



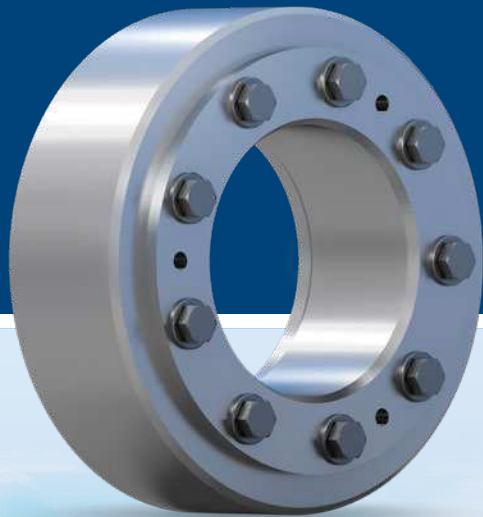
STÜWE[®]

Catalogue Shrink Disc TYPE HSD



Certified in accordance with
DIN ISO 9001:2008

STÜWE[®]



SHRINK DISC TYPE HSD



SHRINK DISC

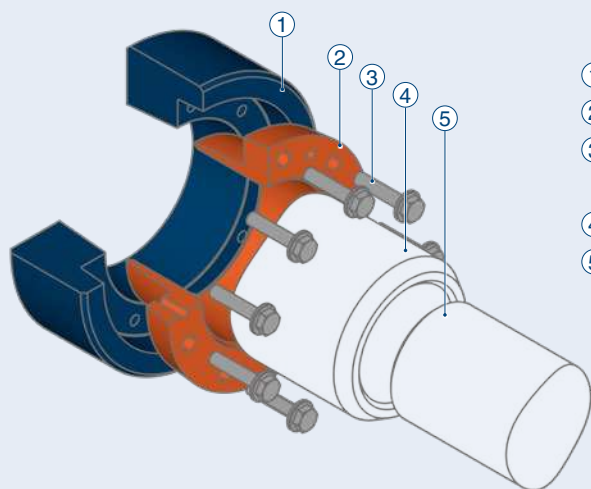
TYPE HSD – GENERAL INFORMATION

Description of Application

The Type HSD shrink disc is a detachable machine element for the connection of a hollow shaft with a shaft. The shrink connection is a maintenance-free connection which is dirt-resistant due to its press fit and which may be used for many different applications. The Type HSD is an inexpensive solution for the connection of a shaft and hub in such as wind turbine drives, packaging machines or luggage sorting systems.

Areas of Application

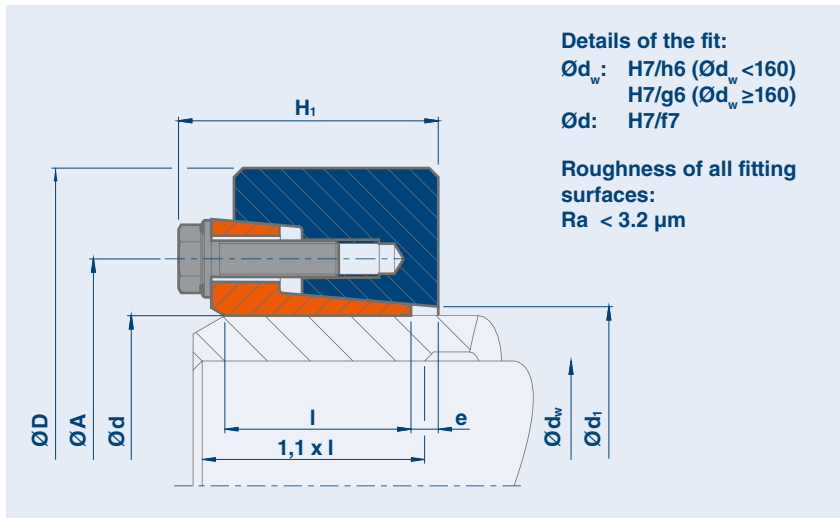
Series	Shaft diameter	Transmissible torque	Feature
HSD 20	20 - 250 mm	0,15 - 18,3 kNm	Low torques
HSD 21	110 - 730 mm	16 - 4033 kNm	Medium-sized torques
HSD 22	9 - 1050 mm	0,02 - 16493 kNm	High torques
HSD 23	100 - 1050 mm	26 - 19684 kNm	Very high torques
HSD 81	38 - 1050 mm	1,5 - 19958 kNm	Identical to series 22 but 20 - 30 % higher torques
HSD 83	100 - 1050 mm	30 - 23811 kNm	Identical to series 23 but 20 - 30 % higher torques



- ① Outer ring*
- ② Inner ring*
- ③ Tightening bolts*
including washers where necessary*
- ④ Hub
- ⑤ Shaft

*Included in the scope of delivery

STÜWE® Shrink Disc Type HSD Series 20



Code

- M_t Maximum transmissible torque of a shrink disc where $P_{ax} = 0$
- P_{ax} Maximum transmissible axial load of shrink disc where $M_t = 0$
- M_a Required tightening torque of the tightening bolts (see also "Installation and Removal Instructions")

Dimensions H_1 and e apply to untightened units.

Shrink Disc Type HSD – Series 20

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm	kg
HSD 24 - 20	24	20	0.15	15	12	6 x M6	50	11.5	17	38	25.5	1.5	0.2
		21	0.17	17									
		22	0.21	19									
HSD 29 - 20	29	25	0.22	18	12	6 x M6	58	12.5	18	44	32	1.5	0.2
		26	0.25	19									
		27	0.29	21									
HSD 35 - 20	34	29	0.22	15	12	5 x M6	64	12.5	18	52	39	1.5	0.2
		30	0.25	16									
		32	0.31	19									
HSD 40 - 20	38	34	0.28	16	12	6 x M6	69	12.2	18	55	43	1.6	0.3
		35	0.31	18									
		36	0.34	19									
HSD 46 - 20	46	38	0.41	22	12	6 x M6	80	13	23	62	49	2.5	0.4
		40	0.50	25									
		42	0.60	28									
HSD 51 - 20	51	44	0.55	25	12	8 x M6	86	13	23	67	54	2.6	0.5
		45	0.60	27									
		47	0.70	30									
HSD 56 - 20	55	48	0.57	24	12	8 x M6	90	13	23	72	59	3	0.5
		50	0.66	26									
		52	0.76	29									
HSD 61 - 20	61	53	0.68	26	12	8 x M6	96	13	24	76	64	3	0.6
		55	0.79	29									
		57	0.90	32									
HSD 66 - 20	65	58	0.74	26	12	8 x M6	100	13	24	82	69	3	0.6
		60	0.85	28									
		62	0.97	31									

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade 10.9, alternative DIN EN ISO 4762 Grade 10.9

From M16 and larger with washers: DIN EN ISO 7416

When ordering please state: (Type x $\varnothing d$) e.g. HSD 35 - 20 x 34

Shrink Disc Type HSD – Series 20

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm	kg
HSD 73 - 20	70	63	0.94	30	29	9 x M8	115	18	30	94	77	3	1.2
	72	65	1.07	33									
	73	68	1.29	38									
HSD 78 - 20	76	68	1.21	36	29	9 x M8	120	18	30	100	82	3	1.2
	78	70	1.36	39									
		72	1.52	42									
HSD 83 - 20	81	73	1.24	34	29	9 x M8	125	18	30	104	87	3	1.3
	83	75	1.38	37									
		77	1.54	40									
HSD 88 - 20	86	78	1.47	38	29	9 x M8	130	18	30	110	92	3	1.4
	88	80	1.62	40									
		82	1.78	43									
HSD 93 - 20	93	83	1.63	39	29	9 x M8	135	18	31	114	97	3	1.4
	94	85	1.80	42									
		87	1.97	45									
HSD 98 - 20	96	88	1.72	39	29	9 x M8	140	18	31	120	102	3	1.5
	98	90	1.89	42									
		92	2.07	45									
HSD 103 - 20	103	93	2.13	46	29	10 x M8	145	18	31	124	107	3.5	1.5
		95	2.31	49									
		97	2.50	52									
HSD 108 - 20	106	98	2.16	44	29	10 x M8	150	18	31	128	112	3.5	1.6
	108	100	2.34	47									
		102	2.53	50									
HSD 115 - 20	112	103	2.34	45	29	10 x M8	160	22	35	134	118	3.5	2.1
	115	105	2.54	48									
		108	2.86	53									
HSD 120 - 20	118	108	2.82	52	29	10 x M8	164	22	35	140	124	3.5	2.1
	120	110	3.03	55									
		113	3.37	60									
HSD 125 - 20	125	113	2.94	52	29	12 x M8	169	22	35	144	129	3.5	2.2
		115	3.16	55									
		118	3.49	59									
HSD 130 - 20	130	118	3.15	53	29	12 x M8	174	22	35	150	134	3.5	2.2
		120	3.37	56									
		123	3.71	60									
HSD 135 - 20	135	123	3.57	58	29	12 x M8	179	22	35	154	139	3.5	2.3
		125	3.81	61									
		128	4.19	66									
HSD 140 - 20	138	128	3.93	61	29	12 x M8	184	22	36	160	144	4	2.4
	140	130	4.18	64									
		132	4.44	67									
HSD 145 - 20	145	133	4.39	66	29	12 x M8	189	22	36	164	149	4	2.5
		135	4.65	69									
		137	4.92	72									
HSD 150 - 20	150	138	4.89	71	29	12 x M8	194	22	36	170	154	4	2.5
		140	5.16	74									
		142	5.44	77									
HSD 160 - 20	160	146	4.86	67	29	12 x M8	204	22	35	180	164	4	2.6
		150	5.39	72									
		152	5.67	75									
HSD 170 - 20	166	156	5.20	67	29	12 x M8	214	22	35	190	174	4	3.0
	170	160	5.73	72									
		162	6.01	74									

