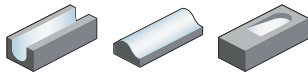


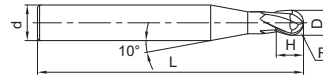
A

Ball nose cutter Semi-finishing

GM-2BS



- Factory standard
- Centre cutting
- Helix angle 35°



Turning

B

Article	*	Dimensions [mm]					Teeth	Grade
		R	D	d (h6)	H	L		KMG303
GM-2BS-R0.15		0.15	0.3	4	0.5	50	2	●
GM-2BS-R0.20		0.2	0.4	4	0.6	50	2	●
GM-2BS-R0.25		0.25	0.5	4	0.8	50	2	●
GM-2BS-R0.30		0.3	0.6	4	0.9	50	2	●
GM-2BS-R0.35		0.35	0.7	4	1	50	2	●
GM-2BS-R0.40		0.4	0.8	4	1.2	50	2	●
GM-2BS-R0.45		0.45	0.9	4	1.3	50	2	●
GM-2BS-R0.50		0.5	1	4	1.5	50	2	●
GM-2BS-R0.60		0.6	1.2	4	1.8	50	2	●
GM-2BS-R0.70		0.7	1.4	4	2	50	2	●
GM-2BS-R0.75		0.75	1.5	4	2.3	50	2	●
GM-2BS-R0.80		0.8	1.6	4	2.5	50	2	●
GM-2BS-R0.90		0.9	1.8	4	2.7	50	2	●
GM-2BS-R1.00		1	2	4	3	50	2	●
GM-2BS-R1.25		1.25	2.5	4	3.7	50	2	●
GM-2BS-R1.50		1.5	3	4	4.5	50	2	●

Milling

C

- Ex stock ○ On demand
- * With internal cooling

Drilling

D

Application field

P	M	K	N	S	H
✓	✓	✓			

- ✓ Very suitable
- ✓ Suitable

Technical Information

E

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System code > B268

Cutting data > B436

Nonstandard order > B477

Recommended feed rate

Solid carbide milling group 5 – Ball nose cutters GM series

	a _e / D	Feed rate per cutting edge (f _z) [mm]															
		Ø0,5	Ø0,8	Ø 1	Ø 2	Ø 3	Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 18	Ø 20	
P	1/1																
	1/10	0,02	0,05	0,05	0,05	0,05	0,05	0,07	0,07	0,09	0,14	0,16	0,16	0,18	0,18	0,20	
	1/20	0,03	0,06	0,06	0,06	0,06	0,06	0,08	0,08	0,11	0,17	0,20	0,20	0,23	0,23	0,25	
M	1/1																
	1/10	0,02	0,04	0,04	0,04	0,04	0,04	0,05	0,05	0,07	0,11	0,13	0,13	0,15	0,15	0,16	
	1/20	0,02	0,05	0,05	0,05	0,05	0,05	0,07	0,07	0,09	0,14	0,16	0,16	0,18	0,18	0,21	
K	1/1																
	1/10	0,02	0,05	0,05	0,05	0,05	0,05	0,07	0,07	0,09	0,14	0,16	0,16	0,18	0,18	0,20	
	1/20	0,03	0,06	0,06	0,06	0,06	0,06	0,08	0,08	0,11	0,17	0,20	0,20	0,23	0,23	0,25	
H	1/1																
	1/10	0,02	0,04	0,04	0,04	0,04	0,04	0,05	0,05	0,07	0,11	0,13	0,13	0,15	0,15	0,16	
	1/20	0,02	0,05	0,05	0,05	0,05	0,05	0,07	0,07	0,09	0,14	0,16	0,16	0,18	0,18	0,21	

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.

Solid carbide milling group 6 – High feed mills PM series

	a _e / D	Feed rate per cutting edge (f _z) [mm]							
		Ø 3	Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	Ø 12	
P	1/1								
	1/10								
	1/20	0,15	0,25	0,28	0,33	0,44	0,55	0,66	
M	1/1								
	1/10								
	1/20	0,12	0,22	0,25	0,30	0,41	0,52	0,63	
K	1/1								
	1/10								
	1/20	0,15	0,25	0,28	0,33	0,44	0,55	0,66	
H	1/1								
	1/10								
	1/20	0,12	0,22	0,25	0,30	0,41	0,52	0,63	

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.

