



FLAT SHANK

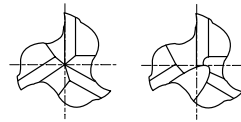
E2553 SERIES

FLAT SHANK

EQ553 SERIES

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

3

30°

FLAT

P.750~757

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAIN	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	5.8	6	8	39
E2553060	EQ553060	6.0	6	8	39
E2553065	EQ553065	6.5	8	10	42
E2553070	EQ553070	7.0	8	10	42
E2553075	EQ553075	7.5	8	10	42

► TiN and TiCN Coatings are available on your request.

► NEXT PAGE

Tolerances according to DIN 7160 & 7161

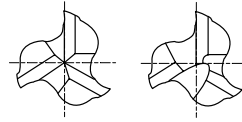
Tolerance range in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73	-50 -89
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16

◎ : Excellent ○ : Good

ISO Material Description	P										M			K								
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel			Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21		
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230		
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎		
ISO Material Description	N										S					H						
	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron		Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	
HRc											15	30	25	38	34			55	60	42	55	
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550	
Recommend	◎	◎	◎	◎	◎																	

HSSCo8, 3 FLUTE SHORT LENGTH THROW AWAY

- HSSCo8, 3 SCHNEIDEN KURZ EINWEGFRÄSER
- Fraise HSSCo8, 3 dents à jeter, courte
- 3 TAGLIANTI, SERIE CORTA NON RIAFFILABILE - HSSCo8



Up to Ø10mm Over Ø10mm

HSS Co8
YG STD
3
30°
FLAT
P.750~757

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAIN	e8	h6		
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

	Tolerance range in μm					
	Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 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

ISO Material Description	P										M				K						
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel				Stainless steel		Grey cast iron		Nodular cast iron		Malleable cast iron
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRC		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25	42	21	
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230	
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	○										
ISO Material Description	N										S						H				
	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys						Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRC											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○																

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

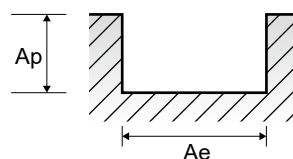
Vc = m/min.
fz = mm/tooth
RPM = rev./min.
FEED = mm/min.

3 FLUTE - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)								
						2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	
P	1	Non-alloy steel	1.0D	0.5D	Vc	35	35	35	35	35	35	35	35	35
					fz	0.002	0.005	0.007	0.012	0.015	0.021	0.027	0.037	
					RPM	5570	3714	2785	2228	1857	1393	1114	928	
	2		1.0D	0.5D	Vc	30	30	30	30	30	30	30	30	30
					fz	0.002	0.004	0.007	0.01	0.014	0.021	0.026	0.033	
					RPM	4775	3183	2387	1910	1592	1194	955	796	
	3-4		1.0D	0.5D	Vc	25	25	25	25	25	25	25	25	25
					fz	0.002	0.003	0.006	0.008	0.011	0.019	0.023	0.029	
					RPM	3979	2653	1989	1592	1326	995	796	663	
	5		1.0D	0.5D	Vc	15	15	15	15	15	15	15	15	15
					fz	0.002	0.003	0.006	0.007	0.01	0.018	0.022	0.029	
RPM		2387			1592	1194	955	796	597	477	398			
6	1.0D	0.5D	Vc	30	30	30	30	30	30	30	30	30		
			fz	0.002	0.004	0.007	0.01	0.014	0.021	0.026	0.033			
			RPM	4775	3183	2387	1910	1592	1194	955	796			
7	1.0D	0.5D	Vc	25	25	25	25	25	25	25	25	25		
			fz	0.002	0.003	0.006	0.008	0.011	0.019	0.023	0.029			
			RPM	3979	2653	1989	1592	1326	995	796	663			
8-9	1.0D	0.5D	Vc	15	15	15	15	15	15	15	15	15		
			fz	0.002	0.003	0.006	0.007	0.01	0.018	0.022	0.029			
			RPM	2387	1592	1194	955	796	597	477	398			
10	1.0D	0.5D	Vc	30	30	30	30	30	30	30	30	30		
			fz	0.002	0.004	0.007	0.01	0.014	0.021	0.026	0.033			
			RPM	4775	3183	2387	1910	1592	1194	955	796			
11.1	1.0D	0.5D	Vc	15	15	15	15	15	15	15	15	15		
			fz	0.002	0.003	0.006	0.007	0.01	0.018	0.022	0.029			
			RPM	2387	1592	1194	955	796	597	477	398			
N	21-22	Aluminum-wrought alloy	1.0D	0.5D	Vc	75	105	100	100	105	100	95	95	
					fz	0.003	0.005	0.008	0.011	0.013	0.022	0.029	0.035	
					RPM	11937	11141	7958	6366	5570	3979	3024	2520	
					FEED	107	167	191	210	217	263	263	265	
N	23-24	Aluminum-cast, alloyed	1.0D	0.5D	Vc	49	68	65	65	68	65	62	62	
					fz	0.003	0.005	0.008	0.011	0.013	0.022	0.029	0.035	
					RPM	7799	7215	5173	4138	3608	2586	1974	1645	
					FEED	70	108	124	137	141	171	172	173	

