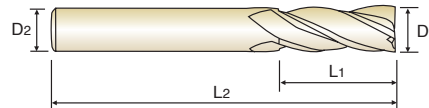


**CARBIDE, 4 FLUTE MULTIPLE HELIX (Sharp corner removal)**  
**VOLLHARTMETALL, 4 SCHNEIDEN MEHRSPIRAL (Scharfe Schneidenecken entfernt)**

- ▶ Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
  - ▶ Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRC55 and machine parts.
  - ▶ Due to Multiple Helix for 3.0mm and over 3.0mm diameter end mills, vibration can be minimized at cutting, and wear of cutting tool can be decreased too.
    - Designed equal index flute for long length end mills.
  - ▶ Due to gash land geometry used at end tooth, heavy duty cutting can be achieved.
  - ▶ Available various length products like short, regular and long length end mills etc.
- ▶ 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  $\geq 3,0\text{mm } \phi$  werden Vibrationen zuverlässig verhindert und gleichzeitig der Schneidkantenverschleiß verringert.
    - Designed mit gleichgeteilten Spannuten für überlange Schafffräser.
  - ▶ Aufgrund der korrigierten Stirnschneiden ist eine Schwerzerspannung möglich.
  - ▶ Erhältlich in verschiedenen Variationen: kurz, lang und extra lang.

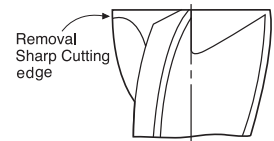


D $\geq$ 3

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	Remark
	D1	D2	L1	L2	
SEME7101001E	1.0	6	1	40	Short
SEME7101002E	1.0	6	2	40	Short
★ SEME71010E	1.0	6	2.5	50	Regular
SEME7101003E	1.0	6	3	50	Long
SEME7101004E	1.0	6	4	50	Long
SEME7101006E	1.0	6	6	50	Long
SEME7101202E	1.2	6	2	40	Short
★ SEME71012E	1.2	6	3	50	Regular
SEME7101204E	1.2	6	4	50	Long
SEME7101206E	1.2	6	6	50	Long
SEME71015015E	1.5	6	1.5	40	Short
SEME7101503E	1.5	6	3	40	Short
★ SEME71015E	1.5	6	4	50	Regular
SEME7101506E	1.5	6	6	50	Long
SEME7101508E	1.5	6	8	50	Long
SEME7101510E	1.5	6	10	50	Long
SEME7102002E	2.0	6	2	40	Short
SEME7102004E	2.0	6	4	40	Short
★ SEME71020E	2.0	6	6	50	Regular
SEME7102008E	2.0	6	8	50	Long
SEME7102010E	2.0	6	10	50	Long
SEME7102012E	2.0	6	12	50	Long
SEME71025025E	2.5	6	2.5	40	Short
SEME7102505E	2.5	6	5	40	Short
★ SEME71025E	2.5	6	7	50	Regular
SEME7102510E	2.5	6	10	50	Long

▶ ★ Stock Item



◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel	Acrylic	CFRP
~HB225	HB225~325	HRC30~40	HRC40~45	HRC45~55	HRC55~70									
○	◎	◎	◎	○										

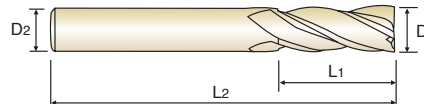
**YG 4G MILL  
END MILLS**

**SEME71 SERIES**

PLAIN SHANK  
GLATTER ZYLINDERSCHAFT

**CARBIDE, 4 FLUTE MULTIPLE HELIX (Sharp corner removal)**  
**VOLLHARTMETALL, 4 SCHNEIDEN MEHRSPIRAL (Scharfe Schneidenecken entfernt)**

