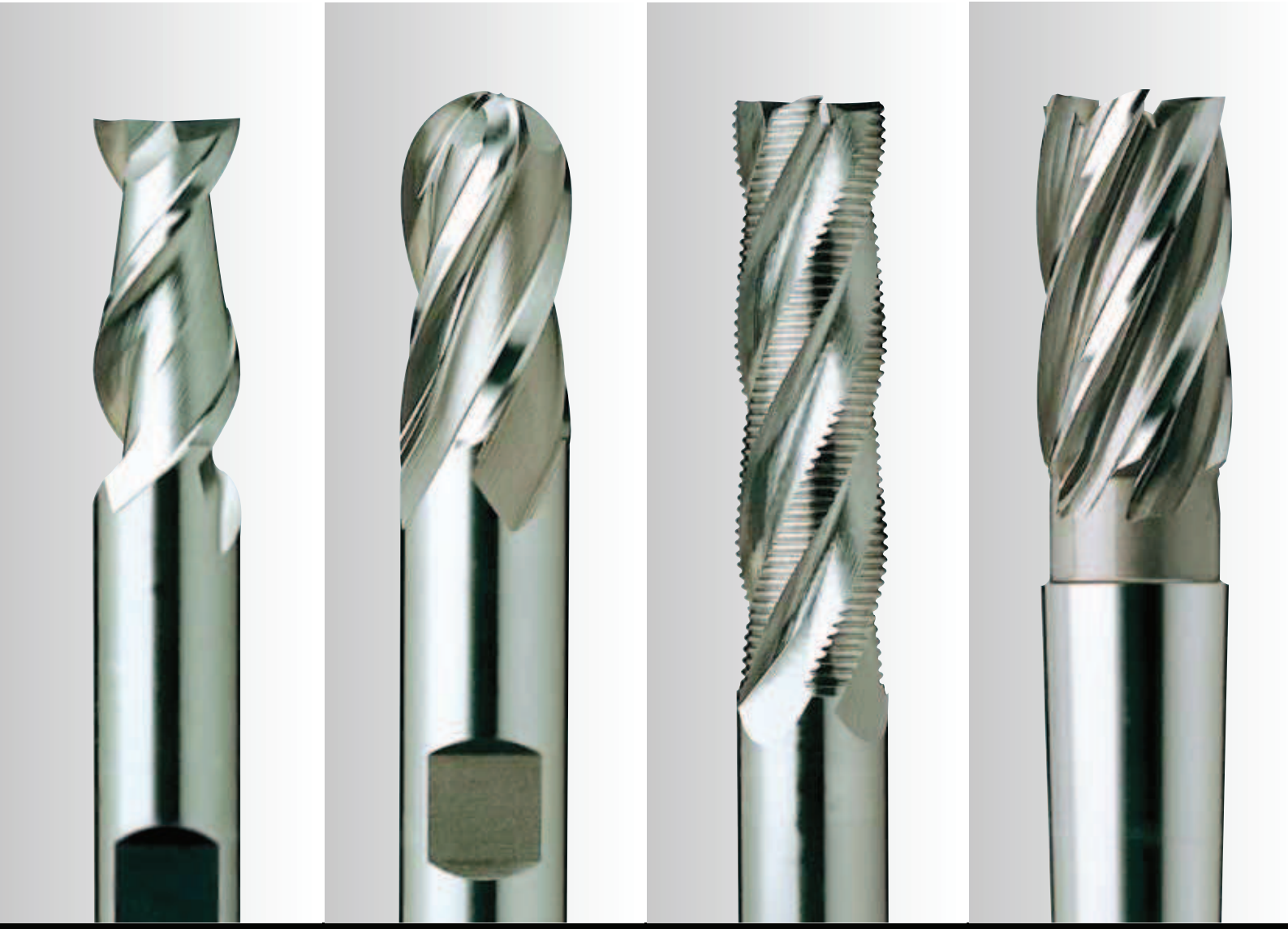
HSS

YG

Leading Through Innovation



GENERAL HSS END MILLS

ALLGEMEINEN HSS FRÄSER

- General Purpose, Non-coated, Any Coating Available
- Unbeschichtet für allgemeinen Einsatz. Jegliche Beschichtung möglich

SELECTION GUIDE

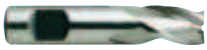
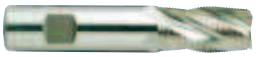
ITEM	MODEL	DESCRIPTION	SIZE MIN	SIZE MAX	PAGE
E9410		PREMIUM HSS-PM, 2 FLUTE SHORT LENGTH PREMIUM HSS-PM, 2 SCHNEIDEN KURZ	D2.0	D25.0	1380
E9720		PREMIUM HSS-PM, MULTI FLUTE SHORT LENGTH ROUGHING - FINE PREMIUM HSS-PM, MULTI SCHNEIDEN SCHRUPPFRÄSER KURZ - FEIN	D6.0	D30.0	1381
E3570		HSS-PM, 2 FLUTE SHORT LENGTH HSS-PM, 2 SCHNEIDEN KURZ	D2.0	D30.0	1382
E3574 E3575		HSS-PM, 4&6 FLUTE SHORT LENGTH HSS-PM, 4&6 SCHNEIDEN KURZ	D2.0 D22.0	D20.0 D30.0	1383
E3462 E3463		HSS-PM, 3&4 FLUTE 60° HELIX SHORT LENGTH HSS-PM, 3&4 SCHNEIDEN 60° RECHTSSPIRALE KURZ	D6.0 D25.0	D20.0 D30.0	1384
E2535		HSSCo8, 2 FLUTE SHORT LENGTH BALL NOSE HSSCo8, 2 SCHNEIDEN KURZ STIRNRADIUS	R1.0	R16.0	1385
E2492		HSSCo8, 2 FLUTE LONG LENGTH BALL NOSE HSSCo8, 2 SCHNEIDEN LANG STIRNRADIUS	R1.0	R15.0	1386
E2512		HSSCo8, 3 FLUTE SHORT LENGTH BALL NOSE THROW AWAY HSSCo8, 3 SCHNEIDEN KURZ STIRNRADIUS EINWEGFRÄSER	R1.0	R3.0	1387
E2410		HSSCo8, 4&6 FLUTE SHORT LENGTH BALL NOSE HSSCo8, 4&6 SCHNEIDEN KURZ STIRNRADIUS	R3.0	R12.5	1388
E2429		HSSCo8, 4&6 FLUTE LONG LENGTH BALL NOSE HSSCo8, 4&6 SCHNEIDEN LANG STIRNRADIUS	R5.0	R12.5	1389
EL623		HSS-E, 1 FLUTE HSS-E, 1 SCHNEIDEN	D3.0	D10.0	1390
EL612		HSS-E, 1 FLUTE for ALUMINUM HSS-E, 1 SCHNEIDEN für ALUMINIUM	D3.0	D10.0	1391
E2570		HSSCo8, 2 FLUTE SHORT LENGTH HSSCo8, 2 SCHNEIDEN KURZ	D1.0	D40.0	1392
E2571		HSSCo8, 2 FLUTE LONG LENGTH HSSCo8, 2 SCHNEIDEN LANG	D1.5	D40.0	1395
E2510		HSSCo8, 2 FLUTE EXTRA LONG LENGTH HSSCo8, 2 SCHNEIDEN EXTRA LANG	D2.5	D40.0	1397
E2464		HSSCo8, 2 FLUTE 42° HELIX SHORT LENGTH for ALUMINUM HSSCo8, 2 SCHNEIDEN 42° RECHTSSPIRALE KURZ für ALUMINIUM	D1.0	D32.0	1398
E2509		HSSCo8, 2 FLUTE 42° HELIX LONG LENGTH for ALUMINUM HSSCo8, 2 SCHNEIDEN 42° RECHTSSPIRALE LANG für ALUMINIUM	D2.0	D20.0	1400
E2572		HSSCo8, 3 FLUTE STUB LENGTH HSSCo8, 3 SCHNEIDEN EXTRA KURZ	D1.5	D32.0	1401

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎									○				
○										◎				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
○										◎				
○										◎				
◎	◎	○								○				

▶ NEXT PAGE

SELECTION GUIDE

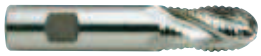
ITEM	MODEL	DESCRIPTION	SIZE MIN	SIZE MAX	PAGE
E2573		HSSCo8, 3 FLUTE SHORT LENGTH HSSCo8, 3 SCHNEIDEN KURZ	D1.0	D40.0	1402
E2516		HSSCo8, 3 FLUTE LONG LENGTH HSSCo8, 3 SCHNEIDEN LANG	D2.0	D40.0	1404
E2553		HSSCo8, 3 FLUTE SHORT LENGTH THROW AWAY HSSCo8, 3 SCHNEIDEN KURZ EINWEGFRÄSER	D1.0	D20.0	1406
E2SET553		HSSCo8, THROW AWAY SET (NON-COATED) HSSCo8, EINWEG-SCHAFTFRÄSER SET (NICHT-BESCHICHTET)	D2.0	D10.0	1407
E2554		HSSCo8, 3 FLUTE LONG LENGTH THROW AWAY HSSCo8, 3 SCHNEIDEN LANG EINWEGFRÄSER	D1.5	D10.0	1408
E2551		HSSCo8, 3 FLUTE SHORT LENGTH THROW AWAY HSSCo8, 3 SCHNEIDEN KURZ EINWEGFRÄSER	D1.0	D10.0	1409
E2552		HSSCo8, 3 FLUTE LONG LENGTH THROW AWAY HSSCo8, 3 SCHNEIDEN LANG EINWEGFRÄSER	D1.5	D10.0	1410
E2574 E2575		HSSCo8, 4&6 FLUTE SHORT LENGTH HSSCo8, 4&6 SCHNEIDEN KURZ	D2.0 D21.0	D20.0 D40.0	1411
E2595 E2596		HSSCo8, 4&6 FLUTE SHORT LENGTH - CENTER CUTTING HSSCo8, 4&6 SCHNEIDEN KURZ	D2.0 D22.0	D25.0 D40.0	1412
E2576 E2577		HSSCo8, 4&6 FLUTE LONG LENGTH HSSCo8, 4&6 SCHNEIDEN LANG	D2.0 D22.0	D20.0 D40.0	1413
E2597 E2598		HSSCo8, 4&6 FLUTE LONG LENGTH - CENTER CUTTING HSSCo8, 4&6 SCHNEIDEN LANG	D2.0 D22.0	D20.0 D40.0	1414
E2776		HSSCo8, MULTI FLUTE SHORT LENGTH HSSCo8, MULTI SCHNEIDEN KURZ	D14.0	D50.0	1415
E2461 E2462 E2463		HSSCo8, MULTI FLUTE 50° HELIX SHORT LENGTH HSSCo8, MULTI SCHNEIDEN 50° RECHTSSPIRALE KURZ	D2.0 D6.0 D22.0	D5.0 D23.0 D30.0	1416
E2761		HSSCo8, MULTI FLUTE SHORT LENGTH ROUGHING - EXTRA FINE HSSCo8, MULTI SCHNEIDEN KURZ SCHRUPPFRÄSER - EXTRA FEIN	D6.0	D25.0	1417
E2606		HSSCo8, 3&4 FLUTE SHORT LENGTH ROUGHING BALL NOSE - FINE HSSCo8, 3&4 SCHNEIDEN KURZ SCHRUPPFRÄSER STIRNRADIUS - FEIN	R3.0	R20.0	1418
E2524		HSSCo8, 3&4 FLUTE STUB LENGTH ROUGHING - FINE HSSCo8, 3&4 SCHNEIDEN EXTRA KURZ SCHRUPPFRÄSER - FEIN	D6.0	D20.0	1419
E2753		HSSCo8, MULTI FLUTE SHORT LENGTH ROUGHING - FINE HSSCo8, MULTI SCHNEIDEN KURZ SCHRUPPFRÄSER - FEIN	D6.0	D40.0	1420
E2762		HSSCo8, MULTI FLUTE LONG LENGTH ROUGHING - FINE HSSCo8, MULTI SCHNEIDEN LANG SCHRUPPFRÄSER - FEIN	D6.0	D40.0	1421

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○												
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				

▶ NEXT PAGE

SELECTION GUIDE

ITEM	MODEL	DESCRIPTION	SIZE MIN	SIZE MAX	PAGE
E2757		HSSCo8, 3&4 FLUTE SHORT LENGTH ROUGHING BALL NOSE - COARSE HSSCo8, 3&4 SCHNEIDEN KURZ SCHRUPPFRÄSER STIRNRADIUS - GROB	R3.0	R20.0	1422
E2751 E2764		HSSCo8, 3 FLUTE SHORT LENGTH ROUGHING - COARSE HSSCo8, 3 SCHNEIDEN KURZ SCHRUPPFRÄSER - GROB	D6.0 D10.0	D8.0 D40.0	1423
E2752 E2765		HSSCo8, 3 FLUTE LONG LENGTH ROUGHING - COARSE HSSCo8, 3 SCHNEIDEN LANG SCHRUPPFRÄSER - GROB	D6.0 D10.0	D8.0 D40.0	1424
E2755		HSSCo8, 3 FLUTE 37° HELIX SHORT LENGTH ROUGHING for ALUMINUM HSSCo8, 3 SCHNEIDEN 37° RECHTSSPIRALE KURZ SCHRUPPFRÄSER für ALUMINIUM	D6.0	D30.0	1425
E2756		HSSCo8, 3 FLUTE 37° HELIX LONG LENGTH ROUGHING for ALUMINUM HSSCo8, 3 SCHNEIDEN 37° RECHTSSPIRALE LANG SCHRUPPFRÄSER für ALUMINIUM	D10.0	D30.0	1426
E2751		HSSCo8, MULTI FLUTE SHORT LENGTH ROUGHING - COARSE HSSCo8, MULTI SCHNEIDEN KURZ SCHRUPPFRÄSER - GROB	D6.0	D50.0	1427
E2752		HSSCo8, MULTI FLUTE LONG LENGTH ROUGHING - COARSE HSSCo8, MULTI SCHNEIDEN LANG SCHRUPPFRÄSER - GROB	D6.0	D40.0	1429
E2778		HSSCo8, MULTI FLUTE SHORT LENGTH ROUGHING - FINE HSSCo8, MULTI SCHNEIDEN KURZ SCHRUPPFRÄSER - FEIN	D16.0	D50.0	1430
E2777		HSSCo8, MULTI FLUTE SHORT LENGTH ROUGHING - COARSE HSSCo8, MULTI SCHNEIDEN KURZ SCHRUPPFRÄSER - GROB	D14.0	D50.0	1431
E2779		HSSCo8, MULTI FLUTE SHORT LENGTH ROUGHING & FINISHING HSSCo8, MULTI SCHNEIDEN KURZ SCHRUPPSCHLICHTFRÄSER	D16.0	D50.0	1432
E2766		HSSCo8, 3 FLUTE SHORT LENGTH ROUGHING & FINISHING HSSCo8, 3 SCHNEIDEN KURZ SCHRUPPSCHLICHTFRÄSER	D6.0	D40.0	1433
E2767		HSSCo8, 3 FLUTE LONG LENGTH ROUGHING & FINISHING HSSCo8, 3 SCHNEIDEN LANG SCHRUPPSCHLICHTFRÄSER	D6.0	D40.0	1434
E2754		HSSCo8, MULTI FLUTE SHORT LENGTH ROUGHING & FINISHING HSSCo8, MULTI SCHNEIDEN KURZ SCHRUPPSCHLICHTFRÄSER	D6.0	D40.0	1435
E2768		HSSCo8, MULTI FLUTE LONG LENGTH ROUGHING & FINISHING HSSCo8, MULTI SCHNEIDEN LANG SCHRUPPSCHLICHTFRÄSER	D6.0	D45.0	1436
		RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN			1437

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	○									◎				
◎	○									◎				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				

HSS END MILLS

E9410 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

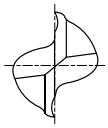
EP410 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

PREMIUM HSS-PM, 2 FLUTE SHORT LENGTH

PREMIUM HSS-PM, 2 SCHNEIDEN KURZ

Fraise HSS-PM Premium, 2 dents, courte

HSS-PM, 2 TAGLIENTI, SERIE CORTA



YPM | DIN 327 | N | 2 | 30° | DIN 1835B

P.1437

Unit : mm

EDP No. UNCOATED	EDP No. TiAlN	Mill Diameter e8	Shank Diameter h6	Length of Cut	Overall Length
E9410020	EP410020	2.0	6	4	48
E9410030	EP410030	3.0	6	5	49
E9410040	EP410040	4.0	6	7	51
E9410050	EP410050	5.0	6	8	52
E9410060	EP410060	6.0	6	8	52
E9410080	EP410080	8.0	10	11	61
E9410100	EP410100	10.0	10	13	63
E9410120	EP410120	12.0	12	16	73
E9410140	EP410140	14.0	12	16	73
E9410160	EP410160	16.0	16	19	79
E9410180	EP410180	18.0	16	19	79
E9410200	EP410200	20.0	20	22	88
E9410220	EP410220	22.0	20	22	88
E9410250	EP410250	25.0	25	26	102

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in ㎛ / Toleranzwerte in ㎛						
Nominal-Diameter in mm / Nennmaßbereich in mm						
	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
e8	– 14 – 28	– 20 – 38	– 25 – 47	– 32 – 59	– 40 – 73	– 50 – 89
h6	0 – 6	0 – 8	0 – 9	0 – 11	0 – 13	0 – 16

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E9720 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

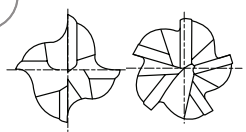
EP720 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

PREMIUM HSS-PM, MULTI FLUTE SHORT LENGTH ROUGHING - FINE

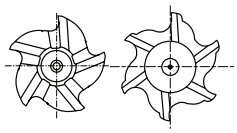
PREMIUM HSS-PM, MULTI SCHNEIDEN KURZ SCHRUPPFRÄSER - FEIN

Fraise HSS-PM Premium, multi-dents ébauche, pas fin, courte

HSS-PM, MULTITAGLIENTE, SERIE CORTA, PER SGROSSAATURA, BOMBATO FINE



Up to Ø20mm



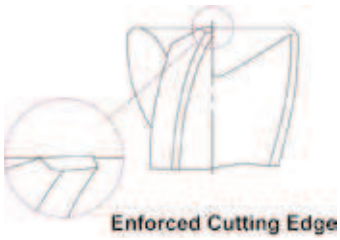
Over Ø20mm

YPM | DIN 844 | HR | 4-6 | 30° | DIN 1835B | ~Ø8 | Ø8~Ø20 | Ø22~ | C x 45° P.1438

Unit : mm

EDP No. UNCOATED	EDP No. TiAlN	Mill Diameter js12	Shank Diameter h6	Length of Cut	Overall Length	No. of Flute	Chamfer
E9720060	EP720060	6.0	6	13	57	4	0.18
E9720070	EP720070	7.0	10	16	66	4	0.18
E9720080	EP720080	8.0	10	19	69	4	0.18
E9720090	EP720090	9.0	10	19	69	5	0.18
E9720100	EP720100	10.0	10	22	72	5	0.18
E9720110	EP720110	11.0	12	22	79	5	0.18
E9720120	EP720120	12.0	12	26	83	5	0.18
E9720130	EP720130	13.0	12	26	83	5	0.18
E9720140	EP720140	14.0	12	26	83	5	0.25
E9720150	EP720150	15.0	12	26	83	5	0.25
E9720160	EP720160	16.0	16	32	92	5	0.25
E9720180	EP720180	18.0	16	32	92	5	0.25
E9720200	EP720200	20.0	20	38	104	5	0.25
E9720220	EP720220	22.0	20	38	104	5	0.30
E9720250	EP720250	25.0	25	45	121	6	0.36
E9720300	EP720300	30.0	25	45	121	6	0.33

▶ Other shank design on your request.
▶ TiN and TiCN Coatings are available on your request.



Enforced Cutting Edge

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in μm / Toleranzwerte in μm

Nominal-Diameter in mm / Nennmaßbereich in mm	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
js12	±50	±60	±75	±90	±105	±125
h6	0 / −6	0 / −8	0 / −9	0 / −11	0 / −13	0 / −16

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

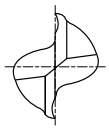
HSS END MILLS

E3570 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

ER570 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

HSS-PM, 2 FLUTE SHORT LENGTH

HSS-PM, 2 SCHNEIDEN KURZ
Fraise HSS-PM, 2 dents, courte
HSS-PM, 2 TAGLIENTI, SERIE CORTA



HSS PM | DIN 327 | N | 2 | 30° | DIN 1835B

P.1439

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAlN	e8	h6		
E3570020	ER570020	2.0	6	4	48
E3570025	ER570025	2.5	6	5	49
E3570030	ER570030	3.0	6	5	49
E3570040	ER570040	4.0	6	7	51
E3570050	ER570050	5.0	6	8	52
E3570060	ER570060	6.0	6	8	52
E3570070	ER570070	7.0	10	10	60
E3570080	ER570080	8.0	10	11	61
E3570090	ER570090	9.0	10	11	61
E3570100	ER570100	10.0	10	13	63
E3570110	ER570110	11.0	12	13	70
E3570120	ER570120	12.0	12	16	73
E3570130	ER570130	13.0	12	16	73
E3570140	ER570140	14.0	12	16	73
E3570150	ER570150	15.0	12	16	73
E3570160	ER570160	16.0	16	19	79
E3570170	ER570170	17.0	16	19	79
E3570180	ER570180	18.0	16	19	79
E3570190	ER570190	19.0	16	19	79
E3570200	ER570200	20.0	20	22	88
E3570220	ER570220	22.0	20	22	88
E3570240	ER570240	24.0	25	26	102
E3570250	ER570250	25.0	25	26	102
E3570280	ER570280	28.0	25	26	102
E3570300	ER570300	30.0	25	26	102

▶ Other shank design on your request.
▶ TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in μm / Toleranzwerte in μm
Nominal-Diameter in mm / Nennmaßbereich in mm

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
e8	– 14 – 28	– 20 – 38	– 25 – 47	– 32 – 59	– 40 – 73	– 50 – 89
h6	0 – 6	0 – 8	0 – 9	0 – 11	0 – 13	0 – 16

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

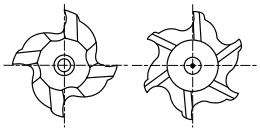
HSS END MILLS

E3574, ER574 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

E3575, ER575 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSS-PM, 4&6 FLUTE SHORT LENGTH

HSS-PM, 4&6 SCHNEIDEN KURZ
Fraise HSS-PM, 4&6 dents, courte
HSS-PM, 4&6 TAGLIENTI, SERIE CORTA



HSS PM | DIN 844 | N | 4&6 | 30° | DIN 1835B

P.1440

Unit : mm

EDP No. UNCOATED	EDP No. TiAlN	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
E3574020	ER574020	2.0	6	7	51	4
E3574030	ER574030	3.0	6	8	52	4
E3574040	ER574040	4.0	6	11	55	4
E3574050	ER574050	5.0	6	13	57	4
E3574060	ER574060	6.0	6	13	57	4
E3574070	ER574070	7.0	10	16	66	4
E3574080	ER574080	8.0	10	19	69	4
E3574090	ER574090	9.0	10	19	69	4
E3574100	ER574100	10.0	10	22	72	4
E3574120	ER574120	12.0	12	26	83	4
E3574140	ER574140	14.0	12	26	83	4
E3574160	ER574160	16.0	16	32	92	4
E3574180	ER574180	18.0	16	32	92	4
E3574200	ER574200	20.0	20	38	104	4
E3575220	ER575220	22.0	20	38	104	6
E3575240	ER575240	24.0	25	45	121	6
E3575250	ER575250	25.0	25	45	121	6
E3575280	ER575280	28.0	25	45	121	6
E3575300	ER575300	30.0	25	45	121	6

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
+ 0.04 — 0	h6

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E3462, ER462 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

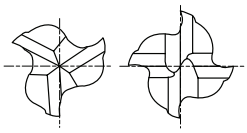
E3463, ER463 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSS-PM, 3&4 FLUTE 60° HELIX SHORT LENGTH

HSS-PM, 3&4 SCHNEIDEN 60° RECHTSSPIRALE KURZ

Fraise HSS-PM, 3&4 dents, hélice 60°, courte

HSS-PM, 3&4 TAGLIENTI, ELICA 60°, SERIE CORTA



HSS PM | DIN 844 | N | 3&4 | 60° | DIN 1835B

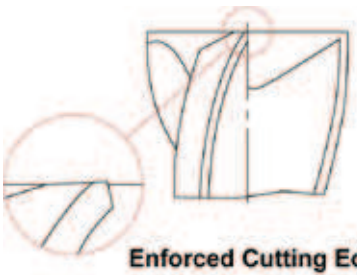
P.1441

Unit : mm

EDP No. UNCOATED	EDP No. TiAlN	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
E3462060	ER462060	6.0	6	13	57	3
E3462070	ER462070	7.0	10	16	66	3
E3462080	ER462080	8.0	10	19	69	3
E3462090	ER462090	9.0	10	19	69	3
E3462100	ER462100	10.0	10	22	72	3
E3462120	ER462120	12.0	12	26	83	3
E3462140	ER462140	14.0	12	26	83	3
E3462150	ER462150	15.0	12	26	83	3
E3462160	ER462160	16.0	16	32	92	3
E3462180	ER462180	18.0	16	32	92	3
E3462200	ER462200	20.0	20	38	104	3
E3463250	ER463250	25.0	25	45	121	4
E3463300	ER463300	30.0	25	45	121	4

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Mill Dia. Tolerance(mm)		Shank Dia. Tolerance
up to Ø6.5	+ 0.048 — 0	h6
Ø7.0 ~ Ø10.0	+ 0.058 — 0	
Ø10.5 ~ Ø18.0	+ 0.070 — 0	
over Ø18.0	+ 0.084 — 0	



◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2535 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

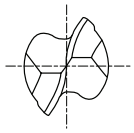
EQ535 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 2 FLUTE SHORT LENGTH BALL NOSE

HSSCo8, 2 SCHNEIDEN KURZ STIRNRADIUS

Fraise HSSCo8, 2 dents, hémisphérique, courte

2 TAGLIENTI, SEMISFERICA, SERIE CORTA - HSSCo8



HSS Co8 | DIN 327 | N | 2 | 30° | R ±0.02 | DIN 1835B

P.1442-1443

Unit : mm

EDP No.		Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAlN	R (±0.02)	e8	h6		
E2535020	EQ535020	R1.0	2.0	6	4	48
E2535025	EQ535025	R1.25	2.5	6	5	49
E2535030	EQ535030	R1.5	3.0	6	5	49
E2535035	EQ535035	R1.75	3.5	6	6	50
E2535040	EQ535040	R2.0	4.0	6	7	51
E2535045	EQ535045	R2.25	4.5	6	7	51
E2535050	EQ535050	R2.5	5.0	6	8	52
E2535055	EQ535055	R2.75	5.5	6	8	52
E2535060	EQ535060	R3.0	6.0	6	8	52
E2535070	EQ535070	R3.5	7.0	10	10	60
E2535080	EQ535080	R4.0	8.0	10	11	61
E2535090	EQ535090	R4.5	9.0	10	11	61
E2535100	EQ535100	R5.0	10.0	10	13	63
E2535110	EQ535110	R5.5	11.0	12	13	70
E2535120	EQ535120	R6.0	12.0	12	16	73
E2535130	EQ535130	R6.5	13.0	12	16	73
E2535140	EQ535140	R7.0	14.0	12	16	73
E2535150	EQ535150	R7.5	15.0	12	16	73
E2535160	EQ535160	R8.0	16.0	16	19	79
E2535170	EQ535170	R8.5	17.0	16	19	79
E2535180	EQ535180	R9.0	18.0	16	19	79
E2535190	EQ535190	R9.5	19.0	16	19	79
E2535923	EQ535923	R10.0	20.0	16	22	82
E2535200	EQ535200	R10.0	20.0	20	22	88
E2535220	EQ535220	R11.0	22.0	20	22	88
E2535922	EQ535922	R11.0	22.0	25	22	98
E2535240	EQ535240	R12.0	24.0	25	26	102
E2535250	EQ535250	R12.5	25.0	25	26	102
E2535260	EQ535260	R13.0	26.0	25	26	102
E2535280	EQ535280	R14.0	28.0	25	26	102
E2535300	EQ535300	R15.0	30.0	25	26	102
E2535320	EQ535320	R16.0	32.0	32	32	112

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

▶Other shank design on your reguest.
▶TiN and TiCN Coatings are available on your request.

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2492 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

EQ492 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 2 FLUTE LONG LENGTH BALL NOSE

HSSCo8, 2 SCHNEIDEN LANG STIRNRADIUS

Fraise HSSCo8, 2 dents, hémisphérique, longue

2 TAGLIENTI, SEMISFERICA, SERIE LUNGA - HSSCo8

HSS Co8 | DIN 1889 | N | 2 | 30° | R ±0.02 | DIN 1835B

P.1442-1443

Unit : mm

EDP No.		Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAlN	R (±0.02)	e8	h6		
E2492020	EQ492020	R1.0	2.0	6	7	54
E2492030	EQ492030	R1.5	3.0	6	8	56
E2492040	EQ492040	R2.0	4.0	6	11	63
E2492050	EQ492050	R2.5	5.0	6	13	68
E2492060	EQ492060	R3.0	6.0	6	13	68
E2492070	EQ492070	R3.5	7.0	10	16	80
E2492080	EQ492080	R4.0	8.0	10	19	88
E2492090	EQ492090	R4.5	9.0	10	19	88
E2492100	EQ492100	R5.0	10.0	10	22	95
E2492110	EQ492110	R5.5	11.0	12	22	102
E2492120	EQ492120	R6.0	12.0	12	26	110
E2492130	EQ492130	R6.5	13.0	12	26	110
E2492140	EQ492140	R7.0	14.0	12	26	110
E2492150	EQ492150	R7.5	15.0	12	26	110
E2492160	EQ492160	R8.0	16.0	16	32	123
E2492170	EQ492170	R8.5	17.0	16	32	123
E2492180	EQ492180	R9.0	18.0	16	32	123
E2492190	EQ492190	R9.5	19.0	16	32	123
E2492200	EQ492200	R10.0	20.0	20	38	141
E2492220	EQ492220	R11.0	22.0	20	38	141
E2492240	EQ492240	R12.0	24.0	25	45	166
E2492250	EQ492250	R12.5	25.0	25	45	166
E2492260	EQ492260	R13.0	26.0	25	45	166
E2492280	EQ492280	R14.0	28.0	25	45	166
E2492300	EQ492300	R15.0	30.0	25	45	166

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

▶ Other shank design on your reguest.
▶ TiN and TiCN Coatings are available on your request.

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSSCo8, 3 FLUTE SHORT LENGTH BALL NOSE THROW AWAY

HSSCo8, 3 SCHNEIDEN KURZ STIRNRADIUS EINWEGFRÄSER

Fraise HSSCo8, 3 dents, hémisphérique à jeter, courte

3 TAGLIENTI, SEMISFERICA, SERIE CORTA, NON RIAFFILABILE - HSSCo8

HSS Co8 | YG STD | N | 3 | 30° | R ±0.02 | FLAT

P.1444-1445

Unit : mm

EDP No.		Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAlN	R (±0.02)	e8	h6		
E2512020	**EQ512020**	R1.0	**2.0**	6	4	35
E2512025	**EQ512025**	R1.25	**2.5**	6	5	36
E2512030	**EQ512030**	R1.5	**3.0**	6	5	36
E2512040	**EQ512040**	R2.0	**4.0**	6	7	38
E2512050	**EQ512050**	R2.5	**5.0**	6	8	39
E2512060	**EQ512060**	R3.0	**6.0**	6	8	39

▶TiN and TiCN Coatings are available on your request.

