Kanal açma ve kesme

Modüler sistemler, kanal uçları ve talaş kırıcılar

ZCC Cutting Tools Europe resmî yenilik yayınlarından operasyona göre seçilmiş teknik sayfalar.

Dönemler en yeniden eskiye sıralanmıştır. Üreticinin ölçü tabloları, ürün kodları ve teknik çizimleri özgün biçimleriyle korunmuştur.

Bu belge Toksan tarafından hazırlanmış bir derlemedir; üreticinin tek bir döneme ait resmî ana kataloğu değildir. Eski yayınlar güncel stok veya ürünün devam ettiğine ilişkin taahhüt sayılmaz.

NASIL KULLANILIR?

Sonraki sayfadan dönemi seçin. PDF yer imleriyle bölümler arasında geçiş yapabilirsiniz. Teknik içerik İngilizcedir.

İhtiyacınız olan döneme geçin

Sayfa numaraları bu derlemeye aittir. “Kaynak yayın” bağlantısı üreticinin özgün PDF dosyasını açar.

Eylül 2026 3 - 9

zGroove Compact: alın kanalı ve üretim tornaları
Kaynak yayın □ | Özgün PDF sayfaları: 76-82

Eylül 2025 / 2026 güncellemesi 10 - 21

PG1110 / PG1120, zGroove Compact ve HG
Kaynak yayın □ | Özgün PDF sayfaları: 28-39

Mart 2023 22 - 27

MU kanal açma talaş kırıcı
Kaynak yayın □ | Özgün PDF sayfaları: 16-21

Teknik seçim, tutucu uyumu ve güncel bulunabilirlik için Toksan ile görüşün. Üretici telif ve iletişim sayfaları derlemenin sonundadır.

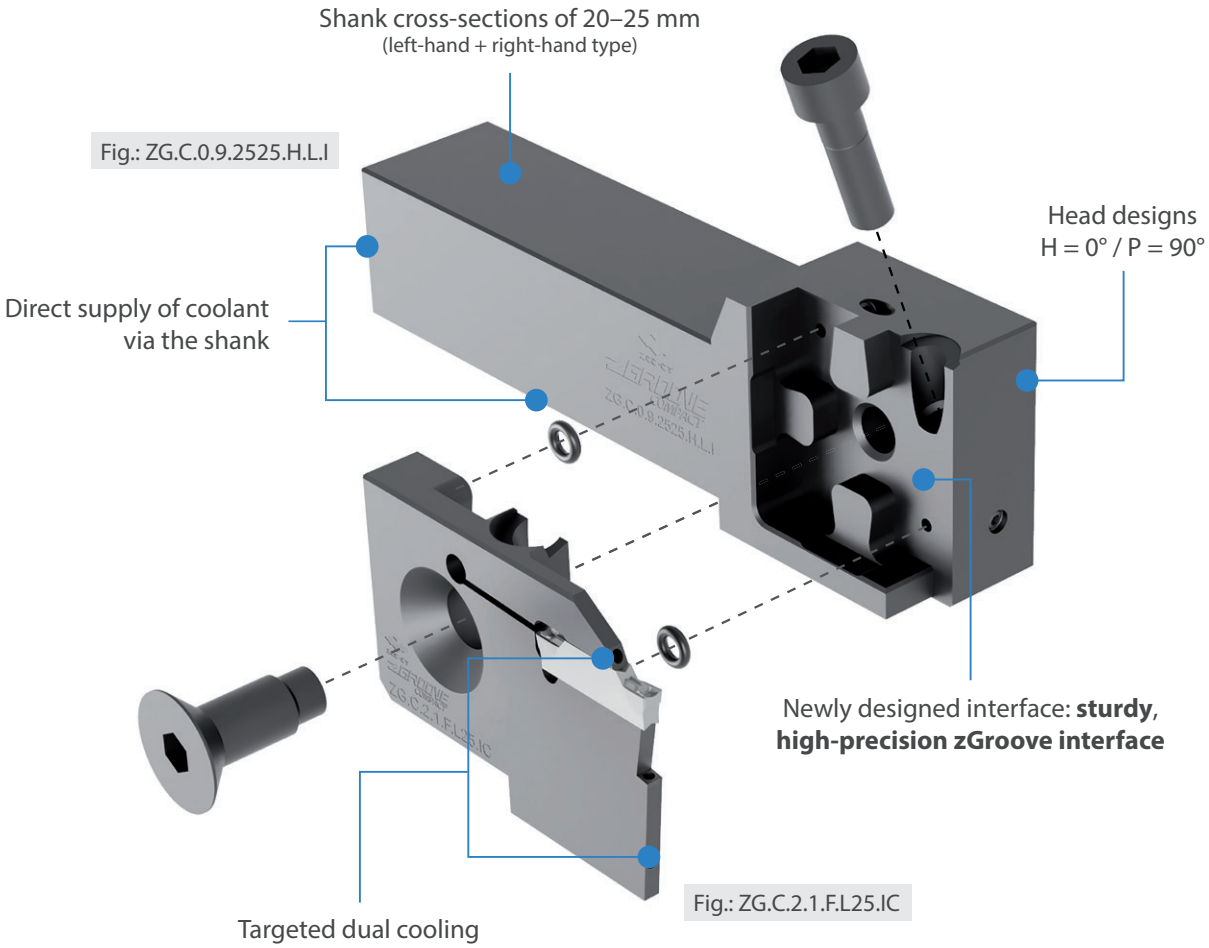
zGROOVE® COMPACT

Compact design, easy to work with

Now also available for axial machining New

YOUR BENEFITS

– Newly designed zGroove interface for **simple** and **precise change-over of any component**
– **Excellent chip removal** and **reduced machining temperatures** thanks to targeted cooling
– **Compatible with a wide range of machines** thanks to compact design
– Sturdy design for all parting and grooving/turning applications



NEW: Type for axial machining

– These types are compatible with all zGroove Compact shank holders
– Targeted coolant delivery to the cutting zone
– It is also possible to groove along a stud
– Axial cutting depths of 10.0–22.0 mm
– Diameter range: Ø 44.0–815.0 mm
– Groove widths: 3.0–6.0 mm

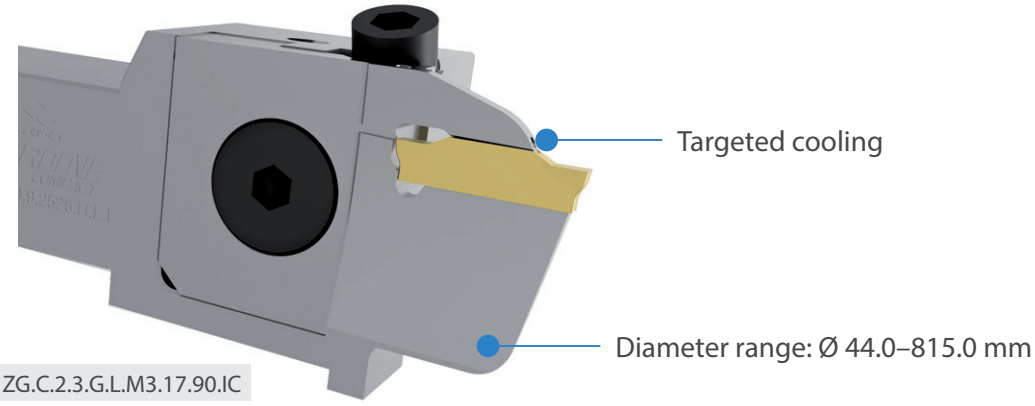


Fig.: ZG.C.2.3.G.L.M3.17.90.IC

Type for radial machining

– These types are compatible with all zGroove Compact shank holders
– Targeted dual cooling
– Radial cutting depths of 10.0–30.0 mm
– Parting-off with a reinforced primary cartridge up to Ø 80 mm
– Groove widths: 1.5–8.0 mm

