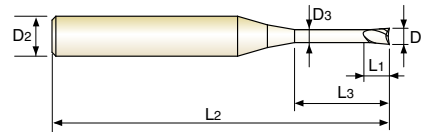


CARBIDE, 2 FLUTE with EXTENDED NECK

- VOLLHARTMETALL, 2 SCHNEIDEN mit ABGESETZTEM SCHAFTTETL
- Fraise carbure, 2 dents, détalonnée
- MD, 2 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.
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 - ▶ Available in several effective lengths of cut and also overall lengths to apply on various rib processing.
- ▶ 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.
 - ▶ Bei Fräsen mit einem $\phi \leq 1,0\text{mm}$ gewährleistet die "Doppel-Hals-Geometrie" eine erhöhte Werkzeugsteifigkeit und minimiert Vibrationen während der Bearbeitung.
 - ▶ Die Auswahl an verschiedenen Effektiv- und Gesamt-Längen der Werkzeuge ermöglicht die Herstellung der verschiedensten Steg- und Rippen-Variationen.



CARBIDE 2 30° PLAIN P.316-325

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	D1	D2	L1	L3	L2	D3
SEM845001003E	0.1	4	0.15	0.3	40	0.085
★ SEM845001005E	0.1	4	0.15	0.5	40	0.085
SEM84500101E	0.1	4	0.15	1	40	0.085
SEM84500150035SE	0.15	4	0.2	0.35	40	0.13
★ SEM845002005E	0.2	4	0.3	0.5	40	0.17
★ SEM84500201E	0.2	4	0.3	1	40	0.17
★ SEM845002015E	0.2	4	0.3	1.5	40	0.17
★ SEM84500202E	0.2	4	0.3	2	40	0.17
★ SEM84500301E	0.3	4	0.5	1	40	0.27
★ SEM845003015E	0.3	4	0.5	1.5	40	0.27
★ SEM84500302E	0.3	4	0.5	2	40	0.27
SEM845003025E	0.3	4	0.5	2.5	40	0.27
★ SEM84500303E	0.3	4	0.5	3	40	0.27
★ SEM84500304E	0.3	4	0.5	4	40	0.27
SEM84500305E	0.3	4	0.5	5	40	0.27
★ SEM84500401E	0.4	4	0.6	1	40	0.37
★ SEM845004015E	0.4	4	0.6	1.5	40	0.37
★ SEM84500402E	0.4	4	0.6	2	40	0.37
★ SEM845004025E	0.4	4	0.6	2.5	40	0.37
★ SEM84500403E	0.4	4	0.6	3	40	0.37
★ SEM84500404E	0.4	4	0.6	4	40	0.37
★ SEM84500405E	0.4	4	0.6	5	40	0.37
SEM84500406E	0.4	4	0.6	6	40	0.37
SEM84500408E	0.4	4	0.6	8	40	0.37

★ : Stock Item

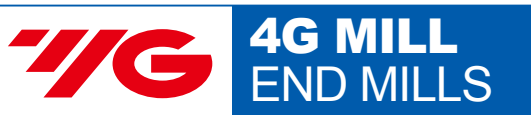
▶ NEXT PAGE

Size	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to $\phi 6$	0 ~ - 0.012	h5
over $\phi 6$	0 ~ - 0.015	

◎ : 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																		○	◎	○	○

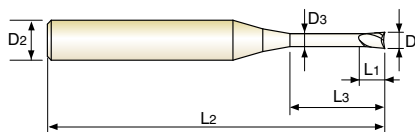


CARBIDE, 2 FLUTE with EXTENDED NECK

- **VOLLHARTMETALL, 2 SCHNEIDEN mit ABGESETZTEM SCHAFTTETTEL**
- **Fraise carbure, 2 dents, détalonnée**
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- ▶ Available in several effective lengths of cut and also overall lengths to apply on various rib processing.

- ▶ 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.
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- ▶ Die Auswahl an verschiedenen Effektiv- und Gesamt-Längen der Werkzeuge ermöglicht die Herstellung der verschiedensten Steg- und Rippen-Variationen.



Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	D1	D2	L1	L3	L2	D3
SEM84500410E	0.4	4	0.6	10	40	0.37
★ SEM84500501E	0.5	4	0.7	1	45	0.45
SEM845005015E	0.5	4	0.7	1.5	45	0.45
★ SEM84500502E	0.5	4	0.7	2	45	0.45
SEM845005025E	0.5	4	0.7	2.5	45	0.45
★ SEM84500503E	0.5	4	0.7	3	45	0.45
★ SEM84500504E	0.5	4	0.7	4	45	0.45
★ SEM84500505E	0.5	4	0.7	5	45	0.45
★ SEM84500506E	0.5	4	0.7	6	45	0.45
SEM84500508E	0.5	4	0.7	8	45	0.45
SEM84500510E	0.5	4	0.7	10	45	0.45
SEM84500512E	0.5	4	0.7	12	45	0.45
SEM84500514E	0.5	4	0.7	14	45	0.45
SEM84500516E	0.5	4	0.7	16	45	0.45
★ SEM84500602E	0.6	4	0.9	2	45	0.55
★ SEM84500603E	0.6	4	0.9	3	45	0.55
★ SEM84500604E	0.6	4	0.9	4	45	0.55
★ SEM84500605E	0.6	4	0.9	5	45	0.55
★ SEM84500606E	0.6	4	0.9	6	45	0.55
★ SEM84500608E	0.6	4	0.9	8	45	0.55
★ SEM84500610E	0.6	4	0.9	10	45	0.55
SEM84500612E	0.6	4	0.9	12	45	0.55
SEM84500614E	0.6	4	0.9	14	45	0.55
SEM84500616E	0.6	4	0.9	16	45	0.55

★ : Stock Item

▶ NEXT PAGE

Size	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to $\phi 6$	0 ~ - 0.012	h5
over $\phi 6$	0 ~ - 0.015	

◎ : 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											○	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎		



4G MILL END MILLS

PLAIN SHANK

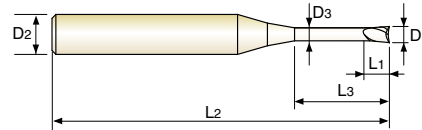
SEM845 SERIES

CARBIDE, 2 FLUTE with EXTENDED NECK

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- ▶ Die Auswahl an verschiedenen Effektiv- und Gesamt-Längen der Werkzeuge ermöglicht die Herstellung der verschiedensten Steg- und Rippen-Variationen.



P.316-325

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	D1	D2	L1	L3	L2	D3
★ SEM84500702E	0.7	4	1.2	2	45	0.65
★ SEM84500704E	0.7	4	1.2	4	45	0.65
★ SEM84500706E	0.7	4	1.2	6	45	0.65
SEM84500708E	0.7	4	1.2	8	45	0.65
SEM84500710E	0.7	4	1.2	10	45	0.65
SEM84500712E	0.7	4	1.2	12	45	0.65
★ SEM84500802E	0.8	4	1.2	2	45	0.75
★ SEM84500803E	0.8	4	1.2	3	45	0.75
★ SEM84500804E	0.8	4	1.2	4	45	0.75
★ SEM84500805E	0.8	4	1.2	5	45	0.75
★ SEM84500806E	0.8	4	1.2	6	45	0.75
★ SEM84500808E	0.8	4	1.2	8	45	0.75
★ SEM84500810E	0.8	4	1.2	10	45	0.75
SEM84500812E	0.8	4	1.2	12	45	0.75
SEM84500814E	0.8	4	1.2	14	45	0.75
SEM84500816E	0.8	4	1.2	16	45	0.75
SEM84500820E	0.8	4	1.2	20	45	0.75
SEM84500906E	0.9	4	1.3	6	45	0.85
SEM84500908E	0.9	4	1.3	8	45	0.85
SEM84500910E	0.9	4	1.3	10	45	0.85
★ SEM84501002E	1.0	4	1.5	2	50	0.95
★ SEM84501003E	1.0	4	1.5	3	50	0.95
★ SEM84501004E	1.0	4	1.5	4	50	0.95
★ SEM84501005E	1.0	4	1.5	5	50	0.95

★ : Stock Item

▶ NEXT PAGE

Size	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to $\phi 6$	0 ~ - 0.012	h5
over $\phi 6$	0 ~ - 0.015	

◎ : 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																		○	◎	○	○

YG 4G MILL END MILLS

PLAIN SHANK

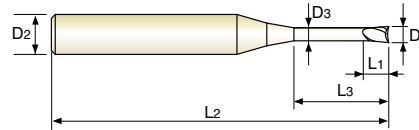
SEM845 SERIES

CARBIDE, 2 FLUTE with EXTENDED NECK

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- **Fraise carbure, 2 dents, détalonnée**
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- ▶ Bei Fräsern mit einem $\phi \leq 1,0\text{mm}$ gewährleistet die "Doppel-Hals-Geometrie" eine erhöhte Werkzeugsteifigkeit und minimiert Vibrationen während der Bearbeitung.
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CARBIDE 2 30° PLAIN P.316-325

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	D1	D2	L1	L3	L2	D3
★ SEM84501006E	1.0	4	1.5	6	50	0.95
SEM84501007E	1.0	4	1.5	7	50	0.95
★ SEM84501008E	1.0	4	1.5	8	50	0.95
★ SEM84501010E	1.0	4	1.5	10	50	0.95
★ SEM84501012E	1.0	4	1.5	12	50	0.95
★ SEM84501014E	1.0	4	1.5	14	50	0.95
★ SEM84501016E	1.0	4	1.5	16	50	0.95
SEM84501018E	1.0	4	1.5	18	50	0.95
★ SEM84501020E	1.0	4	1.5	20	50	0.95
SEM84501022E	1.0	4	1.5	22	60	0.95
SEM84501026E	1.0	4	1.5	26	60	0.95
SEM84501030E	1.0	4	1.5	30	70	0.95
SEM84501040E	1.0	4	1.5	40	80	0.95
SEM84501050E	1.0	4	1.5	50	100	0.95
SEM84501204E	1.2	4	1.8	4	50	1.15
★ SEM84501206E	1.2	4	1.8	6	50	1.15
★ SEM84501208E	1.2	4	1.8	8	50	1.15
★ SEM84501210E	1.2	4	1.8	10	50	1.15
★ SEM84501212E	1.2	4	1.8	12	50	1.15
SEM84501214E	1.2	4	1.8	14	50	1.15
SEM84501216E	1.2	4	1.8	16	50	1.15
SEM84501220E	1.2	4	1.8	20	50	1.15
SEM84501226E	1.2	4	1.8	26	60	1.15
SEM84501230E	1.2	4	1.8	30	70	1.15

