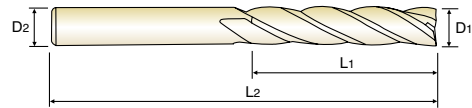


**CARBIDE, 4 FLUTE LONG LENGTH**

- **VOLLHARTMETALL, 4 SCHNEIDEN LANG**
- **Fraise carbure, 4 dents, longue**
- **MD, 4 TAGLIENTI, SPIGOLO VIVO, SERIE LUNGA**

- ▶ New coating and tool geometry applied resulting outstanding cutting abilities and wear resistance.
- ▶ Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRC55 and machine parts.
- ▶ Available in short, regular and long shank end mills.

- ▶ Aufgrund einer neuartigen Beschichtung und neuer Werkzeuggeometrien hervorragende Schnittleistung und Verschleißfestigkeit
- ▶ Hervorragende Leistung bei der Zerspaltung von vorvergüteten Stählen bis HRC55, welche im Werkzeug- und Formenbau Verwendung finden.
- ▶ Erhältlich in verschiebenen Schneiden- und Gesamtlängen.



CARBIDE 4 30° PLAIN P.330-335

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	D1	D2	L1	L2
★ SEME7201003E	1.0	6	3	60
★ SEME7201004E	1.0	6	4	60
★ SEME7201005E	1.0	6	5	60
★ SEME7201006E	1.0	6	6	60
SEME7201007E	1.0	6	7	60
★ SEME7201008E	1.0	6	8	60
SEME7201010E	1.0	6	10	60
SEME7201012E	1.0	6	12	60
SEME7201204E	1.2	6	4	60
SEME7201206E	1.2	6	6	60
SEME7201208E	1.2	6	8	60
SEME7201210E	1.2	6	10	60
SEME7201212E	1.2	6	12	60
★ SEME7201506E	1.5	6	6	60
★ SEME7201508E	1.5	6	8	60
SEME7201510E	1.5	6	10	60
SEME7201512E	1.5	6	12	60
SEME7201514E	1.5	6	14	60
SEME7201516E	1.5	6	16	60
★ SEME7202008E	2.0	6	8	60
★ SEME7202010E	2.0	6	10	60
★ SEME7202012E	2.0	6	12	60
★ SEME7202014E	2.0	6	14	60
★ SEME7202016E	2.0	6	16	60

★ : Stock Item

▶ NEXT PAGE

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0 ~ - 0.03	h5

◎ : Excellent ○ : Good

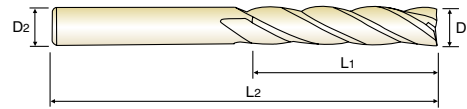
ISO Material Description	P											M			K						
	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron		
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21	
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											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○	◎	◎	○

**CARBIDE, 4 FLUTE LONG LENGTH**

- VOLLHARTMETALL, 4 SCHNEIDEN LANG
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- ▶ Hervorragende Leistung bei der Zerspaltung von vorvergüteten Stählen bis HRC55, welche im Werkzeug- und Formenbau Verwendung finden.
- ▶ Erhältlich in verschiebenen Schneiden- und Gesamtlängen.



CARBIDE

4

30°

PLAIN

P.330-335

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	D1	D2	L1	L2
★ SEME7202510E	2.5	6	10	60
★ SEME7202512E	2.5	6	12	60
SEME7202516E	2.5	6	16	60
SEME7202520E	2.5	6	20	60
SEME7202526E	2.5	6	26	60
SEME72030163SE	3.0	3	16	100
★ SEME7203010E	3.0	6	10	70
★ SEME7203012E	3.0	6	12	70
★ SEME7203014E	3.0	6	14	70
★ SEME7203016E	3.0	6	16	70
★ SEME7203020E	3.0	6	20	70
★ SEME7203026E	3.0	6	26	70
★ SEME7203030E	3.0	6	30	70
★ SEME72040204SE	4.0	4	20	100
★ SEME7204012E	4.0	6	12	70
★ SEME7204016E	4.0	6	16	70
★ SEME7204020E	4.0	6	20	70
★ SEME7204026E	4.0	6	26	70
★ SEME7204030E	4.0	6	30	70
★ SEME7205020E	5.0	6	20	70
★ SEME7205025E	5.0	6	25	70
★ SEME7205025100E	5.0	6	25	100
★ SEME7205030E	5.0	6	30	80
★ SEME7205035E	5.0	6	35	90

★ : Stock Item

▶ NEXT PAGE

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0 ~ - 0.03	h5

◎ : 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		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21	
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											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○	◎	◎	○

# YG 4G MILL END MILLS

PLAIN SHANK

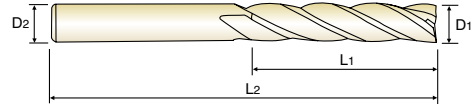
**SEME72** SERIES

## CARBIDE, 4 FLUTE LONG LENGTH

- **VOLLHARTMETALL, 4 SCHNEIDEN LANG**
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- ▶ Hervorragende Leistung bei der Zerspaltung von vorvergüteten Stählen bis HRC55, welche im Werkzeug- und Formenbau Verwendung finden.
- ▶ Erhältlich in verschiebenen Schneiden- und Gesamtlängen.



