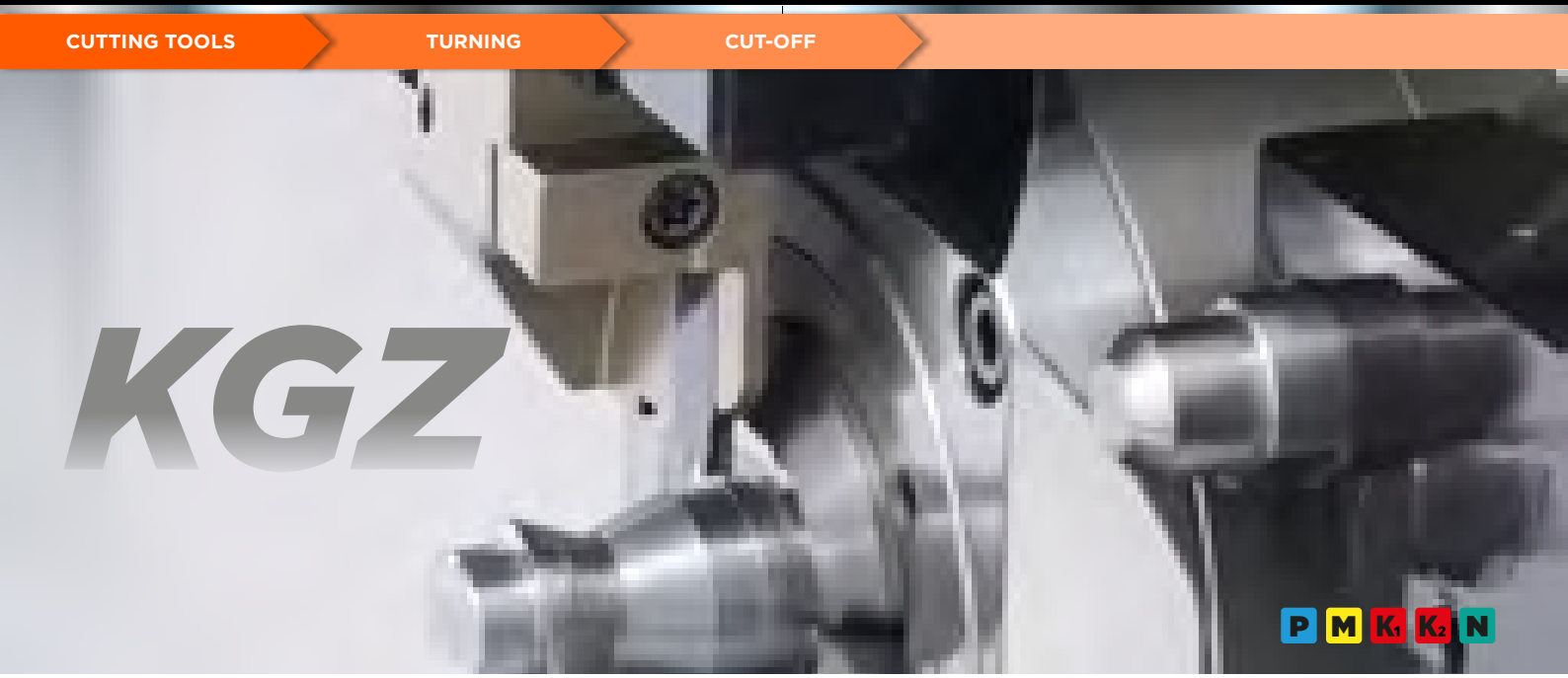
TOOL TRADER® EUROPE

ADVANCED CUTTING SOLUTIONS

CUTTING TOOLS › TURNING › CUT-OFF



KYOCERA

WINTER PROMOTION

KGZ

FOR SMALL PARTS MACHINING

Strong, precise and reliable cutt-off performance that provides stable machining and is easy to use with unique clamp design. Extensive line-up for many applications.

Purchase 10 inserts and receive 1 corresponding toolholder free of charge!

ORDER NOW

General conditions

- The promotion is valid from October 2nd 2024 until March 27th 2025.
- Different chipbreakers can be mixed to reach the required insert quantity.
- Orders on schedule, combination with other special offer, cancellation, exchange and return cannot be accepted.
- Errors excepted, with reservation subject to change.

TOOL MANAGEMENT • TOOLING SYSTEMS • CUTTING TOOLS • CLAMPING SYSTEMS

KYOCERA

Cut-off solutions
for small parts machining | KGZ

KGZ

NEW

Strong, precise, and reliable cut-off performance

Provides stable machining and is easy to use with unique clamp design

New coating PR20 series provides longer tool life

Extensive product line-up for a wide variety of applications.

KEEPS YOU AHEAD

Cut-off solutions for small parts machining

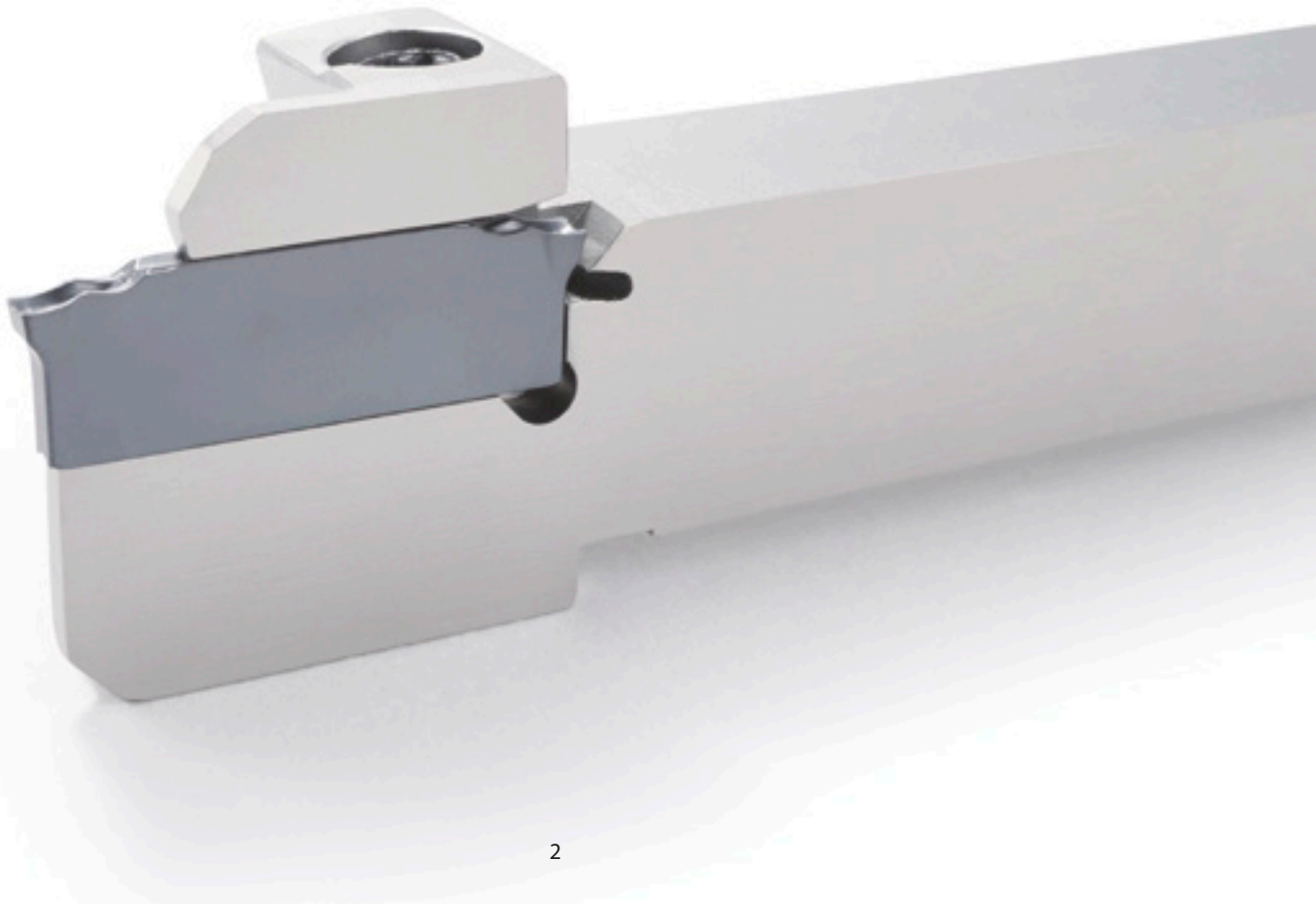
KGZ

**Provides stable machining and is easy to use with unique clamp design.
New coating PR20 series provides longer tool life and supports a wide range of applications.**

Challenge

Cut-off is an important, but difficult process in small parts machining applications

Machining performance	**High machining load and tool rigidity issues. Chatter / Insert and holder damage / Difficulty improving machining efficiency etc.**
Usability	**Inserts can be difficult to replace inside the machine resulting in time-consuming work and the possibility of insecure clamping.**