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

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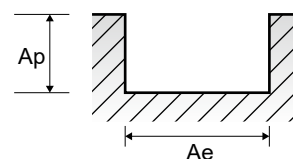


E2572, E2573, E2516, E2553, E2554, E2551, E2552 SERIES

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

3 FLUTE - SLOTTING

VDI 3323	Parameter	Diameter (Ø)											
		14.0	16.0	18.0	20.0	22.0	25.0	28.0	30.0	32.0	35.0	36.0	40.0
1	Vc	35	35	35	35	35	35	35	35	35	35	35	35
	fz	0.042	0.048	0.048	0.054	0.06	0.059	0.058	0.057	0.057	0.057	0.059	0.065
	RPM	796	696	619	557	506	446	398	371	348	318	309	279
2	FEED	100	100	89	90	91	79	69	64	60	54	55	54
	Vc	30	30	30	30	30	30	30	30	30	30	30	30
	fz	0.033	0.042	0.047	0.052	0.052	0.054	0.052	0.054	0.054	0.051	0.053	0.061
3-4	RPM	682	597	531	477	434	382	341	318	298	273	265	239
	FEED	68	75	75	74	68	62	53	52	48	42	42	44
	Vc	25	25	25	25	25	25	25	25	20	25	25	25
5	fz	0.033	0.037	0.042	0.042	0.048	0.043	0.042	0.04	0.045	0.04	0.042	0.046
	RPM	568	497	442	398	362	318	284	265	199	227	221	199
	FEED	56	55	56	50	52	41	36	32	27	27	28	27
6	Vc	15	15	15	15	15	15	15	15	15	15	15	15
	fz	0.033	0.036	0.04	0.045	0.045	0.037	0.042	0.042	0.048	0.038	0.042	0.045
	RPM	341	298	265	239	217	191	171	159	149	136	133	119
7	FEED	34	32	32	32	29	21	21	20	21	16	17	16
	Vc	30	30	30	30	30	30	30	30	30	30	30	30
	fz	0.033	0.042	0.047	0.052	0.052	0.054	0.052	0.054	0.054	0.051	0.053	0.061
8-9	RPM	682	597	531	477	434	382	341	318	298	273	265	239
	FEED	68	75	75	74	68	62	53	52	48	42	42	44
	Vc	25	25	25	25	25	25	25	25	20	25	25	25
10	fz	0.033	0.037	0.042	0.042	0.048	0.043	0.042	0.04	0.045	0.04	0.042	0.046
	RPM	568	497	442	398	362	318	284	265	199	227	221	199
	FEED	56	55	56	50	52	41	36	32	27	27	28	27
11.1	Vc	15	15	15	15	15	15	15	15	15	15	15	15
	fz	0.033	0.036	0.04	0.045	0.045	0.037	0.042	0.042	0.048	0.038	0.042	0.045
	RPM	341	298	265	239	217	191	171	159	149	136	133	119
21-22	FEED	34	32	32	32	29	21	21	20	21	16	17	16
	Vc	95	100	100	100	95	95	95	105	100	105	100	100
	fz	0.036	0.04	0.044	0.046	0.048	0.053	0.055	0.055	0.053	0.053	0.056	0.054
23-24	RPM	2160	1989	1768	1592	1375	1210	1080	1114	995	955	884	796
	FEED	233	239	233	220	198	192	178	184	158	152	149	129
	Vc	62	65	65	65	62	62	62	68	65	68	65	65
23-24	fz	0.036	0.04	0.044	0.046	0.048	0.053	0.055	0.055	0.053	0.053	0.056	0.054
	RPM	1410	1293	1149	1035	897	789	705	722	647	618	575	517
	FEED	152	155	152	143	129	126	116	119	103	98	97	84