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade 10.9, alternative DIN EN ISO 4762 Grade 10.9

From M16 and larger with washers: DIN EN ISO 7416

When ordering please state: (Type x Ød) e.g. HSD 108 - 20 x 106

Shrink Disc Type HSD – Series 20

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm	kg
HSD 182 - 20	182	166	7.62	92	29	14 x M8	230	25	41	206	188	5	3.9
		170	8.35	98									
		172	8.73	101									
HSD 192 - 20	189	176	8.35	95	29	14 x M8	240	25	41	216	198	5	3.9
		180	9.09	101									
		182	9.47	104									
HSD 202 - 20	197	186	8.88	95	29	15 x M8	250	25	41	224	208	5.5	4.6
		190	9.67	102									
		192	10.08	105									
HSD 212 - 20	212	196	9.74	99	29	15 x M8	260	25	41	234	218	5.5	4.4
		200	10.55	106									
		202	10.97	109									
HSD 222 - 20	220	206	10.83	105	29	16 x M8	270	25	42	244	228	5.7	4.9
		210	11.66	111									
		212	12.09	114									
HSD 232 - 20	230	216	14.40	133	29	16 x M8	280	25	42	254	238	5.7	5.0
		220	15.35	140									
		222	15.83	143									
HSD 242 - 20	242	226	15.27	135	29	16 x M8	290	25	42	264	248	5.7	5.0
		230	16.22	141									
		232	16.72	144									
HSD 252 - 20	252	234	15.98	137	29	16 x M8	300	25	42	274	258	6	5.2
		238	16.94	142									
		240	17.44	145									
HSD 262 - 20	262	244	16.84	138	29	18 x M8	310	25	42	286	268	6	5.6
		248	17.80	144									
		250	18.30	146									

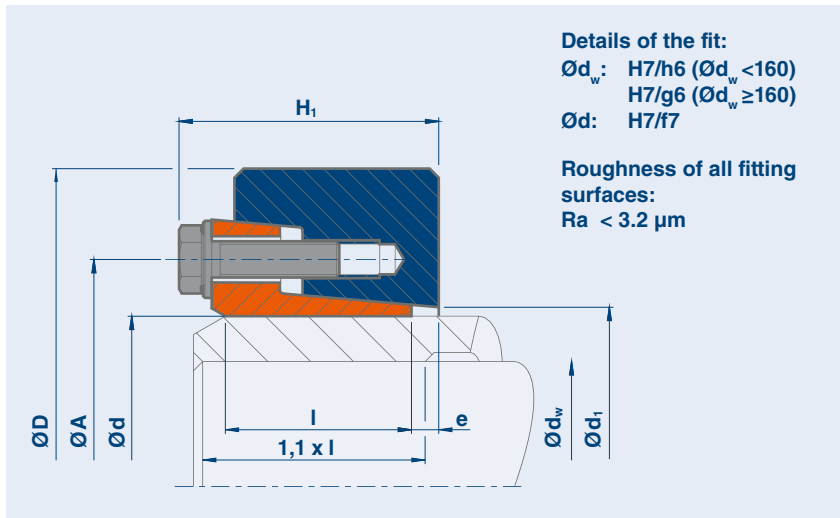
Further sizes on request. Subject to technical change without notice.

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade 10.9, alternative DIN EN ISO 4762 Grade 10.9

From M16 and larger with washers: DIN EN ISO 7416

When ordering please state: (Type x Ød) e.g. HSD 192 - 20 x 192

STÜWE® Shrink Disc Type HSD Series 21



Code

M_t Maximum transmissible torque of a shrink disc where $P_{ax} = 0$

P_{ax} Maximum transmissible axial load of shrink disc where $M_t = 0$

M_a Required tightening torque of the tightening bolts (see also "Installation and Removal Instructions")

Dimensions H_1 and e apply to untightened units.

Shrink Disc Type HSD – Series 21

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm	kg
HSD 140 - 21	140	110	16	298	100	9 x M12	215	38	52	164	143	6.5	6.4
		120	20	341									
		130	25	385									
HSD 155 - 21	155	130	26	398	100	15 x M12	245	38	52	184	164	6.5	8.7
		160	28	420									
		140	31	443									
HSD 165 - 21	165	135	29	432	160	12 x M14	263	43	58	200	174	6.2	11.4
		170	32	456									
		145	35	480									
HSD 175 - 21	175	145	36	497	160	12 x M14	275	43	59	208	184	7.2	12.2
		180	39	522									
		155	42	547									
HSD 185 - 21	185	155	50	645	160	16 x M14	290	51	68	220	195	8.2	16
		190	54	675									
		165	58	704									
HSD 195 - 21	195	165	68	822	160	15 x M14	320	51	68	230	204	8.2	20.6
		200	73	855									
		180	83	922									
HSD 220 - 21	220	180	80	892	240	16 x M16	340	55	79	254	227	10	23.6
		190	91	962									
		200	103	1032									
HSD 240 - 21	240	200	103	1026	240	16 x M16	370	55	80	274	247	11	27.6
		210	115	1095									
		220	128	1165									
HSD 260 - 21	260	220	132	1197	240	18 x M16	405	55	80	294	266	11	33.5
		230	146	1271									
		240	161	1344									
HSD 280 - 21	280	230	160	1392	470	15 x M20	430	65	93	320	288	12	44.1
		240	177	1473									
		250	194	1555									

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade 10.9, alternative DIN EN ISO 4762 Grade 10.9
From M16 and larger with washers: DIN EN ISO 7416

When ordering please state: (Type x Ød) e.g. HSD 185 - 21 x 190

Shrink Disc Type HSD – Series 21

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm	kg
HSD 300 - 21	300	250	191	1529	470	16 x M20	460	65	94	340	308	13	50.2
		260	209	1610									
		270	228	1691									
HSD 320 - 21	320	270	243	1804	470	20 x M20	485	77	106	364	327	13	64.5
		280	265	1894									
		290	288	1986									
HSD 340 - 21	340	280	274	1958	470	20 x M20	520	77	106	384	347	13	75
		290	297	2050									
		300	322	2143									
HSD 360 - 21	360	300	356	2373	470	20 x M20	570	89	122	410	368	13	113
		310	384	2476									
		330	443	2686									
HSD 390 - 21	390	330	438	2654	470	24 x M20	590	89	123	440	398	14	114
		340	469	2759									
		350	501	2865									
HSD 420 - 21	420	350	624	3564	820	18 x M24	630	120	160	470	427	21	166
		360	665	3697									
		370	709	3831									
HSD 440 - 21	440	370	778	4203	820	20 x M24	660	132	174	494	448	21	203
		380	826	4350									
		390	877	4497									
HSD 460 - 21	460	390	852	4370	820	20 x M24	690	132	174	516	468	21	222
		400	903	4514									
		410	955	4658									
HSD 480 - 21	480	410	1086	5298	820	24 x M24	720	152	194	540	487	23	274
		420	1147	5461									
		430	1210	5626									
HSD 500 - 21	500	420	1137	5415	820	24 x M24	745	152	197	560	508	24	293
		430	1200	5581									
		450	1331	5914									
HSD 530 - 21	530	450	1376	6114	1210	24 x M27	790	166	209	594	540	20	359
		460	1446	6287									
		480	1592	6635									
HSD 560 - 21	560	480	1578	6576	1210	28 x M27	830	166	211	626	570	22	393
		490	1653	6748									
		510	1809	7093									
HSD 590 - 21	590	510	1873	7344	1210	24 x M27	880	172	219	658	599	26	452
		520	1957	7526									
		540	2131	7891									
HSD 620 - 21	620	540	2097	7768	1210	24 x M27	930	172	222	690	629	28	516
		550	2186	7948									
		570	2368	8309									
HSD 660 - 21	660	570	2426	8511	1640	24 x M30	990	182	235	734	670	29	619
		580	2522	8696									
		610	2823	9255									
HSD 700 - 21	700	610	2772	9088	1640	24 x M30	1040	182	234	774	710	28	694
		620	2874	9271									
		640	3084	9638									
HSD 750 - 21	750	640	3104	9700	1640	28 x M30	1100	192	246	826	760	30	777
		650	3214	9888									
		680	3555	10456									
HSD 800 - 21	800	680	3443	10128	1640	28 x M30	1150	192	248	876	809	32	819
		700	3673	10495									
		730	4033	11049									

