

GUHRING

Ratio®



90°

- for semi-finishing and fine-finishing
- no corner chamfers
- the solution for components requiring true 90° corners

RF 100 90° Sharp corner milling cutters

GUHRING - YOUR WORLD-WIDE PARTNER

RF 100 90°

sharp corner milling cutter without corner chamfers

for semi-finishing and fine-finishing

P M K N S H

the suitable solution for multiple materials: Steel, cast iron, stainless materials, titanium- and special alloys and aluminium

Stable face geometry thanks to lip correction at cutting edge

Sharp corner – no corner chamfer

For components in electronics, medical, aviation, and machine builders where precise 90° corners are required.

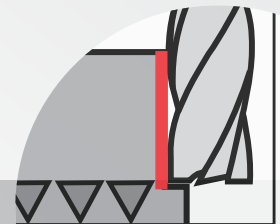
90°

Variable helix & flute spacing for chatter free operation

RF 100 SF · Guhring series 6776

RF 100 A · Guhring series 6775

RF 100 F · Guhring series 6764

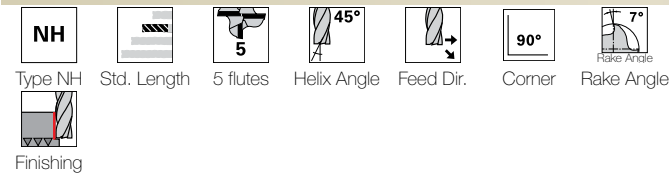


Optimal surface finish when side and face milling on wall and base geometries

Perfect for HPC / HSC strategies such as Trochoidal milling or

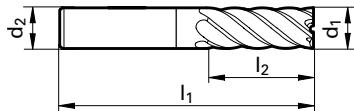
imachining

RF 100 SF 90° - Inch diameters

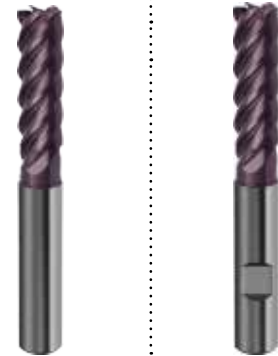


P	•
M	•
K	•
N	•
S	•
H	

center cutting · without corner protection chamfer



Tool material	Solid Carbide	
Surface	nano-A ^a	
Type	RF 100 SF 90°	
Shank design	HA	HB



Guhring Series

6776

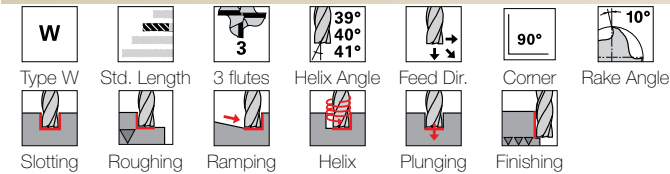
d1 h10 inch	d2 h6 inch	l1 inch	l2 inch	Code no.	EDP Number
3/16	3/16	2	5/8	4.760	9067760047600
1/4	1/4	2 1/2	3/4	6.350	9067760063500
5/16	5/16	2 1/2	13/16	7.940	9067760079400
3/8	3/8	2 1/2	1	9.520	9067760095200
1/2	1/2	3 1/2	1 1/4	12.700	9067760127000
5/8	5/8	3 1/2	1 1/4	15.870	9067760158700
3/4	3/4	4	1 1/2	19.050	9067760190500

