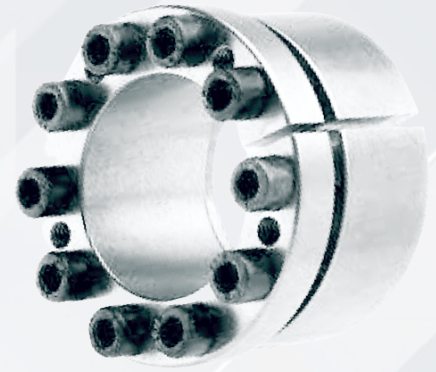
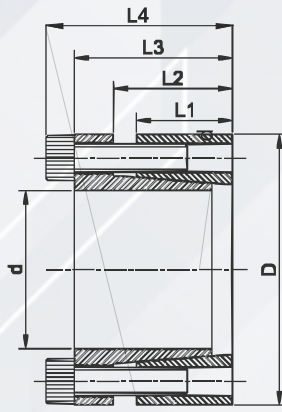




**SELF CENTERING
MEDIUM TORQUE**

M01



Product Code	Dimensions [mm]					LOCKING SCREWS			SPECIFICATION			
	d	D	L1	L2	L3	No.	SIZE	Ts Nm	Tmax Nm	Fax	Ps N/mm ²	Ph N/mm ²
M01018047	18	47	17	23	28.5	5	M 6	14	327	36	314	121
M01019047	19	47	17	23	28.5	5	M 6	14	346	36	297	121
M01020047	20	47	17	23	28.5	5	M 6	14	364	36	283	121
M01022047	22	47	17	23	28.5	5	M 6	14	400	36	257	121
M01024050	24	50	17	23	28.5	6	M 6	14	524	43	236	136
M01025050	25	50	17	23	28.5	6	M 6	14	546	43	271	136
M01028055	28	55	17	23	28.5	6	M 6	14	611	43	242	124
M01030055	30	55	17	23	28.5	6	M 6	14	655	43	226	124
M01032060	32	60	17	23	28.5	8	M 6	14	931	58	283	151
M01035060	35	60	17	23	28.5	8	M 6	14	1018	58	258	151
M01038065	38	65	17	23	28.5	8	M 6	14	1106	58	238	140
M01040065	40	65	17	23	28.5	8	M 6	14	1164	58	226	140
M01042075	42	75	20	27	34.5	7	M 8	34	1991	94	307	168
M01045075	45	75	20	27	34.5	7	M 8	34	2133	94	287	168
M01048080	48	80	20	27	34.5	7	M 8	34	2330	94	269	161
M01050080	50	80	20	27	34.5	7	M 8	34	2371	94	269	157
M01055085	55	85	20	27	34.5	8	M 8	34	2980	108	258	159
M01060090	60	90	20	27	34.5	8	M 8	34	3251	108	268	160
M01065095	65	95	20	27	34.5	9	M 8	34	3962	121	246	170
M01070110	70	110	24	31	40.5	8	M 10	68	6151	175	255	177
M01075115	75	115	24	31	40.5	8	M 10	68	6591	175	281	169
M01080120	80	120	24	31	40.5	8	M 10	68	7030	175	262	162
M01085125	85	125	24	31	40.5	9	M 10	68	8403	197	246	175
M01090130	90	130	24	31	40.5	9	M 10	68	8897	197	261	168
M01095135	95	135	24	31	40.5	10	M 10	68	10435	219	246	180
M01100145	100	145	26	33	45	8	M 12	122	13478	269	259	190
M01110155	110	155	26	33	45	8	M 12	122	14826	269	270	177
M01120165	120	165	26	33	45	9	M 12	122	18195	303	245	188
M01130180	130	180	34	41	55	9	M 14	183	25452	391	253	170
M01140190	140	190	34	41	55	9	M 14	183	27410	391	240	161
M01150200	150	200	34	41	55	10	M 14	183	32631	435	223	170

- **Tmax** Maximum Transmitting torque **Nm**
- **Ts** Screw tightening torque **Nm**
- **Fax** Axial Force **kN**
- **Ps** Specific Pressure on shaft **N/mm²**
- **Ph** Specific Pressure on hub **N/mm²**

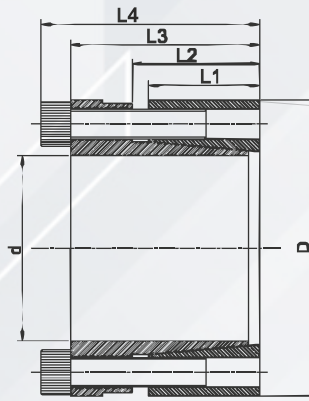
Instruction:

- 1 Surface finish require for shaft and hub bore Ra<=3.2 m
- 2 Recommend mounting tolerance for shaft h8 for hub H8
- 3 Do not use lubricants, Molykote molybdenum disulfide based oil.