Solid carbide milling group 7 – Ball nose cutters HM series

	a _e / D	Feed rate per cutting edge (f _z) [mm]															
		Ø0,5	Ø0,8	Ø 1	Ø 2	Ø 3	Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 18	Ø 20	
H	1/1																
	1/2	0,02	0,04	0,04	0,04	0,04	0,04	0,05	0,05	0,07	0,11	0,13	0,13	0,15	0,15	0,16	
	1/10	0,02	0,05	0,05	0,05	0,05	0,05	0,07	0,07	0,09	0,14	0,16	0,16	0,18	0,18	0,21	

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.

Solid carbide milling group 8 – High feed mills AL series

	a _e / D	Feed rate per cutting edge (f _z) [mm]							
		Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 18	Ø 20
N	1/1	0,04	0,05	0,08	0,09	0,11	0,13	0,16	0,18
	3/4	0,05	0,07	0,10	0,12	0,14	0,16	0,20	0,23
	1/10	0,08	0,11	0,16	0,19	0,22	0,25	0,31	0,36

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.

A

Turning

B

Milling

C

Drilling

D

Technical Information

E

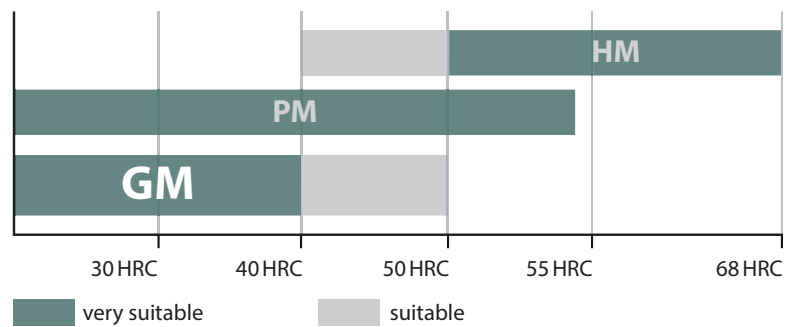
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GM series

For general applications

- For machining of steel to max. 50 HRC and cast iron to heat-resistant alloys.
- Sharp cutting edge with high edge stability. Roughing to finishing with long tool life.
- End mills, ball nose cutters, torus mills, rippers and mini cutters.
- Diameter range 0.3–20.0 mm

Application fields for machining of steel



GM – 2 E L P – D12 R0.5 – M08 – W

1 2 3 4 5 6 7 8 9

Application	
Code	Description
GR	General roughing
GM	Semi-finishing
GF	Finishing
PM	High-performance machining
HM	Hard machining
HH	High-speed hard machining
NM	General machining of non-ferrous metals
AL	General machining of Al and Al alloys
ALP	High-performance machining of Al and Al alloys
ALG	General machining of Al and Al alloys
UM	HSC/HPC machining
VSM	General machining of heat-resistant alloys

Number of teeth

1
2

Cutting edge type		Cutting edge length	
Code	Description	Code	Description
E	Square shoulder mill with protective chamfer	L	Long
F	Square shoulder mill with sharp cutting edges	X	Extra long
B	Ball nose cutter	F	Short
R	Torus mill		
W	Ripper		
H	High-feed mill		

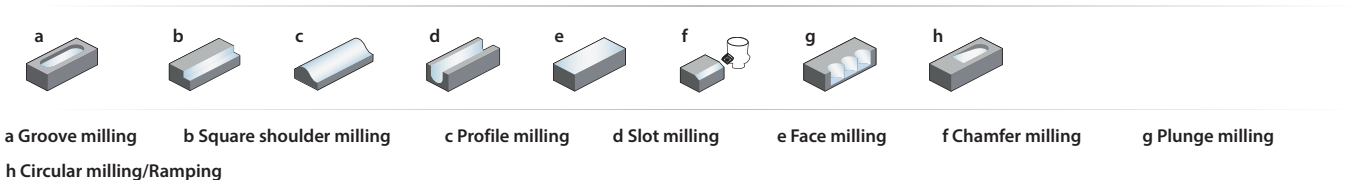
3
4

Type		Diameter [mm]	
Code	Description	Code	Description
S	Mini diameter	D3.0	3,0
P	Ground neck	D8.0	8,0
C	Conical neck	D20.0	20,0
		...	