CARBIDE 4 30° PLAIN P.330-335

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	D1	D2	L1	L2
★ SEME7205040E	5.0	6	40	100
★ SEME7206015E	6.0	6	15	60
★ SEME7206015080E	6.0	6	15	80
★ SEME7206020E	6.0	6	20	70
★ SEME7206020090E	6.0	6	20	90
★ SEME7206025E	6.0	6	25	75
★ SEME7206030E	6.0	6	30	80
★ SEME7206030100E	6.0	6	30	100
★ SEME7206030150E	6.0	6	30	150
★ SEME7206035E	6.0	6	35	90
★ SEME7206040E	6.0	6	40	90
★ SEME7206040120E	6.0	6	40	120
★ SEME7206045E	6.0	6	45	150
★ SEME7208025E	8.0	8	25	80
★ SEME7208030E	8.0	8	30	80
★ SEME7208030100E	8.0	8	30	100
★ SEME7208035E	8.0	8	35	90
★ SEME7208040E	8.0	8	40	90
★ SEME7208040120E	8.0	8	40	120
★ SEME7208040150E	8.0	8	40	150
★ SEME7208045E	8.0	8	45	100
★ SEME7208050E	8.0	8	50	100
★ SEME7208050150E	8.0	8	50	150
★ SEME7210030E	10.0	10	30	80

★ : Stock Item

▶ NEXT PAGE

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0 ~ - 0.03	h5

◎ : Excellent ○ : Good

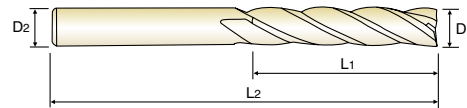
ISO Material Description	P											M			K						
	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron		
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRC		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21	
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											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○	◎	◎	○

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EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	D1	D2	L1	L2
★ SEME7210030100E	10.0	10	30	100
★ SEME7210035E	10.0	10	35	90
★ SEME7210040E	10.0	10	40	90
★ SEME7210040120E	10.0	10	40	120
★ SEME7210045E	10.0	10	45	100
★ SEME7210050E	10.0	10	50	100
★ SEME7210050150E	10.0	10	50	150
SEME7210050200E	10.0	10	50	200
★ SEME7210055E	10.0	10	55	150
★ SEME7210060E	10.0	10	60	110
SEME7210060200E	10.0	10	60	200
★ SEME7212035E	12.0	12	35	90
★ SEME7212040E	12.0	12	40	100
★ SEME7212040120E	12.0	12	40	120
★ SEME7212045E	12.0	12	45	130
★ SEME7212050E	12.0	12	50	100
★ SEME7212050150E	12.0	12	50	150
★ SEME7212055E	12.0	12	55	110
★ SEME7212060E	12.0	12	60	110
★ SEME7212060150E	12.0	12	60	150
SEME7212060200E	12.0	12	60	200
SEME7212065E	12.0	12	65	150
SEME7212070E	12.0	12	70	120
SEME7212070200E	12.0	12	70	200

★ : Stock Item

▶ NEXT PAGE

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0 ~ - 0.03	h5

◎ : 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		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25	42	21		
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230		
Recommend	○	○	◎	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○		

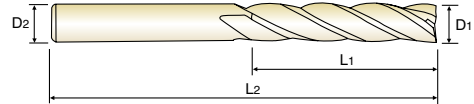
ISO Material Description	N										S						H				
	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys						Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRC											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○	◎	◎	○

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CARBIDE 4 30° PLAIN P.330-335

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	D1	D2	L1	L2
★ SEME7214050E	14.0	16	50	110
★ SEME7214060E	14.0	16	60	150
SEME7216040E	16.0	16	40	150
★ SEME7216050E	16.0	16	50	110
SEME7216050150E	16.0	16	50	150
★ SEME7216060E	16.0	16	60	120
★ SEME7216070E	16.0	16	70	130
★ SEME7216070150E	16.0	16	70	150
SEME7216070200E	16.0	16	70	200
SEME7216080E	16.0	16	80	150
SEME7216090E	16.0	16	90	150
SEME72160110E	16.0	16	110	200
SEME72160120E	16.0	16	120	250
SEME7218050E	18.0	20	50	120
SEME7218070E	18.0	20	70	130
SEME72180100E	18.0	20	100	200
★ SEME7220050E	20.0	20	50	110
SEME7220050150E	20.0	20	50	150
★ SEME7220060E	20.0	20	60	130
★ SEME7220070E	20.0	20	70	130
SEME7220080E	20.0	20	80	150
★ SEME7220090E	20.0	20	90	150
★ SEME7220090200E	20.0	20	90	200
SEME72200110E	20.0	20	110	200

★ : Stock Item

▶ NEXT PAGE

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0 ~ - 0.03	h5

◎ : Excellent ○ : Good

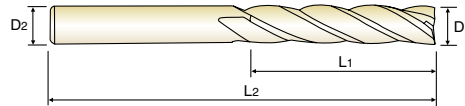
ISO Material Description	P										M			K							
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel			Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21	
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											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○	◎	◎	○

**CARBIDE, 4 FLUTE LONG LENGTH**

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CARBIDE

4

30°

PLAIN

P.330-335

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
	D1	D2	L1	L2
★ SEME72200120E	20.0	20	120	250
SEME7222075E	22.0	20	75	150
SEME72220110E	22.0	20	110	200
SEME7225070E	25.0	25	70	150
★ SEME7225090E	25.0	25	90	150
SEME72250110E	25.0	25	110	200
SEME72250120E	25.0	25	120	250