★ : Stock Item

▶ NEXT PAGE

Size	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to $\phi 6$	0 ~ - 0.012	h5
over $\phi 6$	0 ~ - 0.015	

◎ : 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											○	○	○	○	○	○	○	○	○	◎	○		

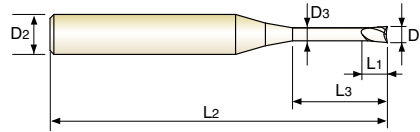
YG 4G MILL END MILLS

PLAIN SHANK **SEM845** SERIES

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CARBIDE 2 30° PLAIN P.316-325

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	D1	D2	L1	L3	L2	D3
★ SEM84501406E	1.4	4	2.1	6	50	1.35
★ SEM84501408E	1.4	4	2.1	8	50	1.35
SEM84501410E	1.4	4	2.1	10	50	1.35
SEM84501414E	1.4	4	2.1	14	50	1.35
SEM84501416E	1.4	4	2.1	16	50	1.35
SEM84501420E	1.4	4	2.1	20	50	1.35
★ SEM84501504E	1.5	4	2.3	4	50	1.45
SEM84501505E	1.5	4	2.3	5	50	1.45
★ SEM84501506E	1.5	4	2.3	6	50	1.45
SEM84501507E	1.5	4	2.3	7	50	1.45
★ SEM84501508E	1.5	4	2.3	8	50	1.45
★ SEM84501510E	1.5	4	2.3	10	50	1.45
★ SEM84501512E	1.5	4	2.3	12	50	1.45
★ SEM84501514E	1.5	4	2.3	14	50	1.45
★ SEM84501516E	1.5	4	2.3	16	50	1.45
★ SEM84501518E	1.5	4	2.3	18	50	1.45
★ SEM84501520E	1.5	4	2.3	20	50	1.45
SEM84501522E	1.5	4	2.3	22	60	1.45
SEM84501526E	1.5	4	2.3	26	60	1.45
SEM84501530E	1.5	4	2.3	30	70	1.45
SEM84501608E	1.6	4	2.3	8	50	1.55
SEM84501610E	1.6	4	2.3	10	50	1.55
SEM84501612E	1.6	4	2.3	12	50	1.55
SEM84501616E	1.6	4	2.3	16	50	1.55

★ : Stock Item

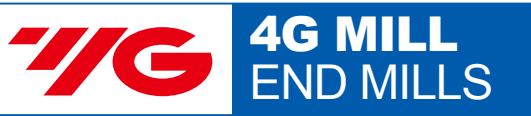
▶ NEXT PAGE

Size	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to $\phi 6$	0 ~ - 0.012	h5
over $\phi 6$	0 ~ - 0.015	

◎ : 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																		○	◎	○	○

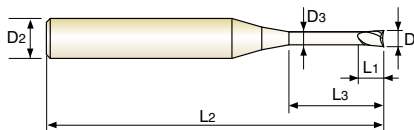


CARBIDE, 2 FLUTE with EXTENDED NECK

- **VOLLHARTMETALL, 2 SCHNEIDEN mit ABGESETZTEM SCHAFTTETTEL**
- **Fraise carbure, 2 dents, détalonnée**
- **MD, 2 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.
- ▶ For 1.0mm and under 1.0mm diameter size products, it is designed with a double neck to increase tool rigidity and to minimize vibration.
- ▶ Available in several effective lengths of cut and also overall lengths to apply on various rib processing.

- ▶ 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.
- ▶ Bei Fräsern mit einem $\phi \leq 1,0\text{mm}$ gewährleistet die "Doppel-Hals-Geometrie" eine erhöhte Werkzeugsteifigkeit und minimiert Vibrationen während der Bearbeitung.
- ▶ Die Auswahl an verschiedenen Effektiv- und Gesamt-Längen der Werkzeuge ermöglicht die Herstellung der verschiedensten Steg- und Rippen-Variationen.



Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	D1	D2	L1	L3	L2	D3
SEM84501620E	1.6	4	2.3	20	50	1.55
★ SEM84501808E	1.8	4	2.7	8	50	1.75
★ SEM84501810E	1.8	4	2.7	10	50	1.75
★ SEM84501812E	1.8	4	2.7	12	50	1.75
SEM84501816E	1.8	4	2.7	16	50	1.75
SEM84501820E	1.8	4	2.7	20	50	1.75
★ SEM84502006E	2.0	4	3	6	50	1.95
★ SEM84502008E	2.0	4	3	8	50	1.95
★ SEM84502010E	2.0	4	3	10	50	1.95
★ SEM84502012E	2.0	4	3	12	50	1.95
★ SEM84502014E	2.0	4	3	14	50	1.95
★ SEM84502016E	2.0	4	3	16	50	1.95
SEM84502018E	2.0	4	3	18	50	1.95
★ SEM84502020E	2.0	4	3	20	50	1.95
SEM84502022E	2.0	4	3	22	60	1.95
★ SEM84502026E	2.0	4	3	26	60	1.95
★ SEM84502030E	2.0	4	3	30	70	1.95
★ SEM84502035E	2.0	4	3	35	70	1.95
★ SEM84502040E	2.0	4	3	40	80	1.95
SEM84502045E	2.0	4	3	45	90	1.95
SEM84502050E	2.0	4	3	50	100	1.95
SEM84502060E	2.0	4	3	60	110	1.95
★ SEM84502508E	2.5	4	4	8	50	2.40
★ SEM84502510E	2.5	4	4	10	50	2.40

★ : Stock Item

▶ NEXT PAGE

Size	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to $\phi 6$	0 ~ - 0.012	h5
over $\phi 6$	0 ~ - 0.015	

◎ : 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																		◎	◎	◎	○

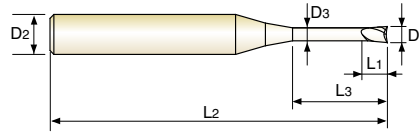
YG 4G MILL END MILLS

PLAIN SHANK **SEM845** SERIES

CARBIDE, 2 FLUTE with EXTENDED NECK

- VOLLHARTMETALL, 2 SCHNEIDEN mit ABGESETZTEM SCHAFTTETEL
- Fraise carbure, 2 dents, détalonnée
- MD, 2 TAGLIENTI, SPIGOLO VIVO, SERIE LUNGA

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 - ▶ Excellent for cutting prehardened steels, carbon steels, alloy steels of molds and dies, up to HRC55 and machine parts.
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- ▶ 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.
 - ▶ Bei Fräsern mit einem $\phi \leq 1,0\text{mm}$ gewährleistet die "Doppel-Hals-Geometrie" eine erhöhte Werkzeugsteifigkeit und minimiert Vibrationen während der Bearbeitung.
 - ▶ Die Auswahl an verschiedenen Effektiv- und Gesamt-Längen der Werkzeuge ermöglicht die Herstellung der verschiedensten Steg- und Rippen-Variationen.



CARBIDE 2 30° PLAIN P.316-325

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	D1	D2	L1	L3	L2	D3
★ SEM84502512E	2.5	4	4	12	50	2.40
SEM84502514E	2.5	4	4	14	50	2.40
★ SEM84502516E	2.5	4	4	16	50	2.40
SEM84502518E	2.5	4	4	18	50	2.40
★ SEM84502520E	2.5	4	4	20	50	2.40
SEM84502522E	2.5	4	4	22	60	2.40
★ SEM84502526E	2.5	4	4	26	60	2.40
SEM84502530E	2.5	4	4	30	70	2.40
SEM84502535E	2.5	4	4	35	70	2.40
SEM84502540E	2.5	4	4	40	80	2.40
SEM84502545E	2.5	4	4	45	90	2.40
SEM84502550E	2.5	4	4	50	100	2.40
★ SEM84503006E	3.0	6	4.5	6	50	2.85
★ SEM84503008E	3.0	6	4.5	8	50	2.85
★ SEM84503010E	3.0	6	4.5	10	50	2.85
★ SEM84503012E	3.0	6	4.5	12	50	2.85
★ SEM84503014E	3.0	6	4.5	14	60	2.85
★ SEM84503016E	3.0	6	4.5	16	60	2.85
★ SEM84503018E	3.0	6	4.5	18	60	2.85
★ SEM84503020E	3.0	6	4.5	20	60	2.85
SEM84503022E	3.0	6	4.5	22	65	2.85
★ SEM84503026E	3.0	6	4.5	26	65	2.85
★ SEM84503030E	3.0	6	4.5	30	70	2.85
★ SEM84503035E	3.0	6	4.5	35	70	2.85

★ : Stock Item

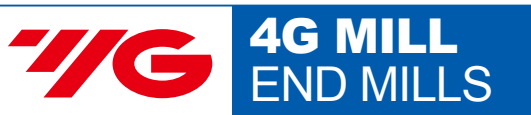
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Size	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to $\phi 6$	0 ~ - 0.012	h5
over $\phi 6$	0 ~ - 0.015	

◎ : 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	125	13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25	42	21	
HB	190	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	60	100	75	90	130	110	90	100			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																		○	◎	○	○

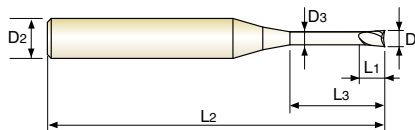


CARBIDE, 2 FLUTE with EXTENDED NECK

- **VOLLHARTMETALL, 2 SCHNEIDEN mit ABGESETZTEM SCHAFTTETL**
- **Fraise carbure, 2 dents, détalonnée**
- **MD, 2 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.
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- ▶ 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.
- ▶ Bei Fräsern mit einem $\phi \leq 1,0\text{mm}$ gewährleistet die "Doppel-Hals-Geometrie" eine erhöhte Werkzeugsteifigkeit und minimiert Vibrationen während der Bearbeitung.
- ▶ Die Auswahl an verschiedenen Effektiv- und Gesamt-Längen der Werkzeuge ermöglicht die Herstellung der verschiedensten Steg- und Rippen-Variationen.