Newly developed clamp creates a strong and rigid hold

Strength

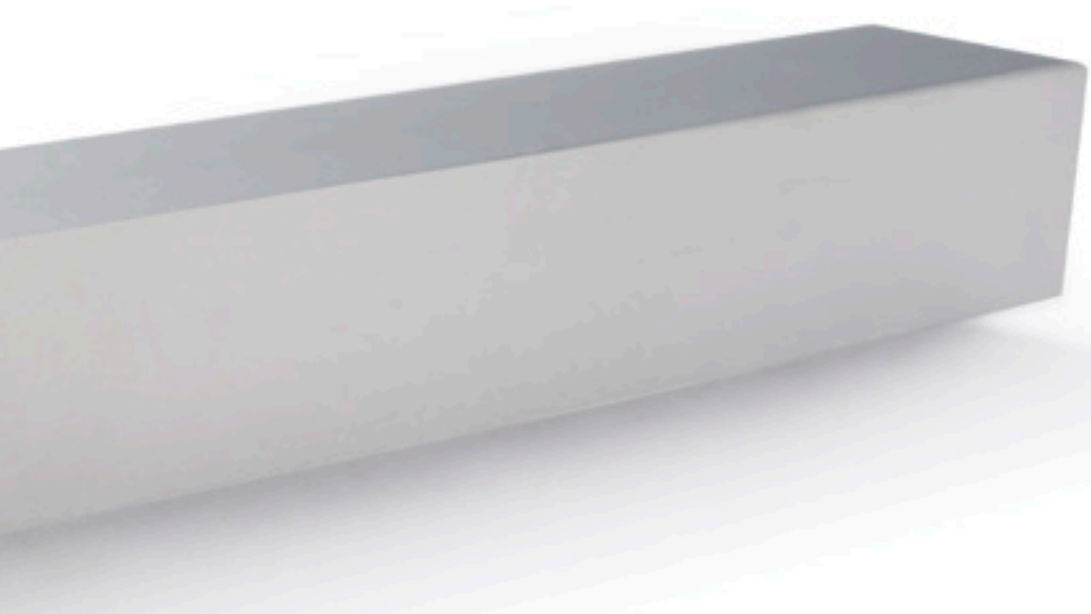
Stable machining with sturdy clamp design

- Greater chatter resistance provides excellent surface finish and stable tool life
- Toolholder durability reduces down-time and cuts cost
- Supports high efficiency machining and reduces cycle time.

Dependability

Easy insert management

- Fast and secure insert installation
- Inserts are more resistant to wear and reduce the frequency of tool changes.



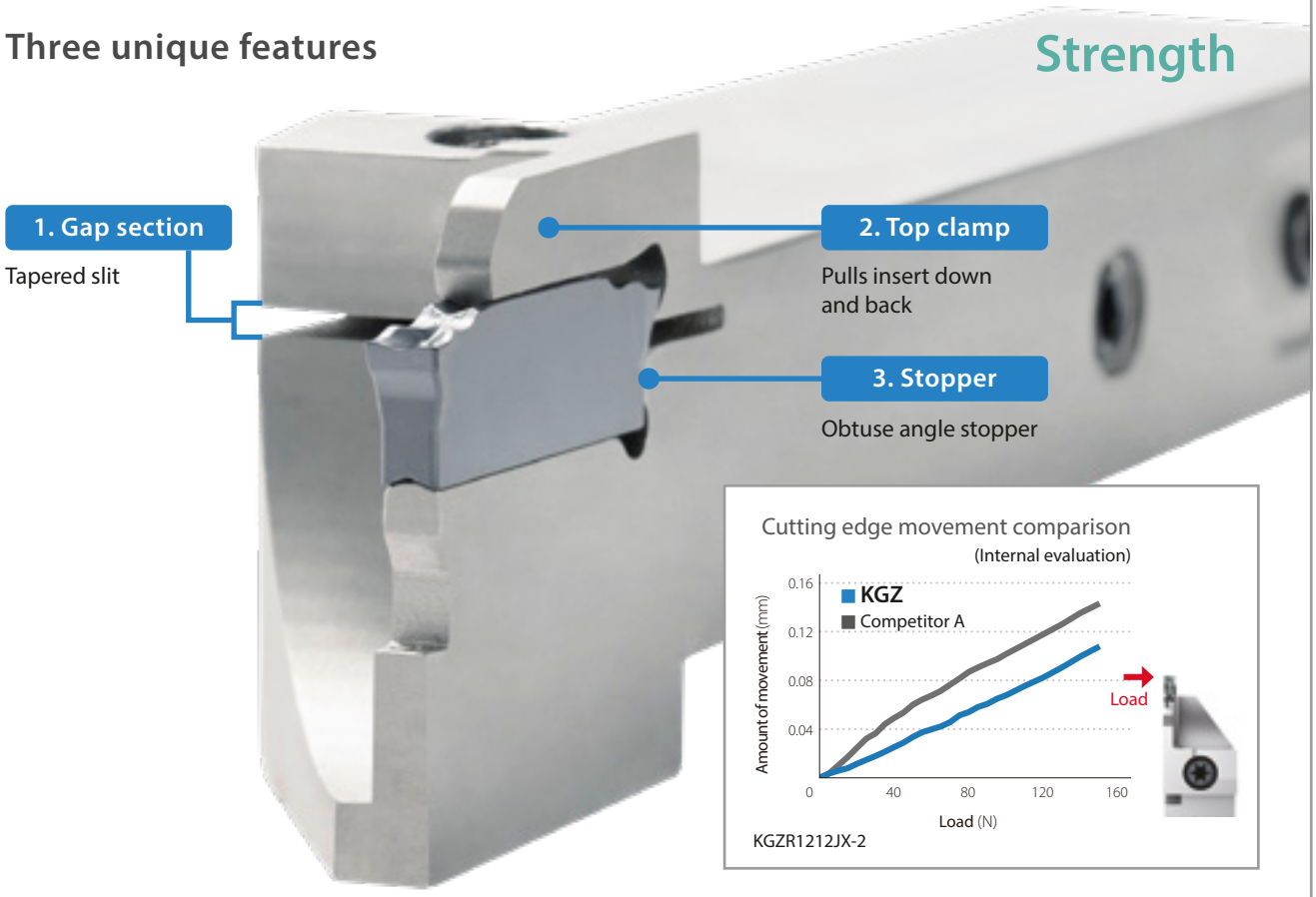
Insert CW: 1.3 ~ 3 mm	Low feed **PF**	Medium feed **PM**	High feed **PH**	Low cutting force **PG**	PVD coating P M K **PR2015 / PR2025 / PR2035** NEW DLC coating N **PDL025**	Non-coated carbide K N **GW15**
						
Toolholder 1010 ~ 2525	**Internal coolant** JCTM Series for direct coolant.			**External coolant** Standard type / For sub-spindle tooling.		

1 Achieved stable machining with newly developed clamp structure

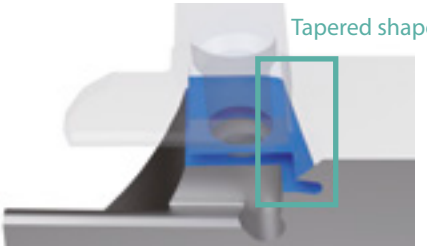
Toolholder Sturdy clamps

Three unique features

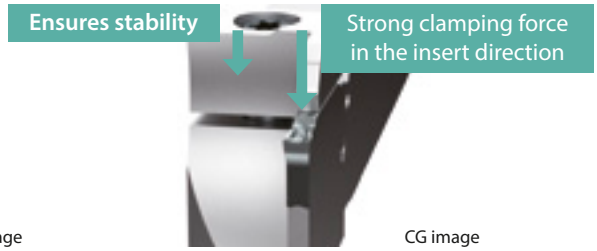
Strength



1. Gab section Tapered slit creates strong insert hold.



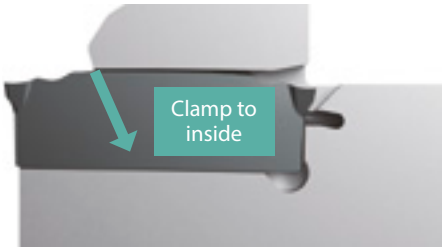
CG image



CG image

2. Top clamp

Pulls insert inward to increase hold.

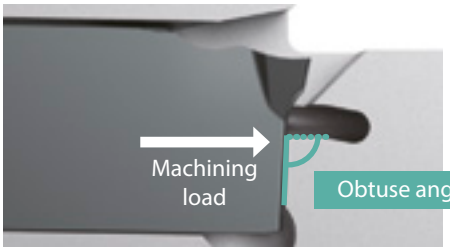


CG image

3. Stopper

The insert stop is designed with an obtuse shape to resist machining load and a large surface area distributes stress.

