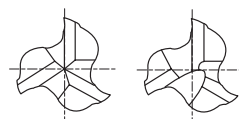


CARBIDE, 3 FLUTE SHORT LENGTH THROW AWAY
VOLLHARTMETALL, 3 SCHNEIDEN KURZ EINWEG



under Ø2mm from Ø2mm



P.1115, 1116, 1117, 1118

Unit : mm

EDP No.	ITEM No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN / FLAT	PLAIN / FLAT	h10	h6		
E5553005	T3FSC-005KS	0.5	● 3	1.5	38
E5553006	T3FSC-006KS	0.6	● 3	1.5	38
E5553008	T3FSC-008KS	0.8	● 3	2	38
E5553010	T3FSC-010KS	1.0	● 3	2	38
E5553012	T3FSC-012KS	1.2	● 3	2	38
E5553015	T3FSC-015KS	1.5	● 3	2	38
E5553018	T3FSC-018KS	1.8	● 3	2	38
E5410020	T3FSC-020AF	2.0	6	4	35
E5410025	T3FSC-025AF	2.5	6	5	36
E5410030	T3FSC-030AF	3.0	6	5	36
E5410035	T3FSC-035AF	3.5	6	6	37
E5410040	T3FSC-040AF	4.0	6	7	38
E5410045	T3FSC-045AF	4.5	6	8	38
E5410050	T3FSC-050AF	5.0	6	8	39
E5410055	T3FSC-055AF	5.5	6	8	39
E5410957	T3FSC-0575AF	5.75	6	8	39
E5410060	T3FSC-060AF	6.0	6	8	39
E5410967	T3FSC-0675BF	6.75	8	10	42
E5410070	T3FSC-070BF	7.0	8	10	42
E5410977	T3FSC-0775BF	7.75	8	10	42
E5410080	T3FSC-080BF	8.0	8	11	43

● with plain shank

◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel	Acrylic	CFRP
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	◎				○		○	○	○				

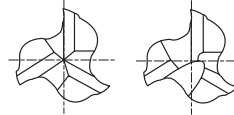
- CARBIDE
- HSS
- CBN END MILLS
- i-Xmill END MILLS
- i-HS mill END MILLS
- X5070 END MILLS
- 4G MILL END MILLS
- X-SPEED ROUGHER END MILLS
- X-POWER END MILLS
- JET-POWER END MILLS
- TN MILL END MILLS
- V7 Mill END MILLS
- ALU-POWER END MILLS
- CRX S END MILLS
- D-POWER GRAPHITE END MILLS
- D-POWER CFRP END MILLS
- ROUTERS
- K-2 CARBIDE END MILLS
- GENERAL CARBIDE END MILLS
- TANK-POWER END MILLS
- GENERAL HSS END MILLS
- MILLING CUTTERS
- TECHNICAL DATA



E5410 SERIES

FLAT SHANK
SEITLICHE MITNAHMEFLÄCHEN

CARBIDE, 3 FLUTE SHORT LENGTH THROW AWAY
VOLLHARTMETALL, 3 SCHNEIDEN KURZ EINWEG



under Ø2mm from Ø2mm



P.1115, 1116, 1117, 1118

Unit : mm

EDP No.	ITEM No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
FLAT	FLAT	h10	h6		
E5410087	T3FSC-087TF	8.7	10	11	48
E5410090	T3FSC-090TF	9.0	10	11	48
E5410097	T3FSC-097TF	9.7	10	11	48
E5410100	T3FSC-100TF	10.0	10	13	50
E5410120	T3FSC-120DF	12.0	12	15	55
E5410140	T3FSC-140ZF	14.0	14	15	58
E5410160	T3FSC-160EF	16.0	16	18	62
E5410180	T3FSC-180ZF	18.0	18	20	70
E5410200	T3FSC-200FF	20.0	20	22	75

► TiN, TiCN-COATING & TiAlN-COATING 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
h10	0 - 40	0 - 48	0 - 58	0 - 70	0 - 84
h6	0 - 6	0 - 8	0 - 9	0 - 11	0 - 13

SET ORDERING No.: E5SET410

- * 12PCS. SET
- 2PCS. OF EACH SIZE 2, 3, 4, 5, 6mm (T3FSC)
- 1PC. OF EACH SIZE 8, 10mm (T3FSC)
- * 1 Tooth Over Center

