GripLock®

CATALOGUE | 2024-2025

Spirit of Perfection®

Made in Germany

KEMMER
HARTMETALLWERKZEUGE

KEMMER specialist for grooving and turning

Development

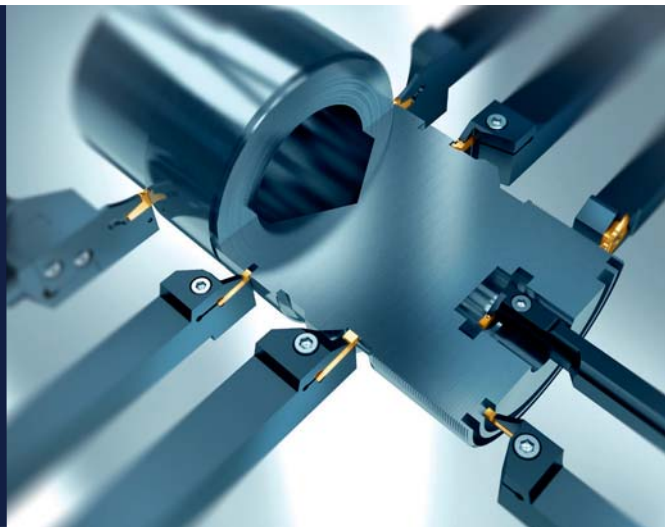
Production

Sales

Grooving tools
Made in Germany

The product range GripLock stands for high-quality tools for parting off, grooving, cutting and turning, face grooving, precision grooving, threading, hard machining and profile cutting.

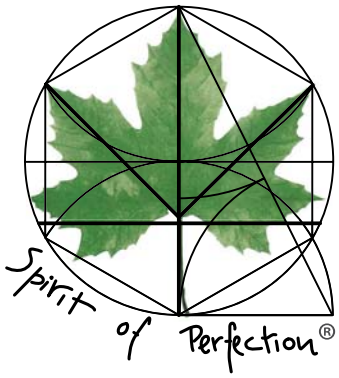
This product line includes several systems of one-edged up to four-edged or modular systems as well as tailor made solutions, which are produced according to customer demands.



Kemmer Hartmetallwerkzeuge has been founded in **Wildberg** in the Blackforest. In 1998 the Administration Department moved to our modern administration building. From this location GripLock tools are rapidly and reliable sent to "all over the world".

Since 1993 our tools for grooving, side turning and parting off applications as well as tailor made solutions are produced and developed in our plant site in Zella-Mehlis. Here we provide also trainings for our customers and live demonstrations.

Quality assurance | Certification



Consulting

Service

Quality

Kemmer Hartmetallwerkzeuge is a certified manufacturer and supplier for grooving applications. To provide the best performance of our tools we do regulary update and check our standards in quality and process management. And with our trademark "Spirit of perfection" we show our dedication to perfection even above.

We are your trustful partner in finding the right grooving solution- no matter if standard or tailor made designs are needed.

1974 2024

History of our company

For over **50 years** your competent partner for: grooving, grooving and side turning, parting off, face grooving, threading & special solutions.

1974	Company foundation
1983	Patent: Self clamping insert with locking ring
1984	Start of the GripLock range
1990	Decision for production facility holder production
1993	Start of the production in Zella-Mehlis
1994	ISO products brand MEGACUT
1996	Start of Tailor Made Solutions
1997	New administration building in Wildberg
2004	New production building in Zella-Mehlis and relocation of production
2007	Development of the product lines MULTICUT 4, P92 2 face grooving and FLEX FIX
2008	Introduction of the TWIN Blade P92 range
2009	QM Certification DIN ISO 9001
2010	Introduction of the GripLock Modular range
2013	Introduction of the GripLock hard material machining products
2016	Introduction of trademark "Spirit of Perfection"
2023 2024	**30 years** Production location Zella- Mehlis **50 years** Kemmer Hartmetallwerkzeuge

KEMMER HARTMETALLWERKZEUGE

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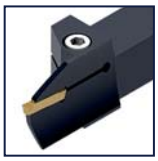
Threading

Face grooving



GLM - GripLock Modular

GLS - GripLock SWISS

Profile cutting

KEMMER
HARTMETALLWERKZEUGE

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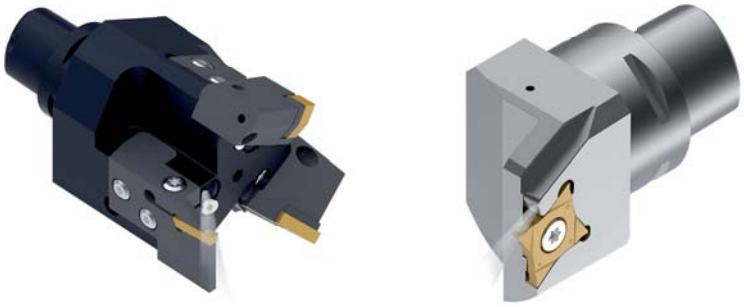
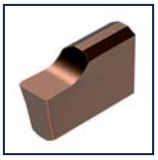
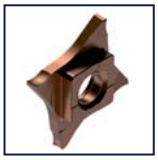


Hard material machining





Spare parts and accessories

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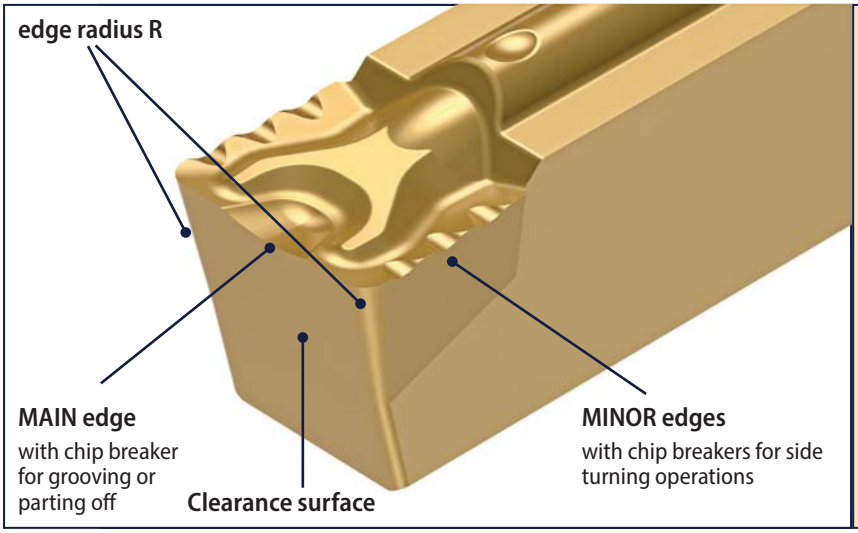
KEMMER HARTMETALLWERKZEUGE

Technical section page

Informations about ISO-range, abbreviations and symbols please find at the inner part of the cover, on the back.

Basics for grooving and side turning



The "cult" of the cutting edge

For over 50 years we as Kemmer Hartmetallwerkzeuge have put the focus on the topics GROOVING and SIDE TURNING.

One thing is for sure:

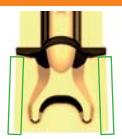
To achieve and replicate a good performance the geometry and application of the edge(s) is essential!

Types of GRIPLOCK edges

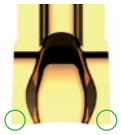
Rounded edge	With negative chamfer	Sharp edge
		
▸ Up to a few µm ▸ High stability of the edge ▸ Universal usage for nearly all grooving applications	▸ Provides maximum stability on the main edge ▸ Recommended for interrupted cuts and difficult operations	▸ Good chip control in long chipping materials (like automate steels)

Modifications of GRIPLOCK minor edges or edge radii

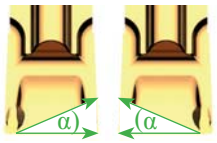
MTNS<u>G</u> (base) ▸ **G**round edge with tight cutting width tolerance ±0,0..



BTNN<u>F</u> (base) ▸ Sharp **(F)** ground edge radii (R ~ 0 mm)

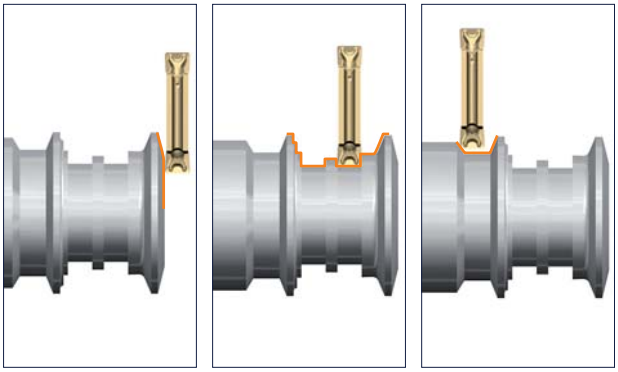


SCT<u>R/L</u> (base) ▸ Parting off insert with lead angle **R**IGHT handed or **L**EFT handed

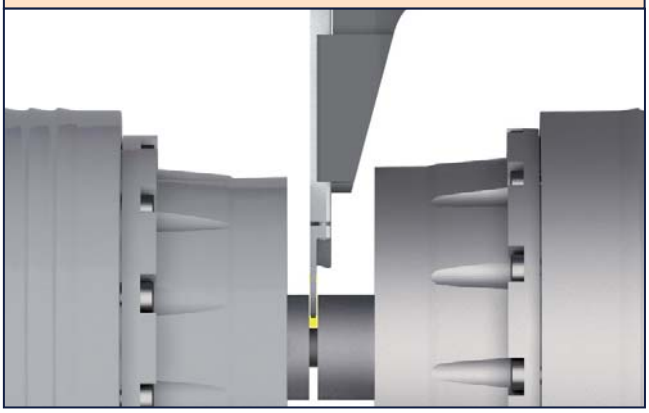


Benefits of grooving applications

High flexibility and reduced set up effort by a wide range of applications

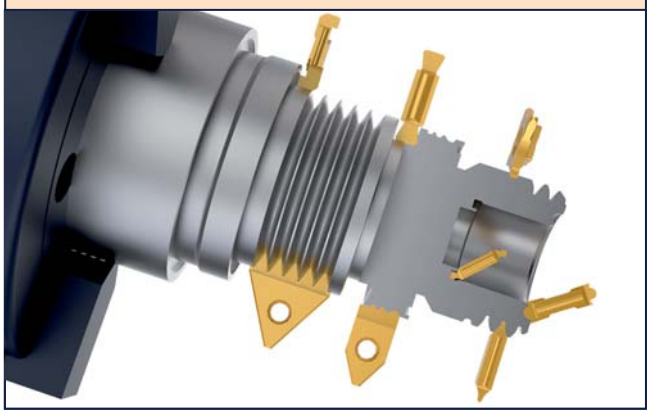


Working in tight areas!

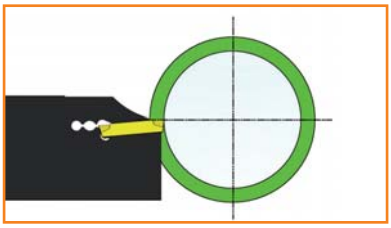


Various options for tools and geometries

Tailor made solutions for nearly every challenge



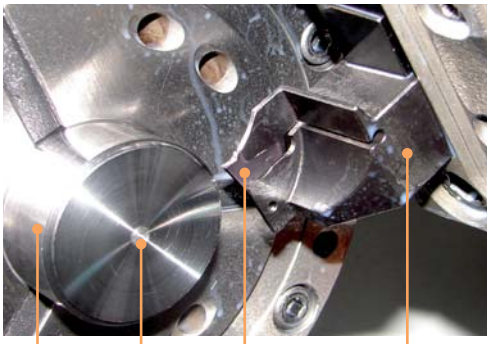
The difficult way to the center

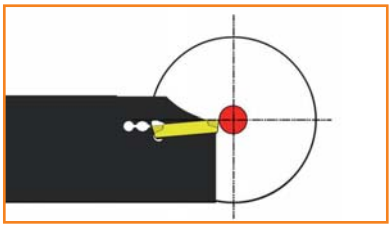


The way towards the center isn`t easy at all:

When beginning the operation **all conditions are ideal:**

- cutting speed (Vc)
- cooling and
- chip removal





The more the cutting edge arrives at the center the more conditions **deteriorate gradually.**

- cutting speed decreases to zero
- cooling becomes inefficient
- chip removal becomes very difficult.

Success factors at the center

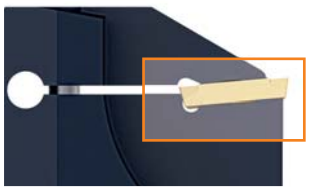
 Chip breaker

 Coolant

 Parameters

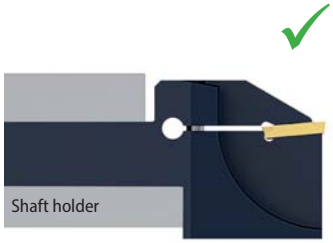
Recommendations for parting off see page 232

Important characteristics for a good result



Insert pockets

Clamping force



Tool extension

The principle applies to parting off:

The stronger the tool, the higher the gripping power, the better are performance and results.

- True and straight run
- Clean faces
- Plane parallel faces
- Consistently long tool life
- Perfect cooling

Premium tool choice

Unique chip breaker:

- Parting off geometry e.g. TWIN **BTNN**
- Parting off geometry e.g. TWIN **SCTD**
- Grooving and turning geometry e.g. TWIN **MTNS**
- Parting off geometry one edge e.g. **SFN**

Fitting toolholders

- TWIN blade **P92 TMS**
- Reinforced holder **P92 A CXCBR/L**
- Reinforced parting off blades **P92 CXCBR/L...X**
- Reinforced parting off blades **Flex Fix F16 R/L 65**
- Toolholders with internal coolant

Typical weak points

- Insufficient clamping force between tools and machine tool
- Insufficient clamping force between tool holders and inserts
- Insufficient chucking force

pic. P92 A CXCBL

For parting off don't compromise!
Choose the tool with the best solidity.

M92-System - MULTICUT — 4 edges

Cutting inserts

OFQ16R/L...N/R/L
p. 29 - 30

Precision cutting inserts

OFQ16R/L...N
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Face grooving inserts

OFQ16R/L...A
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Full radius inserts

OFQ16R/L...R...
p. 34

Threading inserts

OFQ16R/L...EL
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Part profile threading insert

OFQ16R/L...EIR
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Profile turning finishing

OFQ16R/L..IVR/L
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Profile turning back turning

OFQ16R/L..DECO R/L
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Precision cutting Extended

OFQE16R/L..N
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Full radius Extended

OFQE16R/L..R
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Face grooving Extended

OFQE16R/L..A
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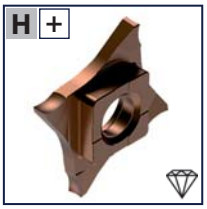
Grooving hard machining



OFQ16 R/L...N00
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Full radius hard machining

OFQ16R/L..R..N
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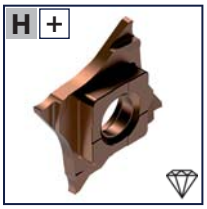
Precision hard machining



OFQ16 R/L...N
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Threading hard machining

OFQ16R...ER
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Profile turning hard machining

OFQ16R/L...IVR/L
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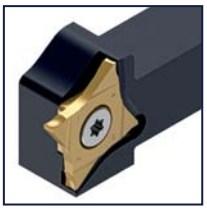
Holder



M92 Q FXCBR/L
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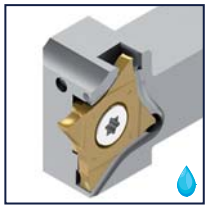
Holder with internal coolant



M92Q FXCBR/L..HP
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Holder for linear slides

M92 Q 90FXCBR_L...
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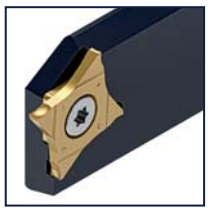
Blades



M92 Q FXCBR/L...X...
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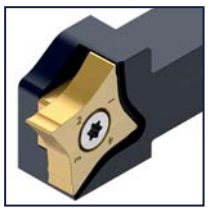
Holder for Extended inserts



M92 QE FXCBR/L
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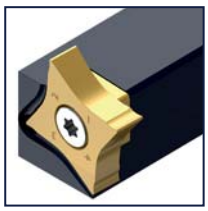

M92 QE 90 FXCBR/L
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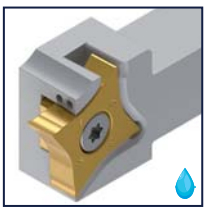
Holder for Extended inserts with internal coolant



M92 QE FXCBR/L..HP
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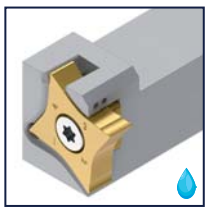

M92 QE 90 FXCBR/L..HP
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[+] For further options see product pages

P92-System — 2 edges

Cutting and turning inserts


P +
VTNS
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P M K +
MTNS
p. 56


N M S +
MTNSG
p. 57


N S +
STNZ / STNG
p. 58


P +
CTDS
p. 58


M S +
ETNZ
p. 59


N S +
PTNSM
p. 60


P M K +
MTNZ
p. 61


P M +
GTNS
p. 62


P M +
XTNS
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N M S +
BTNG
p. 64


P M +
BTNX
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K +
OTXC
p. 65


K +
OTXS
p. 65


N S +
RTNG
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P M K +
RTNX
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Parting off inserts


P M K N S +
BTNN R/L
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P M +
BTNNF
p. 70


P N +
CTD ALU
p. 71


P M +
CTD
p. 72


P M +
SCTD
p. 73


P +
LTNN
p. 74

Parting off inserts for large diameters


P M +
A GTNS
p. 75


P M +
A BTNN
p. 75


P M +
A CTD
p. 75


P M +
A SCTD
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+ For further options see product pages

P92-System — 2 edges

Cutting and turning inserts for hard material machining

BTNG
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MTNS
p. 78

RTNG
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Grooving and parting off inserts for hard material machining

BTNN
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CTD ALU
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SCTD
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KCTD
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Holders, boring bars, cartridges and blades for cutting, grooving and turning

P92 CXCBR/L...
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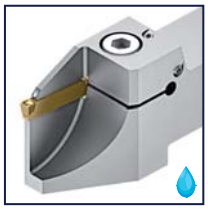

P92 CXCBR/L HP
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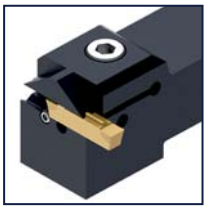

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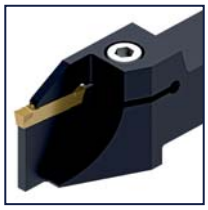

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P92 A CXCBR/L..D42-56 HP
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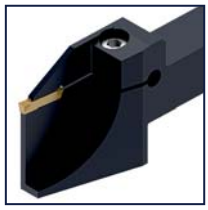

P92 A CXCBR/L...D65-80
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P92 A CXCBL HP
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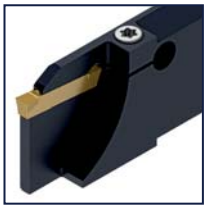

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P92 TMS
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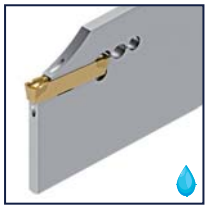

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P92 TMS 52
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P92 CTR...HHPG1/8
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P92 CT HP
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P92 CGR/L
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P92 CA R/L
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P92 CS R/L
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+ For further options see product pages

P92-System — 1 edge

Small boring bars and inserts for cutting, grooving and turning

KCTD
p. 103

KCTDS
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KCTD
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P92 CGR/L..30C
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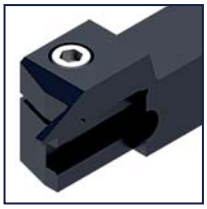
P92 2, P91 1 and P92 90 System — 2 edges

Holder with cartridges for face grooving and -turning


P92 2 CXCRD/LD
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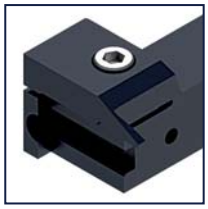
P92 90 CXCRD/LD
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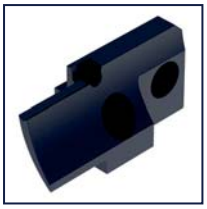
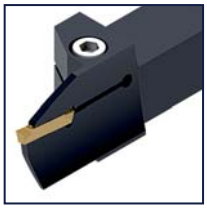

C92 LD/RD
p. 110 - 113

Monoblock holder for face grooving & -turning


P92 2 CXCBR/L
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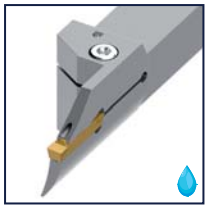
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Blades for face grooving


P92 2 TMS
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Boring bars for face grooving


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P92 P-System — 2 edges

Precision inserts

OTX...R/L
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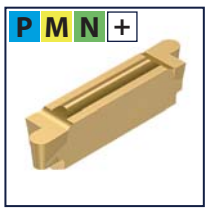

OTXR...R/L
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OTXRN
p. 126

OTXR...N R
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OTXR...N
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Precision inserts for longitudinal turning

STV R/L
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STD R/L
p. 128

OTX DECO (Decolletage)
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ISO-threading inserts (internal and external)

OTX ER Full profil
p. 130

OTX IR Full profil
p. 130

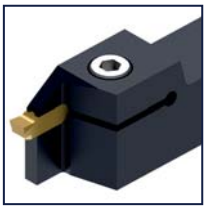
OTX EIR Part profil
p. 131

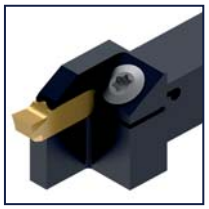
+ For further options see product pages

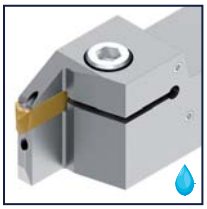
Product overview

P92 P-System — 2 edges

Precision holders, -boring bars for OTX inserts


P92 P CXCBR/L
p. 132

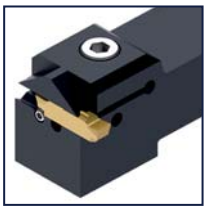

P92 P CXCBR/L..K4 11
p. 133

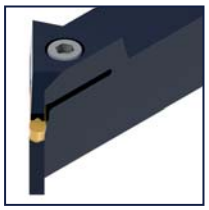

P92 P CXCBR/L..HP
p. 134

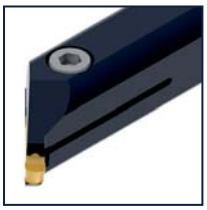

P92 P 20 CXCBR/L..HP
p. 134


P92 P CGR/L
p. 135


P92 P CGR/L..8
p. 135


P92 P 90 uni
p. 136


P92 P 45 CXCBR/L
p. 138


P92 P 45 CGR
p. 138

P92 P-System — 1 edge

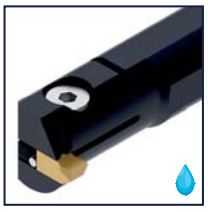
Precision grooving and ISO threading inserts for internal machining

KOTX...R/L
p. 139

KOTX R...R/L
p. 139

KOTX 4 IR Vollprofil
p. 140

Fitting boring bars


P92 P CGR...4C
p. 140

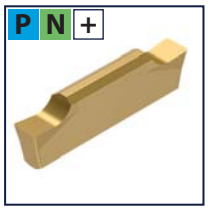
P92 S-System (2 mm cutting width, short extension) — 2 edges

Inserts for parting off and small ISO-threading inserts

BTNS
p. 144

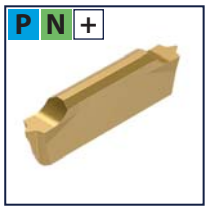
ITNS
p. 144

STNS
p. 145



HTNS
p. 145

HTNST
p. 146

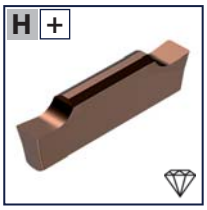


HTNG 2 ER / IR
p. 147-148

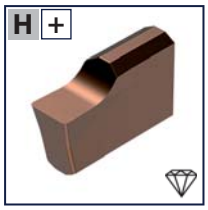
Grooving inserts for hard material machining

ITNS
p. 150

STNS
p. 150



HTNS
p. 150



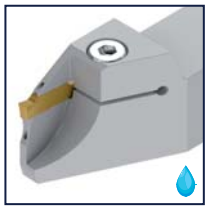
KHTNS
p. 151

[+] For further options see product pages

P92 S-System (2 mm cutting width, short extension) — 2 edges

Holders, blades and boring bars for cutting, grooving, turning and threading


P92 S CXCBR/L
p. 152


P92 S CXCBR/L HP
p. 153

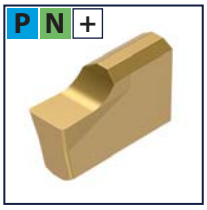

P92 S CXCBR/L..11
p. 153


P92 S CXCBR/L...X
p. 154

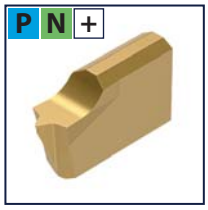

P92 S CGR/L
p. 154

P92 S-System — 1 edge

Inserts for grooving and threading

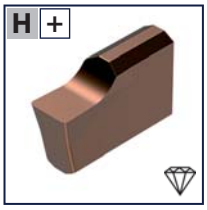


KHTNS 2
p. 155



KHTNG 2 IR
p. 155

Inserts for hard material machining



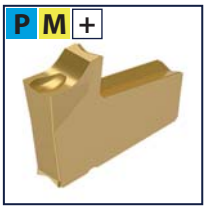
KHTNS
p. 156

fitting boring bars

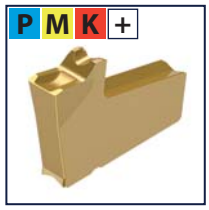

P92 S CGR/L M20C
p. 156

FLEX FIX - System — 1 edge

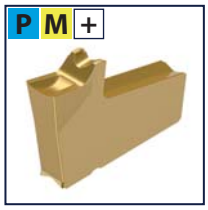
Parting off inserts



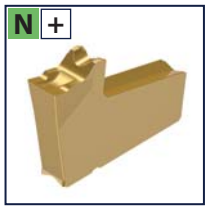
BFN
p. 161



IFN
p. 162

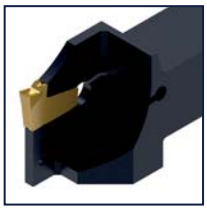


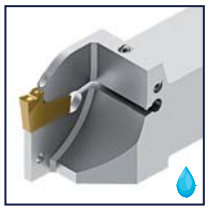
SFN
p. 163



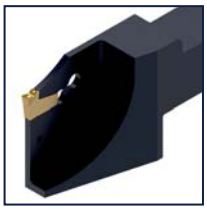
IFN ALU
p. 163

Holders, blades and cartridges for parting off


F16 R/L 42
p. 164


F16 R/L 42 HP
p. 164


F16 R/L 52 HP
p. 165

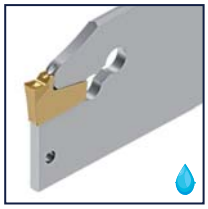

F16 R/L 65
p. 165


F16 R/L 65 HP
p. 166


F16 R/L
p. 166


F16 R/L 3208 HP
p. 167


F16 T
p. 168


F16 T HP
p. 168

[+] For further options see product pages

Product overview

Standard Design-System (precision sintered) 1 edge

Parting off inserts

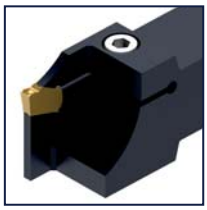
SNTN/R/L
p. 171

ITN/R/L
p. 172

ITN/R/L ALU
p. 173

BGN/R/L
p. 173

Holders and blades for parting off



CLCBR/L
p. 174

CLCBR/L...X
p. 175

TMS
p. 175

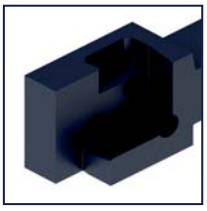
Tool blocks

TS
p. 176

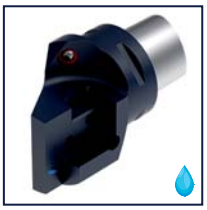
KL 52
p. 176

GLM - GripLock Modular

Basic toolholders



GLM HR/L
p. 180



GLM PSC..R/L 0
p. 181

GLM PSC..R/L 90
p. 181

GLM HSK63T..R/L 0
p. 182

GLM HSK63T..R/L 10
p. 182

GLM HSK63T..R/L 45
p. 182

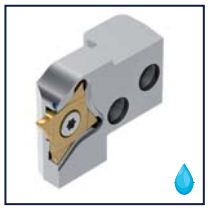
GLM HSK63T..R/L 90
p. 183

+ For further options see product pages

GLM - GripLock Modular System

Grooving Cartridges


GLMC R/L M92 Q
p. 184


GLMCR/L M92 Q...HP
p. 184


GLMCR/L P92
p. 185


GLMCR/L P92 HP
p. 185

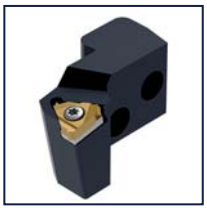

GLMCR/L P92 2 R/LD
p. 186

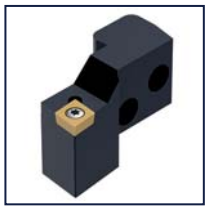

GLMCR/L P92 P
p. 187


GLMCR/L F16
p. 187

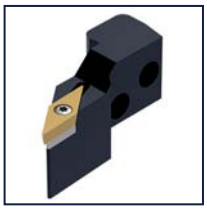

GLMCR/L F16 HP
p. 188

ISO-Cartridges


GLMCR/L 16EL/R ISO
p. 189


GLMCR/L CC09T3
p. 190


GLMCR/L DC11T3
p. 190


GLMCR/L VC1604
p. 190


GLMCR/L VC1303
p. 190


GLMCR/L CN1204
p. 191


GLMCR/L WN0804
p. 191


GLMCR/L VN1604
p. 191


GLMCR/L DN1506
p. 191

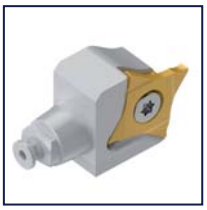
GLS - GripLock SWISS

Basic toolholders for GripLock SWISS Cartridges

GLS HN
p. 197

GLS PSC
p. 197

GripLock SWISS Grooving Cartridges



GLS R/L M92
p. 198

GLS R/L M92 HP
p. 198

GLS R/L P92 X15
p. 199

GLS R/L P92 X
p. 199

GLS R/L P92 X HP
p. 200

GLS R/L P92A X HP
p. 200

GLS R/L P92S X HP
p. 201

GLS R/L P92P X
p. 201

GLS R/L P92P X HP
p. 202

GripLock SWISS ISO Cartridges

GLS CR/L C HP
p. 202

GLS CR/L DC HP
p. 203

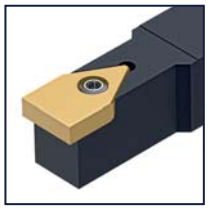
GLS CR/L ER/L HP
p. 203

GLS CR/L VC HP
p. 203

F92 Profiling tool system

Inserts and holders for profile cutting

F 00000
p. 207



F92 SFCCN
p. 208

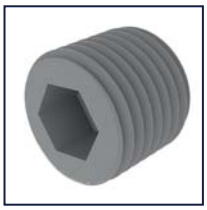
e.g. Profile insert
p. 207, 212

Spare parts and accessories

Spare parts

Screws + Wrenches
p. 218

Spare parts for ISO
p. 219



Spare parts for IC
p. 219

Torque tools

Torque VARIO ST plus
p. 220

Torque Vario-S
p. 220

Torque interchangeable blades

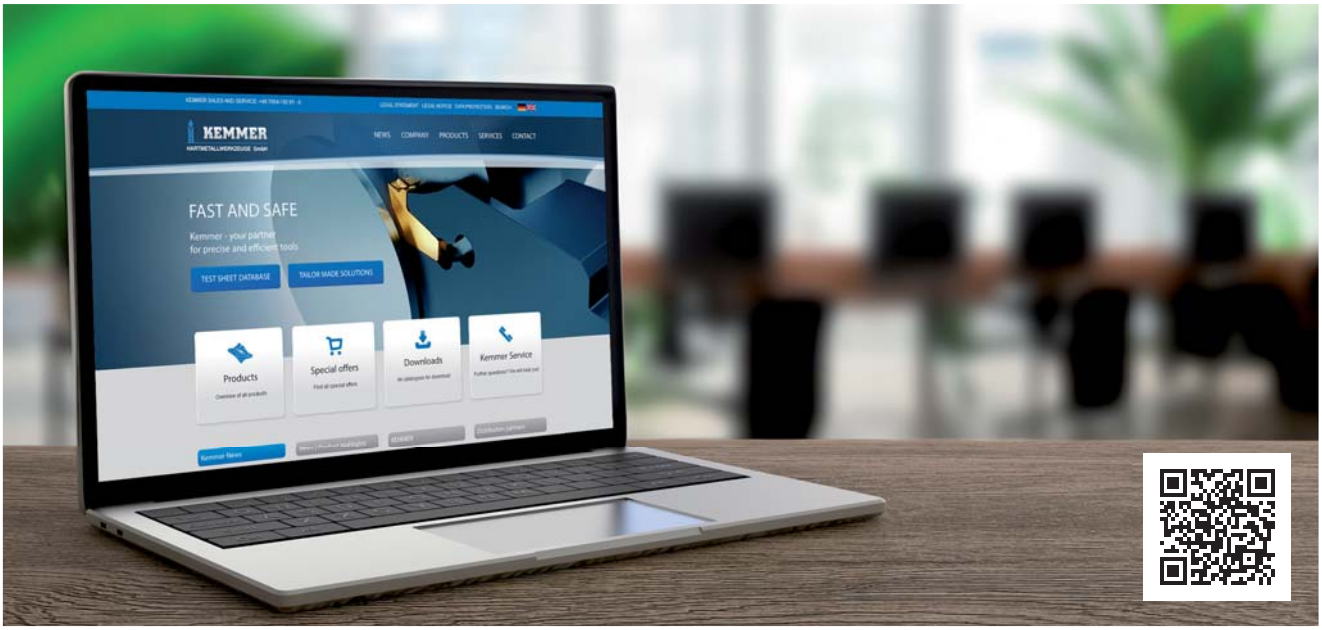
WT/F Torx
p. 220

WS/F Hex
p. 220

Screwdriver with interchangeable blades for MULTICUT holders

TX 25 10
p. 221

KEMMER | Online



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DATES

Test sheets &
Application

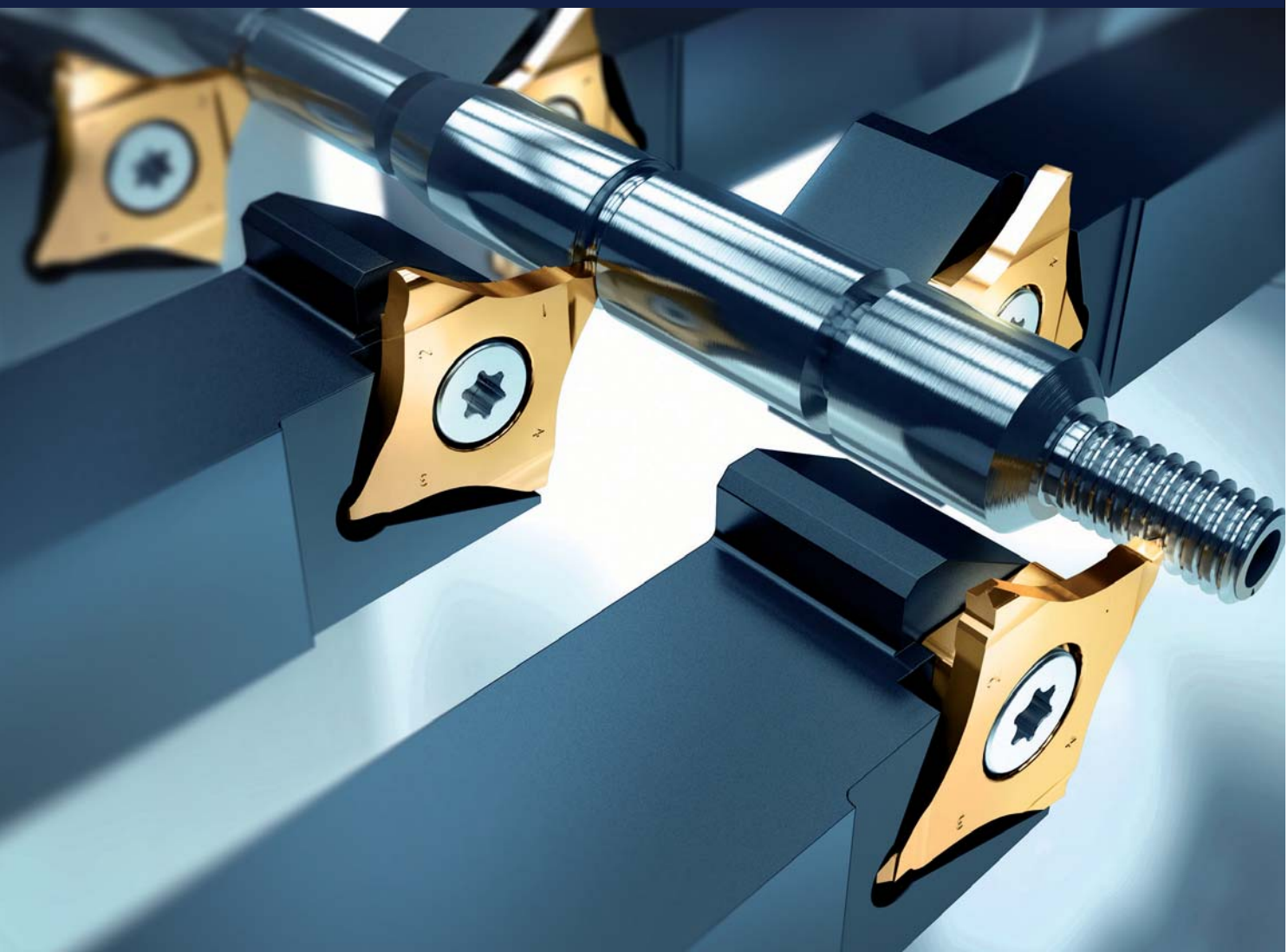
Webinars
For all product contents

Career
new jobs (DE)

M92 Q | MULTICUT 4

The perfect grooving and cutting system

- Parting off
- Precision grooving
- Face grooving
- Full radius grooving
- Threading
- ISO / DECO turning
- EXTENDED up to cutting width 6,5 mm
- Special profiles

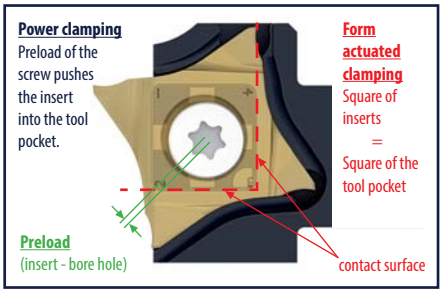


KEMMER HARTMETALLWERKZEUGE

2

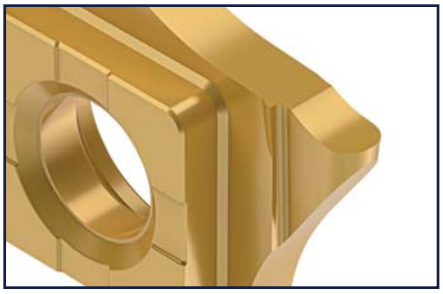
M92 Q MULTICUT 4

The perfect grooving and cutting system

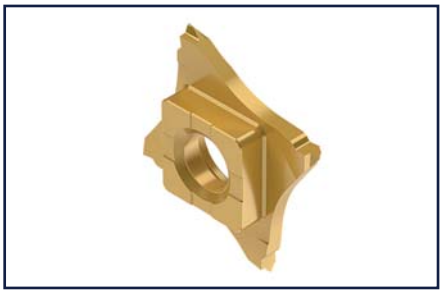


Vertical positioned inserts are well known. However, the segmented MULTICUT 4 inserts represent the new state of art technology. This improved development features a lot of advantages:

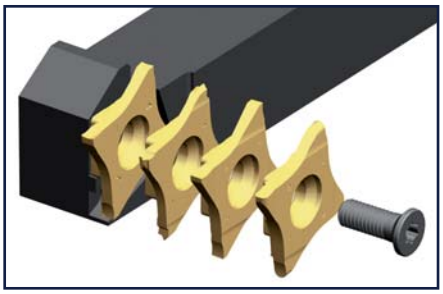
- Perfect power and form actuated clamping.



- Reinforced solidity of inserts supresses vibrations. Achieves high and consistant tool life. Maintains reliability on cutting operations.
- Reinforced area of the cutting edge grants stability.



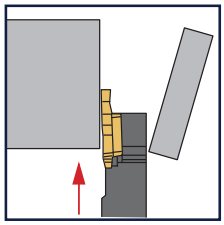
- In case a cutting edge is damaged all other edges can be used independently.

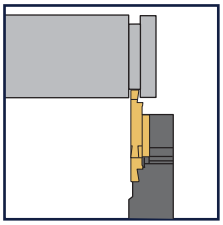


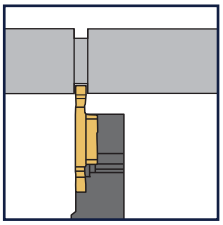
- Precise re-positioning when changing cutting edges.
- Fast and safe fixing in pocket.
- Only one insert pocket for many inserts for different cutting operations.

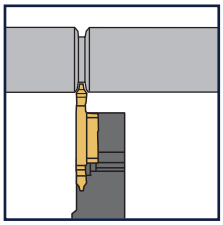
- Positive top rake with mould-shape

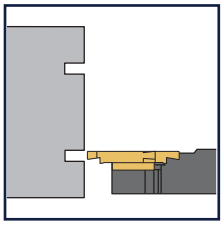
Applications and Symbols

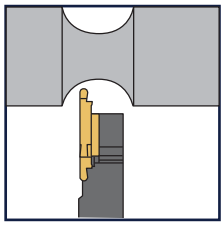

Parting off

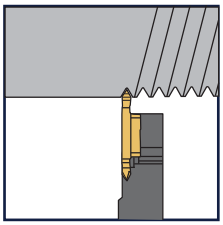

Grooving

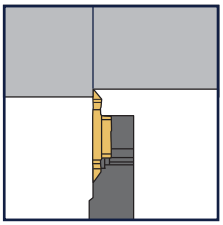

Precision grooving without chamfer

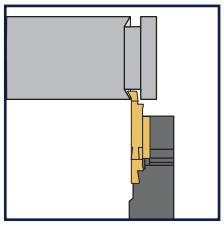

Precision grooving with chamfer


Face grooving


Full radius copying


Threading


ISO/DECO


Tailor made solutions

Hard material machining

Coatings in this system

Coating	Type	Structure	Layer thickness	Main application	Alternative application
NANOSPEED	Supernitrid PVD	TiAlN	3 µm	P M	N S
TILOX	Supernitrid PVD	TiAlN	3 µm	P M	K S
ALUSPEED	HiPIMS PVD	TiB	2 µm	N	S
CARBO SX2	HiPIMS PVD	AlTiN	3 µm	P	S
HARD SX3	HiPIMS PVD	TiAlSiN	3 µm	H	S
Uncoated	-	-	-	N	*

* additional coating options or customer-specific applications
see technical section and tailor made solutions section (on request)

MULTICUT 4 - Insert designation code

O F Q (E) 16 R 000 000 R 00 TILOX

- Top rake
- 4 edges
- Insert system: square and vertical
- **Extended**
- Inside diameter Ø 16 (pocketsize)
- Right hand insert
- Cutting width
- Corner radius
- Rotation
- Lead angle
- Coating

Type OFQ
Cutting width up to 3,5 mm

Type OFQ E
Cutting width up to 4 - 6,5 mm

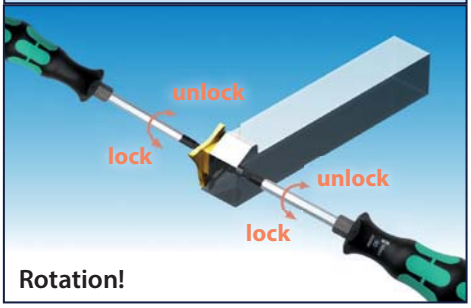
MULTICUT 4 - Designation code for tool holders and blades

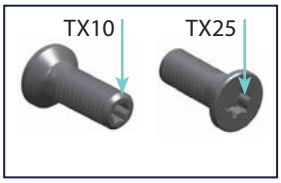
M92 Q (E) FXCB L 2020 M 16

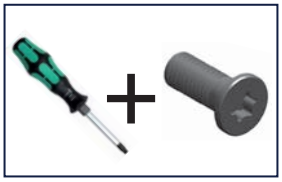
- Tool family
- Insert type MULTICUT 4
- **Extended**
- Screw clamped holder for inserts with 4-edges
- Rotation
- Shank dimension
- ISO-Code length of holder
- Inside diameter Ø 16 (pocketsize)

Optimal clamping and releasing - Special screwdriver for MULTICUT 4 holders and blades (incl. in order extensive)

Special screwdriver and torx screws with interchangeable blade to change Multicut 4 inserts in confined space.







ET-Nr.	WG355 Ref.	ID-Nr.	Item	Recommended torquet max. [Nm]
33	TXM5x14 10 25	44641	Torx screw L=14	4,5
34	TXM5x10 10 25	44817	Torx screw L=10	4,5

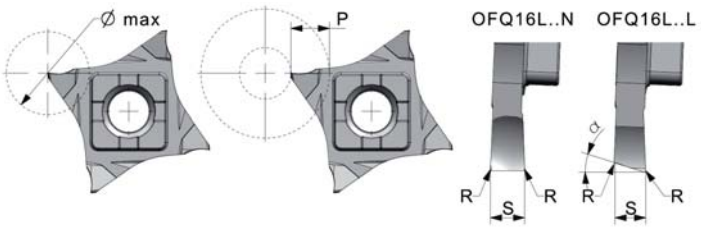
Order details

WG355 Ref.	ID-Nr.	Item
TX25 10 1	45131	Set content: spare part numbers 39 + 40 + 33
TX25 10 2	45132	Set content: spare part numbers 39 + 40 + 34

Detailed description on page 221

MULTICUT 4 - Cutting inserts with 4 edges for grooving and parting off

OFQ16L..N/L

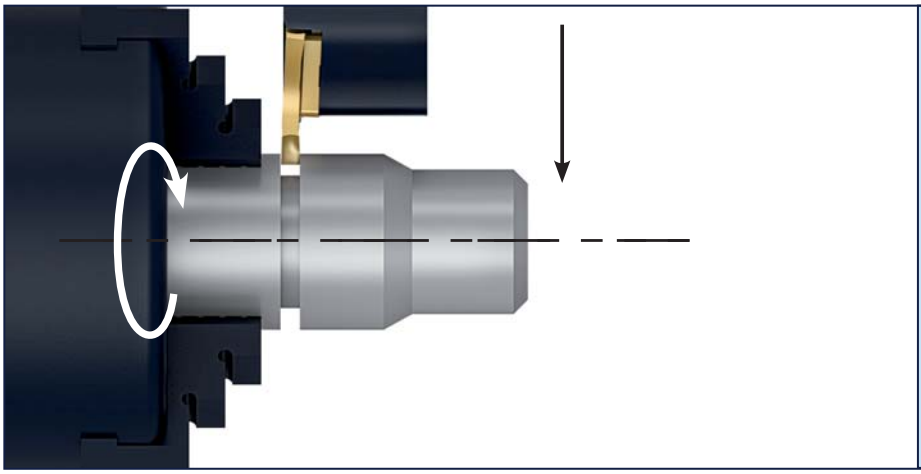


Enlarged view

PRODDES	IDNR	IDNR	IIC	IH	PDPT	REL/RER	CW	CWUD	CWLD	PSIRR	PSIRL	
WG400 Ref.	FM NANOSPEED	FM TILOX	pocket size		P	R	S	S+	S-	α° R	α° L	Ømax.
	P M N S	P M K S										
OFQ16L 050 000 N 00	31019	31020	16L	N	2,5	0,00	0,50	0,05	0,00	0	0	5,0
OFQ16L 100 000 N 00	31021	31022	16L	N	3,5	0,00	1,00	0,05	0,00	0	0	7,0
OFQ16L 120 000 N 00	35046	38719	16L	N	6,5	0,00	1,20	0,05	0,00	0	0	13,0
OFQ16L 150 010 N 00	31239	31238	16L	N	6,5	0,10	1,50	0,05	0,00	0	0	13,0
OFQ16L 200 010 N 00	31026	31027	16L	N	6,5	0,10	2,00	0,05	0,00	0	0	13,0
OFQ16L 200 020 N 00	43669	43670	16L	N	6,5	0,20	2,00	0,05	0,00	0	0	13,0
OFQ16L 250 010 N 00	30946	31028	16L	N	6,5	0,10	2,50	0,05	0,00	0	0	13,0
OFQ16L 250 020 N 00	43671	43672	16L	N	6,5	0,20	2,50	0,05	0,00	0	0	13,0
OFQ16L 300 010 N 00	31029	31030	16L	N	6,5	0,10	3,00	0,05	0,00	0	0	13,0
OFQ16L 300 020 N 00	43673	43674	16L	N	6,5	0,20	3,00	0,05	0,00	0	0	13,0
OFQ16L 100 000 L 06	31031	31032	16L	L	3,5	0,00	1,00	0,05	0,00	0	6	7,0
OFQ16L 100 000 L 15	31033	31034	16L	L	3,5	0,00	1,00	0,05	0,00	0	15	7,0
OFQ16L 120 000 L 06	38720	38721	16L	L	6,5	0,00	1,20	0,05	0,00	0	6	13,0
OFQ16L 150 010 L 06	37813	26738	16L	L	6,5	0,10	1,50	0,05	0,00	0	6	13,0
OFQ16L 150 010 L 15	31266	31265	16L	L	6,5	0,10	1,50	0,05	0,00	0	15	13,0
OFQ16L 200 010 L 06	31039	31040	16L	L	6,5	0,10	2,00	0,05	0,00	0	6	13,0
OFQ16L 200 020 L 06	43675	43676	16L	L	6,5	0,20	2,00	0,05	0,00	0	6	13,0
OFQ16L 200 010 L 15	31041	31042	16L	L	6,5	0,10	2,00	0,05	0,00	0	15	13,0
OFQ16L 200 020 L 15	43677	43678	16L	L	6,5	0,20	2,00	0,05	0,00	0	15	13,0

Comment:

Segmented and ground micrograin insert.
Positive top-rake with **chipforming** groove,
beginning with 1,5 mm width to 3mm.



MULTICUT 4

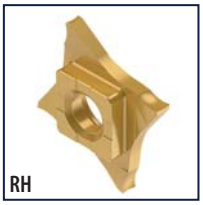
Only one insert pocket for many different applications.

- Parting off and grooving
- Threading
- Precision grooving
- Full radius grooving
- Special profiles

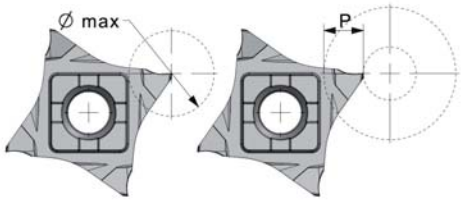
Fitting tools

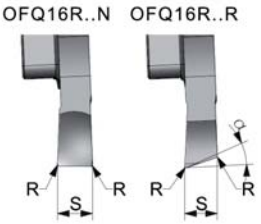
p. 223 p. 224 p. 228 p. 47 p. 48 p. 48 p. 184 p. 198

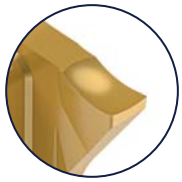
MULTICUT 4 - Cutting inserts with 4 edges for grooving and parting off



OFQ16R...N/R







Enlarged view

PRODDES	IDNR	IDNR	IIC	IH	PDPT	REL/RER	CW	CWUD	CWLD	PSIRR	PSIRL	
WG 400 Ref.	FM NANOSPEED P M N S	FM TILOX P M K S	pocket size		P	R	S	S+	S-	α° R	α° L	Ømax.
OFQ16R 050 000 N 00	30971	30972	16R	N	2,5	0,00	0,50	0,05	0,00	0	0	5,0
OFQ16R 100 000 N 00	30973	30974	16R	N	3,5	0,00	1,00	0,05	0,00	0	0	7,0
OFQ16R 120 000 N 00	35044	38722	16R	N	6,5	0,00	1,20	0,05	0,00	0	0	13,0
OFQ16R 150 010 N 00	31257	31237	16R	N	6,5	0,10	1,50	0,05	0,00	0	0	13,0
OFQ16R 200 010 N 00	30977	30978	16R	N	6,5	0,10	2,00	0,05	0,00	0	0	13,0
OFQ16R 200 020 N 00	43679	43680	16R	N	6,5	0,20	2,00	0,05	0,00	0	0	13,0
OFQ16R 250 010 N 00	30945	30979	16R	N	6,5	0,10	2,50	0,05	0,00	0	0	13,0
OFQ16R 250 020 N 00	43681	43682	16R	N	6,5	0,20	2,50	0,05	0,00	0	0	13,0
OFQ16R 300 010 N 00	30980	30981	16R	N	6,5	0,10	3,00	0,05	0,00	0	0	13,0
OFQ16R 300 020 N 00	43683	43684	16R	N	6,5	0,20	3,00	0,05	0,00	0	0	13,0
OFQ16R 100 000 R 06	30982	30983	16R	R	3,5	0,00	1,00	0,05	0,00	6	0	7,0
OFQ16R 100 000 R 15	30984	30985	16R	R	3,5	0,00	1,00	0,05	0,00	15	0	7,0
OFQ16R 120 000 R 06	38723	38724	16R	R	6,5	0,00	1,20	0,05	0,00	6	0	13,0
OFQ16R 150 010 R 06	31262	31261	16R	R	6,5	0,10	1,50	0,05	0,00	6	0	13,0
OFQ16R 150 010 R 15	31264	31263	16R	R	6,5	0,10	1,50	0,05	0,00	15	0	13,0
OFQ16R 200 010 R 06	30990	30991	16R	R	6,5	0,10	2,00	0,05	0,00	6	0	13,0
OFQ16R 200 020 R 06	43685	43686	16R	R	6,5	0,20	2,00	0,05	0,00	6	0	13,0
OFQ16R 200 010 R 15	30992	30993	16R	R	6,5	0,10	2,00	0,05	0,00	15	0	13,0
OFQ16R 200 020 R 15	43687	43688	16R	R	6,5	0,20	2,00	0,05	0,00	15	0	13,0

Comment:

Segmented and ground micrograin insert.
Positive top-rake with **chipforming** groove,
beginning with 1,5 mm width to 3mm.

Fitting tools

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p. 224

p. 228


p. 47


p. 48

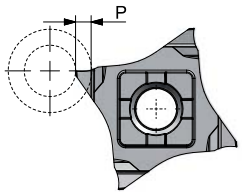

p. 48

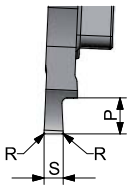

p. 184


p. 198

MULTICUT 4 - Precision grooving inserts according to DIN 471 without chamfer

OFQ16L...N

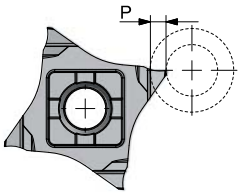


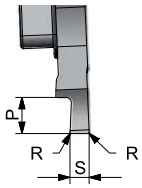


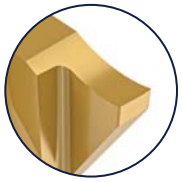
Enlarged view

PRODDES	IDNR	IDNR	IIC	IH	PDPT	REL/RER		CW	CWUD	CWLD
WG400 Ref.	FM NANOSPEED	FM TILOX	pocket size		P	R		S	S+	S-
	P M N S	P M K S								
OFQ16L 050 000 N	31152	31153	16L	L	1,0	0,00	0,50	0,57	0,00	0,05
OFQ16L 060 000 N	31154	31155	16L	L	1,0	0,00	0,60	0,67	0,00	0,05
OFQ16L 070 000 N	31156	31157	16L	L	1,5	0,00	0,70	0,77	0,00	0,05
OFQ16L 080 000 N	31158	31159	16L	L	1,5	0,00	0,80	0,87	0,00	0,05
OFQ16L 090 000 N	31160	31161	16L	L	1,5	0,00	0,90	0,97	0,00	0,05
OFQ16L 100 000 N	38725	38727	16L	L	1,5	0,00	1,00	1,07	0,00	0,05
OFQ16L 110 010 N	31162	31163	16L	L	1,5	0,10	1,10	1,24	0,00	0,05
OFQ16L 130 010 N	31164	31165	16L	L	1,5	0,10	1,30	1,44	0,00	0,05
OFQ16L 160 010 N	31172	31173	16L	L	2,0	0,10	1,60	1,74	0,00	0,05
OFQ16L 185 010 N	31174	31175	16L	L	2,0	0,10	1,85	1,99	0,00	0,05
OFQ16L 215 010 N	31176	31177	16L	L	2,5	0,10	2,15	2,29	0,00	0,05
OFQ16L 265 010 N	31178	31179	16L	L	2,5	0,10	2,65	2,79	0,00	0,05
OFQ16L 315 010 N	31180	31181	16L	L	2,5	0,10	3,15	3,29	0,00	0,05

OFQ16R...N







Enlarged view

PRODDES	IDNR	IDNR	IIC	IH	PDPT	REL/RER		CW	CWUD	CWLD
WG400 Ref.	FM NANOSPEED	FM TILOX	pocket size		P	R		S	S+	S-
	P M N S	P M K S								
OFQ16R 050 000 N	31127	31128	16R	R	1,0	0,00	0,50	0,57	0,00	0,05
OFQ16R 060 000 N	31129	31130	16R	R	1,0	0,00	0,60	0,67	0,00	0,05
OFQ16R 070 000 N	31131	31132	16R	R	1,5	0,00	0,70	0,77	0,00	0,05
OFQ16R 080 000 N	31133	31134	16R	R	1,5	0,00	0,80	0,87	0,00	0,05
OFQ16R 090 000 N	31136	31137	16R	R	1,5	0,00	0,90	0,97	0,00	0,05
OFQ16R 100 000 N	38726	38728	16R	R	1,5	0,00	1,00	1,07	0,00	0,05
OFQ16R 110 010 N	31138	31139	16R	R	1,5	0,10	1,10	1,24	0,00	0,05
OFQ16R 130 010 N	31140	31141	16R	R	1,5	0,10	1,30	1,44	0,00	0,05
OFQ16R 160 010 N	31142	31143	16R	R	2,0	0,10	1,60	1,74	0,00	0,05
OFQ16R 185 010 N	31144	31145	16R	R	2,0	0,10	1,85	1,99	0,00	0,05
OFQ16R 215 010 N	31146	31147	16R	R	2,5	0,10	2,15	2,29	0,00	0,05
OFQ16R 265 010 N	31148	31149	16R	R	2,5	0,10	2,65	2,79	0,00	0,05
OFQ16R 315 010 N	31150	31151	16R	R	2,5	0,10	3,15	3,29	0,00	0,05

Comment:

Segmented and ground micrograin insert.
Horizontal cutting edge and positive top rake.

Fitting tools

p. 223

p. 224

p. 228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p. 48


p. 48


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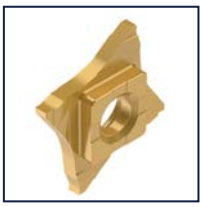
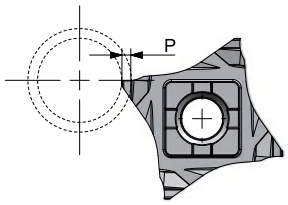
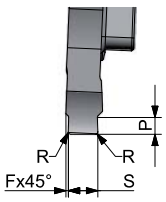
p. 198

MULTICUT 4 - Precision grooving inserts according to DIN 471 with chamfer



OFQ16L..P..M



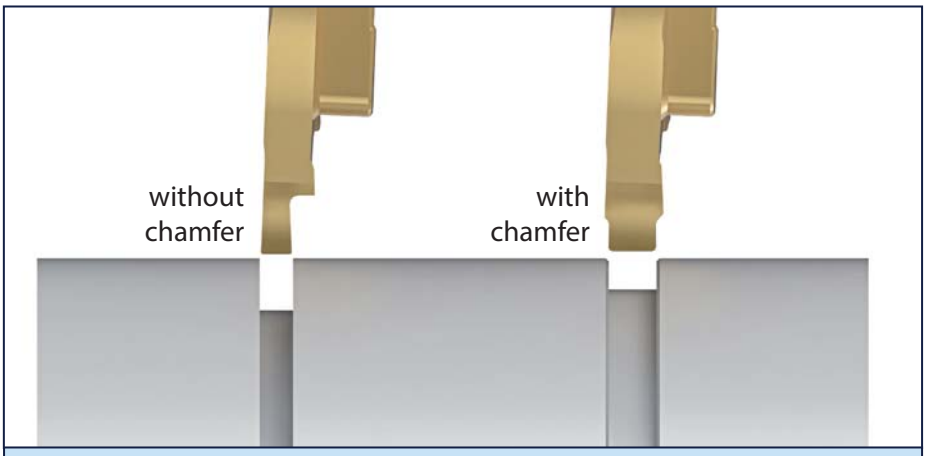


Enlarged view

PRODDES	IDNR	IIC	IH		PDPT	REL/RER		CW	CWUD	CWLD
WG400 Ref.	KM NANOSPEED	pocket size		F	P	R		S	S+	S-
	P M N S									
OFQ16L 110 010 P050 M	43103	16L	L	0,15	0,50	0,10	1,10	1,24	0,00	0,05
OFQ16L 130 010 P067 M	43104	16L	L	0,15	0,67	0,10	1,30	1,44	0,00	0,05
OFQ16L 160 010 P100 M	43105	16L	L	0,15	1,00	0,10	1,60	1,74	0,00	0,05
OFQ16L 185 015 P125 M	43106	16L	L	0,20	1,25	0,15	1,85	1,99	0,00	0,05
OFQ16L 215 015 P150 M	43107	16L	L	0,20	1,50	0,15	2,15	2,29	0,00	0,05
OFQ16L 265 015 P150 M	43108	16L	L	0,20	1,50	0,15	2,65	2,79	0,00	0,05
OFQ16L 265 015 P175 M	43109	16L	L	0,20	1,75	0,15	2,65	2,79	0,00	0,05

Comment:

Segmented and ground micrograin insert.
Horizontal cutting edge and positive top rake.



Execution Multicut with and without chamfer

Pro
Flexible cutting depth (until dimension P)

Contra
An additional insert / operation for machining the chamfer necessary

Pro
No additional insert / operation for chamfering necessary

Contra
Fix cutting depth P

Fitting tools

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p. 228


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p. 48


p. 48


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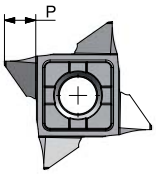
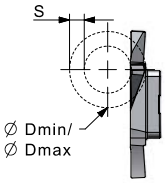
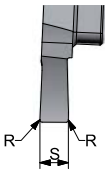
MULTICUT 4 - Inserts for face grooving

OFQ16L...A 50



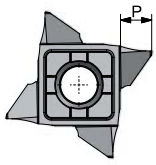


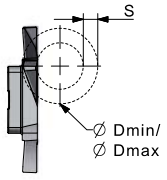


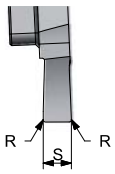
Enlarged view

PRODDES	IDNR	IDNR	IDNR	IIC	IH	DAXN	DAXX	PDPT	REL/RER	CW	CWUD	CWLD
WG400 Ref.	KM	KM NANOSPEED	KM CARBOSX2	pocket size		D min	D max	P	R	S	S+	S-
	N	P M N S	P S									
OFQ16L 150 010 A 50	55336	55344	65211	16L	R	15	∞	5,0	0,10	1,50	0,05	0,00
OFQ16L 200 010 A 50	55337	55345	65215	16L	R	20	∞	5,0	0,10	2,00	0,05	0,00
OFQ16L 250 020 A 50	55338	55346	65223	16L	R	20	∞	5,0	0,20	2,50	0,05	0,00
OFQ16L 300 020 A 50	55339	55322	65226	16L	R	20	∞	5,0	0,20	3,00	0,05	0,00

OFQ16R...A 50



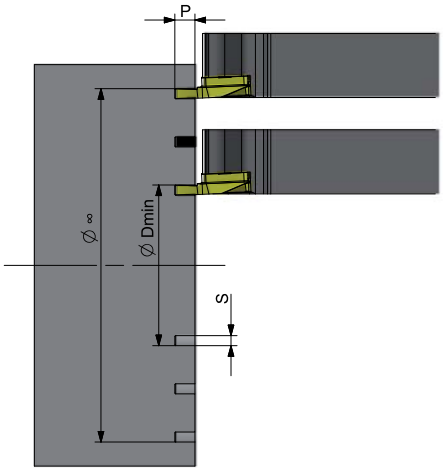


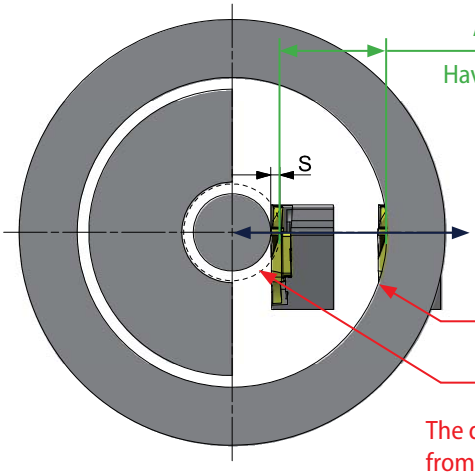


Enlarged view

PRODDES	IDNR	IDNR	IDNR	IIC	IH	DAXN	DAXX	PDPT	REL/RER	CW	CWUD	CWLD
WG400 Ref.	KM	KM NANOSPEED	KM CARBOSX2	pocket size		D min	D max	P	R	S	S+	S-
	N	P M N S	P S									
OFQ16R 150 010 A 50	55340	55347	65228	16R	L	15	∞	5,0	0,10	1,50	0,05	0,00
OFQ16R 200 010 A 50	55341	55348	65229	16R	L	20	∞	5,0	0,10	2,00	0,05	0,00
OFQ16R 250 020 A 50	55342	55349	65230	16R	L	20	∞	5,0	0,20	2,50	0,05	0,00
OFQ16R 300 020 A 50	55343	55350	65231	16R	L	20	∞	5,0	0,20	3,00	0,05	0,00

Comment:
The first groove must not be smaller than Ø D min.





Allowable range for grooving

Having set the first cut correctly, face turning is possible over the full range from 0 to maximum diameter

Ø max = ∞

Ø min = 15 mm

The diameter range is always counted from the outer cutting edge corner.

Fitting tools

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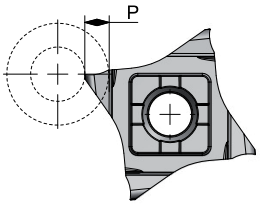
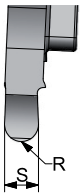
MULTICUT 4 - Full radius insert for grooving and copying

OFQ16L..R..N

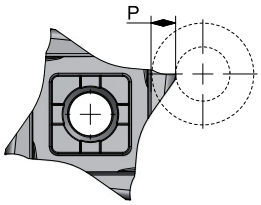


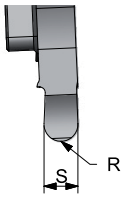


Enlarged view

PRODDES	IDNR	IDNR	IIC	IH	PDPT	CRE	CW	CWUD	CWLD
WG400 Ref.	FM NANOSPEED	FM TILOX	pocket size		P	R	S	S+	S-
	P M N S	P M K S							
OFQ16L 100 R050 N	31202	31203	16L	L	1,0	0,50	1,00	0,05	0,00
OFQ16L 150 R075 N	31204	31205	16L	L	1,5	0,75	1,50	0,05	0,00
OFQ16L 200 R100 N	31206	31207	16L	L	2,0	1,00	2,00	0,05	0,00
OFQ16L 250 R125 N	31208	31209	16L	L	2,5	1,25	2,50	0,05	0,00
OFQ16L 300 R150 N	31210	31211	16L	L	3,0	1,50	3,00	0,05	0,00

OFQ16R..R..N



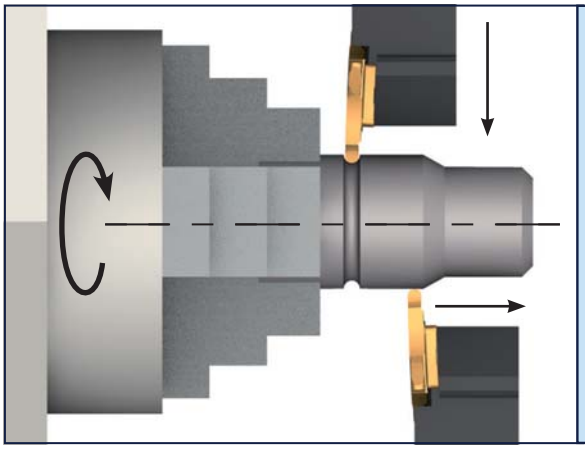


Enlarged view

PRODDES	IDNR	IDNR	IIC	IH	PDPT	CRE	CW	CWUD	CWLD
WG400 Ref.	FM NANOSPEED	FM TILOX	pocket size		P	R	S	S+	S-
	P M N S	P M K S							
OFQ16R 100 R050 N	31187	31188	16R	R	1,0	0,50	1,00	0,05	0,00
OFQ16R 150 R075 N	31189	31190	16R	R	1,5	0,75	1,50	0,05	0,00
OFQ16R 200 R100 N	31191	31192	16R	R	2,0	1,00	2,00	0,05	0,00
OFQ16R 250 R125 N	31193	31194	16R	R	2,5	1,25	2,50	0,05	0,00
OFQ16R 300 R150 N	31195	31196	16R	R	3,0	1,50	3,00	0,05	0,00

Comment:

Segmented and ground micrograin insert. Horizontal cutting edge and positive top rake.



Full radius groove and copying with MC4 full radius inserts.

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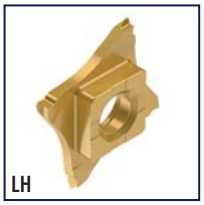
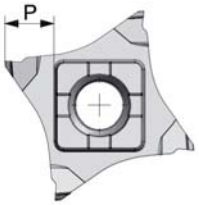
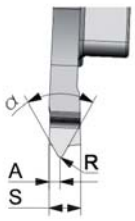
MULTICUT 4 - Precision threading inserts external for ISO- and withworth full profile



OFQ16L...EL

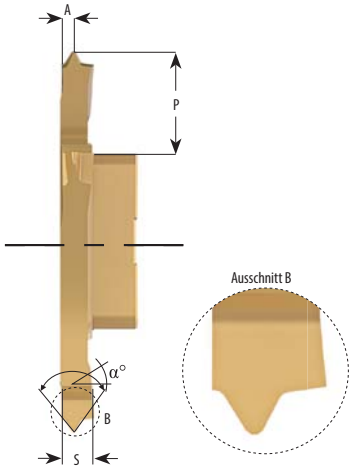




Enlarged view

PRODDES	IDNR	IDNR	IIC	IH	TPN	PDX	CRE	CDX	CW	PNA
WG400 Ref.	FM NANOSPEED	FM TILOX	pocket size			A	R	P	S	α°
	P M N S	P M K S								
OFQ16L 200 050 EL ISO	31418	31419	16L	L	0,50	0,5	0,07	6,5	2,0	60
OFQ16L 200 070 EL ISO	31420	31421	16L	L	0,70	0,5	0,10	6,5	2,0	60
OFQ16L 200 075 EL ISO	31422	31423	16L	L	0,75	0,5	0,11	6,5	2,0	60
OFQ16L 200 080 EL ISO	31424	31425	16L	L	0,80	0,7	0,12	6,5	2,0	60
OFQ16L 200 100 EL ISO	31426	31427	16L	L	1,00	0,7	0,15	6,5	2,0	60
OFQ16L 200 125 EL ISO	31428	31429	16L	L	1,25	0,7	0,18	6,5	2,0	60
OFQ16L 200 28W EL	31430	31431	16L	L	28 G/inch	1,0	0,12	6,5	2,0	55
OFQ16L 200 19W EL	31432	31433	16L	L	19 G/inch	1,0	0,18	6,5	2,0	55
OFQ16L 350 14W EL	31434	31435	16L	L	14 G/inch	1,3	0,25	6,5	3,5	55
OFQ16L 350 11W EL	31436	31437	16L	L	11 G/inch	1,5	0,32	6,5	3,5	55
OFQ16L 350 150 EL ISO	31438	31439	16L	L	1,50	0,8	0,20	6,5	3,5	60
OFQ16L 350 175 EL ISO	31440	31441	16L	L	1,75	0,9	0,25	6,5	3,5	60
OFQ16L 350 200 EL ISO	31442	31443	16L	L	2,00	1,0	0,29	6,5	3,5	60
OFQ16L 350 250 EL ISO	37451	34994	16L	L	2,50	1,3	0,36	6,5	3,5	60
OFQ16L 350 300 EL ISO	37452	34995	16L	L	3,00	1,8	0,43	6,5	3,5	60

Delievery time and price on request, minimum purchase 3 pieces.



Precision ground threading inserts for external threads

The vertical position of the insert, its positive top rake, large chip chambers, large front clearance and coated micrograin carbide together create perfect conditions for difficult threading operations.

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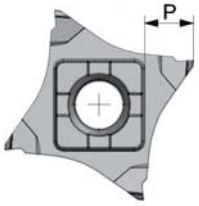
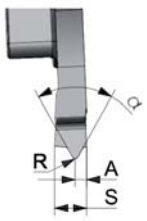
MULTICUT 4 - Precision threading inserts external for ISO- and Withworth full profile

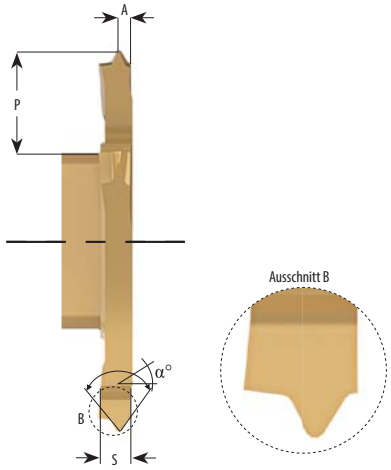
OFQ16R...ER





Enlarged view

PRODDES	IDNR	IDNR	IIC	IH	TPN	PDX	CRE	CDX	CW	PNA
WG400 Ref.	FM NANOSPEED	FM TILOX	pocket size			A	R	P	S	
	P M N S	P M K S								
OFQ16R 200 050 ER ISO	31294	31297	16R	R	0,50	0,5	0,07	6,5	2,0	60
OFQ16R 200 070 ER ISO	31298	31299	16R	R	0,70	0,5	0,10	6,5	2,0	60
OFQ16R 200 075 ER ISO	31393	31394	16R	R	0,75	0,5	0,11	6,5	2,0	60
OFQ16R 200 080 ER ISO	31395	31396	16R	R	0,80	0,7	0,12	6,5	2,0	60
OFQ16R 200 100 ER ISO	31397	31400	16R	R	1,00	0,7	0,15	6,5	2,0	60
OFQ16R 200 125 ER ISO	31401	31402	16R	R	1,25	0,7	0,18	6,5	2,0	60
OFQ16R 200 28W ER	31403	31404	16R	R	28 G/inch	1,0	0,12	6,5	2,0	55
OFQ16R 200 19W ER	31405	31406	16R	R	19 G/inch	1,0	0,18	6,5	2,0	55
OFQ16R 350 14W ER	31407	31408	16R	R	14 G/inch	1,3	0,25	6,5	3,5	55
OFQ16R 350 11W ER	31409	31410	16R	R	11 G/inch	1,5	0,32	6,5	3,5	55
OFQ16R 350 150 ER ISO	31411	31412	16R	R	1,50	0,8	0,20	6,5	3,5	60
OFQ16R 350 175 ER ISO	31413	31414	16R	R	1,75	0,9	0,25	6,5	3,5	60
OFQ16R 350 200 ER ISO	31415	31417	16R	R	2,00	1,0	0,29	6,5	3,5	60
OFQ16R 350 250 ER ISO	37450	34992	16R	R	2,50	1,3	0,36	6,5	3,5	60
OFQ16R 350 300 ER ISO	34130	34993	16R	R	3,00	1,8	0,43	6,5	3,5	60



Precision ground threading inserts for external threads

The vertical position of the insert, its positive top rake, large chip chambers, large front clearance and coated micrograin carbide together create perfect conditions for difficult threading operation

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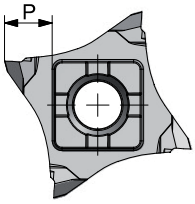
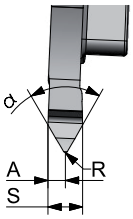
MULTICUT 4 - Precision threading inserts external for ISO- and Withworth full profile

OFQ16L...EIR



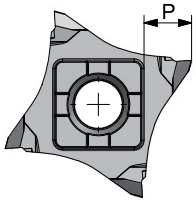


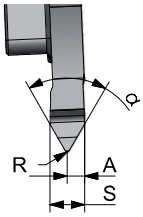
Enlarged view

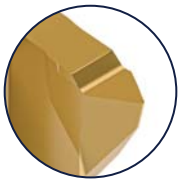
PRODDES	IDNR	IDNR	IIC	IH	TPN	PDX	CRE	CDX	CW	PNA
WG400 Ref.	FM NANOSPEED	FM TILOX	pocket size			A	R	P	S	α°
	P M N S	P M K S								
OFQ16L 200 EIR55 28 W	43128	43129	16L	L	28-20 G/inch	0,9	0,1	6,5	2,0	55
OFQ16L 200 EIR60 050	43130	43131	16L	L	0,5-1,00	0,9	0,1	6,5	2,0	60
OFQ16L 250 EIR55 19 W	43132	43133	16L	L	19-14 G/inch	1,2	0,2	6,5	2,5	55
OFQ16L 250 EIR60 125	43134	43135	16L	L	1,25-1,75	1,2	0,2	6,5	2,5	60
OFQ16L 350 EIR55 12 W	43136	43137	16L	L	12-10 G/inch	1,8	0,3	6,5	3,5	55
OFQ16L 350 EIR60 200	43138	43139	16L	L	2,00-3,00	1,8	0,3	6,5	3,5	60

Delievery time and price on request, minimum purchase 3 pieces

OFQ16R...EIR







Enlarged view

PRODDES	IDNR	IDNR	IIC	IH	TPN	PDX	CRE	CDX	CW	PNA
WG400 Ref.	FM NANOSPEED	FM TILOX	pocket size			A	R	P	S	α°
	P M N S	P M K S								
OFQ16R 200 EIR55 28 W	43140	43141	16R	R	28-20 G/inch	0,9	0,1	6,5	2,0	55
OFQ16R 200 EIR60 050	43142	43143	16R	R	0,5-1,00	0,9	0,1	6,5	2,0	60
OFQ16R 250 EIR55 19 W	43144	43145	16R	R	19-14 G/inch	1,2	0,2	6,5	2,5	55
OFQ16R 250 EIR60 125	43146	43147	16R	R	1,25-1,75	1,2	0,2	6,5	2,5	60
OFQ16R 350 EIR55 12 W	43148	43149	16R	R	12-10 G/inch	1,8	0,3	6,5	3,5	55
OFQ16R 350 EIR60 200	43150	43151	16R	R	2,00-3,00	1,8	0,3	6,5	3,5	60

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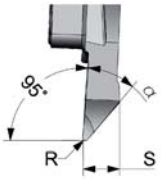
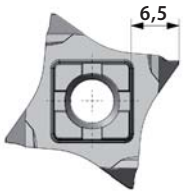
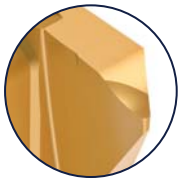
MULTICUT 4 - ISO | Profiling inserts for finishing

OFQ16R...IVR/L

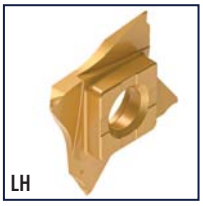




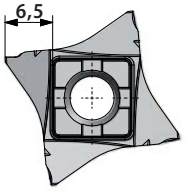


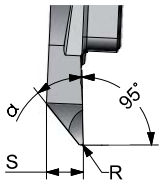
Enlarged view

PRODDES	IDNR	IDNR	IIC	IH	PDPT	RER/REL	CW	KCHR	KCHL
WG400 Ref.	FM NANOSPEED	FM ALUSPEED	pocket size		P	R	S	α° R	α° L
	P M N S	N S							
OFQ16R 270 020IVL	62775	62779	16R	R	0,75	0,20	2,70	35	-
OFQ16R 270 020IVR	62776	62780	16R	R	0,75	0,20	2,70	35	-



OFQ16L...IVR/L





Enlarged view

PRODDES	IDNR	IDNR	IIC	IH	PDPT	RER/REL	CW	KCHR	KCHL
WG400 Ref.	FM NANOSPEED	FM ALUSPEED	pocket size		P	R	S	α° R	α° L
	P M N S	N S							
OFQ16L 270 020IVL	62770	62777	16L	L	0,75	0,20	2,70	-	35
OFQ16L 270 020IVR	62774	62778	16L	L	0,75	0,20	2,70	-	35

Comment

Segmented and ground micro-grain insert.

ISO V type 35 degree.

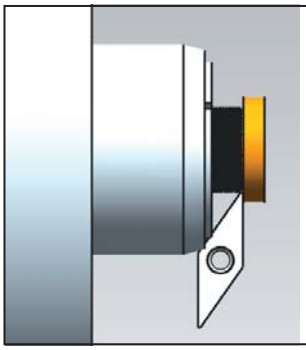

L - L


L - R


R - R

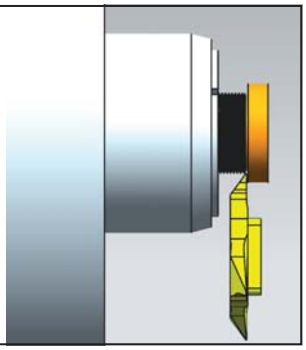

R - L

- Tight and narrow cutting areas (e.g. near to the working spindle)
- Finishing and profile turning with low cutting depths
- Face turning/thread clearance
- Difficult materials such as titanium or aluminum alloys
- Components with high surface quality



Profiling in tight spaces with ISO standard insert.

Profiling in tight spaces with MULTICUT 4 ISO insert for finishing.



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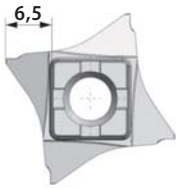
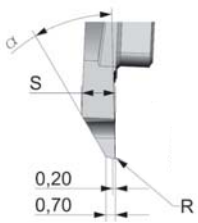
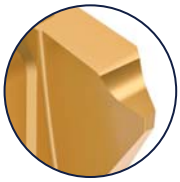
MULTICUT 4 - DECOLLETAGE | Profiling inserts for back turning

OFQ16R...DECO L





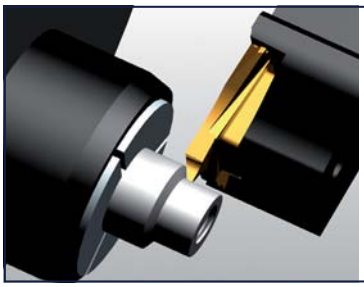


Enlarged view

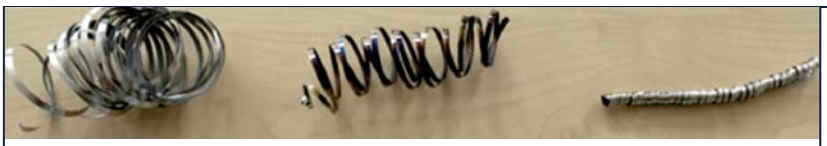
PRODDES	IDNR	IIC	IH	PDPT	RER/REL	CW	KCHR	KCHL
WG400 Ref.	FM NANOSPEED	pocket size		P	R	S	α° R	α° L
	P M N S							
OFQ 16L 250 005 DECO R	62877	16L	L	1,20	0,05	2,50	-	28
OFQ16R 250 005 DECO L	62878	16R	R	1,20	0,05	2,50	28	-

Comment

Segmented and ground micro-grain insert. **DECO type.**



- Back turning operations in tight areas and long turning machines.
- Roughing and finishing
- Average cutting depths (ap = 1-2 mm)
- Perfect chipping
- Steel and alloyed steel



Competitor A | Competitor B | KEMMER

Chipping

Material: 1.7227

ap = 2 mm
f = 0,08 mm/U
vc = 150 m/min

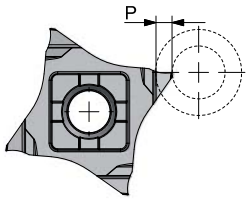
Fitting tools

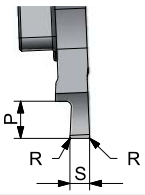
Tech. Section p. 223 | pocket size p. 224 | Intersection main cutting edge p. 228 | p. 47 | p. 48 | p. 48 | p. 184 | p. 198

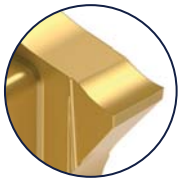
MULTICUT 4 - EXTENDED | Precision grooving inserts up to 4,15 mm width

OFQE16R...N

EXTENDED VERSION





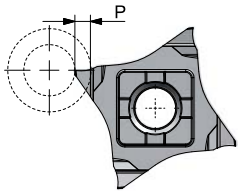


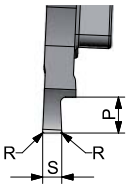
Enlarged view

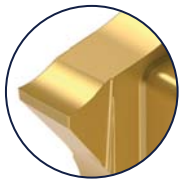
PRODDES	IDNR	IDNR	IIC	IH	PDPT	REL/RER		CW	CWUD	CWLD
WG400 Ref.	FM NANOSPEED	FM TILOX	pocket size		P	R		S	S+	S-
	P M N S	P M K S								
OFQE16R 415 010 N	65565	65566	16ER	R	3,5	0,10	4,15	4,29	0,00	0,05

OFQE16L...N

EXTENDED VERSION







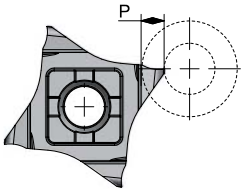
Enlarged view

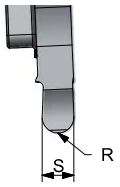
PRODDES	IDNR	IDNR	IIC	IH	PDPT	REL/RER		CW	CWUD	CWLD
WG400 Ref.	FM NANOSPEED	FM TILOX	pocket size		P	R		S	S+	S-
	P M N S	P M K S								
OFQE16L 415 010 N	65563	65564	16EL	L	3,5	0,10	4,15	4,29	0,00	0,05

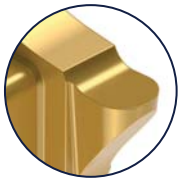
MULTICUT 4 - EXTENDED | Fullradius inserts for grooving and copying up to 6 mm width

OFQE16R..R..N

EXTENDED VERSION





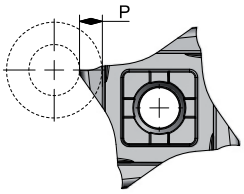


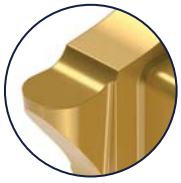
Enlarged view

PRODDES	IDNR	IDNR	IIC	IH	PDPT	CRE	CW	CWUD	CWLD
WG400 Ref.	FM NANOSPEED	FM TILOX	pocket size		P	R	S	S+	S-
	P M N S	P M K S							
OFQE16R 400 R200 N	64822	65557	16ER	R	4,0	2,00	4,00	0,05	0,00
OFQE16R 500 R250 N	65558	65560	16ER	R	4,0	2,50	5,00	0,05	0,00
OFQE16R 600 R300 N	65561	65562	16ER	R	4,0	3,00	6,00	0,05	0,00

OFQE16L..R..N

EXTENDED VERSION





Enlarged view

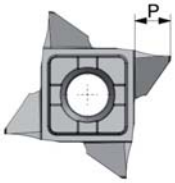
PRODDES	IDNR	IDNR	IIC	IH	PDPT	CRE	CW	CWUD	CWLD
WG400 Ref.	FM NANOSPEED	FM TILOX	pocket size		P	R	S	S+	S-
	P M N S	P M K S							
OFQE16L 400 R200 N	64821	65552	16EL	L	4,0	2,00	4,00	0,05	0,00
OFQE16L 500 R250 N	65553	65554	16EL	L	4,0	2,50	5,00	0,05	0,00
OFQE16L 600 R300 N	65555	65556	16EL	L	4,0	3,00	6,00	0,05	0,00

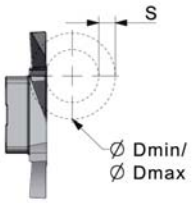
Fitting tools see notice on page 41

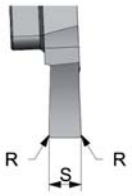
MULTICUT 4 - EXTENDED | Inserts for face grooving up to 5 mm width

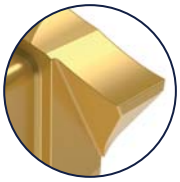
OFQE16R...A

EXTENDED VERSION



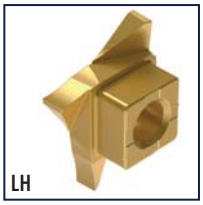






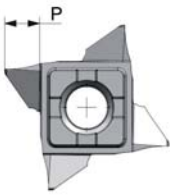
Enlarged view

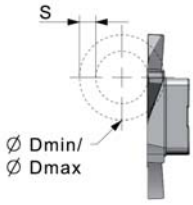
PRODDES	IDNR	IDNR	IDNR	IIC	IH	DAXN	DAXX	PDPT	REL/RER	CW	CWUD	CWLD
WG400 Ref.	KM	KM NANOSPEED	KM CARBOSX2	pocket size		D min	D max	P	R	S	S+	S-
	N	P M N S	P S									
OFQE16R 400 020 A 50	65573	65574	65576	16ER	R	20	∞	5,0	0,20	4,00	0,05	0,00
OFQE16R 500 020 A 50	65578	65579	65580	16ER	R	20	∞	5,0	0,20	5,00	0,05	0,00

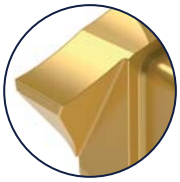


OFQE16L...A

EXTENDED VERSION







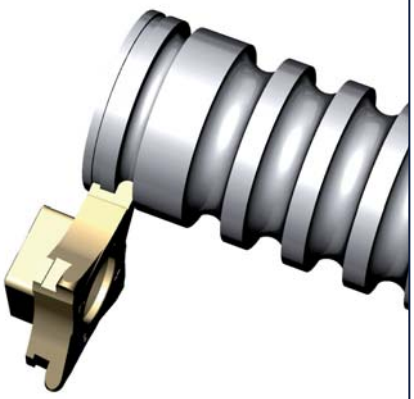
Enlarged view

PRODDES	IDNR	IDNR	IDNR	IIC	IH	DAXN	DAXX	PDPT	REL/RER	CW	CWUD	CWLD
WG400 Ref.	KM	KM NANOSPEED	KM CARBOSX2	pocket size		D min	D max	P	R	S	S+	S-
	N	P M N S	P S									
OFQE16L 400 020 A 50	65567	65568	65569	16EL	L	20	∞	5,0	0,20	4,00	0,05	0,00
OFQE16L 500 020 A 50	65570	65571	65572	16EL	L	20	∞	5,0	0,20	5,00	0,05	0,00

EXTENDED possibilities

4 edges special profiles up to 6,5 mm width.

Your inquiry



Fitting tools

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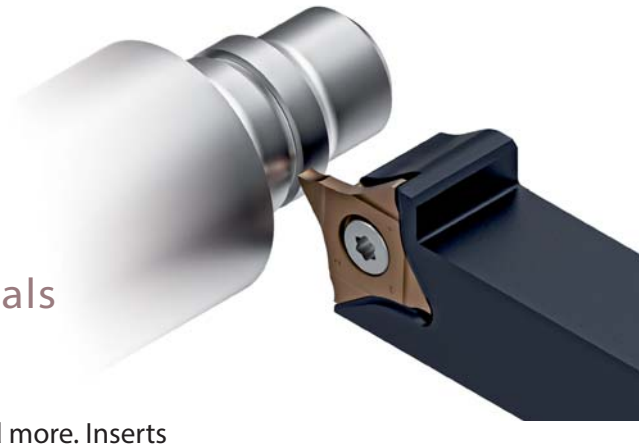
Hard material machining

Inserts, coating and tool holders for parting off, grooving and turning

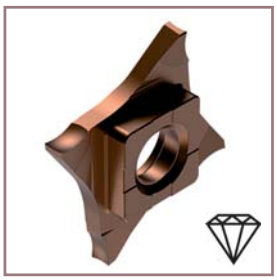
Inserts with efficient chip breakers and special coating HARD SX3 for:

- hardened materials
- surface hardened materials
- exotic and tempered materials

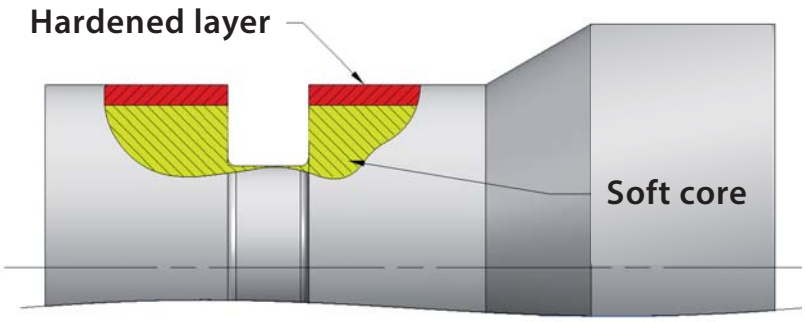


Machining materials with a Rockwell hardness of 54 and more. Inserts and holders are stressed heavily on such operations.
Therefore starting-up speeds, feeds and depths should be low graded.

HARD SX3

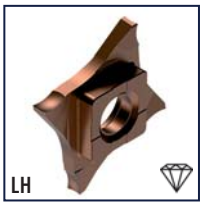


- Polished edges and surfaces
- Low price alternative compared with CBN tipped inserts
- To be used on unhardened steels as well
- Multi edge inserts available
- Constant performance when cutting from hard layer into soft core

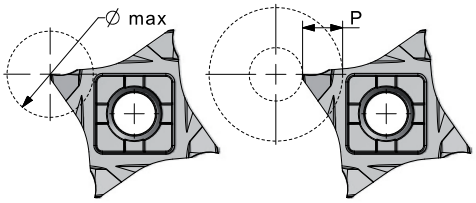


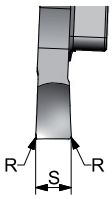
Remark: Other cutting widths and special profiles with HARD SX3 on request.

