



Leading Through Innovation



SOLID CARBIDE

ROUTERS

Mikroverzahnter VHM Fräser

- For Composite Materials including CFRP and GFRP
- Für Verbundwerkstoffe einschließlich CFK und GFK

SELECTION GUIDE

HSS



SERIES	RTI104
FLUTE	-
HELIX ANGLE	-
CUTTING EDGE SHAPE	ROUTER
SIZE MIN	D3.0
SIZE MAX	D12.0
PAGE	527

CBN END MILLS

i-Xmill END MILLS

i-SMART MODULAR END MILLS

X5070 END MILLS

4G MILL END MILLS

X-POWER PRO END MILLS

TitaNox-POWER END MILLS

JET-POWER END MILLS

V7 PLUS END MILLS

ALU-POWER HPC END MILLS

ALU-POWER END MILLS

D-POWER GRAPHITE END MILLS

D-POWER CFRP END MILLS

ROUTERS

CRX S END MILLS

K-2 END MILLS

ONLY ONE COATED PM60 END MILLS

TANK-POWER END MILLS

GENERAL HSS END MILLS

MILLING CUTTERS

TECHNICAL DATA

SOLID CARBIDE
ROUTERS

For composite materials including CFRP, GFRP

Diamond



Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

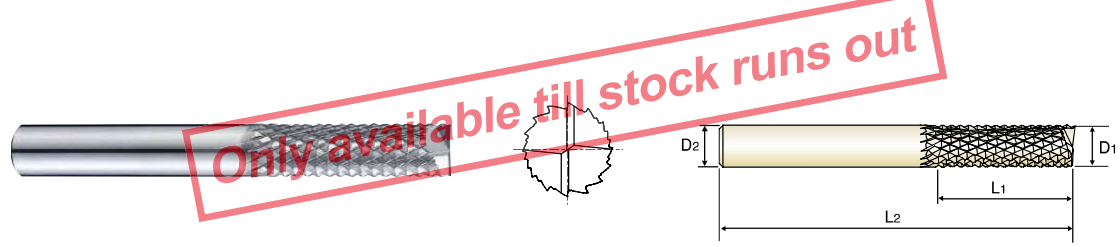
Recommended cutting conditions : P 528

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc	
P	1	Non-alloy steel	About 0.15% C Annealed	125		
	2		About 0.45% C Annealed	190	13	
	3		About 0.45% C Quenched & Tempered	250	25	
	4		About 0.75% C Annealed	270	28	
	5		About 0.75% C Quenched & Tempered	300	32	
	6	Low alloy steel	Annealed	180	10	
	7		Quenched & Tempered	275	29	
	8		Quenched & Tempered	300	32	
	9		Quenched & Tempered	350	38	
	10		High alloyed steel, and tool steel	Annealed	200	15
	11	Quenched & Tempered		325	35	
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15	
	13		Martensitic Quenched & Tempered	240	23	
	14		Austenitic	180	10	
K	15	Grey cast iron	Pearlitic / ferritic	180	10	
	16		Pearlitic (Martensitic)	260	26	
	17	Nodular cast iron	Ferritic	160	3	
	18		Pearlitic	250	25	
	19	Malleable cast iron	Ferritic	130		
20	Pearlitic		230	21		
N	21	Aluminum-wrought alloy	Not Curable	60		
	22		Curable Hardened	100		
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75		
	24		≤ 12% Si, Curable Hardened	90		
	25		> 12% Si, Not Curable	130		
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110		
	27		CuZn, CuSnZn (Brass)	90		
	28		CuSn, lead-free copper and electrolytic copper	100		
	29.1	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic			
	29.2		Graphite			
29.3	CFRP, GFRP				◎	
30	Rubber, Wood, etc.					
S	31	Heat Resistant Super Alloys	Fe Based Annealed	200	15	
	32		Cured	280	30	
	33		Annealed	250	25	
	34		Ni or Co Based Cured	350	38	
	35		Cast	320	34	
	36	Titanium Alloys	Pure Titanium	400 Rm		
	37		Alpha + Beta Alloys Hardened	1050 Rm		
H	38	Hardened steel	Hardened	550	55	
	39		Hardened	630	60	
	40	Chilled Cast Iron	Cast	400	42	
	41	Hardened Cast Iron	Hardened	550	55	