Improved holder durability for high-efficiency machining.



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Insert Ease insert installation

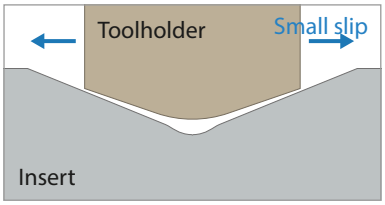
Top V-shape Different groove angles at ends end centre

Dependability

Groove end

Small groove angle on top of insert.

These grooves prevent the insert from shifting and provide fast and accurate insert mounts.

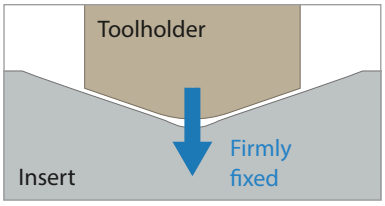


Image

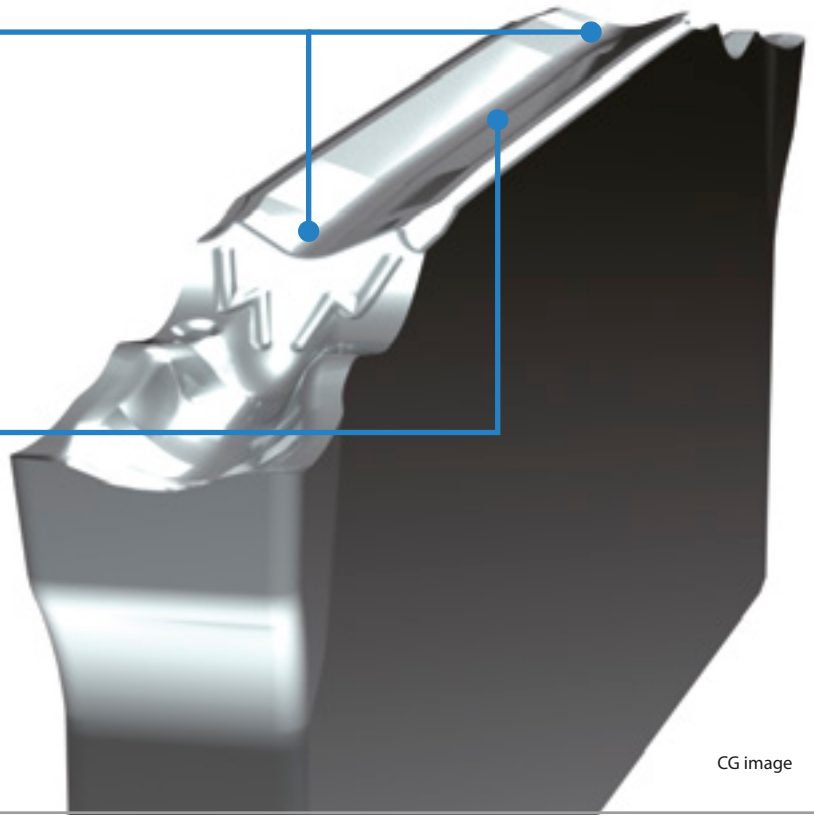
Centre of groove

Large groove angle on top of insert.

Firmly engages the toolholder to increase hold.



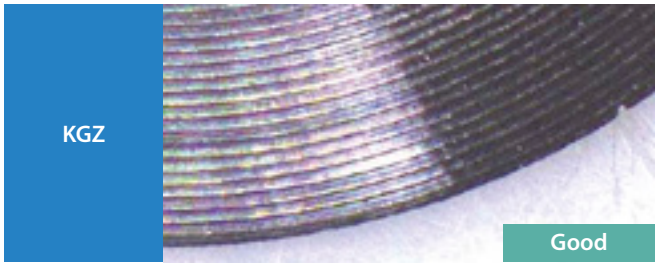
Image



CG image

Excellent chatter resistance

Machined surface comparison (Internal evaluation)



Cutting conditions: Vc = ~ 60 m/min., f = 0.12 mm/rev.
Workpiece: SUS303 (ø14). Wet (External coolant). KGZR1212JX-2.
Edge width: 2 mm (PM chipbreaker).

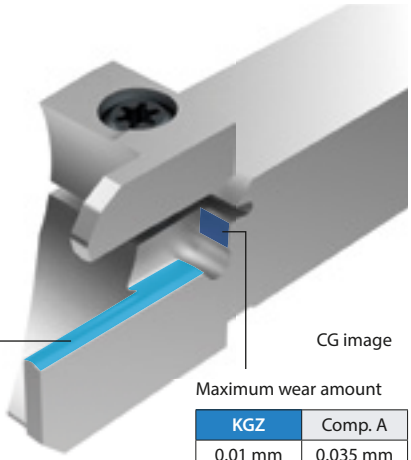
Strong toolholder durability

Toolholder durability comparison (Internal evaluation)

Toolholder damage comparison after 100,000 cuts

Maximum wear amount

KGZ	Comp. A
0.015 mm	0.02 mm



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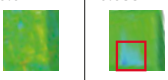
Maximum wear amount

KGZ	Comp. A
0.01 mm	0.035 mm



Cutting conditions: Vc = ~ 80 m/min., f = 0.1 mm/rev.
Workpiece: SUS303 (ø14). Wet (External coolant). KGZR1212JX-2.
Edge width: 2 mm (PM chipbreaker).

2 MEGACOAT NANO EX coating technology provides longer tool life

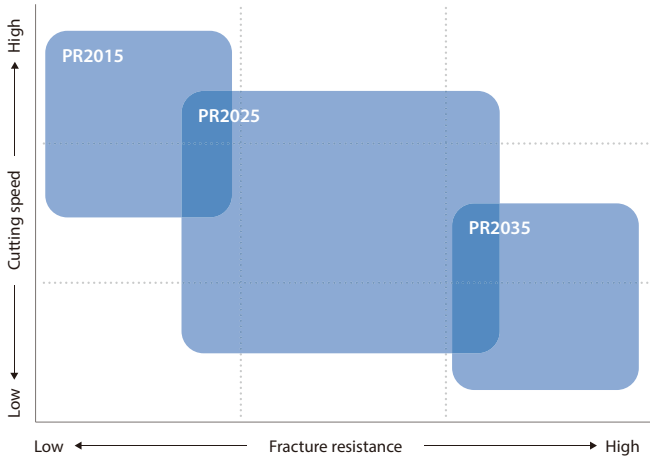
New insert grades for grooving and cut-off solutions

PR20 Series NEW

PR2015 — **1st recommendation for cast iron**
Also available for steel and stainless steel.

PR2025 — **1st recommendation for steel**
Also available for stainless steel.

PR2035 — **1st recommendation for stainless steel**
Also available for steel.

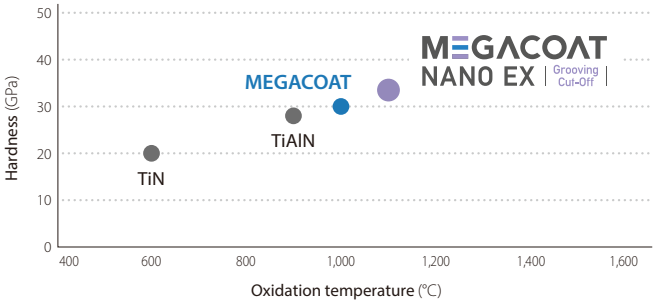


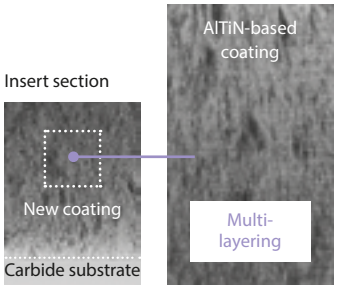
New coating for grooving and cut-off machining

MEGACOAT NANO EX | Grooving Cut-Off

Achieve long tool life and high stability with the combination of high content aluminium nano coating layer.

Coating characteristics (Internal evaluation)





Special nano coating layer

Long tool life — Excellent wear and fracture resistance

Multi-layering of high content aluminium nano layers added with high melting point material having different concentration.
Suppresses hexagonal crystal precipitation and achieves excellent oxidation resistance.

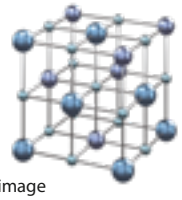
Stable machining — High coating toughness

Crystal grain refinement.
Optimised internal stress suppresses crack growth.

Unique technology (Patent applied)

Proprietary coating process
Improve high content aluminium nano layers performance.