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

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2410 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

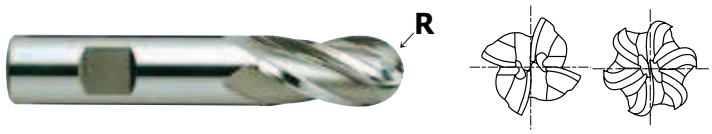
EQ410 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 4&6 FLUTE SHORT LENGTH BALL NOSE

HSSCo8, 4&6 SCHNEIDEN KURZ STIRNRADIUS

Fraise HSSCo8, 4&6 dents, hémisphérique, courte

4&6 TAGLIENTI, SEMISFERICA, SERIE CORTA - HSSCo8



HSS Co8 | DIN 1889 | N | 4&6 | 30° | R ±0.02 | DIN 1835B

P.1444-1445

Unit : mm

EDP No.		Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
UNCOATED	TiAlN	R (±0.02)	e8	h6			
E2410060	EQ410060	R3.0	6.0	6	13	57	4
E2410080	EQ410080	R4.0	8.0	10	19	69	4
E2410100	EQ410100	R5.0	10.0	10	22	72	4
E2410120	EQ410120	R6.0	12.0	12	26	83	4
E2410160	EQ410160	R8.0	16.0	16	32	92	4
E2410200	EQ410200	R10.0	20.0	20	38	104	4
E2410250	EQ410250	R12.5	25.0	25	45	121	6

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

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2429 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

EQ429 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 4&6 FLUTE LONG LENGTH BALL NOSE

HSSCo8, 4&6 SCHNEIDEN LANG STIRNRADIUS

Fraise HSSCo8, 4&6 dents, hémisphérique, longue

4&6 TAGLIENTI, SEMISFERICA, SERIE LUNGA - HSSCo8

HSS Co8 | DIN 1889 | N | 4&6 | 30° | R ±0.02 | DIN 1835B

P.1444-1445

Unit : mm

EDP No.		Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
UNCOATED	TiAlN	R (±0.02)	e8	h6			
E2429100	EQ429100	R5.0	10.0	10	45	95	4
E2429120	EQ429120	R6.0	12.0	12	53	110	4
E2429160	EQ429160	R8.0	16.0	16	63	123	4
E2429200	EQ429200	R10.0	20.0	20	75	141	4
E2429250	EQ429250	R12.5	25.0	25	90	166	6

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

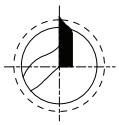
◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

EL623 SERIES PLAIN SHANK / GLATTER ZYLINDERSCHAFT

HSS-E, 1 FLUTE
HSS-E, 1 SCHNEIDEN
Fraise HSS-E, 1 dent
1 TAGLIENTE - HSS-E



HSS-E | YG STD | N | 1 | 30° | DIN 1835A

P.1446

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	e8	h6		
EL623030	3.0	8	12	60
EL623040	4.0	8	12	60
EL623050	5.0	8	12	60
EL623060	6.0	8	14	60
EL623070	7.0	8	14	60
EL623080	8.0	8	14	80
EL623090	9.0	8	14	80
EL623100	10.0	8	14	80

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in ㎛ / Toleranzwerte in ㎛

Nominal-Diameter in mm / Nennmaßbereich in mm						
	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
js14	±125	±150	±180	±215	±260	±310
h6	0 – 6	0 – 8	0 – 9	0 – 11	0 – 13	0 – 16

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎									○				

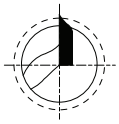
HSS END MILLS

EL612 SERIES PLAIN SHANK / GLATTER ZYLINDERSCHAFT

HSS-E, 1 FLUTE for ALUMINUM

HSS-E, 1 SCHNEIDEN für ALUMINIUM
Fraise HSS-E, 1 dent pour aluminium
1 TAGLIENTE - HSS-E

for ALUMINUM
für ALUMINIUM

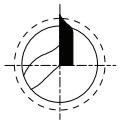


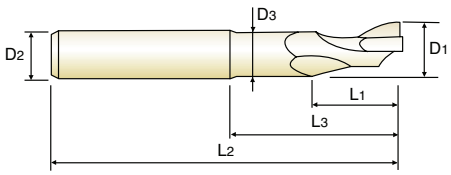
HSS-E | YG STD | W | 1 | 30° | DIN 1835A

P.1446

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	js14	h6		
EL612030	3.0	8	12	60
EL612040	4.0	8	12	60
EL612050	5.0	8	12	60
EL612060	6.0	8	14	60
EL612070	7.0	8	14	60
EL612080	8.0	8	14	80
EL612090	9.0	8	14	80
EL612100	10.0	8	14	80





Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Length of Cut	Overall Length	Neck Diameter
UNCOATED	D1(js14)	D2(h6)	L1	L3	L2	D3
EL612030	5.0	8	18	35	80	4.8
EL612090	5.0	8	40	-	100	-
EL612100	8.0	8	14	68	120	7.5

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in µm / Toleranzwerte in µm
Nominal-Diameter in mm / Nennmaßbereich in mm

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
js14	±125	±150	±180	±215	±260	±310
h6	0 / −6	0 / −8	0 / −9	0 / −11	0 / −13	0 / −16

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
○										◎				

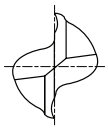
HSS END MILLS

E2570 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

EQ570 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 2 FLUTE SHORT LENGTH

HSSCo8, 2 SCHNEIDEN KURZ
Fraise HSSCo8, 2 dents, courte
2 TAGLIENTI, SERIE CORTA - HSSCo8



HSS Co8 | DIN 327 | N | 2 | 30° | DIN 1835B

P.1447-1448

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAlN	e8	h6		
E2570010	EQ570010	1.0	6	2.5	47
E2570015	EQ570015	1.5	6	3	47
E2570020	EQ570020	2.0	6	4	48
E2570025	EQ570025	2.5	6	5	49
E2570028	EQ570028	2.8	6	5	49
E2570030	EQ570030	3.0	6	5	49
E2570035	EQ570035	3.5	6	6	50
E2570038	EQ570038	3.8	6	7	51
E2570040	EQ570040	4.0	6	7	51
E2570045	EQ570045	4.5	6	7	51
E2570048	EQ570048	4.8	6	8	52
E2570050	EQ570050	5.0	6	8	52
E2570055	EQ570055	5.5	6	8	52
E2570957	EQ570957	5.75	6	8	52
E2570060	EQ570060	6.0	6	8	52
E2570065	EQ570065	6.5	10	10	60
E2570967	EQ570967	6.75	10	10	60
E2570070	EQ570070	7.0	10	10	60
E2570075	EQ570075	7.5	10	10	60
E2570977	EQ570977	7.75	10	11	61
E2570080	EQ570080	8.0	10	11	61
E2570085	EQ570085	8.5	10	11	61
E2570087	EQ570087	8.7	10	11	61
E2570090	EQ570090	9.0	10	11	61
E2570095	EQ570095	9.5	10	11	61
E2570097	EQ570097	9.7	10	13	63
E2570100	EQ570100	10.0	10	13	63

▶ NEXT PAGE

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

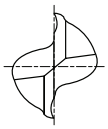
HSS END MILLS

E2570 SERIES FLAT SHANK
SEITLICHE MITNAHMEFLÄCHEN

EQ570 SERIES FLAT SHANK
SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 2 FLUTE SHORT LENGTH

HSSCo8, 2 SCHNEIDEN KURZ
Fraise HSSCo8, 2 dents, courte
2 TAGLIENTI, SERIE CORTA - HSSCo8



HSS Co8 | DIN 327 | N | 2 | 30° | DIN 1835B

P.1447-1448

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAlN	e8	h6		
E2570105	EQ570105	10.5	12	13	70
E2570107	EQ570107	10.7	12	13	70
E2570110	EQ570110	11.0	12	13	70
E2570115	EQ570115	11.5	12	13	70
E2570117	EQ570117	11.7	12	16	73
E2570120	EQ570120	12.0	12	16	73
E2570125	EQ570125	12.5	12	16	73
E2570127	EQ570127	12.7	12	16	73
E2570130	EQ570130	13.0	12	16	73
E2570135	EQ570135	13.5	12	16	73
E2570137	EQ570137	13.7	12	16	73
E2570140	EQ570140	14.0	12	16	73
E2570147	EQ570147	14.7	12	16	73
E2570150	EQ570150	15.0	12	16	73
E2570157	EQ570157	15.7	16	19	79
E2570160	EQ570160	16.0	16	19	79
E2570167	EQ570167	16.7	16	19	79
E2570170	EQ570170	17.0	16	19	79
E2570177	EQ570177	17.7	16	19	79
E2570180	EQ570180	18.0	16	19	79
E2570190	EQ570190	19.0	16	19	79
E2570197	EQ570197	19.7	20	22	88
E2570920	EQ570920	20.0	16	22	82
E2570200	EQ570200	20.0	20	22	88
E2570210	EQ570210	21.0	20	22	88
E2570220	EQ570220	22.0	20	22	88
E2570922	EQ570922	22.0	25	22	98

▶ NEXT PAGE

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2570 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

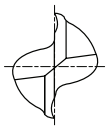
EQ570 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 2 FLUTE SHORT LENGTH

HSSCo8, 2 SCHNEIDEN KURZ

Fraise HSSCo8, 2 dents, courte

2 TAGLIENTI, SERIE CORTA - HSSCo8



HSS Co8 | DIN 327 | N | 2 | 30° | DIN 1835B

P.1447-1448

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAlN	e8	h6		
E2570240	EQ570240	24.0	25	26	102
E2570250	EQ570250	25.0	25	26	102
E2570260	EQ570260	26.0	25	26	102
E2570270	EQ570270	27.0	25	26	102
E2570280	EQ570280	28.0	25	26	102
E2570290	EQ570290	29.0	25	26	102
E2570300	EQ570300	30.0	25	26	102
E2570320	EQ570320	32.0	32	32	112
E2570340	EQ570340	34.0	32	32	112
E2570350	EQ570350	35.0	32	32	112
E2570360	EQ570360	36.0	32	32	112
E2570380	EQ570380	38.0	32	38	118
E2570938	EQ570938	38.0	40	38	130
E2570400	EQ570400	40.0	32	38	118
E2570903	EQ570903	40.0	40	38	130

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in μm / Toleranzwerte in μm
Nominal-Diameter in mm / Nennmaßbereich in mm

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
e8	– 14 – 28	– 20 – 38	– 25 – 47	– 32 – 59	– 40 – 73	– 50 – 89
h6	0 – 6	0 – 8	0 – 9	0 – 11	0 – 13	0 – 16

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

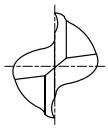
HSS END MILLS

E2571 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

EQ571 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 2 FLUTE LONG LENGTH

HSSCo8, 2 SCHNEIDEN LANG
Fraise HSSCo8, 2 dents, longue
2 TAGLIENTI, SERIE LUNGA - HSSCo8



HSS Co8 | DIN 844 | N | 2 | 30° | DIN 1835B

P.1447-1448

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAlN	e8	h6		
E2571015	EQ571015	1.5	6	7	51
E2571020	EQ571020	2.0	6	7	51
E2571025	EQ571025	2.5	6	8	52
E2571030	EQ571030	3.0	6	8	52
E2571035	EQ571035	3.5	6	10	54
E2571040	EQ571040	4.0	6	11	55
E2571045	EQ571045	4.5	6	11	55
E2571050	EQ571050	5.0	6	13	57
E2571055	EQ571055	5.5	6	13	57
E2571060	EQ571060	6.0	6	13	57
E2571065	EQ571065	6.5	10	16	66
E2571070	EQ571070	7.0	10	16	66
E2571075	EQ571075	7.5	10	16	66
E2571080	EQ571080	8.0	10	19	69
E2571085	EQ571085	8.5	10	19	69
E2571090	EQ571090	9.0	10	19	69
E2571095	EQ571095	9.5	10	19	69
E2571100	EQ571100	10.0	10	22	72
E2571110	EQ571110	11.0	12	22	79
E2571120	EQ571120	12.0	12	26	83
E2571130	EQ571130	13.0	12	26	83
E2571140	EQ571140	14.0	12	26	83
E2571150	EQ571150	15.0	12	26	83
E2571160	EQ571160	16.0	16	32	92
E2571180	EQ571180	18.0	16	32	92

▶ NEXT PAGE

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2571 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

EQ571 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 2 FLUTE LONG LENGTH

HSSCo8, 2 SCHNEIDEN LANG

Fraise HSSCo8, 2 dents, longue

2 TAGLIENTI, SERIE LUNGA - HSSCo8

HSS Co8 | DIN 844 | N | 2 | 30° | DIN 1835B

P.1447-1448

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAlN	e8	h6		
E2571200	EQ571200	20.0	20	38	104
E2571220	EQ571220	22.0	20	38	104
E2571240	EQ571240	24.0	25	45	121
E2571250	EQ571250	25.0	25	45	121
E2571260	EQ571260	26.0	25	45	121
E2571270	EQ571270	27.0	25	45	121
E2571280	EQ571280	28.0	25	45	121
E2571300	EQ571300	30.0	25	45	121
E2571320	EQ571320	32.0	32	53	133
E2571400	EQ571400	40.0	40	63	155

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in μm / Toleranzwerte in μm
Nominal-Diameter in mm / Nennmaßbereich in mm

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
e8	– 14 – 28	– 20 – 38	– 25 – 47	– 32 – 59	– 40 – 73	– 50 – 89
h6	0 – 6	0 – 8	0 – 9	0 – 11	0 – 13	0 – 16

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2510 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

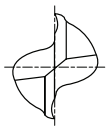
EQ510 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 2 FLUTE EXTRA LONG LENGTH

HSSCo8, 2 SCHNEIDEN EXTRA LANG

Fraise HSSCo8, 2 dents, extra-longue

2 TAGLIENTI, SERIE EXTRA LUNGA - HSSCo8



HSS Co8 | DIN 844 | N | 2 | 30° | DIN 1835B

P.1447-1448

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAlN	e8	h6		
E2510025	EQ510025	2.5	6	8	56
E2510030	EQ510030	3.0	6	8	56
E2510035	EQ510035	3.5	6	10	59
E2510040	EQ510040	4.0	6	11	63
E2510045	EQ510045	4.5	6	11	63
E2510050	EQ510050	5.0	6	13	68
E2510055	EQ510055	5.5	6	13	68
E2510060	EQ510060	6.0	6	13	68
E2510065	EQ510065	6.5	10	16	80
E2510070	EQ510070	7.0	10	16	80
E2510080	EQ510080	8.0	10	19	88
E2510085	EQ510085	8.5	10	19	88
E2510090	EQ510090	9.0	10	19	88
E2510100	EQ510100	10.0	10	22	95
E2510120	EQ510120	12.0	12	26	110
E2510140	EQ510140	14.0	12	26	110
E2510160	EQ510160	16.0	16	32	123
E2510180	EQ510180	18.0	16	32	123
E2510200	EQ510200	20.0	20	38	141
E2510220	EQ510220	22.0	20	38	141
E2510240	EQ510240	24.0	25	45	166
E2510250	EQ510250	25.0	25	45	166
E2510260	EQ510260	26.0	25	45	166
E2510280	EQ510280	28.0	25	45	166
E2510300	EQ510300	30.0	25	45	166
E2510320	EQ510320	32.0	32	53	186
E2510360	EQ510360	36.0	32	53	186
E2510400	EQ510400	40.0	32	63	207
E2510940	EQ510940	40.0	40	63	217

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in μm / Toleranzwerte in μm

Nominal-Diameter in mm / Nennmaßbereich in mm

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
e8	– 14 – 28	– 20 – 38	– 25 – 47	– 32 – 59	– 40 – 73	– 50 – 89
h6	0 – 6	0 – 8	0 – 9	0 – 11	0 – 13	0 – 16

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

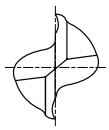
HSS END MILLS

E2464 SERIES FLAT SHANK
SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 2 FLUTE 42° HELIX SHORT LENGTH for ALUMINUM

HSSCo8, 2 SCHNEIDEN 42° RECHTSSPIRALE KURZ für ALUMINIUM
Fraise HSSCo8, 2 dents, hélice 42°, pour aluminium, courte
2 TAGLIENTI, ELICA 42°, SERIE CORTA - HSSCo8

for ALUMINUM
für ALUMINIUM



HSS Co8 | DIN 844 | W | 2 | 42° | DIN 1835B

P.1449

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	e8	h6		
E2464010	1.0	6	3	49
E2464015	1.5	6	5	49
E2464020	2.0	6	7	51
E2464025	2.5	6	8	52
E2464030	3.0	6	8	52
E2464035	3.5	6	10	54
E2464040	4.0	6	11	55
E2464045	4.5	6	11	55
E2464050	5.0	6	13	57
E2464055	5.5	6	13	57
E2464060	6.0	6	13	57
E2464065	6.5	10	16	66
E2464070	7.0	10	16	66
E2464075	7.5	10	16	66
E2464080	8.0	10	19	69
E2464085	8.5	10	19	69
E2464090	9.0	10	19	69
E2464100	10.0	10	22	72
E2464110	11.0	12	22	79
E2464120	12.0	12	26	83
E2464130	13.0	12	26	83
E2464140	14.0	12	26	83
E2464150	15.0	12	26	83
E2464160	16.0	16	32	92
E2464170	17.0	16	32	92
E2464180	18.0	16	32	92
E2464190	19.0	16	32	92

▶ NEXT PAGE

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
○										◎				

HSSCo8, 2 FLUTE 42° HELIX SHORT LENGTH for ALUMINUM

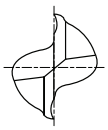
HSSCo8, 2 SCHNEIDEN 42° RECHTSSPIRALE KURZ für ALUMINIUM

Fraise HSSCo8, 2 dents, hélice 42°, pour aluminium, courte

2 TAGLIENTI, ELICA 42°, SERIE CORTA - HSSCo8

for ALUMINUM

für ALUMINIUM



HSS Co8 | DIN 844 | W | 2 | 42° | DIN 1835B

P.1449

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	e8	h6		
E2464200	**20.0**	20	38	104
E2464210	**21.0**	20	38	104
E2464220	**22.0**	20	38	104
E2464230	**23.0**	20	38	104
E2464240	**24.0**	25	45	121
E2464250	**25.0**	25	45	121
E2464260	**26.0**	25	45	121
E2464280	**28.0**	25	45	121
E2464300	**30.0**	25	45	121
E2464320	**32.0**	32	53	133

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in μm / Toleranzwerte in μm
Nominal-Diameter in mm / Nennmaßbereich in mm

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
e8	– 14 – 28	– 20 – 38	– 25 – 47	– 32 – 59	– 40 – 73	– 50 – 89
h6	0 – 6	0 – 8	0 – 9	0 – 11	0 – 13	0 – 16

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
○										◎				

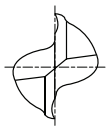
HSS END MILLS

E2509 SERIES FLAT SHANK
SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 2 FLUTE 42° HELIX LONG LENGTH for ALUMINUM

HSSCo8, 2 SCHNEIDEN 42° RECHTSSPIRALE KURZ für ALUMINIUM
Fraise HSSCo8, 2 dents, hélice 42°, pour aluminium, longue
2 TAGLIENTI, ELICA 42°, SERIE LUNGA - HSSCo8

for ALUMINUM
für ALUMINIUM



HSS Co8 | DIN 844 | W | 2 | 42° | DIN 1835B

P.1449

Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	e8	h6		
E2509020	2.0	6	10	54
E2509030	3.0	6	12	56
E2509040	4.0	6	19	63
E2509050	5.0	6	24	68
E2509060	6.0	6	24	68
E2509070	7.0	10	30	80
E2509080	8.0	10	38	88
E2509090	9.0	10	38	88
E2509100	10.0	10	45	95
E2509110	11.0	12	45	102
E2509120	12.0	12	53	110
E2509130	13.0	12	53	110
E2509140	14.0	12	53	110
E2509150	15.0	12	53	110
E2509160	16.0	16	63	123
E2509180	18.0	16	63	123
E2509200	20.0	20	75	141

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in ㎛ / Toleranzwerte in ㎛
Nominal-Diameter in ㎜ / Nennmaßbereich in ㎜

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
e8	– 14 – 28	– 20 – 38	– 25 – 47	– 32 – 59	– 40 – 73	– 50 – 89
h6	0 – 6	0 – 8	0 – 9	0 – 11	0 – 13	0 – 16

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
○										◎				

HSS END MILLS

E2572 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

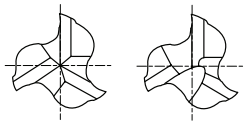
EQ572 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 3 FLUTE STUB LENGTH

HSSCo8, 3 SCHNEIDEN EXTRA KURZ

Fraise HSSCo8, 3 dents, extra-courte

3 TAGLIENTI. SERIE EXTRA CORTA - HSSCo8



Up to Ø2.5mm Over Ø2.5mm

HSS Co8 | DIN 327 | N | 3 | 30° | DIN 1835B

P.1450-1453

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAlN	e8	h6		
E2572015	EQ572015	1.5	6	3	47
E2572020	EQ572020	2.0	6	4	48
E2572025	EQ572025	2.5	6	5	49
E2572030	EQ572030	3.0	6	5	49
E2572035	EQ572035	3.5	6	6	50
E2572040	EQ572040	4.0	6	7	51
E2572045	EQ572045	4.5	6	7	51
E2572050	EQ572050	5.0	6	8	52
E2572055	EQ572055	5.5	6	8	52
E2572060	EQ572060	6.0	6	8	52
E2572065	EQ572065	6.5	10	10	60
E2572070	EQ572070	7.0	10	10	60
E2572075	EQ572075	7.5	10	10	60
E2572080	EQ572080	8.0	10	11	61
E2572085	EQ572085	8.5	10	11	61
E2572100	EQ572100	10.0	10	13	63
E2572120	EQ572120	12.0	12	16	73
E2572140	EQ572140	14.0	12	16	73
E2572150	EQ572150	15.0	12	16	73
E2572160	EQ572160	16.0	16	19	79
E2572180	EQ572180	18.0	16	19	79
E2572200	EQ572200	20.0	20	22	88
E2572220	EQ572220	22.0	20	22	88
E2572240	EQ572240	24.0	25	26	102
E2572250	EQ572250	25.0	25	26	102
E2572260	EQ572260	26.0	25	26	102
E2572280	EQ572280	28.0	25	26	102
E2572300	EQ572300	30.0	25	26	102
E2572320	EQ572320	32.0	32	32	112

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in ㎛ / Toleranzwerte in ㎛

Nominal-Diameter in mm / Nennmaßbereich in mm

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
e8	– 14 – 28	– 20 – 38	– 25 – 47	– 32 – 59	– 40 – 73	– 50 – 89
h6	0 – 6	0 – 8	0 – 9	0 – 11	0 – 13	0 – 16

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

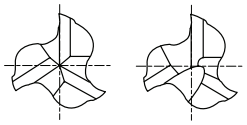
HSS END MILLS

E2573 SERIES FLAT SHANK
SEITLICHE MITNAHMEFLÄCHEN

EQ573 SERIES FLAT SHANK
SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 3 FLUTE SHORT LENGTH

HSSCo8, 3 SCHNEIDEN KURZ
Fraise HSSCo8, 3 dents, courte
3 TAGLIENTI, SERIE CORTA - HSSCo8



Up to Ø2.5mm Over Ø2.5mm

HSS Co8 | DIN 844 | N | 3 | 30° | DIN 1835B

P.1450-1453

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAlN	e8	h6		
E2573010	EQ573010	1.0	6	3	47
E2573015	EQ573015	1.5	6	7	51
E2573020	EQ573020	2.0	6	7	51
E2573025	EQ573025	2.5	6	8	52
E2573030	EQ573030	3.0	6	8	52
E2573035	EQ573035	3.5	6	10	54
E2573040	EQ573040	4.0	6	11	55
E2573045	EQ573045	4.5	6	11	55
E2573050	EQ573050	5.0	6	13	57
E2573055	EQ573055	5.5	6	13	57
E2573060	EQ573060	6.0	6	13	57
E2573065	EQ573065	6.5	10	16	66
E2573070	EQ573070	7.0	10	16	66
E2573075	EQ573075	7.5	10	16	66
E2573080	EQ573080	8.0	10	19	69
E2573085	EQ573085	8.5	10	19	69
E2573090	EQ573090	9.0	10	19	69
E2573095	EQ573095	9.5	10	19	69
E2573100	EQ573100	10.0	10	22	72
E2573120	EQ573120	12.0	12	26	83
E2573140	EQ573140	14.0	12	26	83
E2573150	EQ573150	15.0	12	26	83
E2573160	EQ573160	16.0	16	32	92
E2573180	EQ573180	18.0	16	32	92

▶ NEXT PAGE

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2573 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

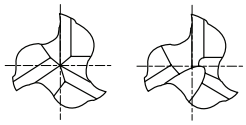
EQ573 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 3 FLUTE SHORT LENGTH

HSSCo8, 3 SCHNEIDEN KURZ

Fraise HSSCo8, 3 dents, courte

3 TAGLIENTI, SERIE CORTA - HSSCo8



Up to Ø2.5mm Over Ø2.5mm

HSS Co8 | DIN 844 | N | 3 | 30° | DIN 1835B

P.1450-1453

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAlN	e8	h6		
E2573200	EQ573200	20.0	20	38	104
E2573220	EQ573220	22.0	20	38	104
E2573240	EQ573240	24.0	25	45	121
E2573250	EQ573250	25.0	25	45	121
E2573260	EQ573260	26.0	25	45	121
E2573280	EQ573280	28.0	25	45	121
E2573300	EQ573300	30.0	25	45	121
E2573320	EQ573320	32.0	32	53	133
E2573400	EQ573400	40.0	40	63	155

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in μm / Toleranzwerte in μm

Nominal-Diameter in mm / Nennmaßbereich in mm

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
e8	– 14 – 28	– 20 – 38	– 25 – 47	– 32 – 59	– 40 – 73	– 50 – 89
h6	0 – 6	0 – 8	0 – 9	0 – 11	0 – 13	0 – 16

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

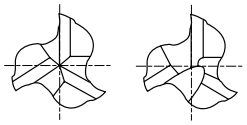
HSS END MILLS

E2516 SERIES FLAT SHANK
SEITLICHE MITNAHMEFLÄCHEN

EQ516 SERIES FLAT SHANK
SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 3 FLUTE LONG LENGTH

HSSCo8, 3 SCHNEIDEN LANG
Fraise HSSCo8, 3 dents, longue
3 TAGLIENTI, SERIE LUNGA - HSSCo8



Up to Ø2.5mm Over Ø2.5mm

HSS Co8 | DIN 844 | N | 3 | 30° | DIN 1835B

P.1450-1453

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAlN	e8	h6		
E2516020	EQ516020	2.0	6	10	54
E2516025	EQ516025	2.5	6	12	56
E2516030	EQ516030	3.0	6	12	56
E2516035	EQ516035	3.5	6	15	59
E2516040	EQ516040	4.0	6	19	63
E2516045	EQ516045	4.5	6	19	63
E2516050	EQ516050	5.0	6	24	68
E2516055	EQ516055	5.5	6	24	68
E2516060	EQ516060	6.0	6	24	68
E2516070	EQ516070	7.0	10	30	80
E2516075	EQ516075	7.5	10	30	80
E2516080	EQ516080	8.0	10	38	88
E2516090	EQ516090	9.0	10	38	88
E2516100	EQ516100	10.0	10	45	95
E2516110	EQ516110	11.0	12	45	102
E2516120	EQ516120	12.0	12	53	110
E2516130	EQ516130	13.0	12	53	110
E2516140	EQ516140	14.0	12	53	110
E2516150	EQ516150	15.0	12	53	110
E2516160	EQ516160	16.0	16	63	123
E2516170	EQ516170	17.0	16	63	123
E2516180	EQ516180	18.0	16	63	123
E2516190	EQ516190	19.0	16	63	123
E2516901	EQ516901	20.0	16	75	135
E2516200	EQ516200	20.0	20	75	141
E2516220	EQ516220	22.0	20	75	141

▶ NEXT PAGE

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

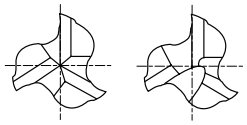
HSS END MILLS

E2516 SERIES FLAT SHANK
SEITLICHE MITNAHMEFLÄCHEN

EQ516 SERIES FLAT SHANK
SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 3 FLUTE LONG LENGTH

HSSCo8, 3 SCHNEIDEN LANG
Fraise HSSCo8, 3 dents, longue
3 TAGLIENTI, SERIE LUNGA - HSSCo8



Up to Ø2.5mm Over Ø2.5mm

HSS Co8 | DIN 844 | N | 3 | 30° | FLAT

P.1450-1453

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAlN	e8	h6		
E2516240	EQ516240	24.0	25	90	166
E2516250	EQ516250	25.0	25	90	166
E2516260	EQ516260	26.0	25	90	166
E2516280	EQ516280	28.0	25	90	166
E2516300	EQ516300	30.0	25	90	166
E2516320	EQ516320	32.0	32	106	186
E2516350	EQ516350	35.0	32	106	186
E2516360	EQ516360	36.0	32	106	186
E2516400	EQ516400	40.0	40	125	217

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in μm / Toleranzwerte in μm
Nominal-Diameter in mm / Nennmaßbereich in mm

e8	– 14 – 28	– 20 – 38	– 25 – 47	– 32 – 59	– 40 – 73	– 50 – 89
h6	0 – 6	0 – 8	0 – 9	0 – 11	0 – 13	0 – 16

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2553 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

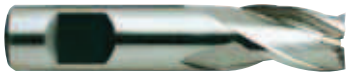
EQ553 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

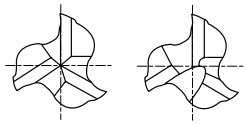
HSSCo8, 3 FLUTE SHORT LENGTH THROW AWAY

HSSCo8, 3 SCHNEIDEN KURZ EINWEGFRÄSER

Fraise HSSCo8, 3 dents à jeter, courte

3 TAGLIENTI, SERIE CORTA NON RIAFFILABILE - HSSCo8





Up to Ø10mm Over Ø10mm

HSS Co8 | YG STD | N | 3 | 30° | FLAT

P.1450-1453

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAlN	e8	h6		
E2553010	EQ553010	1.0	6	2	34
E2553013	EQ553013	1.3	6	3	34
E2553015	EQ553015	1.5	6	3	34
E2553018	EQ553018	1.8	6	3	34
E2553020	EQ553020	2.0	6	4	35
E2553023	EQ553023	2.3	6	4	35
E2553025	EQ553025	2.5	6	5	36
E2553028	EQ553028	2.8	6	5	36
E2553030	EQ553030	3.0	6	5	36
E2553033	EQ553033	3.3	6	6	37
E2553035	EQ553035	3.5	6	6	37
E2553038	EQ553038	3.8	6	7	38
E2553040	EQ553040	4.0	6	7	38
E2553043	EQ553043	4.3	6	7	38
E2553045	EQ553045	4.5	6	7	38
E2553048	EQ553048	4.8	6	8	39
E2553050	EQ553050	5.0	6	8	39
E2553053	EQ553053	5.3	6	8	39
E2553055	EQ553055	5.5	6	8	39
E2553957	EQ553957	5.75	6	8	39
E2553060	EQ553060	6.0	6	8	39

▶ NEXT PAGE

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2553 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

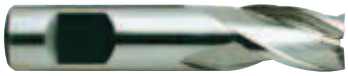
EQ553 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

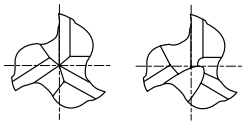
HSSCo8, 3 FLUTE SHORT LENGTH THROW AWAY

HSSCo8, 3 SCHNEIDEN KURZ EINWEGFRÄSER

Fraise HSSCo8, 3 dents à jeter, courte

3 TAGLIENTI, SERIE CORTA NON RIAFFILABILE - HSSCo8





Up to Ø10mm Over Ø10mm

HSS Co8 | YG STD | N | 3 | 30° | FLAT

P.1450-1453

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAlN	e8	h6		
E2553065	EQ553065	6.5	8	10	42
E2553070	EQ553070	7.0	8	10	42
E2553075	EQ553075	7.5	8	10	42
E2553080	EQ553080	8.0	8	11	43
E2553085	EQ553085	8.5	10	11	48
E2553090	EQ553090	9.0	10	11	48
E2553095	EQ553095	9.5	10	11	48
E2553100	EQ553100	10.0	10	13	50
E2553120	EQ553120	12.0	12	16	58
E2553160	EQ553160	16.0	16	19	64
E2553200	EQ553200	20.0	20	22	78

▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in ㎛ / Toleranzwerte in ㎛

Nominal-Diameter in mm / Nennmaßbereich in mm

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
e8	– 14 – 28	– 20 – 38	– 25 – 47	– 32 – 59	– 40 – 73	– 50 – 89
h6	0 – 6	0 – 8	0 – 9	0 – 11	0 – 13	0 – 16

SET ORDERING No.: E2SET553

* 12PCS. SET
SHORT LENGTH
- 2PCS. OF EACH SIZE
2, 3, 4, 5, 6mm (C3FSC)
- 1PC. OF EACH SIZE
8, 10mm (C3FSC)

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2554 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

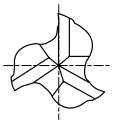
EQ554 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 3 FLUTE LONG LENGTH THROW AWAY

HSSCo8, 3 SCHNEIDEN LANG EINWEGFRÄSER

Fraise HSSCo8, 3 dents à jeter, longue

3 TAGLIENTI, SERIE LUNGA, NON RIAFFILABILE - HSSCo8



HSS Co8 | YG STD | N | 3 | 30° | FLAT

P.1450-1453

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAlN	e8	h6		
E2554015	EQ554015	1.5	6	4	35
E2554020	EQ554020	2.0	6	7	38
E2554025	EQ554025	2.5	6	8	39
E2554030	EQ554030	3.0	6	8	39
E2554035	EQ554035	3.5	6	10	41
E2554040	EQ554040	4.0	6	11	42
E2554045	EQ554045	4.5	6	11	42
E2554050	EQ554050	5.0	6	13	44
E2554055	EQ554055	5.5	6	13	44
E2554060	EQ554060	6.0	6	13	44
E2554065	EQ554065	6.5	8	16	48
E2554070	EQ554070	7.0	8	16	48
E2554075	EQ554075	7.5	8	16	48
E2554080	EQ554080	8.0	8	19	51
E2554085	EQ554085	8.5	10	19	56
E2554090	EQ554090	9.0	10	19	56
E2554095	EQ554095	9.5	10	19	56
E2554100	EQ554100	10.0	10	22	59

▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161

Toleranzen nach DIN 7160 & 7161

Tolerance range in ㎛ / Toleranzwerte in ㎛

Nominal-Diameter in ㎜ / Nennmaßbereich in ㎜

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
e8	− 14 − 28	− 20 − 38	− 25 − 47	− 32 − 59	− 40 − 73	− 50 − 89
h6	0 − 6	0 − 8	0 − 9	0 − 11	0 − 13	0 − 16

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2551 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

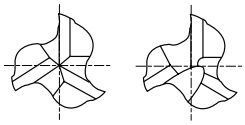
EQ551 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 3 FLUTE SHORT LENGTH THROW AWAY

HSSCo8, 3 SCHNEIDEN KURZ EINWEGFRÄSER

Fraise HSSCo8, 3 dent à jeter, courte

3 TAGLIENTI, SERIE CORTA NON RIAFFILABILE - HSSCo8



Up to Ø6mm Over Ø6mm

HSS Co8 | YG STD | N | 3 | 30° | FLAT

P.1450-1453

Unit : mm

EDP No. UNCOATED	EDP No. TiAlN	Mill Diameter e8	Shank Diameter	Length of Cut	Overall Length
E2551010	EQ551010	1.0	6	2	24.5
E2551015	EQ551015	1.5	6	2.5	24.5
E2551020	EQ551020	2.0	6	3	25.5
E2551025	EQ551025	2.5	6	4	26
E2551028	EQ551028	2.8	6	4.5	28
E2551030	EQ551030	3.0	6	4.5	28
E2551035	EQ551035	3.5	6	5.5	30
E2551038	EQ551038	3.8	6	6.5	32.5
E2551040	EQ551040	4.0	6	6.5	32.5
E2551045	EQ551045	4.5	6	7	34.5
E2551048	EQ551048	4.8	6	7.5	36
E2551050	EQ551050	5.0	6	7.5	36
E2551055	EQ551055	5.5	6	8.5	36
E2551957	EQ551957	5.75	6	9.5	36
E2551060	EQ551060	6.0	6	9.5	36
E2551075	EQ551075	7.5	10	11	47.5
E2551080	EQ551080	8.0	10	11	47.5
E2551095	EQ551095	9.5	10	13	51.5
E2551100	EQ551100	10.0	10	13	51.5

▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in ㎛ / Toleranzwerte in ㎛

Nominal-Diameter in ㎜ / Nennmaßbereich in ㎜

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
e8	– 14 – 28	– 20 – 38	– 25 – 47	– 32 – 59	– 40 – 73	– 50 – 89
h6	0 – 6	0 – 8	0 – 9	0 – 11	0 – 13	0 – 16

Shank Dia. Tolerance	
up to Ø6	– 0.018 – 0.025
over Ø6	h6

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2552 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

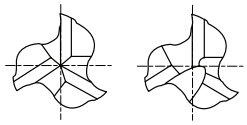
EQ552 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 3 FLUTE LONG LENGTH THROW AWAY

HSSCo8, 3 SCHNEIDEN LANG EINWEGFRÄSER

Fraise HSSCo8, 3 dents à jeter, longue

3 TAGLIENTI, SERIE CORTA NON RIAFFILABILE - HSSCo8



Up to Ø6mm Over Ø6mm

HSS Co8 | YG STD | N | 3 | 30° | FLAT

P.1450-1453

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAlN	e8			
E2552015	EQ552015	1.5	6	4	28
E2552020	EQ552020	2.0	6	4.5	29
E2552025	EQ552025	2.5	6	6.5	32
E2552030	EQ552030	3.0	6	7.5	34
E2552035	EQ552035	3.5	6	8.5	36.5
E2552040	EQ552040	4.0	6	9.5	39
E2552045	EQ552045	4.5	6	11	42
E2552050	EQ552050	5.0	6	12.5	44.5
E2552055	EQ552055	5.5	6	14.5	46
E2552060	EQ552060	6.0	6	16	44.5
E2552080	EQ552080	8.0	10	19	55.5
E2552090	EQ552090	9.0	10	22.5	61
E2552100	EQ552100	10.0	10	22.5	61

▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in ㎛ / Toleranzwerte in ㎛

Nominal-Diameter in mm / Nennmaßbereich in mm

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
e8	– 14 – 28	– 20 – 38	– 25 – 47	– 32 – 59	– 40 – 73	– 50 – 89
h6	0 – 6	0 – 8	0 – 9	0 – 11	0 – 13	0 – 16

Shank Dia. Tolerance	
up to Ø6	– 0.018 – 0.025
over Ø6	h6

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

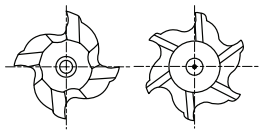
HSS END MILLS

E2574 , EQ574 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

E2575 , EQ575 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 4&6 FLUTE SHORT LENGTH

HSSCo8, 4&6 SCHNEIDEN KURZ
Fraise HSSCo8, 4&6 dents, courte
HSSCo8, 4&6 TAGLIENTI, SERIE CORTA



HSS Co8 | DIN 844 | N | 4&6 | 30° | DIN 1835B

P.1454-1455

Unit : mm

EDP No. UNCOATED	EDP No. TiAlN	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
E2574020	EQ574020	2.0	6	7	51	4
E2574025	EQ574025	2.5	6	8	52	4
E2574030	EQ574030	3.0	6	8	52	4
E2574035	EQ574035	3.5	6	10	54	4
E2574040	EQ574040	4.0	6	11	55	4
E2574050	EQ574050	5.0	6	13	57	4
E2574060	EQ574060	6.0	6	13	57	4
E2574070	EQ574070	7.0	10	16	66	4
E2574080	EQ574080	8.0	10	19	69	4
E2574090	EQ574090	9.0	10	19	69	4
E2574100	EQ574100	10.0	10	22	72	4
E2574110	EQ574110	11.0	12	22	79	4
E2574120	EQ574120	12.0	12	26	83	4
E2574130	EQ574130	13.0	12	26	83	4
E2574140	EQ574140	14.0	12	26	83	4
E2574150	EQ574150	15.0	12	26	83	4
E2574160	EQ574160	16.0	16	32	92	4
E2574170	EQ574170	17.0	16	32	92	4
E2574180	EQ574180	18.0	16	32	92	4
E2574190	EQ574190	19.0	16	32	92	4
E2574200	EQ574200	20.0	20	38	104	4
E2575210	EQ575210	21.0	20	38	104	6
E2575220	EQ575220	22.0	20	38	104	6
E2575230	EQ575230	23.0	20	38	104	6
E2575240	EQ575240	24.0	25	45	121	6
E2575250	EQ575250	25.0	25	45	121	6
E2575260	EQ575260	26.0	25	45	121	6
E2575280	EQ575280	28.0	25	45	121	6
E2575300	EQ575300	30.0	25	45	121	6
E2575320	EQ575320	32.0	32	53	133	6
E2575340	EQ575340	34.0	32	53	133	6
E2575350	EQ575350	35.0	32	53	133	6
E2575360	EQ575360	36.0	32	53	133	6
E2575400	EQ575400	40.0	32	63	143	6

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~+0.04	h6

▶Other shank design on your reguest.
▶TiN and TiCN Coatings are available on your request.