★ : Stock Item

Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
0 ~ - 0.03	h5

◎ : 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	13	19	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25	42	21	
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											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																		○	◎	○	○



# YG 4G MILL END MILLS

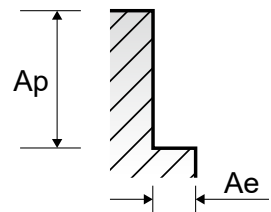
## RECOMMENDED CUTTING CONDITIONS EMPFOLHENE SCHNEIDPARAMETER

### SEME72 SERIES 4 FLUTE - SIDE CUTTING

Vc = m/min. fz = mm/tooth  
RPM = rev./min. FEED = mm/min.  
LOC = Length of Cut

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)															
						1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.2	1.2	1.2	1.2				
						LOC 3	4	5	6	7	8	10	12	4	6	8	10				
P	1-5	Non-alloy steel	0.05D	2.5D	Vc	60	60	60	54	54	54	54	48	61	61	55	55				
					fz	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.002				
	RPM	19099	19099	19099	17189	17189	17189	17189	15279	16181	16181	14589	14589								
	FEED	153	153	153	138	138	138	138	122	194	194	175	117								
	6-8	Low alloy steel	0.05D	2.5D	Vc	60	60	60	54	54	54	54	48	61	61	55	55				
fz					0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.002					
RPM					19099	19099	19099	17189	17189	17189	17189	15279	16181	16181	14589	14589					
9	High alloyed steel, and tool steel	0.05D	2.5D	Vc	34	34	34	31	31	31	31	28	35	35	31	31					
				fz	0.002	0.002	0.002	0.002	0.002	0.001	0.001	0.001	0.002	0.002	0.002	0.002					
				RPM	10823	10823	10823	9868	9868	9868	9868	8913	9284	9284	8223	8223					
10-11.1	High alloyed steel, and tool steel	0.05D	2.5D	Vc	60	60	60	54	54	54	54	48	61	61	55	55					
				fz	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.002					
				RPM	19099	19099	19099	17189	17189	17189	17189	15279	16181	16181	14589	14589					
11.2	High alloyed steel, and tool steel	0.05D	2.5D	Vc	34	34	34	31	31	31	31	28	35	35	31	31					
				fz	0.002	0.002	0.002	0.002	0.002	0.001	0.001	0.001	0.002	0.002	0.002	0.002					
				RPM	10823	10823	10823	9868	9868	9868	9868	8913	9284	9284	8223	8223					
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	2.5D	Vc	60	60	60	54	54	54	54	48	61	61	55	55				
					fz	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.002				
					RPM	19099	19099	19099	17189	17189	17189	17189	15279	16181	16181	14589	14589				
H	38.1 - 38.2	Hardened steel	0.02D	2.0D	Vc	21	21	21	19	19	19	19	17	21	21	19	19				
					fz	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.002				
	40	Chilled Cast Iron	0.05D	2.5D	Vc	34	34	34	31	31	31	31	28	35	35	31	31				
fz					0.002	0.002	0.002	0.002	0.002	0.001	0.001	0.001	0.002	0.002	0.002	0.002					
RPM					10823	10823	10823	9868	9868	9868	9868	8913	9284	9284	8223	8223					
41	Hardened Cast Iron	0.02D	2.0D	Vc	21	21	21	19	19	19	19	17	21	21	19	19					
				fz	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.001					
				RPM	6685	6685	6685	6048	6048	6048	6048	5411	5570	5570	5040	5040					

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# YG 4G MILL END MILLS

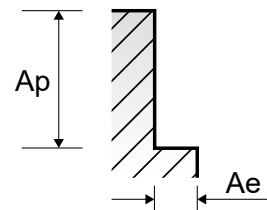
## RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDPARAMETER