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

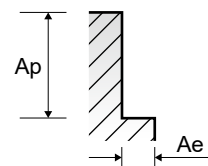
Vc = m/min.
fz = mm/tooth
RPM = rev./min.
FEED = mm/min.

3 FLUTE - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)								
						2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	
P	1	Non-alloy steel	0.1D	1.5D	Vc	35	35	35	35	35	35	35	35	35
					fz	0.004	0.008	0.013	0.02	0.025	0.036	0.045	0.061	
					RPM	5570	3714	2785	2228	1857	1393	1114	928	
	2		0.1D	1.5D	Vc	30	30	30	30	30	30	30	30	30
					fz	0.003	0.006	0.011	0.018	0.023	0.036	0.044	0.056	
					RPM	4775	3183	2387	1910	1592	1194	955	796	
	3-4		0.1D	1.5D	Vc	25	25	25	25	25	25	25	25	25
					fz	0.003	0.006	0.009	0.014	0.018	0.03	0.038	0.048	
					RPM	3979	2653	1989	1592	1326	995	796	663	
	5		0.1D	1.5D	Vc	15	15	15	15	15	15	15	15	15
					fz	0.002	0.004	0.009	0.013	0.019	0.03	0.037	0.046	
RPM		2387			1592	1194	955	796	597	477	398			
6	0.1D	1.5D	Vc	30	30	30	30	30	30	30	30	30		
			fz	0.003	0.006	0.011	0.018	0.023	0.036	0.044	0.056			
			RPM	4775	3183	2387	1910	1592	1194	955	796			
7	0.1D	1.5D	Vc	25	25	25	25	25	25	25	25	25		
			fz	0.003	0.006	0.009	0.014	0.018	0.03	0.038	0.048			
			RPM	3979	2653	1989	1592	1326	995	796	663			
8-9	0.1D	1.5D	Vc	15	15	15	15	15	15	15	15	15		
			fz	0.002	0.004	0.009	0.013	0.019	0.03	0.037	0.046			
			RPM	2387	1592	1194	955	796	597	477	398			
10	0.1D	1.5D	Vc	30	30	30	30	30	30	30	30	30		
			fz	0.003	0.006	0.011	0.018	0.023	0.036	0.044	0.056			
			RPM	4775	3183	2387	1910	1592	1194	955	796			
11.1	0.1D	1.5D	Vc	15	15	15	15	15	15	15	15	15		
			fz	0.002	0.004	0.009	0.013	0.019	0.03	0.037	0.046			
			RPM	2387	1592	1194	955	796	597	477	398			
21-22	0.1D	1.5D	Vc	75	105	100	100	105	100	95	95			
			fz	0.005	0.008	0.014	0.019	0.021	0.037	0.048	0.057			
			RPM	11937	11141	7958	6366	5570	3979	3024	2520			
23-24	0.1D	1.5D	Vc	49	68	65	65	68	65	62	62			
			fz	0.005	0.008	0.014	0.019	0.021	0.037	0.048	0.057			
			RPM	7799	7215	5173	4138	3608	2586	1974	1645			
FEED						14	19	32	37	45	54	53	55	
FEED						36	48	54	67	72	90	91	95	
FEED						14	19	32	37	45	54	53	55	
FEED						43	57	79	103	110	129	126	134	
FEED						43	57	79	103	110	129	126	134	
FEED						43	57	79	103	110	129	126	134	
FEED						36	48	54	67	72	90	91	95	
FEED						14	19	32	37	45	54	53	55	
FEED						14	19	32	37	45	54	53	55	
FEED						14	19	32	37	45	54	53	55	
FEED						179	267	334	363	351	442	435	431	
FEED						117	173	217	236	227	287	284	281	