CARBIDE, ROUTER END MILL TYPE

- MIKROVERZAHNTER VHM FRÄSER
- FRAISE CARBURE À DÉTOURER
- ROUTERS DI SGROS. - CFRP & GFRP (Per lavorazioni di materiali compositi)

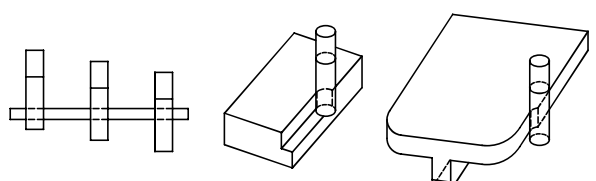
- ▶ For composite materials - CFRP, GFRP.
- ▶ Reduce delamination and burrs.
- ▶ Diamond coating with excellent abrasion resistance
- ▶ Für verbund materialien - CFK und GFK
- ▶ Verringert Ablösungen (Delamination) und Gratbildung
- ▶ Diamant-Beschichtung mit ausgezeichneter Abriebfestigkeit.



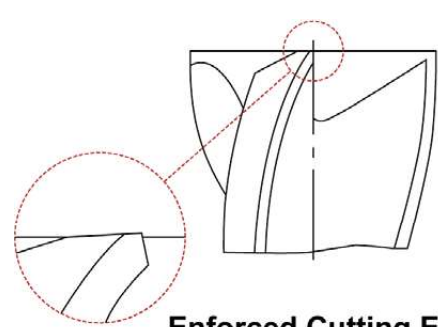
EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	D1	D2	L1	L2
▲ RTI104030	3.0	3	9	50
▲ RTI104040	4.0	4	12	50
▲ RTI104050	5.0	5	15	50
▲ RTI104060	6.0	6	18	65
▲ RTI104080	8.0	8	24	75
▲ RTI104100	10.0	10	30	85
▲ RTI104120	12.0	12	36	100

▲ : Only available till stock runs out

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
- 0.02 ~ - 0.08	h5



Scan QR Code to See More Tools for COMPOSITE MATERIALS
SOLID CARBIDE ROUTERS is only available till stock runs out!



Enforced Cutting Edge

◎ : Excellent ○ : Good

ISO Material Description	P										M				K						
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel				Stainless steel		Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRC																					
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230	
Recommend																					
ISO Material Description	N					S					H										
	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron	
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRC																					
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																					

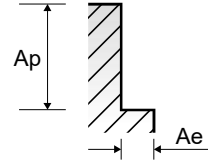


RTI104 SERIES

ROUTER END MILL TYPE - SIDE CUTTING

Vc = m/min.
fz = mm/tooth
RPM = rev./min.
FEED = mm/min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)						
						3.0	4.0	5.0	6.0	8.0	10.0	12.0
N	29.3	CFRP	0.35D	2.0D	Vc	200	200	200	200	200	200	200
					fz	-	-	-	-	-	-	-
					RPM	21221	15915	12732	10610	7958	6366	5305
		GFRP	0.35D	2.0D	FEED	1270	1430	1910	2225	2623	3053	3393
					Vc	100	100	100	100	100	100	100
					fz	-	-	-	-	-	-	-
RPM	10610	7958	6366	5305	3979	3183	2653					
FEED	635	715	955	1113	1311	1526	1697					



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MILLING CUTTERS

TECHNICAL DATA

HIGH QUALITY PRODUCTS and ON TIME DELIVERY for WORLD-WIDE CUSTOMERS

Since 1982, YG-1 has been committed to quality, innovation and the unique customer experience.

Our performance and experience have granted YG-1 the global impression of one of the leading manufacturers of high quality cutting tool solutions. This global footprint expands over 75 countries, with international logistic centers, pledging to our customers to give the best service available today - and tomorrow.

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