



FLAT SHANK

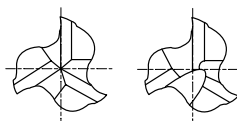
E2553 SERIES

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

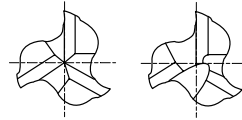
	Tolerance range in μm					
	Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73	-50 -89
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16

◎ : 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	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	60	100	75	90	130	110	90	100			15	30	25	38	34	55	60	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	○	○	○	○	○																

EQ572, EQ573, EQ516, EQ553, EQ554, EQ551, EQ552 SERIES

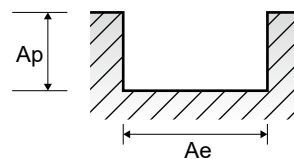
Vc = m/min.
fz = mm/tooth
RPM = rev./min.
FEED = mm/min.

3 FLUTE TiAIN COATED - 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	50	45	50	50	45	50	45	50
					fz	0.002	0.005	0.007	0.012	0.015	0.021	0.028	0.036
					RPM	7958	4775	3979	3183	2387	1989	1432	1326
	2		Vc	40	40	40	40	40	40	40	40		
			fz	0.002	0.004	0.006	0.01	0.014	0.022	0.028	0.033		
			RPM	6366	4244	3183	2546	2122	1592	1273	1061		
	3-4		Vc	35	35	30	35	30	35	35	35		
			fz	0.002	0.003	0.005	0.008	0.011	0.018	0.023	0.028		
			RPM	5570	3714	2387	2228	1592	1393	1114	928		
	5		Vc	33	33	36	53	53	75	77	78		
			fz	0.002	0.003	0.005	0.008	0.011	0.017	0.021	0.03		
RPM		3183	2122	1592	1273	1061	796	637	531				
6	Vc	20	20	20	20	20	20	20	20				
	fz	0.002	0.003	0.005	0.008	0.011	0.017	0.021	0.03				
	RPM	3183	2122	1592	1273	1061	796	637	531				
7	Vc	19	19	33	31	35	41	40	48				
	fz	0.002	0.003	0.005	0.008	0.011	0.018	0.023	0.028				
	RPM	3183	2122	1592	1273	1061	796	637	531				
8-9	Vc	33	33	36	53	53	75	77	78				
	fz	0.002	0.003	0.005	0.008	0.011	0.017	0.021	0.03				
	RPM	3183	2122	1592	1273	1061	796	637	531				
10	Vc	20	20	20	20	20	20	20	20				
	fz	0.002	0.003	0.005	0.008	0.011	0.017	0.021	0.03				
	RPM	3183	2122	1592	1273	1061	796	637	531				
11.1	Vc	19	19	33	31	35	41	40	48				
	fz	0.002	0.003	0.005	0.008	0.011	0.017	0.021	0.03				
	RPM	3183	2122	1592	1273	1061	796	637	531				
N	21-22	Aluminum-wrought alloy	1.0D	0.5D	Vc	105	145	140	140	145	140	135	130
					fz	0.003	0.005	0.008	0.011	0.012	0.021	0.029	0.034
					RPM	16711	15385	11141	8913	7692	5570	4297	3448
					FEED	150	231	267	294	277	351	374	352
23-24	Aluminum-cast, alloyed	1.0D	0.5D	Vc	68	94	91	91	94	91	88	85	
				fz	0.003	0.005	0.008	0.011	0.012	0.021	0.029	0.034	
				RPM	10823	9974	7242	5793	4987	3621	2801	2255	
				FEED	97	150	174	191	180	228	244	230	

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

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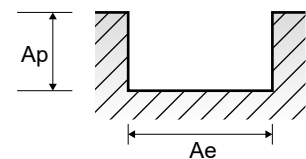