CARBIDE 2 30° PLAIN P.316-325

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	D1	D2	L1	L3	L2	D3
★ SEM84503040E	3.0	6	4.5	40	80	2.85
SEM84503045E	3.0	6	4.5	45	90	2.85
SEM84503050E	3.0	6	4.5	50	100	2.85
SEM84503060E	3.0	6	4.5	60	100	2.85
SEM84504008E	4.0	6	6	8	50	3.85
★ SEM84504010E	4.0	6	6	10	50	3.85
★ SEM84504012E	4.0	6	6	12	50	3.85
SEM84504014E	4.0	6	6	14	60	3.85
★ SEM84504016E	4.0	6	6	16	60	3.85
★ SEM84504018E	4.0	6	6	18	60	3.85
★ SEM84504020E	4.0	6	6	20	60	3.85
SEM84504022E	4.0	6	6	22	65	3.85
★ SEM84504026E	4.0	6	6	26	65	3.85
★ SEM84504030E	4.0	6	6	30	70	3.85
★ SEM84504035E	4.0	6	6	35	70	3.85
★ SEM84504040E	4.0	6	6	40	80	3.85
★ SEM84504045E	4.0	6	6	45	90	3.85
SEM84504050E	4.0	6	6	50	100	3.85
SEM84504060E	4.0	6	6	60	100	3.85
SEM84505016E	5.0	6	8	16	60	4.85
★ SEM84505020E	5.0	6	8	20	60	4.85
SEM84505026E	5.0	6	8	26	65	4.85
★ SEM84505030E	5.0	6	8	30	70	4.85
★ SEM84505035E	5.0	6	8	35	75	4.85

★ : Stock Item

▶ NEXT PAGE

Size	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to $\phi 6$	0 ~ - 0.012	h5
over $\phi 6$	0 ~ - 0.015	

◎ : 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	14	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																		◎	◎	◎	○		



4G MILL END MILLS

PLAIN SHANK

SEM845 SERIES

CARBIDE, 2 FLUTE with EXTENDED NECK

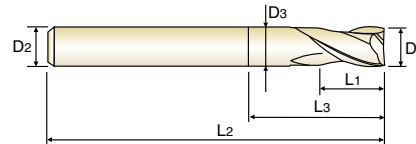
● VOLLHARTMETALL, 2 SCHNEIDEN mit ABGESETZTEM SCHAFTTETEL

○ Fraise carbure, 2 dents, détalonnée

○ MD, 2 TAGLIENTI, SPIGOLO VIVO, SERIE LUNGA

- ▶ New coating and tool geometry applied resulting outstanding cutting abilities and wear resistance.
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- ▶ Bei Fräsern mit einem $\phi \leq 1,0\text{mm}$ gewährleistet die "Doppel-Hals-Geometrie" eine erhöhte Werkzeugsteifigkeit und minimiert Vibrationen während der Bearbeitung.
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P.316-325

Unit : mm

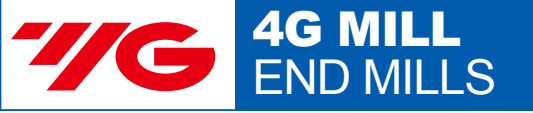
EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	D1	D2	L1	L3	L2	D3
★ SEM84505040E	5.0	6	8	40	80	4.85
★ SEM84505050E	5.0	6	8	50	90	4.85
SEM84505060E	5.0	6	8	60	100	4.85
★ SEM84506015E	6.0	6	9	15	60	5.85
★ SEM84506020E	6.0	6	9	20	60	5.85
★ SEM84506030E	6.0	6	9	30	70	5.85
★ SEM84506032E	6.0	6	9	32	90	5.85
★ SEM84508025E	8.0	8	12	25	70	7.70
★ SEM84508030E	8.0	8	12	30	80	7.70
★ SEM84508042E	8.0	8	12	42	100	7.70
★ SEM84510030E	10.0	10	15	30	75	9.70
SEM84510035E	10.0	10	15	35	80	9.70
★ SEM84510045E	10.0	10	15	45	100	9.70
★ SEM84512035E	12.0	12	20	35	80	11.70
SEM84512040E	12.0	12	20	40	90	11.70
★ SEM84512050E	12.0	12	20	50	110	11.70

★ : Stock Item

Size	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to $\phi 6$	0 ~ - 0.012	h5
over $\phi 6$	0 ~ - 0.015	

◎ : 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	60	100	75	90	130	110	90	100			15	30	25	38	34	400 Rm	1050 Rm	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																		○	◎	◎	○



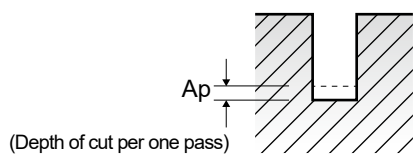
RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDPARAMETER

SEM845 SERIES 2 FLUTE - SLOTTING

Vc = m/min. fz = mm/tooth
RPM = rev./min. FEED = mm/min.
Ap = mm LBS = Length Below Shank

ISO	VDI 3323	Material Description	Parameter	Diameter (Ø)																
				0.1		0.15		0.2		0.2		0.3		0.3		0.3		0.4		
				LBS	0.3	0.5	1	0.35	0.5	1	1.5	2	2	1	1.5	2	2.5	3	4	5
P	1-5	Non-alloy steel	Vc	16	16	14	20	24	24	22	22	32	32	29	29	29	26	19	34	34
			fz	0.003	0.003	0.003	0.004	0.005	0.005	0.004	0.004	0.006	0.006	0.005	0.005	0.005	0.005	0.004	0.01	0.01
			RPM	50930	50930	44563	42441	38197	38197	35014	35014	33953	33953	30770	30770	30770	27587	20160	27056	27056
	6-8	Low alloy steel	FEED	306	306	267	340	382	382	280	280	407	407	308	308	308	276	161	541	541
			Ap	0.009	0.006	0.002	0.013	0.018	0.013	0.007	0.005	0.019	0.019	0.011	0.007	0.007	0.004	0.003	0.036	0.025
			Vc	16	16	14	20	24	24	22	22	32	32	29	29	29	26	19	34	34
	9	High alloyed steel, and tool steel	fz	0.003	0.003	0.003	0.004	0.005	0.005	0.004	0.006	0.006	0.005	0.005	0.005	0.005	0.004	0.01	0.01	
			RPM	50930	50930	44563	42441	38197	38197	35014	35014	33953	33953	30770	30770	30770	27587	20160	27056	27056
			FEED	306	306	267	340	382	382	280	280	407	407	308	308	308	276	161	541	541
	10-11.1	High alloyed steel, and tool steel	Ap	0.009	0.006	0.002	0.013	0.018	0.013	0.007	0.005	0.019	0.019	0.011	0.007	0.007	0.004	0.003	0.036	0.025
			Vc	15	15	13	19	23	23	21	21	30	30	27	27	27	24	18	32	32
			fz	0.002	0.002	0.002	0.003	0.004	0.004	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.007	0.007
11.2	High alloyed steel, and tool steel	RPM	47746	47746	41380	40319	36606	36606	33423	33423	31831	31831	28648	28648	28648	25465	19099	25465	25465	
		FEED	191	191	166	242	293	293	201	201	255	255	229	229	229	153	115	357	357	
		Ap	0.007	0.005	0.002	0.010	0.014	0.01	0.006	0.004	0.015	0.015	0.008	0.005	0.005	0.003	0.002	0.028	0.02	
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	Vc	16	16	14	20	24	24	22	22	32	32	29	29	29	26	19	34	34
			fz	0.003	0.003	0.003	0.004	0.005	0.005	0.004	0.004	0.006	0.006	0.005	0.005	0.005	0.005	0.004	0.01	0.01
			RPM	50930	50930	44563	42441	38197	38197	35014	35014	33953	33953	30770	30770	30770	27587	20160	27056	27056
H	38.1 - 38.2	Hardened steel	FEED	306	306	267	340	382	382	280	280	407	407	308	308	308	276	161	541	541
			Ap	0.009	0.006	0.002	0.013	0.018	0.013	0.007	0.005	0.019	0.019	0.011	0.007	0.007	0.004	0.003	0.036	0.025
			Vc	13	13	11	16	20	20	18	18	27	27	24	24	24	21	16	29	29
40	Chilled Cast Iron	fz	0.002	0.002	0.002	0.003	0.004	0.004	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.007	0.007	
		RPM	41380	41380	35014	33953	31831	31831	28648	28648	28648	28648	25465	25465	25465	22282	16977	23077	23077	
		FEED	166	166	140	136	191	191	172	172	229	229	204	204	204	134	102	277	277	
41	Hardened Cast Iron	Ap	0.005	0.004	0.001	0.007	0.01	0.007	0.004	0.003	0.011	0.011	0.006	0.004	0.004	0.002	0.002	0.02	0.014	
		Vc	15	15	13	19	23	23	21	21	30	30	27	27	27	24	18	32	32	
		fz	0.002	0.002	0.002	0.003	0.004	0.004	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.006	0.006	
ROUTERS	CRX S END MILLS	K-2 END MILLS	RPM	41380	41380	35014	33953	31831	31831	28648	28648	28648	28648	25465	25465	25465	22282	16977	23077	
			FEED	166	166	140	136	191	191	172	172	229	229	204	204	204	134	102	277	277
			Ap	0.005	0.004	0.001	0.007	0.01	0.007	0.004	0.003	0.011	0.011	0.006	0.004	0.004	0.002	0.002	0.02	0.014