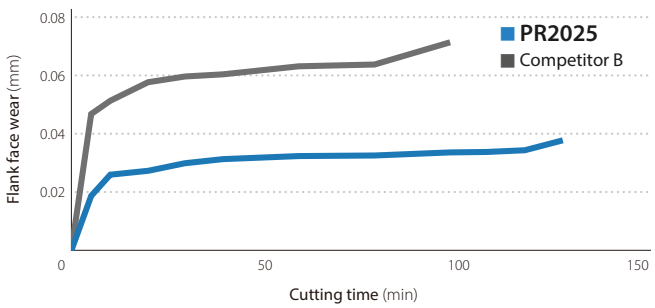
Maintains a cubic crystal structure to maximize the properties of aluminium (Al)



CG image

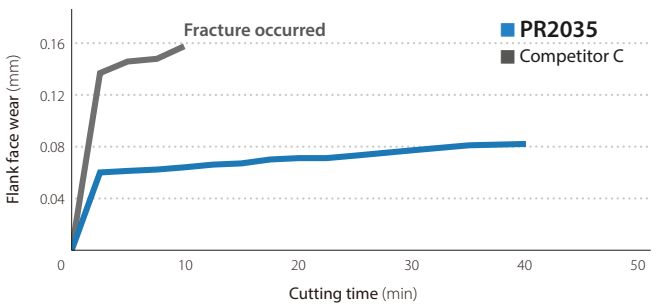
Cutting performance

S45C wear resistance comparison (Internal evaluation)



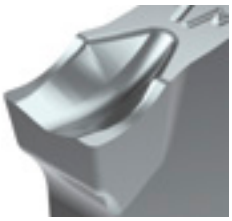
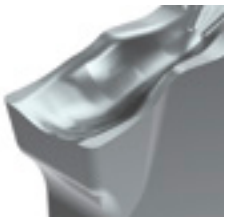
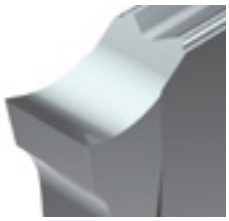
Cutting conditions : Vc = ~ 100 m/min., f = 0.1 mm/rev
Workpiece : S45C (Ø20) Wet (External coolant) GZM2020N-020PM

SUS304 wear resistance comparison (Internal evaluation)



Cutting conditions : Vc = ~ 80 m/min., f = 0.05 mm/rev
Workpiece : SUS304 (Ø20) Wet (External coolant) GZM2020N-020PM

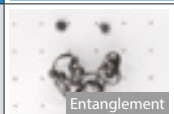
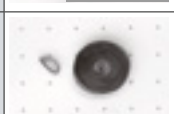
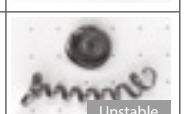
3 Choose from a variety of insert and chipbreaker combinations for a wide range of applications

	Chip control oriented			Sharp edge
	Low feed machining	Medium feed machining	High feed machining	Low cutting force
Chipbreakers	**PF chipbreaker**	**PM chipbreaker**	**PH chipbreaker**	**PG chipbreaker**
				
	With/without lead angle	With/without lead angle	No lead angle	With/without lead angle
Grades	PR2015 PR2025 PR2035	PR2015 PR2025 PR2035	PR2015 PR2025 PR2035	PR2025 PR2035 PDL025 GW15
Features	Edge width from 1.3 mm. For reducing cost of steel workpiece.	High versatility. For a variety of machining.	Reduced cycle time. For high feed machining.	Superior sharpness. For aluminium alloy machining.
				
	S10C »Chip control« video	**SUS304** »Chip control« video	**S45C** »Chip control« video	**A6061** »Chip control« video

Solution — High efficiency machining with PH chipbreaker

Supports high feed machining with f = ~ 0.2 mm/rev (steel) and f = ~ 0.16 mm/rev (stainless steel).
Excellent chip control in a wide range of machining area.

S45C chip control comparison (Internal evaluation)

f (mm/rev)	0.1	0.15	0.2
KGZ PH			
Competitor D	 Entanglement		
Competitor E			 Unstable

Cutting conditions: Vc = ~ 150 m/min. Workpiece: S45C (Ø14).
Wet (External coolant). KGZR1616JX-2. Edge width: 2 mm (PH chipbreaker).

SUS304 chip control comparison (Internal evaluation)

f (mm/rev)	0.1	0.12	0.16
KGZ PH			
Competitor D		 Entanglement	
Competitor E			 Unstable

Cutting conditions: Vc = ~ 80 m/min. Workpiece: SUS304 (Ø14).
Wet (External coolant). KGZR1616JX-2. Edge width: 2 mm (PH chipbreaker).

4 Supports vibration/oscillation machining with stable chipcontrol and longer tool life

Stable machining — Breaks chips into small pieces with vibration machining

SUS304 chip control comparison (Internal evaluation)

PF chipbreaker

Good — Breaks chips into small pieces

Cutting conditions : Vc = ~ 120 m/min., f = 0.03 mm/rev.
Workpiece: SUS304 (Ø14). Wet (External coolant). KGZR1212JX-2. Edge width: 2 mm.

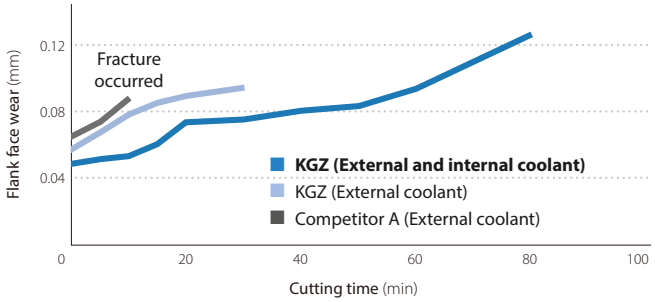
PM chipbreaker

Good — Breaks chips into small pieces

Cutting conditions : Vc = ~ 120 m/min., f = 0.05 mm/rev.
Workpiece: SUS304 (ø14). Wet (External coolant). KGZR1616JX-2. Edge width: 2 mm.

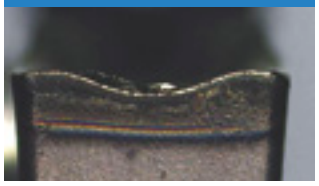
Long tool life — Extended tool life in combination with internal coolant (JCTM)

Wear resistance comparison (Internal evaluation)



Cutting edge condition

KGZ (External and internal coolant)



After 40 minutes machining.

Competitor A (External coolant)

After 15 minutes machining.

Cutting conditions: Vc = ~ 120 m/min., f = 0.05 mm/rev. Workpiece: SUS304 (Ø14). Wet. KGZR1218JX-2JCTM. Edge width: 2 mm. (PM chipbreaker).

Direct coolant holder for small parts machining

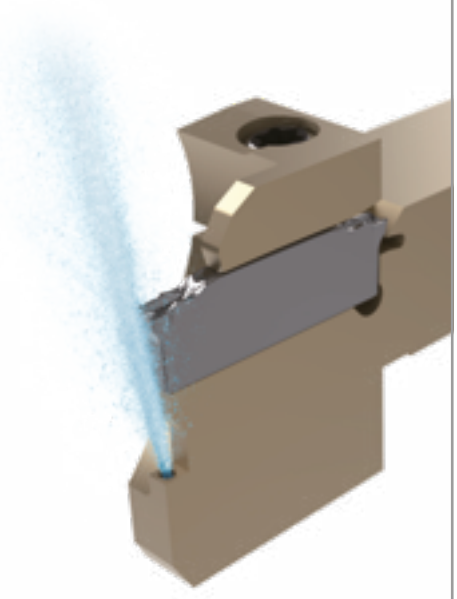
JCTM Series

Long tool life and stable machining by internal coolant with/without piping system.

Rectangular shank with optimised coolant channel design.

1st recommendation

Square shank is also available.



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Without piping — When the tool turret supports direct coolant

- Coolant is supplied directly from tool turret into the holder.
- No need for piping just by installing tools.

With piping

- Compatible with internal coolant on any machine with standard piping parts.

Case studies

Provides extended tool life and high efficiency in a wide variety of applications

1 Pin SUS304

Cutting conditions
Vc = ~ 36 m/min.
f = 0.02 mm/rev
Wet (External coolant)
Ø15
KGZL1616JX-2
GZM2020N-020PM (PR2035)

Number of parts — Tool life

KGZ	10,000 pcs/corner	2x
Competitor F	5,000 pcs/corner	

Tool life was extended in stainless steel machining.
Machining surface quality and chip control were good.

(User evaluation)

2 Base metal S45C

Cutting conditions (KGZ)
Vc = ~ 104 m/min., f = 0.02 ~ 0.05 mm/rev
Wet (External coolant) Ø9.7
Edge width : 2 mm
KGZL1212JX-2
GZM2020N-020PM (PR2025)
Cutting conditions (Competitor G)
Vc = ~ 86 m/min., f = 0.02 ~ 0.05 mm/rev
Wet (External coolant) Ø9.7
Edge width: 2 mm

Machining efficiency — Machining efficiency

KGZ	Vc = ~104 m/min.	UP
Competitor G	Vc = ~86 m/min.	

KGZ machined the workpieces equivalent to competitor G with higher cutting speed.
The cutting edge was good.