**SELF CENTERING
MEDIUM-HIGH TORQUE**

M02



Product Code	Dimensions [mm]						LOCKING SCREWS			SPECIFICATIONS			
	d	D	L1	L2	L3	L4	No.	SIZE	Ts Nm	T max Nm	Fax kN	Ps N/mm ²	Ph N/mm ²
M02018047	18	47	26	30	42	48	4	M 6	17	340	38	214	82
M02019047	19	47	26	30	42	48	4	M 6	17	360	38	203	82
M02020047	20	47	26	30	42	48	6	M 6	17	570	57	289	123
M02022047	22	47	26	30	42	48	6	M 6	17	620	57	262	123
M02024050	24	50	26	31	43	49	6	M 6	17	680	57	241	115
M02025050	25	50	26	31	43	49	6	M 6	17	710	57	231	115
M02028055	28	55	26	31	43	49	6	M 6	17	790	57	206	105
M02030055	30	55	26	31	43	49	6	M 6	17	850	57	192	105
M02032060	32	60	26	31	43	49	8	M 6	17	1 210	76	241	128
M02035060	35	60	26	31	43	49	8	M 6	17	1 320	76	220	128
M02038065	38	65	26	31	43	49	8	M 6	17	1 430	76	203	118
M02040065	40	65	26	31	43	49	8	M 6	17	1 510	76	192	118
M02042075	42	75	30	36	51	59	6	M 8	41	2 200	105	220	123
M02045075	45	75	30	36	51	59	6	M 8	41	2 350	105	205	123
M02048080	48	80	30	36	51	59	6	M 8	41	2 510	105	193	116
M02050080	50	80	30	36	51	59	6	M 8	41	2 610	105	185	116
M02055085	55	85	30	36	51	59	8	M 8	41	3 830	139	224	145
M02060090	60	90	30	36	51	59	8	M 8	41	4 180	139	205	137
M02065095	65	95	30	36	51	59	8	M 8	41	4 530	139	190	130
M02070110	70	110	40	46	59	69	7	M 10	83	7 010	200	190	121
M02075115	75	115	40	46	59	69	7	M 10	83	7 510	200	177	115
M02080120	80	120	40	46	59	69	7	M 10	83	8 010	200	166	111
M02085125	85	125	40	46	59	69	8	M 10	83	9 700	229	179	121
M02090130	90	130	40	46	59	69	8	M 10	83	10 300	229	169	117
M02095135	95	135	40	46	59	69	10	M 10	83	13 600	286	200	141
M02100145	100	145	46	52	70	82	7	M 12	145	15 000	299	172	119
M02110155	110	155	46	52	70	82	7	M 12	145	16 400	299	157	111
M02120165	120	165	46	52	70	82	8	M 12	145	20 500	342	164	119
M02130180	130	180	46	52	70	82	10	M 12	145	27 800	427	190	137
M02140190	140	190	51	59	82	86	8	M 14	230	32 600	466	173	128
M02150200	150	200	51	59	82	86	10	M 14	230	43 700	583	202	152

- **Tmax** Maximum Transmitting torque **Nm**
- **Ts** Screw tightening torque **Nm**
- **Fax** Axial Force **kN**
- **Ps** Specific Pressure on shaft **N/mm²**
- **Ph** Specific Pressure on hub **N/mm²**

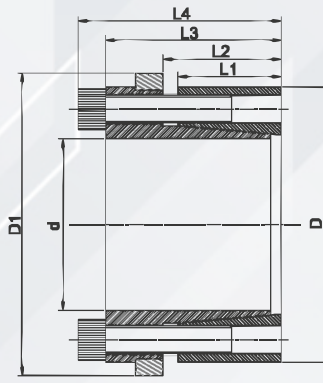
Instruction:

- 1 Surface finish require for shaft and hub bore Ra<=3.2 m
- 2 Recommend mounting tolerance for shaft h8 for hub H8
- 3 Do not use lubricants, Molykote molybdenum disulfide based oil.