5
6

Radius [mm]		Features		Weldon shank
Code	Description	Code	Description	
R0.5	0,5	G	Spiral angle 30°	
R1.0	1,5	M	Neck length [mm]	
R3.0	3,0	S	Thin shank	
...		AIR	For aerospace industry	

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8
9



A

Turning

B

Milling

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Drilling

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Technical Information

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A

Turning

Coated cemented carbide PVD

Grade	Grade description
KMD401	PVD coated carbide substrate for high performance milling application of non-ferrous metals, CFRP and GFRP and organic materials. The DLC layer has very good wear protection and high thermal stability.

B

Milling

KMG303	PVD coated carbide substrate for universal milling application of steel (up to HRC<=48), stainless steel and cast iron.
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KMG405	PVD coated carbide substrate for high performance milling application of steel (up to HRC <55), stainless steel, super alloy material and cast iron. High wear resistance and toughness for a wide application field.
---------------	---

C

Drilling

KMG555	PVD coated carbide substrate for hard milling application of steel (HRC 55–68), highest wear resistance and toughness for best cutting result.
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KMG309	PVD coated carbide substrate for non ferrous materials. High wear resistance even in abrasive materials.
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D

Technical Information

Uncoated cemented carbide












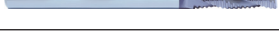
Grade	Grade description
YK30F	Uncoated K30 carbide substrate for steel, stainless steel, cast iron and non ferrous materials.

E

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YK40F	Uncoated K20–K30/N20–N30 carbide substrate for cast iron and non ferrous materials.
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General machining

Products	Solid carbide cutters	Teeth	Ø	Application						Type	Page
				P	M	K	N	S	H		
GM-2BFP		2	1.0-20.0	✓	✓	✓				Ball nose cutters	B315
GM-2BS		2	0.3-3.0	✓	✓	✓				Mini ball nose cutters	B316
GM-2BP		2	0.5-5.0	✓	✓	✓				Mini ball nose cutters	B317
GM-4B		4	3.0-20.0	✓	✓	✓				Ball nose cutters	B319
GM-4BL		4	3.0-20.0	✓	✓	✓				Ball nose cutters	B320
GM-2R		2	1.0-12.0	✓	✓	✓				Torus mills	B321
GM-4R		4	3.0-12.0	✓	✓	✓				Torus mills	B322
GM-4RL		4	6.0-16.0	✓	✓	✓				Torus mills	B323
5602R303GR		3	6.0-8.0	✓	✓	✓				Rippers	B324
5602R304GR		4	10.0-20.0	✓	✓	✓				Rippers	B325
5602R305GR		5	25.0	✓	✓	✓				Rippers	B326
GM-4W		4	6.0-20.0	✓	✓	✓				Rippers	B327

✓ Very suitable ✓ Suitable

Machining high hardness steel

HM-2E		2	1.0-20.0						✓	End mills	B354
HM-2EFP		2	6.0-20.0						✓	End mills	B355
HM-2EP		2	0.5-5.0						✓	Mini end mills	B356
HM-2ES		2	0.3-3.0						✓	Mini end mills	B358
HM-4E		4	1.0-20.0						✓	End mills	B359
HM-4EL		4	3.0-20.0						✓	End mills	B360
HM-4EFP		4	6.0-20.0						✓	End mills	B361
5502R55MHH		4-8	3.0-20.0						✓	End mills	B362

✓ Very suitable ✓ Suitable

A

Turning

B

Milling

C

Drilling

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