

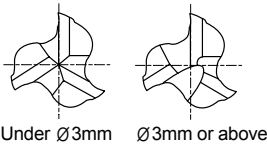


FLAT SHANK **E2573** SERIES

FLAT SHANK **EQ573** SERIES

HSSCo8, 3 FLUTE SHORT LENGTH

- HSSCo8, 3 SCHNEIDEN KURZ**
- Fraise HSSCo8, 3 dents, courte**
- 3 TAGLIENTI, SERIE CORTA - HSSCo8**



HSS Co8

DIN 844

3

30°

DIN 1835B

P.750~757

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAIN	e8	h6		
E2573010	EQ573010	1.0	6	3	47
E2573015	EQ573015	1.5	6	7	51
E2573020	EQ573020	2.0	6	7	51
E2573025	EQ573025	2.5	6	8	52
E2573030	EQ573030	3.0	6	8	52
E2573035	EQ573035	3.5	6	10	54
E2573040	EQ573040	4.0	6	11	55
E2573045	EQ573045	4.5	6	11	55
E2573050	EQ573050	5.0	6	13	57
E2573055	EQ573055	5.5	6	13	57
E2573060	EQ573060	6.0	6	13	57
E2573065	EQ573065	6.5	10	16	66
E2573070	EQ573070	7.0	10	16	66
E2573075	EQ573075	7.5	10	16	66
E2573080	EQ573080	8.0	10	19	69
E2573085	EQ573085	8.5	10	19	69
E2573090	EQ573090	9.0	10	19	69
E2573095	EQ573095	9.5	10	19	69
E2573100	EQ573100	10.0	10	22	72
E2573120	EQ573120	12.0	12	26	83
E2573140	EQ573140	14.0	12	26	83
E2573150	EQ573150	15.0	12	26	83
E2573160	EQ573160	16.0	16	32	92
E2573180	EQ573180	18.0	16	32	92

Tolerances according to DIN 7160 & 7161

- ▶ Other shank design on your request.
- ▶ TiN and TiCN Coatings are available on your request.
- ▶ NEXT PAGE

Tolerance range in μ m						
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

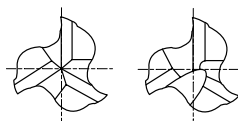
ISO	P											M			K						
Material Description	Non-alloy steel					Low alloy steel					High alloyed steel and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	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	N										S							H			
Material Description	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

● **HSSCo8, 3 SCHNEIDEN KURZ**

● **Fraise HSSCo8, 3 dents, courte**

● **3 TAGLIENTI, SERIE CORTA - HSSCo8**



Under Ø3mm

Ø3mm or above



P.750~757

Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length
UNCOATED	TiAIN	e8	h6		
E2573200	EQ573200	20.0	20	38	104
E2573220	EQ573220	22.0	20	38	104
E2573240	EQ573240	24.0	25	45	121
E2573250	EQ573250	25.0	25	45	121
E2573260	EQ573260	26.0	25	45	121
E2573280	EQ573280	28.0	25	45	121
E2573300	EQ573300	30.0	25	45	121
E2573320	EQ573320	32.0	32	53	133
E2573400	EQ573400	40.0	40	63	155

▶ Other shank design on your request.

▶ TiN and TiCN Coatings are available on your request.

Tolerances according to DIN 7160 & 7161

Tolerance range in μ m						
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	P											M			K						
Material Description	Non-alloy steel					Low alloy steel				High alloy 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	N										S						H				
Material Description	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	○	○	○	○	○																