**SELF CENTERING
MEDIUM-HIGH TORQUE**

M04



Product Code	Dimensions [mm]							LOCKING SCREWS			SPECIFICATIONS			
	d	D	D1	L1	L2	L3	L4	No.	SIZE	Ts Nm	T max Nm	Fax kN	Ps N/mm ²	Ph N/mm ²
M04018047	18	47	53	26	30	42	48	4	M 6	17	210	23	132	50
M04019047	19	47	53	26	30	42	48	4	M 6	17	220	23	125	50
M04020047	20	47	53	26	30	42	48	6	M 6	17	350	35	178	76
M04022047	22	47	53	26	30	42	48	6	M 6	17	380	35	162	76
M04024050	24	50	56	26	31	43	49	6	M 6	17	420	35	148	71
M04025050	25	50	56	26	31	43	49	6	M 6	17	440	35	142	71
M04028055	28	55	61	26	31	43	49	6	M 6	17	490	35	127	65
M04030055	30	55	61	26	31	43	49	6	M 6	17	520	35	118	65
M04032060	32	60	66	26	31	43	49	8	M 6	17	740	46	148	79
M04035060	35	60	66	26	31	43	49	8	M 6	17	810	46	135	79
M04038065	38	65	71	26	31	43	49	8	M 6	17	880	46	125	73
M04040065	40	65	71	26	31	43	49	8	M 6	17	930	46	118	73
M04042075	42	75	81	30	36	51	59	6	M 8	41	1 350	64	135	76
M04045075	45	75	81	30	36	51	59	6	M 8	41	1 450	64	126	76
M04048080	48	80	86	30	36	51	59	6	M 8	41	1 540	64	119	71
M04050080	50	80	86	30	36	51	59	6	M 8	41	1 610	64	114	71
M04055085	55	85	91	30	36	51	59	8	M 8	41	2 360	86	138	89
M04060090	60	90	96	30	36	51	59	8	M 8	41	2 570	86	126	84
M04065095	65	95	102	30	36	51	59	8	M 8	41	2 790	86	117	80
M04070110	70	110	117	40	46	59	69	7	M 10	83	4 310	123	117	74
M04075115	75	115	122	40	46	59	69	7	M 10	83	4 620	123	109	71
M04080120	80	120	127	40	46	59	69	7	M 10	83	4 930	123	102	68
M04085125	85	125	132	40	46	59	69	8	M 10	83	5 990	141	110	75
M04090130	90	130	137	40	46	59	69	8	M 10	83	6 340	141	104	72
M04095135	95	135	142	40	46	59	69	10	M 10	83	8 360	176	123	86
M04100145	100	145	153	46	52	70	82	7	M 12	145	9 200	184	106	73
M04110155	110	155	163	46	52	70	82	7	M 12	145	10 100	184	96	68
M04120165	120	165	173	46	52	70	82	8	M 12	145	12 600	210	101	74
M04130180	130	180	188	46	52	70	82	10	M 12	145	17 100	263	117	84
M04140190	140	190	199	51	59	82	86	8	M 14	230	20 100	287	107	79
M04150200	150	200	209	51	59	82	86	10	M 14	230	26 900	359	124	93

- **Tmax** Maximum Transmitting torque **Nm**
- **Ts** Screw tightening torque **Nm**
- **Fax** Axial Force **kN**
- **Ps** Specific Pressure on shaft **N/mm²**
- **Ph** Specific Pressure on hub **N/mm²**

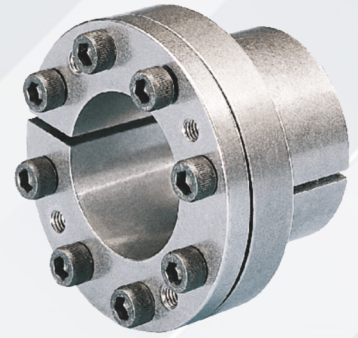
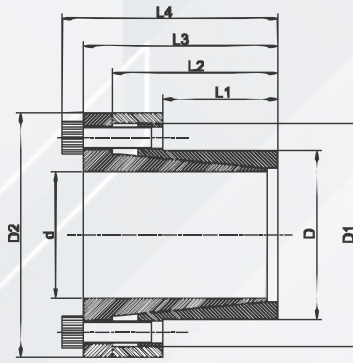
Instruction:

- 1 Surface finish require for shaft and hub bore Ra<=3.2 m
- 2 Recommend mounting tolerance for shaft h8 for hub H8
- 3 Do not use lubricants, Molykote molybdenum disulfide based oil.