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2595 , EQ595 SERIES — FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

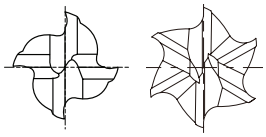
E2596 , EQ596 SERIES — FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 4&6 FLUTE SHORT LENGTH - CENTER CUTTING

HSSCo8, 4&6 SCHNEIDEN KURZ

Fraise HSSCo8, 4&6 dents, coupe au centre, courte

4 - 6 TAGLIENTI, SERIE CORTA, TAGLIENTE AL CENTRO - HSSCo8



HSS Co8 | DIN 844 | N | 4&6 | 30° | DIN 1835B

P.1464-1465

Unit : mm

EDP No. UNCOATED	EDP No. TiAlN	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
E2595020	EQ595020	2.0	6	7	51	4
E2595030	EQ595030	3.0	6	8	52	4
E2595040	EQ595040	4.0	6	11	55	4
E2595050	EQ595050	5.0	6	13	57	4
E2595060	EQ595060	6.0	6	13	57	4
E2595070	EQ595070	7.0	10	16	66	4
E2595080	EQ595080	8.0	10	19	69	4
E2595090	EQ595090	9.0	10	19	69	4
E2595100	EQ595100	10.0	10	22	72	4
E2595110	EQ595110	11.0	12	22	79	4
E2595120	EQ595120	12.0	12	26	83	4
E2595130	EQ595130	13.0	12	26	83	4
E2595140	EQ595140	14.0	12	26	83	4
E2595150	EQ595150	15.0	12	26	83	4
E2595160	EQ595160	16.0	16	32	92	4
E2595170	EQ595170	17.0	16	32	92	4
E2595180	EQ595180	18.0	16	32	92	4
E2595190	EQ595190	19.0	16	32	92	4
E2595920	EQ595920	20.0	16	38	98	4
E2595200	EQ595200	20.0	20	38	104	4
E2595220	EQ595220	22.0	20	38	104	4
E2595250	EQ595250	25.0	25	45	121	4
E2596220	EQ596220	22.0	20	38	104	6
E2596240	EQ596240	24.0	25	45	121	6
E2596250	EQ596250	25.0	25	45	121	6
E2596260	EQ596260	26.0	25	45	121	6
E2596280	EQ596280	28.0	25	45	121	6
E2596300	EQ596300	30.0	25	45	121	6
E2596320	EQ596320	32.0	32	53	133	6
E2596340	EQ596340	34.0	32	53	133	6
E2596350	EQ596350	35.0	32	53	133	6
E2596360	EQ596360	36.0	32	53	133	6
E2596380	EQ596380	38.0	32	63	143	6
E2596901	EQ596901	40.0	32	63	143	6
E2596400	EQ596400	40.0	40	63	155	6

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~+0.04	h6

▶ Other shank design on your reguest.
▶ TiN and TiCN Coatings are available on your request.

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

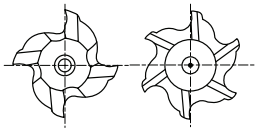
HSS END MILLS

E2576 , EQ576 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

E2577 , EQ577 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 4&6 FLUTE LONG LENGTH

HSSCo8, 4&6 SCHNEIDEN LANG
Fraise HSSCo8, 4&6 dents, longue
HSSCo8, 4&6 TAGLIENTI, SERIE LUNGA



HSS Co8 | DIN 844 | N | 4&6 | 30° | DIN 1835B

P.1454-1455

Unit : mm

EDP No. UNCOATED	EDP No. TiAlN	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
E2576020	EQ576020	2.0	6	10	54	4
E2576025	EQ576025	2.5	6	12	56	4
E2576030	EQ576030	3.0	6	12	56	4
E2576035	EQ576035	3.5	6	15	59	4
E2576040	EQ576040	4.0	6	19	63	4
E2576045	EQ576045	4.5	6	19	63	4
E2576050	EQ576050	5.0	6	24	68	4
E2576060	EQ576060	6.0	6	24	68	4
E2576070	EQ576070	7.0	10	30	80	4
E2576080	EQ576080	8.0	10	38	88	4
E2576090	EQ576090	9.0	10	38	88	4
E2576100	EQ576100	10.0	10	45	95	4
E2576110	EQ576110	11.0	12	45	102	4
E2576120	EQ576120	12.0	12	53	110	4
E2576130	EQ576130	13.0	12	53	110	4
E2576140	EQ576140	14.0	12	53	110	4
E2576150	EQ576150	15.0	12	53	110	4
E2576160	EQ576160	16.0	16	63	123	4
E2576170	EQ576170	17.0	16	63	123	4
E2576180	EQ576180	18.0	16	63	123	4
E2576190	EQ576190	19.0	16	63	123	4
E2576902	EQ576902	20.0	16	75	135	4
E2576200	EQ576200	20.0	20	75	141	4
E2577220	EQ577220	22.0	20	75	141	6
E2577240	EQ577240	24.0	25	90	166	6
E2577250	EQ577250	25.0	25	90	166	6
E2577260	EQ577260	26.0	25	90	166	6
E2577280	EQ577280	28.0	25	90	166	6
E2577300	EQ577300	30.0	25	90	166	6
E2577320	EQ577320	32.0	32	106	186	6
E2577360	EQ577360	36.0	32	106	186	6
E2577400	EQ577400	40.0	40	125	217	6

Mill Dia. Tolerance(mm)		Shank Dia. Tolerance
up to Ø6	0~+0.04	h6
over Ø6	0~+0.05	

▶Other shank design on your reguest.
▶TiN and TiCN Coatings are available on your request.

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2597 , EQ597 SERIES — FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

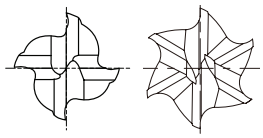
E2598 , EQ598 SERIES — FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 4&6 FLUTE LONG LENGTH - CENTER CUTTING

HSSCo8, 4&6 SCHNEIDEN LANG

Fraise HSSCo8, 4&6 dents, coupe au centre, longue

4&6 TAGLIENTI, SERIE LUNGA, TAGLIENTE AL CENTRO - HSSCo8



HSS Co8 | DIN 844 | N | 4&6 | ≈30° | DIN 1835B

P.1454-1455

Unit : mm

EDP No. UNCOATED	EDP No. TiAlN	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
E2597020	EQ597020	2.0	6	10	54	4
E2597025	EQ597025	2.5	6	12	56	4
E2597030	EQ597030	3.0	6	12	56	4
E2597035	EQ597035	3.5	6	15	59	4
E2597040	EQ597040	4.0	6	19	63	4
E2597045	EQ597045	4.5	6	19	63	4
E2597050	EQ597050	5.0	6	24	68	4
E2597055	EQ597055	5.5	6	24	68	4
E2597060	EQ597060	6.0	6	24	68	4
E2597070	EQ597070	7.0	10	30	80	4
E2597080	EQ597080	8.0	10	38	88	4
E2597090	EQ597090	9.0	10	38	88	4
E2597100	EQ597100	10.0	10	45	95	4
E2597110	EQ597110	11.0	12	45	102	4
E2597120	EQ597120	12.0	12	53	110	4
E2597130	EQ597130	13.0	12	53	110	4
E2597140	EQ597140	14.0	12	53	110	4
E2597150	EQ597150	15.0	12	53	110	4
E2597160	EQ597160	16.0	16	63	123	4
E2597170	EQ597170	17.0	16	63	123	4
E2597180	EQ597180	18.0	16	63	123	4
E2597190	EQ597190	19.0	16	63	123	4
E2597200	EQ597200	20.0	20	75	141	4
E2598220	EQ598220	22.0	20	75	141	6
E2598240	EQ598240	24.0	25	90	166	6
E2598250	EQ598250	25.0	25	90	166	6
E2598260	EQ598260	26.0	25	90	166	6
E2598280	EQ598280	28.0	25	90	166	6
E2598300	EQ598300	30.0	25	90	166	6
E2598320	EQ598320	32.0	32	106	186	6
E2598360	EQ598360	36.0	32	106	186	6
E2598400	EQ598400	40.0	40	125	217	6

Mill Dia. Tolerance(mm)		Shank Dia. Tolerance
up to Ø6	0~+0.04	h6
over Ø6	0~+0.05	

▶ Other shank design on your reguest.
▶ TiN and TiCN Coatings are available on your request.

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2776 SERIES MORSE TAPER SHANK / MORSE KEGELSCHAFT

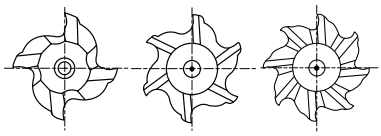
EQ776 SERIES MORSE TAPER SHANK / MORSE KEGELSCHAFT

HSSCo8, MULTI FLUTE SHORT LENGTH

HSSCo8, MULTI SCHNEIDEN KURZ

Fraise HSSCo8, multi-dents, courte

MULTI TAGLIENTE, SERIE CORTA - HSSCo8



HSS Co8 | DIN 845 | N | 4-8 | 30° | DIN 228A

P.1454-1455

Unit : mm

EDP No. UNCOATED	EDP No. TiAlN	Mill Diameter	Length of Cut	Overall Length	Morse Taper No.	No.of Flute
E2776140	EQ776140	14.0	26	111	2	4
E2776150	EQ776150	15.0	26	111	2	4
E2776160	EQ776160	16.0	32	117	2	4
E2776180	EQ776180	18.0	32	117	2	4
E2776200	EQ776200	20.0	38	123	2	4
E2776220	EQ776220	22.0	38	123	2	6
E2776240	EQ776240	24.0	45	147	3	6
E2776250	EQ776250	25.0	45	147	3	6
E2776260	EQ776260	26.0	45	147	3	6
E2776280	EQ776280	28.0	45	147	3	6
E2776300	EQ776300	30.0	45	147	3	6
E2776320	EQ776320	32.0	53	178	4	6
E2776350	EQ776350	35.0	53	178	4	6
E2776360	EQ776360	36.0	53	178	4	6
E2776380	EQ776380	38.0	63	188	4	6
E2776400	EQ776400	40.0	63	188	4	6
E2776420	EQ776420	42.0	63	188	4	6
E2776440	EQ776440	44.0	63	188	4	6
E2776450	EQ776450	45.0	63	188	4	8
E2776500	EQ776500	50.0	75	233	5	8

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Mill Dia. Tolerance(mm)
±0.120

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2461, E2462, E2463 SERIES — FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

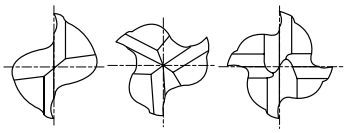
EQ461, EQ462, EQ463 SERIES — FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, MULTI FLUTE 50° HELIX SHORT LENGTH

HSSCo8, MULTI SCHNEIDEN 50° RECHTSSPIRALE KURZ

Fraise HSSCo8, multi-dents, hélice 50°, courte

MULTI TAGLIENTE, ELICA 50°, SERIE CORTA - HSSCo8



HSS Co8 | DIN 844 | N | 2-4 | 50° | DIN 1835B

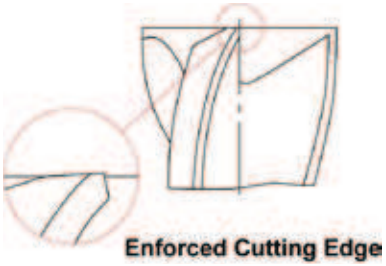
P.1456-1457

Unit : mm

EDP No. UNCOATED	EDP No. TiAlN	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
E2461020	EQ461020	2.0	6	7	51	2
E2461030	EQ461030	3.0	6	8	52	2
E2461040	EQ461040	4.0	6	11	55	2
E2461050	EQ461050	5.0	6	13	57	2
E2462060	EQ462060	6.0	6	13	57	3
E2462070	EQ462070	7.0	10	16	66	3
E2462080	EQ462080	8.0	10	19	69	3
E2462090	EQ462090	9.0	10	19	69	3
E2462100	EQ462100	10.0	10	22	72	3
E2462110	EQ462110	11.0	12	22	79	3
E2462120	EQ462120	12.0	12	26	83	3
E2462130	EQ462130	13.0	12	26	83	3
E2462140	EQ462140	14.0	12	26	83	3
E2462150	EQ462150	15.0	12	26	83	3
E2462160	EQ462160	16.0	16	32	92	3
E2462180	EQ462180	18.0	16	32	92	3
E2462200	EQ462200	20.0	20	38	104	3
E2462230	EQ462230	23.0	20	38	104	3
E2463220	EQ463220	22.0	25	45	121	4
E2463250	EQ463250	25.0	25	45	121	4
E2463300	EQ463300	30.0	25	45	121	4

▶Other shank design on your reguest.
▶TiN and TiCN Coatings are available on your request.

Mill Dia. Tolerance(mm)		Shank Dia. Tolerance
up to Ø3	0~+0.04	h6
Ø4.0 ~ Ø6.0	0~+0.048	
Ø7.0 ~ Ø10.0	0~+0.058	
Ø10.5 ~ Ø18.0	0~+0.07	
over Ø18	0~+0.084	



◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○												

HSS END MILLS

E2761 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

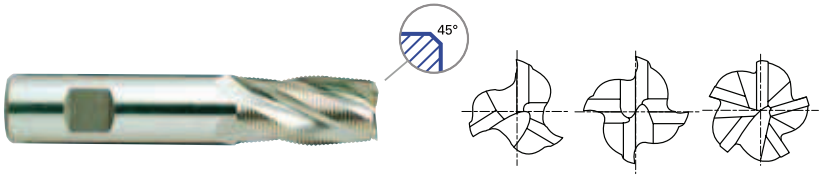
EQ761 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, MULTI FLUTE SHORT LENGTH ROUGHING - EXTRA FINE

HSSCo8, MULTI SCHNEIDEN KURZ SCHRUPPFRÄSER - EXTRA FEIN

Fraise HSSCo8, multi-dents ébauche, pas extra-fin, courte

MULTI TAGLIENTE, PER SGROSSATURA, SERIE CORTA, BOMBATO FINE - HSSCo8



HSS Co8 | DIN 844 | HR | EXTRA FINE | 3-5 | 30° | DIN 1835B | C x 45°

P.1458-1459

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute	Chamfer
UNCOATED	TiAlN	js12	h6				
E2761060	EQ761060	6.0	6	13	57	3	0.30
E2761070	EQ761070	7.0	10	16	66	3	0.30
E2761080	EQ761080	8.0	10	19	69	3	0.30
E2761090	EQ761090	9.0	10	19	69	3	0.30
E2761100	EQ761100	10.0	10	22	72	4	0.30
E2761120	EQ761120	12.0	12	26	83	4	0.34
E2761140	EQ761140	14.0	12	26	83	4	0.34
E2761160	EQ761160	16.0	16	32	92	4	0.34
E2761180	EQ761180	18.0	16	32	92	4	0.44
E2761200	EQ761200	20.0	20	38	104	4	0.44
E2761220	EQ761220	22.0	20	38	104	5	0.44
E2761250	EQ761250	25.0	25	45	121	5	0.44

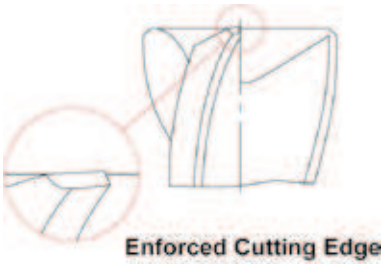
▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in ㎛ / Toleranzwerte in ㎛

Nominal-Diameter in mm / Nennmaßbereich in mm

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
js12	±50	±60	±75	±90	±105	±125
h6	0 / – 6	0 / – 8	0 / – 9	0 / – 11	0 / – 13	0 / – 16



◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2606 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

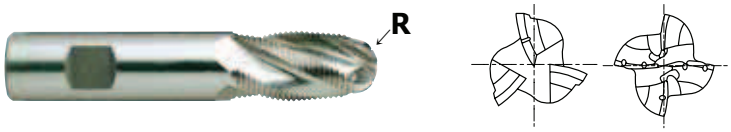
EQ606 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 3&4 FLUTE SHORT LENGTH ROUGHING BALL NOSE - FINE

HSSCo8, 3&4 SCHNEIDEN KURZ SCHRUPPFRÄSER STIRNRADIUS - FEIN

Fraise HSSCo8, 3&4 dents, ébauche, hémisphérique, pas fin, courte

3&4 TAGLIENTI, SEMISFERICA, PER SGROSSATURA, SERIE CORTA, B. F. - HSSCo8



HSS Co8 | DIN 1889 | HR | FINE | 3&4 | 30° | R ±0.02 | DIN 1835B

P.1460-1461

Unit : mm

EDP No.		Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
UNCOATED	TiAlN	R (±0.02)	js12	h6			
E2606060	EQ606060	R3.0	6.0	6	13	57	3
E2606080	EQ606080	R4.0	8.0	10	19	69	3
E2606100	EQ606100	R5.0	10.0	10	22	72	3
E2606120	EQ606120	R6.0	12.0	12	26	83	4
E2606160	EQ606160	R8.0	16.0	16	32	92	4
E2606200	EQ606200	R10.0	20.0	20	38	104	4
E2606250	EQ606250	R12.5	25.0	25	45	121	4
E2606320	EQ606320	R16.0	32.0	32	53	133	4
E2606400	EQ606400	R20.0	40.0	32	63	155	4

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in ㎛ / Toleranzwerte in ㎛
Nominal-Diameter in mm / Nennmaßbereich in mm

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
js12	±50	±60	±75	±90	±105	±125
h6	0 / – 6	0 / – 8	0 / – 9	0 / – 11	0 / – 13	0 / – 16

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2524 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

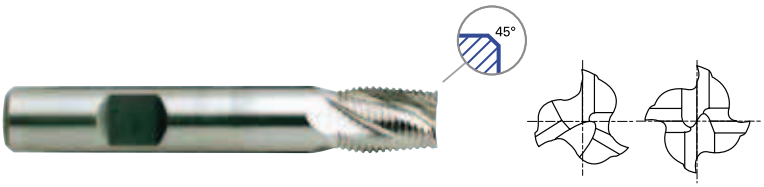
EQ524 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 3&4 FLUTE STUB LENGTH ROUGHING - FINE

HSSCo8, 3&4 SCHNEIDEN EXTRA KURZ SCHRUPPFRÄSER - FEIN

Fraise HSSCo8, 3&4 dents, ébauche, pas fin, extra-courte

3&4 TAGLIENTI, PER SGROSSATURA, EXTRA CORTA, BOMBATO FINE - HSSCo8



HSS Co8 | DIN 327 | HR | FINE | 3&4 | 30° | DIN 1835B | C x 45°

P.1462-1463

Unit : mm

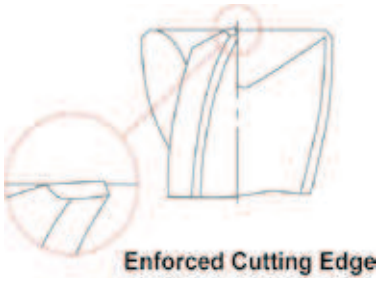
EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute	Chamfer
UNCOATED	TiAlN	k12	h6				
E2524060	EQ524060	6.0	6	8	52	3	0.18
E2524080	EQ524080	8.0	10	11	61	4	0.18
E2524100	EQ524100	10.0	10	13	63	4	0.18
E2524120	EQ524120	12.0	12	16	73	4	0.18
E2524140	EQ524140	14.0	12	16	73	4	0.25
E2524160	EQ524160	16.0	16	19	79	4	0.25
E2524180	EQ524180	18.0	16	19	79	4	0.25
E2524200	EQ524200	20.0	20	22	88	4	0.25

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in ㎛ / Toleranzwerte in ㎛
Nominal-Diameter in ㎜ / Nennmaßbereich in ㎜

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
k12	+90 0	+120 0	+150 0	+180 0	+210 0	+250 0
h6	0 − 6	0 − 8	0 − 9	0 − 11	0 − 13	0 − 16



◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2753 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

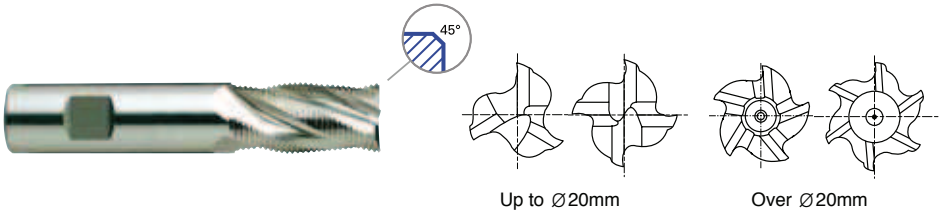
EQ753 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, MULTI FLUTE SHORT LENGTH ROUGHING - FINE

HSSCo8, MULTI SCHNEIDEN KURZ SCHRUPPFRÄSER - FEIN

Fraise HSSCo8, multi-dents ébauche, pas fin, courte

MULTI TAGLIENTE, PER SGROSSATURA, SERIE CORTA, BOMBATO FINE - HSSCo8



HSS Co8 | DIN 844 | HR | FINE | 3-6 | 30° | DIN 1835B | ~Ø20 | Ø22~ | C x 45° P.1458-1459

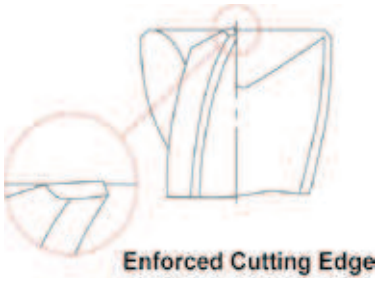
Unit : mm

EDP No. UNCOATED	EDP No. TiAlN	Mill Diameter js12	Shank Diameter h6	Length of Cut	Overall Length	No. of Flute	Chamfer
E2753060	EQ753060	6.0	6	13	57	3	0.18
E2753070	EQ753070	7.0	10	16	66	3	0.18
E2753080	EQ753080	8.0	10	19	69	3	0.18
E2753090	EQ753090	9.0	10	19	69	3	0.18
E2753100	EQ753100	10.0	10	22	72	4	0.18
E2753110	EQ753110	11.0	12	22	79	4	0.18
E2753120	EQ753120	12.0	12	26	83	4	0.18
E2753130	EQ753130	13.0	12	26	83	4	0.18
E2753140	EQ753140	14.0	12	26	83	4	0.25
E2753150	EQ753150	15.0	12	26	83	4	0.25
E2753160	EQ753160	16.0	16	32	92	4	0.25
E2753180	EQ753180	18.0	16	32	92	4	0.25
E2753200	EQ753200	20.0	20	38	104	4	0.25
E2753250	EQ753250	25.0	25	45	121	5	0.36
E2753280	EQ753280	28.0	25	45	121	6	0.36
E2753300	EQ753300	30.0	25	45	121	6	0.36
E2753320	EQ753320	32.0	32	53	133	6	0.51
E2753350	EQ753350	35.0	32	53	133	6	0.51
E2753400	EQ753400	40.0	32	63	155	6	0.56

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in ㎛ / Toleranzwerte in ㎛						
Nominal-Diameter in ㎜ / Nennmaßbereich in ㎜						
	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
js12	±50	±60	±75	±90	±105	±125
h6	0 – 6	0 – 8	0 – 9	0 – 11	0 – 13	0 – 16


Enforced Cutting Edge

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2762 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

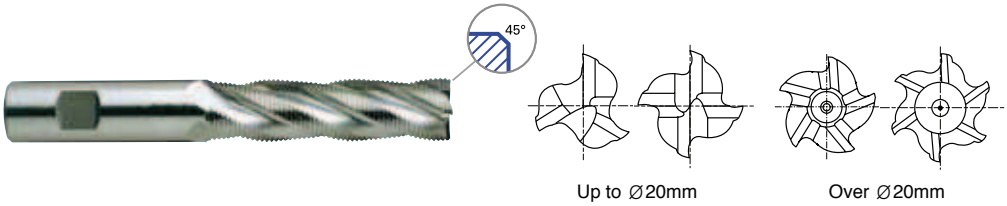
EQ762 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, MULTI FLUTE LONG LENGTH ROUGHING - FINE

HSSCo8, MULTI SCHNEIDEN LANG SCHRUPPFRÄSER - FEIN

Fraise HSSCo8, multi-dents ébauche, pas fin, longue

MULTI TAGLIENTE, PER SGROSSATURA, SERIE LUNGA, BOMBATO FINE - HSSCo8



HSS Co8 | DIN 844 | HR | FINE | 3-6 | 30° | DIN 1835B | ~Ø20 | Ø22~ | C x 45°

P.1458-1459

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute	Chamfer
UNCOATED	TiAlN	js12	h6				
E2762060	EQ762060	6.0	6	24	68	3	0.18
E2762070	EQ762070	7.0	10	30	80	3	0.18
E2762080	EQ762080	8.0	10	38	88	3	0.18
E2762090	EQ762090	9.0	10	38	88	3	0.18
E2762100	EQ762100	10.0	10	45	95	4	0.18
E2762110	EQ762110	11.0	12	45	102	4	0.18
E2762120	EQ762120	12.0	12	53	110	4	0.18
E2762130	EQ762130	13.0	12	53	110	4	0.18
E2762140	EQ762140	14.0	12	53	110	4	0.25
E2762150	EQ762150	15.0	12	53	110	4	0.25
E2762160	EQ762160	16.0	16	63	123	4	0.25
E2762170	EQ762170	17.0	16	63	123	4	0.25
E2762180	EQ762180	18.0	16	63	123	4	0.25
E2762190	EQ762190	19.0	16	63	123	4	0.25
E2762200	EQ762200	20.0	20	75	141	4	0.25
E2762220	EQ762220	22.0	20	75	141	5	0.36
E2762240	EQ762240	24.0	25	90	166	5	0.36
E2762250	EQ762250	25.0	25	90	166	5	0.36
E2762260	EQ762260	26.0	25	90	166	6	0.36
E2762280	EQ762280	28.0	25	90	166	6	0.36
E2762300	EQ762300	30.0	25	90	166	6	0.36
E2762320	EQ762320	32.0	32	106	186	6	0.51
E2762350	EQ762350	35.0	32	106	186	6	0.51
E2762360	EQ762360	36.0	32	106	186	6	0.56
E2762380	EQ762380	38.0	32	125	217	6	0.56
E2762400	EQ762400	40.0	32	125	217	6	0.56
E2762940	EQ762940	40.0	40	125	217	6	0.56

Tolerances according to DIN 7160 & 7161

Toleranzen nach DIN 7160 & 7161

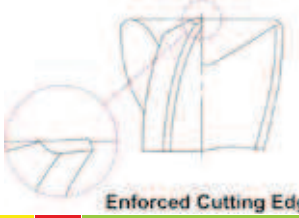
Tolerance range in µm / Toleranzwerte in µm

Nominal-Diameter in mm / Nennmaßbereich in mm

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
js12	±50	±60	±75	±90	±105	±125
h6	0 / – 6	0 / – 8	0 / – 9	0 / – 11	0 / – 13	0 / – 16

▶Other shank design on your request.

▶TiN and TiCN Coatings are available on your request.



◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2757 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

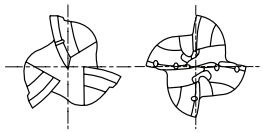
EQ757 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 3&4 FLUTE SHORT LENGTH ROUGHING BALL NOSE - COARSE

HSSCo8, 3&4 SCHNEIDEN KURZ SCHRUPPFRÄSER STIRNRADIUS - GROB

Fraise HSSCo8, 3&4 dents, ébauche, hémisphérique, pas grossier, courte

3&4 TAGLIENTI, SEMISFERICA, PER SGROSSATURA, SERIE CORTA, B. F. - HSSCo8



HSS Co8 | DIN 1889 | NR | COARSE | 3&4 | 30° | R ±0.02 | DIN 1835B

P.1460-1461

Unit : mm

EDP No. UNCOATED	EDP No. TiAlN	Radius of Ball Nose R (±0.02)	Mill Diameter js12	Shank Diameter h6	Length of Cut	Overall Length	No.of Flute
E2757060	EQ757060	R3.0	6.0	6	13	57	3
E2757080	EQ757080	R4.0	8.0	10	19	69	3
E2757100	EQ757100	R5.0	10.0	10	22	72	3
E2757120	EQ757120	R6.0	12.0	12	26	83	4
E2757160	EQ757160	R8.0	16.0	16	32	92	4
E2757200	EQ757200	R10.0	20.0	20	38	104	4
E2757250	EQ757250	R12.5	25.0	25	45	121	4
E2757320	EQ757320	R16.0	32.0	32	53	133	4
E2757400	EQ757400	R20.0	40.0	32	63	155	4

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in ㎛ / Toleranzwerte in ㎛
Nominal-Diameter in mm / Nennmaßbereich in mm

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
js12	±50	±60	±75	±90	±105	±125
h6	0 / −6	0 / −8	0 / −9	0 / −11	0 / −13	0 / −16

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2751, EQ751 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

E2764, EQ764 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 3 FLUTE SHORT LENGTH ROUGHING - COARSE

HSSCo8, 3 SCHNEIDEN KURZ SCHRUPPFRÄSER - GROB

Fraise HSSCo8, 3 dents, ébauche, pas grossier, courte

3 TAGLIENTI, PER SGROSSATURA, SERIE CORTA, BOMBATO GROSSO - HSSCo8

HSS Co8 | DIN 844 | NR | COARSE | 3 | 30° | DIN 1835B | C x 45°

P.1458-1459

Unit : mm

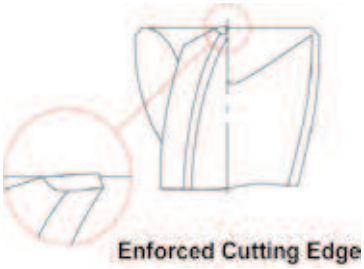
EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length	Chamfer
UNCOATED	TiAlN	js12	h6			
E2751060	EQ751060	6.0	6	13	57	0.25
E2751080	EQ751080	8.0	10	19	69	0.25
E2764100	EQ764100	10.0	10	22	72	0.34
E2764120	EQ764120	12.0	12	26	83	0.50
E2764140	EQ764140	14.0	12	26	83	0.55
E2764160	EQ764160	16.0	16	32	92	0.55
E2764180	EQ764180	18.0	16	32	92	0.55
E2764200	EQ764200	20.0	20	38	104	0.55
E2764220	EQ764220	22.0	20	38	104	0.55
E2764250	EQ764250	25.0	25	45	121	0.55
E2764280	EQ764280	28.0	25	45	121	0.70
E2764300	EQ764300	30.0	25	45	121	0.70
E2764320	EQ764320	32.0	32	53	133	0.70
E2764360	EQ764360	36.0	32	53	133	0.70
E2764400	EQ764400	40.0	32	63	155	0.88

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in ㎛ / Toleranzwerte in ㎛

Nominal-Diameter in mm / Nennmaßbereich in mm						
	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
js12	±50	±60	±75	±90	±105	±125
h6	0 / – 6	0 / – 8	0 / – 9	0 / – 11	0 / – 13	0 / – 16



◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2752, EQ752 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

E2765, EQ765 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 3 FLUTE LONG LENGTH ROUGHING - COARSE

HSSCo8, 3 SCHNEIDEN LANG SCHRUPPFRÄSER - GROB

Fraise HSSCo8, 3 dents, ébauche, pas grossier, longue

3 TAGLIENTI, PER SGROSSATURA, SERIE LUNGA, BOMBATO GROSSO - HSSCo8

HSS Co8 | DIN 844 | NR | COARSE | 3 | 30° | DIN 1835B | C x 45°

P.1458-1459

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length	Chamfer
UNCOATED	TiAlN	js12	h6			
E2752060	EQ752060	6.0	6	24	68	0.25
E2752080	EQ752080	8.0	10	38	88	0.25
E2765100	EQ765100	10.0	10	45	95	0.34
E2765120	EQ765120	12.0	12	53	110	0.50
E2765140	EQ765140	14.0	12	53	110	0.55
E2765160	EQ765160	16.0	16	63	123	0.55
E2765180	EQ765180	18.0	16	63	123	0.55
E2765200	EQ765200	20.0	20	75	141	0.55
E2765220	EQ765220	22.0	20	75	141	0.55
E2765250	EQ765250	25.0	25	90	166	0.55
E2765280	EQ765280	28.0	25	90	166	0.70
E2765300	EQ765300	30.0	25	90	166	0.70
E2765360	EQ765360	36.0	32	106	186	0.70
E2765400	EQ765400	40.0	32	125	217	0.88

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in ㎛ / Toleranzwerte in ㎛

Nominal-Diameter in mm / Nennmaßbereich in mm						
	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
js12	±50	±60	±75	±90	±105	±125
h6	0 – 6	0 – 8	0 – 9	0 – 11	0 – 13	0 – 16

Enforced Cutting Edge

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2755 SERIESS FLAT SHANK
SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 3 FLUTE 37° HELIX SHORT LENGTH ROUGHING for ALUMINUM

HSSCo8, 3 SCHNEIDEN 37° RECHTSSPIRALE KURZ SCHRUPPFRÄSER für ALUMINIUM
Fraise HSSCo8, 3 dents, ébauche pour aluminium, hélice 37°, courte
3 TAGLIENTI, ELICA 37°, PER SGROSSATURA, SERIE CORTA - HSSCo8

for ALUMINUM
für ALUMINIUM

HSS Co8 | DIN 844 | WR | ALU | 3 | 37° | DIN 1835B | C x 45°

P.1466-1467

Unit : mm

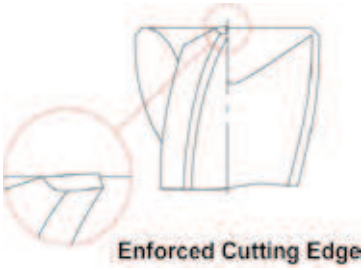
EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	Chamfer
UNCOATED	js12	h6			
E2755060	**6.0**	6	13	57	0.51
E2755080	**8.0**	10	19	69	0.51
E2755100	**10.0**	10	22	72	0.60
E2755120	**12.0**	12	26	83	0.74
E2755140	**14.0**	12	26	83	0.94
E2755160	**16.0**	16	32	92	0.94
E2755180	**18.0**	16	32	92	0.94
E2755200	**20.0**	20	38	104	0.94
E2755220	**22.0**	20	38	104	0.94
E2755250	**25.0**	25	45	121	0.94
E2755300	**30.0**	25	45	121	1.23

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in ㎛ / Toleranzwerte in ㎛
Nominal-Diameter in mm / Nennmaßbereich in mm

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
js12	±50	±60	±75	±90	±105	±125
h6	0 / – 6	0 / – 8	0 / – 9	0 / – 11	0 / – 13	0 / – 16



◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	○									◎				

HSS END MILLS

E2756 SERIES FLAT SHANK
SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 3 FLUTE 37° HELIX LONG LENGTH ROUGHING for ALUMINUM

HSSCo8, 3 SCHNEIDEN 37° RECHTSSPIRALE LANG SCHRUPPFRÄSER für ALUMINIUM

Fraise HSSCo8, 3 dents, ébauche pour aluminium, hélice 37°, longue

3 TAGLIENTI, ELICA 37°, PER SGROSSATURA, SERIE LUNGA, B.G. - HSSCo8

for ALUMINUM
für ALUMINIUM

HSS Co8 | DIN 844 | WR | ALU | 3 | 37° | DIN 1835B | C x 45°

P.1466-1467

Unit : mm

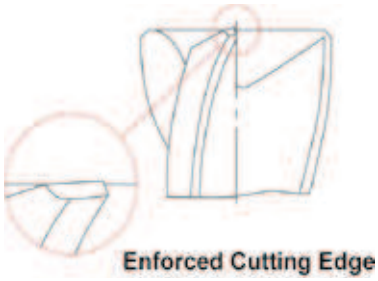
EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length	Chamfer
UNCOATED	js12	h6			
E2756100	**10.0**	10	45	95	0.60
E2756120	**12.0**	12	53	110	0.74
E2756140	**14.0**	12	53	110	0.76
E2756160	**16.0**	16	63	123	0.94
E2756180	**18.0**	16	63	123	0.76
E2756200	**20.0**	20	75	141	0.94
E2756220	**22.0**	20	75	141	0.94
E2756250	**25.0**	25	90	166	0.94
E2756300	**30.0**	25	90	166	1.23

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in ㎛ / Toleranzwerte in ㎛
Nominal-Diameter in mm / Nennmaßbereich in mm

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
js12	±50	±60	±75	±90	±105	±125
h6	0 / – 6	0 / – 8	0 / – 9	0 / – 11	0 / – 13	0 / – 16



◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	○									◎				

HSS END MILLS

E2751 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

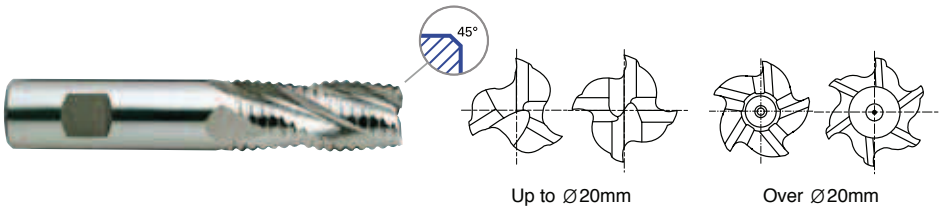
EQ751 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, MULTI FLUTE SHORT LENGTH ROUGHING - COARSE

HSSCo8, MULTI SCHNEIDEN KURZ SCHRUPPFRÄSER - GROB

Fraise HSSCo8, multi-dents ébauche, pas grossier, courte

MULTI TAGLIENTE, PER SGROSSATURA, SERIE CORTA, BOMBATO GROSSO - HSSCo8



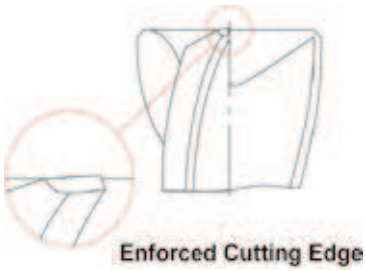
HSS Co8 | DIN 844 | NR | COARSE | 3-6 | 30° | DIN 1835B | ~Ø20 | Ø22~ | C x 45°