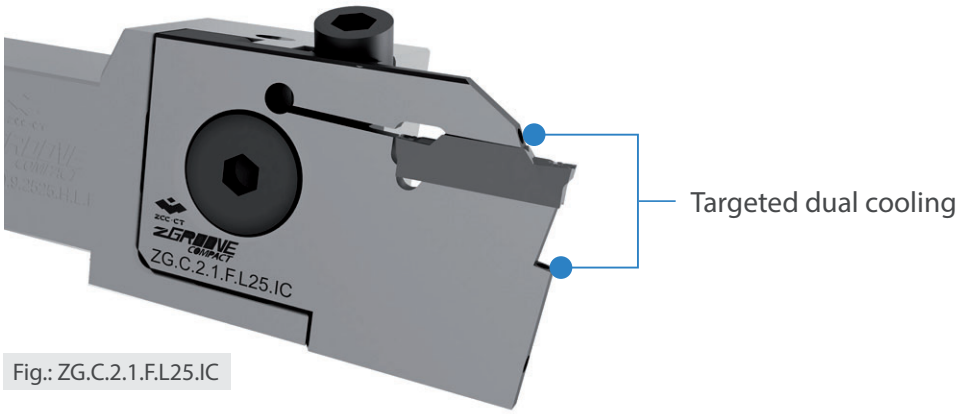
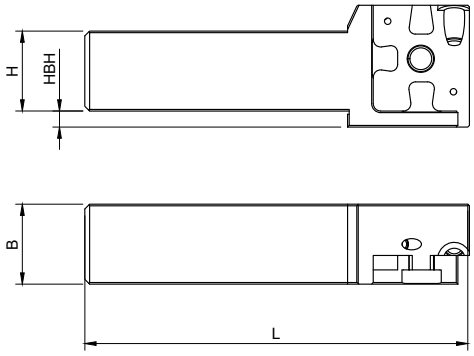


Fig.: ZG.C.2.1.F.L25.IC

zGroove Compact shank holder, H = 0°



Left hand style



Left hand style

Article	✻	Stock	Dimensions [mm]				Primary cartridge
			H	B	L	HBH	
ZG.C.0.9.2020.H.L.I	✻	●	20	20	108	10	ZG.C.2.*.*.L**.IC
ZG.C.0.9.2525.H.L.I	✻	●	25	25	120	5	ZG.C.2.*.*.L**.IC

● Ex stock ○ On demand

Right hand style

Article	✻	Stock	Dimensions [mm]				Primary cartridge
			H	B	L	HBH	
ZG.C.0.9.2020.H.R.I	✻	●	20	20	108	10	ZG.C.2.*.*.R**.IC
ZG.C.0.9.2525.H.R.I	✻	●	25	25	120	5	ZG.C.2.*.*.R**.IC

● Ex stock ○ On demand

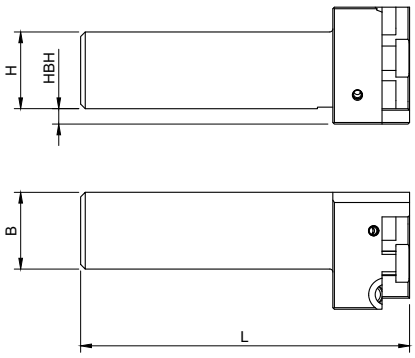
Spare parts

		Article	Stock
	**Screw (primary cartridge)**	ZG.C.2.M8*16	●
	**Screw (insert)**	GB70-85-M6*20	●

zGroove Compact shank holder, P = 90°



Left hand style



Left hand style

Article	✻	Stock	Dimensions [mm]				Primary cartridge
			H	B	L	HBH	
ZG.C.0.9.2020.P.LR.I	✻	●	20	20	90	10	ZG.C.2.*.*.R**.IC
ZG.C.0.9.2525.P.LR.I	✻	●	25	25	107	5	ZG.C.2.*.*.R**.IC

● Ex stock ○ On demand

Right hand style

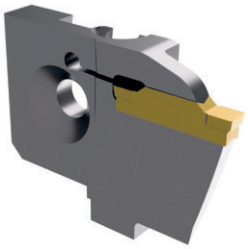
Article	✻	Stock	Dimensions [mm]				Primary cartridge
			H	B	L	HBH	
ZG.C.0.9.2020.P.RL.I	✻	●	20	20	90	10	ZG.C.2.*.*.L**.IC
ZG.C.0.9.2525.P.RL.I	✻	●	25	25	107	5	ZG.C.2.*.*.L**.IC

● Ex stock ○ On demand

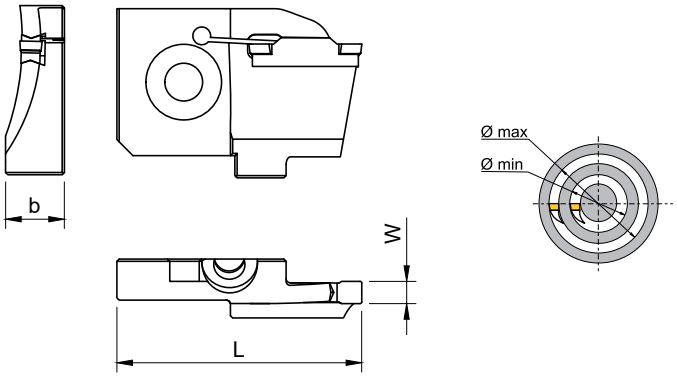
Spare parts

		Article	Stock
	**Screw (primary cartridge)**	ZG.C.2.M8*16	●
	**Screw (insert)**	GB70-85-M6*20	●

zGroove Compact primary cartridge (grooving / axial turning)



