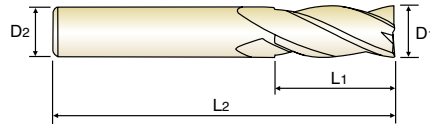


CARBIDE, 4 FLUTE MULTIPLE HELIX

- **VOLLHARTMETALL, 4 SCHNEIDEN MEHRSPIRAL**
- **Fraise carbure, 4 dents, hélice multiple**
- **MD, 4 TAGLIENTI, SPIGOLO VIVO**

- ▶ 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.
- ▶ Multiple Helix for 3.0mm and over 3.0mm diameter end mills minimizing vibration and decreasing wear in cutting.

- ▶ Aufgrund einer neuartigen Beschichtung und neuer Werkzeuggeometrien hervorragende Schnittleistung und Verschleißfestigkeit
- ▶ Ausgezeichnet geeignet für das Fräsen von vorvergütetem Stahl, kohlenstoff Stahl, legiertem Stahl für Formen, bis HRC55 und Maschinenbauteile.
- ▶ Aufgrund der Multi-Helix (M-Helix) bei Schafffräsern $\geq 3,0\text{mm}$ \varnothing werden Vibrationen zuverlässig verhindert und gleichzeitig der Schneidkantenverschleiß verringert.



CARBIDE 4 27°/30° PLAIN P.326-329

D< \varnothing 3, 30° HELIX

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	Remark
	D1	D2	L1	L2	
SEME36008E	0.8	4	1.6	40	4mm Shank
SEME36009E	0.9	4	1.8	40	4mm Shank
SEME360104SE	1.0	4	2.5	50	4mm Shank
★ SEME36010E	1.0	6	2.5	50	-
SEME360124SE	1.2	4	3	50	4mm Shank
SEME36012E	1.2	6	3	50	-
SEME360154SE	1.5	4	4	50	4mm Shank
★ SEME36015E	1.5	6	4	50	-
SEME360204SE	2.0	4	6	50	4mm Shank
★ SEME36020E	2.0	6	6	50	-
SEME360254SE	2.5	4	7	50	4mm Shank
★ SEME36025E	2.5	6	7	50	-
★ SEME36030E	3.0	6	8	50	-
★ SEME36035E	3.5	6	10	50	-
★ SEME36040E	4.0	6	10	50	-
★ SEME36045E	4.5	6	14	50	-
★ SEME36050E	5.0	6	15	60	-
★ SEME36055E	5.5	6	15	60	-
★ SEME36060E	6.0	6	15	60	-
★ SEME36065E	6.5	8	18	60	-
★ SEME36070E	7.0	8	20	60	-
★ SEME36075E	7.5	8	20	60	-
★ SEME36080E	8.0	8	20	70	-
★ SEME36085E	8.5	10	22	70	-

★ : Stock Item

▶ NEXT PAGE

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

◎ : Excellent ○ : Good

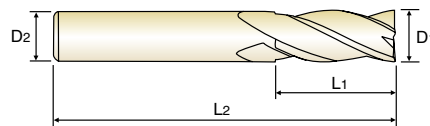
ISO Material Description	P											M				K					
	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel		Grey cast iron		Nodular cast iron		Malleable cast iron			
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRc		13	25	28	32	10	29	32	38	15	35	15	23	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 MULTIPLE HELIX

- **VOLLHARTMETALL, 4 SCHNEIDEN MEHRSPIRAL**
- (●) **Fraise carbure, 4 dents, hélice multiple**
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- ▶ Ausgezeichnet geeignet für das Fräsen von vorvergütetem Stahl, kohlenstoff Stahl, legiertem Stahl für Formen, bis HRC55 und Maschinenbauteile.
- ▶ Aufgrund der Multi-Helix (M-Helix) bei Schafffräsern $\geq 3,0\text{mm } \phi$ werden Vibrationen zuverlässig verhindert und gleichzeitig der Schneidkantenverschleiß verringert.