- ▶ Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
  - ▶ Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRC55 and machine parts.
  - ▶ Due to Multiple Helix for 3.0mm and over 3.0mm diameter end mills, vibration can be minimized at cutting, and wear of cutting tool can be decreased too.
    - Designed equal index flute for long length end mills.
  - ▶ Due to gash land geometry used at end tooth, heavy duty cutting can be achieved.
  - ▶ Available various length products like short, regular and long length end mills etc.
- ▶ 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  $\geq 3,0\text{mm } \phi$  werden Vibrationen zuverlässig verhindert und gleichzeitig der Schneidkantenverschleiß verringert.
    - Designed mit gleichgeteilten Spannuten für überlange Schafffräser.
  - ▶ Aufgrund der korrigierten Stirnschneiden ist eine Schwerzerspannung möglich.
  - ▶ Erhältlich in verschiedenen Variationen: kurz, lang und extra lang.



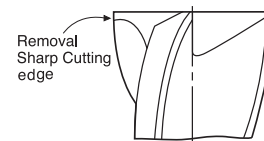
MG HM 4 M-Helix PLAIN P.811

D $\geq$ 3

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	Remark
	D1	D2	L1	L2	
SEME7102512E	2.5	6	12	50	Long
SEME7103003E	3.0	6	3	40	Short
SEME7103006E	3.0	6	6	40	Short
★ SEME71030E	3.0	6	8	50	Regular
SEME7103010E	3.0	6	10	50	Long
SEME7103012E	3.0	6	12	50	Long
SEME7103014E	3.0	6	14	50	Long
SEME7104004E	4.0	6	4	40	Short
SEME7104008E	4.0	6	8	40	Short
★ SEME71040E	4.0	6	10	50	Regular
SEME7104012E	4.0	6	12	50	Long
SEME7104014E	4.0	6	14	50	Long
SEME7104016E	4.0	6	16	50	Long
SEME7105005E	5.0	6	5	50	Short
SEME7105010E	5.0	6	10	50	Short
★ SEME71050E	5.0	6	15	60	Regular
SEME7105020E	5.0	6	20	60	Long
SEME7105025E	5.0	6	25	60	Long
SEME7106006E	6.0	6	6	50	Short
SEME7106012E	6.0	6	12	50	Short
★ SEME71060E	6.0	6	15	60	Regular
SEME7106020E	6.0	6	20	60	Long
SEME7106025E	6.0	6	25	60	Long
SEME7108016E	8.0	8	16	60	Short
★ SEME71080E	8.0	8	20	70	Regular
SEME7108025E	8.0	8	25	70	Long

▶ ★ Stock Item

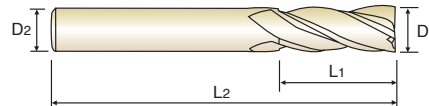


◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel	Acrylic	CFRP
~HB225	HB225~325	HRC30~40	HRc40~45	HRc45~55	HRc55~70									
○	◎	◎	◎	○					○					

## CARBIDE, 4 FLUTE MULTIPLE HELIX (Sharp corner removal) VOLLHARTMETALL, 4 SCHNEIDEN MEHRSPIRAL (Scharfe Schneidenecken entfernt)

- ▶ Due to new coating and new tool geometry, outstanding cutting ability and wear resistance.
  - ▶ Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRC55 and machine parts.
  - ▶ Due to Multiple Helix for 3.0mm and over 3.0mm diameter end mills, vibration can be minimized at cutting, and wear of cutting tool can be decreased too.
    - Designed equal index flute for long length end mills.
  - ▶ Due to gash land geometry used at end tooth, heavy duty cutting can be achieved.
  - ▶ Available various length products like short, regular and long length end mills etc.
- ▶ 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  $\geq 3,0\text{mm } \phi$  werden Vibrationen zuverlässig verhindert und gleichzeitig der Schneidkantenverschleiß verringert.
    - Designed mit gleichgeteilten Spannuten für überlange Schafffräser.
  - ▶ Aufgrund der korrigierten Stirnschneiden ist eine Schwerzerspannung möglich.
  - ▶ Erhältlich in verschiedenen Variationen: kurz, lang und extra lang.