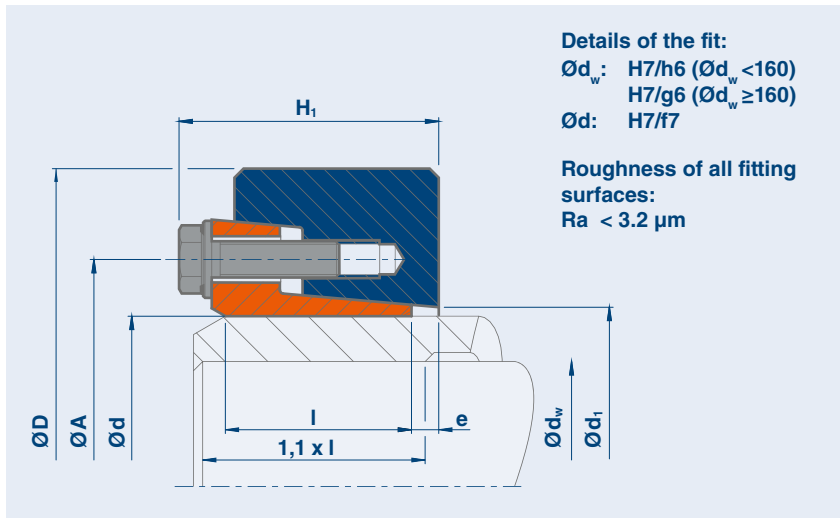
Further sizes on request. Subject to technical change without notice.

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade 10.9, alternative DIN EN ISO 4762 Grade 10.9

From M16 and larger with washers: DIN EN ISO 7416

When ordering please state: (Type x Ød) e.g. HSD 660 - 21 x 660

STÜWE® Shrink Disc Type HSD Series 22



Code

- M_t** Maximum transmissible torque of a shrink disc where $P_{ax} = 0$
- P_{ax}** Maximum transmissible axial load of shrink disc where $M_t = 0$
- M_a** Required tightening torque of the tightening bolts (see also "Installation and Removal Instructions")

Dimensions H_1 and e apply to untightened units.

Shrink Disc Type HSD – Series 22

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm	kg
HSD 12 - 22	12	9	0.02	5	12	3x M6	35	10	16	24	13	2	0.1
		10	0.04	8									
HSD 14 - 22	14	11	0.03	6	12	3 x M6	38	10	16	26	15	2	0.1
		12	0.05	9									
HSD 16 - 22	16	13	0.07	10	12	3 x M6	41	13.5	20	28	17	2.5	0.1
		14	0.09	13									
HSD 18 - 22	18	15	0.08	11	12	4x M6	44	13.5	20	30	19	2.5	0.1
		16	0.11	14									
HSD 20 - 22	20	17	0.15	18	12	4 x M6	47	13.5	20	32	21	2.5	0.2
		18	0.18	20									
HSD 24 - 22	24	19	0.16	17	12	5 x M6	50	14	23	36	26	2.5	0.2
		20	0.20	20									
		22	0.28	25									
HSD 30 - 22	30	24	0.27	23	12	6 x M6	60	16	26	44	32	3	0.4
		25	0.32	25									
		26	0.36	28									
HSD 36 - 22	36	28	0.49	35	29	5 x M8	72	18	29	52	38	3.4	0.5
		30	0.61	41									
		33	0.82	50									
HSD 44 - 22	44	34	0.69	41	29	6 x M8	80	20	33	61	47	4.7	0.7
		35	0.77	44									
		36	0.84	47									

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade 10.9, alternative DIN EN ISO 4762 Grade 10.9

From M16 and larger with washers: DIN EN ISO 7416

When ordering please state: (Type x Ød) e.g. HSD 44 - 22 x 42

Shrink Disc Type HSD – Series 22

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm	kg
HSD 50 - 22	50	38	1.10	58	29	8 x M8	90	22	34	68	53	4.4	0.9
		40	1.29	65									
		42	1.50	71									
HSD 55 - 22	55	42	1.23	59	29	8 x M8	100	23	36	72	58	4.4	1.2
		45	1.53	68									
		48	1.86	78									
HSD 62 - 22	62	48	1.67	70	29	9 x M8	110	23	36	80	66	4.4	1.4
		60	1.89	76									
		52	2.12	81									
HSD 68 - 22	68	50	1.87	75	29	9 x M8	115	23	36	86	72	4.4	1.4
		55	2.45	89									
		60	3.12	104									
HSD 75 - 22	75	55	2.33	85	58	10 x M10	138	25	40	100	79	4.6	2.5
		60	3.02	101									
		65	3.80	117									
HSD 80 - 22	80	60	3.19	106	58	10 x M10	141	25	40	104	84	4.6	2.5
		65	4.00	123									
		70	4.90	140									
HSD 90 - 22	90	65	5.4	166	58	10 x M10	155	30	46	114	94	5.1	3.5
		85	6.5	187									
		75	7.8	208									
HSD 100 - 22	100	70	6.0	171	58	12 x M10	170	34	51	124	104	5.1	4.7
		95	7.2	192									
		80	8.5	213									
HSD 110 - 22	110	80	10.0	249	100	12 x M12	185	39	59	137	114	5.5	6.3
		105	11.7	275									
		90	13.6	302									
HSD 120 - 22	120	85	11.9	280	100	12 x M12	197	42	63	147	124	6.5	7.4
		115	13.8	307									
		95	15.9	334									
HSD 125 - 22	125	90	14.4	319	100	12 x M12	215	42	63	152	129	6.5	9.3
		95	16.5	347									
		100	18.7	375									
HSD 135 - 22	135	95	18.1	382	160	10 x M14	230	46	69	165	139	7.2	11.5
		130	20.6	412									
		110	26.0	473									
HSD 140 - 22	140	100	19.6	392	160	12 x M14	230	46	70	172	146	8.2	11.1
		105	22.1	421									
		115	27.6	481									
HSD 155 - 22	155	110	26.5	482	160	12 x M14	263	50	74	186	159	8.7	15.9
		150	29.5	514									
		125	36.1	578									
HSD 165 - 22	165	120	37.3	622	240	12 x M16	290	56	85	198	169	9	22.2
		160	41.2	659									
		135	49.6	734									
HSD 175 - 22	175	130	45	692	240	12 x M16	300	56	85	208	179	9	23.3
		170	49	730									
		145	58	805									
HSD 185 - 22	185	140	64	916	240	16 x M16	320	71	102	222	191	10	33.3
		180	70	961									
		155	82	1053									
HSD 200 - 22	200	150	80	1073	240	16 x M16	340	71	102	238	206	10	36.9
		195	87	1120									
		190	100	1216									

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade 10.9, alternative DIN EN ISO 4762 Grade 10.9

From M16 and larger with washers: DIN EN ISO 7416

When ordering please state: (Type x Ød) e.g. HSD 200 - 22 x 195

Shrink Disc Type HSD – Series 22

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm	kg
HSD 220 - 22	220	160	103	1283	470	15 x M20	370	93	121	270	230	12	51.5
		170	119	1395									
		180	136	1509									
HSD 240 - 22	240	170	122	1439	470	16 x M20	405	95	124	288	248	12	63.9
		180	140	1555									
		200	179	1790									
HSD 260 - 22	260	190	163	1715	470	15 x M20	430	105	136	306	268	14	77.5
		200	184	1842									
		220	231	2099									
HSD 280 - 22	280	210	215	2051	470	16 x M20	460	114	146	328	288	16	94.7
		220	240	2186									
		240	295	2458									
HSD 300 - 22	300	220	270	2456	820	16 x M24	485	123	158	354	309	16	112
		230	300	2605									
		250	363	2906									
HSD 320 - 22	320	240	301	2511	820	18 x M24	520	125	159	380	328	14	133
		250	332	2655									
		270	398	2945									
HSD 340 - 22	340	250	390	3118	820	18 x M24	570	134	171	402	349	16	177
		260	427	3283									
		280	506	3617									
HSD 350 - 22	350	270	493	3649	820	20 x M24	580	140	178	414	365	16	190
		280	535	3825									
		290	580	4001									
HSD 360 - 22	360	270	496	3676	820	20 x M24	590	140	179	416	369	17	194
		280	539	3852									
		300	631	4206									
HSD 380 - 22	380	290	585	4034	1210	18 x M27	640	146	188	444	388	19	244
		300	632	4215									
		310	681	4397									
HSD 390 - 22	390	290	640	4411	1210	18 x M27	645	146	189	454	398	20	243
		300	691	4605									
		320	799	4996									
HSD 420 - 22	420	320	742	4640	1210	18 x M27	670	167	210	490	428	20	286
		330	797	4829									
		350	912	5209									
HSD 440 - 22	440	340	945	5557	1210	21 x M27	710	174	219	506	448	22	339
		350	1009	5764									
		370	1143	6181									
HSD 460 - 22	460	360	1104	6133	1210	21 x M27	745	174	222	534	470	25	375
		370	1174	6345									
		390	1320	6771									
HSD 480 - 22	480	380	1300	6843	1640	20 x M30	770	192	239	552	488	22	437
		390	1378	7066									
		410	1541	7516									
HSD 500 - 22	500	400	1496	7478	1640	21 x M30	800	192	241	572	509	24	470
		410	1581	7711									
		430	1759	8180									
HSD 530 - 22	530	430	1930	8976	1640	24 x M30	845	213	266	606	540	29	576
		440	2031	9234									
		460	2243	9752									
HSD 560 - 22	560	450	2097	9318	1640	24 x M30	900	213	264	632	568	27	660
		460	2201	9572									
		480	2420	10081									