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YG 4G MILL END MILLS

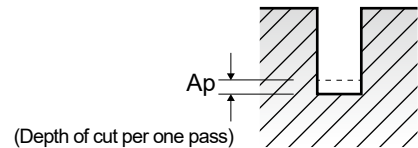
RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDPARAMETER

SEM845 SERIES 2 FLUTE - SLOTTING

Vc = m/min. fz = mm/tooth
RPM = rev./min. FEED = mm/min.
Ap = mm LBS = Length Below Shank

VDI 3323	Parameter	Diameter (Ø)																							
		0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	
1-5	Vc	34	31	31	31	28	28	21	10	43	43	43	43	39	39	39	34	26	26	13	13	4	52	52	
	fz	0.01	0.009	0.009	0.009	0.008	0.008	0.007	0.006	0.01	0.01	0.01	0.01	0.009	0.009	0.009	0.008	0.007	0.007	0.006	0.006	0.005	0.014	0.014	
	RPM	27056	24669	24669	24669	22282	22282	16711	7958	27375	27375	27375	27375	24828	24828	24828	21645	16552	16552	8276	8276	2546	27587	27587	
	FEED	541	444	444	444	357	357	234	95	547	547	547	547	447	447	447	346	232	232	99	99	25	772	772	
6-8	Vc	34	31	31	31	28	28	21	10	43	43	43	43	39	39	39	34	26	26	13	13	4	52	52	
	fz	0.01	0.009	0.009	0.009	0.008	0.008	0.007	0.006	0.01	0.01	0.01	0.01	0.009	0.009	0.009	0.008	0.007	0.007	0.006	0.006	0.005	0.014	0.014	
	RPM	27056	24669	24669	24669	22282	22282	16711	7958	27375	27375	27375	27375	24828	24828	24828	21645	16552	16552	8276	8276	2546	27587	27587	
	FEED	541	444	444	444	357	357	234	95	547	547	547	547	447	447	447	346	232	232	99	99	25	772	772	
9	Vc	32	29	29	29	26	26	19	10	41	41	41	41	36	36	36	32	24	24	12	12	4	49	49	
	fz	0.007	0.007	0.007	0.007	0.006	0.006	0.005	0.005	0.008	0.008	0.008	0.008	0.007	0.007	0.007	0.007	0.006	0.006	0.005	0.005	0.004	0.011	0.011	
	RPM	25465	23077	23077	23077	20690	20690	15120	7958	26101	26101	26101	26101	22918	22918	22918	20372	15279	15279	7639	7639	2546	25995	25995	
	FEED	357	323	323	323	248	248	151	80	418	418	418	418	321	321	321	285	183	183	76	76	20	572	572	
10 - 11.1	Vc	34	31	31	31	28	28	21	10	43	43	43	43	39	39	39	34	26	26	13	13	4	52	52	
	fz	0.01	0.009	0.009	0.009	0.008	0.008	0.007	0.006	0.01	0.01	0.01	0.01	0.009	0.009	0.009	0.008	0.007	0.007	0.006	0.006	0.005	0.014	0.014	
	RPM	27056	24669	24669	24669	22282	22282	16711	7958	27375	27375	27375	27375	24828	24828	24828	21645	16552	16552	8276	8276	2546	27587	27587	
	FEED	541	444	444	444	357	357	234	95	547	547	547	547	447	447	447	346	232	232	99	99	25	772	772	
11.2	Vc	32	29	29	29	26	26	19	10	41	41	41	41	36	36	36	32	24	24	12	12	4	49	49	
	fz	0.007	0.007	0.007	0.007	0.006	0.006	0.005	0.005	0.008	0.008	0.008	0.008	0.007	0.007	0.007	0.007	0.006	0.006	0.005	0.005	0.004	0.011	0.011	
	RPM	25465	23077	23077	23077	20690	20690	15120	7958	26101	26101	26101	26101	22918	22918	22918	20372	15279	15279	7639	7639	2546	25995	25995	
	FEED	357	323	323	323	248	248	151	80	418	418	418	418	321	321	321	285	183	183	76	76	20	572	572	
15 - 20	Vc	34	31	31	31	28	28	21	10	43	43	43	43	39	39	39	34	26	26	13	13	4	52	52	
	fz	0.01	0.009	0.009	0.009	0.008	0.008	0.007	0.006	0.01	0.01	0.01	0.01	0.009	0.009	0.009	0.008	0.007	0.007	0.006	0.006	0.005	0.014	0.014	
	RPM	27056	24669	24669	24669	22282	22282	16711	7958	27375	27375	27375	27375	24828	24828	24828	21645	16552	16552	8276	8276	2546	27587	27587	
	FEED	541	444	444	444	357	357	234	95	547	547	547	547	447	447	447	346	232	232	99	99	25	772	772	
38.1	Vc	29	26	26	26	23	23	17	9	36	36	36	36	32	32	32	29	21	21	11	11	4	43	43	
	fz	0.006	0.005	0.005	0.005	0.005	0.005	0.004	0.004	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.005	0.004	0.004	0.004	0.004	0.003	0.009	0.009	
	RPM	23077	20690	20690	20690	18303	18303	13528	7162	22918	22918	22918	22918	20372	20372	20372	18462	13369	13369	7003	7003	2546	22812	22812	
	FEED	277	207	207	207	183	183	108	57	275	275	275	275	244	244	244	185	107	107	56	56	15	411	411	
40	Vc	32	29	29	29	26	26	19	10	41	41	41	41	36	36	36	32	24	24	12	12	4	49	49	
	fz	0.007	0.007	0.007	0.007	0.006	0.006	0.005	0.005	0.008	0.008	0.008	0.008	0.007	0.007	0.007	0.007	0.006	0.006	0.005	0.005	0.004	0.011	0.011	
	RPM	25465	23077	23077	23077	20690	20690	15120	7958	26101	26101	26101	26101	22918	22918	22918	20372	15279	15279	7639	7639	2546	25995	25995	
	FEED	357	323	323	323	248	248	151	80	418	418	418	418	321	321	321	285	183	183	76	76	20	572	572	
41	Vc	29	26	26	26	23	23	17	9	36	36	36	36	32	32	32	29	21	21	11	11	4	43	43	
	fz	0.006	0.005	0.005	0.005	0.005	0.005	0.004	0.004	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.005	0.004	0.004	0.004	0.004	0.003	0.009	0.009	
	RPM	23077	20690	20690	20690	18303	18303	13528	7162	22918	22918	22918	22918	20372	20372	20372	18462	13369	13369	7003	7003	2546	22812	22812	
	FEED	277	207	207	207	183	183	108	57	275	275	275	275	244	244	244	185	107	107	56	56	15	411	411	

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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

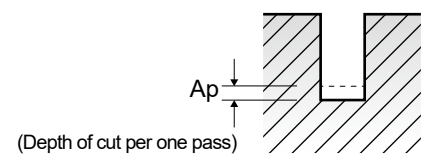
RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDPARAMETER

SEM845 SERIES 2 FLUTE - SLOTTING

Vc = m/min. fz = mm/tooth
RPM = rev./min. FEED = mm/min.
Ap = mm LBS = Length Below Shank

ISO	VDI 3323	Parameter	Diameter (Ø)																		
			0.6		0.6		0.6		0.6		0.6		0.6		0.7		0.7		0.8		
			LBS	4	5	6	8	10	12	14	16	2	4	6	8	10	12	2	3	4	5
P	1-5	Vc	46	46	46	41	31	31	15	15	60	54	54	48	48	36	69	69	69	62	62
		fz	0.013	0.013	0.013	0.011	0.01	0.01	0.009	0.009	0.014	0.013	0.013	0.011	0.011	0.01	0.014	0.014	0.014	0.013	0.013
		RPM	24404	24404	24404	21751	16446	16446	7958	7958	27284	24555	24555	21827	21827	16370	27454	27454	27454	24669	24669
		FEED	634	634	634	479	329	329	143	143	764	638	638	480	480	327	769	769	769	641	641
	6-8	Vc	46	46	46	41	31	31	15	15	60	54	54	48	48	36	69	69	69	62	62
		fz	0.013	0.013	0.013	0.011	0.01	0.01	0.009	0.009	0.014	0.013	0.013	0.011	0.011	0.01	0.014	0.014	0.014	0.013	0.013
		RPM	24404	24404	24404	21751	16446	16446	7958	7958	27284	24555	24555	21827	21827	16370	27454	27454	27454	24669	24669
		FEED	634	634	634	479	329	329	143	143	764	638	638	480	480	327	769	769	769	641	641
	9	Vc	44	44	44	39	29	29	15	15	57	51	51	45	45	34	65	65	65	58	58
		fz	0.009	0.009	0.009	0.008	0.007	0.007	0.006	0.006	0.011	0.009	0.009	0.008	0.008	0.007	0.012	0.012	0.012	0.011	0.011
		RPM	23343	23343	23343	20690	15385	15385	7958	7958	25920	23191	23191	20463	20463	15461	25863	25863	25863	23077	23077
		FEED	420	420	420	331	215	215	95	95	570	417	417	327	327	216	621	621	621	508	508
10-11.1	Vc	46	46	46	41	31	31	15	15	60	54	54	48	48	36	69	69	69	62	62	
	fz	0.013	0.013	0.013	0.011	0.01	0.01	0.009	0.009	0.014	0.013	0.013	0.011	0.011	0.01	0.014	0.014	0.014	0.013	0.013	
	RPM	24404	24404	24404	21751	16446	16446	7958	7958	27284	24555	24555	21827	21827	16370	27454	27454	27454	24669	24669	
	FEED	634	634	634	479	329	329	143	143	764	638	638	480	480	327	769	769	769	641	641	
11.2	Vc	44	44	44	39	29	29	15	15	57	51	51	45	45	34	65	65	65	58	58	
	fz	0.009	0.009	0.009	0.008	0.007	0.007	0.006	0.006	0.011	0.009	0.009	0.008	0.008	0.007	0.012	0.012	0.012	0.011	0.011	
	RPM	23343	23343	23343	20690	15385	15385	7958	7958	25920	23191	23191	20463	20463	15461	25863	25863	25863	23077	23077	
	FEED	420	420	420	331	215	215	95	95	570	417	417	327	327	216	621	621	621	508	508	
K	15-20	Vc	46	46	46	41	31	31	15	15	60	54	54	48	48	36	69	69	69	62	62
		fz	0.013	0.013	0.013	0.011	0.01	0.01	0.009	0.009	0.014	0.013	0.013	0.011	0.011	0.01	0.014	0.014	0.014	0.013	0.013
		RPM	24404	24404	24404	21751	16446	16446	7958	7958	27284	24555	24555	21827	21827	16370	27454	27454	27454	24669	24669
		FEED	634	634	634	479	329	329	143	143	764	638	638	480	480	327	769	769	769	641	641
H	38.1 - 38.2	Vc	39	39	39	34	26	26	13	13	50	45	45	40	40	30	57	57	57	52	52
		fz	0.008	0.008	0.008	0.007	0.006	0.006	0.005	0.005	0.009	0.008	0.008	0.007	0.007	0.006	0.01	0.01	0.01	0.009	0.009
		RPM	20690	20690	20690	18038	13793	13793	6897	6897	22736	20463	20463	18189	18189	13642	22680	22680	22680	20690	20690
		FEED	331	331	331	253	166	166	69	69	409	327	327	255	255	164	454	454	454	372	372
	40	Vc	44	44	44	39	29	29	15	15	57	51	51	45	45	34	65	65	65	58	58
		fz	0.009	0.009	0.009	0.008	0.007	0.007	0.006	0.006	0.011	0.009	0.009	0.008	0.008	0.007	0.012	0.012	0.012	0.011	0.011
		RPM	23343	23343	23343	20690	15385	15385	7958	7958	25920	23191	23191	20463	20463	15461	25863	25863	25863	23077	23077
		FEED	420	420	420	331	215	215	95	95	570	417	417	327	327	216	621	621	621	508	508
	41	Vc	39	39	39	34	26	26	13	13	50	45	45	40	40	30	57	57	57	52	52
		fz	0.008	0.008	0.008	0.007	0.006	0.006	0.005	0.005	0.009	0.008	0.008	0.007	0.007	0.006	0.01	0.01	0.01	0.009	0.009
		RPM	20690	20690	20690	18038	13793	13793	6897	6897	22736	20463	20463	18189	18189	13642	22680	22680	22680	20690	20690
		FEED	331	331	331	253	166	166	69	69	409	327	327	255	255	164	454	454	454	372	372