P.1458-1459

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute	Chamfer
UNCOATED	TiAlN	js12	h6				
E2751060	EQ751060	6.0	6	13	57	3	0.25
E2751070	EQ751070	7.0	10	16	66	3	0.25
E2751080	EQ751080	8.0	10	19	69	3	0.25
E2751090	EQ751090	9.0	10	19	69	3	0.34
E2751095	EQ751095	9.5	10	19	69	3	0.34
E2751100	EQ751100	10.0	10	22	72	4	0.34
E2751110	EQ751110	11.0	12	22	79	4	0.50
E2751120	EQ751120	12.0	12	26	83	4	0.50
E2751125	EQ751125	12.5	12	26	83	4	0.50
E2751130	EQ751130	13.0	12	26	83	4	0.50
E2751140	EQ751140	14.0	12	26	83	4	0.55
E2751145	EQ751145	14.5	12	26	83	4	0.55
E2751150	EQ751150	15.0	12	26	83	4	0.55
E2751160	EQ751160	16.0	16	32	92	4	0.55
E2751170	EQ751170	17.0	16	32	92	4	0.55
E2751180	EQ751180	18.0	16	32	92	4	0.55
E2751190	EQ751190	19.0	16	32	92	4	0.55
E2751200	EQ751200	20.0	20	38	104	4	0.55
E2751901	EQ751901	20.0	16	38	98	4	0.55
E2751220	EQ751220	22.0	20	38	104	5	0.55
E2751240	EQ751240	24.0	25	45	121	5	0.55
E2751250	EQ751250	25.0	25	45	121	5	0.55
E2751260	EQ751260	26.0	25	45	121	6	0.55
E2751280	EQ751280	28.0	25	45	121	6	0.70
E2751300	EQ751300	30.0	25	45	121	6	0.70

▶ NEXT PAGE



◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2751 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

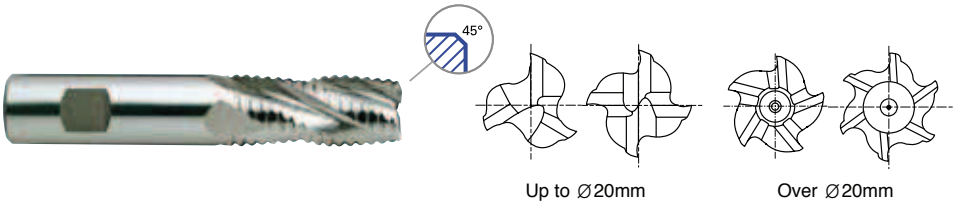
EQ751 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, MULTI FLUTE SHORT LENGTH ROUGHING - COARSE

HSSCo8, MULTI SCHNEIDEN KURZ SCHRUPPFRÄSER - GROB

Fraise HSSCo8, multi-dents ébauche, pas grossier, courte

MULTI TAGLIENTE, PER SGROSSATURA, SERIE CORTA, BOMBATO GROSSO - HSSCo8



HSS Co8 | DIN 844 | NR | COARSE | 3-6 | 30° | DIN 1835B | ~Ø20 | Ø22~ | C x 45°

P.1458-1459

Unit : mm

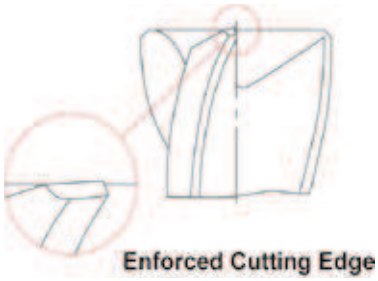
EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute	Chamfer
UNCOATED	TiAlN	js12	h6				
E2751320	EQ751320	32.0	32	53	133	6	0.70
E2751340	EQ751340	34.0	32	53	133	6	0.70
E2751350	EQ751350	35.0	32	53	133	6	0.70
E2751360	EQ751360	36.0	32	53	133	6	0.70
E2751380	EQ751380	38.0	32	63	155	6	0.70
E2751938	EQ751938	38.0	40	63	155	6	0.70
E2751400	EQ751400	40.0	32	63	155	6	0.88
E2751940	EQ751940	40.0	40	63	155	6	0.88
E2751450	EQ751450	45.0	32	63	143	6	0.88
E2751500	EQ751500	50.0	50	75	177	6	0.88

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in ㎛ / Toleranzwerte in ㎛
Nominal-Diameter in mm / Nennmaßbereich in mm

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
js12	±50	±60	±75	±90	±105	±125
h6	0 / −6	0 / −8	0 / −9	0 / −11	0 / −13	0 / −16



◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2752 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

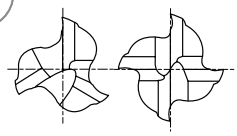
EQ752 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, MULTI FLUTE LONG LENGTH ROUGHING - COARSE

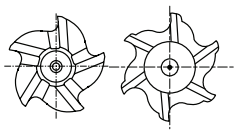
HSSCo8, MULTI SCHNEIDEN LANG SCHRUPPFRÄSER - GROB

Fraise HSSCo8, multi-dents ébauche, pas grossier, longue

MULTI TAGLIENTE, PER SGROSSATURA, SERIE LUNGA, BOMBATO GROSSO - HSSCo8



Up to Ø20mm



Over Ø20mm

HSS Co8 | DIN 844 | NR | COARSE | 3-6 | 30° | DIN 1835B | ~Ø20 | Ø22~ | C x 45°

P.1458-1459

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute	Chamfer
UNCOATED	TiAlN	js12	h6				
E2752060	EQ752060	6.0	6	24	68	3	0.25
E2752070	EQ752070	7.0	10	30	80	3	0.25
E2752080	EQ752080	8.0	10	38	88	3	0.25
E2752090	EQ752090	9.0	10	38	88	3	0.34
E2752100	EQ752100	10.0	10	45	95	4	0.34
E2752110	EQ752110	11.0	12	45	102	4	0.50
E2752120	EQ752120	12.0	12	53	110	4	0.50
E2752130	EQ752130	13.0	12	53	110	4	0.50
E2752140	EQ752140	14.0	12	53	110	4	0.55
E2752150	EQ752150	15.0	12	53	110	4	0.55
E2752160	EQ752160	16.0	16	63	123	4	0.55
E2752170	EQ752170	17.0	16	63	123	4	0.55
E2752180	EQ752180	18.0	16	63	123	4	0.55
E2752190	EQ752190	19.0	16	63	123	4	0.55
E2752200	EQ752200	20.0	20	75	141	4	0.55
E2752901	EQ752901	20.0	16	75	135	4	0.55
E2752220	EQ752220	22.0	20	75	141	5	0.55
E2752902	EQ752902	22.0	25	75	151	5	0.55
E2752240	EQ752240	24.0	25	90	166	5	0.55
E2752250	EQ752250	25.0	25	90	166	5	0.55
E2752260	EQ752260	26.0	25	90	166	6	0.55
E2752280	EQ752280	28.0	25	90	166	6	0.70
E2752300	EQ752300	30.0	25	90	166	6	0.70
E2752320	EQ752320	32.0	32	106	186	6	0.70
E2752350	EQ752350	35.0	32	106	186	6	0.70
E2752360	EQ752360	36.0	32	106	186	6	0.70
E2752380	EQ752380	38.0	32	125	217	6	0.70
E2752938	EQ752938	38.0	40	125	217	6	0.70
E2752400	EQ752400	40.0	32	125	217	6	0.88
E2752940	EQ752940	40.0	40	125	217	6	0.88

Tolerances according to DIN 7160 & 7161

Toleranzen nach DIN 7160 & 7161

Tolerance range in μm / Toleranzwerte in μm

Nominal-Diameter in mm / Nennmaßbereich in mm

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
js12	±50	±60	±75	±90	±105	±125
h6	0 / −6	0 / −8	0 / −9	0 / −11	0 / −13	0 / −16

▶ Other shank design on your request.

▶ TiN and TiCN Coatings are available on your request.

Enforced Cutting Edge

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2778 SERIES MORSE TAPER SHANK / MORSE KEGELSCHAFT

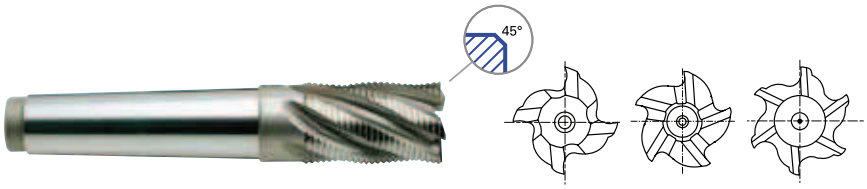
EQ778 SERIES MORSE TAPER SHANK / MORSE KEGELSCHAFT

HSSCo8, MULTI FLUTE SHORT LENGTH ROUGHING - FINE

HSSCo8, MULTI SCHNEIDEN KURZ SCHRUPPFRÄSER - FEIN

Fraise HSSCo8, multi-dents ébauche, pas fin, courte

MULTI TAGLIENTE, SERIE CORTA, PER SGROSSATURA, BOMBATO FINE - HSSCo8



HSS Co8 | DIN 845 | HR | FINE | 4-6 | 30° | DIN 228A | C x 45°

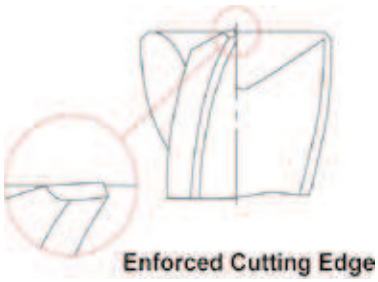
P.1458-1459

Unit : mm

EDP No. UNCOATED	EDP No. TiAlN	Mill Diameter	Length of Cut	Overall Length	Morse Taper No.	No.of Flute	Chamfer
E2778160	EQ778160	16.0	32	117	2	4	0.25
E2778180	EQ778180	18.0	32	117	2	4	0.25
E2778200	EQ778200	20.0	38	123	2	4	0.25
E2778220	EQ778220	22.0	38	123	2	5	0.30
E2778240	EQ778240	24.0	45	147	3	5	0.30
E2778250	EQ778250	25.0	45	147	3	5	0.43
E2778260	EQ778260	26.0	45	147	3	5	0.30
E2778280	EQ778280	28.0	45	147	3	6	0.30
E2778300	EQ778300	30.0	45	147	3	6	0.70
E2778320	EQ778320	32.0	53	178	4	6	0.51
E2778350	EQ778350	35.0	53	178	4	6	0.51
E2778360	EQ778360	36.0	53	178	4	6	0.51
E2778380	EQ778380	38.0	63	188	4	6	0.56
E2778400	EQ778400	40.0	63	188	4	6	0.56
E2778450	EQ778450	45.0	63	188	4	6	0.56
E2778500	EQ778500	50.0	75	233	5	6	0.56

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Mill Dia. Tolerance(mm)
±0.120



Enforced Cutting Edge

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2777 SERIES MORSE TAPER SHANK / MORSE KEGELSCHAFT

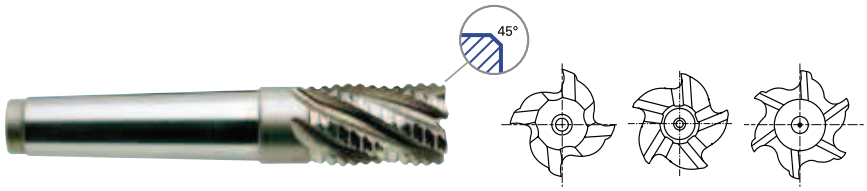
EQ777 SERIES MORSE TAPER SHANK / MORSE KEGELSCHAFT

HSSCo8, MULTI FLUTE SHORT LENGTH ROUGHING - COARSE

HSSCo8, MULTI SCHNEIDEN KURZ SCHRUPPFRÄSER - GROB

Fraise HSSCo8, multi-dents ébauche, pas grossier, courte

MULTI TAGLIENTE, SERIE CORTA, PER SGROSSATURA, B.G. - HSSCo8



HSS Co8 | DIN 845 | NR | COARSE | 4-6 | 30° | DIN 228A | C x 45°

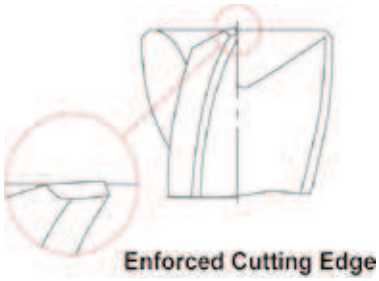
P.1458-1459

Unit : mm

EDP No. UNCOATED	EDP No. TiAlN	Mill Diameter	Length of Cut	Overall Length	Morse Taper No.	No.of Flute	Chamfer
E2777140	EQ777140	14.0	26	111	2	4	0.56
E2777160	EQ777160	16.0	32	117	2	4	0.56
E2777180	EQ777180	18.0	32	117	2	4	0.56
E2777200	EQ777200	20.0	38	123	2	4	0.56
E2777220	EQ777220	22.0	38	123	2	5	0.56
E2777240	EQ777240	24.0	45	147	3	5	0.56
E2777250	EQ777250	25.0	45	147	3	5	0.56
E2777260	EQ777260	26.0	45	147	3	5	0.56
E2777270	EQ777270	27.0	45	147	3	6	0.70
E2777280	EQ777280	28.0	45	147	3	6	0.70
E2777300	EQ777300	30.0	45	147	3	6	0.70
E2777320	EQ777320	32.0	53	178	4	6	0.70
E2777350	EQ777350	35.0	53	178	4	6	0.70
E2777360	EQ777360	36.0	53	178	4	6	0.70
E2777380	EQ777380	38.0	63	188	4	6	0.70
E2777400	EQ777400	40.0	63	188	4	6	0.88
E2777450	EQ777450	45.0	63	188	4	6	0.88
E2777500	EQ777500	50.0	75	233	5	6	0.88

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Mill Dia. Tolerance(mm)
±0.120



Enforced Cutting Edge

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2779 SERIES MORSE TAPER SHANK / MORSE KEGELSCHAFT

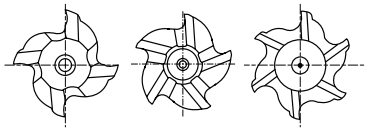
EQ779 SERIES MORSE TAPER SHANK / MORSE KEGELSCHAFT

HSSCo8, MULTI FLUTE SHORT LENGTH ROUGHING & FINISHING

HSSCo8, MULTI SCHNEIDEN KURZ SCHRUPPSCHLICHTFRÄSER

Fraise HSSCo8, multi-dents ébauche et finition, courte

MULTI TAGLIENTE, SERIE CORTA, PER SEMIFINITURA - HSSCo8



HSS Co8 | DIN 845 | NF | ROUGHING & FINISHING | 4-6 | 30° | DIN 228A

P.1468-1469

Unit : mm

EDP No. UNCOATED	EDP No. TiAlN	Mill Diameter	Length of Cut	Overall Length	Morse Taper No.	No.of Flute
E2779160	EQ779160	16.0	32	117	2	4
E2779180	EQ779180	18.0	32	117	2	4
E2779200	EQ779200	20.0	38	123	2	4
E2779220	EQ779220	22.0	38	123	2	5
E2779240	EQ779240	24.0	45	147	3	5
E2779250	EQ779250	25.0	45	147	3	5
E2779260	EQ779260	26.0	45	147	3	5
E2779280	EQ779280	28.0	45	147	3	6
E2779300	EQ779300	30.0	45	147	3	6
E2779320	EQ779320	32.0	53	178	4	6
E2779350	EQ779350	35.0	53	178	4	6
E2779360	EQ779360	36.0	53	178	4	6
E2779380	EQ779380	38.0	63	188	4	6
E2779400	EQ779400	40.0	63	188	4	6
E2779450	EQ779450	45.0	63	188	4	6
E2779500	EQ779500	50.0	75	233	5	6

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Mill Dia. Tolerance(mm)
±0.120

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2766 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

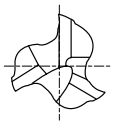
EQ766 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 3 FLUTE SHORT LENGTH ROUGHING & FINISHING

HSSCo8, 3 SCHNEIDEN KURZ SCHRUPPSCHLICHTFRÄSER

Fraise HSSCo8, 3 dents ébauche et finition, courte

HSSCo8, 3 TAGLIENTI, SERIE CORTA, PER SGROSSATURA & FINITURA



HSS Co8 | DIN 844 | NF | ROUGHING & FINISHING | 3 | 30° | DIN 1835B

P.1470-1471

Unit : mm

EDP No. UNCOATED	EDP No. TiAlN	Mill Diameter k10	Shank Diameter h6	Length of Cut	Overall Length
E2766060	EQ766060	6.0	6	13	57
E2766080	EQ766080	8.0	10	19	69
E2766100	EQ766100	10.0	10	22	72
E2766120	EQ766120	12.0	12	26	83
E2766130	EQ766130	13.0	12	26	83
E2766140	EQ766140	14.0	12	26	83
E2766160	EQ766160	16.0	16	32	92
E2766180	EQ766180	18.0	16	32	92
E2766200	EQ766200	20.0	20	38	104
E2766220	EQ766220	22.0	20	38	104
E2766250	EQ766250	25.0	25	45	121
E2766280	EQ766280	28.0	25	45	121
E2766300	EQ766300	30.0	25	45	121
E2766320	EQ766320	32.0	32	53	133
E2766360	EQ766360	36.0	32	53	133
E2766400	EQ766400	40.0	32	63	155

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in μm / Toleranzwerte in μm

Nominal-Diameter in mm / Nennmaßbereich in mm	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
k10	+40 0	+48 0	+58 0	+70 0	+84 0	+100 0
h6	0 – 6	0 – 8	0 – 9	0 – 11	0 – 13	0 – 16

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

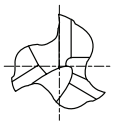
HSS END MILLS

E2767 SERIES FLAT SHANK
SEITLICHE MITNAHMEFLÄCHEN

EQ767 SERIES FLAT SHANK
SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, 3 FLUTE LONG LENGTH ROUGHING & FINISHING

HSSCo8, 3 SCHNEIDEN LANG SCHRUPPSCHLICHTFRÄSER
Fraise HSSCo8, 3 dents, ébauche et finition, longue
HSSCo8, 3 TAGLIENTI, SERIE CORTA, PER SGROSSATURA & FINITURA



HSS Co8 | DIN 844 | NF | ROUGHING & FINISHING | 3 | 30° | DIN 1835B

P.1470-1471

Unit : mm

EDP No. UNCOATED	EDP No. TiAlN	Mill Diameter k10	Shank Diameter h6	Length of Cut	Overall Length
E2767060	EQ767060	6.0	6	24	68
E2767080	EQ767080	8.0	10	38	88
E2767100	EQ767100	10.0	10	45	95
E2767120	EQ767120	12.0	12	53	110
E2767140	EQ767140	14.0	12	53	110
E2767160	EQ767160	16.0	16	63	123
E2767180	EQ767180	18.0	16	63	123
E2767200	EQ767200	20.0	20	75	141
E2767220	EQ767220	22.0	20	75	141
E2767250	EQ767250	25.0	25	90	166
E2767280	EQ767280	28.0	25	90	166
E2767300	EQ767300	30.0	25	90	166
E2767360	EQ767360	36.0	32	106	186
E2767400	EQ767400	40.0	32	125	217

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in ㎛ / Toleranzwerte in ㎛
Nominal-Diameter in mm / Nennmaßbereich in mm

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
k10	+40 0	+48 0	+58 0	+70 0	+84 0	+100 0
h6	0 − 6	0 − 8	0 − 9	0 − 11	0 − 13	0 − 16

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2754 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

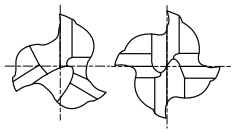
EQ754 SERIES FLAT SHANK / SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, MULTI FLUTE SHORT LENGTH ROUGHING & FINISHING

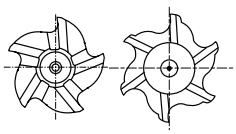
HSSCo8, MULTI SCHNEIDEN KURZ SCHRUPPSCHLICHTFRÄSER

Fraise HSSCo8, multi-dents, ébauche et finition, courte

MULTI TAGLIENTE, SERIE CORTA PER SEMIFINITURA - HSSCo8



Up to Ø20mm



Over Ø20mm

HSS Co8 | DIN 844 | NF | ROUGHING & FINISHING | 3-6 | 30° | DIN 1835B | ~Ø20 | Ø22~

P.1472-1473

Unit : mm

EDP No. UNCOATED	EDP No. TiAlN	Mill Diameter k10	Shank Diameter h6	Length of Cut	Overall Length	No.of Flute
E2754060	EQ754060	6.0	6	13	57	3
E2754070	EQ754070	7.0	10	16	66	3
E2754080	EQ754080	8.0	10	19	69	4
E2754090	EQ754090	9.0	10	19	69	4
E2754100	EQ754100	10.0	10	22	72	4
E2754110	EQ754110	11.0	12	22	79	4
E2754120	EQ754120	12.0	12	26	83	4
E2754130	EQ754130	13.0	12	26	83	4
E2754140	EQ754140	14.0	12	26	83	4
E2754150	EQ754150	15.0	12	26	83	4
E2754160	EQ754160	16.0	16	32	92	4
E2754180	EQ754180	18.0	16	32	92	4
E2754200	EQ754200	20.0	20	38	104	4
E2754220	EQ754220	22.0	20	38	104	5
E2754250	EQ754250	25.0	25	45	121	5
E2754280	EQ754280	28.0	25	45	121	5
E2754300	EQ754300	30.0	25	45	121	5
E2754320	EQ754320	32.0	32	53	133	5
E2754360	EQ754360	36.0	32	53	133	6
E2754400	EQ754400	40.0	32	63	155	6

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in ㎛ / Toleranzwerte in ㎛

Nominal-Diameter in mm / Nennmaßbereich in mm

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
k10	+40 0	+48 0	+58 0	+70 0	+84 0	+100 0
h6	0 − 6	0 − 8	0 − 9	0 − 11	0 − 13	0 − 16

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS END MILLS

E2768 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

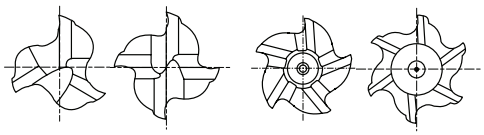
EQ768 SERIES FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

HSSCo8, MULTI FLUTE LONG LENGTH ROUGHING & FINISHING

HSSCo8, MULTI SCHNEIDEN LANG SCHRUPPSCHLICHTFRÄSER

Fraise HSSCo8, multi-dents, ébauche et finition, longue

MULTI TAGLIENTE, SERIE LUNGA PER SEMIFINITURA - HSSCo8



Up to Ø20mm　　Over Ø20mm

HSS Co8 | DIN 844 | NF | ROUGHING & FINISHING | 3-6 | 30° | DIN 1835B | ~Ø20 | Ø22~

P.1472-1473

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No.of Flute
UNCOATED	TiAlN	k10	h6			
E2768060	EQ768060	6.0	6	24	68	3
E2768080	EQ768080	8.0	10	38	88	4
E2768100	EQ768100	10.0	10	45	95	4
E2768120	EQ768120	12.0	12	53	110	4
E2768140	EQ768140	14.0	12	53	110	4
E2768160	EQ768160	16.0	16	63	123	4
E2768180	EQ768180	18.0	16	63	123	4
E2768200	EQ768200	20.0	20	75	141	4
E2768220	EQ768220	22.0	20	75	141	5
E2768250	EQ768250	25.0	25	90	166	5
E2768300	EQ768300	30.0	25	90	166	5
E2768320	EQ768320	32.0	32	106	186	5
E2768450	EQ768450	45.0	40	125	217	6

▶Other shank design on your request.
▶TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in ㎛ / Toleranzwerte in ㎛

Nominal-Diameter in mm / Nennmaßbereich in mm

	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
k10	+40 0	+48 0	+58 0	+70 0	+84 0	+100 0
h6	0 – 6	0 – 8	0 – 9	0 – 11	0 – 13	0 – 16

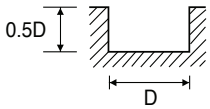
◎ : Excellent　○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

PREMIUM HSS-PM, 2 FLUTE - SLOTTING
PREMIUM HSS-PM, 2 SCHNEIDEN - NUTENFRÄSEN

E9410 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS	~ HRc20				HRc20 ~ HRc30				HRc30 ~ HRc40			
STRENGTH	500 ~ 800N/mm²				800 ~ 1000N/mm²				1000 ~ 1300N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	5600	35	35	0.003	5000	35	30	0.004	2800	20	20	0.004
3.0	4000	55	40	0.007	3000	50	30	0.008	2000	25	20	0.006
4.0	2800	70	35	0.013	2200	55	30	0.013	1400	35	20	0.013
5.0	2200	85	35	0.019	2000	75	30	0.019	1100	45	15	0.020
6.0	2000	100	40	0.025	1500	75	30	0.025	1000	50	20	0.025
8.0	1400	110	35	0.039	1100	85	30	0.039	700	55	20	0.039
10.0	1100	110	35	0.050	1000	100	30	0.050	560	55	20	0.049
12.0	1000	125	40	0.063	800	100	30	0.063	500	60	20	0.060
14.0	900	110	40	0.061	700	100	30	0.071	450	60	20	0.067
16.0	700	110	35	0.079	560	85	30	0.076	350	55	20	0.079
18.0	600	110	35	0.092	500	85	30	0.085	300	55	15	0.092
20.0	560	110	35	0.098	500	85	30	0.085	280	55	20	0.098
22.0	560	110	40	0.098	450	85	30	0.094	280	55	20	0.098
25.0	500	100	40	0.100	400	75	30	0.094	230	45	20	0.098

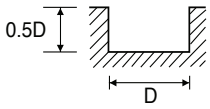


RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

PREMIUM HSS-PM, 2 FLUTE TiAlN COATED - SLOTTING
PREMIUM HSS-PM, 2 SCHNEIDEN TiAlN-BESCHICHTET - NUTENFRÄSEN

E9410 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS	~ HRc20				HRc20 ~ HRc30				HRc30 ~ HRc40			
STRENGTH	500 ~ 800N/mm²				800 ~ 1000N/mm²				1000 ~ 1300N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	7840	50	50	0.003	7000	50	45	0.004	3900	30	25	0.004
3.0	5600	80	55	0.007	4200	70	40	0.008	2800	35	25	0.006
4.0	3900	100	50	0.013	3100	75	40	0.012	1950	50	25	0.013
5.0	3100	120	50	0.019	2800	105	45	0.019	1540	60	25	0.019
6.0	2800	140	55	0.025	2100	105	40	0.025	1400	70	25	0.025
8.0	1950	155	50	0.040	1540	120	40	0.039	1000	75	25	0.038
10.0	1550	155	50	0.050	1400	150	45	0.054	800	75	25	0.047
12.0	1400	175	55	0.063	1100	150	40	0.068	700	85	25	0.061
14.0	1250	155	55	0.062	1000	150	45	0.075	600	85	25	0.071
16.0	1000	155	50	0.078	800	120	40	0.075	500	75	25	0.075
18.0	840	155	50	0.092	700	120	40	0.086	390	75	20	0.096
20.0	780	155	50	0.099	700	120	45	0.086	390	75	25	0.096
22.0	780	155	55	0.099	600	120	40	0.100	390	75	25	0.096
25.0	700	140	55	0.100	550	105	45	0.095	320	65	25	0.102



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

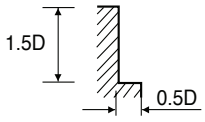
HSS END MILLS

RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

PREMIUM HSS-PM, MULTI FLUTE ROUGHING - SIDE CUTTING
PREMIUM HSS-PM, MULTI SCHNEIDEN SCHRUPPFRÄSER- SEITENFRÄSEN

E9720 SERIES

MATERIAL	P															
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS	~ HRc20				HRc20 ~ HRc30				HRc30 ~ HRc40				HRc30 ~ HRc40			
STRENGTH	500 ~ 800N/mm²				800 ~ 9000N/mm²				900~ 1100N/mm²				1100 ~ 1300N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	2300	100	45	0.011	2000	75	40	0.009	1500	70	30	0.012	1000	35	20	0.009
8.0	1800	130	45	0.018	1400	95	35	0.017	1100	80	30	0.018	700	45	20	0.016
10.0	1400	190	45	0.027	1100	150	35	0.027	1000	140	30	0.028	560	75	20	0.027
12.0	1100	230	40	0.042	1000	180	40	0.036	800	140	30	0.035	500	85	20	0.034
14.0	1000	230	45	0.046	900	180	40	0.040	700	140	30	0.040	450	85	20	0.038
16.0	900	230	45	0.051	700	180	35	0.051	560	140	30	0.050	350	85	20	0.121
18.0	800	230	45	0.058	600	180	35	0.060	500	140	30	0.056	300	85	15	0.057
20.0	700	230	45	0.066	560	180	35	0.064	500	140	30	0.056	300	85	20	0.057
22.0	600	280	40	0.093	560	210	40	0.075	450	180	30	0.080	300	105	20	0.070
25.0	560	280	45	0.083	500	210	40	0.070	400	180	30	0.075	230	105	20	0.076
28.0	500	260	45	0.087	450	200	40	0.074	350	160	30	0.076	200	105	20	0.088
30.0	450	260	40	0.096	400	200	40	0.083	300	160	30	0.089	200	105	20	0.088



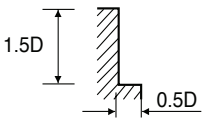
RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

※The FEED, in long & extra long types, should be reduced by around 50%

PREMIUM HSS-PM, MULTI FLUTE ROUGHING TiAlN COATED - SIDE CUTTING
PREMIUM HSS-PM, MULTI SCHNEIDEN SCHRUPPFRÄSER TiAlN-BESCHICHTET - SEITENFRÄSEN

E9720 SERIES

MATERIAL	P															
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS	~ HRc20				HRc20 ~ HRc30				HRc30 ~ HRc40				HRc30 ~ HRc40			
STRENGTH	500 ~ 800N/mm²				800 ~ 9000N/mm²				900~ 1100N/mm²				1100 ~ 1300N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	3220	140	60	0.011	2800	105	55	0.009	2100	95	40	0.011	1400	50	25	0.009
8.0	2520	180	65	0.018	1960	135	50	0.017	1540	110	40	0.018	980	60	25	0.015
10.0	1960	265	60	0.027	1540	210	50	0.027	1400	195	45	0.028	780	105	25	0.027
12.0	1540	320	60	0.042	1400	250	55	0.036	1120	195	40	0.035	700	120	25	0.034
14.0	1400	320	60	0.046	1260	250	55	0.040	980	195	45	0.040	630	120	30	0.038
16.0	1260	320	65	0.051	980	250	50	0.051	780	195	40	0.050	490	120	25	0.049
18.0	1120	320	65	0.057	840	250	50	0.060	700	195	40	0.056	420	120	25	0.057
20.0	980	320	60	0.065	780	250	50	0.064	700	195	45	0.056	420	120	25	0.057
22.0	840	390	60	0.093	780	295	55	0.076	630	250	45	0.079	420	145	30	0.069
25.0	780	390	60	0.083	700	295	55	0.070	560	250	45	0.074	320	145	25	0.076
28.0	700	365	60	0.087	630	280	55	0.074	490	225	45	0.077	280	145	25	0.086
30.0	630	365	60	0.097	560	280	55	0.083	420	225	40	0.089	280	145	25	0.086



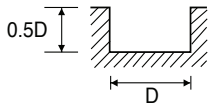
RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

※The FEED, in long & extra long types, should be reduced by around 50%

HSS-PM, 2 FLUTE - SLOTTING
HSS-PM, 2 SCHNEIDEN - NUTENFRÄSEN

E3570 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS	~ HRc20				HRc20 ~ HRc30				HRc30 ~ HRc40			
STRENGTH	500 ~ 800N/mm²				800 ~ 1000N/mm²				1000 ~ 1300N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	5000	35	30	0.004	4500	35	30	0.004	2400	15	15	0.003
3.0	3500	50	35	0.007	2800	45	25	0.008	1800	20	15	0.006
4.0	2500	60	30	0.012	2000	50	25	0.013	1200	35	15	0.015
5.0	2000	75	30	0.019	1800	65	30	0.018	1000	40	15	0.020
6.0	1800	90	35	0.025	1300	65	25	0.025	900	45	15	0.025
8.0	1200	100	30	0.042	1000	75	25	0.038	600	50	15	0.042
10.0	1000	100	30	0.050	900	90	30	0.050	500	50	15	0.050
12.0	900	110	35	0.061	700	90	25	0.064	450	55	15	0.061
14.0	800	100	35	0.063	600	90	25	0.075	400	55	20	0.069
16.0	600	100	30	0.083	500	75	25	0.075	300	50	15	0.083
18.0	550	100	30	0.091	450	75	25	0.083	280	50	15	0.089
20.0	500	100	30	0.100	450	75	30	0.083	250	50	15	0.100
22.0	500	100	35	0.100	400	75	30	0.094	250	50	15	0.100
25.0	450	90	35	0.100	350	65	25	0.093	200	40	15	0.100

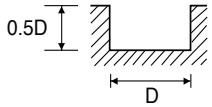


RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

HSS-PM, 2 FLUTE TiAlN COATED - SLOTTING
HSS-PM, 2 SCHNEIDEN TiAlN-BESCHICHTET - NUTENFRÄSEN

E3570 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS	~ HRc20				HRc20 ~ HRc30				HRc30 ~ HRc40			
STRENGTH	500 ~ 800N/mm²				800 ~ 1000N/mm²				1000 ~ 1300N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	7000	50	45	0.004	6300	50	40	0.004	3350	20	20	0.003
3.0	4900	70	45	0.007	3900	65	35	0.008	2500	30	25	0.006
4.0	3500	85	45	0.012	2800	70	35	0.013	1700	50	20	0.015
5.0	2800	105	45	0.019	2500	90	40	0.018	1400	55	20	0.020
6.0	2500	125	45	0.025	1800	90	35	0.025	1250	60	25	0.024
8.0	1700	140	45	0.041	1400	105	35	0.038	250	70	5	0.140
10.0	1400	140	45	0.050	1260	125	40	0.050	700	70	20	0.050
12.0	1250	155	45	0.062	980	125	35	0.064	600	75	25	0.063
14.0	1100	140	50	0.064	840	125	35	0.074	550	75	25	0.068
16.0	850	140	45	0.082	700	105	35	0.075	400	70	20	0.088
18.0	750	140	40	0.093	630	105	35	0.083	390	70	20	0.090
20.0	700	140	45	0.100	630	105	40	0.083	350	70	20	0.100
22.0	700	140	50	0.100	560	105	40	0.094	350	70	25	0.100
25.0	630	125	50	0.099	490	90	40	0.092	280	55	20	0.098



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

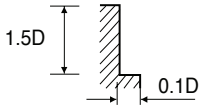
HSS END MILLS

RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

HSS-PM, MULTI FLUTE - SIDE CUTTING
HSS-PM, MULTI SCHNEIDEN - SEITENFRÄSEN

E3574, E3575 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS	~ HRc20				HRc20 ~ HRc30				HRc30 ~ HRc40			
STRENGTH	500 ~ 800N/mm²				800 ~ 1000N/mm²				1000 ~ 1300N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	5000	60	30	0.003	4500	50	30	0.003	2400	20	15	0.002
3.0	3500	90	35	0.006	2800	65	25	0.006	1800	35	15	0.005
4.0	2500	110	30	0.011	2000	70	25	0.009	1200	50	15	0.010
5.0	2000	140	30	0.018	1800	100	30	0.014	1000	55	15	0.014
6.0	1800	160	35	0.022	1300	100	25	0.019	900	65	15	0.018
8.0	1200	180	30	0.038	1000	115	25	0.029	600	70	15	0.029
10.0	1000	180	30	0.045	900	130	30	0.036	500	70	15	0.035
12.0	900	200	35	0.056	700	130	25	0.046	450	80	15	0.044
14.0	800	180	35	0.056	600	130	25	0.054	400	80	20	0.050
16.0	600	180	30	0.075	500	115	25	0.058	300	70	15	0.058
18.0	550	180	30	0.082	450	115	25	0.064	280	70	15	0.063
20.0	500	180	30	0.090	450	115	30	0.064	250	70	15	0.070
22.0	500	180	35	0.060	400	115	30	0.048	250	70	15	0.047
25.0	450	160	35	0.059	350	100	25	0.048	200	55	15	0.046