D<math>\phi</math>3, 30° HELIX

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	Remark
	D1	D2	L1	L2	
★ SEME36090E	9.0	10	22	70	-
★ SEME36095E	9.5	10	24	70	-
★ SEME36100E	10.0	10	25	75	-
SEME36105E	10.5	12	26	75	-
★ SEME36110E	11.0	12	30	75	-
SEME36115E	11.5	12	30	80	-
★ SEME36120E	12.0	12	30	80	-
SEME36130E	13.0	12	35	100	-
SEME3614012SE	14.0	12	35	100	-
★ SEME3614014SE	14.0	14	35	100	-
★ SEME36140E	14.0	16	35	100	-
SEME36150E	15.0	16	38	100	-
★ SEME36160E	16.0	16	40	100	-
SEME36170E	17.0	16	42	100	-
★ SEME36180E	18.0	16	45	100	-
★ SEME3618018SE	18.0	18	45	100	-
SEME36190E	19.0	20	45	100	-
★ SEME36200E	20.0	20	45	100	-
SEME36210E	21.0	20	45	100	-
SEME36220E	22.0	20	45	100	-
SEME36230E	23.0	25	50	120	-
SEME36240E	24.0	25	50	120	-
SEME36250E	25.0	25	50	120	-

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

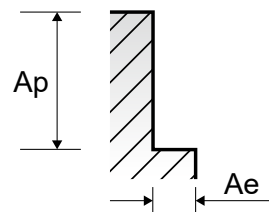
ISO Material Description	N					S										H					
	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron	
VDI 3323	21	22	23	24	25	26	27	28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

SEME36, SEME71 SERIES 4 FLUTE - SIDE CUTTING

Vc = m/min.
fz = mm/tooth
RPM = rev./min.
FEED = mm/min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)							
						0.8	0.9	1.0	1.2	1.5	2.0	2.5	3.0
P	1-5	Non-alloy steel	0.05D	1.0D	Vc	79	83	84	85	88	91	101	105
					fz	0.002	0.002	0.002	0.003	0.004	0.005	0.006	0.008
					RPM	31433	29355	26738	22547	18674	14483	12860	11141
	6-8	Low alloy steel	0.05D	1.0D	Vc	79	83	84	85	88	91	101	105
					fz	0.002	0.002	0.002	0.003	0.004	0.005	0.006	0.008
					RPM	31433	29355	26738	22547	18674	14483	12860	11141
	9	Low alloy steel	0.05D	1.0D	Vc	47	50	51	51	53	59	64	66
					fz	0.002	0.002	0.002	0.003	0.004	0.005	0.006	0.008
					RPM	18701	17684	16234	13528	11247	9390	8149	7003
	10-11.1	High alloyed steel, and tool steel	0.05D	1.0D	Vc	79	83	84	85	88	91	101	105
					fz	0.002	0.002	0.002	0.003	0.004	0.005	0.006	0.008
					RPM	31433	29355	26738	22547	18674	14483	12860	11141
11.2	High alloyed steel, and tool steel	0.05D	1.0D	Vc	47	50	51	51	53	59	64	66	
				fz	0.002	0.002	0.002	0.003	0.004	0.005	0.006	0.008	
				RPM	18701	17684	16234	13528	11247	9390	8149	7003	
M	14.1	Stainless steel	0.05D	1.0D	Vc	39	41	42	42	44	50	54	54
					fz	0.002	0.002	0.002	0.003	0.004	0.005	0.006	0.008
					RPM	15518	14501	13369	11141	9337	7958	6875	5730
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.05D	1.0D	Vc	79	83	84	85	88	91	101	105
					fz	0.002	0.002	0.002	0.003	0.004	0.005	0.006	0.008
					RPM	31433	29355	26738	22547	18674	14483	12860	11141
H	38.1 - 38.2	Hardened steel	0.05D	1.0D	Vc	31	33	34	34	35	40	41	40
					fz	0.001	0.001	0.001	0.001	0.002	0.002	0.003	0.004
					RPM	12335	11671	10823	9019	7427	6366	5220	4244
H	40	Chilled Cast Iron	0.05D	1.0D	Vc	47	50	51	51	53	59	64	66
					fz	0.002	0.002	0.002	0.003	0.004	0.005	0.006	0.008
					RPM	18701	17684	16234	13528	11247	9390	8149	7003
H	41	Hardened Cast Iron	0.05D	1.0D	Vc	31	33	34	34	35	40	41	40
					fz	0.001	0.001	0.001	0.001	0.002	0.002	0.003	0.004
					RPM	12335	11671	10823	9019	7427	6366	5220	4244