◎ : Excellent ○ : Good

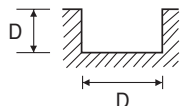
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel	Acrylic	CFRP
~HB225	HB225~325	HRC30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	◎				○		○	○	○				

CARBIDE, 3 FLUTE - SLOTTING
VOLLHARTMETALL, 3 SCHNEIDEN - NUTENFRÄSEN

E5553, E5410, E5425, E5417, E5439, E5433, E5528 SERIES

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				STAINLESS STEELS TITANIUM ALLOYS			
	~ HRc 20				HRc 20 ~ HRc 30				HRc 30 ~ HRc 40							
STRENGTH	500 ~ 800N/mm ²				800 ~ 1000N/mm ²				1000 ~ 1300N/mm ²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	5500	70	35	0.004	4800	60	30	0.004	4000	50	25	0.004	8000	55	50	0.002
3.0	3700	80	35	0.007	3200	75	30	0.008	2600	55	25	0.007	5300	55	50	0.003
4.0	2800	80	35	0.010	2400	75	30	0.010	2000	55	25	0.009	4000	55	50	0.005
5.0	2200	80	35	0.012	1900	70	30	0.012	1600	55	25	0.011	3200	55	50	0.006
6.0	1800	80	35	0.015	1600	70	30	0.015	1300	55	25	0.014	2600	60	50	0.008
8.0	1400	80	35	0.019	1200	70	30	0.019	1000	55	25	0.018	2000	60	50	0.010
10.0	1100	80	35	0.024	950	70	30	0.025	800	55	25	0.023	1600	60	50	0.013
12.0	900	80	35	0.030	800	70	30	0.029	660	55	25	0.028	1300	60	50	0.015
14.0	800	80	35	0.033	700	70	30	0.033	570	55	25	0.032	1100	60	50	0.018
16.0	700	90	35	0.043	600	75	30	0.042	500	65	25	0.043	1000	70	50	0.023
20.0	550	90	35	0.055	480	75	30	0.052	400	65	25	0.054	800	70	50	0.029

MATERIAL	CAST IRON				ALUMINUM ALLOYS				COPPER. BRASS NON-FERROUS METALS			
	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	6500	140	40	0.007	16000	290	100	0.006	12000	220	75	0.006
3.0	4200	140	40	0.011	11000	300	105	0.009	8000	220	75	0.009
4.0	3200	130	40	0.014	8000	290	100	0.012	6000	220	75	0.012
5.0	2500	135	40	0.018	6400	290	100	0.015	4800	220	75	0.015
6.0	2100	160	40	0.025	5300	305	100	0.019	4000	240	75	0.020
8.0	1600	170	40	0.035	4000	310	100	0.026	3000	230	75	0.026
10.0	1300	180	40	0.046	3200	305	100	0.032	2400	230	75	0.032
12.0	1000	190	40	0.063	2600	300	100	0.038	2000	230	75	0.038
14.0	900	200	40	0.074	2300	300	100	0.043	1700	230	75	0.045
16.0	800	200	40	0.083	2000	300	100	0.050	1500	230	75	0.051
20.0	640	215	40	0.112	1600	300	100	0.063	1200	230	75	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/t