### SEME72 SERIES 4 FLUTE - SIDE CUTTING

Vc = m/min. fz = mm/tooth  
RPM = rev./min. FEED = mm/min.  
LOC = Length of Cut

VDI 3323	Parameter	Diameter (Ø)																		
		1.2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5	2.5	3.0
	LOC	12	6	8	10	12	14	16	8	10	12	14	16	10	12	16	20	26	10	12
1-5	Vc	55	65	59	59	59	59	52	66	66	60	60	60	71	71	64	64	57	70	70
	fz	0.002	0.004	0.004	0.004	0.003	0.003	0.003	0.006	0.006	0.005	0.005	0.005	0.007	0.007	0.006	0.006	0.005	0.009	0.009
	RPM	14589	13793	12520	12520	12520	12520	11035	10504	10504	9549	9549	9549	9040	9040	8149	8149	7257	7427	7427
6-8	Vc	55	65	59	59	59	59	52	66	66	60	60	60	71	71	64	64	57	70	70
	fz	0.002	0.004	0.004	0.004	0.003	0.003	0.003	0.006	0.006	0.005	0.005	0.005	0.007	0.007	0.006	0.006	0.005	0.009	0.009
	RPM	14589	13793	12520	12520	12520	12520	11035	10504	10504	9549	9549	9549	9040	9040	8149	8149	7257	7427	7427
9	Vc	31	37	33	33	33	33	30	38	38	34	34	34	41	41	37	37	32	40	40
	fz	0.002	0.003	0.003	0.002	0.002	0.002	0.002	0.004	0.004	0.004	0.004	0.003	0.005	0.005	0.005	0.004	0.004	0.007	0.007
	RPM	8223	7852	7003	7003	7003	7003	6366	6048	6048	5411	5411	5411	5220	5220	4711	4711	4074	4244	4244
10 - 11.1	Vc	55	65	59	59	59	59	52	66	66	60	60	60	71	71	64	64	57	70	70
	fz	0.002	0.004	0.004	0.004	0.003	0.003	0.003	0.006	0.006	0.005	0.005	0.005	0.007	0.007	0.006	0.006	0.005	0.009	0.009
	RPM	14589	13793	12520	12520	12520	12520	11035	10504	10504	9549	9549	9549	9040	9040	8149	8149	7257	7427	7427
11.2	Vc	31	37	33	33	33	33	30	38	38	34	34	34	41	41	37	37	32	40	40
	fz	0.002	0.003	0.003	0.002	0.002	0.002	0.002	0.004	0.004	0.004	0.004	0.003	0.005	0.005	0.005	0.004	0.004	0.007	0.007
	RPM	8223	7852	7003	7003	7003	7003	6366	6048	6048	5411	5411	5411	5220	5220	4711	4711	4074	4244	4244
15 - 20	Vc	55	65	59	59	59	59	52	66	66	60	60	60	71	71	64	64	57	70	70
	fz	0.002	0.004	0.004	0.004	0.003	0.003	0.003	0.006	0.006	0.005	0.005	0.005	0.007	0.007	0.006	0.006	0.005	0.009	0.009
	RPM	14589	13793	12520	12520	12520	12520	11035	10504	10504	9549	9549	9549	9040	9040	8149	8149	7257	7427	7427
38.1 - 38.2	Vc	19	23	20	20	20	20	18	24	24	21	21	21	25	25	23	23	20	25	25
	fz	0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.004	0.004	0.003	0.003	0.003	0.005	0.005	0.004	0.004	0.003	0.006	0.006
	RPM	5040	4881	4244	4244	4244	4244	3820	3820	3820	3342	3342	3342	3183	3183	2928	2928	2546	2653	2653
40	Vc	31	37	33	33	33	33	30	38	38	34	34	34	41	41	37	37	32	40	40
	fz	0.002	0.003	0.003	0.002	0.002	0.002	0.002	0.004	0.004	0.004	0.004	0.003	0.005	0.005	0.005	0.004	0.004	0.007	0.007
	RPM	8223	7852	7003	7003	7003	7003	6366	6048	6048	5411	5411	5411	5220	5220	4711	4711	4074	4244	4244
41	Vc	19	23	20	20	20	20	18	24	24	21	21	21	25	25	23	23	20	25	25
	fz	0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.004	0.004	0.003	0.003	0.003	0.005	0.005	0.004	0.004	0.003	0.006	0.006
	RPM	5040	4881	4244	4244	4244	4244	3820	3820	3820	3342	3342	3342	3183	3183	2928	2928	2546	2653	2653
	FEED	117	221	200	200	150	150	132	252	252	191	191	191	253	253	196	196	145	267	267

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HSS

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



# YG 4G MILL END MILLS

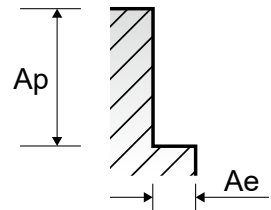
## RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDPARAMETER