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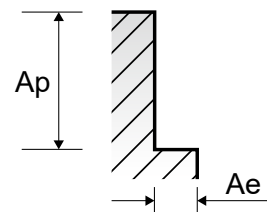


SEME36, SEME71 SERIES **4 FLUTE - SIDE CUTTING**

Vc = m/min.
fz = mm/tooth
RPM = rev./min.
FEED = mm/min.

VDI 3323	Parameter	Diameter (Ø)											
		3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0
1-5	Vc	113	119	122	124	128	131	133	134	134	132	132	132
	fz	0.011	0.016	0.018	0.02	0.022	0.025	0.027	0.03	0.032	0.035	0.036	0.037
	RPM	10277	9470	8630	7894	7408	6950	6513	6093	5687	5252	4943	4669
6-8	FEED	452	606	621	632	652	695	703	731	728	735	712	691
	Vc	113	119	122	124	128	131	133	134	134	132	132	132
	fz	0.011	0.016	0.018	0.02	0.022	0.025	0.027	0.03	0.032	0.035	0.036	0.037
9	RPM	10277	9470	8630	7894	7408	6950	6513	6093	5687	5252	4943	4669
	FEED	452	606	621	632	652	695	703	731	728	735	712	691
	Vc	70	73	74	74	77	79	80	81	80	79	80	80
10	fz	0.011	0.016	0.018	0.02	0.023	0.026	0.027	0.028	0.03	0.032	0.032	0.031
	RPM	6366	5809	5234	4711	4456	4191	3918	3683	3395	3143	2996	2829
	FEED	280	372	377	377	410	436	423	413	407	402	383	351
11.1	Vc	113	119	122	124	128	131	133	134	134	132	132	132
	fz	0.011	0.016	0.018	0.02	0.022	0.025	0.027	0.03	0.032	0.035	0.036	0.037
	RPM	10277	9470	8630	7894	7408	6950	6513	6093	5687	5252	4943	4669
11.2	FEED	452	606	621	632	652	695	703	731	728	735	712	691
	Vc	70	73	74	74	77	79	80	81	80	79	80	80
	fz	0.011	0.016	0.018	0.02	0.023	0.026	0.027	0.028	0.03	0.032	0.032	0.031
14.1	RPM	6366	5809	5234	4711	4456	4191	3918	3683	3395	3143	2996	2829
	FEED	280	372	377	377	410	436	423	413	407	402	383	351
	Vc	58	61	62	62	65	67	68	68	67	66	66	67
15	fz	0.011	0.015	0.017	0.02	0.022	0.024	0.026	0.029	0.031	0.035	0.036	0.036
	RPM	5275	4854	4386	3947	3762	3554	3330	3092	2844	2626	2472	2370
	FEED	232	291	298	316	331	341	346	359	353	368	356	341
20	Vc	113	119	122	124	128	131	133	134	134	132	132	132
	fz	0.011	0.016	0.018	0.02	0.022	0.025	0.027	0.03	0.032	0.035	0.036	0.037
	RPM	10277	9470	8630	7894	7408	6950	6513	6093	5687	5252	4943	4669
38.1	FEED	452	606	621	632	652	695	703	731	728	735	712	691
	Vc	43	46	47	46	47	47	49	51	52	53	53	54
	fz	0.004	0.004	0.005	0.006	0.007	0.009	0.01	0.011	0.013	0.014	0.014	0.014
38.2	RPM	3911	3661	3325	2928	2720	2493	2400	2319	2207	2109	1985	1910
	FEED	63	59	66	70	76	90	96	102	115	118	111	107
	Vc	70	73	74	74	77	79	80	81	80	79	80	80
40	fz	0.011	0.016	0.018	0.02	0.023	0.026	0.027	0.028	0.03	0.032	0.032	0.031
	RPM	6366	5809	5234	4711	4456	4191	3918	3683	3395	3143	2996	2829
	FEED	280	372	377	377	410	436	423	413	407	402	383	351
41	Vc	43	46	47	46	47	47	49	51	52	53	53	54
	fz	0.004	0.004	0.005	0.006	0.007	0.009	0.01	0.011	0.013	0.014	0.014	0.014
	RPM	3911	3661	3325	2928	2720	2493	2400	2319	2207	2109	1985	1910
41	FEED	63	59	66	70	76	90	96	102	115	118	111	107