EQ572, EQ573, EQ516, EQ553, EQ554, EQ551, EQ552 SERIES

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

3 FLUTE TiAIN COATED - 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	50	50	50	50	50	50	50	45	50	50	50	50
	fz	0.042	0.048	0.047	0.053	0.06	0.058	0.06	0.058	0.058	0.059	0.058	0.064
	RPM	1137	995	884	796	723	637	568	477	497	455	442	398
2	FEED	143	143	125	127	130	111	102	83	87	80	77	76
	Vc	45	40	40	40	45	45	45	40	40	40	40	40
	fz	0.034	0.043	0.048	0.053	0.053	0.054	0.051	0.054	0.056	0.056	0.052	0.059
3-4	RPM	1023	796	707	637	651	573	512	424	398	364	354	318
	FEED	104	103	102	101	104	93	78	69	67	61	55	56
	Vc	35	30	30	35	35	35	35	35	30	30	30	30
5	fz	0.032	0.037	0.042	0.042	0.048	0.043	0.043	0.038	0.043	0.04	0.042	0.047
	RPM	796	597	531	557	506	446	398	371	298	273	265	239
	FEED	76	66	67	70	73	57	51	42	38	33	33	34
6	Vc	20	20	20	20	20	20	20	20	20	20	20	20
	fz	0.034	0.034	0.038	0.043	0.043	0.04	0.045	0.045	0.05	0.046	0.039	0.044
	RPM	455	398	354	318	289	255	227	212	199	182	177	159
7	FEED	46	41	40	41	37	31	31	29	30	25	21	21
	Vc	45	40	40	40	45	45	45	40	40	40	40	40
	fz	0.034	0.043	0.048	0.053	0.053	0.054	0.051	0.054	0.056	0.056	0.052	0.059
8-9	RPM	1023	796	707	637	651	573	512	424	398	364	354	318
	FEED	104	103	102	101	104	93	78	69	67	61	55	56
	Vc	35	30	30	35	35	35	35	35	30	30	30	30
10	fz	0.032	0.037	0.042	0.042	0.048	0.043	0.043	0.038	0.043	0.04	0.042	0.047
	RPM	796	597	531	557	506	446	398	371	298	273	265	239
	FEED	76	66	67	70	73	57	51	42	38	33	33	34
11.1	Vc	20	20	20	20	20	20	20	20	20	20	20	20
	fz	0.034	0.034	0.038	0.043	0.043	0.04	0.045	0.045	0.05	0.046	0.039	0.044
	RPM	455	398	354	318	289	255	227	212	199	182	177	159
21-22	FEED	46	41	40	41	37	31	31	29	30	25	21	21
	Vc	135	140	140	140	135	135	130	140	140	145	140	140
	fz	0.037	0.04	0.045	0.047	0.048	0.053	0.056	0.056	0.054	0.055	0.056	0.055
23-24	RPM	3069	2785	2476	2228	1953	1719	1478	1485	1393	1319	1238	1114
	FEED	341	334	334	314	281	273	248	250	226	218	208	184
	Vc	88	91	91	91	88	88	85	91	91	94	91	91
23-24	fz	0.037	0.04	0.045	0.047	0.048	0.053	0.056	0.056	0.054	0.055	0.056	0.055
	RPM	2001	1810	1609	1448	1273	1120	966	966	905	855	805	724
	FEED	222	217	217	204	183	178	162	162	147	141	135	119



EQ572, EQ573, EQ516, EQ553, EQ554, EQ551, EQ552 SERIES

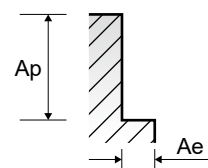
Vc = m/min.
fz = mm/tooth
RPM = rev./min.
FEED = mm/min.

3 FLUTE TiAIN COATED - 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	50	45	50	50	45	50	45	50	
					fz	0.004	0.007	0.012	0.02	0.025	0.035	0.047	0.059	
					RPM	7958	4775	3979	3183	2387	1989	1432	1326	
	FEED		95	100	143	191	179	209	202	235				
	2		0.1D	1.5D	Vc	40	40	40	40	40	40	40	40	40
					fz	0.003	0.006	0.011	0.017	0.023	0.038	0.044	0.058	
					RPM	6366	4244	3183	2546	2122	1592	1273	1061	
	FEED		57	76	105	130	146	181	168	185				
	3-4		0.1D	1.5D	Vc	35	35	30	35	30	35	35	35	35
					fz	0.003	0.006	0.009	0.014	0.018	0.028	0.038	0.047	
					RPM	5570	3714	2387	2228	1592	1393	1114	928	
FEED	50	67	64	94	86	117	127	131						
5	0.1D	1.5D	Vc	20	20	20	20	20	20	20	20	20		
			fz	0.002	0.005	0.009	0.013	0.018	0.03	0.037	0.045			
			RPM	3183	2122	1592	1273	1061	796	637	531			
FEED	19	32	43	50	57	72	71	72						
6	0.1D	1.5D	Vc	40	40	40	40	40	40	40	40	40		
			fz	0.003	0.006	0.011	0.017	0.023	0.038	0.044	0.058			
			RPM	6366	4244	3183	2546	2122	1592	1273	1061			
FEED	57	76	105	130	146	181	168	185						
7	0.1D	1.5D	Vc	35	35	30	35	30	35	35	35	35		
			fz	0.003	0.006	0.009	0.014	0.018	0.028	0.038	0.047			
			RPM	5570	3714	2387	2228	1592	1393	1114	928			
FEED	50	67	64	94	86	117	127	131						
8-9	0.1D	1.5D	Vc	20	20	20	20	20	20	20	20	20		
			fz	0.002	0.005	0.009	0.013	0.018	0.03	0.037	0.045			
			RPM	3183	2122	1592	1273	1061	796	637	531			
FEED	19	32	43	50	57	72	71	72						
10	0.1D	1.5D	Vc	40	40	40	40	40	40	40	40	40		
			fz	0.003	0.006	0.011	0.017	0.023	0.038	0.044	0.058			
			RPM	6366	4244	3183	2546	2122	1592	1273	1061			
FEED	57	76	105	130	146	181	168	185						
11.1	0.1D	1.5D	Vc	20	20	20	20	20	20	20	20	20		
			fz	0.002	0.005	0.009	0.013	0.018	0.03	0.037	0.045			
			RPM	3183	2122	1592	1273	1061	796	637	531			
FEED	19	32	43	50	57	72	71	72						
N	21-22	Aluminum-wrought alloy	0.1D	1.5D	Vc	105	145	140	140	145	140	135	130	
					fz	0.005	0.008	0.014	0.019	0.021	0.037	0.049	0.057	
					RPM	16711	15385	11141	8913	7692	5570	4297	3448	
					FEED	251	369	468	508	485	618	632	590	
23-24	Aluminum-cast, alloyed	0.1D	1.5D	Vc	68	94	91	91	94	91	88	85		
				fz	0.005	0.008	0.014	0.019	0.021	0.037	0.049	0.057		
				RPM	10823	9974	7242	5793	4987	3621	2801	2255		
				FEED	162	239	304	330	314	402	412	386		