(User evaluation)

3 Automotive parts SUS304F

Cutting conditions
Vc = ~ 108 m/min.
f = 0.12 mm/rev
Wet (External coolant)
Ø15.2
KGZR1212JX-2
GZM2020N-020PM (PR2035)

Number of parts — Tool life

KGZ	250 pcs/corner	1.9x
Competitor H	130 pcs/corner	

Competitor H had welding. KGZ had no welding and good chip control. Achieved about 1.9 times longer tool life.

(User evaluation)

4 Wedge S48C

Cutting conditions
n = 2,100 min-1 (Constant)
f = 0.12 mm/rev
Wet (External coolant)
Ø20
KGZR1616JX-3
GZM3020N-025PM (PR2015)

Number of parts — Tool life

KGZ	2,000 pcs/corner	1.1x
Competitor I	1,800 pcs/corner	

Longer tool life under high feed conditions (f = 0.12 mm/rev).

(User evaluation)

5 Sleeve 12Cr

Cutting conditions
Vc = ~ 72 m/min.
f = 0.08 mm/rev
Wet (External coolant)
Ø65
KGZR2020JX-3D42
GZM3020N-025PM (PR2025)

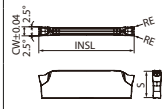
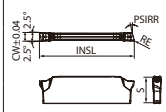
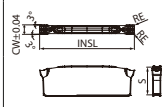
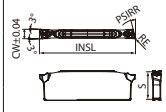
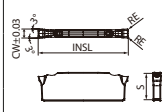
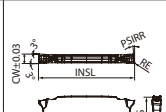
Number of parts — Tool life

KGZ	200 pcs/corner	2x
Competitor J	100 pcs/corner	

Stable machining was possible even with hollow workpiece.
Double the tool life.

(User evaluation)

GZM

	Shape Handed insert shows Right-hand		Description		No. of corners	Dimensions (mm)					Angle	MEGACOAT NANO EX			DLC coating	Carbide	Applicable toolholders
						CW		S	RE	INSL	PSIR R/L	PR2015	PR2025	PR2035	PDL025	GW15	
							Tolerance										
Low feed			GZM	1316N-003PF	2	1.3	+0.04 -0.04	4.4	0.03	16	-	●	●	●			KGZ R/L…1.3(D16) KGZS R/L…1.3A/B
				1316N-015PF					0.15			●	●	●			
				1516N-003PF		1.5			0.03			●	●	●			KGZ R/L…1.5(D16) KGZS R/L…1.5A/B
				1516N-015PF					0.15			●	●	●			
	15° Lead angle		GZM	1316R-003PF-15D		1.3			0.03		15°	●	●	●			KGZ R/L…1.3(D16) KGZS R/L…1.3A/B
				1316L-003PF-15D								●	●	●			
				1516R-003PF-15D		1.5						●	●	●			KGZ R/L…1.5(D16) KGZS R/L…1.5A/B
				1516L-003PF-15D								●	●	●			
				1516R-015PF-15D					0.15			●	●	●			
			GZM	2020N-003PF		2			0.03		-	●	●	●			KGZ R/L…-2(…) KGZS R/L…-2A/B
				2020N-015PF					0.15			●	●	●			
				2520N-003PF		2.5			0.03			●	●	●			KGZ R/L…-2(…) KGZ R/L…-2.4(…) KGZS R/L…-2A/B
				2520N-015PF					0.15			●	●	●			
				3020N-003PF		3			0.03			●	●	●			KGZ R/L…-2(…) KGZ R/L…-2.4(…) KGZ R/L…-3(…) KGZS R/L…-2A/B
				3020N-015PF					0.15			●	●	●			
	15° Lead angle		GZM	2020R-003PF-15D		2		5.9	0.03	20	15°	●	●	●			KGZ R/L…-2(…) KGZS R/L…-2A/B
				2020L-003PF-15D								●	●	●			
				2020R-015PF-15D					0.15			●	●	●			
				2520R-003PF-15D		2.5			0.03			●	●	●			KGZ R/L…-2(…) KGZ R/L…-2.4(…) KGZS R/L…-2A/B
				2520L-003PF-15D								●	●	●			
				2520R-015PF-15D					0.15			●	●	●			
				3020R-003PF-15D		3			0.03			●	●	●			KGZ R/L…-2(…) KGZ R/L…-2.4(…) KGZ R/L…-3(…) KGZS R/L…-2A/B
				3020L-003PF-15D								●	●	●			
				3020R-015PF-15D					0.15			●	●	●			
Medium feed			GZM	2020N-020PM	2	2	+0.03 -0.03	5.9	0.2	20	-	●	●	●			KGZ R/L…-2(…) KGZS R/L…-2A/B
				2520N-020PM		2.5						●	●	●			KGZ R/L…-2(…) KGZ R/L…-2.4(…) KGZS R/L…-2A/B
				3020N-025PM		3			0.25			●	●	●			KGZ R/L…-2(…) KGZ R/L…-2.4(…) KGZ R/L…-3(…) KGZS R/L…-2A/B
	6° Lead angle		GZM	2020R-020PM-6D		2			0.2		6°	●	●	●			KGZ R/L…-2(…) KGZS R/L…-2A/B
				2520R-020PM-6D		2.5						●	●	●			KGZ R/L…-2(…) KGZ R/L…-2.4(…) KGZS R/L…-2A/B
				3020R-025PM-6D		3			0.25			●	●	●			KGZ R/L…-2(…) KGZ R/L…-2.4(…) KGZ R/L…-3(…) KGZS R/L…-2A/B

Using PF or PM chipbreaker for grooving will not create a flat bottom.
GZM and GZG inserts cannot be installed in KGM and KGD holders.

●: Available

GZM/GZG

Shape Handed insert shows Right-hand			Description		No. of corners	Dimensions (mm)					Angle	MEGACOAT NANO EX			DLC coating	Carbide	Applicable toolholders
						CW		S	RE	INSL	PSIR R/L	PR2015	PR2025	PR2035	PDL025	GW15	
						Tolerance											
High feed			GZM	2020N-020PH	2	2	+0.03 -0.03	5.9	0.2	20	-	●	●	●			KGZ R/L…-2(…) KGZS R/L…-2A/B
				2520N-020PH		2.5						●	●	●			KGZ R/L…-2(…) KGZ R/L…-2.4(…) KGZS R/L…-2A/B
				3020N-030PH		3			0.3			●	●	●			KGZ R/L…-2(…) KGZ R/L…-2.4(…) KGZ R/L…-3(…) KGZS R/L…-2A/B
	1-edge		GZMS	2020N-020PH	1	2			0.2		-	●	●	●			KGZ R/L…-2(…) KGZS R/L…-2A/B
				3020N-030PH		3			0.3			●	●	●			KGZ R/L…-2(…) KGZ R/L…-2.4(…) KGZ R/L…-3(…) KGZS R/L…-2A/B
Low cutting force			GZG	2020N-005PG	2	2	+0.02 -0.02	5.9	0.05	20	-		●	●	●	●	KGZ R/L…-2(…) KGZS R/L…-2A/B
				2520N-005PG		2.5							●	●	●	●	KGZ R/L…-2(…) KGZ R/L…-2.4(…) KGZS R/L…-2A/B
				3020N-005PG		3							●	●	●	●	KGZ R/L…-2(…) KGZ R/L…-2.4(…) KGZ R/L…-3(…) KGZS R/L…-2A/B
			GZG	2020R-005PG-15D		2					15°		●	●	●	●	KGZ R/L…-2(…) KGZS R/L…-2A/B
				2520R-005PG-15D		2.5							●	●	●	●	KGZ R/L…-2(…) KGZ R/L…-2.4(…) KGZS R/L…-2A/B
	15° Lead angle			3020R-005PG-15D		3							●	●	●	●	KGZ R/L…-2(…) KGZ R/L…-2.4(…) KGZ R/L…-3(…) KGZS R/L…-2A/B

●: Available

Inserts identification system

Tolerance	Edge width	Hand of tool	Chipbreaker
G: G-Class M: M-Class	13: 1.3 mm 20: 2 mm 30: 3 mm 15: 1.5 mm 25: 2.5 mm	R: Right-hand L: Left-hand N: Neutral	PF: Low feed PH: High feed PM: Medium feed PG: Low cutting force

GZ	M	S	20	20	N	-	020	PH	(	-	6D	)

Number of edges	Insert length	RE	Lead angle
No indication: 2-edge S: 1-edge	16: 16 mm 20: 20 mm	003: 0.03 mm 020: 0.2 mm 005: 0.05 mm 025: 0.25 mm 015: 0.15 mm 030: 0.3 mm	No indication: 0° 6D: 6° 15D: 15°

