TechFlash New Production Technologies from the Manufacturer



RPK-Reamers with **Polygonal Interface**



High-tensile Connection by Polygonal Insert Seat



Manufacturer of Precision Tools since 1974 INNOVATION · PRECISION · INDIVIDUALITY · QUALITY · SERVICE



RPK-Reamers

RPK-Reamers with Polygonal Insert Seat for high Chip Removal

A new generation of reamers allow to introduce blind and through holes into components with high precision. The polygonal connection of the cutting insert and shaft improves the economy of the machining process significantly. 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. The insert change is fast and easy to run. Due to the frontal clamping screw the shaft must not be unclamped. Different overall lenghts 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
- Diameters area 12,00-20,20 mm
- Any gate geometries
- Any tolerances
- Cutting materials: carbide / Cermet
- Coatings: TINAMATIC / without







RPK-Reamers



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.

Туре	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 6 and in the table below	1 = Carbide 7 = Cermet	0 = without (blank) 1 = TINAMATIC (Thin layer)	
Example:							
R P K 40	J	20,100	+10 -12	L B G	1	1	

Cutting Data Standard Values according to Gate Geometries

		Favour	ed gate geometr				
		Throug	h holes	Blind	bores	Cutting speed	Feed per tooth
		left-hand twist	straight grooved	left-hand twist	straight grooved	Vc	fz
Material to be machined		RPK 42	RPK 40	RPK 42	RPK 40	m/min.	mm/t
	Unalloyed steel, Construc- tion steel, Free cutting steel	LBG			LBG	100 - 250	0,15 - 0,30
Ρ	Low alloyed steel	LBG			LBG	100 - 250	0,15 - 0,30
	High alloyed steel, Tool steel, Heat-treatable steel, Nitriding steel	LBG			LBG	20 -50	0,05 - 0,15
	Stainless steel, martensitic	LBG			LBG	15 - 40	0,05 - 0,15
м	Stainless steel, austenitic	LBG			LBG	10 - 30	0,05 - 0,15
	Stainless steel, heat resistant	LBG			LBG	10 - 30	0,05 - 0,15
	Cast iron, Alloyed cast iron (GG)		CND		CND	80 - 200	0,12 - 0,25
к	Spheroidal cast iron, ferritic (GGG40-GGG55)		CND		CND	60 - 180	0,12 - 0,25
	Spheroidal cast iron ferr./ pearl. (GGG60-GGG80)		CND		CND	80 - 200	0,12 - 0,25
	Aluminium cast alloys < 10% Si		CNG		CNG	200 - 400	0,10 - 0,25
N	Aluminium cast alloys > 10% Si		CNG		CNG	200 - 400	0,10 - 0,25
	Copper, Bronze, Brass		CNG		CNG	50 - 250	0,10 - 0,20

Ream addition

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

туре **RPS 400**

Please generate order-key for individual customizing and intermediate sizes

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Reamer Holder with polygonal Interface



											Spare part No.		
Order-No.	Shank size	D minmax.	Drilling depth	dh6 mm	dı mm	E mm	L mm	Lı mm	Description	Shank mat.	T15 IP T20 IP Screwdriver	Screw	Prall- scheibe
169208	J	12,00-16,20	3 x D	16	11	9	110	38	RPS400J3D6	Steel	111671	107473	107536
169209	J	12,00-16,20	5 x D	16	11	9	140	68	RPS400J5D6	Steel	111671	107473	107536
169210	М	16,21-20,20	3 x D	20	11	9	125	50	RPS400M3D6	Steel	111594	169815	169812
169211	М	16,21-20,20	5 x D	20	11	9	175	100	RPS400M5D6	Steel	111594	169815	169812
											Screw torque for Screw	or T15 IP = 3,8 N orr T20 IP = 5,5 N	lm Im

туре **RPK 42**

Reamer Head with polygonal Interface

Grooves with left-hand twist for through holes

For steel materials (P, M)



								(see page 3)
Туре	D mm	Shank size	Tole- rance	E mm	Number of edges	Gate geometry	Description	Order No. TINAMATIC
RPK 42	12,00	J	H7	9	6	LBG	RPK42J12,00H7LBG11	169490
RPK 42	13,00	J	H7	9	6	LBG	RPK42J13,00H7LBG11	169492
RPK 42	14,00	J	H7	9	6	LBG	RPK42J14,00H7LBG11	169494
RPK 42	15,00	J	H7	9	6	LBG	RPK42J15,00H7LBG11	169496
RPK 42	16,00	J	H7	9	6	LBG	RPK42J16,00H7LBG11	169498
RPK 42	17,00	М	H7	9	6	LBG	RPK42M17,00H7LBG11	169500
RPK 42	18,00	М	H7	9	6	LBG	RPK42M18,00H7LBG11	169502
RPK 42	19,00	М	H7	9	6	LBG	RPK42M19,00H7LBG11	169504
RPK 42	20,00	М	H7	9	6	LBG	RPK42M20,00H7LBG11	169506

туре **RPK 40**



Reamer Head with polygonal Interface

Straight grooves for blind bores
For steel materials (P, M)

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	Please generate
	individual
	customizing and intermediate
	sizes
_	(see page 3)
	Order No.