**SELF CENTERING
MEDIUM-HIGH TORQUE**

M05



Product Code	Dimensions [mm]								LOCKING SCREWS			SPECIFICATIONS			
	d	D	D1	D2	L1	L2	L3	L4	No.	SIZE	Ts Nm	T max Nm	Fax kN	Ps N/mm ²	Ph N/mm ²
M05014023	14	23	33	38	14	24	28	32	4	M 4	5	66	9.4	114	78
M05015024	15	24	40	44	16	30	37	43	3	M 6	17	125	16.7	167	115
M05016024	16	24	40	44	16	30	37	43	3	M 6	17	134	16.7	159	115
M05018026	18	26	42	47	18	33	40	46	4	M 6	17	200	22.3	169	126
M05019027	19	27	43	49	18	33	40	46	4	M 6	17	212	22.3	160	122
M05020028	20	28	44	50	18	33	40	46	4	M 6	17	223	22.3	152	117
M05022032	22	32	48	54	25	40	47	53	4	M 6	17	245	22.3	100	74
M05024034	24	34	50	56	25	40	47	53	6	M 6	17	401	33.4	138	104
M05025034	25	34	50	56	25	40	47	53	6	M 6	17	418	33.4	133	104
M05028039	28	39	55	61	25	40	47	53	6	M 6	17	468	33.4	117	91
M05030041	30	41	57	62	25	40	47	53	6	M 6	17	501	33.4	109	86
M05032043	32	43	59	65	25	40	47	53	8	M 6	17	713	44.6	137	110
M05035047	35	47	62	68	32	47	54	60	8	M 6	17	780	44.6	99	79
M05038050	38	50	66	72	32	47	54	60	8	M 6	17	846	44.6	91	74
M05040053	40	53	69	75	32	47	54	60	8	M 6	17	891	44.6	86	70
M05042055	42	55	71	78	32	47	54	60	8	M 6	17	936	44.6	82	67
M05045059	45	59	80	86	45	62	70	78	8	M 8	41	1850	82.3	102	82
M05048062	48	62	81	87	45	62	70	78	8	M 8	41	1980	82.3	96	78
M05050065	50	65	86	92	45	62	70	78	8	M 8	41	2060	82.3	91	75
M05055071	55	71	92	98	55	73	81	89	9	M 8	41	2550	92.6	77	63
M05060077	60	77	98	104	55	73	81	89	9	M 8	41	2780	92.6	70	58
M05065084	65	84	105	111	55	73	81	89	9	M 8	41	3010	92.6	65	53
M05070090	70	90	113	119	65	86	96	106	9	M 10	83	5320	152	84	69
M05075095	75	95	119	126	65	86	96	106	9	M 10	83	5700	152	78	65
M05080100	80	100	125	131	65	86	96	106	12	M 10	83	8110	203	98	83
M05085106	85	106	131	137	65	86	96	106	12	M 10	83	8610	203	92	78
M05090112	90	112	137	144	65	86	96	106	12	M 10	83	9120	203	87	74
M05095120	95	120	142	149	65	86	96	106	14	M 10	83	11230	236	95	80
M05100125	100	125	153	160	70	94	107	119	12	M 12	145	15100	303	108	92
M05110140	110	140	168	174	70	94	107	119	12	M 12	145	16600	303	97	82
M05120155	120	155	187	198	90	115	128	140	16	M 12	145	24200	404	93	77
M05130165	130	165	197	208	90	115	128	140	16	M 12	145	26200	404	85	72

- **Tmax** Maximum Transmitting torque **Nm**
- **Ts** Screw tightening torque **Nm**
- **Fax** Axial Force **kN**
- **Ps** Specific Pressure on shaft **N/mm²**
- **Ph** Specific Pressure on hub **N/mm²**

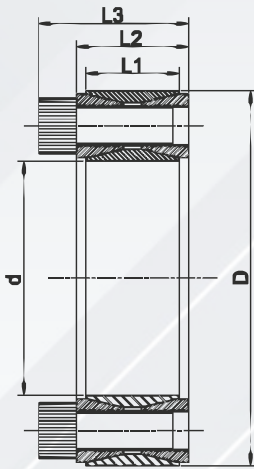
Instruction:

- 1 Surface finish require for shaft and hub bore Ra<=3.2 μm
- 2 Recommend mounting tolerance for shaft h8 for hub H8
- 3 Do not use lubricants, Molykote molybdenum disulfide based oil.