Recommended cutting conditions ★ 1st recommendation ☆ 2nd recommendation

Workpiece	Vc (m/min)					f (mm/rev)									Remarks
	MEGACOAT NANO EX			DLC	Carbide	PF (RE = 0.03)			PF (RE = 0.15)			PM	PH	PG	
						CW (mm)									
	PR2015	PR2025	PR2035	PDL025	GW15	1.3~1.5	2.0	2.5~3.0	1.3~1.5	2.0	2.5~3.0	2.0~3.0	2.0~3.0	2.0	2.5~3.0	
Carbon steel	☆ 70~180	★ 70~150	☆ 70~150	-	-	0.01~ 0.04	0.02~ 0.06	0.02~ 0.08	0.01~ 0.05	0.03~ 0.08	0.04~ 0.10	0.05~ 0.15	0.10~ 0.20	0.01~ 0.04	0.01~ 0.05	Wet
Alloy steel	☆ 70~180	★ 70~150	☆ 70~150	-	-											
Stainless steel	☆ 60~150	☆ 60~120	★ 60~120	-	-	0.01~ 0.03	0.01~ 0.04	0.01~ 0.05	0.01~ 0.04	0.03~ 0.07	0.04~ 0.08	0.04~ 0.12	0.08~ 0.16	0.01~ 0.03	0.01~ 0.04	
Cast iron	★ 80~200	-	-	-	☆ 50~100	0.01~ 0.05	0.02~ 0.07	0.03~ 0.08	0.01~ 0.06	0.03~ 0.09	0.04~ 0.10	0.05~ 0.15	0.10~ 0.20	0.01~ 0.04	0.01~ 0.05	
Aluminum alloy	-	-	-	★ 200~500	☆ 200~450	-	-	-	-	-	-	-	-	0.01~ 0.05	0.01~ 0.06	
Brass	-	-	-	-	★ 100~200	-	-	-	-	-	-	-	-	0.01~ 0.07	0.01~ 0.08	

KGZ-JCTM (Internal coolant)

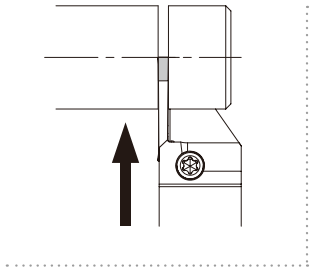
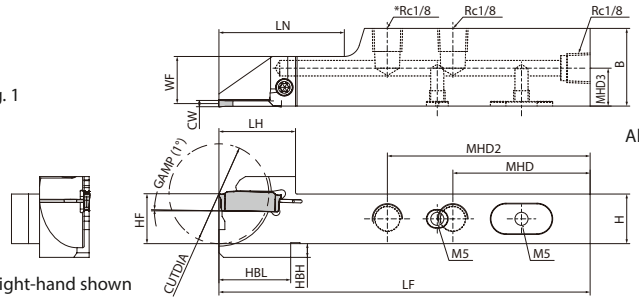
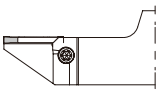


Fig. 1

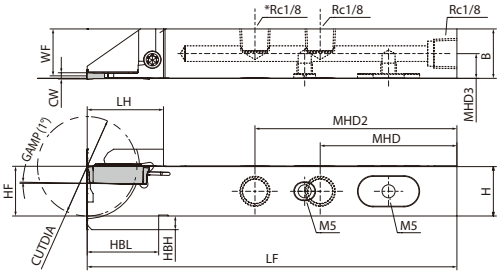


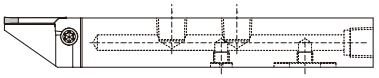


Above figure shows KGZL... (left-hand)

• Right-hand shown

Fig.2





Above figure shows KGZL... (left-hand)

• Right-hand shown

*KGZ R/L12… : 2-Rc1/8

Description	Availability		Dimensions (mm)													Cutting width (mm)		Shape	Spare parts				Applicable inserts
	R	L	CUTDIA	H	B	LH	MHD	MHD2	MHD3	HF	HBH	HBL	LF	LN	WF	MIN	MAX.		Plug 1	Plug 2	Clamp screw	Wrench	
KGZR 1218JX-2JCTM	●		24	12	18	19.8	54	-	8.4	12	8.5	19.8	120	43.7	11.2	2	3	Fig.1	GP-1	HS5X 4LP	SB-40120 TR	LTW-15S	GZG2020… GZM2020… GZMS2020… GZG2520… GZM2520… GZG3020… GZM3020… GZMS3020…
KGZL 1218JX-2JCTM		●							7.7														
KGZR 1625JX-2JCTM	●		32	16	25	24.8	44	65	12.2	16	4.5	23.2		40.0	15.2								
KGZL 1625JX-2JCTM		●							7.7														
KGZR 1218JX-2.4JCTM	●		24	12	18	19.8	54	-	8.4	12	8.5	19.8	120	43.7	11.0	2.4	3	Fig.1	GP-1	HS5X 4LP	SB-40120 TR	LTW-15S	GZG2520… GZM2520… GZG3020… GZM3020… GZMS3020…
KGZL 1218JX-2.4JCTM		●							7.7														
KGZR 1625JX-2.4JCTM	●		32	16	25	24.8	44	65	12.2	16	4.5	23.2		40.0	15.0								
KGZL 1625JX-2.4JCTM		●							7.7														
KGZR 1218JX-3JCTM	●		24	12	18	19.8	54	-	8.6	12	8.5	19.8	120	43.7	10.8	3	3	Fig.1	GP-1	HS5X 4LP	SB-40120 TR	LTW-15S	GZG3020… GZM3020… GZMS3020…
KGZL 1218JX-3JCTM		●							7.7														
KGZR 1625JX-3JCTM	●		32	16	25	24.8	44	65	12.2	16	4.5	23.2		40.0	14.8								
KGZL 1625JX-3JCTM		●							7.7														
KGZR 1212JX-2JCTM	●		24	12	12	19.8	59	-	6	12	6	19.8	120	-	11.2	2	3	Fig.2	GP-1	HS5X 4LP	SB-40120 TR	LTW-15S	GZG2020… GZM2020… GZMS2020… GZG2520… GZM2520… GZG3020… GZM3020… GZMS3020…
KGZL 1212JX-2JCTM		●																					
KGZR 1616JX-2JCTM	●		32	16	16	24.8	44	65	8	16	4.5	23.2			15.2								
KGZL 1616JX-2JCTM		●																					
KGZR 1212JX-2.4JCTM	●		24	12	12	19.8	59	-	6	12	6	19.8	120		11.0	2.4	3	Fig.2	GP-1	HS5X 4LP	SB-40120 TR	LTW-15S	GZG2520… GZM2520… GZG3020… GZM3020… GZMS3020…
KGZL 1212JX-2.4JCTM		●																					
KGZR 1616JX-2.4JCTM	●		32	16	16	24.8	44	65	8	16	4.5	23.2			15.0								
KGZL 1616JX-2.4JCTM		●																					
KGZR 1212JX-3JCTM	●		24	12	12	19.8	59	-	6	12	6	19.8	120		10.8	3	3	Fig.2	GP-1	HS5X 4LP	SB-40120 TR	LTW-15S	GZG3020… GZM3020… GZMS3020…
KGZL 1212JX-3JCTM		●																					
KGZR 1616JX-3JCTM	●		32	16	16	24.8	44	65	8	16	4.5	23.2			14.8								
KGZL 1616JX-3JCTM		●																					

Recommended tightening torque: 2.0 Nm / (SB-40120TR).

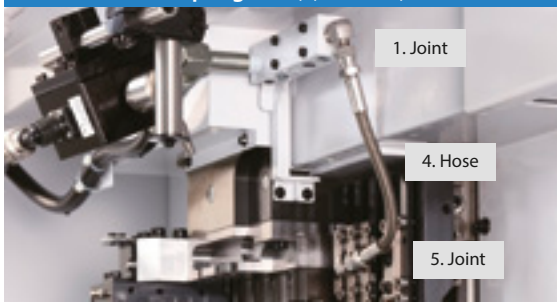
●: Available

GM* and GD* inserts cannot be installed in the KGZ holder (GMM, GMG, GMN, GMR/L, GDM, GDG, GDGS, GDMS).

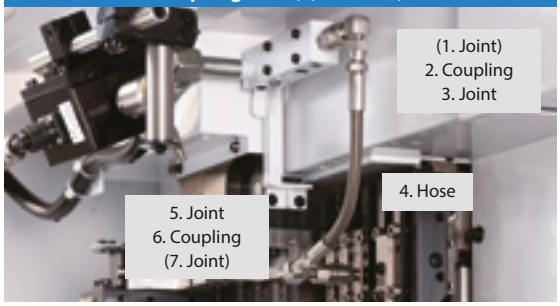
Piping parts will be required separately if internal coolant is used

Pump pressure : Up to 20 MPa. Pump pressure: Up to 7.5 MPa if coupling is used.