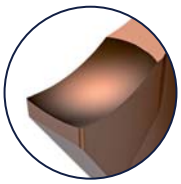
MULTICUT 4 Inserts for grooving and parting off | Hard material machining



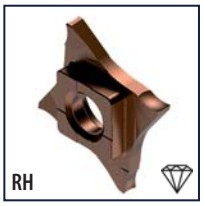
OFQ16 L...N00



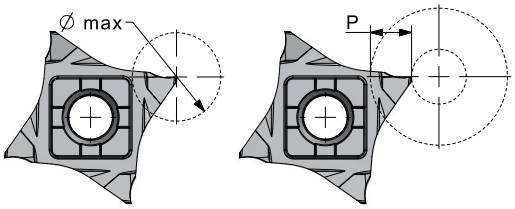


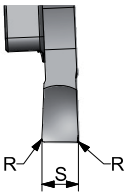


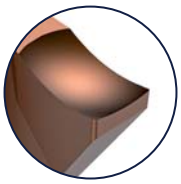
PRODDES	IDNR	IIC	IH	PDPT	REL/RER	CW	CWUD	CWLD	
WG404 Ref.	FM HARDSX3	pocket size		P	R	S	S+	S-	Ømax.
	H S								
OFQ16L 100 000 N 00	65335	16L	N	3,5	0,00	1,00	0,05	0,00	7,0
OFQ16L 120 000 N 00	65339	16L	N	6,5	0,00	1,20	0,05	0,00	13,0
OFQ16L 150 010 N 00	65341	16L	N	6,5	0,10	1,50	0,05	0,00	13,0
OFQ16L 200 010 N 00	65345	16L	N	6,5	0,10	2,00	0,05	0,00	13,0
OFQ16L 200 020 N 00	65346	16L	N	6,5	0,20	2,00	0,05	0,00	13,0
OFQ16L 250 010 N 00	65349	16L	N	6,5	0,10	2,50	0,05	0,00	13,0
OFQ16L 250 020 N 00	65350	16L	N	6,5	0,20	2,50	0,05	0,00	13,0
OFQ16L 300 010 N 00	65353	16L	N	6,5	0,10	3,00	0,05	0,00	13,0
OFQ16L 300 020 N 00	65354	16L	N	6,5	0,20	3,00	0,05	0,00	13,0



OFQ16 R...N00







PRODDES	IDNR	IIC	IH	PDPT	REL/RER	CW	CWUD	CWLD	
WG404 Ref.	FM HARDSX3	pocket size		P	R	S	S+	S-	Ømax.
	H S								
OFQ16R 100 000 N 00	65362	16R	N	3,5	0,00	1,00	0,05	0,00	7,0
OFQ16R 120 000 N 00	65366	16R	N	6,5	0,00	1,20	0,05	0,00	13,0
OFQ16R 150 010 N 00	65368	16R	N	6,5	0,10	1,50	0,05	0,00	13,0
OFQ16R 200 010 N 00	65372	16R	N	6,5	0,10	2,00	0,05	0,00	13,0
OFQ16R 200 020 N 00	65373	16R	N	6,5	0,20	2,00	0,05	0,00	13,0
OFQ16R 250 010 N 00	65384	16R	N	6,5	0,10	2,50	0,05	0,00	13,0
OFQ16R 250 020 N 00	65385	16R	N	6,5	0,20	2,50	0,05	0,00	13,0
OFQ16R 300 010 N 00	65388	16R	N	6,5	0,10	3,00	0,05	0,00	13,0
OFQ16R 300 020 N 00	65389	16R	N	6,5	0,20	3,00	0,05	0,00	13,0

Fitting tools

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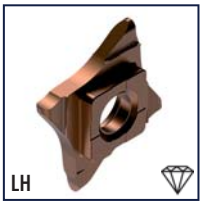
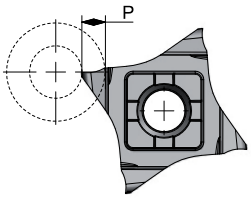
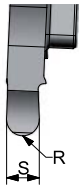
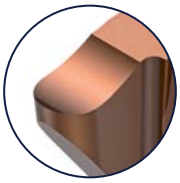
MULTICUT 4 - Full radius insert for grooving and copying | Hard material machining



OFQ16L..R..N





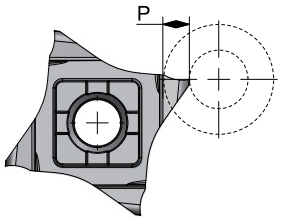


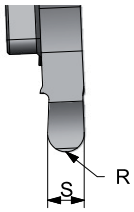
PRODDES	IDNR	IIC	IH	PDPT	CRE	CW	CWUD	CWLD
WG404 Ref.	FM HARDSX3	pocket size		P	R	S	S+	S-
	H S							
OFQ16L 100 R050 N	65337	16L	N	1,0	0,50	1,00	0,05	0,00
OFQ16L 150 R075 N	65342	16L	N	1,5	0,75	1,50	0,05	0,00
OFQ16L 200 R100 N	65347	16L	N	2,0	1,00	2,00	0,05	0,00
OFQ16L 250 R125 N	65351	16L	N	2,5	1,25	2,50	0,05	0,00
OFQ16L 300 R150 N	65355	16L	N	3,0	1,50	3,00	0,05	0,00

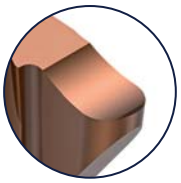
Comment:

Segmented and ground micrograin insert.
Horizontal cutting edge and positive top rake.

OFQ16R..R..N







PRODDES	IDNR	IIC	IH	PDPT	CRE	CW	CWUD	CWLD
WG404 Ref.	FM HARDSX3	pocket size		P	R	S	S+	S-
	H S							
OFQ16R 100 R050 N	65364	16R	N	1,0	0,50	1,00	0,05	0,00
OFQ16R 150 R075 N	65369	16R	N	1,5	0,75	1,50	0,05	0,00
OFQ16R 200 R100 N	65382	16R	N	2,0	1,00	2,00	0,05	0,00
OFQ16R 250 R125 N	65386	16R	N	2,5	1,25	2,50	0,05	0,00
OFQ16R 300 R150 N	65390	16R	N	3,0	1,50	3,00	0,05	0,00

Comment:

Segmented and ground micrograin insert.
Horizontal cutting edge and positive top rake.

Fitting tools

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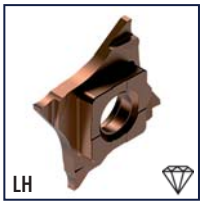
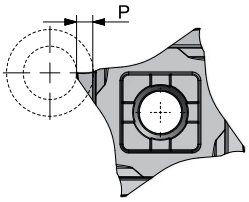
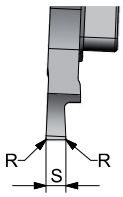
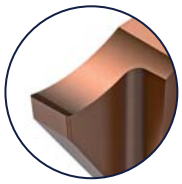
MULTICUT 4 - Precision grooving inserts according to DIN 471 | Hard material machining



OFQ16 L...N

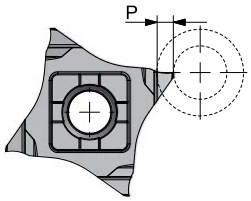


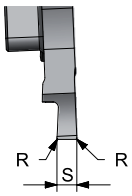


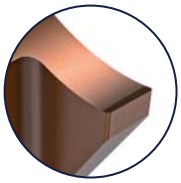


PRODDES	IDNR	IIC	IH	PDPT	REL/RER		CW	CWUD	CWLD
WG404 Ref.	FM HARDSX3	pocket size		P	R		S	S+	S-
	H S								
OFQ16L 050 000 N	65330	16L	N	1,0	0,00	0,50	0,57	0	0,05
OFQ16L 060 000 N	65331	16L	N	1,0	0,00	0,60	0,67	0	0,05
OFQ16L 070 000 N	65332	16L	N	1,5	0,00	0,70	0,77	0	0,05
OFQ16L 080 000 N	65333	16L	N	1,5	0,00	0,80	0,87	0	0,05
OFQ16L 090 000 N	65334	16L	N	1,5	0,00	0,90	0,97	0	0,05
OFQ16L 100 000 N	65336	16L	N	1,5	0,00	1,00	1,07	0	0,05
OFQ16L 110 010 N	65338	16L	N	1,5	0,10	1,10	1,24	0	0,05
OFQ16L 130 010 N	65340	16L	N	1,5	0,10	1,30	1,44	0	0,05
OFQ16L 160 010 N	65343	16L	N	2,0	0,10	1,60	1,74	0	0,05
OFQ16L 185 010 N	65344	16L	N	2,0	0,10	1,85	1,99	0	0,05
OFQ16L 215 010 N	65348	16L	N	2,5	0,10	2,15	2,29	0	0,05
OFQ16L 265 010 N	65352	16L	N	2,5	0,10	2,65	2,79	0	0,05
OFQ16L 315 010 N	65356	16L	N	2,5	0,10	3,15	3,29	0	0,05

OFQ16 R...N







PRODDES	IDNR	IIC	IH	PDPT	REL/RER		CW	CWUD	CWLD
WG404 Ref.	FM HARDSX3	pocket size		P	R		S	S+	S-
	H S								
OFQ16R 050 000 N	65357	16R	N	1,0	0,00	0,50	0,57	0	0,05
OFQ16R 060 000 N	65358	16R	N	1,0	0,00	0,60	0,67	0	0,05
OFQ16R 070 000 N	65359	16R	N	1,5	0,00	0,70	0,77	0	0,05
OFQ16R 080 000 N	65360	16R	N	1,5	0,00	0,80	0,87	0	0,05
OFQ16R 090 000 N	65361	16R	N	1,5	0,00	0,90	0,97	0	0,05
OFQ16R 100 000 N	65363	16R	N	1,5	0,00	1,00	1,07	0	0,05
OFQ16R 110 010 N	65365	16R	N	1,5	0,10	1,10	1,24	0	0,05
OFQ16R 130 010 N	65367	16R	N	1,5	0,10	1,30	1,44	0	0,05
OFQ16R 160 010 N	65370	16R	N	2,0	0,10	1,60	1,74	0	0,05
OFQ16R 185 010 N	65371	16R	N	2,0	0,10	1,85	1,99	0	0,05
OFQ16R 215 010 N	65383	16R	N	2,5	0,10	2,15	2,29	0	0,05
OFQ16R 265 010 N	65387	16R	N	2,5	0,10	2,65	2,79	0	0,05
OFQ16R 315 010 N	65391	16R	N	2,5	0,10	3,15	3,29	0	0,05

Fitting tools

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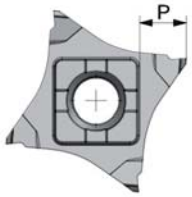
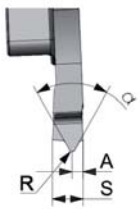
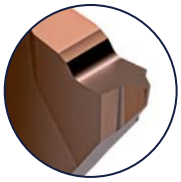
MULTICUT 4 - Precision threading inserts external for ISO - & Whitworth full profile | hard machining

OFQ16R...ER





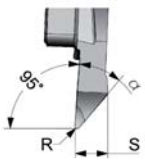


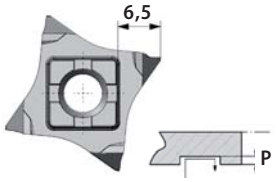
PRODDES	IDNR	IIC	IH	TPN	PDX	CRE	CDX	CW	PNA
WG404 Ref.	FM HARDSX3	pocket size			A	R	P	S	α°
	H S								
OFQ16R 200 050 ER ISO	65374	16R	R	0,50	0,5	0,07	6,5	2,0	60
OFQ16R 200 070 ER ISO	65375	16R	R	0,70	0,5	0,10	6,5	2,0	60
OFQ16R 200 075 ER ISO	65376	16R	R	0,75	0,5	0,11	6,5	2,0	60
OFQ16R 200 080 ER ISO	65377	16R	R	0,80	0,7	0,12	6,5	2,0	60
OFQ16R 200 100 ER ISO	65378	16R	R	1,00	0,7	0,15	6,5	2,0	60
OFQ16R 200 125 ER ISO	65379	16R	R	1,25	0,7	0,18	6,5	2,0	60
OFQ16R 200 28W ER	65381	16R	R	28 G/inch	1,0	0,12	6,5	2,0	55
OFQ16R 200 19W ER	65380	16R	R	19 G/inch	1,0	0,18	6,5	2,0	55
OFQ16R 350 14W ER	65393	16R	R	14 G/inch	1,3	0,25	6,5	3,5	55
OFQ16R 350 11W ER	65392	16R	R	11 G/inch	1,5	0,32	6,5	3,5	55
OFQ16R 350 150 ER ISO	65394	16R	R	1,50	0,8	0,20	6,5	3,5	60
OFQ16R 350 175 ER ISO	65395	16R	R	1,75	0,9	0,25	6,5	3,5	60
OFQ16R 350 200 ER ISO	65396	16R	R	2,00	1,0	0,29	6,5	3,5	60
OFQ16R 350 250 ER ISO	65397	16R	R	2,50	1,3	0,36	6,5	3,5	60
OFQ16R 350 300 ER ISO	65398	16R	R	3,00	1,8	0,43	6,5	3,5	60

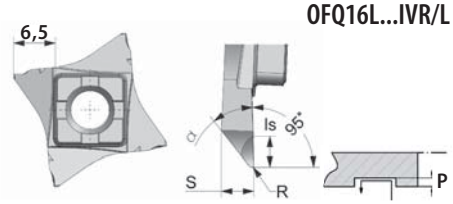
Comment: LH inserts on request.

MULTICUT 4 - ISO | Profiling inserts for finishing

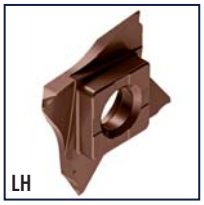
OFQ16R...IVR/L







OFQ16L...IVR/L



PRODDES	IDNR	IIC	IH	PDPT	RER/REL	CW	KCHR	KCHL
WG400 Ref.	FM HARD SX3	pocket size		P	R	S	α° R	α° L
	H S							
OFQ16L 270 020IVL	62790	16L	L	0,75	0,20	2,70	-	35
OFQ16L 270 020IVR	62791	16L	L	0,75	0,20	2,70	-	35
OFQ16R 270 020IVL	62789	16R	R	0,75	0,20	2,70	35	-
OFQ16R 270 020IVR	62788	16R	R	0,75	0,20	2,70	35	-


L - L


L - R


R - R


R - L

Comment: Examples for application see page 38.

Fitting tools

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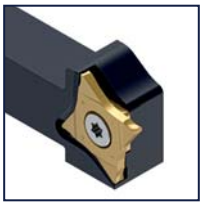
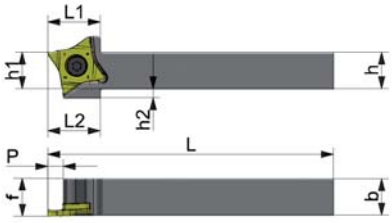
MULTICUT 4 - holders for cutting, threading and precision grooving inserts



M92 Q FXCB L

LH holders
for LH inserts

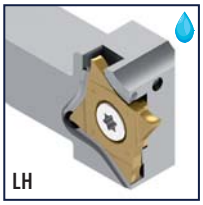


M92 Q FXCB R

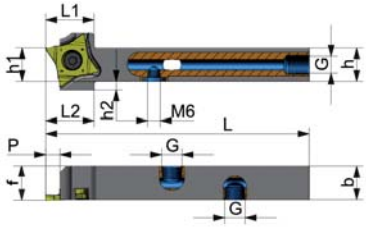
RH holders
for RH inserts

PRODDES	IDNR	MIID	Hand	H	HF		B	WF	CDX	OAL	LH	LTA	
WG402 Ref.	ID-Nr.	pocket size		h	h1	h2	b	f	P	L	L1	L2	
M92 Q FXCBL 1012 K16	30306	16L	L	10	10	10	12	12,3	6,5	125	23	27	34+39+40
M92 Q FXCBL 1212 K16	30312	16L	L	12	12	8	12	12,3	6,5	125	23	27	34+39+40
M92 Q FXCBL 1616 K16	30316	16L	L	16	16	4	16	16,3	6,5	125	23	23	33+39+40
M92 Q FXCBL 2020 K16	29120	16L	L	20	20	-	20	20,3	6,5	125	23	-	33+39+40
M92 Q FXCBL 2525 M16	30320	16L	L	25	25	-	25	25,3	6,5	150	23	-	33+39+40
M92 Q FXCBR 1012 K16	30324	16R	R	10	10	10	12	12,3	6,5	125	23	27	34+39+40
M92 Q FXCBR 1212 K16	30328	16R	R	12	12	8	12	12,3	6,5	125	23	27	34+39+40
M92 Q FXCBR 1616 K16	30332	16R	R	16	16	4	16	16,3	6,5	125	23	23	33+39+40
M92 Q FXCBR 2020 K16	30302	16R	R	20	20	-	20	20,3	6,5	125	23	-	33+39+40
M92 Q FXCBR 2525 M16	30336	16R	R	25	25	-	25	25,3	6,5	150	23	-	33+39+40

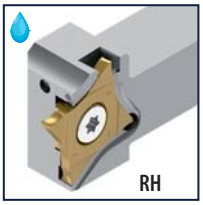
MULTICUT 4 - Holder with internal cooling for grooving, threading and precision grooving



M92 Q FXCBL HP



M92 Q FXCBR HP



PRODDES	IDNR	MIID	Hand		H	HF		B	WF	CDX	OAL	LH	LTA	
WG4020 Ref.	ID-Nr.	pocket size		G	h	h1	h2	b	f	P	L	L1	L2	
M92 Q FXCBL 1212 K16HPM8x1	56581	16L	L	M8x1	12	12	8	12	12,3	6,5	125	23,0	27	34+39+40
M92 Q FXCBL 1616 K16HPG1/8	56585	16L	L	G1/8	16	16	4	16	16,3	6,5	125	23,0	19,5	33+39+40
M92 Q FXCBL 2020 K16HPG1/8	56587	16L	L	G1/8	20	20	-	20	20,3	6,5	125	23,0	-	33+39+40
M92 Q FXCBL 2525 M16HPG1/8	56590	16L	L	G1/8	25	25	-	25	25,3	6,5	150	23,0	-	33+39+40
M92 Q FXCBR 1212 K16HPM8x1	56584	16R	R	M8x1	12	12	8	12	12,3	6,5	125	23,0	27	34+39+40
M92 Q FXCBR 1616 K16HPG1/8	56586	16R	R	G1/8	16	16	4	16	16,3	6,5	125	23,0	19,5	33+39+40
M92 Q FXCBR 2020 K16HPG1/8	56588	16R	R	G1/8	20	20	-	20	20,3	6,5	125	23,0	-	33+39+40
M92 Q FXCBR 2525 M16HPG1/8	56591	16R	R	G1/8	25	25	-	25	25,3	6,5	150	23,0	-	33+39+40

Remark:
Only RH inserts will fit into RH tool holders and blades. Only RH inserts will fit into RH tool holders and blades.

How to order: recommended

1 St. M92 Q FXCB**R** 1012 K16 or: **1 St. ID-Nr. 30324**

5 St. OFQ 16**R** 050 000N FM TILOX or: **5 St. ID-Nr. 31128**

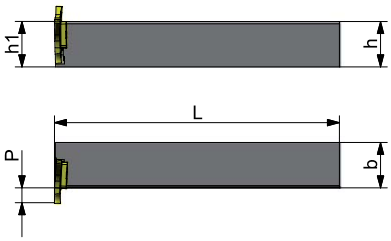
Fitting inserts

Torque p. 220, 221, 245 | Tech. Section p. 223 | pocket size p. 224 | Intersection main cutting edge p. 228 | p. 29 + 30 | p. 31 | p. 32 | p. 33 | p. 34 | p. 35-37 | p.38 | Hard material machining p. 42-46

MULTICUT 4 - 90° holders for many different turning applications

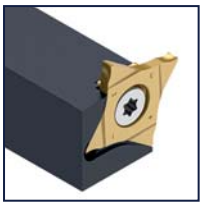
M92 Q 90 FXCBL

LH holder
for RH inserts



M92 Q 90 FXCBR

RH holder
for LH inserts

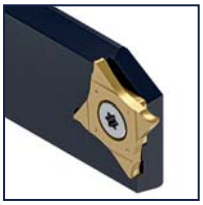


PRODDES	IDNR	MIID	Hand	H	HF	B	CDX	OAL	
WG402 Ref.	ID-Nr.	pocket size		h	h1	b	P	L	
M92 Q 90 FXCBL 2020 K16	43343	16L	L	20	20	20	6,5	125	33+39+40
M92 Q 90 FXCBR 2020 K16	43342	16R	R	20	20	20	6,5	125	33+39+40

Fitting inserts see below

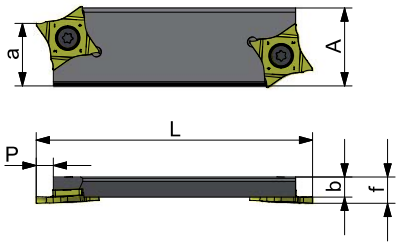
Remark:
Only RH inserts will fit into RH tool holders and blades.
Only RH inserts will fit into RH tool holders and blades.

MULTICUT 4 - Blades for cutting, threading and precision grooving inserts



M92 Q...X..L

LH holder
for RH inserts



M92 Q...X..R

RH holder
for LH inserts

PRODDES	IDNR	MIID	Hand	H	HF	B	WF	CDX	OAL	
WG401 Ref.	ID-Nr.	pocket size		A	a	b	f	P	L	
M92 Q FXCBL 2608 X16L	30349	16L	L	26	21,4	8	10,5	6,5	110	34+39+40
M92 Q FXCBL 3208 X16L	29116	16L	L	32	25,0	8	10,5	6,5	110	34+39+40
M92 Q FXCBR 2608 X16R	30353	16R	R	26	21,4	8	10,5	6,5	110	34+39+40
M92 Q FXCBR 3208 X16R	30345	16R	R	32	25,0	8	10,5	6,5	110	34+39+40

Comment:
Each blade has got **2 insert pockets**.

Remark:
Only RH inserts will fit into RH tool holders and blades.
Only RH inserts will fit into RH tool holders and blades.

How to order: recommended

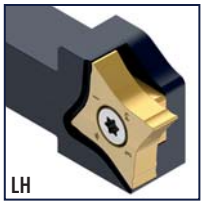
1 St. M92 Q FXCB**R** 2608 X16R or: **1 St. ID-Nr. 30353**

5 St. OFQ 16**R** 050 000N FM TILOX or: **5 St. ID-Nr. 31128**

Fitting inserts

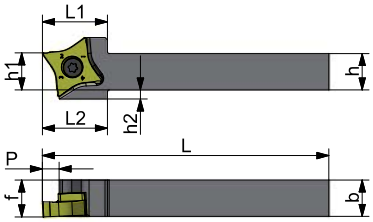
Torque p. 220, 221, 245 | Tech. Section p. 223 | pocket size p. 224 | Intersection main cutting edge p. 228 | p. 29 + 30 | p. 31 | p. 32 | p. 33 | p. 34 | p. 35-37 | p.38, 39 | Hard material machining p. 42-46 | p. 176

MULTICUT 4 - EXTENDED | Holders for EXTENDED inserts

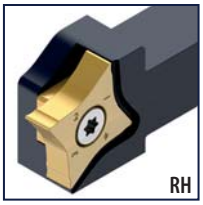


M92 QE FXCBL

EXTENDED VERSION

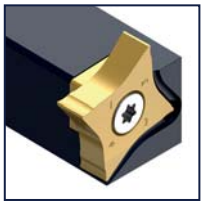


M92 QE FXCBR



PRODDES	IDNR	MIID	Hand	H	HF		B	WF	CDX	OAL	LH	LTA	
WG402 Ref.	ID-Nr.	pocket size		h	h1	h2	b	f	P	L	L1	L2	
M92 QE FXCBL 1616 K16	64580	16EL	L	16	16	4	16	16,3	6,5	125	28,0	28,0	33+39+40
M92 QE FXCBL 2020 K16	64581	16EL	L	20	20	-	20	20,3	6,5	125	28,0	-	33+39+40
M92 QE FXCBL 2525 M16	64582	16EL	L	25	25	-	25	25,3	6,5	150	28,0	-	33+39+40
M92 QE FXCBR 1616 K16	64583	16ER	R	16	16	4	16	16,3	6,5	125	28,0	28,0	33+39+40
M92 QE FXCBR 2020 K16	64584	16ER	R	20	20	-	20	20,3	6,5	125	28,0	-	33+39+40
M92 QE FXCBR 2525 M16	64585	16ER	R	25	25	-	25	25,3	6,5	150	28,0	-	33+39+40

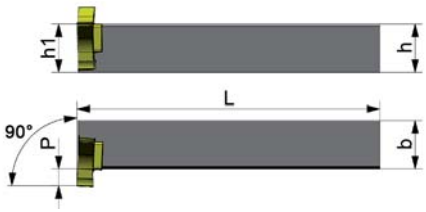
MULTICUT 4 - EXTENDED | 90° Holder for EXTENDED inserts



M92 QE 90 FXCBL

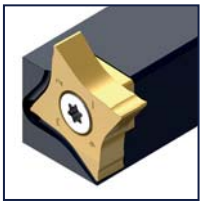
EXTENDED VERSION

LH holder
for RH inserts



M92 QE 90 FXCBR

RH holder
for LH inserts

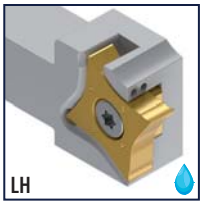


PRODDES	IDNR	MIID	Hand	H	HF	B	CDX	OAL	
WG402 Ref.	ID-Nr.	pocket size		h	h1	b	P	L	
M92 QE 90 FXCBL 2020 K16	64576	16ER	L	20	20	20	6,5	125	33+39+40
M92 QE 90 FXCBL 2525 M16	64577	16ER	L	25	25	25	6,5	150	33+39+41
M92 QE 90 FXCBR 2020 K16	64578	16EL	R	20	20	20	6,5	125	33+39+40
M92 QE 90 FXCBR 2525 M16	64579	16EL	R	25	25	25	6,5	150	33+39+41

Fitting inserts

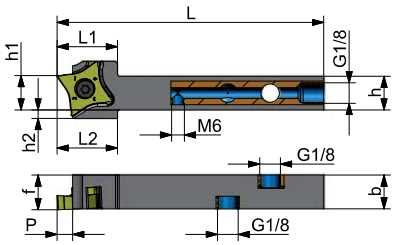
Torque p. 220, 221, 245 | Tech. Section p. 223 | pocket size p. 224 | Intersection main cutting edge p. 228 | p. 40 | p. 40 | p. 41 | p. 40 | Hard material machining p. 42-46

MULTICUT 4 - EXTENDED | Holders with internal coolant for EXTENDED inserts

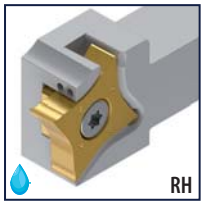


M92 QE FXCBL..HP

EXTENDED VERSION



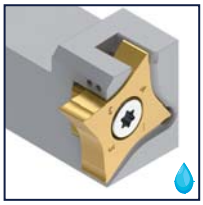
M92 QE FXCBR..HP



PRODDES	IDNR	MIID	Hand	H	HF		B	WF	CDX	OAL	LH	LTA	
WG4020 Ref.	ID-Nr.	pocket size		h	h1	h2	b	f	P	L	L1	L2	
M92 QE FXCBL 1616 K16 HP G1/8	64569	16EL	L	16	16	4	16	16,3	6,5	125	28,0	28,0	33+39+40
M92 QE FXCBL 2020 K16 HP G1/8	64570	16EL	L	20	20	-	20	20,3	6,5	125	28,0	-	33+39+40
M92 QE FXCBL 2525 M16 HP G1/8	64571	16EL	L	25	25	-	25	25,3	6,5	150	28,0	-	33+39+40
M92 QE FXCBR 1616 K16 HP G1/8	64572	16ER	R	16	16	4	16	16,3	6,5	125	28,0	28,0	33+39+40
M92 QE FXCBR 2020 K16 HP G1/8	64573	16ER	R	20	20	-	20	20,3	6,5	125	28,0	-	33+39+40
M92 QE FXCBR 2525 M16 HP G1/8	64574	16ER	R	25	25	-	25	25,3	6,5	150	28,0	-	33+39+40

Fitting inserts see below

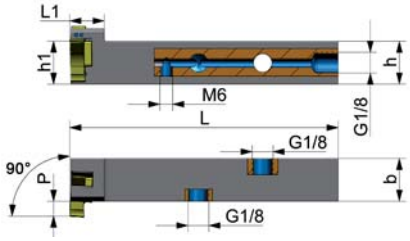
MULTICUT 4 - EXTENDED | 90° Holders with internal coolant for EXTENDED inserts



M92 QE 90 FXCBL..HP

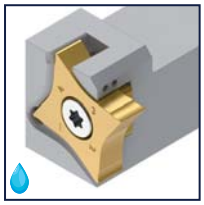
EXTENDED VERSION

LH holder for RH inserts



M92 QE 90 FXCBR..HP

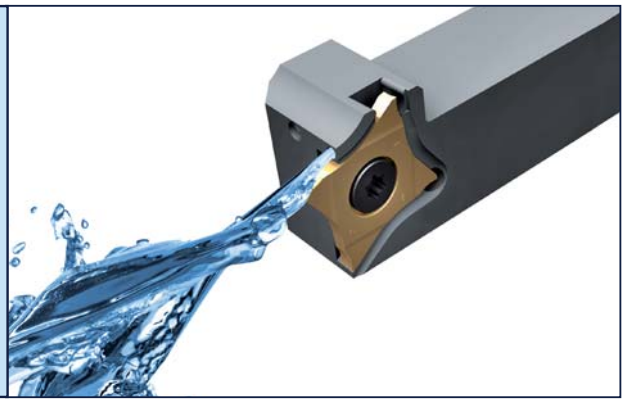
RH holder for LH inserts



PRODDES	IDNR	MIID	Hand	H	HF	B	CDX	OAL	LH	
WG4020 Ref.	ID-Nr.	pocket size		h	h1	b	P	L	L1	
M92 QE90 FXCBL 2020 K16 HP G1/8	64565	16ER	L	20	20	20	6,5	125	16	33+39+40
M92 QE90 FXCBL 2525 M16 HP G1/8	64566	16ER	L	25	25	25	6,5	150	16	33+39+41
M92 QE90 FXCBR 2020 K16 HP G1/8	64567	16EL	R	20	20	20	6,5	125	16	33+39+40
M92 QE90 FXCBR 2525 M16 HP G1/8	64568	16EL	R	25	25	25	6,5	150	16	33+39+41

Advantages of internal coolant

- More efficient cooling of the cutting edge
- Better chip control
- Less heat development



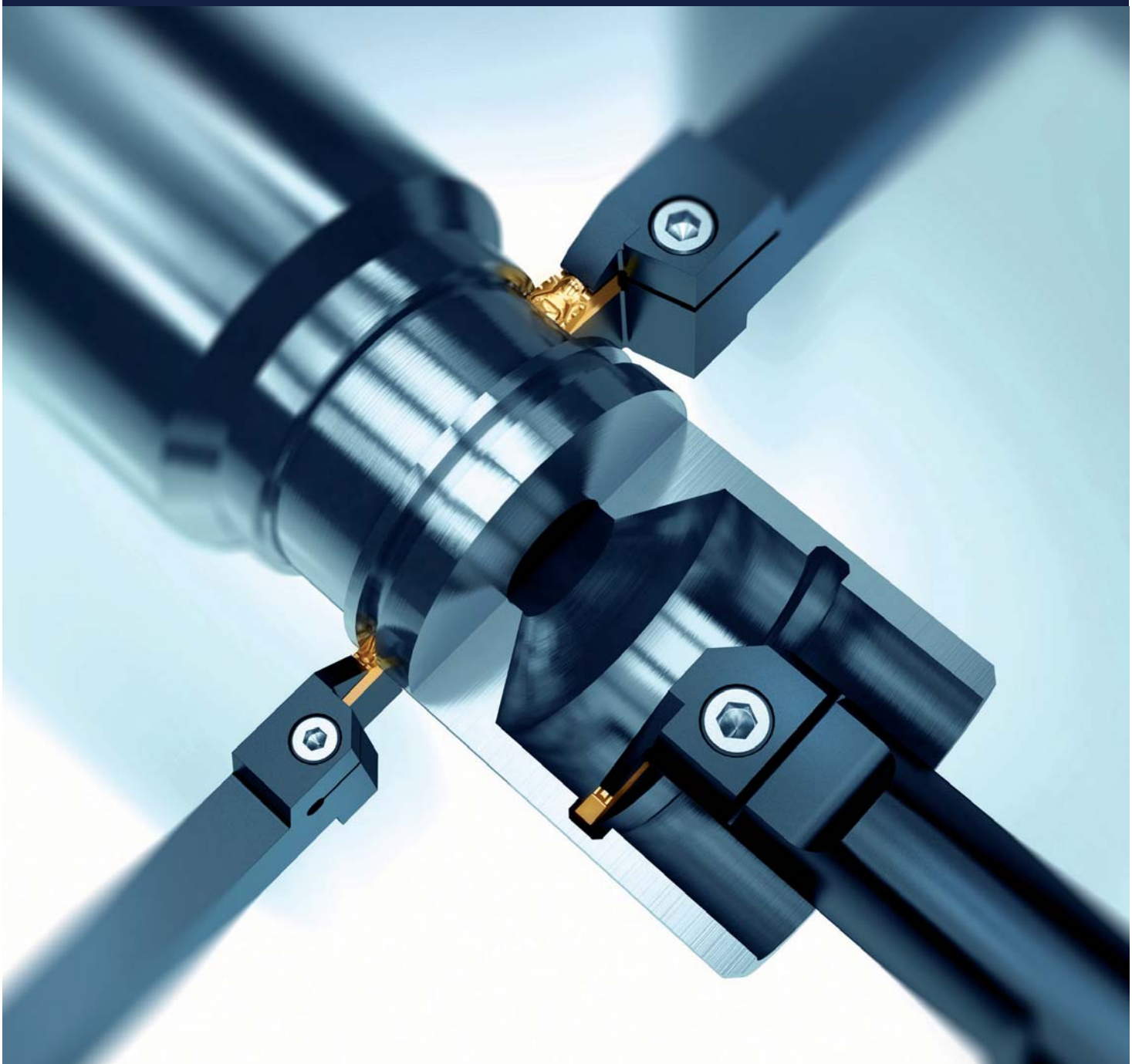
Fitting inserts

Torque p. 220, 221, 245 | Tech. Section p. 223 | pocket size p. 224 | Intersection main cutting edge p. 228 | p. 40 | p. 40 | p. 41 | p.40 | Hard material machining p. 42-46

P92 | Parting off, grooving and turning

A great variety of applications

- Grooving
- Turning
- Copying
- Parting off
- Hard material machining



KEMMER HARTMETALLWERKZEUGE

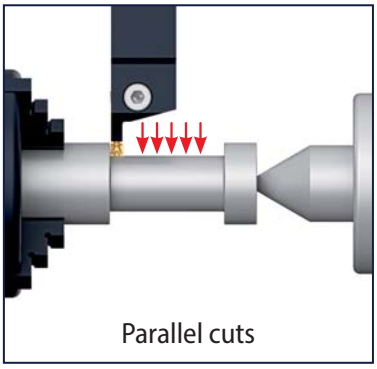
P92 | Parting off, grooving and turning

A great variety of applications

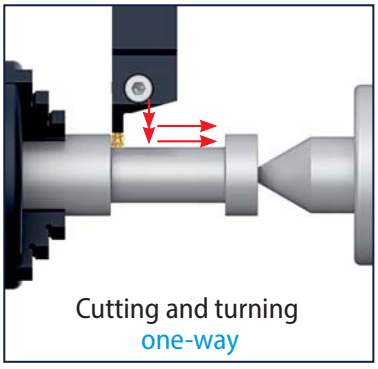
Cutting and turning machining

The major cutting edge cuts a groove and then the minor edge turns in longitudinal direction.

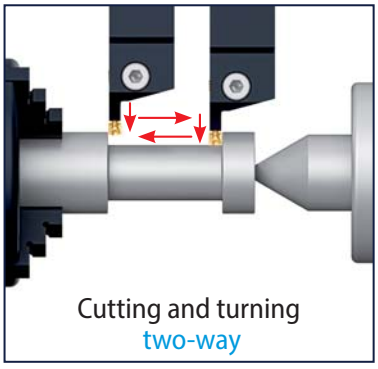
Different methods of cutting and turning



Parallel cuts



Cutting and turning
one-way

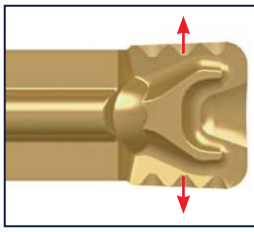


Cutting and turning
two-way

Major cutting edge

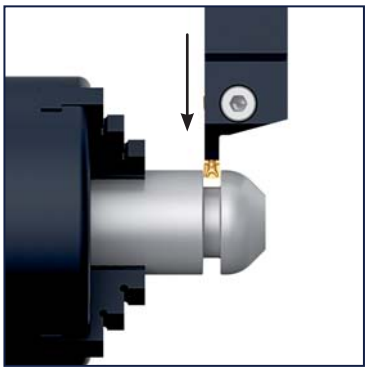
The major cutting edge features an efficient chip breaker for cutting applications.

Minor cutting edge



The minor cutting edges, left and right, feature efficient chip breaker for longitudnial turning.

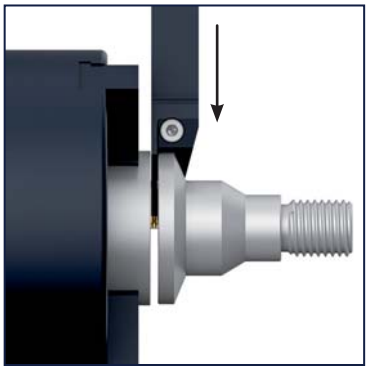
Grooving

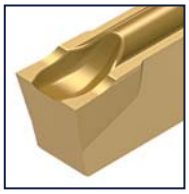


Grooving MTNS
insert with solid and rounded cutting edge.

The major cutting edge cuts a groove.

Parting off





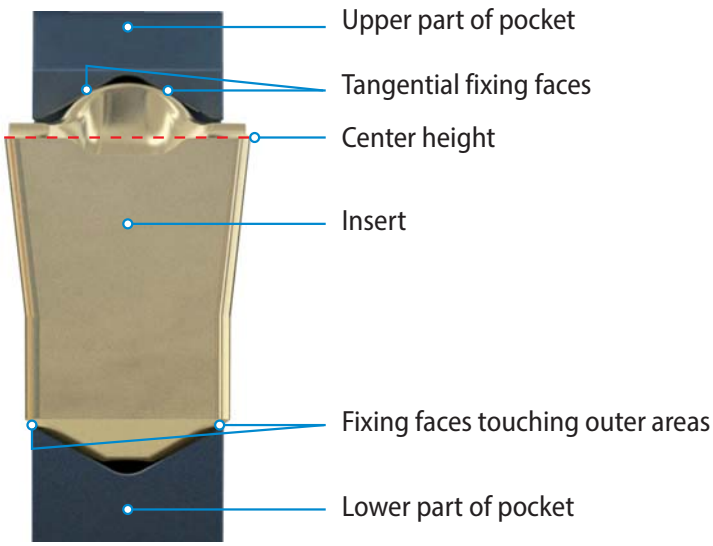
Parting off BTNN
Insert featuring a large and efficient chip breaker.

The major edge parts off a component from the bar.

P92 | Parting off, grooving and turning

A great variety of applications

The absolutely rigid clamping system



Designation code P92 inserts

M T N S (G) 3 02 KM NANOSPEED

- M – Main chip breaker
- T – TWIN System
- N – Standard version (straight)
- S – Minor edges | lead angle N/R/L
- (G) – Additional edge modifications
- 3 – Cutting width
- 02 – Edge radius
- KM – Grade
- NANOSPEED – Coating

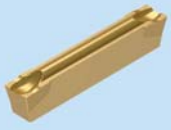
e.g. Grooving and turning inserts

MTNSG 302 KM TILOX

Chip breaker **(M)**
for TWIN System **(T)**
in the standard version (straight) **(N)**
with minor edges for turning **(S)**
and ground edges **(G)**
with cutting width 3 mm **(3)**
and edge radius R 0,2 **(02)**
in grade **KM**
and coating **TILOX**.

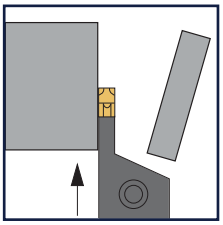
e.g. Parting off insert

BTNN 2 PM NANOSPEED

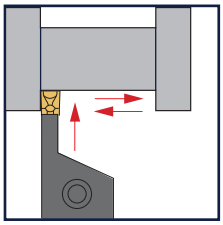


Chip breaker **(B)**
for TWIN System **(T)**
in the standard version (straight) **(N)**
without minor edges for parting off,
neutral without lead angle **(N)**
with cutting width 2 mm **(2)**
in grade **PM**
and coating **NANOSPEED**.

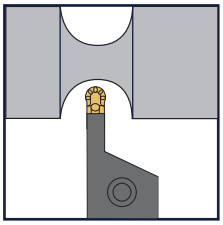
System applications and symbols



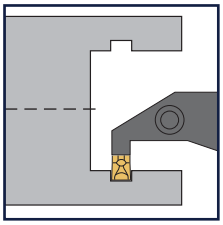
Parting off



Grooving & Turning

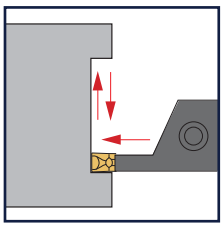


Copying

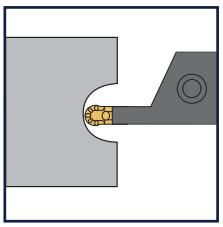


Internal grooving

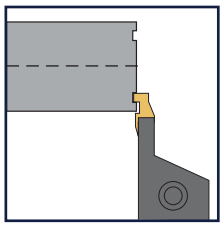
Hard material machining



Face grooving *



Face grooving copying *



Tailor made solutions**

* Toolholders for face grooving see section P92-2 / P92-1 page 105
** Examples for tailor made solutions P92 see page 209

Coatings in this system

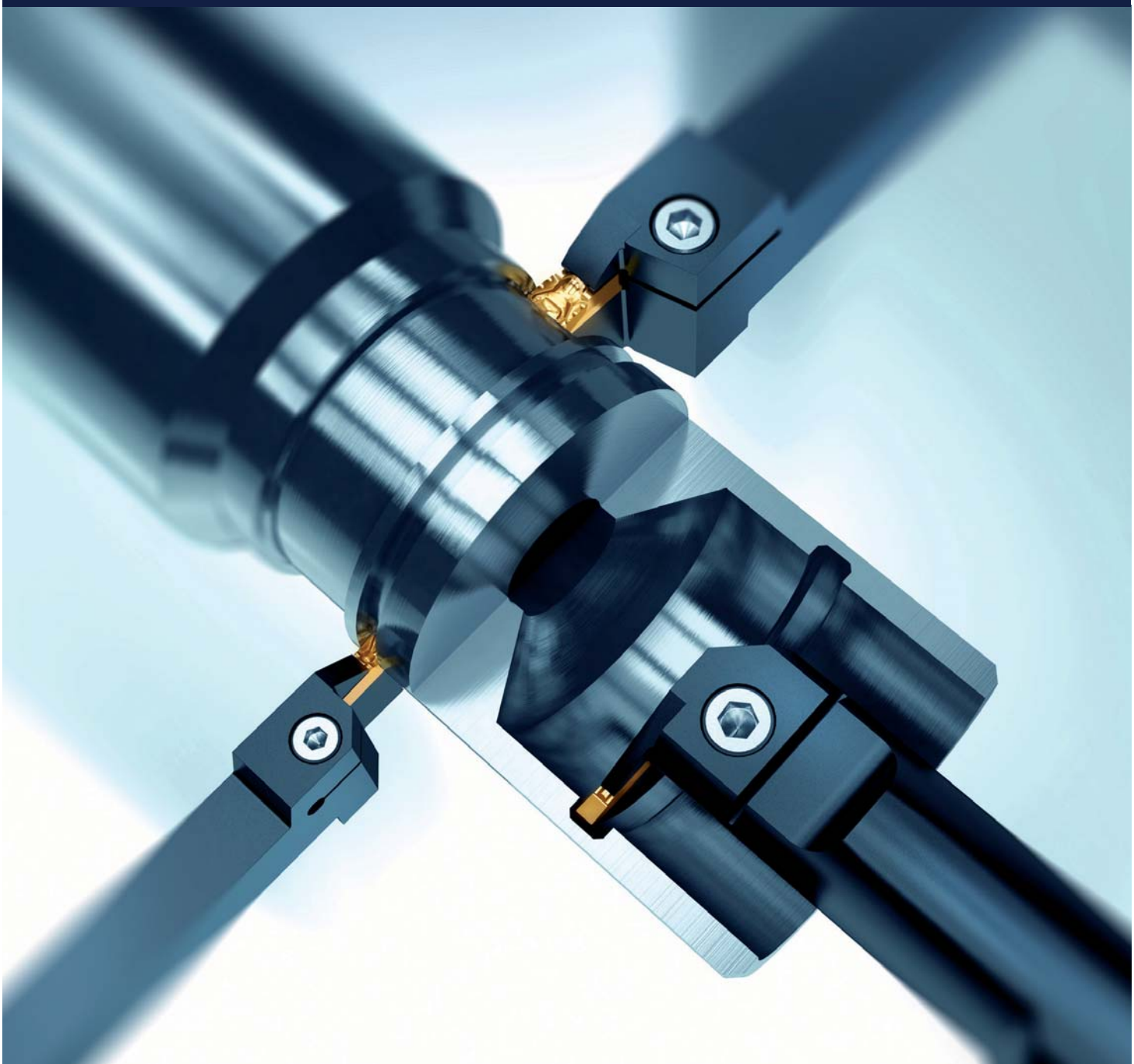
Coating	Type	Structure	Layer thickness	Main application	Alternative application
NANOSPEED	Supernitrid PVD	TiAlN	3 µm	P M	N S
TILOX	Supernitrid PVD	TiAlN	3 µm	P M	K S
ALOX	Supernitrid PVD	TiAlN	6 µm	K	P
HYPERSPEED	Supernitrid PVD	TiAlN	3 µm	S	M
ALUSPEED	HiPIMS PVD	TiB	2 µm	N	S
CARBO SX2	HiPIMS PVD	AlTiN	3 µm	P	S
HARD SX3	HiPIMS PVD	TiAlSiN	3 µm	H	S
CASTSPEED	CVD	TiCN	8 µm	K	-
CASTSPEED+	CVD	TiCN	22 µm	K	-
Uncoated	-	-	-	N	**

** additional coating options or customer-specific applications
see technical section and tailor made solutions section (on request)

P92 | Grooving and turning

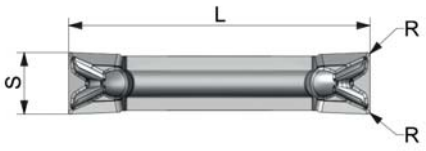
A great variety of applications

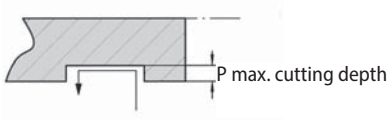
- Geometries for GROOVING
- Geometries for TURNING
- Geometries for COPYING
- Geometries for FACE GROOVING



Inserts for grooving and turning

VTNS





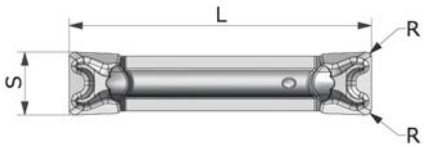
Enlarged view

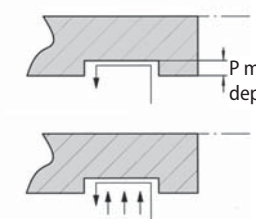
PRODDES	IDNR	IDNR	IDNR	IDNR	IDNR	IIC	IH	INSL	PDPT	RER/REL	CW	CWUD	CWLD
WG300 Ref.	PM NANOSPEED	PM ALOX	PM TILOX	GF110 TILOX	KM TILOX	pocket size	( )	L	P	R	S	S+	S-
	P M N S	K P	P M K S	P M K S	P M K S								
VTNS 302	11445	11442	11444	54743	30668	30	N	20	1,9	0,2	3,08	0,08	-0,08
VTNS 3.5	11449	11446	11448	54686	54674	40	N	20	1,9	0,2	3,55	0,04	-0,04
VTNS 402	11453	11450	11452	54689	54677	40	N	20	2,2	0,2	4,10	0,10	-0,10
VTNS 502	11457	11454	11456	54692	54682	50	N	25	2,7	0,2	5,13	0,13	-0,13

VTNS-Roughing to finishing

Horizontal cutting edge with V-shaped chip breaker. Horizontal turning edges with large chip spaces to allow deep cuts. Especially recommended for carbon steels, low alloy steels and free cutting materials.

MTNS





Enlarged view

PRODDES	IDNR	IDNR	IDNR	IDNR	IDNR	IDNR	IDNR	IIC	IH	INSL	PDPT	REL/RER	CW	CWUD	CWLD
WG300 Ref.	PM NANO-SPEED	KM NANO-SPEED	PM ALOX	KM TILOX	PM TILOX	GF110 NANO-SPEED	GF110 ALOX	pocket size	( )	L	P	R	S	S+	S-
	P M N S	P M N S	K P	P M K S	P M K S	P M N S	K P								
MTNS 202	54647	33879	54917	33878	54918	56957	54929	20	N	20,10	1,60	0,2	2,09	0,11	-0,11
MTNS 2,5	54649	33889	54916	33888	54919	56958	54928	20	N	20,10	1,60	0,2	2,62	0,05	-0,05
MTNS 302	11011	54618	11008	38482	11010	56959	44290	30	N	20,00	2,80	0,2	3,09	0,09	-0,09
MTNS 304	11015	54619	11012	38541	11014	44195	36063	30	N	20,00	2,80	0,4	3,09	0,09	-0,09
MTNS 402	11019	54620	11016	38542	11018	56960	44291	40	N	20,00	2,80	0,2	4,09	0,12	-0,12
MTNS 404	11023	54621	11020	38543	11022	56961	44275	40	N	20,00	2,80	0,4	4,08	0,12	-0,12
MTNS 408	21555	54622	21344	13170	43814	56962	44292	40	N	20,00	2,80	0,8	4,07	0,14	-0,14
MTNS 504	11031	54623	11028	38544	11030	56963	39451	50	N	25,00	3,40	0,4	5,18	0,13	-0,13
MTNS 508	43821	54624	43822	13413	43823	56611	44293	50	N	25,00	3,40	0,8	5,18	0,13	-0,13
MTNS 604	43827	54625	43828	19268	43829	56964	44294	60	N	30,00	3,90	0,4	6,18	0,13	-0,13
MTNS 608	21557	54626	32197	19269	40340	56965	21022	60	N	30,00	3,90	0,8	6,18	0,13	-0,13
MTNS 612	54651	54642	54912	19270	54920	56966	54930	60	N	30,00	3,90	1,2	6,18	0,13	-0,13
MTNS 808	21559	54627	28346	19271	29875	56967	54927	80	N	30,00	5,10	0,8	8,18	0,13	-0,13
MTNS 812	54653	54643	54915	19272	54921	56968	54931	80	N	30,00	5,10	1,2	8,18	0,13	-0,13
MTNS 1008	54655	54644	54913	19274	54922	56969	54932	100	N	30,00	6,50	0,8	10,18	0,13	-0,13
MTNS 1012	54657	54645	54914	19275	54923	56970	54933	100	N	30,00	6,50	1,2	10,18	0,13	-0,13

MTNS-Roughing

Cutting edge with large parting off chip breakers. Excellent chip control in the range ls x 0,8. Especially recommended for carbon steels, low and high alloy steels.

Fitting tools

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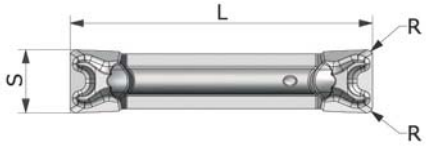
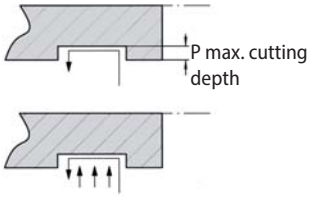
Inserts for grooving and turning

MTNSG





Enlarged view

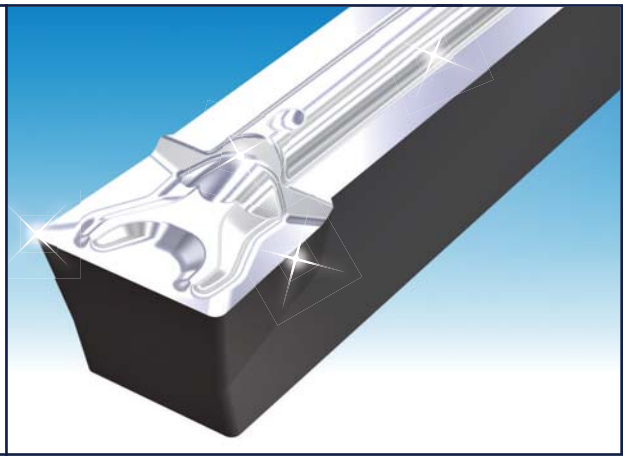
PRODDES	IDNR	IDNR	IDNR	IIC	IH	INSL	PDPT	RER/REL	CW	CWUD	CWLD
WG300 Ref.	KM TILOX	PM ALUSPEED	KM	pocket size		L	P	R	S	S+	S-
	P M K S	N S	N								
MTNSG 202	49957	66467	66493	20	N	20,00	1,60	0,2	1,95	0,03	-0,03
MTNSG 2,5	49958	66487	66494	20	N	20,10	1,60	0,2	2,45	0,03	-0,03
MTNSG 302	49959	66488	66495	30	N	19,95	2,80	0,2	2,95	0,03	-0,03
MTNSG 304	49960	66489	66496	30	N	19,95	2,80	0,4	2,95	0,03	-0,03
MTNSG 402	49961	66490	66497	40	N	19,85	2,80	0,2	3,95	0,03	-0,03
MTNSG 404	49962	66491	66498	40	N	19,85	2,80	0,4	3,95	0,03	-0,03
MTNSG 408	49963	66492	66499	40	N	19,85	2,80	0,8	3,95	0,03	-0,03
MTNSG 504	49964	-	66500	50	N	24,85	3,40	0,4	5,00	0,03	-0,03
MTNSG 508	49965	-	66501	50	N	24,85	3,40	0,8	5,00	0,03	-0,03
MTNSG 604	49966	-	-	60	N	29,80	3,90	0,4	6,00	0,03	-0,03
MTNSG 608	49967	-	-	60	N	29,80	3,90	0,8	6,00	0,03	-0,03
MTNSG 612	49968	-	-	60	N	29,80	3,90	1,2	6,00	0,03	-0,03
MTNSG 808	49969	-	-	80	N	29,65	5,10	0,8	7,95	0,03	-0,03
MTNSG 812	49970	-	-	80	N	29,65	5,10	1,2	7,95	0,03	-0,03
MTNSG 1008	49971	-	-	100	N	29,70	6,50	0,8	9,95	0,03	-0,03
MTNSG 1012	49972	-	-	100	N	29,70	6,50	1,2	9,95	0,03	-0,03

MTNSG Cutting and turning chip breaker

Circumferentially ground cutting edges slightly honed with polished top-rake. Recommended for stainless steels, titanium, nickel alloys and aluminium alloy steels.

Easy chip flow

- Low heat built-up
- Reduces wear on the cutting edges
- Improves chip removal from the component



Fitting tools

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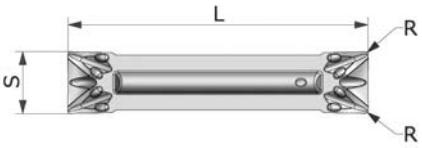
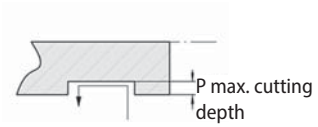
KEMMER HARTMETALLWERKZEUGE

Inserts for grooving and turning

STNZ / STNG





Enlarged view

PRODDES	IDNR	IDNR	IDNR	IDNR	IIC	IH	INSL	PDPT	RER/REL	CW	CWUD	CWLD
WG300 Ref.	KM	KM Aluspeed	KM HYPERSPEED	KM TILOX	pocket size		L	P	R	S	S+	S-
	N	N S	S M	P M K S								
STNZ 504		45003	45009	45117	50	N	25,0	2,0	0,4	5,25	0,075	-0,075
STNG 502	45014	45004	45010	45118	50	N	25,0	2,0	0,2	5,10	0,000	-0,050
STNG 504	45015	45005	45011	45119	50	N	25,0	2,0	0,4	5,10	0,000	-0,050

Comment:

STNZ/STNG has been developed, to machine materials, which are difficult to cut, like:

- nonferrous heavy metals
- nickel alloys
- plastic materials
- composite materials
- aluminium alloys

STNG = polished surfaces, sharp cutting edges
STNZ = polished surfaces, honed edges

Fitting tools

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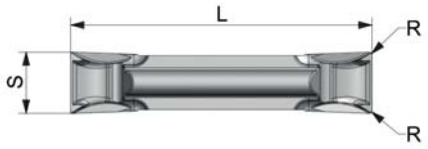
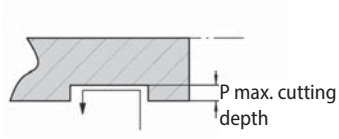
CTDS





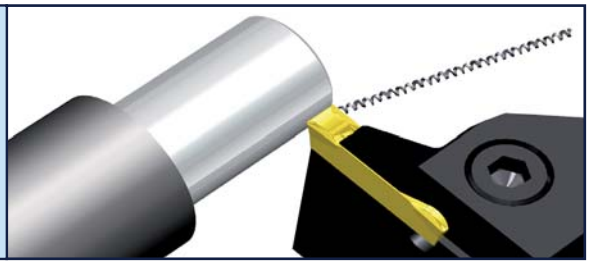
Enlarged view

PRODDES	IDNR	IDNR	IDNR	IIC	IH	INSL	PDPT	RER/REL	CW	CWUD	CWLD
WG300 Ref.	PM NANOSPEED	PM TILOX	KM TILOX	pocket size		L	P	R	S	S+	S-
	P M N S	P M K S	P M K S								
CTDS 302	10418	10417	15318	30	N	20,0	2,4	0,2	3,07	0,10	-0,10
CTDS 402	10422	10421	21412	40	N	20,0	2,4	0,2	4,10	0,10	-0,10
CTDS 502	10426	10425	60278	50	N	25,0	2,4	0,2	5,13	0,13	-0,13

CTDS-Super finishing

Chamfered cutting edge and sharply ground turning edges.
Excellent chip control even on turning with small cutting depths.

Super finishing with CTDS



Fitting tools

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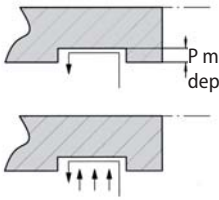
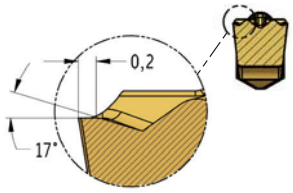
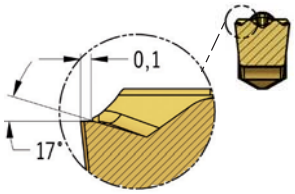
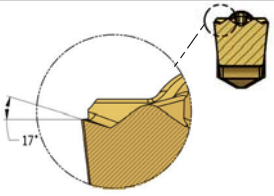
Inserts for grooving and turning

ETNZ



Enlarged view

PRODDES	IDNR	IDNR	IIC	IH		INSL			PDPT	RER/REL	CW	CWUD	CWLD
WG 300 Ref.	GF110 TILOX	GF110 Hyperspeed	pocket size		application	L	L+	L-	P	R	S	S+	S-
	P M K S	S M											
ETNZ 3.504	54198	54199	30	N	R	20,5	0,20	-0,20	2,80	0,4	3,50	0,08	-0,08
ETNZW 3.304	54190	54193	30	N	M	20,3	0,05	-0,05	2,80	0,4W	3,30	0,05	-0,05
ETNZG 3.002	54195	54196	30	N	F	20,0	0,05	-0,05	2,80	0,2	3,00	0,05	-0,05
ETNZ 4.504	50594	50596	40	N	R	20,5	0,20	-0,20	2,80	0,4	4,50	0,08	-0,08
ETNZW 4.304	50605	50607	40	N	M	20,3	0,05	-0,05	2,80	0,4W	4,30	0,05	-0,05
ETNZG 4.002	50599	50601	40	N	F	20,0	0,05	-0,05	2,80	0,2	4,00	0,05	-0,05
ETNZ 5.504	59038	59218	50	N	R	25,5	0,20	-0,20	3,40	0,4	5,50	0,08	-0,08
ETNZW 5.304	59040	59219	50	N	M	25,3	0,05	-0,05	3,40	0,4W	5,30	0,05	-0,05
ETNZG 5.002	59042	59220	50	N	F	25,0	0,05	-0,05	3,40	0,2	5,00	0,05	-0,05
ETNZ 6.504	59039	59221	60	N	R	30,5	0,20	-0,20	3,90	0,4	6,50	0,08	-0,08
ETNZW 6.304	59041	59222	60	N	M	30,3	0,05	-0,05	3,90	0,4W	6,30	0,05	-0,05
ETNZG 6.002	59043	59223	60	N	F	30,0	0,05	-0,05	3,90	0,2	6,00	0,05	-0,05

Application comments			Profile of minor cutting edges A - A
R	Grooving, turning and parting off for difficult to cut materials.	The minor cutting edges and the radius area are marked through a zero degree chamfer x 0,2 mm. Crater wear will be reduced significantly.	
M	Grooving, turning and parting off for difficult to cut materials.	The minor cutting edges and the WIPER edge are sharp and are marked by a stabil zero degree chamfer x 0,1 mm. The polished geometry reduce heat development and crater wear.	
F	Grooving, turning and parting off for difficult to cut materials, also for Titanium and nonferrous materials.	The minor cutting edges and the radius area are sharp. The polished geometry reduce heat developement, crater wear and built-up edges.	

WIPER Geometrie

ETNZW 3.304 GF 110 TILOX and
ETNZW 4.304 GF 110 HYPERSPEED

are new products in grooving and turning.

The WIPER geometry generates excellent surfaces in finishing quality even if you use high cutting parameters. This component was machined with Vc = 150 m/min and f = 0,2 - 0,5 mm/rev.

Fitting tools

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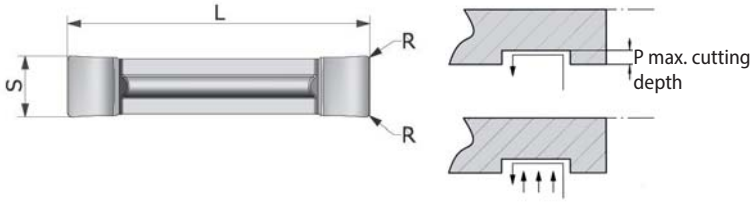
KEMMER HARTMETALLWERKZEUGE

Inserts for profiling

PTNSM



Enlarged view

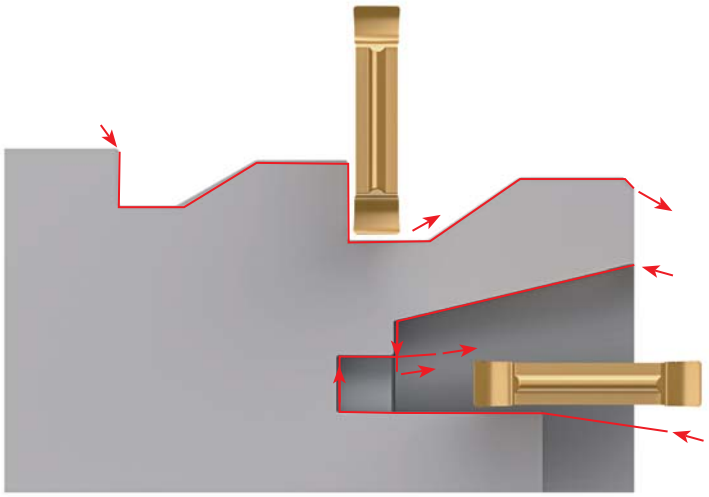
PRODDES	IDNR	IIC	IH	INSL	PDPT	RER/REL	CW	CWUD	CWLD
WG300 Ref.	GF110 TILOX	pocket size		L	P	R	S	S+	S-
	N P M K S								
PTNSM 202	57184	20	N	20,0	0,5	0,2	2,075	0,10	-0,10
PTNSM 2.502	57185	20	N	20,0	0,5	0,2	2,575	0,10	-0,10
PTNSM 304	57186	30	N	20,0	0,5	0,4	3,075	0,10	-0,10
PTNSM 402	57187	40	N	20,0	0,5	0,2	4,075	0,10	-0,10
PTNSM 404	57188	40	N	20,0	0,5	0,4	4,075	0,10	-0,10
PTNSM 504	57189	50	N	25,0	0,5	0,4	5,125	0,10	-0,10
PTNSM 508	57190	50	N	25,0	0,5	0,8	5,125	0,10	-0,10
PTNSM 604	57191	60	N	30,0	0,5	0,4	6,125	0,10	-0,10
PTNSM 608	57192	60	N	30,0	0,5	0,8	6,125	0,10	-0,10
PTNSM 808	57193	80	N	30,0	0,5	0,8	8,125	0,10	-0,10
PTNSM 812	57194	80	N	30,0	0,5	1,2	8,125	0,10	-0,10

High positive parting off geometry

Ground top rake with 0,1 mm chamfer on the major cutting edge for stabilisation.
Especially recommended for: NE materials and difficult to cut materials. Application: profiling.

PTNSM application

Finishing and super-finishing operation with an offset ap = 0,2-0,5mm in NE- and difficult to cut materials.



Fitting tools

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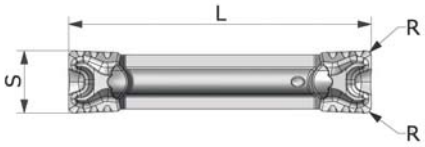
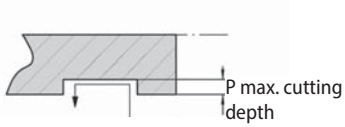
Inserts for grooving and turning

MTNZ



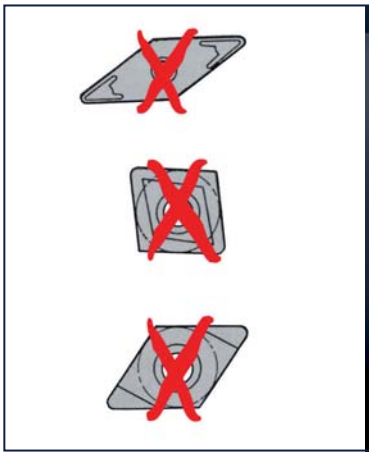


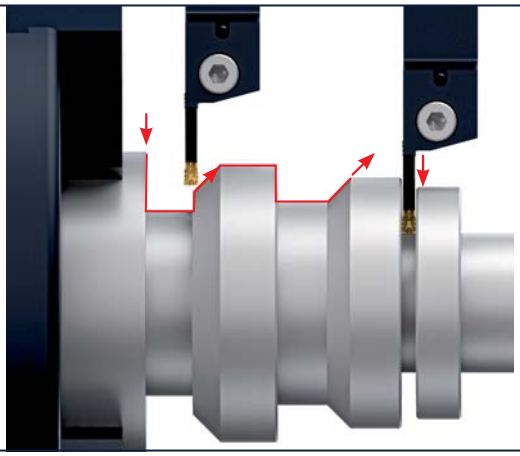
Enlarged view

PRODDES	IDNR	IDNR	IDNR	IDNR	IDNR	IIC	IH	INSL	PDPT	RER/REL	CW	CWUD	CWLD
WG300 Ref.	PM NANOSPEED	KM NANOSPEED	PM ALOX	PM TILOX	KM TILOX	pocket size	( )	L	P	R	S	S+	S-
	P M N S	P M N S	K P	P M K S	P M K S								
MTNZ 304	42791	42790	42793	42792	41018	30	N	20,00	2,80	0,4	3,08	0,08	-0,08
MTNZ 3,5	11035	-	11032	11034	-	40	N	20,00	2,80	0,2	3,55	0,08	-0,08
MTNZ 402	11039	15723	11036	11038	15724	40	N	20,00	2,80	0,2	4,10	0,10	-0,10
MTNZ 404	42797	42796	42799	42798	41017	40	N	20,00	2,80	0,4	4,10	0,10	-0,10
MTNZ 504	11043	54667	11040	11042	54668	50	N	25,00	3,40	0,4	5,13	0,13	-0,13
MTNZ 508	42801	42800	42803	42802	41000	50	N	25,00	3,40	0,8	5,13	0,13	-0,13
MTNZ 604	42805	42804	42807	42806	41019	60	N	30,00	3,90	0,4	6,13	0,13	-0,13
MTNZ 608	42809	42808	42811	42810	41196	60	N	30,00	3,90	0,8	6,13	0,13	-0,13
MTNZ 808	42814	42813	42816	42815	42812	80	N	30,00	5,10	0,8	8,13	0,13	-0,13
MTNZ 812	42818	42817	42820	42819	41197	80	N	30,00	5,10	1,2	8,13	0,13	-0,13

MTNZ-Roughing

Grooved cutting edge and wave shaped turning edges. Chip control even when machining high alloy steels and stainless steels.





All operations with 1 tool holder and 1 insert

- Face turning
- Profiling
- Grooving
- Large groove cutting
- Roughing
- Finishing
- Chamfering
- Parting-off

How to order:

		recommended		
1 pc.	P92 CXCBL 1212 K30 10	or:	**1 St.**	**ID-Nr. 28189**
10 pcs.	MTNZ 304 PM NANOSPEED	or:	**10 St.**	**ID-Nr. 42791**

Fitting tools

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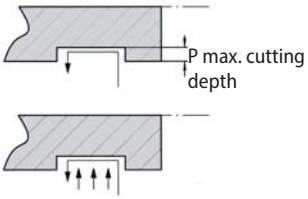
KEMMER HARTMETALLWERKZEUGE

Inserts for face grooving and parting off

GTNS



Enlarged view

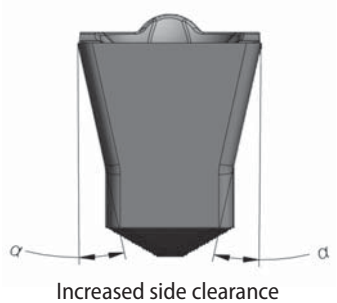
PRODDES	IDNR	IDNR	IDNR	IDNR	IIC	IH	PDPT	INSL	REL/RER	CW	CWUD	CWLD
WG300 Bezeich-nung	GF110 TILOX	PM TILOX	GF110 CARBOSX2	PM CARBOSX2	pocket size		P	L	R	S	S+	S-
	P M K S	P M K S	P S	P S								
GTNS 302	57238	57239	65190	65189	30	N	1,2	20,0	0,2	3,075	0,10	-0,10
GTNS 404	55940	57242	65191	65190	40	N	1,2	20,0	0,4	4,075	0,10	-0,10
GTNS 504	40195	40194	65193	65194	50	N	1,2	25,0	0,4	5,125	0,10	-0,10

Chip breaker:
Especially developed for effective chip flow when face grooving.

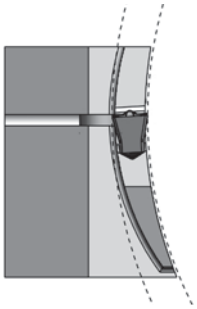
Insert::
Developed for machining of stainless and alloyed steels.

Clearance:
Especially for face grooving.

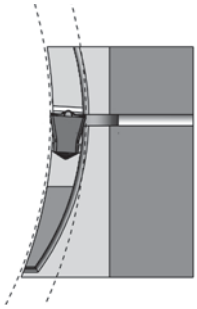
Remark:
To be used as well for radial grooving and **parting off.**



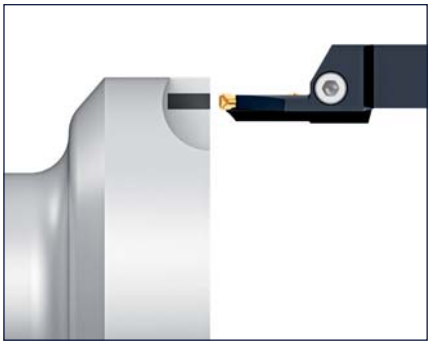
Increased side clearance



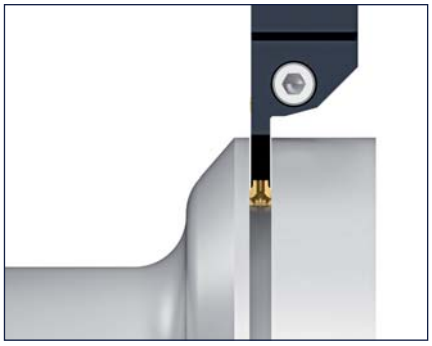
Especially recommended for face grooving



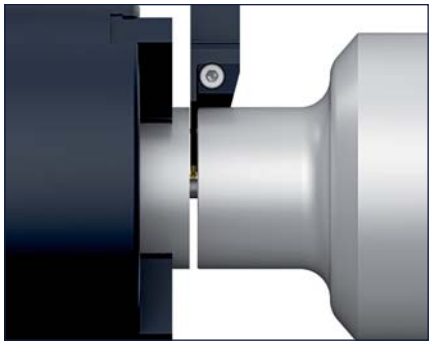
Face grooving



Grooving



Parting off



Fitting tools

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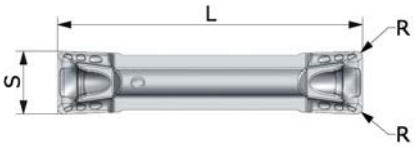
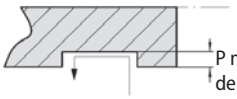
Inserts for copying and turning

XTNS





Enlarged view

PRODDES	IDNR	IDNR	IDNR	IIC	IH	INSL	PDPT	REL/RER	CW	CWUD	CWLD
WG300 Ref.	KM TILOX	PM NANOSPEED	GF110 TILOX	pocket size		L	P	R	S	S+	S-
	P M K S	P M N S	P M K S								
XTNS 202	14268	60205	38917	20	N	20,15	1,60	0,2	2,08	0,1	-0,1
XTNS 302	14055	60206	38918	30	N	20,15	2,40	0,2	3,08	0,1	-0,1
XTNS 304	14053	60207	38919	30	N	20,15	2,40	0,4	3,08	0,1	-0,1
XTNS 404	38903	60208	38920	40	N	20,15	2,70	0,4	4,08	0,1	-0,1
XTNS 408	38904	60209	38921	40	N	20,15	2,70	0,8	4,03	0,1	-0,1
XTNS 504	38905	60210	54696	50	N	25,15	3,40	0,4	5,13	0,1	-0,1
XTNS 508	38906	60211	54699	50	N	25,15	3,40	0,8	5,13	0,1	-0,1
XTNS 604	38910	60212	54701	60	N	30,10	3,60	0,4	6,13	0,1	-0,1
XTNS 608	38911	60213	54702	60	N	30,10	3,60	0,8	6,13	0,1	-0,1
XTNS 612	38912	60214	54703	60	N	30,10	3,60	1,2	6,13	0,1	-0,1
XTNS 808	38913	60215	54704	80	N	30,10	4,80	0,8	8,13	0,1	-0,1
XTNS 812	38914	60216	54705	80	N	30,10	4,80	1,2	8,13	0,1	-0,1
XTNS 1008	38915	60217	54706	100	N	30,10	4,90	0,8	10,13	0,1	-0,1
XTNS 1012	38916	60218	54669	100	N	30,10	4,90	1,2	10,13	0,1	-0,1

XTNS - Roughing to finishing

A 9° declining major cutting edge with a reinforcing chamfer and a 24° positive entry to the chip former, achieve excellent chip control especially on difficult to cut materials. The minor cutting edges with 16° positive entry angle achieve efficient profile turning creating clean surfaces.

Notable!

Although the insert has been developed for universal cutting and turning, parting off tests with KM TILOX proved **excellent tool life on stainless steels**, e.g. 1.4404 (X2 CrNiMo1810). Therefore the insert is also recommmended for stainless steel parting off.

The best tool life on parting off **hexagon material** 1.4571 Ø 38 has been **409 pcs so far**. This could be **increased to an amazing 678 pcs** with the same speeds. (Vc: 60 m/min; f: 0,05 mm/Rev.)

Fitting tools

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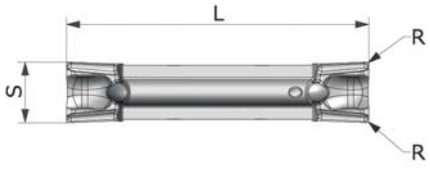
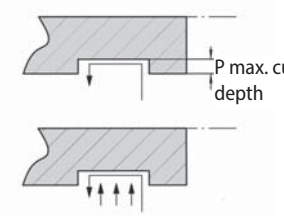
Inserts for grooving and turning

BTNG

System P92





Enlarged view

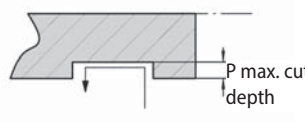
PRODDES	IDNR	IDNR	IDNR	IIC	IH	INSL	PDPT	REL/RER	CW	CWUD	CWLD
WG260 Ref.	GF110	GF110 NANOSPEED	GF110 TILOX	pocket size		L	P	R	S	S+	S-
	N	P M N S	P M K S								
BTNG 202	32649	34264	34263	20	N	20,00	1,60	0,2	2,00	0,03	-0,03
BTNG 2,5	32652	34005	34004	20	N	20,00	1,60	0,2	2,50	0,03	-0,03
BTNG 302	13403	13404	-	30	N	20,00	2,80	0,2	3,00	0,03	-0,03
BTNG 304	13405	13406	-	30	N	20,00	2,80	0,4	3,00	0,03	-0,03
BTNG 402	13407	13408	-	40	N	20,00	2,80	0,2	4,00	0,03	-0,03
BTNG 404	13409	13410	-	40	N	20,00	2,80	0,4	4,00	0,03	-0,03
BTNG 408	13411	13412	-	40	N	20,00	2,80	0,8	4,00	0,03	-0,03
BTNG 504	13402	13124	-	50	N	25,00	3,40	0,4	5,00	0,03	-0,03
BTNG 508	13396	13395	-	50	N	25,00	3,40	0,8	5,00	0,03	-0,03
BTNG 604	19292	20502	-	60	N	30,00	3,90	0,4	6,00	0,03	-0,03
BTNG 608	19293	20503	-	60	N	30,00	3,90	0,8	6,00	0,03	-0,03
BTNG 808	19294	20504	-	80	N	30,00	5,10	0,8	8,00	0,03	-0,03
BTNG 812	19295	20505	-	80	N	30,00	5,10	1,2	8,00	0,03	-0,03
BTNG 1008	19296	20506	-	100	N	30,00	6,50	0,8	10,00	0,03	-0,03
BTNG 1012	19297	20507	-	100	N	30,00	6,50	1,2	10,00	0,03	-0,03

BTNG-Finishing

Fitting tools see below

Grooved cutting edge. Horizontal turning edges with parallel chip breakers.
The **precision ground micrograin insert** is recommended especially for heat resistant alloys.

BTNX



Enlarged view

PRODDES	IDNR	IDNR	IDNR	IDNR	IDNR	IIC	IH	INSL	PDPT	RER/REL	CW	CWUD	CWLD
WG300 Ref.	GS 530 NANOSPEED	KM TILOX	KS140 TILOX	KS420 NANOSPEED	KS420 CASTSPEED PLUS	pocket size		L	P	R	S	S+	S-
	P M N S	P M K S	P M K S	P M N S	K								
BTNX 202	-	38825	63950	63949	63948	20	N	20,10	1,60	0,2	2,10	0,05	-0,05
BTNX 2,50	32661	38824	-	-	-	20	N	20,10	1,60	0,2	2,67	0,05	-0,05
BTNX 302	12669	38826	-	-	-	30	N	20,00	2,80	0,2	3,13	0,08	-0,08
BTNX 304	12687	38827	-	-	-	30	N	20,00	2,80	0,4	3,13	0,08	-0,08
BTNX 404	12691	38828	-	-	-	40	N	20,00	2,80	0,4	4,13	0,08	-0,08
BTNX 408	12686	38829	-	-	-	40	N	20,00	2,80	0,8	4,13	0,08	-0,08
BTNX 504	12692	38830	-	-	-	50	N	25,00	3,40	0,4	5,18	0,13	-0,13
BTNX 508	12685	38831	-	-	-	50	N	25,00	3,40	0,8	5,18	0,13	-0,13

BTNX-Semi Finishing

Grooved cutting edge. Horizontal turning edges with parallel chip breakers. The TIN-coated **cermet insert** is recommended for high speed finishing. The insert can be used universally.
The grade KM TILOX is recommended for semi finishing to roughing machining.

Fitting tools

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p. 83

p. 84 - 90

p. 91 - 93

p. 96-99

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p. 101

p. 110-113

p. 115-117

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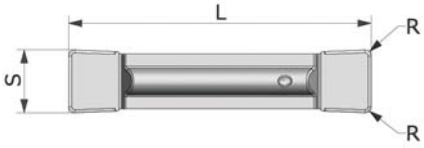
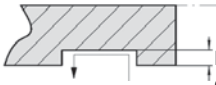
Inserts for grooving and turning

OTXC





Enlarged view

PRODDES	IDNR	IDNR	IIC	IH	INSL	PDPT	RER/REL	CW	CWUD	CWLD
WG300 Ref.	GF110 CASTSPEED plus	KM CASTSPEED	pocket size		L	P	R	S	S+	S-
	K	K								
OTXC 304	56299	52919	30	N	20,0	2,80	0,4	3,075	0,10	-0,10
OTXC 402	56298	52920	40	N	20,0	2,80	0,2	4,075	0,10	-0,10
OTXC 404	56297	52921	40	N	20,0	2,80	0,4	4,075	0,10	-0,10
OTXC 504	56296	52922	50	N	25,0	3,40	0,4	5,125	0,10	-0,10
OTXC 508	56295	52923	50	N	25,0	3,40	0,8	5,125	0,10	-0,10
OTXC 604	56294	52924	60	N	30,0	5,10	0,4	6,125	0,10	-0,10
OTXC 608	56293	52925	60	N	30,0	5,10	0,8	6,125	0,10	-0,10
OTXC 808	54290	52926	80	N	30,0	5,10	0,8	8,125	0,10	-0,10
OTXC 812	54291	52927	80	N	30,0	5,10	1,2	8,125	0,10	-0,10

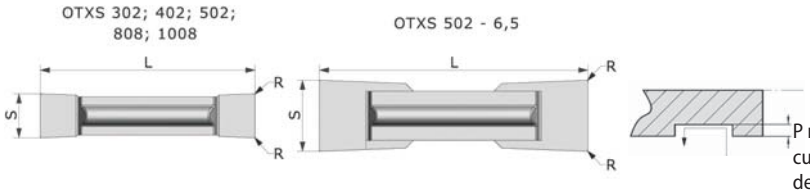
OTXC …KM Castspeed

This insert has a ground top rake, a ground negative chamfer on the cutting edge and a slightly honed cutting edge.
The insert has a CVD thin layer (10-12µm) and is especially recommended for unstable cast materials with interrupted cuts.

OTXC …GF110 Castspeed plus

Precision sintered insert with negative chamfer. The insert has a CVD thick layer (20-22µm) and is especially recommended for cast materials with interrupted cuts.

OTXS



Enlarged view

PRODDES	IDNR	IDNR	IIC	IH	INSL	PDPT	RER/REL	CW	CWUD	CWLD
WG300 Ref.	PM	KM	pocket size		L	P	R	S	S+	S-
	N K	N K								
OTXS 302	11199	11198	30	N	20	2,80	0,2	3,08	0,08	0,08
OTXS 402	11201	11200	40	N	20	2,80	0,2	4,10	0,10	-0,10
OTXS 502	11203	11202	50	N	25	3,40	0,2	5,13	0,13	-0,13
OTXS 502 6,5	11205	11204	50	N	25	3,90	0,2	6,63	0,13	-0,13
OTXS 808	-	20544	80	N	30	5,10	0,8	8,12	0,13	-0,13
OTXS 1008	-	20543	100	N	30	6,50	0,8	10,18	0,13	-0,13

OTXS-Semi finishing

Ground top rake with 0° rake angle. Recommended for cast materials and for **customer applications**.

Fitting tools

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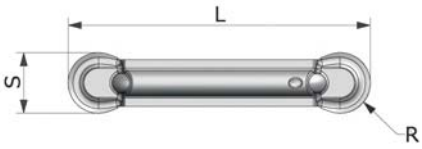
Inserts for copying and turning

RTNG



Enlarged view

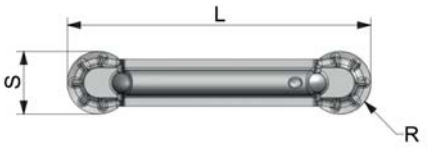
PRODDES	IDNR	IDNR	IIC	IH	INSL	PDPT	RER/REL	CW	CWUD	CWLD
WG260 Ref.	GF 110	GF 110 NANOSPEED	pocket size		L	P	R	S	S+	S-
	N	P M N S								
RTNG 210	34649	34650	20	N	20,00	1,40	1,0	2,00	0,03	-0,03
RTNG 315	19302	20471	30	N	20,00	2,10	1,5	3,00	0,03	-0,03
RTNG 420	13415	12681	40	N	20,00	2,70	2,0	4,00	0,03	-0,03
RTNG 525	13416	13417	50	N	25,00	3,30	2,5	5,00	0,03	-0,03
RTNG 630	19303	20508	60	N	30,00	3,90	3,0	6,00	0,03	-0,03
RTNG 840	19304	20509	80	N	30,00	5,20	4,0	8,00	0,03	-0,03
RTNG 1050	19310	20510	100	N	30,00	6,50	5,0	10,00	0,03	-0,03

RTNG-Finishing

Fitting tools see below

Precision ground full radius insert. Horizontal cutting edge with parallel chip breaker. The **micrograin** insert is especially recommended for heat resistant alloys.

RTNX



Enlarged view

PRODDES	IDNR	IIC	IH	INSL	PDPT	RER/REL	CW	CWUD	CWLD
WG300 Ref.	KM TILOX	pocket size		L	P	R	S	S+	S-
	P M K S								
RTNX 210	31706	20	N	20,10	1,40	1,1	2,10	0,05	-0,05
RTNX 315	19298	30	N	20,00	2,10	1,5	3,13	0,08	-0,08
RTNX 420	13067	40	N	20,00	2,70	2,0	4,13	0,08	-0,08
RTNX 525	13414	50	N	25,00	3,30	2,5	5,18	0,13	-0,13
RTNX 630	19299	60	N	30,00	3,90	3,0	6,18	0,13	-0,13
RTNX 840	19300	80	N	30,00	5,20	4,0	8,18	0,13	-0,13
RTNX 1050	19301	100	N	30,00	6,50	5,0	10,18	0,13	-0,13

RTNX-Roughing

Full radius insert. The horizontal cutting edge with its chip breaker rips makes short chips in almost all materials.

Fitting tools

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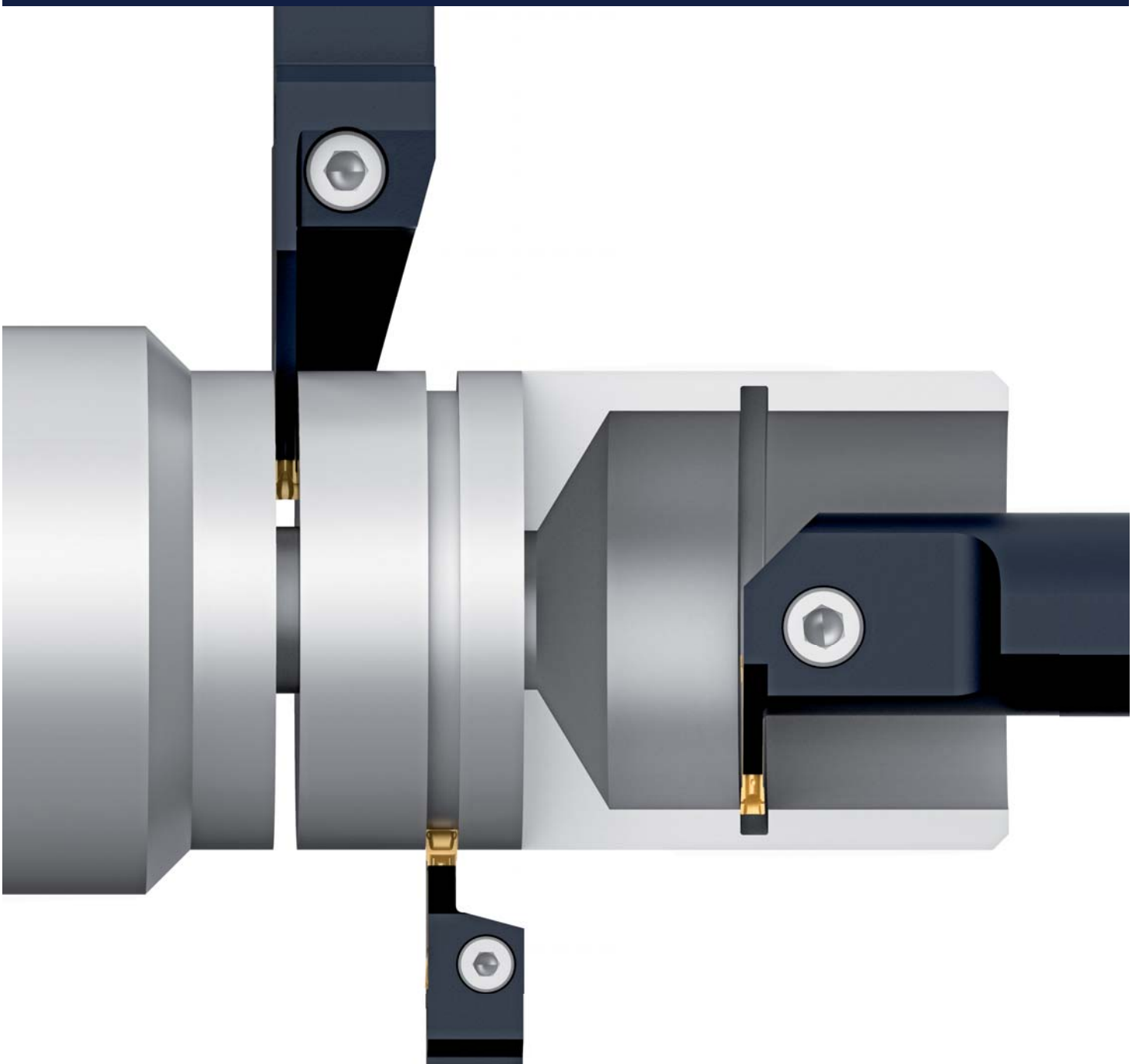
P92 | Parting off and grooving

A variety of applications

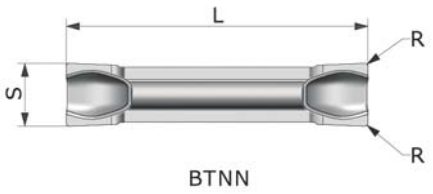
- Geometries for PARTING OFF with lead angle or neutral
- Geometries for GROOVING
- Toolholders fitting for all P92 geometries



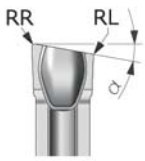
KEMMER HARTMETALLWERKZEUGE

Parting off and grooving inserts with 2 edges

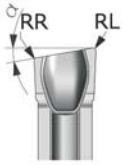
BTNN/R/L



BTNN



BTNL



BTNR

Enlarged view

PRODDES	IDNR	IDNR	IDNR	IDNR	IDNR	IDNR	IIC	IH	INSL	RER	REL	CW	CWUD	CWLD	PSIRR	PSIRL
WG300 Ref.	KM NANO-SPEED	PM NANO-SPEED	KM TILOX	PM TILOX	KM CARBO SX2	GS 530 NANO-SPEED	pocket size	( )	L	RR	RL	S	S+	S-	α°	α°
	P M N S	P M N S	P M K S	P M K S	P S	P M N S										
BTNN 1,5	-	45058	30595	-	65151	43561	15	N	15,50	0,2	0,2	1,58	0,10	0,10	0	0
BTNN 2	34208	45059	30944	-	65153	-	20	N	20,00	0,2	0,2	2,08	0,10	0,10	0	0
BTNN 2,5	33999	45060	30850	-	65152	-	20	N	20,00	0,2	0,2	2,58	0,10	0,10	0	0
BTNN 3	-	20532	12689	20917	65159	-	30	N	20,00	0,2	0,2	3,08	0,10	0,10	0	0
BTNN 4	-	20533	15843	30597	65154	-	40	N	20,00	0,2	0,2	4,08	0,10	0,10	0	0
BTNR 1,5 6D	-	45061	30576	-	-	-	15	R	15,50	0	0,2	1,58	0,10	0,10	6	0
BTNR 1,5 10D	-	45062	30666	-	-	-	15	R	15,50	0	0,2	1,58	0,10	0,10	10	0
BTNR 1,5 16D	-	45063	30667	-	-	-	15	R	15,50	0	0,2	1,58	0,10	0,10	16	0
BTNR 2 6D	34210	45064	34209	-	-	-	20	R	20,00	0	0,2	2,08	0,10	0,10	6	0
BTNR 2 10D	34207	45065	34206	-	-	-	20	R	20,00	0	0,2	2,08	0,10	0,10	10	0
BTNR 2,5 6D	34003	45066	34002	-	-	-	20	R	20,00	0	0,2	2,58	0,10	0,10	6	0
BTNR 2,5 10D	34001	45067	34000	-	-	-	20	R	20,00	0	0,2	2,58	0,10	0,10	10	0
BTNR 3 6D	-	20534	12690	-	-	-	30	R	20,00	0	0,2	3,08	0,10	0,10	6	0
BTNR 3 10D	-	20536	19665	-	-	-	30	R	20,00	0	0,2	3,08	0,10	0,10	10	0
BTNR 4 6D	-	20538	15844	-	-	-	40	R	20,00	0	0,2	4,08	0,10	0,10	6	0
BTNR 4 10D	-	20540	19667	-	-	-	40	R	20,00	0	0,2	4,08	0,10	0,10	10	0
BTNL 1,5 6D	-	45068	30665	-	-	-	15	L	15,50	0,2	0	1,58	0,10	0,10	0	6
BTNL 1,5 10D	-	45069	30663	-	-	-	15	L	15,50	0,2	0	1,58	0,10	0,10	0	10
BTNL 1,5 16D	-	45070	30664	-	-	-	15	L	15,50	0,2	0	1,58	0,10	0,10	0	16
BTNL 2 6D	33994	45071	33993	-	-	-	20	L	20,00	0,2	0	2,08	0,10	0,10	0	6
BTNL 2 10D	34205	45072	34204	-	-	-	20	L	20,00	0,2	0	2,08	0,10	0,10	0	10
BTNL 2,5 6D	33996	45073	33995	-	-	-	20	L	20,00	0,2	0	2,58	0,10	0,10	0	6
BTNL 2,5 10D	33998	45074	33997	-	-	-	20	L	20,00	0,2	0	2,58	0,10	0,10	0	10
BTNL 3 6D	-	20535	12688	-	-	-	30	L	20,00	0,2	0	3,08	0,10	0,10	0	6
BTNL 3 10D	-	20537	19666	-	-	-	30	L	20,00	0,2	0	3,08	0,10	0,10	0	10
BTNL 4 6D	-	20539	15845	-	-	-	40	L	20,00	0,2	0	4,08	0,10	0,10	0	6
BTNL 4 10D	-	20541	19668	-	-	-	40	L	20,00	0,2	0	4,08	0,10	0,10	0	10

BTN-Parting off chip breaker

Grooved parting off edge with reinforced flanks. The deep and spacious **chip chamber** gives excellent chip control. Efficient on almost all materials.

Fitting tools

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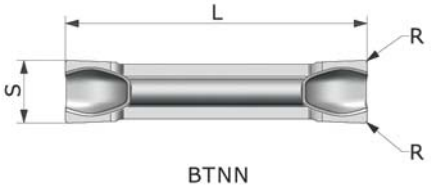
Parting off and grooving inserts with special surface preparation and cutting edge honing

BTNN/R/L



Enlarged view

PRODDES	IDNR	IDNR	IDNR	IIC	IH	INSL	RER	REL	CW	CWUD	CWLD	PSIRR	PSIRL
WG300 Ref.	GF110 CARBOSX2	GF110 NANOSPEED	GF110 Hyperspeed	pocket size		L	RR	RL	S	S+	S-	α°	α°
	P S	P M N S	S M										
BTNN 1,5	65155	45076	45077	15	N	15,50	0,2	0,2	1,58	0,10	-0,10	0	0
BTNN 2	65157	45079	45080	20	N	20,00	0,2	0,2	2,08	0,10	-0,10	0	0
BTNN 2,5	65156	45082	45083	20	N	20,00	0,2	0,2	2,58	0,10	-0,10	0	0
BTNN 3	65158	42825	42826	30	N	20,00	0,2	0,2	3,08	0,10	-0,10	0	0
BTNN 4	65160	45086	45087	40	N	20,00	0,2	0,2	4,08	0,10	-0,10	0	0
BTNL 1,5 7D	-	49108	-	15	L	15,50	0,2	0	1,58	0,10	-0,10	0	7
BTNL 2 7D	-	49109	-	20	L	20,00	0,2	0	2,08	0,10	-0,10	0	7
BTNL 2,5 7D	-	49110	-	20	L	20,00	0,2	0	2,58	0,10	-0,10	0	7
BTNL 3 7D	-	49111	-	30	L	20,00	0,2	0	3,08	0,10	-0,10	0	7
BTNL 4 7D	-	49112	-	40	L	20,00	0,2	0	4,08	0,10	-0,10	0	7
BTNR 1,5 7D	-	49103	-	15	R	15,50	0	0,2	1,58	0,10	-0,10	7	0
BTNR 2 7D	-	49104	-	20	R	20,00	0	0,2	2,08	0,10	-0,10	7	0
BTNR 2,5 7D	-	49105	-	20	R	20,00	0	0,2	2,58	0,10	-0,10	7	0
BTNR 3 7D	-	49106	-	30	R	20,00	0	0,2	3,08	0,10	-0,10	7	0
BTNR 4 7D	-	49107	-	40	R	20,00	0	0,2	4,08	0,10	-0,10	7	0

Fitting tools

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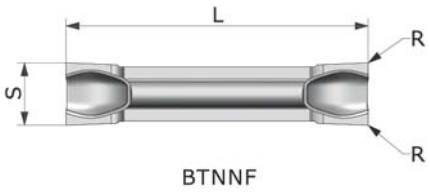
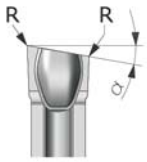
KEMMER HARTMETALLWERKZEUGE

Parting off and grooving inserts

BTNNF/RF/LF



BTNNF



BTNLF

BTNRF

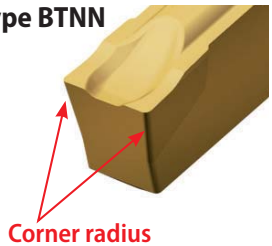
Enlarged view

PRODDES	IDNR	IDNR	IDNR	IIC	IH	INSL	RER/REL	CW	CWUD	CWLD	PSIRR	PSIRL
WG300 Ref.	GF 110 NANOSPEED	PM NANOSPEED	GF 110 CARBOSX2	pocket size		L	R	S	S+	S-	α°	α°
	P M N S	P M N S	P S									
BTNNF1,5	48311	54586	65161	15	N	15,10	0,0	1,58	0,10	0,10	0	0
BTNNF 2	48312	54589	65163	20	N	19,60	0,0	2,08	0,10	0,10	0	0
BTNNF 2,5	49633	54590	65162	20	N	19,60	0,0	2,58	0,10	0,10	0	0
BTNNF 3	49634	54591	65164	30	N	19,60	0,0	3,08	0,10	0,10	0	0
BTNRF1,5 6D	48313	54592	-	15	R	15,10	0,0	1,58	0,10	0,10	6	0
BTNRF1,5 10D	49635	54593	-	15	R	15,10	0,0	1,58	0,10	0,10	10	0
BTNRF 2 6D	48314	54594	-	20	R	19,60	0,0	2,08	0,10	0,10	6	0
BTNRF 2 10D	49636	54595	-	20	R	19,60	0,0	2,08	0,10	0,10	10	0
BTNRF 2,5 6D	49637	54596	-	20	R	19,60	0,0	2,58	0,10	0,10	6	0
BTNRF 2,5 10D	49638	54597	-	20	R	19,60	0,0	2,58	0,10	0,10	10	0
BTNRF 3 6D	49639	54598	-	30	R	19,60	0,0	3,08	0,10	0,10	6	0
BTNRF 3 10D	49640	54599	-	30	R	19,60	0,0	3,08	0,10	0,10	10	0
BTNLF 1,5 6D	48315	54600	-	15	L	15,10	0,0	1,58	0,10	0,10	0	6
BTNLF 1,5 10D	49641	54601	-	15	L	15,10	0,0	1,58	0,10	0,10	0	10
BTNLF 2 6D	48316	54602	-	20	L	19,60	0,0	2,08	0,10	0,10	0	6
BTNLF 2 10D	49642	54603	-	20	L	19,60	0,0	2,08	0,10	0,10	0	10
BTNLF 2,5 6D	49643	54604	-	20	L	19,60	0,0	2,58	0,10	0,10	0	6
BTNLF 2,5 10D	49644	54605	-	20	L	19,60	0,0	2,58	0,10	0,10	0	10
BTNLF 3 6D	49645	54606	-	30	L	19,60	0,0	3,08	0,10	0,10	0	6
BTNLF 3 10D	49646	54607	-	30	L	19,60	0,0	3,08	0,10	0,10	0	10

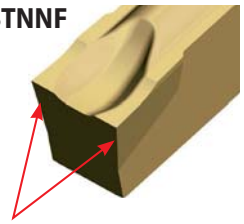
Remark:

Sharply ground cutting edge without corner radius.
Recommended for automatic lathe cutting jobs.