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade 10.9, alternative DIN EN ISO 4762 Grade 10.9

From M16 and larger with washers: DIN EN ISO 7416

When ordering please state: (Type x Ød) e.g. HSD 280 - 22 x 280

Shrink Disc Type HSD – Series 22

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm	kg
HSD 590 - 22	590	470	2593	11032	1640	28 x M30	950	230	287	664	598	32	821
		480	2715	11314									
		500	2970	11881									
HSD 620 - 22	620	500	2904	11616	1640	28 x M30	960	254	310	706	630	30	872
		520	3169	12190									
		540	3447	12767									
HSD 660 - 22	660	530	3329	12562	2210	24 x M33	1020	260	320	748	670	34	1004
		550	3614	13140									
		570	3911	13722									
HSD 700 - 22	700	560	3804	13585	2210	28 x M33	1080	260	318	780	710	32	1141
		580	4109	14169									
		600	4427	14756									
HSD 750 - 22	750	600	4801	16004	2210	32 x M33	1150	278	344	846	760	38	1346
		620	5157	16636									
		650	5716	17589									
HSD 800 - 22	800	640	5620	17562	2210	30 x M33	1230	296	376	900	814	52	1646
		660	6012	18219									
		700	6839	19541									
HSD 850 - 22	850	650	5942	18282	2850	30 x M36	1300	315	386	950	860	43	1942
		700	6994	19983									
		730	7669	21011									
HSD 900 - 22	900	700	6967	19905	2850	32 x M36	1350	332	413	990	920	51	2142
		730	7640	20930									
		760	8345	21961									
HSD 950 - 22	950	750	8295	22121	2850	36 x M36	1400	360	438	1050	970	50	2425
		780	9041	23182									
		820	10088	24606									
HSD 1000 - 22	1000	800	9568	23920	2850	36 x M36	1460	380	461	1100	1020	53	2740
		830	10380	25013									
		860	11228	26111									
HSD 1050 - 22	1050	850	11241	26449	2850	36 x M36	1520	400	481	1150	1070	53	3078
		880	12135	27579									
		920	13383	29092									
HSD 1100 - 22	1100	900	13045	28990	2850	40 x M36	1570	430	511	1200	1120	53	3438
		930	14023	30156									
		960	15038	31328									
HSD 1200 - 22	1200	940	12902	27452	2850	40 x M36	1630	460	541	1300	1220	53	3566
		1000	14803	29606									
		1050	16493	31415									

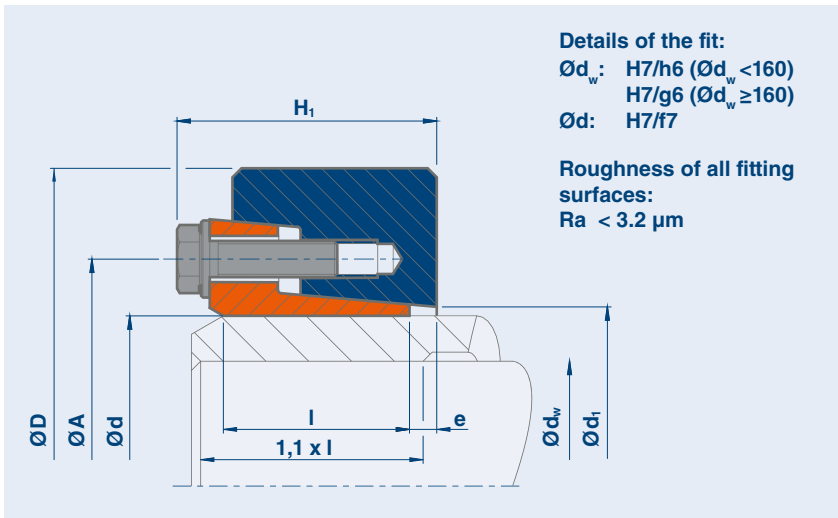
Further sizes on request. Subject to technical change without notice.

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade 10.9, alternative DIN EN ISO 4762 Grade 10.9

From M16 and larger with washers: DIN EN ISO 7416

When ordering please state: (Type x Ød) e.g. HSD 750 - 22 x 750

STÜWE® Shrink Disc Type HSD Series 23



Code

- M_t Maximum transmissible torque of a shrink disc where $P_{ax} = 0$
- P_{ax} Maximum transmissible axial load of shrink disc where $M_t = 0$
- M_a Required tightening torque of the tightening bolts (see also "Installation and Removal Instructions")

Dimensions H_1 and e apply to untightened units.

Shrink Disc Type HSD – Series 23

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm	kg
HSD 140 - 23	140	100	26	523	240	8 x M16	230	60	89	174	144	10	13.6
	135	105	30	562									
		115	37	641									
HSD 155 - 23	155	110	36	646	240	9 x M16	263	66	95	194	160	11	19.8
	150	115	40	687									
		125	48	772									
HSD 165 - 23	165	120	50	828	240	12 x M16	290	72	102	200	169	10	27.7
	160	125	55	877									
		135	66	977									
HSD 175 - 23	175	130	61	943	240	12 x M16	300	72	103	210	179	11	29
	170	135	67	993									
		145	79	1094									
HSD 185 - 23	185	140	89	1269	470	12 x M20	320	92	122	232	190	12	40.1
	180	145	96	1330									
		155	113	1455									
HSD 200 - 23	200	150	104	1391	470	12 x M20	340	92	125	246	204	15	44.5
	195	155	113	1453									
		165	130	1577									
HSD 220 - 23	220	160	127	1591	470	15 x M20	370	117	148	266	225	14	65.3
		165	137	1661									
		180	169	1876									
HSD 240 - 23	240	170	157	1847	470	16 x M20	405	122	154	286	245	15	81.6
		180	180	1996									
		200	230	2300									
HSD 260 - 23	260	190	230	2424	470	18 x M20	430	136	171	306	266	17	101
		200	260	2600									
		220	325	2957									

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade 10.9, alternative DIN EN ISO 4762 Grade 10.9

From M16 and larger with washers: DIN EN ISO 7416

When ordering please state: (Type x Ød) e.g. HSD 240 - 23 x 240

Shrink Disc Type HSD – Series 23

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm	kg
HSD 280 - 23	280	210	306	2918	820	16 x M24	460	148	185	334	286	16	126
		220	342	3105									
		240	418	3485									
HSD 300 - 23	300	230	360	3132	820	16 x M24	485	152	191	354	306	18	140
		240	398	3314									
		250	437	3498									
HSD 320 - 23	320	240	430	3580	820	18 x M24	520	160	199	374	325	18	171
		250	473	3781									
		270	565	4186									
HSD 340 - 23	340	250	551	4407	1210	18 x M27	560	176	219	404	346	19	221
		260	603	4637									
		280	714	5100									
HSD 360 - 23	360	270	671	4969	1210	18 x M27	590	180	224	424	366	20	249
		280	729	5204									
		300	852	5679									
HSD 390 - 23	390	290	850	5860	1210	20 x M27	650	190	238	456	399	24	324
		300	917	6116									
		320	1061	6633									
HSD 420 - 23	420	320	1008	6301	1210	21 x M27	670	214	264	486	428	26	367
		330	1082	6555									
		350	1237	7067									
HSD 440 - 23	440	340	1218	7166	1640	21 x M30	740	229	279	514	448	25	508
		350	1301	7433									
		370	1475	7972									
HSD 460 - 23	460	360	1402	7791	1640	21 x M30	750	226	278	534	469	28	485
		370	1491	8062									
		390	1678	8606									
HSD 480 - 23	480	380	1712	9008	1640	21 x M30	760	246	305	552	488	33	537
		390	1814	9302									
		410	2028	9893									
HSD 500 - 23	500	400	1993	9963	1640	24 x M30	800	246	303	572	508	31	604
		410	2106	10273									
		430	2342	10895									
HSD 530 - 23	530	430	2549	11857	2210	21 x M33	860	276	341	616	539	36	794
		440	2683	12196									
		460	2962	12878									
HSD 560 - 23	560	450	2849	12660	2210	24 x M33	900	280	341	646	568	34	867
		460	2990	13002									
		480	3285	13689									
HSD 590 - 23	590	470	3310	14084	2210	24 x M33	960	296	366	672	598	40	1071
		480	3467	14446									
		500	3793	15171									
HSD 620 - 23	620	500	4069	16276	2210	27 x M33	1000	330	401	706	630	41	1279
		510	4251	16672									
		540	4824	17866									
HSD 660 - 23	660	530	4746	17909	2850	28 x M36	1070	334	402	750	670	40	1475
		540	4944	18313									
		570	5566	19530									
HSD 700 - 23	700	560	5316	18985	2850	27 x M36	1070	334	413	800	710	45	1387
		570	5525	19387									
		600	6179	20596									
HSD 750 - 23	750	600	6326	21086	2850	32 x M36	1170	360	431	850	760	44	1810
		620	6794	21917									
		650	7530	23169									
HSD 800 - 23	800	640	7358	22993	2850	32 x M36	1280	360	439	900	810	51	2290
		660	7871	23851									
		700	8952	25576									