### SEME72 SERIES 4 FLUTE - SIDE CUTTING

Vc = m/min. fz = mm/tooth  
RPM = rev./min. FEED = mm/min.  
LOC = Length of Cut

ISO	VDI 3323	Ae	Ap	Parameter	Diameter (Ø)															
					3.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	
P	1-5	0.05D	2.5D	LOC	14	16	20	26	30	12	16	20	26	30	20	25	30	35	40	
				Vc	70	63	63	63	63	75	75	75	68	68	80	80	72	72	72	
				fz	0.009	0.009	0.008	0.008	0.008	0.014	0.014	0.014	0.013	0.013	0.021	0.021	0.019	0.019	0.017	
	6-8	0.05D	2.5D	RPM	7427	6685	6685	6685	6685	5968	5968	5968	5411	5411	5093	5093	4584	4584	4584	
				FEED	267	241	214	214	214	334	334	334	281	281	428	428	348	348	312	
				Vc	70	63	63	63	63	75	75	75	68	68	80	80	72	72	72	
	9	0.05D	2.5D	fz	0.009	0.009	0.008	0.008	0.008	0.014	0.014	0.014	0.013	0.013	0.021	0.021	0.019	0.019	0.017	
				RPM	7427	6685	6685	6685	6685	5968	5968	5968	5411	5411	5093	5093	4584	4584	4584	
				FEED	267	241	214	214	214	334	334	334	281	281	428	428	348	348	312	
	10-11.1	0.05D	2.5D	Vc	40	36	36	36	36	43	43	43	39	39	46	46	41	41	41	
				fz	0.007	0.007	0.006	0.006	0.006	0.01	0.01	0.01	0.009	0.009	0.015	0.015	0.013	0.013	0.011	
				RPM	4244	3820	3820	3820	3820	3422	3422	3422	3104	3104	2928	2928	2610	2610	2610	
11.2	0.05D	2.5D	FEED	119	107	92	92	92	137	137	137	112	112	176	176	136	136	115		
			Vc	70	63	63	63	63	75	75	75	68	68	80	80	72	72	72		
			fz	0.009	0.009	0.008	0.008	0.008	0.014	0.014	0.014	0.013	0.013	0.021	0.021	0.019	0.019	0.017		
K	15-20	0.05D	2.5D	RPM	7427	6685	6685	6685	6685	5968	5968	5968	5411	5411	5093	5093	4584	4584	4584	
				FEED	267	241	214	214	214	334	334	334	281	281	428	428	348	348	312	
				Vc	40	36	36	36	36	43	43	43	39	39	46	46	41	41	41	
	38.1 - 38.2	0.02D	2.0D	fz	0.007	0.007	0.006	0.006	0.006	0.01	0.01	0.01	0.009	0.009	0.015	0.015	0.013	0.013	0.011	
				RPM	4244	3820	3820	3820	3820	3422	3422	3422	3104	3104	2928	2928	2610	2610	2610	
				FEED	119	107	92	92	92	137	137	137	112	112	176	176	136	136	115	
	40	0.05D	2.5D	Vc	25	22	22	22	22	27	27	27	24	24	30	30	27	27	27	
				fz	0.006	0.006	0.006	0.005	0.005	0.008	0.008	0.008	0.008	0.008	0.011	0.011	0.01	0.01	0.009	
				RPM	2653	2334	2334	2334	2334	2149	2149	2149	1910	1910	1910	1910	1719	1719	1719	
	41	0.02D	2.0D	FEED	64	56	56	47	47	69	69	69	61	61	84	84	69	69	62	
				Vc	40	36	36	36	36	43	43	43	39	39	46	46	41	41	41	
				fz	0.007	0.007	0.006	0.006	0.006	0.01	0.01	0.01	0.009	0.009	0.015	0.015	0.013	0.013	0.011	
41	0.02D	2.0D	RPM	4244	3820	3820	3820	3820	3422	3422	3422	3104	3104	2928	2928	2610	2610	2610		
			FEED	119	107	92	92	92	137	137	137	112	112	176	176	136	136	115		
			Vc	25	22	22	22	22	27	27	27	24	24	30	30	27	27	27		
41	0.02D	2.0D	fz	0.006	0.006	0.006	0.005	0.005	0.008	0.008	0.008	0.008	0.008	0.011	0.011	0.01	0.01	0.009		
			RPM	2653	2334	2334	2334	2334	2149	2149	2149	1910	1910	1910	1910	1719	1719	1719		
			FEED	64	56	56	47	47	69	69	69	61	61	84	84	69	69	62		