Type BTNN



Type BTNNF



The difference BTNN and BTNNF:

F marks an especially sharp edge.
This is recommended for hard and tough materials and also for machining steels.

The way towards the center isn't easy at all

When beginning the operation all conditions are ideal:

- cutting speed (Vc)
- cooling and
- chip removal

BTN Parting off chip breaker

Grooved parting off edge with reinforced flanks. The deep and spacious chip chamber gives excellent chip control.
Efficient on almost all materials.

Fitting tools

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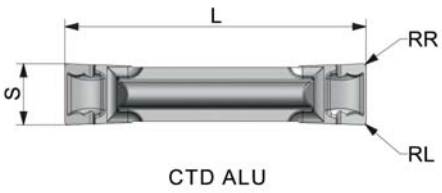
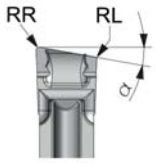
Parting off and grooving inserts with 2 edges

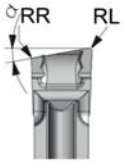
CTD/R/L-ALU



CTD ALU



CTL ALU



CTR ALU

Enlarged view

PRODDES	IDNR	IDNR	IDNR	IDNR	IIC	IH	INSL	RER	REL	CW	CWUD	CWLD	PSIRR	PSIRL
WG300 Ref.	KM	PM NANOSPEED	KM ALUSPEED	GF110 ALUSPEED	pocket size		L	RR	RL	S	S+	S-	α°	α°
	N	P M N S	N S	N S										
CTD 1.5 ALU	-	54957	54960	54960	15	N	15,5	0,2	0,2	1,58	0,10	-0,10	0	0
CTD 2 ALU	-	54958	54983	54983	20	N	20,0	0,2	0,2	2,08	0,10	-0,10	0	0
CTD 2.5 ALU	-	54959	54984	54984	20	N	20,0	0,2	0,2	2,58	0,10	-0,10	0	0
CTD 3 ALU	10400	10402	10709	-	30	N	20,0	0,2	0,2	3,08	0,10	-0,10	0	0
CTD 4 ALU	10405	10407	30661	-	40	N	20,0	0,2	0,2	4,08	0,10	-0,10	0	0
CTD 5 ALU	10410	10412	38483	-	50	N	25,0	0,2	0,2	5,13	0,10	-0,10	0	0
CTL 3 6D ALU	-	10432	30662	-	30	L	20,0	0,2	0	3,08	0,10	-0,10	0	6
CTL 4 6D ALU	-	10444	36195	-	40	L	20,0	0,2	0	4,08	0,10	-0,10	0	6
CTL 5 6D ALU	-	10456	10454	-	50	L	25,0	0,2	0	5,13	0,10	-0,10	0	6
CTR 3 6D ALU	-	10431	30598	-	30	R	20,0	0	0,2	3,08	0,10	-0,10	6	0
CTR 4 6D ALU	-	10443	38484	-	40	R	20,0	0	0,2	4,08	0,10	-0,10	6	0
CTR 5 6D ALU	-	10455	10453	-	50	R	25,0	0	0,2	5,13	0,10	-0,10	6	0

ALU chip breaker

Horizontal ground cutting edge. The flat chip chamber conveys chips at high speed.

Recommended for: nonferrous materials, machining steels, thinwalled parts, unstable components and pipes.

TIPS for grooving and parting off non-ferrous metals

- Positive chip geometries provide a good chipping
- Sharp (ground) edges support a better chip breaking
- When machining non-ferrous materials thin layer coatings (1. choice=ALUSPEED) or uncoated types should be favoured

N

Fitting tools

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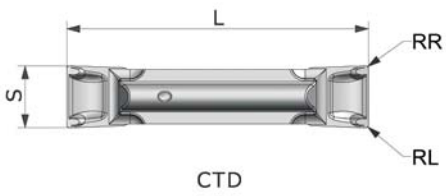
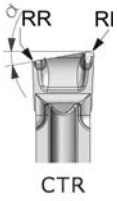
KEMMER HARTMETALLWERKZEUGE

Parting off and grooving inserts with 2 edges

CTD R/L-IT



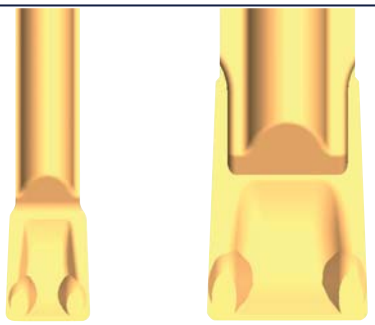


Enlarged view

PRODDES	IDNR	IDNR	IDNR	IDNR	IDNR	IIC	IH	INSL	RER	REL	CW	CWUD	CWLD	PSIRR	PSIRL
WG300 Ref.	GF110 NANO-SPEED	PM NANO-SPEED	PM TILOX	GF110 CARBO SX2	PM CARBO SX2	pocket size		L	RR	RL	S	S+	S-	α°	α°
	P M N S	P M N S	P M K S	P S	P S										
CTD 1,5	49973	49974	50204	65165	65166	15	N	15,5	0,15	0,15	1,58	0,10	-0,10	0	0
CTD 2	49977	49978	50207	65169	65170	20	N	20,0	0,20	0,20	2,08	0,10	-0,10	0	0
CTD 2,5	49981	49982	50209	65167	65168	20	N	20,0	0,20	0,20	2,58	0,10	-0,10	0	0
CTD 3	54827	10404	10403	65171	65172	30	N	20,0	0,20	0,20	3,08	0,10	-0,10	0	0
CTD 4	54829	10409	10408	65173	65174	40	N	20,0	0,20	0,20	4,08	0,10	-0,10	0	0
CTD 5	54832	10414	10413	65175	65176	50	N	25,0	0,20	0,20	5,13	0,10	-0,10	0	0
CTL 1,5 6D	49985	49986	50213	65177	-	15	L	15,5	0,15	0,00	1,58	0,10	-0,10	0	6
CTL 2 6D	49989	49990	50214	65179	-	20	L	20,0	0,20	0,00	2,08	0,10	-0,10	0	6
CTL 2,5 6D	49993	49994	50215	65178	-	20	L	20,0	0,20	0,00	2,58	0,10	-0,10	0	6
CTL 3 6D	54834	10438	10436	65180	-	30	L	20,0	0,20	0,00	3,08	0,10	-0,10	0	6
CTL 4 6D	54836	10450	10448	65181	-	40	L	20,0	0,20	0,00	4,08	0,10	-0,10	0	6
CTL 5 6D	54838	10462	10460	65182	-	50	L	25,0	0,20	0,00	5,13	0,10	-0,10	0	6
CTR 1,5 6D	49997	49998	50216	65183	-	15	R	15,5	0,00	0,15	1,58	0,10	-0,10	6	0
CTR 2 6D	50001	50002	50217	65185	-	20	R	20,0	0,00	0,20	2,08	0,10	-0,10	6	0
CTR 2,5 6D	50005	50006	50218	65184	-	20	R	20,0	0,00	0,20	2,58	0,10	-0,10	6	0
CTR 3 6D	54840	10437	10435	65186	-	30	R	20,0	0,00	0,20	3,08	0,10	-0,10	6	0
CTR 4 6D	54842	10449	10447	65187	-	40	R	20,0	0,00	0,20	4,08	0,10	-0,10	6	0
CTR 5 6D	54844	10461	10459	65188	-	50	R	25,0	0,00	0,20	5,13	0,10	-0,10	6	0

Classic chip breaker

Horizontal, chamfered parting off edge with reinforced flanks and large chip breaker. To be used universally and especially in alloyed steels, stainless steels and interrupted cuts



The cost cutters

The use of small widths safes an enormous amount of material, costs and energy.

Fitting tools

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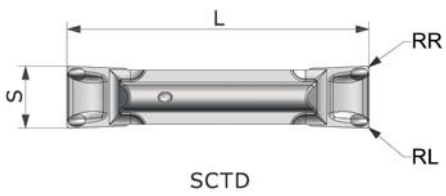
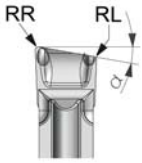
Parting off inserts

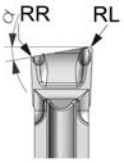
SCTD/R/L



SCTD



SCTL



SCTR

Enlarged view

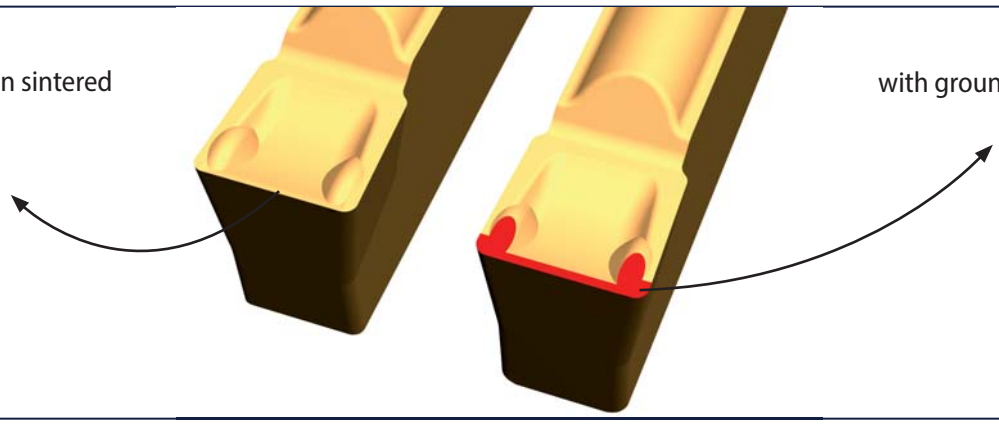
PRODDES	IDNR	IDNR	IDNR	IDNR	IDNR	IDNR	IIC	IH	INSL	RER	REL	CW	CWUD	CWLD	PSIRR	PSIRL
WG300 Ref.	GF110 NANO-SPEED	KM NANO-SPEED	PM NANO-SPEED	GF110 CARBO SX2	KM CARBO SX2	PM CARBO SX2	pocket size		L	RR	RL	S	S+	S-	α°	α°
	P M N S	P M N S	P M N S	P S	P S	P S										
SCTD 1,5	50009	-	50010	65232	-	65233	15	N	15,5	0,2	0,2	1,58	0,10	-0,10	0	0
SCTD 2	50013	-	50014	65236	-	65237	20	N	20,0	0,2	0,2	2,08	0,10	-0,10	0	0
SCTD 2,5	50017	-	50018	65234	-	65235	20	N	20,0	0,2	0,2	2,58	0,10	-0,10	0	0
SCTD 3,0	59226	53868	53869	65238	65239	65240	30	N	20,0	0,2	0,2	3,08	0,10	-0,10	0	0
SCTD 4,0	59227	53875	53876	65241	65242	65243	40	N	20,0	0,2	0,2	4,08	0,10	-0,10	0	0
SCTD 5,0	59228	53879	53880	65244	65245	65246	50	N	25,0	0,2	0,2	5,13	0,10	-0,10	0	0
SCTL 1,5 6D	50021	-	50022	-	-	65247	15	L	15,5	0,2	0	1,58	0,10	-0,10	0	6
SCTL 2 6D	50025	-	50026	-	-	65249	20	L	20,0	0,2	0	2,08	0,10	-0,10	0	6
SCTL 2,5 6D	50029	-	50030	-	-	65248	20	L	20,0	0,2	0	2,58	0,10	-0,10	0	6
SCTL 3,0 6D	59232	53883	53884	-	-	65250	30	L	20,0	0,2	0	3,08	0,10	-0,10	0	6
SCTR 1,5 6D	50033	-	50034	-	-	65251	15	R	15,5	0	0,2	1,58	0,10	-0,10	6	0
SCTR 2 6D	50037	-	50038	-	-	65253	20	R	20,0	0	0,2	2,08	0,10	-0,10	6	0
SCTR 2,5 6D	50041	-	50042	-	-	65252	20	R	20,0	0	0,2	2,58	0,10	-0,10	6	0
SCTR 3,0 6D	59234	53887	53888	-	-	65254	30	R	20,0	0	0,2	3,08	0,10	-0,10	6	0

SUPERNOVA Parting off geometry

Slightly honed cutting edge with reinforced flanks and large chip chamber.

SCTD
with precision sintered cutting edge

CTD
with ground chamfer



Fitting tools

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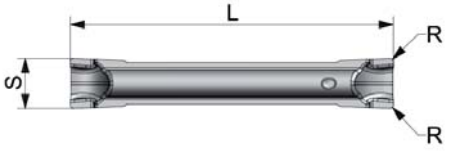
KEMMER HARTMETALLWERKZEUGE

Parting off inserts

LTNN



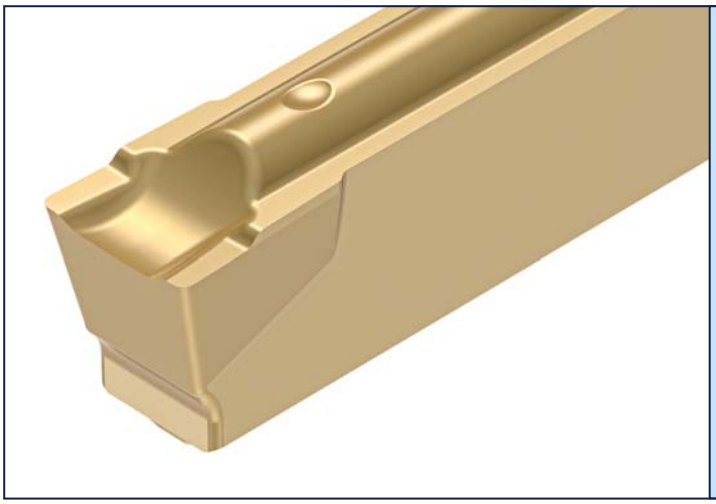
Enlarged view

PRODDES	IDNR	IDNR	IDNR	IIC	IH	INSL	RER/REL	CW	CWUD	CWLD
WG300 Ref.	GF110 NANOSPEED	PM NANOSPEED	GF110 CARBOSX2	pocket size		L	R	S	S+	S-
	P M N S	P M N S	P S							
LTNN 1.5	55647	55980	65202	15	N	15,50	0,15	1,575	0,10	0,10
LTNN 2	55975	55976	65203	20	N	20,00	0,20	2,075	0,10	0,10
LTNN 3	54443	54441	65204	30	N	20,00	0,20	3,075	0,10	0,10
LTNNW 3	57177	57176	-	30	N	20,00	0,20	3,075	0,05	0,05

LTN parting off geometry

For parting off long chipping materials.
Especially recommended for double-spindle lathes.

WIPER Edges Description on p. 59



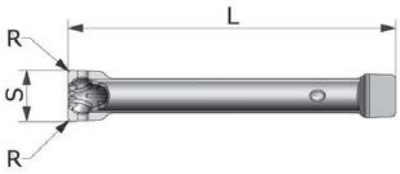
- High feeds
- Easy cutting geometry
- Reinforced flanks
- Short chipbreaker

Fitting tools

Tech. section p. 223 | Pocket size p. 224 | p. 82 - 83 | p. 84 - 90 | p. 91 - 93 | p. 96-99 | p. 100 | p. 101 | p. 110-113 | p. 115-117 | p. 119 | p. 185 | p.199

Parting off inserts for deep cuts with one edge

A GTNS

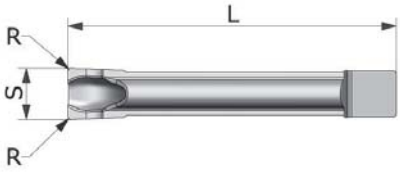


Enlarged view

PRODDES	IDNR	IDNR	IIC	IH	INSL	REL/RER	CW	CWUD	CWLD
WG300 Ref.	GF110 TILOX	PM NANOSPEED	pocket size		L	R	S	S+	S-
	P M K S	P M N S							
A GTNS 302	57229	57231	30	N	20,00	0,2	3,075	0,10	-0,10
A GTNS 404	57230	57232	40	N	20,00	0,4	4,075	0,10	-0,10
A GTNS 504	48472	48474	50	N	25,00	0,4	5,125	0,10	-0,10

Fitting tools see below

A BTNN



Enlarged view

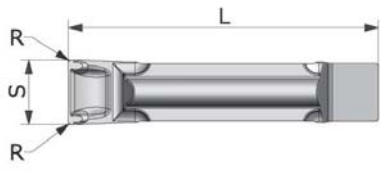
PRODDES	IDNR	IDNR	IIC	IH	INSL	REL/RER	CW	CWUD	CWLD
WG300 Ref.	GF110 TILOX	PM NANOSPEED	pocket size		L	R	S	S+	S-
	P M K S	P M N S							
A BTNN 3	13953	24050	30	N	20,00	0,2	3,08	0,10	-0,10
A BTNN 4	20291	24051	40	N	20,00	0,2	4,08	0,10	-0,10

Fitting tools see below

BTN-insert, type with one cutting edge.

Deep cutting depths and clean turning faces. **Reduce feed** while cutting depth increases. Grooved parting off edge with reinforced flanks. The deep and spacious **chip chamber** gives excellent chip control. Efficent on almost all materials.

A CTD



Enlarged view

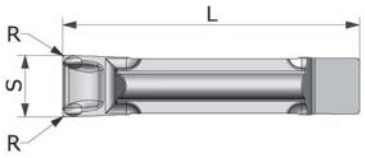
PRODDES	IDNR	IDNR	IIC	IH	INSL	REL/RER	CW	CWUD	CWLD
WG300 Ref.	KM TILOX	PM NANOSPEED	pocket size		L	R	S	S+	S-
	P M K S	P M N S							
A CTD 3	10980	10983	30	N	20,00	0,20	3,075	0,10	-0,10
A CTD 4	10985	10988	40	N	20,00	0,20	4,075	0,10	-0,10

Fitting tools

p. 223 p. 224 p. 84 - 90 p. 91 - 93 p. 96-99 p. 100 p. 101 p. 110-113 p. 115-117 p. 119 p. 185 p.199

Parting off inserts for deep cuts with one edge

A SCTD

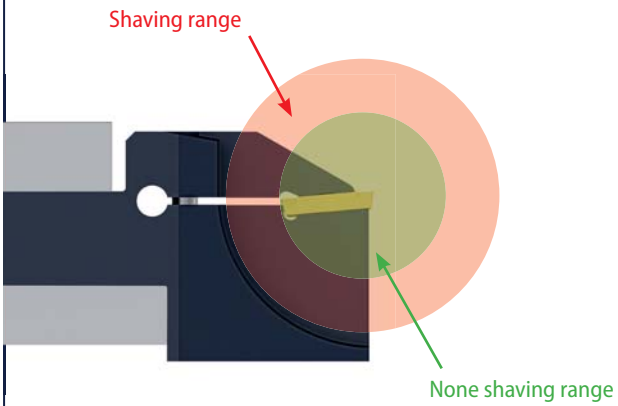


Enlarged view

PRODDES	IDNR	IDNR	IIC	IH	INSL	REL/RER	CW	CWUD	CWLD
WG300 Ref.	KM TILOX	PM NANOSPEED	pocket size		L	R	S	S+	S-
	P M K S	P M N S							
A SCTD 3	57233	57234	30	N	20,00	0,20	3,075	0,10	-0,10
A SCTD 4	57235	57236	40	N	20,00	0,20	4,075	0,10	-0,10

Remark P92 A - inserts with 1 edge

P92 A-inserts and P92 A CXCB...holder join together forming an extremely solid unit owing to long guide surfaces between insert and pocket and reinforced tool holders. A-type tools are therefore recommended for heavy duty cutting, deep cuts and to achieve clean surfaces.



Shaving

If the cutting depth exceeds the length of the cutting insert, the second edge of the insert penetrates into the slot and may cause shaving marks on the component. To prevent from shaving the insert type A is recommended.

Fitting tools

Tech. section p. 223 | Pocket size p. 224 | p. 84 - 90 | p. 91 - 93 | p. 96-99 | p. 100 | p. 101 | p. 110-113 | p. 115-117 | p. 119 | p. 185 | p.199

Hard material machining

Inserts, coating and tool holders for parting off, grooving and turning

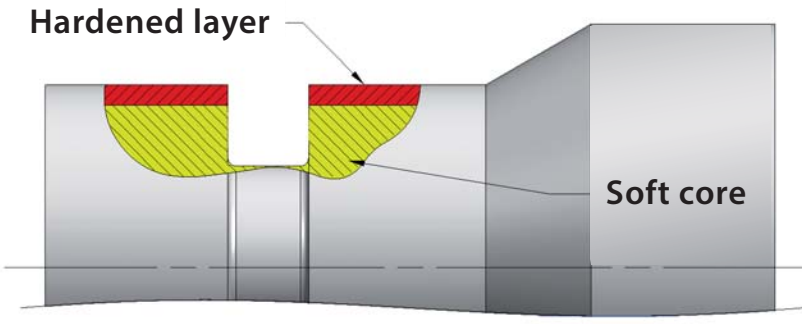
Inserts with efficient chip breakers and special coating HARD SX3 for:

- hardened materials
- surface hardened materials
- exotic and tempered materials

Machining materials with a Rockwell hardness of 54 and more. Inserts and holders are stressed heavily on such operations.
Therefore starting-up speeds, feeds and depths should be low graded.

HARD SX3

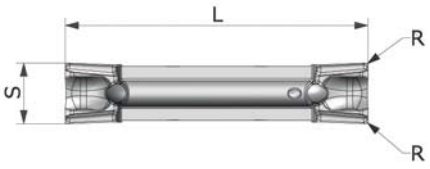
- Polished edges and surfaces
- Low price alternative compared with CBN tipped inserts
- To be used on unhardened steels as well
- Multi edge inserts available
- Constant performance when cutting from hard layer into soft core

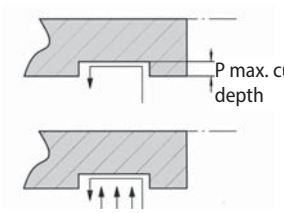


Remark: Other cutting widths and special profiles with HARD SX3 on request.

Cutting and turning inserts | Hard material machining

BTNG



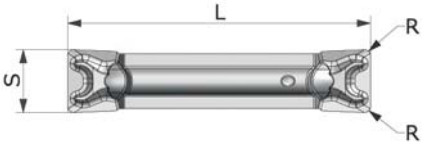


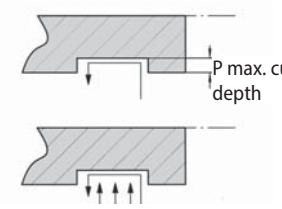
Enlarged view

PRODDES	IDNR	IIC	IH	INSL	PDPT	RER/REL	CW	CWUD	CWLD
WG262 Ref.	GF110 HARDSX3	pocket size		L	P	R	S	S+	S-
	H S								
BTNG 202	65258	20	N	20,00	1,60	0,20	2,00	0,03	-0,03
BTNG 302	65259	30	N	20,00	2,80	0,20	3,00	0,03	-0,03
BTNG 304	65260	30	N	20,00	2,80	0,40	3,00	0,03	-0,03
BTNG 402	65261	40	N	20,00	2,80	0,20	4,00	0,03	-0,03
BTNG 404	65262	40	N	20,00	2,80	0,40	4,00	0,03	-0,03
BTNG 408	65263	40	N	20,00	2,80	0,80	4,00	0,03	-0,03
BTNG 504	65264	50	N	25,00	3,40	0,40	5,00	0,03	-0,03
BTNG 508	65265	50	N	25,00	3,40	0,80	5,00	0,03	-0,03
BTNG 604	65266	60	N	30,00	3,90	0,40	6,00	0,03	-0,03
BTNG 808	65267	80	N	30,00	5,10	0,80	8,00	0,03	-0,03

Fitting tools see below

MTNS





Enlarged view

PRODDES	IDNR	IIC	IH	INSL	PDPT	RER/REL	CW	CWUD	CWLD
WG302 Ref.	KM HARDSX3	pocket size		L	P	R	S	S+	S-
	H S								
MTNS 202	65289	20	N	20,10	1,60	0,20	2,09	0,11	-0,11
MTNS 302	65325	30	N	20,00	2,80	0,20	3,09	0,09	-0,09
MTNS 304	65326	30	N	20,00	2,80	0,40	3,09	0,09	-0,09
MTNS 402	65327	40	N	20,00	2,80	0,20	4,09	0,12	-0,12
MTNS 404	65328	40	N	20,00	2,80	0,40	4,08	0,12	-0,12
MTNS 408	65329	40	N	20,00	2,80	0,80	4,07	0,14	-0,14
MTNS 504	65290	50	N	25,00	3,40	0,40	5,18	0,13	-0,13
MTNS 508	65291	50	N	25,00	3,40	0,80	5,18	0,13	-0,13
MTNS 604	65292	60	N	30,00	3,90	0,40	6,18	0,13	-0,13
MTNS 808	65293	80	N	30,00	5,10	0,80	8,18	0,13	-0,13

Fitting tools

p. 223

p. 224

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p. 84 - 90


p. 91 - 93


p. 96-99


p. 100


p. 101


p. 110-113


p. 115-117


p. 119

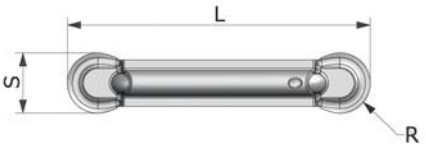

p. 120

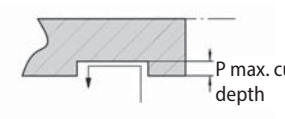

p. 185


p.199

Cutting and turning inserts | Hard material machining

RTNG





Enlarged view

PRODDES	IDNR	IIC	IH	INSL	PDPT	RER/REL	CW	CWUD	CWLD
WG262 Ref.	GF110 HARDSX3	pocket size		L	P	R	S	S+	S-
	H S								
RTNG 210	65295	20	N	20,00	1,40	1,00	2,00	0,03	-0,03
RTNG 315	65296	30	N	20,00	2,00	1,50	3,00	0,03	-0,03
RTNG 420	65297	40	N	20,00	2,70	2,00	4,00	0,03	-0,03
RTNG 525	65298	50	N	25,00	3,30	2,50	5,00	0,03	-0,03
RTNG 630	65299	60	N	30,00	3,90	3,00	6,00	0,03	-0,03
RTNG 840	65300	80	N	30,00	5,20	4,00	8,00	0,03	-0,03
RTNG 1050	65294	100	N	30,00	6,50	5,00	10,00	0,03	-0,03

Fitting tools

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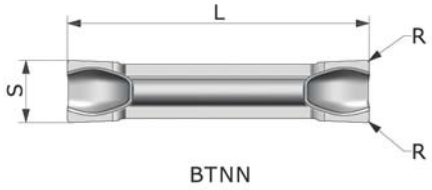
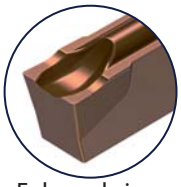
Inserts for grooving and parting off | Hard material machining

BTNN

System P92





Enlarged view

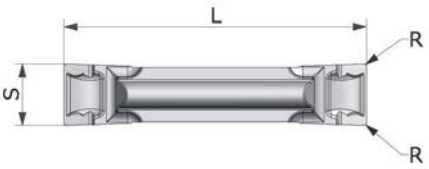
IDNR	IDNR	IIC	IH	INSL	RER/REL	CW	CWUD	CWLD
WG302 Ref.	KM HARDSX3	pocket size		L	R	S	S+	S-
	H S							
BTNN1,5	65268	15	N	15,50	0,15	1,58	0,10	-0,10
BTNN 2	65270	20	N	20,00	0,20	2,08	0,10	-0,10
BTNN 2,5	65269	20	N	20,00	0,20	2,58	0,10	-0,10
BTNN 3	65315	30	N	20,00	0,20	3,08	0,10	-0,10
BTNN 4	65271	40	N	20,00	0,20	4,08	0,10	-0,10

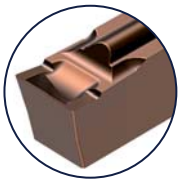
Fitting tools

p. 223 p. 224 p. 228 p. 82 - 83 p. 84 - 90 p. 91 - 93 p. 96-99 p. 100 p. 101 p. 110-113 p. 115-117 p. 119 p. 185 p.199

Inserts for grooving and parting off | Hard material machining

CTD ALU





Enlarged view

PRODDES	IDNR	IIC	IH	INSL	RER/REL	CW	CWUD	CWLD
WG302 Ref.	GF110 HARDSX3	pocket size		L	R	S	S+	S-
	H S							
CTD 1.5 ALU	65316	15	N	15,5	0,15	1,58	0,10	-0,10
CTD 2 ALU	65318	20	N	20,0	0,20	2,08	0,10	-0,10
CTD 2.5 ALU	65317	20	N	20,0	0,20	2,58	0,10	-0,10
CTD 3 ALU	65319	30	N	20,0	0,20	3,08	0,10	-0,10
CTD 4 ALU	65320	40	N	20,0	0,20	4,08	0,10	-0,10
CTD 5 ALU	65281	50	N	25,0	0,20	5,13	0,10	-0,10

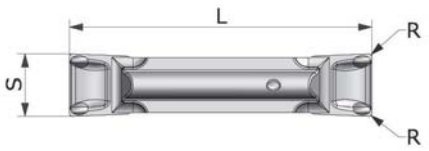
ALU chip breaker

Horizontal ground cutting edge. The flat chip chamber conveys chips at high speed.

Recommended for: Nonferrous heavy metals, machining steels, thinwalled parts, unstable components and pipes.

Fitting tools, see below

SCTD



Enlarged view

PRODDES	IDNR	IIC	IH	INSL	RER/REL	CW	CWUD	CWLD
WG302 Ref.	GF110 HARDSX3	pocket size		L	R	S	S+	S-
	H S							
SCTD 1,5	65399	15	N	15,5	0,15	1,58	0,10	-0,10
SCTD 2	65401	20	N	20,0	0,20	2,08	0,10	-0,10
SCTD 2,5	65400	20	N	20,0	0,20	2,58	0,10	-0,10
SCTD 3,0	65402	30	N	20,0	0,20	3,08	0,10	-0,10
SCTD 4,0	65403	40	N	20,0	0,20	4,08	0,10	-0,10
SCTD 5,0	65404	50	N	25,0	0,20	5,13	0,10	-0,10

SUPERNOVA Parting off geometry

Slightly honed cutting edge with reinforced flanks and large chip trough.

Fitting tools

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p. 96-99


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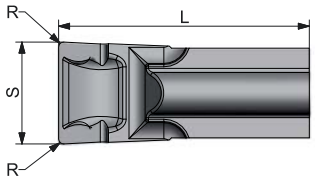
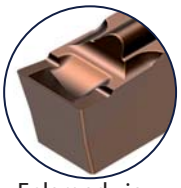
p.199

Inserts for grooving with one edge | Hard material machining

KCTD





Enlarged view

PRODDES	IDNR	IIC	IH	INSL	RER/REL	CW	CWUD	CWLD	
WG302 Ref.	KM HARDSX3	pocket size		L	R	S	S+	S-	Boring bar-Ø
	H S								
KCTD 3	65322	K30	N	9,5	0,20	3,08	0,10	-0,10	12
KCTD 3	65322	K30	N	9,5	0,20	3,08	0,10	-0,10	16
KCTD 3 MAX	65323	K30	N	12,0	0,20	3,08	0,10	-0,10	12
KCTD 3 MAX	65323	K30	N	12,0	0,20	3,08	0,10	-0,10	16

Remark

Inserts for small diameters.

Fitting tools

Tech. section p. 223
Pocket size p. 224
Intersection main cutting edge p. 228
p. 104

KEMMER HARTMETALLWERKZEUGE

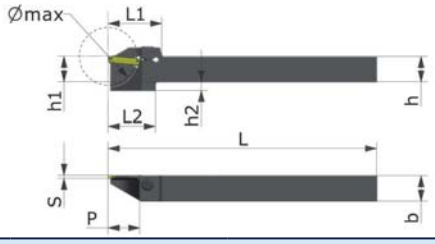
P92 - Code for toolholders

P92 CXCB R 2020 K 30 14

- P92 — Tool familiy P92 / P92 A
- CXCB — Screw clamped holder for inserts with TWO cutting edges
- R — Rotation
- 2020 — Shank dimension
- K — ISO Length
- 30 — Cutting width (30 = 3 mm)
- 14 — Cutting depth / Parting Ø

Holders for parting off, grooving and turning for cutting width 1,5 mm

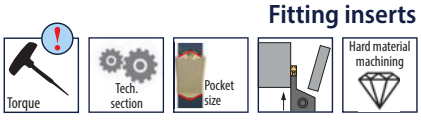
P92 CXCBL



P92 CXCBR

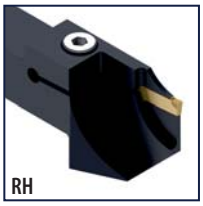
PRODDES	IDNR	MIID	Hand		H	HF		B	CDX	CW	OAL	LH	LTA	
WG380 Ref.	ID-Nr.	pocket size		Ø max	h	h1	h2	b	P	S	L	L1	L2	
P92 CXCBL 0808 K15 08	33450	15	L	16	8	8	4	8	8	1,5	125	19	19	10
P92 CXCBL 1010 K15 08	30110	15	L	16	10	10	6	10	8	1,5	125	19	19	10
P92 CXCBL 1010 K15 14	44738	15	L	28	10	10	6	10	14	1,5	125	25	22	10
P92 CXCBL 1212 K15 08	30109	15	L	16	12	12	4	12	8	1,5	125	19	19	10
P92 CXCBL 1212 K15 14	44739	15	L	28	12	12	4	12	14	1,5	125	25	22	10
P92 CXCBL 1616 K15 08	30100	15	L	16	16	16	-	16	8	1,5	125	19	-	10
P92 CXCBL 1616 K15 14	44740	15	L	28	16	16	-	16	14	1,5	125	25	-	10
P92 CXCBL 2020 K15 14	44741	15	L	28	20	20	-	20	14	1,5	125	25	-	10
P92 CXCBL 2525 M15 14	33460	15	L	28	25	25	-	25	14	1,5	150	30	-	1
P92 CXCBR 0808 K15 08	33449	15	R	16	8	8	4	8	8	1,5	125	19	19	10
P92 CXCBR 1010 K15 08	30124	15	R	16	10	10	6	10	8	1,5	125	19	19	10
P92 CXCBR 1010 K15 14	44733	15	R	28	10	10	6	10	14	1,5	125	25	22	10
P92 CXCBR 1212 K15 08	30125	15	R	16	12	12	4	12	8	1,5	125	19	19	10
P92 CXCBR 1212 K15 14	44734	15	R	28	12	12	4	12	14	1,5	125	25	22	10
P92 CXCBR 1616 K15 08	30126	15	R	16	16	16	-	16	8	1,5	125	19	-	10
P92 CXCBR 1616 K15 14	44735	15	R	28	16	16	-	16	14	1,5	125	25	-	10
P92 CXCBR 2020 K15 14	44736	15	R	28	20	20	-	20	14	1,5	125	25	-	10
P92 CXCBR 2525 M15 14	33459	15	R	28	25	25	-	25	14	1,5	150	30	-	1

Fitting inserts

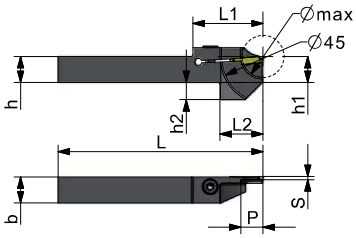


p. 220, 221, 245 p. 223 p. 224 p. 68-74 p. 77-80

Holders for parting off, grooving and turning for Traub TR12 for cutting width 1,5 mm



P92 CXCBR...TR12



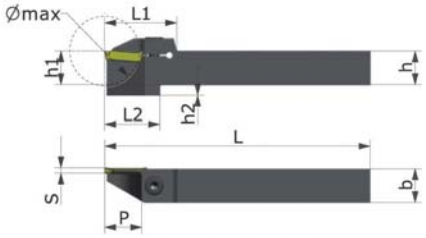
PRODDES	IDNR	MIID	Hand	H	HF		B	CDX	CW	OAL	LH	LTA	
WG380 Ref.	ID-Nr.	pocket size		Ø max	h	h1	h2	b	P	S	L	L1	L2	
P92 CXCBR 1212 K15 10 TR12	54546	15	R	20	12	12	8	12	10	1,5	95	32,5	20	18

Fitting inserts

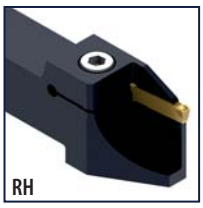
Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | p. 68-74 | Hard material machining p. 77-80

Holders for parting off, grooving and turning for cutting width 2 and 2,5 mm

P92 CXCBL



P92 CXCBR



PRODDES	IDNR	MIID	Hand	H	HF		B	CDX	CW	OAL	LH	LTA	
WG380 Ref.	ID-Nr.	pocket size		Ø max	h	h1	h2	b	P	S	L	L1	L2	
P92 CXCBL 0808 K20+25 11	33444	20	L	22	8	8	4	8	11	2	125	19,5	19,5	10
P92 CXCBL 1010 K20+25 11	33445	20	L	22	10	10	6	10	11	2	125	19,5	19,5	10
P92 CXCBL 1212 K20+25 11	33448	20	L	22	12	12	4	12	11	2	125	19,5	19,5	10
P92-CXCBL 1212 K20+25 14	44742	20	L	28	12	12	4	12	14	2	125	25	22	10
P92 CXCBL 1616 K20+25 11	33452	20	L	22	16	16	-	16	11	2	125	19,5	-	10
P92 CXCBL 1616 K20+25 17	33473	20	L	34	16	16	5	16	17	2	125	34	26	1
P92 CXCBL 2020 K20+25 14	33454	20	L	28	20	20	-	20	14	2	125	30	-	1
P92 CXCBL 2020 K20+25 17	33474	20	L	34	20	20	-	20	17	2	125	34	-	1
P92 CXCBL 2525 M20+25 14	33455	20	L	28	25	25	-	25	14	2	150	30	-	1
P92 CXCBL 2525 M20+25 17	33475	20	L	34	25	25	-	25	17	2	150	34	-	1
P92 CXCBR 0808 K20+25 11	33336	20	R	22	8	8	4	8	11	2	125	19,5	19,5	10
P92 CXCBR 1010 K20+25 11	33446	20	R	22	10	10	6	10	11	2	125	19,5	19,5	10
P92 CXCBR 1212 K20+25 11	33447	20	R	22	12	12	4	12	11	2	125	19,5	19,5	10
P92-CXCBR 1212 K20+25 14	44737	20	R	28	12	12	4	12	14	2	125	25	22	10
P92 CXCBR 1616 K20+25 11	33451	20	R	22	16	16	-	16	11	2	125	19,5	-	10
P92 CXCBR 1616 K20+25 17	33470	20	R	34	16	16	5	16	17	2	125	34	26	1
P92 CXCBR 2020 K20+25 14	33453	20	R	28	20	20	-	20	14	2	125	30	-	1
P92 CXCBR 2020 K20+25 17	33471	20	R	34	20	20	-	20	17	2	125	34	-	1
P92 CXCBR 2525 M20+25 14	33456	20	R	28	25	25	-	25	14	2	150	30	-	1
P92 CXCBR 2525 M20+25 17	33472	20	R	34	25	25	-	25	17	2	150	34	-	1

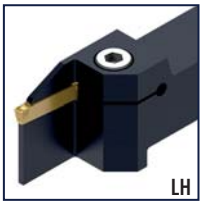
Fitting inserts

Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | p. 56 - 64 | p. 66 | p. 68-74 | Hard material machining p. 77-80

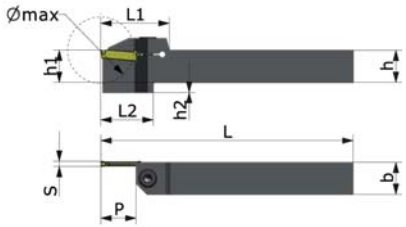
One pocket size for two cutting widths
2 mm or **2,5 mm**

KEMMER HARTMETALLWERKZEUGE

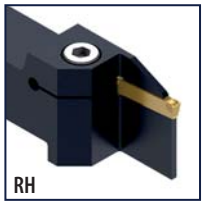
Holders for parting off, grooving and turning for cutting width 2 and 2,5 mm



P92 CXCBL...



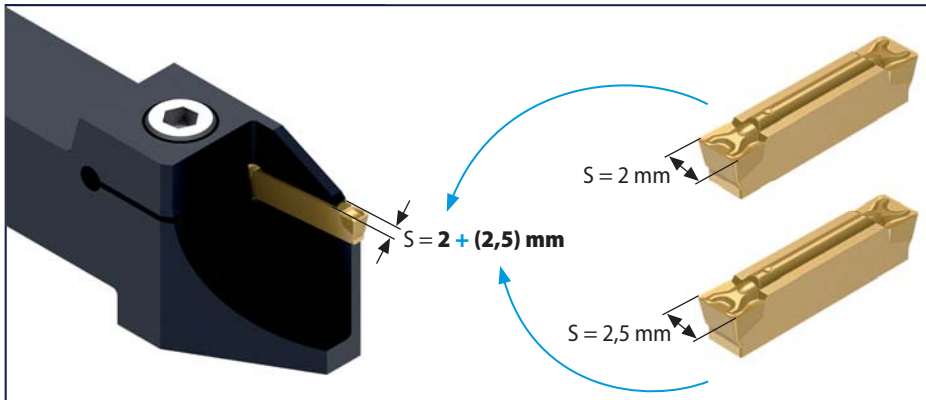
P92 CXCBR...



PRODDES	IDNR	MIID	Hand		H	HF		B	CDX	CW	OAL	LH	LTA	
WG380 Ref.	ID-Nr.	pocket size		Ø max	h	h1	h2	b	P	S	L	L1	L2	
P92 CXCBL 1616 K20+25	59178	20	L	34	16	16	5	16	17	2	125	34	26	1
P92 CXCBL 2020 K20+25	59179	20	L	34	20	20	-	20	17	2	125	34	-	1
P92 CXCBL 2525 M20+25	59180	20	L	34	25	25	-	25	17	2	150	34	-	1
P92 CXCBR 1616 K20+25	59181	20	R	34	16	16	5	16	17	2	125	34	26	1
P92 CXCBR 2020 K20+25	59182	20	R	34	20	20	-	20	17	2	125	34	-	1
P92 CXCBR 2525 M20+25	59183	20	R	34	25	25	-	25	17	2	150	34	-	1

Comment

Tool holders with an extension of 17 mm offer an enlarged range for parting off. When used for turning, moderate feeds should be applied.



One pocket size for two cutting widths

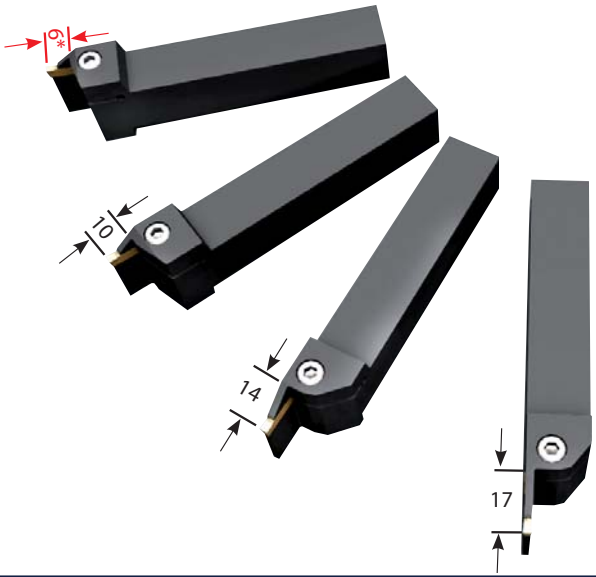
The cutting widths **2 mm** and **2.5 mm** fits in one pocket size.

Select the smallest possible extension

Tool holder standards

For each cutting width are different extensions available.

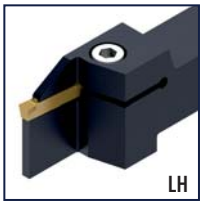
* Special solution



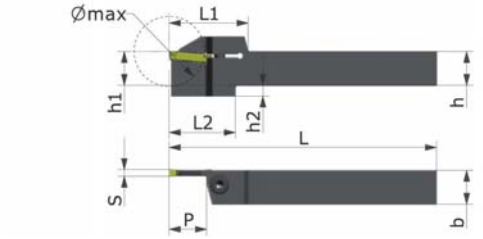
Fitting inserts

Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | p. 56 - 64 | p. 66 | p. 68-74 | Hard material machining p. 77-80

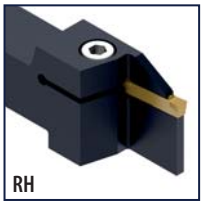
Holders for parting off, grooving and turning for cutting width range 3 to 3,5 mm



P92 CXCBL



P92 CXCBR

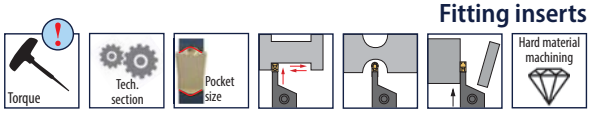


PRODDES	IDNR	MIID	Hand		H	HF		B	CDX	CW	OAL	LH	LTA	
WG380 Ref.	ID-Nr.	pocket size		Ø max	h	h1	h2	b	P	S	L	L1	L2	
P92 CXCBL 1212 K30 10	28189	30	L	20	12	12	5	12	10	3,0	125	21	22	11
P92 CXCBL 1212 K30 14	19698	30	L	28	12	12	5	12	14	3,0	125	34	26	1
P92 CXCBL 1616 K30 10	38514	30	L	20	16	16	5	16	10	3,0	125	28	22	1
P92 CXCBL 1616 K30 14	10092	30	L	28	16	16	5	16	14	3,0	125	34	28	1
P92 CXCBL 1616 K30 17	10094	30	L	34	16	16	5	16	17	3,0	125	37	31	1
P92 CXCBL 2020 K30 10	38515	30	L	20	20	20	5	20	10	3,0	125	30	26	1
P92 CXCBL 2020 K30 14	10096	30	L	28	20	20	5	20	14	3,0	125	34	26	1
P92 CXCBL 2020 K30 17	10098	30	L	34	20	20	5	20	17	3,0	125	37	29	1
P92 CXCBL 2525 M30 10	31254	30	L	20	25	25	-	25	10	3,0	150	30	-	2
P92 CXCBL 2525 M30 14	10108	30	L	28	25	25	-	25	14	3,0	150	34	-	2
P92 CXCBL 2525 M30 17	10110	30	L	34	25	25	-	25	17	3,0	150	37	-	2
P92 CXCBR 1212 K30 10	28188	30	R	20	12	12	5	12	10	3,0	125	21	22	11
P92 CXCBR 1212 K30 14	19533	30	R	28	12	12	5	12	14	3,0	125	34	26	1
P92 CXCBR 1616 K30 10	38516	30	R	20	16	16	5	16	10	3,0	125	28	22	1
P92 CXCBR 1616 K30 14	10091	30	R	28	16	16	5	16	14	3,0	125	34	28	1
P92 CXCBR 1616 K30 17	10093	30	R	34	16	16	5	16	17	3,0	125	37	31	1
P92 CXCBR 2020 K30 10	38517	30	R	20	20	20	5	20	10	3,0	125	30	26	1
P92 CXCBR 2020 K30 14	10095	30	R	28	20	20	5	20	14	3,0	125	34	26	1
P92 CXCBR 2020 K30 17	10097	30	R	34	20	20	5	20	17	3,0	125	37	29	1
P92 CXCBR 2525 M30 10	36432	30	R	20	25	25	-	25	10	3,0	150	30	-	2
P92 CXCBR 2525 M30 14	10107	30	R	28	25	25	-	25	14	3,0	150	34	-	2
P92 CXCBR 2525 M30 17	10109	30	R	34	25	25	-	25	17	3,0	150	37	-	2
P92 CXCBL 2020 K35 17	10100	40	L	34	20	20	5	20	17	3,5	125	37	29	1
P92 CXCBL 2525 M35 17	10112	40	L	34	25	25	-	25	17	3,5	150	37	-	2
P92 CXCBR 2020 K35 17	10099	40	R	34	20	20	5	20	17	3,5	125	37	29	1
P92 CXCBR 2525 M35 17	10111	40	R	34	25	25	-	25	17	3,5	150	37	-	2

Comment:

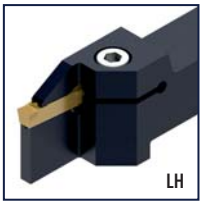
Tool holders with an extension of 17 mm offer an enlarged range for parting off. When used for turning, moderate feeds should be applied.

Fitting inserts

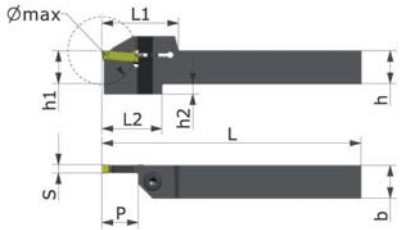


p. 220, 221, 245 p. 223 p. 224 p. 56 - 65 p. 66 p. 68-74 p. 77-80

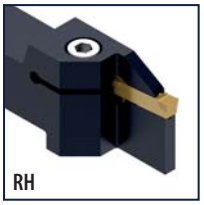
Holders for parting off, grooving and turning for cutting width range 4 to 5 mm



P92 CXCBL



P92 CXCBR

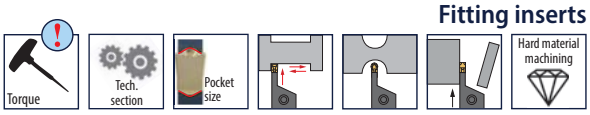


PRODDES	IDNR	MIID	Hand		H	HF		B	CDX	CW	OAL	LH	LTA	
WG380 Ref.	ID-Nr.	pocket size		Ø max	h	h1	h2	b	P	S	L	L1	L2	
P92 CXCBL 1616 K40 10	38523	40	L	20	16	16	5	16	10	4	125	28	22	1
P92 CXCBL 1616 K40 14	19476	40	L	28	16	16	5	16	14	4	125	34	26	1
P92 CXCBL 1616 K40 17	28191	40	L	34	16	16	5	16	17	4	125	37	29	1
P92 CXCBL 2020 K40 10	38524	40	L	20	20	20	5	20	10	4	125	30	26	1
P92 CXCBL 2020 K40 14	10102	40	L	28	20	20	5	20	14	4	125	34	26	1
P92 CXCBL 2020 K40 17	10104	40	L	34	20	20	5	20	17	4	125	37	29	1
P92 CXCBL 2525 M40 10	38525	40	L	20	25	25	-	25	10	4	150	30	-	2
P92 CXCBL 2525 M40 14	10114	40	L	28	25	25	-	25	14	4	150	34	-	2
P92 CXCBL 2525 M40 17	10116	40	L	34	25	25	-	25	17	4	150	37	-	2
P92 CXCBR 1616 K40 10	20619	40	R	20	16	16	5	16	10	4	125	28	22	1
P92 CXCBR 1616 K40 14	19477	40	R	28	16	16	5	16	14	4	125	34	26	1
P92 CXCBR 1616 K40 17	23199	40	R	34	16	16	5	16	17	4	125	37	29	1
P92 CXCBR 2020 K40 10	38527	40	R	20	20	20	5	20	10	4	125	30	26	1
P92 CXCBR 2020 K40 14	10101	40	R	28	20	20	5	20	14	4	125	34	26	1
P92 CXCBR 2020 K40 17	10103	40	R	34	20	20	5	20	17	4	125	37	29	1
P92 CXCBR 2525 M40 10	38528	40	R	20	25	25	-	25	10	4	150	30	-	2
P92 CXCBR 2525 M40 14	10113	40	R	28	25	25	-	25	14	4	150	34	-	2
P92 CXCBR 2525 M40 17	10115	40	R	34	25	25	-	25	17	4	150	37	-	2
P92 CXCBL 2020 K50 10	19568	50	L	20	20	20	5	20	10	5	125	34,5	30	1
P92 CXCBL 2020 K50 20	44224	50	L	40	20	20	5	20	20	5	125	40	33	2
P92 CXCBL 2525 M50 10	38526	50	L	20	25	25	-	25	10	5	150	34,5	-	2
P92 CXCBL 2525 M50 20	10118	50	L	40	25	25	-	25	20	5	150	40	-	2
P92 CXCBR 2020 K50 10	16033	50	R	20	20	20	5	20	10	5	125	34,5	30	1
P92 CXCBR 2020 K50 20	44223	50	R	40	20	20	5	20	20	5	125	40	33	2
P92 CXCBR 2525 M50 10	38529	50	R	20	25	25	-	25	10	5	150	34,5	-	2
P92 CXCBR 2525 M50 20	10117	50	R	40	25	25	-	25	20	5	150	40	-	2

Comment

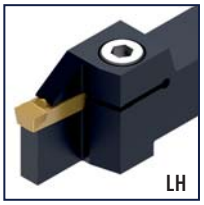
Tool holders with an extension of 17 mm offer an enlarged range for parting off. When used for turning, moderate feeds should be applied.

Fitting inserts

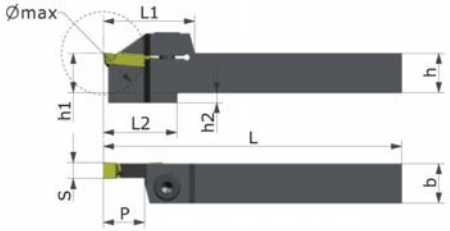


p. 220, 221, 245 p. 223 p. 224 p. 56 - 65 p. 66 p. 68-74 p. 77-80

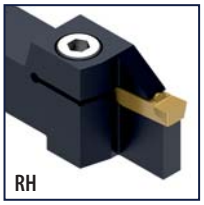
Holders for parting off, grooving and turning for cutting width range 6 to 10 mm



P92 CXCBL



P92 CXCBR



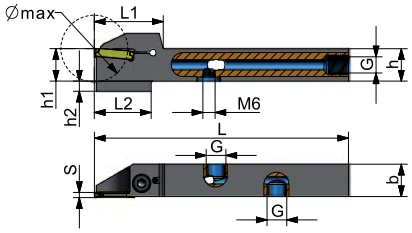
PRODDES	IDNR	MIID	Hand		H	HF		B	CDX	CW	OAL	LH	LTA	
WG380 Ref.	ID-Nr.	pocket size		Ø max	h	h1	h2	b	P	S	L	L1	L2	
P92 CXCBL 2020 M60 10	21252	60	L	20	20	20	5	20	10	6	150	38	29	2
P92 CXCBL 2020 M60 20	19757	60	L	40	20	20	5	20	20	6	150	43	35	2
P92 CXCBL 2525 M60 10	38520	60	L	20	25	25	-	25	10	6	150	38	-	2
P92 CXCBL 2525 M60 20	19347	60	L	40	25	25	-	25	20	6	150	40	-	2
P92 CXCBL 3225 P60 26	19349	60	L	52	32	32	-	25	26	6	170	45	-	2
P92 CXCBR 2020 M60 10	21253	60	R	20	20	20	5	20	10	6	150	38	29	2
P92 CXCBR 2020 M60 20	19758	60	R	40	20	20	5	20	20	6	150	43	35	2
P92 CXCBR 2525 M60 10	20803	60	R	20	25	25	-	25	10	6	150	38	-	2
P92 CXCBR 2525 M60 20	19327	60	R	40	25	25	-	25	20	6	150	40	-	2
P92 CXCBR 3225 P60 26	19348	60	R	52	32	32	-	25	26	6	170	45	-	2
P92 CXCBL 2020 M80 14	30298	80	L	28	20	20	5	20	14	8	150	39,5	31	2
P92 CXCBL 2525 M80 20	19354	80	L	40	25	25	-	25	20	8	150	43	-	3
P92 CXCBL 3225 P80 26	19350	80	L	52	32	32	-	25	26	8	170	47	-	3
P92 CXCBR 2020 M80 14	30297	80	R	28	20	20	5	20	14	8	150	39,5	31	2
P92 CXCBR 2525 M80 20	19355	80	R	40	25	25	-	25	20	8	150	43	-	3
P92 CXCBR 3225 P80 26	19351	80	R	52	32	32	-	25	26	8	170	47	-	3
P92 CXCBL 3225 P100 26	19352	100	L	52	32	32	-	25	26	10	170	47	-	3
P92 CXCBR 3225 P100 26	19353	100	R	52	32	32	-	25	26	10	170	47	-	3

Fitting inserts

Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | p. 56 - 65 | p. 66 | Hard material machining p. 77-80

Holders for parting off with internal coolant | with 3 thread connections

P92 CXCBL 20+25 HP



P92 CXCBR 20+25 HP

PRODDES	IDNR	MIID	Hand		H	HF		B	CW	OAL	LH	LTA	
WG3805 Ref.	ID-Nr.	pocket size	( )	G	Ø max	h	h1	h2	b	S	L	L1	L2	
P92 CXCBL 1212 K20+25 11HPM8x1	57245	20	L	M8x1	22	12	12	4	12	2	125	19,5	19,5	10
P92 CXCBL 1616 K20+25 11HPG1/8	57247	20	L	G1/8	22	16	16	-	16	2	125	19,5	-	10
P92 CXCBL 1212 K20+25 14 HPM8X1	63222	20	L	M8x1	28	12	12	4	12	2	125	25,0	22	10
P92 CXCBL 1616 K20+25 17HPG1/8	57248	20	L	G1/8	34	16	16	5	16	2	125	34	26	1
P92 CXCBL 2020 K20+25 17HPG1/8	57251	20	L	G1/8	34	20	20	-	20	2	125	34	-	1
P92 CXCBR 1212 K20+25 11HPM8x1	57255	20	R	M8x1	22	12	12	4	12	2	125	19,5	19,5	10
P92 CXCBR 1616 K20+25 11HPG1/8	57257	20	R	G1/8	22	16	16	-	16	2	125	19,5	-	10
P92 CXCBR 1212 K20+25 14 HPM8X1	63223	20	R	M8x1	28	12	12	4	12	2	125	25,0	22	10
P92 CXCBR 1616 K20+25 17HPG1/8	57258	20	R	G1/8	34	16	16	5	16	2	125	34	26	1
P92 CXCBR 2020 K20+25 17HPG1/8	57262	20	R	G1/8	34	20	20	-	20	2	125	34	-	1

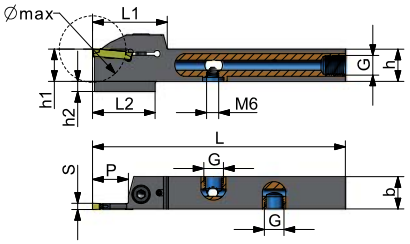
Delivery with 1 key and 3 plugs

Fitting inserts see below

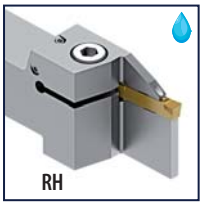
One pocket size for two cutting widths
2 mm or **2,5 mm**

Holders with internal coolant for cutting width 3mm

P92 CXCBL 30 HP



P92 CXCBR 30 HP



PRODDES	IDNR	MIID	Hand		H	HF		B	CDX	CW	OAL	LH	LTA	
WG3805 Ref.	ID-Nr.	pocket size	( )	G	Ø max	h	h1	h2	b	P	S	L	L1	L2	
P92 CXCBL 1212 K30 14HPM8x1	57246	30	L	M8x1	28	12	12	5	12	14	3,0	125	34	26	11
P92 CXCBL 1616 K30 14HPG1/8	57249	30	L	G1/8	28	16	16	5	16	14	3,0	125	34	26	1
P92 CXCBL 1616 K30 17HPG1/8	57250	30	L	G1/8	34	16	16	5	16	17	3,0	125	37	29	1
P92 CXCBL 2020 K30 17HPG1/8	57252	30	L	G1/8	34	20	20	5	20	17	3,0	125	37	29	1
P92 CXCBL 2525 M30 17HPG1/8	57253	30	L	G1/8	34	25	25	-	25	17	3,0	150	37	-	2
P92 CXCBR 1212 K30 14HPM8x1	57256	30	R	M8x1	28	12	12	5	12	14	3,0	125	34	26	11
P92 CXCBR 1616 K30 14HPG1/8	57259	30	R	G1/8	28	16	16	5	16	14	3,0	125	34	26	1
P92 CXCBR 1616 K30 17HPG1/8	57261	30	R	G1/8	34	16	16	5	16	17	3,0	125	37	29	1
P92 CXCBR 2020 K30 17HPG1/8	57263	30	R	G1/8	34	20	20	5	20	17	3,0	125	37	29	1
P92 CXCBR 2525 M30 17HPG1/8	57264	30	R	G1/8	34	25	25	-	25	17	3,0	150	37	-	2

Fitting inserts

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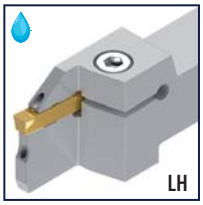
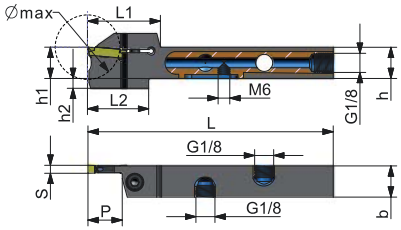
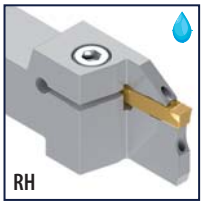
Holders with internal coolant for cutting widths from 4 to 6 mm



P92 CXCBL 40-60 HP



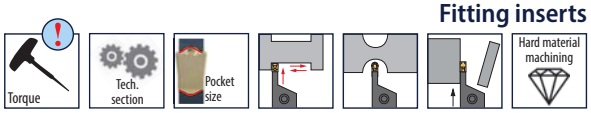
P92 CXCBR 40-60 HP



PRODDES	IDNR	MIID	Hand		H	HF		B	CDX	CW	OAL	LH	LTA	
WG3805 Ref.	ID-Nr.	pocket size		Ø max	h	h1	h2	b	P	S	L	L1	L2	
P92 CXCBL 1616 K40 10HPG1/8	65080	40	L	20	16	16	5	16	10	4,0	125	29	23	1
P92 CXCBL 1616 K40 17HPG1/8	65082	40	L	34	16	16	5	16	17	4,0	125	37	31	1
P92 CXCBL 2020 K40 10HPG1/8	65084	40	L	20	20	20	5	20	10	4,0	125	30	26	1
P92 CXCBL 2020 K40 17HPG1/8	65086	40	L	34	20	20	5	20	17	4,0	125	37	29	1
P92 CXCBL 2525 M40 10HPG1/8	65088	40	L	20	25	25	-	25	10	4,0	150	32	-	2
P92 CXCBL 2525 M40 17HPG1/8	65090	40	L	34	25	25	-	25	17	4,0	150	37	-	2
P92 CXCBL 2020 K50 20HPG1/8	65092	50	L	40	20	20	5	20	20	5,0	125	40	33	2
P92 CXCBL 2525 M50 20HPG1/8	65094	50	L	40	25	25	-	25	20	5,0	150	40	-	2
P92 CXCBL 2525 M60 20HPG1/8	65096	60	L	40	25	25	-	25	20	6,0	150	40	-	2
P92 CXCBR 1616 K40 10HPG1/8	65081	40	R	20	16	16	5	16	10	4,0	125	29	23	1
P92 CXCBR 1616 K40 17HPG1/8	65083	40	R	34	16	16	5	16	17	4,0	125	37	31	1
P92 CXCBR 2020 K40 10HPG1/8	65085	40	R	20	20	20	5	20	10	4,0	125	30	26	1
P92 CXCBR 2020 K40 17HPG1/8	65087	40	R	34	20	20	5	20	17	4,0	125	37	29	1
P92 CXCBR 2525 M40 10HPG1/8	65089	40	R	20	25	25	-	25	10	4,0	150	32	-	2
P92 CXCBR 2525 M40 17HPG1/8	65091	40	R	34	25	25	-	25	17	4,0	150	37	-	2
P92 CXCBR 2020 K50 20HPG1/8	65093	50	R	40	20	20	5	20	20	5,0	125	40	33	2
P92 CXCBR 2525 M50 20HPG1/8	65095	50	R	40	25	25	-	25	20	5,0	150	40	-	2
P92 CXCBR 2525 M60 20HPG1/8	65097	60	R	40	25	25	-	25	20	6,0	150	40	-	2

Delivery with 1 key and 3 plugs

Fitting inserts



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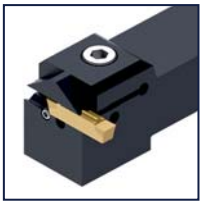
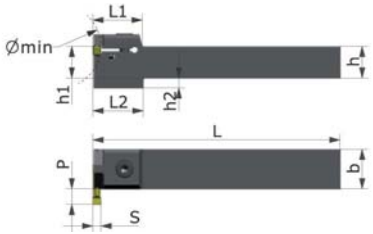
KEMMER HARTMETALLWERKZEUGE

90 ° - Holders for many different turning applications



P92 90 UNI

RH and LH pocket

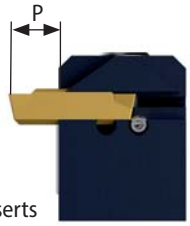


PRODDES	IDNR	MIID	Hand		H	HF		B	CDX	CW	OAL	LH	LTA	
WG380 Ref.	ID-Nr.	pocket size		Dmin	h	h1	h2	b	P	S	L	L1	L2	
P92 90 CXCBRL 1616 K30 UNI	38485	30	R + L	>70	16	16	4	16	5	3	125	25	26	1+13
P92 90 CXCBRL 2020 K30 UNI	38486	30	R + L	>70	20	20	-	20	5	3	125	25	-	1+13
P92 90 CXCBRL 2525 M30 UNI	38487	30	R + L	>70	25	25	-	25	5	3	150	25	-	1+13
P92 90 CXCBRL 2020 K60 UNI	24260	60	R + L	>120	20	20	-	20	11,0	6	125	34	-	14+20
P92 90 CXCBRL 2525 M60 UNI	24261	60	R + L	>120	25	25	-	25	11,0	6	150	34	-	14+20
P92 90 CXCBRL 3232 P60 UNI	24262	60	R + L	>120	32	32	-	32	11,0	6	170	34	-	14+20
P92 90 CXCBRL 2020 K80 UNI	24263	80	R + L	>120	20	20	5	20	11,0	8	125	40	31	3+21
P92 90 CXCBRL 2525 M80 UNI	24264	80	R + L	>120	25	25	-	25	11,0	8	150	40	-	3+21
P92 90 CXCBRL 3232 P80 UNI	24265	80	R + L	>120	32	32	-	32	11,0	8	170	40		3+21

UNI-Holder for clockwise (CW) and counter clockwise (CCW) run

Insert positioned for clockwise (CW) run, face grooving

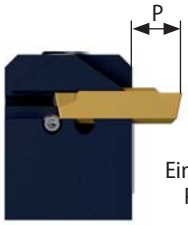
Insert positioned for counter clockwise (CCW) run, grooving



P92 inserts

Insert positioned for counter clockwise (CCW) run, face grooving

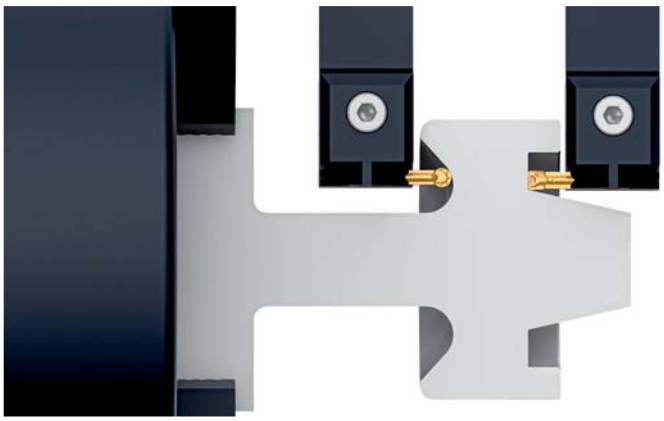
Insert positioned for clockwise (CW) run, grooving



Einsatz P92
Platten

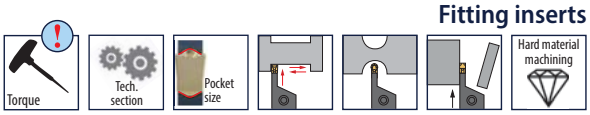
2 tapped holes for a positioning pin permit the use of P92 inserts for CW and CCW run!

Face turning
with RTNX 840 TILOX



Face grooving
with MTNS 812 TILOX

Fitting inserts



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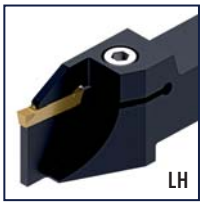
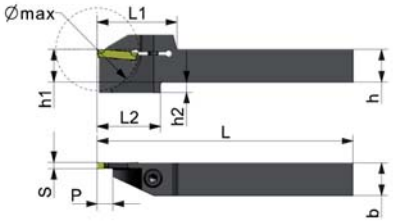
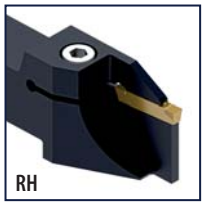
Holder for deep cuts from Ø 42 mm up to Ø 56 mm and deep grooving



P92 A CXCBL



P92 A CXCBR



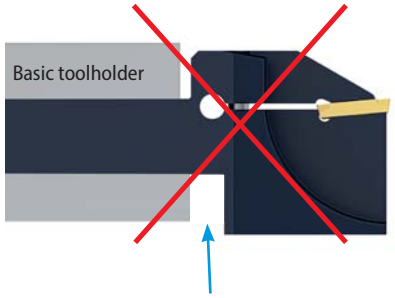
PRODDES	IDNR	MIID	Hand		H	HF		B	CDX	CW	OAL	LH	LTA	
WG380 Ref.	ID-Nr.	pocket size		Ø max	h	h1	h2	b	P	S	L	L1	L2	
P92 A CXCBL 1616 K30 42	35158	30	L	42	16	16	5	16	7,0	3,0	125	39	31	1
P92 A CXCBL 2020 K30 42	35160	30	L	42	20	20	5	20	7,0	3,0	125	39	31	1
P92 A CXCBL 2525 M30 42	35163	30	L	42	25	25	-	25	-	3,0	150	39	-	1
P92 A CXCBL 2020 K30 56	24890	30	L	56	20	20	5	20	20,5	3,0	125	46	38	1
P92 A CXCBL 2525 M30 56	24891	30	L	56	25	25	-	25	14,0	3,0	150	46	-	1
P92 A CXCBL 2020 K40 56	28182	40	L	56	20	20	5	20	20,5	4,0	125	46	38	1
P92 A CXCBL 2525 M40 56	28181	40	L	56	25	25	-	25	14,0	4,0	150	46	-	1
P92 A CXCBR 1616 K30 42	35159	30	R	42	16	16	5	16	7,0	3,0	125	39	31	1
P92 A CXCBR 2020 K30 42	35161	30	R	42	20	20	5	20	7,0	3,0	125	39	31	1
P92 A CXCBR 2525 M30 42	35162	30	R	42	25	25	-	25	-	3,0	150	39	-	1
P92 A CXCBR 2020 K30 56	25568	30	R	56	20	20	5	20	20,5	3,0	125	46	38	1
P92 A CXCBR 2525 M30 56	25685	30	R	56	25	25	-	25	14,0	3,0	150	46	-	1
P92 A CXCBR 2020 K40 56	28184	40	R	56	20	20	5	20	20,5	4,0	125	46	38	1
P92 A CXCBR 2525 M40 56	28180	40	R	56	25	25	-	25	14,0	4,0	150	46	-	1

Remark

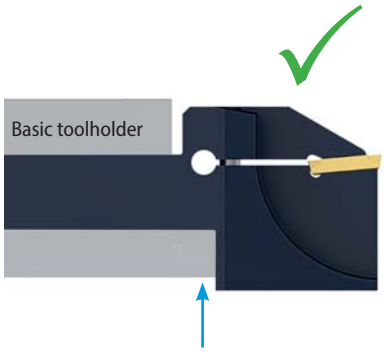
P92 A-inserts and P92 A CXCB...holder join together to form an extremely solid unit owing to long guide surfaces between insert and pocket and reinforced tool holders. A-type tools are therefore recommended for heavy duty cutting, deep cuts and to achieve clean faces.

Recommendation:

For deep grooving inserts with 2-edges are recommended.



No face touch with wrong edge extension



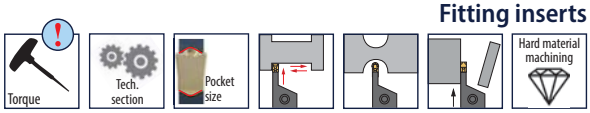
Face touch and best possible edge extension

Please note!

On parting off operations always select the **strongest tool holders**. This is a big advantage!

Make sure the holder's rear face **touches** the front face of the slide or basic tool holder firmly. If not, vibrations and fast edge wear will be the negative result of such improper set up.

Fitting inserts



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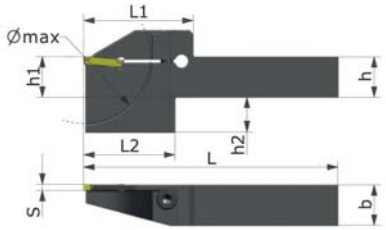
KEMMER HARTMETALLWERKZEUGE

Holder for deep cuts from Ø 65 mm up to Ø 80 mm and deep grooving

P92 A CXCBL



P92 A CXCBR

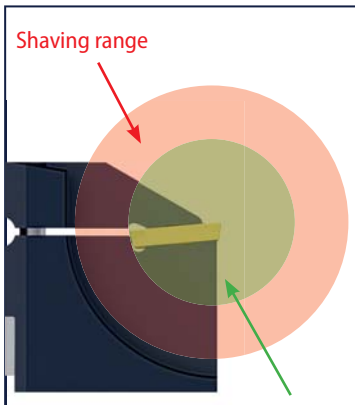
PRODDES	IDNR	MIID	Hand		H	HF		B	CW	OAL	LH	LTA	
WG380 Ref.	ID-Nr.	pocket size		Ø max	h	h1	h2	b	S	L	L1	L2	
P92 A CXCBL 2020 K30 65	10136	30	L	65	20	20	17	20	3,0	125	54	45	12
P92 A CXCBL 2525 M30 65	10144	30	L	65	25	25	12	25	3,0	150	54	45	12
P92 A CXCBL 2020 K40 65	10140	40	L	65	20	20	17	20	4,0	125	54	45	12
P92 A CXCBL 2525 M40 65	10148	40	L	65	25	25	12	25	4,0	150	54	45	12
P92 A CXCBL 2020 M50 80	10142	50	L	80	20	20	17	20	5,0	150	62	52	12
P92 A CXCBL 2525 P50 80	10150	50	L	80	25	25	12	25	5,0	170	62	52	12
P92 A CXCBR 2020 K30 65	10135	30	R	65	20	20	17	20	3,0	125	54	45	12
P92 A CXCBR 2525 M30 65	10143	30	R	65	25	25	12	25	3,0	150	54	45	12
P92 A CXCBR 2020 K40 65	10139	40	R	65	20	20	17	20	4,0	125	54	45	12
P92 A CXCBR 2525 M40 65	10147	40	R	65	25	25	12	25	4,0	150	54	45	12
P92 A CXCBR 2020 M50 80	10141	50	R	80	20	20	17	20	5,0	150	62	52	12
P92 A CXCBR 2525 P50 80	10149	50	R	80	25	25	12	25	5,0	170	62	52	12

Remark

P92 A-inserts and P92 A CXCB...holder join together to form an extremely solid unit owing to long guide surfaces between insert and pocket and reinforced tool holders. A-type tools are therefore recommended for heavy duty cutting, deep cuts and to achieve clean faces.

Recommendation

For cutting deep chambers inserts with 2-edges are recommended.



Shaving

If the cutting depth exceeds the length of the cutting insert, the second edge of the insert penetrates into the slot and may cause shaving marks on the component. To prevent from shaving the insert type A-BTNN is recommended.

How to order:

		recommended	
1 St.	P92 A CXCBR 2020 K30	or:	**1 St. ID-Nr. 10135**
10 St.	A BTNN 3 GF110 TILOX	or:	**10 St. ID-Nr. 13953**

Fitting inserts

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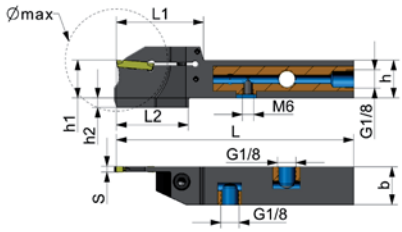
Holder with internal coolant for deep cuts from Ø 42 to Ø 56 mm and deep grooving

P92 A CXCBL HP



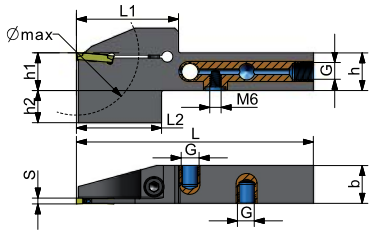
P92 A CXCBR HP

PRODDES	IDNR	MIID	Hand		H	HF		B	CW	OAL	LH	LTA	
WGRGL3805 Ref.	ID-Nr.	pocket size		Ø max	h	h1	h2	b	S	L	L1	L2	
P92 A CXCBL 1616 K30 42 HPG1-8	63145	30	L	42	16	16	5	16	3,0	125	39	31	1
P92 A CXCBL 2020 K30 42 HPG1-8	62095	30	L	42	20	20	5	20	3,0	125	39	31	1
P92 A CXCBL 2525 M30 42 HPG1-8	63147	30	L	42	25	25	-	25	3,0	150	39	-	1
P92 A CXCBL 2020 K30 56 HPG1-8	62795	30	L	56	20	20	5	20	3,0	125	46	38	1
P92 A CXCBL 2525 M30 56 HPG1-8	62793	30	L	56	25	25	-	25	3,0	150	46	-	1
P92 A CXCBL 2020 K40 56 HPG1-8	63217	40	L	56	20	20	5	20	4,0	125	46	38	1
P92 A CXCBL 2525 M40 56 HPG1-8	63219	40	L	56	25	25	-	25	4,0	150	46	-	1
P92 A CXCBR 1616 K30 42 HPG1-8	63146	30	R	42	16	16	5	16	3,0	125	39	31	1
P92 A CXCBR 2020 K30 42 HPG1-8	63144	30	R	42	20	20	5	20	3,0	125	39	31	1
P92 A CXCBR 2525 M30 42 HPG1-8	63149	30	R	42	25	25	-	25	3,0	150	39	-	1
P92 A CXCBR 2020 K30 56 HPG1-8	62796	30	R	56	20	20	5	20	3,0	125	46	38	1
P92 A CXCBR 2525 M30 56 HPG1-8	62794	30	R	56	25	25	-	25	3,0	150	46	-	1
P92 A CXCBR 2020 K40 56 HPG1-8	63218	40	R	56	20	20	5	20	4,0	125	46	38	1
P92 A CXCBR 2525 M40 56 HPG1-8	63220	40	R	56	25	25	-	25	4,0	150	46	-	1

Fitting inserts see below

Holder with internal coolant for deep cuts up to Ø 65 mm and deep grooving

P92 A CXCBL HP

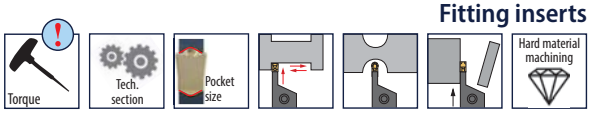


P92 A CXCBR HP

PRODDES	IDNR	MIID	Hand			H	HF		B	CW	OAL	LH	LTA	
WG3805 Ref.	ID-Nr.	pocket size		G	Ø max	h	h1	h2	b	S	L	L1	L2	
P92 A CXCBL 2020 K30 65HPG1/8	57203	30	L	G1/8	65	20	20	17	20	3,0	125	54	45	12
P92 A CXCBL 2525 M30 65HPG1/8	57209	30	L	G1/8	65	25	25	12	25	3,0	150	54	45	12
P92 A CXCBL 2020 K40 65HPG1/8	57208	40	L	G1/8	65	20	20	17	20	4,0	125	54	45	12
P92 A CXCBL 2525 M40 65HPG1/8	57210	40	L	G1/8	65	25	25	12	25	4,0	150	54	45	12
P92 A CXCBR 2020 K30 65HPG1/8	57211	30	R	G1/8	65	20	20	17	20	3,0	125	54	45	12
P92 A CXCBR 2525 M30 65HPG1/8	57213	30	R	G1/8	65	25	25	12	25	3,0	150	54	45	12
P92 A CXCBR 2020 K40 65HPG1/8	57212	40	R	G1/8	65	20	20	17	20	4,0	125	54	45	12
P92 A CXCBR 2525 M40 65HPG1/8	57214	40	R	G1/8	65	25	25	12	25	4,0	150	54	45	12

Delivery with 1 key and 3 plugs

Fitting inserts



p. 220, 221, 245 p. 223 p. 224 p. 56 - 65 p. 66 p. 68-74 p. 77-80

Designation code for dove-tail blades

P92 CXCB R 2608 X 20 R

- P92 — Tool family
- CXCB — Cutting tool holder for inserts with 2 cutting edges. Screw clamping type
- R — **Spindle rotation counterclockwise**
- 2608 — Main tool dimensions
- X — Length X
- 20 — With radial reinforcement
- R — **Right hand. The side of the dovetail with the smaller height**

How to select the blade to fit your machine tool

To select a fitting blade for your machine tool, you have to determine:

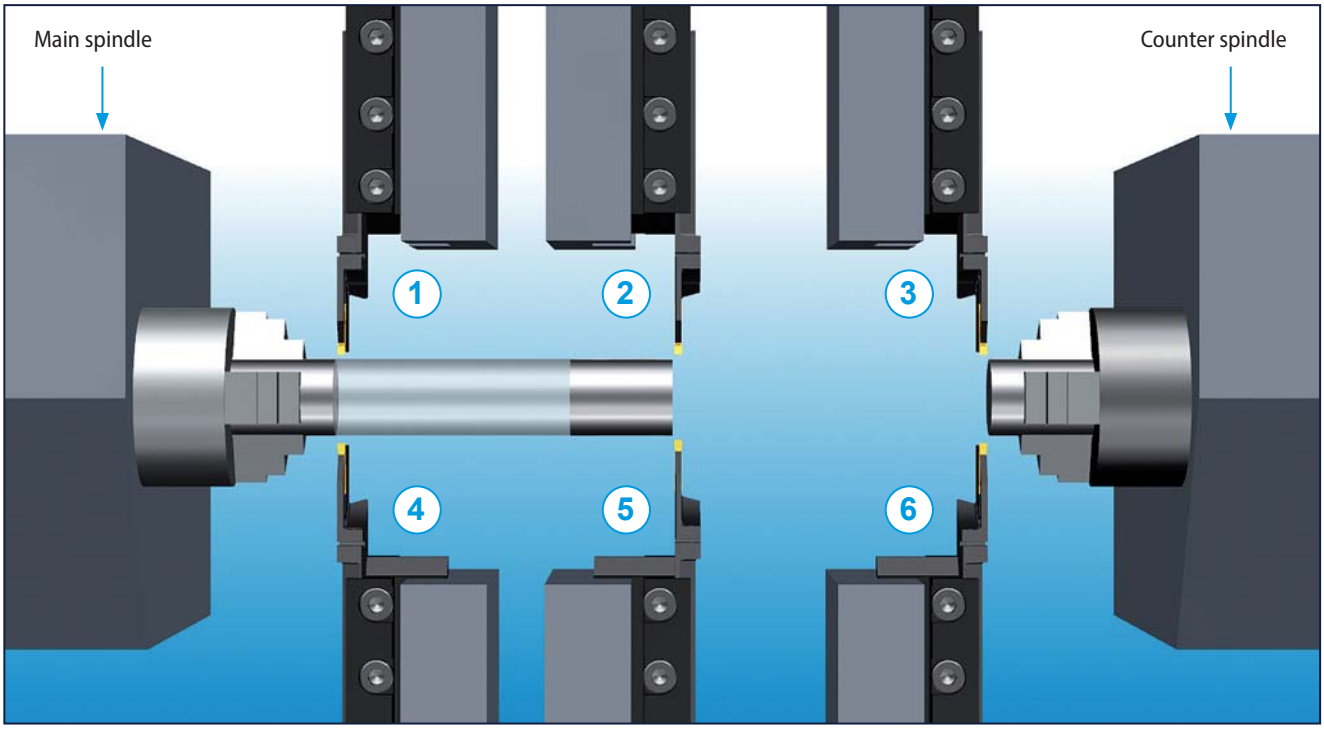
- Spindle rotation CW: LH blade is required
  CCW: RH blade is required
- The dovetail's small side when looked from the front side of the blade.

 P92 CXCBL 2608 X30L Cutting edge left hand for clockwise rotation. Small side of the dovetail on the left side: LH	Type 1
 P92 CXCBL 2608 X30R Cutting edge left hand for clockwise rotation. Small side of the dovetail on the right side: RH	Type 2
 P92 CXCBR 2608 X30R Cutting edge right hand for clockwise rotation. Small side of the dovetail on the right side: RH	Type 3
 P92 CXCBR 2608 X30L Cutting edge right hand for clockwise rotation. Small side of the dovetail on the left side: LH	Type 4

Remarks:

- These dovetail tool blades fit into many basic tool holders of automatic lathes like Traub, EMCO, Tornos, Bechler etc. **AND they also fit into the tool blocks on pages 176.**

Application field of dove-tail blades

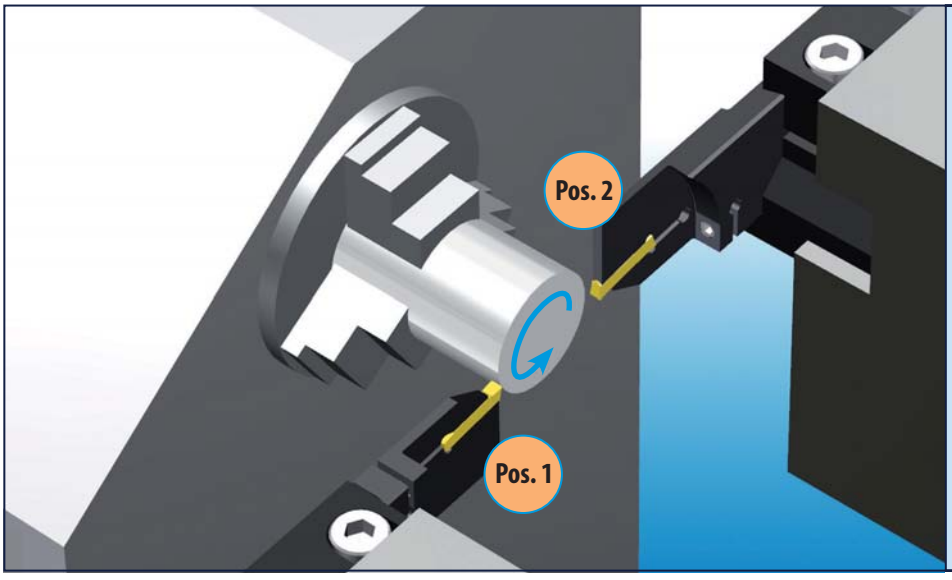


Nr.	Working position	Rotation	Working position normal	Working position overhead
1	Main spindle Behind center line	clockwise	LL (Type 1)	RR (Type 3)
2	Main spindle Behind center line	clockwise	LR (Type 2)	RL (Type 4)
3	Counter spindle Behind center line	counter clockwise (separate drive)	RR (Type 3)	LL (Type 1)
4	Main spindle In front of center line	counter clockwise	RR (Type 3)	LL (Type 1)
5	Main spindle In front of center line	counter clockwise	RL (Type 4)	LR (Type 2)
6	Counter spindle In front of center line	clockwise (separate drive)	LL (Type 1)	RR (Type 3)

A few application examples of dovetail blades on different machine tool positions.

Remark:

You'll find these blades on pages 96, 97, 154 and 166.



Example for application

Counter clockwise rotation regular and overhead, machining with a BTNN 3 GF110 NANOSPEED insert

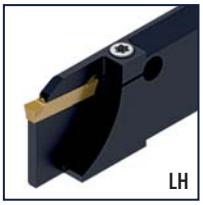
Pos. 1:

Blade R-R in front of bar

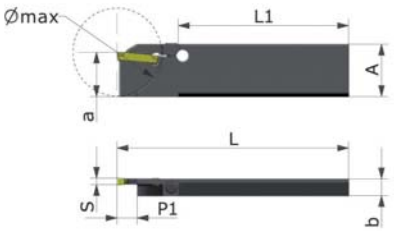
Pos. 2:

Blade R-R overhead behind the bar

Reinforced parting off blades with dovetail shank



P92..CXCBL 2608X..R/L

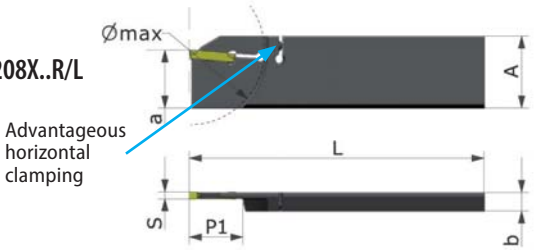


P92 CXCBR 2608X..R/L

PRODDES	IDNR	MIID	Hand	CODX	H	HF	B	CDX	CW	OAL	LH	
WG380 Ref.	ID-Nr.	pocket size		Ø max	A	a	b	P1	S	L	L1	
P92 CXCBL 2608 X30R	19669	30	L	42	26	21,4	8	9,0	3,0	110	81,3	10
P92 CXCBL 2608 X30L	21614	30	L	42	26	21,4	8	9,0	3,0	110	81,3	10
P92 CXCBR 2608 X30R	21222	30	R	42	26	21,4	8	9,0	3,0	110	81,3	10
P92 CXCBR 2608 X30L	21613	30	R	42	26	21,4	8	9,0	3,0	110	81,3	10

Fitting inserts and tool blocks, see below

P92..CXCBL 3208X..R/L



P92 CXCBR 3208X..R/L

PRODDES	IDNR	MIID	Hand	CODX	H	HF	B	CDX	CW	OAL	
WG380 Ref.	ID-Nr.	pocket size		Ø max	A	a	b	P1	S	L	
P92 CXCBL 3208 X30R 65	31784	30	L	65	32	25,0	8	22,0	3,0	126	42
P92 CXCBL 3208 X30L 65	31788	30	L	65	32	25,0	8	22,0	3,0	126	42
P92 CXCBR 3208 X30R 65	31780	30	R	65	32	25,0	8	22,0	3,0	126	42
P92 CXCBR 3208 X30L 65	29826	30	R	65	32	25,0	8	22,0	3,0	126	42

Comment

Blades and tool blocks with the same "A" dimension fit together.

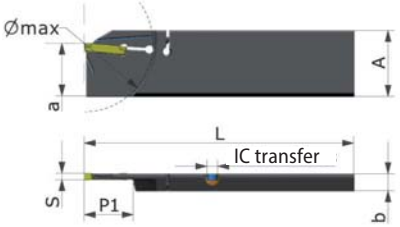
Example for application you will find on page 95

Fitting inserts and tool blocks

Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | p. 56 - 65 | p. 66 | p. 68-74 | Hard material machining p. 77-80 | p. 176

Reinforced parting off blades with dovetail blade and internal cooling

P92 CXCBL 3208X...
R/L65HP



P92 CXCBR 3208X...
R/L65HP

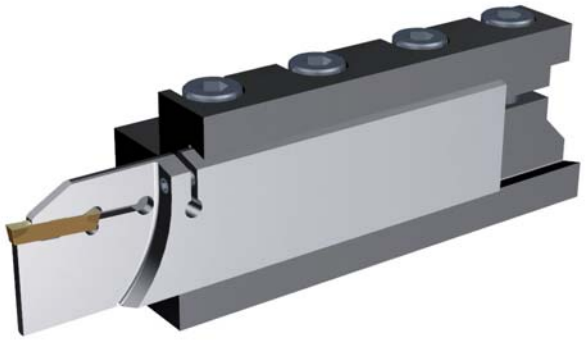
PRODDES	IDNR	MIID	Hand	CODX	H	HF	B	CDX	CW	OAL	
WG3805 Ref.	ID-Nr.	pocket size		Ø max	A	a	b	P1	S	L	
P92 CXCBL 3208 X30R 65 HP	58263	30	L	65	32	25,0	8	22,0	3,0	126	42
P92 CXCBL 3208 X30L 65 HP	57532	30	L	65	32	25,0	8	22,0	3,0	126	42
P92 CXCBR 3208 X30R 65 HP	58266	30	R	65	32	25,0	8	22,0	3,0	126	42
P92 CXCBR 3208 X30L 65 HP	58264	30	R	65	32	25,0	8	22,0	3,0	126	42

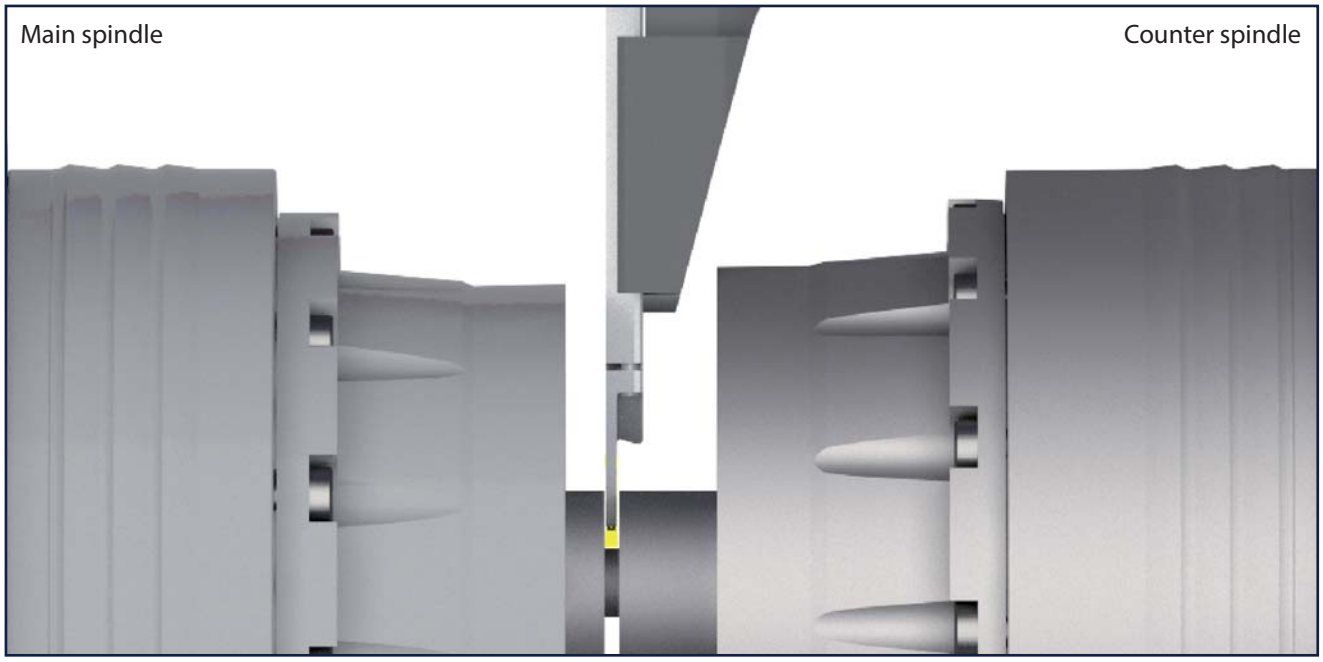
Application of reinforced parting off blades

moderate to heavy machining

Advantages:

- Large extension range
- No squeaking
- Best possible tool life
- Superior performance
- Clean faces
- Tight areas





Machining in narrow spaces (for instance operations with counter spindle)

Fitting inserts and tool blocks

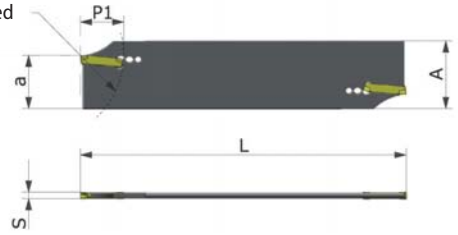
Torque p. 220, 221, 245
Tech. section p. 223
Pocket size p. 224
p. 56 - 65
p. 66
p. 68-74
Hard material machining p. 77-80
p. 176

KEMMER HARTMETALLWERKZEUGE

TWIN blade parting off blade

P92 TMS

recommended range



PRODDES	IDNR	MIID	Hand	H	HF	CDX	CW	OAL	
WG310 Ref.	ID-Nr.	pocket size		A	a	P1	S	L	
P92 TMS 26 20+25	36644	20	N	26	21,4	18,5	2	110	28
P92 TMS 32 20+25	36643	20	N	32	25,0	18,5	2	150	28
P92 TMS 26 30	36645	30	N	26	21,4	18,5	3,0	110	28
P92 TMS 32 30	33429	30	N	32	25,0	18,5	3,0	150	28
P92 TMS 32 35	34369	40	N	32	25,0	18,5	3,5	150	28
P92 TMS 32 40	36642	40	N	32	25,0	18,5	4,0	150	28
P92 TMS 32 50	44524	50	N	32	25,0	23,5	5,0	150	28
P92 TMS 32 60	44537	60	N	32	25,0	28,5	6,0	150	28

Remark

Blades and tool blocks with the same "A" dimension fit together.