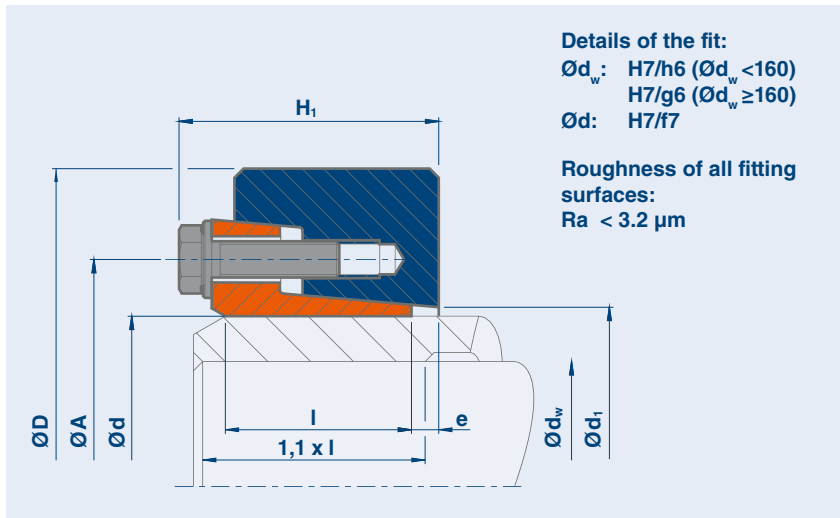
Further sizes on request. Subject to technical change without notice.

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade 10.9, alternative DIN EN ISO 4762 Grade 10.9

From M16 and larger with washers: DIN EN ISO 7416

When ordering please state: (Type x Ød) e.g. HSD 420 - 23 x 420

STÜWE® Shrink Disc Type HSD Series 81



Code

M_t Maximum transmissible torque of a shrink disc where $P_{ax} = 0$

P_{ax} Maximum transmissible axial load of shrink disc where $M_t = 0$

M_a Required tightening torque of the tightening bolts (see also "Installation and Removal Instructions")

Dimensions H_1 and e apply to untightened units.

Shrink Disc Type HSD – Series 81

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm	kg
HSD 50 - 81	50	38	1.5	79	35	8 x M8	90	22	34	68	53	4.4	0.9
		40	1.7	87									
		42	2.0	94									
HSD 55 - 81	55	42	1.6	78	35	8 x M8	100	23	36	72	58	4.4	1.2
		45	2.0	88									
		48	2.4	99									
HSD 62 - 81	62 60	48	2.2	92	35	9 x M8	110	23	36	80	66	4.4	1.4
		50	2.5	98									
		52	2.7	105									
HSD 68 - 81	68	50	2.4	94	35	9 x M8	115	23	36	86	72	4.4	1.4
		55	3.0	111									
		60	3.8	128									
HSD 75 - 81	75	55	3.7	135	70	10 x M10	138	25	40	100	79	4.6	2.5
		60	4.7	156									
		65	5.8	177									
HSD 80 - 81	80	60	4.2	141	70	10 x M10	141	25	41	104	84	5.6	2.5
		65	5.2	160									
		70	6.3	180									
HSD 90 - 81	90 85	65	5.9	182	70	10 x M10	155	30	47	114	94	6.1	3.5
		70	7.2	204									
		75	8.5	227									
HSD 100 - 81	100 95	70	7.4	213	70	12 x M10	170	34	51	124	104	5.1	4.7
		75	8.9	236									
		80	10.4	260									
HSD 110 - 81	110 105	80	12.6	314	120	12 x M12	185	39	60	137	114	6.5	6.3
		85	14.6	345									
		90	16.9	376									
HSD 120 - 81	120 115	85	13.6	320	120	12 x M12	197	42	63	147	124	6.5	7.8
		90	15.7	349									
		95	18.0	379									

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade 12.9, alternative DIN EN ISO 4762 Grade 12.9
From M16 and larger with washers: DIN EN ISO 7416

When ordering please state: (Type x Ød) e.g. HSD 62 - 81 x 60

Shrink Disc Type HSD – Series 81

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm	kg
HSD 125 - 81	125	90	16.4	365	120	12 x M12	215	42	63	152	129	6.5	9.3
		95	18.8	395									
		100	21.3	425									
HSD 135 - 81	135	95	20.3	428	193	10 x M14	230	46	69	165	139	7.2	11.5
		130	23.0	461									
		110	29.0	527									
HSD 140 - 81	140	100	23.0	460	193	12 x M14	230	46	70	172	146	8.2	11.5
		105	25.9	493									
		115	32.2	561									
HSD 155 - 81	155	110	31.1	566	193	12 x M14	263	50	74	186	159	8.7	16
		150	34.6	602									
		125	42.1	673									
HSD 165 - 81	165	120	44.0	734	295	12 x M16	290	56	85	198	169	9	22.5
		160	48.5	776									
		135	58.1	860									
HSD 175 - 81	175	130	54	831	295	12 x M16	300	56	86	208	179	10	23.5
		170	59	874									
		145	70	960									
HSD 185 - 81	185	140	81	1153	295	16 x M16	320	71	103	222	191	11	33.5
		180	88	1207									
		155	102	1315									
HSD 200 - 81	200	150	96	1280	295	16 x M16	340	71	103	238	206	11	37
		195	103	1335									
		190	119	1446									
HSD 220 - 81	220	160	129	1614	570	15 x M20	370	93	122	270	230	13	52
		170	149	1751									
		180	170	1888									
HSD 240 - 81	240	170	151	1778	570	16 x M20	405	95	125	288	248	13	64
		180	172	1916									
		200	220	2195									
HSD 260 - 81	260	190	212	2234	570	15 x M20	430	105	137	306	268	15	78
		200	239	2391									
		220	298	2707									
HSD 280 - 81	280	210	279	2657	570	16 x M20	460	114	149	328	288	19	95
		220	311	2823									
		240	379	3158									
HSD 300 - 81	300	220	332	3016	900	16 x M24	485	123	158	354	308	16	113
		230	367	3194									
		250	444	3554									
HSD 320 - 81	320	240	404	3371	900	18 x M24	520	125	160	380	328	15	133
		250	444	3554									
		270	530	3924									
HSD 340 - 81	340	250	489	3909	900	18 x M24	570	134	171	402	349	17	178
		260	534	4109									
		280	632	4511									
HSD 360 - 81	360	270	625	4626	900	20 x M24	590	140	179	416	369	19	195
		280	678	4841									
		300	791	5275									
HSD 390 - 81	390	290	780	5377	1310	18 x M27	650	146	190	454	398	21	249
		300	841	5608									
		320	972	6074									
HSD 420 - 81	420	320	969	6055	1310	18 x M27	680	167	211	490	428	22	300
		330	1038	6292									
		350	1185	6769									
HSD 440 - 81	440	340	1212	7129	1310	21 x M27	725	174	222	506	448	25	363
		350	1293	7386									
		370	1462	7904									

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade 12.9, alternative DIN EN ISO 4762 Grade 12.9