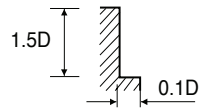


RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

HSS-PM, MULTI FLUTE TiAlN COATED - SIDE CUTTING
HSS-PM, MULTI SCHNEIDEN TiAlN-BESCHICHTET - SEITENFRÄSEN

E3574, E3575 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS	~ HRc20				HRc20 ~ HRc30				HRc30 ~ HRc40			
STRENGTH	500 ~ 800N/mm²				800 ~ 1000N/mm²				1000 ~ 1300N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	7000	85	45	0.003	6300	70	40	0.003	3350	30	20	0.002
3.0	4900	125	45	0.006	3900	90	35	0.006	2500	50	25	0.005
4.0	3500	155	45	0.011	2800	100	35	0.009	1700	70	20	0.010
5.0	2800	195	45	0.017	2500	140	40	0.014	1400	75	20	0.013
6.0	2500	225	45	0.023	1800	140	35	0.019	1250	90	25	0.018
8.0	1700	250	45	0.037	1400	160	35	0.029	250	100	5	0.100
10.0	1400	250	45	0.045	1260	180	40	0.036	700	100	20	0.036
12.0	1250	280	45	0.056	980	180	35	0.046	600	110	25	0.046
14.0	1100	250	50	0.057	840	180	35	0.054	550	110	25	0.050
16.0	850	250	45	0.074	700	160	35	0.057	400	95	20	0.059
18.0	750	250	40	0.083	630	160	35	0.063	390	95	20	0.061
20.0	700	250	45	0.089	630	160	40	0.063	350	95	20	0.068
22.0	700	250	50	0.060	560	160	40	0.048	350	95	25	0.045
25.0	630	225	50	0.060	490	140	40	0.048	280	75	20	0.045

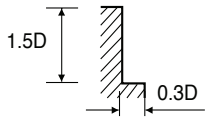


RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

HSS-PM, 3&4 FLUTE 60° HELIX - SIDE CUTTING
HSS-PM, 3&4 SCHNEIDEN 60° RECHTSSPIRALE - SEITENFRÄSEN

E3462, E3463 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS	~ HRc20				HRc20 ~ HRc30				HRc30 ~ HRc40			
STRENGTH	500 ~ 800N/mm²				800 ~ 1000N/mm²				1000 ~ 1300N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	2000	100	40	0.017	1600	65	30	0.014	1200	45	25	0.013
8.0	1500	100	40	0.022	1300	80	35	0.021	1000	45	25	0.015
10.0	1300	110	40	0.028	1000	80	30	0.027	800	50	25	0.021
12.0	1000	120	40	0.040	800	80	30	0.033	600	50	25	0.028
14.0	800	130	35	0.054	650	80	30	0.041	500	55	20	0.037
16.0	660	140	35	0.071	520	110	25	0.071	400	70	20	0.058
18.0	500	180	30	0.120	400	140	25	0.117	310	100	20	0.108
20.0	400	190	25	0.158	330	160	20	0.162	250	100	15	0.133

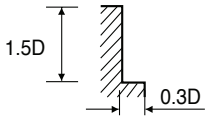


RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

HSS-PM, 3&4 FLUTE 60° HELIX TiAlN COATED - SIDE CUTTING
HSS-PM, 3&4 SCHNEIDEN 60° RECHTSSPIRALE TiAlN-BESCHICHTET - SEITENFRÄSEN

E3462, E3463 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS	~ HRc20				HRc20 ~ HRc30				HRc30 ~ HRc40			
STRENGTH	500 ~ 800N/mm²				800 ~ 1000N/mm²				1000 ~ 1300N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	2800	140	55	0.017	2240	90	40	0.013	1680	60	30	0.012
8.0	2100	140	55	0.022	1820	110	45	0.020	1400	60	35	0.014
10.0	1800	155	55	0.029	1400	110	45	0.026	1120	70	35	0.021
12.0	1400	170	55	0.040	1120	110	40	0.033	840	70	30	0.028
14.0	1100	180	50	0.055	910	110	40	0.040	700	75	30	0.036
16.0	920	195	45	0.071	730	155	35	0.071	560	100	30	0.060
18.0	700	250	40	0.119	560	195	30	0.116	430	140	25	0.109
20.0	560	265	35	0.158	460	225	30	0.163	350	140	20	0.133



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

HSS END MILLS

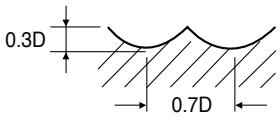
RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

HSSCo8, 2 FLUTE BALL NOSE
HSSCo8, 2 SCHNEIDEN STIRNRADIUS

E2535, E2492 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
R1.5 × 3.0	4500	95	40	0.011	3400	70	30	0.010	2000	30	20	0.008
R2.0 × 4.0	3200	115	40	0.018	2400	80	30	0.017	1400	35	20	0.013
R3.0 × 6.0	2200	135	40	0.031	1700	90	30	0.026	1000	45	20	0.023
R4.0 × 8.0	1600	160	40	0.050	1200	105	30	0.044	700	50	20	0.036
R5.0 × 10.0	1300	180	40	0.069	1000	120	30	0.060	560	60	20	0.054
R6.0 × 12.0	1000	170	40	0.085	800	105	30	0.066	450	55	15	0.061
R8.0 × 16.0	800	150	40	0.094	600	100	30	0.083	350	55	20	0.079
R10.0 × 20.0	600	140	40	0.117	500	85	30	0.085	300	50	20	0.083
R12.5 × 25.0	500	130	40	0.130	400	70	30	0.088	220	40	15	0.091

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
R1.5 × 3.0	1400	20	15	0.007	11000	230	105	0.010
R2.0 × 4.0	1000	25	15	0.013	8000	260	100	0.016
R3.0 × 6.0	700	25	15	0.018	5600	280	105	0.025
R4.0 × 8.0	500	30	15	0.030	4000	350	100	0.044
R5.0 × 10.0	400	35	15	0.044	3200	360	100	0.056
R6.0 × 12.0	320	35	10	0.055	2500	340	95	0.068
R8.0 × 16.0	250	35	15	0.070	2000	300	100	0.075
R10.0 × 20.0	200	35	15	0.088	1600	280	100	0.088
R12.5 × 25.0	160	30	15	0.094	1300	250	100	0.096



※The FEED, in long & extra long types, should be reduced by around 50%

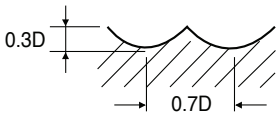
RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

HSSCo8, 2 FLUTE BALL NOSE TiAlN COATED
HSSCo8, 2 SCHNEIDEN STIRNRADIUS TiAlN-BESCHICHTET

E2535, E2492 SERIES

MATERIAL	P				P				P			
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
R1.5 × 3.0	6300	135	60	0.011	4750	100	45	0.011	2800	40	25	0.007
R2.0 × 4.0	4500	160	55	0.018	3350	110	40	0.016	1950	50	25	0.013
R3.0 × 6.0	3100	190	60	0.031	2400	125	45	0.026	1400	65	25	0.023
R4.0 × 8.0	2250	225	55	0.050	1700	145	45	0.043	1000	70	25	0.035
R5.0 × 10.0	1800	250	55	0.069	1400	170	45	0.061	800	85	25	0.053
R6.0 × 12.0	1400	240	55	0.086	1100	145	40	0.066	650	75	25	0.058
R8.0 × 16.0	1100	210	55	0.095	850	140	45	0.082	500	75	25	0.075
R10.0 × 20.0	850	195	55	0.115	700	120	45	0.086	400	70	25	0.088
R12.5 × 25.0	700	180	55	0.129	550	100	45	0.091	300	55	25	0.092

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
R1.5 × 3.0	1950	30	20	0.008	15400	320	145	0.010
R2.0 × 4.0	1400	35	20	0.013	11200	365	140	0.016
R3.0 × 6.0	1000	35	20	0.018	7850	390	150	0.025
R4.0 × 8.0	700	40	20	0.029	5600	490	140	0.044
R5.0 × 10.0	550	50	15	0.045	4500	505	140	0.056
R6.0 × 12.0	450	50	15	0.056	3500	475	130	0.068
R8.0 × 16.0	350	50	20	0.071	2800	420	140	0.075
R10.0 × 20.0	300	50	20	0.083	2250	390	140	0.087
R12.5 × 25.0	200	40	15	0.100	1800	350	140	0.097



※The FEED, in long & extra long types, should be reduced by around 50%

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

HSS END MILLS

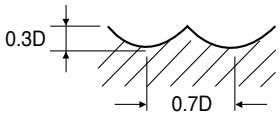
RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

HSSCo8, MULTI FLUTE BALL NOSE
HSSCo8, MULTI SCHNEIDEN STIRNRADIUS

E2410, E2429, E2512 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
R3.0 × 6.0	2200	200	40	0.030	1700	135	30	0.026	1000	70	20	0.023
R4.0 × 8.0	1600	240	40	0.050	1200	160	30	0.044	700	75	20	0.036
R5.0 × 10.0	1300	270	40	0.069	1000	180	30	0.060	560	90	20	0.054
R6.0 × 12.0	1000	260	40	0.087	800	160	30	0.067	450	80	15	0.059
R8.0 × 16.0	800	230	40	0.096	600	150	30	0.083	350	80	20	0.076
R10.0 × 20.0	600	210	40	0.117	500	130	30	0.087	300	75	20	0.083
R12.5 × 25.0	500	200	40	0.133	400	105	30	0.088	220	60	15	0.091

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
R3.0 × 6.0	700	40	15	0.019	5600	420	105	0.025
R4.0 × 8.0	500	45	15	0.030	4000	530	100	0.044
R5.0 × 10.0	400	50	15	0.042	3200	540	100	0.056
R6.0 × 12.0	320	50	15	0.052	2500	510	95	0.068
R8.0 × 16.0	250	50	15	0.067	2000	450	100	0.075
R10.0 × 20.0	200	50	15	0.083	1600	420	100	0.088
R12.5 × 25.0	160	45	15	0.094	1300	380	100	0.097



※The FEED, in long & extra long types, should be reduced by around 50%

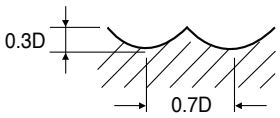
RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

HSSCo8, MULTI FLUTE BALL NOSE TiAlN COATED
HSSCo8, MULTI SCHNEIDEN STIRNRADIUS TiAlN-BESCHICHTET

E2410, E2429, E2512 SERIES

MATERIAL	P				P				P			
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
R3.0 × 6.0	3100	280	58	0.030	2400	190	45	0.026	1400	100	26	0.024
R4.0 × 8.0	2250	335	57	0.050	1700	225	43	0.044	1000	105	25	0.035
R5.0 × 10.0	1800	380	57	0.070	1400	250	44	0.060	800	125	25	0.052
R6.0 × 12.0	1400	365	53	0.087	1100	225	41	0.068	650	110	25	0.056
R8.0 × 16.0	1100	320	55	0.097	850	210	43	0.082	500	110	25	0.073
R10.0 × 20.0	850	295	53	0.116	700	180	44	0.086	400	105	25	0.088
R12.5 × 25.0	700	280	55	0.133	550	145	43	0.088	300	85	24	0.094

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
R3.0 × 6.0	1000	55	19	0.018	7850	590	148	0.025
R4.0 × 8.0	700	65	18	0.031	5600	740	141	0.044
R5.0 × 10.0	550	70	17	0.042	4500	755	141	0.056
R6.0 × 12.0	450	70	17	0.052	3500	715	132	0.068
R8.0 × 16.0	350	70	18	0.067	2800	630	141	0.075
R10.0 × 20.0	300	70	19	0.078	2250	590	141	0.087
R12.5 × 25.0	200	65	16	0.108	1800	530	141	0.098



※The FEED, in long & extra long types, should be reduced by around 50%

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

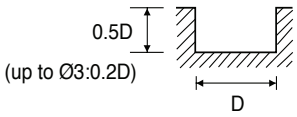
HSS END MILLS

RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

HSS-E, 1 FLUTE
HSS-E, 1 SCHNEIDEN

EL612, EL623 SERIES

MATERIAL	N			
	ALUMINUM ALUMINUM ALLOYS			
DIAMETER	RPM	FEED	Vc	fz
3.0	20000	1100	188	0.055
4.0	18000	950	226	0.053
5.0	14000	750	220	0.054
6.0	11000	600	207	0.055
7.0	10000	550	220	0.055
8.0	8500	450	214	0.053
10.0	7000	380	220	0.054



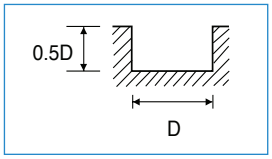
RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

HSSCo8, 2 FLUTE - SLOTTING
HSSCo8, 2 SCHNEIDEN - NUTENFRÄSEN

E2570, E2571, E2510 SERIES

MATERIAL	P				P				P			
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	5600	40	35	0.004	4500	30	30	0.003	4000	30	25	0.004
3.0	3500	55	35	0.008	3200	45	30	0.007	2500	40	25	0.008
4.0	2800	70	35	0.013	2200	55	30	0.013	1800	45	25	0.013
5.0	2200	90	35	0.020	1800	70	30	0.019	1600	60	25	0.019
6.0	1800	90	35	0.025	1600	80	30	0.025	1200	60	25	0.025
8.0	1400	100	35	0.036	1100	90	30	0.041	900	70	25	0.039
10.0	1100	100	35	0.045	900	90	30	0.050	800	80	25	0.050
12.0	900	110	35	0.061	800	100	30	0.063	630	80	25	0.063
14.0	800	110	35	0.069	700	90	30	0.064	560	80	25	0.071
16.0	700	110	35	0.079	560	90	30	0.080	450	70	25	0.078
18.0	630	100	35	0.079	500	90	30	0.090	400	70	25	0.088
20.0	560	100	35	0.089	450	90	30	0.100	400	70	25	0.088
22.0	500	100	35	0.100	450	90	30	0.100	350	70	25	0.100
25.0	450	90	35	0.100	400	80	30	0.100	310	60	25	0.097
28.0	400	80	35	0.100	350	70	30	0.100	280	55	25	0.098
30.0	350	70	35	0.100	310	60	30	0.097	250	50	25	0.100
32.0	350	70	35	0.100	280	55	30	0.098	220	45	20	0.102
36.0	310	60	35	0.097	250	50	30	0.100	200	40	25	0.100
40.0	280	60	35	0.107	220	50	30	0.114	180	40	25	0.111

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	2200	15	15	0.003	12000	160	75	0.007
3.0	1600	20	15	0.006	11000	250	105	0.011
4.0	1100	30	15	0.014	8000	290	100	0.018
5.0	900	35	15	0.019	6300	310	100	0.025
6.0	800	40	15	0.025	5600	310	105	0.028
8.0	560	45	15	0.040	4000	390	100	0.049
10.0	450	45	15	0.050	3100	400	95	0.065
12.0	400	50	15	0.063	2500	380	95	0.076
14.0	350	50	15	0.071	2200	350	95	0.080
16.0	280	45	15	0.080	2000	350	100	0.088
18.0	250	45	15	0.090	1800	350	100	0.097
20.0	220	45	15	0.102	1600	320	100	0.100
22.0	220	45	15	0.102	1400	300	95	0.107
25.0	180	35	15	0.097	1200	280	95	0.117
28.0	160	30	15	0.094	1100	270	95	0.123
30.0	160	30	15	0.094	1100	270	105	0.123
32.0	140	30	15	0.107	1000	240	100	0.120
36.0	120	25	15	0.104	900	220	100	0.122
40.0	110	25	15	0.114	800	200	100	0.125



※The FEED, in long & extra long types, should be reduced by around 50%

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

HSS END MILLS

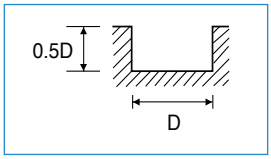
RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

HSSCo8, 2 FLUTE TiAlN COATED - SLOTTING
HSSCo8, 2 SCHNEIDEN TiAlN-BESCHICHTET - NUTENFRÄSEN

E2570, E2571, E2510 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	7850	55	50	0.004	6300	40	40	0.003	5600	40	35	0.004
3.0	4900	75	45	0.008	4500	65	40	0.007	3500	55	35	0.008
4.0	3900	100	50	0.013	3100	75	40	0.012	2500	65	30	0.013
5.0	3100	125	50	0.020	2500	100	40	0.020	2250	85	35	0.019
6.0	2500	125	45	0.025	2250	110	40	0.024	1700	85	30	0.025
8.0	1950	140	50	0.036	1550	125	40	0.040	1250	100	30	0.040
10.0	1550	140	50	0.045	1250	125	40	0.050	1100	110	35	0.050
12.0	1250	155	45	0.062	1100	140	40	0.064	900	110	35	0.061
14.0	1100	155	50	0.070	1000	125	45	0.063	800	110	35	0.069
16.0	1000	155	50	0.078	800	125	40	0.078	650	100	35	0.077
18.0	900	140	50	0.078	700	125	40	0.089	550	100	30	0.091
20.0	800	140	50	0.088	650	125	40	0.096	550	100	35	0.091
22.0	700	140	50	0.100	650	125	45	0.096	500	100	35	0.100
25.0	650	125	50	0.096	550	110	45	0.100	450	85	35	0.094
28.0	550	110	50	0.100	500	100	45	0.100	400	75	35	0.094
30.0	500	100	45	0.100	450	85	40	0.094	350	70	35	0.100
32.0	500	100	50	0.100	400	75	40	0.094	300	65	30	0.108
36.0	450	85	50	0.094	350	70	40	0.100	300	55	35	0.092
40.0	400	85	50	0.106	300	70	40	0.117	250	55	30	0.110

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	3100	20	20	0.003	16800	225	105	0.007
3.0	2250	30	20	0.007	15400	350	145	0.011
4.0	1550	40	20	0.013	11200	405	140	0.018
5.0	1250	50	20	0.020	8800	435	140	0.025
6.0	1100	55	20	0.025	7850	435	150	0.028
8.0	800	65	20	0.041	5600	545	140	0.049
10.0	650	65	20	0.050	4350	560	135	0.064
12.0	550	70	20	0.064	3500	530	130	0.076
14.0	500	70	20	0.070	3100	490	135	0.079
16.0	400	65	20	0.081	2800	490	140	0.088
18.0	350	65	20	0.093	2500	490	140	0.098
20.0	300	65	20	0.108	2250	450	140	0.100
22.0	300	65	20	0.108	1950	420	135	0.108
25.0	250	50	20	0.100	1700	390	135	0.115
28.0	200	40	20	0.100	1550	380	135	0.123
30.0	200	40	20	0.100	1550	380	145	0.123
32.0	200	40	20	0.100	1400	335	140	0.120
36.0	150	35	15	0.117	1250	310	140	0.124
40.0	150	35	20	0.117	1100	280	140	0.127



※The FEED, in long & extra long types, should be reduced by around 50%

RPM = rev./min. Vc = m/min.

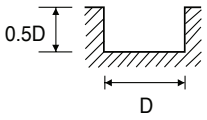
FEED = mm/min. fz = mm/tooth

HSSCo8, 2 FLUTE 42° HELIX
HSSCo8, 2 SCHNEIDEN 42° RECHTSSPIRALE

E2464, E2509 SERIES

SLOTTING

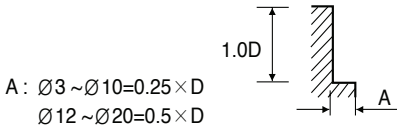
MATERIAL	N			
	ALUMINUM NON-FERROUS METALS			
DIAMETER	RPM	FEED	Vc	fz
3.0	8000	560	75	0.035
6.0	7000	700	130	0.050
8.0	6000	850	150	0.071
10.0	5000	1200	155	0.120
12.0	5000	1200	190	0.120
14.0	3500	1240	155	0.177
16.0	3500	1240	175	0.177
18.0	2300	1300	130	0.283
20.0	2300	1300	145	0.283



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

SIDE CUTTING

MATERIAL	N			
	ALUMINUM NON-FERROUS METALS			
DIAMETER	RPM	FEED	Vc	fz
3.0	8000	730	75	0.046
6.0	7000	900	130	0.064
8.0	6000	1100	150	0.092
10.0	5000	1500	155	0.150
12.0	5000	1500	190	0.150
14.0	3500	1600	155	0.229
16.0	3500	1600	175	0.229
18.0	2300	1700	130	0.370
20.0	2300	1700	145	0.370



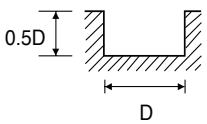
RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

HSSCo8, 2 FLUTE 42° HELIX TiCN COATED
HSSCo8, 2 SCHNEIDEN 42° RECHTSSPIRALE TiCN-BESCHICHTET

E2464, E2509 SERIES

SLOTTING

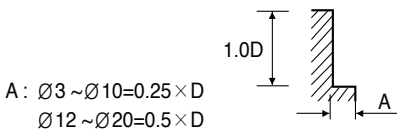
MATERIAL	N			
	ALUMINUM NON-FERROUS METALS			
DIAMETER	RPM	FEED	Vc	fz
3.0	10400	730	100	0.035
6.0	9100	910	170	0.050
8.0	7800	1100	195	0.071
10.0	6500	1560	205	0.120
12.0	6500	1560	245	0.120
14.0	4500	1610	200	0.179
16.0	4500	1610	225	0.179
18.0	3000	1700	170	0.283
20.0	3000	1700	190	0.283



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

SIDE CUTTING

MATERIAL	N			
	ALUMINUM NON-FERROUS METALS			
DIAMETER	RPM	FEED	Vc	fz
3.0	10400	950	100	0.046
6.0	9100	1150	170	0.063
8.0	7800	1400	195	0.090
10.0	6500	1950	205	0.150
12.0	6500	1950	245	0.150
14.0	4500	2080	200	0.231
16.0	4500	2080	225	0.231
18.0	3000	2210	170	0.368
20.0	3000	2210	190	0.368



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

HSS END MILLS

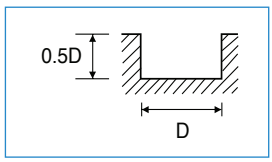
RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

HSSCo8, 3 FLUTE - SLOTTING
HSSCo8, 3 SCHNEIDEN - NUTENFRÄSEN

E2572, E2573, E2516, E2553, E2554, E2551, E2552 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	5600	35	35	0.002	4500	25	30	0.002	4000	20	25	0.002
3.0	3500	50	35	0.005	3200	35	30	0.004	2500	25	25	0.003
4.0	2800	60	35	0.007	2200	45	30	0.007	1800	30	25	0.006
5.0	2200	80	35	0.012	1800	55	30	0.010	1600	40	25	0.008
6.0	1800	80	35	0.015	1600	65	30	0.014	1200	40	25	0.011
8.0	1400	90	35	0.021	1100	70	30	0.021	900	50	25	0.019
10.0	1100	90	35	0.027	900	70	30	0.026	800	55	25	0.023
12.0	900	100	35	0.037	800	80	30	0.033	630	55	25	0.029
14.0	800	100	35	0.042	700	70	30	0.033	560	55	25	0.033
16.0	700	100	35	0.048	560	70	30	0.042	450	50	25	0.037
18.0	630	90	35	0.048	500	70	30	0.047	400	50	25	0.042
20.0	560	90	35	0.054	450	70	30	0.052	400	50	25	0.042
22.0	500	90	35	0.060	450	70	30	0.052	350	50	25	0.048
25.0	450	80	35	0.059	400	65	30	0.054	310	40	25	0.043
28.0	400	70	35	0.058	350	55	30	0.052	280	35	25	0.042
30.0	350	60	35	0.057	310	50	30	0.054	250	30	25	0.040
32.0	350	60	35	0.057	280	45	30	0.054	220	30	20	0.045
35.0	320	55	35	0.057	260	40	30	0.051	210	25	25	0.040
36.0	310	55	35	0.059	250	40	30	0.053	200	25	25	0.042
40.0	280	55	35	0.065	220	40	30	0.061	180	25	25	0.046

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	2200	10	15	0.002	12000	110	75	0.003
3.0	1600	15	15	0.003	11000	170	105	0.005
4.0	1100	20	15	0.006	8000	200	100	0.008
5.0	900	20	15	0.007	6300	210	100	0.011
6.0	800	25	15	0.010	5600	210	105	0.013
8.0	560	30	15	0.018	4000	260	100	0.022
10.0	450	30	15	0.022	3100	270	95	0.029
12.0	400	35	15	0.029	2500	260	95	0.035
14.0	350	35	15	0.033	2200	240	95	0.036
16.0	280	30	15	0.036	2000	240	100	0.040
18.0	250	30	15	0.040	1800	240	100	0.044
20.0	220	30	15	0.045	1600	220	100	0.046
22.0	220	30	15	0.045	1400	200	95	0.048
25.0	180	20	15	0.037	1200	190	95	0.053
28.0	160	20	15	0.042	1100	180	95	0.055
30.0	160	20	15	0.042	1100	180	105	0.055
32.0	140	20	15	0.048	1000	160	100	0.053
35.0	130	15	15	0.038	950	150	105	0.053
36.0	120	15	15	0.042	900	150	100	0.056
40.0	110	15	15	0.045	800	130	100	0.054



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

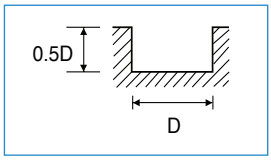
※The FEED, in long & extra long types, should be reduced by around 50%

HSSCo8, 3 FLUTE TiAlN COATED - SLOTTING
HSSCo8, 3 SCHNEIDEN TiAlN-BESCHICHTET - NUTENFRÄSEN

E2572, E2573, E2516, E2553, E2554, E2551, E2552 SERIES

MATERIAL	P				P				P			
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	7900	50	50	0.002	6300	35	40	0.002	5600	30	35	0.002
3.0	4900	70	45	0.005	4500	50	40	0.004	3500	35	35	0.003
4.0	3900	85	50	0.007	3100	60	40	0.006	2500	40	30	0.005
5.0	3100	110	50	0.012	2500	75	40	0.010	2200	55	35	0.008
6.0	2500	110	45	0.015	2200	90	40	0.014	1700	55	30	0.011
8.0	2000	125	50	0.021	1500	100	40	0.022	1300	70	35	0.018
10.0	1500	125	45	0.028	1300	110	40	0.028	1100	75	35	0.023
12.0	1300	140	50	0.036	1100	110	40	0.033	880	75	35	0.028
14.0	1100	140	50	0.042	980	100	45	0.034	780	75	35	0.032
16.0	980	140	50	0.048	780	100	40	0.043	630	70	30	0.037
18.0	880	125	50	0.047	700	100	40	0.048	560	70	30	0.042
20.0	780	125	50	0.053	630	100	40	0.053	560	70	35	0.042
22.0	700	125	50	0.060	630	100	45	0.053	490	70	35	0.048
25.0	630	110	50	0.058	560	90	45	0.054	430	55	35	0.043
28.0	560	100	50	0.060	490	75	45	0.051	390	50	35	0.043
30.0	490	85	45	0.058	430	70	40	0.054	350	40	35	0.038
32.0	490	85	50	0.058	390	65	40	0.056	310	40	30	0.043
35.0	450	80	50	0.059	360	60	40	0.056	290	35	30	0.040
36.0	430	75	50	0.058	350	55	40	0.052	280	35	30	0.042
40.0	390	75	50	0.064	310	55	40	0.059	250	35	30	0.047

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	3100	15	20	0.002	16800	150	105	0.003
3.0	2200	20	20	0.003	15400	240	145	0.005
4.0	1500	30	20	0.007	11200	280	140	0.008
5.0	1300	30	20	0.008	8800	290	140	0.011
6.0	1100	35	20	0.011	7800	290	145	0.012
8.0	780	40	20	0.017	5600	360	140	0.021
10.0	630	40	20	0.021	4300	380	135	0.029
12.0	560	50	20	0.030	3500	360	130	0.034
14.0	490	50	20	0.034	3100	340	135	0.037
16.0	390	40	20	0.034	2800	340	140	0.040
18.0	350	40	20	0.038	2500	340	140	0.045
20.0	310	40	20	0.043	2200	310	140	0.047
22.0	310	40	20	0.043	1950	280	135	0.048
25.0	250	30	20	0.040	1700	270	135	0.053
28.0	220	30	20	0.045	1500	250	130	0.056
30.0	220	30	20	0.045	1500	250	140	0.056
32.0	200	30	20	0.050	1400	225	140	0.054
35.0	180	25	20	0.046	1300	215	145	0.055
36.0	170	20	20	0.039	1250	210	140	0.056
40.0	150	20	20	0.044	1100	180	140	0.055



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

※The FEED, in long & extra long types, should be reduced by around 50%

HSS END MILLS

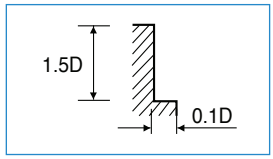
RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

HSSCo8, 3 FLUTE - SIDE CUTTING
HSSCo8, 3 SCHNEIDEN - SEITENFRÄSEN

E2572, E2573, E2516, E2553, E2554, E2551, E2552 SERIES

MATERIAL	P				P				P			
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	5600	60	35	0.004	4500	40	30	0.003	4000	35	25	0.003
3.0	3500	80	35	0.008	3200	60	30	0.006	2500	45	25	0.006
4.0	2800	105	35	0.013	2200	75	30	0.011	1800	50	25	0.009
5.0	2200	135	35	0.020	1800	95	30	0.018	1600	65	25	0.014
6.0	1800	135	35	0.025	1600	110	30	0.023	1200	65	25	0.018
8.0	1400	150	35	0.036	1100	120	30	0.036	900	80	25	0.030
10.0	1100	150	35	0.045	900	120	30	0.044	800	90	25	0.038
12.0	900	165	35	0.061	800	135	30	0.056	630	90	25	0.048
14.0	800	165	35	0.069	700	120	30	0.057	560	90	25	0.054
16.0	700	165	35	0.079	560	120	30	0.071	450	80	25	0.059
18.0	630	150	35	0.079	500	120	30	0.080	400	80	25	0.067
20.0	560	150	35	0.089	450	120	30	0.089	400	80	25	0.067
22.0	500	150	35	0.100	450	120	30	0.089	350	80	25	0.076
25.0	450	135	35	0.100	400	110	30	0.092	310	65	25	0.070
28.0	400	120	35	0.100	350	95	30	0.090	280	60	25	0.071
30.0	350	105	35	0.100	310	80	30	0.086	250	55	25	0.073
32.0	350	105	35	0.100	280	75	30	0.089	220	50	20	0.076
35.0	320	95	35	0.099	260	65	30	0.083	210	45	25	0.071
36.0	310	90	35	0.097	250	65	30	0.087	200	45	25	0.075
40.0	280	90	35	0.107	220	65	30	0.098	180	45	25	0.083

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	2200	15	15	0.002	12000	180	75	0.005
3.0	1600	20	15	0.004	11000	280	105	0.008
4.0	1100	30	15	0.009	8000	330	100	0.014
5.0	900	35	15	0.013	6300	350	100	0.019
6.0	800	45	15	0.019	5600	350	105	0.021
8.0	560	50	15	0.030	4000	440	100	0.037
10.0	450	50	15	0.037	3100	450	95	0.048
12.0	400	55	15	0.046	2500	430	95	0.057
14.0	350	55	15	0.052	2200	400	95	0.061
16.0	280	50	15	0.060	2000	400	100	0.067
18.0	250	50	15	0.067	1800	400	100	0.074
20.0	220	50	15	0.076	1600	360	100	0.075
22.0	220	50	15	0.076	1400	340	95	0.081
25.0	180	35	15	0.065	1200	320	95	0.089
28.0	160	30	15	0.063	1100	300	95	0.091
30.0	160	30	15	0.063	1100	300	105	0.091
32.0	140	30	15	0.071	1000	270	100	0.090
35.0	130	25	15	0.064	950	260	105	0.091
36.0	120	25	15	0.069	900	250	100	0.093
40.0	110	25	15	0.076	800	220	100	0.092



※The FEED, in long & extra long types, should be reduced by around 50%

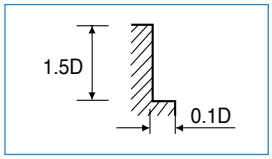
RPM = rev./min.
Vc = m/min.
FEED = mm/min.
fz = mm/tooth

HSSCo8, 3 FLUTE TiAlN COATED - SIDE CUTTING
HSSCo8, 3 SCHNEIDEN TiAlN-BESCHICHTET - SEITENFRÄSEN

E2572, E2573, E2516, E2553, E2554, E2551, E2552 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	7900	85	50	0.004	6300	55	40	0.003	5600	50	35	0.003
3.0	4900	110	45	0.007	4500	85	40	0.006	3500	60	35	0.006
4.0	3900	145	50	0.012	3100	105	40	0.011	2500	70	30	0.009
5.0	3100	190	50	0.020	2500	130	40	0.017	2200	90	35	0.014
6.0	2500	190	45	0.025	2200	155	40	0.023	1700	90	30	0.018
8.0	2000	210	50	0.035	1500	170	40	0.038	1300	110	35	0.028
10.0	1500	210	45	0.047	1300	170	40	0.044	1100	125	35	0.038
12.0	1300	230	50	0.059	1100	190	40	0.058	880	125	35	0.047
14.0	1100	230	50	0.070	980	170	45	0.058	780	125	35	0.053
16.0	980	230	50	0.078	780	170	40	0.073	630	110	30	0.058
18.0	880	210	50	0.080	700	170	40	0.081	560	110	30	0.065
20.0	780	210	50	0.090	630	170	40	0.090	560	110	35	0.065
22.0	700	210	50	0.100	630	170	45	0.090	490	110	35	0.075
25.0	630	190	50	0.101	560	155	45	0.092	430	90	35	0.070
28.0	560	170	50	0.101	490	130	45	0.088	390	85	35	0.073
30.0	490	145	45	0.099	430	110	40	0.085	350	75	35	0.071
32.0	490	145	50	0.099	390	105	40	0.090	310	70	30	0.075
35.0	450	130	50	0.096	360	95	40	0.088	290	65	30	0.075
36.0	430	125	50	0.097	350	90	40	0.086	280	65	30	0.077
40.0	390	125	50	0.107	310	90	40	0.097	250	65	30	0.087

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	3100	20	20	0.002	16800	250	105	0.005
3.0	2200	30	20	0.005	15400	390	145	0.008
4.0	1500	40	20	0.009	11200	460	140	0.014
5.0	1300	50	20	0.013	8800	490	140	0.019
6.0	1100	60	20	0.018	7800	490	145	0.021
8.0	780	70	20	0.030	5600	620	140	0.037
10.0	630	70	20	0.037	4300	630	135	0.049
12.0	560	75	20	0.045	3500	600	130	0.057
14.0	490	75	20	0.051	3100	560	135	0.060
16.0	390	70	20	0.060	2800	560	140	0.067
18.0	350	70	20	0.067	2500	560	140	0.075
20.0	310	70	20	0.075	2200	500	140	0.076
22.0	310	70	20	0.075	1950	480	135	0.082
25.0	250	50	20	0.067	1700	450	135	0.088
28.0	220	40	20	0.061	1500	420	130	0.093
30.0	220	40	20	0.061	1500	420	140	0.093
32.0	200	40	20	0.067	1400	380	140	0.090
35.0	180	35	20	0.065	1300	360	145	0.092
36.0	170	35	20	0.069	1250	350	140	0.093
40.0	150	35	20	0.078	1100	310	140	0.094



※The FEED, in long & extra long types, should be reduced by around 50%

RPM = rev./min.
Vc = m/min.