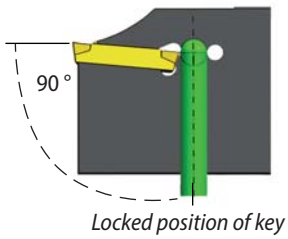
If the cutting depth exceeds the length of the cutting insert, the second edge of the insert penetrates into the slot and may cause shaving marks on the components faces. To prevent from shaving the insert type A-BTNN is recommended.

One pocket size for two cutting widths
2 mm or **2,5 mm**

Advantages

- Increased profitability compared to blades holding 1-edge inserts
- Reinforced solidity
- Perfect clamping and easy handling
- Marking for easy understanding
- Excellent tool life together with parting off inserts BTNN and A BTNN

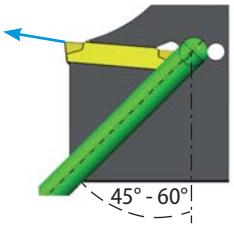
Insert in locked condition



Locked position of key

Insert firmly locked

Insert in unlocked condition



Insert to be removed

Fitting inserts and tool blocks

p. 220, 221, 245

p. 223

p. 224


p. 56 - 65


p. 66

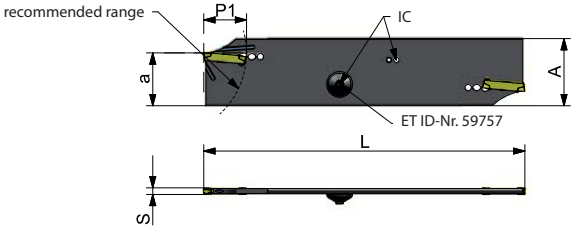

p. 68-74

p. 77-80


p. 176

TWIN blade for parting off with internal cooling

P92 TMS HP



PRODDES	IDNR	MIID	Hand	H	HF	CDX	CW	OAL	
WG3105 Ref.	ID-Nr.	pocket size		A	a	P1	S	L	
P92 TMS 26 20+25 HP	57316	20	N	26	21,4	18,5	2	110	28
P92 TMS 32 20+25 HP	57318	20	N	32	25,0	18,5	2	150	28
P92 TMS 26 30 HP	57317	30	N	26	21,4	18,5	3,0	110	28
P92 TMS 32 30 HP	57319	30	N	32	25,0	18,5	3,0	150	28
P92 TMS 32 40 HP	57320	40	N	32	25,0	18,5	4,0	150	28

Tool block for holders with internal cooling

Tooling block for blade heights 26 + 32

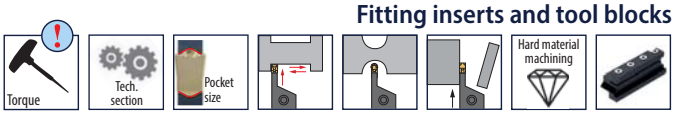
VDI-blade holder for blade heights 26 + 32

Blade holder-adapter for holder-types VDI; PSC; HSK

One pocket size for two cutting widths
2 mm or **2,5 mm**

Extract from Megacut catalogue

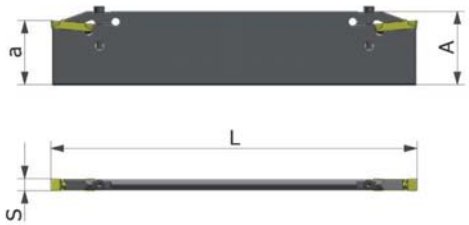
Fitting inserts and tool blocks



p. 220, 221, 245 p. 223 p. 224 p. 56 - 65 p. 66 p. 68-74 p. 77-80 p. 176

TWIN parting off blade without internal cooling

P92 TMS 52



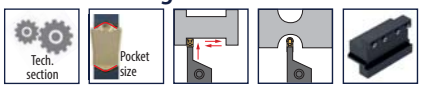
PRODDES	IDNR	MIID	Hand	H	HF	CW	OAL	
WG310 Ref.	ID-Nr.	pocket size		A	a	S	L	
P92 TMS 52 80	31464	80	N	52,6	45,0	8,0	250	11
P92 TMS 52 100	44539	100	N	52,6	45,0	10,0	250	11

Remark

Blades and tool blocks with the same "A" dimension fit together.

If the cutting depth exceeds the length of the cutting insert, the second edge of the insert penetrates into the slot and may cause shaving marks on the components faces.

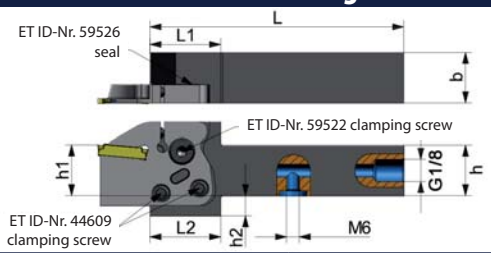
Fitting inserts and tool blocks



p. 223 p. 224 p. 56 - 65 p. 66 p. 176

Cartridge holders for parting off holders with internal cooling

P92 CL/R HP G1/8



PRODDES	IDNR	Hand	H	HF		B	OAL	LH	LTA	
WG3865 Ref.	ID-Nr.		h	h1	h2	b	L	L1	L2	
P92 CL 2020 H HP G1/8	59539	L	20	20	8	20	100	28	28	36+45
P92 CL 2525 H HP G1/8	59540	L	25	25	6	25	100	28	28	36+45
P92 CR 2020 H HP G1/8	59541	R	20	20	8	20	100	28	28	36+45
P92 CR 2525 H HP G1/8	59542	R	25	25	6	25	100	28	28	36+45

Tool block for holders with internal cooling

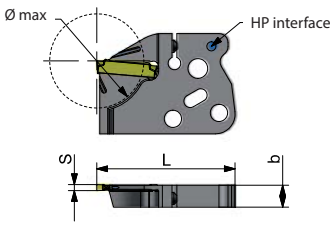
VDI-tooling block form C

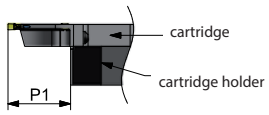
Tooling block form B

Extract from Megacut catalogue

Parting off cartridges for cartridge holders with internal cooling

P92 CT HP

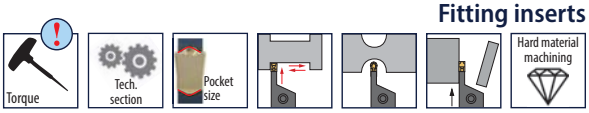




PRODDES	IDNR	MIID	Hand	CODX	B	CDX	CW	OAL	
WG3865 Ref.	ID-Nr.	pocket size		Ømax	b	P1	S	L	
P92 CT L 20+25 22 HP	58969	20	L	22	7,2	20,5	2,0	45,5	42
P92 CT L 20+25 32 HP	58970	20	L	32	7,2	20,5	2,0	45,5	42
P92 CT L 30 40 HP	58971	30	L	40	7,2	20,5	3,0	45,5	42
P92 CT R 20+25 22 HP	58972	20	R	22	7,2	20,5	2,0	45,5	42
P92 CT R 20+25 32 HP	58973	20	R	32	7,2	20,5	2,0	45,5	42
P92 CT R 30 40 HP	58974	30	R	40	7,2	20,5	3,0	45,5	42

One pocket size for two cutting widths
2 mm or **2,5 mm**

Fitting inserts



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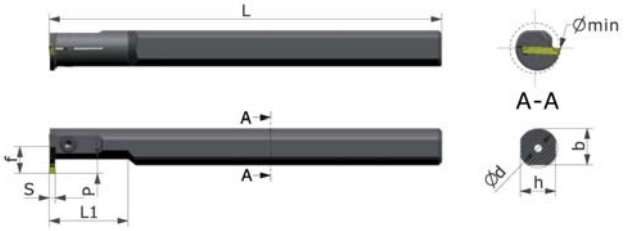
Boring bars with internal cooling for grooving and turning

P92 CGL



P92 CGR

PRODDES	IDNR	MIID	Hand	DMIN	DCONMS	H	B	WF	CDX	CW	OAL	LH	
WG390 Ref.	ID-Nr.	pocket size		Ømin	Ø d	h	b	f	P	S	L	L1	
P92 CGL 0016 P15	33461	15	L	20	16	15	15,5	11	7	1,5	170	26	7
P92 CGL 0020 R15	34954	15	L	25	20	18	18,5	13	7	1,5	200	40	6
P92 CGL 0020 R20+25	33463	20	L	25	20	18	18,5	13	7	2,0	200	40	6
P92 CGL 0020 R30	10066	30	L	25	20	18	18,5	13	7	3,0	200	40	6
P92 CGL 0020 R40	10070	40	L	25	20	18	18,5	13	7	4,0	200	40	6
P92 CGL 0025 R20+25	33465	20	L	32	25	23	23,0	17	10	2,0	200	50	14
P92 CGL 0025 R30	10072	30	L	32	25	23	23,0	17	10	3,0	200	50	14
P92 CGL 0025 R40	10076	40	L	32	25	23	23,0	17	10	4,0	200	50	14
P92 CGL 0032 S20+25	33467	20	L	40	32	30	30,0	22	12	2,0	250	64	1
P92 CGL 0032 S30	10078	30	L	40	32	30	30,0	22	12	3,0	250	64	14
P92 CGL 0032 S40	10082	40	L	40	32	30	30,0	22	12	4,0	250	64	14
P92 CGL 0032 S50	10084	50	L	44	32	30	30,0	26	16	5,0	250	64	14
P92 CGL 0040 S30	52650	30	L	52	40	38	38,0	30	16	3,0	250	80	2
P92 CGL 0040 T40	10086	40	L	52	40	38	38,0	30	16	4,0	300	80	2
P92 CGL 0040 T50	10088	50	L	52	40	38	38,0	30	16	5,0	300	80	2
P92 CGL 0040 T60	19357	60	L	52	40	38	38,0	30	16	6,0	300	80	2
P92 CGR 0016 P15	33337	15	R	20	16	15	15,5	11	7	1,5	170	26	7
P92 CGR 0020 R15	34953	15	R	25	20	18	18,5	13	7	1,5	200	40	6
P92 CGR 0020 R20+25	33462	20	R	25	20	18	18,5	13	7	2,0	200	40	6
P92 CGR 0020 R30	10065	30	R	25	20	18	18,5	13	7	3,0	200	40	6
P92 CGR 0020 R40	10069	40	R	25	20	18	18,5	13	7	4,0	200	40	6
P92 CGR 0025 R20+25	33464	20	R	32	25	23	23,0	17	10	2,0	200	50	14
P92 CGR 0025 R30	10071	30	R	32	25	23	23,0	17	10	3,0	200	50	14
P92 CGR 0025 R40	10075	40	R	32	25	23	23,0	17	10	4,0	200	50	14
P92 CGR 0032 S20+25	33466	20	R	40	32	30	30,0	22	12	2,0	250	64	1
P92 CGR 0032 S30	10077	30	R	40	32	30	30,0	22	12	3,0	250	64	14
P92 CGR 0032 S40	10081	40	R	40	32	30	30,0	22	12	4,0	250	64	14
P92 CGR 0032 S50	10083	50	R	44	32	30	30,0	26	16	5,0	250	64	14
P92 CGR 0040 S30	52652	30	R	52	40	38	38,0	30	16	3,0	250	80	2
P92 CGR 0040 T40	10085	40	R	52	40	38	38,0	30	16	4,0	300	80	2
P92 CGR 0040 T50	10087	50	R	52	40	38	38,0	30	16	5,0	300	80	2
P92 CGR 0040 T60	19356	60	R	52	40	38	38,0	30	16	6,0	300	80	2

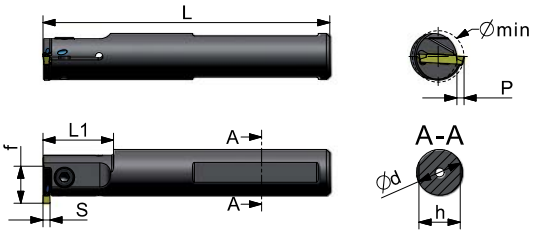
One pocket size for two cutting widths
2 mm or **2,5 mm**

Fitting inserts

Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | p. 56 - 65 | p. 66 | p. 68-74 | Hard material machining p. 77-80

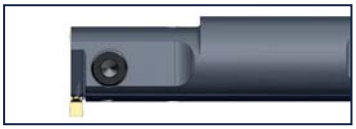
Boring bars with direct coolant and short extension

P92 CAL



P92 CAR

PRODDES	IDNR	MIID	Hand	DMIN	DCONMS	H	WF	CDX	CW	OAL	LH	
WG3905 Ref.	ID-Nr.	pocket size		Ømin	Ø d	h	f	P	S	L	L1	
P92 CAL 0020 K30 HP	64932	30	L	22	20	18	13,5	3	3,0	125	30	6
P92 CAL 0025 M30 HP	64934	30	L	25	25	23	17,5	4,5	3,0	150	40	6
P92 CAR 0020 K30 HP	64933	30	R	22	20	18	13,5	3	3,0	125	30	6
P92 CAR 0025 M30 HP	64935	30	R	25	25	23	17,5	4,5	3,0	150	40	6



CA (rear excenter)

Boring bars type CA for applications with small diameters and short cutting depths.

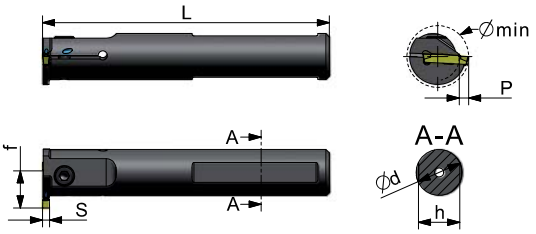
Fitting inserts see below

Good performance in internal grooving applications

- Short extension
- Stable shank size (see Ømin)
- Coolant

Boring bars with direct coolant for grooving and turning

P92 CSL



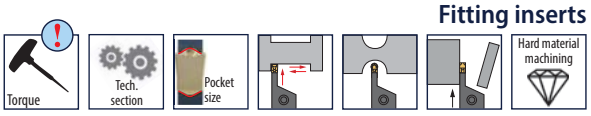
P92 CSR

PRODDES	IDNR	MIID	Hand	DMIN	DCONMS	H	WF	CDX	CW	OAL	
WG3905 Ref.	ID-Nr.	pocket size		Ømin	Ø d	h	f	P	S	L	
P92 CSL 0020 K30 HP	64900	30	L	27	20	18	15,5	5	3,0	125	6
P92 CSL 0025 M30 HP	64902	30	L	33	25	23	19	6	3,0	150	1
P92 CSL 0025 M40 HP	64904	40	L	33	25	23	19	6	4,0	150	1
P92 CSL 0032 M30 HP	64906	30	L	42	32	30	24,5	8	3,0	150	14
P92 CSL 0032 M40 HP	64908	40	L	42	32	30	24,5	8	4,0	150	14
P92 CSR 0020 K30 HP	64901	30	R	27	20	18	15,5	5	3,0	125	6
P92 CSR 0025 M30 HP	64903	30	R	33	25	23	19	6	3,0	150	1
P92 CSR 0025 M40 HP	64905	40	R	33	25	23	19	6	4,0	150	1
P92 CSR 0032 M30 HP	64907	30	R	42	32	30	24,5	8	3,0	150	14
P92 CSR 0032 M40 HP	64909	40	R	42	32	30	24,5	8	4,0	150	14

CS (without excenter)

Boring bars type CS for applications with reinforced shank.

Fitting inserts



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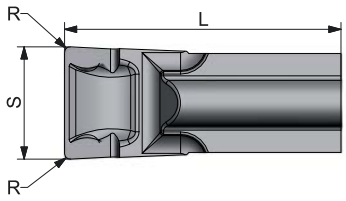
Inserts for grooving with one edge

KCTD

System P92



Enlarged view

PRODDES	IDNR	IDNR	IDNR	IDNR	IIC	IH	INSL	RER/REL	CW	CWUD	CWLD	
WG300 Ref.	PM	KM	PM NANOSPEED	KM TILOX	pocket size		L	R	S	S+	S-	Boring bar-Ø
	N	N	P M N S	P M K S								
KCTD 3	10899	20748	10902	29682	K30	N	9,5	0,20	3,08	0,10	-0,10	12
KCTD 3	10899	20748	10902	29682	K30	N	9,5	0,20	3,08	0,10	-0,10	16
KCTD 3 MAX	10903	26940	10906	31091	K30	N	12,0	0,20	3,08	0,10	-0,10	12
KCTD 3 MAX	10903	26940	10906	31091	K30	N	12,0	0,20	3,08	0,10	-0,10	16

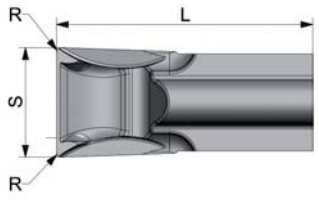
Remark:

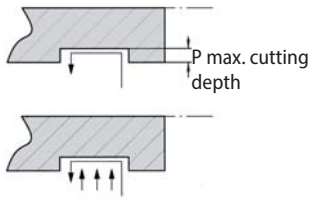
Ground cutting edge with positive top-rake and wide chip-space.

Fitting tools, see below

Inserts for grooving and turning with one edge

KCTDS





Enlarged view

PRODDES	IDNR	IDNR	IDNR	IDNR	IIC	IH	INSL	PDPT	RER/REL	CW	CWUD	CWLD	
WG300 Ref.	PM	KM	PM NANOSPEED	KM TILOX	pocket size		L	P	R	S	S+	S-	Boring bar-Ø
	N	N	P M N S	P M K S									
KCTDS 3	10907	20746	10910	35903	K30	N	9,5	1	0,20	3,08	0,10	-0,10	12
KCTDS 3	10907	20746	10910	35903	K30	N	9,5	1	0,20	3,08	0,10	-0,10	16
								1					
KCTDS 3 MAX	10911	14603	10914	12644	K30	N	12,0	1	0,20	3,08	0,10	-0,10	12
KCTDS 3 MAX	10911	14603	10914	12644	K30	N	12,0	1	0,20	3,08	0,10	-0,10	16

Remark:

Chamfered cutting edge and ground turning edges for excellent chip control.

Fitting tools

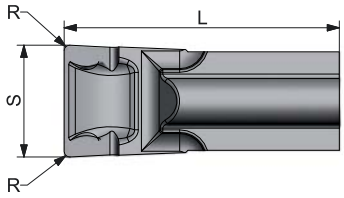
p. 223

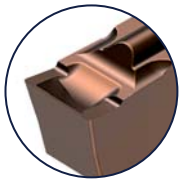
p. 224

p.104

Inserts for grooving with one edge | Hard material machining

KCTD





Enlarged view

PRODDES	IDNR	IIC	IH	INSL	RER/REL	CW	CWUD	CWLD	
WG302 Ref.	KM HARDSX3	pocket size		L	R	S	S+	S-	Boring bar-Ø
	H S								
KCTD 3	65322	K30	N	9,5	0,20	3,08	0,10	-0,10	12
KCTD 3	65322	K30	N	9,5	0,20	3,08	0,10	-0,10	16
KCTD 3 MAX	65323	K30	N	12,0	0,20	3,08	0,10	-0,10	12
KCTD 3 MAX	65323	K30	N	12,0	0,20	3,08	0,10	-0,10	16

Remark

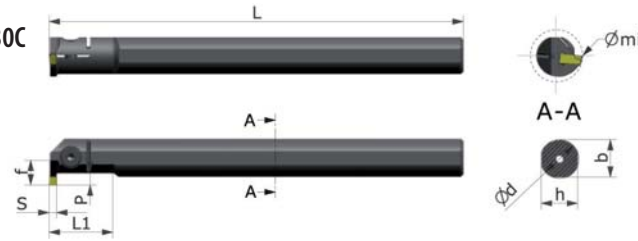
Inserts for small diameters.

Fitting tools

p. 223 p. 224 p. 228 p.104

Small boring bars with internal cooling for grooving and turning

P92 CGL..30C



P92 CGR..30C

PRODDES	IDNR	MIID	Hand	DMIN		DCONMS	H	B	WF		CDX		CW	OAL	LH		
WG390 Ref.	ID-Nr.	pocket size		KCTD Ømin	KCTD max Ømin	d	h	b	f	f2	P	P1	S	L	L1		Insert
P92 CGL 0012 M30C	10062	K30	L	15,5	18	12	11	-	9	11,5	3	5,5	3,0	150	22	7	KCTD 3 + KCTDS 3 KCTD 3 MAX + KCTDS 3 MAX
P92 CGL 0016 P30C	10064	K30	L	20	22,5	16	15	15,5	11	13,5	4,5	7	3,0	170	26	19	KCTD 3 + KCTDS 3 KCTD 3 MAX + KCTDS 3 MAX
P92 CGR 0012 M30C	10061	K30	R	15,5	18	12	11	-	9	11,5	3	5,5	3,0	150	22	7	KCTD 3 + KCTDS 3 KCTD 3 MAX + KCTDS 3 MAX
P92 CGR 0016 P30C	10063	K30	R	20	22,5	16	15	15,5	11	13,5	4,5	7	3,0	170	26	19	KCTD 3 + KCTDS 3 KCTD 3 MAX + KCTDS 3 MAX

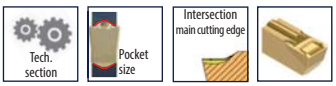
Remark

Recommended ranges for internal grooving + turning:

Vc ~ 40 m/min ➞120 m/min
f ~ 0,02 mm/U ➞ 0,08 mm/U

Cutting width P = Use KCTD
Cutting width P1 = Use KCTD max

Fitting inserts: KCTD + KCTDS



p. 223 p. 224 p. 228 p. 103

P92-1 | P92-2 | P92-90
face grooving tools

for the ranges 25 mm - ∞ mm

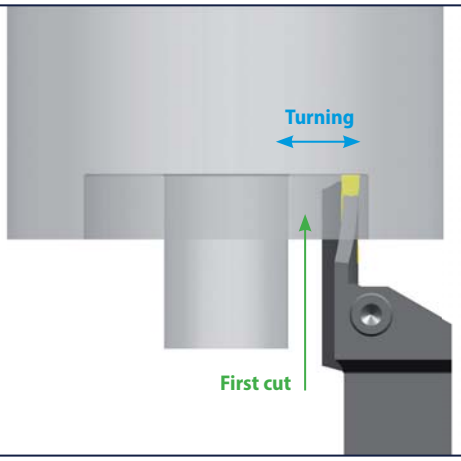
- Cartridge-system
- Monoblock-system
- Face grooving blades
- Face grooving boring bars

KEMMER HARTMETALLWERKZEUGE

P92-1 | P92-2 | P92-90 face grooving tools

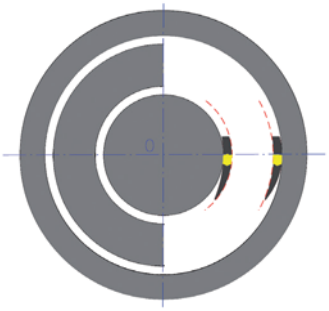
Modular face grooving
Monoblock face grooving
Internal face grooving

Turning to the center or to the outside diameter is possible provided the 1st cut has been positioned inside the range Ø min - Ø max.



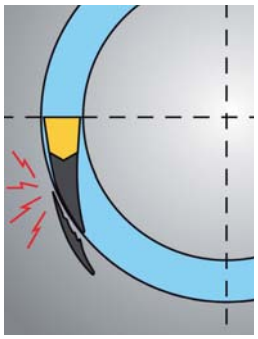
Face grooving | Cartridge choice
Each cartridge is designed for a certain diameter range. This range is marked as Ø min - Ø max.

The drawing marks the collision-safe range Ø min - Ø max.

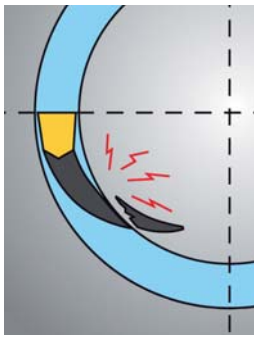


See page 237 for more details.

Damage caused when the 1st cut has been positioned incorrectly.



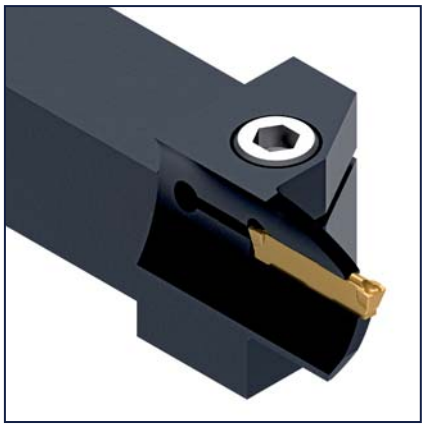
Shows the damage caused when the 1st cut is positioned within a smaller dimension than Ø min. **The outer face** of the cartridge collides with the component.



Shows the damage caused when the 1st cut is positioned outside Ø max, to the outer diameter. **The inner face** of the cartridge collides with the component.

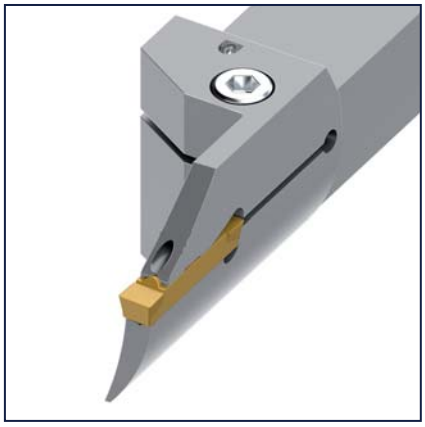
P92-1 | P92-2 | P92-90 face grooving tools

Modular face grooving
Monoblock face grooving
Internal face grooving



Characteristics

- The strong and rigid tool holder construction, provides for vibration free run and grants production reliability.
- All GripLock P92 inserts fit in the MONOBLOCK face grooving tool holders.
- In case of problems you can just select the most effective chip breaker from the assortment of applicable inserts.
- Program includes RH and LH toolholders, boring bars and blades for different applications, interfaces, cutting widths and extensions



Recommendation

The first recommendation for face grooving are the chip breakers:

VTNS
MTNS
GTNS
XTNS
MTNZ

Technical specifications

Available widths of inserts:
3 mm, 4 mm, 5 mm and 6 mm

Range of diameters:
25 mm - ∞

Depth of cut:
15 mm - 45 mm

Available chip breaker:
22


BTNG p. 64


BTNX p. 64


GTNS p. 62


MTNS/G p. 56-57


MTNZ p. 61


OTXC p. 65


OTXS p. 65


STNZ p. 58


VTNS p. 56


SCTD p. 73


CTD-IT p. 72


CTD-ALU p. 71


BTNNF p. 70

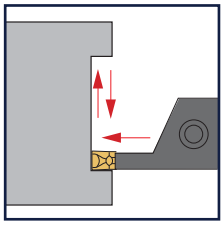

BTNN p. 68- 69


RTNX p. 66

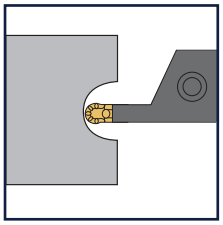

RTNG p. 66


XTNS p. 63

System applications and symbols

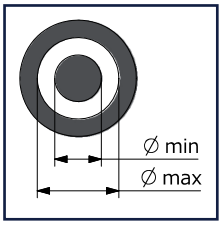


Face grooving *



Face copying *

Remark for face grooving tools
Dimensions refer to the outer position of the cutting edge.



* You can see inserts for face grooving in the section P92 starting from p. 55

Tool types and choices

Types	Description	Cutting widths	Cutting depths	D min - D max	from page
C92 	Modular cartridge system and basic toolholder	3 mm 4 mm	up to 15 mm	25 - 300 mm	110
P92 2 	Monoblock system TYPE DIN 2 (Outside direction)	3 mm 4 mm 5 mm	up to 45 mm	25 - ∞ mm	115
P92 1 	Monoblock system TYPE DIN 1 (Inside direction)	6 mm	up to 40 mm	75 - 200 mm	118
P92 2 TMS 	Blade system self clamping	4 mm 5 mm	up to 35 mm	85 - ∞ mm	119
P92 1 CG 	Internal face grooving boring bars	3 mm 4 mm	up to 20 mm	25 - 60 mm	120

Modular face grooving system with cartridges C92

- One toolholder based on cutting width / rotation
- Various modular cartridges for a high flexibility
- Cutting width S = 3 + 4 mm
- Cutting depth = 15 mm

Code for face grooving cartridges

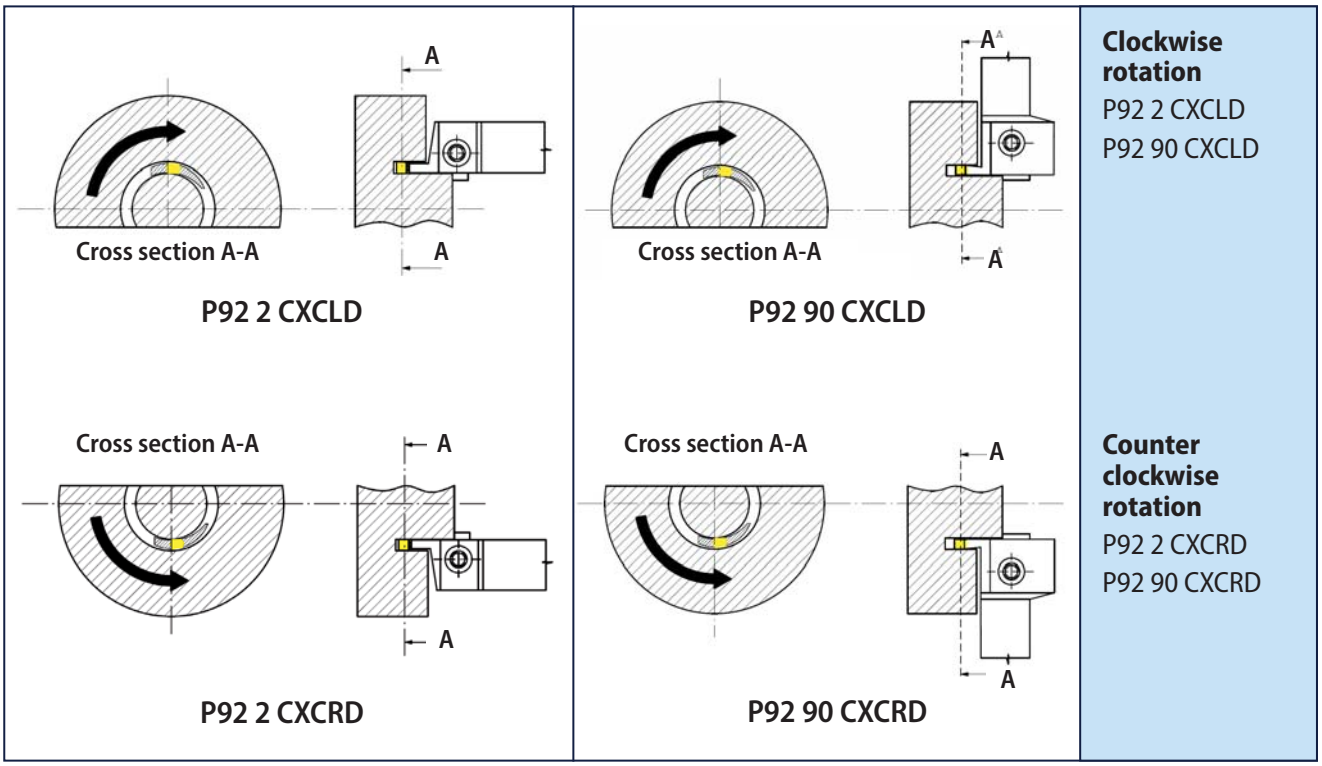
C92 LD 25 30 30

C92	Tool family
LD	CW Rotation
25	Ø min (25 mm) smallest safe diameter
30	Ø max (30 mm) biggest safe diameter
30	Cutting width S = 3 mm

Code for face grooving holders

P92 2 CXCRD 2020 K 30

P92	Tool family
2	Face grooving
CXCRD	Face grooving tool CW / CCW for cartridges
2020	Shank dimensions
K	ISO tool length
30	Cutting width S = 3 mm



Clockwise rotation
P92 2 CXCLD
P92 90 CXCLD

Counter clockwise rotation
P92 2 CXCRD
P92 90 CXCRD

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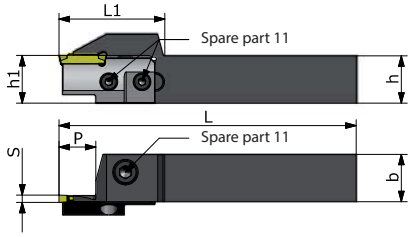
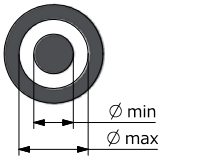
Tool holders with cartridges for face grooving

P92 2 CXCLD





Dimension refer to the outer position of the cutting edge

PRODDES	IDNR	MIID	Hand	H	HF	B	CDX	OAL	LH	
WG385 Cartridge holder Ref.	ID-Nr.	pocket size		h	h1	b	P	L	L1	
P92 2 CXCLD 2020 K 30	10119	30	L	20	20	20	15	125	44	11+2
P92 2 CXCLD 2525 M 30	10121	30	L	25	25	25	15	150	44	11+2

PRODDES	IDNR	MIID	CW	DAXN	DAXX
WG385 Cartridge Ref.	ID-Nr.	pocket size	S	Ø min	Ø max
C92 LD 2530 30	10371	30	3	25	30
C92 LD 3035 30	10372	30	3	30	35
C92 LD 3542 30	10373	30	3	35	42
C92 LD 4250 30	10374	30	3	42	50
C92 LD 5058 30	10376	30	3	50	58
C92 LD 5866 30	10378	30	3	58	66
C92 LD 6675 30	10379	30	3	66	75
C92 LD 75100 30	10381	30	3	75	100
C92 LD 100200 30	10369	30	3	100	200
C92 LD 200300 30	43835	30	3	200	300

PRODDES	IDNR	MIID	Hand	H	HF	B	CDX	OAL	LH	
WG385 Cartridge holder Ref.	ID-Nr.	pocket size		h	h1	b	P	L	L1	
P92 2 CXCLD 2020 K 40	10120	40	L	20	20	20	15	125	44	11+2
P92 2 CXCLD 2525 M 40	10122	40	L	25	25	25	15	150	44	11+2

PRODDES	IDNR	MIID	CW	DAXN	DAXX
WG385 Cartridge Ref.	ID-Nr.	pocket size	S	Ø min	Ø max
C92 LD 4254 40	10375	40	4	42	54
C92 LD 5466 40	10377	40	4	54	66
C92 LD 6680 40	10380	40	4	66	80
C92 LD 80100 40	10382	40	4	80	100
C92 LD 100200 40	10370	40	4	100	200
C92 LD 200300 40	37200	40	4	200	300

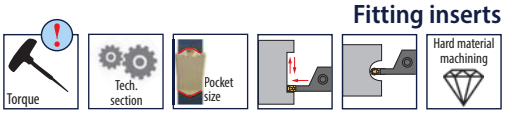
Remark

Holder and cartridges fit together provided the final two figures of the Reference-Nr. are identical.

Example:

P92 2 CXCLD 2020 K **30** and C92 LD 3035 **30**
P92 2 CXCLD 2525 M **40** and C92 LD 6680 **40**

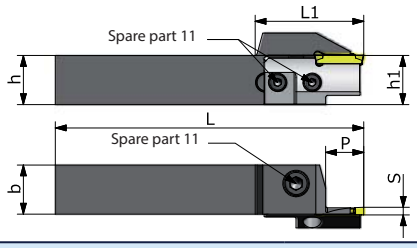
Fitting inserts

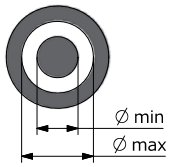


p. 220, 221, 245 p. 223 p. 224 p. 56-65 p. 66 p. 77-80

Tool holders with cartridges for face grooving

P92 2 CXCRD





Dimension refer to the outer position of the cutting edge

PRODDES	IDNR	MIID	Hand	H	HF	B	CDX	OAL	LH	
WG385 Cartridge holder Ref.	ID-Nr.	pocket size		h	h1	b	P	L	L1	
P92 2 CXCRD 2020 K 30	10123	30	R	20	20	20	15	125	44	11+2
P92 2 CXCRD 2525 M 30	10125	30	R	25	25	25	15	150	44	11+2

PRODDES	IDNR	MIID	CW	DAXN	DAXX
WG385 Cartridge Ref.	ID-Nr.	pocket size	S	Ø min	Ø max
C92 RD 2530 30	10385	30	3	25	30
C92 RD 3035 30	10386	30	3	30	35
C92 RD 3542 30	10387	30	3	35	42
C92 RD 4250 30	10388	30	3	42	50
C92 RD 5058 30	10390	30	3	50	58
C92 RD 5866 30	10392	30	3	58	66
C92 RD 6675 30	10393	30	3	66	75
C92 RD 75100 30	10395	30	3	75	100
C92 RD 100200 30	10383	30	3	100	200
C92 RD 200300 30	18356	30	3	200	300

PRODDES	IDNR	MIID	Hand	H	HF	B	CDX	OAL	LH	
WG385 Cartridge holder Ref.	ID-Nr.	pocket size		h	h1	b	P	L	L1	
P92 2 CXCRD 2020 K 40	10124	40	R	20	20	20	15	125	44	11+2
P92 2 CXCRD 2525 M 40	10126	40	R	25	25	25	15	150	44	11+2

PRODDES	IDNR	MIID	CW	DAXN	DAXX
WG385 Cartridge Ref.	ID-Nr.	pocket size	S	Ø min	Ø max
C92 RD 4254 40	10389	40	4	42	54
C92 RD 5466 40	10391	40	4	54	66
C92 RD 6680 40	10394	40	4	66	80
C92 RD 80100 40	10396	40	4	80	100
C92 RD 100200 40	10384	40	4	100	200
C92 RD 200300 40	21371	40	4	200	300

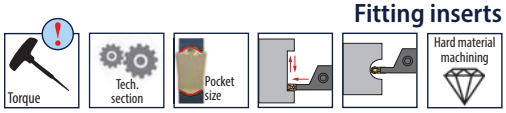
Remark

Holder and cartridges fit together provided the final two figures of the Reference-Nr. are identical.

Example:

P92 2 CXCRD 2020 K **30** and C92 RD 3035 **30**
P92 2 CXCRD 2525 M **40** and C92 RD 6680 **40**

Fitting inserts



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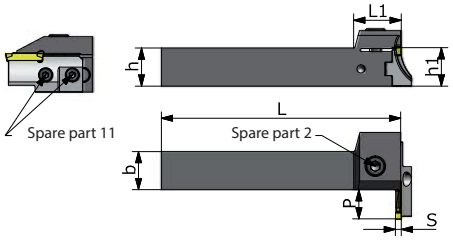
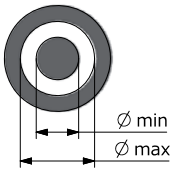
KEMMER HARTMETALLWERKZEUGE

Tool holders with cartridges for face grooving

P92 90 CXCLD





Dimension refer to the outer position of the cutting edge

PRODDES	IDNR	MIID	Hand	H	HF	B	CDX	OAL	LH	
WG385 Cartridge holder Ref.	ID-Nr.	pocket size		h	h1	b	P	L	L1	
P92 90 CXCLD 2020 K 30	10127	30	L	20	20	20	15	125	24	11+2
P92 90 CXCLD 2525 M 30	10129	30	L	25	25	25	15	150	24	11+2

PRODDES	IDNR	MIID	CW	DAXN	DAXX
WG385 Cartridge Ref.	ID-Nr.	pocket size	S	Ø min	Ø max
C92 LD 2530 30	10371	30	3	25	30
C92 LD 3035 30	10372	30	3	30	35
C92 LD 3542 30	10373	30	3	35	42
C92 LD 4250 30	10374	30	3	42	50
C92 LD 5058 30	10376	30	3	50	58
C92 LD 5866 30	10378	30	3	58	66
C92 LD 6675 30	10379	30	3	66	75
C92 LD 75100 30	10381	30	3	75	100
C92 LD 100200 30	10369	30	3	100	200
C92 LD 200300 30	43835	30	3	200	300

PRODDES	IDNR	MIID	Hand	H	HF	B	CDX	OAL	LH	
WG385 Cartridge holder Ref.	ID-Nr.	pocket size		h	h1	b	P	L	L1	
P92 90 CXCLD 2020 K 40	10128	40	L	20	20	20	15	125	24	11+2
P92 90 CXCLD 2525 M 40	10130	40	L	25	25	25	15	150	24	11+2

PRODDES	IDNR	MIID	CW	DAXN	DAXX
WG385 Cartridge Ref.	ID-Nr.	pocket size	S	Ø min	Ø max
C92 LD 4254 40	10375	40	4	42	54
C92 LD 5466 40	10377	40	4	54	66
C92 LD 6680 40	10380	40	4	66	80
C92 LD 80100 40	10382	40	4	80	100
C92 LD 100200 40	10370	40	4	100	200
C92 LD 200300 40	37200	40	4	200	300

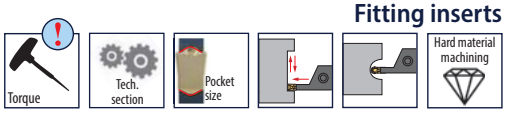
Remark

Holder and cartridges fit together provided the final two figures of the Reference-Nr. are identical.

Example:

P92 90 CXCLD 2020 K **30** and C92 LD 3035 **30**
P92 90 CXCLD 2525 M **40** and C92 LD 6680 **40**

Fitting inserts



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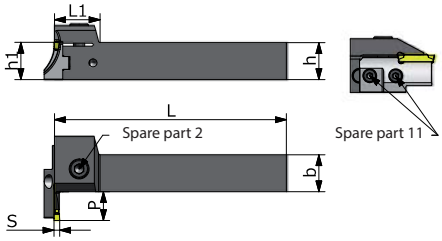
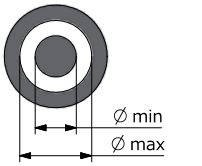
Tool holders with cartridges for face grooving


RH holder

P92 90 CXCRD





Dimension refer to the outer position of the cutting edge


RH cartridges

PRODDES	IDNR	MIID	Hand	H	HF	B	CDX	OAL	LH	
WG385 Cartridge holder Ref.	ID-Nr.	pocket size		h	h1	b	P	L	L1	
P92 90 CXCRD 2020 K 30	10131	30	R	20	20	20	15	125	24	11+2
P92 90 CXCRD 2525 M 30	10133	30	R	25	25	25	15	150	24	11+2

PRODDES	IDNR	MIID	CW	DAXN	DAXX
WG385 Cartridge Ref.	ID-Nr.	pocket size	S	Ø min	Ø max
C92 RD 2530 30	10385	30	3	25	30
C92 RD 3035 30	10386	30	3	30	35
C92 RD 3542 30	10387	30	3	35	42
C92 RD 4250 30	10388	30	3	42	50
C92 RD 5058 30	10390	30	3	50	58
C92 RD 5866 30	10392	30	3	58	66
C92 RD 6675 30	10393	30	3	66	75
C92 RD 75100 30	10395	30	3	75	100
C92 RD 100200 30	10383	30	3	100	200
C92 RD 200300 30	18356	30	3	200	300

PRODDES	IDNR	MIID	Hand	H	HF	B	CDX	OAL	LH	
WG385 Cartridge holder Ref.	ID-Nr.	pocket size		h	h1	b	P	L	L1	
P92 90 CXCRD 2020 K 40	10132	40	R	20	20	20	15	125	24	11+2
P92 90 CXCRD 2525 M 40	10134	40	R	25	25	25	15	150	24	11+2

PRODDES	IDNR	MIID	CW	DAXN	DAXX
Cartridge	ID-Nr.	pocket size	S	Ø min	Ø max
C92 RD 4254 40	10389	40	4	42	54
C92 RD 5466 40	10391	40	4	54	66
C92 RD 6680 40	10394	40	4	66	80
C92 RD 80100 40	10396	40	4	80	100
C92 RD 100200 40	10384	40	4	100	200
C92 RD 200300 40	21371	40	4	200	300

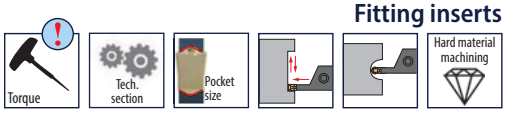
Remark

Holder and cartridges fit together provided the final two figures of the Reference-Nr. are identical.

Example:

P92 90 CXCRD 2020 K **30** and C92 RD 3035 **30**
P92 90 CXCRD 2525 M **40** and C92 RD 6680 **40**

Fitting inserts



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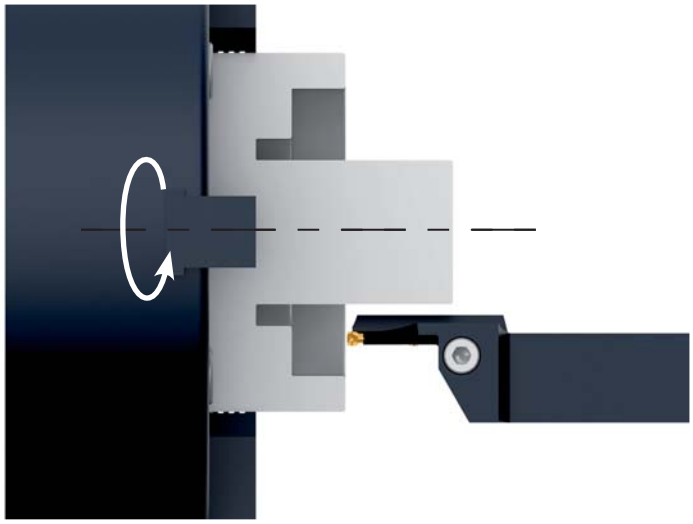
Monoblock face grooving holder P92 2 | P92 1

- Maximum stability = MONOBLOCK design
- Wide range of diameters 25 - ∞ mm
- Cutting width S = 3,4 + 5 mm as well as 6 mm (P92 1)
- Cutting depth up to 45mm

Code for MONOBLOCK face grooving tools

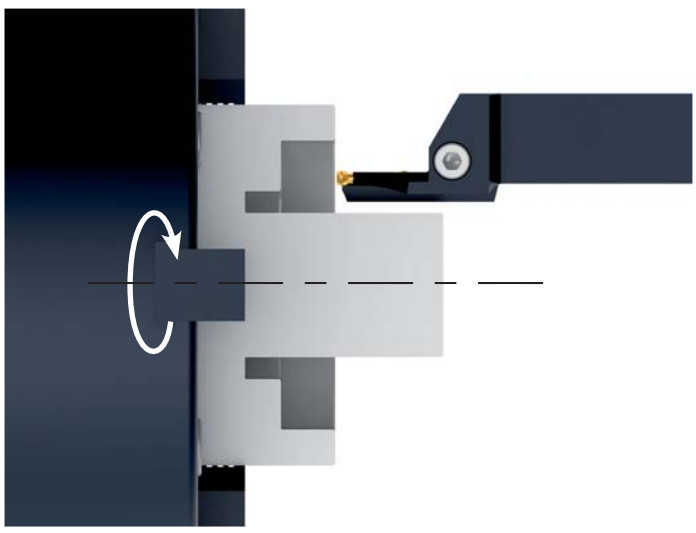
P92 2 CXCB R 2020 K 30 30 A (HP)

- P92 – Tool family
- 2 – Face grooving (DIN Version 2/1)
- CXCB – Cutting tool holder for inserts with 2 edges. Screw clamping type
- R – Rotation
- 2020 – Shank dimensions
- K – ISO holder length
- 30 – Cutting width in tenth mm
- 30 – Ø min
- A – Dimension P enlarged
- (HP) – With internal coolant

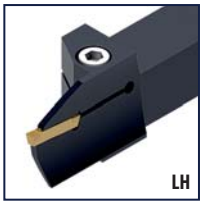


Counter clockwise rotation (CCW)

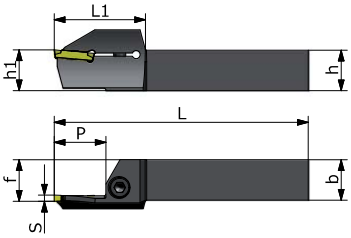
Clockwise rotation (CW)

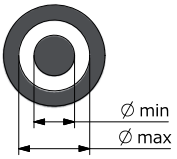


MONOBLOCK Face grooving tool holders for cutting width 3 mm



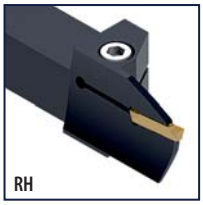
P92 2 CXCBL





Dimensions refer to the outer position of the cutting edge

P92 2 CXCBR



PRODDES	IDNR	MIID	Hand	DAXN	DAXX	H	HF	B	WF	CDX	CW	OAL	LH	
WG388 Ref.	ID-Nr.	pocket size		Ø min	Ø max	h	h1	b	f	P	S	L	L1	
P92 2 CXCBL 2020 K 30 25	30164	30	L	25	30	20	20	20	20,5	15	3	125	35	2
P92 2 CXCBL 2020 K 30 30	30167	30	L	30	38	20	20	20	20,5	15	3	125	35	2
P92 2 CXCBL 2020 K 30 38	30169	30	L	38	48	20	20	20	20,5	15	3	125	35	2
P92 2 CXCBL 2020 K 30 48	30170	30	L	48	60	20	20	20	20,5	15	3	125	35	2
P92 2 CXCBL 2020 K 30 60	30171	30	L	60	75	20	20	20	20,5	22	3	125	43	2
P92 2 CXCBL 2020 K 30 75	30172	30	L	75	100	20	20	20	20,5	25	3	125	45	2
P92 2 CXCBL 2020 K 30 100	30173	30	L	100	200	20	20	20	20,5	25	3	125	45	2
P92 2 CXCBL 2525 M 30 25	30174	30	L	25	30	25	25	25	25,5	15	3	150	35	2
P92 2 CXCBL 2525 M 30 30	30175	30	L	30	38	25	25	25	25,5	15	3	150	35	2
P92 2 CXCBL 2525 M 30 38	30179	30	L	38	48	25	25	25	25,5	15	3	150	35	2
P92 2 CXCBL 2525 M 30 48	30181	30	L	48	60	25	25	25	25,5	15	3	150	35	2
P92 2 CXCBL 2525 M 30 60	30182	30	L	60	75	25	25	25	25,5	22	3	150	43	2
P92 2 CXCBL 2525 M 30 75	30184	30	L	75	100	25	25	25	25,5	25	3	150	45	2
P92 2 CXCBL 2525 M 30 100	30185	30	L	100	200	25	25	25	25,5	25	3	150	45	2
P92 2 CXCBR 2020 K 30 25	29786	30	R	25	30	20	20	20	20,5	15	3	125	35	2
P92 2 CXCBR 2020 K 30 30	29787	30	R	30	38	20	20	20	20,5	15	3	125	35	2
P92 2 CXCBR 2020 K 30 38	29788	30	R	38	48	20	20	20	20,5	15	3	125	35	2
P92 2 CXCBR 2020 K 30 48	29789	30	R	48	60	20	20	20	20,5	15	3	125	35	2
P92 2 CXCBR 2020 K 30 60	29790	30	R	60	75	20	20	20	20,5	22	3	125	43	2
P92 2 CXCBR 2020 K 30 75	29791	30	R	75	100	20	20	20	20,5	25	3	125	45	2
P92 2 CXCBR 2020 K 30 100	29792	30	R	100	200	20	20	20	20,5	25	3	125	45	2
P92 2 CXCBR 2525 M 30 25	29793	30	R	25	30	25	25	25	25,5	15	3	150	35	2
P92 2 CXCBR 2525 M 30 30	29794	30	R	30	38	25	25	25	25,5	15	3	150	35	2
P92 2 CXCBR 2525 M 30 38	29795	30	R	38	48	25	25	25	25,5	15	3	150	35	2
P92 2 CXCBR 2525 M 30 48	29796	30	R	48	60	25	25	25	25,5	15	3	150	35	2
P92 2 CXCBR 2525 M 30 60	29797	30	R	60	75	25	25	25	25,5	22	3	150	43	2
P92 2 CXCBR 2525 M 30 75	29798	30	R	75	100	25	25	25	25,5	25	3	150	45	2
P92 2 CXCBR 2525 M 30 100	29799	30	R	100	200	25	25	25	25,5	25	3	150	45	2

DIN Version „2“ outside direction

Fitting inserts

Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | p. 56-65 | p. 66 | Hard material machining p. 77-80

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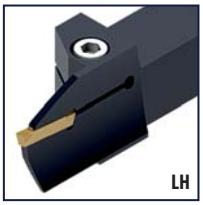
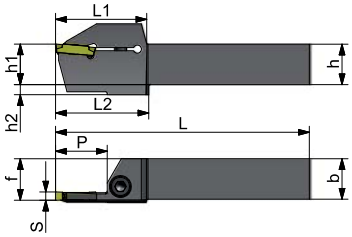
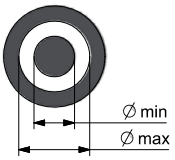
MONOBLOCK Face grooving tool holders for cutting width 4 mm



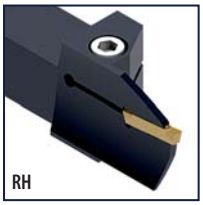
P92 2 CXCBL





Dimensions refer to the outer position of the cutting edge

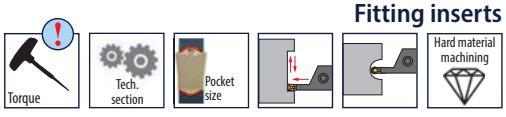
P92 2 CXCBR



PRODDES	IDNR	MIID	Hand	DAXN	DAXX	H	HF		B	WF	CDX	CW	OAL	LH	LTA	
WG388 Ref.	ID-Nr.	pocket size		Ø min	Ø max	h	h1	h2	b	f	P	S	L	L1	L2	
P92 2 CXCBL 2020 K 40 34	30186	40	L	34	40	20	20		20	20,5	20	4	125	41		2
P92 2 CXCBL 2020 K 40 40	30187	40	L	40	48	20	20		20	20,5	25	4	125	45		2
P92 2 CXCBL 2020 K 40 48	30188	40	L	48	60	20	20		20	20,5	25	4	125	45		2
P92 2 CXCBL 2020 K 40 60	30189	40	L	60	75	20	20		20	20,5	25	4	125	45		2
P92 2 CXCBL 2020 K 40 75	30190	40	L	75	150	20	20		20	20,5	25	4	125	45		2
P92 2 CXCBL 2020 K 40 150	29718	40	L	150	450	20	20	5	20	20,5	25	4	125	45	46	2
P92 2 CXCBL 2525 M 40 34	30192	40	L	34	40	25	25		25	25,5	20	4	150	41		2
P92 2 CXCBL 2525 M 40 40	30193	40	L	40	48	25	25		25	25,5	25	4	150	45		2
P92 2 CXCBL 2525 M 40 48	30194	40	L	48	60	25	25		25	25,5	25	4	150	45		2
P92 2 CXCBL 2525 M 40 60	30195	40	L	60	75	25	25		25	25,5	25	4	150	45		2
P92 2 CXCBL 2525 M 40 75	30196	40	L	75	150	25	25		25	25,5	25	4	150	45		2
P92 2 CXCBL 2525 M 40 150	30197	40	L	150	450	25	25		25	25,5	25	4	150	45		2
P92 2 CXCBL 2525 M 40 450	30198	40	L	450	∞	25	25	5	25	25,5	25	4	150	45	46	2
P92 2 CXCBR 2020 K 40 34	29742	40	R	34	40	20	20		20	20,5	20	4	125	41		2
P92 2 CXCBR 2020 K 40 40	29743	40	R	40	48	20	20		20	20,5	25	4	125	45		2
P92 2 CXCBR 2020 K 40 48	29744	40	R	48	60	20	20		20	20,5	25	4	125	45		2
P92 2 CXCBR 2020 K 40 60	29745	40	R	60	75	20	20		20	20,5	25	4	125	45		2
P92 2 CXCBR 2020 K 40 75	29746	40	R	75	150	20	20		20	20,5	25	4	125	45		2
P92 2 CXCBR 2020 K 40 150	29717	40	R	150	450	20	20	5	20	20,5	25	4	125	45	46	2
P92 2 CXCBR 2525 M 40 34	29747	40	R	34	40	25	25		25	25,5	20	4	150	41		2
P92 2 CXCBR 2525 M 40 40	29748	40	R	40	48	25	25		25	25,5	25	4	150	45		2
P92 2 CXCBR 2525 M 40 48	29749	40	R	48	60	25	25		25	25,5	25	4	150	45		2
P92 2 CXCBR 2525 M 40 60	29750	40	R	60	75	25	25		25	25,5	25	4	150	45		2
P92 2 CXCBR 2525 M 40 75	29751	40	R	75	150	25	25		25	25,5	25	4	150	45		2
P92 2 CXCBR 2525 M 40 150	29719	40	R	150	450	25	25		25	25,5	25	4	150	45		2
P92 2 CXCBR 2525 M 40 450	29721	40	R	450	∞	25	25	5	25	25,5	25	4	150	45	46	2

DIN Version „2" outside direction

Fitting inserts



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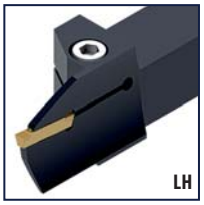
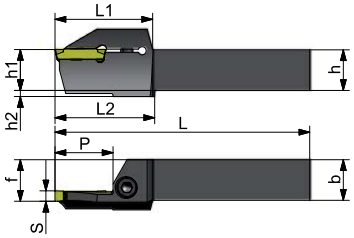
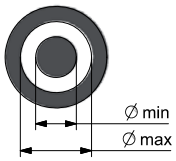
MONOBLOCK Face grooving tool holders for cutting width 5 mm



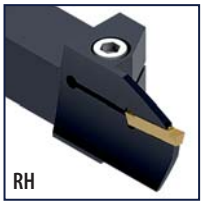
P92 2 CXCBL





Dimensions refer to the outer position of the cutting edge

P92 2 CXCBR



PRODDES	IDNR	MIID	Hand	DAXN	DAXX	H	HF		B	WF	CDX	CW	OAL	LH	LTA	
WG388 Ref.	ID-Nr.	pocket size		Ø min	Ø max	h	h1	h2	b	f	P	S	L	L1	L2	
P92 2 CXCBL 2020 K 50 42	28296	50	L	42	55	20	20		20	20,5	25	5	125	45		2
P92 2 CXCBL 2020 K 50 55	30199	50	L	55	75	20	20		20	20,5	25	5	125	45		2
P92 2 CXCBL 2020 K 50 75	29714	50	L	75	130	20	20	3	20	20,5	28	5	125	48	49	2
P92 2 CXCBL 2525 M 50 42	28298	50	L	42	55	25	25		25	25,5	25	5	150	45		2
P92 2 CXCBL 2525 M 50 55	30201	50	L	55	75	25	25		25	25,5	25	5	150	45		2
P92 2 CXCBL 2525 M 50 75	30202	50	L	75	130	25	25		25	25,5	32	5	150	52		2
P92 2 CXCBL 2525 M 50 75A	30203	50	L	75	130	25	25		25	25,5	40	5	150	60		2
P92 2 CXCBL 2525 M 50 130	30204	50	L	130	200	25	25	5	25	25,5	32	5	150	52	53	2
P92 2 CXCBL 2525 M 50 130A	30205	50	L	130	200	25	25	5	25	25,5	40	5	150	60	61	2
P92 2 CXCBL 2525 M 50 200	30207	50	L	200	450	25	25	5	25	25,5	32	5	150	52	53	2
P92 2 CXCBL 2525 M 50 200A	30208	50	L	200	450	25	25	5	25	25,5	45	5	150	65	66	2
P92 2 CXCBL 2525 M 50 450	30210	50	L	450	∞	25	25	5	25	25,5	32	5	150	52	53	2
P92 2 CXCBL 2525 M 50 450A	30209	50	L	450	∞	25	25	5	25	25,5	45	5	150	65	66	2
P92 2 CXCBR 2020 K 50 42	28295	50	R	42	55	20	20		20	20,5	25	5	125	45		2
P92 2 CXCBR 2020 K 50 55	29774	50	R	55	75	20	20		20	20,5	25	5	125	45		2
P92 2 CXCBR 2020 K 50 75	29713	50	R	75	130	20	20	3	20	20,5	28	5	125	48	49	2
P92 2 CXCBR 2525 M 50 42	28297	50	R	42	55	25	25		25	25,5	25	5	150	45		2
P92 2 CXCBR 2525 M 50 55	29775	50	R	55	75	25	25		25	25,5	25	5	150	45		2
P92 2 CXCBR 2525 M 50 75	29776	50	R	75	130	25	25		25	25,5	32	5	150	52		2
P92 2 CXCBR 2525 M 50 75A	29777	50	R	75	130	25	25		25	25,5	40	5	150	60		2
P92 2 CXCBR 2525 M 50 130	29780	50	R	130	200	25	25	5	25	25,5	32	5	150	52	53	2
P92 2 CXCBR 2525 M 50 130A	29781	50	R	130	200	25	25	5	25	25,5	40	5	150	60	61	2
P92 2 CXCBR 2525 M 50 200	29782	50	R	200	450	25	25	5	25	25,5	32	5	150	52	53	2
P92 2 CXCBR 2525 M 50 200A	29784	50	R	200	450	25	25	5	25	25,5	45	5	150	65	66	2
P92 2 CXCBR 2525 M 50 450	29715	50	R	450	∞	25	25	5	25	25,5	32	5	150	52	53	2
P92 2 CXCBR 2525 M 50 450A	29785	50	R	450	∞	25	25	5	25	25,5	45	5	150	65	66	2

DIN Version „2“ outside direction

How to order:

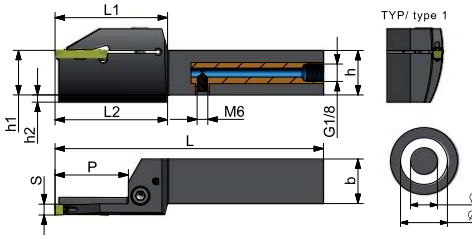
		recommended	
1 St.	P92 2 CXCBR 2020 K 50 42	or:	**1 St. ID-Nr. 28295**
10 St.	RTNX 525 KM TILOX	or:	**10 St. ID-Nr. 13414**

Fitting inserts

Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | p. 56-65 | p. 66 | Hard material machining p. 77-80

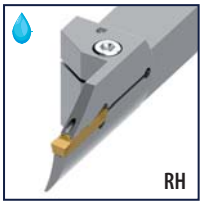
MONOBLOCK-Holder with internal coolant for face grooving for cutting width 6 mm

P92 1 CXCBL HP



Dimensions refer to the outer position of the cutting edge

P92 1 CXCBR HP

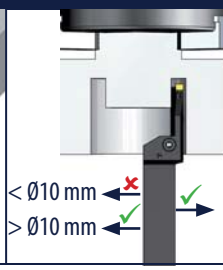


PRODDES	IDNR	MIID	Hand	DAXN	DAXX	H	HF		B	CDX	CW	OAL	LH	LTA	
WGRGL3805 Ref.	ID-Nr.	pocket size		Ø min	Ø max	h	h1	h2	b	P	S	L	L1	L2	
P92 1 CXCBL 2525 M60 75 HP G1/8	63036	60	L	75	130	25	25	4	25	40	6	150	63	63	2
P92 1 CXCBL 2525 M60 130 HP G1/8	63034	60	L	130	200	25	25	4	25	40	6	150	63	63	2
P92 1 CXCBR 2525 M60 75 HP G1/8	63035	60	R	75	130	25	25	4	25	40	6	150	63	63	2
P92 1 CXCBR 2525 M60 130 HP G1/8	63033	60	R	130	200	25	25	4	25	40	6	150	63	63	2

DIN Version „1“ inside direction

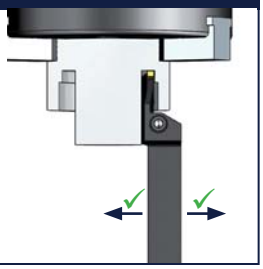
Version P92 1

Inside direction



Version P92 2

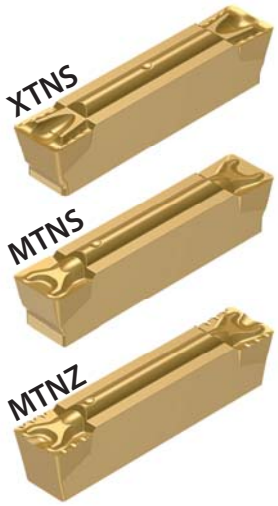
Outside direction

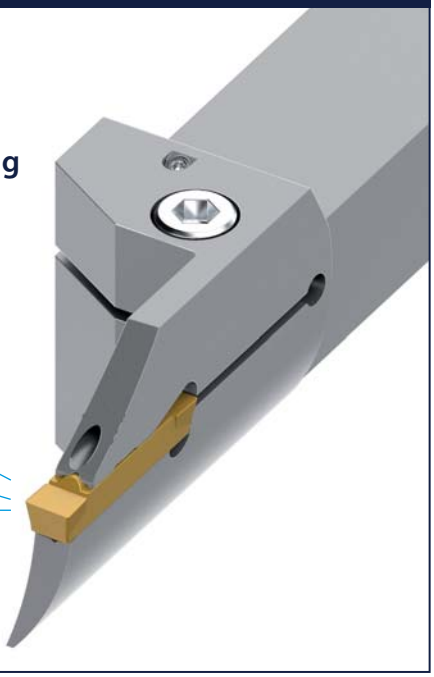


Perfect combination for face grooving

Perfect choice of chip breakers

Stable holder for face grooving
Version P92 1
Cutting width = 6 mm





Fitting inserts

Torque p. 220, 221, 245
Tech. section p. 223
Pocket size p. 224
p. 56-65
p. 66
Hard material machining p. 77-80

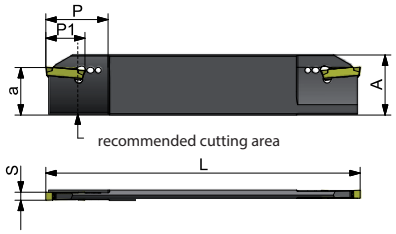
Designation code for blades for face grooving

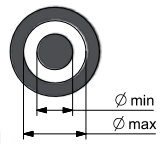
P92 2 TMS 32 4 85 R

- P92 — Tool family
- 2 — Face grooving (DIN Version 2/1)
- TMS — Version blade
- 32 — Tool height
- 4 — Cutting width
- 85 — Ø min
- R — Rotaion

Blades for face grooving

P92 2 TMS





Dimensions refer to the outer position of the cutting edge

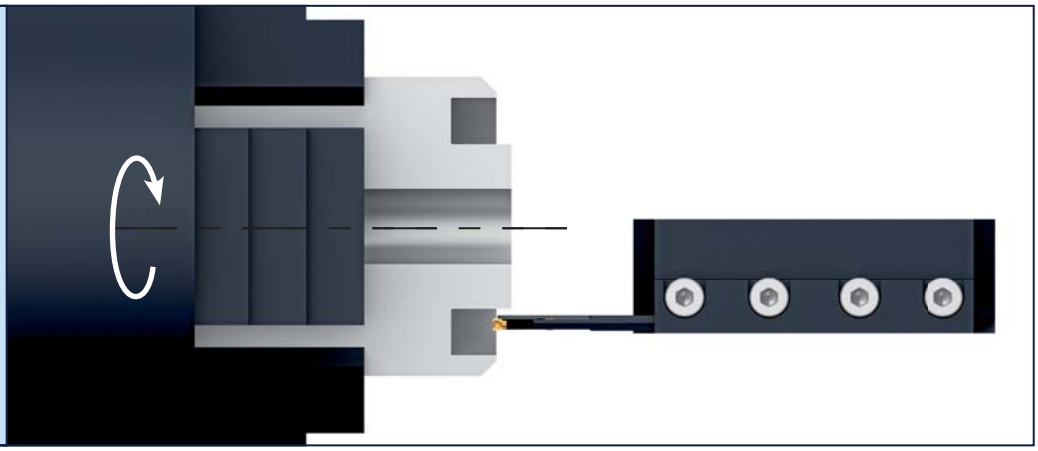
PRODDES	IDNR	MIID	Hand	DAXN	DAXX	H	HF	CDX		CW	OAL	
WG311 Ref.	ID-Nr.	pocket size		Ømin	Ømax	A	a	P	P1	S	L	
P92 2 TMS 32 4 85 R	44531	40	R	85	160	32	25,0	32	18,5	4,0	160	28
P92 2 TMS 32 4 140 R	44542	40	R	140	260	32	25,0	32	18,5	4,0	160	28
P92 2 TMS 32 4 240 R	44543	40	R	240	~	32	25,0	32	18,5	4,0	160	28
P92 2 TMS 32 5 85 R	44538	50	R	85	160	32	25,0	35	23,5	5,0	160	28
P92 2 TMS 32 5 140 R	44540	50	R	140	260	32	25,0	35	23,5	5,0	160	28
P92 2 TMS 32 5 240 R	44541	50	R	240	~	32	25,0	35	23,5	5,0	160	28

Remark: Blades and tool blocks with the same "A" dimension fit together.
For optimal stability, always keep the sword as short and compact as possible.

Changing insert P92 2 TMS

Easy and fast

Application
P92 2 TMS 32



Fitting inserts and tool blocks

Tech. section p. 223 | Pocket size p. 224 | p. 56-65 | p. 66 | Hard material machining p. 77-80 | p. 176-176

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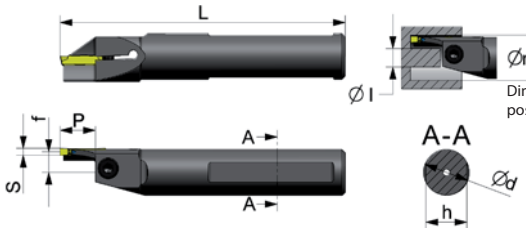
Code for face grooving boring bar

P92 1 CG R 0020 K 30 25 HP

- P92 – Tool family
- 1 – Face grooving (DIN Version 2/1)
- CG – Version boring bar
- R – Rotation
- 0020 – Shank diameter 0020 = 20 mm
- K – ISO length
- 30 – Cutting width (e.g. 30 = 3 mm)
- 25 – Ø min face grooving
- HP – Internal coolant

Boring bars for internal face grooving with internal coolant and short extension

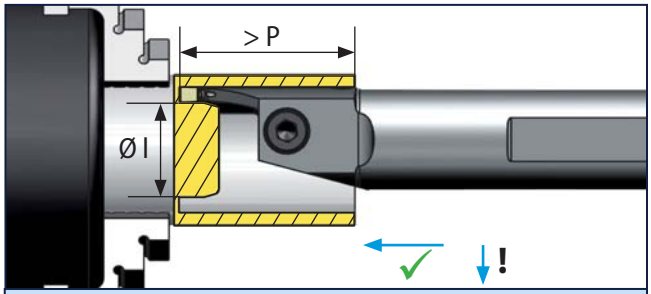
P92 1 CGL



P92 1 CGR

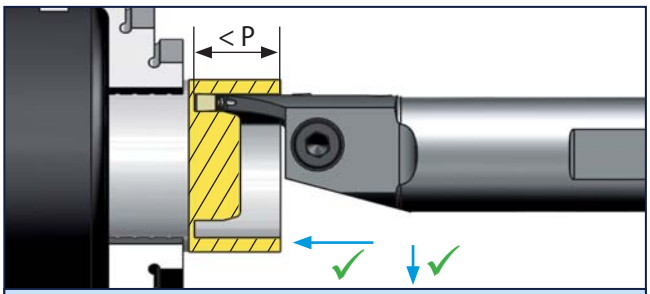
PRODDES	IDNR	MIID	Hand	DAXN	DAXX	DCONMS		H	WF	CDX	CW	OAL	
WG3905 Ref.	ID-Nr.	pocket size		Ø min	Ø max	Ø d	Ø l	h	f	P	S	L	
P92 1 CGL 0020 K3025 HP	65675	30	L	25	30	20	13	18	10,5	15	3,0	125	6
P92 1 CGL 0020 K3030 HP	65677	30	L	30	38	20	6,5	18	10,5	15	3,0	125	6
P92 1 CGL 0020 K3038 HP	65679	30	L	38	48	20	0	18	10,5	15	3,0	125	6
P92 1 CGL 0025 M4034 HP	65681	40	L	34	40	25	12	23	13,5	20	4,0	150	14
P92 1 CGL 0025 M4040 HP	65683	40	L	40	48	25	6	23	13,5	20	4,0	150	14
P92 1 CGL 0025 M4048 HP	65685	40	L	48	60	25	0	23	13,5	20	4,0	150	14
P92 1 CGR 0020 K3025 HP	65674	30	R	25	30	20	13	18	10,5	15	3,0	125	6
P92 1 CGR 0020 K3030 HP	65676	30	R	30	38	20	6,5	18	10,5	15	3,0	125	6
P92 1 CGR 0020 K3038 HP	65678	30	R	38	48	20	0	18	10,5	15	3,0	125	6
P92 1 CGR 0025 M4034 HP	65680	40	R	34	40	25	12	23	13,5	20	4,0	150	14
P92 1 CGR 0025 M4040 HP	65682	40	R	40	48	25	6	23	13,5	20	4,0	150	14
P92 1 CGR 0025 M4048 HP	65684	40	R	48	60	25	0	23	13,5	20	4,0	150	14

DIN Version „1“ inside direction



Extension > Cutting depth (P)

While turning to the inside (after the first cut at Ømin) please pay attention to the limit value for internal Ø!



Extension < Cutting depth (P)

After the first cut at Ømin you can operate towards the center (attention to the recommended cutting depths ap see insert details)!

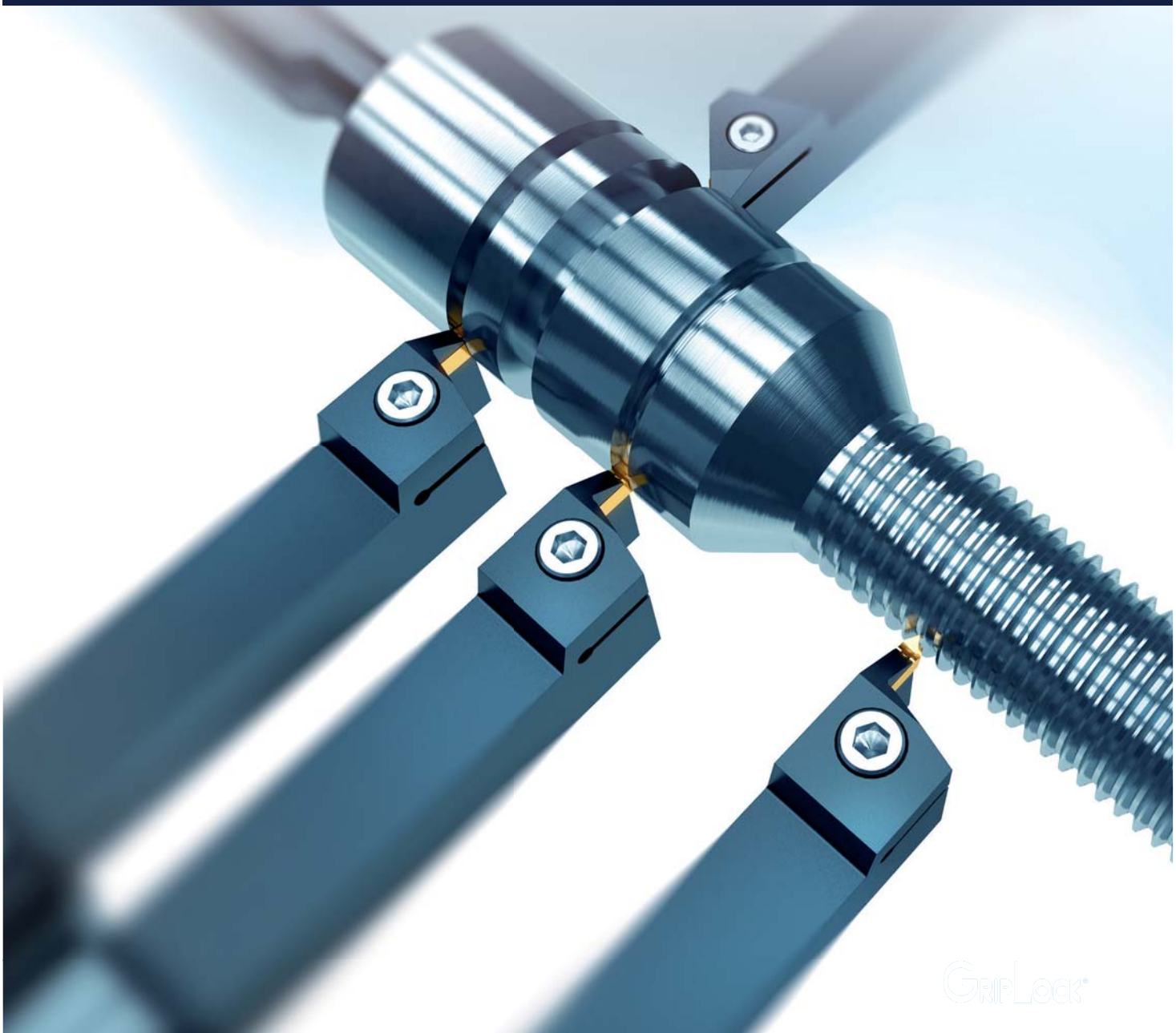
Fitting inserts

Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | p. 56-65 | p. 66 | Hard material machining p. 77-80

P92 P | Precision system

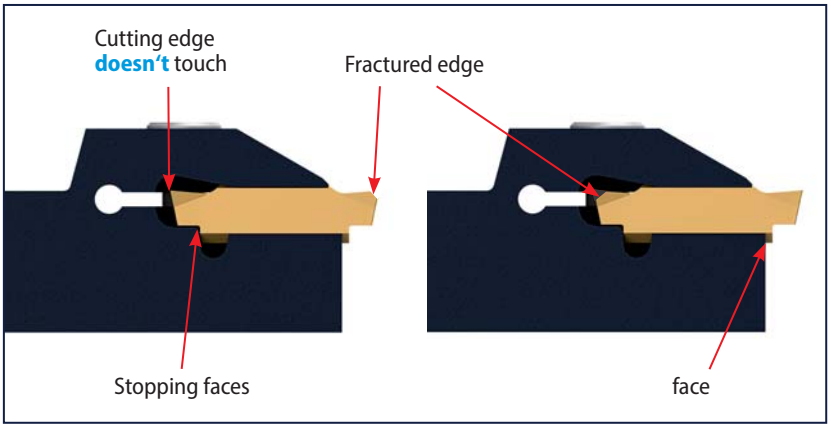
The precision system for machining

- Precision grooving
- Precision copying
- Precision threading
- Precision turning
- ISO turning in tight areas



P92 P | Precision system

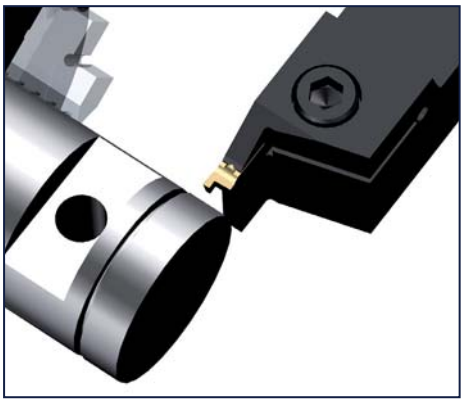
The precision system for machining

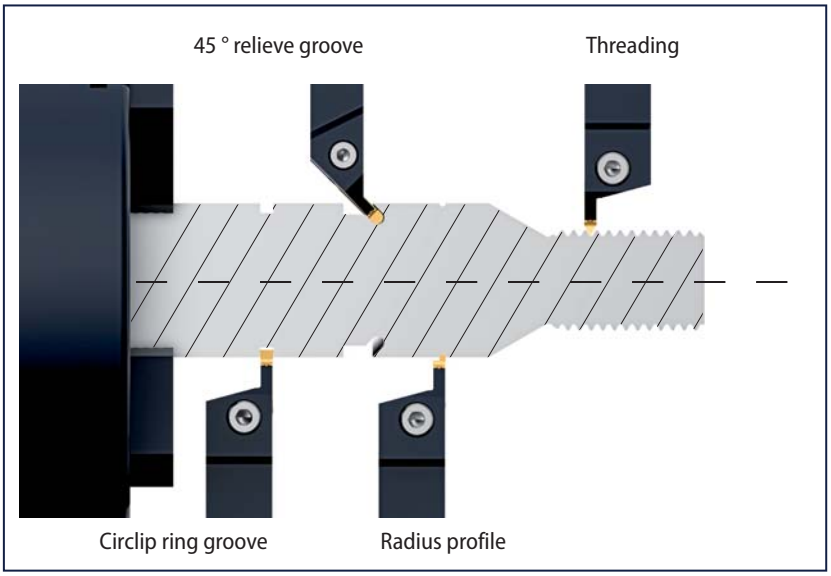


- Precise repositioning of cutting edge
- No loss! In case of fractured edge, the so far unused edge can be employed.

- Long guide surfaces between insert and pocket achieve a solid unit and therefore lead to a perfect straight run.

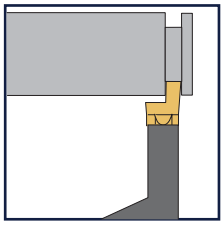
- Narrow profile grooves from 0,5 mm

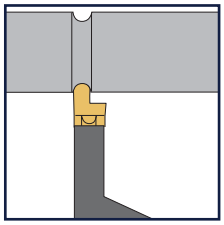


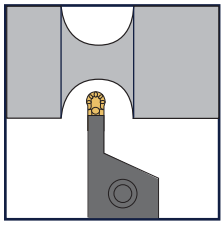


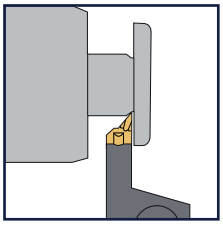
- Many applications
  - Circlip ring groove
  - Full radius grooving
  - Threading
  - Clearance operations
  - Profile turning

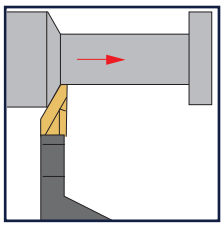
System applications and symbols

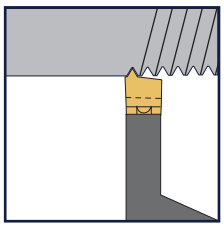

Precision grooving

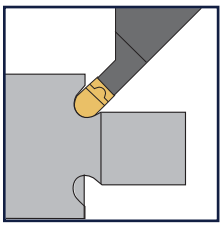

Radius profile grooving

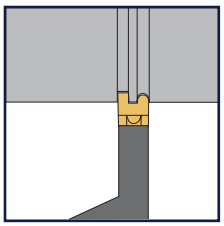

Copying

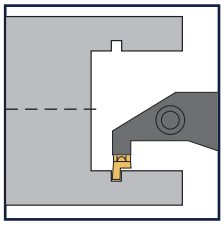

Profile & side turning

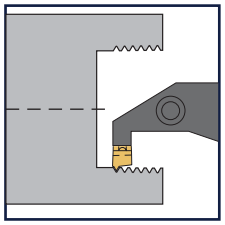

DECO operations

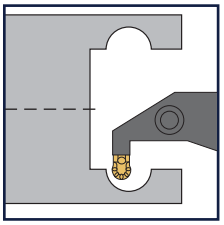

Threading

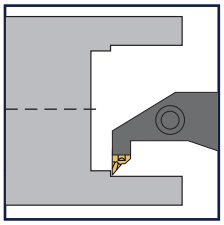

Clearance cutting *


Special solutions *


Internal grooving


Internal threading


Internal copying


Internal profile turning

* Also for internal grooving with borning bars.

Coatings in this system

Coating	Type	Structure	Layer thickness	Main application	Alternative application
NANOSPEED	Supernitrid PVD	TiAlN	3 µm	P M	N S
TILOX	Supernitrid PVD	TiAlN	3 µm	P M	K S
ALUSPEED	HiPIMS PVD	TiB	2 µm	N	S
HYPERSPEED	Supernitrid PVD	TiAlN	3 µm	S	M
Uncoated	-	-	-	N	**

** additional coating options or customer-specific applications
see technical section and tailor made solutions section (on request)

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Precision grooving inserts (DIN 471)

P92 P OTX..R/L

Inserts for CW run

Inserts for CCW run

Enlarged view

PRODDES	IDNR	IDNR	IDNR	IIC	IH	INSL			PDPT	RER/REL		CW	CWUD	CWLD
WG260 Ref.	KM	PM NANOSPEED	KM NANOSPEED	pocket size		L	L+	L-	P	R		S	S+	S-
	N	P M N S	P M N S											
OTX 4 050L	23940	23961	23960	P40	L	19,15	0,05	-0,05	1,0	0,05	0,50	0,57	0,00	-0,05
OTX 4 060L	23941	23965	23964	P40	L	19,15	0,05	-0,05	1,0	0,05	0,60	0,67	0,00	-0,05
OTX 4 070L	23942	23969	23968	P40	L	19,15	0,05	-0,05	1,5	0,05	0,70	0,77	0,00	-0,05
OTX 4 080L	23943	23973	23972	P40	L	19,15	0,05	-0,05	1,5	0,05	0,80	0,87	0,00	-0,05
OTX 4 090L	11047	11053	11049	P40	L	19,15	0,05	-0,05	1,5	0,1	0,90	0,97	0,00	-0,05
OTX 4 110L	11055	11061	11057	P40	L	19,15	0,05	-0,05	1,5	0,1	1,10	1,24	0,00	-0,05
OTX 4 130L	11063	11069	11065	P40	L	19,15	0,05	-0,05	1,5	0,1	1,30	1,44	0,00	-0,05
OTX 4 160L	11071	11077	11073	P40	L	19,15	0,05	-0,05	2,0	0,1	1,60	1,74	0,00	-0,05
OTX 4 185L	11079	11085	11081	P40	L	19,15	0,05	-0,05	2,0	0,1	1,85	1,99	0,00	-0,05
OTX 4 215L	11087	11093	11089	P40	L	19,15	0,05	-0,05	2,5	0,1	2,15	2,29	0,00	-0,05
OTX 4 265L	11095	11101	11097	P40	L	19,15	0,05	-0,05	2,5	0,1	2,65	2,79	0,00	-0,05
OTX 4 315L	11111	11117	11113	P40	L	19,15	0,05	-0,05	2,5	0,1	3,15	3,29	0,00	-0,05
OTX 5 415L	11161	11167	11163	P50	L	23,55	0,05	-0,05	3,5	0,1	4,15	4,29	0,00	-0,05
OTX 4 050R	23939	23963	23962	P40	R	19,15	0,05	-0,05	1,0	0,05	0,50	0,57	0,00	-0,05
OTX 4 060R	23938	23967	23966	P40	R	19,15	0,05	-0,05	1,0	0,05	0,60	0,67	0,00	-0,05
OTX 4 070R	23937	23971	23970	P40	R	19,15	0,05	-0,05	1,5	0,05	0,70	0,77	0,00	-0,05
OTX 4 080R	23936	23975	23974	P40	R	19,15	0,05	-0,05	1,5	0,05	0,80	0,87	0,00	-0,05
OTX 4 090R	11046	11052	11048	P40	R	19,15	0,05	-0,05	1,5	0,1	0,90	0,97	0,00	-0,05
OTX 4 110R	11054	11060	11056	P40	R	19,15	0,05	-0,05	1,5	0,1	1,10	1,24	0,00	-0,05
OTX 4 130R	11062	11068	11064	P40	R	19,15	0,05	-0,05	1,5	0,1	1,30	1,44	0,00	-0,05
OTX 4 160R	11070	11076	11072	P40	R	19,15	0,05	-0,05	2,0	0,1	1,60	1,74	0,00	-0,05
OTX 4 185R	11078	11084	11080	P40	R	19,15	0,05	-0,05	2,0	0,1	1,85	1,99	0,00	-0,05
OTX 4 215R	11086	11092	11088	P40	R	19,15	0,05	-0,05	2,5	0,1	2,15	2,29	0,00	-0,05
OTX 4 265R	11094	11100	11096	P40	R	19,15	0,05	-0,05	2,5	0,1	2,65	2,79	0,00	-0,05
OTX 4 315R	11110	11116	11112	P40	R	19,15	0,05	-0,05	2,5	0,1	3,15	3,29	0,00	-0,05
OTX 5 415R	11160	11166	11162	P50	R	23,55	0,05	-0,05	3,5	0,1	4,15	4,29	0,00	-0,05

How to order:

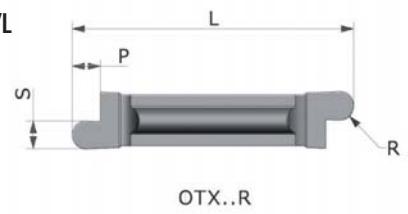
1 St.	P92 P CXCBL 0808 K 4	page 132 pocket size P40
10 St.	OTX 4050 L KM	page 124 pocket size P40

Fitting tools

p. 223 p. 224 p. 228 p. 132-133 p. 135 p. 136 p.138 p. 138 p. 187 p. 201

Full radius grooving and copying inserts

P92 P OTX R..R/L



OTX..R

Inserts for CW run

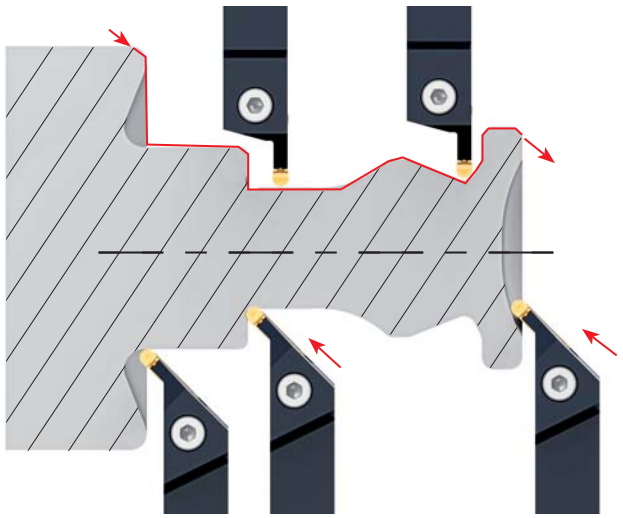
OTX..R..L

Inserts for CCW run

OTX..R..R

Enlarged view

PRODDES	IDNR	IDNR	IDNR	IIC	IH	INSL			PDPT	RER/REL	CW	CWUD	CWLD
WG260 Ref.	KM	PM NANOSPEED	KM NANOSPEED	pocket size		L	L+	L-	P	R	S	S+	S-
	N	P M N S	P M N S										
OTX 4 R 050L	23952	23957	23956	P40	L	19,15	0,05	-0,05	2,0	0,50	1,00	0,05	0,00
OTX 4 R 075L	29648	25285	29651	P40	L	19,15	0,05	-0,05	2,0	0,75	1,50	0,05	0,00
OTX 4 R 100L	11143	11149	11145	P40	L	19,15	0,05	-0,05	3,0	1,00	2,00	0,05	0,00
OTX 4 R 125L	29649	25286	29653	P40	L	19,15	0,05	-0,05	3,0	1,25	2,50	0,05	0,00
OTX 4 R 150L	11151	11157	11153	P40	L	19,15	0,05	-0,05	3,0	1,50	3,00	0,05	0,00
OTX 5 R 200L	11171	11177	11173	P50	L	23,55	0,05	-0,05	4,0	2,00	4,00	0,05	0,00
OTX 6 R 250L	11181	11187	11183	P50	L	23,55	0,05	-0,05	4,0	2,50	5,00	0,05	0,00
OTX 6 R 300L	11189	11195	11191	P50	L	23,55	0,05	-0,05	4,0	3,00	6,00	0,05	0,00
OTX 8 R 350L	-	-	65066	P80	L	28,55	0,05	-0,05	5,0	3,50	7,00	0,05	0,00
OTX 4 R 050R	23953	23959	23958	P40	R	19,15	0,05	-0,05	2,0	0,50	1,00	0,05	0,00
OTX 4 R 075R	29642	25284	29652	P40	R	19,15	0,05	-0,05	2,0	0,75	1,50	0,05	0,00
OTX 4 R 100R	11142	11148	11144	P40	R	19,15	0,05	-0,05	3,0	1,00	2,00	0,05	0,00
OTX 4 R 125R	29650	25287	29654	P40	R	19,15	0,05	-0,05	3,0	1,25	2,50	0,05	0,00
OTX 4 R 150R	11150	11156	11152	P40	R	19,15	0,05	-0,05	3,0	1,50	3,00	0,05	0,00
OTX 5 R 200R	11170	11176	11172	P50	R	23,55	0,05	-0,05	4,0	2,00	4,00	0,05	0,00
OTX 6 R 250R	11180	11186	11182	P50	R	23,55	0,05	-0,05	4,0	2,50	5,00	0,05	0,00
OTX 6 R 300R	11188	11194	11190	P50	R	23,55	0,05	-0,05	4,0	3,00	6,00	0,05	0,00
OTX 8 R 350R	-	-	65067	P80	R	28,55	0,05	-0,05	5,0	3,50	7,00	0,05	0,00



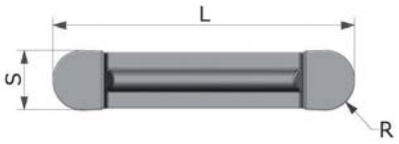
Full radius inserts for different applications

Fitting tools

p. 223 p. 224 p. 228 p. 132-133 p. 135 p. 136 p.138 p. 138 p. 187 p. 201

Radius and copying inserts

P92 P OTX RN



Enlarged view

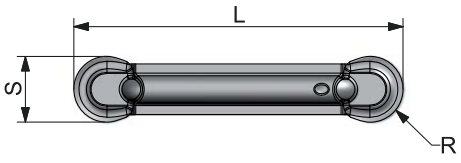
PRODDES	IDNR	IDNR	IDNR	IIC	IH	INSL			RER/REL	CW	CWUD	CWLD
WG260 Ref.	KM	PM NANOSPEED	KM NANOSPEED	pocket size		L	L+	L-	R	S	S+	S-
	N	P M N S	P M N S									
OTX 4 R 200N	11158	11159	-	P40	N	19,15	0,05	-0,05	2,00	3,90	0,10	0,10
OTX 5 R 250N	11178	11179	-	P50	N	23,55	0,05	-0,05	2,50	4,50	0,10	0,10
OTX 6 R 325N	11196	11197	-	P50	N	23,55	0,05	-0,05	3,25	6,40	0,10	0,10
OTX 8 R 400N	-	-	65068	P80	N	28,55	0,05	-0,05	4,00	7,90	0,13	0,13

Superfinishing

Fitting tools, see below

Precision ground full radius inserts with 5° positive top rake angle.

P92 P OTX R...N R



Enlarged view

PRODDES	IDNR	IDNR	IIC	IH	INSL			RER/REL	CW	CWUD	CWLD
WG260 Ref.	GF110	GF110 NANOSPEED	pocket size		L	L+	L-	R	S	S+	S-
	N	P M N S									
OTX 4 R 200N R	24266	24267	P40	N	19,95	0,05	-0,05	2,00	4,00	0,03	-0,03
OTX 5 R 250N R	24268	24269	P50	N	24,95	0,05	-0,05	2,50	5,00	0,03	-0,03

Finishing

Precision ground full radius insert. Horizontal cutting edge with parallel chip breaker.

Especially recommended for heat resistant alloys.