Feeds and Speeds -- Maximum recommended depth of cut (a_p) = 2 x d

	Material	Hardness	Maximum Recommended Width of Cut a_e	Cutting Speed SFM	Feed Rate - IPT per Ø						
					1/8	1/4	5/16	3/8	1/2	5/8	3/4
P	Steels: Structural, free-cutting, unalloyed heat-treatable, case hardened	up to 28 HRc	0.3 x d	920	.0007	.0013	.0016	.0021	.0027	.0031	.0036
	Steels: Alloyed heat-treatable, tool steels, high speed steels	28 to 44 HRc	0.2 x d	720	.0006	.0010	.0014	.0017	.0021	.0025	.0030
M	Stainless Steel: Easy to machine / sulphured	up to 22 HRc	0.2 x d	590	.0006	.0010	.0014	.0017	.0021	.0025	.0030
	Stainless Steel: Moderately difficult to machine	over 22 HRc	0.2 x d	395	.0006	.0010	.0014	.0017	.0021	.0025	.0030
K	Cast iron, grey cast iron, spheroidal graphite and malleable cast iron	over 240 HB 30	0.2 x d	655	.0008	.0015	.0018	.0019	.0027	.0031	.0045
N	Aluminium-cast alloys	up to 7% Si	0.2 x d	3280	.0008	.0015	.0018	.0019	.0027	.0031	.0045
S	High-Temperature Alloys Nimonic, Inconel, Monel, Hastelloy	up to 40 HRc	0.15 x d	150	.0006	.0010	.0014	.0017	.0021	.0025	.0030
	Titanium alloys	up to 40 HRc	0.15 x d	425	.0007	.0013	.0016	.0021	.0027	.0031	.0036

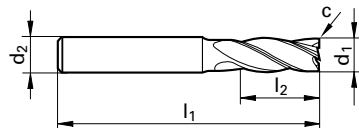
"Gührojet" peripheral cooling is recommended for optimal cooling and tool life.

RF 100 A 90° - Inch diameters



P	
M	
K	
N	•
S	
H	

center cutting · without corner protection chamfer



Tool material	Solid Carbide
Surface	Bright ○
Type	RF 100 A 90°
Shank design	HA HB



Guhring Series

6775

d1 h10	d2 h6	l1	l2	Code no.	EDP Number
inch	inch	inch	inch		
1/8	1/8	2	1/2	3.170	9067750031700
3/16	3/16	2	5/8	4.760	9067750047600
1/4	1/4	2 1/2	3/4	6.350	9067750063500
5/16	5/16	2 1/2	13/16	7.940	9067750079400
3/8	3/8	2 1/2	1	9.520	9067750095200
1/2	1/2	3 1/2	1 1/4	12.700	9067750127000
5/8	5/8	3 1/2	1 1/4	15.870	9067750158700
3/4	3/4	4	1 1/2	19.050	9067750190500

Feeds and Speeds -- Slotting = up to 1xd; Roughing = 0.4 up to 0.9 x d; Finishing = 0.01 up to 0.1 x d

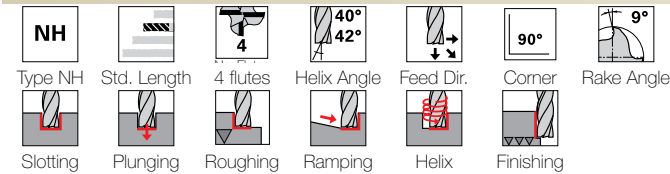
	Material	Hardness	Maximum Recommended Width of Cut a_e	Cutting Speed SFM	Feed Rate - IPT per Ø						
					1/8	1/4	5/16	3/8	1/2	5/8	3/4
N	Aluminum, Al-wrought alloys, Al-alloys 2024, 6061, 7075, 1050, 6351, 5005, 2017, 7075	up to 3% Si	Slotting	1640	.0008	.0017	.0020	.0024	.0033	.0037	.0041
			Roughing	1970	.0008	.0017	.0021	.0026	.0035	.0039	.0045
			Finishing	3280	.0008	.0015	.0018	.0023	.0029	.0035	.0038
	Aluminium-cast alloys 3.2131 G-AlSi5Cu1, 3.2153 G-AlSi7Cu3, 3.2573 G-AlSi9, 3.2581 G-AlSi12, 3.2583 G-AlSi12Cu, - G-AlSi12CuNiMg	up to 7% Si	Slotting	755	.0007	.0013	.0016	.0021	.0027	.0031	.0036
			Roughing	920	.0008	.0017	.0020	.0024	.0033	.0037	.0041
			Finishing	1150	.0008	.0015	.0018	.0023	.0029	.0035	.0038

"Gührojet" peripheral cooling is recommended for optimal cooling and tool life.