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

▶ NEXT PAGE

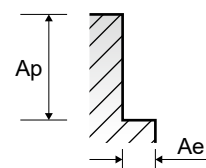


EQ572, EQ573, EQ516, EQ553, EQ554, EQ551, EQ552 SERIES

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

3 FLUTE TiAIN COATED - 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	50	50	50	50	50	50	50	45	50	50	50	50
	fz	0.07	0.078	0.08	0.09	0.1	0.101	0.101	0.099	0.099	0.096	0.097	0.107
	RPM	1137	995	884	796	723	637	568	477	497	455	442	398
2	FEED	239	233	212	215	217	193	172	142	148	131	129	128
	Vc	45	40	40	40	45	45	45	40	40	40	40	40
	fz	0.058	0.073	0.081	0.09	0.09	0.092	0.088	0.085	0.09	0.088	0.086	0.097
3-4	RPM	1023	796	707	637	651	573	512	424	398	364	354	318
	FEED	178	174	172	172	176	158	135	108	107	96	91	93
	Vc	35	30	30	35	35	35	35	35	30	30	30	30
5	fz	0.053	0.058	0.065	0.065	0.075	0.07	0.073	0.071	0.075	0.075	0.077	0.087
	RPM	796	597	531	557	506	446	398	371	298	273	265	239
	FEED	127	104	103	109	114	94	87	79	67	61	61	62
6	Vc	20	20	20	20	20	20	20	20	20	20	20	20
	fz	0.051	0.06	0.067	0.075	0.075	0.067	0.061	0.061	0.067	0.065	0.069	0.078
	RPM	455	398	354	318	289	255	227	212	199	182	177	159
7	FEED	70	72	71	72	65	51	42	39	40	35	37	37
	Vc	45	40	40	40	45	45	45	40	40	40	40	40
	fz	0.058	0.073	0.081	0.09	0.09	0.092	0.088	0.085	0.09	0.088	0.086	0.097
8-9	RPM	1023	796	707	637	651	573	512	424	398	364	354	318
	FEED	178	174	172	172	176	158	135	108	107	96	91	93
	Vc	35	30	30	35	35	35	35	35	30	30	30	30
10	fz	0.053	0.058	0.065	0.065	0.075	0.07	0.073	0.071	0.075	0.075	0.077	0.087
	RPM	796	597	531	557	506	446	398	371	298	273	265	239
	FEED	127	104	103	109	114	94	87	79	67	61	61	62
11.1	Vc	20	20	20	20	20	20	20	20	20	20	20	20
	fz	0.051	0.06	0.067	0.075	0.075	0.067	0.061	0.061	0.067	0.065	0.069	0.078
	RPM	455	398	354	318	289	255	227	212	199	182	177	159
21-22	FEED	70	72	71	72	65	51	42	39	40	35	37	37
	Vc	135	140	140	140	135	135	130	140	140	145	140	140
	fz	0.06	0.067	0.075	0.076	0.082	0.088	0.093	0.093	0.09	0.092	0.093	0.094
23-24	RPM	3069	2785	2476	2228	1953	1719	1478	1485	1393	1319	1238	1114
	FEED	552	560	557	508	481	454	412	414	376	364	345	314
	Vc	88	91	91	91	88	88	85	91	91	94	91	91
23-24	fz	0.06	0.067	0.075	0.076	0.082	0.088	0.093	0.093	0.09	0.092	0.093	0.094
	RPM	2001	1810	1609	1448	1273	1120	966	966	905	855	805	724
	FEED	360	364	362	330	313	296	270	269	244	236	224	204



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		130									
20	Malleable cast iron	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								