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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

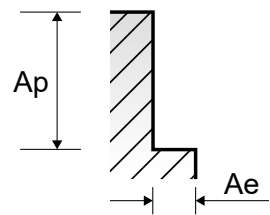
TECHNICAL DATA

SEME36, SEME71 SERIES **4 FLUTE - SIDE CUTTING**

Vc = m/min.
fz = mm/tooth
RPM = rev./min.
FEED = mm/min.

ISO	VDI 3323	Ae	Ap	Parameter	Diameter (Ø)							
					9.5	10.0	10.5	11.0	11.5	12.0	13.0	14.0
P	1-5	0.05D	1.0D	Vc	130	128	129	130	130	129	133	136
				fz	0.038	0.039	0.04	0.04	0.04	0.04	0.04	
				RPM	4356	4074	3911	3762	3598	3422	3257	3092
	6-8	0.05D	1.0D	Vc	130	128	129	130	130	129	133	136
				fz	0.038	0.039	0.04	0.04	0.04	0.04	0.04	
				RPM	4356	4074	3911	3762	3598	3422	3257	3092
	9	0.05D	1.0D	Vc	79	79	79	79	79	79	82	84
				fz	0.031	0.032	0.032	0.032	0.032	0.032	0.031	0.031
				RPM	2647	2515	2395	2286	2187	2096	2008	1910
	10-11.1	0.05D	1.0D	Vc	130	128	129	130	130	129	133	136
				fz	0.038	0.039	0.04	0.04	0.04	0.04	0.04	
				RPM	4356	4074	3911	3762	3598	3422	3257	3092
11.2	0.05D	1.0D	Vc	79	79	79	79	79	79	82	84	
			fz	0.031	0.032	0.032	0.032	0.032	0.032	0.031	0.031	
			RPM	2647	2515	2395	2286	2187	2096	2008	1910	
M	14.1	0.05D	1.0D	Vc	67	66	66	66	65	64	66	68
				fz	0.037	0.038	0.038	0.038	0.038	0.037	0.037	
				RPM	2245	2101	2001	1910	1799	1698	1616	1546
K	15-20	0.05D	1.0D	Vc	130	128	129	130	130	129	133	136
				fz	0.038	0.039	0.04	0.04	0.04	0.04	0.04	
				RPM	4356	4074	3911	3762	3598	3422	3257	3092
H	38.1 - 38.2	0.05D	1.0D	Vc	54	53	54	55	55	55	56	57
				fz	0.014	0.014	0.014	0.014	0.015	0.015	0.015	
				RPM	1809	1687	1637	1592	1522	1459	1371	1296
H	40	0.05D	1.0D	Vc	79	79	79	79	79	79	82	84
				fz	0.031	0.032	0.032	0.032	0.032	0.032	0.031	0.031
				RPM	2647	2515	2395	2286	2187	2096	2008	1910
H	41	0.05D	1.0D	Vc	54	53	54	55	55	55	56	57
				fz	0.014	0.014	0.014	0.014	0.015	0.015	0.015	
				RPM	1809	1687	1637	1592	1522	1459	1371	1296

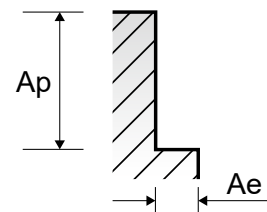
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SEME36, SEME71 SERIES 4 FLUTE - SIDE CUTTING

Vc = m/min.
fz = mm/tooth
RPM = rev./min.
FEED = mm/min.

