

PolyREAM

RPK-Reamers with Polygonal Insert Seat for High Chip Removal

A new generation of Reamers to machine blind and through holes in components with greater accuracy. The polygonal connection between the insert and the shank provides improved strength allowing greater cutting forces which in turn makes for economical machining.

Two basic types RPK 40 and RPK 42 are available, which cover a wide range of applications by their different shanks and cutting insert designs. Changing the insert is quick and easy. The front clamping screw absorbs none of the cutting forces and is merely there to hold the insert in place. Different overall lengths are available.

Advantages

- High-tensile connection by polygonal insert seat
- Easy insert change
- Internal coolant supply directly to the cutting edge
- High concentricity
- Longer durabilities
- High precision
- Higher volume of metal removed by reaming
- Higher feeds
- Shorter processing times
- Special dimensions available

Configurations

- Shank sizes 16 / 20 mm
- Lengths design short / long
- Left-hand twist for through holes
- Straight grooves for blind bores
- Diameter sizes: 12,00 - 20,20 mm
- Any gate geometries
- Any tolerances
- Cutting materials: carbide
- Coatings: TINAMATIC

mimatic® Tool Systems for Sustainability and Efficiency

BLUECOMPETENCE

Alliance Member

Partner of the Engineering Industry Sustainability Initiative

Tools according to the policy of BLUECOMPETENCE are marked in this catalogue. More information on the program (Initiative) of the VDMA see pages 16-17.



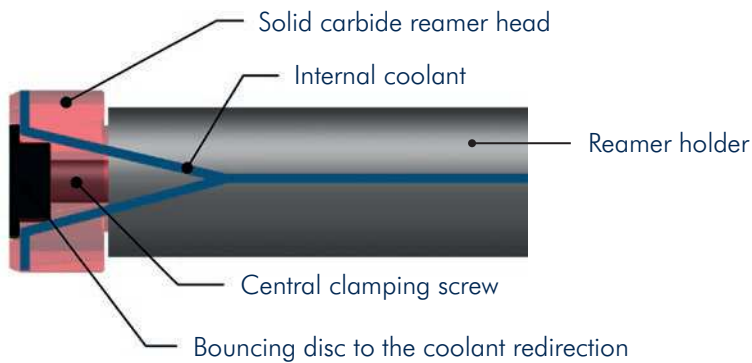
Order-Key for Your Individual Customizing of Reamers

Order numbers for reamers are predefined for common applications within the order tables. Alternatively, the user can completely individually

customize its own ream (intermediate dimension, geometry, cutting material, tolerance,...). An additional key is generated with the

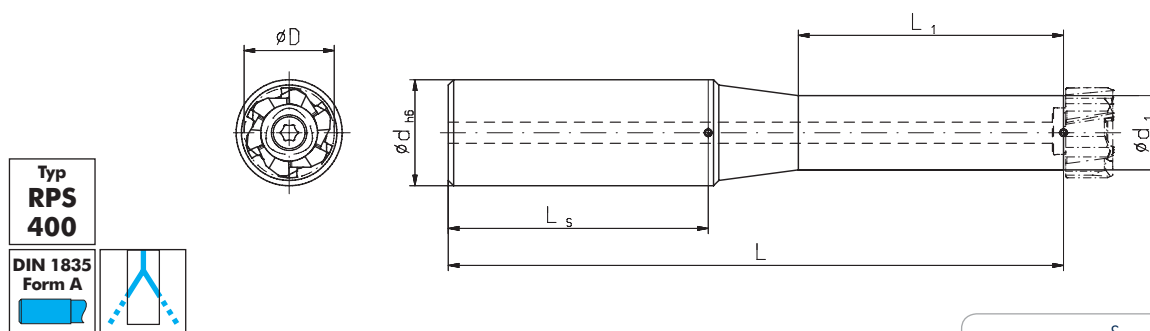
following table that serves your initial order. For subsequent orders, you will receive a short order number assigned.

Type	Size	Diameter	Tolerance	Gate geometry	Cutting mat.	Coating					
RPK 40 = Straight grooves for blind bores RPK 42 = Left-hand twist for through holes	J = 16 M = 20	Specifying in mm	• +10 -10 • H7	see page 172 and in the table below	1 = Carbide	0 = without (blank) 1 = TINAMATIC (Thin layer)					
Example:											
R	P	K	40	M	20,100	+10 -12	L	B	G	1	1

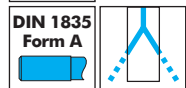


Reamer Holders with Polygonal Interface

- Gate Geometries Page 172
- Cutting data see page 188



Typ
**RPS
400**

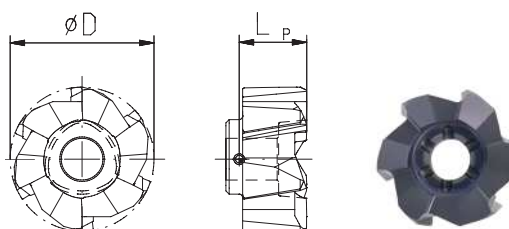


Shank size	Order No.	D min.-max.	Drilling depth	d _{h6} mm	d ₁ mm	E mm	L mm	L ₁ mm	Description	Shank mat.	Spare part No.		
											T15 / T20 IP Screw-driver	Screw	Bouncing disc
J	169208	12,00-16,20	3 x D	16	11	9	101	38	RPS400J3D6	Steel	111671	107473	107536
J	169209	12,00-16,20	5 x D	16	11	9	131	68	RPS400J5D6	Steel	111671	107473	107536
M	169210	16,21-20,20	3 x D	20	14	9	116	50	RPS400M3D6	Steel	111594	169815	169812
M	169211	16,21-20,20	5 x D	20	14	9	166	100	RPS400M5D6	Steel	111594	169815	169812