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YG 4G MILL END MILLS

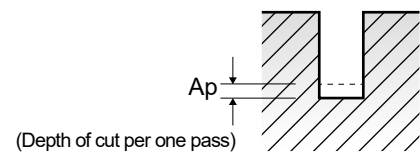
RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDPARAMETER

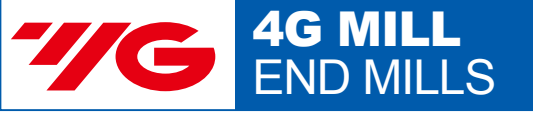
SEM845 SERIES 2 FLUTE - SLOTTING

Vc = m/min. fz = mm/tooth
RPM = rev./min. FEED = mm/min.
Ap = mm LBS = Length Below Shank

VDI 3323	Parameter	Diameter (Ø)																						
		0.8	1.0	0.8	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
		LBS	8	10	12	14	16	20	6	8	10	2	3	4	5	6	7	8	10	12	14	16	18	20
1-5	Vc	62	55	55	41	41	21	63	63	56	77	77	77	77	70	70	70	70	62	62	46	46	46	23
	fz	0.013	0.011	0.011	0.01	0.01	0.009	0.013	0.013	0.012	0.021	0.021	0.021	0.021	0.019	0.019	0.019	0.019	0.017	0.017	0.015	0.015	0.015	0.013
	RPM	24669	21884	21884	16313	16313	8356	22282	22282	19806	24510	24510	24510	24510	22282	22282	22282	22282	19735	19735	14642	14642	14642	7321
	FEED	641	481	481	326	326	150	579	579	475	1029	1029	1029	1029	847	847	847	847	671	671	439	439	439	190
6-8	Vc	62	55	55	41	41	21	63	63	56	77	77	77	77	70	70	70	70	62	62	46	46	46	23
	fz	0.013	0.011	0.011	0.01	0.01	0.009	0.013	0.013	0.012	0.021	0.021	0.021	0.021	0.019	0.019	0.019	0.019	0.017	0.017	0.015	0.015	0.015	0.013
	RPM	24669	21884	21884	16313	16313	8356	22282	22282	19806	24510	24510	24510	24510	22282	22282	22282	22282	19735	19735	14642	14642	14642	7321
	FEED	641	481	481	326	326	150	579	579	475	1029	1029	1029	1029	847	847	847	847	671	671	439	439	439	190
9	Vc	58	52	52	39	39	19	59	59	53	73	73	73	73	66	66	66	66	59	59	44	44	44	22
	fz	0.011	0.009	0.009	0.008	0.008	0.007	0.01	0.01	0.009	0.019	0.019	0.019	0.019	0.017	0.017	0.017	0.017	0.015	0.015	0.013	0.013	0.013	0.011
	RPM	23077	20690	20690	15518	15518	7560	20867	20867	18745	23237	23237	23237	23237	21008	21008	21008	21008	18780	18780	14006	14006	14006	7003
	FEED	508	372	372	248	248	106	417	417	337	883	883	883	883	714	714	714	714	563	563	364	364	364	154
10 - 11.1	Vc	62	55	55	41	41	21	63	63	56	77	77	77	77	70	70	70	70	62	62	46	46	46	23
	fz	0.013	0.011	0.011	0.01	0.01	0.009	0.013	0.013	0.012	0.021	0.021	0.021	0.021	0.019	0.019	0.019	0.019	0.017	0.017	0.015	0.015	0.015	0.013
	RPM	24669	21884	21884	16313	16313	8356	22282	22282	19806	24510	24510	24510	24510	22282	22282	22282	22282	19735	19735	14642	14642	14642	7321
	FEED	641	481	481	326	326	150	579	579	475	1029	1029	1029	1029	847	847	847	847	671	671	439	439	439	190
11.2	Vc	58	52	52	39	39	19	59	59	53	73	73	73	73	66	66	66	66	59	59	44	44	44	22
	fz	0.011	0.009	0.009	0.008	0.008	0.007	0.01	0.01	0.009	0.019	0.019	0.019	0.019	0.017	0.017	0.017	0.017	0.015	0.015	0.013	0.013	0.013	0.011
	RPM	23077	20690	20690	15518	15518	7560	20867	20867	18745	23237	23237	23237	23237	21008	21008	21008	21008	18780	18780	14006	14006	14006	7003
	FEED	508	372	372	248	248	106	417	417	337	883	883	883	883	714	714	714	714	563	563	364	364	364	154
15 - 20	Vc	62	55	55	41	41	21	63	63	56	77	77	77	77	70	70	70	70	62	62	46	46	46	23
	fz	0.013	0.011	0.011	0.01	0.01	0.009	0.013	0.013	0.012	0.021	0.021	0.021	0.021	0.019	0.019	0.019	0.019	0.017	0.017	0.015	0.015	0.015	0.013
	RPM	24669	21884	21884	16313	16313	8356	22282	22282	19806	24510	24510	24510	24510	22282	22282	22282	22282	19735	19735	14642	14642	14642	7321
	FEED	641	481	481	326	326	150	579	579	475	1029	1029	1029	1029	847	847	847	847	671	671	439	439	439	190
38.1 - 38.2	Vc	52	46	46	34	34	17	52	52	46	64	64	64	64	58	58	58	58	52	52	39	39	39	19
	fz	0.009	0.008	0.008	0.007	0.007	0.006	0.009	0.009	0.008	0.016	0.016	0.016	0.016	0.015	0.015	0.015	0.015	0.013	0.013	0.011	0.011	0.011	0.01
	RPM	20690	18303	18303	13528	13528	6764	18391	18391	16269	20372	20372	20372	20372	18462	18462	18462	18462	16552	16552	12414	12414	12414	6048
	FEED	372	293	293	189	189	81	331	331	260	652	652	652	652	554	554	554	554	430	430	273	273	273	121
40	Vc	58	52	52	39	39	19	59	59	53	73	73	73	73	66	66	66	66	59	59	44	44	44	22
	fz	0.011	0.009	0.009	0.008	0.008	0.007	0.01	0.01	0.009	0.019	0.019	0.019	0.019	0.017	0.017	0.017	0.017	0.015	0.015	0.013	0.013	0.013	0.011
	RPM	23077	20690	20690	15518	15518	7560	20867	20867	18745	23237	23237	23237	23237	21008	21008	21008	21008	18780	18780	14006	14006	14006	7003
	FEED	508	372	372	248	248	106	417	417	337	883	883	883	883	714	714	714	714	563	563	364	364	364	154
41	Vc	52	46	46	34	34	17	52	52	46	64	64	64	64	58	58	58	58	52	52	39	39	39	19
	fz	0.009	0.008	0.008	0.007	0.007	0.006	0.009	0.009	0.008	0.016	0.016	0.016	0.016	0.015	0.015	0.015	0.015	0.013	0.013	0.011	0.011	0.011	0.01
	RPM	20690	18303	18303	13528	13528	6764	18391	18391	16269	20372	20372	20372	20372	18462	18462	18462	18462	16552	16552	12414	12414	12414	6048
	FEED	372	293	293	189	189	81	331	331	260	652	652	652	652	554	554	554	554	430	430	273	273	273	121
Ap		0.01	0.01	0.006	0.004	0.004	0.004	0.018	0.011	0.011	0.05	0.05	0.035	0.035	0.02	0.02	0.02	0.02	0.013	0.013	0.008	0.008	0.005	0.005