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**YG 4G MILL END MILLS**

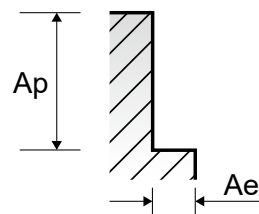
**RECOMMENDED CUTTING CONDITIONS  
EMPFOHLENE SCHNEIDPARAMETER**

**SEME72 SERIES 4 FLUTE - SIDE CUTTING**

Vc = m/min. fz = mm/tooth  
RPM = rev./min. FEED = mm/min.  
LOC = Length of Cut

VDI 3323	Parameter	Diameter (Ø)																		
		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	8.0	8.0	8.0	8.0	8.0	8.0	10.0	10.0	10.0	10.0	10.0
	<b>LOC</b>	15	20	25	30	35	40	45	25	30	35	40	45	50	30	35	40	45	50	55
1-5	<b>Vc</b>	83	83	83	83	75	75	75	84	84	84	84	84	76	76	89	89	89	89	80
	<b>fz</b>	0.029	0.029	0.029	0.025	0.025	0.022	0.022	0.041	0.041	0.041	0.041	0.035	0.035	0.031	0.049	0.049	0.049	0.042	0.041
	<b>RPM</b>	4403	4403	4403	4403	3979	3979	3979	3342	3342	3342	3342	3342	3024	3024	2833	2833	2833	2833	2546
6-8	<b>FEED</b>	511	511	511	440	398	350	350	548	548	548	468	423	375	555	555	555	476	476	418
	<b>Vc</b>	83	83	83	83	75	75	75	84	84	84	84	84	76	76	89	89	89	89	80
	<b>fz</b>	0.029	0.029	0.029	0.025	0.025	0.022	0.022	0.041	0.041	0.041	0.041	0.035	0.035	0.031	0.049	0.049	0.049	0.042	0.041
9	<b>RPM</b>	4403	4403	4403	4403	3979	3979	3979	3342	3342	3342	3342	3024	3024	2833	2833	2833	2833	2833	2546
	<b>FEED</b>	511	511	511	440	398	350	350	548	548	548	468	423	375	555	555	555	476	476	418
	<b>Vc</b>	48	48	48	48	43	43	43	48	48	48	48	48	43	43	52	52	52	52	46
10 - 11.1	<b>fz</b>	0.021	0.021	0.021	0.018	0.018	0.016	0.016	0.028	0.028	0.028	0.024	0.024	0.021	0.033	0.033	0.033	0.033	0.028	0.028
	<b>RPM</b>	2546	2546	2546	2546	2281	2281	2281	1910	1910	1910	1910	1910	1711	1711	1655	1655	1655	1655	1464
	<b>FEED</b>	214	214	214	183	164	146	146	214	214	214	183	164	144	218	218	218	218	185	185
11.2	<b>Vc</b>	83	83	83	83	75	75	75	84	84	84	84	84	76	76	89	89	89	89	80
	<b>fz</b>	0.029	0.029	0.029	0.025	0.025	0.022	0.022	0.041	0.041	0.041	0.035	0.035	0.031	0.049	0.049	0.049	0.042	0.041	
	<b>RPM</b>	4403	4403	4403	4403	3979	3979	3979	3342	3342	3342	3342	3024	3024	2833	2833	2833	2833	2833	2546
15 - 20	<b>FEED</b>	511	511	511	440	398	350	350	548	548	548	468	423	375	555	555	555	476	476	418
	<b>Vc</b>	48	48	48	48	43	43	43	48	48	48	48	43	43	52	52	52	52	52	46
	<b>fz</b>	0.021	0.021	0.021	0.018	0.018	0.016	0.016	0.028	0.028	0.028	0.024	0.024	0.021	0.033	0.033	0.033	0.033	0.028	0.028
38.1 - 38.2	<b>RPM</b>	2546	2546	2546	2546	2281	2281	2281	1910	1910	1910	1910	1910	1711	1711	1655	1655	1655	1655	1464
	<b>FEED</b>	214	214	214	183	164	146	146	214	214	214	183	164	144	218	218	218	218	185	185
	<b>Vc</b>	83	83	83	83	75	75	75	84	84	84	84	84	76	76	89	89	89	89	80
40	<b>fz</b>	0.029	0.029	0.029	0.025	0.025	0.022	0.022	0.041	0.041	0.041	0.035	0.035	0.031	0.049	0.049	0.049	0.042	0.041	
	<b>RPM</b>	4403	4403	4403	4403	3979	3979	3979	3342	3342	3342	3342	3024	3024	2833	2833	2833	2833	2833	2546
	<b>FEED</b>	511	511	511	440	398	350	350	548	548	548	468	423	375	555	555	555	476	476	418
41	<b>Vc</b>	31	31	31	31	28	28	28	32	32	32	32	32	28	28	32	32	32	32	29
	<b>fz</b>	0.017	0.017	0.017	0.014	0.014	0.013	0.013	0.022	0.022	0.022	0.018	0.018	0.017	0.027	0.027	0.027	0.022	0.022	
	<b>RPM</b>	1645	1645	1645	1645	1485	1485	1485	1273	1273	1273	1273	1273	1114	1114	1019	1019	1019	1019	923
	<b>FEED</b>	112	112	112	92	83	77	77	112	112	112	92	85	76	110	110	110	90	90	85

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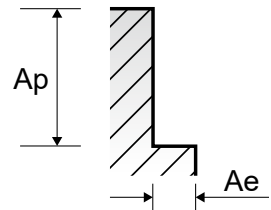


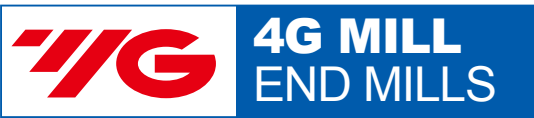
**SEME72** SERIES 4 FLUTE - SIDE CUTTING