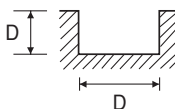
RECOMMENDED CUTTING CONDITIONS
EMPHOHLENE SCHNEIDKONDITIONEN

CARBIDE, 3 FLUTE TiAlN-COATED - SLOTTING
VOLLHARTMETALL, 3 SCHNEIDEN TiAlN-BESCHICHTET - NUTENFRÄSEN

E5553, E5410, E5425, E5417, E5439, E5433, E5528 SERIES

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				STAINLESS STEELS TITANIUM ALLOYS			
	~ HRc 20				HRc 20 ~ HRc 30				HRc 30 ~ HRc 40							
STRENGTH	500 ~ 800N/mm ²				800 ~ 1000N/mm ²				1000 ~ 1300N/mm ²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	7700	100	50	0.004	6720	85	40	0.004	5600	70	35	0.004	11200	75	70	0.002
3.0	5180	110	50	0.007	4480	105	40	0.008	3640	75	35	0.007	7420	75	70	0.003
4.0	3920	110	50	0.009	3360	105	40	0.010	2800	75	35	0.009	5600	75	70	0.004
5.0	3080	110	50	0.012	2660	100	40	0.013	2240	75	35	0.011	4480	75	70	0.006
6.0	2520	110	50	0.015	2240	100	40	0.015	1820	75	35	0.014	3640	85	70	0.008
8.0	1960	110	50	0.019	1680	100	40	0.020	1400	75	35	0.018	2800	85	70	0.010
10.0	1540	110	50	0.024	1330	100	40	0.025	1120	75	35	0.022	2240	85	70	0.013
12.0	1260	110	50	0.029	1120	100	40	0.030	920	75	35	0.027	1820	85	70	0.016
14.0	1120	110	50	0.033	980	100	45	0.034	800	75	35	0.031	1540	85	70	0.018
16.0	980	125	50	0.043	840	105	40	0.042	700	90	35	0.043	1400	100	70	0.024
20.0	770	125	50	0.054	670	105	40	0.052	560	90	35	0.054	1120	100	70	0.030

MATERIAL	CAST IRON				ALUMINUM ALLOYS				COPPER. BRASS NON-FERROUS METALS			
STRENGTH												
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	9100	195	55	0.007	22400	405	140	0.006	16800	310	105	0.006
3.0	5880	195	55	0.011	15400	420	145	0.009	11200	310	105	0.009
4.0	4480	180	55	0.013	11200	405	140	0.012	8400	310	105	0.012
5.0	3500	190	55	0.018	8960	405	140	0.015	6720	310	105	0.015
6.0	2940	225	55	0.026	7420	425	140	0.019	5600	335	105	0.020
8.0	2240	240	55	0.036	5600	435	140	0.026	4200	320	105	0.025
10.0	1820	250	55	0.046	4480	425	140	0.032	3360	320	105	0.032
12.0	1400	265	55	0.063	3640	420	135	0.038	2800	320	105	0.038
14.0	1260	280	55	0.074	3220	420	140	0.043	2380	320	105	0.045
16.0	1120	280	55	0.083	2800	420	140	0.050	2100	320	105	0.051
20.0	900	300	55	0.111	2240	420	140	0.063	1680	320	105	0.063



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

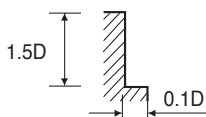
RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/t

CARBIDE, 3 FLUTE - SIDE CUTTING
VOLLHARTMETALL, 3 SCHNEIDEN - SEITENFRÄSEN

E5553, E5410, E5425, E5417, E5439, E5433, E5528 SERIES

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				STAINLESS STEELS TITANIUM ALLOYS			
	~ HRc 20				HRc 20 ~ HRc 30				HRc 30 ~ HRc 40							
STRENGTH	500 ~ 800N/mm ²				800 ~ 1000N/mm ²				1000 ~ 1300N/mm ²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	5500	180	35	0.011	4800	160	30	0.011	4000	120	25	0.010	8000	140	50	0.006
3.0	3700	200	35	0.018	3200	170	30	0.018	2600	130	25	0.017	5300	140	50	0.009
4.0	2800	200	35	0.024	2400	180	30	0.025	2000	130	25	0.022	4000	140	50	0.012
5.0	2200	200	35	0.030	1900	180	30	0.032	1600	130	25	0.027	3200	140	50	0.015
6.0	1800	200	35	0.037	1600	180	30	0.038	1300	130	25	0.033	2600	150	50	0.019
8.0	1400	200	35	0.048	1200	180	30	0.050	1000	130	25	0.043	2000	150	50	0.025
10.0	1100	200	35	0.061	950	180	30	0.063	800	130	25	0.054	1600	150	50	0.031
12.0	900	200	35	0.074	800	180	30	0.075	660	130	25	0.066	1300	150	50	0.038
14.0	800	200	35	0.083	700	180	30	0.086	570	130	25	0.076	1100	150	50	0.045
16.0	700	220	35	0.105	600	190	30	0.106	500	160	25	0.107	1000	170	50	0.057
20.0	550	220	35	0.133	480	190	30	0.132	400	160	25	0.133	800	180	50	0.075