Fitting tools

p. 223 p. 224 p. 228 p. 132-133 p. 135 p. 136 p.138 p. 138 p. 187 p. 201

Inserts for grooving and copying

STV R/L


STV...L


STV...R


Enlarged view

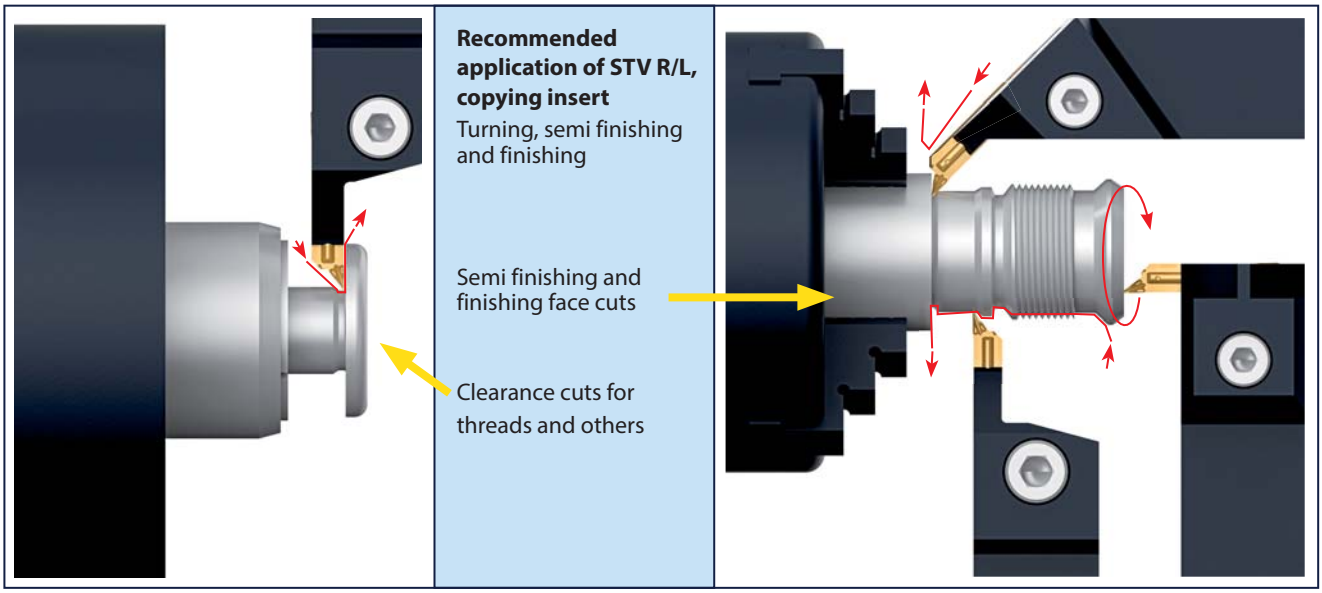
PRODDES	IDNR	IDNR	IDNR	IDNR	IIC	IH	INSL			PDPT	RER/REL	CW	CWUD	CWLD
WG301 Ref.	KM	KM Aluspeed	KM HYPERSPEED	KM TILOX	pocket size		L	L+	L-	P	R	S	S+	S-
	N	N S	S M	P M K S										
STVL 5005	45154	57135	57136	57137	PS50	L	24,90	0,05	-0,05	2,5	0,05	4,95	0,05	-0,05
STVL 501	45034	45018	45026	45121	PS50	L	24,90	0,05	-0,05	2,5	0,10	4,95	0,05	-0,05
STVL 502	45035	45019	45027	45122	PS50	L	24,90	0,05	-0,05	2,5	0,20	4,95	0,05	-0,05
STVL 503	56596	57138	57139	57140	PS50	L	24,90	0,05	-0,05	2,5	0,30	4,95	0,05	-0,05
STVL 504	56598	57141	57142	53648	PS50	L	24,90	0,05	-0,05	2,5	0,40	4,95	0,05	-0,05
STVR 5005	45153	57143	57144	57145	PS50	R	24,90	0,05	-0,05	2,5	0,05	4,95	0,05	-0,05
STVR 501	45038	45022	45030	45123	PS50	R	24,90	0,05	-0,05	2,5	0,10	4,95	0,05	-0,05
STVR 502	45039	45023	45031	45124	PS50	R	24,90	0,05	-0,05	2,5	0,20	4,95	0,05	-0,05
STVR 503	56599	57146	57147	57148	PS50	R	24,90	0,05	-0,05	2,5	0,30	4,95	0,05	-0,05
STVR 504	56601	57149	57150	54041	PS50	R	24,90	0,05	-0,05	2,5	0,40	4,95	0,05	-0,05

Comment:

STV R/L has been developed, to machine materials, which are difficult to cut, like:

- nonferrous heavy metals
- nickel alloys
- plastic materials
- composite materials
- aluminium alloys

STVL/R = polished surfaces, sharp cutting edges



First choice for STV/STD

Fitting tools

p. 223 p. 224 p. 228 p. 132-133 p. 135 p. 134 p. 136 p.138 p. 138 p. 187 p. 201

Inserts for profiling and copying

STD R/L

Enlarged view

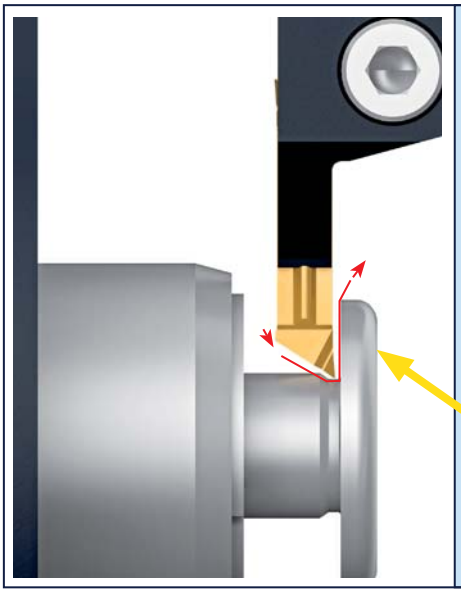
PRODDES	IDNR	IIC	IH	INSL			RER/REL	CW	CWUD	CWLD
WG301 Ref.	GF110 Nanospeed	pocket size		L	L+	L-	R	S	S+	S-
	P M N S									
STDL 5005	57158	P50	L	24,55	0,05	-0,05	0,05	4,95	0,05	-0,05
STDL 501	57159	P50	L	24,65	0,05	-0,05	0,1	4,95	0,05	-0,05
STDL 502	57160	P50	L	24,65	0,05	-0,05	0,2	4,95	0,05	-0,05
STDR 5005	57162	P50	R	24,55	0,05	-0,05	0,05	4,95	0,05	-0,05
STDR 501	57163	P50	R	24,65	0,05	-0,05	0,1	4,95	0,05	-0,05
STDR 502	57164	P50	R	24,65	0,05	-0,05	0,2	4,95	0,05	-0,05

Comment:

STD R/L has been developed, to machine materials, which are difficult to cut, like:

- nonferrous heavy metals
- nickel alloys
- plastic materials
- composite materials
- aluminium alloys

STDL/R = polished surfaces, sharp cutting edges

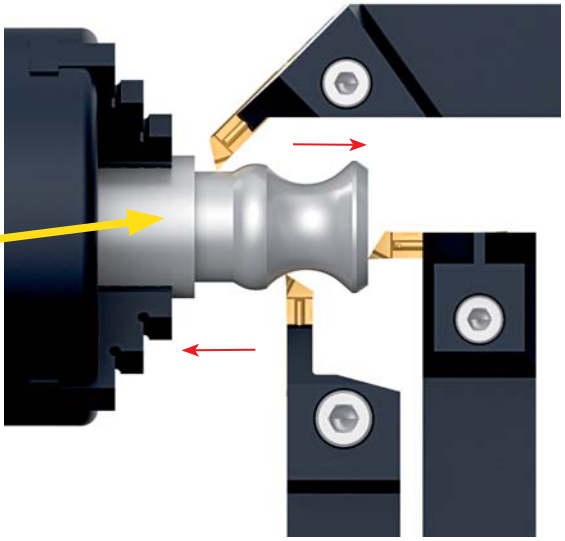


Recommended application of STD R/L, copying insert

Turning, semi finishing and finishing

Semi finishing and finishing face cuts

Clearance cuts for threads and others



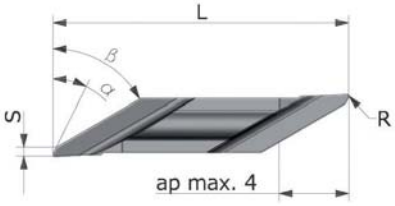
First choice for STV/STD

Fitting tools

p. 223 p. 224 p. 228 p. 132-133 p. 135 p. 134 p. 136 p.138 p. 138 p. 187 p. 201

Decolletage turning insert for sliding-head machine tools

P92 P OTX4

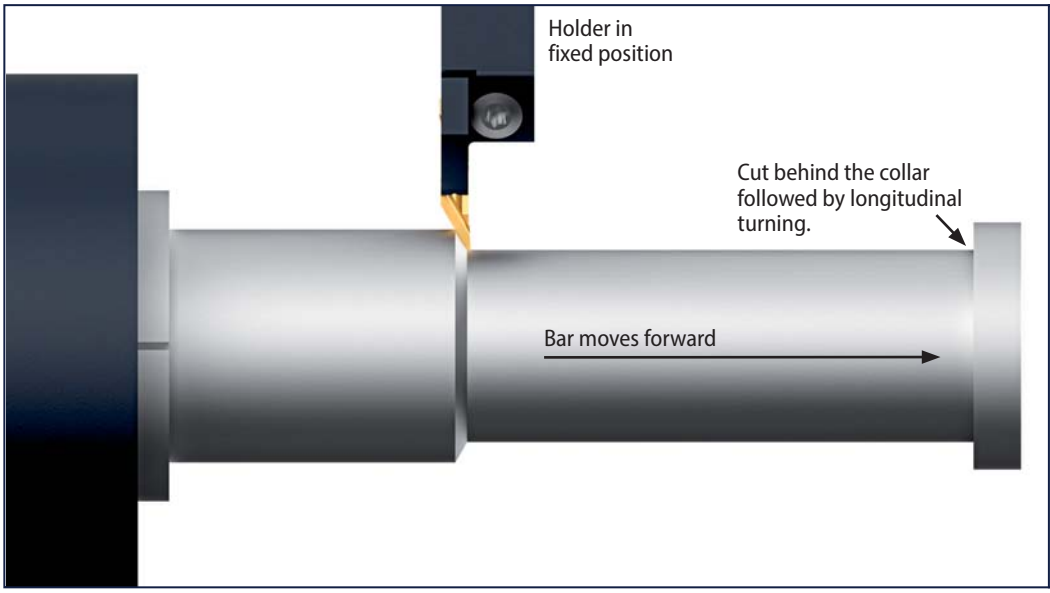


CW rund

CCW run

Enlarged view

PRODDES	IDNR	IDNR	IIC	IH	INSL	REL	RER	CW	PSIRL	PSIRR	KCHL	KCHR
WG260 Ref.	KM	PM NANOSPEED	pocket size		L	RL	RR	S	α° L	α° R	βL	βR
	N	P M N S										
OTX 4 DECO SL0660 L01	24291	24301	P40	L	20	0,10		0,60	15		60	
OTX 4 DECO SL1260 L01	24292	24304	P40	L	20	0,10		1,20	15		60	
OTX 4 DECO SL0660 R01	24289	24295	P40	R	20		0,10	0,60		15		60
OTX 4 DECO SL1260 R01	24290	24298	P40	R	20		0,10	1,20		15		60
OTX 4 DECO SL0660 L02	11118	11119	P40	L	20	0,20		0,60	15		60	
OTX 4 DECO SL1260 L02	11122	11123	P40	L	20	0,20		1,20	15		60	
OTX 4 DECO SL0660 R02	11120	11121	P40	R	20		0,20	0,60		15		60
OTX 4 DECO SL1260 R02	11124	11125	P40	R	20		0,20	1,20		15		60



Precision ground DECOinsert:

- cuts easily
- runs quietly
- makes clean faces
- achieves long tool life

Fitting tools

Tech. section p. 223 | Pocket size p. 224 | Intersection main cutting edge p. 228 | p. 132-133 | p. 135 | p. 136 | p. 187 | p. 201

KEMMER HARTMETALLWERKZEUGE

Threading inserts for ISO full profile

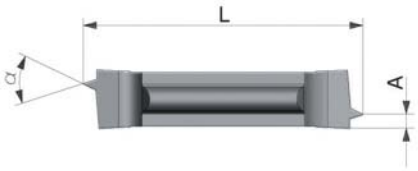
P92 P OTX ER
External thread

Enlarged view

PRODDES	IDNR	IIC	TPN	PDX	INSL			CRE	PNA
WG260 Ref.	PM NANOSPEED	pocket size		A	L	L+	L-	R	α°
	P M N S								
OTX 4 ER ISO 100	11128	P40	1,00	0,8	19,15	0,05	-0,05	0,15	60
OTX 4 ER ISO 125	11129	P40	1,25	0,8	19,15	0,05	-0,05	0,18	60
OTX 4 ER ISO 150	11130	P40	1,50	1,0	19,15	0,05	-0,05	0,20	60
OTX 4 ER ISO 175	11131	P40	1,75	1,1	19,15	0,05	-0,05	0,25	60
OTX 4 ER ISO 200	11132	P40	2,00	1,4	19,15	0,05	-0,05	0,29	60
OTX 4 ER ISO 250	11133	P40	2,50	1,5	19,15	0,05	-0,05	0,36	60
OTX 4 ER ISO 300	11134	P40	3,00	1,8	19,15	0,05	-0,05	0,43	60
OTX 4 ER 14 W	18235	P40	14 G/inch	1,3	19,15	0,05	-0,05	0,25	55
OTX 4 ER 11 W	18242	P40	11 G/inch	1,5	19,15	0,05	-0,05	0,32	55

Fitting tools see below

P92 P OTX IR
Internal thread



Enlarged view

PRODDES	IDNR	IIC	TPN	PDX	INSL			CRE	PNA
WG260 Ref.	PM NANOSPEED	pocket size		A	L	L+	L-	R	α°
	P M N S								
OTX 4 IR ISO 100	11135	P40	1,00	0,8	19,15	0,05	-0,05	0,06	60
OTX 4 IR ISO 125	11136	P40	1,25	0,8	19,15	0,05	-0,05	0,12	60
OTX 4 IR ISO 150	11137	P40	1,50	1,0	19,15	0,05	-0,05	0,14	60
OTX 4 IR ISO 175	11138	P40	1,75	1,1	19,15	0,05	-0,05	0,17	60
OTX 4 IR ISO 200	11139	P40	2,00	1,4	19,15	0,05	-0,05	0,20	60
OTX 4 IR ISO 250	11140	P40	2,50	1,5	19,15	0,05	-0,05	0,27	60
OTX 4 IR ISO 300	11141	P40	3,00	1,8	19,15	0,05	-0,05	0,32	60
OTX 4 IR 11 W	44519	P40	11 G/inch	1,5	19,15	0,05	-0,05	0,32	55
OTX 4 IR 14 W	31362	P40	14 G/inch	1,3	19,15	0,05	-0,05	0,22	55
OTX 4 IR 19 W	31365	P40	19 G/inch	0,8	19,15	0,05	-0,05	0,18	55

Fitting tools

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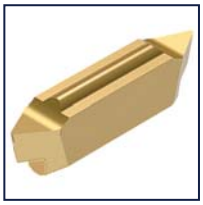
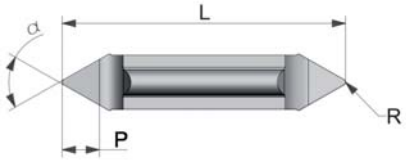
Part-profile threading inserts internal and external



P92 P OTX EIR

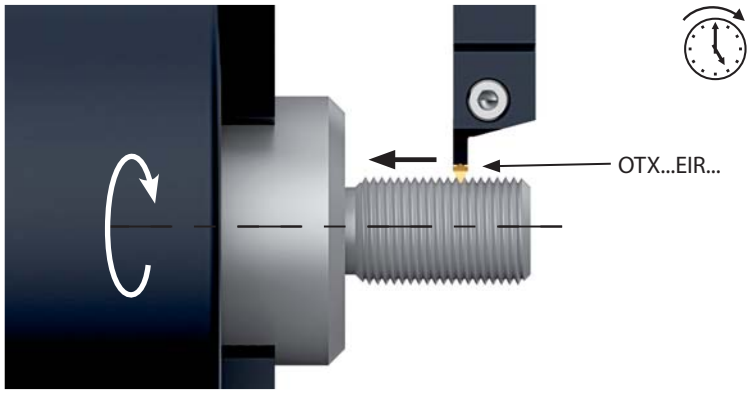


Enlarged view

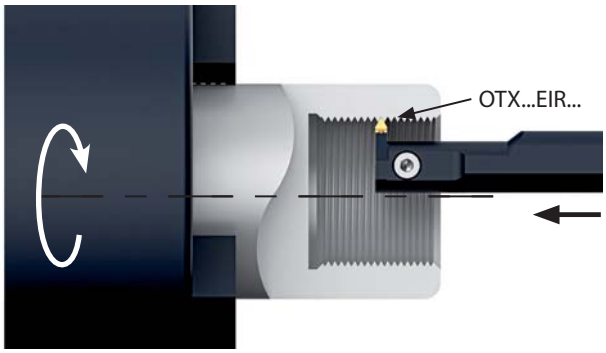
PRODDES	IDNR	IIC	TPN	TPX	PDPT	INSL			CRE	PNA
WG260 Ref.	PM NANOSPEED	pocket size	min	max	P	L	L+	L-	R	α°
	P M N S									
OTX 4 EIR 60 050	11127	P40	0,50	1,00	2,7	19,15	0,05	-0,05	0,10	60
OTX 4 EIR 60 125	24278	P40	1,25	1,75	2,7	19,15	0,05	-0,05	0,20	60
OTX 4 EIR 60 200	24281	P40	2,00	3,00	2,7	19,15	0,05	-0,05	0,30	60

PRODDES	IDNR	IIC	TPIN	TPIX	PDPT	INSL			CRE	PNA
WG260 Ref.	PM NANOSPEED	pocket size	min	max	P	L	L+	L-	R	α°
	P M N S									
OTX 4 EIR 55 28 W	11126	P40	20 G/inch	28 G/inch	2,7	19,15	0,05	-0,05	0,10	55
OTX 4 EIR 55 19 W	24272	P40	14 G/inch	19 G/inch	2,7	19,15	0,05	-0,05	0,20	55
OTX 4 EIR 55 12 W	24275	P40	10 G/inch	12 G/inch	2,7	19,15	0,05	-0,05	0,30	55

CCW run



CCW run



OTX...EIR... for internal and external threading.

Fitting tools

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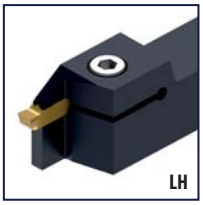
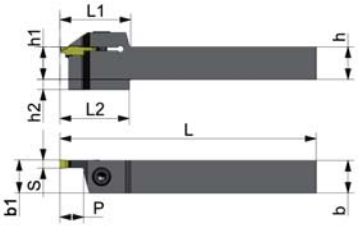
KEMMER HARTMETALLWERKZEUGE

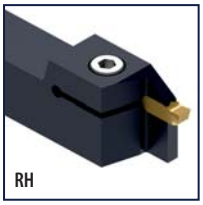
Precision holders



P92 P CXCBL



P92 P CXCBR



PRODDES	IDNR	MIID	Hand	H	HF		B		CDX	CW	OAL	LH	LTA	
WG380 Ref.	ID-Nr.	pocket size		h	h1	h2	b	b 1	P	S	L	L1	L2	
P92 P CXCBL 0808 K4	10168	P40	L	08	08	4	08	12	11	4	125	19,5	19,5	10
P92 P CXCBL 1616 K4	28169	P40	L	16	16	-	16	-	11	4	125	34,0	-	1
P92 P CXCBL 2020 K4	10178	P40	L	20	20	-	20	-	11	4	125	34,0	-	14
P92 P CXCBL 2525 M4	10182	P40	L	25	25	-	25	-	11	4	150	34,0	-	2
P92 P CXCBL 1616 K5+6	24257	P50	L	16	16	-	16	-	14	5	125	35,0	-	1
P92 P CXCBL 2020 K5+6	10180	P50	L	20	20	-	20	-	14	5	125	35,0	-	14
P92 P CXCBL 2525 M5+6	10184	P50	L	25	25	-	25	-	14	5	150	37,0	-	2
P92 P CXCBL 2020 M8	64418	P80	L	20	20	5	20	-	20	8	150	45,0	45,0	2
P92 P CXCBL 2525 M8	64420	P80	L	25	25	-	25	-	20	8	150	48,0	-	3
P92 P CXCBL 3232 P8	64422	P80	L	32	32	-	32	-	20	8	170	48,0	-	3
P92 P CXCBR 0808 K4	10167	P40	R	08	08	4	08	12	11	4	125	19,5	19,5	10
P92 P CXCBR 1616 K4	28168	P40	R	16	16	-	16	-	11	4	125	34,0	-	1
P92 P CXCBR 2020 K4	10177	P40	R	20	20	-	20	-	11	4	125	34,0	-	14
P92 P CXCBR 2525 M4	10181	P40	R	25	25	-	25	-	11	4	150	34,0	-	2
P92 P CXCBR 1616 K5+6	24256	P50	R	16	16	-	16	-	14	5	125	35,0	-	1
P92 P CXCBR 2020 K5+6	10179	P50	R	20	20	-	20	-	14	5	125	35,0	-	14
P92 P CXCBR 2525 M5+6	10183	P50	R	25	25	-	25	-	14	5	150	37,0	-	2
P92 P CXCBR 2020 M8	64417	P80	R	20	20	5	20	-	20	8	150	45,0	45,0	2
P92 P CXCBR 2525 M8	64419	P80	R	25	25	-	25	-	20	8	150	48,0	-	3
P92 P CXCBR 3232 P8	64421	P80	R	32	32	-	32	-	20	8	170	48,0	-	3

How to order:

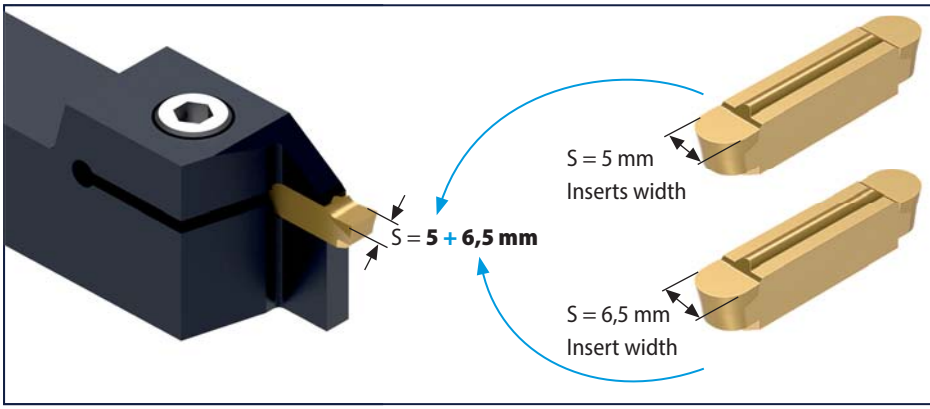
1 St. P92 P 90 CXCBRL 1620 K5+6 UNI

10 St. OTX5 R 250N R GF110 NANOSPEED

recommended

or: **1 St. ID-Nr. 24885**

or: **10 St. ID-Nr. 24269**



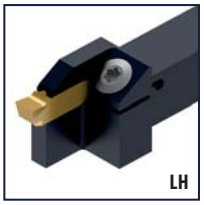
One pocket size for two cutting widths

The cutting widths **5 mm** and **6,5 mm** fit in one pocket size.

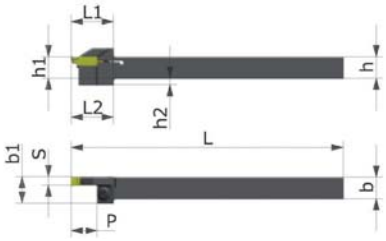
Fitting inserts

Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | p. 124 | p. 125 | p. 126 | p. 127-129 | p. 130-131

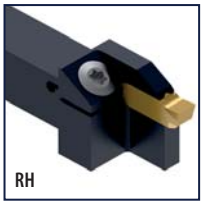
Precision tool holders for sliding head machine tools



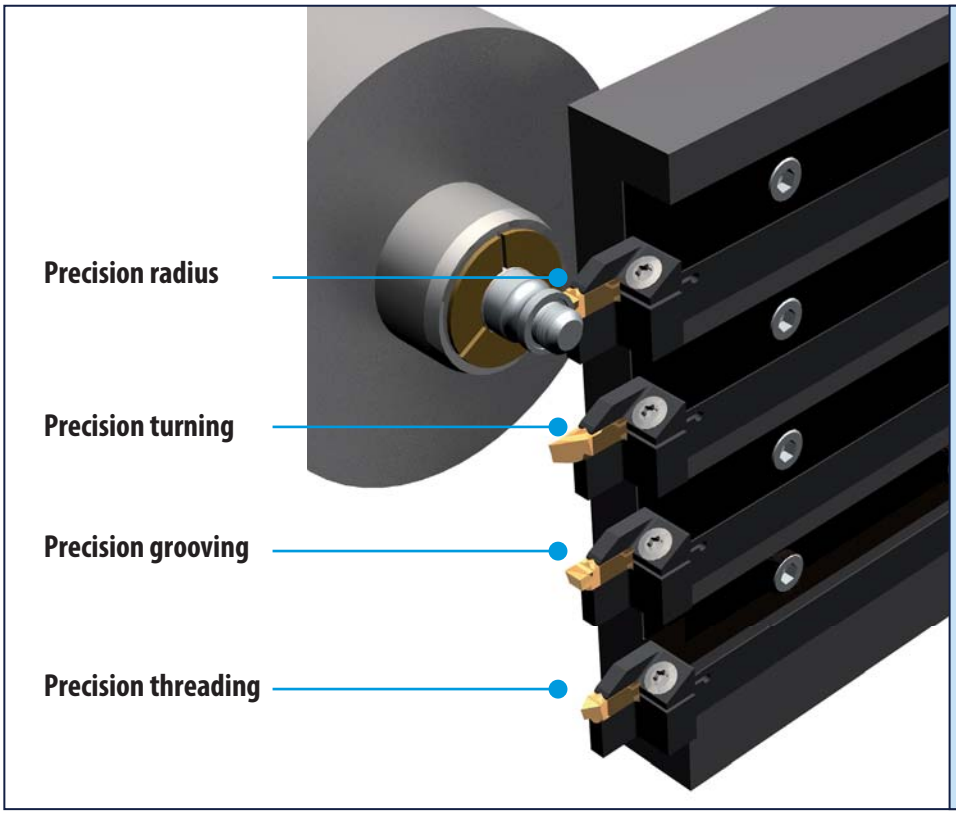
P92 P CXCBL..K4-11



P92 P CXCBR..K4-11



PRODDES	IDNR	MIID	Hand	H	HF		B		CDX	CW	OAL	LH	LTA	
WG380 Ref.	ID-Nr.	pocket size		h	h1	h2	b	b 1	P	S	L	L1	L2	
P92 P CXCBL 1010 K4 11	15617	P40	L	10	10	3	10	12	11	4	125	19,5	19,5	9
P92 P CXCBL 1212 K4 11	14374	P40	L	12	12	-	12	-	11	4	125	19,5	-	4
P92 P CXCBL 1616 K4 11	24259	P40	L	16	16	-	16	-	11	4	125	19,5	-	4
P92 P CXCBR 1010 K4 11	15618	P40	R	10	10	3	10	12	11	4	125	19,5	19,5	9
P92 P CXCBR 1212 K4 11	18705	P40	R	12	12	-	12	-	11	4	125	19,5	-	4
P92 P CXCBR 1616 K4 11	24258	P40	R	16	16	-	16	-	11	4	125	19,5	-	4



GripLock precision inserts on sliding head machines

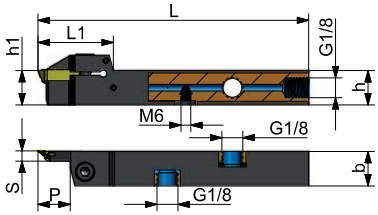
- Short extension
- Easy fixing
- Many applications
- Tailor made inserts available

Fitting inserts

Torque p. 220, 221, 245
Tech. section p. 223
Pocket size p. 224
p. 124
p. 125
p. 126
p. 127-129
p. 130-131

Holder with internal coolant for STV and STD inserts

P92 P CXCBL..HP

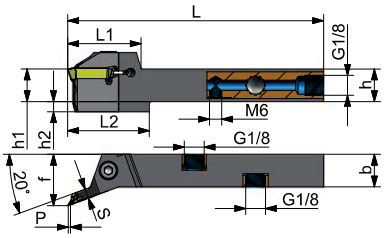


P92 P CXCBR..HP

PRODDES	IDNR	MIID	Hand		H	HF	B	CDX	CW	OAL	LH	
WG3805 Ref.	ID-Nr.	pocket size		Position IK	h	h1	b	P	S	L	L1	
P92 P CXCBR 1212 K5 HPL M8x1	62568	PS50	R	L	12	12	12	12	5	125	30,0	10
P92 P CXCBR 1212 K5 HPR M8x1	62580	PS50	R	R	12	12	12	12	5	125	30,0	10
P92 P CXCBR 1616 K5 HPL G1-8	62584	PS50	R	L	16	16	16	14	5	125	35,0	1
P92 P CXCBR 1616 K5 HPR G1-8	62585	PS50	R	R	16	16	16	14	5	125	35,0	1
P92 P CXCBR 2020 K5 HPL G1-8	62602	PS50	R	L	20	20	20	14	5	125	38,0	14
P92 P CXCBR 2020 K5 HPR G1-8	62603	PS50	R	R	20	20	20	14	5	125	38,0	14
P92 P CXCBR 2525 M5 HPL G1-8	62607	PS50	R	L	25	25	25	14	5	150	37,0	14
P92 P CXCBR 2525 M5 HPR G1-8	62608	PS50	R	R	25	25	25	14	5	150	37,0	14
P92 P CXCBL 1212 K5 HPL M8x1	62615	PS50	L	L	12	12	12	12	5	125	30,0	10
P92 P CXCBL 1212 K5 HPR M8x1	62616	PS50	L	R	12	12	12	12	5	125	30,0	10
P92 P CXCBL 1616 K5 HPL G1-8	62620	PS50	L	L	16	16	16	14	5	125	35,0	1
P92 P CXCBL 1616 K5 HPR G1-8	62621	PS50	L	R	16	16	16	14	5	125	35,0	1
P92 P CXCBL 2020 K5 HPL G1-8	62625	PS50	L	L	20	20	20	14	5	125	38,0	14
P92 P CXCBL 2020 K5 HPR G1-8	62626	PS50	L	R	20	20	20	14	5	125	38,0	14
P92 P CXCBL 2525 M5 HPL G1-8	62630	PS50	L	L	25	25	25	14	5	150	37,0	14
P92 P CXCBL 2525 M5 HPR G1-8	62631	PS50	L	R	25	25	25	14	5	150	37,0	14

Fitting inserts see below

P92 P 20..L..HP

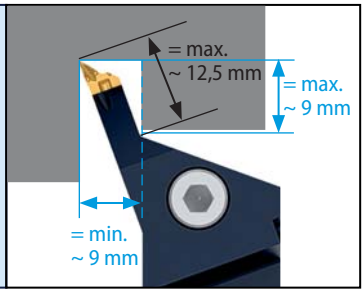


P92 P 20..R..HP

PRODDES	IDNR	MIID	Hand		H	HF		B	WF	CDX	CW	OAL	LH	LTA	
WG380 Ref.	ID-Nr.	pocket size		Position IK	h	h1	h2	b	f	P	S	L	L1	L2	
P92 P 20 CXCBL 1616 K5 HPL G1-8	63211	PS50	L	L	16	16	5	16	25	1,5	5	125	36	40	1
P92 P 20 CXCBL 2020 K5 HPL G1-8	63213	PS50	L	L	20	20	-	20	29	1,5	5	125	36	-	1
P92 P 20 CXCBL 2525 M5 HPL G1-8	63215	PS50	L	L	25	25	-	25	34	1,5	5	150	38	-	1
P92 P 20 CXCBR 1616 K5 HPR G1-8	63212	PS50	R	R	16	16	5	16	25	1,5	5	125	36	40	1
P92 P 20 CXCBR 2020 K5 HPR G1-8	63214	PS50	R	R	20	20	-	20	29	1,5	5	125	36	-	1
P92 P 20 CXCBR 2525 M5 HPR G1-8	63216	PS50	R	R	25	25	-	25	34	1,5	5	150	38	-	1

Machining difficult and slim profiles in angled areas

Depth/area
max. 12,5 mm



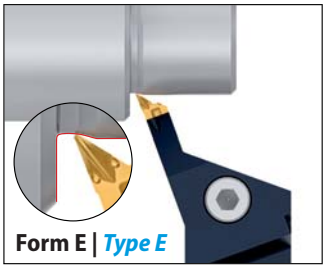
Description

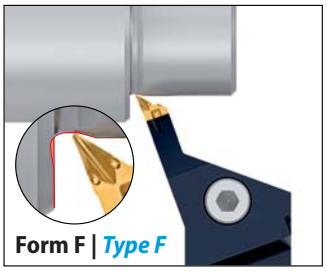
Toolholder with 20 ° pocket design for machining ISO clearance and undercut areas..

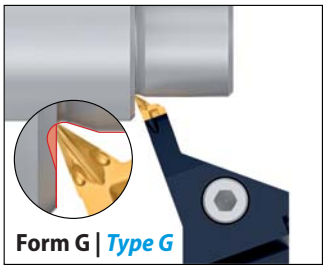
Fitting inserts

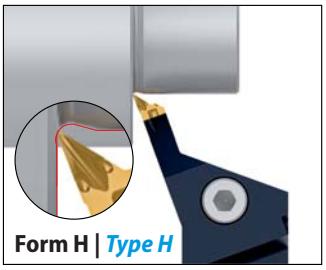
Torque p. 220, 221, 245
Tech. section p. 223
Pocket size p. 224
p.127

One basic toolholder P92 P 20 for several clearance operations





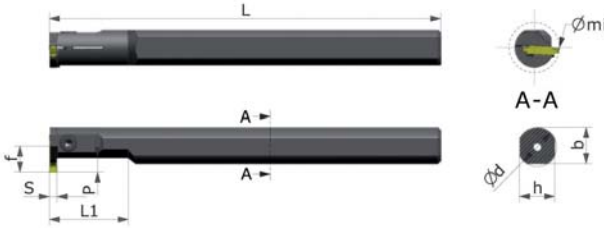




D min starting at ~ 20 mm

Precision boring bars with internal cooling

P92 P CGL



P92 P CGR

PRODDES	IDNR	MIID	Hand	DMIN	DCONMS	H	B	WF	CDX	CW	OAL	LH	
WG390 Ref.	ID-Nr.	pocket size		Ømin *	d	h	b	f	P	S	L	L1	
P92 P CGL 0020 R4	10156	P40	L	24	20	18	18,5	13	7	4,0	200	40	6
P92 P CGL 0025 R4	10160	P40	L	32	25	23	23,0	17	10	4,0	200	50	14
P92 P CGL 0032 S4	10164	P40	L	42	32	30	30,0	22	12	4,0	250	64	14
P92 P CGL 0020 R5+6	10158	P50	L	27	20	18	18,5	15	9	5,0	200	40	6
P92 P CGL 0025 R5+6	10162	P50	L	32	25	23	23,0	17	10	5,0	200	50	14
P92 P CGL 0032 S5+6	10166	P50	L	44	32	30	30,0	26	16	5,0	250	64	14
P92 P CGL 0040 T5+6	33468	P50	L	52	40	38	38,0	30	16	5,0	300	80	2
P92 P CGL 0032 S8	64424	P80	L	44	32	30	30,0	26	11,5	8,0	250	-	14
P92 P CGL 0040 T8	64426	P80	L	52	40	38	38,0	30	11,5	8,0	300	-	2
P92 P CGR 0020 R4	10155	P40	R	24	20	18	18,5	13	7	4,0	200	40	6
P92 P CGR 0025 R4	10159	P40	R	32	25	23	23,0	17	10	4,0	200	50	14
P92 P CGR 0032 S4	10163	P40	R	42	32	30	30,0	22	12	4,0	250	64	14
P92 P CGR 0020 R5+6	10157	P50	R	27	20	18	18,5	15	9	5,0	200	40	6
P92 P CGR 0025 R5+6	10161	P50	R	32	25	23	23,0	17	10	5,0	200	50	14
P92 P CGR 0032 S5+6	10165	P50	R	44	32	30	30,0	26	16	5,0	250	64	14
P92 P CGR 0040 T5+6	24445	P50	R	52	40	38	38,0	30	16	5,0	300	80	2
P92 P CGR 0032 S8	64423	P80	R	44	32	30	30,0	26	11,5	8,0	250	-	14
P92 P CGR 0040 T8	64425	P80	R	52	40	38	38,0	30	11,5	8,0	300	-	2

* **Attention:** When using insert types STV/STD the DMIN does increase by about 3 mm.
e.g. DMIN = 24 mm; DMIN (STV) = 27 mm

How to order:

		recommended	
1 St.	P92 P CGR 0020 R4	or:	**1 St. ID-Nr. 10155**
10 St.	OTX4 IR ISO 100 PM NANOSPEED	or:	**10 St. ID-Nr. 11135**

Recommendation!

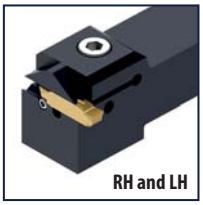
LH inserts and RH boring bars fit together.

RH inserts and LH boring bars fit together.

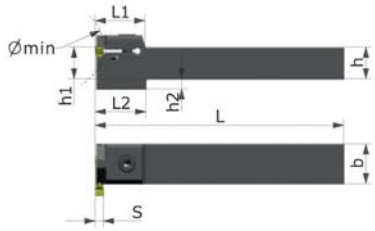
Fitting inserts

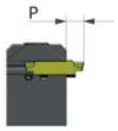
Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | p. 124 | p. 125 | p. 126 | p. 127-129 | p. 130-131

90 ° - Holders for many different turning applications



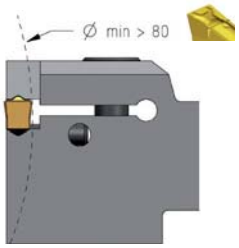
P92 P 90 UNI

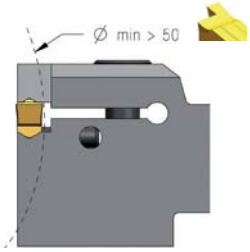




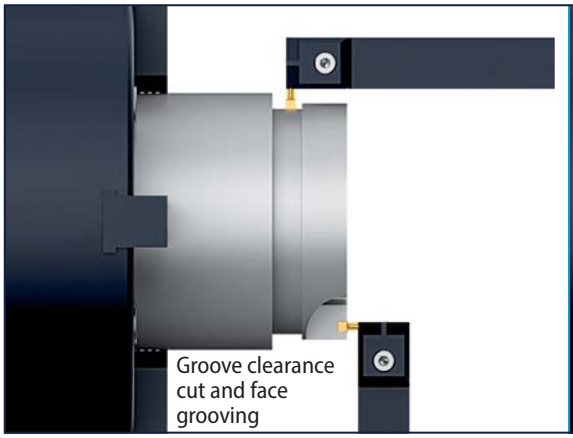
PRODDES	IDNR	MIID	Hand	H	HF		B		CDX	CW	OAL	LH	LTA	
WG380 Ref.	ID-Nr.	pocket size	( )	h	h1	h2	b	P1	P	S	L	L1	L2	
P92 P 90 CXCBRL 1620 K4 UNI	24694	P40	R + L	16	16	5	20	7,5	5,0	4,0	125	25	23	1+13
P92 P 90 CXCBRL 2020 K4 UNI	10185	P40	R + L	20	20	-	20	7,5	5,0	4,0	125	25	-	1+13
P92 P 90 CXCBRL 2525 M4 UNI	10187	P40	R + L	25	25	-	25	7,5	5,0	4,0	150	25	-	1+13
P92 P 90 CXCBRL 1620 K5+6 UNI	24885	P50	R + L	16	16	5	20	9,5	6,0	5,0	125	25	23	1+13
P92 P 90 CXCBRL 2020 K5+6 UNI	10186	P50	R + L	20	20	-	20	9,5	6,0	5,0	125	25	-	1+13
P92 P 90 CXCBRL 2525 M5+6 UNI	10188	P50	R + L	25	25	-	25	9,5	6,0	5,0	150	34	-	1+13

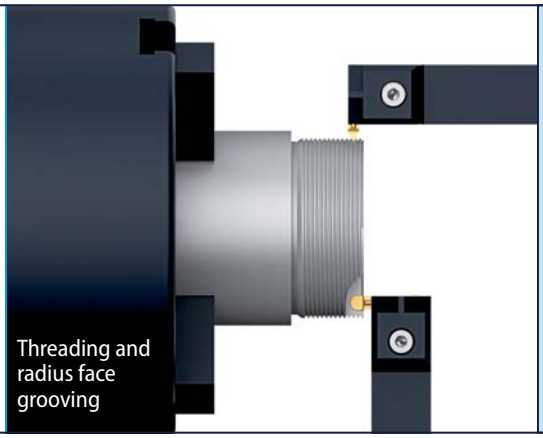
Smallest face grooving diameter for P92 or P92 P inserts.
(Special inserts for smaller diameters by request)





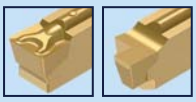
One pocket size for two cutting widths 5 mm or 6,5 mm.

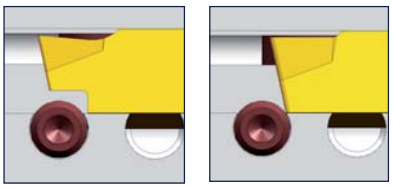




2 tapped holes for a positioning pin permit the use of P92 and P92-P inserts for CW and CCW run!

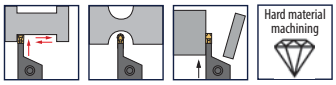
P92 P92 P



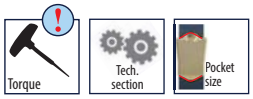


Tapped holes for one pin

Fitting inserts P92 (pay attention to dimension P1)

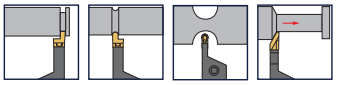


p. 56 - 65 p. 66 p. 68-74 p. 77-80



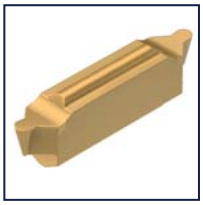
p. 220, 221, 245 p. 223 p. 224

Fitting inserts P92 P (pay attention to dimension P)

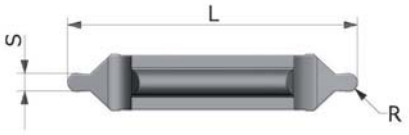


p. 124 p. 125 p. 126 p. 127-129

Radius inserts normed for DIN 509 grooves

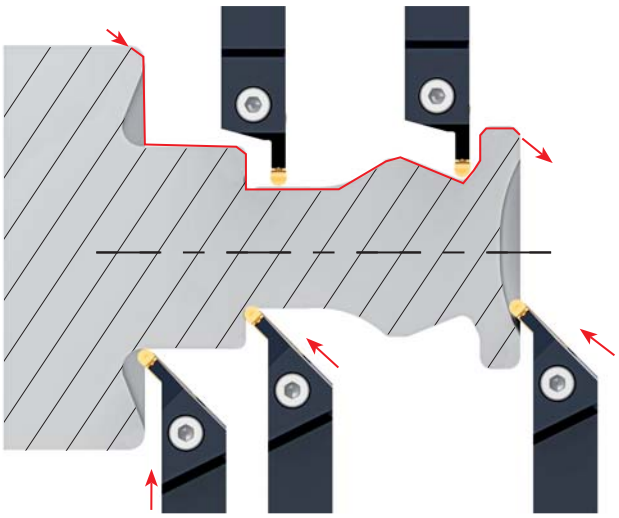


OTX R ... N



Enlarged view

PRODDES	IDNR	IDNR	IIC	IH	INSL			PDPT	RER/REL	CW	CWUD	CWLD	DAXN	DAXX
WG260 Ref.	PM NANOSPEED	KM NANOSPEED	pocket size		L	L+	L-	P	R	S	S+	S-	Ø min	Ø min
	P M N S	P M N S												
OTX 4 R050N	27160	31383	P40	N	19,15	0,05	-0,05	1,5	0,50	0,93	0,08	-0,08	10	25
OTX 4 R075N	27161	31384	P40	N	19,15	0,05	-0,05	2,0	0,75	1,43	0,08	-0,08	10	25
OTX 4 R100N	27162	31385	P40	N	19,15	0,05	-0,05	2,0	1,00	1,93	0,08	-0,08	10	25

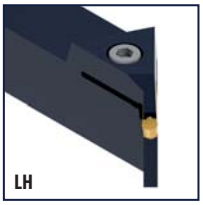


Radius inserts for different applications

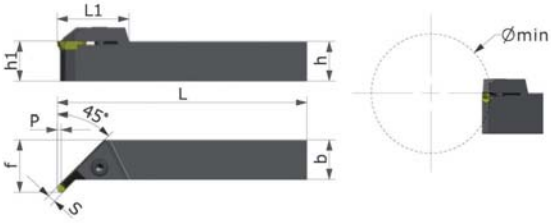
Fitting tools

p. 223 p. 224 p. 228 p. 132-133 p. 135 p. 136 p.138 p. 138 p. 187

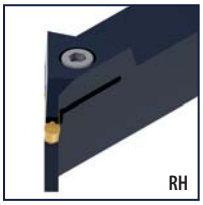
Holders for relieve grooves and copy turning



P92 P 45 CXCBL



P92 P 45 CXCBR

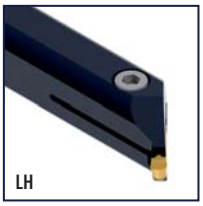


PRODDES	IDNR	MIID	Hand	DAXN		H	B	WF	CDX	CW	OAL	LH	
WG380 Ref.	ID-Nr.	pocket size		Ømin	h	h1	b	f	P	S	L	L1	
P92 P 45 CXCBL 1616 K4	19747	P40	L	>25	16	16	16	22	1,5	4,0	125	35	1
P92 P 45 CXCBL 2020 K4	19664	P40	L	>25	20	20	20	26	1,5	4,0	125	35	5
P92 P 45 CXCBL 2525 M4	19755	P40	L	>25	25	25	25	31	1,5	4,0	150	39	5
P92 P 45 CXCBL 1620 K5+6	19749	P50	L	>40	16	16	20	26	2,0	5,0	125	35	1
P92 P 45 CXCBL 2020 K5+6	19751	P50	L	>40	20	20	20	26	2,0	5,0	125	37	5
P92 P 45 CXCBL 2525 M5+6	19752	P50	L	>40	25	25	25	31	2,0	5,0	150	39	5
P92 P 45 CXCBR 1616 K4	19746	P40	R	>25	16	16	16	22	1,5	4,0	125	35	1
P92 P 45 CXCBR 2020 K4	19663	P40	R	>25	20	20	20	26	1,5	4,0	125	35	5
P92 P 45 CXCBR 2525 M4	19754	P40	R	>25	25	25	25	31	1,5	4,0	150	39	5
P92 P 45 CXCBR 1620 K5+6	19748	P50	R	>40	16	16	20	26	2,0	5,0	125	35	1
P92 P 45 CXCBR 2020 K5+6	19750	P50	R	>40	20	20	20	26	2,0	5,0	125	37	5
P92 P 45 CXCBR 2525 M5+6	19753	P50	R	>40	25	25	25	31	2,0	5,0	150	39	5

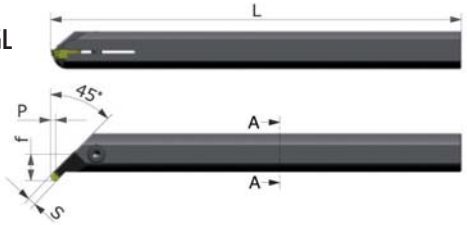
Fitting inserts see below

Recommendation!
LH inserts and RH boring bars fit together.
RH inserts and LH boring bars fit together.

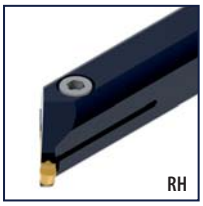
Boring bars with internal cooling for relieve grooves



P92 P 45 CGL



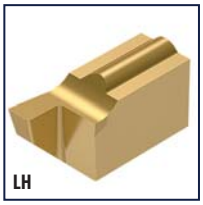
P92 P 45 CGR



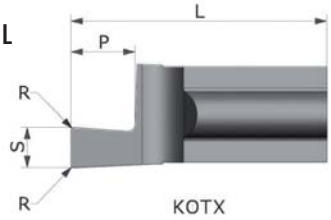
PRODDES	IDNR	MIID	Hand	DMIN	DCONMS	H	B	WF	CDX	CW	OAL	
WG390 Ref.	ID-Nr.	pocket size		Ø min	d	h	b	f	P	S	L	
P92 P 45 CGL 0020 R4	19660	P40	L	25	20	18	18,5	13	1,5	4	200	6
P92 P 45 CGL 0025 R4	19662	P40	L	28	25	23	23	15,5	1,5	4	200	1
P92 P 45 CGR 0020 R4	19659	P40	R	25	20	18	18,5	13	1,5	4	200	6
P92 P 45 CGR 0025 R4	19661	P40	R	28	25	23	23	15,5	1,5	4	200	1

Fitting inserts
Torque p. 220, 221, 245
Tech. section p. 223
Pocket size p. 224
p. 126, 137

Precision grooving inserts according to DIN 472



P92 P KOTX L




KOTX...L

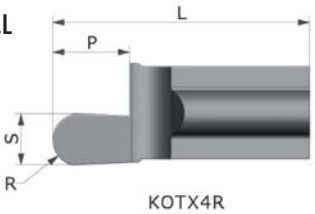

KOTX...R

P92 P KOTX R

PRODDES	IDNR	IIC	IH	INSL			PDPT	RER/REL		CW	CWUD	CWLD
WG260 Ref.	PM NANOSPEED	pocket size		L	L+	L-	P	R		S	S+	S-
	P M N S											
KOTX4 090L	10918	PK40	L	9,15	0,05	-0,05	1,5	0,1	0,90	0,97	0,00	-0,05
KOTX4 110L	10922	PK40	L	9,15	0,05	-0,05	1,5	0,1	1,10	1,24	0,00	-0,05
KOTX4 130L	10926	PK40	L	9,15	0,05	-0,05	1,5	0,1	1,30	1,44	0,00	-0,05
KOTX4 160L	10930	PK40	L	9,15	0,05	-0,05	2,0	0,1	1,60	1,74	0,00	-0,05
KOTX4 185L	10934	PK40	L	9,15	0,05	-0,05	2,0	0,1	1,85	1,99	0,00	-0,05
KOTX4 215L	10938	PK40	L	9,15	0,05	-0,05	2,5	0,1	2,15	2,29	0,00	-0,05
KOTX4 265L	10942	PK40	L	9,15	0,05	-0,05	2,5	0,1	2,65	2,79	0,00	-0,05
KOTX4 315L	10950	PK40	L	9,15	0,05	-0,05	2,5	0,1	3,15	3,29	0,00	-0,05
KOTX4 090R	10917	PK40	R	9,15	0,05	-0,05	1,5	0,1	0,90	0,97	0,00	-0,05
KOTX4 110R	10921	PK40	R	9,15	0,05	-0,05	1,5	0,1	1,10	1,24	0,00	-0,05
KOTX4 130R	10925	PK40	R	9,15	0,05	-0,05	1,5	0,1	1,30	1,44	0,00	-0,05
KOTX4 160R	10929	PK40	R	9,15	0,05	-0,05	2,0	0,1	1,60	1,74	0,00	-0,05
KOTX4 185R	10933	PK40	R	9,15	0,05	-0,05	2,0	0,1	1,85	1,99	0,00	-0,05
KOTX4 215R	10937	PK40	R	9,15	0,05	-0,05	2,5	0,1	2,15	2,29	0,00	-0,05
KOTX4 265R	10941	PK40	R	9,15	0,05	-0,05	2,5	0,1	2,65	2,79	0,00	-0,05
KOTX4 315R	10949	PK40	R	9,15	0,05	-0,05	2,5	0,1	3,15	3,29	0,00	-0,05

Fitting tools see below

P92 P KOTX R..L




KOTX4R..L


KOTX4R..R

P92 P KOTX R..R

PRODDES	IDNR	IIC	IH	INSL			PDPT	RER/REL	CW	CWUD	CWLD
WG260 Ref.	PM NANOSPEED	pocket size		L	L+	L-	P	R	S	S+	S-
	P M N S										
KOTX4 R 100L	10961	PK40	L	9,15	0,05	-0,05	2,5	1,00	2,00	0,05	0,00
KOTX4 R 150L	10965	PK40	L	9,15	0,05	-0,05	2,5	1,50	3,00	0,05	0,00
KOTX4 R 100R	10960	PK40	R	9,15	0,05	-0,05	2,5	1,00	2,00	0,05	0,00
KOTX4 R 150R	10964	PK40	R	9,15	0,05	-0,05	2,5	1,50	3,00	0,05	0,00

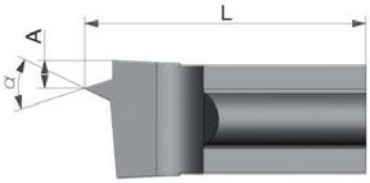
Fitting boring bars

Tech. section p. 223 | Pocket size p. 224 | Intersection main cutting edge p. 228 | p. 140

KEMMER HARTMETALLWERKZEUGE

Full profile inserts for internal and external threading

P92 P KOTX IR



Enlarged view

PRODDES	IDNR	IIC	TPN	PDX	INSL			CRE	PNA
WG260 Ref.	PM NANOSPEED	pocket size		A	L	L+	L-	R	α°
	P M N S								
KOTX4 IR ISO 100	10951	PK40	1,00	0,8	9,20	0,10	-0,10	0,06	60
KOTX4 IR ISO 125	10952	PK40	1,25	0,8	9,20	0,10	-0,10	0,12	60
KOTX4 IR ISO 150	10953	PK40	1,50	1,0	9,20	0,10	-0,10	0,14	60
KOTX4 IR ISO 175	10954	PK40	1,75	1,1	9,20	0,10	-0,10	0,17	60
KOTX4 IR ISO 200	10955	PK40	2,00	1,4	9,20	0,10	-0,10	0,20	60
KOTX4 IR ISO 250	10956	PK40	2,50	1,5	9,20	0,10	-0,10	0,27	60
KOTX4 IR ISO 300	10957	PK40	3,00	1,8	9,20	0,10	-0,10	0,32	60

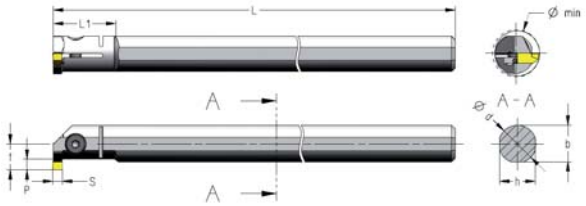
Internal threading with KOTX IR ISO ...

Fitting boring bars

Tech. section p. 223 | Pocket size p. 224 | Intersection main cutting edge p. 228 | p. 140

Boring bars with internal cooling for grooving and threading

P92 P CGL 4C



P92 P CGR 4C

PRODDES	IDNR	MIID	Hand	DMIN	DCONMS	H	B	WF	CDX	CW	OAL	LH	
WG390 Ref.	ID-Nr.	pocket size		Ømin	d	h	b	f	p	S	L	L1	
P92 P CGL 0012 M4C	10152	PK40	L	15,5	12	11	-	8,7	2,5	max 1,85	150	22	22
P92 P CGL 0016 P4C	10154	PK40	L	20	16	15	15,5	11	2,5	max 3,15	170	26	19
P92 P CGR 0012 M4C	10151	PK40	R	15,5	12	11	-	8,7	2,5	max 1,85	150	22	22
P92 P CGR 0016 P4C	10153	PK40	R	20	16	15	15,5	11	2,5	max 3,15	170	26	19

Recommendation!
LH inserts and RH boring bars fit together.
RH inserts and LH boring bars fit together.

Fitting inserts

Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | p. 139-140

P92 S | Grooving and parting off

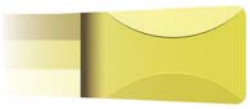
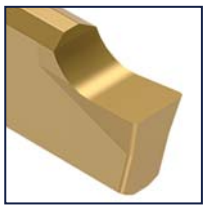
twin-cut series (cutting width 2 mm)

- Cutting and turning
- Grooving and parting off
- Threading

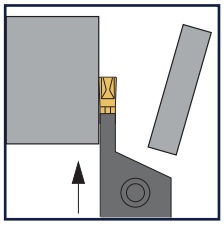
P92 S | Grooving and parting off

Cutting and turning, grooving and parting off and threading with twin-cut series (cutting width 2 mm)

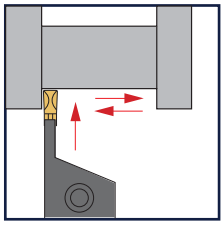
Chip breaker types *twin cut*

Grooving turning		HTNST page 146	 HEUBERG-T
Parting off / grooving		STN… page 145	 SUPERNOVA
		HTN… page 145	 HEUBERG
		BTN… page 144	 BT-CHIP BREAKER
		ITN… page 144	 IT-CHIP BREAKER

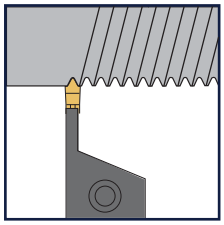
System applications and symbols



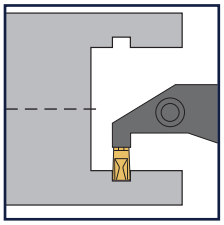
Parting off *



Grooving & Turning *



Threading *



Internal grooving *

Hard material machining

Hard material machiching *

Special solutions
e.g. lead angle, special solutions on request

* pocket size S20 (cutting width S = 2 mm)

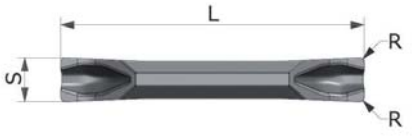
Coatings in this system

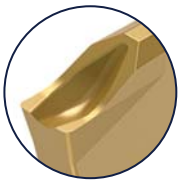
Coating	Type	Structure	Layer thickness	Main application	Alternative application
NANOSPEED	Supernitrid PVD	TiAlN	3 µm	P M	N S
TILOX	Supernitrid PVD	TiAlN	3 µm	P M	K S
HARD SX3	HiPIMS PVD	TiAlSiN	3 µm	H	S
Uncoated	-	-	-	N	**

* additional coating options or customer-specific applications
see technical section and tailor made solutions section (on request)

Inserts with 2 edges for parting off and grooving

BTNS





Enlarged view

PRODDES	IDNR	IDNR	IDNR	IIC	IH	INSL	RER/REL	CW	CWUD	CWLD
WG300 Ref.	KM	PM NANOSPEED	KM TILOX	pocket size		L	R	S	S+	S-
	N	P M N S	P M K S							
BTNS 2	30501	30504	30502	S20	N	14,00	0,20	2,00	0,10	0,10

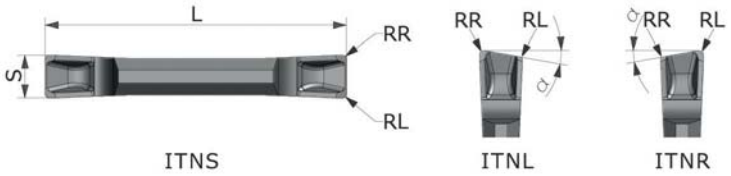
BTN Parting off chip breaker

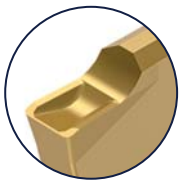
Grooved parting off edge with reinforced flanks. The deep and spacious **chip chamber** gives excellent chip control. Efficient on almost all materials.

Fitting tools

p. 223 p. 224 p. 228 p. 152 p. 154 p. 201

ITN S/R/L





Enlarged view

PRODDES	IDNR	IDNR	IDNR	IIC	IH	INSL	RER	REL	CW	CWUD	CWLD	PSIRR	PSIRL
WG300 Ref.	KM	PM NANOSPEED	KM TILOX	pocket size		L	RR	RL	S	S+	S-	α° R	α° L
	N	P M N S	P M K S										
ITNS 2	10534	10536	15172	S20	N	14,00	0,20	0,20	2,00	0,10	-0,10		
ITNL 2 8D	10529	10533	30508	S20	L	14,00	0,20	0,00	2,00	0,10	-0,10		8
ITNR 2 8D	10528	10532	13801	S20	R	14,00	0,00	0,20	2,00	0,10	-0,10	8	

twin-cut | Type IT

Horizontal, chamfered cutting edge with reinforced flanks and large chip chamber.

Especially recommended for:

- high alloy steels
- stainless steels
- interrupted cuts

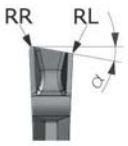
Fitting tools

p. 223 p. 224 p. 228 p. 152 p. 154 p. 201

Inserts with 2 edges for parting off and grooving

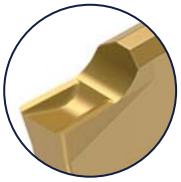
STN S/R/L

STNS



STNL

STNR



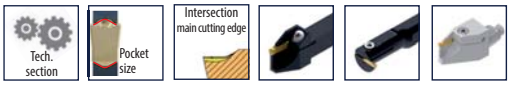
Enlarged view

PRODDES	IDNR	IDNR	IDNR	IDNR	IIC	IH	INSL	RER	REL	CW	CWUD	CWLD	PSIRR	PSIRL
WG300 Ref.	KM	PM NANOSPEED	PM TILOX	KM TILOX	pocket size		L	RR	RL	S	S+	S-	α° R	α° L
	N	P M N S	P M K S	P M K S										
STNS 2	19587	11441	11440	26742	S20	N	14,00	0,20	0,20	2,00	0,10	-0,10		
STNL 2 10D	11434	11438	11436	-	S20	L	14,00	0,20	0,00	2,00	0,10	-0,10		10
STNR 2 10D	11433	11437	11435	-	S20	R	14,00	0,00	0,20	2,00	0,10	-0,10	10	

twin-cut | Type SUPERNOVA

The arc-shaped, slightly honed cutting edge with its large chip-chamber leads to good chip control. For universal use.

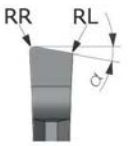
Fitting tools



p. 223 p. 224 p. 228 p. 152 p. 154 p. 201

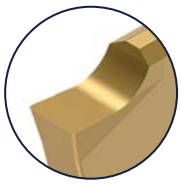
HTN S/R/L

HTNS



HTNL

HTNR



Enlarged view

PRODDES	IDNR	IDNR	IDNR	IDNR	IIC	IH	INSL	RER	REL	CW	CWUD	CWLD	PSIRR	PSIRL
WG300 Ref.	KM	PM NANOSPEED	PM TILOX	KM TILOX	pocket size		L	RR	RL	S	S+	S-	α° R	α° L
	N	P M N S	P M K S	P M K S										
HTNS 2	10579	10581	10580	23647	S20	N	14,00	0,2	0,2	2,00	0,10	-0,10		
HTNSF 2	23648	23693	23690	-	S20	N	13,40	0,0	0,0	2,00	0,10	-0,10		
HTNL 2 6D	23660	23702	23698	-	S20	L	14,00	0,2	0,0	2,00	0,10	-0,10		6
HTNLF 2 6D	23659	23703	23699	-	S20	L	13,40	0,0	0,0	2,00	0,10	-0,10		6
HTNL 2 15D	10574	10578	10576	-	S20	L	14,00	0,2	0,0	2,00	0,10	-0,10		15
HTNLF 2 15D	23656	23695	23692	-	S20	L	13,40	0,0	0,0	2,00	0,10	-0,10		15
HTNR 2 6D	23654	23700	23696	-	S20	R	14,00	0,0	0,2	2,00	0,10	-0,10	6	
HTNRF 2 6D	23652	23701	23697	-	S20	R	13,40	0,0	0,0	2,00	0,10	-0,10	6	
HTNR 2 15D	10573	10577	10575	-	S20	R	14,00	0,0	0,2	2,00	0,10	-0,10	15	
HTNRF 2 15D	23651	23694	23691	-	S20	R	13,40	0,0	0,0	2,00	0,10	-0,10	15	

twin-cut | Type „Heuberg“

Horizontal ground cutting edge with positive top rake angle.
Recommended for automatic lathe cutting jobs on free cutting materials.

Fitting tools

p. 223 p. 224 p. 228 p. 152 p. 154 p. 201

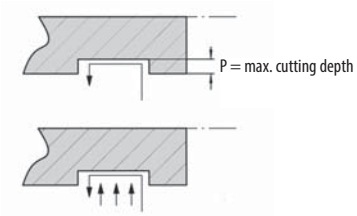
Remark:

Inserts marked with „**F**“ have ground cutting edges without corner radius, e.g. HTNS**F**

KEMMER HARTMETALLWERKZEUGE

Inserts with 2 edges for grooving and turning

HTNST



Enlarged view

PRODDES	IDNR	IDNR	IDNR	IIC	IH	INSL	PDPT	RER/REL	CW	CWUD	CWLD
WG300 Ref.	KM	PM NANOSPEED	KM TILOX	pocket size		L	P	R	S	S+	S-
	N	P M N S	P M K S								
HTNST 2	24058	24061	34314	S20	N	14,00	0,50	0,2	2,00	0,10	-0,10

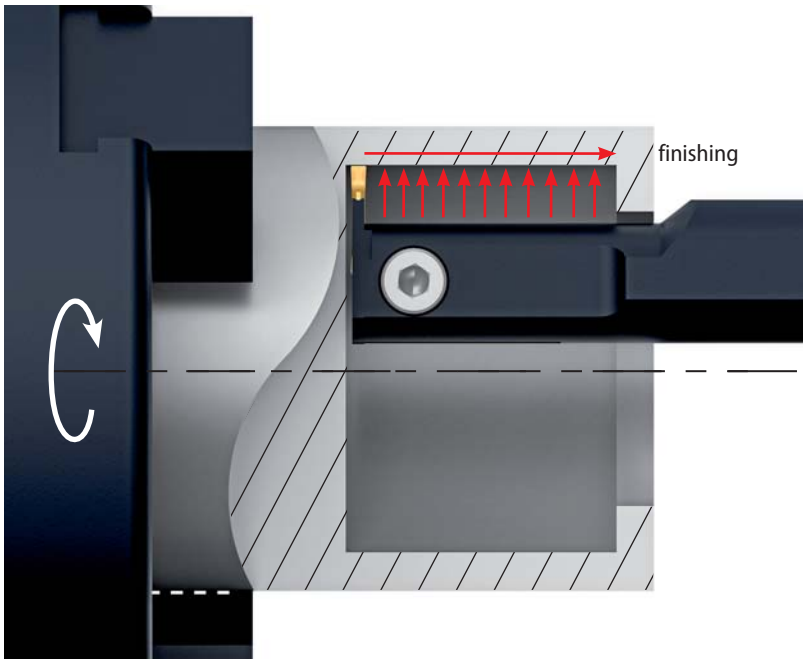
twin-cut | Type HEUBERG-T Cutting and turning insert

Horizontal major cutting edge with sharply ground minor turning edges. Excellent chip control.

6

HTNST 2 PM NANOSPEED in action.

Grooving a large chamber with a final finishing cut.

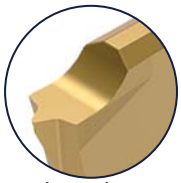


Fitting tools

Tech. section p. 223 | Pocket size p. 224 | Intersection main cutting edge p. 228 | p. 152 | p. 154 | p. 201

External threading inserts for Whitworth and ISO Full profile

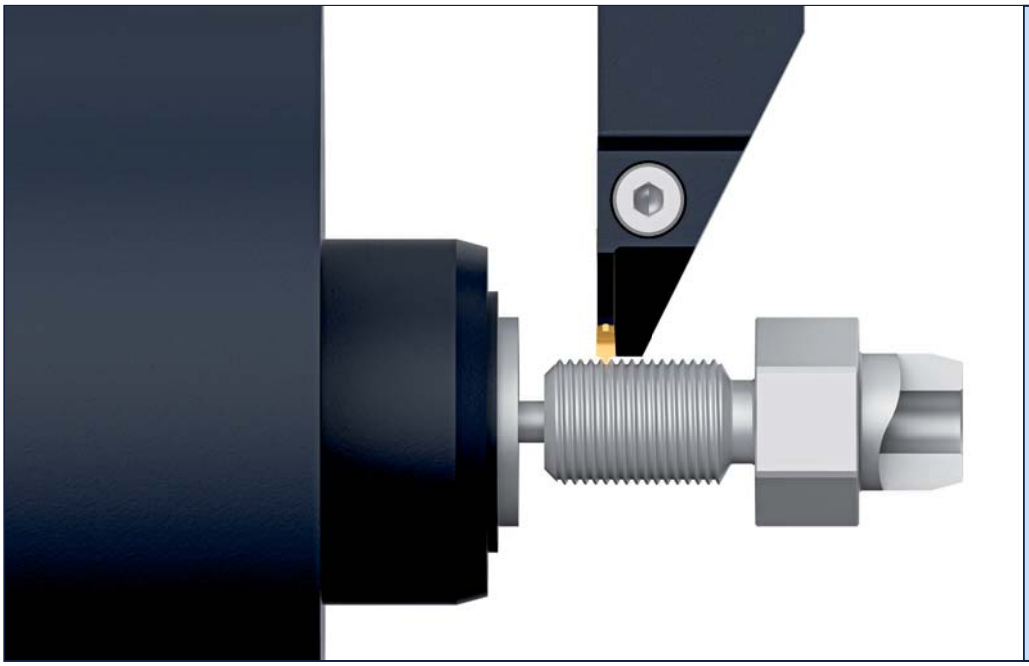
HTNG 2 ER



Enlarged view

PRODDES	IDNR	IDNR	IIC	TPN	INSL	CRE	CW	PNA
WG260 Ref.	KM	PM NANOSPEED	pocket size		L	R	S	α°
	N	P M N S						
HTNG 2 ER ISO 035	28436	38475	S20	0,35	13,75	0,05	2,00	60°
HTNG 2 ER ISO 050	10998	10999	S20	0,50	13,75	0,07	2,00	60°
HTNG 2 ER ISO 070	25925	31391	S20	0,70	13,75	0,13	2,00	60°
HTNG 2 ER ISO 075	11000	11001	S20	0,75	13,75	0,13	2,00	60°
HTNG 2 ER ISO 080	25927	30791	S20	0,80	13,75	0,15	2,00	60°
HTNG 2 ER ISO 100	11002	11003	S20	1,00	13,75	0,15	2,00	60°
HTNG 2 ER ISO 125	11004	11005	S20	1,25	13,75	0,18	2,00	60°
HTNG 2 ER ISO 150	11006	11007	S20	1,50	13,75	0,20	2,00	60°
HTNG 2 ER 14W	38474	29937	S20	14 G/inch	13,75	0,22	2,00	55°
HTNG 2 ER 19W	10994	10995	S20	19 G/inch	13,75	0,18	2,00	55°
HTNG 2 ER 28W	10996	10997	S20	28 G/inch	13,75	0,12	2,00	55°

Remark:
These inserts can be used for RH and LH threading.



Threading with HTNG 2ER...ISO

CW run

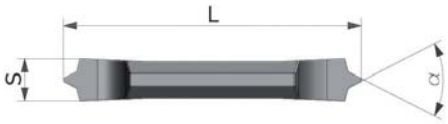
Fitting tools

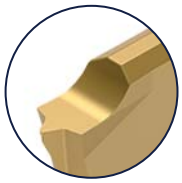
p. 223 p. 224 p. 228 p. 152, 154 p. 201

KEMMER HARTMETALLWERKZEUGE

Internal threading inserts for Whitworth and ISO Full profile

HTNG 2 IR

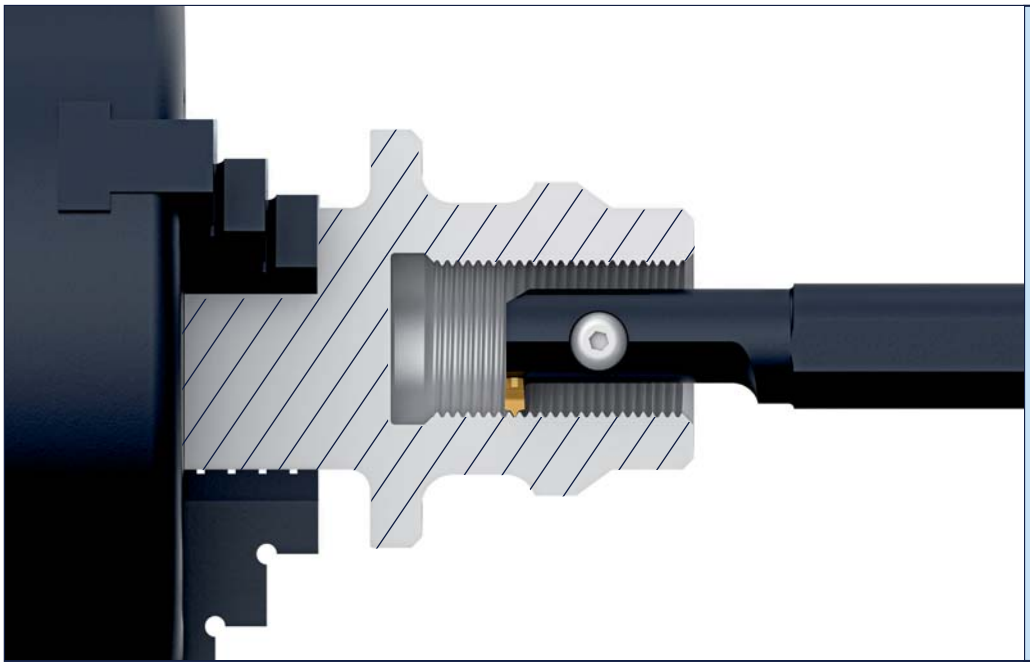




Enlarged view

PRODDES	IDNR		IIC	TPN	INSL	CRE	CF	CW	PNA
WG260 Ref.	KM	PM NANOSPEED	pocket size		L	R	Spitzenfase	S	α°
	N	P M N S							
HTNG 2 IR ISO 100	38498	38501	S20	1,00	13,75	0,05		2,00	60°
HTNG 2 IR ISO 150	38499	38502	S20	1,50	13,75		0,14	2,00	60°
HTNG 2 IR 14W	38500	38503	S20	14 G/inch	13,75	0,22		2,00	55°

Remark:
These inserts can be used for RH and LH threading.



Internal threading with HTNG 2IR...ISO

CCW run

Fitting tools

p. 223 p. 224 p. 228 p. 154

Hard material machining

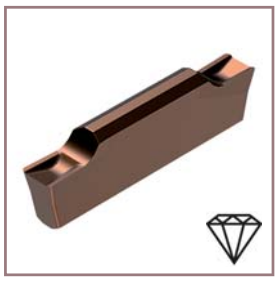
Inserts, coating and tool holders for parting off, grooving and turning

Inserts with efficient chip breakers and special coating HARD SX3 for:

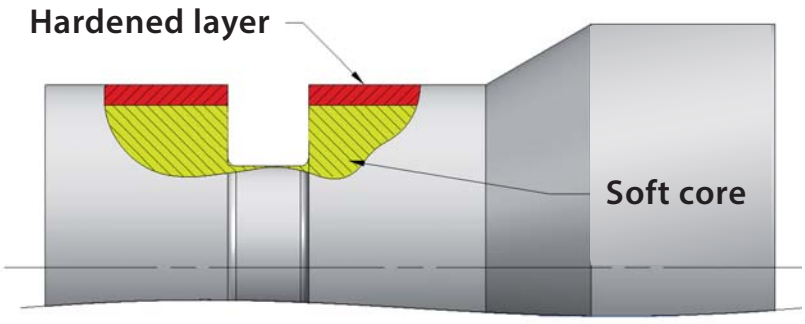
- hardened materials
- surface hardened materials
- exotic and tempered materials

Machining materials with a Rockwell hardness of 54 and more. Inserts and holders are stressed heavily on such operations.
Therefore starting-up speeds, feeds and depths should be low graded.

HARD SX3



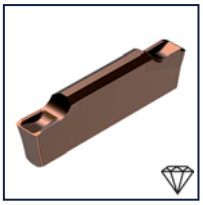
- Polished edges and surfaces
- Low price alternative compared with CBN tipped inserts
- To be used on unhardened steels as well
- Multi edge inserts available
- Constant performance when cutting from hard layer into soft core

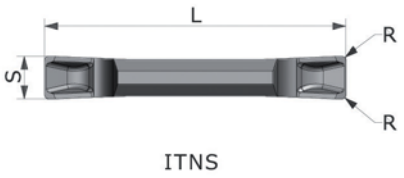


Remark: Other cutting widths and special profiles with HARD SX3 on request.

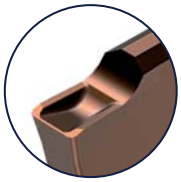
Inserts for grooving and parting off | Hard material machining

ITNS





ITNS


Enlarged view

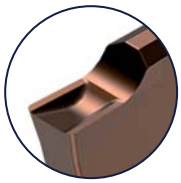
PRODDES	IDNR	IIC	IH	INSL	RER/REL	CW	CWUD	CWLD
Ref.	KM HARDSX3	pocket size		L	R	S	S+	S+
	H S							
ITNS 2	65288	S20	N	14,00	0,2	2,00	0,10	-0,10

Remark:
Inserts for internal and external machining

Fitting tools, see below

STNS

STNS

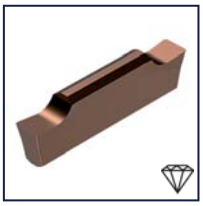

Enlarged view

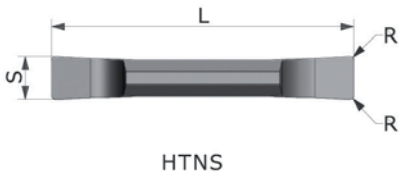
PRODDES	IDNR	IIC	IH	INSL	RER/REL	CW	CWUD	CWLD
Ref.	KM HARDSX3	pocket size		L	R	S	S+	S+
	H S							
STNS 2	65301	S20	N	14,00	0,2	2,00	0,10	-0,10

Remark:
Inserts for internal and external machining

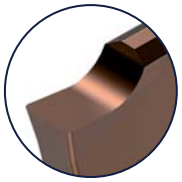
Fitting tools, see below

HTNS





HTNS


Enlarged view

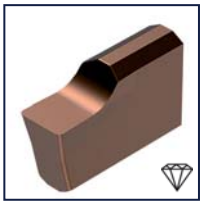
PRODDES	IDNR	IIC	IH	INSL	RER/REL	CW	CWUD	CWLD
Ref.	KM HARDSX3	pocket size		L	R	S	S+	S+
	H S							
HTNS 2	65321	S20	N	14,00	0,2	2,00	0,10	-0,10

Remark:
Inserts for internal and external machining

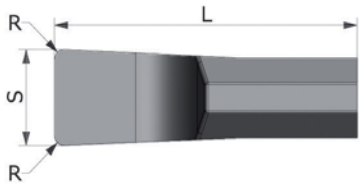
Fitting tools

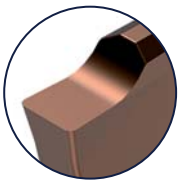
p. 223 p. 224 p. 228 p. 152, 154 p. 201

Inserts for grooving and parting off | Hard material machining



KHTNS





Enlarged view

PRODDES	IDNR	IIC	IH	INSL			RER/REL	CW	CWUD	CWLD
WG302 Ref.	KM HARDSX3	pocket size		L	L+	L-	R	S	S+	S-
	H S									
KHTNS 2	65324	SK20	N	6,35	0,10	-0,10	0,2	2,0	0,10	-0,10

Remark

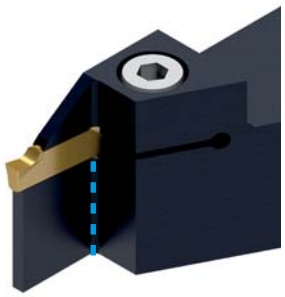
Inserts for small diameters.

Fitting tools

Tech. section p. 223 | Pocket size p. 224 | Intersection main cutting edge p. 228 | p. 156

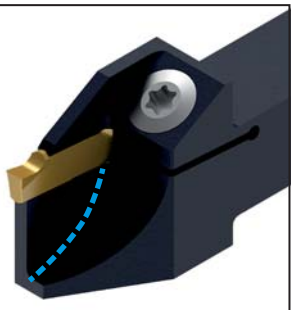
KEMMER HARTMETALLWERKZEUGE

Tools for P92 S inserts



Design straight extension
Pay attention to dimension "P"

Design reinforced extension
Pay attention to dimension "Ø max"

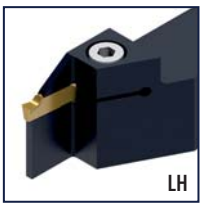


Code for toolholders P92 S

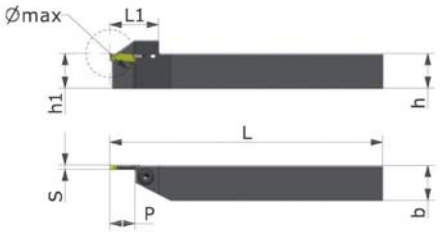
P92 S CXCB L 2020 K 20

- P92 — Tool family
- S — S = small
- CXCB — Screw clamped holder for inserts with TWO cutting edges
- L — Rotation
- 2020 — Shank dimension
- K — ISO Length
- 20 — Cutting width S = 2 mm

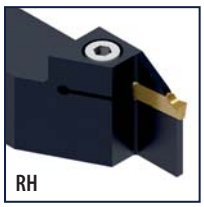
Holders for parting off and grooving



P92 S CXCBL

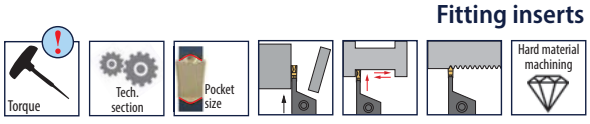


P92 S CXCBR



PRODDES	IDNR	MIID	Hand		H	HF	B	CDX	CW	OAL	LH	
WG380 Ref.	ID-Nr.	pocket size		Ø max	h	h1	b	P	S	L	L1	
P92 S CXCBL 1616 K20	23579	S20	L	22	16	16	16	11	2	125	22	11
P92 S CXCBL 2020 K20	10204	S20	L	22	20	20	20	11	2	125	22	11
P92 S CXCBL 2525 M20	10206	S20	L	22	25	25	25	11	2	150	22	11
P92 S CXCBR 1616 K20	23576	S20	R	22	16	16	16	11	2	125	22	11
P92 S CXCBR 2020 K20	10203	S20	R	22	20	20	20	11	2	125	22	11
P92 S CXCBR 2525 M20	10205	S20	R	22	25	25	25	11	2	150	22	11

Fitting inserts

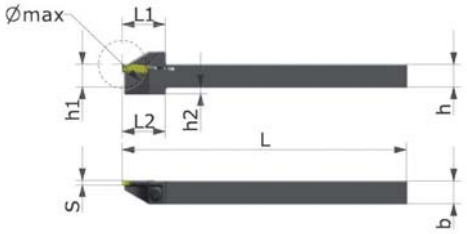


p. 220, 221, 245 p. 223 p. 224 p. 142-145 p. 146 p. 147-148 p. 149

Holders for parting off, grooving and threading

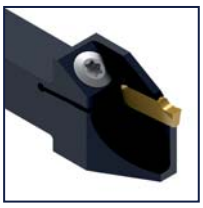
P92 S CXCBL..11

LH holder
Radially reinforced



P92 S CXCBR..11

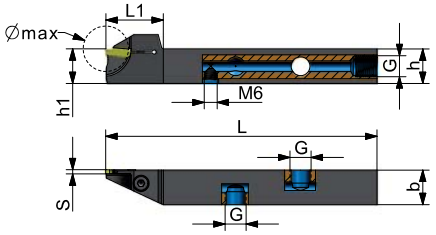
RH holder
Radially reinforced



PRODDES	IDNR	MIID	Hand		H	HF		B	CW	OAL	LH	LTA	
WG380 Ref.	ID-Nr.	pocket size		Ø max	h	h1	h2	b	S	L	L1	L2	
P92 S CXCBL 1010 K20 11	19260	S20	L	22	10	10	3	10	2	125	19	19	9
P92 S CXCBL 1212 K20 11	18547	S20	L	22	12	12	-	12	2	125	19	-	4
P92 S CXCBL 1616 K20 11	23571	S20	L	22	16	16	-	16	2	125	19,5	-	4
P92 S CXCBL 2020 K20 11	23577	S20	L	22	20	20	-	20	2	125	22	-	11
P92 S CXCBL 2525 M20 11	23578	S20	L	22	25	25	-	25	2	150	22	-	11
P92 S CXCBR 1010 K20 11	19259	S20	R	22	10	10	3	10	2	125	19	19	9
P92 S CXCBR 1212 K20 11	18548	S20	R	22	12	12	-	12	2	125	19	-	4
P92 S CXCBR 1616 K20 11	23570	S20	R	22	16	16	-	16	2	125	19,5	-	4
P92 S CXCBR 2020 K20 11	23574	S20	R	22	20	20	-	20	2	125	22	-	11
P92 S CXCBR 2525 M20 11	23575	S20	R	22	25	25	-	25	2	150	22	-	11

Holders with internal coolant for parting off, grooving and threading

P92 S CXCBL HP

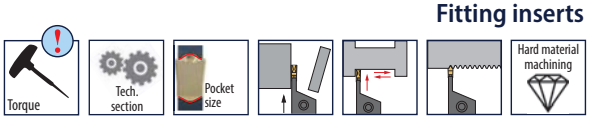


P92 S CXCBR HP

PRODDES	IDNR	MIID	Hand			H	HF	B	CW	OAL	LH	
WGRGL3805 Ref.	ID-Nr.	pocket size		G	Ø max	h	h1	b	S	L	L1	
P92 S CXCBL 1212 K20 11 HPM8x1	65518	S20	L	M8x1	22	12	12	12	2,0	125	25	11
P92 S CXCBL 1616 K20 11 HPG1/8	65520	S20	L	G1/8	22	16	16	16	2,0	125	26	11
P92 S CXCBL 2020 K20 11 HPG1/8	65522	S20	L	G1/8	22	20	20	20	2,0	125	26	11
P92 S CXCBL 2525 M20 11 HPG1/8	65524	S20	L	G1/8	22	25	25	25	2,0	150	26	11
P92 S CXCBR 1212 K20 11 HPM8x1	65519	S20	R	M8x1	22	12	12	12	2,0	125	25	11
P92 S CXCBR 1616 K20 11 HPG1/8	65521	S20	R	G1/8	22	16	16	16	2,0	125	26	11
P92 S CXCBR 2020 K20 11 HPG1/8	65523	S20	R	G1/8	22	20	20	20	2,0	125	26	11
P92 S CXCBR 2525 M20 11 HPG1/8	65525	S20	R	G1/8	22	25	25	25	2,0	150	26	11

Delivery with 1 key and 3 plugs

Fitting inserts

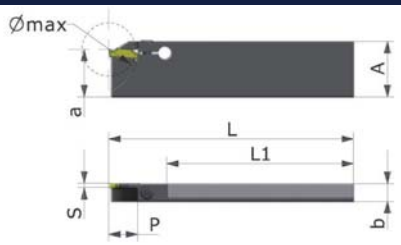


p. 220, 221, 245 p. 223 p. 224 p. 142-145 p. 146 p. 147-148 p. 149

KEMMER HARTMETALLWERKZEUGE

Reinforced parting off blades with dovetail shank

P92 S CXCBL..X



P92 S CXCBR..X

PRODDES	IDNR	MIID	Hand	H	HF	CODX	B	CDX	CW	OAL	LH	
WG380 Ref.	ID-Nr.	pocket size		A	a	Ø max	b	P	S	L	L1	
P92 S CXCBL 2608 X20R	20123	S20	L	26	21,4	24	8	12,0	2,0	110	84,0	4
P92 S CXCBL 2608 X20L	21612	S20	L	26	21,4	24	8	12,0	2,0	110	84,0	4
P92 S CXCBR 2608 X20R	21610	S20	R	26	21,4	24	8	12,0	2,0	110	84,0	4
P92 S CXCBR 2608 X20L	21611	S20	R	26	21,4	24	8	12,0	2,0	110	84,0	4

Comment

Blades and tool blocks with the same "A" dimension fit together.

Example for application you will find on page 95

Fitting inserts and tool blocks

p. 220, 221, 245

p. 223

p. 224


p. 142-145

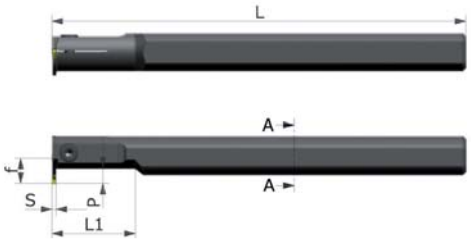

p. 146

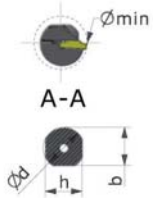

p. 147-148


p. 176

Boring bars with internal coolant for internal grooving

P92 S CGL





P92 S CGR

PRODDES	IDNR	MIID	Hand	DMIN	DCONMS	H	B	WF	CDX	CW	OAL	LH	
WG390 Ref.	ID-Nr.	pocket size		Ø min	Ø d	h	b	f	P	S	L	L1	
P92 S CGL 0012 M20	19258	S20	L	15,5	12	11	-	9	5,5	2	150	22	27
P92 S CGL 0016 P20	10190	S20	L	20,0	16	15	15,5	11	7,0	2	170	26	7
P92 S CGL 0020 R20	10192	S20	L	25,0	20	18	18,5	13	7,0	2	200	40	6
P92 S CGL 0025 R20	10194	S20	L	27,0	25	23	23,0	12	7,0	2	200	50	6
P92 S CGR 0012 M20	20308	S20	R	15,5	12	11	-	9	5,5	2	150	22	27
P92 S CGR 0016 P20	10189	S20	R	20,0	16	15	15,5	11	7,0	2	170	26	7
P92 S CGR 0020 R20	10191	S20	R	25,0	20	18	18,5	13	7,0	2	200	40	6
P92 S CGR 0025 R20	10193	S20	R	27,0	25	23	23,0	12	7,0	2	200	50	6

Fitting inserts

p. 220, 221, 245

p. 223

p. 224

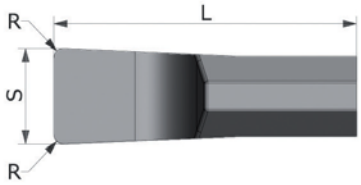

p. 142-145

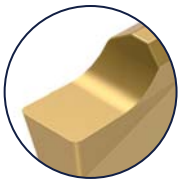

p. 146


p. 147-148

Inserts with 1 edge for grooving and turning

KHTNS





PRODDES	IDNR	IIC	IH	INSL			RER/REL	CW	CWUD	CWLD
WG300 Ref.	PM NANOSPEED	pocket size		L	L+	L-	R	S	S+	S-
	P M N S									
KHTNS 2	36299	SK20	N	6,35	0,10	-0,10	0,2	2,0	0,10	-0,10
KHTNSF 2	38497	SK20	N	6,00	0,10	-0,10	0,0	2,0	0,10	-0,10

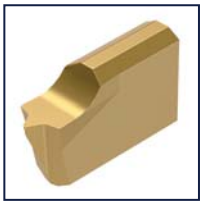
Remark

Inserts marked with"**F**" have ground cutting edges without corner radius. e.g. HTNS**F**

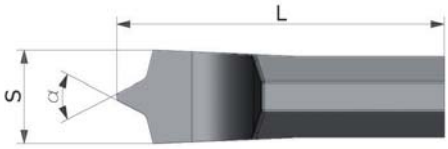
Fitting tools

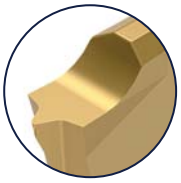
Tech. section p. 223 | Pocket size p. 224 | Intersection main cutting edge p. 228 | p. 156

Internal threading inserts with 1 edge for Whitworth and ISO Full profile



KHTNG IR



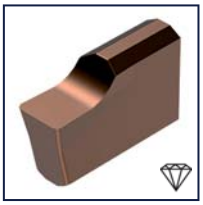


PRODDES	IDNR		IIC	TPN	INSL			CRE	CF	CW	PNA
WG260 Ref.	KM	PM NANOSPEED	pocket size		L	L+	L-	R	edge chamfer	S	α°
	N	P M N S									
KHTNG 2 IR ISO 050	38504	38509	SK20	0,50	6,30	0,05	-0,05	0,05		2,00	60°
KHTNG 2 IR ISO 100	38505	38510	SK20	1,00	6,30	0,05	-0,05	0,05		2,00	60°
KHTNG 2 IR ISO 150	38506	38511	SK20	1,50	6,30	0,05	-0,05		0,14	2,00	60°
KHTNG 2 IR 14W	38507	38512	SK20	14Gg	6,30	0,05	-0,05	0,22		2,00	55°
KHTNG 2 IR 19W	38508	38513	SK20	19Gg	6,30	0,05	-0,05	0,18		2,00	55°

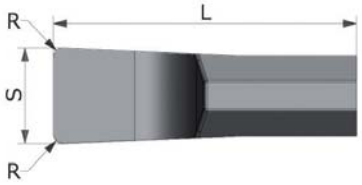
Fitting tools

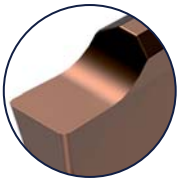
Tech. section p. 223 | Pocket size p. 224 | Intersection main cutting edge p. 228 | p. 156

Inserts for grooving and parting off | Hard material machining



KHTNS



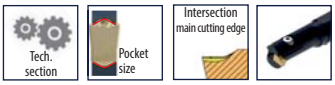


PRODDES	IDNR	IIC	IH	INSL			RER/REL	CW	CWUD	CWLD
WG302 Ref.	KM HARDSX3	pocket size		L	L+	L-	R	S	S+	S-
	H S									
KHTNS 2	65324	SK20	N	6,35	0,10	-0,10	0,2	2,0	0,10	-0,10

Remark

Inserts for small diameters.

Fitting tools



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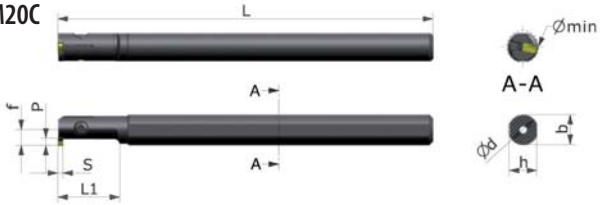
Bohrstangen mit Innenkühlung

P92 S CGL..M20C



P92 S CGR...M20C
System P92-S

PRODDES	IDNR	MIID	Hand	DMIN	DCONMS	H	B	WF	CDX	CW	OAL	LH	
WG390 Ref.	ID-Nr.	pocket size		Ø min	Ø d	h	b	f	P	S	L	L1	
P92 S CGL 0012 M20C	35943	SK20	L	12	12	11	-	6,25	2,5	2,0	150	22	27
P92 S CGR 0012 M20C	35007	SK20	R	12	12	11	-	6,25	2,5	2,0	150	22	27

Remark

When using KHTNSF 2 inserts reduce max. depth to 2.1 mm.

How to order: **recommended**

1 St.	P92 S CGR 0012 M20C	or:	**1 St.**	**ID-Nr. 35007**
10 St.	KHTNG 2 IR ISO 050 PM NANOSPEED	or:	**10 St.**	**ID-Nr. 38509**

Fitting inserts

p. 220, 221, 245 p. 223 p. 224 p. 155, 156 p. 155

FLEX FIX | One edge cutting system

for parting off and grooving

The perfect parting off solution with wide range of tools and geometries

KEMMER HARTMETALLWERKZEUGE

FLEX FIX | One edge cutting system

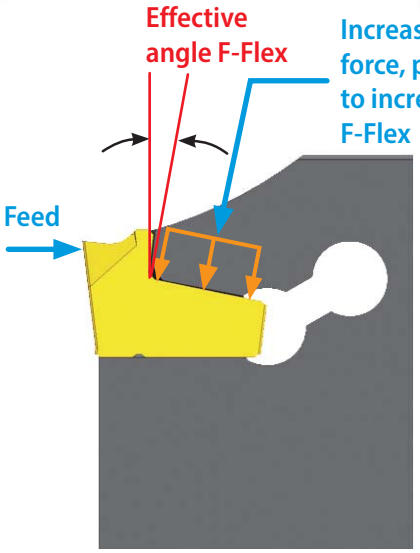
for parting off and grooving

Construction and the way, these grooving and parting off tools fit together

Just a few degrees in the right direction, lead to a new technique, which solves the old and well known system problems like

- Loss of center height
- Opening of insert pocket
- Fatigue of material
- Insert creeping

and increase tool life by 120 %, stated by absolute authentic test series, compared to older designs for one edged parting systems.



