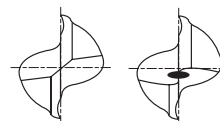


PREMIUM HSS-PM, 2 FLUTE LONG LENGTH
PREMIUM HSS-PM, 2 SCHNEIDEN LANG

- ▶ Designed to machine carbon steels, alloyed steels, stainless steels.
- ▶ 2 Flute design for slotting.
- ▶ Suitable for high speed cutting of difficult - to - cut materials.
- ▶ YG-1's new developed TANK-POWER Coating suitable for high speed cutting.

- ▶ Geeignet zum Fräsen von Stahl, legiertem Stahl und rostfreier Stahl.
- ▶ 2 Schneiden, Geeignet für Nutenfräsen.
- ▶ Geeignet für Hochgeschwindigkeitsfräsen von schwer zu zerspanenden Materialien.
- ▶ Neuentwickelte Beschichtung für Hochgeschwindigkeitsfräsen.



up to Ø3mm over Ø3mm

YPM DIN 844 2 30° DIN 1835B P.1150, 1151

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TANK-POWER COATED	e8	h6		
E9A29010	GAA29010	1.0	6	3	47
E9A29020	GAA29020	2.0	6	7	51
E9A29030	GAA29030	3.0	6	8	52
E9A29040	GAA29040	4.0	6	11	55
E9A29050	GAA29050	5.0	6	13	57
E9A29060	GAA29060	6.0	6	13	57
E9A29070	GAA29070	7.0	10	16	66
E9A29080	GAA29080	8.0	10	19	69
E9A29090	GAA29090	9.0	10	19	69
E9A29100	GAA29100	10.0	10	22	72
E9A29120	GAA29120	12.0	12	26	83
E9A29140	GAA29140	14.0	12	26	83
E9A29160	GAA29160	16.0	16	32	92
E9A29180	GAA29180	18.0	16	32	92
E9A29200	GAA29200	20.0	20	38	104
E9A29220	GAA29220	22.0	20	38	104
E9A29250	GAA29250	25.0	25	45	121

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
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

◎ : Excellent ○ : Good

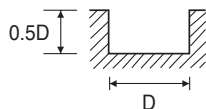
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel	Acrylic	CFRP
~HB225	HB225~325	HRC30~40	HRc40~45	HRc45~55	HRc55~70									
◎	◎	○				○		◎		◎				

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

GA936, GAA29 SERIES

MATERIAL	STRUCTURAL STEELS CARBON STEELS				STRUCTURAL STEELS CARBON STEELS CAST IRONS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRC20				HRC20 ~ HRC30			
STRENGTH	~ 500N/mm ²				500 ~ 800N/mm ²				800 ~ 1000N/mm ²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	7000	115	45	0.008	5900	90	35	0.008	4900	80	30	0.008
3.0	5000	160	45	0.016	4100	135	40	0.016	3350	115	30	0.017
4.0	4300	230	55	0.027	3600	175	45	0.024	3150	160	40	0.025
5.0	3900	255	60	0.033	3250	200	50	0.031	2600	185	40	0.036
6.0	3500	265	65	0.038	2900	210	55	0.036	2300	190	45	0.041
8.0	2600	275	65	0.053	2200	240	55	0.055	1800	200	45	0.056
10.0	2100	300	65	0.071	1800	265	55	0.074	1450	230	45	0.079
12.0	1800	275	70	0.076	1450	240	55	0.083	1150	210	45	0.091
14.0	1600	265	70	0.083	1250	210	55	0.084	1000	195	45	0.098
16.0	1350	265	70	0.098	1150	195	60	0.085	890	180	45	0.101
18.0	1150	240	65	0.104	950	195	55	0.103	790	160	45	0.101
20.0	950	220	60	0.116	780	165	50	0.106	700	150	45	0.107
22.0	840	185	60	0.110	710	150	50	0.106	600	125	40	0.104
25.0	750	155	60	0.103	630	140	50	0.111	490	115	40	0.117