Screw torques max.
107473 T15 IP 3,8 Nm
169815 T20 IP 5,5 Nm

Reamer Heads with Polygonal Interface

- Chip grooves with left-hand twist for through holes
- For steel materials (P, M)
- Cutting data see page 188



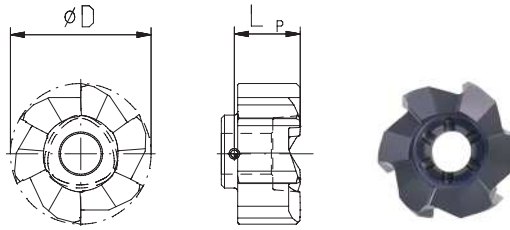
Please generate order-key for individual customizing and intermediate sizes (see page 169)



Shank size	Type	D mm	Tolerance	LP mm	Number of edges	Gate geometry	Description	Order No. TINAMATIC
J	RPK 42	12,00	H7	9,4	6	LBG	RPK42J12,00H7LBG11	169490
J	RPK 42	13,00	H7	9,4	6	LBG	RPK42J13,00H7LBG11	169492
J	RPK 42	14,00	H7	9,4	6	LBG	RPK42J14,00H7LBG11	169494
J	RPK 42	15,00	H7	9,4	6	LBG	RPK42J15,00H7LBG11	169496
J	RPK 42	16,00	H7	9,4	6	LBG	RPK42J16,00H7LBG11	169498
M	RPK 42	17,00	H7	9,4	6	LBG	RPK42M17,00H7LBG11	169500
M	RPK 42	18,00	H7	9,4	6	LBG	RPK42M18,00H7LBG11	169502
M	RPK 42	19,00	H7	9,4	6	LBG	RPK42M19,00H7LBG11	169504
M	RPK 42	20,00	H7	9,4	6	LBG	RPK42M20,00H7LBG11	169506

Reamer Heads with Polygonal Interface

- Straight chip grooves for blind bores
- For steel materials (P, M)
- Cutting data see page 188

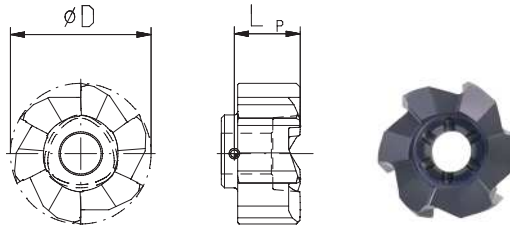


Please generate order-key for individual customizing and intermediate sizes (see page 169)



Shank size	Type	D mm	Tolerance	LP mm	Number of edges	Gate geometry	Description	Order No. TINAMATIC
J	RPK 40	12,00	H7	9,4	6	LBG	RPK40J12,00H7LBG11	169489
J	RPK 40	13,00	H7	9,4	6	LBG	RPK40J13,00H7LBG11	169491
J	RPK 40	14,00	H7	9,4	6	LBG	RPK40J14,00H7LBG11	169493
J	RPK 40	15,00	H7	9,4	6	LBG	RPK40J15,00H7LBG11	169495
J	RPK 40	16,00	H7	9,4	6	LBG	RPK40J16,00H7LBG11	169497
M	RPK 40	17,00	H7	9,4	6	LBG	RPK40M17,00H7LBG11	169499
M	RPK 40	18,00	H7	9,4	6	LBG	RPK40M18,00H7LBG11	169501
M	RPK 40	19,00	H7	9,4	6	LBG	RPK40M19,00H7LBG11	169503
M	RPK 40	20,00	H7	9,4	6	LBG	RPK40M20,00H7LBG11	169505

- Straight chip grooves for blind bores
- For cast iron materials (K)
- Cutting data see page 188

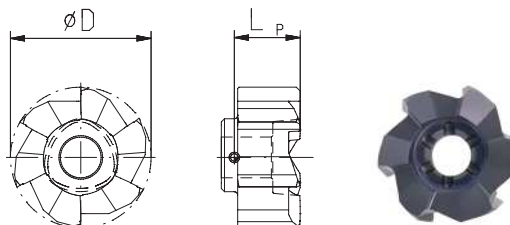


Please generate order-key for individual customizing and intermediate sizes (see page 169)