- Vibrations → 0
- Positioning in insert pocket → perfect
- Heat rejection improved
- Quick and defined insert change

Testmaterial	Quantity Flex Fix	Quantity Passt Perfekt	Result in %
1.0277 (hexagonal))	*220*	180	*22 % more*
1.7227 (Ø 45mm)	*265*	130	*103 % more*
1.4301 (Ø 45mm)	*85*	25	*240 % more*

Increased tool life by

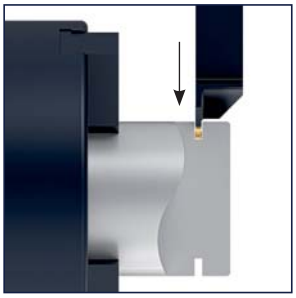
avarage

120 %

FLEX FIX | One edge cutting system

for parting off and grooving

Grooving



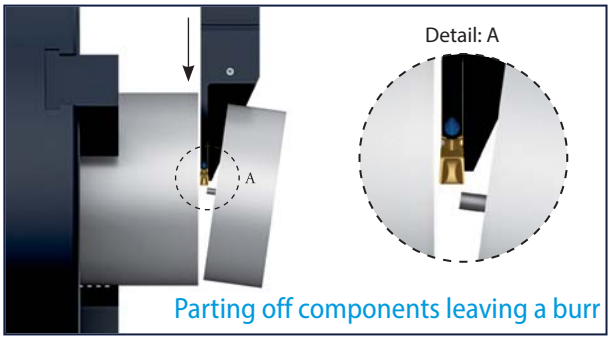
Parting off and grooving IFN

Grooving, the major edge cuts a groove

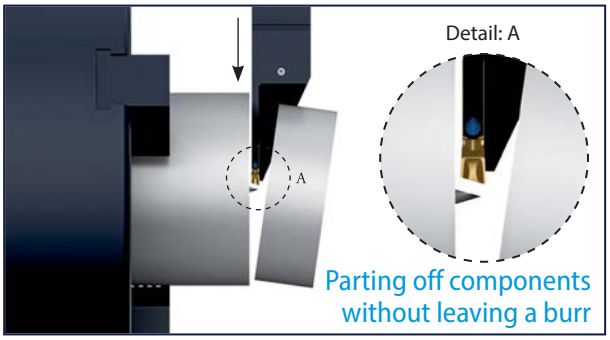
Parting off

Parting off BFN

The major edge **parts off** a component.

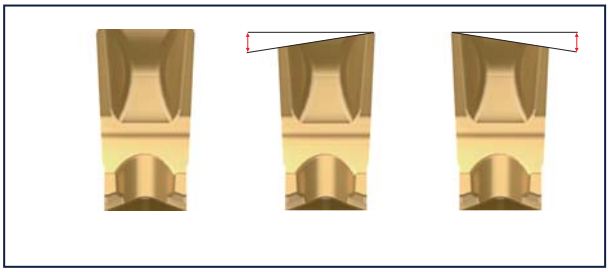


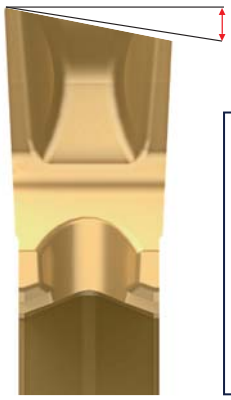
Parting off components leaving a burr



Parting off components without leaving a burr

Neutral inserts, inserts with lead angle right handed and lead angle left handed





Application

- Thin walled pipes
- Full material at about >15mm
- Problems with parting off "burrs"

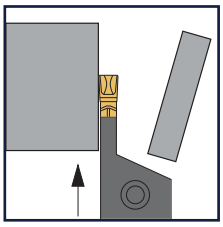
CCW and CW rotation

View into the spindle:

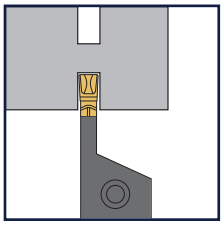
RH or CCW: Workpiece or bar rotates counter clockwise (German: „Rechtslauf")

LH or CW: Workpiece or bar rotates clockwise (German: „Linkslauf")

System applications and symbols



Parting off



Grooving

Tool block for blades

see section Standard Design

Special solutions
e.g. lead angle, tailor made tools on request.

Coatings in this system

Coating	Type	Structure	Layer thickness	Main application	Alternativ application
NANOSPEED	Supernitrid PVD	TiAlN	3 µm	P M	N S
TILOX	Supernitrid PVD	TiAlN	3 µm	P M	K S
HYPERSPEED	Supernitrid PVD	TiAlN	3 µm	S	M
ALUSPEED	HiPIMS PVD	TiB	2 µm	N	S
CARBO SX2	HiPIMS PVD	AlTiN	3 µm	P	S
Uncoated	-	-	-	N	**

** additional coating options or customer-specific applications
see technical section and tailor made solutions section (on request)

Chip breaker FLEX FIX

BFN

Universal application

IFN

Interrupted cuts/ difficult operations

SFN

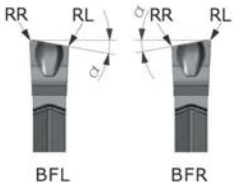
1.choice for steel + stainless materials

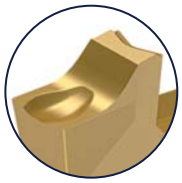
IFN ALU

For non-ferrous materials and aluminium alloys

Parting off and grooving inserts

BFN



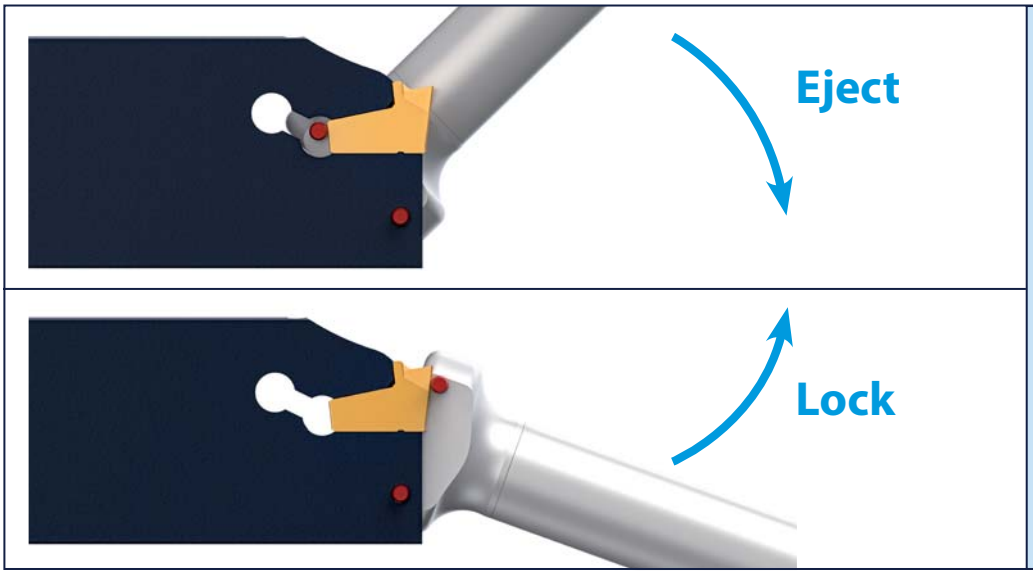


Enlarged view

PRODDES	IDNR	IDNR	IDNR	IIC	IH	RER	REL	CW	CWUD	CWLD	PSIRR	PSIRL
WG0022 Ref.	KM TILOX	KM NANOSPEED	KM HYPERSPEED	pocket size		RR	RL	S	S+	S-	α° R	α° L
	P M K S	P M N S	S M									
BFN 3	43203	43204	41172	FF3	N	0,2	0,2	3,0	0,05	-0,05	0	
BFN 4	43205	43207	43208	FF4	N	0,2	0,2	4,0	0,05	-0,05	0	
BFL 3 8D		43239		FF3	L	0,2	0	3,0	0,05	-0,05		8
BFL 4 8D		43243		FF4	L	0,2	0	4,0	0,05	-0,05		8
BFR 3 8D		43215		FF3	R	0	0,2	3,0	0,05	-0,05	8	
BFR 4 8D		43219		FF4	R	0	0,2	4,0	0,05	-0,05	8	

BF-Parting off chip breaker

Grooved parting off edge with reinforced flanks.
The deep and spacious **chip chamber** gives excellent chip control.
To be used on almost all materials.



FLEX FIX insert change:

Easy
Safe
Quick

Fitting tools

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KEMMER HARTMETALLWERKZEUGE

Parting off and grooving inserts

IFN

IFN

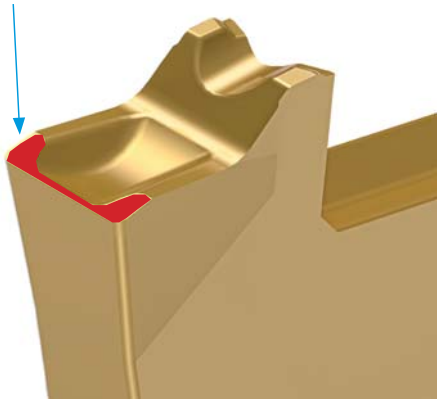
Enlarged view

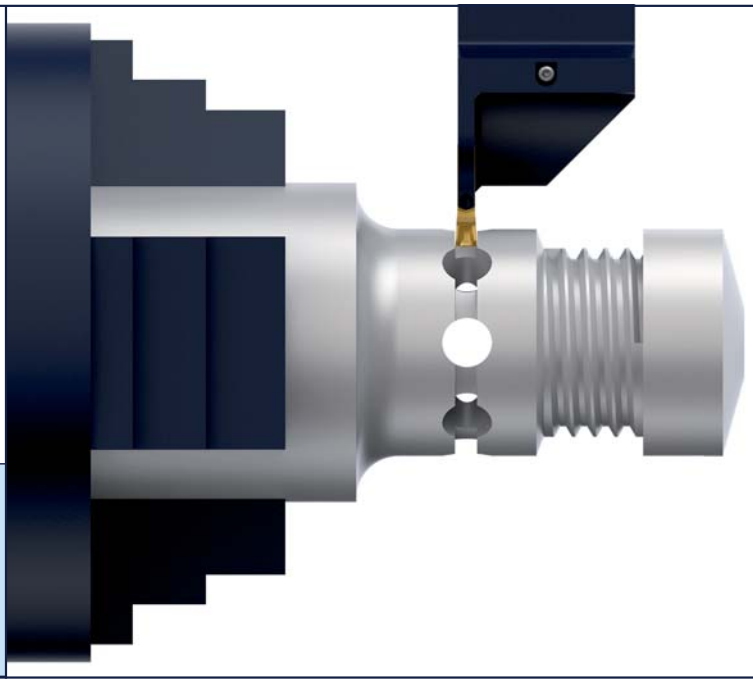
PRODDES	IDNR	IDNR	IDNR	IDNR	IDNR	IDNR	IIC	IH	RER/REL	CW	CWUD	CWLD
WG0022 Ref.	KM TILOX	KM NANOSPEED	KM CARBOSX2	KS140 TILOX	KS140 NANOSPEED	KS140 CARBOSX2	pocket size		R	S	S+	S-
	P M K S	P M N S	P S	P M K S	P M N S	P S						
IFN 2	43260	43262	65195				FF2	N	0,2	2,0	0,05	0,05
IFN 3	39203	43259	65196	63025	63024	65430	FF3	N	0,2	3,0	0,05	0,05
IFN 4	43264	43266	65197				FF4	N	0,2	4,0	0,05	0,05

IF Geometry with its cutting edge strengthening, **ground chamfer** is recommended for:

- Alloy steels
- Stainless steels
- Interrupted cuts

Ground chamfer





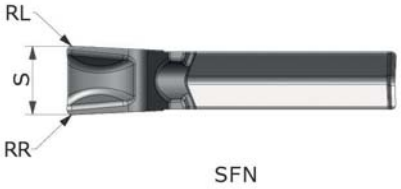
IFN in action on interrupted cutting. Negative chamfer reinforces the cutting edge.

Fitting tools

p. 223 p. 224 p. 228 p. 164 p. 165 p. 166 p. 168-168 p. 187-188

Parting off and grooving inserts

SF N/R/L
FLEX FIX



SFN

SFL

SFR


Enlarged view

PRODDES	IDNR	IDNR	IDNR	IDNR	IDNR	IDNR	IIC	IH	RER	REL	CW	CWUD	CWLD	PSIRR	PSIRL
WG0022 Ref.	KM TILOX	KM NANOSPEED	KM CARBOSX2	KS140 TILOX	KS140 NANOSPEED	KS140 CARBOSX2	pocket size	( )	RR	RL	S	S+	S-	R	L
	P M K S	P M N S	P S	P M K S	P M N S	P S									
SFN 2	43087	43169	65255				FF2	N	0,2	0,2	2,0	0,05	0,05		
SFN 3	38635	43170	65256	62708	62710	65431	FF3	N	0,2	0,2	3,0	0,05	0,05		
SFN 4	43171	43173	65257				FF4	N	0,2	0,2	4,0	0,05	0,05		
SFL 2 6D		43189					FF2	L	0,2	0	2,0	0,05	0,05		6
SFL 3 6D		43192					FF3	L	0,2	0	3,0	0,05	0,05		6
SFL 4 6D		43196					FF4	L	0,2	0	4,0	0,05	0,05		6
SFR 2 6D		43178					FF2	R	0	0,2	2,0	0,05	0,05	6	
SFR 3 6D		43181					FF3	R	0	0,2	3,0	0,05	0,05	6	
SFR 4 6D		43185					FF4	R	0	0,2	4,0	0,05	0,05	6	

SF-Chip breaker SUPERNOVA

The arc shaped cutting edge with its reinforced flanks achieves ideal chips. Recommended for free cutting and low alloy steels and stainless steels , also to be used on unstable machine tools.

Fitting tools, see below

IFN ALU

IFN ALU


Enlarged view

PRODDES	IDNR	IDNR	IIC	IH	RER/REL	CW	CWUD	CWLD
WG0022 Ref.	KM	KM ALUSPEED	pocket size	( )	R	S	S+	S-
	N	N S						
IFN 2 ALU	47727	47730	FF2	N	0,2	2,0	0,05	0,05
IFN 3 ALU	47728	47731	FF3	N	0,2	3,0	0,05	0,05
IFN 4 ALU	47729	47732	FF4	N	0,2	4,0	0,05	0,05

The new IF ALU geometry

has got a horizontally ground cutting edge with a flat chip breaker for high speed chip removal. The geometry is positive and sharply ground and is recommended for:
Nonferrous heavy metals, pipes, thinwalled parts, unstable components, free cutting materials and titanium.

Fitting tools

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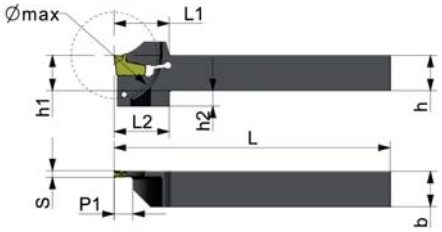
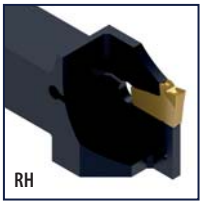
Toolholders for FLEX FIX inserts

F16 L 42



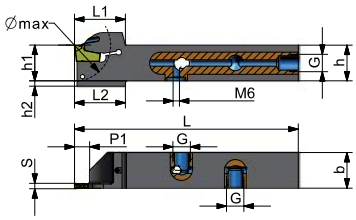
F16 R 42



PRODDES	IDNR	MIID	Hand		H	HF		B	CDX	CW	OAL	LH	LTA	
WG3201 Ref.	ID-Nr.	pocket size		Ø max	h	h1	h2	b	P1	S	L	L1	L2	
F16 L 1616 K20 42	43330	FF2	L	42	16	16	7	16	8	2,0	125	25	25	AWF16
F16 L 2020 K20 42	43333	FF2	L	42	20	20	3	20	8	2,0	125	25	25	AWF16
F16 L 2525 M20 42	43336	FF2	L	42	25	25	0	25	8	2,0	150	25	25	AWF16
F16 L 1616 K30 42	43331	FF3	L	42	16	16	7	16	8	3,0	125	25	25	AWF16
F16 L 2020 K30 42	43334	FF3	L	42	20	20	3	20	8	3,0	125	25	25	AWF16
F16 L 2525 M30 42	43337	FF3	L	42	25	25	0	25	8	3,0	150	25	25	AWF16
F16 L 1616 K40 42	43332	FF4	L	42	16	16	7	16	8	4,0	125	25	25	AWF16
F16 L 2020 K40 42	43335	FF4	L	42	20	20	3	20	8	4,0	125	25	25	AWF16
F16 L 2525 M40 42	49376	FF4	L	42	25	25	0	25	8	4,0	150	25	25	AWF16
F16 R 1616 K20 42	43322	FF2	R	42	16	16	7	16	8	2,0	125	25	25	AWF16
F16 R 2020 K20 42	43325	FF2	R	42	20	20	3	20	8	2,0	125	25	25	AWF16
F16 R 2525 M20 42	43328	FF2	R	42	25	25	0	25	8	2,0	150	25	25	AWF16
F16 R 1616 K30 42	43323	FF3	R	42	16	16	7	16	8	3,0	125	25	25	AWF16
F16 R 2020 K30 42	43326	FF3	R	42	20	20	3	20	8	3,0	125	25	25	AWF16
F16 R 2525 M30 42	43329	FF3	R	42	25	25	0	25	8	3,0	150	25	25	AWF16
F16 R 1616 K40 42	43324	FF4	R	42	16	16	7	16	8	4,0	125	25	25	AWF16
F16 R 2020 K40 42	43327	FF4	R	42	20	20	3	20	8	4,0	125	25	25	AWF16
F16 R 2525 M40 42	49377	FF4	R	42	25	25	0	25	8	4,0	150	25	25	AWF16

Toolholders for FLEX FIX inserts with internal coolant

F16 L 42 HP



F16 R 42 HP

PRODDES	IDNR	MIID	Hand			H	HF		B	CDX	CW	OAL	LH	LTA	
WG3205 Ref.	ID-Nr.	pocket size	G		Ø max	h	h1	h2	b	P1	S	L	L1	L2	
F16 L 2020 K30 42HP G1/8	57216	FF3	G1/8	L	42	20	20	3	20	8	3,0	125	28,5	25	AWF16
F16 L 2525 M30 42HP G1/8	57220	FF3	G1/8	L	42	25	25	0	25	8	3,0	150	28,5	25	AWF16
F16 R 2020 K30 42HP G1/8	57223	FF3	G1/8	R	42	20	20	3	20	8	3,0	125	28,5	25	AWF16
F16 R 2525 M30 42HP G1/8	57226	FF3	G1/8	R	42	25	25	0	25	8	3,0	150	28,5	25	AWF16

Fitting inserts

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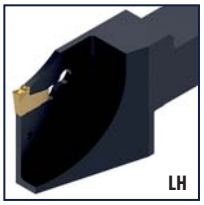
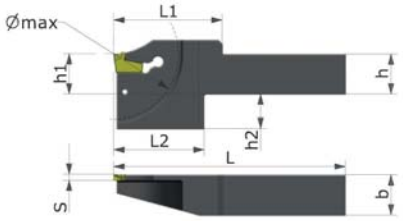
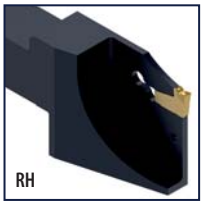
Parting off holders for FLEX FIX inserts



F16 L 65



F16 R 65



PRODDES	IDNR	MIID	Hand		H	HF		B	CW	OAL	LH	LTA	
WG3201 Ref.	ID-Nr.	pocket size		Ø max	h	h1	h2	b	S	L	L1	L2	
F16 L 2020 X30 65	38875	FF3	L	65	20	20	17	20	3,0	115	54	45	AWF16
F16 L 2525 X30 65	43320	FF3	L	65	25	25	12	25	3,0	140	54	45	AWF16
F16 L 2020 X40 65	43319	FF4	L	65	20	20	17	20	4,0	115	54	45	AWF16
F16 L 2525 X40 65	43321	FF4	L	65	25	25	12	25	4,0	140	54	45	AWF16
F16 R 2020 X30 65	38878	FF3	R	65	20	20	17	20	3,0	115	54	45	AWF16
F16 R 2525 X30 65	43317	FF3	R	65	25	25	12	25	3,0	140	54	45	AWF16
F16 R 2020 X40 65	43316	FF4	R	65	20	20	17	20	4,0	115	54	45	AWF16
F16 R 2525 X40 65	43318	FF4	R	65	25	25	12	25	4,0	140	54	45	AWF16

Fitting inserts

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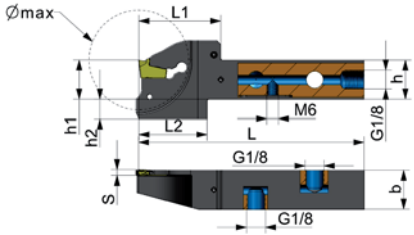
Parting off holders for FLEX FIX inserts with internal coolant up to Ø 52 mm

F16 L 52 HP



F16 R 52 HP

PRODDES	IDNR	MIID	Hand		H	HF		B	CW	OAL	LH	LTA	
WG3205 Ref.	ID-Nr.	pocket size		Ø max	h	h1	h2	b	S	L	L1	L2	
F16 L 2020 X30 52 HP G1-8	62986	FF3	L	52	20	20	10	20	3,0	115	42	35	AWF16
F16 L 2525 X30 52 HP G1-8	62984	FF3	L	52	25	25	5	25	3,0	140	42	35	AWF16
F16 R 2020 X30 52 HP G1-8	62985	FF3	R	52	20	20	10	20	3,0	115	42	35	AWF16
F16 R 2525 X30 52 HP G1-8	62968	FF3	R	52	25	25	5	25	3,0	140	42	35	AWF16

Fitting inserts

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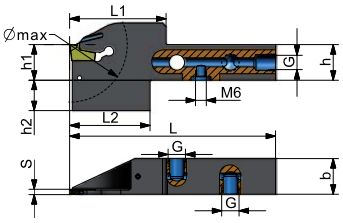
Parting off holders for FLEX FIX inserts with internal coolant up to Ø 65 mm

F16 L 65 HP



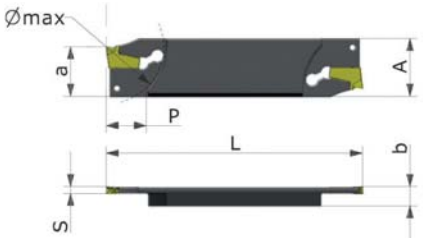
F16 R 65 HP

PRODDES	IDNR	MIID	Hand		H	HF		B	CW	OAL	LH	LTA	
WG3205 Ref.	ID-Nr.	pocket size	G	( )	Ø max	h	h1	h2	b	S	L	L1	L2	
F16 L 2020 X30 65HP G1/8	57217	FF3	G1/8	L	65	20	20	17	20	3,0	115	54	45	AWF16
F16 L 2525 X30 65HP G1/8	57222	FF3	G1/8	L	65	25	25	12	25	3,0	140	54	45	AWF16
F16 R 2020 X30 65HP G1/8	57225	FF3	G1/8	R	65	20	20	17	20	3,0	115	54	45	AWF16
F16 R 2525 X30 65HP G1/8	57227	FF3	G1/8	R	65	25	25	12	25	3,0	140	54	45	AWF16

Fitting inserts see below

Reinforced parting off blades for FLEX FIX inserts

F16 L 2608

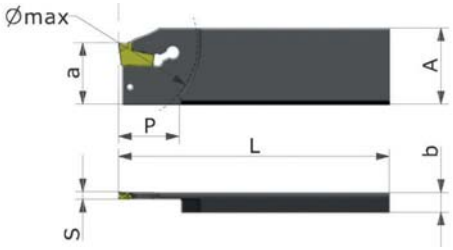


F16 R 2608

PRODDES	IDNR	MIID	Hand	CODX	H	HF	B	CDX	CW	OAL	
WG3101 Ref.	ID-Nr.	pocket size	( )	Ø max	A	a	b	P	S	L	
F16 L 2608 J30 R 50	43313	FF3	L	50	26	21,4	8	17	3,0	110	AWF16
F16 R 2608 J30 L 50	43312	FF3	R	50	26	21,4	8	17	3,0	110	AWF16

Fitting inserts, see below

F16 L 3208



F16 R 3208

PRODDES	IDNR	MIID	Hand	CODX	H	HF	B	CDX	CW	OAL	
WG3101 Ref.	ID-Nr.	pocket size	( )	Ø max	A	a	b	P	S	L	
F16 L 3208 J30 R 65	43315	FF3	L	65	32	25	8	24,5	3,0	110	AWF16
F16 L 3208 J30 L 65	53794	FF3	L	65	32	25	8	24,5	3,0	110	AWF16
F16 R 3208 J30 L 65	43314	FF3	R	65	32	25	8	24,5	3,0	110	AWF16
F16 R 3208 J30 R 65	52553	FF3	R	65	32	25	8	24,5	3,0	110	AWF16

Fitting inserts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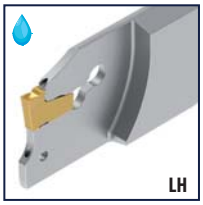
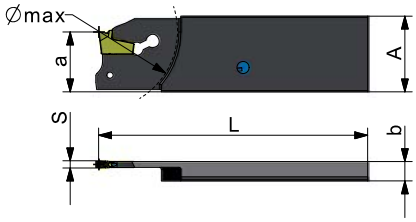
Reinforced parting off blades with internal coolant for FLEX FIX inserts



F16 L 3208 HP



F16 R 3208 HP

PRODDES	IDNR	MIID	Hand	CODX	H	HF	B	CW	OAL	
WG3105 Ref.	ID-Nr.	Platten-sitz-größe		Ø max	A	a	b	S	L	
F16 L 3208 J30 R 65 HP	63225	FF3	L	65	32	25	8	3,0	110	AWF16
F16 L 3208 J30 L 65 HP	63224	FF3	L	65	32	25	8	3,0	110	AWF16
F16 R 3208 J30 L 65 HP	63226	FF3	R	65	32	25	8	3,0	110	AWF16
F16 R 3208 J30 R 65 HP	63227	FF3	R	65	32	25	8	3,0	110	AWF16

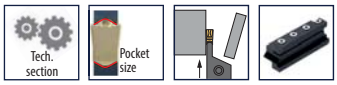
Application of reinforced parting off blades

moderate to heavy machining

Advantages:

- Clean faces
- Superior performance
- No squeaking
- Large extension range
- Best possible tool life
- Tight areas

Fitting inserts



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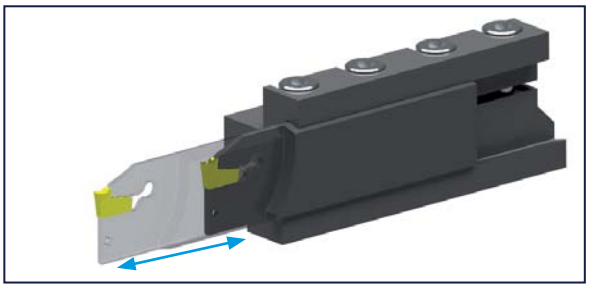


Good stability on large extensions.

Large dovetail clamping faces.

Key for FLEX FIX tools

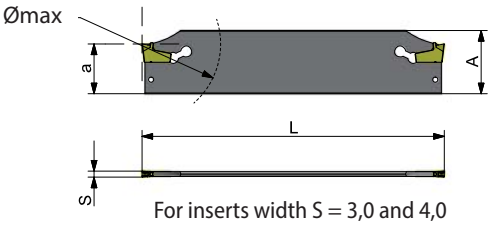
AW F16

WG355 Ref.	ID-Nr.	
AW F16	39880	AW F16 1
AW F16 1	39881	

Comment:
The key is added to each FLEX FIX tool delivery.

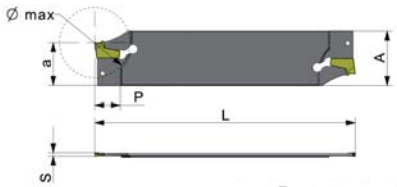
Parting off blades for FLEX FIX inserts

F16 T



For inserts width S = 3,0 and 4,0

PRODDES	IDNR	MIID	CODX	H	HF	CDX	CW	OAL	
WG3101 Ref.	ID-Nr.	pocket size	Ø max.	A	a	P	S	L	E-Teile
F16 T 26 2	41093	FF2	42	26	21,4	15	2	110	AWF 16
F16 T 26 3	38743	FF3	75	26	21,4	-	3	110	AWF 16
F16 T 26 4	41096	FF3	80	26	21,4	-	4	110	AWF 16
F16 T 32 2	41094	FF2	42	32	25	15	2	150	AWF 16
F16 T 32 3	35217	FF3	100	32	25	-	3	150	AWF 16
F16 T 32 4	41095	FF3	100	32	25	-	4	150	AWF 16



For inserts width S = 2,0

Fitting inserts

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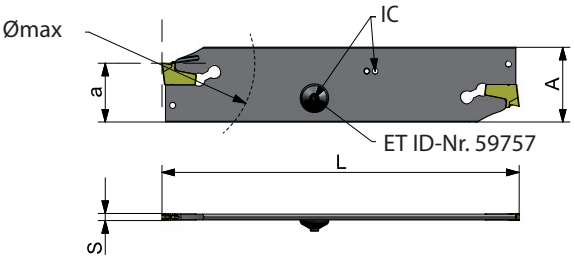
Parting off blades with internal coolant for FLEX FIX inserts

F16 T HP



PRODDES	IDNR	MIID	CODX	H	HF	CW	OAL	
WG3105 Ref.	ID-Nr.	pocket size	Ø max.	A	a	S	L	
F16 T 26 30 HP	57323	FF3	75	26	21,4	3	110	AWF 16
F16 T 32 30 HP	57324	FF3	100	32	25	3	150	AWF 16

Tool blocks for holders with internal cooling

Extract from Megacut Catalogue


Tool blocks for blade height 26 + 32


VDI-Blade holder for blade height 26 + 32


VDI-Basic toolholder Type C


Blade holder Adapter for basic holder VDI; PSC; HSK


Basic toolholder Type B

Fitting inserts

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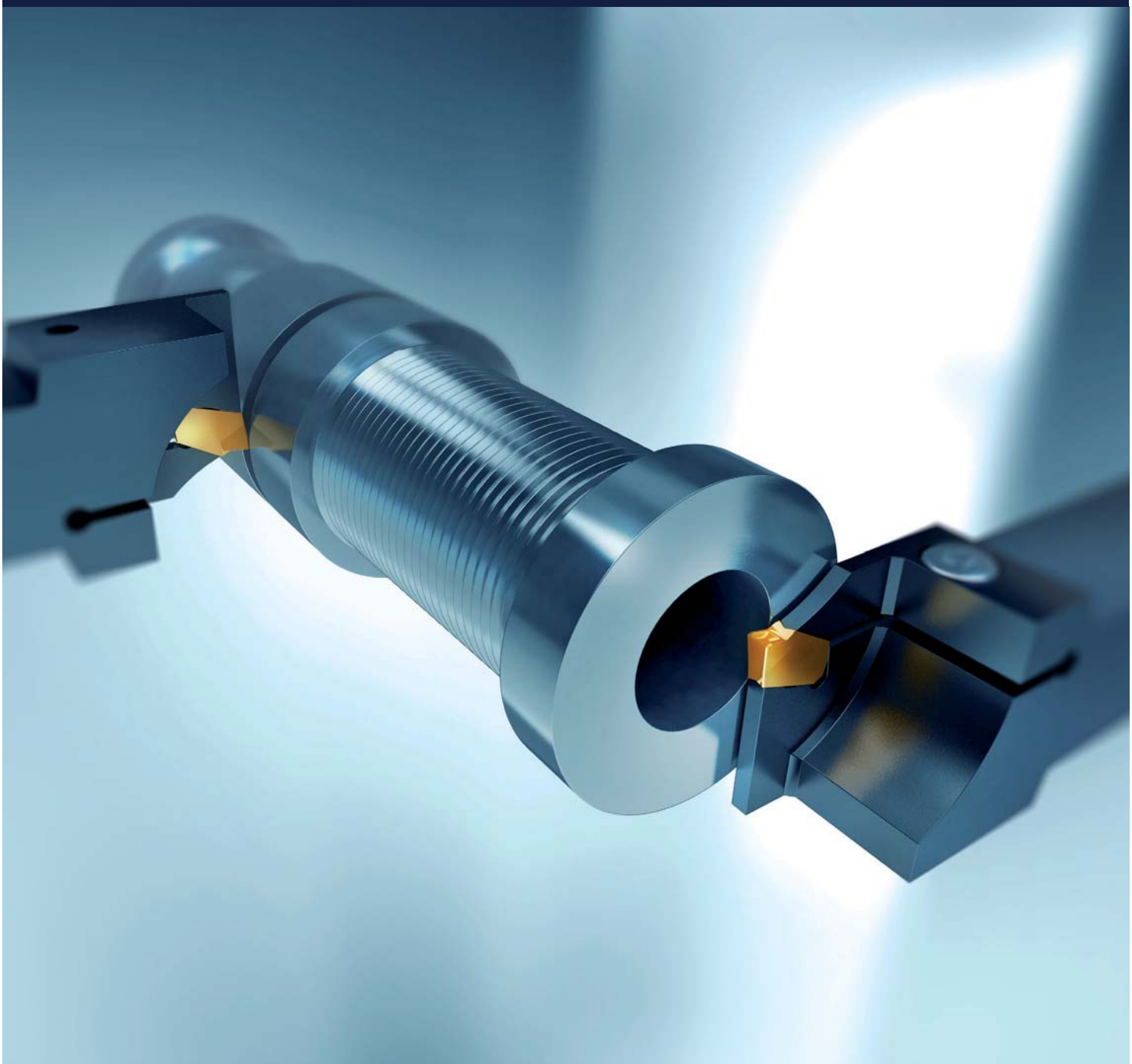
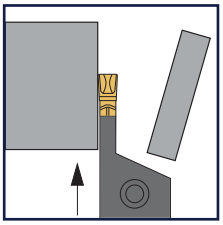
Standard Design

One edged cutting system for parting off and grooving

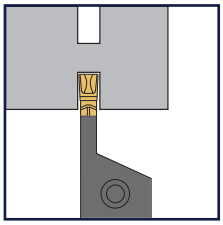
The "classic" system for parting off applications



System applications and symbols



Parting off



Grooving

Tool blocks for blades

Special solutions
e.g. lead angle, tailor made tools on request.

Coatings in this system

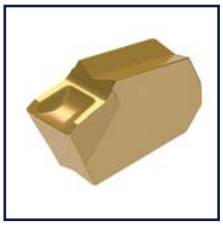
Coating	Type	Structure	Layer thickness	Main application	Alternative application
NANOSPEED	Supernitrid PVD	TiAlN	3 µm	P M	N S
TILOX	Supernitrid PVD	TiAlN	3 µm	P M	K S
CARBO SX2	HiPIMS PVD	AlTiN	3 µm	P	S
CASTSPEED	CVD	TiCN	8 µm	K	-
Uncoated	-	-	-	N	**

** additional coating options or customer-specific applications
see technical section and tailor made solutions section (on request)

Chip breakers Standard Design

BGN

Universal application



ITN

Interrupted cuts/ difficult operations

SNT

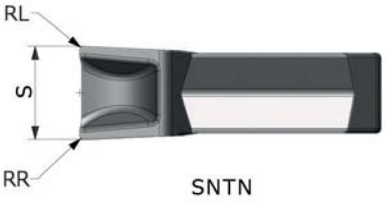
1.choice for steel + stainless materials

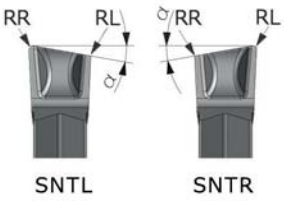
ITN ALU

For non-ferrous materials and aluminium alloys

Parting off and grooving inserts

SNT N/R/L





Enlarged view

PRODDES	IDNR	IIC	IH	RER	REL	CW	CWUD	CWLD	PSIRR	PSIRL
WG325 Ref.	PM NANOSPEED	pocket size		RR	RL	S	S+	S-	α° R	α° R
	P M N S									
SNTN 2	47916	SD2	N	0,20	0,20	2,20	0,10	-0,10		
SNTN 3	11330	SD3	N	0,20	0,20	3,10	0,10	-0,10		
SNTN 4	11342	SD4	N	0,20	0,20	4,10	0,10	-0,10		
SNTN 5	47920	SD5	N	0,20	0,20	5,10	0,10	-0,10		
SNTR 2 6D	47922	SD2	R	0,00	0,20	2,20	0,10	-0,10	6	
SNTR 3 6D	11391	SD3	R	0,00	0,20	3,10	0,10	-0,10	6	
SNTR 4 6D	11411	SD4	R	0,00	0,20	4,10	0,10	-0,10	6	
SNTR 5 6D	47926	SD5	R	0,00	0,20	5,10	0,10	-0,10	6	
SNTL 2 6D	47910	SD2	L	0,20	0,00	2,20	0,10	-0,10		6
SNTL 3 6D	11392	SD3	L	0,20	0,00	3,10	0,10	-0,10		6
SNTL 4 6D	11412	SD4	L	0,20	0,00	4,10	0,10	-0,10		6
SNTL 5 6D	47914	SD5	L	0,20	0,00	5,10	0,10	-0,10		6

SUPERNOVA

The arc-shaped cutting edge with its reinforced flanks forms ideal chips. Recommended for free cutting and low alloy steels and stainless steels, also to be used on unstable machine tools.

Fitting tools

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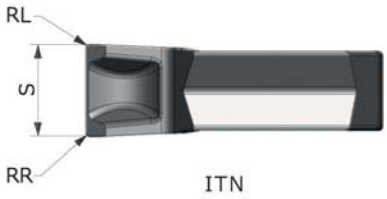
KEMMER HARTMETALLWERKZEUGE

Parting off and grooving inserts

IT N/R/L



Enlarged view

PRODDES	IDNR	IDNR	IIC	IH	RER	REL	CW	CWUD	CWLD	PSIRR	PSIRL
WG002 Ref.	PM NANOSPEED	GF110 CARBOSX2	pocket size		RR	RL	S	S+	S-	α° R	α° L
	P M N S	P S									
ITN 2	47890	65198	SD2	N	0,20	0,20	2,20	0,10	-0,10	0	0
ITN 3	10497	65199	SD3	N	0,20	0,20	3,10	0,10	-0,10	0	0
ITN 4	10515	65200	SD4	N	0,20	0,20	4,10	0,10	-0,10	0	0
ITN 5	47896	65201	SD5	N	0,20	0,20	5,10	0,10	-0,10	0	0
ITN 6	10527	-	SD6	N	0,20	0,20	6,35	0,10	-0,10	0	0
ITR 2 4D	47898	-	SD2	R	0,00	0,20	2,20	0,10	-0,10	4	0
ITR 2 8D	47900	-	SD2	R	0,00	0,20	2,20	0,10	-0,10	8	0
ITR 3 4D	10791	-	SD3	R	0,00	0,20	3,10	0,10	-0,10	4	0
ITR 3 8D	10811	-	SD3	R	0,00	0,20	3,10	0,10	-0,10	8	0
ITR 4 4D	10837	-	SD4	R	0,00	0,20	4,10	0,10	-0,10	4	0
ITR 4 8D	10857	-	SD4	R	0,00	0,20	4,10	0,10	-0,10	8	0
ITR 5 4D	47906	-	SD5	R	0,00	0,20	5,10	0,10	-0,10	4	0
ITR 5 8D	47908	-	SD5	R	0,00	0,20	5,10	0,10	-0,10	8	0
ITL 2 4D	47877	-	SD2	L	0,20	0,00	2,20	0,10	-0,10	0	4
ITL 2 8D	47879	-	SD2	L	0,20	0,00	2,20	0,10	-0,10	0	8
ITL 3 4D	10792	-	SD3	L	0,20	0,00	3,10	0,10	-0,10	0	4
ITL 3 8D	10812	-	SD3	L	0,20	0,00	3,10	0,10	-0,10	0	8
ITL 4 4D	10838	-	SD4	L	0,20	0,00	4,10	0,10	-0,10	0	4
ITL 4 8D	10858	-	SD4	L	0,20	0,00	4,10	0,10	-0,10	0	8
ITL 5 4D	47885	-	SD5	L	0,20	0,00	5,10	0,10	-0,10	0	4
ITL 5 8D	47887	-	SD5	L	0,20	0,00	5,10	0,10	-0,10	0	8

IT Chip breaker

IT Geometry with its cutting edge strengthening, ground chamfer is recommended for:

- Alloy steels
- Stainless steels
- Interrupted cuts

PRODDES	IDNR	IDNR	IDNR	IDNR	IIC	IH	RER/REL	CW	CWUD	CWLD
WG002 Ref.	GF110 CASTSPEED	GF110 CARBO SX2	KM CASTSPEED	PM CASTSPEED	pocket size		R	S	S+	S-
	K	P S	K	K						
ITN 3	53896	-	-	-	SD3	N	0,20	3,10	0,10	-0,10
ITN 6	-	57772	57773	57775	SD6	N	0,20	6,40	0,10	-0,10

GF110 Castspeed

For cast materials.

PM Castspeed

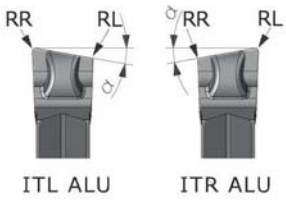
For cast materials and steel applications in unstable conditions.

Fitting tools

p. 223 p. 224 p. 228 p. 174, 175 p. 175

Parting off and grooving inserts

IT N/R/L ALU



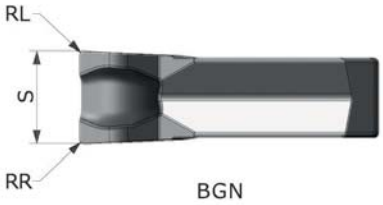
Enlarged view

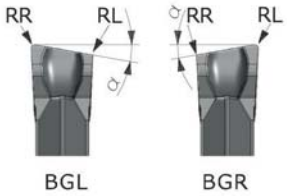
PRODDES	IDNR	IDNR	IIC	IH	RER	REL	CW	CWUD	CWLD	PSIRR	PSIRL
WG002 Ref.	GF 110	PM NANOSPEED	pocket size	( )	RR	RL	S	S+	S-	α° R	α° L
	N	P M N S									
ITN 2 ALU	29338	47891	SD2	N	0,20	0,20	2,20	0,10	-0,10		
ITN 3 ALU	10480	10485	SD3	N	0,20	0,20	3,10	0,10	-0,10		
ITN 4 ALU	10498	10503	SD4	N	0,20	0,20	4,10	0,10	-0,10		
ITR 2 4D ALU	29602	47897	SD2	R	0,00	0,20	2,20	0,10	-0,10	4	
ITR 3 4D ALU	20692	10771	SD3	R	0,00	0,20	3,10	0,10	-0,10	4	
ITR 4 4D ALU	29215	10817	SD4	R	0,00	0,20	4,10	0,10	-0,10	4	
ITL 2 4D ALU	32370	47876	SD2	L	0,20	0,00	2,20	0,10	-0,10		4
ITL 3 4D ALU	21489	10772	SD3	L	0,20	0,00	3,10	0,10	-0,10		4
ITL 4 4D ALU	29212	10818	SD4	L	0,20	0,00	4,10	0,10	-0,10		4

ALU Geometry with sharply ground, positive cutting edge is recommended for:
Nonferrous heavy metals, pipes, thinwalled parts, unstable components and machining steels

Fitting tools, see below

BGN /R/L

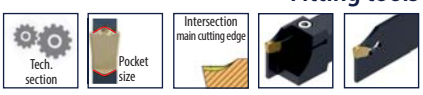




Enlarged view

PRODDES	IDNR	IIC	IH	RER	REL	CW	CWUD	CWLD	PSIRR	PSIRL
WG002 Ref.	PM NANOSPEED	pocket size	( )	RR	RL	S	S+	S-	α° R	α° L
	P M N S									
BGN 3	30874	SD3	N	0,20	0,20	3,10	0,10	-0,10		
BGN 4	48183	SD4	N	0,20	0,20	4,10	0,10	-0,10	0	
BGR 3 4D	48185	SD3	R	0,00	0,20	3,10	0,10	-0,10	4	
BGR 3 8D	48187	SD3	R	0,00	0,20	3,10	0,10	-0,10	8	
BGR 4 4D	48189	SD4	R	0,00	0,20	4,10	0,10	-0,10	4	
BGR 4 8D	48191	SD4	R	0,00	0,20	4,10	0,10	-0,10	8	
BGL 3 4D	48174	SD3	L	0,20	0,00	3,10	0,10	-0,10		4
BGL 3 8D	48176	SD3	L	0,20	0,00	3,10	0,10	-0,10		8
BGL 4 4D	48178	SD4	L	0,20	0,00	4,10	0,10	-0,10		4
BGL 4 8D	48180	SD4	L	0,20	0,00	4,10	0,10	-0,10		8

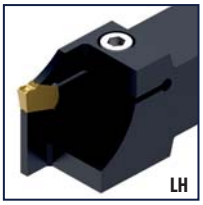
Fitting tools



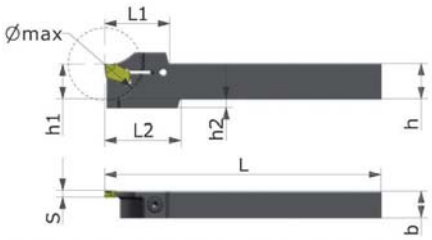
p. 223 p. 224 p. 228 p. 174, 175 p. 175

KEMMER HARTMETALLWERKZEUGE

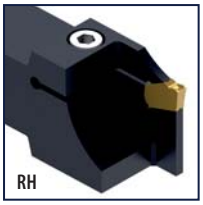
Parting off holders



CLCBL



CLCBR



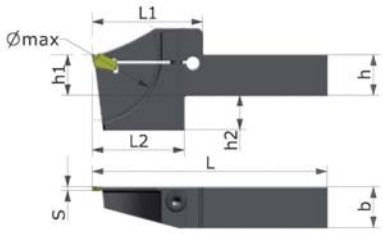
PRODDES	IDNR	MIID	Hand		H	HF		B	CW	OAL	LH	LTA	
WG380 Ref.	ID-Nr.	pocket size		Ø max	h	h1	h2	b	S	L	L1	L2	
CLCBL 1010 K20	10290	SD2	L	28	10	10	10	10	2,2	125	26	36	11
CLCBL 1212 K20	10292	SD2	L	28	12	12	8	12	2,2	125	26	33	11
CLCBL 1612 K20	10298	SD2	L	28	16	16	4	12	2,2	125	26	31	11
CLCBL 2020 K20	10304	SD2	L	40	20	20	5	20	2,2	125	33	33	5
CLCBL 2525 M20	10316	SD2	L	40	25	25	0	25	2,2	150	36	-	2
CLCBL 1212 K30	10294	SD3	L	34	12	12	8	12	3,0	125	29	33	11
CLCBL 1612 K30	10300	SD3	L	34	16	16	4	12	3,0	125	29	34	11
CLCBL 2020 K30	10306	SD3	L	40	20	20	5	20	3,0	125	33	33	5
CLCBL 2525 M30	10318	SD3	L	40	25	25	0	25	3,0	150	36	-	2
CLCBL 1612 K40	10302	SD4	L	40	16	16	8	12	4,0	125	33	34	11
CLCBL 2020 K40	10308	SD4	L	53	20	20	5	20	4,0	125	40	40	5
CLCBL 2525 M40	10320	SD4	L	53	25	25	0	25	4,0	150	40	-	2
CLCBL 2525 P50	10322	SD5	L	80	25	25	15	25	5,0	170	56	62	2
CLCBR 1010 K20	10289	SD2	R	28	10	10	10	10	2,2	125	26	36	11
CLCBR 1212 K20	10291	SD2	R	28	12	12	8	12	2,2	125	26	33	11
CLCBR 1612 K20	10297	SD2	R	28	16	16	4	12	2,2	125	26	31	11
CLCBR 2020 K20	10303	SD2	R	40	20	20	5	20	2,2	125	33	33	5
CLCBR 2525 M20	10315	SD2	R	40	25	25	0	25	2,2	150	36	-	2
CLCBR 1212 K30	10293	SD3	R	34	12	12	8	12	3,0	125	29	33	11
CLCBR 1612 K30	10299	SD3	R	34	16	16	4	12	3,0	125	29	34	11
CLCBR 2020 K30	10305	SD3	R	40	20	20	5	20	3,0	125	33	33	5
CLCBR 2525 M30	10317	SD3	R	40	25	25	0	25	3,0	150	36	-	2
CLCBR 1612 K40	10301	SD4	R	40	16	16	8	12	4,0	125	33	34	11
CLCBR 2020 K40	10307	SD4	R	53	20	20	5	20	4,0	125	40	40	5
CLCBR 2525 M40	10319	SD4	R	53	25	25	0	25	4,0	150	40	-	2
CLCBR 2525 P50	10321	SD5	R	80	25	25	15	25	5,0	170	56	62	2

Fitting inserts

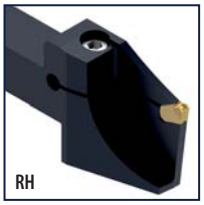
Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | p. 171-173

Reinforced parting off holders

CLCBL..X

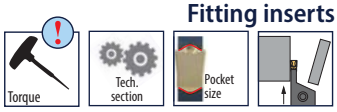


CLCBR..X



PRODDES	IDNR	MIID	Hand		H	HF		B	CW	OAL	LH	LTA	
WG380 Ref.	ID-Nr.	pocket size		Ø max	h	h1	h2	b	S	L	L1	L2	
CLCBL 2020 X20 65	10310	SD2	L	65	20	20	17	20	2,2	115	54	45	12
CLCBL 2020 X30 65	10312	SD3	L	65	20	20	17	20	3,0	115	54	45	12
CLCBL 2525 X30 65	10324	SD3	L	65	25	25	12	25	3,0	140	54	45	12
CLCBL 2020 X40 65	10314	SD4	L	65	20	20	17	20	4,0	115	54	45	12
CLCBL 2525 X40 65	10326	SD4	L	65	25	25	12	25	4,0	140	54	45	12
CLCBR 2020 X20 65	10309	SD2	R	65	20	20	17	20	2,2	115	54	45	12
CLCBR 2020 X30 65	10311	SD3	R	65	20	20	17	20	3,0	115	54	45	12
CLCBR 2525 X30 65	10323	SD3	R	65	25	25	12	25	3,0	140	54	45	12
CLCBR 2020 X40 65	10313	SD4	R	65	20	20	17	20	4,0	115	54	45	12
CLCBR 2525 X40 65	10325	SD4	R	65	25	25	12	25	4,0	140	54	45	12

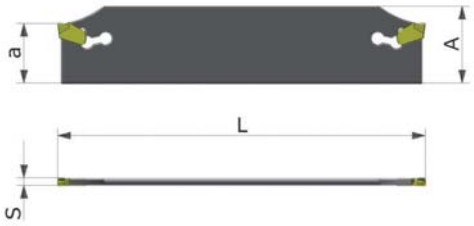
Fitting inserts



p. 220, 221, 245 p. 223 p. 224 p. 171-173

Parting off blades with autolock pocket

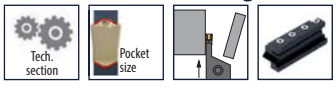
TMS



PRODDES	IDNR	MIID	Hand	H	HF	CW	OAL	
WG310 Ref.	ID-Nr.	pocket size		A	a	S	L	
TMS 26 2	10016	SD2	N	26	21,4	2,2	110	16
TMS 26 3	10017	SD3	N	26	21,4	3,0	110	16
TMS 26 4	10018	SD4	N	26	21,4	4,0	110	16
TMS 32 3	10019	SD3	N	32	25,0	3,0	150	16
TMS 32 4	10020	SD4	N	32	25,0	4,0	150	16
TMS 32 5	10021	SD5	N	32	25,0	5,0	150	16
TMS 32 6	10022	SD6	N	32	25,0	6,0	150	16

Key 1856 (Spare part 16) is added to the delievery

Fitting inserts

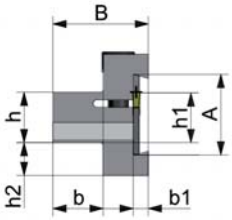


p. 223 p. 224 p. 171-173 p. 176,

KEMMER HARTMETALLWERKZEUGE

Tool blocks for parting off blades

TS



PRODDES	IDNR		HF							OAL	
WG330 Ref.	ID-Nr.		A	h	h1	h2	B	b	b1	L	
TS 26 16	10049	N	26	16	16	3	34	16	5	90	3
TS 26 20	10050	N	26	20	20	9	38	20	5	90	3
TS 32 20	10051	N	32	20	20	13	38	20	6	120	3
TS 32 25	10052	N	32	25	25	8	38	20	6	120	3
TS 32 32	10053	N	32	32	32	1	44	25	6	120	3

Remark

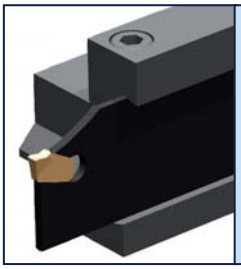
Tool blocks KL and TS are recommended for the dovetail shaft tools on page 96 - 99, 119, 154, 166, 168 and 175.

Blades and tool blocks with the same "A" dimension fit together.

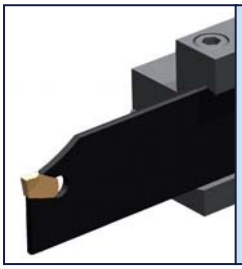
Attention!
Short blade extention will create best results. The shorter the better!

Fitting blades

p. 220, 221, 245 | p. 223 | p. 224 | p. 96 | p. 99 | p. 119 | p. 166, 168 | p. 175



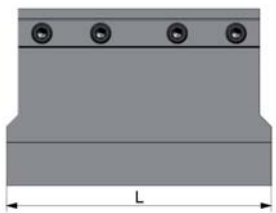
Short extention:
- Clean faces
- No vibrations
- No squeaking
- Best tool life

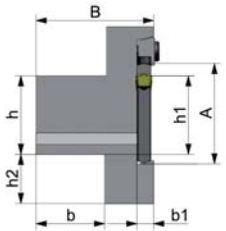


Long extention:
- Rough faces
- Vibrations
- Squeaking
- Low performance

Tool block for parting off blades

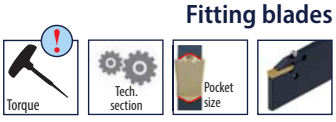
KL 52





PRODDES	IDNR		HF							OHL	
WG330 Ref.	ID-Nr.		A	h	h1	h2	B	b	b1	L	
KL 52 40	45128	N	52,6	40	40	25	60	35	8,5	135	2+38
KL 52 50	45129	N	52,6	50	50	15	63	38	8,5	135	2+38

Fitting blades



p. 220, 221, 245 | p. 223 | p. 224 | p.99

GLM - GripLock Modular

Quick change system with
basic holder and cartridges

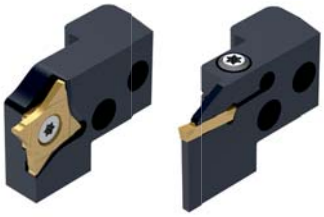
- GLM Square basic holder
- GLM PSC | HSK-T holder
- GLM Cartridges for:

  MULTICUT 4
  P92 Radial
  P92 Face grooving
  P92 P Precision grooving
  FLEX FIX Parting off
  ISO Inserts
  Special solutions

KEMMER HARTMETALLWERKZEUGE

GLM - GripLock Modular

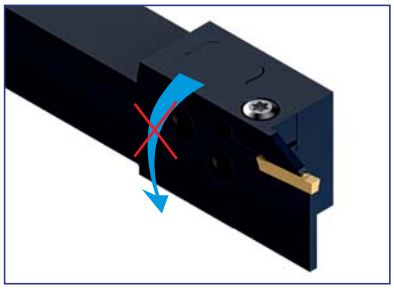
Quick change system with basic toolholder and cartridges



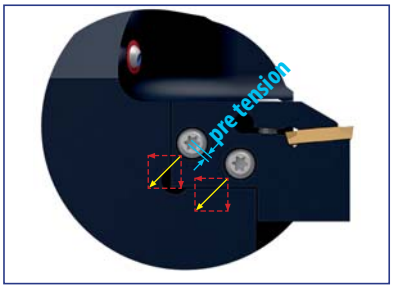
With the
GRIPLOCK MODULAR interlock
the complete GripLock world
can be applied to the most advanced,
state of the art, clamping system

Less setup effort + greater flexibility

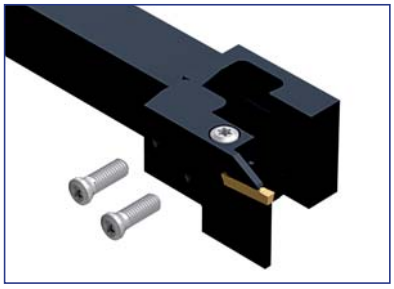
- A cleverly constructed interlockface makes single handed assembly possible.



- The perfect interlock creates monoblock stability.



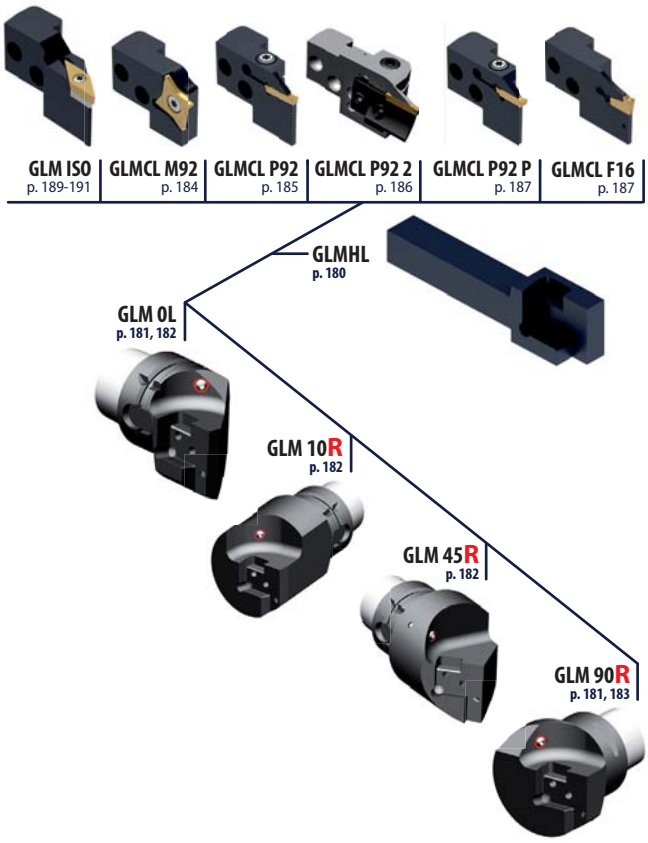
- Change of cartridges:
  simple, safe and fast!
  One key fits all three screws!



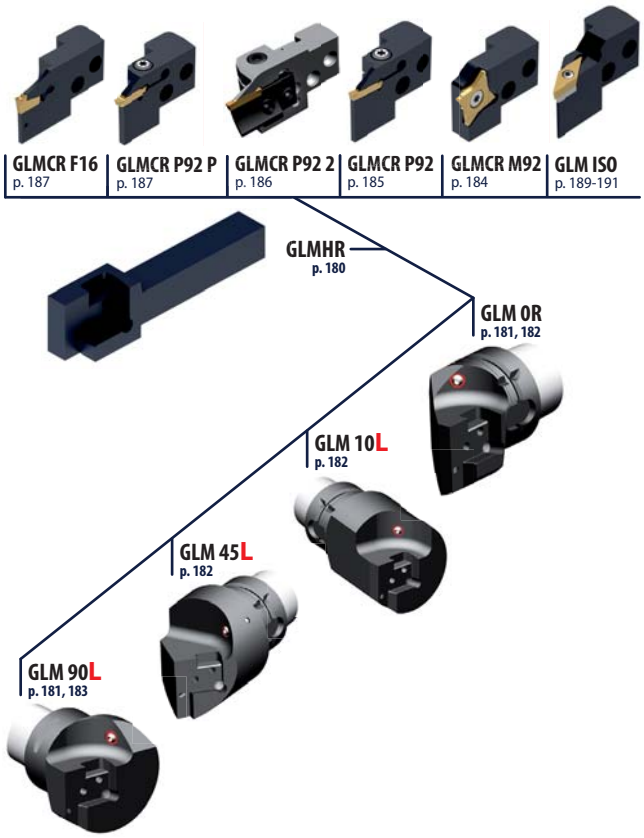
- All important information at a glance:
  The type of cartridge, cutting width,
  NC-Parameter, ID-No. and ISO- drawing.

Basic tool holders with interchangeable cartridges

LH Cartridges



RH Cartridges

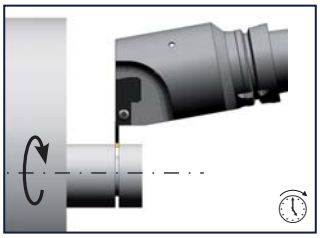


Examples for application and how to fit tools together correctly

LH (CW rotation)

GLM 0° left hand basic tool holder + left hand cartridge

LH (CW rotation)

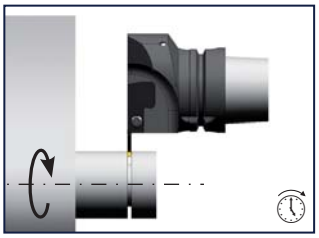


GLM 10° left hand basic tool holder + left hand cartridge

LH (CW rotation)

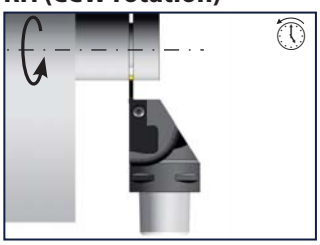
GLM 45° left hand basic tool holder + left hand cartridge

LH (CW rotation)



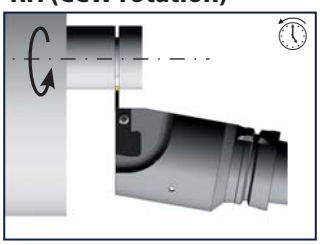
GLM 90° left hand basic tool holder + left hand cartridge

RH (CCW rotation)



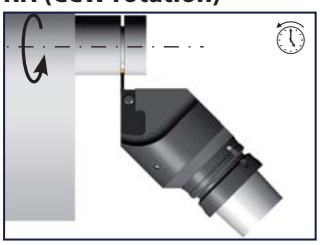
GLM 0° right hand basic tool holder + right hand cartridge

RH (CCW rotation)



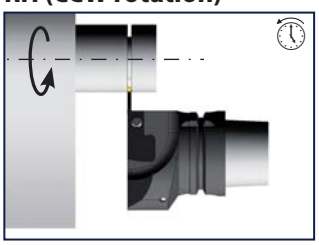
GLM 10° right hand basic tool holder + right hand cartridge

RH (CCW rotation)



GLM 45° right hand basic tool holder + right hand cartridge

RH (CCW rotation)



GLM 90° right hand basic tool holder + right hand cartridge

Code for GLM - Basic toolholders

GLM H R 2020

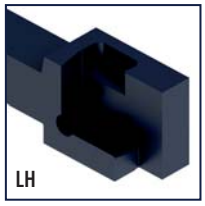
- GLM: Tool System GripLock Modular
- H: Type of coupling
- R: RH / LH
- 2020: Shank size: h; b

Code for GLM - PSC and HSK-T

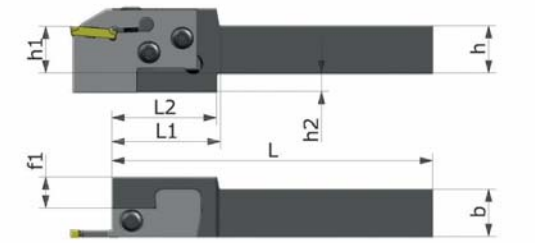
GLM PSC 40 R 0 10 70

- GLM: Tool System GripLock Modular
- PSC: Type of coupling: PSC = (Capto); HSKT = (HSK-T)
- 40: Dimension of PSC / HSK-T
  - 40 → D = 40 mm
  - 50 → D = 50 mm
  - 63 → D = 63 mm
- R: RH / LH
- 0: Tool unit setting angle
- 10: Dimension: F
- 70: Dimension: L
  - 0 → 0 °
  - 10 → 10 °
  - 45 → 45 °
  - 90 → 90 °

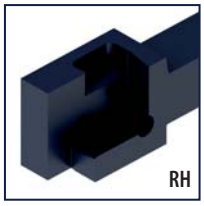
GLM - basic toolholder



GLM H L



GLM H R



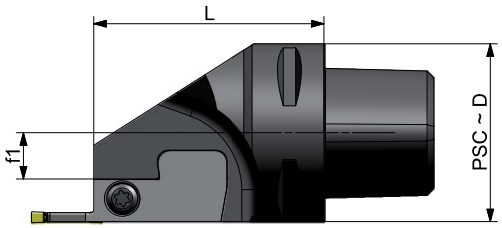
PRODDES	IDNR	Hand	HF			OAW	OAL	LPR		WF	
WG501 Ref.	ID-Nr.		h	h1	h2	b	L	L1	L2	f1	
GLMHL 2020	38072	L	20	20	8	20	130	45	44	8	29
GLMHL 2525	38073	L	25	25	3	25	130	45	44	13	29
GLMHL 3225	38074	L	32	32	0	25	140	40	0	13	29
GLMHR 2020	38069	R	20	20	8	20	130	45	44	8	29
GLMHR 2525	38070	R	25	25	3	25	130	45	44	13	29
GLMHR 3225	38071	R	32	32	0	25	140	40	0	13	29

Fitting cartridges

Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | p. 184 | p. 185 | p. 185 | p. 186 | p. 187-188 | p. 189- 191

GLM - PSC

GLM PSC 0 L

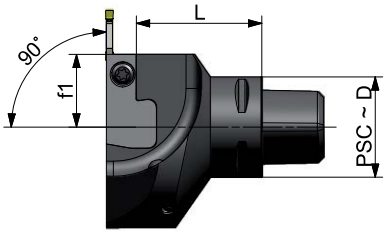


GLM PSC 0 R

PRODDES	IDNR	Hand	CZCMS	WF	OAL		WT
WG501 Ref.	ID-Nr.		PSC/D	f1	L		kg
GLM PSC40 L 0 12 65	38078	L	40	12,0	65	29	0,59
GLM PSC50 L 0 13 65	38079	L	50	13,0	65	29	0,82
GLM PSC63 L 0 195 70	38080	L	63	19,5	70	29	1,37
GLM PSC40 R 0 12 65	38075	R	40	12,0	65	29	0,59
GLM PSC50 R 0 13 65	38076	R	50	13,0	65	29	0,82
GLM PSC63 R 0 195 70	38077	R	63	19,5	70	29	1,37

Fitting cartridges, see below

GLM PSC 90 L



GLM PSC 90 R

PRODDES	IDNR	Hand	CZCMS	WF	OAL		WT
WG501 Ref.	ID-Nr.		PSC/D	f1	L		kg
GLM PSC40 L 90 29 50	38090	L	40	29,0	50	29	1,04
GLM PSC50 L 90 29 50	38091	L	50	29,0	50	29	1,23
GLM PSC63 L 90 315 52	38092	L	63	31,5	52	29	1,73
GLM PSC40 R 90 29 50	38087	R	40	29,0	50	29	1,04
GLM PSC50 R 90 29 50	38088	R	50	29,0	50	29	1,23
GLM PSC63 R 90 315 52	38089	R	63	31,5	52	29	1,73

Remark

RH cartridges will fit only on **LH** basic tool holders with setting angles 10°, 45° and 90°.
(Assembly for CCW run)

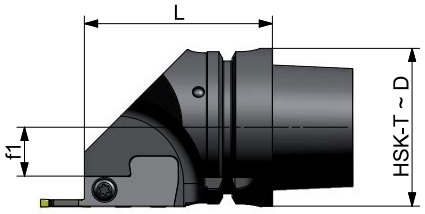
LH cartridges will fit only on **RH** basic tool holders with setting angles 10°, 45° and 90°.
(Assembly for CW run)

Fitting cartridges

Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | p. 184 | p. 185 | p. 185 | p. 186 | p. 187-188 | p. 189- 191

GLM - HSKT

GLM HSKT 0 L

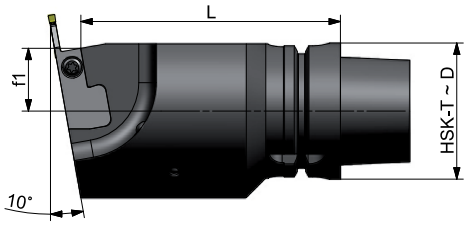


GLM HSKT 0 R

PRODDES	IDNR	Hand	CZCMS	WF	OAL		WT
WG501 Ref.	ID-Nr.		HSK-T/D	f1	L		kg
GLM HSK63T L 0 195 75	38082	L	63	19,5	75	29	1,30
GLM HSK63T R 0 195 75	38081	R	63	19,5	75	29	1,30

Fitting cartridges, see below

GLM HSKT 10 L



GLM HSKT 10 R

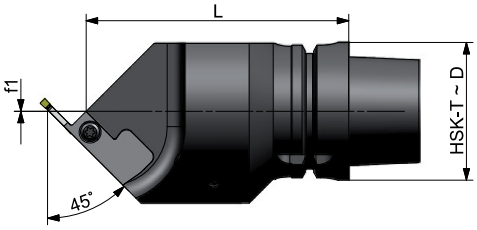
PRODDES	IDNR	Hand	CZCMS	WF	OAL		WT
WG501 Ref.	ID-Nr.		HSK-T/D	f1	L		kg
GLM HSK63T L 10 29 120	38084	L	63	29	120	29	3,56
GLM HSK63T R 10 29 120	38083	R	63	29	120	29	3,56

Remark

RH cartridges will fit only on **LH** basic tool holders with setting angles 10°, 45° and 90°. (Assembly for CCW run)
LH cartridges will fit only on **RH** basic tool holders with setting angles 10°, 45° and 90°. (Assembly for CW run)

Fitting cartridges, see below

GLM HSKT 45 L



GLM HSKT 45 R

PRODDES	IDNR	Hand	CZCMS	WF	OAL		WT
WG501 Ref.	ID-Nr.		HSK-T/D	f1	L		kg
GLM HSK63T L 45 00 120	38086	L	63	00	120	29	3,19
GLM HSK63T R 45 00 120	38085	R	63	00	120	29	3,19

Remark

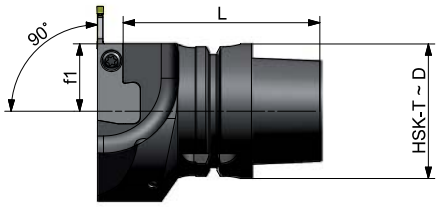
RH cartridges will fit only on **LH** basic tool holders with setting angles 10°, 45° and 90°. (Assembly for CCW run)
LH cartridges will fit only on **RH** basic tool holders with setting angles 10°, 45° and 90°. (Assembly for CW run)

Fitting cartridges

Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | p. 184 | p. 185 | p. 185 | p. 186 | p. 187-188 | p. 189- 191

GLM - HSKT

GLM HSKT 90 L



GLM HSKT 90 R

PRODDES WG501 Ref.	IDNR ID-Nr.	Hand	CZCMS HSK-T/D	WF f1	OAL L		WT kg
GLM HSK63T L 90 315 60	38094	L	63	31,5	60	29	1,71
GLM HSK63T R 90 315 60	38093	R	63	31,5	60	29	1,71

Remark

RH cartridges will fit only on **LH** basic tool holders with setting angles 10°, 45° and 90°. (Assembly for CCW run)

LH cartridges will fit only on **RH** basic tool holders with setting angles 10°, 45° and 90°. (Assembly for CW run)

Fitting cartridges

Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | p. 184 | p. 185 | p. 185 | p. 186 | p. 187-188 | p. 189- 191

Cooling flow unit and key

WG355 Holder	Cooling flow unit ID-Nr	Key ID-Nr.
HSK63T	38834	38833

Remark

This sealing unit stops coolant flowing through the spindle and prevents bearings from being damaged.

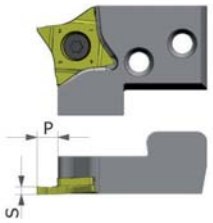
Code for GLM - Cartidges

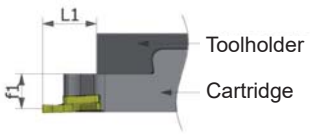
GLM C R P92 30 17 (HP)

- GLM — Tool System GripLock Modular
- C — Cartridge
- R — RH / LH
- P92 — Tool system (Applied inserts)
  - P92 2 → Face grooving
  - P92 P → Precision grooving
  - M92 Q → MULTICUT
  - F16 → Flex Fix
- 30 — Cutting width
- 17 — Cutting depth
- (HP) — With internal coolant

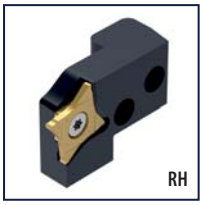
GLM - Cartridges System M92

GLMC L M92 Q





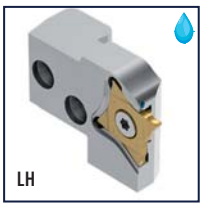
GLMC R M92 Q



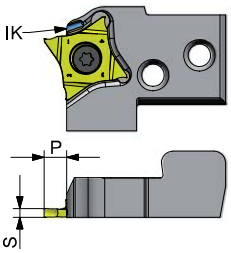
PRODDES	IDNR	MIID	Hand	CDX	LH	WF	
WG510 Ref.	ID-Nr.	pocket size		P	L1	f1	
GLMCL M92 Q 16 65	38182	16	L	6,5	17,5	12,3	24
GLMCR M92 Q 16 65	38179	16	R	6,5	17,5	12,3	24

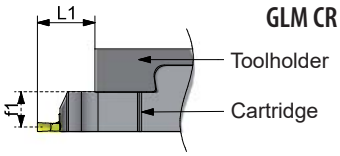
Fitting inserts, see below

GLM - Cartridges System M92

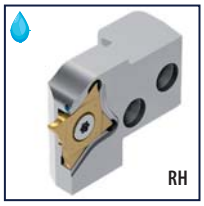


GLM CL M92Q...HP





GLM CR M92Q...HP



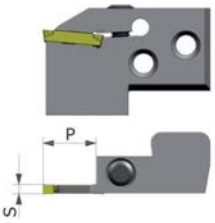
PRODDES	IDNR	MIID	Hand	CDX	LH	CW	WF	
WG5105 Ref.	ID-Nr.	pocket size		P	L1	s	f1	
GLMCL M92 Q 16 65 HP	59914	16	L	6,5	17,5	3,5	12,3	24
GLMCR M92 Q 16 65 HP	49703	16	R	6,5	17,5	3,5	12,3	24

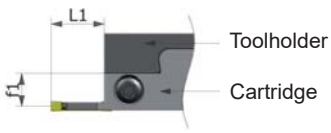
Fitting inserts and tools

Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | Intersection main cutting edge p. 228 | p. 29 + 30 | p. 31 | p. 32 | p. 33 | p. 34 | p. 35-37 | p. 38 | p. 180 | p. 182- 183 | Hard material machining p. 42-46

GLM Cartridges System P92

GLMC L P92





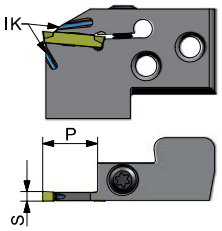
GLMC R P92

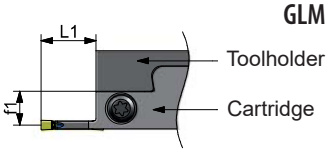
PRODDES	IDNR	MIID	Hand	CDX	LH	CW	WF	
WG510 Ref.	ID-Nr.	pocket size		P	L1	S	f1	
GLMCL P92 20+25 17	38107	20	L	17	17,5	2+2,5	11,20	29
GLMCL P92 30 17	38108	30	L	17	17,5	3	10,76	29
GLMCL P92 40 17	38109	40	L	17	17,5	4	10,26	29
GLMCL P92 50 22	38110	50	L	22	22,5	5	10,78	29
GLMCR P92 20+25 17	38097	20	R	17	17,5	2+2,5	11,20	29
GLMCR P92 30 17	38098	30	R	17	17,5	3	10,76	29
GLMCR P92 40 17	38099	40	R	17	17,5	4	10,26	29
GLMCR P92 50 22	38100	50	R	22	22,5	5	10,78	29

Fitting inserts and tools, see below

GLM Cartridges System P92 with internal coolant

GLM CL P92...HP



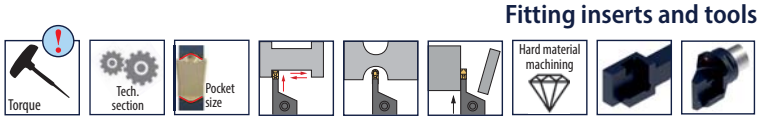


GLM CR P92...HP

PRODDES	IDNR	MIID	Hand	CDX	LH	CW	WF	
WG5105 Ref.	ID-Nr.	pocket size		P	L1	S	f1	
GLMCL P92 30 17 HP	59916	30	L	17	17,5	3	10,76	29
GLMCR P92 30 17 HP	59917	30	R	17	17,5	3	10,76	29

How to order:	recommended	
1 St. GLM HSK63T **R** 0 195 75	or:	**1 St. ID-Nr. 38081**
1 St. GLMC**R** P92 30 17	or:	**1 St. ID-Nr. 38098**

Fitting inserts and tools

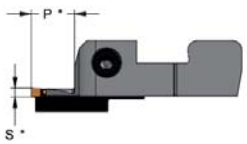


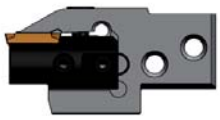
p. 220, 221, 245 p. 223 p. 224 p. 56 - 65 p. 66 p. 68-74 p. 77-80 p. 180 p. 182- 183

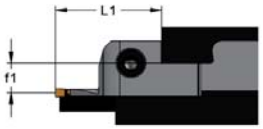
KEMMER HARTMETALLWERKZEUGE

GLM Adapter face grooving C92 catridges

GLMCR P922 LD..







GLMCL P922 RD..

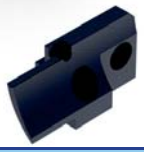
PRODDES	IDNR	MIID	Hand	CDX	LH	CW	WF	
WG510 Ref.	ID-Nr.	pocket size		P	L1	S	f1	
GLMCL P922 RD30	59685	30	L	15	38,0	3	10,75	11+2
GLMCL P922 RD40	59686	40	L	15	38,0	4	10,25	11+2
GLMCR P922 LD30	59687	30	R	15	38,0	3	10,75	11+2
GLMCR P922 LD40	59688	40	R	15	38,0	4	10,25	11+2

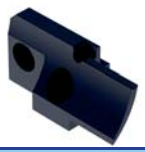
Fitting cartridges

p. 110

The variety of PSC and HSK holders combined with the flexibility of the C92 range!

Cutting width 3 mm, 4 mm
Cutting depth 15 mm





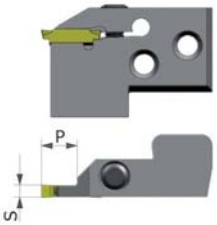
Adapter	C92 Cartridge	ID	Adapter	C92 Cartridge	ID
GLMCR P922 LD30 ID59687	C92 LD 2530 30	10371	GLMCL P922 RD30 ID59685	C92 RD 2530 30	10385
	C92 LD 3035 30	10372		C92 RD 3035 30	10386
	C92 LD 3542 30	10373		C92 RD 3542 30	10387
	C92 LD 4250 30	10374		C92 RD 4250 30	10388
	C92 LD 5058 30	10376		C92 RD 5058 30	10390
	C92 LD 5866 30	10378		C92 RD 5866 30	10392
	C92 LD 6675 30	10379		C92 RD 6675 30	10393
	C92 LD 75100 30	10381		C92 RD 75100 30	10395
	C92 LD 100200 30	10369		C92 RD 100200 30	10383
	C92 LD 200300 30	43835		C92 RD 200300 30	18356
GLMCR P922 LD40 ID59688	C92 LD 4254 40	10375	GLMCL P922 RD40 ID59686	C92 RD 4254 40	10389
	C92 LD 5466 40	10377		C92 RD 5466 40	10391
	C92 LD 6680 40	10380		C92 RD 6680 40	10394
	C92 LD 80100 40	10382		C92 RD 80100 40	10396
	C92 LD 100200 40	10370		C92 RD 100200 40	10384
	C92 LD 200300 40	37200		C92 RD 200300 40	21371

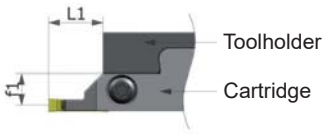
Fitting tools

p. 220, 221, 245 p. 223 p. 224 p. 180 p. 182- 183

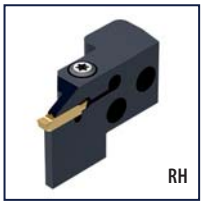
GLM - Cartridges System P92 P

GLMC L P92 P



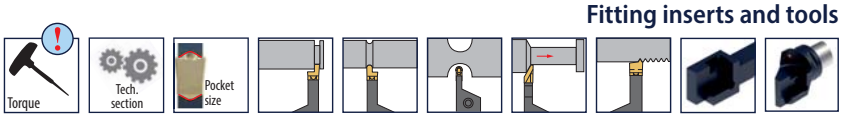


GLMC R P92 P



PRODDES	IDNR	MIID	Hand	CDX	LH	CW	WF	
WG510 Ref.	ID-Nr.	pocket size		P	L1	S	f1	
GLMCL P92 P 4 11	38175	P40	L	11	17,5	4	10,26	29
GLMCL P92 P 5+6 14	38176	P50	L	14	20,5	5+6,5	9,86	29
GLMCR P92 P 4 11	38171	P40	R	11	17,5	4	10,26	29
GLMCR P92 P 5+6 14	38172	P50	R	14	20,5	5+6,5	9,86	29

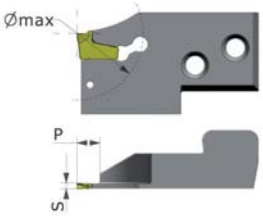
Fitting inserts and tools

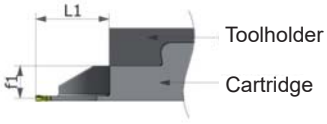


p. 220, 221, 245 p. 223 p. 224 p. 124 p. 125 p. 126 p. 127-129 p. 130-131 p. 180 p. 182- 183

GLM - Cartridges System F16

GLMC L F16

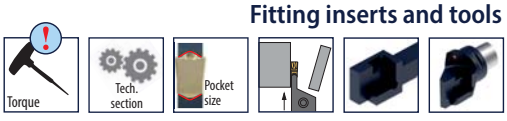




GLMC R F16

PRODDES	IDNR	MIID	Hand	CDX	LH	CODX	CW	WF	
WG510 Ref.	ID-Nr.	pocket size		P1	L1	Ø max	S	f1	
GLMCL F16 20 50	43338	FF2	L	6,0	25,5	50	2	11,2	AWF16
GLMCL F16 30 50	38880	FF3	L	6,0	25,5	50	3	10,8	AWF16
GLMCL F16 40 50	43339	FF4	L	6,0	25,5	50	4	10,3	AWF16
GLMCR F16 20 50	43340	FF2	R	6,0	25,5	50	2	11,2	AWF16
GLMCR F16 30 50	39726	FF3	R	6,0	25,5	50	3	10,8	AWF16
GLMCR F16 40 50	43341	FF4	R	6,0	25,5	50	4	10,3	AWF16

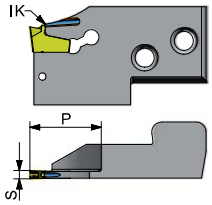
Fitting inserts and tools

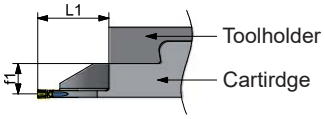


p. 220, 221, 245 p. 223 p. 224 p. 161-163 p. 180 p. 182- 183

GLM Cartridges System F16 with internal coolant

GLM CL F16...HP



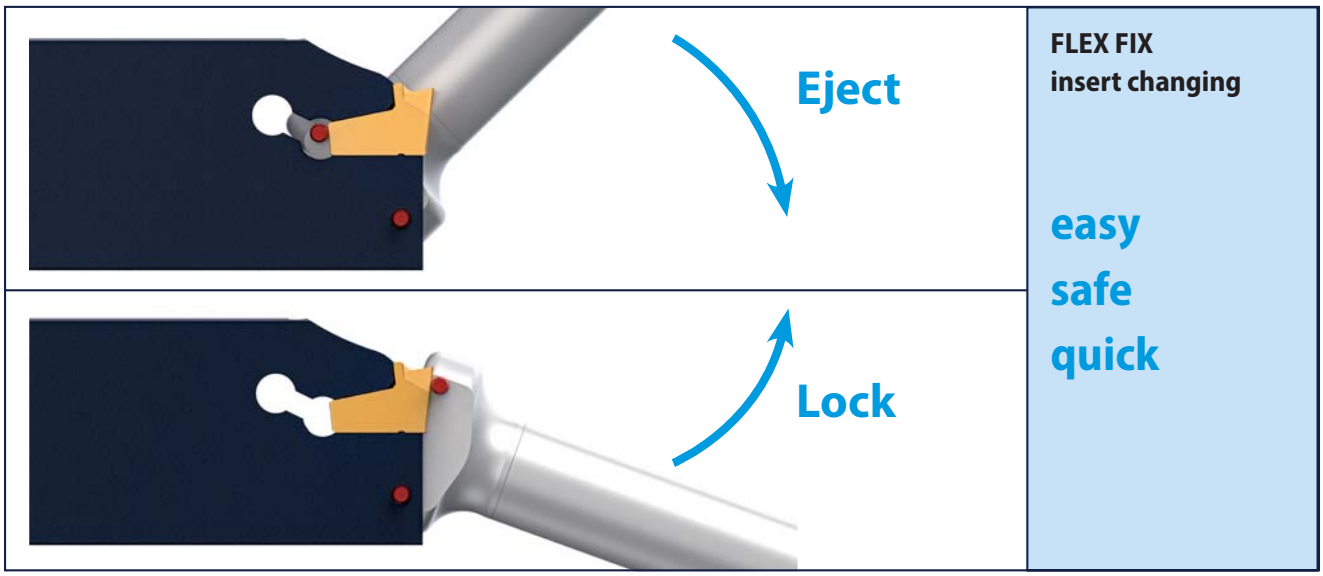


GLM CR F16...HP

PRODDES	IDNR	MIID	Hand	CDX	LH	CODX	CW	WF	
WG5105 Ref.	ID-Nr.	pocket size		P1	L1	Ø max	S	f1	
GLMCL F16 30 50 HP	59918	FF3	L	6,0	25,5	50	3	10,8	AWF16
GLMCR F16 30 50 HP	59919	FF3	R	6,0	25,5	50	3	10,8	AWF16

Fitting inserts and tools

Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | p. 161-163 | p. 180 | p. 182- 183



FLEX FIX
insert changing

easy
safe
quick

Key for FLEX FIX tools

AW F16

WG355 Ref.	ID-Nr.	ET
AW F16	39880	AW F16 1
AW F16 1	39881	

Remark:
The key is added to each FLEX FIX tool delivery.