Left hand style



Article	*	Stock R	Stock L	Dimensions [mm] W	Spindle rotation direction	a_r max.	ØD (min-max)	L	b	Insert
ZG.C.2.3.F.R.M4.10.44.IC	*	●		3.0	M4 (CCW)	10	44-65	50	13,2	Z*F*030*-**
ZG.C.2.3.F.L.M3.10.44.IC	*		●	3.0	M3 (CW)	10	44-65	50	13,2	Z*F*030*-**
ZG.C.2.3.G.R.M4.17.48.IC	*	●		4.0	M4 (CCW)	17	48-62	55	13,2	Z*G*040*-**
ZG.C.2.3.G.L.M3.17.48.IC	*		●	4.0	M3 (CW)	17	48-62	55	13,2	Z*G*040*-**
ZG.C.2.3.G.R.M4.17.62.IC	*	●		4.0	M4 (CCW)	17	62-90	55	13,2	Z*G*040*-**
ZG.C.2.3.G.L.M3.17.62.IC	*		●	4.0	M3 (CW)	17	62-90	55	13,2	Z*G*040*-**
ZG.C.2.3.G.R.M4.17.90.IC	*	●		4.0	M4 (CCW)	17	90-177	55	13,2	Z*G*040*-**
ZG.C.2.3.G.L.M3.17.90.IC	*		●	4.0	M3 (CW)	17	90-177	55	13,2	Z*G*040*-**
ZG.C.2.3.H.R.M4.17.48.IC	*	●		5.0	M4 (CCW)	17	48-68	55	13,2	Z*H*050*-**
ZG.C.2.3.H.L.M3.17.48.IC	*		●	5.0	M3 (CW)	17	48-68	55	13,2	Z*H*050*-**
ZG.C.2.3.H.R.M4.17.90.IC	*	●		5.0	M4 (CCW)	17	90-135	55	13,2	Z*H*050*-**
ZG.C.2.3.H.L.M3.17.90.IC	*		●	5.0	M3 (CW)	17	90-135	55	13,2	Z*H*050*-**
ZG.C.2.3.H.R.M4.22.215.IC	*	●		5.0	M4 (CCW)	22	215-815	55	10,7	Z*H*050*-**
ZG.C.2.3.H.L.M3.22.215.IC	*		●	5.0	M3 (CW)	22	215-815	55	10,7	Z*H*050*-**
ZG.C.2.3.K.R.M4.22.100.IC	*	●		6.0	M4 (CCW)	22	100-200	55	13,2	Z*K*060*-**
ZG.C.2.3.K.L.M3.22.100.IC	*		●	6.0	M3 (CW)	22	100-200	55	13,2	Z*K*060*-**

● Ex stock ○ On demand

Find all compatible grooving inserts on our website.

Spare parts

		Article	Stock
	**Seal (primary cartridge)**	ZG.C.S.3*1.5	●



zGroove Compact

Parting-off solution for
CNC production lathes

ZGROOVE® COMPACT

Compact design, easy to work with

Now also available as a parting-off solution for CNC production lathes New

YOUR BENEFITS

– Modular 3-component system: Base holders, intermediate holders and primary cassettes can be combined as required
– Slim design in the part-off zone for **minimum spindle clearance**
– Cutting depth and width can be flexibly adjusted by changing the adapter
– Centre height manually adjustable, even without a Y-axis
– **Coolant supply directly via the turret**, with no hoses at all
– Base holders for star and disc turrets **– the right interface for every situation**
– Parting off to the centre for bar passages up to Ø80 mm

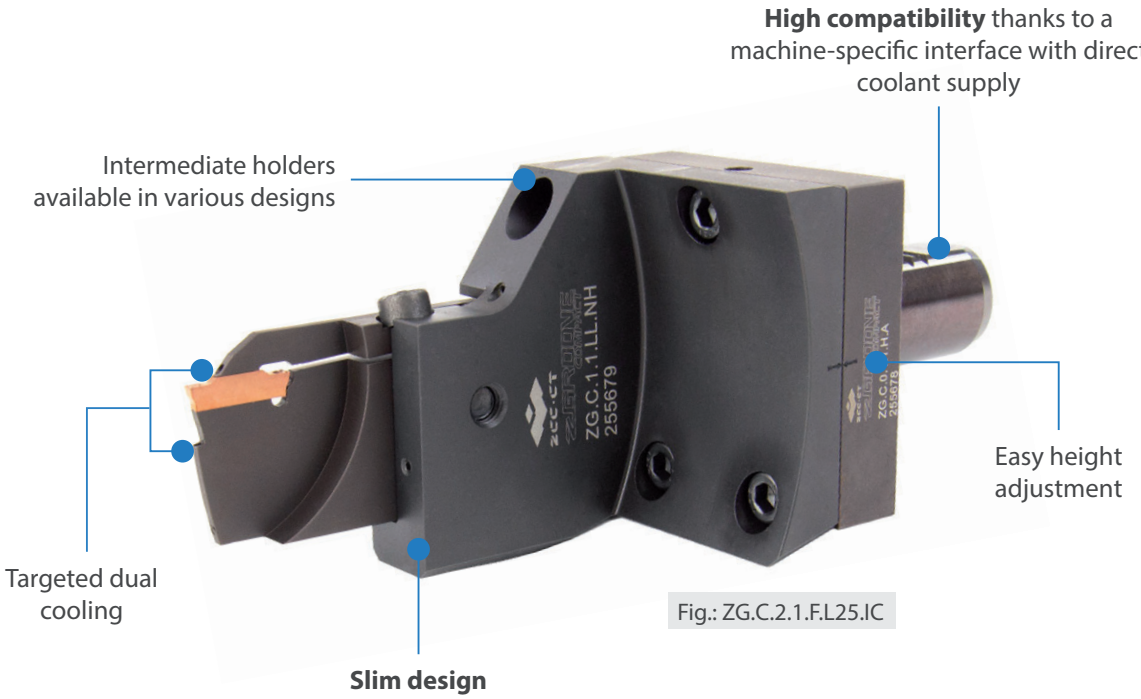


Fig.: ZG.C.2.1.F.L25.IC

VDI base holders for disc and star turrets from VDI25 to VDI50, as well as some PSC and BMT types, are already available. Further models available on demand. Please do get in touch with us to discuss your bespoke solution!

Modular grooving system

System code – inserts

ZP	G	D	04	04	–	H	G
1	2	3	4	5		6	7

Application	
Code	Description
ZP	Parting
ZT	Grooving & turning
ZR	Form turning

1

Insert seat size [mm]	
Groove width	
Code	Description
B	2,0
E	2,5
F	3,0
G	4,0
H	5,0
K	6,0
L	8,0

2

No. of cutting edges	
Code	Description
S	Single
D	Double

3

Insert thickness S [mm]	
	
Code	S
02	2,0
025	2,5
03	3,0
04	4,0
05	5,0
06	6,0
08	8,0

4

Nose radius r [mm]	
	
Code	r
02	0,2
03	0,3
04	0,4
08	0,8

5

Tolerance class [mm]	
Code	Description
M	±0,13
E	±0,025
H	±0,025

6

Chip breaker	
Code	Description
G	General chip breaker
F	Special chip breaker
M	Straight edge

7

PG1110 grade

Maximum resistance to wear when working with difficult-to-machine materials

YOUR BENEFITS

– Thermally stable TiAlSiN coating technology with **enhanced adhesion properties** and **ultra-smooth coating surface**
– **Longer tool life** thanks to hard substrate base
– Ideally suited for **mass production applications** with stable cutting conditions