Vc = m/min. fz = mm/tooth  
RPM = rev./min. FEED = mm/min.  
LOC = Length of Cut

ISO	VDI 3323	Ae	Ap	Parameter	Diameter (Ø)																
					10.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	14.0	14.0	16.0	16.0	16.0	16.0		
P	1-5	0.05D	2.5D	LOC	60	35	40	45	50	55	60	65	70	50	60	40	50	60	70		
				Vc	80	87	87	87	87	87	87	87	87	78	78	93	93	98	98	98	98
				fz	0.037	0.047	0.047	0.04	0.04	0.04	0.04	0.04	0.035	0.035	0.035	0.041	0.041	0.05	0.05	0.042	0.042
	6-8	0.05D	2.5D	RPM	2546	2308	2308	2308	2308	2308	2308	2308	2069	2069	2114	2114	1950	1950	1950	1950	
				FEED	377	434	434	369	369	369	369	323	290	290	347	347	390	390	328	328	
				Vc	80	87	87	87	87	87	87	87	87	78	78	93	93	98	98	98	98
	9	0.05D	2.5D	fz	0.037	0.047	0.047	0.04	0.04	0.04	0.04	0.04	0.035	0.035	0.035	0.041	0.041	0.05	0.05	0.042	0.042
				RPM	2546	2308	2308	2308	2308	2308	2308	2308	2308	2069	2069	2114	2114	1950	1950	1950	1950
				FEED	377	434	434	369	369	369	369	323	290	290	347	347	390	390	328	328	
	10-11.1	0.05D	2.5D	Vc	46	52	52	52	52	52	52	52	47	47	54	54	54	54	54	54	
				fz	0.024	0.034	0.034	0.03	0.03	0.03	0.03	0.026	0.026	0.026	0.029	0.029	0.035	0.035	0.03	0.03	
				RPM	1464	1379	1379	1379	1379	1379	1379	1379	1247	1247	1228	1228	1074	1074	1074	1074	
11.2	0.05D	2.5D	FEED	141	188	188	166	166	166	166	143	130	130	142	142	150	150	129	129		
			Vc	80	87	87	87	87	87	87	87	78	78	93	93	98	98	98	98		
			fz	0.037	0.047	0.047	0.04	0.04	0.04	0.04	0.035	0.035	0.035	0.041	0.041	0.05	0.05	0.042	0.042		
K	15-20	0.05D	2.5D	RPM	2546	2308	2308	2308	2308	2308	2308	2069	2069	2114	2114	1950	1950	1950	1950		
				FEED	377	434	434	369	369	369	369	323	290	290	347	347	390	390	328	328	
				Vc	46	52	52	52	52	52	52	52	47	47	54	54	54	54	54	54	
	38.1 - 38.2	0.02D	2.0D	fz	0.021	0.025	0.025	0.021	0.021	0.021	0.019	0.018	0.018	0.021	0.021	0.026	0.026	0.022	0.022		
				RPM	923	849	849	849	849	849	849	849	769	769	750	750	676	676	676	676	
				FEED	78	85	85	71	71	71	71	65	55	55	63	63	70	70	60	60	
	40	0.05D	2.5D	Vc	46	52	52	52	52	52	52	47	47	54	54	54	54	54	54		
				fz	0.024	0.034	0.034	0.03	0.03	0.03	0.03	0.026	0.026	0.026	0.029	0.029	0.035	0.035	0.03	0.03	
				RPM	1464	1379	1379	1379	1379	1379	1379	1379	1247	1247	1228	1228	1074	1074	1074	1074	
	41	0.02D	2.0D	FEED	141	188	188	166	166	166	143	130	130	142	142	150	150	129	129		
				Vc	29	32	32	32	32	32	32	29	29	33	33	34	34	34	34	34	
				fz	0.021	0.025	0.025	0.021	0.021	0.021	0.019	0.018	0.018	0.021	0.021	0.026	0.026	0.022	0.022		
D-POWER GRAPHITE END MILLS	38.1 - 38.2	0.02D	2.0D	RPM	923	849	849	849	849	849	849	769	769	750	750	676	676	676	676		
				FEED	78	85	85	71	71	71	71	65	55	55	63	63	70	70	60	60	
				Vc	29	32	32	32	32	32	32	29	29	33	33	34	34	34	34	34	
D-POWER CFRP END MILLS	40	0.05D	2.5D	fz	0.021	0.025	0.025	0.021	0.021	0.021	0.019	0.018	0.018	0.021	0.021	0.026	0.026	0.022	0.022		
				RPM	923	849	849	849	849	849	849	849	769	769	750	750	676	676	676	676	
				FEED	78	85	85	71	71	71	71	65	55	55	63	63	70	70	60	60	

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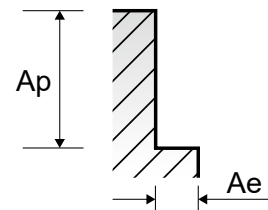