MATERIAL	PREHARDENED STEELS ALLOY STEELS TOOL STEELS				ALLOY STEELS TOOL STEELS AUSTENITIC STAINLESS STEELS			
HARDNESS	HRC30 ~ HRC35				HRC35 ~ HRC40			
STRENGTH	1000 ~ 1100N/mm ²				1100 ~ 1300N/mm ²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	3150	65	20	0.010	2000	40	15	0.010
3.0	2300	80	20	0.017	1800	62	15	0.017
4.0	2000	92	25	0.023	1600	75	20	0.023
5.0	1700	102	25	0.030	1350	75	20	0.028
6.0	1450	110	25	0.038	1150	85	20	0.037
8.0	1150	115	30	0.050	890	85	20	0.048
10.0	900	125	30	0.069	700	102	20	0.073
12.0	740	115	30	0.078	580	85	20	0.073
14.0	630	110	30	0.087	500	80	20	0.080
16.0	560	102	30	0.091	440	80	20	0.091
18.0	500	100	30	0.100	400	75	25	0.094
20.0	440	92	30	0.105	360	70	25	0.097
22.0	400	80	30	0.100	320	55	20	0.086
25.0	360	75	30	0.104	250	52	20	0.104



* The FEED, in long & long reach types, should be reduced by around 50%

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



TANK-POWER END MILLS

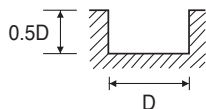
RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN

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

E9936, E9A29 SERIES

MATERIAL	STRUCTURAL STEELS CARBON STEELS				STRUCTURAL STEELS CARBON STEELS CAST IRONS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRC20				HRC20 ~ HRC30			
STRENGTH	~ 500N/mm ²				500 ~ 800N/mm ²				800 ~ 1000N/mm ²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	4800	70	30	0.007	4000	55	25	0.007	3300	50	20	0.008
3.0	3300	100	30	0.015	2800	85	25	0.015	2200	75	20	0.017
4.0	2900	140	35	0.024	2400	110	30	0.023	2100	100	25	0.024
5.0	2600	160	40	0.031	2200	125	35	0.028	1800	115	30	0.032
6.0	2300	160	45	0.035	2000	135	40	0.034	1600	120	30	0.038
8.0	1800	170	45	0.047	1500	150	40	0.050	1200	125	30	0.052
10.0	1400	180	45	0.064	1200	165	40	0.069	1000	140	30	0.070
12.0	1200	170	45	0.071	1000	150	40	0.075	800	130	30	0.081
14.0	1100	160	50	0.073	850	140	35	0.082	680	120	30	0.088
16.0	900	160	45	0.089	750	135	40	0.090	600	110	30	0.092
18.0	800	150	45	0.094	640	120	35	0.094	530	100	30	0.094
20.0	640	130	40	0.102	540	100	35	0.093	480	95	30	0.099
22.0	570	110	40	0.096	480	90	35	0.094	400	75	30	0.094
25.0	510	95	40	0.093	430	85	35	0.099	340	70	25	0.103

MATERIAL	PREHARDENED STEELS ALLOY STEELS TOOL STEELS				ALLOY STEELS TOOL STEELS AUSTENITIC STAINLESS STEELS			
HARDNESS	HRC30 ~ HRC35				HRC35 ~ HRC40			
STRENGTH	1000 ~ 1100N/mm ²				1100 ~ 1300N/mm ²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	2100	40	15	0.010	1300	25	10	0.010
3.0	1600	50	15	0.016	1200	40	10	0.017
4.0	1300	60	15	0.023	1050	45	15	0.021
5.0	1100	65	15	0.030	900	45	15	0.025
6.0	1000	65	20	0.033	750	55	15	0.037
8.0	750	70	20	0.047	600	55	15	0.046
10.0	600	80	20	0.067	480	65	15	0.068
12.0	500	70	20	0.070	400	55	15	0.069
14.0	430	65	20	0.076	340	50	15	0.074
16.0	380	65	20	0.086	300	50	15	0.083
18.0	340	55	20	0.081	270	45	15	0.083
20.0	300	55	20	0.092	240	40	15	0.083
22.0	270	50	20	0.093	210	35	15	0.083
25.0	240	45	20	0.094	175	30	15	0.086



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