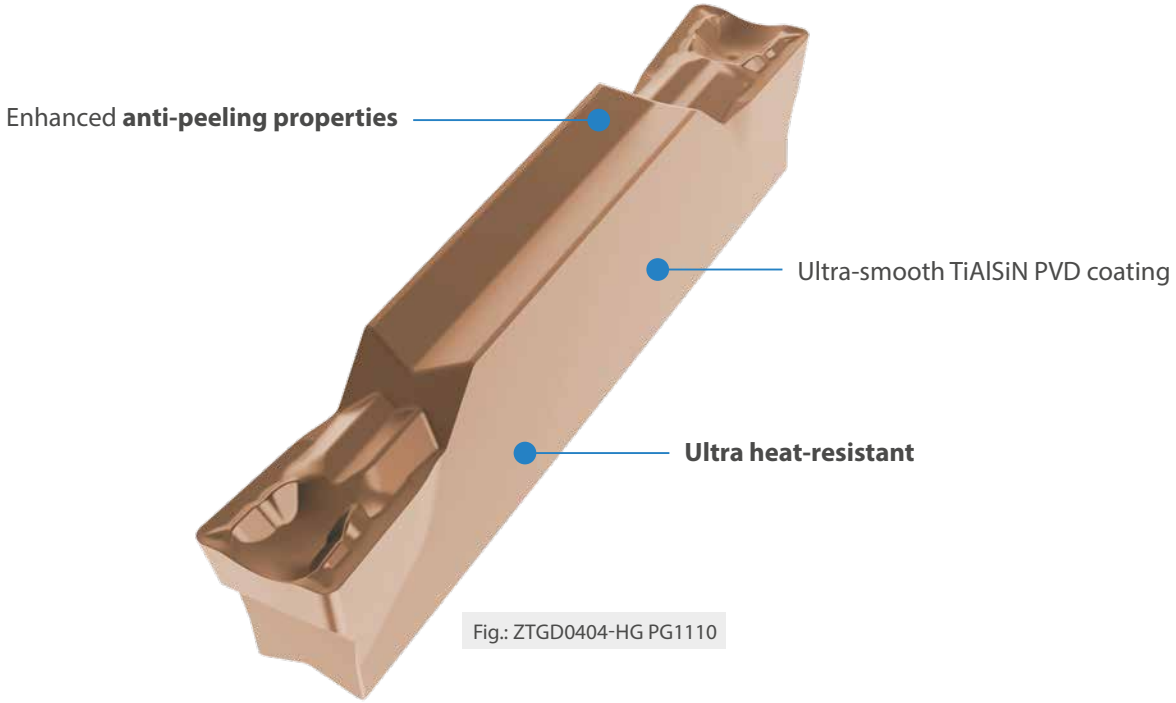


Fig.: ZTGD0404-HG PG1110

Articles available with the new PG1110 grade:

Article	Stock
ZTBD02002-HG PG1110	●
ZTBD0202-HG PG1110 ■	●
ZTED02503-HG PG1110	●
ZTFD0303-HG PG1110	●
ZTGD0402-HG PG1110	●
ZTGD0404-HG PG1110	●
ZTHD0504-HG PG1110	●
ZTKD0608-HG PG1110	●

● Ex stock ○ On demand

PG1120 grade

Maximum reliability even when cutting conditions change

YOUR BENEFITS

– Well suited for machining alloyed steel, stainless steel and difficult-to-machine materials
– Suitable for parting and grooving applications under high thermal and mechanical loads
– Temperature-resistant TiAlSiN coating with **ultra-smooth surface** and **enhanced adhesion properties**
– **Reduced chipping on cutting edge** thanks to high fracture toughness

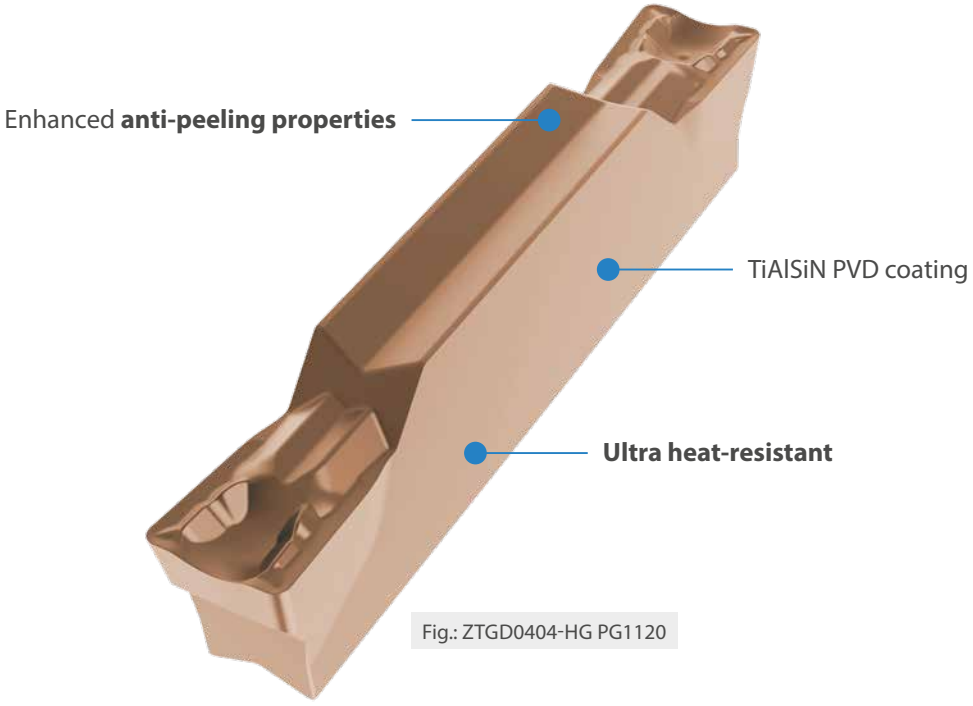


Fig.: ZTGD0404-HG PG1120

Update

Articles available with the new PG1120 grade:

Article	Stock
ZTAD01502-HG PG1120 ■	●
ZTBD02002-HG PG1120	●
ZTBS0202-HG PG1120 ■	●
ZTED02502-HG PG1120 ■	●
ZTED02503-HG PG1120	●
ZTES02503-HG PG1120 ■	●
ZTFD0302-HG PG1120 ■	●
ZTFD0303-HG PG1120	●

● Ex stock ○ On demand

Article	Stock
ZTFS0303-HG PG1120 ■	●
ZTGD0402-HG PG1120	●
ZTGD0404-HG PG1120	●
ZTGD0408-HG PG1120 ■	●
ZTHD0504-HG PG1120	●
ZTHD0508-HG PG1120 ■	●
ZTKD0604-HG PG1120 ■	●
ZTKD0608-HG PG1120	●

● Ex stock ○ On demand

zGROOVE® COMPACT

Compact design, easy to work with

YOUR BENEFITS

– Newly designed zGroove interface for **simple** and **precise change-over of any component**
– **Excellent chip removal** and **reduced machining temperatures** thanks to targeted dual cooling
– **Compatible with a wide range of machines** thanks to compact design
– Sturdy design for all parting and grooving/turning applications