FEED = mm/min.
fz = mm/tooth

HSS END MILLS

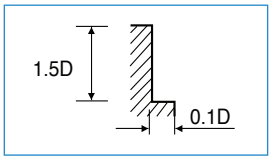
RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

HSSCo8, MULTI FLUTE - SIDE CUTTING
HSSCo8, MULTI SCHNEIDEN - SEITENFRÄSEN

E2574, E2575, E2576, E2577, E2597, E2598, E2776 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	5600	80	35	0.004	4500	55	30	0.003	4000	45	25	0.003
3.0	3500	110	35	0.008	3200	80	30	0.006	2500	60	25	0.006
4.0	2800	140	35	0.013	2200	100	30	0.011	1800	65	25	0.009
5.0	2200	180	35	0.020	1800	125	30	0.017	1600	90	25	0.014
6.0	1800	180	35	0.025	1600	145	30	0.023	1200	90	25	0.019
8.0	1400	200	35	0.036	1100	160	30	0.036	900	105	25	0.029
10.0	1100	200	35	0.045	900	160	30	0.044	800	120	25	0.038
12.0	900	220	35	0.061	800	180	30	0.056	630	120	25	0.048
14.0	800	220	35	0.069	700	160	30	0.057	560	120	25	0.054
16.0	700	220	35	0.079	560	160	30	0.071	450	105	25	0.058
18.0	630	200	35	0.079	500	160	30	0.080	400	105	25	0.066
20.0	560	200	35	0.089	450	160	30	0.089	400	105	25	0.066
22.0	500	200	35	0.067	450	160	30	0.059	350	105	25	0.050
25.0	450	180	35	0.067	400	145	30	0.060	310	90	25	0.048
28.0	400	160	35	0.067	350	125	30	0.060	280	80	25	0.048
30.0	350	140	35	0.067	310	110	30	0.059	250	75	25	0.050
32.0	350	140	35	0.067	280	100	30	0.060	220	65	20	0.049
36.0	310	120	35	0.065	250	90	30	0.060	200	60	25	0.050
40.0	280	120	35	0.071	220	90	30	0.068	180	60	25	0.056

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	2200	20	15	0.002	12000	240	75	0.005
3.0	1600	30	15	0.005	11000	380	105	0.009
4.0	1100	45	15	0.010	8000	440	100	0.014
5.0	900	50	15	0.014	6300	470	100	0.019
6.0	800	60	15	0.019	5600	470	105	0.021
8.0	560	65	15	0.029	4000	580	100	0.036
10.0	450	65	15	0.036	3100	600	95	0.048
12.0	400	75	15	0.047	2500	570	95	0.057
14.0	350	75	15	0.054	2200	530	95	0.060
16.0	280	65	15	0.058	2000	530	100	0.066
18.0	250	65	15	0.065	1800	530	100	0.074
20.0	220	65	15	0.074	1600	480	100	0.075
22.0	220	65	15	0.049	1400	450	95	0.054
25.0	180	50	15	0.046	1200	420	95	0.058
28.0	160	45	15	0.047	1100	400	95	0.061
30.0	160	45	15	0.047	1100	400	105	0.061
32.0	140	45	15	0.054	1000	360	100	0.060
36.0	120	35	15	0.049	900	330	100	0.061
40.0	110	35	15	0.053	800	300	100	0.063



※The FEED, in long & extra long types, should be reduced by around 50%

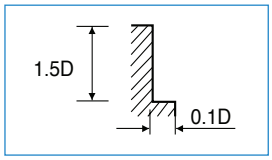
RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

HSSCo8, MULTI FLUTE TiAlN COATED - SIDE CUTTING
HSSCo8, MULTI SCHNEIDEN TiAlN-BESCHICHTET - SEITENFRÄSEN

E2574, E2575, E2576, E2577, E2597, E2598, E2776 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	7850	110	50	0.004	6300	75	40	0.003	5600	65	35	0.003
3.0	4900	155	45	0.008	4500	110	40	0.006	3500	85	35	0.006
4.0	3900	195	50	0.013	3100	140	40	0.011	2500	90	30	0.009
5.0	3100	250	50	0.020	2500	175	40	0.018	2250	125	35	0.014
6.0	2500	250	45	0.025	2250	205	40	0.023	1700	125	30	0.018
8.0	1950	280	50	0.036	1550	225	40	0.036	1250	145	30	0.029
10.0	1550	280	50	0.045	1250	225	40	0.045	1100	170	35	0.039
12.0	1250	310	45	0.062	1100	250	40	0.057	900	170	35	0.047
14.0	1100	310	50	0.070	1000	225	45	0.056	800	170	35	0.053
16.0	1000	310	50	0.078	800	225	40	0.070	650	145	35	0.056
18.0	900	280	50	0.078	700	225	40	0.080	550	145	30	0.066
20.0	800	280	50	0.088	650	225	40	0.087	550	145	35	0.066
22.0	700	280	50	0.067	650	225	45	0.058	500	145	35	0.048
25.0	650	250	50	0.064	550	205	45	0.062	450	125	35	0.046
28.0	550	225	50	0.068	500	175	45	0.058	400	110	35	0.046
30.0	500	195	45	0.065	450	155	40	0.057	350	105	35	0.050
32.0	500	195	50	0.065	400	140	40	0.058	300	90	30	0.050
36.0	450	170	50	0.063	350	125	40	0.060	300	85	35	0.047
40.0	400	170	50	0.071	300	125	40	0.069	250	85	30	0.057

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	3100	30	20	0.002	16800	335	105	0.005
3.0	2250	40	20	0.004	15400	530	145	0.009
4.0	1550	65	20	0.010	11200	615	140	0.014
5.0	1250	70	20	0.014	8800	660	140	0.019
6.0	1100	85	20	0.019	7850	660	150	0.021
8.0	800	90	20	0.028	5600	810	140	0.036
10.0	650	90	20	0.035	4350	840	135	0.048
12.0	550	105	20	0.048	3500	800	130	0.057
14.0	500	105	20	0.053	3100	740	135	0.060
16.0	400	90	20	0.056	2800	740	140	0.066
18.0	350	90	20	0.064	2500	740	140	0.074
20.0	300	90	20	0.075	2250	670	140	0.074
22.0	300	90	20	0.050	1950	630	135	0.054
25.0	250	70	20	0.047	1700	590	135	0.058
28.0	200	65	20	0.054	1550	560	135	0.060
30.0	200	65	20	0.054	1550	560	145	0.060
32.0	200	65	20	0.054	1400	505	140	0.060
36.0	150	50	15	0.056	1250	460	140	0.061
40.0	150	50	20	0.056	1100	420	140	0.064



※The FEED, in long & extra long types, should be reduced by around 50%

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

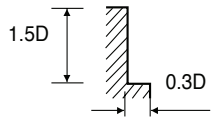
HSS END MILLS

RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

HSSCo8, MULTI FLUTE 50° HELIX - SIDE CUTTING
HSSCo8, MULTI SCHNEIDEN 50° RECHTSSPIRALE - SEITENFRÄSEN

E2461, E2462, E2463 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS	~ HRc20				HRc20 ~ HRc30				HRc30 ~ HRc40			
STRENGTH	500 ~ 800N/mm²				800 ~ 1000N/mm²				1000 ~ 1300N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	5000	35	30	0.004	4500	25	30	0.003	2500	10	15	0.002
3.0	3500	50	35	0.007	2800	35	30	0.006	1800	20	15	0.006
4.0	2500	60	30	0.012	2000	40	25	0.010	1200	25	15	0.010
5.0	2000	75	30	0.019	1800	55	30	0.015	1000	30	15	0.015
6.0	1800	85	35	0.016	1300	55	25	0.014	900	35	15	0.013
8.0	1200	95	30	0.026	1000	65	25	0.022	600	40	15	0.022
10.0	1000	95	30	0.032	900	70	30	0.026	500	40	15	0.027
12.0	900	110	35	0.041	700	70	25	0.033	450	45	15	0.033
14.0	800	95	35	0.040	600	70	25	0.039	400	45	20	0.038
16.0	600	95	30	0.053	500	65	25	0.043	300	40	15	0.044
18.0	550	95	30	0.058	450	65	25	0.048	280	40	15	0.048
20.0	500	95	30	0.063	450	65	30	0.048	250	40	15	0.053
22.0	500	95	35	0.048	400	65	30	0.041	250	40	15	0.040
25.0	450	85	35	0.047	350	55	25	0.039	200	30	15	0.038
28.0	400	75	35	0.047	300	50	25	0.042	180	25	15	0.035
30.0	350	65	35	0.046	280	45	25	0.040	180	25	15	0.035

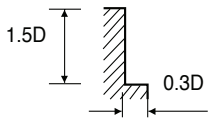


RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

HSSCo8, MULTI FLUTE 50° HELIX TiAlN COATED - SIDE CUTTING
HSSCo8, MULTI SCHNEIDEN 50° RECHTSSPIRALE TiAlN-BESCHICHTET - SEITENFRÄSEN

E2461, E2462, E2463 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS	~ HRc20				HRc20 ~ HRc30				HRc30 ~ HRc40			
STRENGTH	500 ~ 800N/mm²				800 ~ 1000N/mm²				1000 ~ 1300N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	7000	50	45	0.004	6300	35	40	0.003	3500	15	20	0.002
3.0	4900	70	45	0.007	3920	50	35	0.006	2520	30	25	0.006
4.0	3500	85	45	0.012	2800	55	35	0.010	1680	35	20	0.010
5.0	2800	105	45	0.019	2520	75	40	0.015	1400	40	20	0.014
6.0	2520	120	50	0.016	1820	75	35	0.014	1260	50	25	0.013
8.0	1680	135	40	0.027	1400	90	35	0.021	840	55	20	0.022
10.0	1400	135	45	0.032	1260	100	40	0.026	700	55	20	0.026
12.0	1260	155	50	0.041	980	100	35	0.034	630	65	25	0.034
14.0	1120	135	50	0.040	840	100	35	0.040	560	65	25	0.039
16.0	840	135	40	0.054	700	90	35	0.043	420	55	20	0.044
18.0	770	135	45	0.058	630	90	35	0.048	390	55	20	0.047
20.0	700	135	45	0.064	630	90	40	0.048	350	55	20	0.052
22.0	700	135	50	0.048	560	90	40	0.040	350	55	25	0.039
25.0	630	120	50	0.048	490	75	40	0.038	280	40	20	0.036
28.0	560	105	50	0.047	420	70	35	0.042	250	35	20	0.035
30.0	490	90	45	0.046	390	65	35	0.042	250	35	25	0.035



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

HSS END MILLS

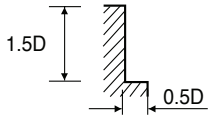
RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

HSSCo8, MULTI FLUTE ROUGHING - SIDE CUTTING
HSSCo8, MULTI SCHNEIDEN SCHRUPPFRÄSER - SEITENFRÄSEN

E2751, E2752, E2764, E2765, E2761, E2753, E2762, E2777, E2778 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	1800	80	35	0.015	1600	60	30	0.013	1200	55	25	0.015
8.0	1400	105	35	0.025	1100	75	30	0.023	900	65	25	0.024
10.0	1100	150	35	0.034	900	120	30	0.033	800	110	25	0.034
12.0	900	180	35	0.050	800	140	30	0.044	630	110	25	0.044
14.0	800	180	35	0.056	700	140	30	0.050	560	110	25	0.049
16.0	700	180	35	0.064	560	140	30	0.063	450	110	25	0.061
18.0	630	180	35	0.071	500	140	30	0.070	400	110	25	0.069
20.0	560	180	35	0.080	450	140	30	0.078	400	110	25	0.069
22.0	500	220	35	0.088	450	170	30	0.076	350	140	25	0.080
25.0	450	220	35	0.098	400	170	30	0.085	310	140	25	0.090
28.0	400	210	35	0.088	350	160	30	0.076	280	130	25	0.077
30.0	350	210	35	0.100	310	160	30	0.086	250	130	25	0.087
32.0	350	210	35	0.100	280	160	30	0.095	220	130	20	0.098
36.0	310	210	35	0.113	250	160	30	0.107	200	130	25	0.108
40.0	280	200	35	0.119	220	150	30	0.114	180	120	25	0.111
50.0	220	200	35	0.152	180	170	30	0.157	160	140	25	0.146

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	800	30	15	0.013	4500	200	85	0.015
8.0	560	35	15	0.021	3100	230	80	0.025
10.0	450	60	15	0.033	2500	350	80	0.035
12.0	400	70	15	0.044	2000	400	75	0.050
14.0	350	70	15	0.050	1800	420	80	0.058
16.0	280	70	15	0.063	1600	450	80	0.070
18.0	250	70	15	0.070	1400	470	80	0.084
20.0	220	70	15	0.080	1200	500	75	0.104
22.0	220	85	15	0.077	1100	470	75	0.085
25.0	180	85	15	0.094	1000	450	80	0.090
28.0	160	85	15	0.089	900	510	80	0.094
30.0	160	85	15	0.089	900	530	85	0.098
32.0	140	85	15	0.101	800	500	80	0.104
36.0	120	85	15	0.118	700	470	80	0.112
40.0	110	80	15	0.121	630	450	80	0.119
50.0	90	80	15	0.148	500	370	80	0.123



※The FEED, in long & extra long types, should be reduced by around 50%

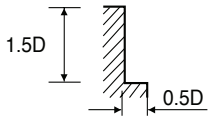
RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

HSSCo8, MULTI FLUTE ROUGHING TiAlN COATED - SIDE CUTTING
HSSCo8, MULTI SCHNEIDEN SCHRUPPFRÄSER TiAlN-BESCHICHTET - SEITENFRÄSEN

E2751, E2752, E2764, E2765, E2761, E2753, E2762, E2777, E2778 SERIES

MATERIAL	P				P				P			
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	2500	110	45	0.015	2250	85	40	0.013	1700	75	30	0.015
8.0	1950	145	50	0.025	1550	105	40	0.023	1250	90	30	0.024
10.0	1550	210	50	0.034	1250	170	40	0.034	1100	155	35	0.035
12.0	1250	250	45	0.050	1100	195	40	0.044	900	155	35	0.043
14.0	1100	250	50	0.057	1000	195	45	0.049	800	155	35	0.048
16.0	1000	250	50	0.063	800	195	40	0.061	650	155	35	0.060
18.0	900	250	50	0.069	700	195	40	0.070	550	155	30	0.070
20.0	800	250	50	0.078	650	195	40	0.075	550	155	35	0.070
22.0	700	310	50	0.089	650	240	45	0.074	500	195	35	0.078
25.0	650	310	50	0.095	550	240	45	0.087	450	195	35	0.087
28.0	550	295	50	0.089	500	225	45	0.075	400	180	35	0.075
30.0	500	295	45	0.098	450	225	40	0.083	350	180	35	0.086
32.0	500	295	50	0.098	400	225	40	0.094	300	180	30	0.100
36.0	450	295	50	0.109	350	225	40	0.107	300	180	35	0.100
40.0	400	280	50	0.117	300	210	40	0.117	250	170	30	0.113
50.0	300	280	45	0.156	250	240	40	0.160	220	195	35	0.148

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	1100	40	20	0.012	6300	280	120	0.015
8.0	800	50	20	0.021	4350	320	110	0.025
10.0	650	85	20	0.033	3500	490	110	0.035
12.0	550	100	20	0.045	2800	560	105	0.050
14.0	500	100	20	0.050	2500	590	110	0.059
16.0	400	100	20	0.063	2250	630	115	0.070
18.0	350	100	20	0.071	1950	660	110	0.085
20.0	300	100	20	0.083	1700	700	105	0.103
22.0	300	120	20	0.080	1550	660	105	0.085
25.0	250	120	20	0.096	1400	630	110	0.090
28.0	220	120	20	0.091	1250	715	110	0.095
30.0	220	120	20	0.091	1250	740	120	0.099
32.0	200	120	20	0.100	1100	700	110	0.106
36.0	170	120	20	0.118	1000	660	115	0.110
40.0	130	110	15	0.141	900	630	115	0.117
50.0	120	110	20	0.153	700	520	110	0.124



※The FEED, in long & extra long types, should be reduced by around 50%

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

HSS END MILLS

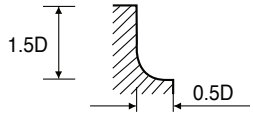
RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

HSSCo8, MULTI FLUTE ROUGHING BALL NOSE TiAlN COATED - SIDE CUTTING
HSSCo8, MULTI SCHNEIDEN SCHRUPPFRÄSER STIRNRADIUS TiAlN-BESCHICHTET - SEITENFRÄSEN

E2757, E2606 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
R4.0 × 8.0	1960	150	50	0.026	1540	105	40	0.023	1260	90	30	0.024
R5.0 × 10.0	1540	210	50	0.045	1260	170	40	0.045	1120	155	35	0.046
R6.0 × 12.0	1260	250	50	0.050	1120	195	40	0.044	880	155	35	0.044
R8.0 × 16.0	980	250	50	0.064	790	195	40	0.062	630	155	30	0.062
R10.0 × 20.0	790	250	50	0.079	630	195	40	0.077	560	155	35	0.069
R12.5 × 25.0	630	310	50	0.123	560	240	45	0.107	440	195	35	0.111
R16.0 × 32.0	490	295	50	0.151	390	225	40	0.144	310	180	30	0.145
R20.0 × 40.0	390	280	50	0.179	310	210	40	0.169	250	170	30	0.170

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
R4.0 × 8.0	790	50	20	0.021	4340	320	110	0.025
R5.0 × 10.0	630	85	20	0.045	3500	350	110	0.033
R6.0 × 12.0	560	100	20	0.045	2800	560	105	0.050
R8.0 × 16.0	390	100	20	0.064	2240	630	115	0.070
R10.0 × 20.0	310	100	20	0.081	1680	700	105	0.104
R12.5 × 25.0	250	120	20	0.120	1400	630	110	0.113
R16.0 × 32.0	200	120	20	0.150	1120	700	115	0.156
R20.0 × 40.0	160	110	20	0.172	880	630	110	0.179



※The FEED, in long & extra long types, should be reduced by around 50%

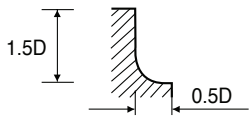
RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

HSSCo8, MULTI FLUTE ROUGHING BALL NOSE - SIDE CUTTING
HSSCo8, MULTI SCHNEIDEN SCHRUPPFRÄSER STIRNRADIUS - SEITENFRÄSEN

E2757, E2606 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
R4.0 × 8.0	1400	105	35	0.025	1100	75	30	0.023	900	65	25	0.024
R5.0 × 10.0	1100	150	35	0.045	900	120	30	0.044	800	110	25	0.046
R6.0 × 12.0	900	180	35	0.050	800	140	30	0.044	630	110	25	0.044
R8.0 × 16.0	700	180	35	0.064	560	140	30	0.063	450	110	25	0.061
R10.0 × 20.0	560	180	35	0.080	450	140	30	0.078	400	110	25	0.069
R12.5 × 25.0	450	220	35	0.122	400	170	30	0.106	310	140	25	0.113
R16.0 × 32.0	350	210	35	0.150	280	160	30	0.143	220	130	20	0.148
R20.0 × 40.0	280	200	35	0.179	220	150	30	0.170	180	120	25	0.167

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
R4.0 × 8.0	560	35	15	0.021	3100	230	80	0.025
R5.0 × 10.0	450	60	15	0.044	2500	250	80	0.033
R6.0 × 12.0	400	70	15	0.044	2000	400	75	0.050
R8.0 × 16.0	280	70	15	0.063	1600	450	80	0.070
R10.0 × 20.0	220	70	15	0.080	1200	500	75	0.104
R12.5 × 25.0	180	85	15	0.118	1000	450	80	0.113
R16.0 × 32.0	140	85	15	0.152	800	500	80	0.156
R20.0 × 40.0	110	80	15	0.182	630	450	80	0.179



※The FEED, in long & extra long types, should be reduced by around 50%

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

HSS END MILLS

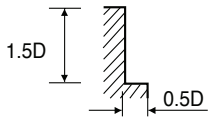
RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

HSSCo8, MULTI FLUTE ROUGHING - SIDE CUTTING
HSSCo8, MULTI SCHNEIDEN SCHRUPPFRÄSER - SEITENFRÄSEN

E2524 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	1800	80	35	0.015	1600	60	30	0.013	1200	55	25	0.015
8.0	1400	105	35	0.019	1100	75	30	0.017	900	65	25	0.018
10.0	1100	150	35	0.034	900	120	30	0.033	800	110	25	0.034
12.0	900	180	35	0.050	800	140	30	0.044	630	110	25	0.044
14.0	800	180	35	0.056	700	140	30	0.050	560	110	25	0.049
16.0	700	180	35	0.064	560	140	30	0.063	450	110	25	0.061
18.0	630	180	35	0.071	500	140	30	0.070	400	110	25	0.069
20.0	560	180	35	0.080	450	140	30	0.078	400	110	25	0.069

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	800	30	15	0.013	4500	200	85	0.015
8.0	560	35	15	0.016	3100	230	80	0.019
10.0	450	60	15	0.033	2500	350	80	0.035
12.0	400	70	15	0.044	2000	400	75	0.050
14.0	350	70	15	0.050	1800	420	80	0.058
16.0	280	70	15	0.063	1600	450	80	0.070
18.0	250	70	15	0.070	1400	470	80	0.084
20.0	220	70	15	0.080	1200	500	75	0.104



※The FEED, in long & extra long types, should be reduced by around 50%

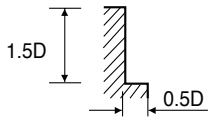
RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

HSSCo8, MULTI FLUTE ROUGHING TiAlN COATED - SIDE CUTTING
HSSCo8, MULTI SCHNEIDEN SCHRUPPFRÄSER TiAlN-BESCHICHTET - SEITENFRÄSEN

E2524 SERIES

MATERIAL	P				P				P			
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	2500	110	45	0.015	2250	85	40	0.013	1700	75	30	0.015
8.0	1950	145	50	0.019	1550	105	40	0.017	1250	90	30	0.018
10.0	1550	210	50	0.034	1250	170	40	0.034	1100	155	35	0.035
12.0	1250	250	45	0.050	1100	195	40	0.044	900	155	35	0.043
14.0	1100	250	50	0.057	1000	195	45	0.049	800	155	35	0.048
16.0	1000	250	50	0.063	800	195	40	0.061	650	155	35	0.060
18.0	900	250	50	0.069	700	195	40	0.070	550	155	30	0.070
20.0	800	250	50	0.078	650	195	40	0.075	550	155	35	0.070

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	1100	40	20	0.012	6300	280	120	0.015
8.0	800	50	20	0.016	4350	320	110	0.018
10.0	650	85	20	0.033	3500	490	110	0.035
12.0	550	100	20	0.045	2800	560	105	0.050
14.0	500	100	20	0.050	2500	590	110	0.059
16.0	400	100	20	0.063	2250	630	115	0.070
18.0	350	100	20	0.071	1950	660	110	0.085
20.0	300	100	20	0.083	1700	700	105	0.103



※The FEED, in long & extra long types, should be reduced by around 50%

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

HSS END MILLS

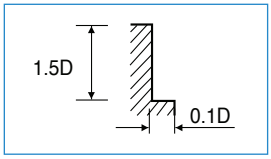
RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

HSSCo8, MULTI FLUTE - SIDE CUTTING
HSSCo8, MULTI SCHNEIDEN - SEITENFRÄSEN

E2595, E2596 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	5600	80	35	0.004	4500	55	30	0.003	4000	45	25	0.003
3.0	3500	110	35	0.008	3200	80	30	0.006	2500	60	25	0.006
4.0	2800	140	35	0.013	2200	100	30	0.011	1800	65	25	0.009
5.0	2200	180	35	0.020	1800	125	30	0.017	1600	90	25	0.014
6.0	1800	180	35	0.025	1600	145	30	0.023	1200	90	25	0.019
8.0	1400	200	35	0.036	1100	160	30	0.036	900	105	25	0.029
10.0	1100	200	35	0.045	900	160	30	0.044	800	120	25	0.038
12.0	900	220	35	0.061	800	180	30	0.056	630	120	25	0.048
14.0	800	220	35	0.069	700	160	30	0.057	560	120	25	0.054
16.0	700	220	35	0.079	560	160	30	0.071	450	105	25	0.058
18.0	630	200	35	0.079	500	160	30	0.080	400	105	25	0.066
20.0	560	200	35	0.089	450	160	30	0.089	400	105	25	0.066
22.0	500	200	35	0.100	450	160	30	0.089	350	105	25	0.075
25.0	450	180	35	0.100	400	145	30	0.091	310	90	25	0.073
28.0	400	160	35	0.067	350	125	30	0.060	280	80	25	0.048
30.0	350	140	35	0.067	310	110	30	0.059	250	75	25	0.050
32.0	350	140	35	0.067	280	100	30	0.060	220	65	20	0.049
36.0	310	120	35	0.065	250	90	30	0.060	200	60	25	0.050
40.0	280	120	35	0.071	220	90	30	0.068	180	60	25	0.056

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	2200	20	15	0.002	12000	240	75	0.005
3.0	1600	30	15	0.005	11000	380	105	0.009
4.0	1100	45	15	0.010	8000	440	100	0.014
5.0	900	50	15	0.014	6300	470	100	0.019
6.0	800	60	15	0.019	5600	470	105	0.021
8.0	560	65	15	0.029	4000	580	100	0.036
10.0	450	65	15	0.036	3100	600	95	0.048
12.0	400	75	15	0.047	2500	570	95	0.057
14.0	350	75	15	0.054	2200	530	95	0.060
16.0	280	65	15	0.058	2000	530	100	0.066
18.0	250	65	15	0.065	1800	530	100	0.074
20.0	220	65	15	0.074	1600	480	100	0.075
22.0	220	65	15	0.074	1400	450	95	0.080
25.0	180	50	15	0.069	1200	420	95	0.088
28.0	160	45	15	0.047	1100	400	95	0.061
30.0	160	45	15	0.047	1100	400	105	0.061
32.0	140	45	15	0.054	1000	360	100	0.060
36.0	120	35	15	0.049	900	330	100	0.061
40.0	110	35	15	0.053	800	300	100	0.063



※The FEED, in long & extra long types, should be reduced by around 50%

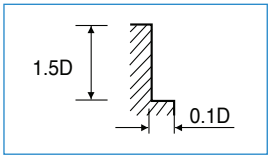
RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

HSSCo8, MULTI FLUTE TiAlN COATED - SIDE CUTTING
HSSCo8, MULTI SCHNEIDEN TiAlN-BESCHICHTET - SEITENFRÄSEN

E2595, E2596 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	7850	110	50	0.004	6300	75	40	0.003	5600	65	35	0.003
3.0	4900	155	45	0.008	4500	110	40	0.006	3500	85	35	0.006
4.0	3900	195	50	0.013	3100	140	40	0.011	2500	90	30	0.009
5.0	3100	250	50	0.020	2500	175	40	0.018	2250	125	35	0.014
6.0	2500	250	45	0.025	2250	205	40	0.023	1700	125	30	0.018
8.0	1950	280	50	0.036	1550	225	40	0.036	1250	145	30	0.029
10.0	1550	280	50	0.045	1250	225	40	0.045	1100	170	35	0.039
12.0	1250	310	45	0.062	1100	250	40	0.057	900	170	35	0.047
14.0	1100	310	50	0.070	1000	225	45	0.056	800	170	35	0.053
16.0	1000	310	50	0.078	800	225	40	0.070	650	145	35	0.056
18.0	900	280	50	0.078	700	225	40	0.080	550	145	30	0.066
20.0	800	280	50	0.088	650	225	40	0.087	550	145	35	0.066
22.0	700	280	50	0.100	650	225	45	0.087	500	145	35	0.073
25.0	650	250	50	0.096	550	205	45	0.093	450	125	35	0.069
28.0	550	225	50	0.068	500	175	45	0.058	400	110	35	0.046
30.0	500	195	45	0.065	450	155	40	0.057	350	105	35	0.050
32.0	500	195	50	0.065	400	140	40	0.058	300	90	30	0.050
36.0	450	170	50	0.063	350	125	40	0.060	300	85	35	0.047
40.0	400	170	50	0.071	300	125	40	0.069	250	85	30	0.057

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	3100	30	20	0.002	16800	335	105	0.005
3.0	2250	40	20	0.004	15400	530	145	0.009
4.0	1550	65	20	0.010	11200	615	140	0.014
5.0	1250	70	20	0.014	8800	660	140	0.019
6.0	1100	85	20	0.019	7850	660	150	0.021
8.0	800	90	20	0.028	5600	810	140	0.036
10.0	650	90	20	0.035	4350	840	135	0.048
12.0	550	105	20	0.048	3500	800	130	0.057
14.0	500	105	20	0.053	3100	740	135	0.060
16.0	400	90	20	0.056	2800	740	140	0.066
18.0	350	90	20	0.064	2500	740	140	0.074
20.0	300	90	20	0.075	2250	670	140	0.074
22.0	300	90	20	0.075	1950	630	135	0.081
25.0	250	70	20	0.070	1700	590	135	0.087
28.0	200	65	20	0.054	1550	560	135	0.060
30.0	200	65	20	0.054	1550	560	145	0.060
32.0	200	65	20	0.054	1400	505	140	0.060
36.0	150	50	15	0.056	1250	460	140	0.061
40.0	150	50	20	0.056	1100	420	140	0.064



※The FEED, in long & extra long types, should be reduced by around 50%

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

HSS END MILLS

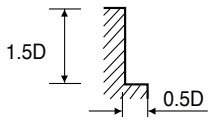
RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

HSSCo8, MULTI FLUTE ROUGHING - SIDE CUTTING
HSSCo8, MULTI SCHNEIDEN SCHRUPPFRÄSER - SEITENFRÄSEN

E2755, E2756 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	1800	80	35	0.015	1600	60	30	0.013	1200	55	25	0.015
8.0	1400	105	35	0.025	1100	75	30	0.023	900	65	25	0.024
10.0	1100	150	35	0.045	900	120	30	0.044	800	110	25	0.046
12.0	900	180	35	0.067	800	140	30	0.058	630	110	25	0.058
14.0	800	180	35	0.075	700	140	30	0.067	560	110	25	0.065
16.0	700	180	35	0.086	560	140	30	0.083	450	110	25	0.081
18.0	630	180	35	0.095	500	140	30	0.093	400	110	25	0.092
20.0	560	180	35	0.107	450	140	30	0.104	400	110	25	0.092
22.0	500	220	35	0.147	450	170	30	0.126	350	140	25	0.133
25.0	450	220	35	0.163	400	170	30	0.142	310	140	25	0.151
30.0	350	210	35	0.200	310	160	30	0.172	250	130	25	0.173

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	800	30	15	0.013	4500	200	85	0.015
8.0	560	35	15	0.021	3100	230	80	0.025
10.0	450	60	15	0.044	2500	350	80	0.047
12.0	400	70	15	0.058	2000	400	75	0.067
14.0	350	70	15	0.067	1800	420	80	0.078
16.0	280	70	15	0.083	1600	450	80	0.094
18.0	250	70	15	0.093	1400	470	80	0.112
20.0	220	70	15	0.106	1200	500	75	0.139
22.0	220	85	15	0.129	1100	470	75	0.142
25.0	180	85	15	0.157	1000	450	80	0.150
30.0	160	85	15	0.177	900	530	85	0.196



※The FEED, in long & extra long types, should be reduced by around 50%

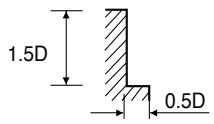
RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

HSSCo8, MULTI FLUTE ROUGHING TiAlN COATED - SIDE CUTTING
HSSCo8, MULTI SCHNEIDEN SCHRUPPFRÄSER TiAlN-BESCHICHTET - SEITENFRÄSEN

E2755, E2756 SERIES

MATERIAL	P				P				P			
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	2500	110	45	0.015	2250	85	40	0.013	1700	75	30	0.015
8.0	1950	145	50	0.025	1550	105	40	0.023	1250	90	30	0.024
10.0	1550	210	50	0.045	1250	170	40	0.045	1100	155	35	0.047
12.0	1250	250	45	0.067	1100	195	40	0.059	900	155	35	0.057
14.0	1100	250	50	0.076	1000	195	45	0.065	800	155	35	0.065
16.0	1000	250	50	0.083	800	195	40	0.081	650	155	35	0.079
18.0	900	250	50	0.093	700	195	40	0.093	550	155	30	0.094
20.0	800	250	50	0.104	650	195	40	0.100	550	155	35	0.094
22.0	700	310	50	0.148	650	240	45	0.123	500	195	35	0.130
25.0	650	310	50	0.159	550	240	45	0.145	450	195	35	0.144
30.0	500	295	45	0.197	450	225	40	0.167	350	180	35	0.171

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	1100	40	20	0.012	6300	280	120	0.015
8.0	800	50	20	0.021	4350	320	110	0.025
10.0	650	85	20	0.044	3500	490	110	0.047
12.0	550	100	20	0.061	2800	560	105	0.067
14.0	500	100	20	0.067	2500	590	110	0.079
16.0	400	100	20	0.083	2250	630	115	0.093
18.0	350	100	20	0.095	1950	660	110	0.113
20.0	300	100	20	0.111	1700	700	105	0.137
22.0	300	120	20	0.133	1550	660	105	0.142
25.0	250	120	20	0.160	1400	630	110	0.150
30.0	220	120	20	0.182	1250	740	120	0.197



※The FEED, in long & extra long types, should be reduced by around 50%

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

HSS END MILLS

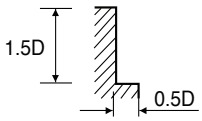
RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

HSSCo8, MULTI FLUTE ROUGHING & FINISHING - SIDE CUTTING
HSSCo8, MULTI SCHNEIDEN SCHRUPPSCHLICHTFRÄSER - SEITENFRÄSEN

E2779 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
16.0	700	145	35	0.052	560	110	30	0.049	450	90	25	0.050
18.0	630	145	35	0.058	500	110	30	0.055	400	90	25	0.056
20.0	560	145	35	0.065	450	110	30	0.061	400	90	25	0.056
22.0	500	175	35	0.070	450	135	30	0.060	350	110	25	0.063
25.0	450	175	35	0.078	400	135	30	0.068	310	110	25	0.071
28.0	400	170	35	0.071	350	130	30	0.062	280	105	25	0.063
30.0	350	170	35	0.081	310	130	30	0.070	250	105	25	0.070
32.0	350	170	35	0.081	280	130	30	0.077	220	105	25	0.080
36.0	310	170	35	0.091	250	130	30	0.087	200	105	25	0.088
40.0	280	160	35	0.095	220	120	30	0.091	180	95	25	0.088
45.0	250	150	35	0.099	210	125	30	0.099	180	95	25	0.088
50.0	220	145	35	0.110	190	120	30	0.106	160	90	25	0.094

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
16.0	280	55	15	0.049	1600	360	80	0.056
18.0	250	55	15	0.055	1400	380	80	0.068
20.0	220	55	15	0.063	1200	400	80	0.083
22.0	220	70	15	0.064	1100	380	80	0.069
25.0	180	70	15	0.078	1000	360	80	0.072
28.0	160	70	15	0.073	900	410	80	0.076
30.0	160	70	15	0.073	900	420	85	0.078
32.0	140	70	15	0.083	800	400	80	0.083
36.0	120	70	15	0.097	700	380	80	0.090
40.0	110	65	15	0.098	630	360	80	0.095
45.0	100	60	15	0.099	560	330	80	0.100
50.0	90	55	15	0.100	500	330	80	0.110



※The FEED, in long & extra long types, should be reduced by around 50%

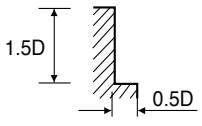
RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

HSSCo8, MULTI FLUTE ROUGHING & FINISHING TiAlN COATED - SIDE CUTTING
HSSCo8, MULTI SCHNEIDEN SCHRUPPSCHLICHTFRÄSER TiAlN-BESCHICHTET - SEITENFRÄSEN

E2779 SERIES

MATERIAL	P				P				P			
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
16.0	1000	205	50	0.051	800	155	40	0.048	650	125	35	0.048
18.0	900	205	50	0.057	700	155	40	0.055	550	125	30	0.057
20.0	800	205	50	0.064	650	155	40	0.060	550	125	35	0.057
22.0	700	245	50	0.070	650	190	45	0.058	500	155	35	0.062
25.0	650	245	50	0.075	550	190	45	0.069	450	155	35	0.069
28.0	550	240	50	0.073	500	180	45	0.060	400	145	35	0.060
30.0	500	240	50	0.080	450	180	40	0.067	350	145	35	0.069
32.0	500	240	50	0.080	400	180	40	0.075	300	145	30	0.081
36.0	450	240	50	0.089	350	180	40	0.086	280	145	30	0.086
40.0	400	225	50	0.094	300	170	40	0.094	250	135	30	0.090
45.0	350	205	50	0.099	280	170	40	0.102	210	115	30	0.094
50.0	310	190	50	0.104	250	165	40	0.110	190	110	30	0.099

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
16.0	400	75	20	0.047	2250	505	115	0.056
18.0	350	75	20	0.054	1950	530	110	0.068
20.0	300	75	20	0.063	1700	560	105	0.082
22.0	300	100	20	0.067	1550	530	105	0.068
25.0	250	100	20	0.080	1400	505	110	0.072
28.0	200	100	20	0.083	1250	575	110	0.077
30.0	200	100	20	0.083	1250	590	120	0.079
32.0	170	100	15	0.098	1100	560	110	0.085
36.0	150	100	15	0.111	1000	530	115	0.088
40.0	150	90	20	0.100	900	505	115	0.094
45.0	140	85	20	0.103	810	485	115	0.100
50.0	120	75	20	0.106	730	460	115	0.106



※The FEED, in long & extra long types, should be reduced by around 50%

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

HSS END MILLS

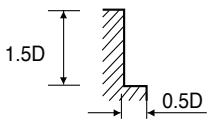
RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

HSSCo8, MULTI FLUTE ROUGHING & FINISHING - SIDE CUTTING
HSSCo8, MULTI SCHNEIDEN SCHRUPPSCHLICHTFRÄSER - SEITENFRÄSEN

E2766, E2767 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	1800	65	35	0.012	1600	50	30	0.010	1200	45	25	0.013
8.0	1400	85	35	0.020	1100	60	30	0.018	900	50	25	0.019
10.0	1100	120	35	0.036	900	95	30	0.035	800	90	25	0.038
12.0	900	145	35	0.054	800	110	30	0.046	630	90	25	0.048
14.0	800	145	35	0.060	700	110	30	0.052	560	90	25	0.054
16.0	700	145	35	0.069	560	110	30	0.065	450	90	25	0.067
18.0	630	145	35	0.077	500	110	30	0.073	400	90	25	0.075
20.0	560	145	35	0.086	450	110	30	0.081	400	90	25	0.075
22.0	500	175	35	0.117	450	135	30	0.100	350	110	25	0.105
25.0	450	175	35	0.130	400	135	30	0.113	310	110	25	0.118
28.0	400	170	35	0.142	350	130	30	0.124	280	105	25	0.125
30.0	350	170	35	0.162	310	130	30	0.140	250	105	25	0.140
32.0	350	170	35	0.162	280	130	30	0.155	220	105	25	0.159
36.0	310	170	35	0.183	250	130	30	0.173	200	105	25	0.175
40.0	280	160	35	0.190	220	120	30	0.182	180	95	25	0.176