For high speed milling up to 2 x d deep, multiply slotting values by the below chip thinning factors:

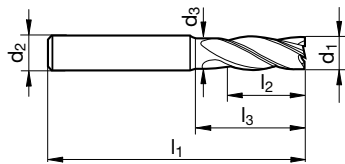
Width of Cut	SFM factor	IPT factor
.25 x d	SFM x 1.6	IPT x 1.5
.1 x d	SFM x 1.8	IPT x 2.3
.05 x d	SFM x 1.9	IPT x 3.3

RF 100 F 90° - Metric diameters



P	•
M	•
K	•
N	•
S	•
H	•

center cutting · without corner protection chamfer



Metric diameter end mills are stocked in Germany

Tool material
Surface
Type
Shank design

Solid Carbide
nano-A 
RF 100 F 90°
HA



Guhring Series

6764

d1 h10 mm	d2 h6 mm	d3 mm	l1 mm	l2 mm	l3 mm	Code no.	EDP Number
3.00	6.00	2.80	57	8	15	3.000	9067640030000
4.00	6.00	3.80	57	11	18	4.000	9067640040000
5.00	6.00	4.80	57	13	18	5.000	9067640050000
6.00	6.00	5.70	57	13	20	6.000	9067640060000
8.00	8.00	7.70	63	19	26	8.000	9067640080000
10.00	10.00	9.50	72	22	30	10.000	9067640100000
12.00	12.00	11.50	83	26	36	12.000	9067640120000
16.00	16.00	15.50	92	32	42	16.000	9067640160000
20.00	20.00	19.50	104	38	52	20.000	9067640200000

Feeds and Speeds -- Slotting = up to 1x d; Roughing = 0.4 up to 0.9 x d; Finishing = 0.01 up to 0.1 x d

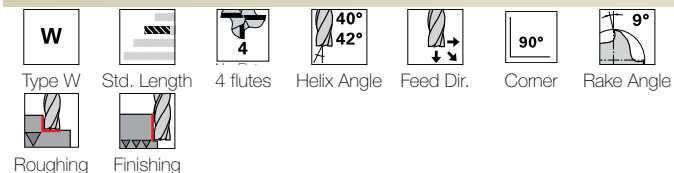
	Material	Hardness	Maximum Recommended Width of Cut a ₀	Cutting Speed SFM	Feed Rate - IPT per Ø						
					3mm	6mm	8mm	10mm	12mm	16mm	20mm
P	Steels: Structural, free-cutting, unalloyed heat-treatable, case hardened	up to 28 HRc	Slotting	590	0.0007	0.0014	0.0018	0.0024	0.0028	0.0035	0.0039
			Roughing	655	0.0008	0.0016	0.0022	0.0028	0.0335	0.0039	0.0047
			Finishing	920	0.0006	0.0012	0.0016	0.0022	0.0026	0.0031	0.0037
	Steels: Alloyed heat-treatable, tool steels, high speed steels	28 to 44 HRc	Slotting	445	0.0006	0.0012	0.0016	0.0022	0.0026	0.0031	0.0037
			Roughing	525	0.0008	0.0016	0.0020	0.0026	0.0031	0.0037	0.0043
			Finishing	655	0.0006	0.0012	0.0016	0.0020	0.0024	0.0028	0.0035
M	Stainless Steel: Easy to machine / sulphured	up to 22 HRc	Slotting	395	0.0006	0.0012	0.0016	0.0020	0.0024	0.0028	0.0035
			Roughing	460	0.0007	0.0014	0.0018	0.0024	0.0028	0.0035	0.0039
			Finishing	590	0.0006	0.0012	0.0016	0.0022	0.0026	0.0031	0.0037
	Stainless Steel: Moderately difficult to machine	over 22 HRc	Slotting	230	0.0005	0.0010	0.0012	0.0016	0.0018	0.0024	0.0028
			Roughing	330	0.0006	0.0010	0.0014	0.0018	0.0020	0.0026	0.0031
			Finishing	395	0.0006	0.0010	0.0014	0.0018	0.0020	0.0026	0.0031
S	High-Temperature Alloys Nimonic, Inconel, Monel, Hastelloy	up to 40 HRc	Slotting	100	0.0004	0.0006	0.0008	0.0010	0.0012	0.0016	0.0020
			Roughing	115	0.0004	0.0008	0.0012	0.0014	0.0016	0.0022	0.0026
			Finishing	150	0.0006	0.0010	0.0014	0.0018	0.0020	0.0026	0.0031
	Titanium alloys	up to 40 HRc	Slotting	195	0.0006	0.0010	0.0014	0.0018	0.0020	0.0026	0.0031
			Roughing	295	0.0006	0.0012	0.0016	0.0022	0.0026	0.0031	0.0037
			Finishing	425	0.0006	0.0012	0.0016	0.0022	0.0026	0.0031	0.0037