								(see page 3)
Туре	D mm	Shank size	Tole- rance	E mm	Number of edges	Gate geometry	Description	Order No. TINAMATIC
RPK 40	12,00	J	H7	9	6	LBG	RPK40J12,00H7LBG11	169489
RPK 40	13,00	J	H7	9	6	LBG	RPK40J13,00H7LBG11	169491
RPK 40	14,00	J	H7	9	6	LBG	RPK40J14,00H7LBG11	169493
RPK 40	15,00	J	H7	9	6	LBG	RPK40J15,00H7LBG11	169495
RPK 40	16,00	J	H7	9	6	LBG	RPK40J16,00H7LBG11	169497
RPK 40	17,00	М	H7	9	6	LBG	RPK40M17,00H7LBG11	169499
RPK 40	18,00	М	H7	9	6	LBG	RPK40M18,00H7LBG11	169501
RPK 40	19,00	М	H7	9	6	LBG	RPK40M19,00H7LBG11	169503
RPK 40	20,00	М	H7	9	6	LBG	RPK40M20,00H7LBG11	169505

Straight grooves for blind bores

For cast iron materials (K)





Please generate order-key for individual customizing and intermediate sizes

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								(see page 3)
Туре	D mm	Shank size	Tole- rance	E mm	Number of edges	Gate geometry	Description	Order No.
RPK 40	12,00	J	H7	9	6	CND	RPK40J12,00H7CND11	169945
RPK 40	13,00	J	H7	9	6	CND	RPK40J13,00H7CND11	169947
RPK 40	14,00	J	H7	9	6	CND	RPK40J14,00H7CND11	169949
RPK 40	15,00	J	H7	9	6	CND	RPK40J15,00H7CND11	169951
RPK 40	16,00	J	H7	9	6	CND	RPK40J16,00H7CND11	169953
RPK 40	17,00	М	H7	9	6	CND	RPK40M17,00H7CND11	169955
RPK 40	18,00	М	H7	9	6	CND	RPK40M18,00H7CND11	169957
RPK 40	19,00	М	H7	9	6	CND	RPK40M19,00H7CND11	169959
RPK 40	20,00	М	H7	9	6	CND	RPK40M20,00H7CND11	169961

Straight grooves for blind bores

For aluminium cast alloys (N)





								(see page 3)
Туре	D mm	Shank size	Tole- rance	E mm	Number of edges	Gate geometry	Description	Order No. TINAMATIC
RPK 40	12,00	J	H7	9	6	CNG	RPK40J12,00H7CNG11	169946
RPK 40	13,00	J	H7	9	6	CNG	RPK40J13,00H7CNG11	169948
RPK 40	14,00	J	H7	9	6	CNG	RPK40J14,00H7CNG11	169950
RPK 40	15,00	J	H7	9	6	CNG	RPK40J15,00H7CNG11	169952
RPK 40	16,00	J	H7	9	6	CNG	RPK40J16,00H7CNG11	169954
RPK 40	17,00	М	H7	9	6	CNG	RPK40M17,00H7CNG11	169956
RPK 40	18,00	М	H7	9	6	CNG	RPK40M18,00H7CNG11	169958
RPK 40	19,00	М	H7	9	6	CNG	RPK40M19,00H7CNG11	169960
RPK 40	20,00	М	H7	9	6	CNG	RPK40M20,00H7CNG11	169962

RPK-Reamers



Gate geometries

Gate geometry		Chip breake	r	Chip angle		Gate code
	Code		Code		Code	
		YES	В	09		LBD
1 mm		NO	Ν	U	U	LND
22		YES	В	6°	G	LBG
	-	NO	Ν	0	9	LNG
		YES	В	12°	R	LBR
		NO	N	. 2	ĸ	LNR
		YES	В	0°	D	EBD
•)		NO	N			END
	E	YES	В	6°	G	EBG
1.4		NO	N			ENG
		YES	В	12°	R	EBR
		NO	N			ENR
		YES	В	O°	D	GBD
		NO	N			GND
	G	IES NO	В	6°	G	GBG
1		VEC	N			GNG
- 		NO	D	12°	R	GDR
		VES	P			CRD
	с	NO	N	O°	D	CND
\$\$ \		VES	R			CRG
		NO	N	6°	G	CNG
0, 55		YES	B			CBR
		NO	N	12°	R	CNR
		YES	В		_	ABD
is A more		NO	N	0°	D	AND
	A	YES	В	4.0		ABG
<u> </u>		NO	N	6°	G	ANG
0,4		YES	В	100	_	ABR
		NO	N	12*	ĸ	ANR
		YES	В	<u></u>		DBD
· /		NO	Ν	0	U	DND
	D	YES	В	40	G	DBG
[₹] <u>0,5</u>	U	NO	Ν	U	9	DNG
		YES	В	1.20	D	DBR
		NO	Ν	12	ĸ	DNR
>		YES	В	0°	D	RBD
ig/ig/		NO	Ν			RND
	R	YES	В	6°	G	RBG
0,5		NO	N	-	•	RNG
- + - '		YES	В	12°	R	RBR
		NO	N			RNR
•		YES	B	O°	D	WBD
19/15/		YES	B			WND
t t	W	NO	N	6°	G	WNG
0,5		YES	В	1.00	D	WBR
_ _ , <u>8</u>		NO	Ν	1Z	ĸ	WNR
SPECIAL	S					001 - 999



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