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

▶ NEXT PAGE

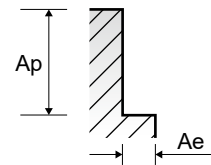


Vc = m/min.
fz = mm/tooth
RPM = rev./min.
FEED = mm/min.

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

3 FLUTE - SIDE CUTTING

VDI 3323	Parameter	Diameter (Ø)											
		14.0	16.0	18.0	20.0	22.0	25.0	28.0	30.0	32.0	35.0	36.0	40.0
1	Vc	35	35	35	35	35	35	35	35	35	35	35	35
	fz	0.069	0.079	0.079	0.089	0.1	0.1	0.1	0.1	0.1	0.099	0.097	0.107
	RPM	796	696	619	557	506	446	398	371	348	318	309	279
2	FEED	165	165	147	149	152	134	119	111	104	95	90	89
	Vc	30	30	30	30	30	30	30	30	30	30	30	30
	fz	0.057	0.071	0.08	0.089	0.089	0.092	0.09	0.086	0.089	0.083	0.087	0.098
3-4	RPM	682	597	531	477	434	382	341	318	298	273	265	239
	FEED	117	127	127	127	116	105	92	82	80	68	69	70
	Vc	25	25	25	25	25	25	25	25	20	25	25	25
5	fz	0.054	0.059	0.067	0.067	0.076	0.07	0.071	0.073	0.076	0.071	0.075	0.083
	RPM	568	497	442	398	362	318	284	265	199	227	221	199
	FEED	92	88	89	80	82	67	61	58	45	48	50	50
6	Vc	15	15	15	15	15	15	15	15	15	15	15	15
	fz	0.052	0.06	0.067	0.076	0.076	0.065	0.063	0.063	0.071	0.064	0.069	0.076
	RPM	341	298	265	239	217	191	171	159	149	136	133	119
7	FEED	53	54	53	54	49	37	32	30	32	26	27	27
	Vc	30	30	30	30	30	30	30	30	30	30	30	30
	fz	0.057	0.071	0.08	0.089	0.089	0.092	0.09	0.086	0.089	0.083	0.087	0.098
8-9	RPM	682	597	531	477	434	382	341	318	298	273	265	239
	FEED	117	127	127	127	116	105	92	82	80	68	69	70
	Vc	25	25	25	25	25	25	25	25	20	25	25	25
10	fz	0.054	0.059	0.067	0.067	0.076	0.07	0.071	0.073	0.076	0.071	0.075	0.083
	RPM	568	497	442	398	362	318	284	265	199	227	221	199
	FEED	92	88	89	80	82	67	61	58	45	48	50	50
11.1	Vc	15	15	15	15	15	15	15	15	15	15	15	15
	fz	0.052	0.06	0.067	0.076	0.076	0.065	0.063	0.063	0.071	0.064	0.069	0.076
	RPM	341	298	265	239	217	191	171	159	149	136	133	119
21-22	FEED	53	54	53	54	49	37	32	30	32	26	27	27
	Vc	95	100	100	100	95	95	95	105	100	105	100	100
	fz	0.061	0.067	0.074	0.075	0.081	0.089	0.091	0.091	0.09	0.091	0.093	0.092
23-24	RPM	2160	1989	1768	1592	1375	1210	1080	1114	995	955	884	796
	FEED	395	400	393	358	334	323	295	304	269	261	247	220
	Vc	62	65	65	65	62	62	62	68	65	68	65	65
23-24	fz	0.061	0.067	0.074	0.075	0.081	0.089	0.091	0.091	0.09	0.091	0.093	0.092
	RPM	1410	1293	1149	1035	897	789	705	722	647	618	575	517
	FEED	258	260	255	233	218	211	192	197	175	169	160	143