From M16 and larger with washers: DIN EN ISO 7416

When ordering please state: (Type x Ød) e.g. HSD 360 - 81 x 360

Shrink Disc Type HSD – Series 81

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm	kg
HSD 460 - 81	460	360	1397	7759	1310	21 x M27	745	174	225	534	470	28	376
		370	1484	8020									
		390	1666	8545									
HSD 480 - 81	480	380	1658	8729	1800	20 x M30	790	192	243	552	488	26	476
		390	1756	9006									
		410	1961	9564									
HSD 500 - 81	500	400	1888	9441	1800	21 x M30	835	192	244	572	508	27	540
		410	1994	9727									
		430	2215	10304									
HSD 530 - 81	530	430	2397	11148	1800	24 x M30	890	213	270	606	541	33	680
		440	2521	11461									
		460	2781	12090									
HSD 560 - 81	560	450	2546	11314	1800	24 x M30	920	213	268	632	568	31	710
		460	2672	11617									
		480	2934	12225									
HSD 590 - 81	590	470	2969	12634	1800	28 x M30	960	230	288	664	598	33	830
		480	3109	12955									
		500	3400	13600									
HSD 620 - 81	620	500	3404	13617	1800	28 x M30	970	254	314	706	630	34	900
		520	3713	14281									
		540	4036	14949									
HSD 660 - 81	660	530	4034	15222	2400	24 x M33	1060	260	326	748	670	38	1120
		550	4373	15902									
		570	4726	16584									
HSD 700 - 81	700	560	4605	16447	2400	28 x M33	1140	260	321	780	710	35	1320
		580	4969	17134									
		600	5347	17823									
HSD 750 - 81	750	600	5806	19354	2400	32 x M33	1200	278	345	846	760	42	1540
		620	6231	20099									
		650	6896	21219									
HSD 800 - 81	800	640	6798	21244	2400	32 x M33	1270	296	376	900	810	54	1835
		660	7265	22016									
		700	8249	23569									
HSD 850 - 81	850	650	7214	22197	3100	30 x M36	1340	315	392	950	860	49	2154
		700	8470	24199									
		730	9274	25408									
HSD 900 - 81	900	700	8453	24152	3100	32 x M36	1400	332	419	990	915	56	2433
		730	9256	25360									
		760	10098	26573									
HSD 950 - 81	950	750	10060	26826	3100	36 x M36	1450	360	444	1050	965	56	2752
		780	10949	28076									
		820	12197	29750									

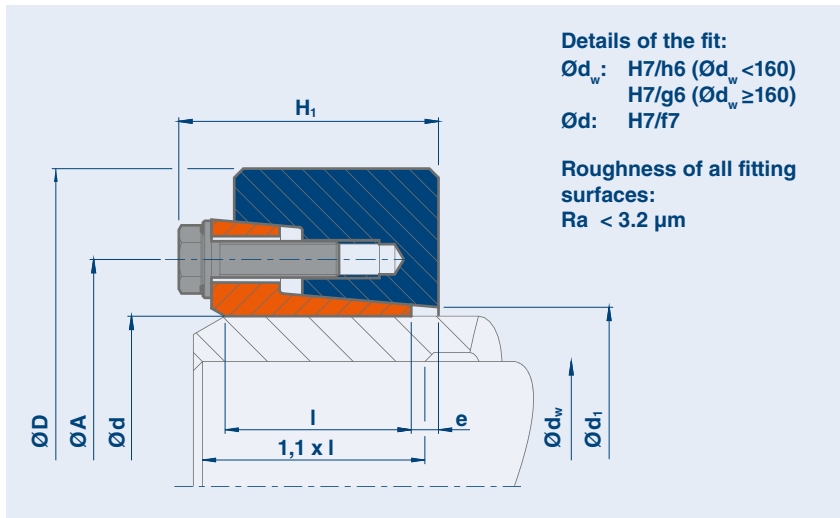
Further sizes on request. Subject to technical change without notice.

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade 12.9, alternative DIN EN ISO 4762 Grade 12.9

From M16 and larger with washers: DIN EN ISO 7416

When ordering please state: (Type x Ød) e.g. HSD 950 - 81 x 950

STÜWE® Shrink Disc Type HSD Series 83



Code

- M_t** Maximum transmissible torque of a shrink disc where $P_{ax} = 0$
- P_{ax}** Maximum transmissible axial load of shrink disc where $M_t = 0$
- M_a** Required tightening torque of the tightening bolts (see also "Installation and Removal Instructions")

Dimensions H_1 and e apply to untightened units.

Shrink Disc Type HSD – Series 83

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d _i mm	e mm	kg
HSD 140 - 83	140	100	30	608	295	8 x M16	240	60	89	174	144	10	15.5
	135	105	34	652									
		115	43	742									
HSD 155 - 83	155	110	45	816	295	9 x M16	263	66	95	194	160	11	20
	150	115	50	867									
		125	61	970									
HSD 165 - 83	165	120	64	1062	295	12 x M16	290	72	103	200	169	11	28
	160	125	70	1122									
		135	84	1244									
HSD 175 - 83	175	130	74	1132	295	12 x M16	300	72	104	210	179	12	29
	170	135	80	1191									
		145	95	1309									
HSD 185 - 83	185	140	106	1519	570	12 x M20	320	92	124	232	189	14	40.5
	180	145	115	1592									
		155	135	1737									
HSD 200 - 83	200	150	127	1696	570	12 x M20	340	92	124	246	204	14	44.5
	195	155	137	1769									
		165	158	1917									
HSD 220 - 83	220	160	163	2042	570	15 x M20	370	117	149	266	224	15	65.5
		165	176	2128									
		180	215	2391									
HSD 240 - 83	240	170	209	2459	570	16 x M20	405	122	154	286	244	15	82
		180	238	2647									
		200	303	3029									
HSD 260 - 83	260	190	288	3036	570	18 x M20	430	136	173	306	265	19	100
		200	325	3247									
		220	404	3675									
HSD 280 - 83	280	210	361	3437	900	16 x M24	460	148	186	334	285	17	126
		220	402	3654									
		240	491	4092									

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade 12.9, alternative DIN EN ISO 4762 Grade 12.9
From M16 and larger with washers: DIN EN ISO 7416

When ordering please state: (Type x $\varnothing d$) e.g. HSD 200 - 83 x 195

Shrink Disc Type HSD – Series 83

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm	kg
HSD 300 - 83	300	230	465	4047	900	16 x M24	485	152	190	354	305	18	141
		240	513	4273									
		250	563	4501									
HSD 320 - 83	320	240	510	4250	900	18 x M24	520	160	200	374	325	19	171
		250	560	4484									
		270	669	4955									
HSD 340 - 83	340	250	664	5316	1310	18 x M27	570	176	221	404	345	21	234
		260	726	5587									
		280	859	6135									
HSD 360 - 83	360	270	763	5655	1310	18 x M27	590	180	226	424	365	22	249
		280	829	5921									
		300	969	6457									
HSD 390 - 83	390	290	972	6703	1310	20 x M27	650	190	240	456	398	26	325
		300	1049	6994									
		320	1213	7580									
HSD 420 - 83	420	320	1297	8105	1310	21 x M27	690	214	268	486	428	30	404
		330	1389	8421									
		350	1585	9057									
HSD 440 - 83	440	340	1585	9323	1800	21 x M30	750	225	284	514	448	31	530
		350	1690	9659									
		370	1912	10336									
HSD 460 - 83	460	360	1747	9706	1800	21 x M30	760	226	280	534	468	30	520
		370	1856	10035									
		390	2086	10697									
HSD 480 - 83	480	380	2105	11076	1800	21 x M30	800	246	309	552	488	37	640
		390	2229	11430									
		410	2489	12142									
HSD 500 - 83	500	400	2552	12762	1800	24 x M30	850	246	306	572	508	34	740
		410	2695	13147									
		430	2993	13922									
HSD 530 - 83	530	430	3108	14455	2400	21 x M33	890	280	346	616	538	40	900
		440	3270	14861									
		460	3606	15678									
HSD 560 - 83	560	450	3452	15341	2400	24 x M33	940	280	344	646	568	36	1000
		460	3622	15749									
		480	3976	16567									
HSD 590 - 83	590	470	4027	17138	2400	24 x M33	980	296	369	666	600	41	1150
		480	4217	17571									
		500	4610	18439									
HSD 620 - 83	620	500	5040	20160	2400	27 x M33	1020	330	406	706	630	46	1370
		510	5263	20641									
		540	5964	22089									
HSD 660 - 83	660	530	5833	22013	3100	28 x M36	1090	334	405	750	670	43	1570
		540	6075	22501									
		570	6832	23972									
HSD 700 - 83	700	560	6485	23160	3100	27 x M36	1160	334	416	800	710	48	1810
		570	6738	23642									
		600	7528	25095									
HSD 750 - 83	750	600	7671	25569	3100	30 x M36	1220	370	446	850	760	48	2140
		620	8234	26562									
		650	9119	28059									
HSD 800 - 83	800	640	9085	28390	3100	36 x M36	1340	360	460	900	810	60	2651
		660	9709	29422									
		700	11024	31497									
HSD 850 - 83	850	650	8924	27459	3100	36 x M36	1440	380	469	950	860	60.5	3271
		700	10474	29927									
		730	11467	31416									
HSD 900 - 83	900	700	10259	29310	3100	38 x M36	1470	400	493	1010	912	64	3370
		730	11233	30774									
		760	12253	32245									
HSD 950 - 83	950	750	12147	32392	3100	40 x M36	1520	430	525	1050	970	66.5	3805
		780	13220	33898									
		820	14726	35917									

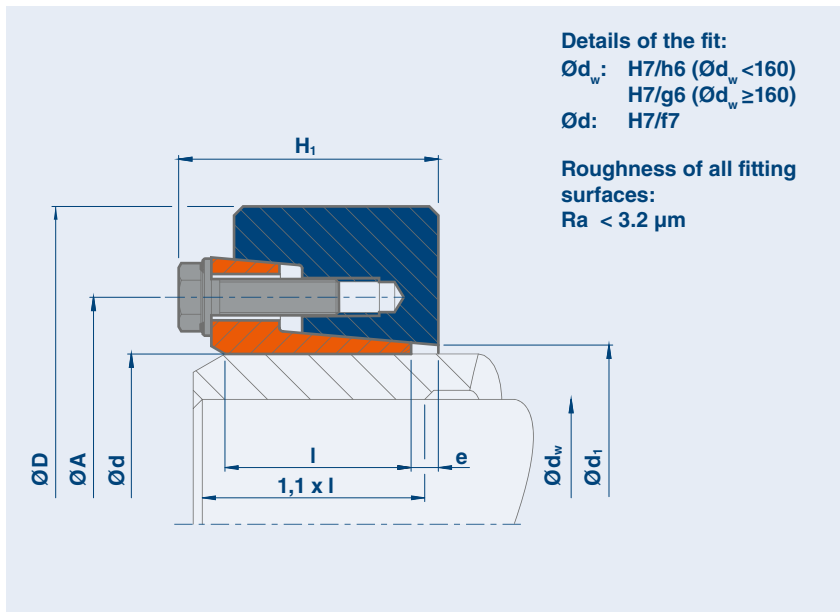
Further sizes on request. Subject to technical change without notice.