Without coupling (Pump pressure: Up to 20 MPa)



Without coupling (Pump pressure: Up to 7.5 MPa)



Combination part description (Example)

Spare parts	Description
1. Joint	J-AN-R1/8-G1/8
4. Hose	HS-G1/8-G1/8-200
5. Joint	J-AN-R1/8-G1/8

Convert the thread standards on the machine's side (Rc1/4, Rc1/8, NPT1/8, etc.) to the thread standard on the hose side (G1/8) for use.
Use sealing agents such as seal tapes when installing piping parts.

Combination part description (Example)

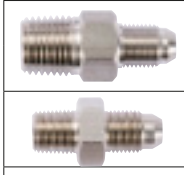
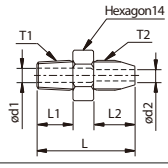
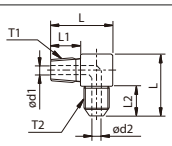
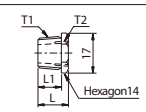
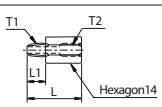
Spare parts	Description
(1. Joint)	–
2. Coupling	CP-ST-R1/8 • P-ST-RC1/8
3. Joint	J-AN-R1/8-G1/8
4. Hose	HS-G1/8-G1/8-200
5. Joint	J-AN-R1/8-G1/8
6. Coupling	P-ST-RC1/8 • CP-ST-R1/8
(7. Joint)	–

Convert the thread standards on the machine's side (Rc1/4, Rc1/8, NPT1/8, etc.) to thread standards of the coupling (Rc1/8, etc.) or hose (G1/8) for use.
Use sealing agents such as seal tapes when installing piping parts.

Piping part dimensions

Joint (1/3/5/7) Pressure: ~20.0 MPa

(Unit: mm)

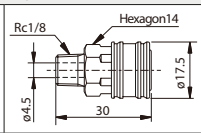
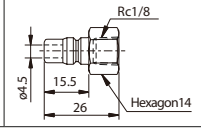
Shape		Description	Availability	ød1	ød2	L	L1	L2	T1	T2
		J-ST-R1/4-G1/8	●	5.5	4.0	34	13	13	R1/4	G1/8
		J-ST-NPT1/8-G1/8	●	3.5	3.5	29	10	13	NPT1/8	G1/8
		J-ST-R1/8-G1/8	●	4.0	4.0	29	10	13	R1/8	G1/8
		J-AN-R1/8-G1/8	●	4.0	4.0	27	14	13	R1/8	G1/8
		J-ST-R1/4-RC1/8	●	–	–	17	12	–	R1/4	Rc1/8
		J-ST-NPT1/8-RC1/8	●	3.5	–	30	10	–	NPT1/8	Rc1/8
		J-ST-R1/8-RC1/8	●	3.5	–	33	13	–	R1/8	Rc1/8

Elbow piping (J-AN-R1/8-G1/8) is recommended.

●: Available

Coupling (2/6) Pressure: ~7.5 MPa

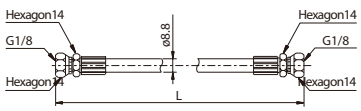
(Unit: mm)

Shape		Description	Availability
		CP-ST-R1/8	●
		P-ST-RC1/8	●

●: Available

Hose (4) Pressure: ~20.0 MPa

(Unit: mm)

Shape		Description	Availability	L
		HS-G1/8-G1/8-200	●	200
		HS-G1/8-G1/8-300	●	300
		HS-G1/8-G1/8-400	●	400
		HS-G1/8-G1/8-500	●	500
		HS-G1/8-G1/8-600	●	600
		HS-G1/8-G1/8-800	●	800

●: Available

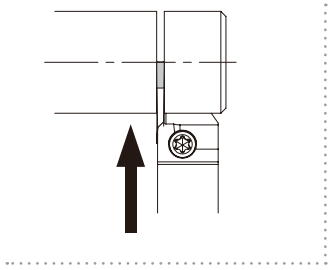


Fig.1

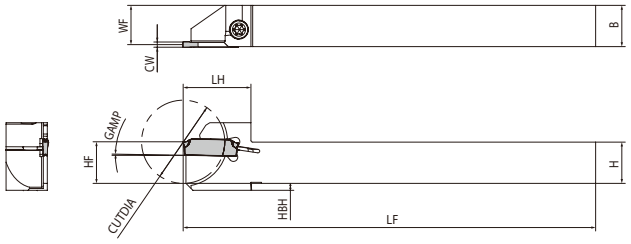
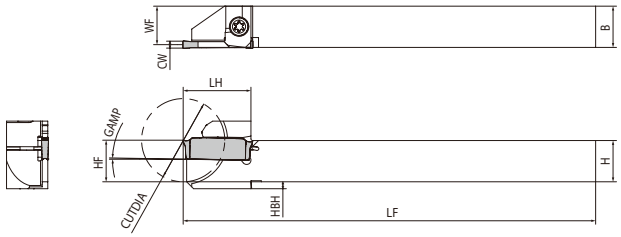


Fig.2



• Right-hand shown

Description		Availability		Dimensions (mm)								Cutting width (mm)		Angle	Shape	Spare parts		Applicable inserts
																Clamp screw	Wrench	
		R	L	CUTDIA	H	B	LH	HF	HBH	LF	WF	MIN.	MAX.	GAMP				
KGZ R/L	1010JX-1.3D16	●	●	16	10	10	17.8	10	2.1	120	9.5	1.3	1.3	1°	Fig.1	SB-40120TR	LTW-15S	GZM1316…
	1010JX-1.3	●	●	20			18.7											
	1212F-1.3D16	●	●	16	12	12	17.8	12		85	11.5							
	1212JX-1.3D16	●	●							120								
	1212F-1.3	●	●	24			19.8			85								
	1212JX-1.3	●	●							120								
KGZ R/L	1010JX-1.5D16	●	●	16	10	10	17.8	10	2.1	120	9.4	1.5	1.5					GZM1516…
	1010JX-1.5	●	●	20			18.7											
	1212F-1.5D16	●	●	16	12	12	17.8	12		85	11.4							
	1212JX-1.5D16	●	●							120								
	1212F-1.5	●	●	24			19.8			85								
	1212JX-1.5	●	●							120								
KGZ R/L	1010JX-2	●	●	20	10	10	18.7	10	2.1	120	9.2	2	3	2°	Fig.2	SB-40120TR	LTW-15S	GZG2020… GZM2020… GZMS2020…
	1212F-2	●	●	24	12	12	19.8	12		85	11.2			1°				
	1212JX-2	●	●							120								
	1616JX-2	●	●	32	16	16	24.8	16	-		15.2							GZG2520… GZM2520…
	2012K-2D34	●	●	34	20	12	26.8	20		125	11.2					SE-50125TR	LTW-20	GZG3020… GZM3020…
	2020K-2D34	●	●			20					19.2							
	2525K-2D34	●	●		25	25	32.7	25			24.2					HH5X16	LW-4	GZMS3020…
KGZ R/L	1010JX-2.4	●	●	20	10	10	18.7	10	2.1	120	9	2.4	3	2°		SB-40120TR	LTW-15S	GZG2520… GZM2520… GZG3020… GZM3020… GZMS3020…
	1212F-2.4	●	●	24	12	12	19.8	12		85	11			1°				
	1212JX-2.4	●	●							120								
	1616JX-2.4	●	●	32	16	16	24.6	16	-		15							
	2012K-2.4D34	●	●	34	20	12	26.6	20		125	11					SE-50125TR	LTW-20	
	2020K-2.4D34	●	●			20					19							
	2525K-2.4D34	●	●		25	25	32.7	25			24					HH5X16	LW-4	
KGZ R/L	1212JX-3	●	●	24	12	12	19.8	12	2.1	120	10.8	3	3	1°		SB-40120TR	LTW-15S	GZG3020… GZM3020… GZMS3020…
	1616JX-3	●	●	32	16	16	24.6	16	-		14.8							
	1616JX-3D38	●	●	38	28.6											SE-50125TR	LTW-20	
	1913K-3D38	●	●		19	13		19		125	11.8							
	2012JX-3D42	●	●	42	20	12	30.7	20		120	10.8							
	2012JX-3D51	●	●	51			35.2											
	2020JX-3D42	●	●	42		20	30.7				18.8							
	2020JX-3D51	●	●	51			35.2											
	2525K-3D51	●	●		25	25	41.7	25		125	23.8					HH5X16	LW-4	

Recommended tightening torque: 2.0Nm / (SB-40120TR) • 2.5Nm / (SE-50125TR) • 6.5Nm / (HH5X16).