**SELF CENTERING
MEDIUM-HIGH TORQUE**

M06



Product Code	Dimensions [mm]					LOCKING SCREWS			SPECIFICATIONS			
	d	D	L1	L2	L3	No.	SIZE	Ts Nm	T max Nm	Fax kN	Ps N/mm ²	Ph N/mm ²
M06018047	18	47	17	20	26	8	M 6	17	300	33	332	127
M06019047	19	47	17	20	26	8	M 6	17	310	33	314	127
M06020047	20	47	17	20	26	8	M 6	17	330	33	298	127
M06022047	22	47	17	20	26	8	M 6	17	360	33	271	127
M06024050	24	50	17	20	26	9	M 6	17	440	37	280	134
M06025050	25	50	17	20	26	9	M 6	17	460	36	269	134
M06028055	28	55	17	20	26	10	M 6	17	560	40	266	136
M06030055	30	55	17	20	26	10	M 6	17	600	40	249	136
M06032060	32	60	17	20	26	12	M 6	17	770	48	280	149
M06035060	35	60	17	20	26	12	M 6	17	880	48	256	149
M06038065	38	65	17	20	26	14	M 6	17	1050	55	275	161
M06040065	40	65	17	20	26	14	M 6	17	1100	55	261	161
M06042075	42	75	20	24	32	12	M 8	41	1830	87	336	188
M06045075	45	75	20	24	32	12	M 8	41	1950	87	314	188
M06048080	48	80	20	24	32	12	M 8	41	2080	87	294	176
M06050080	50	80	20	24	32	12	M 8	41	2160	86	282	176
M06055085	55	85	20	24	32	14	M 8	41	2750	100	300	194
M06060090	60	90	20	24	32	14	M 8	41	2990	100	275	183
M06065095	65	95	20	24	32	16	M 8	41	3680	113	290	198
M06070110	70	110	24	28	38	14	M 10	83	5650	162	321	204
M06075115	75	115	24	28	38	14	M 10	83	6030	161	300	196
M06080120	80	120	24	28	38	14	M 10	83	6410	160	281	187
M06085125	85	125	24	28	38	16	M 10	83	7750	182	302	206
M06090130	90	130	24	28	38	16	M 10	83	8180	182	286	198
M06095135	95	135	24	28	38	18	M 10	83	9680	204	304	214
M06100145	100	145	26	33	45	14	M 12	145	11690	234	307	212
M06110155	110	155	26	33	45	14	M 12	145	12780	232	279	198
M06120165	120	165	26	33	45	16	M 12	145	15850	264	293	213
M06130180	130	180	34	38	50	20	M 12	145	21360	329	258	187
M06140190	140	190	34	38	50	22	M 12	145	25180	360	264	194
M06150200	150	200	34	38	50	24	M 12	145	29310	391	269	201
M06160210	160	210	34	38	50	26	M 12	145	33730	422	273	208
M06170225	170	225	38	44	58	22	M 14	230	41210	485	265	200
M06180235	180	235	38	44	58	24	M 14	230	47430	527	273	209
M06190250	190	250	46	52	66	28	M 14	230	58360	613	249	190
M06200260	200	260	46	52	66	30	M 14	230	65450	655	254	195
M06220285	220	285	50	56	72	26	M 16	355	85090	774	252	195
M06240305	240	305	50	56	72	30	M 16	355	106520	888	267	210
M06260325	260	325	50	56	72	34	M 16	355	130130	1001	279	223
M06280355	280	355	60	66	84	32	M 18	485	157960	1128	245	193
M06300375	300	375	60	66	84	36	M 18	485	189580	1264	257	206
M06320405	320	405	72	78	98	36	M 20	690	260250	1627	259	205
M06340425	340	425	72	78	98	36	M 20	690	275470	1620	244	195
M06360455	360	455	84	90	112	36	M 22	930	356360	1980	242	192
M06380475	380	475	84	90	112	36	M 22	930	374890	1973	230	184