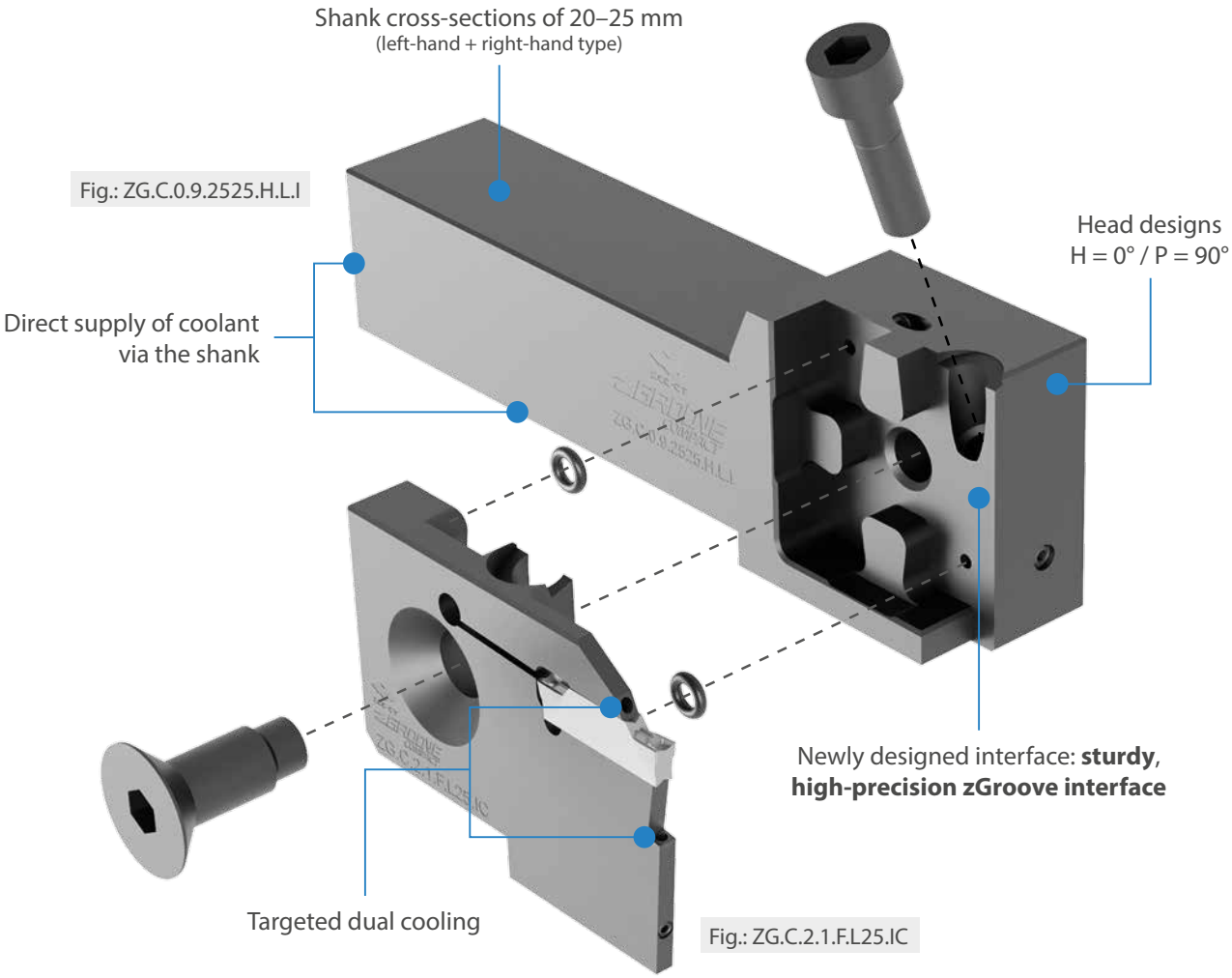


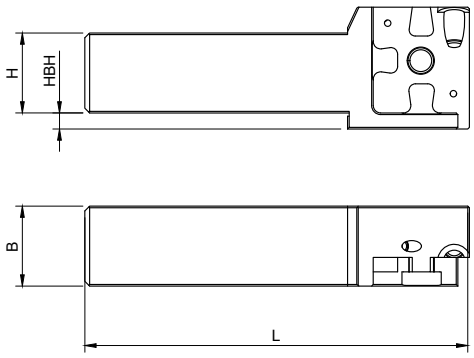
Fig.: ZG.C.0.9.2525.H.L.I

Fig.: ZG.C.2.1.F.L25.IC

zGroove Compact shank holder, H = 0°



Left hand style



Left hand style

Article	✻	Stock	Dimensions [mm]				Primary cartridge
			H	B	L	HBH	
ZG.C.0.9.2020.H.L.I	✻	●	20	20	108	10	ZG.C.2.*.*.L**.IC
ZG.C.0.9.2525.H.L.I	✻	●	25	25	120	5	ZG.C.2.*.*.L**.IC

● Ex stock ○ On demand

Right hand style

Article	✻	Stock	Dimensions [mm]				Primary cartridge
			H	B	L	HBH	
ZG.C.0.9.2020.H.R.I	✻	●	20	20	108	10	ZG.C.2.*.*.R**.IC
ZG.C.0.9.2525.H.R.I	✻	●	25	25	120	5	ZG.C.2.*.*.R**.IC

● Ex stock ○ On demand

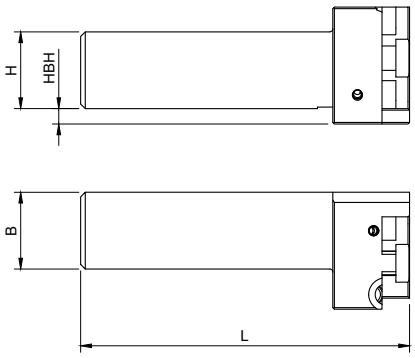
Spare parts

		Article	Stock
	**Screw (primary cartridge)**	ZG.C.2.M8*16	●
	**Screw (insert)**	GB70-85-M6*20	●

zGroove Compact shank holder, P = 90°



Left hand style



Left hand style

Article	✻	Stock	Dimensions [mm]				Primary cartridge
			H	B	L	HBH	
ZG.C.0.9.2020.P.LR.I	✻	●	20	20	90	10	ZG.C.2.*.*.R**.IC
ZG.C.0.9.2525.P.LR.I	✻	●	25	25	107	5	ZG.C.2.*.*.R**.IC

● Ex stock ○ On demand

Right hand style

Article	✻	Stock	Dimensions [mm]				Primary cartridge
			H	B	L	HBH	
ZG.C.0.9.2020.P.RL.I	✻	●	20	20	90	10	ZG.C.2.*.*.L**.IC
ZG.C.0.9.2525.P.RL.I	✻	●	25	25	107	5	ZG.C.2.*.*.L**.IC

● Ex stock ○ On demand

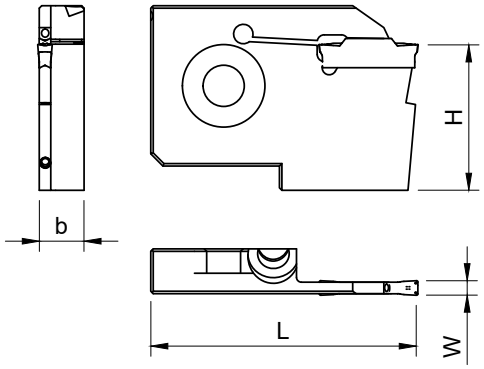
Spare parts

		Article	Stock
	**Screw (primary cartridge)**	ZG.C.2.M8*16	●
	**Screw (insert)**	GB70-85-M6*20	●

zGroove Compact primary cartridge (parting & grooving / turning)



Left hand style



Article	*	Stock		Dimensions [mm]					Insert
		R	L	W	H	a_r max.	L	b	
ZG.C.2.1.B.L/R10.IC		●	●	2.0	30	10	45	9	Z*BD**
ZG.C.2.1.E.L/R15.IC		●	●	2.5	30	15	50	9	Z*ED**
ZG.C.2.1.F.L/R15.IC		●	●	3.0	30	15	55	9	Z*FD**
ZG.C.2.1.F.L/R25.IC		●	●	3.0	30	25	55	9	Z*FD**
ZG.C.2.1.G.L/R20.IC		●	●	4.0	30	20	55	9	Z*GD**
ZG.C.2.1.H.L/R25.IC		●	●	5.0	30	25	55	9	Z*HD**
ZG.C.2.1.K.L/R25.IC		●	●	6.0	30	25	55	9	Z*KD**
ZG.C.2.1.L.L/R30.IC		●	●	8.0	30	30	55	9	Z*LD**

● Ex stock ○ On demand

Find all compatible grooving inserts on our website.