Modular turning with ISO-cartridges

More flexibility with GripLock Modular using ISO cartridges

The GripLock modular system fits:

Tailor made ISO cartridges can be ordered

Required information for Specials:
sonder@kemmerhmw.de

- Type of insert
- Right hand or left hand
- Setting angle
- Clamping with spare parts
- Holder/flange type/setting angle of cartridge
- Setting angle of cartridge
- Maximum extension

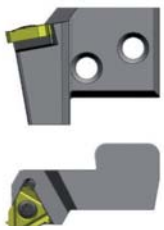
Code for ISO - Cartridges

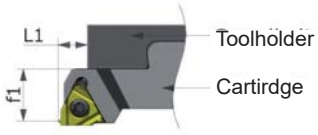
GLM C R CN 12 04

- GLM — Tool system GripLock Modular
- C — Cartridge
- R — RH / LH
- CN — Form and clearance of insert
- 12 — Length of cutting edge
- 04 — Insert thickness

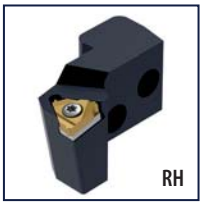
GLM-ISO-Cartridges for ISO threading inserts

GLMCL 16EL ISO





GLMC R 16ER ISO

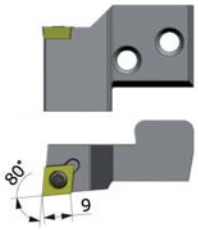


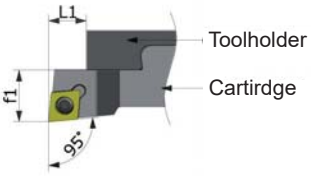
PRODDES	IDNR	Hand	LH	WF	MIID	
WG550 Ref.	ID-Nr.		L1	f1	Insert	
GLMCL 16EL ISO	47680	L	8,8	17	EL16	p. 219
GLMCR 16ER ISO	46962	R	8,8	17	ER16	p. 219

Fitting tools p. 180 - 183

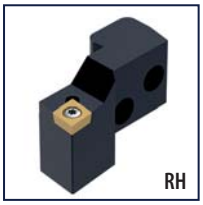
GLM-ISO-Cartridges with positive insert pocket

GLMCL CC09T3



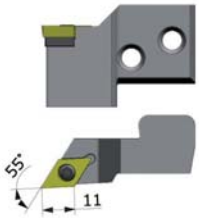


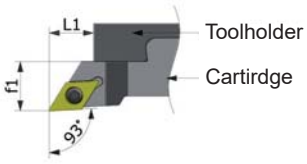
GLMCR CC09T3



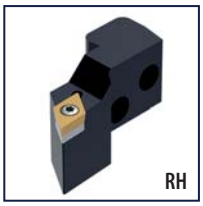
PRODDES	IDNR	Hand	LH	WF	MIID	
WG550 Ref.	ID-Nr.		L1	f1	Insert	
GLMCL CC09T3	46966	L	12,5	17	CC09T308	p. 219
GLMCR CC09T3	46961	R	12,5	17	CC09T308	p. 219

GLMCL DC11T3

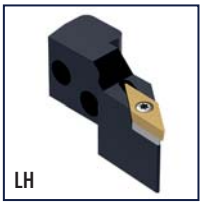




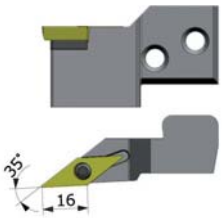
GLMCR DC11T3

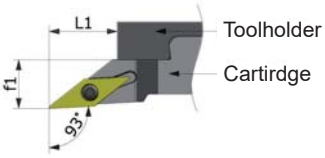


PRODDES	IDNR	Hand	LH	WF	MIID	
WG550 Ref.	ID-Nr.		L1	f1	Insert	
GLMCL DC11T3	46959	L	15,5	17	DC11T312	p. 219
GLMCR DC11T3	46965	R	15,5	17	DC11T312	p. 219

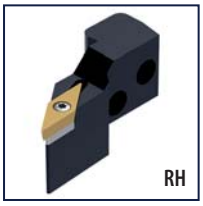


GLMCL VC1604

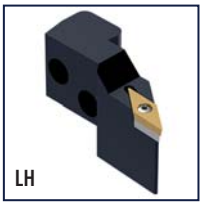




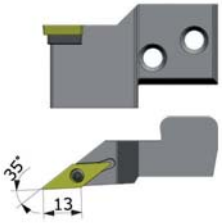
GLMCR VC1604

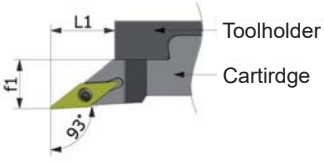


PRODDES	IDNR	Hand	LH	WF	MIID	
WG550 Ref.	ID-Nr.		L1	f1	Insert	
GLMCL VC1604	46968	L	24,5	17	VC160416	p. 219
GLMCR VC1604	46967	R	24,5	17	VC160416	p. 219

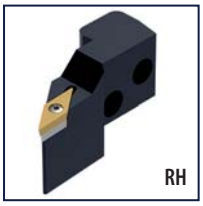


GLMCL VC1303





GLMCR VC1303

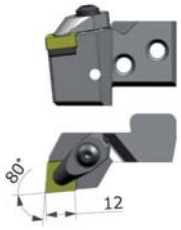


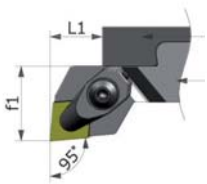
PRODDES	IDNR	Hand	LH	WF	MIID	
WG550 Ref.	ID-Nr.		L1	f1	Insert	
GLMCL VC1303	47553	L	22,5	16,5	VC130308	p. 219
GLMCR VC1303	47554	R	22,5	16,5	VC130308	p. 219

Fitting tools p. 180 - 183

GLM-ISO-Cartridges with negative insert pocket

GLMCL CN1204





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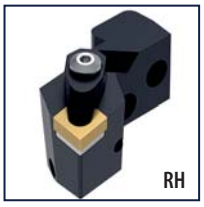
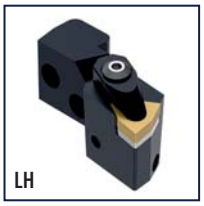
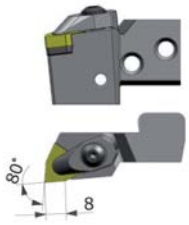
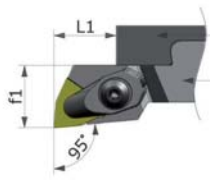


PRODDES	IDNR	Hand	LH	WF	MIID	
WG550 Ref.	ID-Nr.		L1	f1	Insert	
GLMCL CN1204	47607	L	17,5	25	CN120416	p. 219
GLMCR CN1204	47341	R	17,5	25	CN120416	p. 219

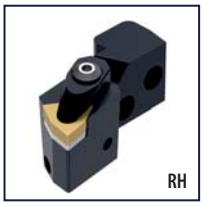


GLMCL WN0804

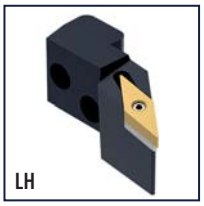




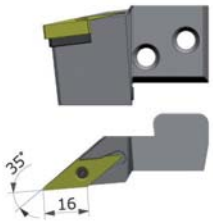
GLMCR WN0804

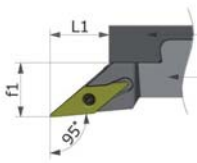


PRODDES	IDNR	Hand	LH	WF	MIID	
WG550 Ref.	ID-Nr.		L1	f1	Insert	
GLMCL WN0804	46964	L	20,5	20,5	WN080412	p. 219
GLMCR WN0804	46969	R	20,5	20,5	WN080412	p. 219

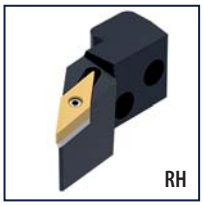


GLMCL VN1604



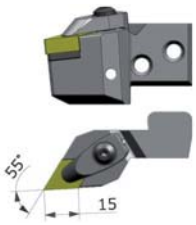


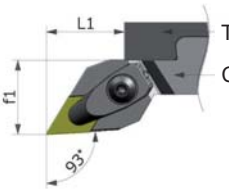
GLMCR VN1604



PRODDES	IDNR	Hand	LH	WF	MIID	
WG550 Ref.	ID-Nr.		L1	f1	Insert	
GLMCL VN1604	46960	L	21,5	19	VN160410	p. 219
GLMCR VN1604	46963	R	21,5	19	VN160410	p. 219

GLMCL DN1506



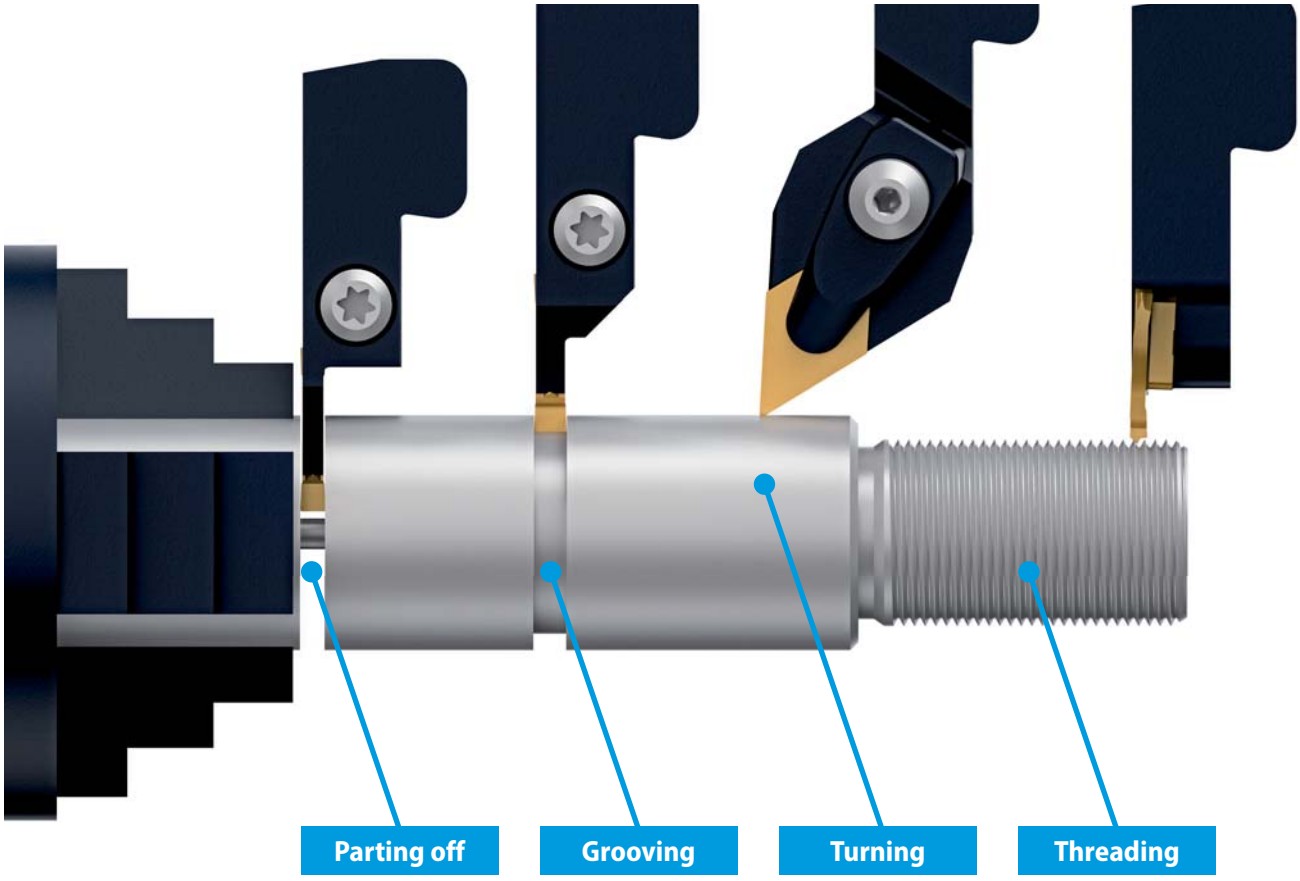


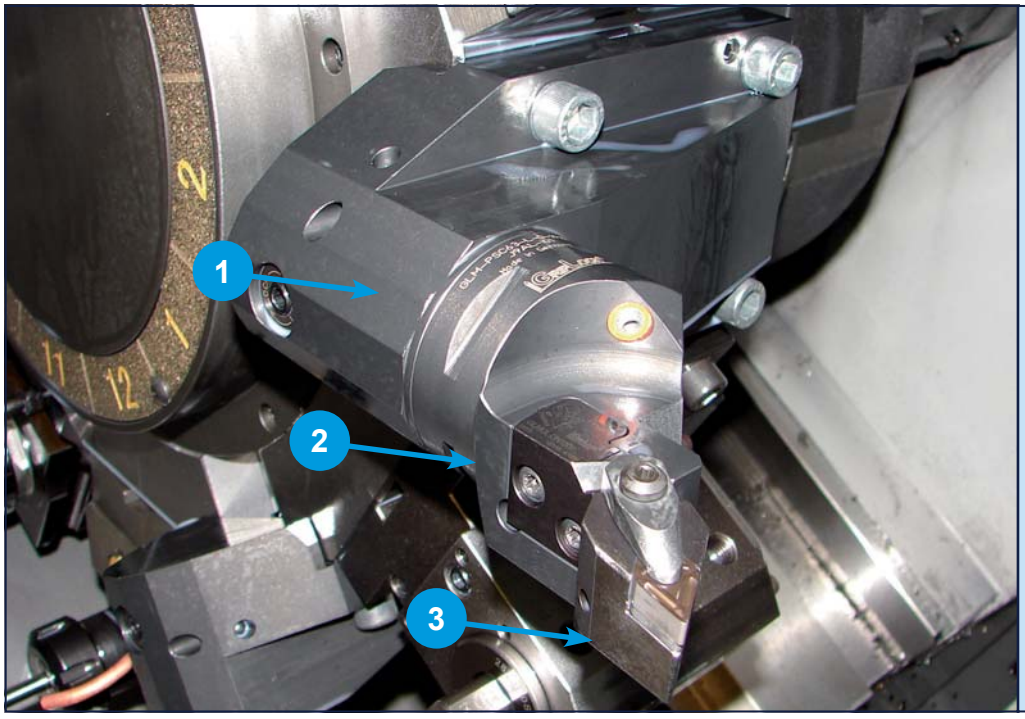
GLMCR DN1506

PRODDES	IDNR	Hand	LH	WF	MIID	
WG550 Ref.	ID-Nr.		L1	f1	Insert	
GLMCL DN1506	47606	L	27,5	26	DN150612	p. 219
GLMCR DN1506	47340	R	27,5	26	DN150612	p. 219

Fitting tools p. 180 - 183

GLM - Modular cartridges machining a large component





Application on a turret

1. PSC Basic holder
2. GLMCL PSC63019570
3. GLMCL DN1506

GLM - GripLock Modular

perfect **tailor made** solutions unlimited

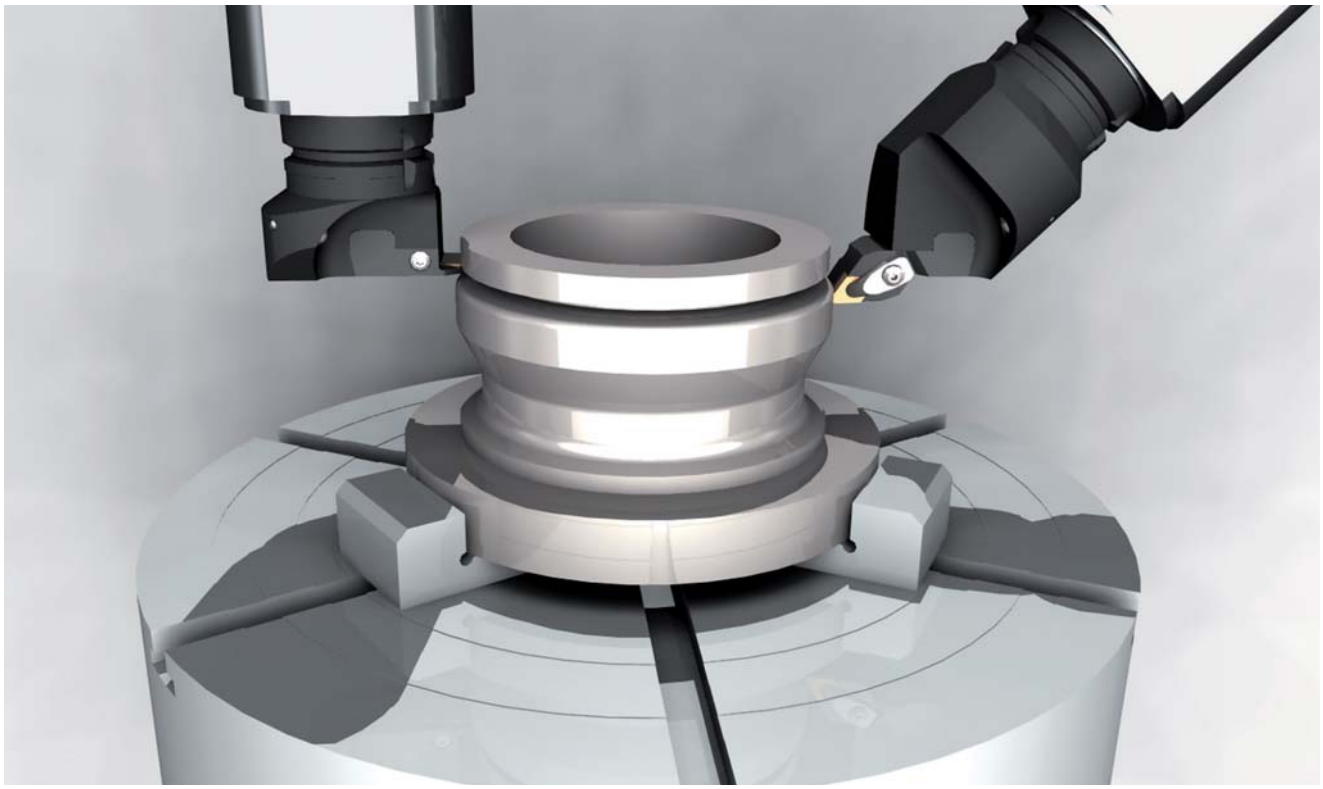
Tooling units

Special cartridges for standard basic tool holders

KEMMER HARTMETALLWERKZEUGE

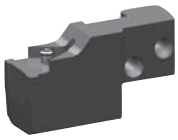
GLM - GripLock Modular

perfect **tailor made** solutions unlimited



GLM-applications for tailor made solutions

TAILOR MADE **Cartridges**

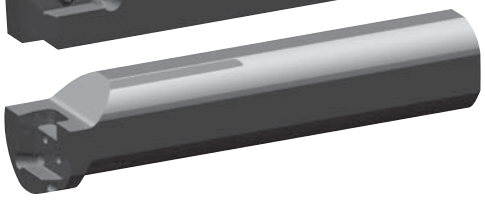


Cutting GripLock or ISO Turning

TAILOR MADE **Holders**

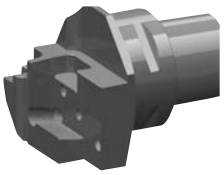
e.g. 40 x 50

TAILOR MADE **Boring bars**



e.g. D 40

TAILOR MADE **Tool holders**



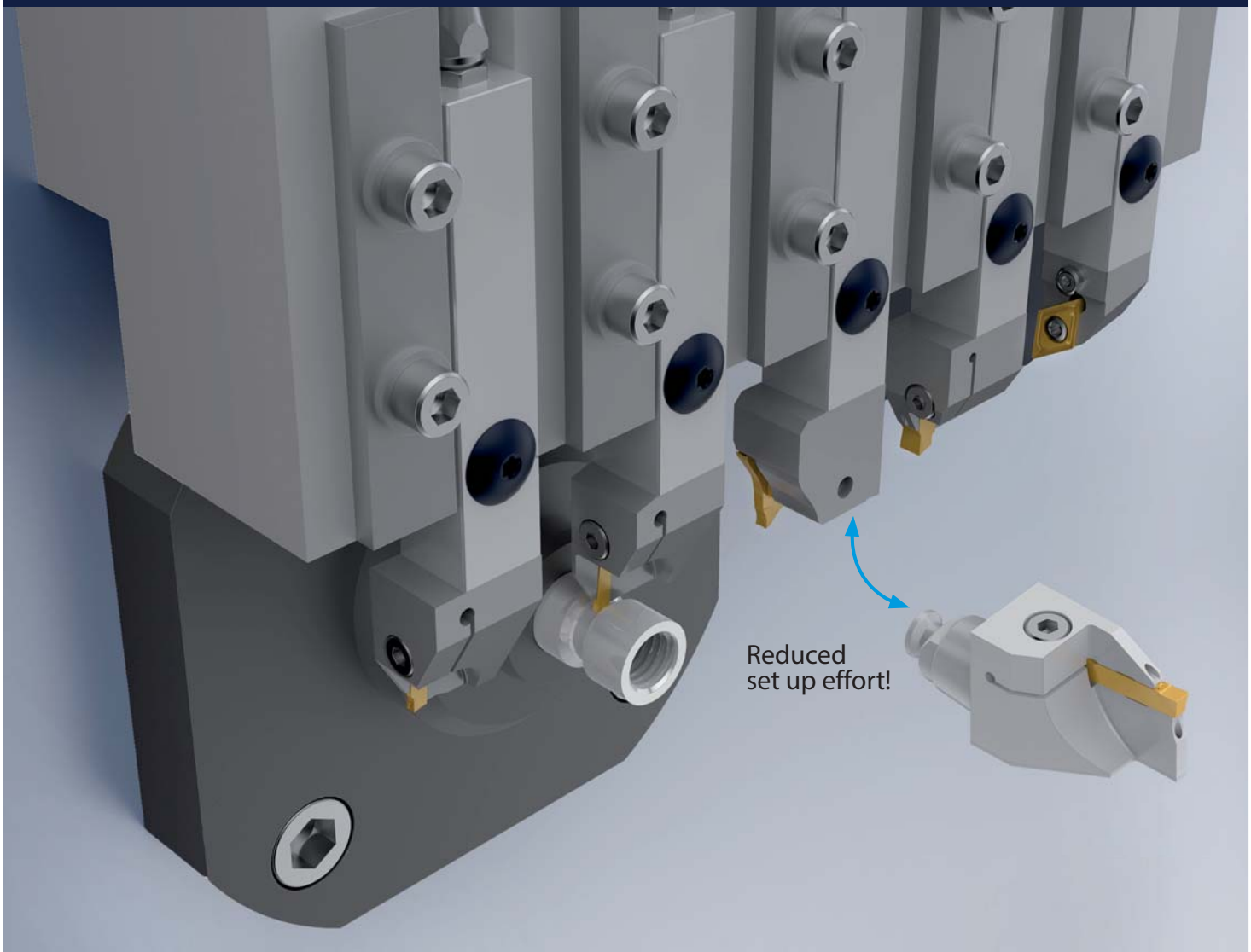
PSC 32 - 80
(can be delivered as well as Monoblock tools.)

GLS - GripLock SWISS

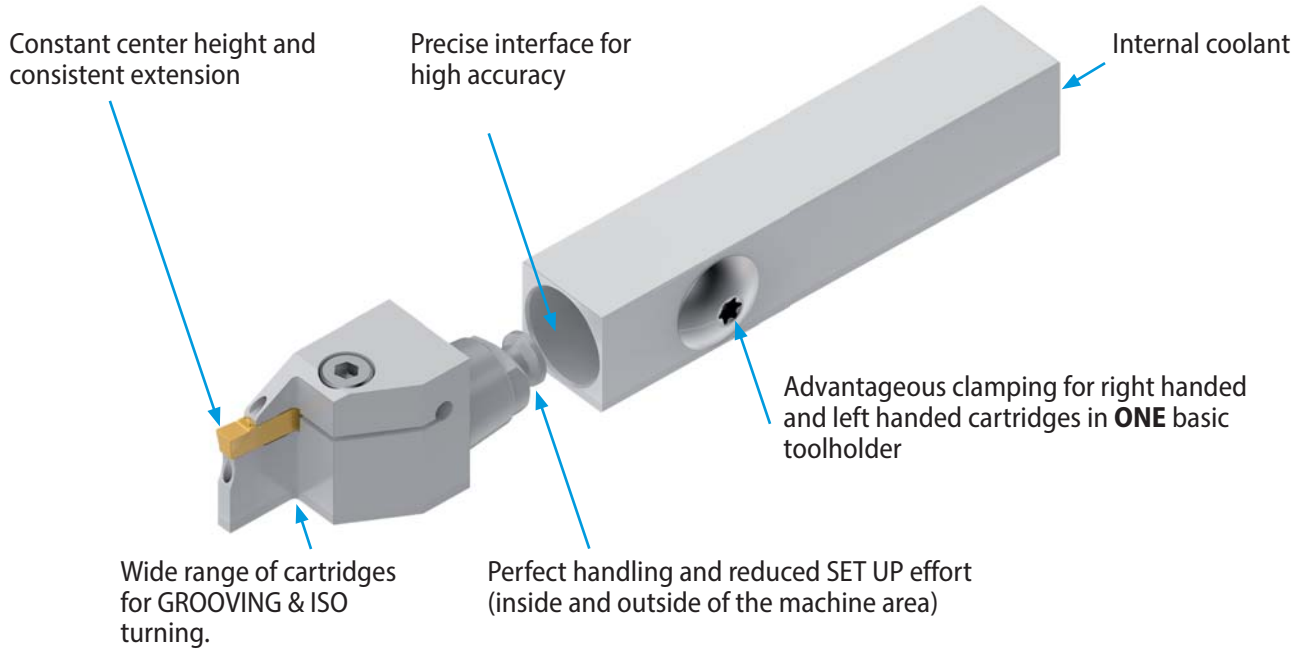
Modular cartridge system for
Swiss-type lathes

Cartridges & Holders for:

- Grooving
- Side turning
- Parting off
- Threading
- ISO turning



Advantages



Systems


MULTICUT 4


P92 / P92 A

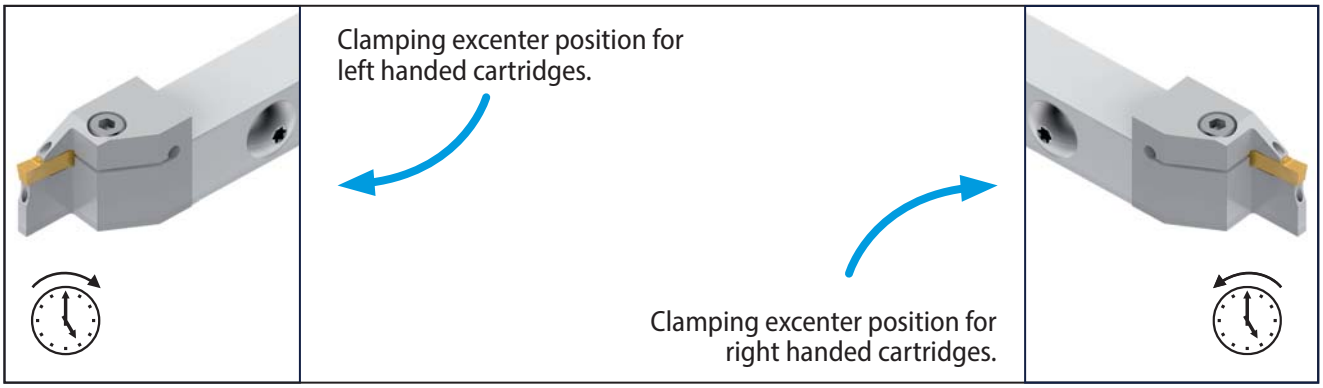

P92 S


P92 P


ISO

Handling

With the included clamping excenter right handed and left handed cartridges can be fixed easily and safe (the unit therefore can be used on both sides of the toolholder shank)



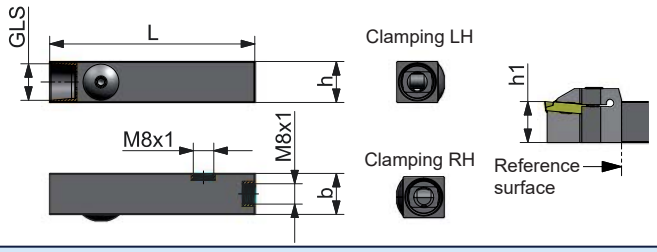
Code for GripLock SWISS toolholders

GLS4 H N 1616 HP

- GLS4 — Interface size
- H — H = Square; PSC = PSC Interface
- N — N = neutral design; R = RH version; L = LH version
- 1616 — Shank size (not for type PSC)
- HP — Internal coolant

Toolholder for GripLock SWISS cartridges

GLS HN

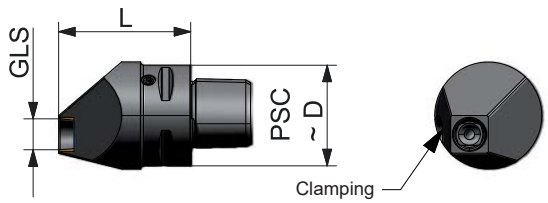


PRODDES WG800 Ref.	IDNR ID-Nr.	Hand	GLS	H h	HF h1	B b	OAL L	
GLS3 HN 1212 HP	66298	N	3	12	12	12	80	page 197
GLS4 HN 1616 HP	66299	N	4	16	16	16	80	page 197
GLS5 HN 2020 HP	66300	N	5	20	20	20	100	page 197

Customized cartridges SM5 on request

Basic holder for GripLock SWISS cartridges

GLS PSC



PRODDES WG800 Ref.	IDNR ID-Nr.	Hand	GLS	CZCMS PSC/D	OAL L	
GLS3 PSC32 N HP	66321	N	3	32	42	page 197
GLS4 PSC32 N HP	66322	N	4	32	45	page 197

Spare parts for clamping / keys / plugs

Size	ID cl. excenter	ID torque key	ID TORX key	ID plug
GLS 3	65798	65799/ 3,8 Nm	65801	65797
GLS 4	64668	65803/ 5,7 Nm	65805	65797
GLS 5	65998	65803/ 5,7 Nm	65805	65797

Fitting cartridges

p. 198 p. 199 p. 201 p. 201 p. 202

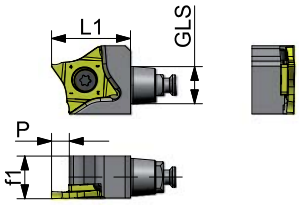
Code for GripLock SWISS cartridges

GLS4 C R P92 X 30 11 (HP)

- GLS4 — Interface size
- C — Type cartridge
- R — Direction
- P92 — Grooving system
- X — Extension / Length X = special
- 30 — Cutting width
- 11 — Cutting depth / Ømax. (type P92A)
- (HP) — Internal coolant

GripLock SWISS Grooving cartridges MULTICUT4

GLS L M92

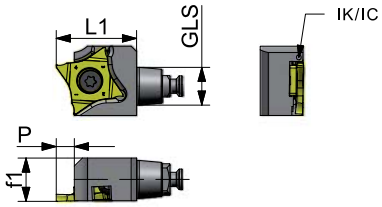


GLS R M92

PRODDES	IDNR		MIID	Hand	CDX	LH	WF	
WG805 Ref.	ID-Nr.	GLS	pocket size		P	L1	f1	
GLS3 CL M92Q X16	66297	16L	16L	L	6,5	23	8,3	33+39+40
GLS4 CL M92QE X16	66459	GLS4	16EL	L	6,5	23	8,3	33+39+40
GLS3 CR M92Q X16	66296	16R	16R	R	6,5	23	8,3	33+39+40
GLS4 CR M92QE X16	66457	GLS4	16ER	R	6,5	23	8,3	33+39+40

* More spare parts see page 219

GLS L M92 HP



GLS R M92 HP

PRODDES	IDNR		MIID	Hand	CDX	LH	WF	
WG805 Ref.	ID-Nr.	GLS	pocket size		P	L1	f1	
GLS4 CL M92Q X16 HP	66295	GLS4	16L	L	6,5	23	8,3	33+39+40 *
GLS4 CL M92QE X16 HP	66456	GLS4	16EL	L	6,5	23	8,3	33+39+40 *
GLS4 CR M92Q X16 HP	66294	GLS4	16R	R	6,5	23	8,3	33+39+40 *
GLS4 CR M92QE X16 HP	66455	GLS4	16ER	R	6,5	23	8,3	33+39+40 *

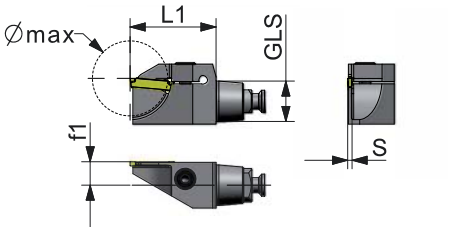
* More spare parts see page 219

Fitting tools and inserts

Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | Intersection main cutting edge p. 228 | p. 197 | p. 29 + 30 | p. 31 | p. 32 | p. 33 | p. 34 | p. 35-37 | p.38 | Hard material machining p. 42-46

GripLock SWISS Grooving cartridges P92

GLS L P92 A X15



GLS R P92 A X15

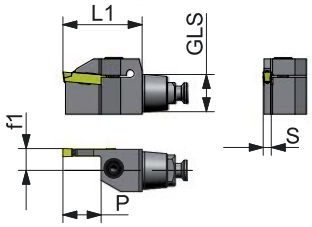
PRODDES	IDNR		MIID	Hand	CODX	LH	SW	WF	
WG805 Ref.	ID-Nr.	GLS	pocket size		Ømax	L1	S	f1	
GLS3 CL P92 A X15 22	66255	GLS3	15	L	22	25	1,5	6,2	46 *
GLS4 CL P92 A X15 28	66265	GLS4	15	L	28	30	1,5	8,2	46 *
GLS3 CR P92 A X15 22	66254	GLS3	15	R	22	25	1,5	6,2	46 *
GLS4 CR P92 A X15 28	66264	GLS4	15	R	28	30	1,5	8,2	46 *

* More spare parts see page 219

Fitting inserts

p. 220, 221, 245 p. 223 p. 224 p. 197 p. 68-74 p. 77-80

GLS L P92 X

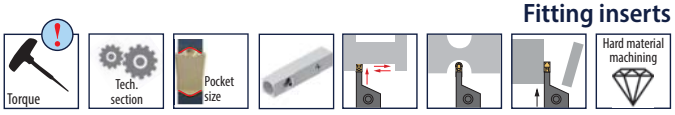


GLS R P92 X

PRODDES	IDNR		MIID	Hand	CDX	LH	SW	WF	
WG805 Ref.	ID-Nr.	GLS	pocket size		P	L1	S	f1	
GLS3 CL P92 X20+25 11	66257	GLS3	20	L	11	25	2+2,5	6,2	46 *
GLS4 CL P92 X20+25 14	66269	GLS4	20	L	14	30	2+2,5	8,2	46 *
GLS3 CL P92 X30 11	66261	GLS3	30	L	11	25	3	6,3	46 *
GLS4 CL P92 X30 14	66275	GLS4	30	L	14	30	3	8,3	46 *
GLS3 CR P92 X20+25 11	66256	GLS3	20	R	11	25	2+2,5	6,2	46 *
GLS4 CR P92 X20+25 14	66268	GLS4	20	R	14	30	2+2,5	8,2	46 *
GLS3 CR P92 X30 11	66260	GLS3	30	R	11	25	3	6,3	46 *
GLS4 CR P92 X30 14	66274	GLS4	30	R	14	30	3	8,3	46 *

* More spare parts see page 219

Fitting inserts



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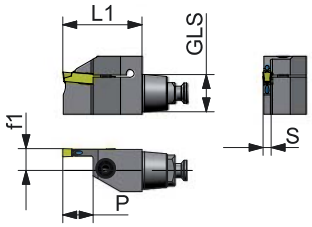
GripLock SWISS Grooving cartridges P92

GLS L P92 X HP

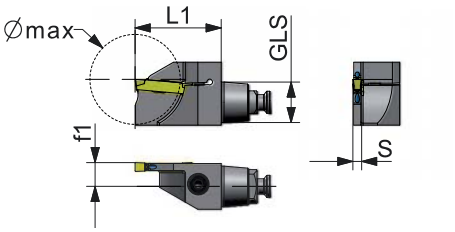


GLS R P92 X HP

PRODDES	IDNR		MIID	Hand	CDX	LH	SW	WF	
WG805 Ref.	ID-Nr.	GLS	pocket size		P	L1	S	f1	
GLS3 CL P92 X20+25 11 HP	66259	GLS3	20	L	11	25	2+2,5	6,2	46 *
GLS4 CL P92 X20+25 11 HP	66267	GLS4	20	L	11	30	2+2,5	8,2	46 *
GLS3 CL P92 X30 11 HP	66263	GLS3	30	L	11	25	3	6,3	46 *
GLS4 CL P92 X30 11 HP	66273	GLS4	30	L	11	30	3	8,3	46 *
GLS3 CR P92 X20+25 11 HP	66258	GLS3	20	R	11	25	2+2,5	6,2	46 *
GLS4 CR P92 X20+25 11 HP	66266	GLS4	20	R	11	30	2+2,5	8,2	46 *
GLS3 CR P92 X30 11 HP	66262	GLS3	30	R	11	25	3	6,3	46 *
GLS4 CR P92 X30 11 HP	66272	GLS4	30	R	11	30	3	8,3	46 *

* More spare parts see page 219

GLS L P92A X HP



GLS R P92A X HP

PRODDES	IDNR		MIID	Hand	CODX	LH	SW	WF	
WG805 Ref.	ID-Nr.	GLS	pocket size		Ømax	L1	S	f1	
GLS4 CL P92 A X20+25 34 HP	66271	GLS4	20	L	34	30	2+2,5	8,2	46 *
GLS4 CR P92 A X20+25 34 HP	66270	GLS4	20	R	34	30	2+2,5	8,2	46 *
GLS4 CL P92 A X30 34 HP	66277	GLS4	30	L	34	30	3	8,3	46 *
GLS4 CR P92 A X30 34 HP	66276	GLS4	30	R	34	30	3	8,3	46 *

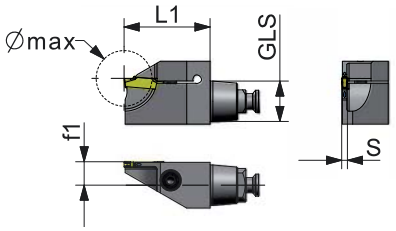
* More spare parts see page 219

Fitting inserts

Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | p. 197 | p. 56 - 65 | p. 66 | p. 68-74 | Hard material machining p. 77-80

GripLock SWISS Grooving cartridges P92 S

GLS L P92S X HP



GLS R P92S X HP

PRODDES	IDNR		MIID	Hand	CODX	LH	SW	WF	
WG805 Ref.	ID-Nr.	GLS	pocket size		Ømax	L1	S	f1	
GLS3 CL P92S X20 11 HP	66251	GLS3	S20	L	22	25	2	6,2	46 *
GLS4 CL P92S X20 11 HP	66253	GLS4	S20	L	22	30	2	8,2	46 *
GLS3 CR P92S X20 11 HP	66250	GLS3	S20	R	22	25	2	6,2	46 *
GLS4 CR P92S X20 11 HP	66252	GLS4	S20	R	22	30	2	8,2	46 *

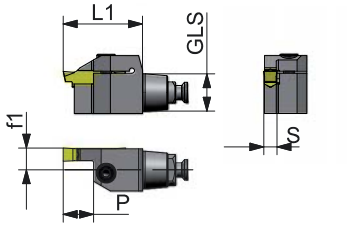
* More spare parts see page 219

Fitting inserts

p. 220, 221, 245 p. 223 p. 224 p. 197 p. 142-145 p. 146 p. 147-148

GripLock SWISS Grooving cartridges P92 P

GLS L P92P X

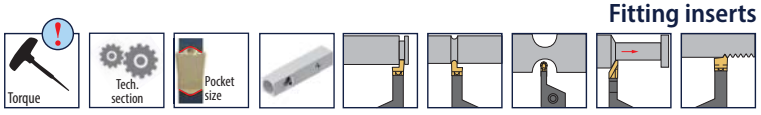


GLS R P92P X

PRODDES	IDNR		MIID	Hand	CDX	LH	SW	WF	
WG805 Ref.	ID-Nr.	GLS	pocket size		P	L1	S	f1	
GLS3 CL P92P X40 11	66283	GLS3	P40	L	11	25	4	6,3	46 *
GLS4 CL P92P X40 11	66289	GLS4	P40	L	11	30	4	8,3	46 *
GLS3 CL P92P X50 11	66285	GLS3	P50	L	11	25	5+6,5	6,3	46 *
GLS4 CL P92P X50 11	66293	GLS4	P50	L	11	30	5+6,5	8,3	46 *
GLS3 CR P92P X40 11	66282	GLS3	P40	R	11	25	4	6,3	46 *
GLS4 CR P92P X40 11	66288	GLS4	P40	R	11	30	4	8,3	46 *
GLS3 CR P92P X50 11	66284	GLS3	P50	R	11	25	5+6,5	6,3	46 *
GLS4 CR P92P X50 11	66292	GLS4	P50	R	11	30	5+6,5	8,3	46 *

* More spare parts see page 219

Fitting inserts



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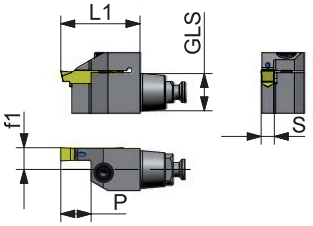
GripLock SWISS Grooving cartridges P92 P

GLS L P92P X HP

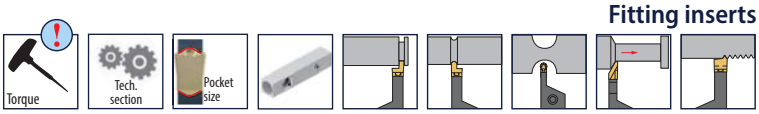


GLS R P92P X HP

PRODDES	IDNR		MIID	Hand	CDX	LH	SW	WF	
WG805 Ref.	ID-Nr.	GLS	pocket size		P	L1	S	f1	
GLS3 CL P92P X40 11 HP	66279	GLS3	P40	L	11	25	4	6,3	46 *
GLS4 CL P92P X40 11 HP	66287	GLS4	P40	L	11	30	4	8,3	46 *
GLS3 CL P92P X50 11 HP	66281	GLS3	P50	L	11	25	5+6,5	6,3	46 *
GLS4 CL P92P X50 11 HP	66291	GLS4	P50	L	11	30	5+6,5	8,3	46 *
GLS3 CR P92P X40 11 HP	66278	GLS3	P40	R	11	25	4	6,3	46 *
GLS4 CR P92P X40 11 HP	66286	GLS4	P40	R	11	30	4	8,3	46 *
GLS3 CR P92P X50 11 HP	66280	GLS3	P50	R	11	25	5+6,5	6,3	46 *
GLS4 CR P92P X50 11 HP	66290	GLS4	P50	R	11	30	5+6,5	8,3	46 *

* More spare parts see page 219

Fitting inserts



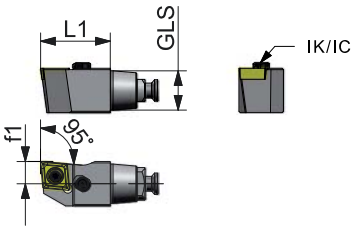
p. 220, 221, 245 p. 223 p. 224 p. 197 p. 124 p. 125 p. 126 p. 127-129 p. 130-131

Code GripLock SWISS ISO cartridges

GLS4 C R VJ C 11 25 (HP)

- Interface size
- Type cartridge
- Direction
- Insert type / position
- ISO Clearance
- Edge length; size threading (ER16)
- Extension
- Internal coolant

GLS..C L C..HP



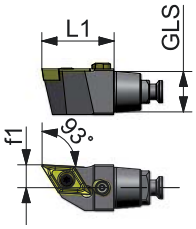
GLS..C R C..HP

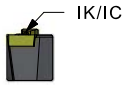
PRODDES	IDNR		Hand	LH	WF	MIID	
WG810 Ref.	ID-Nr.	GLS		L1	f1	Insert	
GLS3 CL CL C09 20 HP	66302	GLS3	L	20	6,0	CC09T3	page 219
GLS4 CL CL C09 25 HP	66304	GLS4	L	25	8,0	CC09T3	page 219
GLS3 CR CL C09 20 HP	66301	GLS3	R	20	6,0	CC09T3	page 219
GLS4 CR CL C09 25 HP	66303	GLS4	R	25	8,0	CC09T3	page 219

Information about fitting holders on page 203

GripLock SWISS ISO cartridges

GLS..C L DC..HP

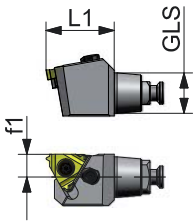


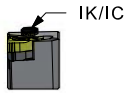


GLS..C R DC..HP

PRODDES	IDNR		Hand	LH	WF	MIID	
WG810 Ref.	ID-Nr.	GLS	( )	L1	f1	Insert	
GLS3 CL DJ C11 25 HP	66305	GLS3	L	20	6,0	DC11T3	page 219
GLS4 CL DJ C11 25 HP	66308	GLS4	L	25	8,0	DC11T3	page 219
GLS3 CR DJ C11 25 HP	66306	GLS3	R	20	6,0	DC11T3	page 219
GLS4 CR DJ C11 25 HP	66307	GLS4	R	25	8,0	DC11T3	page 219

GLS..C L EL..HP

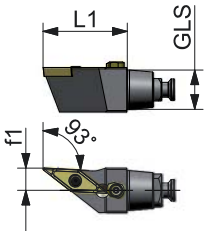


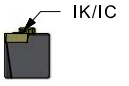


GLS..C R ER..HP

PRODDES	IDNR		Hand	LH	WF	MIID	
WG810 Ref.	ID-Nr.	GLS	( )	L1	f1	Insert	
GLS4 CL EL 16 25 HP	66320	GLS4	L	25	8,0	EL16	page 219
GLS4 CR ER 16 25 HP	66319	GLS4	R	25	8,0	ER16	page 219

GLS..C L VC..HP





GLS..C R VC..HP

PRODDES	IDNR		Hand	LH	WF	MIID	
WG810 Ref.	ID-Nr.	GLS	( )	L1	f1	Insert	
GLS3 CL VJ C11 25 HP	66310	GLS3	L	25	6,0	VC1103	page 219
GLS3 CL VJ C13 30 HP	66312	GLS3	L	30	6,0	VC1303	page 219
GLS4 CL VJ C11 25 HP	66314	GLS4	L	25	8,0	VC1103	page 219
GLS4 CL VJ C13 30 HP	66316	GLS4	L	30	8,0	VC1303	page 219
GLS3 CR VJ C11 25 HP	66309	GLS3	R	25	6,0	VC1103	page 219
GLS3 CR VJ C13 30 HP	66311	GLS3	R	30	6,0	VC1303	page 219
GLS4 CR VJ C11 25 HP	66313	GLS4	R	25	8,0	VC1103	page 219
GLS4 CR VJ C13 30 HP	66315	GLS4	R	30	8,0	VC1303	page 219

Fitting toolholders

p. 220, 221, 245 p. 223 p. 197

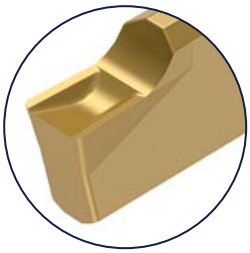
The perfect MATCH - GROOVING with P92

BTNN

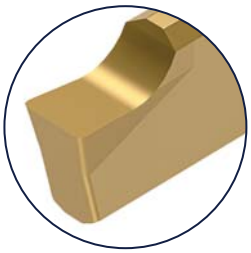
MTNSG

SCTD

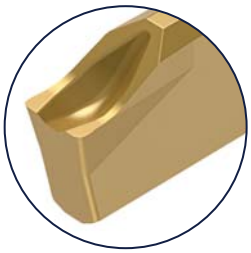
The perfect MATCH - GROOVING with P92S



STNS

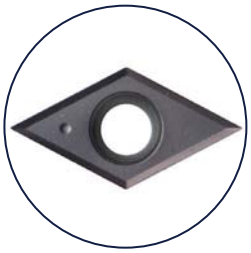


HTNS



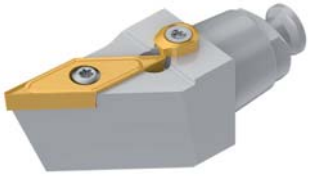
BTNS

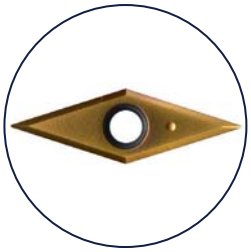
The perfect MATCH- ISO turning with MEGACUT inserts by Kemmer



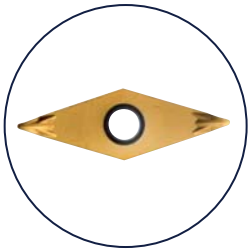
DCGT 11T3..21 POL

DCGT..AK





VCGT..21 POL

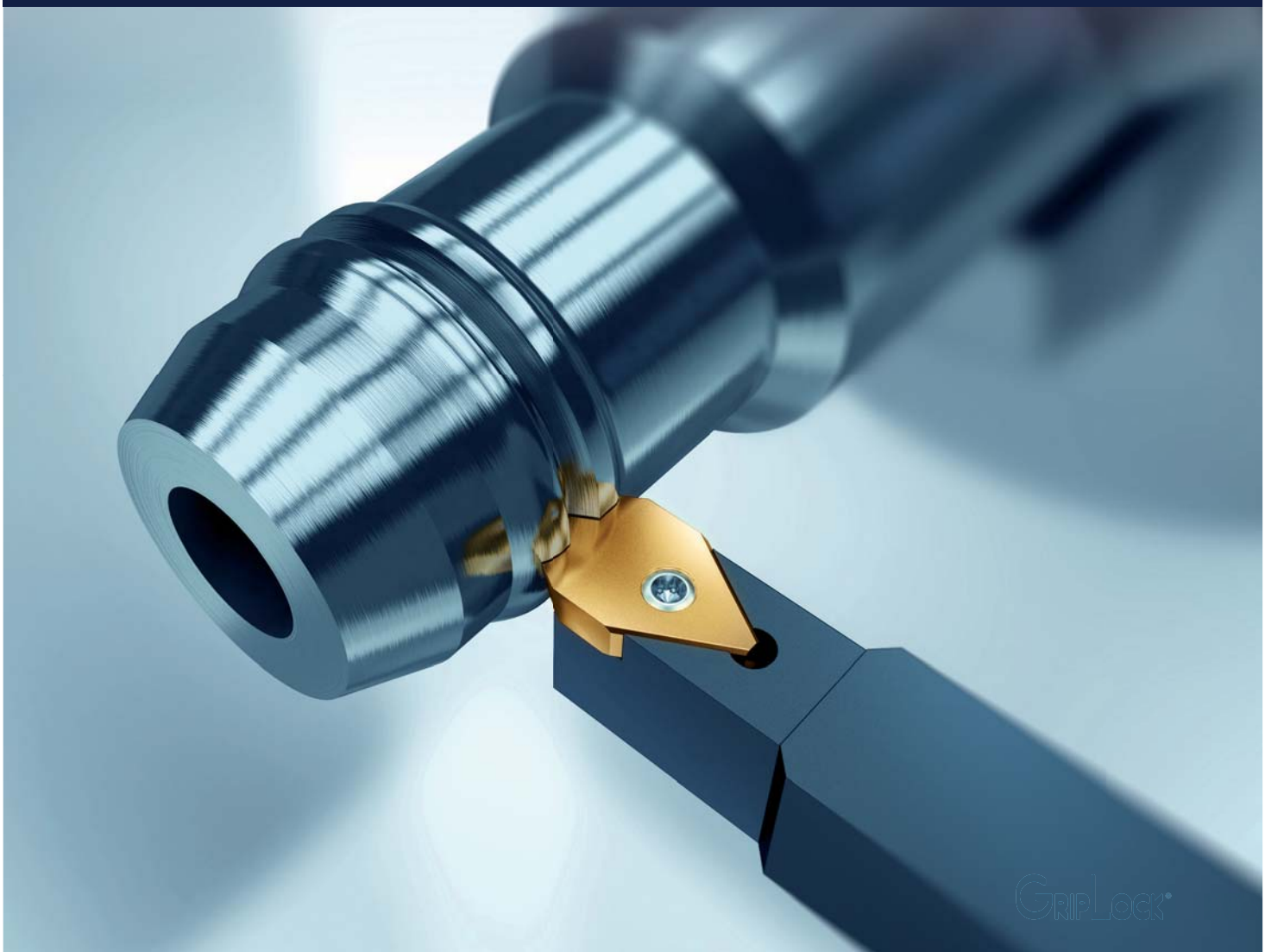


VCGT..S Special

F92 - Profiling system

Special profiles to customer specifications

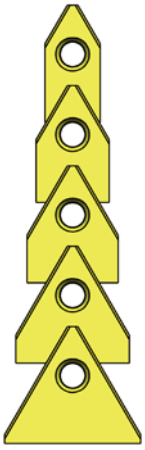
- Fast production of special profiles
- 5 different pre ground blanks
- Perfect interlock between holder and insert
- Excellent price-performance ratio
- Profiles up to 30 mm width



F92 - Profiling system

Special profiles to customers specification

Semi-finished insert width: 12 mm - 30 mm

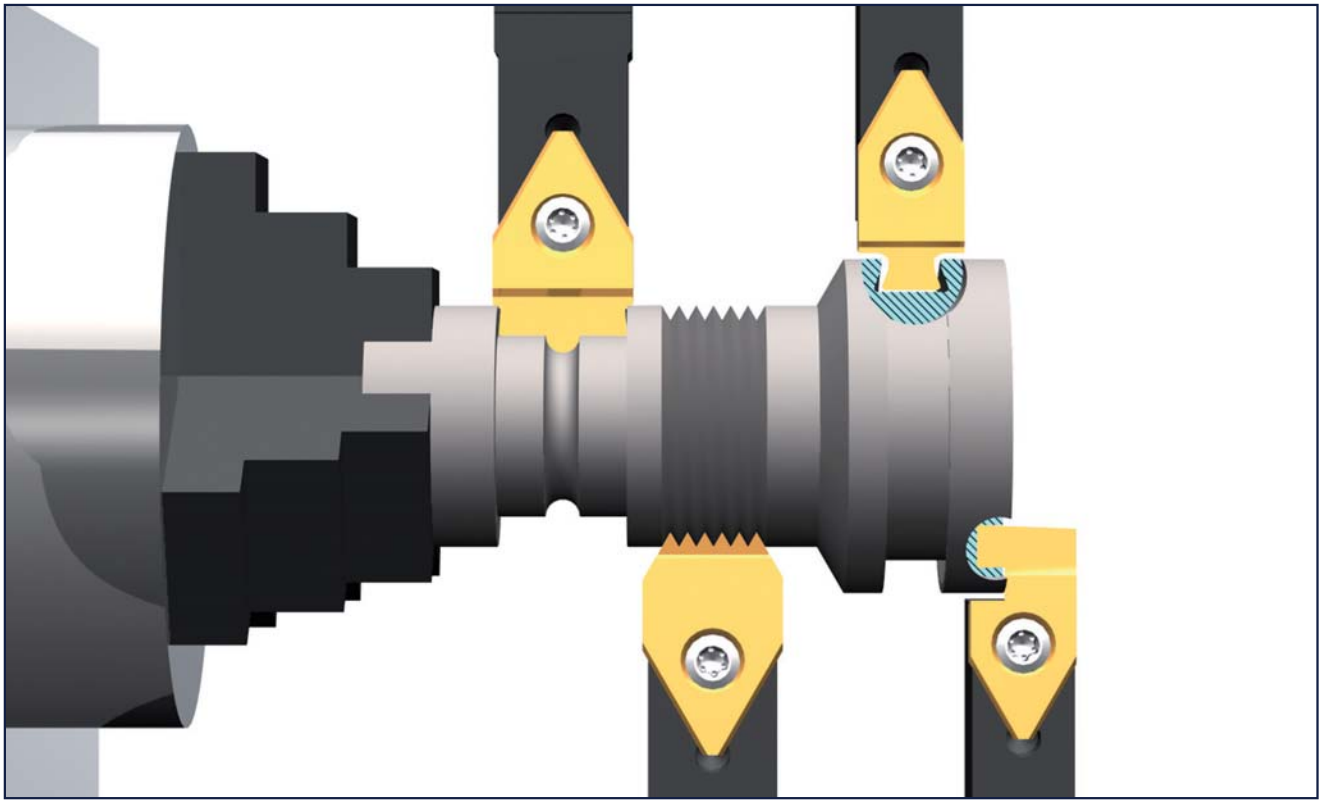


How to place an order:

Example 1: If you intend to grind profiles yourself, you can order tool holders and pre ground inserts.

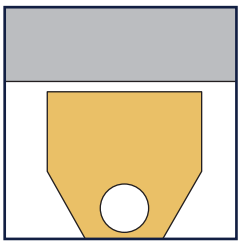
Example 2: If you give us the order to produce profile inserts, we definitely need

- Complete drawing of the component or the profile with
- Dimensions and tolerances
- Lathe rotation: clockwise or counter clockwise
- Material to be machined
- Required coating (see listing p. 226)
- Planned order quantities of tool holders and inserts
- Required delivery times

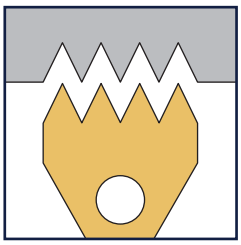


You can see further interesting examples from page 209 onwards.

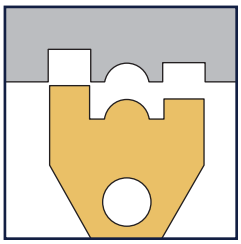
System applications and symbols



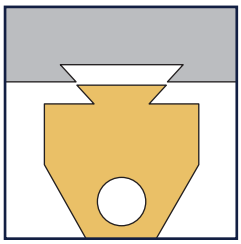
Blanks for customer profiles



TAILOR MADE
e.g. V- Pulley



TAILOR MADE
e.g. profile cutting



TAILOR MADE
e.g. dovetail profiles

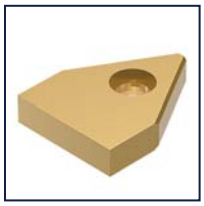
Uncoated or coated according to customer demand.

Code for profile inserts

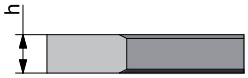
F 00000 16 15 24

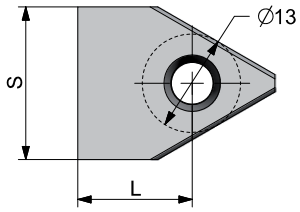
- F — Insert Type
- 00000 — Profile number
- 16 — Width of insert W = 16,3
- 15 — Length of profile insert L = 15,0
- 24 — Production year, 24 = 2024

Pre-ground inserts

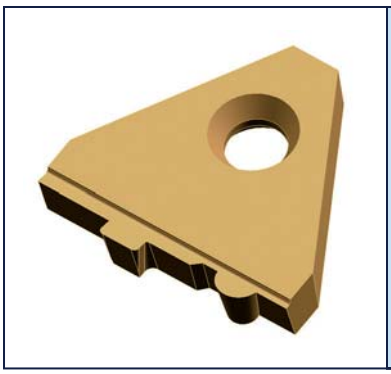


F 00000...00





PRODDES	IDNR	IIC	S1			CW	CWUD	INSL		
WG0023 Ref.	GF 25	pocket size	h ±0,10	h+	h-	S	S+	L	L+	L-
	N									
F 00000 12 15 00	29269	F13	5,1	0,1	-0,1	12,3	0,2	15,0	0,1	-0,1
F 00000 16 15 00	29272	F13	5,1	0,1	-0,1	16,3	0,2	15,0	0,1	-0,1
F 00000 20 15 00	29273	F13	5,1	0,1	-0,1	20,3	0,2	15,0	0,1	-0,1
F 00000 25 15 00	29275	F13	5,1	0,1	-0,1	25,3	0,2	15,0	0,1	-0,1
F 00000 30 15 00	47291	F13	5,1	0,1	-0,1	30,3	0,2	15,0	0,1	-0,1



Finished ground profile insert coated with NANOSPEED.

Remark

Ground faces:

- Both flat-faces
- Both pocket faces
- Chamfer between these faces

The hole has got countersinks on both sides to turn the insert around.

Fitting tools

p. 223

p. 224

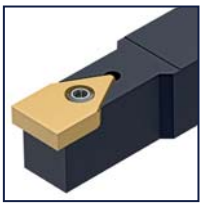
p. 208

Code of tool holders for profile inserts

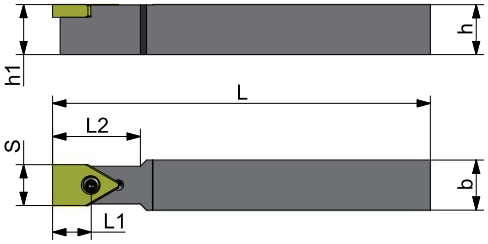
F92 S F C C N 2020 M 1615

- F92 S F C C N 2020 M 1615 — Tool family
- F92 S F C C N 2020 M 1615 — Clamping system
- F92 S F C C N 2020 M 1615 — Type of insert F
- F92 S F C C N 2020 M 1615 — Angle of attack
- F92 S F C C N 2020 M 1615 — Front clearance
- F92 S F C C N 2020 M 1615 — Tool holder type
- F92 S F C C N 2020 M 1615 — Shank dimension
- F92 S F C C N 2020 M 1615 — Tool holder length
- F92 S F C C N 2020 M 1615 — Insert size

F92 Tool holders for profile inserts

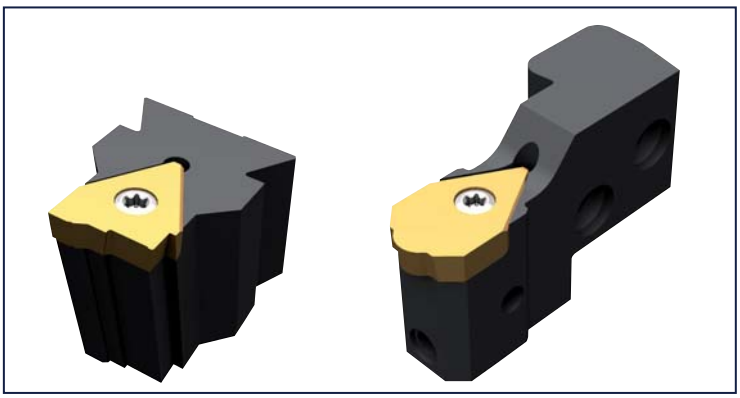


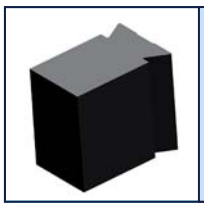
F92 SFCCN



PRODDES	IDNR	MIID	Hand	H	HF	B	CW	OAL	LH	LTA	
WG3802 Ref.	ID-Nr.	pocket size		h	h1	b	S	L	L1	L2	
F92 SFCCN 1212 K12 15	29265	F13	N	12	12	12	12,0	125	15	27	25
F92 SFCCN 1212 K16 15	29342	F13	N	12	12	12	16,0	125	15	35	25
F92 SFCCN 1616 K12 15	29343	F13	N	16	16	16	12,0	125	15	35	25
F92 SFCCN 1616 K16 15	29266	F13	N	16	16	16	16,0	125	15	35	25
F92 SFCCN 1616 K20 15	29344	F13	N	16	16	16	20,0	125	15	35	25
F92 SFCCN 2020 M12 15	29345	F13	N	20	20	20	12,0	150	15	35	25
F92 SFCCN 2020 M16 15	29346	F13	N	20	20	20	16,0	150	15	35	25
F92 SFCCN 2020 M20 15	29267	F13	N	20	20	20	20,0	150	15	35	25
F92 SFCCN 2020 M25+30 15	63906	F13	N	20	20	20	25,0+30,0	150	15	35	25
F92 SFCCN 2525 M16 15	29347	F13	N	25	25	25	16,0	150	15	35	25
F92 SFCCN 2525 M20 15	29348	F13	N	25	25	25	20,0	150	15	35	25
F92 SFCCN 2525 M25+30 15*	29268	F13	N	25	25	25	25,0+30,0	150	15	35	25
F92 SFCCN 3232 P16 15	63908	F13	N	32	32	32	16,0	170	15	27	25
F92 SFCCN 3232 P20 15	63909	F13	N	32	32	32	20,0	170	15	27	25
F92 SFCCN 3232 P25+30 15	63910	F13	N	32	32	32	25,0+ 30,0	170	15	27	25

*** Both inserts fit: F00000251500 and F00000301500**





Remark

AWN-28 System and
GLM Cartridge System on request.

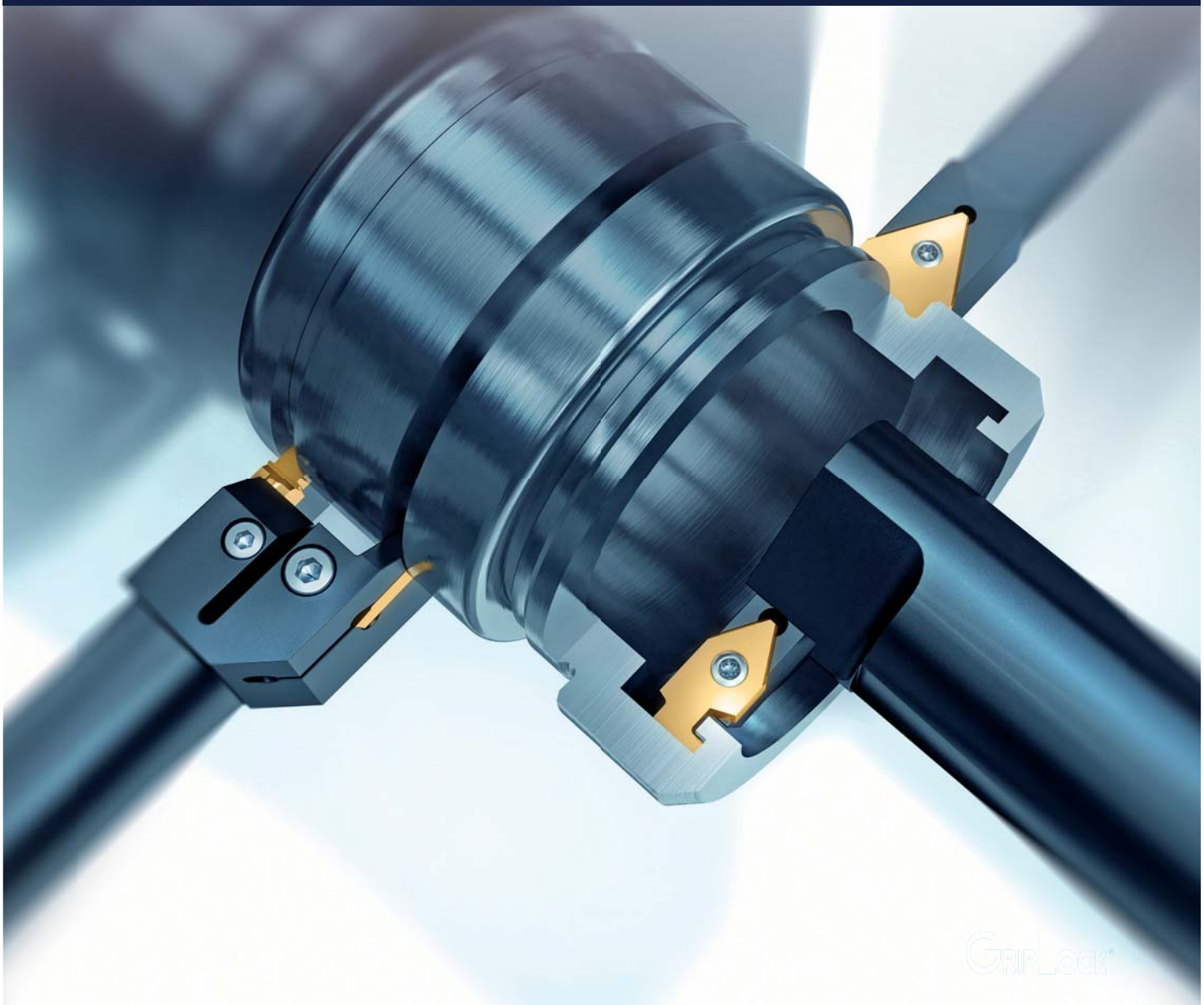
Fitting inserts

Torque p. 220, 221, 245 | Tech. section p. 223 | Pocket size p. 224 | p. 207

Tailor made solutions

GRIPLOCK® TAILORMADE

- Special solutions (TALOR MADE) for your applications
- Inserts and toolholders from the grooving specialist
- Customized advice and tool design



Customised solutions

Why solutions by Kemmer?

Machining operations are continuously improving. That means that manufacturer, service provider and suppliers have to adapt to new challenges. Kemmer is your production and service partner solving these new challenges.

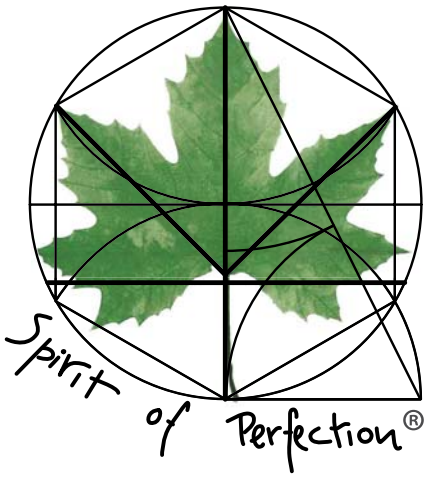
Competent consulting based on long-time experience.

Timely offers containing solutions.

Short delivery times.*

High quality and fair prices.

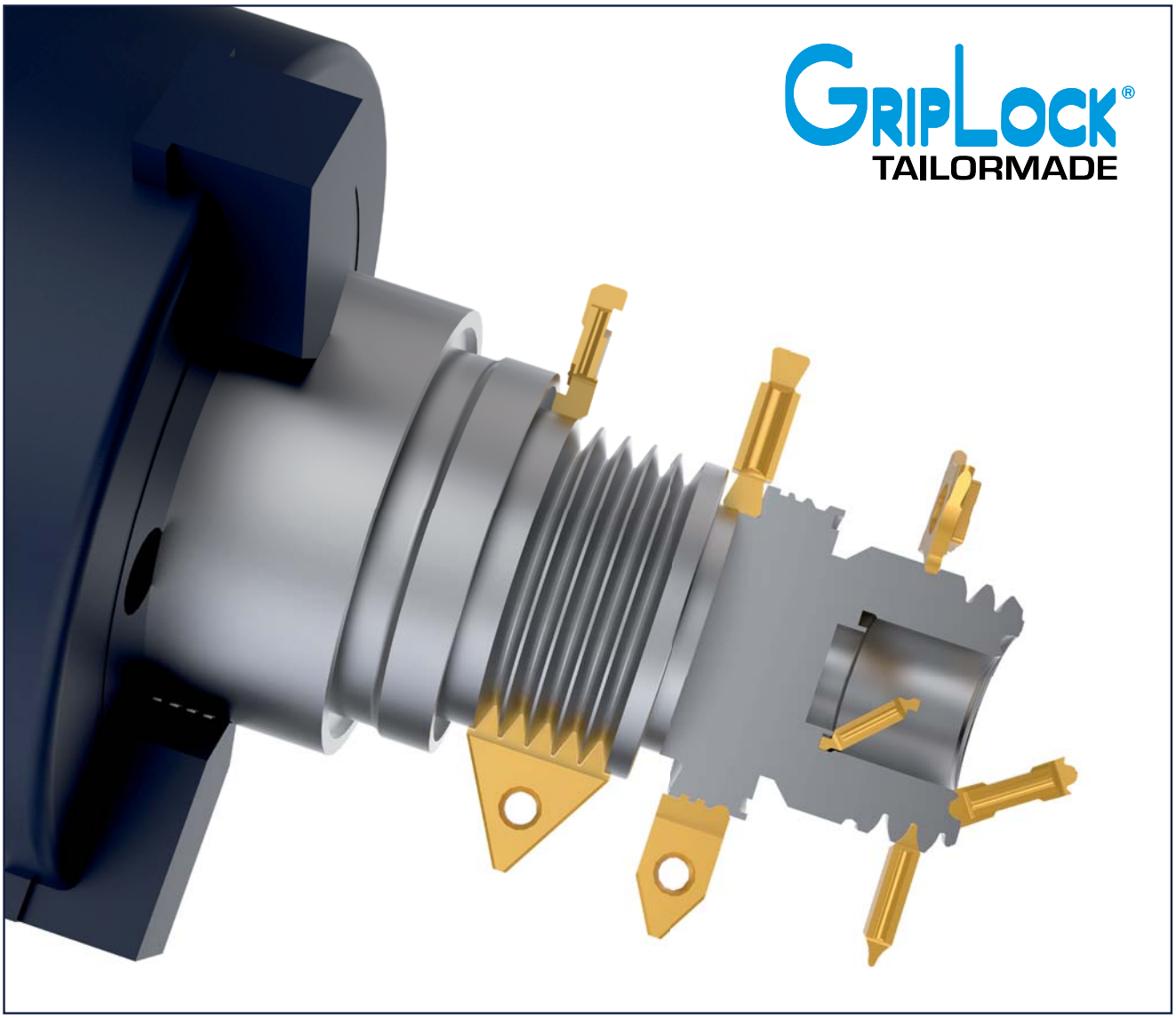
* Delivery times depend on design, quantities and production time. On your enquiries, you'll receive an individual quotation containing the delivery time.



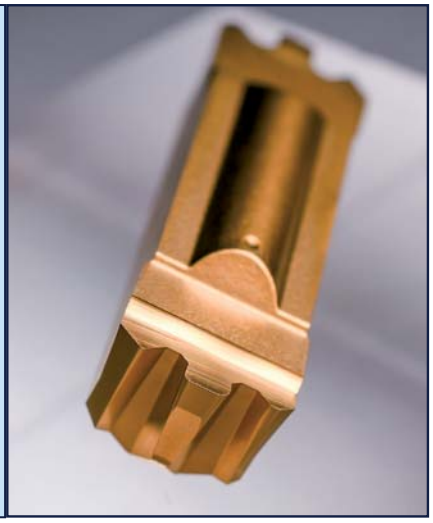
- Individual
- Profitable
- Fast
- Reliable

... simply perfect!

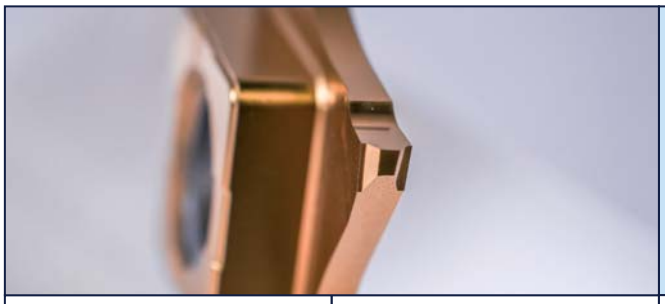
Special inserts



- Comprehensive selection of grooving widths, product systems, grades and coatings
- Efficient production and control on state-of-the-art machines
- Flexible batch sizes
- Reliable delivery times
- Precise cutting edges



M92 Q | MULTICUT

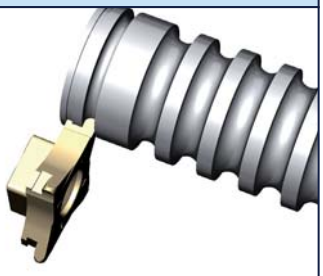


- 4 edges
- Cutting widths /-depths up to 6,5 mm
- Maximum economic efficiency

Grooving e.g. gearparts

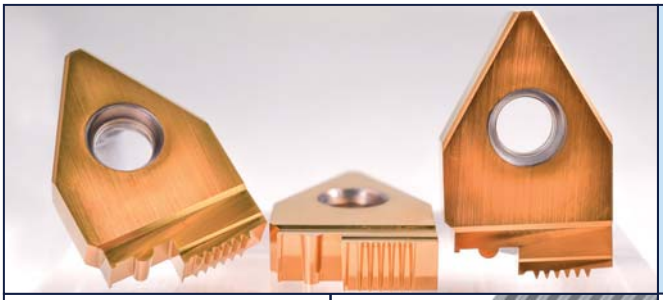
Valve bar

Special threading

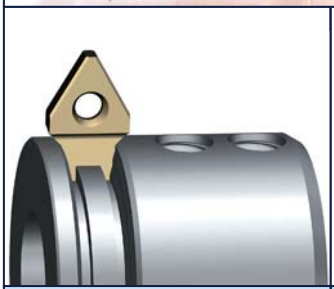


Large grooving up to 6,5 mm (EXTENDED Version)

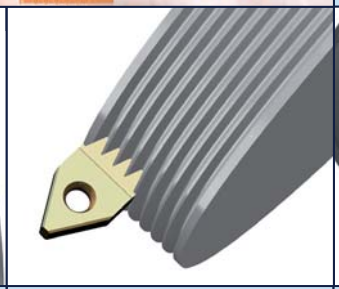
F92 | SYSTEM



- 1 edge
- Cutting widhts: 12 - 30 mm
- The perfect allrounder for wide cuts and special challenges in batch production



Profile cutting

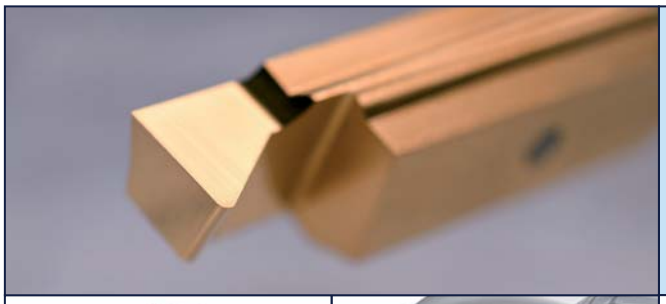


V-PULLEY
(V-ribbed profiles)

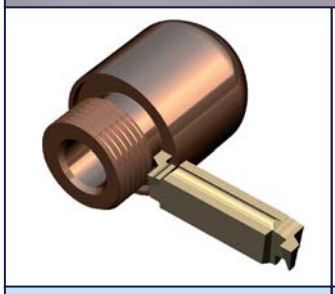
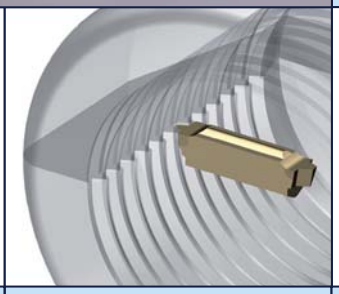
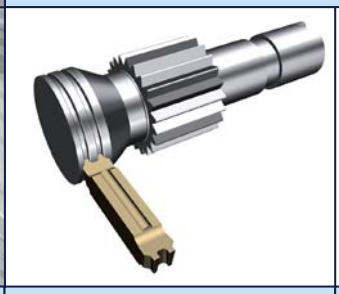
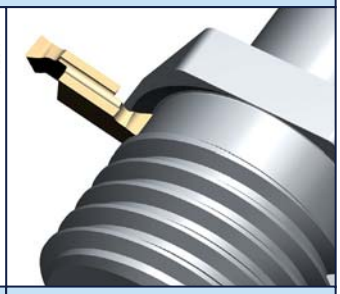
Undercut areas

Wide cutting operations

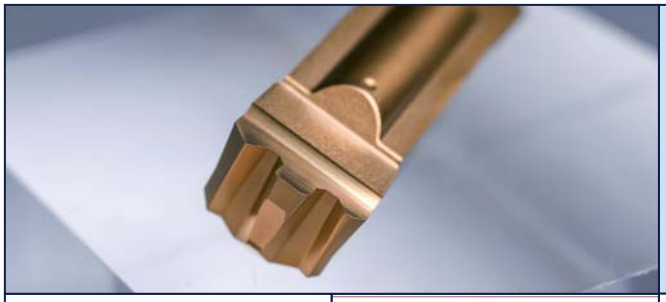
P92 P | (PRECISION) SYSTEM



- 2 edges
- Cutting widths up to 8 mm
- Highest precision and repeating accuracy with P92 P pocket design

			
Clearance cutting	Internal threading	Profitiablility X2	Hook + Dovetail profiling

P92 | TWIN SYSTEM



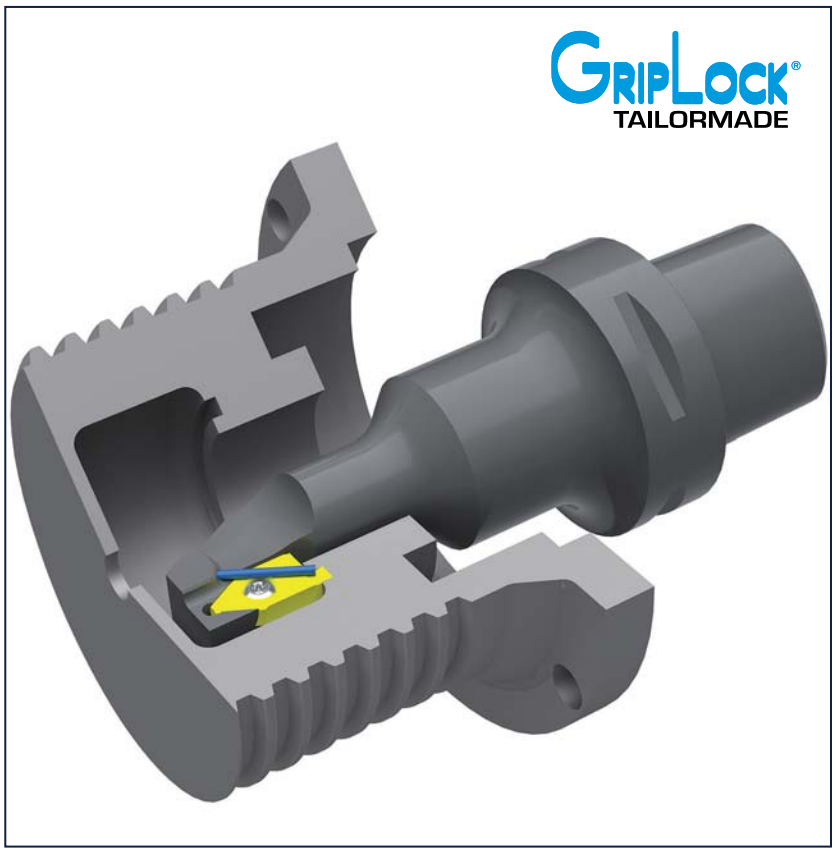
- 2 edges
- Cutting widths up to 10 mm
- Huge possibilities for cutting widths and solutions in all types of grooving applications

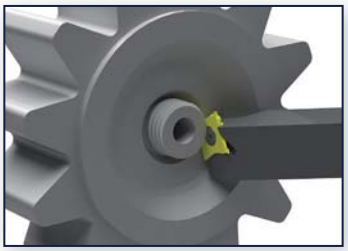
			
Radiusform cutting	Dovetail applications	Internal grooving	Profile cutting

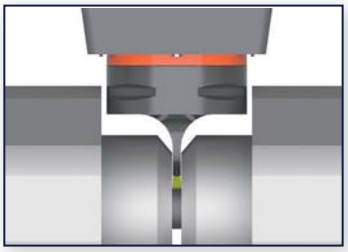
KEMMER HARTMETALLWERKZEUGE

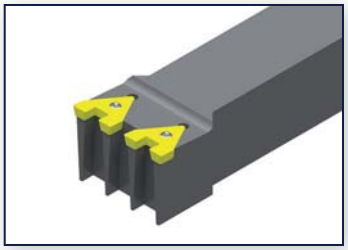
Special tools

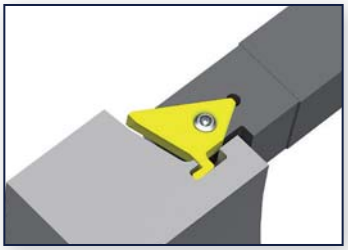
Sophisticated solutions for your requirements

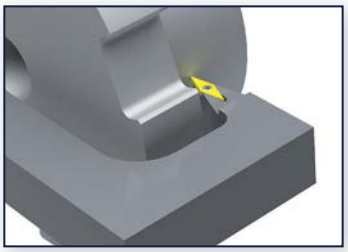


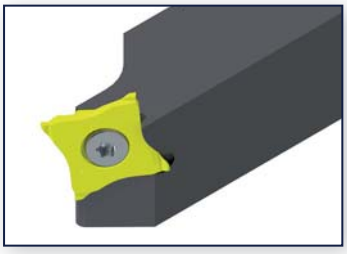


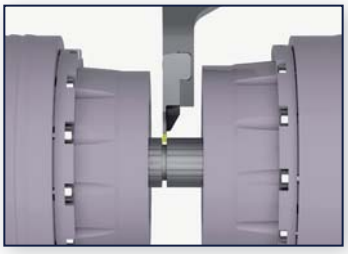




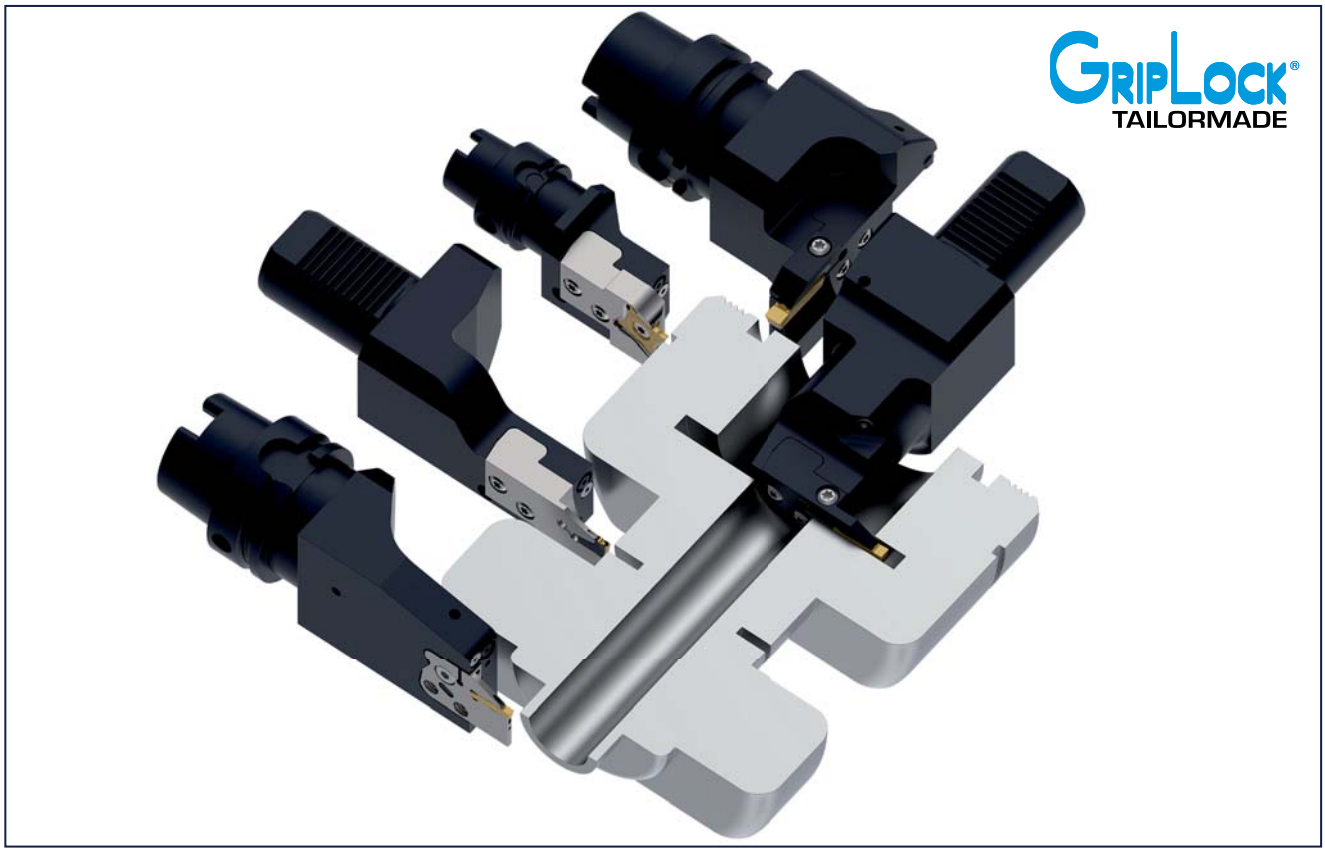






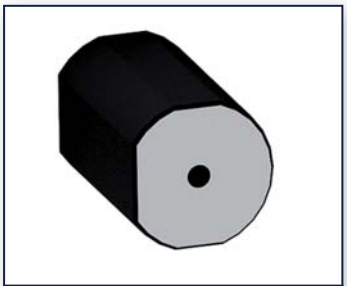


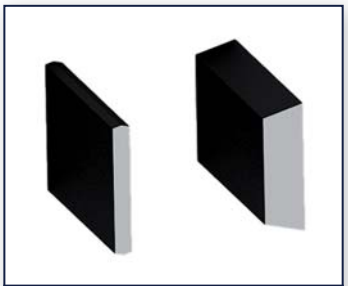
Machine holders and modular units



Interfaces tailor made tools for example:


Square


Bar


Dovetail shanks

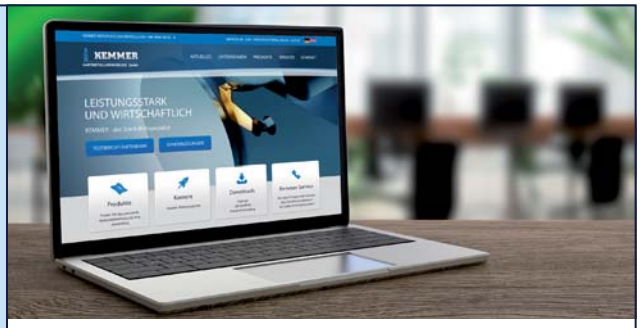

VDI


HSK / KM


PSC

Enquiry help for special solutions on the website

- Examples of tailor made solutions
- Direct access to the catalogue section
- Contact details
- Enquiry form (DOWNLOAD)
  - Job description
  - Machining position
  - Material to be machined
  - Interface requirement
  - Sketches / pictures upload
  - and much more



Anfrage Sonderlösung / ***Inquiry tailor made solutions*** | Datum / *date* | Potential / *Potential*: ☐ Hoch / *high* ☐ Mittel / *middle* ☐ Gering / *low* | Wunschangebot / *Request offer*: ☐ 1-2 Tage / *day* ☐ 3 Tage / *days* ☐ 1-2 Wo / *weeks* | KEMMER HARTMETALLWERKZEUGE GmbH

Firma / *Company*		Ansprechpartner / *Contact person*		Kunden-Nr. / *Customer ID*	
E-Mail / *E-mail*		Telefon / *phone*		Abteilung / *Department*	

Anfrageart und Details | *Type of the inquiry and details*

Sonderwerkzeug / *Special tooling*	☐	Schnittstelle/Werkzeuggröße / *Interface/size*		Anstellbare Wzg.-Aufnahme/Bereich (°)? / *With flexible tool orientation/range (°)?*	☐ Keine Werkzeuganstellung / *No flexible orientation*
Sonderplatte / *Special insert*	☐	Plattentyp/System od. Schneidenanzahl / *Type of insert/system or edge qty.*		Maschine / Typ / *Machine brand / Type of machine*	
Modifizierung Standard / *Modification standard*	☐	Ausgangshalter Standard / *Favoured GripLock-System*		Innenkühlung gewünscht? / *With internal cooling?*	
Kundenziele (Standzeit, Prozess,...) / *Customer targets (Tool life, process,...)*				Werkstoff des Bauteils / *Part material*	
				Gewünschte Staffel/Mengen / *Scale of pricing/quantities*	

Bearbeitungsposition | *Working position*

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ **Sonstige** | *Other* ☐

Projektbeschreibung (Aufgabenstellung, Abmaße, Prozessdetails, Mengen; Bitte ergänzen Sie bei Anfragen Zeichnungen/Skizzen/3D Daten auf S. 2+3)
Details inquiry (task, parameters, process details, quantities; please add drawings/sketches/3D files with your inquiry on p. 2+3)

Laufrichtung | *Rotation:*

☐ **Rechtslauf RL** | *CCW*
(rechtes Werkzeug | *RH tools)*

☐ **Linkslauf LL** | *CW*
(linkes Werkzeug | *LH tools)*

Alternative Bearbeitungspositionen | *alternate working position*

MKT027 - Sonderanfragen Formular

TAILOR MADE SOLUTIONS

Direct contact

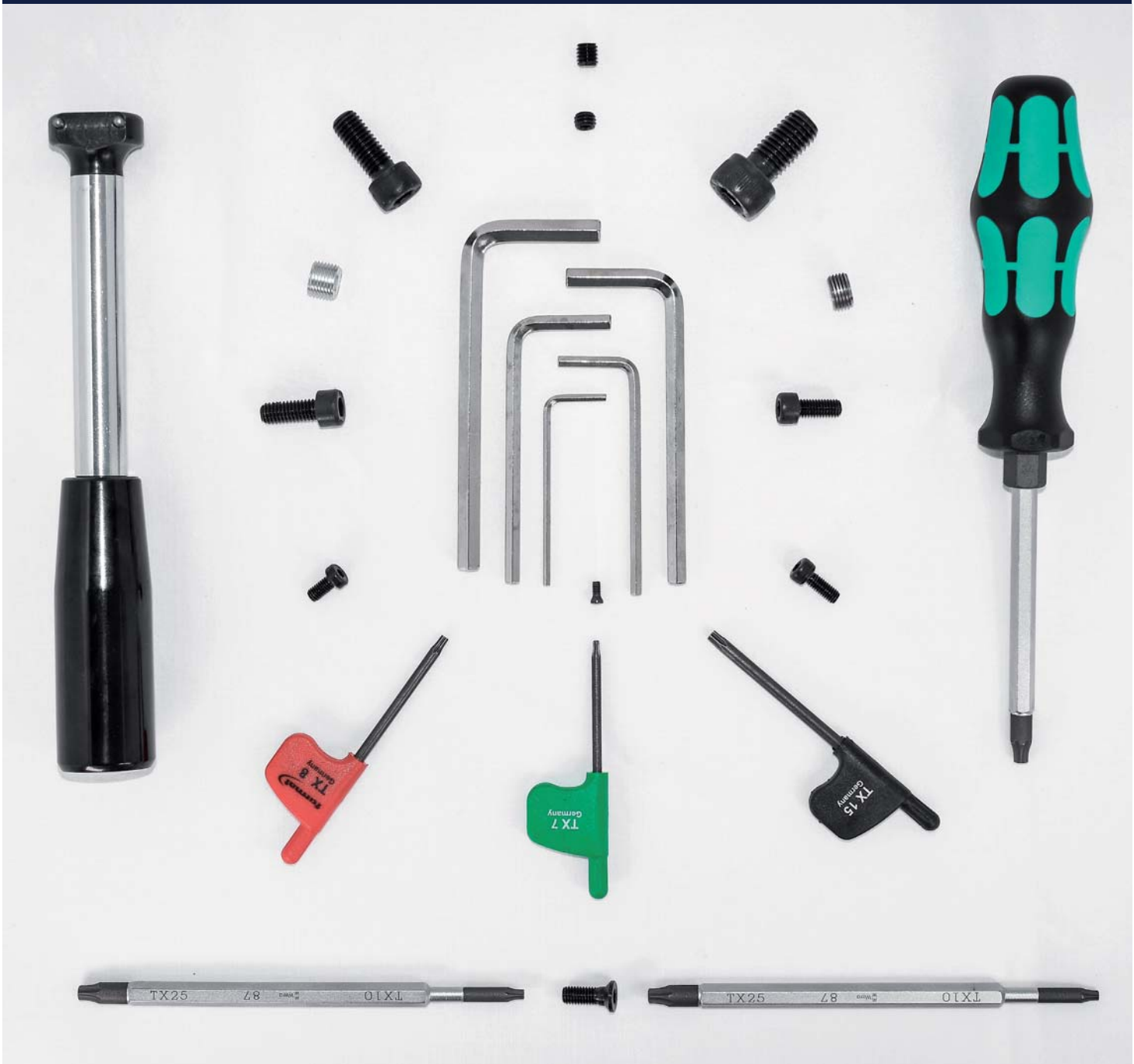
sonder@kemmerhmw.de

Are you looking for support with your next project or do you want to improve your processes with customised solutions?

We will be happy to advise you on the ideal solution for your requirements!

Spare parts and accessories

- Screws
- Keys
- Interchangeable blades
- Torque



Spare parts

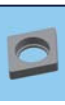
WG355 ET	ID-Nr.	Screw	ID-Nr.	Key	Recommended Torque [Nm]
1	13701	M 5x16	14746	P4	7
2	13707	M 6x20	14747	P5	14
3	13709	M 8x25	14748	P6	14
4	15635	TXM 4x16 15	12900	T15W	3,8
5	13702	M 5x20	14746	P4	7
6	13700	M 5x12	14746	P4	7
7	15166	M 4x8 DIN 7984	14745	P3	5
8	13699	M 5x10	14746	P4	7
9	18777	TXM 4x12	12900	T15W	3,8
10	41015	TXM 4x12/15	40681	T15F	3,8
11	13698	M 4x16	14745	P3	5
12	13708	M 6x25	14747	P5	8
13	15086	M 3x12 DIN 913(Threadstift)	14743	P1,5	0,8
14	13705	M 6x16	14747	P5	14
15	14846	LM 4x8	12771	P2,5	3
16	10397	Order Nr. 1856 (Auswerfer)		-	
17	10398	26 L (Leiste)		-	
18	13696	M 4x10	14745	P3	5
19	16203	M 5x10 DIN 7984	14746	P4	7
20	14749	M 4x16 DIN 913 (Threadstift)	14744	P2	3
21	21949	M 5x20 DIN 913 (Threadstift)	12771	P2,5	4
22	14846	LM 4x8 DIN 7380	14745	P3	3
23	34839	TXM 5x14 25	31353	T25W	5
24	35587	TXM 5x10 25	31353	T25W	5
25	29276	TXM 5x13 20	29312	T20W	5
26	33051	M 5x8 DIN 914 (Threadstift)	35393	P2,5	6
27	35166	LM 3x8 DIN7380	14744	P2	1,5
28	34656	Order Nr. 34656 (Auswerfer A-TWIN)		-	
29	37353	LM 6x20 (Linsenkopfschraube)	38549	TX25	7
30	37556	M4x4 (Threadstift)	14744	P2	3
31	37221	Leiste KL 32		-	
32	44188	M 8x20 1	14747	P6	14
33	44641	TXM5x14 10 25	45130	TX25/10	4,5
34	44817	TXM5x10 10 25	45130	TX25/10	4,5
35	34839	TXM 5x14 25	38549	TX25	7
36	44609	TXM5x13 20P92C	29312	T20W	5
37	44630	TXM6x17 20P92C	29312	T20W	5
38	45133	52 L (Leiste)			
39	45113	WK 25 10 (Wechselklinge)			
40	45112	TX 6 (Griff)			
41	45130	TX25/10 (ET 39+40)			
42	49360	M 4x6 DIN 914 (Threadstift)	14744	P2	3
43	19621	M5x16 DIN7984	14746	P4	7
44	54555	M5X0,5WN	14745	P3	3
45	59522	M6x12 DIN7984	14747	P5	8
46	13697	M4x12	14745	P3	3

Further technical information on torques on page 220.

Spare parts for GLM-ISO-cartridges with positive pocket

WG355 Cartridge							
	ID-Nr.	ID-Nr.	ID-Nr	ID-Nr.	ID-Nr.	ID-Nr.	ID-Nr.
GLMCL/R DC11T3	40679	40680	42889	40678	40681		
GLMCL/R CC09T3	-			40677	40681		
GLMCL/R VC1604	42656	40680	42889	40678	40681	41105	14747
GLMCL/R VC1303	13025	13024	14744	13026	16003	44117	14747

Spare parts for GLM-ISO-cartridges with negative pocket

WG355 Cartridge										
	ID-Nr.	ID-Nr.	ID-Nr.	ID-Nr.	ID-Nr.	ID-Nr.	ID-Nr.	ID-Nr.	ID-Nr.	ID-Nr.
GLMCL/R CN1204	42671	42749	18154	42652	42739	14745	42637	47168	41105	14745
GLMCL/R DN1506	42658	42749	18154	42653	42739	14745	42637	47168	41105	14745
GLMCL/R VN1604	15261	12760	14744	-	-	-	-	-	41105	14745
GLMCL/R WN0804	42668	42750	18154	42652	42739	14745	42637	47168	41105	14745

Spare parts for GLM-ISO-cartridges for ISO threading inserts

WG355 Cartridge					
	ID-Nr.	ID-Nr.	ID-Nr	ID-Nr.	ID-Nr.
GLMCL/R 16ER ISO	42664	40680	42889	40678	40681

Spare parts for GLS-ISO cartridges

WG355 Cartridge			coolant unit		screw for support plate
	ID-Nr.	ID-Nr.	ID-Nr.	ID-Nr.	ID-Nr.
GLS3/4 CR/L CLC0920HP	66396	40681	66400	-	-
GLS3/4 CR/L DJC1125HP	66396	40681	66400	-	-
GLS3/4 CR/L VJC1125HP	66397	17839	66400	-	-
GLS3/4 CR/L VJC1330HP	66398	17839	66400	-	-
GLS3/4 CR ER1625HP	66399	16003	66400	66451	66453
GLS3/4 CL EL1625HP	66399	16003	66400	66452	66453

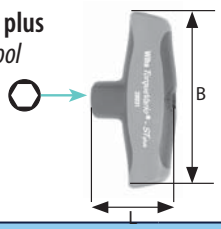
WG355 Cartridge	REAR clamping screw
	ID-Nr.
GLS3 EINSCHRAUBZAPFEN	66449
GLS4 EINSCHRAUBZAPFEN	66450

Spare parts for tools with internal cooling

ID		ID	
47436	M8x1	14746	P4
53273	M10x1	14747	P5
57680	G1/8x5.5	14747	P5
57759	G1/8x8	14747	P5
49528	NPT 1/8	14747	P5
58511	M6x4	14747	P5
59526	O-RING 4X1		

Torque key and interchangeable blades

Torque VARIO ST plus
T-handle torque tool



Torque Vario-S
Torque screwdriver

WG355 Ref.	Torque Nm	ID-Nr.	⬡	L	B	D	Interchangeable blades
Torque VARIO ST plus	5,0 - 14,0	43723	6	56	120	-	Wp..+ WS
Torque Vario-S	1,0 - 5,0	43884	4	138	-	36	WSF.. + WTF

Handle: Window scale displays torque value numerically. Torque infinitely adjustable with Torque-Setter setting tool (also supplied). Soft-grip T-handle for optimal torque transmission. Audible and perceptible click when the pre-set torque has been attained.

Standards: Based on EN ISO 6789, BS EN 26789, ASME B107.14M.

Accuracy: ±6%, traceable to national standards.

Application: For applications where recommended torque settings are important. Use in combination with an inter-changeable 6 mm blade for Wiha T-handle torque tools.

Extra: Delivered in practical plastic box, incl. factory calibration certificate.

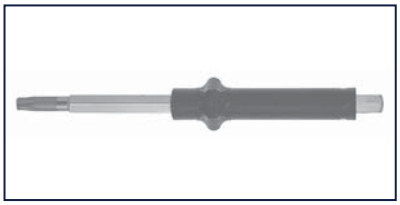
Handle: Ergonomic multi-component handle, particularly light and compact. Handle sizes proportioned to optimise torque setting.Audible and perceptible click when the pre-set torque has been attained.

Standards: EN ISO 6789, BS EN 26789, ASME B107.14M.

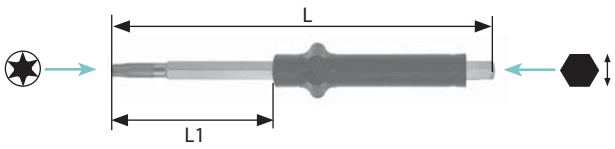
Accuracy: ±6%, traceable to national standards.

Application: For applications where recommended torque settings are important. Use in combination with a Wiha torque interchangeable blade.

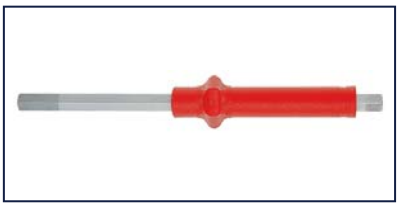
Extra: Delivered in practical plastic box, incl. factory calibration certificate.



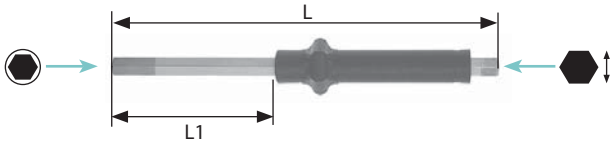
Torx-Interchangeable blades



WG355 Ref.	ID-Nr.	★	⬢↕	L	L1	max Nm	max in.lbs
WTF15	43888	T15	4	175	42	5,5	-
WT15	43716	T15	6	130	53	6	53
WT20	43717	T20	6	130	53	10	88
WT25	43718	T25	6	130	53	15	132



hex-Interchangeable blades



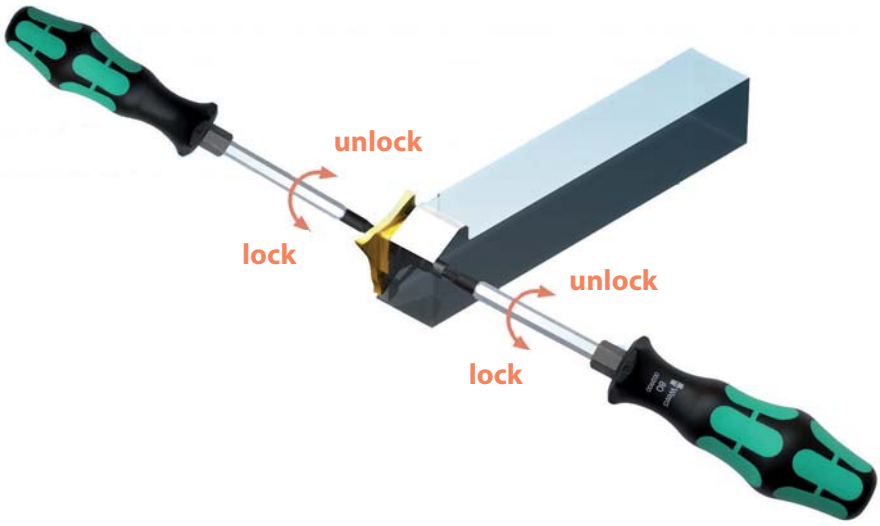
WG355 Ref.	ID-Nr.	⬢	⬢↕	L	L1	max Nm	max in.lbs
WSF2	43885	2	4	175	42	1,8	-
WSF2,5	43886	2,5	4	175	42	3,8	-
WSF3	43887	3	4	175	42	5,5	-
WS3	43719	3	6	130	53	9	79
WS4	43720	4	6	130	53	15	132
WS5	43721	5	6	130	53	15	132
WS6	43722	6	6	130	53	15	132

Blade: High quality chrome-vanadium-molybdenum steel, through hardened. Wiha ChromTop® finish on tip for a perfect fit. Colour-coding Torx-iterchangeable blades: dark green.
Colour-coding: Hex interchangeable blades: red.

Application: For applications where recommended torque settings are important.