- **Tmax** Maximum Transmitting torque **Nm**
- **Ts** Screw tightening torque **Nm**
- **Fax** Axial Force **kN**
- **Ps** Specific Pressure on shaft **N/mm²**
- **Ph** Specific Pressure on hub **N/mm²**

Instruction:

- 1 Surface finish require for shaft and hub bore Ra<=3.2 m
- 2 Recommend mounting tolerance for shaft h8 for hub H8
- 3 Do not use lubricants, Molykote molybdenum disulfide based oil.



**NOT SELF CENTERING
LOW TORQUE**

M07



Product Code	Dimensions [mm]				Load [N]		SPECIFICATIONS			
	d	D	L1	L2	Fa	Fb	T max Nm	Fax N	Ps N/mm ²	Ph N/mm ²
M07018022	18	22	5.3	6.3	9 150	20 000	38.8	4 320	120	98
M07019024	19	24	5.3	6.3	12 780	21 100	43.3	4 560	120	95
M07020025	20	25	5.3	6.3	12 250	22 200	48.0	4 800	120	96
M07022026	22	26	5.3	6.3	9 340	24 400	58.0	5 270	120	102
M07024028	24	28	5.3	6.3	8 650	26 600	69	5 750	120	103
M07025030	25	30	5.3	6.3	10 130	27 800	75	5 990	120	100
M07028032	28	32	5.3	6.3	7 540	31 100	94	6 710	120	105
M07030035	30	35	5.3	6.3	8 640	33 300	108	7 190	120	103
M07032036	32	36	5.3	6.3	7 830	35 500	123	7 670	120	107
M07035040	35	40	6.0	7.0	9 990	44 000	166	9 500	120	105
M07036042	36	42	6.0	7.0	11 450	45 200	176	9 770	120	103
M07038044	38	44	6.6	7.0	10 920	47 800	196	10 300	120	104
M07040045	40	45	6.6	8.0	13 790	55 300	239	11 900	120	107
M07042048	42	48	8.6	8.0	15 530	58 100	263	12 500	120	105
M07045052	45	52	8.6	10.0	27 180	81 100	394	17 500	120	104
M07048055	48	55	8.6	10.0	25 550	86 500	448	18 700	120	105
M07050057	50	57	8.6	10.0	24 560	90 100	486	19 500	120	105
M07055062	55	62	10.4	10.0	21 640	99 100	588	21 400	120	106
M07056064	56	64	10.4	12.0	29 010	122 000	738	26 300	120	105
M07060068	60	68	10.4	12.0	27 260	131 000	847	28 200	120	106
M07063071	63	71	10.4	12.0	26 080	137 000	934	29 600	120	106
M07065073	65	73	12.2	12.0	25 350	142 000	994	30 600	120	107
M07070079	70	79	12.2	14.0	30 900	179 000	1 350	38 600	120	106
M07071080	71	80	12.2	14.0	30 510	181 000	1 390	39 200	120	107
M07075084	75	84	15.0	14.0	35 600	192 000	1 550	41 400	120	107
M07080091	80	91	15.0	17.0	50 030	251 000	2 170	54 300	120	105
M07085096	85	96	15.0	17.0	45 250	267 000	2 450	57 700	120	106
M07090101	90	101	15.0	17.0	42 950	283 000	2 750	61 100	120	107
M07095106	95	106	15.0	17.0	40 880	299 000	3 060	64 500	120	108
M07100114	100	114	18.7	21.0	60 460	392 000	4 230	84 600	120	105
M07110124	110	124	18.7	21.0	67 910	431 000	5 120	93 100	120	106
M07120134	120	134	18.7	21.0	62 420	470 000	6 090	102 000	120	107
M07130148	130	148	25.3	28.0	94 870	689 000	9 670	149 000	120	105
M07140158	140	158	25.3	28.0	88 710	742 000	11 220	160 000	120	106
M07150168	150	168	25.3	28.0	83 290	795 000	12 900	172 000	120	107
M07160178	160	178	25.3	28.0	78 500	848 000	14 700	183 000	120	108
M07170191	170	191	30.0	33.0	122 700	1 068 000	19 600	231 000	120	107
M07180201	180	201	30.0	33.0	116 100	1 131 000	22 000	244 000	120	107
M07190211	190	211	30.0	33.0	105 900	1 194 000	24 500	258 000	120	108
M07200224	200	224	34.8	38.0	132 400	1 458 000	31 500	315 000	120	107