Also compatible with our new **HG chip breaker (see page A36)**

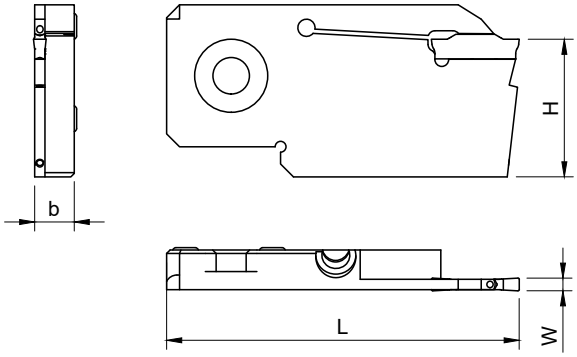
Spare parts

		Article	Stock
	**Seal (primary cartridge)**	ZG.C.S.3*1.5	●

zGroove Compact primary cartridge, reinforced (parting & grooving (ar max. 40 mm))



Left hand style



Article	*	Stock		Dimensions [mm]					Insert
		R	L	W	H	a_r max.	L	b	
ZG.C.2.2.E.L/R42.IC	*	●	●	2.5	30	21	55	9	Z*ED**
ZG.C.2.2.F.L/R65.IC	*	●	●	3.0	30	32,5	68	9	Z*FD**
ZG.C.2.2.F.L/R80.IC	*	●	●	3.0	30	40	71	9	Z*FD**

● Ex stock ○ On demand

Find all compatible grooving inserts on our website.

Also compatible with our new **HG chip breaker (see page A36)**

Spare parts

		Article	Stock
	Seal (primary cartridge)	ZG.C.S.3*1.5	●

HG chip breaker

Specially designed for soft and difficult-to-machine materials

YOUR BENEFITS

– **Low cutting forces** thanks to a positive geometry and sharp cutting edge design
– Ideally suited for soft and ductile materials
– **Flexible** in any application (grooving/parting/ Groove-turning)
– **Less wear and tear** thanks to reduced surface contact
– During machining, the geometry creates a **virtually flat groove base**

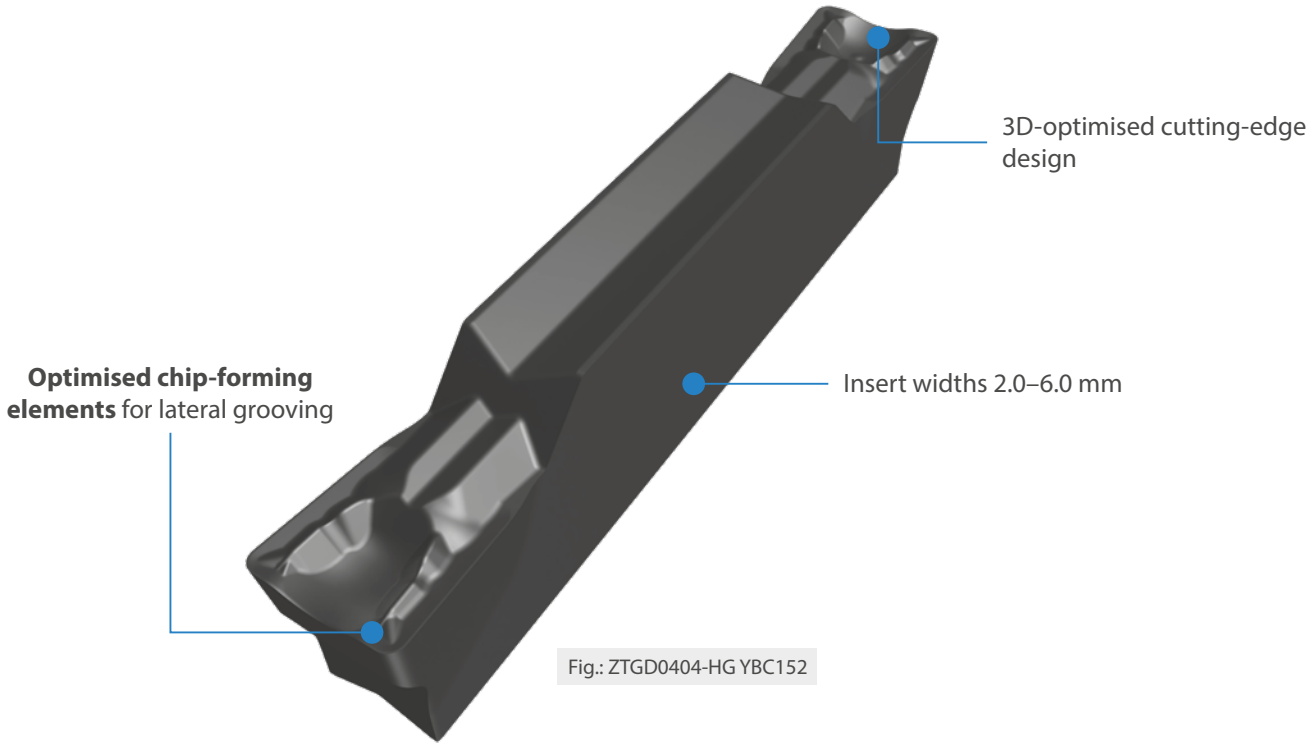
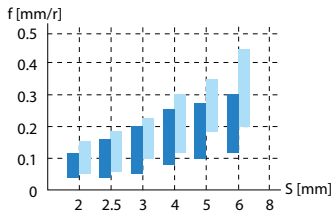
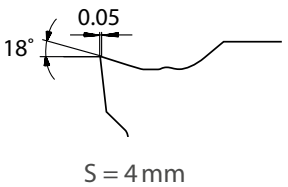


Fig.: ZTGD0404-HG YBC152

Chip breaker	Application	P	M	K	N	S	H	Feed	Cutting edge design
ZT****-HG	Parting & grooving ✔	✔	✔	✔		✔			
	Turning ✔								

S = 4 mm

✔ Very suitable ✔ Suitable

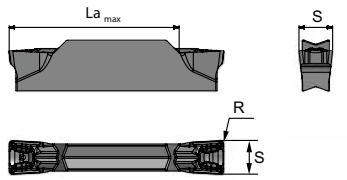
Parting & grooving
Turning

Update

Parting inserts

- Ideal machining conditions
- Normal machining conditions
- Unfavourable machining conditions

Parting & grooving insert (double sided)