●: Available

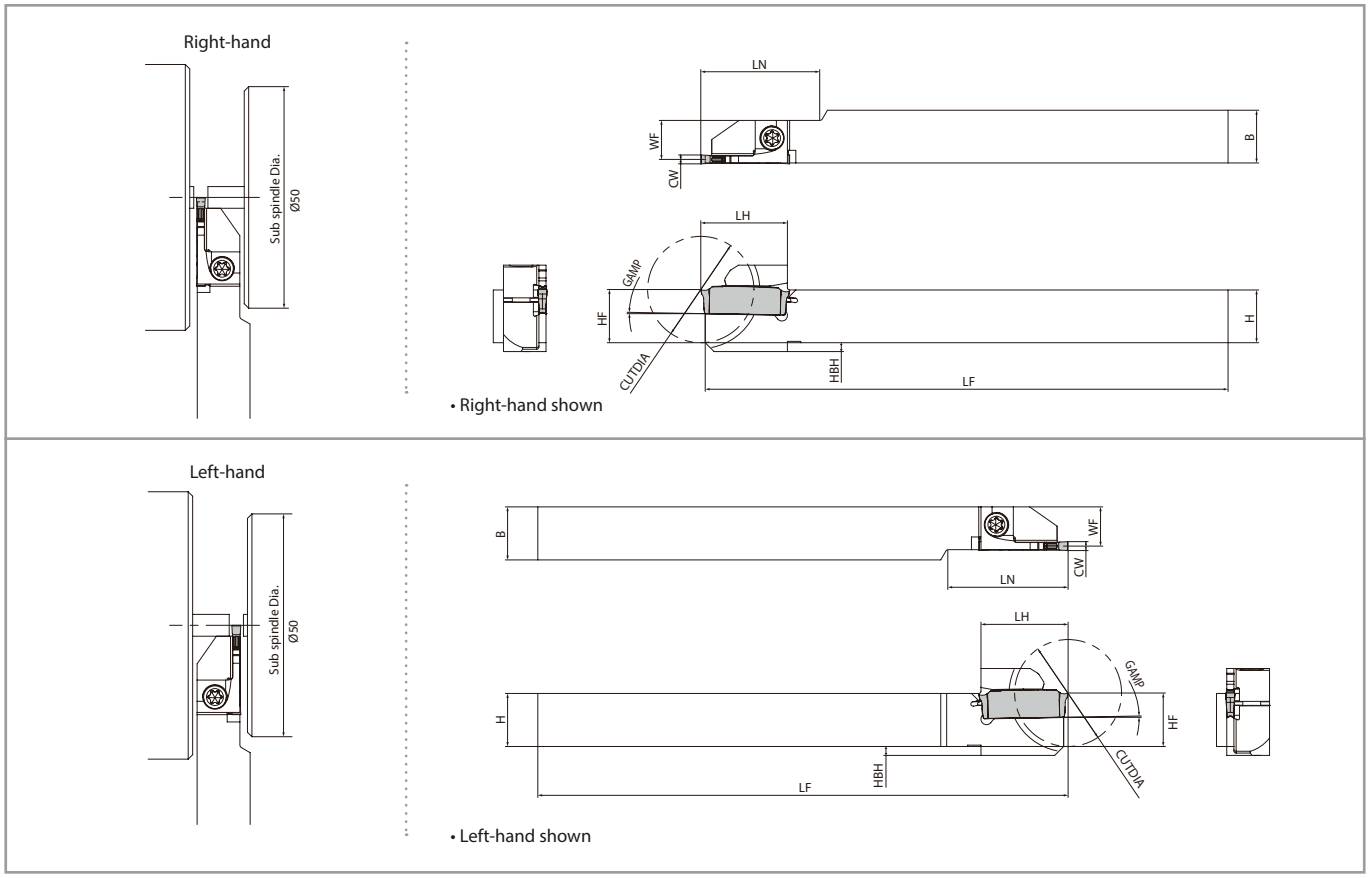
When machining large cutting dia. (over 36 mm) with KGZ R/L....-3D38 or KGZ R/L...-3D42, please follow the instructions below:

• Use 1-edge inserts

• Maximum workpiece diameter for 2-edge inserts is ø36

KGM* and GD* inserts cannot be installed in the KGZ holder (GMM, GMG, GMN, GMR/L, GDM, GDG, GDGS, GDMS).

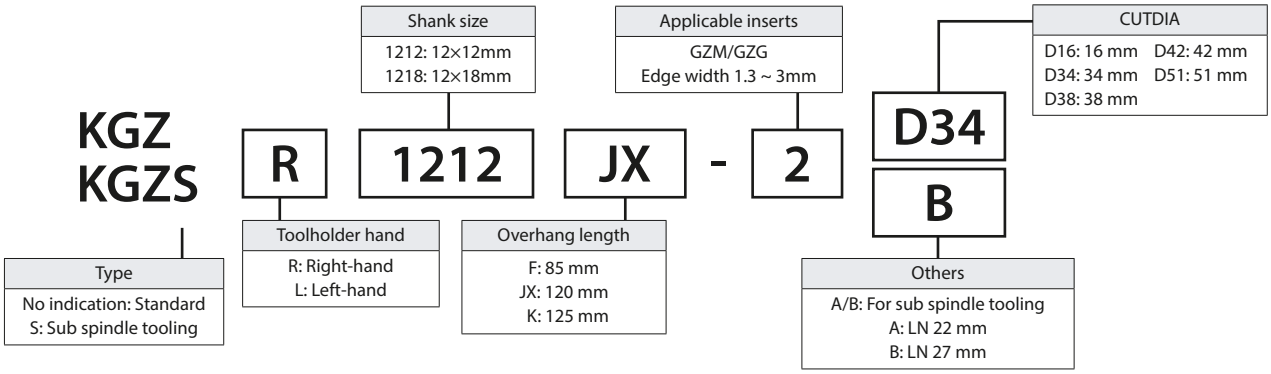
KGZS (For cut-off operation near sub spindle side)



Description		Availability		Dimensions (mm)									Cutting width (mm)		Angle	Spare parts		Applicable inserts
		R	L	CUTDIA	H	B	LH	HF	HBH	LF	LN	WF	MIN.	MAX.	GAMP	Clamp screw	Wrench	
KGZS R/L	1212F-1.3A	●	●	24	12	12	19.8	12	2.1	85	22	8.4	1.3	1.3	1°	SB-40120TR	LTW-15S	GZM1316...
	1212JX-1.3B	●	●							120	27							
	1616JX-1.3B	●	●		16	16		16	-									
	1212F-1.5A	●	●		12	12		12	2.1	85	22	8.4	1.5	1.5				GZM1516...
	1212JX-1.5B	●	●							120	27							
	1616JX-1.5B	●	●		16	16		16	-									
	1212F-2A	●	●		12	12		12	2.1	85	22	8.7	2	3				GZG2020..., GZM2020..., GZMS2020..., GZG2520..., GZM2520..., GZG3020..., GZM3020..., GZMS3020...
	1212JX-2B	●	●							120	27							
	1616JX-2B	●	●		16	16		16	-									

●: Available

Toolholder identification system

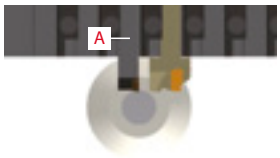


Precautions

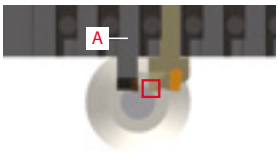
Maximum Ap of the next tool (indicated as tool A) and holder interference

When using JCTM holder 1218/1212 , note maximum Ap of the next tool to avoid interference.

No interference



Interference



Estimated maximum Ap of tool A (mm)

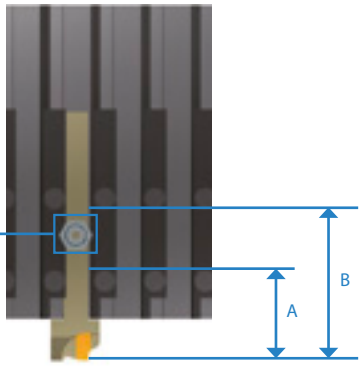
JCTM description \ Workpiece dia.	ø12	ø16	ø20
KGZ R/L 1218JX-*JCTM	2.4	2.0	1.7
KGZ R/L 1212JX-*JCTM	5.0	3.5	2.8

Piping part interference avoidance

Rectangular shank (KGZR/L1218..., KGZR/L1625...) are recommended for use with piping parts connected to JCTM holders.

When connecting piping parts to the JCTM square shank, check the lengths of A and B below to avoid interference with the screws of the tool turret.

Adjust the piping part to fit between the top and bottom screws.

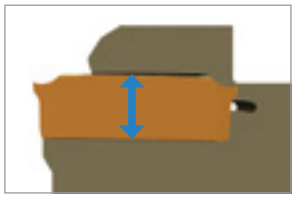


Shank size	Availability of square shank use
1212	"A" shorter than 51.5 mm and "B" longer than 68.5 mm → Available Other than the above conditions → Not available (Use a rectangular shank)
1616	Available

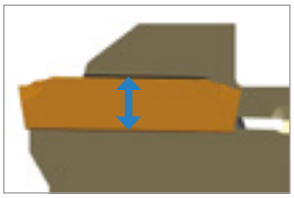
Compatibility with conventional tools

KGZ is not compatible with the conventional tools (KGD/KGM).

KGZ



Conventional



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