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade 12.9, alternative DIN EN ISO 4762 Grade 12.9

From M16 and larger with washers: DIN EN ISO 7416,

When ordering please state: (Type x Ød) e.g. HSD 950 - 83 x 950

STÜWE® Stainless Steel Shrink Disc Type HSD Series 20 - 1.4122



Code

- M_t** Maximum transmissible torque of a shrink disc where $P_{ax} = 0$
- P_{ax}** Maximum transmissible axial load of shrink disc where $M_t = 0$
- M_a** Required tightening torque of the tightening bolts (see also "Installation and Removal Instructions")

Dimensions H_1 and e apply to untightened units.

μ_w The transmissible loads are calculated using a coefficient of friction $\mu_w = 0.1$ for stainless steel materials

Stainless Steel Shrink Disc Type HSD - Series 20 - 1.4122

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm	kg
HSD 24 - 20	24	20	0.08	8	10	6 x M6	50	11.5	18	38	25	1.8	0.2
		21	0.10	10									
		22	0.12	11									
HSD 29 - 20	29	25	0.13	10	10	6 x M6	58	12.5	18	44	31	1.8	0.2
		26	0.15	11									
		27	0.17	13									
HSD 35 - 20	34	29	0.15	10	10	5 x M6	64	12.5	18	52	38	1.8	0.25
		35	0.17	11									
		32	0.21	13									
HSD 40 - 20	38	34	0.19	11	10	6 x M6	69	12.2	18	55	43	2.5	0.3
		40	0.21	12									
		36	0.23	13									
HSD 46 - 20	46	38	0.24	13	10	6 x M6	80	13	23	62	50	2.5	0.5
		47	0.30	15									
		42	0.36	17									
HSD 51 - 20	51	44	0.35	16	10	8 x M6	86	13	23	67	54	2.5	0.5
		45	0.38	17									
		47	0.45	19									
HSD 56 - 20	55	48	0.37	15	10	8 x M6	90	13	23	72	59	2.9	0.6
		56	0.43	17									
		57	0.49	19									
HSD 61 - 20	61	53	0.47	18	10	8 x M6	96	13	24	76	63	2.9	0.7
		55	0.55	20									
		57	0.63	22									
HSD 66 - 20	65	58	0.51	18	10	8 x M6	100	13	24	82	68	2.9	0.7
		66	0.58	19									
		62	0.66	21									

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade A4-80 From M16 and larger with washers: DIN EN ISO 7416, **When ordering please state:** (Type x Ød) e.g. HSD 61 - 20 x 61 - 1.4122

Stainless Steel Shrink Disc Type HSD - Series 20 - 1.4122

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm	kg
HSD 73 - 20	70	63	0.63	20	24	9 x M8	115	18	30	94	77	3.2	1.2
	72	65	0.72	22									
	73	68	0.87	26									
HSD 78 - 20	76	68	0.78	23	24	9 x M8	120	18	30	100	82	3.2	1.3
	78	70	0.87	25									
	72		0.98	27									
HSD 83 - 20	81	73	0.87	24	24	9 x M8	125	18	30	104	87	3.2	1.3
	83	75	0.96	26									
	77		1.07	28									
HSD 88 - 20	86	78	0.98	25	24	9 x M8	130	18	30	110	92	3.5	1.4
	88	80	1.08	27									
	82		1.19	29									
HSD 93 - 20	93	83	1.16	28	24	9 x M8	135	18	31	114	97	3.5	1.4
	94	85	1.28	30									
	87		1.40	32									
HSD 98 - 20	96	88	1.18	27	24	9 x M8	140	18	31	120	102	3.5	1.5
	98	90	1.30	29									
	92		1.42	31									
HSD 103 - 20	103	93	1.44	31	24	10 x M8	145	18	31	124	107	3.5	1.5
	95		1.56	33									
	97		1.69	35									
HSD 108 - 20	106	98	1.46	30	24	10 x M8	150	18	31	128	112	3.5	1.6
	108	100	1.58	32									
	102		1.71	34									
HSD 115 - 20	112	103	1.99	39	24	10 x M8	160	22	35	134	118	3.9	2.2
	115	105	2.14	41									
	108		2.38	44									
HSD 120 - 20	120	108	2.24	42	24	10 x M8	164	22	35	140	124	3.9	2.2
	110		2.40	44									
	113		2.65	47									
HSD 125 - 20	125	113	2.35	42	24	12 x M8	169	22	35	144	129	3.9	2.3
	115		2.50	44									
	118		2.75	47									
HSD 130 - 20	130	118	2.56	43	24	12 x M8	174	22	35	150	134	3.9	2.3
	120		2.72	45									
	123		2.97	48									
HSD 135 - 20	135	123	2.69	44	24	12 x M8	179	22	35	154	139	3.9	2.3
	125		2.86	46									
	128		3.13	49									
HSD 140 - 20	138	128	2.71	42	24	12 x M8	184	22	36	160	144	4.5	2.5
	140	130	2.88	44									
	132		3.05	46									
HSD 145 - 20	145	133	3.02	45	24	12 x M8	189	22	36	164	149	4.5	2.6
	135		3.20	47									
	137		3.38	49									
HSD 150 - 20	150	138	3.25	47	24	12 x M8	194	22	36	170	154	4.5	2.6
	140		3.43	49									
	142		3.61	51									
HSD 160 - 20	160	146	3.41	47	24	12 x M8	204	22	36	180	164	4.5	2.7
	150		3.77	50									
	152		3.96	52									

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade A4-80 From M16 and larger with washers: DIN EN ISO 7416, **When ordering please state:** (Type x Ød) e.g. HSD 140 - 20 x 138 - 1.4122

Stainless Steel Shrink Disc Type HSD - Series 20 - 1.4122

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm	kg
HSD 170 - 20	166	156	3.45	44	24	12 x M8	214	22	36	190	174	4.5	3
	170	160	3.81	48									
		162	3.99	49									
HSD 182 - 20	182	166	4.88	59	24	14 x M8	230	25	41	206	188	5.6	3.9
		170	5.36	63									
		172	5.61	65									
HSD 192 - 20	189	176	5.03	57	24	14 x M8	240	25	41	216	198	5.6	4
		192	5.50	61									
		182	5.74	63									
HSD 202 - 20	202	186	5.66	61	24	15 x M8	250	25	41	224	208	5.6	4.7
		190	6.18	65									
		192	6.45	67									
HSD 212 - 20	212	196	6.27	64	24	15 x M8	260	25	41	234	218	5.6	4.7
		200	6.81	68									
		202	7.08	70									
HSD 222 - 20	222	206	6.73	65	24	16 x M8	270	25	42	244	228	6.5	5
		210	7.27	69									
		212	7.54	71									
HSD 232 - 20	232	216	7.18	66	24	16 x M8	280	25	42	254	238	6.5	5
		220	7.73	70									
		222	8.01	72									
HSD 242 - 20	242	226	7.63	68	24	16 x M8	290	25	42	264	248	6.5	5
		230	8.19	71									
		232	8.47	73									
HSD 252 - 20	252	234	7.84	67	24	16 x M8	300	25	42	274	258	6.5	5.2
		238	8.39	71									
		240	8.67	72									
HSD 262 - 20	262	244	8.30	68	24	18 x M8	310	25	42	286	268	6.5	5.4
		248	8.86	71									
		250	9.14	73									

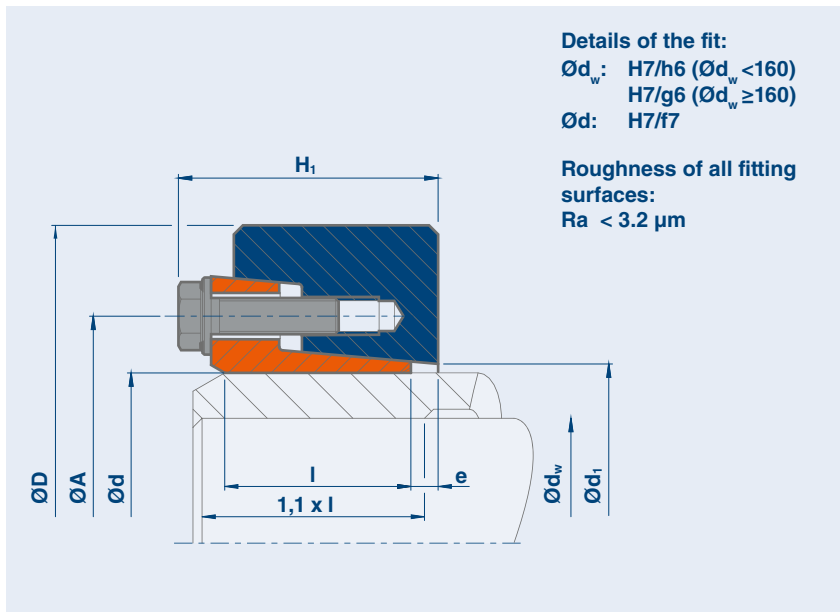
Further sizes on request. Subject to technical change without notice.