- **Tmax** Maximum Transmitting torque **Nm**
- **Fax** Axial Force **kN**
- **Ps** Specific Pressure on shaft **N/mm²**
- **Ph** Specific Pressure on hub **N/mm²**

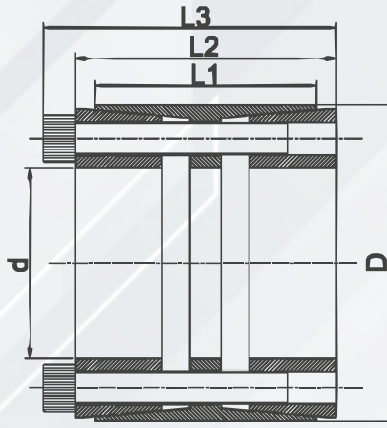
Instruction:

- 1 Surface finish require for shaft and hub bore Ra<=0.8 m
- 2 Recommend mounting tolerance for shaft h7 for hub H7
- 3 Do not use lubricants, Molykote molybdenum disulfide based oil.



**SELF CENTERING
VERY HIGH TORQUE**

M08



Product Code	Dimensions [mm]					LOCKING SCREWS			SPECIFICATIONS			
	d	D	L1	L2	L3	No.	SIZE	Ts Nm	T max Nm	Fax kN	Ps N/mm ²	Ph N/mm ²
M08024055	24	55	32	40	46	6	M 6	17	800	67	308	134
M08025055	25	55	32	40	46	6	M 6	17	840	67	295	134
M08028055	28	55	32	40	46	6	M 6	17	940	67	264	134
M08030055	30	55	32	40	46	6	M 6	17	1 000	67	246	134
M08032060	32	60	44	54	60	7	M 6	17	1 250	78	190	101
M08035060	35	60	44	54	60	7	M 6	17	1 360	78	174	101
M08038075	38	75	44	54	62	7	M 8	41	2 740	144	296	150
M08040075	40	75	44	54	62	7	M 8	41	2 880	144	281	150
M08042075	42	75	44	54	62	7	M 8	41	3 030	144	268	150
M08045075	45	75	44	54	62	7	M 8	41	3 240	144	250	150
M08048080	48	80	56	66	74	8	M 8	41	3 950	165	207	124
M08050080	50	80	56	66	74	8	M 8	41	4 120	165	198	124
M08055085	55	85	56	66	74	9	M 8	41	5 090	185	203	131
M08060090	60	90	56	66	74	10	M 8	41	6 140	206	208	138
M08065095	65	95	56	66	74	10	M 8	41	6 690	206	191	131
M08070110	70	110	70	80	90	10	M 10	83	11 800	338	229	145
M08075115	75	115	70	80	90	10	M 10	83	12 700	338	213	139
M08080120	80	120	70	80	90	11	M 10	83	14 900	372	220	147
M08085125	85	125	70	80	90	11	M 10	83	15 800	372	207	141
M08090130	90	130	70	80	90	12	M 10	83	18 200	405	213	148
M08095135	95	135	70	80	90	12	M 10	83	19 300	405	202	142
M08100145	100	145	90	102	114	11	M 12	145	27 700	555	210	145
M08110155	110	155	90	102	114	12	M 12	145	33 300	605	209	148
M08120165	120	165	90	102	114	14	M 12	145	42 400	706	223	162
M08130180	130	180	104	116	130	12	M 14	230	53 700	826	201	145
M08140190	140	190	104	116	130	14	M 14	230	67 400	963	217	160
M08150200	150	200	104	116	130	15	M 14	230	77 400	1 030	217	163
M08160210	160	210	104	116	130	16	M 14	230	88 100	1 100	217	166
M08170225	170	225	134	149	165	14	M 16	355	111 500	1 310	186	141
M08180235	180	235	134	149	165	15	M 16	355	126 500	1 410	188	144
M08190250	190	250	134	149	165	16	M 16	355	142 400	1 500	190	145
M08200260	200	260	134	149	165	16	M 16	355	149 900	1 500	181	139
M08220285	220	285	134	150	166	18	M 16	355	185 500	1 690	185	143
M08240305	240	305	134	150	166	20	M 16	355	224 800	1 870	188	148
M08260325	260	325	134	150	166	21	M 16	355	255 700	1 970	182	146
M08280355	280	355	165	177	197	18	M 20	690	369 900	2 640	190	150
M08300375	300	375	165	177	197	20	M 20	690	440 300	2 940	197	157
M08320405	320	405	165	177	197	21	M 20	690	493 200	3 080	194	153
M08340425	340	425	165	177	197	22	M 20	690	549 000	3 230	191	153
M08360455	360	455	190	203	225	21	M 22	930	680 300	3 780	183	145
M08380475	380	475	190	203	225	22	M 22	930	752 300	3 960	182	145
M08400495	400	495	190	203	225	24	M 22	930	863 900	4 320	188	152

