

FLAT SHANK SEITLICHE MITNAHMEFLÄCHEN

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**HSSCo8, 2 FLUTE SHORT LENGTH BALL NOSE**  
**HSSCo8, 2 SCHNEIDEN KURZ STIRNRADIUS**



P.1244, 1245

Unit : mm

EDP No.	ITEM No.	EDP No.	ITEM No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	UNCOATED	TiAIN	TiAIN	R (±0.02)	e8	h6		
E2535020	C2GRB-020AF	EQ535020	R2GRB-020AF	R1.0	2.0	6	4	48
E2535025	C2GRB-025AF	EQ535025	R2GRB-025AF	R1.25	2.5	6	5	49
E2535030	C2GRB-030AF	EQ535030	R2GRB-030AF	R1.5	3.0	6	5	49
E2535035	C2GRB-035AF	EQ535035	R2GRB-035AF	R1.75	3.5	6	6	50
E2535040	C2GRB-040AF	EQ535040	R2GRB-040AF	R2.0	4.0	6	7	51
E2535045	C2GRB-045AF	EQ535045	R2GRB-045AF	R2.25	4.5	6	7	51
E2535050	C2GRB-050AF	EQ535050	R2GRB-050AF	R2.5	5.0	6	8	52
E2535055	C2GRB-055AF	EQ535055	R2GRB-055AF	R2.75	5.5	6	8	52
E2535060	C2GRB-060AF	EQ535060	R2GRB-060AF	R3.0	6.0	6	8	52
E2535070	C2GRB-070TF	EQ535070	R2GRB-070TF	R3.5	7.0	10	10	60
E2535080	C2GRB-080TF	EQ535080	R2GRB-080TF	R4.0	8.0	10	11	61
E2535090	C2GRB-090TF	EQ535090	R2GRB-090TF	R4.5	9.0	10	11	61
E2535100	C2GRB-100TF	EQ535100	R2GRB-100TF	R5.0	10.0	10	13	63
E2535110	C2GRB-110DF	EQ535110	R2GRB-110DF	R5.5	11.0	12	13	70
E2535120	C2GRB-120DF	EQ535120	R2GRB-120DF	R6.0	12.0	12	16	73
E2535130	C2GRB-130DF	EQ535130	R2GRB-130DF	R6.5	13.0	12	16	73
E2535140	C2GRB-140DF	EQ535140	R2GRB-140DF	R7.0	14.0	12	16	73
E2535150	C2GRB-150DF	EQ535150	R2GRB-150DF	R7.5	15.0	12	16	73
E2535160	C2GRB-160EF	EQ535160	R2GRB-160EF	R8.0	16.0	16	19	79
E2535170	C2GRB-170EF	EQ535170	R2GRB-170EF	R8.5	17.0	16	19	79
E2535180	C2GRB-180EF	EQ535180	R2GRB-180EF	R9.0	18.0	16	19	79
E2535190	C2GRB-190EF	EQ535190	R2GRB-190EF	R9.5	19.0	16	19	79
E2535923	C2GRB-200EF	EQ535923	R2GRB-200EF	R10.0	20.0	16	22	82
E2535200	C2GRB-200FF	EQ535200	R2GRB-200FF	R10.0	20.0	20	22	88
E2535220	C2GRB-220FF	EQ535220	R2GRB-220FF	R11.0	22.0	20	22	88
E2535922	C2GRB-220GF	EQ535922	R2GRB-220GF	R11.0	22.0	25	22	98
E2535240	C2GRB-240GF	EQ535240	R2GRB-240GF	R12.0	24.0	25	26	102
E2535250	C2GRB-250GF	EQ535250	R2GRB-250GF	R12.5	25.0	25	26	102
E2535260	C2GRB-260GF	EQ535260	R2GRB-260GF	R13.0	26.0	25	26	102
E2535280	C2GRB-280GF	EQ535280	R2GRB-280GF	R14.0	28.0	25	26	102
E2535300	C2GRB-300GF	EQ535300	R2GRB-300GF	R15.0	30.0	25	26	102
E2535320	C2GRB-320HF	EQ535320	R2GRB-320HF	R16.0	32.0	32	32	112

▶ Other shank design on your request.  
 ▶ TiN-COATING & TiCN-COATING are available on your request.

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

◎ : Excellent ○ : Good

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

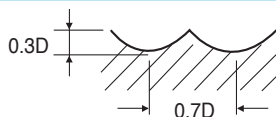


HSSCo8, 2 FLUTE BALL NOSE  
HSSCo8, 2 SCHNEIDEN STIRNRADIUS

**E2535, E2492** SERIES

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
	~ 500N/mm <sup>2</sup>				500 ~ 800N/mm <sup>2</sup>				800 ~ 1000N/mm <sup>2</sup>			
HARDNESS					~ HRc20				HRc20 ~ HRc30			
STRENGTH												
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	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
	HRc30 ~ HRc40							
STRENGTH	1000 ~ 1300N/mm <sup>2</sup>							
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%

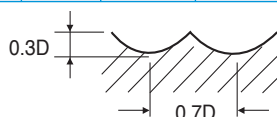
RPM = rev./min.  
FEED = mm/min.  
Vc = m/min.  
fz = mm/t

**HSSCo8, 2 FLUTE BALL NOSE TiAIN COATED**  
**HSSCo8, 2 SCHNEIDEN STIRNRADIUS TiAIN-BESCHICHTET**

**E2535, E2492 SERIES**

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS			
HARDNESS					~ HRC20				HRC20 ~ HRC30			
STRENGTH	~ 500N/mm <sup>2</sup>				500 ~ 800N/mm <sup>2</sup>				800 ~ 1000N/mm <sup>2</sup>			
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	CARBON STEELS ALLOY STEELS TOOL STEELS				ALUMINUM ALUMINUM ALLOYS			
HARDNESS	HRC30 ~ HRC40							
STRENGTH	1000 ~ 1300N/mm <sup>2</sup>							
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/t