"Gührojet" peripheral cooling is recommended for optimal cooling and tool life.

For high speed milling up to 2 x d deep, multiply slotting values by the below chip thinning factors:

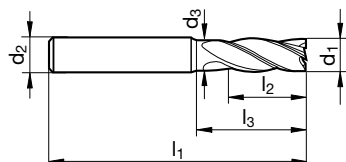
Width of Cut	SFM factor	IPT factor
.25 x d	SFM x 1.6	IPT x 1.5
.1 x d	SFM x 1.8	IPT x 2.3
.05 x d	SFM x 1.9	IPT x 3.3

RF 100 A 90° - Metric diameters



P	
M	
K	
N	•
S	
H	

center cutting · without corner protection chamfer



Metric diameter end mills are stocked in Germany

Tool material

Solid Carbide

Surface

Bright ○

Type

RF 100 A 90°

Shank design

HA



Guhring Series

6762

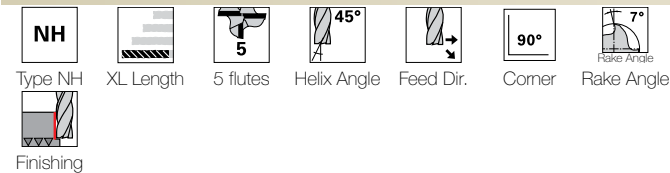
d1 h10 mm	d2 h6 mm	d3 mm	l1 mm	l2 mm	l3 mm	Code no.	EDP Number
3.00	6.00	2.80	57	8	15	3.000	9067620030000
4.00	6.00	3.80	57	11	18	4.000	9067620040000
5.00	6.00	4.80	57	13	18	5.000	9067620050000
6.00	6.00	5.70	57	13	20	6.000	9067620060000
8.00	8.00	7.70	63	19	26	8.000	9067620080000
10.00	10.00	9.50	72	22	30	10.000	9067620100000
12.00	12.00	11.50	83	26	36	12.000	9067620120000
16.00	16.00	15.50	92	32	42	16.000	9067620160000
20.00	20.00	19.50	104	38	52	20.000	9067620200000

Feeds and Speeds -- Maximum recommended depth of cut (a_p) = 2 x d

	Material	Hardness	Maximum Recommended Width of Cut a_p	Cutting Speed SFM	Feed Rate - IPT per Ø						
					3mm	6mm	8mm	10mm	12mm	16mm	20mm
N	Aluminum, Al-wrought alloys, Al-alloys 2024, 6061, 7075, 1050, 6351, 5005, 2017, 7075	up to 3% Si	0.25 x d	3280	0.0010	0.0012	0.0018	0.0020	0.0026	0.0031	0.0047
	Aluminium-cast alloys 3.2131 G-AlSi5Cu1, 3.2153, G-AlSi7Cu3, 3.2573 G-AlSi9, 3.2581 G-AlSi12, 3.2583 G-AlSi12Cu, - G-AlSi12CuNiMg	up to 7% Si	0.2 x d	1310	0.0010	0.0012	0.0018	0.0020	0.0026	0.0031	0.0047