SELECTION GUIDE



HSS

SERIES	E2464	E2509	E2572	E2573	E2516	E2553	E2SET553
FLUTE	2	2	3	3	3	3	3
HELIX ANGLE	42°	42°	≈ 30°	≈ 30°	30°	30°	30°
SIZE MIN	D1.0	D2.0	D1.5	D1.0	D2.0	D1.0	D2.0
SIZE MAX	D32.0	D20.0	D32.0	D40.0	D40.0	D20.0	D10.0
PAGE	696	698	699	700	702	704	705

MILLING TOOLS

HSS GENERAL HSS END MILLS

General Purpose, Non-coated, Any Coating Available

◎ : Excellent ○ : Good

Recommended cutting conditions : P 738

Please visit globalyg1.com/mat for material search



SHORT LENGTH	LONG LENGTH	STUB LENGTH	SHORT LENGTH	LONG LENGTH	SHORT LENGTH THROW AWAY	THROW AWAY SET
Uncoated	Uncoated	Uncoated / TiAIN	Uncoated / TiAIN	Uncoated / TiAIN	Uncoated / TiAIN	Uncoated
HSS Co8	HSS Co8	HSS Co8	HSS Co8	HSS Co8	HSS Co8	HSS Co8



ISO	VDI 3323	Material Description	HB	HRc	E2464	E2509	E2572	E2573	E2516	E2553	E2SET553	
P	1	Non-alloy steel	125		○	○	◎	◎	◎	◎	◎	
	2		190	13	○	○	◎	◎	◎	◎	◎	
	3		250	25			◎	◎	◎	◎	◎	
	4		270	28			◎	◎	◎	◎	◎	
	5		300	32			◎	◎	◎	◎	◎	
	6	Low alloy steel	180	10	○	○	◎	◎	◎	◎	◎	
	7		275	29			◎	◎	◎	◎	◎	
	8		300	32			◎	◎	◎	◎	◎	
	9		350	38			○	○	○	○	○	
	10		High alloyed steel, and tool steel	200	15	○	○	◎	◎	◎	◎	◎
	11			325	35			○	○	○	○	○
M	12	Stainless steel	200	15								
	13		240	23								
	14		180	10								
K	15	Grey cast iron	180	10								
	16		260	26								
	17	Nodular cast iron	160	3								
	18		250	25								
19	Malleable cast iron	130										
20		230	21									
N	21	Aluminum-wrought alloy	60		◎	◎	○	○	○	○	○	
	22		100		◎	◎	○	○	○	○	○	
	23	Aluminum-cast, alloyed	75		◎	◎	○	○	○	○	○	
	24		90		◎	◎	○	○	○	○	○	
	25		130		○	○	○	○	○	○	○	
	26		110									
	27	Copper and Copper Alloys (Bronze / Brass)	90									
	28		100									
	29	Non Metallic Materials										
	30											
S	31	Heat Resistant Super Alloys	200	15								
	32		280	30								
	33		250	25								
	34		350	38								
	35		320	34								
	36	Titanium Alloys	400 Rm									
	37		1050 Rm									
H	38	Hardened steel	550	55								
	39		630	60								
	40	Chilled Cast Iron	400	42								
	41	Hardened Cast Iron	550	55								