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade A4-80

From M16 and larger with washers: DIN EN ISO 7416

When ordering please state: (Type x Ød) e.g. HSD 202 - 20 x 202 - 1.4122

STÜWE® Stainless Steel Shrink Disc Type HSD Series 20 - 1.4462



Code

M_t Maximum transmissible torque of a shrink disc where $P_{ax} = 0$

P_{ax} Maximum transmissible axial load of shrink disc where $M_t = 0$

M_a Required tightening torque of the tightening bolts (see also "Installation and Removal Instructions")

Dimensions H_1 and e apply to untightened units.

μ_w The transmissible loads are calculated using a coefficient of friction $\mu_w = 0.1$ for rust-free materials

Stainless Steel Shrink Disc Type HSD - Series 20 - 1.4462

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm	kg
HSD 24 - 20	24	20	0.06	6	10	6 x M6	50	11.5	18	38	25	1.8	0.2
		21	0.07	7									
		22	0.09	8									
HSD 29 - 20	29	25	0.09	8	10	6 x M6	58	12.5	18	44	31	1.8	0.2
		26	0.11	9									
		27	0.13	10									
HSD 35 - 20	34	29	0.11	8	10	6 x M6	64	12.5	18	52	38	1.8	0.25
		35	0.13	8									
		32	0.16	10									
HSD 40 - 20	38	34	0.14	8	10	6 x M6	69	12.2	18	55	43	2.5	0.3
		40	0.16	9									
		36	0.18	10									
HSD 46 - 20	46	38	0.16	8	10	6 x M6	80	13	23	62	50	2.5	0.5
		47	0.20	10									
		42	0.25	12									
HSD 51 - 20	51	44	0.24	11	10	8 x M6	86	13	23	67	54	2.5	0.5
		45	0.26	12									
		47	0.32	14									
HSD 56 - 20	55	48	0.24	10	10	8 x M6	90	13	23	72	59	2.9	0.6
		56	0.29	12									
		57	0.35	13									
HSD 61 - 20	61	53	0.32	12	10	8 x M6	96	13	24	76	63	2.9	0.7
		55	0.38	14									
		57	0.45	16									
HSD 66 - 20	65	58	0.34	12	10	8 x M6	100	13	24	82	68	2.9	0.7
		66	0.40	13									
		62	0.46	15									

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade A4-80

From M16 and larger with washers: DIN EN ISO 7416

When ordering please state: (Type x Ød) e.g. HSD 61 - 20 x 61 - 61 - 1.4462

Stainless Steel Shrink Disc Type HSD - Series 20 - 1.4462

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm	kg
HSD 73 - 20	70	63	0.38	12	24	9 x M8	115	18	30	94	77	3.2	1.2
	72	65	0.46	14									
	73	68	0.58	17									
HSD 78 - 20	76	68	0.51	15	24	9 x M8	120	18	30	100	82	3.2	1.3
	78	70	0.59	17									
		72	0.67	19									
HSD 83 - 20	81	73	0.57	16	24	9 x M8	125	18	30	104	87	3.2	1.3
	83	75	0.65	17									
		77	0.74	19									
HSD 88 - 20	86	78	0.66	17	24	9 x M8	130	18	30	110	92	3.5	1.4
	88	80	0.74	19									
		82	0.83	20									
HSD 93 - 20	93	83	0.82	20	24	9 x M8	135	18	31	114	97	3.5	1.4
	94	85	0.92	22									
		87	1.02	24									
HSD 98 - 20	96	88	0.82	19	24	9 x M8	140	18	31	120	102	3.5	1.5
	98	90	0.91	20									
		92	1.02	22									
HSD 103 - 20	103	93	1.01	22	24	10 x M8	145	18	31	124	107	3.5	1.5
		95	1.11	23									
		97	1.22	25									
HSD 108 - 20	106	98	1.03	21	24	10 x M8	150	18	31	128	112	3.5	1.6
	108	100	1.13	23									
		102	1.24	24									
HSD 115 - 20	112	103	1.39	27	24	10 x M8	160	22	35	134	118	3.9	2.2
	115	105	1.52	29									
		108	1.72	32									
HSD 120 - 20	120	108	1.65	31	24	10 x M8	164	22	35	140	124	3.9	2.2
		110	1.79	32									
		113	2.00	35									
HSD 125 - 20	125	113	1.72	30	24	12 x M8	169	22	35	144	129	3.9	2.3
		115	1.86	32									
		118	2.07	35									
HSD 130 - 20	130	118	1.85	31	24	12 x M8	174	22	35	150	134	3.9	2.3
		120	1.99	33									
		123	2.20	36									
HSD 135 - 20	135	123	1.89	31	24	12 x M8	179	22	35	154	139	3.9	2.3
		125	2.04	33									
		128	2.27	35									
HSD 140 - 20	138	128	1.93	30	24	12 x M8	184	22	36	160	144	4.5	2.5
	140	130	2.08	32									
		132	2.23	34									
HSD 145 - 20	145	133	2.21	33	24	12 x M8	189	22	36	164	149	4.5	2.6
		135	2.36	35									
		137	2.52	37									
HSD 150 - 20	150	138	2.34	34	24	12 x M8	194	22	36	170	154	4.5	2.6
		140	2.50	36									
		142	2.66	37									
HSD 160 - 20	160	146	2.46	34	24	12 x M8	204	22	36	180	164	4.5	2.7
		150	2.77	37									
		152	2.93	39									

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade A4-80 From M16 and larger with washers: DIN EN ISO 7416, **When ordering please state:** (Type x Ød) e.g. HSD 140 - 20 x 138 - 1.4462

Stainless Steel Shrink Disc Type HSD - Series 20 - 1.4462

Type	d mm	d _w mm	M _t kNm	P _{ax} kN	M _a Nm	B*	D mm	l mm	H ₁ mm	A mm	d ₁ mm	e mm	kg
HSD 170 - 20	166	156	2.43	31	24	12 x M8	214	22	36	190	174	4.5	3
	170	160	2.73	34									
	162	162	2.89	36									
HSD 182 - 20	182	166	3.59	43	24	14 x M8	230	25	41	206	188	5.6	3.9
	170	170	4.00	47									
	172	172	4.22	49									
HSD 192 - 20	189	176	3.64	41	24	14 x M8	240	25	41	216	198	5.6	4
	192	180	4.05	45									
	182	182	4.26	47									
HSD 202 - 20	202	186	4.11	44	24	15 x M8	250	25	41	224	208	5.6	4.7
	190	190	4.56	48									
	192	192	4.79	50									
HSD 212 - 20	212	196	4.54	46	24	15 x M8	260	25	41	234	218	5.6	4.7
	200	200	5.00	50									
	202	202	5.24	52									
HSD 222 - 20	222	206	4.90	48	24	16 x M8	270	25	42	244	228	6.5	5
	210	210	5.36	51									
	212	212	5.61	53									
HSD 232 - 20	232	216	5.35	50	24	16 x M8	280	25	42	254	238	6.5	5
	220	220	5.83	53									
	222	222	6.07	55									
HSD 242 - 20	242	226	5.71	51	24	16 x M8	290	25	42	264	248	6.5	5
	230	230	6.19	54									
	232	232	6.44	56									
HSD 252 - 20	252	234	5.76	49	24	16 x M8	300	25	42	274	258	6.5	5.2
	238	238	6.23	52									
	240	240	6.48	54									
HSD 262 - 20	262	244	6.12	50	24	18 x M8	310	25	42	286	268	6.5	5.4
	248	248	6.60	53									
	250	250	6.84	55									

Further sizes on request. Subject to technical change without notice.

*Tightening bolts: standard DIN EN ISO 4014/4017 Grade A4-80

From M16 and larger with washers: DIN EN ISO 7416

When ordering please state: (Type x Ød) e.g. HSD 202 - 20 x 202 - 1.4462