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	800	25	15	0.010	4500	160	85	0.012
8.0	560	30	15	0.018	3100	185	80	0.020
10.0	450	50	15	0.037	2500	280	80	0.037
12.0	400	55	15	0.046	2000	320	80	0.053
14.0	350	55	15	0.052	1800	340	80	0.063
16.0	280	55	15	0.065	1600	360	80	0.075
18.0	250	55	15	0.073	1400	380	80	0.090
20.0	220	55	15	0.083	1200	400	80	0.111
22.0	220	70	15	0.106	1100	380	80	0.115
25.0	180	70	15	0.130	1000	360	80	0.120
28.0	160	70	15	0.146	900	410	80	0.152
30.0	160	70	15	0.146	900	420	85	0.156
32.0	140	70	15	0.167	800	400	80	0.167
36.0	120	70	15	0.194	700	380	80	0.181
40.0	110	65	15	0.197	630	360	80	0.190



※The FEED, in long & extra long types, should be reduced by around 50%

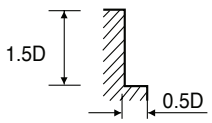
RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

HSSCo8, MULTI FLUTE ROUGHING & FINISHING TiAlN COATED - SIDE CUTTING
HSSCo8, MULTI SCHNEIDEN SCHRUPPSCHLICHTFRÄSER TiAlN-BESCHICHTET - SEITENFRÄSEN

E2766, E2767 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	2500	90	50	0.012	2250	70	40	0.010	1700	65	30	0.013
8.0	1950	120	50	0.021	1550	85	40	0.018	1250	70	30	0.019
10.0	1550	170	50	0.037	1250	135	40	0.036	1100	125	35	0.038
12.0	1250	205	50	0.055	1100	155	40	0.047	900	125	35	0.046
14.0	1100	205	50	0.062	1000	155	45	0.052	800	125	35	0.052
16.0	1000	205	50	0.068	800	155	40	0.065	650	125	35	0.064
18.0	900	205	50	0.076	700	155	40	0.074	550	125	30	0.076
20.0	800	205	50	0.085	650	155	40	0.079	550	125	35	0.076
22.0	700	245	50	0.117	650	190	45	0.097	500	155	35	0.103
25.0	650	245	50	0.126	550	190	45	0.115	450	155	35	0.115
28.0	550	240	50	0.145	500	180	45	0.120	400	145	35	0.121
30.0	500	240	50	0.160	450	180	40	0.133	350	145	35	0.138
32.0	500	240	50	0.160	400	180	40	0.150	300	145	30	0.161
36.0	450	240	50	0.178	350	180	40	0.171	280	145	30	0.173
40.0	400	225	50	0.188	300	170	40	0.189	250	135	30	0.180

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	1100	35	20	0.011	6300	225	120	0.012
8.0	800	40	20	0.017	4350	260	110	0.020
10.0	650	70	20	0.036	3500	390	110	0.037
12.0	550	75	20	0.045	2800	450	105	0.054
14.0	500	75	20	0.050	2500	475	110	0.063
16.0	400	75	20	0.063	2250	505	115	0.075
18.0	350	75	20	0.071	1950	530	110	0.091
20.0	300	75	20	0.083	1700	560	105	0.110
22.0	300	100	20	0.111	1550	530	105	0.114
25.0	250	100	20	0.133	1400	505	110	0.120
28.0	200	100	20	0.167	1250	575	110	0.153
30.0	200	100	20	0.167	1250	590	120	0.157
32.0	170	100	15	0.196	1100	560	110	0.170
36.0	150	100	15	0.222	1000	530	115	0.177
40.0	150	90	20	0.200	900	505	115	0.187



※The FEED, in long & extra long types, should be reduced by around 50%

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

HSS END MILLS

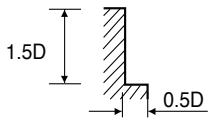
RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

HSSCo8, MULTI FLUTE ROUGHING & FINISHING - SIDE CUTTING
HSSCo8, MULTI SCHNEIDEN SCHRUPPSCHLICHTFRÄSER - SEITENFRÄSEN

E2754, E2768 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	1800	65	35	0.012	1600	50	30	0.010	1200	45	25	0.013
8.0	1400	85	35	0.015	1100	60	30	0.014	900	50	25	0.014
10.0	1100	120	35	0.027	900	95	30	0.026	800	90	25	0.028
12.0	900	145	35	0.040	800	110	30	0.034	630	90	25	0.036
14.0	800	145	35	0.045	700	110	30	0.039	560	90	25	0.040
16.0	700	145	35	0.052	560	110	30	0.049	450	90	25	0.050
18.0	630	145	35	0.058	500	110	30	0.055	400	90	25	0.056
20.0	560	145	35	0.065	450	110	30	0.061	400	90	25	0.056
22.0	500	175	35	0.070	450	135	30	0.060	350	110	25	0.063
25.0	450	175	35	0.078	400	135	30	0.068	310	110	25	0.071
28.0	400	170	35	0.085	350	130	30	0.074	280	105	25	0.075
30.0	350	170	35	0.097	310	130	30	0.084	250	105	25	0.084
32.0	350	170	35	0.097	280	130	30	0.093	220	105	25	0.095
36.0	310	170	35	0.091	250	130	30	0.087	200	105	25	0.088
40.0	280	160	35	0.095	220	120	30	0.091	180	95	25	0.088

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	800	25	15	0.010	4500	160	85	0.012
8.0	560	30	15	0.013	3100	185	80	0.015
10.0	450	50	15	0.028	2500	280	80	0.028
12.0	400	55	15	0.034	2000	320	80	0.040
14.0	350	55	15	0.039	1800	340	80	0.047
16.0	280	55	15	0.049	1600	360	80	0.056
18.0	250	55	15	0.055	1400	380	80	0.068
20.0	220	55	15	0.063	1200	400	80	0.083
22.0	220	70	15	0.064	1100	380	80	0.069
25.0	180	70	15	0.078	1000	360	80	0.072
28.0	160	70	15	0.088	900	410	80	0.091
30.0	160	70	15	0.088	900	420	85	0.093
32.0	140	70	15	0.100	800	400	80	0.100
36.0	120	70	15	0.097	700	380	80	0.090
40.0	110	65	15	0.098	630	360	80	0.095



※The FEED, in long & extra long types, should be reduced by around 50%

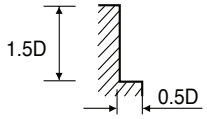
RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

HSSCo8, MULTI FLUTE ROUGHING & FINISHING TiAlN COATED - SIDE CUTTING
HSSCo8, MULTI SCHNEIDEN SCHRUPPSCHLICHTFRÄSER TiAlN-BESCHICHTET - SEITENFRÄSEN

E2754, E2768 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	2500	90	50	0.012	2250	70	40	0.010	1700	65	30	0.013
8.0	1950	120	50	0.015	1550	85	40	0.014	1250	70	30	0.014
10.0	1550	170	50	0.027	1250	135	40	0.027	1100	125	35	0.028
12.0	1250	205	50	0.041	1100	155	40	0.035	900	125	35	0.035
14.0	1100	205	50	0.047	1000	155	45	0.039	800	125	35	0.039
16.0	1000	205	50	0.051	800	155	40	0.048	650	125	35	0.048
18.0	900	205	50	0.057	700	155	40	0.055	550	125	30	0.057
20.0	800	205	50	0.064	650	155	40	0.060	550	125	35	0.057
22.0	700	245	50	0.070	650	190	45	0.058	500	155	35	0.062
25.0	650	245	50	0.075	550	190	45	0.069	450	155	35	0.069
28.0	550	240	50	0.087	500	180	45	0.072	400	145	35	0.073
30.0	500	240	50	0.096	450	180	40	0.080	350	145	35	0.083
32.0	500	240	50	0.096	400	180	40	0.090	300	145	30	0.097
36.0	450	240	50	0.089	350	180	40	0.086	280	145	30	0.086
40.0	400	225	50	0.094	300	170	40	0.094	250	135	30	0.090

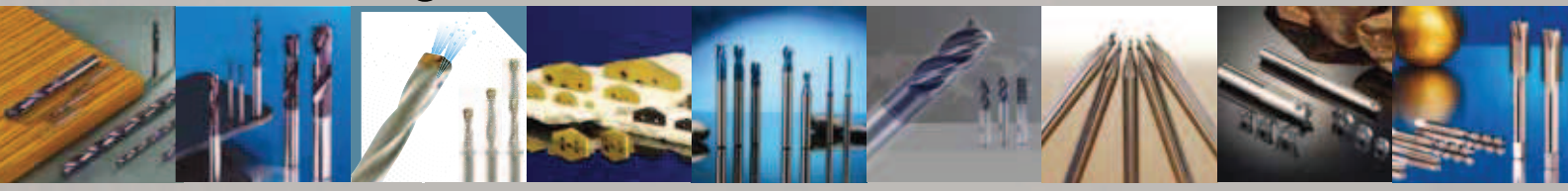
MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
6.0	1100	35	20	0.011	6300	225	120	0.012
8.0	800	40	20	0.013	4350	260	110	0.015
10.0	650	70	20	0.027	3500	390	110	0.028
12.0	550	75	20	0.034	2800	450	105	0.040
14.0	500	75	20	0.038	2500	475	110	0.048
16.0	400	75	20	0.047	2250	505	115	0.056
18.0	350	75	20	0.054	1950	530	110	0.068
20.0	300	75	20	0.063	1700	560	105	0.082
22.0	300	100	20	0.067	1550	530	105	0.068
25.0	250	100	20	0.080	1400	505	110	0.072
28.0	200	100	20	0.100	1250	575	110	0.092
30.0	200	100	20	0.100	1250	590	120	0.094
32.0	170	100	15	0.118	1100	560	110	0.102
36.0	150	100	15	0.111	1000	530	115	0.088
40.0	150	90	20	0.100	900	505	115	0.094



※The FEED, in long & extra long types, should be reduced by around 50%

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

Global Cutting Tool Leader **YG-1**



HSS

YG

Leading Through Innovation

MILLING CUTTERS
FRÄSER

- General Works. Available Dovetail, Woodruff Keyseat, T-slot, Side Milling Cutters and HSS (8% cobalt) Corner Rounding, Shell End Mills

- Für allgemeinen Einsatz. Winkelschaftfräser, Schlitzfräser, T-Nutenfräser, Konkavfräser, Scheibenfräser und HSSE-Co8 Walzenstirnfräser

SELECTION GUIDE

ITEM	MODEL	DESCRIPTION	SIZE MIN	SIZE MAX	PAGE
ML012, ML022 ML112, ML122 ML212, ML222		HSS-E, DOVETAIL CUTTERS TYPE “A”, “C”, “E” HSS-E, WINKELFRÄSER FORM “A”, “C”, “E”	D16.0	D50.0	1478
ML032, ML042 ML132, ML142 ML232, ML242		HSS-E, DOVETAIL CUTTERS TYPE “B”, “D”, “F” HSS-E, WINKELFRÄSER FORM “B”, “D”, “F”	D16.0	D38.0	1479
ML062 ML162 ML262		HSS-E, WOODRUFF KEYSEAT CUTTERS TYPE “B”, “D”, “F” HSS-E, SCHLITZFRÄSER FORM “B”, “D”, “F”	D10.5	D45.5	1480
ML072 ML172 ML272		HSS-E, T-SLOT CUTTERS TYPE “AA”, “AB”, “AD” HSS-E, SCHAFTERFRÄSER FÜR T-NUTEN FORM “AA”, “AB”, “AD”	D12.5	D40.0	1482
ML092		HSS-E, SIDE AND FACE MILLING CUTTERS with STRAIGHT TEETH HSS-E, SCHEIBENFRÄSER mit GERADEVERZAHNT	D50.0	D125.0	1483
ML102		HSS-E, SIDE AND FACE MILLING CUTTERS with STAGGERED TEETH HSS-E, SCHEIBENFRÄSER mit KREUZVERZAHNT	D50.0	D200.0	1484
E2675		HSSCo8, MULTI FLUTE SHELL END MILL HSSCo8, MULTI SCHNEIDEN WALZENSTIRNFRÄSER	D30.0	D160.0	1488
E2676		HSSCo8, MULTI FLUTE SHELL END MILL for ALUMINUM HSSCo8, MULTI SCHNEIDEN WALZENSTIRNFRÄSER für ALUMINIUM	D30.0	D100.0	1489
E2677		HSSCo8, MULTI FLUTE ROUGHING SHELL END MILL - COARSE HSSCo8, MULTI SCHNEIDEN WALZENSTIRN-SCHRUPPFRÄSER - GROBES	D40.0	D160.0	1490
E2678		HSSCo8, MULTI FLUTE ROUGHING SHELL END MILL - FINE HSSCo8, MULTI SCHNEIDEN WALZENSTIRN-SCHRUPPFRÄSER - FEINES	D40.0	D160.0	1491
E2679		HSSCo8, MULTI FLUTE ROUGHING & FINISHING SHELL END MILL HSSCo8, MULTI SCHNEIDEN WALZENSTIRN-SCHRUPPSCHLICHTFRÄSER	D40.0	D160.0	1492
E2498		HSSCo8, 4 FLUTE CORNER ROUNDING CUTTERS HSSCo8, 4 SCHNEIDEN VIERTELKREISFRÄSER	D8.0	D56.0	1493
		RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN			1494

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎									○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○												
○	○									◎				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				
◎	◎	○								○				

MILLING CUTTERS

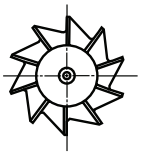
ML012, ML022 SERIES PLAIN SHANK GLATTER ZYLINDERSCHAFT
ML112, ML122 SERIES FLAT SHANK SEITLICHEN MITNAHMEFLÄCHEN
ML212, ML222 SERIES THREAD SHANK ANZUGSGEWINDE

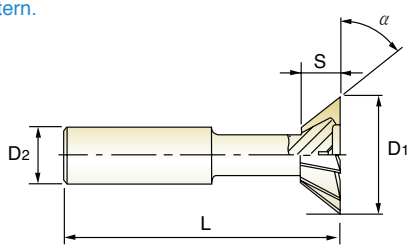
HSS-E, DOVETAIL CUTTERS TYPE "A", "C", "E"

HSS-E, WINKELFRÄSER FORM "A", "C", "E"
Fraise HSS-E pour queue d'aronde Type "A", "C", "E"
FRESE AD ANGOLO DIVERGENTE TIPO "A", "C", "E"

▶ Recommanded for use in place of arbor and threaded hole type cutters to reduce set time and facilitate handling.

▶ Empfohlen zur Nutzung anstelle von Arbor und threaded hole type Cutters um Montierzeit zu verkürzen und Handhabung zu erleichtern.





HSS-E | DIN 1833 | N | 0° | DIN 1835A | DIN 1835B | DIN 1835D

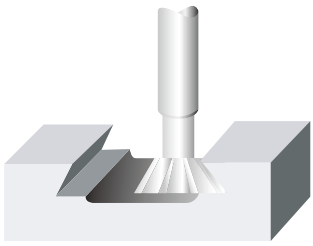
P.1494

Unit : mm

EDP No.			Cutter Diameter	Width of Face	Divergent Taper Angle	Shank Diameter	Overall Length	No. of Teeth
PLAIN	FLAT	THREAD	D_1(js16)	S(js14)	α(±15′)	D_2(h6)	L(js18)	Z
ML01201601	ML11201601	ML21201601	16.0	4	45°	12	60	6
ML01202001	ML11202001	ML21202001	20.0	5	45°	12	63	6
ML01202201	ML11202201	ML21202201	22.0	6	45°	12	67	6
ML01202501	ML11202501	ML21202501	25.0	6.3	45°	16	67	8
ML01202801	ML11202801	ML21202801	28.0	7.5	45°	16	67	8
ML01203201	ML11203201	ML21203201	32.0	8	45°	16	71	10
ML01203801	ML11203801	ML21203801	38.0	10	45°	16	80	12
ML02201601	ML12201601	ML22201601	16.0	6.3	60°	12	60	6
ML02202001	ML12202001	ML22202001	20.0	8	60°	12	63	6
ML02202201	ML12202201	ML22202201	22.0	9	60°	12	67	6
ML02202501	ML12202501	ML22202501	25.0	10	60°	16	67	8
ML02202801	ML12202801	ML22202801	28.0	11	60°	16	67	8
ML02203201	ML12203201	ML22203201	32.0	12.5	60°	16	71	10
ML02203801	ML12203801	ML22203801	38.0	16	60°	16	80	12
ML02204001	ML12204001	ML22204001	40.0	13	60°	25	85	12
ML02205001	ML12205001	ML22205001	50.0	16	60°	25	100	16

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Nominal-Diameter in mm / Nennmaßbereich in mm							
	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50	over 50 to 80 über 50 bis 80	over 80 to 120 über 80 bis 120
Tolerance range in mm / Toleranzwerte in mm							
js16	± 0.375	± 0.45	± 0.55	± 0.65	± 0.80	± 0.95	± 1.10
js14	± 0.15	± 0.18	± 0.215	± 0.26	± 0.31	± 0.37	± 0.435
js18	± 0.90	± 1.10	± 1.35	± 1.65	± 1.95	± 2.30	± 2.70
Tolerance range in μm / Toleranzwerte in μm							
h6	0 / − 8	0 / − 9	0 / − 11	0 / − 13	0 / − 16	0 / − 19	0 / − 22

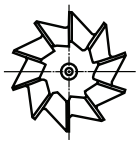


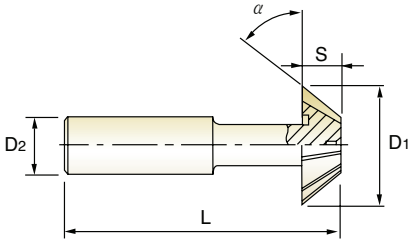
◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS-E, DOVETAIL CUTTERS TYPE “B”, “D”, “F”

HSS-E, WINKELFRÄSER FORM “B”, “D”, “F”
Fraise HSS-E pour queue d'arronde Type "B", "D", "F"
FRESE AD ANGOLO CONVERGENTE TIPO “B”, “D”, “F”





HSS-E | DIN 1833 | N | 0° | DIN 1835A | DIN 1835B | DIN 1835D

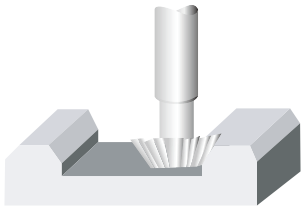
P.1494

Unit : mm

EDP No.			Cutter Diameter	Width of Face	Convergent Taper Angle	Shank Diameter	Overall Length	No. of Teeth
PLAIN	FLAT	THREAD	D_1(js16)	S(js14)	α(±15′)	D_2(h6)	L(js18)	Z
ML03201601	ML13201601	ML23201601	16.0	4	45°	12	60	6
ML03202001	ML13202001	ML23202001	20.0	5	45°	12	63	6
ML03202201	ML13202201	ML23202201	22.0	6	45°	12	67	6
ML03202501	ML13202501	ML23202501	25.0	6.3	45°	16	67	8
ML03202801	ML13202801	ML23202801	28.0	7.5	45°	16	67	8
ML03203201	ML13203201	ML23203201	32.0	8	45°	16	71	10
ML03203801	ML13203801	ML23203801	38.0	10	45°	16	80	12
ML04201601	ML14201601	ML24201601	16.0	6.3	60°	12	60	6
ML04202001	ML14202001	ML24202001	20.0	8	60°	12	63	6
ML04202201	ML14202201	ML24202201	22.0	9	60°	12	67	6
ML04202501	ML14202501	ML24202501	25.0	10	60°	16	67	8
ML04202801	ML14202801	ML24202801	28.0	11	60°	16	67	8
ML04203201	ML14203201	ML24203201	32.0	12.5	60°	16	71	10
ML04203801	ML14203801	ML24203801	38.0	16	60°	16	80	12

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

	Nominal-Diameter in mm / Nennmaßbereich in mm					
	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50	over 50 to 80 über 50 bis 80
	Tolerance range in mm / Toleranzwerte in mm					
js16	± 0.375	± 0.45	± 0.55	± 0.65	± 0.80	± 0.95
js14	± 0.15	± 0.18	± 0.215	± 0.26	± 0.31	± 0.37
js18	± 0.90	± 1.10	± 1.35	± 1.65	± 1.95	± 2.30
	Tolerance range in μm / Toleranzwerte in μm					
h6	0 / − 8	0 / − 9	0 / − 11	0 / − 13	0 / − 16	0 / − 19



◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

MILLING CUTTERS

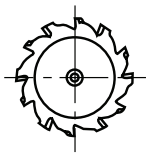
ML062 SERIES PLAIN SHANK
GLATTER ZYLINDERSCHAFT

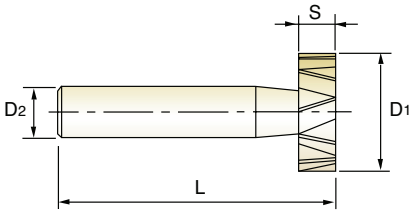
ML162 SERIES FLAT SHANK
SEITLICHEN MITNAHMEFLÄCHEN

ML262 SERIES THREAD SHANK
ANZUGSGEWINDE

HSS-E, WOODRUFF KEYSEAT CUTTERS TYPE “B”, “D”, “F”

HSS-E, SCHLITZFRÄSER FORM “B”, “D”, “F”
Fraise HSS-E WOODRUFF Type "B", "D", "F"
FRESE PER CHIAVETTE WOODRUFF TIPO “B”, “D”, “F”





HSS-E | DIN 850 | N | 10~12° | DIN 1835A | DIN 1835B | DIN 1835D

P.1495

Unit : mm

EDP No.			Cutter Diameter	Width of Face	Shank Diameter	Overall Length	No. of Teeth
PLAIN	FLAT	THREAD	D_1(h11)	S(e8)	D_2(h6)	L(js18)	Z
ML06210E01	ML16210E01	ML26210E01	10.5	2	6	50	8
ML06210E02	ML16210E02	ML26210E02	10.5	2.5	6	50	8
ML06210E03	ML16210E03	ML26210E03	10.5	3	6	50	8
ML06213E01	ML16213E01	ML26213E01	13.5	2	10	56	8
ML06213E02	ML16213E02	ML26213E02	13.5	2.5	10	56	8
ML06213E03	ML16213E03	ML26213E03	13.5	3	10	56	8
ML06213E04	ML16213E04	ML26213E04	13.5	4	10	56	8
ML06216E01	ML16216E01	ML26216E01	16.5	2.5	10	56	8
ML06216E02	ML16216E02	ML26216E02	16.5	3	10	56	8
ML06216E03	ML16216E03	ML26216E03	16.5	4	10	56	8
ML06216E04	ML16216E04	ML26216E04	16.5	5	10	56	8
ML06219E01	ML16219E01	ML26219E01	19.5	3	10	56	8
ML06219E02	ML16219E02	ML26219E02	19.5	4	10	63	8
ML06219E03	ML16219E03	ML26219E03	19.5	5	10	63	8
ML06219E04	ML16219E04	ML26219E04	19.5	6	10	63	8
ML06222E01	ML16222E01	ML26222E01	22.5	4	10	63	10
ML06222E02	ML16222E02	ML26222E02	22.5	5	10	63	10
ML06222E03	ML16222E03	ML26222E03	22.5	6	10	63	10
ML06222E04	ML16222E04	ML26222E04	22.5	8	10	63	10
ML06225E01	ML16225E01	ML26225E01	25.5	5	10	63	10
ML06225E02	ML16225E02	ML26225E02	25.5	6	10	63	10
ML06225E03	ML16225E03	ML26225E03	25.5	7	10	63	10
ML06225E04	ML16225E04	ML26225E04	25.5	8	10	63	10
ML06228E01	ML16228E01	ML26228E01	28.5	5	10	63	10
ML06228E02	ML16228E02	ML26228E02	28.5	6	10	63	10
ML06228E03	ML16228E03	ML26228E03	28.5	7	10	63	10
ML06228E04	ML16228E04	ML26228E04	28.5	8	10	63	10
ML06228E05	ML16228E05	ML26228E05	28.5	10	12	71	10

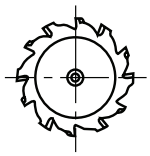
▶ NEXT PAGE

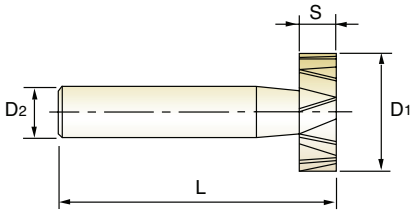
◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS-E, WOODRUFF KEYSEAT CUTTERS TYPE “B”, “D”, “F”

HSS-E, SCHLITZFRÄSER FORM “B”, “D”, “F”
Fraise HSS-E WOODRUFF Type "B", "D", "F"
FRESE PER CHIAVETTE WOODRUFF TIPO “B”, “D”, “F”





HSS-E | DIN 850 | N | 10~12° | DIN 1835A | DIN 1835B | DIN 1835D

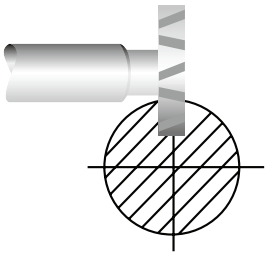
P.1495

Unit : mm

EDP No.			Cutter Diameter	Width of Face	Shank Diameter	Overall Length	No. of Teeth
PLAIN	FLAT	THREAD	D_1(h11)	S(e8)	D_2(h6)	L(js18)	Z
ML06232E01	ML16232E01	ML26232E01	32.5	5	12	71	12
ML06232E02	ML16232E02	ML26232E02	32.5	6	12	71	12
ML06232E03	ML16232E03	ML26232E03	32.5	7	12	71	12
ML06232E04	ML16232E04	ML26232E04	32.5	8	12	71	12
ML06232E05	ML16232E05	ML26232E05	32.5	10	12	71	12
ML06238E01	ML16238E01	ML26238E01	38.5	7	12	71	12
ML06238E02	ML16238E02	ML26238E02	38.5	8	12	71	12
ML06238E03	ML16238E03	ML26238E03	38.5	9	12	71	12
ML06238E04	ML16238E04	ML26238E04	38.5	10	12	71	12
ML06245E01	ML16245E01	ML26245E01	45.5	10	12	71	14

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

	Nominal-Diameter in / Nennmaßbereich in						
	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50	over 50 to 80 über 50 bis 80
	Tolerance range in mm / Toleranzwerte in mm						
js18	–	± 0.90	± 1.10	± 1.35	± 1.65	± 1.95	± 2.30
	Tolerance range in μm / Toleranzwerte in μm						
h11	0 / – 60	0 / – 75	0 / – 90	0 / – 110	0 / – 130	0 / – 160	0 / – 190
e8	– 14 / – 28	– 20 / – 38	– 25 / – 47	– 32 / – 59	– 40 / – 73	– 50 / – 89	– 60 / – 106
h6	0 / – 6	0 / – 8	0 / – 9	0 / – 11	0 / – 13	0 / – 16	0 / – 19



◎ : Excellent ○ : Good

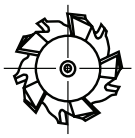
P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

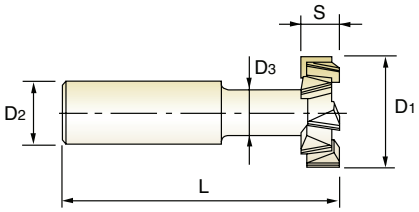
MILLING CUTTERS

ML072 SERIES PLAIN SHANK / GLATTER ZYLINDERSCHAFT
ML172 SERIES FLAT SHANK / SEITLICHEN MITNAHMEFLÄCHEN
ML272 SERIES THREAD SHANK / ANZUGSGEWINDE

HSS-E, T-SLOT CUTTERS TYPE “AA”, “AB”, “AD”

HSS-E, SCHAFTERFRÄSER FÜR T-NUTEN FORM “AA”, “AB”, “AD”
Fraise HSS-E pour rainure en "T" Type "AA", "AB", "AD"
FRESE PER SCANALATURE A T - DENTI ALTERNATI





HSS-E | DIN 851 | N | 10° | DIN 1835A | DIN 1835B | DIN 1835D

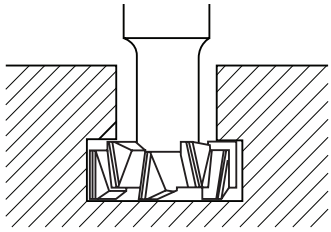
P.1495

Unit : mm

EDP No.			Cutter Diameter	Width of Face	Shank Diameter	Neck Diameter	Overall Length	No. of Teeth
PLAIN	FLAT	THREAD	D_1(d11)	S(d11)	D_2(h6)	D_3(h12)	L(js18)	Z
ML07212E01	ML17212E01	ML27212E01	12.5	6	10	5	57	6
ML07201601	ML17201601	ML27201601	16.0	8	10	6.5	62	6
ML07201801	ML17201801	ML27201801	18.0	8	12	8	70	6
ML07201901	ML17201901	ML27201901	19.0	9	12	8	71	6
ML07202101	ML17202101	ML27202101	21.0	9	12	10	74	6
ML07202201	ML17202201	ML27202201	22.0	10	12	10	75	6
ML07202501	ML17202501	ML27202501	25.0	11	16	12	82	6
ML07202801	ML17202801	ML27202801	28.0	12	16	13	83	6
ML07203201	ML17203201	ML27203201	32.0	14	16	15	90	8
ML07203601	ML17203601	ML27203601	36.0	16	25	17	103	8
ML07204001	ML17204001	ML27204001	40.0	18	25	19	108	8

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Nominal-Diameter in mm / Nennmaßbereich in mm	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50	over 50 to 80 über 50 bis 80	over 80 to 120 über 80 bis 120
Tolerance range in mm / Toleranzwerte in mm							
h12	0 / − 0.12	0 / − 0.15	0 / − 0.18	0 / − 0.21	0 / − 0.25	0 / − 0.30	0 / − 0.35
js18	± 0.90	± 1.10	± 1.35	± 1.65	± 1.95	± 2.30	± 2.70
Tolerance range in μm / Toleranzwerte in μm							
d11	− 30 / − 105	− 40 / − 130	− 50 / − 160	− 65 / − 195	− 80 / − 240	− 100 / − 290	− 120 / − 340
h6	0 / − 8	0 / − 9	0 / − 11	0 / − 13	0 / − 16	0 / − 19	0 / − 22



◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎									○				

HSS-E, SIDE AND FACE MILLING CUTTERS with STRAIGHT TEETH

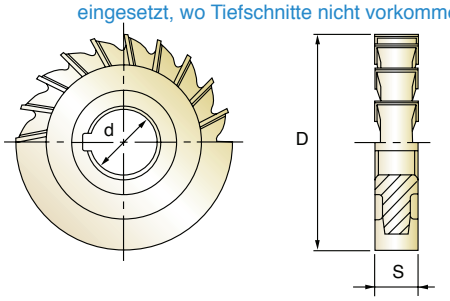
HSS-E, SCHEIBENFRÄSER mit GERADEVERZAHNT

Fraise HSS-E 3 Tailles, denture droite

FRESE A DISCO A TRE TAGLI - DENTI DRITTI

▶ The tools are used for general purpose side and straddle milling where deep cut is not required.

▶ Diese Werkzeuge werden bei allgemeinen Seiten-und Breitfräsen eingesetzt, wo Tiefschnitte nicht vorkommen.



HSS-E | DIN 885-B | H

P.1496

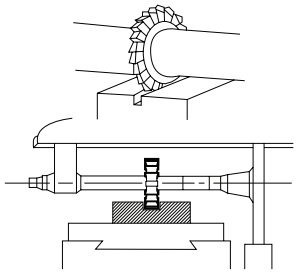
Unit : mm

EDP No.	Cutter Diameter D(js14)	Width of Face S(k11)	Internal Diameter d(H7)	No. of Teeth Z
ML09205001	50.0	4	16	18
ML09205002	50.0	5	16	18
ML09205003	50.0	6	16	18
ML09205004	50.0	8	16	16
ML09205005	50.0	10	16	16
ML09206301	63.0	5	22	22
ML09206302	63.0	6	22	22
ML09206303	63.0	8	22	20
ML09206304	63.0	10	22	20
ML09206305	63.0	12	22	20
ML09208001	80.0	6	22	24
ML09208002	80.0	8	22	24
ML09208003	80.0	10	22	24
ML09208004	80.0	12	22	20
ML09208005	80.0	6	27	24
ML09208006	80.0	8	27	24
ML09208007	80.0	10	27	24
ML09208008	80.0	12	27	20
ML09210001	100.0	6	27	26
ML09210002	100.0	8	27	26
ML09210003	100.0	10	27	22
ML09210004	100.0	6	32	26
ML09210005	100.0	8	32	26
ML09210006	100.0	10	32	22
ML09210007	100.0	12	32	22
ML09212501	125.0	8	32	30
ML09212502	125.0	10	32	30
ML09212503	125.0	12	32	24

Tolerances according to DIN 7160 & 7161

Toleranzen nach DIN 7160 & 7161

	Nominal-Diameter in mm / Nennmaßbereich in mm							
	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50	over 50 to 80 über 50 bis 80	over 80 to 120 über 80 bis 120	over 120 to 180 über 120 bis 180
	Tolerance range in mm / Toleranzwerte mm							
js14	± 0.15	± 0.18	± 0.215	± 0.26	± 0.31	± 0.37	± 0.435	± 0.50
	Tolerance range in / Toleranzwerte in							
k11	+ 75 0	+ 90 0	+ 110 0	+ 130 0	+ 160 0	+ 190 0	+ 220 0	+ 250 0
H7	+ 12 0	+ 15 0	+ 18 0	+ 21 0	+ 25 0	+ 30 0	+ 35 0	+ 40 0



◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

YG MILLING CUTTERS

ML102 SERIES STAGGERED TEETH KREUZVERZAHNT

HSS-E, SIDE AND FACE MILLING CUTTERS with STAGGERED TEETH

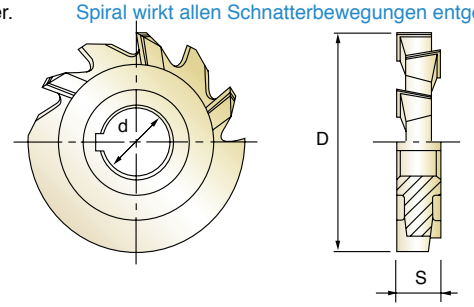
HSS-E, SCHEIBENFRÄSER mit KREUZVERZAHNT

Fraise HSS-E 3 Tailles, denture alternée

FRESE A DISCO A TRE TAGLI - DENTI ALTERNATI

▶ The type of cutter is recommended for slotting operations.
The alternate spiral effectively counteracts all tendency to chatter.

▶ Dieser Typ ist zum Schlitzfräsen geeignet. Das alternierende Spiral wirkt allen Schnatterbewegungen entgegen.



HSS-E | DIN 885-A | H

P.1497

Unit : mm

EDP No.	Cutter Diameter D(js14)	Width of Face S(k11)	Internal Diameter d(H7)	No. of Teeth Z
ML10205001	50.0	3	16	14
ML10205002	50.0	4	16	14
ML10205003	50.0	5	16	14
ML10205004	50.0	6	16	14
ML10205005	50.0	7	16	14
ML10205006	50.0	8	16	14
ML10205007	50.0	9	16	14
ML10205008	50.0	10	16	14
ML10206301	63.0	3	22	16
ML10206302	63.0	4	22	16
ML10206303	63.0	5	22	16
ML10206304	63.0	6	22	16
ML10206305	63.0	7	22	16
ML10206306	63.0	8	22	16
ML10206307	63.0	9	22	16
ML10206308	63.0	10	22	16
ML10206309	63.0	12	22	16
ML10206310	63.0	14	22	16
ML10206311	63.0	16	22	16
ML10206312	63.0	18	22	16
ML10208001	80.0	3	22	18
ML10208002	80.0	4	22	18
ML10208003	80.0	5	22	18
ML10208004	80.0	6	22	18
ML10208005	80.0	7	22	18
ML10208006	80.0	8	22	18
ML10208007	80.0	9	22	18
ML10208008	80.0	10	22	18

▶ NEXT PAGE

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS-E, SIDE AND FACE MILLING CUTTERS with STAGGERED TEETH

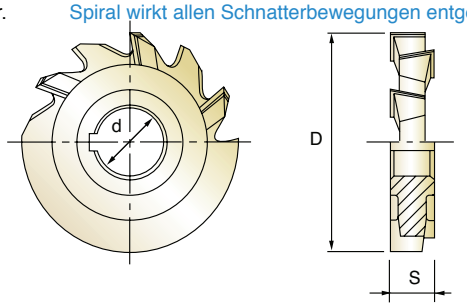
HSS-E, SCHEIBENFRÄSER mit KREUZVERZAHNT

Fraise HSS-E 3 Tailles, denture alternée

FRESE A DISCO A TRE TAGLI - DENTI ALTERNATI

▶ The type of cutter is recommended for slotting operations.
The alternate spiral effectively counteracts all tendency to chatter.