Double cutting edge

	HC[1] (CVD)	HC[1] (PVD)	HW
P	○	○ ❁ ❁	
M		❁ ❁	
K	○		
N			
S		○ ❁ ❁	
H			

	ISO	S ±0.1	R±0.1	La max	L	f_1	f_2	ap	YBC152	PG1110	PG1120	YBG205H
	**ZTAD01502-HG** ■	1.5	0.2	12	16	0.04-0.11	0.04-0.12	0.25-1.00			●	
	ZTBD02002-HG	2.0	0.2	13	16	0.04-0.12	0.05-0.15	0.30-1.00		●	●	●
	ZTED02502-HG ■	2.5	0.2	17	20	0.04-0.16	0.05-0.16	0.40-1.50			●	
	ZTED02503-HG	2.5	0.3	17	20	0.04-0.16	0.06-0.18	0.40-1.50		●	●	●
	ZTFD0302-HG ■	3.0	0.2	17	20	0.05-0.20	0.10-0.20	0.40-2.00			●	
	ZTFD0303-HG	3.0	0.3	17	20	0.05-0.20	0.10-0.23	0.40-2.00	●	●	●	●
	ZTGD0402-HG	4.0	0.2	22	25	0.08-0.25	0.12-0.28	0.30-3.00		●	●	●
	ZTGD0404-HG	4.0	0.4	22	25	0.08-0.25	0.15-0.30	0.50-3.00	●	●	●	●
	ZTHD0504-HG	5.0	0.4	22	25	0.10-0.28	0.18-0.35	0.50-3.50	●	●	●	●
	ZTHD0508-HG ■	5.0	0.8	22	25	0.10-0.28	0.18-0.37	0.50-3.50			●	
	ZTKD0604-HG ■	6.0	0.4	22	25	0.12-0.30	0.20-0.42	0.90-4.00			●	
	ZTKD0608-HG	6.0	0.8	22	25	0.12-0.30	0.20-0.45	0.90-4.00	●	●	●	●

● Ex stock ○ On demand

HC[1] Coated carbide
HW Uncoated carbide

f_1 Parting & grooving
f_2 Turning
ap Side turning

Parting & grooving inserts

Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed vc [m/min]				
						HC (CVD)		HC (PVD)		
						YBC152	YBC252	YBG102	YBG105	
P	Unalloyed steel	approx. 0,15 % C	annealed	125	1		190			
		approx. 0,45 % C	annealed	190	2		175			
		approx. 0,45 % C	tempered	250	3		145			
		approx. 0,75 % C	annealed	270	4		140			
		approx. 0,75 % C	tempered	300	5		135			
	Low-alloyed steel		annealed	180	6		170			
			tempered	275	7		125			
			tempered	300	8		115			
			tempered	350	9		105			
	High-alloyed steel and high-alloyed tool steel		annealed	200	10		125			
			hardened and tempered	325	11		95			
M	Stainless steel	ferritic/martensitic	annealed	200	12		165	165	170	
		martensitic	tempered	240	13		135	135	140	
		austenitic	quench hardened	180	14		155	155	160	
		austenitic-ferritic		230	15		135	135	140	
K	Grey cast iron	perlitic/ferritic		180	16		240			
		perlitic (martensitic)		260	17		185			
	Cast iron with spheroidal graphite	ferritic		160	18		220			
		perlitic		250	19		165			
	Malleable cast iron	ferritic		130	20		175			
		perlitic		230	21		165			
N	Aluminium wrought alloys	cannot be hardened		60	22					
		hardenable	hardened	100	23					
	Cast aluminium alloys	≤ 12% Si, cannot be hardened		75	24					
		≤ 12% Si, hardenable	hardened	90	25					
		> 12% Si, cannot be hardened		130	26					
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27					
		CuZn, CuSnZn		90	28					
		CuSn, Pb-free copper, electrolytic copper		100	29					
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30			95	100	
			hardened	280	31			50	50	
		Ni or Co bass	annealed	250	32			80	80	
			hardened	350	33			70	70	
			cast	320	34			70	70	
	Titanium alloys	pure titanium		R_m 400	35			145	150	
		α and β alloys	hardened	R_m 1050	36			50	50	
H	Hardened steel		hardened and tempered	55 HRC	37					
			hardened and tempered	60 HRC	38					
	Hard cast iron		cast	400	39					
	Hardened cast iron		hardened and tempered	55 HRC	40					
X	Non-metallic materials	Thermoplasts			41					
		Thermosetting plastics			42					
		Plastic, glass-fibre reinforced GFRP			43					
		Plastic, carbon fibre reinforced CFRP			44					
		Graphite			45					
		Wood			46					

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.
For examples of material for cutting tool groups view page D11.

	Starting values for cutting speed vc [m/min]								
	HC (PVD)						HW		
	YB9320	YBG202	YBG205(H)	YBG302	PG1110 PANGU	PG1120 PANGU	YD101	YD201	
	190	190	190	185		205			
	175	175	175	170		189			
	145	145	145	140		157			
	140	140	140	135		151			
	135	135	135	130		146			
	170	170	170	165		184			
	125	125	125	125		135			
	115	115	115	115		124			
	105	105	105	105		113			
	125	125	125	125		135			
	95	95	95	95		103			
	165	165	165	160	190	178			
	135	135	135	130	155	146			
	155	155	155	150	178	167			
	135	135	135	130	155	146			
	240	240	240	235					
	185	185	185	180					
	220	220	220	215					
	165	165	165	160					
	175	175	175	170					
	165	165	165	160					
							800	760	
							600	570	
							320	305	
							240	230	
							160	155	
							160	155	
							600	570	
							200	190	
	95	95	95	95	110	100	70	65	
	50	50	50	50	60	55	35	35	
	80	80	80	75	95	85	60	60	
	70	70	70	65	80	75	50	50	
	70	70	70	65	80	75	50	50	
	145	145	145	140	170	160	105	100	
	50	50	50	50	60	55	35	35	

HC Coated carbide
HW Uncoated carbide, main component (WC)

Parting & grooving System code – inserts

ZP	G	D	04	04	–	M	U
1	2	3	4	5		6	7

Application	
Code	Description
ZP	Parting
ZT	Grooving & turning
ZR	Form turning

1

Insert seat size [mm]	
Groove width	
Code	Description
B	2,0
E	2,5
F	3,0
G	4,0
H	5,0
K	6,0
L	8,0

2

No. of cutting edges	
Code	Description
S	Single
D	Double

3

Insert thickness S [mm]	
	
Code	S
02	2,0
025	2,5
03	3,0
04	4,0
05	5,0
06	6,0
08	8,0

4

Nose radius r [mm]	
	
Code	r
02	0,2
03	0,3
04	0,4
08	0,8

5

Tolerance class [mm]	
Code	Description
M	±0,13
E	±0,025

6

Chip breaker	
Code	Description
G	General chip breaker
F	Special chip breaker
M	Straight edge
U	Universal chip breaker

7

MU chip breaker

Universal tool that delivers optimum chip control

YOUR BENEFITS

– **Maximum chip control** thanks to 3D-optimised chip-forming elements
– Optimally suited for steel, stainless steel and cast iron
– **Flexible in any application** (parting and grooving/grooving)
– Reduced wear thanks to limited surface contact