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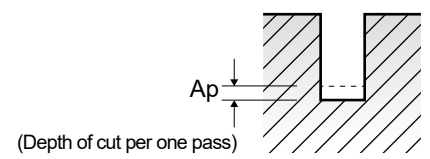
RECOMMENDED CUTTING CONDITIONS
EMPFOLHENE SCHNEIDPARAMETER

SEM845 SERIES 2 FLUTE - SLOTTING

Vc = m/min. fz = mm/tooth
 RPM = rev./min. FEED = mm/min.
 Ap = mm LBS = Length Below Shank

ISO	VDI 3323	Parameter	Diameter (Ø)																			
			1.0	1.0	1.0	1.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.4	1.4	1.4	1.4	1.4	
			LBS	26	30	40	50	4	6	8	10	12	14	16	20	26	30	6	8	10	14	16
P	1-5	Vc	23	23	8	8	83	83	74	74	74	66	66	50	25	25	84	76	76	76	68	
		fz	0.013	0.013	0.01	0.01	0.021	0.021	0.019	0.019	0.019	0.017	0.017	0.015	0.013	0.013	0.021	0.019	0.019	0.019	0.017	
		RPM	7321	7321	2546	2546	22016	22016	19629	19629	19629	17507	17507	13263	6631	6631	19099	17280	17280	17280	15461	
		FEED	190	190	51	51	925	925	746	746	746	595	595	398	172	172	802	657	657	657	526	
	6-8	Vc	23	23	8	8	83	83	74	74	74	66	66	50	25	25	84	76	76	76	68	
		fz	0.013	0.013	0.01	0.01	0.021	0.021	0.019	0.019	0.019	0.017	0.017	0.015	0.013	0.013	0.021	0.019	0.019	0.019	0.017	
		RPM	7321	7321	2546	2546	22016	22016	19629	19629	19629	17507	17507	13263	6631	6631	19099	17280	17280	17280	15461	
		FEED	190	190	51	51	925	925	746	746	746	595	595	398	172	172	802	657	657	657	526	
	9	Vc	22	22	7	7	78	78	70	70	70	62	62	47	23	23	80	72	72	72	64	
		fz	0.011	0.011	0.01	0.01	0.017	0.017	0.016	0.016	0.016	0.014	0.014	0.012	0.01	0.01	0.016	0.014	0.014	0.014	0.013	
		RPM	7003	7003	2228	2228	20690	20690	18568	18568	18568	16446	16446	12467	6101	6101	18189	16370	16370	16370	14551	
		FEED	154	154	45	45	703	703	594	594	594	460	460	299	122	122	582	458	458	458	378	
	10-11.1	Vc	23	23	8	8	83	83	74	74	74	66	66	50	25	25	84	76	76	76	68	
		fz	0.013	0.013	0.01	0.01	0.021	0.021	0.019	0.019	0.019	0.017	0.017	0.015	0.013	0.013	0.021	0.019	0.019	0.019	0.017	
		RPM	7321	7321	2546	2546	22016	22016	19629	19629	19629	17507	17507	13263	6631	6631	19099	17280	17280	17280	15461	
		FEED	190	190	51	51	925	925	746	746	746	595	595	398	172	172	802	657	657	657	526	
	11.2	Vc	22	22	7	7	78	78	70	70	70	62	62	47	23	23	80	72	72	72	64	
		fz	0.011	0.011	0.01	0.01	0.017	0.017	0.016	0.016	0.016	0.014	0.014	0.012	0.01	0.01	0.016	0.014	0.014	0.014	0.013	
		RPM	7003	7003	2228	2228	20690	20690	18568	18568	18568	16446	16446	12467	6101	6101	18189	16370	16370	16370	14551	
		FEED	154	154	45	45	703	703	594	594	594	460	460	299	122	122	582	458	458	458	378	
	K	15-20	Vc	23	23	8	8	83	83	74	74	74	66	66	50	25	25	84	76	76	76	68
			fz	0.013	0.013	0.01	0.01	0.021	0.021	0.019	0.019	0.019	0.017	0.017	0.015	0.013	0.013	0.021	0.019	0.019	0.019	0.017
			RPM	7321	7321	2546	2546	22016	22016	19629	19629	19629	17507	17507	13263	6631	6631	19099	17280	17280	17280	15461
			FEED	190	190	51	51	925	925	746	746	746	595	595	398	172	172	802	657	657	657	526
H	38.1 - 38.2	Vc	19	19	6	6	69	69	62	62	62	55	55	41	21	21	70	63	63	63	56	
		fz	0.01	0.01	0.009	0.009	0.013	0.013	0.012	0.012	0.012	0.011	0.011	0.009	0.008	0.008	0.013	0.012	0.012	0.012	0.011	
		RPM	6048	6048	1910	1910	18303	18303	16446	16446	16446	14589	14589	10876	5570	5570	15915	14324	14324	14324	12732	
		FEED	121	121	34	34	476	476	395	395	395	321	321	196	89	89	414	344	344	344	280	
	40	Vc	22	22	7	7	78	78	70	70	70	62	62	47	23	23	80	72	72	72	64	
		fz	0.011	0.011	0.01	0.01	0.017	0.017	0.016	0.016	0.016	0.014	0.014	0.012	0.01	0.01	0.016	0.014	0.014	0.014	0.013	
		RPM	7003	7003	2228	2228	20690	20690	18568	18568	18568	16446	16446	12467	6101	6101	18189	16370	16370	16370	14551	
		FEED	154	154	45	45	703	703	594	594	594	460	460	299	122	122	582	458	458	458	378	
	41	Vc	19	19	6	6	69	69	62	62	62	55	55	41	21	21	70	63	63	63	56	
		fz	0.01	0.01	0.009	0.009	0.013	0.013	0.012	0.012	0.012	0.011	0.011	0.009	0.008	0.008	0.013	0.012	0.012	0.012	0.011	
		RPM	6048	6048	1910	1910	18303	18303	16446	16446	16446	14589	14589	10876	5570	5570	15915	14324	14324	14324	12732	
		FEED	121	121	34	34	476	476	395	395	395	321	321	196	89	89	414	344	344	344	280	

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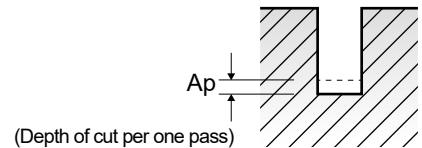


SEM845 SERIES 2 FLUTE - SLOTTING

Vc = m/min. fz = mm/tooth
RPM = rev./min. FEED = mm/min.
Ap = mm LBS = Length Below Shank

ISO	VDI 3323	Parameter	Diameter (Ø)																		
			1.8	1.8	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.5			
			LBS	16	20	6	8	10	12	14	16	18	20	22	26	30	35	40	45	50	60
P	1-5	Vc	91	81	90	90	90	81	81	81	81	81	72	72	72	54	54	27	27	27	97
		fz	0.021	0.019	0.028	0.028	0.028	0.026	0.026	0.026	0.026	0.026	0.023	0.023	0.023	0.02	0.02	0.017	0.017	0.017	0.039
		RPM	16092	14324	14324	14324	14324	12892	12892	12892	12892	12892	11459	11459	11459	8594	8594	4297	4297	4297	12350
		FEED	676	544	802	802	802	670	670	670	670	670	527	527	527	344	344	146	146	146	963
	6-8	Vc	91	81	90	90	90	81	81	81	81	81	72	72	72	54	54	27	27	27	97
		fz	0.021	0.019	0.028	0.028	0.028	0.026	0.026	0.026	0.026	0.023	0.023	0.023	0.02	0.02	0.017	0.017	0.017	0.039	
		RPM	16092	14324	14324	14324	14324	12892	12892	12892	12892	11459	11459	11459	8594	8594	4297	4297	4297	12350	
		FEED	676	544	802	802	802	670	670	670	670	527	527	527	344	344	146	146	146	963	
	9	Vc	86	76	85	85	85	77	77	77	77	77	68	68	68	51	51	26	26	26	91
		fz	0.018	0.016	0.023	0.023	0.023	0.02	0.02	0.02	0.02	0.018	0.018	0.018	0.016	0.016	0.013	0.013	0.013	0.029	
		RPM	15208	13440	13528	13528	13528	12255	12255	12255	12255	10823	10823	10823	8117	8117	4138	4138	4138	11586	
		FEED	547	430	622	622	622	490	490	490	490	390	390	390	260	260	108	108	108	672	
10-11.1	Vc	91	81	90	90	90	81	81	81	81	81	72	72	72	54	54	27	27	27	97	
	fz	0.021	0.019	0.028	0.028	0.028	0.026	0.026	0.026	0.026	0.026	0.023	0.023	0.023	0.02	0.02	0.017	0.017	0.017	0.039	
	RPM	16092	14324	14324	14324	14324	12892	12892	12892	12892	11459	11459	11459	8594	8594	4297	4297	4297	12350		
	FEED	676	544	802	802	802	670	670	670	670	527	527	527	344	344	146	146	146	963		
11.2	Vc	86	76	85	85	85	77	77	77	77	77	68	68	68	51	51	26	26	26	91	
	fz	0.018	0.016	0.023	0.023	0.023	0.02	0.02	0.02	0.02	0.018	0.018	0.018	0.016	0.016	0.013	0.013	0.013	0.029		
	RPM	15208	13440	13528	13528	13528	12255	12255	12255	12255	10823	10823	10823	8117	8117	4138	4138	4138	11586		
	FEED	547	430	622	622	622	490	490	490	490	390	390	390	260	260	108	108	108	672		
K	15-20	Vc	91	81	90	90	90	81	81	81	81	81	72	72	72	54	54	27	27	27	97
		fz	0.021	0.019	0.028	0.028	0.028	0.026	0.026	0.026	0.026	0.026	0.023	0.023	0.023	0.02	0.02	0.017	0.017	0.017	0.039
		RPM	16092	14324	14324	14324	14324	12892	12892	12892	12892	11459	11459	11459	8594	8594	4297	4297	4297	12350	
		FEED	676	544	802	802	802	670	670	670	670	527	527	527	344	344	146	146	146	963	
H	38.1 - 38.2	Vc	75	67	75	75	75	68	68	68	68	60	60	60	45	45	23	23	23	81	
		fz	0.015	0.013	0.02	0.02	0.02	0.018	0.018	0.018	0.018	0.018	0.016	0.016	0.016	0.014	0.014	0.012	0.012	0.012	0.025
		RPM	13263	11848	11937	11937	11937	10823	10823	10823	10823	9549	9549	9549	7162	7162	3661	3661	3661	10313	
		FEED	398	308	477	477	477	390	390	390	390	306	306	306	201	201	88	88	88	516	
	40	Vc	86	76	85	85	85	77	77	77	77	77	68	68	68	51	51	26	26	26	91
		fz	0.018	0.016	0.023	0.023	0.023	0.02	0.02	0.02	0.02	0.018	0.018	0.018	0.016	0.016	0.013	0.013	0.013	0.029	
		RPM	15208	13440	13528	13528	13528	12255	12255	12255	12255	10823	10823	10823	8117	8117	4138	4138	4138	11586	
		FEED	547	430	622	622	622	490	490	490	490	390	390	390	260	260	108	108	108	672	
	41	Vc	75	67	75	75	75	68	68	68	68	60	60	60	45	45	23	23	23	81	
		fz	0.015	0.013	0.02	0.02	0.02	0.018	0.018	0.018	0.018	0.018	0.016	0.016	0.016	0.014	0.014	0.012	0.012	0.012	0.025
		RPM	13263	11848	11937	11937	11937	10823	10823	10823	10823	9549	9549	9549	7162	7162	3661	3661	3661	10313	
		FEED	398	308	477	477	477	390	390	390	390	306	306	306	201	201	88	88	88	516	