**RECOMMENDED CUTTING CONDITIONS**  
**EMPFOHLENE SCHNEIDPARAMETER**

**SEME72** SERIES **4 FLUTE - SIDE CUTTING**

Vc = m/min. fz = mm/tooth  
RPM = rev./min. FEED = mm/min.  
LOC = Length of Cut

VDI 3323	Parameter	Diameter (Ø)																			
		16.0	16.0	16.0	16.0	18.0	18.0	18.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	22.0	22.0	25.0	25.0	25.0	25.0
	LOC	80	90	110	120	50	70	100	50	60	70	80	90	110	120	75	110	70	90	110	120
1-5	Vc	98	88	88	88	95	95	85	89	89	89	89	89	89	80	80	87	86	86	86	86
	fz	0.037	0.037	0.037	0.037	0.049	0.042	0.037	0.048	0.048	0.041	0.041	0.036	0.036	0.036	0.041	0.036	0.049	0.042	0.042	0.036
	RPM	1950	1751	1751	1751	1680	1680	1503	1416	1416	1416	1416	1416	1416	1273	1273	1259	1259	1095	1095	1095
6-8	Vc	98	88	88	88	95	95	85	89	89	89	89	89	89	80	80	87	86	86	86	86
	fz	0.037	0.037	0.037	0.037	0.049	0.042	0.037	0.048	0.048	0.041	0.041	0.036	0.036	0.036	0.041	0.036	0.049	0.042	0.042	0.036
	RPM	1950	1751	1751	1751	1680	1680	1503	1416	1416	1416	1416	1416	1416	1273	1273	1259	1259	1095	1095	1095
9	Vc	54	48	48	48	53	53	48	52	52	52	52	52	52	46	46	57	57	64	64	64
	fz	0.027	0.026	0.026	0.026	0.035	0.029	0.025	0.034	0.034	0.027	0.027	0.024	0.024	0.026	0.026	0.027	0.024	0.034	0.027	0.027
	RPM	1074	955	955	955	937	937	849	828	828	828	828	828	828	732	732	825	825	815	815	815
10 - 11.1	Vc	98	88	88	88	95	95	85	89	89	89	89	89	89	80	80	87	86	86	86	86
	fz	0.037	0.037	0.037	0.037	0.049	0.042	0.037	0.048	0.048	0.041	0.041	0.036	0.036	0.036	0.041	0.036	0.049	0.042	0.042	0.036
	RPM	1950	1751	1751	1751	1680	1680	1503	1416	1416	1416	1416	1416	1416	1273	1273	1259	1259	1095	1095	1095
11.2	Vc	54	48	48	48	53	53	48	52	52	52	52	52	52	46	46	57	57	64	64	64
	fz	0.027	0.026	0.026	0.026	0.035	0.029	0.025	0.034	0.034	0.027	0.027	0.024	0.026	0.026	0.027	0.024	0.034	0.027	0.027	0.024
	RPM	1074	955	955	955	937	937	849	828	828	828	828	828	828	732	732	825	825	815	815	815
15 - 20	Vc	98	88	88	88	95	95	85	89	89	89	89	89	89	80	80	87	86	86	86	86
	fz	0.037	0.037	0.037	0.037	0.049	0.042	0.037	0.048	0.048	0.041	0.041	0.036	0.036	0.036	0.041	0.036	0.049	0.042	0.042	0.036
	RPM	1950	1751	1751	1751	1680	1680	1503	1416	1416	1416	1416	1416	1416	1273	1273	1259	1259	1095	1095	1095
38.1 - 38.2	Vc	34	30	30	30	33	33	30	31	31	31	31	31	31	28	28	35	35	39	39	39
	fz	0.021	0.021	0.021	0.021	0.028	0.023	0.021	0.028	0.028	0.023	0.023	0.02	0.019	0.019	0.023	0.02	0.028	0.023	0.023	0.02
	RPM	676	597	597	597	584	584	531	493	493	493	493	493	493	446	446	506	506	497	497	497
40	Vc	54	48	48	48	53	53	48	52	52	52	52	52	52	46	46	57	57	64	64	64
	fz	0.027	0.026	0.026	0.026	0.035	0.029	0.025	0.034	0.034	0.027	0.027	0.024	0.026	0.026	0.027	0.024	0.034	0.027	0.027	0.024
	RPM	1074	955	955	955	937	937	849	828	828	828	828	828	828	732	732	825	825	815	815	815
41	Vc	34	30	30	30	33	33	30	31	31	31	31	31	31	28	28	35	35	39	39	39
	fz	0.021	0.021	0.021	0.021	0.028	0.023	0.021	0.028	0.028	0.023	0.023	0.02	0.019	0.019	0.023	0.02	0.028	0.023	0.023	0.02
	RPM	676	597	597	597	584	584	531	493	493	493	493	493	493	446	446	506	506	497	497	497



HSS

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

SELECTION GUIDE



SERIES	SEMD98	SEM846	SEM846	SEMD99
FLUTE	2	2	2	2
HELIX ANGLE	30°	30°	30°	30°
CUTTING EDGE SHAPE	BALL NOSE	BALL NOSE	BALL NOSE	CORNER RADIUS
SIZE MIN	R0.05	R0.05	R0.25	D0.2
SIZE MAX	R12.5	R6.0	R1.0	D20.0
PAGE	166	172	182	185

SOLID CARBIDE  
**4G Mill**  
END MILLS

High Speed Cutting for Pre-Hardened Steels up to HRC55

-	EXTENDED NECK	EXTENDED NECK (6mm Shank)	-
Y-Coating	Y-Coating	Y-Coating	Y-Coating



Please visit [globalyg1.com/mat](http://globalyg1.com/mat) for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : P 276

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc	SEMD98	SEM846	SEM846	SEMD99
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		Ferritic	130		○	○	○	○
20	Malleable cast iron	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	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic						
	30		Rubber, Wood, etc.						
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15			
	32			Cured	280	30			
	33		Ni or Co Based	Annealed	250	25			
	34			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	○	○	○	○

SEME61	SEME01	SEME64	SEME35	SEME35	SEME35	SEME70	SEM845	SEME36	SEME71	SEME72	SEME73	SEME75
2	4	4	2	2	2	2	2	4	4	4	4	6
30°	27°/30° (MULTIPLE HELIX)	27°/30° (MULTIPLE HELIX)	30°	30°	30°	30°	30°	27°/30° (MULTIPLE HELIX)	35°/38° (MULTIPLE HELIX)	30°	30°	45°
CORNER RADIUS	CORNER RADIUS	CORNER RADIUS	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE	SQUARE
D0.2	D1.0	D1.0	D0.1	D0.1	D0.1	D1.0	D0.1	D0.8	D1.0	D1.0	D1.0	D6.0
D20.0	D20.0	D20.0	D25.0	D4.0	D3.0	D25.0	D12.0	D25.0	D20.0	D25.0	D12.0	D20.0
193	212	219	234	237	238	239	245	254	256	260	266	271
EXTENDED NECK	-	EXTENDED NECK	-	4mm Shank	3mm Shank	LONG LENGTH	EXTENDED NECK	-	Sharp Corner Removal	LONG LENGTH	EXTENDED NECK	-
Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating	Y-Coating

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													41

HSS

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