MATERIAL	CAST IRON				ALUMINUM ALLOYS				COPPER. BRASS NON-FERROUS METALS			
	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	6500	330	40	0.017	16000	720	100	0.015	12000	540	75	0.015
3.0	4200	330	40	0.026	11000	690	105	0.021	8000	530	75	0.022
4.0	3200	340	40	0.035	8000	720	100	0.030	6000	540	75	0.030
5.0	2500	340	40	0.045	6400	710	100	0.037	4800	530	75	0.037
6.0	2100	400	40	0.063	5300	760	100	0.048	4000	580	75	0.048
8.0	1600	430	40	0.090	4000	760	100	0.063	3000	580	75	0.064
10.0	1300	450	40	0.115	3200	760	100	0.079	2400	580	75	0.081
12.0	1000	470	40	0.157	2600	760	100	0.097	2000	580	75	0.097
14.0	900	490	40	0.181	2300	760	100	0.110	1700	580	75	0.114
16.0	800	510	40	0.213	2000	760	100	0.127	1500	580	75	0.129
20.0	640	540	40	0.281	1600	760	100	0.158	1200	580	75	0.161



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

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



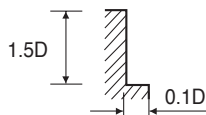
RECOMMENDED CUTTING CONDITIONS
EMPHOHLENE SCHNEIDKONDITIONEN

CARBIDE, 3 FLUTE TiAlN-COATED - SIDE CUTTING
VOLLHARTMETALL, 3 SCHNEIDEN TiAlN-BESCHICHTET - SEITENFRÄSEN

E5553, E5410, E5425, E5417, E5439, E5433, E5528 SERIES

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				STAINLESS STEELS TITANIUM ALLOYS			
	~ HRc 20				HRc 20 ~ HRc 30				HRc 30 ~ HRc 40							
STRENGTH	500 ~ 800N/mm ²				800 ~ 1000N/mm ²				1000 ~ 1300N/mm ²							
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	7700	250	50	0.016	6720	225	40	0.011	5600	170	35	0.010	11200	195	70	0.006
3.0	5180	280	50	0.027	4480	240	40	0.018	3640	180	35	0.016	7420	195	70	0.009
4.0	3920	280	50	0.036	3360	250	40	0.025	2800	180	35	0.021	5600	195	70	0.012
5.0	3080	280	50	0.045	2660	250	40	0.031	2240	180	35	0.027	4480	195	70	0.015
6.0	2520	280	50	0.056	2240	250	40	0.037	1820	180	35	0.033	3640	210	70	0.019
8.0	1960	280	50	0.071	1680	250	40	0.050	1400	180	35	0.043	2800	210	70	0.025
10.0	1540	280	50	0.091	1330	250	40	0.063	1120	180	35	0.054	2240	210	70	0.031
12.0	1260	280	50	0.111	1120	250	40	0.074	920	180	35	0.065	1820	210	70	0.038
14.0	1120	280	50	0.125	980	250	45	0.085	800	180	35	0.075	1540	210	70	0.045
16.0	980	310	50	0.158	840	265	40	0.105	700	225	35	0.107	1400	240	70	0.057
20.0	770	310	50	0.201	670	265	40	0.132	560	225	35	0.134	1120	250	70	0.074

MATERIAL	CAST IRON				ALUMINUM ALLOYS				COPPER. BRASS NON-FERROUS METALS			
	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	9100	460	55	0.017	22400	1010	140	0.015	16800	755	105	0.015
3.0	5880	460	55	0.026	15400	965	145	0.021	11200	740	105	0.022
4.0	4480	475	55	0.035	11200	1010	140	0.030	8400	755	105	0.030
5.0	3500	475	55	0.045	8960	995	140	0.037	6720	740	105	0.037
6.0	2940	560	55	0.063	7420	1065	140	0.048	5600	810	105	0.048
8.0	2240	600	55	0.089	5600	1065	140	0.063	4200	810	105	0.064
10.0	1820	630	55	0.115	4480	1065	140	0.079	3360	810	105	0.080
12.0	1400	660	55	0.157	3640	1065	135	0.098	2800	810	105	0.096
14.0	1260	685	55	0.181	3220	1065	140	0.110	2380	810	105	0.113
16.0	1120	715	55	0.213	2800	1065	140	0.127	2100	810	105	0.129
20.0	900	755	55	0.280	2240	1065	140	0.158	1680	810	105	0.161



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

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