▶ Dieser Typ ist zum Schlitzfräsen geeignet. Das alternierende Spiral wirkt allen Schnatterbewegungen entgegen.



HSS-E | DIN 885-A | H

P.1497

Unit : mm

EDP No.	Cutter Diameter D(js14)	Width of Face S(k11)	Internal Diameter d(H7)	No. of Teeth Z
ML10208009	80.0	12	22	18
ML10208010	80.0	14	22	18
ML10208011	80.0	16	22	18
ML10208012	80.0	18	22	18
ML10208013	80.0	20	22	18
ML10208014	80.0	4	27	18
ML10208015	80.0	5	27	18
ML10208016	80.0	6	27	18
ML10208017	80.0	7	27	18
ML10208018	80.0	8	27	18
ML10208019	80.0	9	27	18
ML10208020	80.0	10	27	18
ML10208021	80.0	12	27	18
ML10208022	80.0	14	27	18
ML10208023	80.0	16	27	18
ML10208024	80.0	18	27	18
ML10208025	80.0	20	27	18
ML10210001	100.0	3	27	20
ML10210002	100.0	4	27	20
ML10210003	100.0	5	27	20
ML10210004	100.0	6	27	20
ML10210005	100.0	7	27	20
ML10210006	100.0	8	27	20
ML10210007	100.0	9	27	20
ML10210008	100.0	10	27	20
ML10210009	100.0	12	27	20
ML10210010	100.0	14	27	20
ML10210011	100.0	15	27	20

▶ NEXT PAGE

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

YG MILLING CUTTERS

ML102 SERIES STAGGERED TEETH KREUZVERZAHNT

HSS-E, SIDE AND FACE MILLING CUTTERS with STAGGERED TEETH

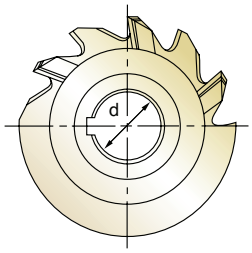
HSS-E, SCHEIBENFRÄSER mit KREUZVERZAHNT

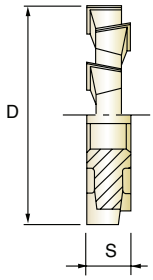
Fraise HSS-E 3 Tailles, denture alternée

FRESE A DISCO A TRE TAGLI - DENTI ALTERNATI

▶ The type of cutter is recommended for slotting operations.
The alternate spiral effectively counteracts all tendency to chatter.

▶ Dieser Typ ist zum Schlitzfräsen geeignet. Das alternierende Spiral wirkt allen Schnatterbewegungen entgegen.





HSS-E | DIN 885-A | H

P.1497

Unit : mm

EDP No.	Cutter Diameter D(js14)	Width of Face S(k11)	Internal Diameter d(H7)	No. of Teeth Z
ML10210012	100.0	16	27	20
ML10210013	100.0	18	27	20
ML10210014	100.0	20	27	20
ML10210015	100.0	4	32	20
ML10210016	100.0	5	32	20
ML10210017	100.0	6	32	20
ML10210018	100.0	7	32	20
ML10210019	100.0	8	32	20
ML10210020	100.0	9	32	20
ML10210021	100.0	10	32	20
ML10210022	100.0	12	32	20
ML10210023	100.0	14	32	20
ML10210024	100.0	15	32	20
ML10210025	100.0	16	32	20
ML10210026	100.0	18	32	20
ML10210027	100.0	20	32	20
ML10212501	125.0	5	32	22
ML10212502	125.0	6	32	22
ML10212503	125.0	8	32	22
ML10212504	125.0	10	32	22
ML10212505	125.0	12	32	22
ML10212506	125.0	14	32	22
ML10212507	125.0	16	32	22
ML10212508	125.0	18	32	22
ML10212509	125.0	20	32	22
ML10216001	160.0	6	32	26
ML10216002	160.0	8	32	26
ML10216003	160.0	10	32	26

▶ NEXT PAGE

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSS-E, SIDE AND FACE MILLING CUTTERS with STAGGERED TEETH

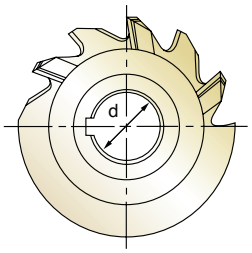
HSS-E, SCHEIBENFRÄSER mit KREUZVERZAHNT

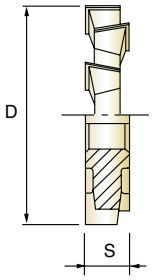
Fraise HSS-E 3 Tailles, denture alternée

FRESE A DISCO A TRE TAGLI - DENTI ALTERNATI

▶ The type of cutter is recommended for slotting operations.
The alternate spiral effectively counteracts all tendency to chatter.

▶ Dieser Typ ist zum Schlitzfräsen geeignet. Das alternierende Spiral wirkt allen Schnatterbewegungen entgegen.





HSS-E | DIN 885-A | H

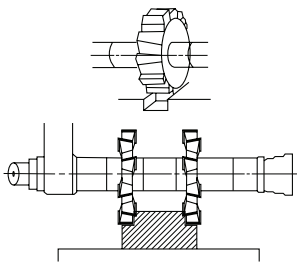
P.1497

Unit : mm

EDP No.	Cutter Diameter D(js14)	Width of Face S(k11)	Internal Diameter d(H7)	No. of Teeth Z
ML10216004	160.0	12	32	26
ML10216005	160.0	14	32	26
ML10216006	160.0	16	32	26
ML10216007	160.0	18	32	26
ML10216008	160.0	20	32	26
ML10216009	160.0	6	40	26
ML10216010	160.0	8	40	26
ML10216011	160.0	10	40	26
ML10216012	160.0	12	40	26
ML10216013	160.0	14	40	26
ML10216014	160.0	16	40	26
ML10216015	160.0	18	40	26
ML10216016	160.0	20	40	26
ML10220001	200.0	10	40	30
ML10220002	200.0	12	40	30
ML10220003	200.0	14	40	30
ML10220004	200.0	16	40	30
ML10220005	200.0	18	40	30
ML10220006	200.0	20	40	30
ML10220007	200.0	22	40	30
ML10220008	200.0	25	40	30

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

	Nominal-Diameter in mm / Nennmaßbereich in mm								
	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50	over 50 to 80 über 50 bis 80	over 80 to 120 über 80 bis 120	over 120 to 180 über 120 bis 180	over 180 to 250 über 180 bis 250
	Tolerance range in mm / Toleranzwerte in mm								
js14	± 0.15	± 0.18	± 0.215	± 0.26	± 0.31	± 0.37	± 0.435	± 0.50	± 0.575
	Tolerance range in µm / Toleranzwerte in µm								
k11	+ 75 0	+ 90 0	+ 110 0	+ 130 0	+ 160 0	+ 190 0	+ 220 0	+ 250 0	+ 290 0
H7	+ 12 0	+ 15 0	+ 18 0	+ 21 0	+ 25 0	+ 30 0	+ 35 0	+ 40 0	+ 46 0



◎ : Excellent ○ : Good

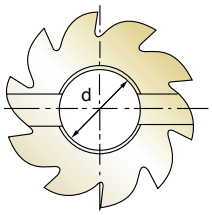
P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

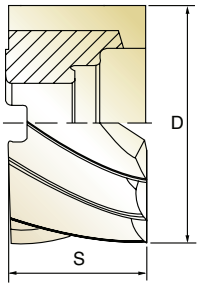
MILLING CUTTERS

E2675 SERIES

HSSCo8, MULTI FLUTE SHELL END MILL

HSSCo8, MULTI SCHNEIDEN WALZENSTIRNFRÄSER
Fraise HSSCo8, multi-dents trou lisse
FRESA CILINDRICA FRONTALE, MULTI TAGLIENTE





HSS Co8 | DIN 841 | N | 6-10 | 30° P.1498

Unit : mm

EDP No.	Mill Diameter D	Width of Face S	Internal Diameter d	No. of Teeth Z
E2675300	30.0	30	● 13	6
E2675350	35.0	35	● 16	6
E2675400	40.0	20	● 16	8
E2675402	40.0	40	● 16	8
E2675500	50.0	25	22	8
E2675502	50.0	50	22	8
E2675600	60.0	30	27	8
E2675601	60.0	60	27	8
E2675750	75.0	35	27	10
E2675751	75.0	75	27	10
E2675900	90.0	35	27	10
E2675902	110.0	35	32	10

● Tolerance of Internal Diameter = +0.018 ~ 0
▶ TiN-COATING, TiCN-COATING & TiAlN-COATING is available on your request.

HSS Co8 | DIN 1880 | N | 8-14 | 30° P.1498

Unit : mm

EDP No.	Mill Diameter D	Width of Face S	Internal Diameter d	No. of Teeth Z
E2675401	40.0	32	● 16	8
E2675501	50.0	36	22	8
E2675630	63.0	40	27	8
E2675800	80.0	45	27	10
E2675901	100.0	50	32	10
E2675903	125.0	56	40	12
E2675904	160.0	63	50	14

Mill Dia. Tolerance(mm)	Width of Face Tolerance(mm)	Internal Dia. Tolerance(mm)
+ 0.25 − 0.15	+ 0.5 − 0	+ 0.02 − 0

● Tolerance of Internal Diameter = +0.018 ~ 0
▶ TiN-COATING, TiCN-COATING & TiAlN-COATING is available on your request.

◎ : Excellent ○ : Good

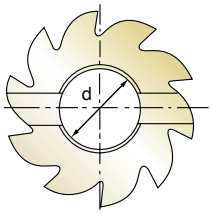
P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○												

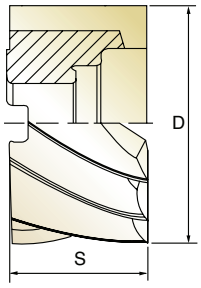
HSSCo8, MULTI FLUTE SHELL END MILL for ALUMINUM

HSSCo8, MULTI SCHNEIDEN WALZENSTIRNFRÄSER für ALUMINIUM

Fraise HSSCo8, multi-dents trou lisse pour aluminium

FRESA CILINDRICA FRONTALE MULTI TAGLIENTE, PER ALLUMINIO





HSS Co8 | DIN 841 | W | 4&6 | 42° P.1498

Unit : mm

EDP No.	Mill Diameter D	Width of Face S	Internal Diameter d	No. of Teeth Z
E2676300	30.0	30	● 13	4
E2676400	40.0	20	● 16	4
E2676402	40.0	40	● 16	4
E2676500	50.0	25	22	6
E2676502	50.0	50	22	6
E2676600	60.0	30	27	6
E2676601	60.0	60	27	6
E2676750	75.0	75	27	6

● Tolerance of Internal Diameter = +0.018 ~ 0

▶ TiN-COATING, TiCN-COATING & TiAlN-COATING is available on your request.

HSS Co8 | DIN 1880 | W | 4&6 | 42° P.1498

Unit : mm

EDP No.	Mill Diameter D	Width of Face S	Internal Diameter d	No. of Teeth Z
E2676401	40.0	32	● 16	4
E2676501	50.0	36	22	6
E2676630	63.0	40	27	6
E2676800	80.0	45	27	6
E2676901	100.0	50	32	6

● Tolerance of Internal Diameter = +0.018 ~ 0

▶ TiN-COATING, TiCN-COATING & TiAlN-COATING is available on your request.

Mill Dia. Tolerance(mm)	Width of Face Tolerance(mm)	Internal Dia. Tolerance(mm)
+ 0.25 − 0.15	+ 0.5 − 0	+ 0.02 − 0

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
○	○									◎				

YG MILLING CUTTERS

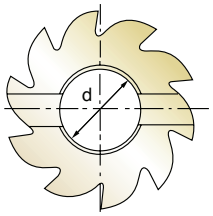
E2677 SERIES

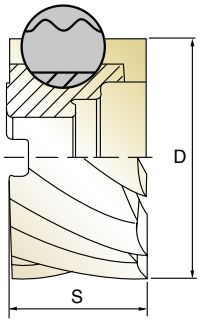
HSSCo8, MULTI FLUTE ROUGHING SHELL END MILL - COARSE

HSSCo8, MULTI SCHNEIDEN WALZENSTIRN-SCHRUPPFRÄSER - GROBES

Fraise HSSCo8, multi-dents trou lisse, ébauche, pas grossier

FRESA CILINDRICA FRONTALE MULTI TAGLIENTE, PER SGROSSATURA





HSS Co8 | DIN 841 | NR | COARSE | 6-12 | 30° P.1499

Unit : mm

EDP No.	Mill Diameter D	Width of Face S	Internal Diameter d	No. of Teeth Z
E2677401	40.0	40	● 16	6
E2677501	50.0	50	22	8
E2677600	60.0	30	27	8
E2677601	60.0	60	27	8
E2677750	75.0	35	27	10
E2677751	75.0	75	27	10
E2677900	90.0	35	27	10
E2677902	110.0	35	32	12

● Tolerance of Internal Diameter = +0.018 ~ 0
▶ TiN-COATING, TiCN-COATING & TiAlN-COATING is available on your request.

HSS Co8 | DIN 1880 | NR | COARSE | 6-12 | 30° P.1499

Unit : mm

EDP No.	Mill Diameter D	Width of Face S	Internal Diameter d	No. of Teeth Z
E2677400	40.0	32	● 16	6
E2677500	50.0	36	22	8
E2677630	63.0	40	27	8
E2677800	80.0	45	27	10
E2677901	100.0	50	32	10
E2677903	125.0	56	40	12
E2677904	160.0	63	50	12

● Tolerance of Internal Diameter = +0.018 ~ 0
▶ TiN-COATING, TiCN-COATING & TiAlN-COATING is available on your request.

Mill Dia. Tolerance(mm)	Width of Face Tolerance(mm)	Internal Dia. Tolerance(mm)
+ 0.25 − 0.15	+ 0.5 − 0	+ 0.02 − 0

◎ : Excellent ○ : Good

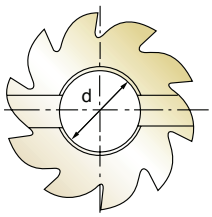
P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

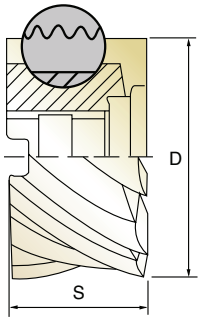
HSSCo8, MULTI FLUTE ROUGHING SHELL END MILL - FINE

HSSCo8, MULTI SCHNEIDEN WALZENSTIRN-SCHRUPPFRÄSER - FEINES

Fraise HSSCo8, multi-dents trou lisse, ébauche, pas fin

FRESA CILINDRICA FRONTALE MULTI TAGLIENTE, PER SGROSSATURA





HSS Co8 | DIN 841 | HR | FINE | 6-12 | 30° P.1499

Unit : mm

EDP No.	Mill Diameter D	Width of Face S	Internal Diameter d	No. of Teeth Z
E2678401	40.0	40	● 16	6
E2678501	50.0	50	22	8
E2678600	60.0	30	27	8
E2678601	60.0	60	27	8
E2678750	75.0	35	27	10
E2678751	75.0	75	27	10
E2678900	90.0	35	27	10
E2678902	110.0	35	32	12

● Tolerance of Internal Diameter = +0.018 ~ 0

▶ TiN-COATING, TiCN-COATING & TiAlN-COATING is available on your request.

HSS Co8 | DIN 1880 | HR | FINE | 6-12 | 30° P.1499

Unit : mm

EDP No.	Mill Diameter D	Width of Face S	Internal Diameter d	No. of Teeth Z
E2678400	40.0	32	● 16	6
E2678500	50.0	36	22	8
E2678630	63.0	40	27	8
E2678800	80.0	45	27	10
E2678901	100.0	50	32	10
E2678903	125.0	56	40	12
E2678904	160.0	63	50	12

● Tolerance of Internal Diameter = +0.018 ~ 0

▶ TiN-COATING, TiCN-COATING & TiAlN-COATING is available on your request.

Mill Dia. Tolerance(mm)	Width of Face Tolerance(mm)	Internal Dia. Tolerance(mm)
+ 0.25 − 0.15	+ 0.5 − 0	+ 0.02 − 0

◎ : Excellent ○ : Good

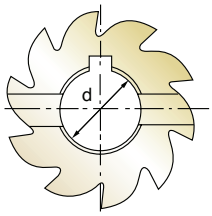
P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

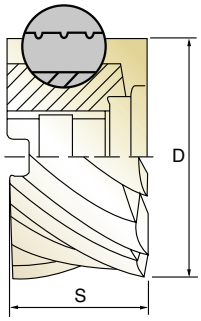
MILLING CUTTERS

E2679 SERIES

HSSCo8, MULTI FLUTE ROUGHING & FINISHING SHELL END MILL

HSSCo8, MULTI SCHNEIDEN WALZENSTIRN-SCHRUPPSCHLICHTFRÄSER
Fraise HSSCo8, multi-dents trou lisse, ébauche et finition
FRESA CILINDRICA FRONTALE MULTI TAGLIENTE, SEMI FINITURA





HSS Co8 | DIN 841 | NF | ROUGHING & FINISHING | 6-12 | 30°

P.1499

Unit : mm

EDP No.	Mill Diameter D	Width of Face S	Internal Diameter d	No. of Teeth Z
E2679401	40.0	40	● 16	6
E2679501	50.0	50	22	8
E2679600	60.0	30	27	8
E2679601	60.0	60	27	8
E2679750	75.0	35	27	10
E2679751	75.0	75	27	10
E2679900	90.0	35	27	10
E2679902	110.0	35	32	12

● Tolerance of Internal Diameter = +0.018 ~ 0
▶ TiN-COATING, TiCN-COATING & TiAlN-COATING is available on your request.

HSS Co8 | DIN 1880 | NF | ROUGHING & FINISHING | 6-12 | 30°

P.1499

Unit : mm

EDP No.	Mill Diameter D	Width of Face S	Internal Diameter d	No. of Teeth Z
E2679400	40.0	32	● 16	6
E2679500	50.0	36	22	8
E2679630	63.0	40	27	8
E2679800	80.0	45	27	10
E2679901	100.0	50	32	10
E2679903	125.0	56	40	12
E2679904	160.0	63	50	12

● Tolerance of Internal Diameter = +0.018 ~ 0
▶ TiN-COATING, TiCN-COATING & TiAlN-COATING is available on your request.

Mill Dia. Tolerance(mm)	Width of Face Tolerance(mm)	Internal Dia. Tolerance(mm)
+ 0.25 − 0.15	+ 0.5 − 0	+ 0.02 − 0

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

HSSCo8, 4 FLUTE CORNER ROUNDING CUTTERS

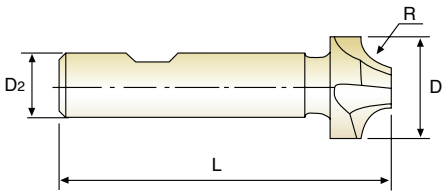
HSSCo8, 4 SCHNEIDEN VIERTELKREISFRÄSER

Fraise HSSCo8, 1/4 de cercle, 4 dents

4 TAGLIENTI PER RAGGIATURA DI SPIGOLI

▶ These tools can be adapted for many screw machine applications as end formming tools to form a specific radius.

▶ Dieses Werkzeug kann an vielen Scrow maschine als Finishingtool für spezielle Radien montiert werden.



HSS Co8 | DIN 6518 | N | 4 | 0° | DIN 1835B

P.1500

Unit : mm

EDP No.	Radius	Outside Diameter	Shank Diameter	Overall Length
FLAT	R(H11)	D	D2(h6)	L
E2498010	R1.0	8.0	10	60
E2498015	R1.5	9.0	10	60
E2498020	R2.0	10.0	10	60
E2498025	R2.5	11.0	10	60
E2498030	R3.0	12.0	12	60
E2498035	R3.5	13.0	12	60
E2498040	R4.0	14.0	12	60
E2498045	R4.5	15.0	12	60
E2498050	R5.0	16.0	12	60
E2498055	R5.5	19.0	16	67
E2498060	R6.0	20.0	16	67
E2498065	R6.5	21.0	16	71
E2498070	R7.0	22.0	16	71
E2498075	R7.5	23.0	16	71
E2498080	R8.0	24.0	16	71
E2498085	R8.5	25.0	25	85
E2498090	R9.0	26.0	25	85
E2498095	R9.5	27.0	25	85
E2498100	R10.0	28.0	25	85
E2498105	R10.5	31.0	25	90
E2498110	R11.0	32.0	25	90
E2498120	R12.0	34.0	25	90
E2498125	R12.5	41.0	25	100
E2498130	R13.0	42.0	25	100
E2498140	R14.0	44.0	25	100
E2498150	R15.0	46.0	25	100
E2498160	R16.0	48.0	25	100
E2498180	R18.0	52.0	32	112
E2498200	R20.0	56.0	32	112

Tolerances according to DIN 7160 & 7161

Toleranzen nach DIN 7160 & 7161

	Nominal-Diameter in mm / Nennmaßbereich in mm					
	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30	over 30 to 50 über 30 bis 50
	Tolerance range in / Toleranzwerte in					
H11	+ 60 0	+ 75 0	+ 90 0	+ 110 0	+ 130 0	+ 160 0
h6	0 − 6	0 − 8	0 − 9	0 − 11	0 − 13	0 − 16

▶ TiN-COATING, TiCN-COATING & TiAlN-COATING is available on your request.

◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○								○				

MILLING CUTTERS

RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

HSS-E, DOVETAIL CUTTERS TYPE “A”, “C”, “E”
HSS-E, WINKELFRÄSER FORM “A”, “C”, “E”

ML012, ML112, ML022, ML122, ML212, ML222 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
16.0	615	110	30	0.030	305	57	15	0.031	215	40	10	0.031
20.0	500	110	30	0.037	255	55	15	0.036	180	38	10	0.035
25.0	380	80	30	0.026	190	47	15	0.031	135	30	10	0.028
32.0	300	125	30	0.042	155	64	15	0.041	100	40	10	0.040
40.0	250	130	30	0.043	125	64	15	0.043	90	45	10	0.042
50.0	190	90	30	0.030	100	42	15	0.026	75	36	10	0.030
63.0	150	75	30	0.031	80	40	15	0.031	60	32	10	0.033

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM & ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
16.0	160	20	10	0.021	1850	336	95	0.030
20.0	125	15	10	0.020	1350	324	85	0.040
25.0	100	16	10	0.020	1150	270	90	0.029
32.0	80	16	10	0.020	920	375	90	0.041
40.0	60	16	10	0.022	765	387	95	0.042
50.0	50	16	10	0.020	550	265	85	0.030
63.0	40	15	10	0.023	450	240	90	0.033

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

HSS-E, DOVETAIL CUTTERS TYPE “B”, “D”, “F”
HSS-E, WINKELFRÄSER FORM “B”, “D”, “F”

ML032, ML132, ML042, ML142, ML232, ML242 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
16.0	615	110	30	0.030	305	57	15	0.031	215	40	10	0.031
20.0	500	110	30	0.037	255	55	15	0.036	180	38	10	0.035
25.0	380	80	30	0.026	190	47	15	0.031	135	30	10	0.028
32.0	300	125	30	0.042	155	64	15	0.041	100	40	10	0.040

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM & ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
16.0	160	20	10	0.021	1850	336	95	0.030
20.0	125	15	10	0.020	1350	324	85	0.040
25.0	100	16	10	0.020	1150	270	90	0.029
32.0	80	16	10	0.020	920	375	90	0.041

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

HSS-E, WOODRUFF KEYSEAT CUTTERS TYPE “B”, “D”, “F”
HSS-E, SCHLITZFRÄSER FORM “B”, “D”, “F”

ML062, ML162, ML262 SERIES

MATERIAL	P				P				P			
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
10.5	900	72	30	0.010	600	48	20	0.010	480	38	15	0.010
13.5	700	56	30	0.010	470	38	20	0.010	370	30	15	0.010
16.5	570	114	30	0.025	380	76	20	0.025	300	60	15	0.025
19.5	480	134	30	0.035	320	90	20	0.035	260	73	15	0.035
22.5	420	168	30	0.040	280	112	20	0.040	220	88	15	0.040
28.5	330	165	30	0.050	220	110	20	0.050	180	90	15	0.050
32.5	290	209	30	0.060	190	137	20	0.060	155	112	15	0.060
45.5	210	206	30	0.070	130	127	20	0.070	110	108	15	0.070

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM & ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
10.5	300	24	10	0.010	3000	240	100	0.010
13.5	230	18	10	0.010	2300	184	100	0.010
16.5	190	38	10	0.025	1900	380	100	0.025
19.5	160	45	10	0.035	1600	448	100	0.035
22.5	140	56	10	0.040	1400	560	100	0.040
28.5	110	55	10	0.050	1100	550	100	0.050
32.5	90	65	10	0.060	900	648	90	0.060
45.5	70	69	10	0.070	700	686	100	0.070

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

HSS-E, T-SLOT CUTTERS TYPE “AA”, “AB”, “AD”
HSS-E, SCHAFTERFRÄSER FÜR T-NUTEN FORM “AA”, “AB”, “AD”

ML072, ML172, ML272 SERIES

MATERIAL	P				P				P				N			
	CARBON STEELS ALLOY STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM & ALUMINUM ALLOYS			
HARDNESS					~ HRc20				HRc20 ~ HRc30							
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
12.5	770	38	30	0.008	380	16	15	0.007	270	8	10	0.005	2350	110	90	0.008
16.0	600	45	30	0.013	300	19	15	0.011	210	9	10	0.007	1830	140	90	0.013
18.0	550	47	30	0.014	270	20	15	0.012	195	12	10	0.010	1680	150	95	0.015
19.0	500	50	30	0.017	250	20	15	0.013	180	15	10	0.014	1540	160	90	0.017
21.0	470	52	30	0.018	230	22	15	0.016	160	16	10	0.017	1430	165	95	0.019
22.0	440	55	30	0.021	220	25	15	0.019	150	17	10	0.019	1330	170	90	0.021
25.0	390	65	30	0.028	190	30	15	0.026	135	18	10	0.022	1170	180	90	0.026
28.0	345	75	30	0.036	170	38	15	0.037	120	20	10	0.028	1040	210	90	0.034
32.0	310	90	30	0.036	150	42	15	0.035	100	20	10	0.025	910	250	90	0.034
50.0	270	80	40	0.037	135	40	20	0.037	90	20	15	0.028	800	230	125	0.036
63.0	240	70	50	0.036	120	38	25	0.040	85	20	15	0.029	730	210	145	0.036

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

MILLING CUTTERS

RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

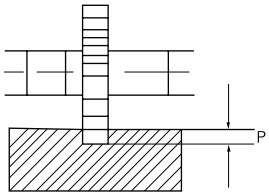
HSS-E, SIDE AND FACE MILLING CUTTERS WITH STRAIGHT TEETH
HSS-E, SCHEIBENFRÄSER mit GERADEVERZAHNT

ML092 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
50.0	160	130	25	0.045	115	82	20	0.040	95	58	15	0.034
63.0	125	160	25	0.058	90	72	20	0.036	75	51	15	0.031
80.0	100	145	25	0.060	70	69	20	0.041	60	48	15	0.033
100.0	80	130	25	0.063	60	60	20	0.038	47	41	15	0.034
125.0	63	100	25	0.066	45	54	20	0.050	38	38	15	0.042

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM & ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
50.0	76	42	10	0.031	630	200	100	0.018
63.0	60	38	10	0.029	500	250	100	0.023
80.0	47	34	10	0.030	400	250	100	0.026
100.0	38	30	10	0.030	320	200	100	0.024
125.0	30	26	10	0.036	250	200	100	0.033

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



MILLING DEPTH P = WIDTH OF FACES

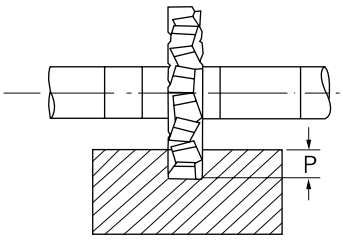
HSS-E, SIDE AND FACE MILLING CUTTERS WITH STAGGERED TEETH
HSS-E, SCHEIBENFRÄSER mit KREUZVERZAHNT

ML102 SERIES

MATERIAL	P											
	CARBON STEELS ALLOY STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH	~ 500N/mm²				500 ~ 800N/mm²				800 ~ 1000N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
50.0	160	130	25	0.058	115	85	20	0.053	95	58	15	0.044
63.0	125	160	25	0.080	90	75	20	0.052	75	51	15	0.043
80.0	100	145	25	0.081	70	69	20	0.055	60	48	15	0.044
100.0	80	130	25	0.081	60	60	20	0.050	47	41	15	0.044
125.0	63	100	25	0.072	45	54	20	0.055	38	38	15	0.045
160.0	50	105	25	0.081	37	48	20	0.050	30	34	15	0.044
200.0	40	95	25	0.079	31	45	20	0.048	25	31	15	0.041

MATERIAL	P				N			
	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM & ALUMINUM ALLOYS			
HARDNESS	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
50.0	76	42	10	0.039	630	200	100	0.023
63.0	60	38	10	0.040	500	250	100	0.031
80.0	47	34	10	0.040	400	250	100	0.035
100.0	38	30	10	0.039	320	200	100	0.031
125.0	30	26	10	0.039	250	200	100	0.036
160.0	23	24	10	0.040	200	150	100	0.029
200.0	19	22	10	0.039	160	150	100	0.031

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



MILLING DEPTH P = WIDTH OF FACES

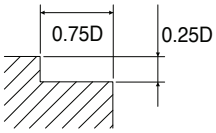
MILLING CUTTERS

RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

HSSCo8, MULTI FLUTE SHELL END MILL
HSSCo8, MULTI SCHNEIDEN WALZENSTIRNFRÄSER

E2675 SERIES

MATERIAL	P															
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS	~ HRc20				HRc20 ~ HRc28				HRc28 ~ HRc35				HRc35 ~ HRc40			
STRENGTH	~ 800N/mm²				800 ~ 900N/mm²				900 ~ 1100N/mm²				1100 ~ 1300N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
40.0	240	135	30	0.070	200	120	25	0.075	140	80	20	0.071	80	50	10	0.078
50.0	200	125	30	0.078	170	105	25	0.077	120	75	20	0.078	70	45	10	0.080
63.0	150	110	30	0.092	130	95	25	0.091	90	65	20	0.090	50	40	10	0.100
80.0	120	120	30	0.100	100	100	25	0.100	80	75	20	0.094	40	40	10	0.100
100.0	100	115	30	0.115	80	95	25	0.119	60	70	20	0.117	30	35	10	0.117
125.0	80	115	30	0.120	70	95	25	0.113	50	65	20	0.108	20	35	10	0.146
160.0	60	110	30	0.131	60	100	30	0.119	40	65	20	0.116	20	35	10	0.125

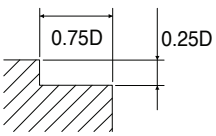


RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

HSSCo8, MULTI FLUTE SHELL END MILL for ALUMINUM
HSSCo8, MULTI SCHNEIDEN WALZENSTIRNFRÄSER für ALUMINIUM

E2676 SERIES

MATERIAL	N			
	ALUMINUM NON-FERROUS METALS			
DIAMETER	RPM	FEED	Vc	fz
30.0	1050	210	100	0.050
40.0	840	200	105	0.060
50.0	600	250	95	0.069
60.0	500	300	95	0.100
63.0	480	330	95	0.115
75.0	450	350	105	0.130
80.0	390	300	100	0.128
100.0	320	290	100	0.151

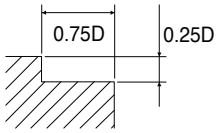


RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

HSSCo8, MULTI FLUTE ROUGHING SHELL END MILL
HSSCo8, MULTI SCHNEIDEN WALZENSTIRN-SCHRUPPFRÄSER

E2677, E2678 SERIES

MATERIAL	P															
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS	~ HRc20				HRc20 ~ HRc28				HRc28 ~ HRc35				HRc35 ~ HRc40			
STRENGTH	~ 800N/mm²				800 ~ 900N/mm²				900 ~ 1100N/mm²				1100 ~ 1300N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
40.0	240	100	30	0.069	200	85	25	0.071	140	60	20	0.071	80	35	10	0.073
50.0	200	125	30	0.078	170	105	25	0.077	120	75	20	0.078	70	45	10	0.080
63.0	150	110	30	0.092	130	95	25	0.091	90	65	20	0.090	50	40	10	0.100
80.0	120	120	30	0.100	100	100	25	0.100	80	75	20	0.094	40	40	10	0.100
100.0	100	115	30	0.115	80	95	25	0.119	60	70	20	0.117	30	35	10	0.117
125.0	80	115	30	0.120	70	95	25	0.113	50	65	20	0.108	20	35	10	0.146
160.0	60	110	30	0.153	60	100	30	0.139	40	65	20	0.135	20	35	10	0.146

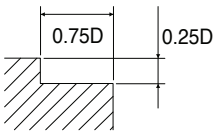


RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/tooth

HSSCo8, MULTI FLUTE ROUGHING & FINISHING SHELL END MILL
HSSCo8, MULTI SCHNEIDEN WALZENSTIRN-SCHRUPPSCHLICHTFRÄSER

E2679 SERIES

MATERIAL	P															
	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS	~ HRc20				HRc20 ~ HRc28				HRc28 ~ HRc35				HRc35 ~ HRc40			
STRENGTH	~ 800N/mm²				800 ~ 900N/mm²				900 ~ 1100N/mm²				1100 ~ 1300N/mm²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
40.0	240	100	30	0.069	200	85	25	0.071	140	60	20	0.071	80	35	10	0.073
50.0	200	125	30	0.078	170	105	25	0.077	120	75	20	0.078	70	45	10	0.080
63.0	150	110	30	0.092	130	95	25	0.091	90	65	20	0.090	50	40	10	0.100
80.0	120	120	30	0.100	100	100	25	0.100	80	75	20	0.094	40	40	10	0.100
100.0	100	115	30	0.115	80	95	25	0.119	60	70	20	0.117	30	35	10	0.117
125.0	80	115	30	0.120	70	95	25	0.113	50	65	20	0.108	20	35	10	0.146
160.0	60	110	30	0.153	60	100	30	0.139	40	65	20	0.135	20	35	10	0.146



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

MILLING CUTTERS

RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

HSSCo8, 4 FLUTE CORNER ROUNDING CUTTERS
HSSCo8, 4 SCHNEIDEN VIERTELKREISFRÄSER

E2498 SERIES

MATERIAL		P							
		CARBON STEELS ALLOY STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS						~ HRc20			
STRENGTH		~ 500N/mm²				500 ~ 800N/mm²			
OUTSIDE DIAMETER	CORNER RADIUS	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
8.0	R1	800	55	20	0.017	600	35	15	0.015
9.0	R1.5	630	55	20	0.022	470	30	15	0.016
10.0	R2	630	50	20	0.020	470	30	15	0.016
11.0	R2.5	530	45	20	0.021	390	30	15	0.019
12.0	R3	530	45	20	0.021	390	30	15	0.019
14.0	R4	450	45	20	0.025	330	30	15	0.023
16.0	R5	350	40	20	0.029	260	30	15	0.029
20.0	R6	310	40	20	0.032	230	30	15	0.033
24.0	R8	260	40	20	0.038	190	30	15	0.039
28.0	R10	210	35	20	0.042	155	25	15	0.040
34.0	R12	180	35	20	0.049	130	25	15	0.048
48.0	R16	130	30	20	0.058	95	20	15	0.053

MATERIAL		P				N			
		CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM & ALUMINUM ALLOYS			
HARDNESS		HRc20 ~ HRc35							
STRENGTH		800 ~ 1100N/mm²							
OUTSIDE DIAMETER	CORNER RADIUS	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
8.0	R1	480	35	10	0.018	3500	245	90	0.018
9.0	R1.5	380	35	10	0.023	2800	230	80	0.021
10.0	R2	380	30	10	0.020	2800	220	90	0.020
11.0	R2.5	315	30	10	0.024	2400	220	85	0.023
12.0	R3	315	30	10	0.024	2400	210	90	0.022
14.0	R4	270	25	10	0.023	2000	200	90	0.025
16.0	R5	210	25	10	0.030	1600	200	80	0.031
20.0	R6	185	25	10	0.034	1400	190	90	0.034
24.0	R8	155	25	10	0.040	1200	180	90	0.038
28.0	R10	125	25	10	0.050	950	170	85	0.045
34.0	R12	105	20	10	0.048	800	160	85	0.050
48.0	R16	75	15	10	0.050	600	140	90	0.058

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