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YG 4G MILL END MILLS

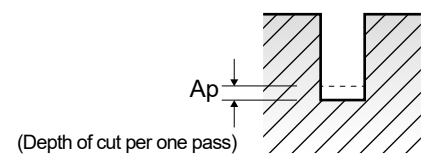
RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDPARAMETER

SEM845 SERIES 2 FLUTE - SLOTTING

Vc = m/min. fz = mm/tooth
RPM = rev./min. FEED = mm/min.
Ap = mm LBS = Length Below Shank

ISO	VDI 3323	Parameter	Diameter (Ø)																			
			3.0		3.0		3.0		3.0		3.0		4.0		4.0		4.0		4.0			
			LBS	30	35	40	45	50	60	8	10	12	14	16	18	20	22	26	30	35	40	45
P	1-5	Vc	92	82	82	82	62	62	101	101	101	101	101	101	101	101	90	90	90	90	90	80
		fz	0.035	0.032	0.032	0.032	0.028	0.028	0.081	0.081	0.081	0.081	0.081	0.081	0.081	0.073	0.073	0.073	0.073	0.073	0.065	
		RPM	9762	8700	8700	8700	6578	6578	8037	8037	8037	8037	8037	8037	8037	8037	7162	7162	7162	7162	7162	6366
	6-8	FEED	683	557	557	557	368	368	1302	1302	1302	1302	1302	1302	1302	1046	1046	1046	1046	1046	828	
		Ap	0.068	0.068	0.041	0.041	0.027	0.027	0.36	0.36	0.36	0.252	0.252	0.252	0.252	0.144	0.144	0.144	0.09	0.09	0.09	
		Vc	92	82	82	82	62	62	101	101	101	101	101	101	101	90	90	90	90	90	80	
	9	fz	0.035	0.032	0.032	0.032	0.028	0.028	0.081	0.081	0.081	0.081	0.081	0.081	0.081	0.073	0.073	0.073	0.073	0.073	0.065	
		RPM	9762	8700	8700	8700	6578	6578	8037	8037	8037	8037	8037	8037	8037	7162	7162	7162	7162	7162	6366	
		FEED	683	557	557	557	368	368	1302	1302	1302	1302	1302	1302	1302	1046	1046	1046	1046	1046	828	
	10-11.1	Ap	0.068	0.068	0.041	0.041	0.027	0.027	0.36	0.36	0.36	0.252	0.252	0.252	0.252	0.144	0.144	0.144	0.09	0.09	0.09	
		Vc	87	78	78	78	58	58	96	96	96	96	96	96	96	86	86	86	86	86	76	
		fz	0.026	0.023	0.023	0.023	0.021	0.021	0.076	0.076	0.076	0.076	0.076	0.076	0.076	0.069	0.069	0.069	0.069	0.069	0.061	
	11.2	RPM	9231	8276	8276	8276	6154	6154	7639	7639	7639	7639	7639	7639	7639	6844	6844	6844	6844	6844	6048	
		FEED	480	381	381	381	258	258	1161	1161	1161	1161	1161	1161	1161	944	944	944	944	944	738	
		Ap	0.053	0.053	0.032	0.032	0.021	0.021	0.28	0.28	0.28	0.196	0.196	0.196	0.196	0.112	0.112	0.112	0.07	0.07	0.07	
	K	15-20	Vc	92	82	82	82	62	62	101	101	101	101	101	101	101	90	90	90	90	90	80
			fz	0.035	0.032	0.032	0.032	0.028	0.028	0.081	0.081	0.081	0.081	0.081	0.081	0.081	0.073	0.073	0.073	0.073	0.073	0.065
			RPM	9762	8700	8700	8700	6578	6578	8037	8037	8037	8037	8037	8037	8037	7162	7162	7162	7162	7162	6366
H	38.1	FEED	683	557	557	557	368	368	1302	1302	1302	1302	1302	1302	1046	1046	1046	1046	1046	828		
		Ap	0.068	0.068	0.041	0.041	0.027	0.027	0.36	0.36	0.36	0.252	0.252	0.252	0.252	0.144	0.144	0.144	0.09	0.09	0.09	
		Vc	56	50	50	50	37	37	84	84	84	84	84	84	84	76	76	76	76	76	67	
	38.2	fz	0.031	0.027	0.027	0.027	0.024	0.024	0.057	0.057	0.057	0.057	0.057	0.057	0.057	0.052	0.052	0.052	0.052	0.052	0.046	
		RPM	5942	5305	5305	5305	3926	3926	6685	6685	6685	6685	6685	6685	6685	6048	6048	6048	6048	6048	5332	
		FEED	368	286	286	286	188	188	762	762	762	762	762	762	762	629	629	629	629	629	491	
	40	Ap	0.038	0.038	0.023	0.023	0.015	0.015	0.2	0.2	0.2	0.14	0.14	0.14	0.14	0.08	0.08	0.08	0.05	0.05	0.05	
		Vc	87	78	78	78	58	58	96	96	96	96	96	96	96	86	86	86	86	86	76	
		fz	0.026	0.023	0.023	0.023	0.021	0.021	0.076	0.076	0.076	0.076	0.076	0.076	0.076	0.069	0.069	0.069	0.069	0.069	0.061	
	41	RPM	9231	8276	8276	8276	6154	6154	7639	7639	7639	7639	7639	7639	7639	6844	6844	6844	6844	6844	6048	
		FEED	480	381	381	381	258	258	1161	1161	1161	1161	1161	1161	1161	944	944	944	944	944	738	
		Ap	0.053	0.053	0.032	0.032	0.021	0.021	0.28	0.28	0.28	0.196	0.196	0.196	0.196	0.112	0.112	0.112	0.07	0.07	0.07	
	D-POWER CFRP END MILLS	41	Vc	56	50	50	50	37	37	84	84	84	84	84	84	76	76	76	76	76	67	
			fz	0.031	0.027	0.027	0.027	0.024	0.024	0.057	0.057	0.057	0.057	0.057	0.057	0.057	0.052	0.052	0.052	0.052	0.052	0.046
			RPM	5942	5305	5305	5305	3926	3926	6685	6685	6685	6685	6685	6685	6685	6048	6048	6048	6048	6048	5332
	D-POWER GRAPHITE END MILLS	40	FEED	368	286	286	286	188	188	762	762	762	762	762	762	629	629	629	629	629	491	
			Ap	0.038	0.038	0.023	0.023	0.015	0.015	0.2	0.2	0.2	0.14	0.14	0.14	0.14	0.08	0.08	0.08	0.05	0.05	0.05
			Vc	87	78	78	78	58	58	96	96	96	96	96	96	96	86	86	86	86	86	76
ALU-POWER HPC END MILLS	38.1	fz	0.026	0.023	0.023	0.023	0.021	0.021	0.076	0.076	0.076	0.076	0.076	0.076	0.069	0.069	0.069	0.069	0.069	0.061		
		RPM	9231	8276	8276	8276	6154	6154	7639	7639	7639	7639	7639	7639	7639	6844	6844	6844	6844	6844	6048	
		FEED	480	381	381	381	258	258	1161	1161	1161	1161	1161	1161	1161	944	944	944	944	944	738	
ALU-POWER HPC END MILLS	38.2	Ap	0.053	0.053	0.032	0.032	0.021	0.021	0.28	0.28	0.28	0.196	0.196	0.196	0.196	0.112	0.112	0.112	0.07	0.07	0.07	
		Vc	56	50	50	50	37	37	84	84	84	84	84	84	84	76	76	76	76	76	67	
		fz	0.031	0.027	0.027	0.027	0.024	0.024	0.057	0.057	0.057	0.057	0.057	0.057	0.057	0.052	0.052	0.052	0.052	0.052	0.046	
V7 PLUS END MILLS	15-20	RPM	5942	5305	5305	5305	3926	3926	6685	6685	6685	6685	6685	6685	6685	6048	6048	6048	6048	6048	5332	
		FEED	368	286	286	286	188	188	762	762	762	762	762	762	629	629	629	629	629	491		
		Ap	0.038	0.038	0.023	0.023	0.015	0.015	0.2	0.2	0.2	0.14	0.14	0.14	0.14	0.08	0.08	0.08	0.05	0.05	0.05	