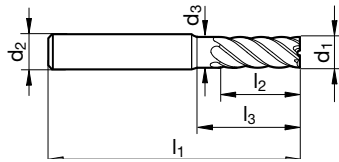
"Gührojet" peripheral cooling is recommended for optimal cooling and tool life.

RF 100 SF 90° - Metric diameters



P	•
M	•
K	•
N	•
S	•
H	

center cutting · without corner protection chamfer



Metric diameter end mills are stocked in Germany

Tool material	Solid Carbide
Surface	nano-A
Type	RF 100 SF 90°
Shank design	HA



Guhring Series

6763

d1 h10 mm	d2 h6 mm	d3 mm	l1 mm	l2 mm	l3 mm	Code no.	EDP Number
4.000	6.00	3.80	65	12	26	4.000	9067630040000
5.000	6.00	4.80	65	15	26	5.000	9067630050000
6.000	6.00	5.70	65	18	28	6.000	9067630060000
8.000	8.00	7.70	75	24	32	8.000	9067630080000
10.000	10.00	9.50	80	30	32	10.000	9067630100000
12.000	12.00	11.50	93	36	46	12.000	9067630120000
16.000	16.00	15.50	108	48	58	16.000	9067630160000
20.000	20.00	19.50	126	60	74	20.000	9067630200000

Feeds and Speeds -- Maximum recommended depth of cut (a_p) = 2 x d

	Material	Hardness	Maximum Recommended Width of Cut a_e	Cutting Speed SFM	Feed Rate - IPT per Ø						
					3mm	6mm	8mm	10mm	12mm	16mm	20mm
P	Steels: Structural, free-cutting, unalloyed heat-treatable, case hardened	up to 28 HRc	0.3 x d	920	0.0006	0.0012	0.0016	0.0022	0.0026	0.0031	0.0037
	Steels: Alloyed heat-treatable, tool steels, high speed steels	28 to 44 HRc	0.2 x d	720	0.0006	0.001	0.0014	0.0018	0.002	0.0026	0.0031
M	Stainless Steel: Easy to machine / sulphured	up to 22 HRc	0.2 x d	590	0.0006	0.001	0.0014	0.0018	0.002	0.0026	0.0031
	Stainless Steel: Moderately difficult to machine	over 22 HRc	0.2 x d	395	0.0006	0.001	0.0014	0.0018	0.002	0.0026	0.0031
K	Cast iron, grey cast iron, spheroidal graphite and malleable cast iron	over 240 HB 30	0.2 x d	655	0.0007	0.0014	0.0018	0.002	0.0026	0.0031	0.0047
N	Aluminium-cast alloys	up to 7% Si	0.2 x d	3280	0.0007	0.0014	0.0018	0.002	0.0026	0.0031	0.0047
S	High-Temperature Alloys	up to 40 HRc	0.15 x d	150	0.0004	0.0008	0.0012	0.0014	0.0016	0.0022	0.0026
	Nimonic, Inconel, Monel, Hastelloy	up to 40 HRc	0.15 x d	425	0.0006	0.0012	0.0016	0.0022	0.0026	0.0031	0.0037

"Gührojet" peripheral cooling is recommended for optimal cooling and tool life.

DRILLING

TAPPING/THREAD MILLING/
FLUTELESS TAPPING

MILLING

REAMING

PCD



SPECIAL TOOLING
SOLUTIONS

COUNTERSINKING/
DE-BURRING

MODULAR SYSTEMS

TOOL RESTORATION SERVICES

GUHRING

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