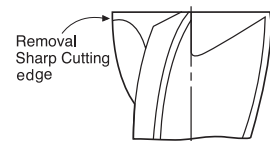

 D $\geq$ 3

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	Remark
	D1	D2	L1	L2	
SEME7108030E	8.0	8	30	70	Long
SEME7110022E	10.0	10	22	65	Short
★ SEME71100E	10.0	10	25	75	Regular
SEME7110030E	10.0	10	30	75	Long
SEME7110035E	10.0	10	35	75	Long
SEME7112026E	12.0	12	26	70	Short
★ SEME71120E	12.0	12	30	80	Regular
SEME7112035E	12.0	12	35	80	Long
SEME7112040E	12.0	12	40	80	Long
SEME71140E	14.0	16	35	100	Regular
★ SEME7116032E	16.0	16	32	100	Short
SEME71160E	16.0	16	40	100	Regular
SEME71180E	18.0	20	45	100	Regular
★ SEME71200E	20.0	20	45	100	Regular

▶ ★ Stock Item

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.03	h6



◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel	Acrylic	CFRP
~HB225	HB225~325	HRC30~40	HRC40~45	HRC45~55	HRC55~70									
○	◎	◎	◎	○					○					

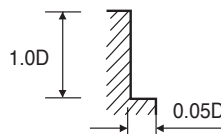


**RECOMMENDED CUTTING CONDITIONS  
EMPFOHLENE SCHNEIDKONDITIONEN**

**CARBIDE, 4 FLUTE MULTIPLE HELIX  
VOLLHARTMETALL, 4 SCHNEIDEN MEHRSPIRAL**

**SEME36, SEME71 SERIES**

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON				ALLOY STEELS HEAT RESISTANT STEELS				STAINLESS STEELS				HARDENED STEELS			
HARDNESS	~ HRc 35				HRc 35 ~ HRc 45								HRc 45 ~ HRc 55			
STRENGTH	~ 1100N/mm <sup>2</sup>				1110 ~ 1500N/mm <sup>2</sup>								1500 ~ 2000N/mm <sup>2</sup>			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
0.8	31250	235	79	0.002	18750	140	47	0.002	15630	120	39	0.002	12500	42	31	0.001
0.9	29300	245	83	0.002	17580	145	50	0.002	14650	120	41	0.002	11720	42	33	0.001
1.0	26800	250	84	0.002	16080	150	51	0.002	13400	125	42	0.002	10720	47	34	0.001
1.2	22500	265	85	0.003	13500	160	51	0.003	11250	130	42	0.003	9000	47	34	0.001
1.5	18750	270	88	0.004	11250	165	53	0.004	9380	135	44	0.004	7500	47	35	0.002
2.0	14450	295	91	0.005	9450	180	59	0.005	7880	145	50	0.005	6300	53	40	0.002
2.5	12800	315	101	0.006	8200	195	64	0.006	6830	165	54	0.006	5250	58	41	0.003
3.0	11150	335	105	0.008	6950	210	66	0.008	5780	180	54	0.008	4200	63	40	0.004
3.5	10300	465	113	0.011	6360	290	70	0.011	5310	235	58	0.011	3940	63	43	0.004
4.0	9450	600	119	0.016	5780	370	73	0.016	4850	295	61	0.015	3680	63	46	0.004
4.5	8660	615	122	0.018	5250	375	74	0.018	4400	305	62	0.017	3290	70	47	0.005
5.0	7880	630	124	0.020	4730	380	74	0.020	3950	315	62	0.020	2900	75	46	0.006
5.5	7410	660	128	0.022	4460	405	77	0.023	3750	330	65	0.022	2700	80	47	0.007
6.0	6950	695	131	0.025	4200	430	79	0.026	3550	345	67	0.024	2500	85	47	0.009