▶ NEXT PAGE



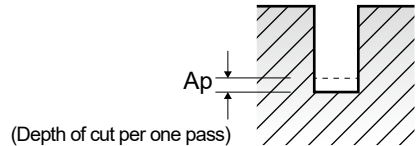
YG 4G MILL END MILLS

RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDPARAMETER

SEM845 SERIES 2 FLUTE - SLOTTING

Vc = m/min. fz = mm/tooth
RPM = rev./min. FEED = mm/min.
Ap = mm LBS = Length Below Shank

VDI 3323	Parameter	Diameter (Ø)																													
		4.0		5.0		5.0		5.0		5.0		6.0		6.0		6.0		8.0		8.0		8.0		10.0		10.0		12.0		12.0	
		LBS	50	60	16	20	26	30	35	40	50	60	15	20	30	32	25	30	42	30	35	45	35	40	50	30	35	45	35	40	50
1-5	Vc	80	80	101	101	90	90	90	90	90	80	100	100	100	90	101	101	90	101	101	90	101	101	101	101	101	101	100	100	100	
	fz	0.065	0.065	0.09	0.09	0.081	0.081	0.081	0.081	0.081	0.072	0.1	0.1	0.1	0.09	0.119	0.119	0.107	0.141	0.141	0.141	0.151	0.151	0.151	0.141	0.141	0.141	0.151	0.151	0.151	
	RPM	6366	6366	6430	6430	5730	5730	5730	5730	5730	5093	5305	5305	5305	4775	4019	4019	3581	3215	3215	3215	2653	2653	2653	3215	3215	3215	2653	2653	2653	
	FEED	828	828	1157	1157	928	928	928	928	928	733	1061	1061	1061	859	956	956	766	907	907	907	801	801	801	907	907	907	801	801	801	
6-8	Vc	80	80	101	101	90	90	90	90	90	80	100	100	100	90	101	101	90	101	101	90	101	101	101	101	101	100	100	100		
	fz	0.065	0.065	0.09	0.09	0.081	0.081	0.081	0.081	0.081	0.072	0.1	0.1	0.1	0.09	0.119	0.119	0.107	0.141	0.141	0.141	0.151	0.151	0.151	0.141	0.141	0.141	0.151	0.151	0.151	
	RPM	6366	6366	6430	6430	5730	5730	5730	5730	5730	5093	5305	5305	5305	4775	4019	4019	3581	3215	3215	3215	2653	2653	2653	3215	3215	3215	2653	2653	2653	
	FEED	828	828	1157	1157	928	928	928	928	928	733	1061	1061	1061	859	956	956	766	907	907	907	801	801	801	907	907	907	801	801	801	
9	Vc	76	76	96	96	86	86	86	86	86	77	94	94	94	85	96	96	85	96	96	85	96	96	96	96	96	96	95	95	95	
	fz	0.061	0.061	0.074	0.074	0.066	0.066	0.066	0.066	0.066	0.059	0.082	0.082	0.082	0.074	0.099	0.099	0.089	0.111	0.111	0.111	0.119	0.119	0.119	0.111	0.111	0.111	0.119	0.119	0.119	
	RPM	6048	6048	6112	6112	5475	5475	5475	5475	5475	4902	4987	4987	4987	4509	3820	3820	3382	3056	3056	3056	2520	2520	2520	3056	3056	3056	2520	2520	2520	
	FEED	738	738	905	905	723	723	723	723	723	578	818	818	818	667	756	756	602	678	678	678	600	600	600	678	678	678	600	600	600	
10 - 11.1	Vc	80	80	101	101	90	90	90	90	90	80	100	100	100	90	101	101	90	101	101	90	101	101	101	101	101	100	100	100		
	fz	0.065	0.065	0.09	0.09	0.081	0.081	0.081	0.081	0.081	0.072	0.1	0.1	0.1	0.09	0.119	0.119	0.107	0.141	0.141	0.141	0.151	0.151	0.151	0.141	0.141	0.141	0.151	0.151	0.151	
	RPM	6366	6366	6430	6430	5730	5730	5730	5730	5730	5093	5305	5305	5305	4775	4019	4019	3581	3215	3215	3215	2653	2653	2653	3215	3215	3215	2653	2653	2653	
	FEED	828	828	1157	1157	928	928	928	928	928	733	1061	1061	1061	859	956	956	766	907	907	907	801	801	801	907	907	907	801	801	801	
11.2	Vc	80	80	101	101	90	90	90	90	90	80	100	100	100	90	101	101	90	101	101	90	101	101	101	101	101	100	100	100		
	fz	0.061	0.061	0.074	0.074	0.066	0.066	0.066	0.066	0.066	0.059	0.082	0.082	0.082	0.074	0.099	0.099	0.089	0.111	0.111	0.111	0.119	0.119	0.119	0.111	0.111	0.111	0.119	0.119	0.119	
	RPM	6048	6048	6112	6112	5475	5475	5475	5475	5475	4902	4987	4987	4987	4509	3820	3820	3382	3056	3056	3056	2520	2520	2520	3056	3056	3056	2520	2520	2520	
	FEED	738	738	905	905	723	723	723	723	723	578	818	818	818	667	756	756	602	678	678	678	600	600	600	678	678	678	600	600	600	
15 - 20	Vc	80	80	101	101	90	90	90	90	90	80	100	100	100	90	101	101	90	101	101	90	101	101	101	101	101	100	100	100		
	fz	0.065	0.065	0.09	0.09	0.081	0.081	0.081	0.081	0.081	0.072	0.1	0.1	0.1	0.09	0.119	0.119	0.107	0.141	0.141	0.141	0.151	0.151	0.151	0.141	0.141	0.141	0.151	0.151	0.151	
	RPM	6366	6366	6430	6430	5730	5730	5730	5730	5730	5093	5305	5305	5305	4775	4019	4019	3581	3215	3215	3215	2653	2653	2653	3215	3215	3215	2653	2653	2653	
	FEED	828	828	1157	1157	928	928	928	928	928	733	1061	1061	1061	859	956	956	766	907	907	907	801	801	801	907	907	907	801	801	801	
38.1 - 38.2	Vc	67	67	85	85	76	76	76	76	76	68	83	83	83	75	83	83	74	83	83	83	82	82	82	83	83	82	82	82		
	fz	0.046	0.046	0.056	0.056	0.05	0.05	0.05	0.05	0.05	0.045	0.063	0.063	0.063	0.056	0.076	0.076	0.069	0.076	0.076	0.076	0.076	0.076	0.076	0.076	0.076	0.076	0.076	0.076		
	RPM	5332	5332	5411	5411	4838	4838	4838	4838	4838	4329	4403	4403	4403	3979	3302	3302	2944	2642	2642	2642	2175	2175	2175	2642	2642	2642	2175	2175	2175	
	FEED	491	491	606	606	484	484	484	484	484	390	555	555	555	446	502	502	406	402	402	402	348	348	348	402	402	402	348	348	348	
40	Vc	76	76	96	96	86	86	86	86	86	77	94	94	94	85	96	96	85	96	96	85	96	96	96	96	96	95	95	95		
	fz	0.061	0.061	0.074	0.074	0.066	0.066	0.066	0.066	0.066	0.059	0.082	0.082	0.082	0.074	0.099	0.099	0.089	0.111	0.111	0.111	0.119	0.119	0.119	0.111	0.111	0.111	0.119	0.119	0.119	
	RPM	6048	6048	6112	6112	5475	5475	5475	5475	5475	4902	4987	4987	4987	4509	3820	3820	3382	3056	3056	3056	2520	2520	2520	3056	3056	3056	2520	2520	2520	
	FEED	738	738	905	905	723	723	723	723	723	578	818	818	818	667	756	756	602	678	678	678	600	600	600	678	678	678	600	600	600	
41	Vc	67	67	85	85	76	76	76	76	76	68	83	83	83	75	83	83	74	83	83	83	82	82	82	83	83	82	82	82		
	fz	0.046	0.046	0.056	0.056	0.05	0.05	0.05	0.05	0.05	0.045	0.063	0.063	0.063	0.056	0.076	0.076	0.069	0.076	0.076	0.076	0.076	0.076	0.076	0.076	0.076	0.076	0.076	0.076		
	RPM	5332	5332	5411	5411	4838	4838	4838	4838	4838	4329	4403	4403	4403	3979	3302	3302	2944	2642	2642	2642	2175	2175	2175	2642	2642	2642	2175	2175	2175	
	FEED	491	491	606	606	484	484	484	484	484	390	555	555	555	446	502	502	406	402	402	402	348	348	348	402	402	402	348	348	348	
38.1 - 38.2	Vc	67	67	85	85	76	76	76	76	76	68	83	83	83	75	83	83	74	83	83	83	82	82	82	83	83	82	82	82		
	fz	0.046	0.046	0.056	0.056	0.05	0.05	0.05	0.05	0.05	0.045	0.063	0.063	0.063	0.056	0.076	0.076	0.069	0.076	0.076	0.076	0.076	0.076	0.076	0.076	0.076	0.076	0.076	0.076		
	RPM	5332	5332	5411	5411	4838	4838	4838	4838	4838	4329	4403	4403	4403	3979	3302	3302	2944	2642	2642	2642	2175	2175	2175	2642	2642	2642	2175	2175	2175	
	FEED	491	491	606	606	484	484	484	484	484	390	555	555	555	446	502	502	406	402	402	402	348	348	348	402	402	402	348	348	348	



HSS

CBN
END MILLS

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MODULAR
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X5070
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4G MILL
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PRO
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TitaNox-
POWER
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JET-POWER
END MILLS

V7 PLUS
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ALU-POWER
HPC
END MILLS

ALU-
POWER
END MILLS

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GRAPHITE
END MILLS

D-POWER
CFRP
END MILLS

ROUTERS

CRX S
END MILLS

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	○	○	○	○