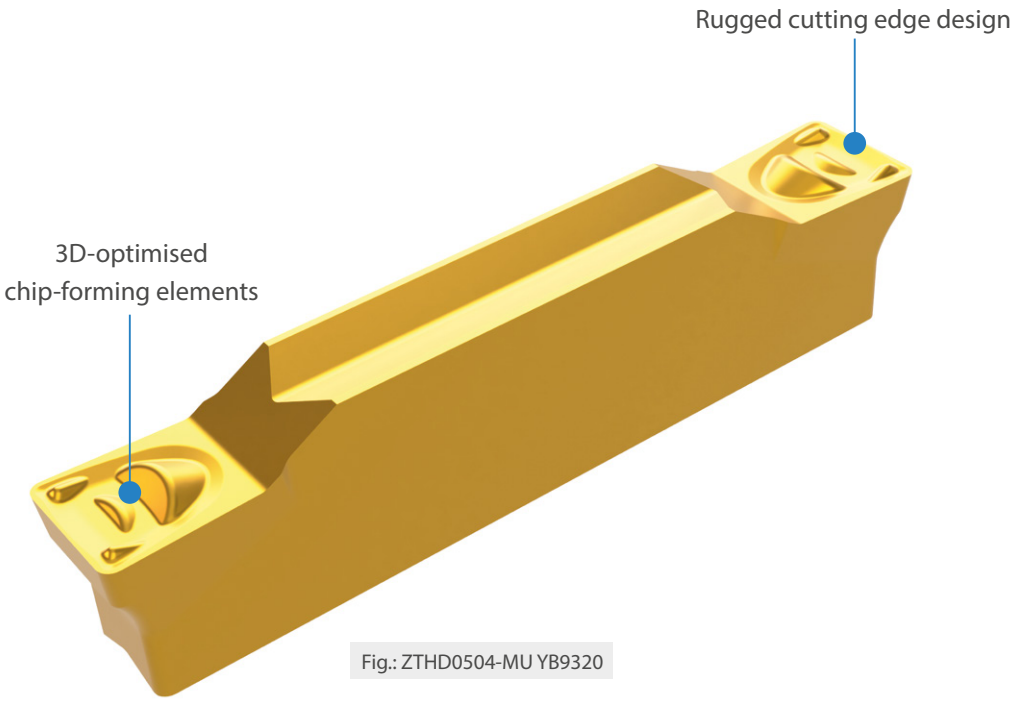
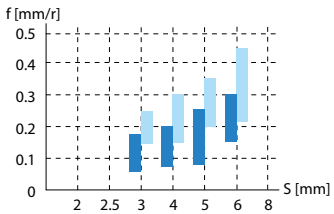
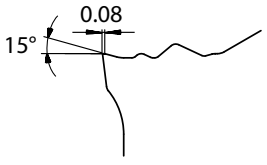


Fig.: ZTHD0504-MU YB9320

Chip breaker	Application	P	M	K	N	S	H	Feed	Cutting edge design
ZT****-MU	Parting & grooving ✔	✔	✔	✔		✔			
	Turning ✔								

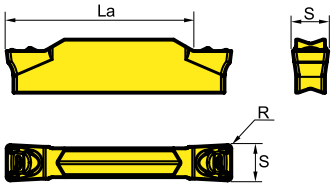
S = 4 mm

✔ Very suitable ✔ Suitable

Parting & grooving
Turning

Ideal machining conditions
Normal machining conditions
Unfavourable machining conditions

Parting inserts

Parting & grooving insert (double sided)							HC¹ (CVD)		HC¹ (PVD)					HW	
 Double cutting edge						P	⊛	⊛	⊛	⊛	⊛	⊛			
						M			⊛	⊛	⊛	⊛			
						K									
						N								●	⊛
						S			●	●	⊛	⊛	⊛		
						H									
	ISO		R±0.1	La *max*	S±0.10	f	YBC252	YBC251	YBG105	YBG102	YB9320	YBG205	YBG202	YD101	YD201
	**ZTFD0302-MU**		0.2	17	3	0,06-0,18					●				
	ZTFD0303-MU		0.3	17	3	0,06-0,18					●				
	ZTGD0402-MU		0.2	22	4	0,08-0,20					●				
	ZTGD0404-MU		0.4	22	4	0,08-0,20					●				
	ZTHD0504-MU		0.4	22	5	0,09-0,25					●				
	ZTHD0508-MU		0.8	22	5	0,09-0,25					●				
	ZTKD0604-MU		0.4	22	6	0,15-0,30					○				
	ZTKD0608-MU		0.8	22	6	0,15-0,30					○				

● Ex stock ○ On demand

HC¹ Coated carbide
HW Uncoated carbide



MU chip breaker

Universal tool that delivers optimum chip control

Parting & grooving inserts

Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed vc [m/min]			
						HC (CVD)	HC (PVD)		
						YBC252	YBG102	YBG105	
P	Unalloyed steel	approx. 0,15 % C	annealed	125	1	190			
		approx. 0,45 % C	annealed	190	2	175			
		approx. 0,45 % C	tempered	250	3	145			
		approx. 0,75 % C	annealed	270	4	140			
		approx. 0,75 % C	tempered	300	5	135			
	Low-alloyed steel		annealed	180	6	170			
			tempered	275	7	125			
			tempered	300	8	115			
			tempered	350	9	105			
	High-alloyed steel and high-alloyed tool steel		annealed	200	10	125			
			hardened and tempered	325	11	95			
M	Stainless steel	ferritic/martensitic	annealed	200	12	165	165	170	
		martensitic	tempered	240	13	135	135	140	
		austenitic	quench hardened	180	14	155	155	160	
		austenitic-ferritic		230	15	135	135	140	
K	Grey cast iron	perlitic/ferritic		180	16	240			
		perlitic (martensitic)		260	17	185			
	Cast iron with spheroidal graphite	ferritic		160	18	220			
		perlitic		250	19	165			
	Malleable cast iron	ferritic		130	20	175			
		perlitic		230	21	165			
N	Aluminium wrought alloys	cannot be hardened		60	22				
		hardenable	hardened	100	23				
	Cast aluminium alloys	≤ 12% Si, cannot be hardened		75	24				
		≤ 12% Si, hardenable	hardened	90	25				
		> 12% Si, cannot be hardened		130	26				
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27				
		CuZn, CuSnZn		90	28				
		CuSn, Pb-free copper, electrolytic copper		100	29				
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30		95	100	
			hardened	280	31		50	50	
		Ni or Co bass	annealed	250	32		80	80	
			hardened	350	33		70	70	
			cast	320	34		70	70	
	Titanium alloys	pure titanium		R_m 400	35		145	150	
		α and β alloys	hardened	R_m 1050	36		50	50	
H	Hardened steel		hardened and tempered	55 HRC	37				
			hardened and tempered	60 HRC	38				
	Hard cast iron		cast	400	39				
	Hardened cast iron		hardened and tempered	55 HRC	40				
X	Non-metallic materials	Thermoplasts			41				
		Thermosetting plastics			42				
		Plastic, glass-fibre reinforced GFRP			43				
		Plastic, carbon fibre reinforced CFRP			44				
		Graphite			45				
		Wood			46				

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.
For examples of material for cutting tool groups view page D11.

	Starting values for cutting speed vc [m/min]						
	HC (PVD)				HW		
	YB9320	YBG202	YBG205	YBG302	YD101	YD201	
	190	190	190	185			
	175	175	175	170			
	145	145	145	140			
	140	140	140	135			
	135	135	135	130			
	170	170	170	165			
	125	125	125	125			
	115	115	115	115			
	105	105	105	105			
	125	125	125	125			
	95	95	95	95			
	165	165	165	160			
	135	135	135	130			
	155	155	155	150			
	135	135	135	130			
	240	240	240	235			
	185	185	185	180			
	220	220	220	215			
	165	165	165	160			
	175	175	175	170			
	165	165	165	160			
					800	760	
					600	570	
					320	305	
					240	230	
					160	155	
					160	155	
					600	570	
					200	190	
	95	95	95	95	70	65	
	50	50	50	50	35	35	
	80	80	80	75	60	60	
	70	70	70	65	50	50	
	70	70	70	65	50	50	
	145	145	145	140	105	100	
	50	50	50	50	35	35	

HC Coated carbide
HW Uncoated carbide, main component (WC)

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