6.5	6530	710	133	0.027	3940	425	80	0.027	3320	350	68	0.026	2400	95	49	0.010
7.0	6100	720	134	0.030	3680	415	81	0.028	3090	355	68	0.029	2300	100	51	0.011
7.5	5680	735	134	0.032	3410	410	80	0.030	2860	360	67	0.031	2200	110	52	0.013
8.0	5250	745	132	0.035	3150	400	79	0.032	2630	370	66	0.035	2100	115	53	0.014
8.5	4960	720	132	0.036	2990	380	80	0.032	2490	355	66	0.036	2000	110	53	0.014
9.0	4660	695	132	0.037	2830	355	80	0.031	2360	340	67	0.036	1900	105	54	0.014
9.5	4370	665	130	0.038	2660	335	79	0.031	2230	330	67	0.037	1800	100	54	0.014
10.0	4080	640	128	0.039	2500	315	79	0.032	2100	315	66	0.038	1700	95	53	0.014
10.5	3910	620	129	0.040	2400	305	79	0.032	2000	300	66	0.038	1640	95	54	0.014
11.0	3750	595	130	0.040	2300	290	79	0.032	1900	285	66	0.038	1580	90	55	0.014
11.5	3590	570	130	0.040	2200	280	79	0.032	1800	270	65	0.038	1510	90	55	0.015
12.0	3430	545	129	0.040	2100	265	79	0.032	1700	250	64	0.037	1450	85	55	0.015
13.0	3260	520	133	0.040	2000	250	82	0.031	1620	240	66	0.037	1370	80	56	0.015
14.0	3090	490	136	0.040	1900	235	84	0.031	1540	230	68	0.037	1290	75	57	0.015
15.0	2920	460	138	0.039	1800	225	85	0.031	1460	220	69	0.038	1210	70	57	0.014
16.0	2750	440	138	0.040	1700	215	85	0.032	1380	210	69	0.038	1130	65	57	0.014
17.0	2590	410	138	0.040	1610	200	86	0.031	1290	200	69	0.039	1060	60	57	0.014
18.0	2430	385	137	0.040	1510	190	85	0.031	1210	185	68	0.038	990	55	56	0.014
19.0	2260	360	135	0.040	1420	180	85	0.032	1130	175	67	0.039	920	47	55	0.013
20.0	2100	335	132	0.040	1330	170	84	0.032	1050	160	66	0.038	850	42	53	0.012
21.0	2020	320	133	0.040	1270	165	84	0.032	1010	150	67	0.037	820	42	54	0.013
22.0	1940	310	134	0.040	1220	160	84	0.033	970	145	67	0.037	780	39	54	0.013
23.0	1860	295	134	0.040	1160	145	84	0.031	930	140	67	0.038	750	37	54	0.012
24.0	1780	280	134	0.039	1110	140	84	0.032	890	130	67	0.037	710	32	54	0.011
25.0	1700	265	134	0.039	1050	135	82	0.032	850	125	67	0.037	680	32	53	0.012



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

HSS

CBN  
END MILLS

i-Xmill  
END MILLS

i-HS mill  
END MILLS

X5070  
END MILLS

4G MILL  
END MILLS

X-SPEED  
ROUGHER  
END MILLS

X-POWER  
END MILLS

JET-POWER  
END MILLS

TN MILL  
END MILLS

V7 Mill  
END MILLS

ALU-POWER  
END MILLS

CRX S  
END MILLS

D-POWER  
GRAPHITE  
END MILLS

D-POWER  
CFRP  
END MILLS

ROUTERS

K-2 CARBIDE  
END MILLS

GENERAL  
CARBIDE  
END MILLS

TANK-POWER  
END MILLS

GENERAL  
HSS  
END MILLS

MILLING  
CUTTERS

TECHNICAL  
DATA