VDI 3323	Parameter	Diameter (Ø)										
		15.0	16.0	17.0	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0
1-5	Vc	138	138	138	137	135	132	133	134	134	134	134
	fz	0.039	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.039	0.039
	RPM	2928	2745	2584	2423	2262	2101	2016	1939	1855	1777	1706
6-8	FEED	457	439	413	388	362	336	323	310	297	277	266
	Vc	138	138	138	137	135	132	133	134	134	134	134
	fz	0.039	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.039	0.039
9	RPM	2928	2745	2584	2423	2262	2101	2016	1939	1855	1777	1706
	FEED	457	439	413	388	362	336	323	310	297	277	266
	Vc	85	85	86	85	85	84	84	84	84	84	82
10	fz	0.031	0.032	0.031	0.031	0.032	0.032	0.032	0.033	0.031	0.032	0.032
	RPM	1804	1691	1610	1503	1424	1337	1273	1215	1163	1114	1044
	FEED	224	216	200	186	182	171	163	160	144	143	134
11.2	Vc	138	138	138	137	135	132	133	134	134	134	134
	fz	0.039	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.039	0.039
	RPM	2928	2745	2584	2423	2262	2101	2016	1939	1855	1777	1706
14.1	FEED	457	439	413	388	362	336	323	310	297	277	266
	Vc	85	85	86	85	85	84	84	84	84	84	82
	fz	0.031	0.032	0.031	0.031	0.032	0.032	0.032	0.033	0.031	0.032	0.032
15	RPM	1804	1691	1610	1503	1424	1337	1273	1215	1163	1114	1044
	FEED	224	216	200	186	182	171	163	160	144	143	134
	Vc	69	69	69	68	67	66	67	67	67	67	67
20	fz	0.038	0.038	0.039	0.038	0.039	0.038	0.037	0.037	0.038	0.037	0.037
	RPM	1464	1373	1292	1203	1122	1050	1016	969	927	889	853
	FEED	223	209	202	183	175	160	150	143	141	132	126
38.1	Vc	138	138	138	137	135	132	133	134	134	134	134
	fz	0.039	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.039	0.039
	RPM	2928	2745	2584	2423	2262	2101	2016	1939	1855	1777	1706
38.2	FEED	457	439	413	388	362	336	323	310	297	277	266
	Vc	57	57	57	56	55	53	54	54	54	54	53
	fz	0.014	0.014	0.014	0.014	0.013	0.012	0.013	0.013	0.012	0.011	0.012
40	RPM	1210	1134	1067	990	921	844	819	781	747	716	675
	FEED	68	64	60	55	48	40	43	41	36	32	32
	Vc	85	85	86	85	85	84	84	84	84	84	82
41	fz	0.031	0.032	0.031	0.031	0.032	0.032	0.032	0.033	0.031	0.032	0.032
	RPM	1804	1691	1610	1503	1424	1337	1273	1215	1163	1114	1044
	FEED	224	216	200	186	182	171	163	160	144	143	134
41	Vc	57	57	57	56	55	53	54	54	54	54	53
	fz	0.014	0.014	0.014	0.014	0.013	0.012	0.013	0.013	0.012	0.011	0.012
	RPM	1210	1134	1067	990	921	844	819	781	747	716	675
41	FEED	68	64	60	55	48	40	43	41	36	32	32



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 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	Malleable cast iron	Ferritic	130		○	○	○	○
20	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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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