Special screwdriver for MULTICUT 4 holders and blades

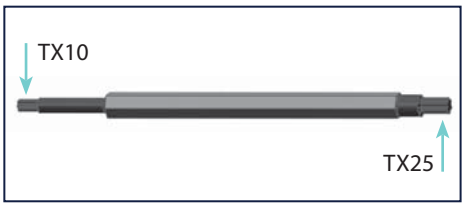
Special screwdriver with interchangeable blade to change MULTICUT 4 inserts in confined spaces



Recommended torques on page 218

TX 6
Handle

ET-Nr.	WG355 Ref.	ID-Nr.	Items
40	TX 6	45112	Handle

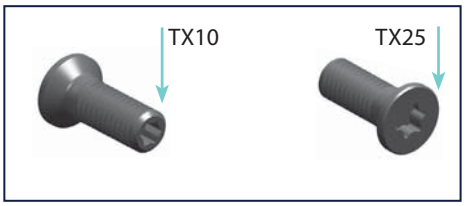


WK 25 10
interchangeable blade

ET-Nr.	WG355 Ref.	ID-Nr.	Items
39	WK 25 10	45113	Blade

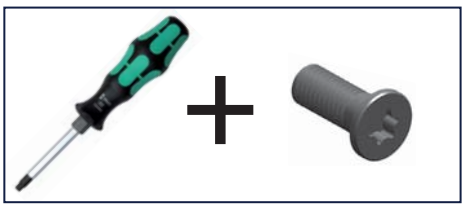
TX 25 10
Screwdriver

ET-Nr.	WG355 Ref.	ID-Nr.	Items
41	TX 25 10	45130	Torque screwdriver



TXM5x14 10 25
Torx screw

ET-Nr.	WG355 Ref.	ID-Nr.	Items	Recommended Torque max. [Nm]
33	TXM5x14 10 25	44641	Torx screw L=14	4,5
34	TXM5x10 10 25	44817	Torx screw L=10	4,5



TX 25 10 1
TX 25 10 2
Screwdriver and Torx screw

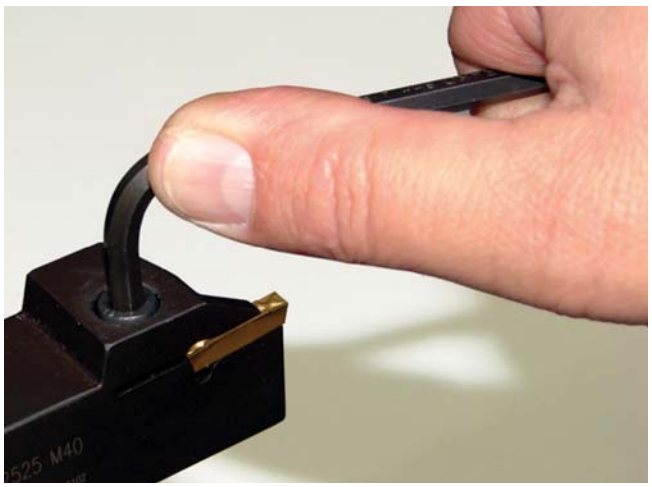
Set-Angebot

WG355 Ref.	ID-Nr.	Items
TX25 10 1	45131	Set contents: spare part numbers 39 + 40 + 33
TX25 10 2	45132	Set contents: spare part numbers 39 + 40 + 34

Remark:
Torx screw ET-Nr. 34, L = 10 mm, fitting small holders 10 x 12 mm and 12 x 12 mm and blades (p. 47 - 48)

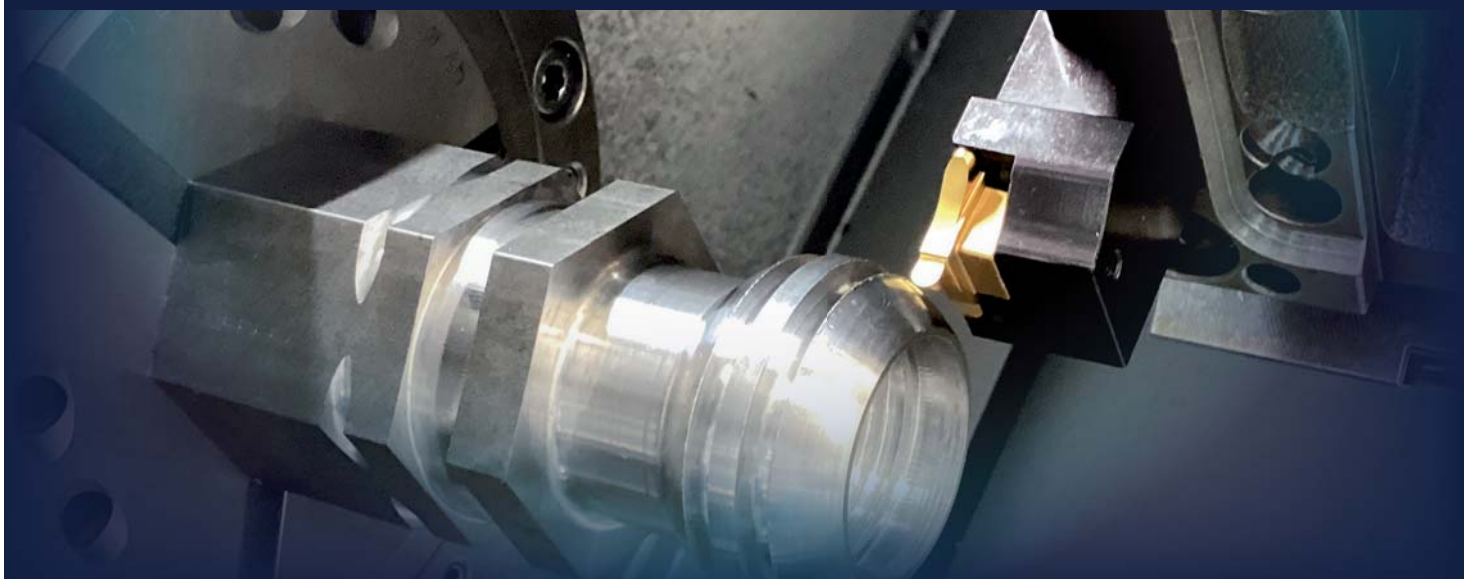
Notes and TIPS on TIGHTENING and RELEASING clamping screws

see page 245

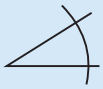


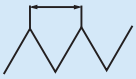
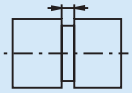
Technical section

Basics, speeds, feeds, coatings and explanations



Symbols

Symbol	Reference
	Rotation / Run
	Diameter
	Angle
	Internal coolant

Symbol	Reference
	Pitch
	Groove width
	Outside
	Hard material machining

Symbol	Reference
	inside
	Spare parts (ET)
	Weight

Abbreviations

Abbreviations	Meaning
ALU	Aluminium
ap	Cutting depth [mm]
b	Width
CCW	Counter clockwise
CW	Clockwise
D	Degree
e.g.	For instance
f	Cutting feed [mm/Revolution]
h	Height
ID-Nr	Identification Number
L	Length
L	Main edge angle LH
G	Thread size
HP	Internal coolant

Abbreviations	Abbreviations
IK	Internal coolant
F	Chamfer width
max	No more than
min	No less than
A	Thread pitch
P	Extension range
p.	Page, e.g. p. 16 = page 16
R	Radius
R	Main edge angle RH
S	Width of cutting edge [mm]
Vc	Cutting speed [m/min]
A	Blade heigth
a	theoretical center height blade
a. A.	on request

pocket size

System / Pocket size	1,5	2,0	half 2,0	3,0	half 3,0	3,5	4,0	half 4,0	5,0	6,0	8,0	10,0	15,0	16,0
Multicut 4 (OFQ16 R/L)														16R/L
Multicut 4 Extended (OFQ16E R/L)														16ER/L
P92	15	20 *		30	K30*	40	40		50	60	80	100		
P92-P							P40	PK40*	P50	P50				
P92-S		S20	SK20*											
P92-2/90				30			40							
P92-2				30			40		50					
FlexFix (FF)		FF2		FF3			FF4							
Standard Design (SD)		SD2		SD3			SD4		SD5	SD6				
F92													F13	
*** K = Short version**														

* for cutting width 2 + 2,5 mm

Selection of chip breakers

Select the most efficient chip breaker for the different materials

	Steel	Stainless steel	Cast iron	Nonferrous materials	Difficult to cut materials	Hard materials
Cutting and turning	MTNS MTNZ CTDS VTNS RTNX BTNX GTNS PTNSM	MTNS VTNS CTDS MTNZ RTNG XTNS BTNX MTNSG	OTXS MTNS CTDS OTXC PTNSM	BTNG HTNST HTNS MTNSG RTNG BTNX STNZ PTNSM	BTNG CTDS RTNG XTNS BTNX STNZ MTNSG ETNZ	BTNG Hard SX3 MTNS Hard SX3 RTNG Hard SX3
Grooving and parting off	CTD SCTD BTNN ITNS BTNS IFN BFN ITN OFQ16 OFQ**E**	STNS BTNS CTD SCTD BTNN XTNS SFN BFN SNTN OFQ16 OFQ**E**	CTD ALU ITNS HTNS IFN ITN OFQ16 OFQ**E**	CTD ALU IFN ALU BFN ITN ALU OFQ16 OFQ**E**	XTNS SFN BFN IFN ALU OFQ16 OFQ**E**	BTNN Hard SX3 CTD ALU Hard SX3 SCTD Hard SX3 KCTD Hard SX3 HTNS Hard SX3 ITNS Hard SX3 STNS Hard SX3 KHTNS Hard SX3 OFQ16 Hard SX3

Grades

Grade Ref./ Abbreviation	Recommended use	Structure	High wear resistance (universal usage)	High toughness (instable conditions)	CERMET applications (high cutting velocity)	GRIPLOCK SYSTEMS
KM			X	(X)		P92, P92S, P92P, F16, SD, MC4
FM			X	(X)		MC4
GF110			X			P92, P92P, F16, SD
KS140			(X)	X		F16, P92
PM				X		P92, P92S, P92P, F16, SD
GF25			(X)	X		F92
GS530			X		X	P92
KS420			X		X	P92

 Stable conditions

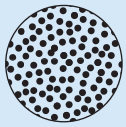
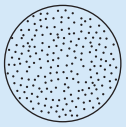
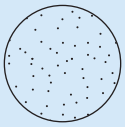
 Mostly stable conditions

 Instable conditions/ tough applications

Coatings

Coating	Type	Structure	Layer thickness	Main application	Alternative application
NANOSPEED	Supernitrid PVD	TiAlN	3 µm	P M	N S
TILOX	Supernitrid PVD	TiAlN	3 µm	P M	K S
ALOX	Supernitrid PVD	TiAlN	6 µm	K	P
HYPERSPEED	Supernitrid PVD	TiAlN	3 µm	S	M
ALUSPEED	HiPIMS PVD	TiB	2 µm	N	S
CARBO SX2	HiPIMS PVD	AlTiN	3 µm	P	S
HARD SX3	HiPIMS PVD	TiAlSiN	3 µm	H	S
CASTSPEED	CVD	TiCN	8 µm	K	-
CASTSPEED+	CVD	TiCN	22 µm	K	-
Uncoated	-	-	-	N	-

Structures and properties of GRIPLOCK grades

Rough structure	Medium to fine structure	Fine structure
		
Tough grade, safe against fracturing For small cutting values Interrupted cuts; instable conditions Less wear restistant	**Tough+ wear resistant** Prefered combination with PVD coatings Universal usage	**Hard, wear resistant grade** Higher cutting values Stable conditions, straight cuts Less tough, more liable for fracturing

Hardness range of grades with principle recommendations

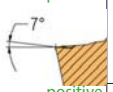
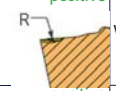
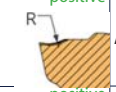
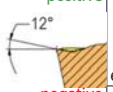
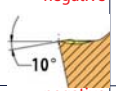
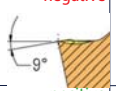
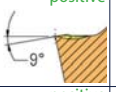
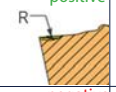
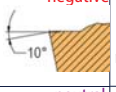
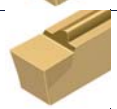
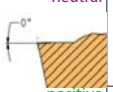
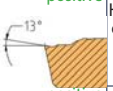
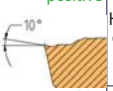
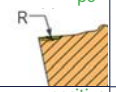
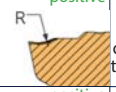
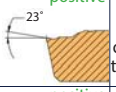
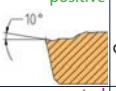
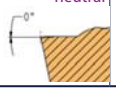
Grade & basic applications		Principle application range and hardness ← wear resistance | toughness →								Application acc. material group					
		ISO RANGE								Material group					
Grade + Coating	**Basis**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**P**	**M**	**K**	**N**	**S**	**H**
GF 110 Carbo SX2		▲	▲	▲	▲	▲	▲			●		○		○	
KM Carbo SX2				▲	▲	▲	▲	▲	▲	●		○		○	
KS 140 Carbo SX2					▲	▲	▲	▲	▲	●		○			
PM TILOX						▲	▲	▲	▲	●	○	○		○	
PM Carbo SX2						▲	▲	▲	▲	●		○		○	
FM TILOX				▲	▲	▲	▲	▲	▲	●	●	○		○	
GF 110 TILOX		▲	▲	▲	▲	▲	▲	▲	▲	●	●	○		○	
KM TILOX				▲	▲	▲	▲	▲	▲	●	●	○			
KS 140 TILOX						▲	▲	▲	▲	●	●	○			
PM ALOX						▲	▲	▲	▲	○		●			
GF110 ALOX				▲	▲	▲	▲	▲		○		●			
FM NANOSPEED				▲	▲	▲	▲	▲	▲	●	●		○	○	
GF 110 NANOSPEED		▲	▲	▲	▲	▲	▲	▲	▲	●	●		○	○	
KM NANOSPEED				▲	▲	▲	▲	▲	▲	●	●		○	○	
KS 140 NANOSPEED						▲	▲	▲	▲	●	●		○	○	
PM NANOSPEED						▲	▲	▲	▲	●	●		○	○	
GS 530 NANOSPEED				▲	▲					●	●	○		○	
KS 420 NANOSPEED				▲	▲					●	●	○		○	
KS 420 CASTSPEED PLUS			▲	▲	▲							●		○	
GF 110 CASTSPEED PLUS		▲	▲	▲	▲	▲	▲					●			
KM CASTSPEED			▲	▲	▲	▲						●			
FM ALUSPEED						▲	▲	▲	▲				●	○	
GF 110 uncoated			▲	▲	▲	▲	▲			○		○	●		
GF 25 uncoated				▲	▲	▲	▲	▲		○		○	○		
KM AluSpeed					▲	▲	▲	▲	▲				●	○	
KM uncoated						▲	▲	▲	▲	○		○	●		
PM uncoated							▲	▲	▲	○			○		
GF 110 HYPERSPEED		▲	▲	▲	▲	▲	▲				○			●	
KM HYPERSPEED		▲	▲	▲	▲	▲	▲				○			●	
FM Hard SX3		▲	▲	▲	▲	▲								●	●
GF 110 Hard SX3		▲	▲	▲	▲	▲								○	●
KM Hard SX3		▲	▲	▲	▲	▲	▲	▲						●	●

● Main application
○ Alternate application

Prefered usage in:

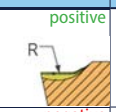
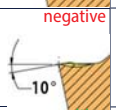
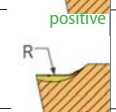
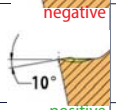
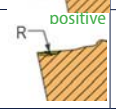
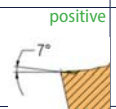
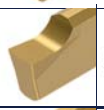
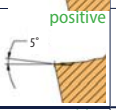
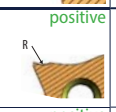
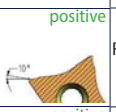
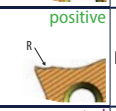
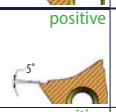
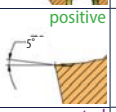
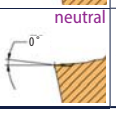
Steel
Steel + Stainless
Non-ferrous
Cast iron
Hard materials
Stainless
Stainless + Steel
Difficult to cut
Steel + Cast iron
Hard + difficult m.

List of available geometries for grooving, turning and parting off

	Type	Bez.	Geometry (chip breaker)	Main cutting edge	Shape and details of minor edges	Kind of machining	Grooving	Turning	Parting off	Copying ISO turning	A PERFECT MATCH	ADDITIONAL RECOMMENDATIONS	Catalogue ref. for detailed information
1st choice: grooving and turning	Maikäfer	MTNS MTNSG		positive 	Horizontal edges with s-shaped chip breakers for easy chip flow	Roughing, Finishing	☺	☺	○		GF110 ALOX for cast materials and free cutting steel	Suitable for parting-off small diameters	 p. 56,p. 78
	Maikäfer Z	MTNZ		positive 	wave shaped chip breaker teeth	Roughing	○	☺	○		KM NANOSPEED for stainless materials	Turning with increasing feed until chips become short	 p. 61
	BG/BX Geometry	BTNG BTNX		positive 	Horizontal edges with parallel	Finishing		●			GF110 NANOSPEED controlling chip flow on stainless steels	BTNG a good choice on nickel alloys	 p. 64, p. 78
	Snake	STNZ STNG		positive 	Arc shaped edges	Finishing and copy turning	○	●			KM ALUSPEED finishing nonferrous heavy metals	The type STVR/L (P92P) suitable for turning with 35° edge angle	 p. 58, p. 127
	Victory	VTNS		positive 	Horizontal edges with large, v-shaped chip breakers for efficient chip flow	Finishing to roughing	●	●	○		PM ALOX machining cast iron	The main chip breaker suitable for parting off alloys	 p. 56
	CS Geometry	CTDS		negative 	**Sharply** ground edges	Super finishing	○	●			PM TILOX super finishing	A unique insert for perfect surfaces	 p. 58
	X-Geometry	XTNS		negative 	16° positive chip entry with integrated chip breaker dents	Roughing semifinishing	●	●	○		KM TILOX excellent machining stainless steels	Insider tip: Grooving and parting off components starting with interrupted cutting	 p. 63
	Exotic	ETNZ		positive 	Positive top rake available with 0° chamfer or sharp cutting edge	Roughing, finishing		☺			GF 110 HARD SX3 for heat resisting materials	Wiper geometry for excellent super finishing surfaces	 p. 59
	PT Geometry	PTNSM		positive 	No minor cutting edges	Finishing		●	○		GF 110 TILOX for universal applications	Super positive geometry for difficult to cut materials and none ferrous materials	 p. 60
	OC Geometry	OTXC		negative 	Straight cutting edge with negative chamfer	Roughing, finishing	☺	☺	☺		CVD-coated insert for cast materials	Parting off, grooving and grooving and turning of cast materials	 p. 65
	OS Geometry	OTXS		neutral 	Horizontal edge with flat top	Finishing	○	○			Tailor made inserts with different coatings on systems P92 and P92P	IGrind a negative chamfer to machine cast iron	 p. 65
	RG Geometry	RTNG		positive 	Horizontal parallel chip breakter and ground cutting edge	Finishing, copying				☺	GF110 NANOSPEED machining heat resisting alloys	Copying with system P92 P and Multicut 4	 p. 66, p. 79
	RX Geometry	RTNX		positive 	Horizontal parallel chip breaker with integrated teeth	Roughing and copying				☺	KM TILOX roughing stainless steels	Copying with system P92 P and Multicut 4	 p. 66
	Gozilla	GTNS		po- 	No minor cutting edges	For face grooving, roughing and finishing	●	○	●		GF 110 TILOX for universal applications	Especially designed for face grooving	 p. 62
	STV-Geometry	STVR/L		positive 	Positive top rake for best possible chip control when turning or copying	Turning with ISO 35° edge angle				☺	KM ALUSPEED for aluminum alloys	Ideal shape when machining in narrow spaces	 p. 127
	STD-Geometry	STDR/L		positive 	Positive top rake for best possible chip control when turning or copying	Turning with ISO 55° edge angle				☺	GF 110 NANOSPEED for heat resisting materials	Ideal for machining in narrow spaces	 p. 128
	DECO-Geometry	OTX DECO		positive 	Positive top rake for best possible chip control when back turning	Decolletage machining on Swiss sliding head automatics				●	PM NANOSPEED for free cutting materials	Edge is cutting easily without vibrations	 p. 129
	Heuberg-T	HTNST		neutral 	Sharply ground edges with arc chaped chip breaker	Super finishing	○	●			KM TILOX for chip control	For automatic lathes and sliding head machines	 p. 146

● = First choice | ○ = 2nd choice | ☺ = Recommended | R=Shape of geometry in longitudinal intersection

List of available geometries for grooving, turning and parting off

	Type	Bez.	Geometry (chip breaker)	Main cutting edge	Shape and details of minor edges	Kind of machining	Grooving	Turning	Parting off	Copying ISO turning	A PERFECT MATCH	ADDITIONAL RECOMMENDATIONS	Catalogue ref. for detailed information
1st choice: parting off and grooving	B-Geometry	BTNN BTNS BFN BGN		positive 	No minor edges chip breaker	universal			☺		BTNN KM TILOX for all kinds of parting-off	Groove slightly below center	 p. 68, p. 79 | p. 144 | p. 161 | p.173
	C - Geometry	CTD		negative 	No minor edges chip breaker	difficult to cut materials	●		●		PM NANOSPEED for parting off stainless steels	Good choice for interrupted cuts	 p. 72
	Supernova	SCTD STNS SFN SNT		positive 	No minor edges chip breaker	universal	○		☺		PM NANOSPEED for instable conditions	For lathes and machine tools with low power	 p. 73, p. 80 | p. 145, p. 150 | p. 163 | p.171
	I - Geometry	ITN IF		negative 	No minor edges chip breaker	difficult to cut materials	●		●		Chamfer reinforces cutting edge	Good choice for interrupted cuts	 p. 172 | p. 162 | p. 162
	LT - Geometry	LTNN		positive 	No minor edges chip breaker	non ferrous metal			☺		GF 110 CARBO SX2 for alloyed steels	Especially suitable for double spindle automatics	 p. 74
	ALU Geometry	CTD ALU IF ALU IT ALU		positive 	No minor edges chip breaker	non ferrous metal	●		●		Instable conditions and thinwalled parts	Good choice for exotic materials	 p. 71 p. 80 | p. 163 | p. 173
	Heuberg	HTN		positive 	Sharp edges	universal	●		●		PM NANOSPEED machining free cutting materials	For automatic lathes and sliding head machines	 p. 145, p. 150
1st choice: Multicut 4	OFQ cutting	OFQ/E...N/ R/L...		positive 	No minor edges chip breaker	grooving and parting off	●		●		FM TILOX for steel	Ground chip breaker starting from width 1,5 mm	 p. 29 , p. 40, p. 43
	OFQ Precision	OFQ/E...N		positive 	No minor edges chip breaker	precision grooving	●				FM TILOX for steel	Ideal for machining shapes according DIN 471	 p. 31 + 32, p. 40, p. 45
	OFQ Radius	OFQ/E R...N		positive 	Radial cutting edge for copying	finishing	●				FM TILOX for steel	Also suitable for super finishing	 p. 34, p. 40, p. 44,
	OFQ Axial	OFQ/E...A...		positive 	No minor edges chip breaker	face grooving	●				KM CARBO SX2 for alloyed steels	For face grooving from D > 15 mm outer cutting edge corner maximum depth 5 mm	 p. 33, p. 41
	OFQ ISO	OFQ ... ISO		positive 	Finishing edge 35 °	finishing				☺	FM NANOSPEED for stainless and steel	fininshing in narrow spaces	 p. 38
	OFQ DECO	OFQ... DECO		neutral 	DECO edge	back turning				☺	FM NANOSPEED for stainless materials and steel	Back turning with 4 edges	 p. 39
First choice: threading	OFQ thread	OFQ... ER/L... W/ISO		positive 	Minor edge with cutting angle 60°/55°	ISO/ Whitworth threading				☺	Type EIR for part profile	Threading basics see technical section	 p. 35 - 37, p. 46
	P92 S thread	HTNG		positive 	Minor edge with cutting angle 60°/55°	ISO/ Whitworth threading				☺	Type IR for inner thread	Threading basics see technical section	 p. 147 - 148 | p. 155
	P92 P thread	OTX... ER/IR... W/ISO		neutral 	Minor edge with cutting angle 60°/55°	ISO/ Whitworth threading				☺	Type IR for inner thread	Threading basics see technical section	 p. 130 | p. 130 | p. 131 | p. 140

● = First choice | ○ = 2nd choice | ☺ = Recommended | R=Shape of geometry in longitudional intersection

Selection of grades and speeds

Recommended grades

Cutting conditions	Steel	Stainless steel	Cast iron	Nonferrous materials	Difficult to cut materials	Hard materials
interrupted cutting	PM ALOX/TILOX PM TILOX/CARBO SX2 KM TILOX/CARBO SX2	PM TILOX/NANOSPEED KM TILOX/NANOSPEED	KM CASTSPEED/PLUS KM TILOX GF110 NANOSPEED	GF110 NANOSPEED GF110	PM TILOX/NANOSPEED KM TILOX/NANOSPEED GF110 HYPERSPEED	HARD SX3
variable cutting depth, crusts, deposits	PM ALOX/TILOX	PM ALOX/TILOX	KM CASTSPEED/PLUS PM ALOX/TILOX GF110 ALOX	KM	PM ALOX/TILOX	HARD SX3
even cutting	KM TILOX/CARBO SX2 GF110 TILOX KS140 TILOX/CARBO SX2	KM TILOX/NANOSPEED GF110 TILOX KS140 TILOX/NANOSPEED	KM CASTSPEED/PLUS KM TILOX GF110 TILOX	KM NANOSPEED/ ALUSPEED	KM TILOX/NANOSPEED GF110 TILOX KM HYPERSPEED	HARD SX3

Recommended speeds

	Material code	Grade	Cutting speed - m/min	Initial cutting speed in m/min
Steel	P	PM ALOX/TILOX/CARBO SX2	60 120 180 240 300	100
		KM TILOX/CARBO SX2		160
		FM TILOX/CARBO SX2		220
		GF110 TILOX/CARBO SX2		220
		KS140 TILOX/CARBO SX2		160
		GS530 / KS420 NANOSPEED		260
		KM + PM CASTSPEED		100

	Material code	Grade	Cutting speed - m/min	Initial cutting speed in m/min
Stainless steel	M	PM TILOX/NANOSPEED	60 120 180 240	80
		KM TILOX/NANOSPEED		120
		KS140 NANONSPEED		120
		FM TILOX/NANOSPEED		150
		GF110 TILOX/NANOSPEED		150
		GS530 / KS420 NANOSPEED		180

	Material code	Grade	Cutting speed - m/min	Initial cutting speed in m/min
Cast iron	K	KM/GF110 TILOX/ALOX	150 200 250 300 600 800 1100	150
		KM+PM CASTSPEED GF110 CASTSPEED PLUS		150
		PM TILOX		150

	Material code	Grade	Cutting speed - m/min	Initial cutting speed in m/min
Nonferrous materials	N	GF110 NANOSPEED/ Aluspeed	150 300 450 600 750	360
		KM NANOSPEED/Aluspeed		450

	Material code	Grade	Cutting speed - m/min	Initial cutting speed in m/min
Difficult to cut materials	S	PM ALOX/TILOX/ NANOSPEED	15 35 55 75 95 115 135 155	30
		KM TILOX/NANOSPEED/ HYPERSPEED		45
		GF110 TILOX/NANOSPEED/ HYPERSPEED		60

	Material code	Grade	Cutting speed - m/min	Initial cutting speed in m/min
Hard materials	H	HARD SX3	15 35 55 80 100 130 160 200 220	30

Further information on the ISO range can be found on the inside flap of the envelope at the back.

Selection of chip breaker and feeds

Recommended cutting depth and feeds for cutting inserts:

MTNS chip breaker

- precision sintered inserts
- solid and rounded cutting edges

BTNG chip breaker

- precision ground inserts with sharp edges
- positive top rake

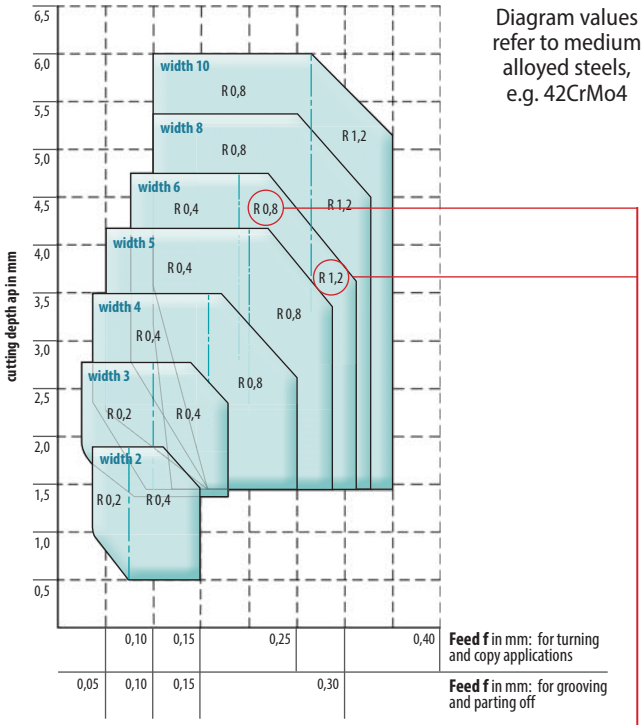
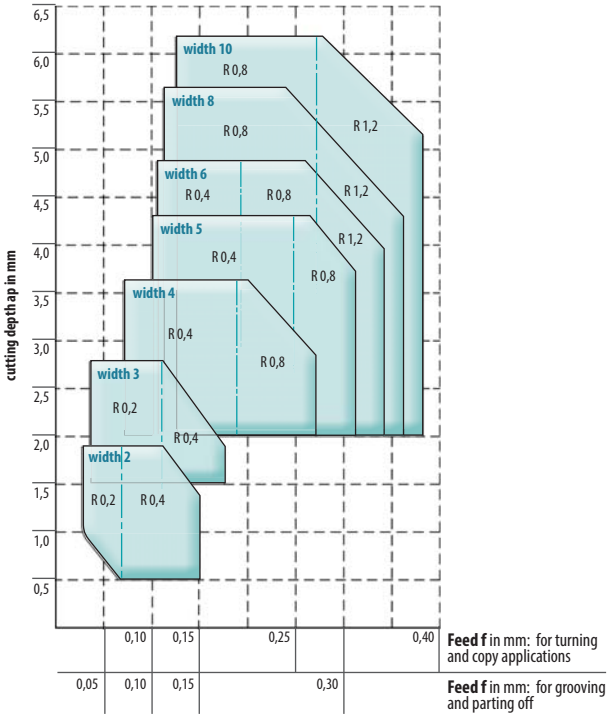


Diagram values refer to medium alloyed steels, e.g. 42CrMo4



Remark: Select feeds according to the radius of inserts.
Diagram explanation:
e.g. R 0,4 means corner radius of the insert is 0,4 mm

Bigger radius require reducing cutting depths and allow increasing feed.

Example MTNS: width 6 mm

R 0,8: ap max. 4,7 mm, → f max. 0,27 mm/U.
R 1,2: ap max. 4,2 mm, → f max. 0,31 mm/U.

Recommended cutting depth and feeds for full radius inserts:

RTNX chip breaker

precision sintered

On turning and copy turning the maximum cutting depth should not exceed half of the insert width e.g. cutting width 6 mm → cutting depth 3 mm

On turning and copy turning the maximum possible feed depends on the material to be machined and the cutting depth. On free cutting materials the feed may be increased multiplied by 1.8 e. g. MTNS 304, cutting width 3 mm, radius 0.4 mm, cutting depth 1.5, feed (Diagram) 0.15 x 1.8 = 0.27

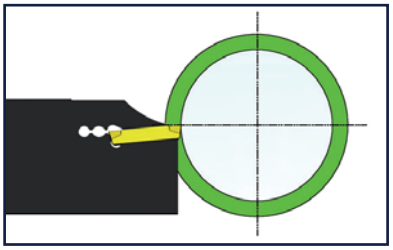
RTNG chip breaker

precision ground

Recommendations for parting off

Parting off operating values and way of proceeding

Starting area

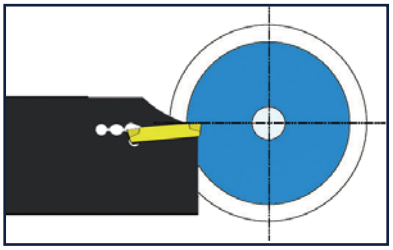


Start with a small value and gradually increase until you reach the ideal technical value.

Feed: f = 0,02 - 0,05

Start carefully! Otherwise the cutting edge may be damaged on the first cut.

Stable cutting conditions

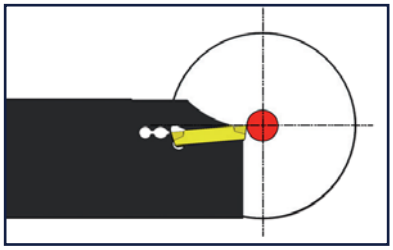


Ideal chips can be machined with numerous geometries if correctly selected.

Feed: f = 0,08 - 0,2

Excellent chips, good tool life!

Runout area



Reduce feed before you reach the center (~ Ø 5 mm) to 0.02.

Feed: f = 0,05 - 0,02

Proceed carefully. Bad chip removal. No efficient cooling. Speed runs to zero.

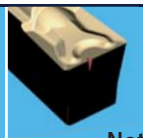
Application guidelines and procedure when parting off in practice on the machine

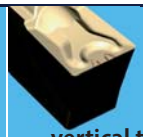
Further practical tips
www.kemmerhmw.de

Grades	cutting speed Vc in m/min	Feed f in mm/U
	Alloyed Steels	
FM NANOSPEED	160 → 300	0,1 → 0,3
FM TILOX		
GF110 NANOSPEED		
GS530 NANOSPEED		
KS140 CARBOSX2		
KM TILOX		
PM NANOSPEED	120 → 240	0,08 → 0,3
	Cast materials	
KM CASTSPEED	100 → 270	0,1 → 0,3
PM ALOX	100 → 200	0,1 → 0,3
	Stainless Steel	
FM NANOSPEED	60 → 120	0,08 → 0,2
FM TILOX		
GF 110 NANOSPEED		
KM NANOSPEED		
KM TILOX		
PM NANOSPEED		
PM TILOX		
	Hard materials	
FM HARDSX3	20 → 60	0,05 → 0,1
GF110 HARDSX3		
KM HARDSX3		

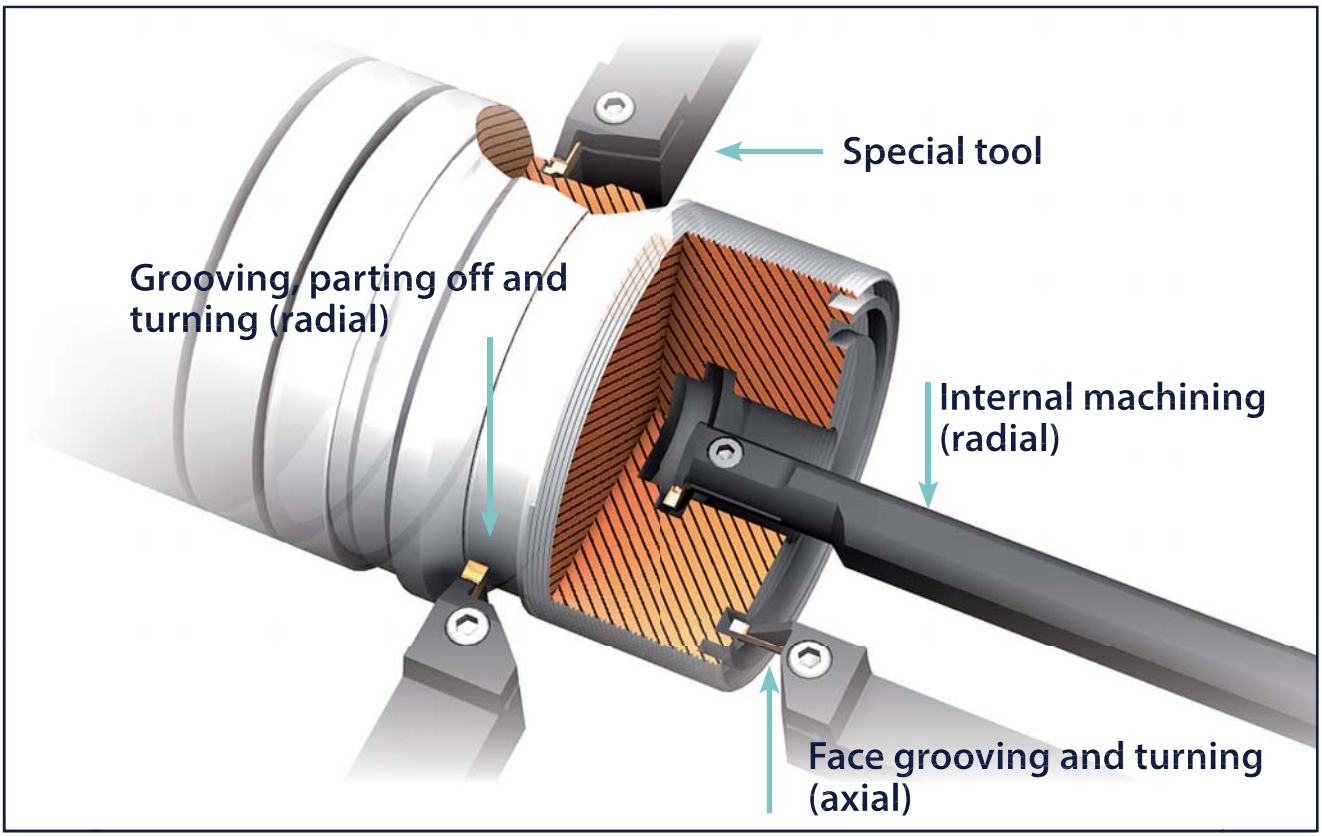
Wear marks and tips to solve them

Wear on an insert has different reasons and mainly does show a result of a not already investigated cause in the process. How to identify and to reduce wear on cutting edges:

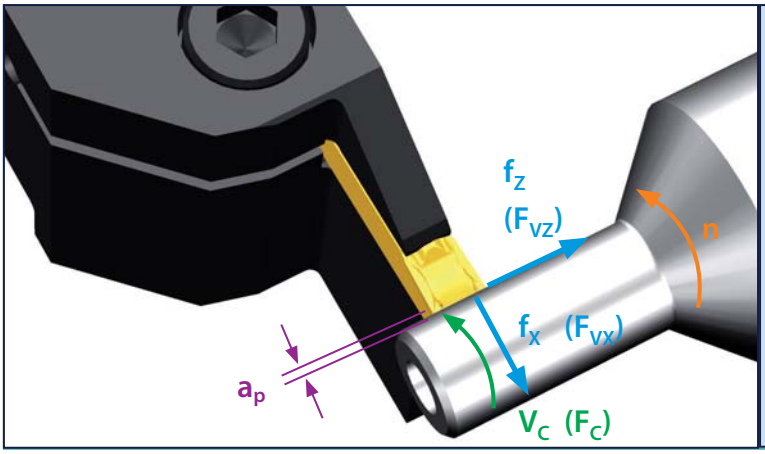
Type of wear	 Built-up-edge	 Splintering	 Wear on flanks or top clearances	 Notch wear
Possible causes	- Too low cutting parameters - Wrong geometry - Missing coating	- Too low cutting parameters - Wrong geometry - Wrong grade	- Too high cutting parameters - Wrong grade	- Too high cutting parameters - Wrong geometry - Wrong grade
Recommendations				
Take smaller corner radius				
Take more positive geometry	●	●		
Increase cutting speed	●	●		
Reduce cutting speed			●	●
Increase cutting depth				
Reduce cutting depth				
Take a more wear resistant grade			●	●
Increase feed				
Reduce feed				
Take a tougher grade		●		
Process check (e.g. extension)				

Type of wear	 Crater wear	 Plastic deformation	 Cracks vertical to edge	 Vibrations
Possible causes	- Too low cutting parameters - Wrong geometry - Cutting depth too small	- Too high cutting parameters - Wrong grade / too soft - High process temperatures	- Wrong grade / too hard	- Cutting speed too high - Instable condition - Wrong geometry
Recommendations				
Take smaller corner radius				●
Take more positive geometry				●
Increase cutting speed				
Reduce cutting speed				●
Increase cutting depth	●			
Reduce cutting depth		●		●
Take a more wear resistant grade	●	●		
Increase feed				●
Reduce feed	●	●		
Take a tougher grade			●	
Process check (e.g. extension)		●		●

Basics to select the right tools



Cutting: Dimensions and formulas

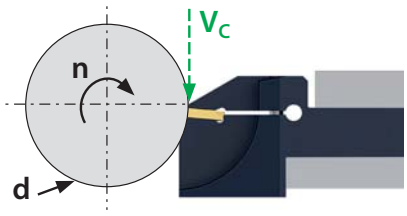


Dimensions

a_p ... cutting depth [mm]
F_C ... cutting force [N]
F_{VX} ... feedforce in X - direction [N]
F_{VZ} ... feedforce in Z - direction [N]
f_X ... feed in X - direction [mm]
f_Z ... feed in Z - direction [mm]
n ... revolutions of main spindel [min^{-1}]
V_C ... cutting speed [m/min]

Cutting speed V_C [m/min]:
Resulting force:: **Cutting force (F_C)**

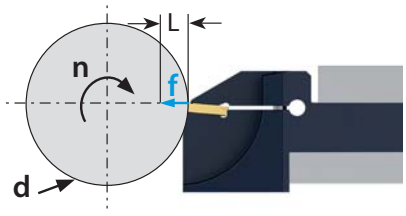
$$VC = \frac{\pi \cdot d\ [mm] \cdot n\ [min\text{-}1]}{1\,000}$$



e.g. for cutting

Feed f [mm/Rev]:
Resulting force:: **Feedforce (F_V)**

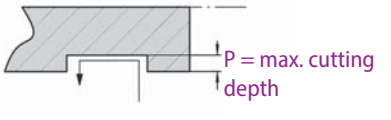
$$f = \frac{L\ (depth))\ [mm]}{Revolution}$$



e.g. for cutting

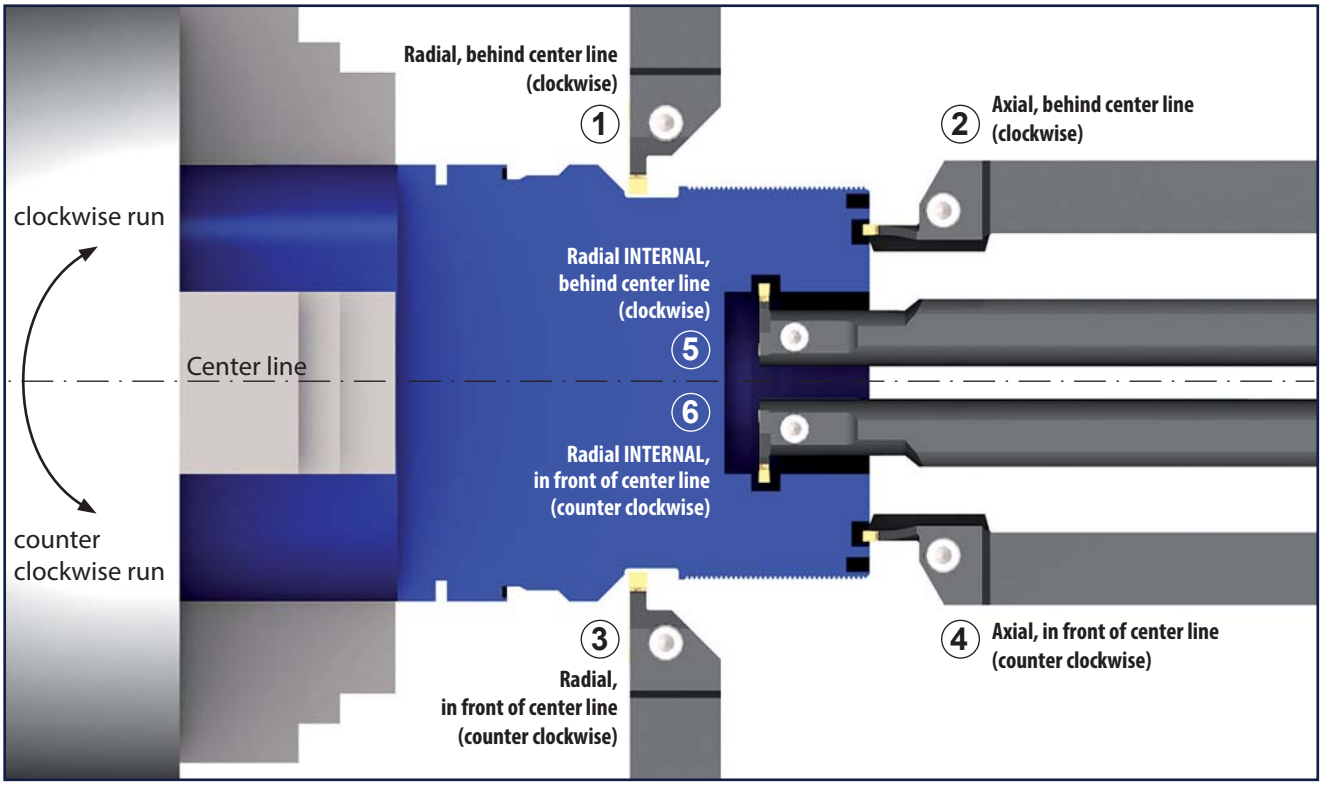
Cutting depth a_p [mm]:
Cutting depth for longitudinal turning

a_p = ... mm

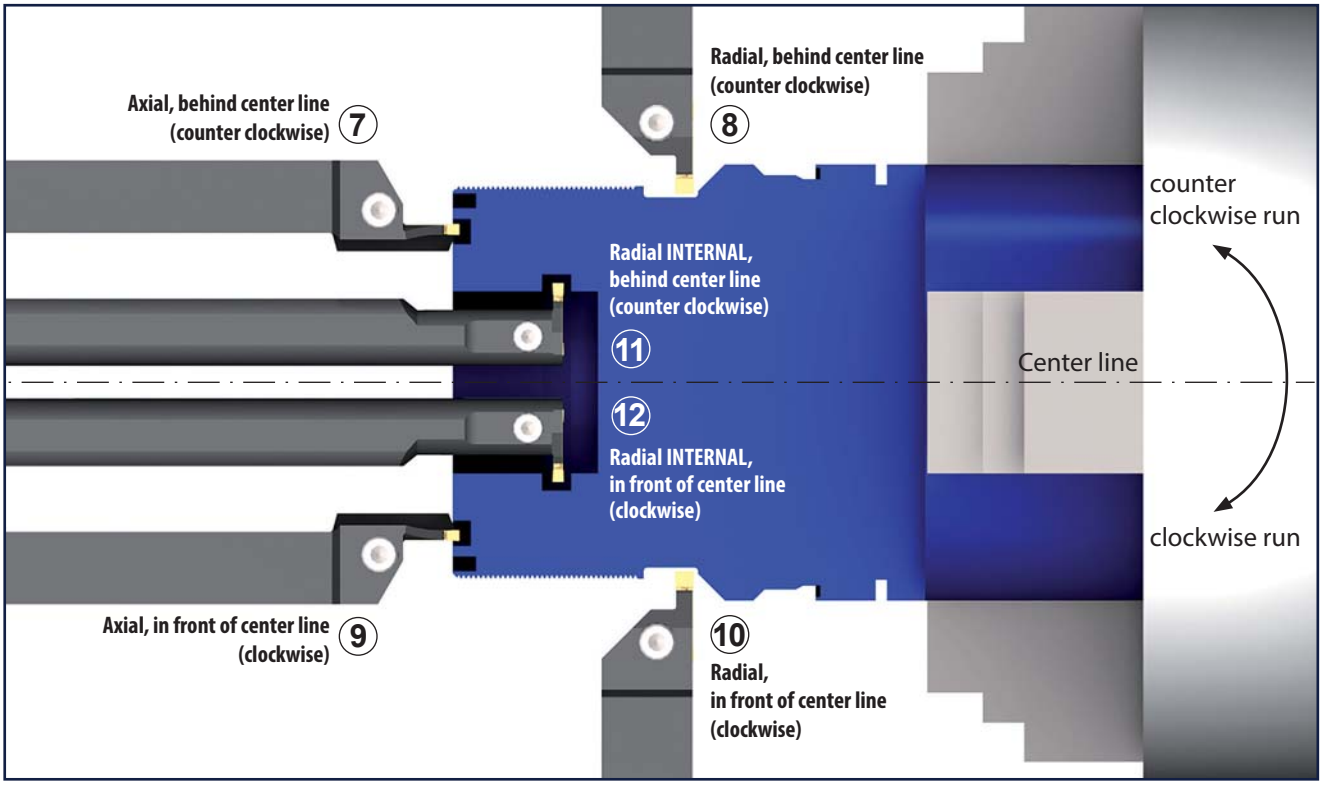


Dimension **P** is the maximum cutting depth refering to the minor cutting edges of the different chip breakers.

Tool application on the MAIN SPINDLE



Tool application on the COUNTER SPINDLE



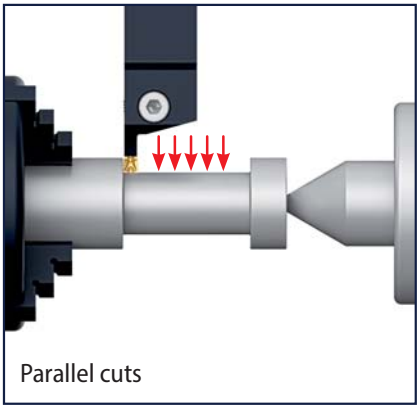
(3) Point of reference in case of consulting

Recommendations for cutting and turning

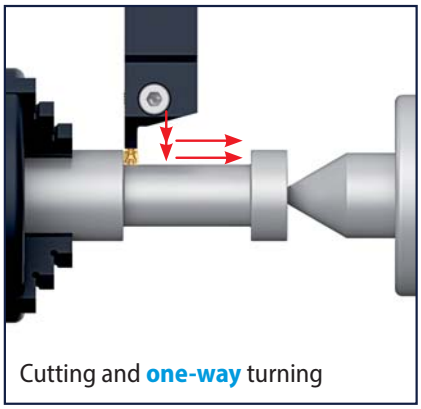
Cutting and turning machining

The major cutting edge cuts a groove and then the minor edge turns in longitudinal directions

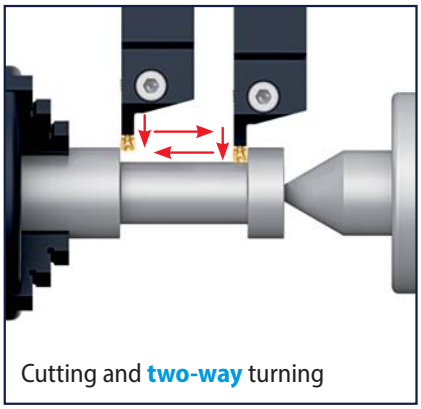
Different methods to cut and turn



Parallel cuts



Cutting and **one-way** turning

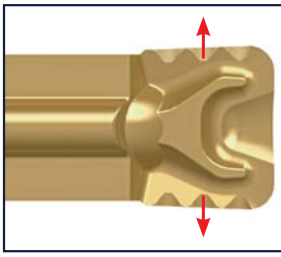


Cutting and **two-way** turning

Major edge

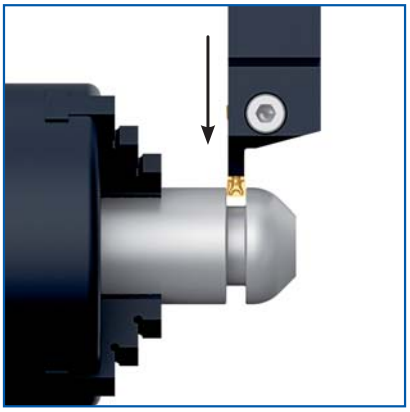
The major cutting edge features an efficient chip breaker for cutting applications.

Minor edge



The minor cutting edges, left and right, feature efficient chip breaker for longitudinal turning.

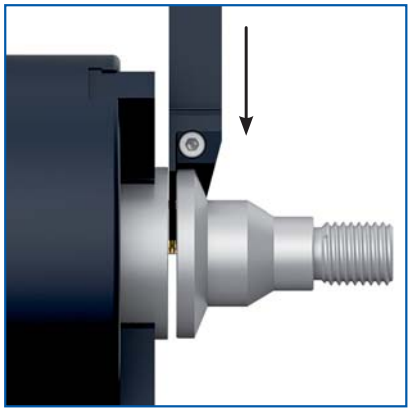
Grooving

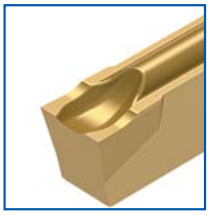


Grooving MTNS insert with solid and rounded cutting edge

The major cutting edge cuts a groove.

Parting off



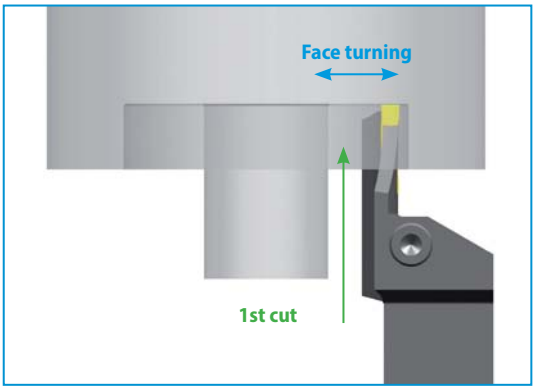


Parting off BTNN insert featuring a large and efficient chip breaker

The major edge parts off a component from the bar.

Explanations on face grooving

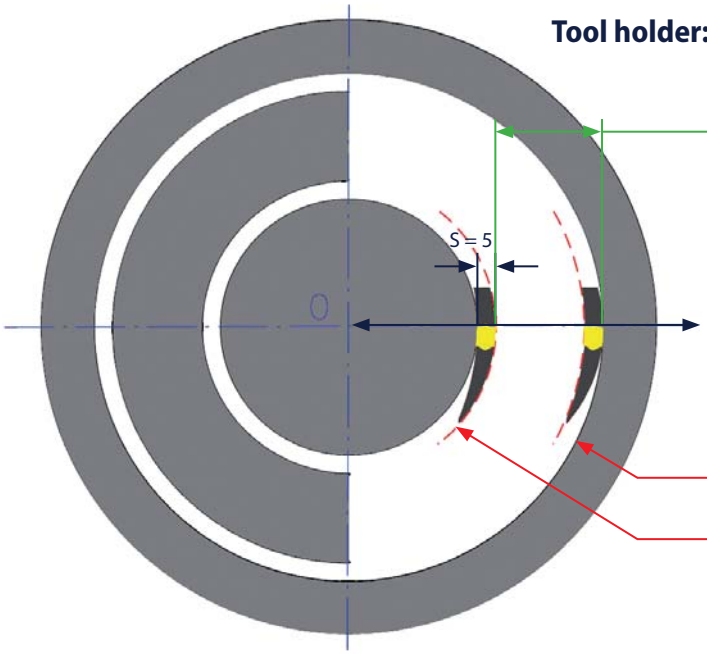
Diameter for the 1st cut



Each cartridge fits for a certain diameter range. This range is marked as Ømin - Ø max. The 1st cut has to be positioned within this range. The dimension Ø min is reduced by the width of the cutting insert.

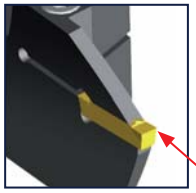
After the 1st cut the groove width can be enlarged moving the tool radially to the center or to the outer diameter. No danger of collision! The following insert types are ideal for radial front turning: CTDS, MTNS, VTNS, MTNZ and BTNG.

Tool holder: P92 2 CXCBR 2020 K50 75 – Ø max 130



Ø Range for the 1st cut

Provided the 1st cut has been set correctly, turning to the outer diameter or to the center is possible.



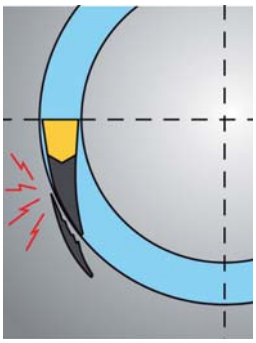
Edge corner facing the outer diameter of the component.

Ø max = 130 mm

Ø min = 75 mm

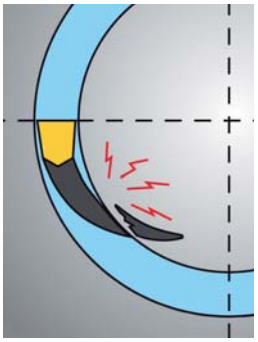
The diameter range always refers to the cutting edge corner, which faces the outer diameter of the component.

Damage caused when the 1st cut is not within the Ø min - Ø max range.



Shows the damage caused when the 1st cut is positioned within a smaller dimension than Ø min.

The outer face of the cartridge collides with the component.



Shows the damage caused when the 1st cut is positioned outside Ø max, to the outer diameter.

The inner face of the cartridge collides with the component.

Find out the RIGHT cutting speed:
Chips must come out SMOOTHLY and may be slightly blue!

Advantages of GripLock threading inserts

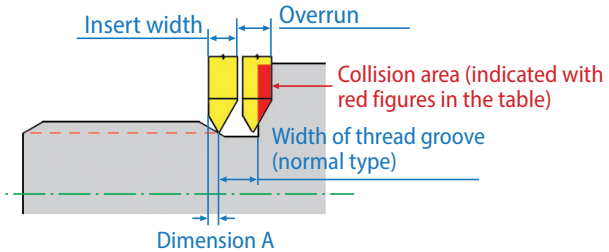
- Inserts fit into many already available tool holders and boring bars.
- Precision ground inserts.
- Wide chip-flow clearances.
- No spare parts.
- Easy cutting owing to ground clearance angles.
- Price per cutting edge is comparable to inserts with 3 cutting edges.
- No shims necessary.

Basics on threading

Overrun dimensions for GripLock threading inserts

System		MC4-external thread full profile			P92-P external and internal thread full and part profile					P92-S external and internal thread full profile		
Pitch	Width of thread relieve cut to DIN76-A	Dimension A	Insert width	Overrun	Dimension A full profile	Dimension A part profile	Insert width	Overrun full profile	Overrun part profile	Dimension A	Insert width	Overrun
0,35	0,7									1,0	2,0	-0,3
0,50	1,1	0,5	2,0	-0,4		2,0	4,0		-0,9	1,0	2,0	0,1
0,70	1,5	0,5	2,0	0,0		2,0	4,0		-0,5	1,0	2,0	0,5
0,75	1,6	0,5	2,0	0,1		2,0	4,0		-0,4	1,0	2,0	0,6
0,80	1,7	0,7	2,0	0,4		2,0	4,0		-0,3	1,0	2,0	0,7
1,00	2,1	0,7	2,0	0,8	0,8	2,0	4,0	-1,1	0,1	1,0	2,0	1,1
1,25	2,7	0,7	2,0	1,4	0,8	2,0	4,0	-0,5	0,7	1,0	2,0	1,7
28W=0,907	2,1	1,0	2,0	1,1		2,0	4,0		0,1	1,0	2,0	1,1
24W=1,05	2,1					2,0	4,0		0,1			
20W=1,27	2,7					2,0	4,0		0,7			
19W=1,337	3,2	1,0	2,0	2,2	0,8	2,0	4,0	0,0	1,2	1,0	2,0	2,2
18W=1,411	3,2					2,0	4,0		1,2			
16W=1,587	3,2					2,0	4,0		1,2			
14W=1,814	3,9	1,3	3,5	1,7	1,3	2,0	4,0	1,2	1,9	1,0	2,0	2,9
12W=2,116	4,5					2,0	4,0	0,5	2,5			
11W=2,309	5,6	1,5	3,5	3,6	1,5	2,0	4,0	3,1	3,6			
10W=2,54	5,6					2,0	4,0		3,6			
1,50	3,2	0,8	3,5	0,5	1,0	2,0	4,0	0,2	1,2	1,0	2,0	2,2
1,75	3,9	0,9	3,5	1,3	1,1	2,0	4,0	1,0	1,9			
2,00	4,5	1,0	3,5	2,0	1,4	2,0	4,0	1,9	2,5			
2,50	5,6	1,3	3,5	3,4	1,5	2,0	4,0	3,1	3,6			
3,00	6,7	1,8	3,5	5	1,8	2,0	4,0	4,5	4,7			

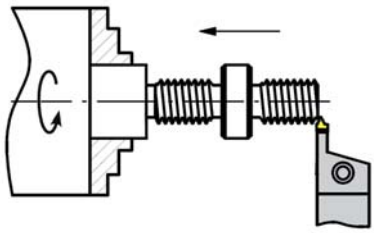
Overrun dimensions marked in RED indicate that a special insert is needed to prevent collision.



Basics on threading

EXTERNAL THREAD – Threading on main spindle

Threading with: **Main spindle** Holder: **RH**
Thread: **RH** Rotation: **CCW**

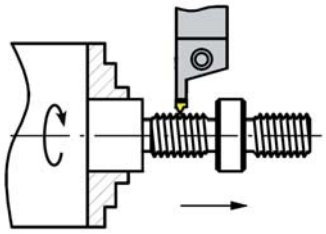


Available systems, tool holders and inserts

M92 Q P92 P P92 S

p. 35 p.130-131 p. 147

Working area: **behind the bar**
Threading with: **Main spindle** Holder: **LH**
Thread: **RH** Rotation: **CW**

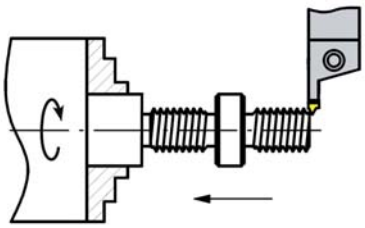


Available systems, tool holders and inserts

P92 S

p. 147

Threading with: **Main spindle** Holder: **LH**
Thread: **LH** Rotation: **CW**

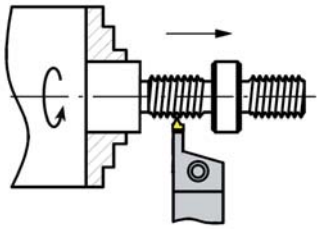


Available systems, tool holders and inserts

M92 Q P92 P P92 S

p. 35 p. 131 p. 147

Arbeiten mit: **Main spindle** Holder: **RH**
Thread: **LH** Rotation: **CCW**

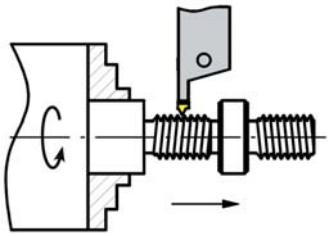


Available systems, tool holders and inserts

P92 S

p. 147

Working area: **behind the bar**
Threading with: **Main spindle** Holder: **RH overhead**
Thread: **LH** Rotation: **CCW**

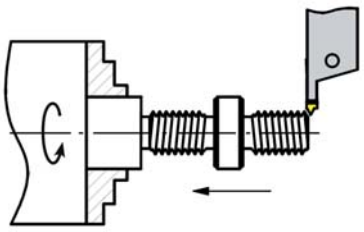


Available systems, tool holders and inserts

P92 S

p. 147

Threading with: **Main spindle** Holder: **RH overhead**
Thread: **RH** Rotation: **CCW**



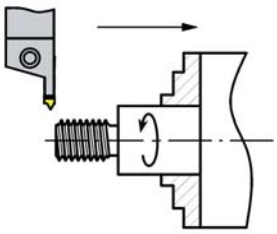
Available systems, tool holders and inserts

M92 Q P92 P P92 S

p. 35 p. 131 p. 147

EXTERNAL THREAD – Threading on tail spindle

Threading with: **Tail spindle** Holder: **RH**
Thread: **RH** Rotation: **CCW**

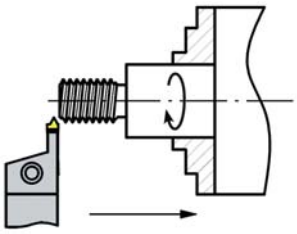


Available systems, tool holders and inserts

M92 Q P92 P P92 S

p. 35 p.130-131 p. 147

Threading with: **Tail spindle** Holder: **LH**
Thread: **LH** Rotation: **CW**

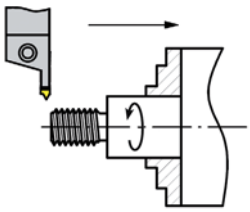


Available systems, tool holders and inserts

M92 Q P92 P P92 S

p. 35 p.130-131 p. 147

Threading with: **Tail spindle** Holder: **RH overhead**
Thread: **RH** Rotation: **CCW**

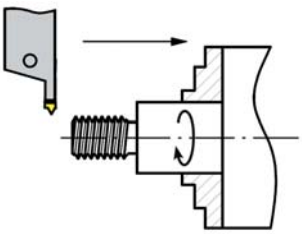


Available systems, tool holders and inserts

M92 Q P92 P P92 S

p. 35 p.130-131 p. 147

Threading with: **Tail spindle** Holder: **LH overhead**
Thread: **LH** Rotation: **CW**



Available systems, tool holders and inserts

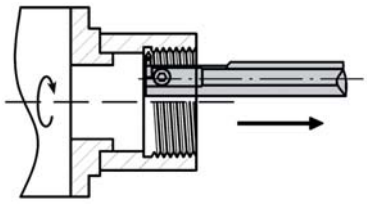
M92 Q P92 P P92 S

p. 35 p.130-131 p. 147

Basics on threading

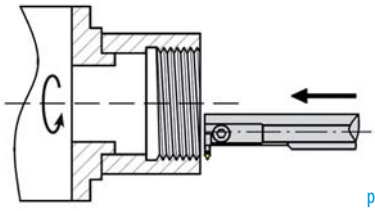
INTERNAL THREAD – Threading on main spindle

Threading with: **Main spindle** Holder: **LH**
Thread: **RH** Rotation: **CW**



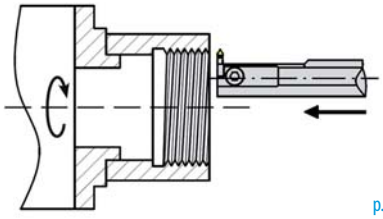
Available systems, tool holders and inserts

Threading with: **Main spindle** Holder: **RH**
Thread: **RH** Rotation: **CCW**



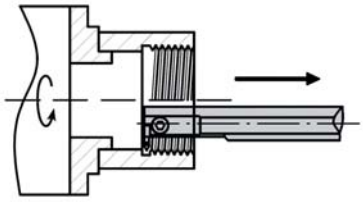
Available systems, tool holders and inserts

Threading with: **Main spindle** Holder: **LH**
Thread: **LH** Rotation: **CW**



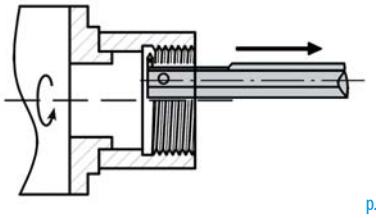
Available systems, tool holders and inserts

Threading with: **Main spindle** Holder: **RH**
Thread: **LH** Rotation: **CCW**



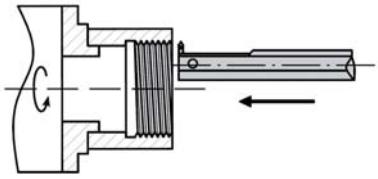
Available systems, tool holders and inserts

Threading with: **Main spindle** Holder: **RH overhead**
Thread: **LH** Rotation: **CCW**



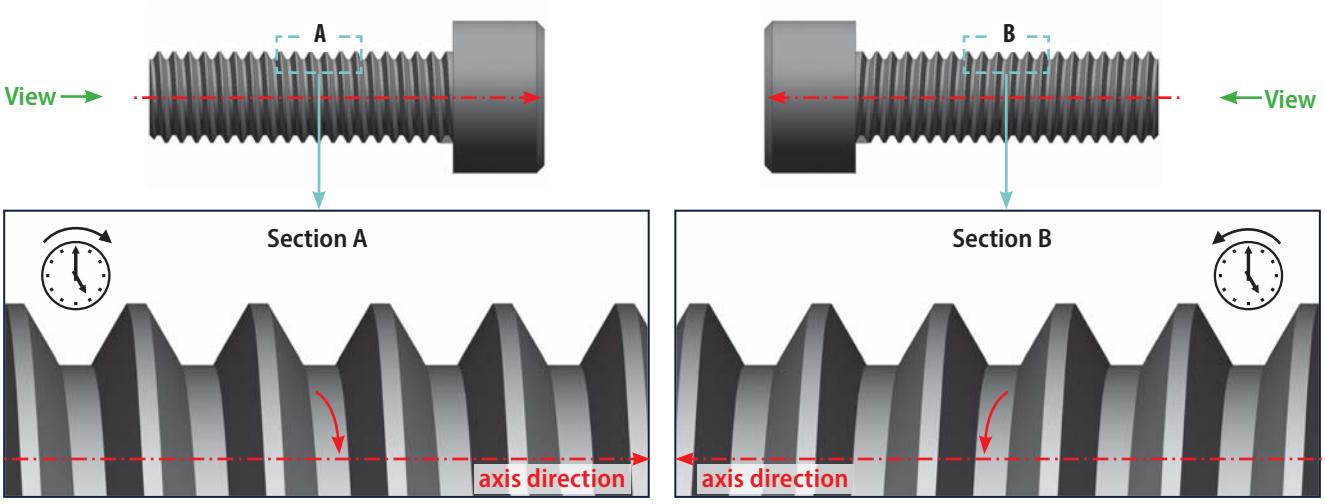
Available systems, tool holders and inserts

Threading with: **Main spindle** Holder: **RH overhead**
Thread: **RH** Rotation: **CCW**



Available systems, tool holders and inserts

RH and LH threads

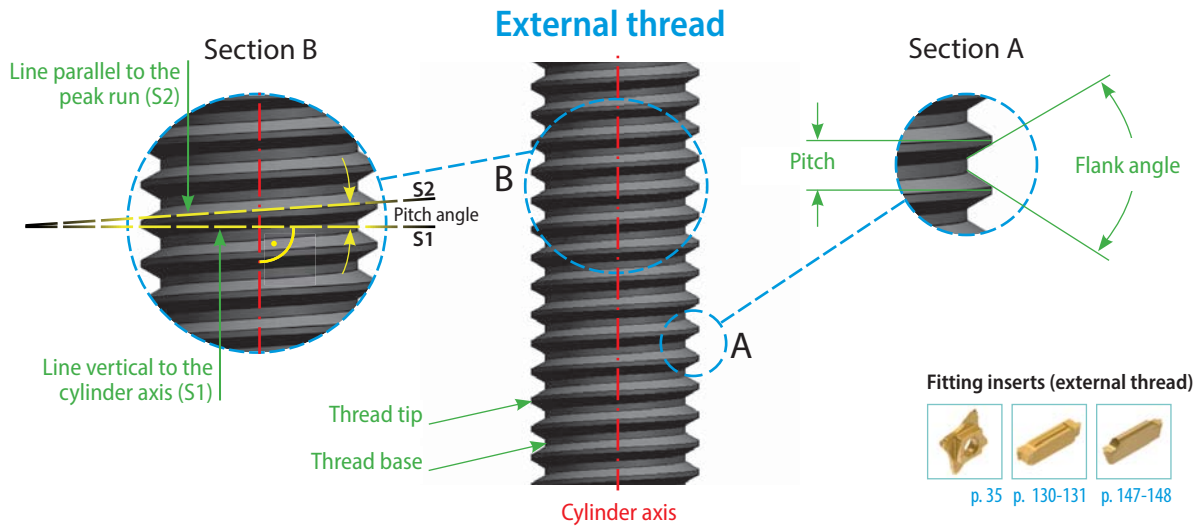


RH thread View in axis direction:
Tooth profile winds in clockwise (CW) direction.

LH thread View in axis direction:
Tooth profile winds in counter clockwise (CCW) direction.

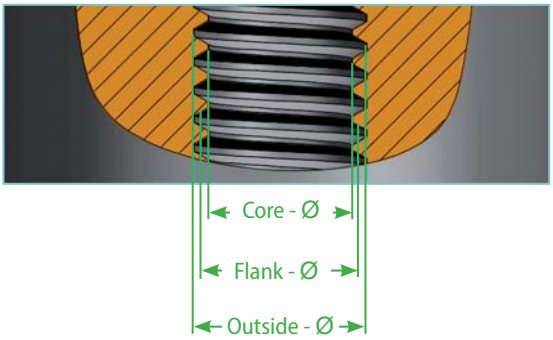
Basics on threading

Definitions



Fitting inserts (external thread)

p. 35 p. 130-131 p. 147-148



Fitting inserts (internal thread)

p. 130-131 p. 140 p. 147-148 p. 155

External thread:
Thread on the outside of a cylinder.

Internal thread:
A thread machined in the surface of a hollow shaft of cylinder.

Outside - Ø (Nominal - Ø):
Diameter of the imaginary cylinder, which touches the thread tips.

Core - Ø:
Diameter of an imaginary cylinder whose surface line touches the thread of the external thread or the thread tips of the internal thread.

Flank - Ø:
The diameter at which the width of the thread tooth equals the width of the spacing between two flanks.

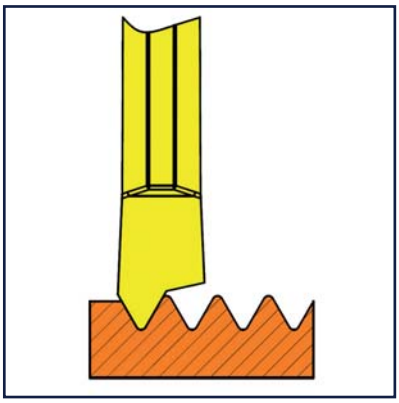
Pitch:
Distance between two threads.

Pitch angle:
Angle between a line vertical to the cylinder axis (S1) and a line parallel with the peak run (S2).

Basics on threading

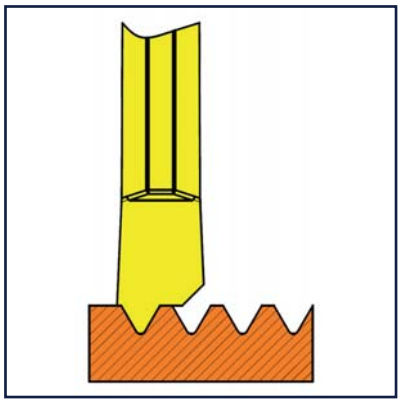
Thread profiles

Part profile



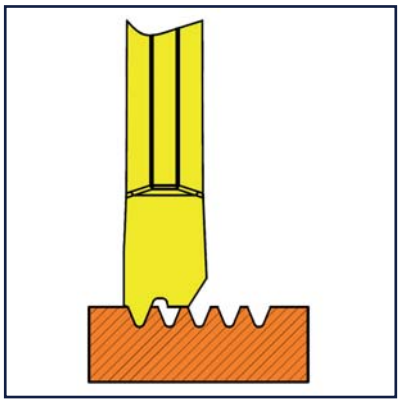
The part profile insert does not finish the outside diameter of external threads or the inside diameter of internal threads.

Full profile



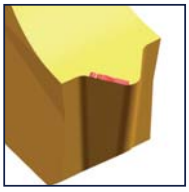
The full profile insert finishes the thread completely. For each pitch and thread type a different insert is necessary.

Full profile for small pitches

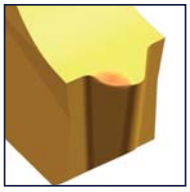


A minor cutting edge finishes the thread.

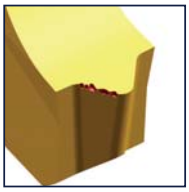
Wear marks and tips to solve them



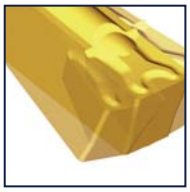
Built up edge
- increase speed step by step



Plastic deformation
- reduce speed
- increase amount of cuts
- increase cooling
- check diameter of component. This diameter may be 1.14 mm bigger than the thread diameter. No more!

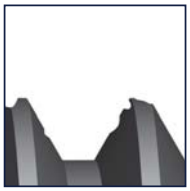


Splintering
- check speed. Is it appropriate?
- increase stability of tooling (Least possible extension? Strongest possible tool holder?)
- change to modified flank feed
- take a tougher grade

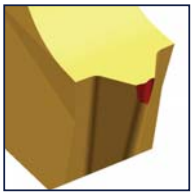


Vibration
- alter speed until vibrations cease
- check stability of tooling (Least possible extension? Strongest possible tool holder?)
- check center height
- check diameter of component

Front clearance wear
- reduce speed
- increase feed
- change to modified flank feed
- take a more wear resistant grade



Poor thread surface
- increase speed step by step
- change to modified flank feed or to radial feed if possible
- take a more wear resistant grade

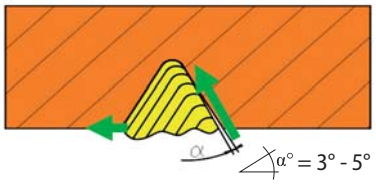
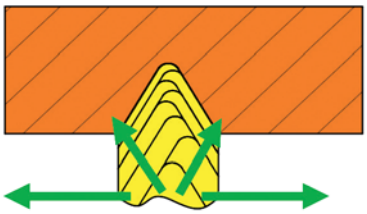
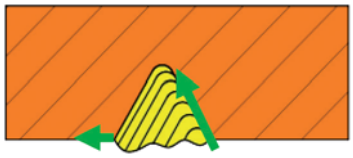
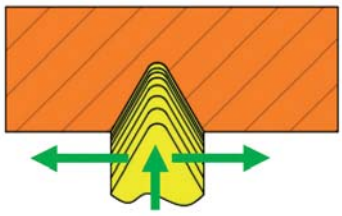


Fractured edge
- increase amount of cuts
- increase stability of tooling (Least possible extension? Strongest possible tool holder?)
- change to modified flank feed
- take a tougher grade
- check center height

Poor chip control
- reduce amount of cuts
- change to modified flank feed
- increase speed step by step
- increase cooling flow

Basics on threading

Feed methods

Feed method	Machine	Advice
Modified flank feed 	CNC	1 st choice for CNC machine tools. Good results provided feed direction differs 3° - 5° from the thread flank. **This method achieves:** ▸ Good chip control ▸ Good thread surface ▸ Good tool life
Two-way flank feed 	CNC	1 st choice on large thread profiles **This method achieves:** ▸ Good tool life ▸ Even flank wear
Flank feed 	CNC und and conventional machines	Recommended provided the modified flank feed method can´t be applied. **This method achieves:** ▸ Good chip control ▸ Good heat conveyance
Radial feed 	conventional machines	Multi edge inserts require radial feed.

Amount of cuts

To machine the full depth of the thread several different cuts are necessary.

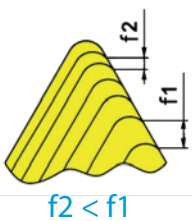
The chip volume increases steadily the more the cutting edge arrives at the bottom of the thread. For this reason the depth of each cut must be reduced constantly, otherwise the edge may fracture quickly.

In any case it is recommended to keep a check on the cutting edge at the beginning of the thread machining:

- Built-up edge will occur, if the speed is too low.
- Plastic deformation will occur, if the speed is too high.
- Fractured edge will occur, if the amount of cuts and the cut setting are insufficient and not fit for the job.

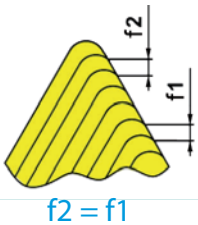
The amount of cuts, the setting accuracy of cuts, the components hardness, respectively toughness and the way cooling or lubrication is applied, strongly influences the quality of the thread.

right



f2 < f1

wrong



f2 = f1

Basics on threading

Number of cuts

Pitch in mm	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	8.00
Threads per inch	48	32	24	20	16	14	12	10	8	7	6	5.5	5	4.5	4	3
Amount of cuts	4-6	4-7	4-8	5-9	6-10	7-12	7-12	8-14	9-16	10-18	11-18	11-19	12-20	12-20	12-20	15-24

Recommended threading speeds

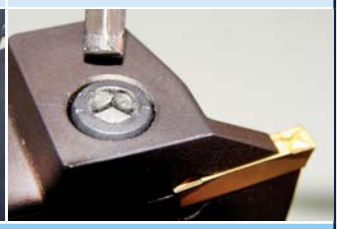
				PM NANOSPEED
	Material to be machined		HB (Hardness Brinell)	Vc in m/min
P	None alloyed steel	Carbon steel	125	120 - 180
	Low alloyed steel	none hardened	180	85 - 140
		hardened	275	60 - 130
		hardened	350	60 - 130
	High alloyed steel	annealed	200	70 - 100
		hardened	325	50 - 100
	Cast steel	low alloyed	200	60 - 140
		high alloyd	225	60 - 120
M	Stainless steel ferritic	none hardened	200	70 - 130
		hardened	330	60 - 100
	Stainless steel austenitic	austenitic	180	90 - 140
		austenitic	200	40 - 100
	Stainless cast steel		200	90 - 110
		hardened	330	65 - 110
K	Malleable cast iron	ferritic	130	70 - 160
		pearlitic	230	60 - 140
	Grey cast iron	low tensile strength	180	70 - 130
		high tensile strength	260	50 - 115
	Cast iron, nodular graphit	ferritic	160	125 - 160
		pearlitic	260	80 - 120
N	Aluminium materials	none hardened	60	100 - 365
		aged	100	80 - 180
	Aluminium alloys	cast	75	200 - 450
		cast, aged	90	200 - 280
	Aluminium materials	cast Si 13 - 22 %	130	60 - 160
	Brass, copper alloy		100	80 - 190
		Bronze	100	80 - 190
S	Heat resisting materials	annealed	200	40 - 60
		aged	280	35 - 50
	Titanium alloys	clean	400 RM	140 - 180
		Alloys Alpha, Beta	1050 RM	50 - 70
H	Hardened steel	hardened and tempered	58 Hrc	45 - 55

Tool holder damages: cause, effect and solution

Cause

Key and pipe prolongation	Key and forcing with hammer	
		

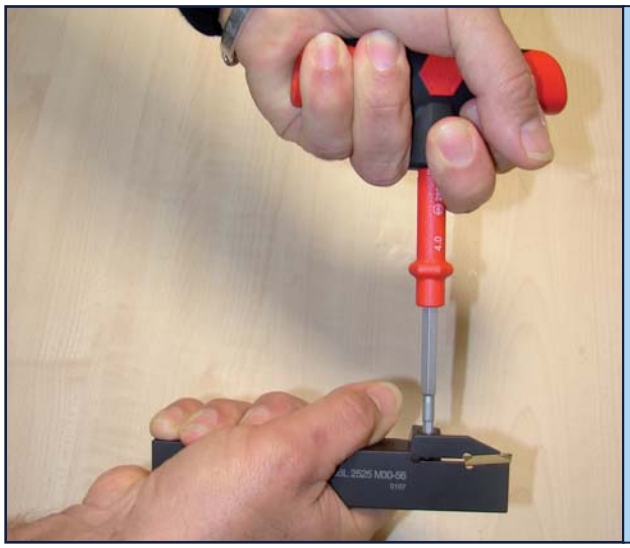
Effect

Screw fracturing	Countersink fracturing	Cracking	Hexagonal screw wear
			

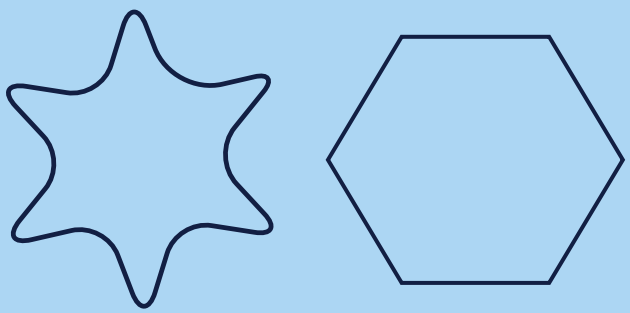
Solution

Handforce	Perfect: with the correct torque	Torque key
	Only with a torque key, correct screw forces can be applied. To apply correct torques by hand force, requires a lot of experience.	

Recommended torques on page 218.



Save yourself a lot of trouble and energy
by using our high quality torque keys.



Material Comparison Table

Material group	Material No.	Germany DIN Bez.	Italy UNI	Japan JIS
		Steel, free cutting steel		
P	1.0036	USt37-3	FE37BFU	
	1.0050	St50-2	FE50	SM50YA
	1.0060	St60-2	FE60-2	SM570
	1.0070	St70-2	FE70-2	
	1.0332	St14		
	1.0401	C15	C15C16	515C
	1.0402	C22	C20C21	S20C; S22C
	1.0715	9SMn	CF95Mn28	SUM22
	1.0501	C35	C35	S35C
	1.0503	C45	C45	S45C
	1.0535	C55	C55	S55C
	1.0601	C60	C60	S60C
	1.0718	9SMn	CF95MnPb28	SUM22L
	1.0721	10S20		
	1.1158	Ck25	C25	S25C
	1.1121	Ck10		S10C
	1.1141	CK 15	C16	S15C
	1.1183	Cf35	C36	S35C
	1.1191	Ck45	C45	S45C
	1.1203	Ck55	C50	S55C
	1.1213	Cf53	C53	S50C
	1.1221	Ck60	C60	S58C
	1.1203	Ck55	C50	S55C
	1.1221	Ck60	C60	S58C
	1.2311	40CrMnMo7	35CrMo8KU	
	1.3501	100Cr2		
	1.4882	X50CrMnNiNbN219		
	1.5415	15Mo3	16Mo3KW	
	1.5423	16Mo5	16Mo5	SB450M
	1.5710	36NiCr6		SNC236
	1.5736	36NiCr10		SNC631(H)
	1.5755	31NiCr14		SNC836
	1.5864	35NiCr18		
	1.7223	41CrMo4	41CrMo4	SCM440
	1.7225	42CrMo4	42CrMo4	SCM440(H)
	1.7238	49CrMo4		
	1.7242	16CrMo4		
	1.7262	15CrMo5		SCM415(H)
	1.7335	13CrMo4 4	14CrMo45	SPVAF12
	1.7337	16CrMo4 4	A18CrMo45KW	
	1.7361	32CrMo12	32CrMo12	
	1.7362	12CrMo19 5	16CrMo205	
	1.7380	10CrMo9 10		SPVA. SCMV4
	1.7561	42CrV6		
	1.7701	51CrMoV4	51CrMoV4	
	1.7715	14MoV6 3		
	1.7733	24CrMoV55	21CrMoV511	
	1.7755	GS-45CrMoV104		
	1.8070	21CrMoV511	35NiCr9	
	1.8159	50CrV4	50CrV4/ 51CrV4	SUP10
	1.8509	41CrAlMo7	41CrAlMo7	SACM645
	1.8523	39CrMoV139	36CrMoV12	

Material Comparison Table

Material group	Material No.	Germany DIN Bez.	Italy UNI	Japan JIS
Alloyed steel and tool steel				
P	1.2067	100Cr6		SUJ2
	1.2210	115CrV3	107CrV3KU	
	1.2241	51CrV4		
	1.2419	105WCr6	10WCr6/107WCr5KU	SKS31
	1.2542	45WCrV7	45WCrV8KU	
	1.2550	60WCrV7	58WCr9KU	
	1.2713	55NiCrMoV6		SKH1/SKT4
	1.2721	50NiCr13		
	1.2762	75CrMoNiW67		
	1.2842	90MnCrV8	88MnV8KU	
	1.3505	100Cr6	100Cr6	
	1.5622	14Ni6	14Ni6	SUJ2
	1.5752	14NiCr10/14NiCr14	16NiCr11	SNC415(H)
	1.6511	36CrNiMo4	38NiCrMo4(KB)	SNC815(H)
	1.6523	21NiCrMo2	20NiCrMo2	SNCM447
	1.6546	40NiCrMo22	40NiCrMo2(KB)	SNCM220(H)
	1.6582	35CrNiMo6	35NiCrMo6(KB)	SNCM240
	1.6587	17CrNiMo6		SNCM447
	1.6657	14NiCrMo34	15NiCrMo13	
	1.7033	34Cr4		
	1.7035	41Cr4	41Cr4	SCR430(H)
	1.7045	42Cr4		SCR440(H)
	1.7131	16MnCr5	16MnCr5	SCR415
	1.7176	55Cr3		SUP9(A)
	1.7218	25CrMo4	25CrMo4(KB)	SM420/SCM430
	1.7220	34CrMo4	35CrMo4	SCM432/SCCRM3
High alloyed steel and high alloyed tool steel				
P	1.2343	X38CrMoV51	X37CrMoV51KYU	SKD6
	1.2344	X40CrMoV51	X40CrMoV511KU	SKD61
	1.2379	X155CrVMo121	X155CrVMo12 1KU	SKD11
	1.2436	X210CrW12	X215CrW121KU	SKD2
	1.2581	X30WCrV93	X30WCrV93KU	SKD5
	1.2601	X165CrMoV12	X165CrMoW12KU	
	1.2606	X37CrMoW 51	X35CrMoW05KU	SKD62
	1.3202	S12-1-4-5	HS12-1-5-5	
	1.3207	S10-4-3-10	HS10-4-3-10	SKH57
	1.3243	S6-5-2-5	HS6-5-2-5	SLKH55
	1.3246	S7-4-2-5	HS7-4-2-5	
	1.3247	S2-10-1-8	HS2-9-1-8	SKH51
	1.3249	S2-9-2-8		
	1.3343	S6-5-2	HS6-5-2-5	SKH9; SKH51
	1.5662	X8Ni9	X10Ni9	SL9N60(53)
	1.5680	12Ni19		

KEMMER HARTMETALLWERKZEUGE

Material Comparison Table

Material group	Material No.	Germany DIN Bez.	Italy UNI	Japan JIS
Stainless steel				
M	1.4000	X6Cr13	X6Cr3	SUS403
	1.4001	X6Cr14		4105. 429
	1.4002	X6CrAl13	X6CrAl13	SUS405
	1.4006	(G-)X10Cr13	X12Cr13	SUS410
	1.4016	X8Cr17	X8Cr17	SUS430
	1.4021	X20Cr13	X20Cr13	SUS420/1
	1.4027	G-X20Cr14		SCS2
	1.4034	X46Cr13	X40Cr14	
	1.4057	X20CrNi17	X16CrNi16	SUS431
	1.4086	G-X120Cr29		
	1.4104	X12CrMoS17	X10CrS17	SUS430F
	1.4113	X6CrMo17	X8CrMo17	SUS434
	1.4125	X105CrMo17	X105CrMo17	SUS440C
	1.4340	G-X40CrNi274		
	1.4417	X2CrNiMoSi195		
	1.4720	X20CrMo13		
	1.4724	X10CrA113	X10CrA112	SUS405
	1.4742	X10CrA118	X8Cr17	SUS430
	1.4762	X10CrA124	X16Cr26	SUH446
Austenitic stainless steel				
M	1.4301	X5CrNi189	X5CrNi1810	SUS304
	1.4310	X12CrNi177	X2CrNi1807	SUS301
	1.4311	X2CrNiN1810	X2CrNiN1810	SUS304LN
	1.4312	G-X10CrNi188		
	1.4350	X5CrNi189	X5CrNi1810	
	1.4362	X2CrNiN234		
	1.4401	X5CrNiMo17 122	X5CrNiMo17 12	SUS316
	1.4404	X2CrNiMo1810	X2CrNiMo1712	SUS316
	1.4410	G-X10CrNiMo189		
	1.4429	X2CrNiMoN17133	X2CrNiMoN1713	SUS316LN
	1.4435	X2CrNiMo18 143	X2CrNiMo1712	SCS16
	1.4436	X3CrNiMo17133	X8CrNiMo1713	SUS316
	1.4438	X2CrNiMo17133	X2CrNiMo1816	SUS317L
	1.4500	G-X7NiCrMoCuNb2520		
	1.4541	X5CrNiTi18 9	X6CrNiTi18 11	SUS321
	1.4550	X10CrNiNb	X6CrNiNb18 11	SUS347
	1.4552	G_X7CrNiNb189		
	1.4571	X10CrNiMoTi1810	X6CrNiMoTi1712	SUS316Ti
	1.4583	X10CrNiMoNb1812	X6CrNiMoNb	
	1.4828	X12CrNi2521		SUH309
	1.4850	G-X7CrNiMoCuNb1818	X6CrNiMoTi1712	
	1.4845	X12CrNi25 21	X6CrNi25 20	SUH310/SUS310S
Austenitic / ferritic stainless steel (Duplex)				
M	1.4460	X8CrNiMo275		SUS329J1
	1.4462	X2CrNiMoN2253		
	1.4821	X15CrNiSi254		
	1.4823	GX40CrNiSi274		

Material Comparison Table

Werkstoff-gruppe	Material No.	Germany DIN Bez.	Italy UNI	Japan JIS
Grey cast iron				
K	0.6010	GG10	G10	FC100
	0.6015	GG15	G14	FC150
	0.6020	GG20	G20	FC200
	0.6025	GG25	G25	FC250
	0.6030	GG30	G30	FC300
	0.6035	GG35	G35	FC350
	0.6040	GG40		FC400
Nodular cast iron				
K	0.7033	GGG35.3		FDC350
	0.7040	GGG40	GGG40	FDC400
	0.7043	GGG40.3		FDC400
	0.7050	GGG50	GGG50	FDC500
	0.7060	GGG60	GGG60	FCD600
	0.7070	GGG70	GGG70	FCD700
Malleable cast iron				
K	0.8035	GTW-35		
	0.8040	GTW-40	GMB40	
	0.8045	GTW-45	GMB45	
	0.8055	GTW-55		
	0.8065	GTW-65		
	0.8135	GTS-35		
	0.8145	GTS-45		
	0.8155	GTS-55		
	0.8165	GTS-65		
	0.8170	GTS-70		

Material Comparison Table

Werkstoff-gruppe	Material No.	Germany DIN Bez.	Italy UNI	Japan JIS
Aluminium alloys				
N	3.0255	Al99.5		
	3.1655	AlCuSiPb		
	3.1754	G-AlCu5Ni1.5	AZ4GU/9051	7050
	3.2373	G-AlSi9Mg		
	3.2381	G-AlSi10Mg		
	3.2382	GD-AlSi10Mg		
	3.2383	G-AlSi10Mg(Cu)		
	3.2581	G-AlSi12		
	3.2582	GD-AlSi12		A6061
	3.2583	G-AlSi12(Cu)		ADC12
	3.3315	AlMg1		
	3.3561	G-AlMg5		AC4A
	3.5101	G-MgZn4SE1Zr1		
	3.5103	MgSE3Zn2Zr1		
	3.5106	G-MgAg3SE2Zr1		
	3.5812	G-MgAl8Zn1		
	3.5912	G-MgAl9Zn1		
	2.1871	G-AlCu4TiMg		
	3.2371	G-AlSi7Mg		
Copper alloys				
N	2.1090	G-CuSn7ZnPb		
	2.1096	G-CuSn5ZnPb		
	2.1098	G-CuSn2ZnPb		
	2.1176	G-CuPb10Sn		
	2.1182	G-CuPb15Sn		
	2.0240	CuZn15		
	2.0265	CuZn30		
	2.0321	CuZn37	C2700.C2720	
	2.0592	G-CuZn35Al1		
	2.0596	G-CuZn34Al2		
	2.1188	G-CuPb20Sn		
	2.1292	G-CuCrF35		
	2.1293	CuCrZr		
	2.0966	CuAl10Ni5Fe4		
	2.0975	G-CuAl10Ni		
	2.1050	G-CuSn10		
	2.1052	G-CuSn12		

Material Comparison Table

Material group	Material No.	Germany DIN Bez.	Italy UNI	Japan JIS
Super alloys on Fe-basis			**US-Trade Mark**	
S	1.4558	X2NiCrAlTi3220	Incoloy 800	
	1.4562	X1NiCrMoCu32287		
	1.4563	X1NiCrMoCuN31274		
	1.4864	X12NiCrSi		SUH330
	1.4864	X5NiCrSi3616		SUH330
	1.4958	X5NiCrAlTi3120		
	1.4977	X40CoCrNi2020		
Super alloys on Ni-basis			**US-Trade Mark**	
S	1.4360	NiCu30FE	Monel 400	
	2.4375	NiCu30Al	Monel K-500	
	2.4610	NiMo16Cr16Ti	Hastelloy C-4	
	2.4630	NiCr20Ti	Nimonic 75	
	2.4642	NiCr29Fe	Inconel 690	
	2.4668	NiCr19FeNbMo	Inconle 718	
	2.4669	NiCr15Fe7TiAl	Inconel X-750	
	2.4685	G-NiMo28	Hastelloy B	
	2.4694	NiCr16Fe7TiAl	Inconel 751	
	2.4810	G-NiMo30	Hastelloy C-4	
	2.4856	NiCr22Mo9N	Inconel 625	
	2.4858	NiCr21Mo	Incoloy 825	
Titanium and Titanium alloys			**US-Trade Mark**	
S	3.7025	Ti 1		
	3.7124	TiCu2		
	3.7195	TiAl3V2.5		
	3.2250	Ti1Pd		
	3.7115	TiAl6Sn2		
	3.7145	TiAl6Sn2Zr4Mo2Si		
	3.7165	TiAl6V4	TiAl6V4	
	3.7175	TiAl6V6Sn2	Ti6V6Al2Sn	
	3.7185	TiAl4Mo4Sn2		

Material group	Material No.	Germany DIN Bez.	Italy UNI	Japan JIS
Hard casting				
H	0.9620	G-X260NiCr42		
	0.9625	G-X330NiCr42		
	0.9630	G-X300CrNiSi952		
	0.9635	G-X300CrMo153		
Hardened cast iron				
H	0.9640	G-X300CrMoNi1521		
	0.9645	G-X260CrMoNi2021		
	0.9650	G-X260Cr27		
	0.9655	G-X300CrMo271		

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