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

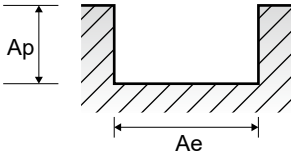
3 FLUTE TiAIN COATED - SLOTTING

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

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
					FEED	48	72	84	115	107	125	120	143
	2		1.0D	0.5D	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
					FEED	38	51	57	76	89	105	107	105
	3-4		1.0D	0.5D	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
					FEED	33	33	36	53	53	75	77	78
	5	Low alloy steel	1.0D	0.5D	Vc	20	20	20	20	20	20	20	20
					fz	0.002	0.003	0.007	0.008	0.011	0.017	0.021	0.03
					RPM	3183	2122	1592	1273	1061	796	637	531
					FEED	19	19	33	31	35	41	40	48
	6	High alloyed steel, and tool steel	1.0D	0.5D	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
					FEED	38	51	57	76	89	105	107	105
	7	Aluminum-wrought alloy	1.0D	0.5D	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
					FEED	33	33	36	53	53	75	77	78
	8-9	Aluminum-cast, alloyed	1.0D	0.5D	Vc	20	20	20	20	20	20	20	20
					fz	0.002	0.003	0.007	0.008	0.011	0.017	0.021	0.03
					RPM	3183	2122	1592	1273	1061	796	637	531
					FEED	19	19	33	31	35	41	40	48
	10	Aluminum-wrought alloy	1.0D	0.5D	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
					FEED	38	51	57	76	89	105	107	105
	11.1	Aluminum-cast, alloyed	1.0D	0.5D	Vc	20	20	20	20	20	20	20	20
					fz	0.002	0.003	0.007	0.008	0.011	0.017	0.021	0.03
					RPM	3183	2122	1592	1273	1061	796	637	531
					FEED	19	19	33	31	35	41	40	48
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%

▶ NEXT PAGE

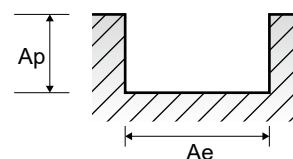


EQ572, EQ573, EQ516, EQ553, EQ554, EQ551, EQ552 SERIES

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

3 FLUTE TiAIN COATED - 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
	FEED	143	143	125	127	130	111	102	83	87	80	77	76
2	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
	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
3-4	Vc	35	30	30	35	35	35	35	35	30	30	30	30
	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
5	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
	FEED	46	41	40	41	37	31	27	29	30	25	21	21
6	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
	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
7	Vc	35	30	30	35	35	35	35	35	30	30	30	30
	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
8-9	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
	FEED	46	41	40	41	37	31	27	29	30	25	21	21
10	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
	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
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
	FEED	46	41	40	41	37	31	27	29	30	25	21	21
21 - 22	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
	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
23 - 24	Vc	88	91	91	91	88	88	85	91	91	94	91	91
	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

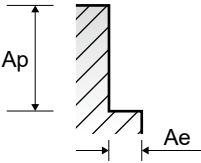
3 FLUTE TiAIN COATED - SIDE CUTTING

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

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
					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
					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	Low alloy steel	0.1D	1.5D	Vc	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	High alloyed steel, and tool steel	0.1D	1.5D	Vc	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	Aluminum-wrought alloy	0.1D	1.5D	Vc	35	35	30	35	30	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	Aluminum-cast, alloyed	0.1D	1.5D	Vc	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	Aluminum-wrought alloy	0.1D	1.5D	Vc	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	Aluminum-cast, alloyed	0.1D	1.5D	Vc	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

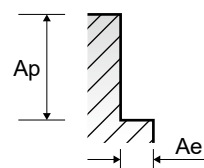


EQ572, EQ573, EQ516, EQ553, EQ554, EQ551, EQ552 SERIES

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
	FEED	239	233	212	215	217	193	172	142	148	131	129	128
2	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
	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
3-4	Vc	35	30	30	35	35	35	35	35	30	30	30	30
	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
5	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
	FEED	70	72	71	72	65	51	42	39	40	35	37	37
6	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
	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
7	Vc	35	30	30	35	35	35	35	35	30	30	30	30
	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
8-9	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
	FEED	70	72	71	72	65	51	42	39	40	35	37	37
10	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
	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
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
	FEED	70	72	71	72	65	51	42	39	40	35	37	37
21 - 22	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
	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
23 - 24	Vc	88	91	91	91	88	88	85	91	91	94	91	91
	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



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



					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
					SHORT LENGTH	LONG LENGTH	STUB LENGTH	SHORT LENGTH	LONG LENGTH	SHORT LENGTH	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								
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		200	15	○	○	◎	◎	◎	◎	◎	◎
	11	High alloyed steel, and tool steel	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	Copper and Copper Alloys	110									
	27		90									
	28	Copper Alloys (Bronze / Brass)	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								