Shank size	Type	D mm	Tolerance	LP mm	Number of edges	Gate geometry	Description	Order No. TINAMATIC
J	RPK 40	12,00	H7	9,4	6	CND	RPK40J12,00H7CND11	169945
J	RPK 40	13,00	H7	9,4	6	CND	RPK40J13,00H7CND11	169947
J	RPK 40	14,00	H7	9,4	6	CND	RPK40J14,00H7CND11	169949
J	RPK 40	15,00	H7	9,4	6	CND	RPK40J15,00H7CND11	169951
J	RPK 40	16,00	H7	9,4	6	CND	RPK40J16,00H7CND11	169953
M	RPK 40	17,00	H7	9,4	6	CND	RPK40M17,00H7CND11	169955
M	RPK 40	18,00	H7	9,4	6	CND	RPK40M18,00H7CND11	169957
M	RPK 40	19,00	H7	9,4	6	CND	RPK40M19,00H7CND11	169959
M	RPK 40	20,00	H7	9,4	6	CND	RPK40M20,00H7CND11	169961

- Straight chip grooves for blind bores
- For aluminium cast alloys (N)
- Cutting data see page 188



Please generate order-key for individual customizing and intermediate sizes (see page 169)



Shank size	Type	D mm	Tolerance	LP mm	Number of edges	Gate geometry	Description	Order No. TINAMATIC
J	RPK 40	12,00	H7	9,4	6	CNG	RPK40J12,00H7CNG11	169946
J	RPK 40	13,00	H7	9,4	6	CNG	RPK40J13,00H7CNG11	169948
J	RPK 40	14,00	H7	9,4	6	CNG	RPK40J14,00H7CNG11	169950
J	RPK 40	15,00	H7	9,4	6	CNG	RPK40J15,00H7CNG11	169952
J	RPK 40	16,00	H7	9,4	6	CNG	RPK40J16,00H7CNG11	169954
M	RPK 40	17,00	H7	9,4	6	CNG	RPK40M17,00H7CNG11	169956
M	RPK 40	18,00	H7	9,4	6	CNG	RPK40M18,00H7CNG11	169958
M	RPK 40	19,00	H7	9,4	6	CNG	RPK40M19,00H7CNG11	169960
M	RPK 40	20,00	H7	9,4	6	CNG	RPK40M20,00H7CNG11	169962

PolyREAM

Gate Geometries

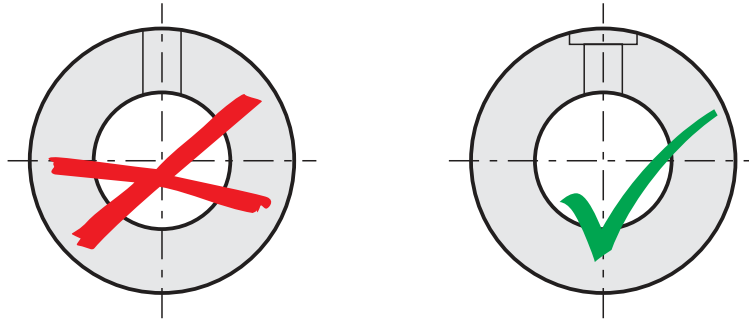
Gate geometry	Chip breaker		Chip angle		Gate code		
	Code	Code	Code	Code			
	L	YES	B	0°	D	LBD	
		NO	N		D	LND	
		6°	YES	B	G	LBG	
			NO	N	G	LNG	
			YES	B	12°	R	LBR
			NO	N		R	LNR
	E	YES	B	0°	D	EBD	
		NO	N		D	END	
		6°	YES	B	G	EBG	
			NO	N	G	ENG	
			YES	B	12°	R	EBR
			NO	N		R	ENR
	G	YES	B	0°	D	GBD	
		NO	N		D	GND	
		6°	YES	B	G	GBG	
			NO	N	G	GNG	
			YES	B	12°	R	GBR
			NO	N		R	GNR
	C	YES	B	0°	D	CBD	
		NO	N		D	CND	
		6°	YES	B	G	CBG	
			NO	N	G	CNG	
			YES	B	12°	R	CBR
			NO	N		R	CNR
	A	YES	B	0°	D	ABD	
		NO	N		D	AND	
		6°	YES	B	G	ABG	
			NO	N	G	ANG	
			YES	B	12°	R	ABR
			NO	N		R	ANR
	D	YES	B	0°	D	DBD	
		NO	N		D	DND	
		6°	YES	B	G	DBG	
			NO	N	G	DNG	
			YES	B	12°	R	DBR
			NO	N		R	DNR
	R	YES	B	0°	D	RBD	
		NO	N		D	RND	
		6°	YES	B	G	RBG	
			NO	N	G	RNG	
			YES	B	12°	R	RBR
			NO	N		R	RNR
	W	YES	B	0°	D	WBD	
		NO	N		D	WND	
		6°	YES	B	G	WBG	
			NO	N	G	WNG	
			YES	B	12°	R	WBR
			NO	N		R	WNR
SPECIAL	S					001 - 999	

PolyREAM

Ream Addition

Ream diameter (mm)	Ream addition (mm to the dia.)
≤ 16,00	0,10 - 0,25
> 16,00	0,20 - 0,30

Information



Before reaming – radial on round parts –
the part must be spot-faced