- **Tmax** Maximum Transmitting torque **Nm**
- **Ts** Screw tightening torque **Nm**
- **Fax** Axial Force **kN**
- **Ps** Specific Pressure on shaft **N/mm²**
- **Ph** Specific Pressure on hub **N/mm²**

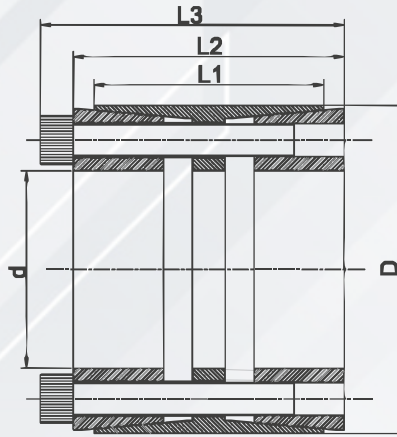
Instruction:

- 1 Surface finish require for shaft and hub bore Ra<=3.2 m
- 2 Recommend mounting tolerance for shaft h8 for hub H8
- 3 Do not use lubricants, Molykote molybdenum disulfide based oil.



**SELF CENTERING
MEDIUM-HIGH TORQUE**

M09



Product Code	Dimensions [mm]					SCREWS			SPECIFICATION			
	d	D	L1	L2	L3	No.	SIZE	Ts Nm	T max Nm	Fax kN	Ps N/mm ²	Ph N/mm ²
M09070110	70	110	50	62	72	8	M 10	83	7 280	208	197	125
M09075115	75	115	50	62	72	8	M 10	83	7 800	208	184	120
M09080120	80	120	50	62	72	10	M 10	83	10 400	260	216	144
M09085125	85	125	50	62	72	10	M 10	83	11 100	260	203	138
M09090130	90	130	50	62	72	11	M 10	83	12 900	286	211	146
M09095135	95	135	50	62	72	11	M 10	83	13 600	286	200	141
M09100145	100	145	60	72	84	10	M 12	145	19 400	388	215	148
M09110155	110	155	60	72	84	10	M 12	145	21 400	388	195	138
M09120165	120	165	60	72	84	11	M 12	145	25 600	427	197	143
M09130180	130	180	65	81	93	14	M 12	145	35 300	544	205	148
M09140190	140	190	65	82	94	15	M 12	145	40 800	582	204	151
M09150200	150	200	65	82	94	15	M 12	145	43 700	582	191	143
M09160210	160	210	65	82	94	16	M 12	145	49 700	621	191	145
M09170225	170	225	78	93	107	15	M 14	230	67 500	795	194	146
M09180235	180	235	78	93	107	15	M 14	230	71 500	795	183	140
M09190250	190	250	88	105	119	16	M 14	230	80 500	848	156	118
M09200260	200	260	88	105	119	18	M 14	230	95 300	950	166	128
M09220285	220	285	96	111	127	15	M 16	355	119 000	1 080	159	123
M09240305	240	305	96	111	127	20	M 16	355	173 000	1 440	194	153
M09260325	260	325	96	111	127	21	M 16	355	196 800	1 510	188	151
M09280355	280	355	96	111	131	15	M 20	690	237 300	1 690	211	167
M09300375	300	375	96	111	131	15	M 20	690	254 200	1 690	197	158
M09320405	320	405	124	136	156	20	M 20	690	361 500	2 260	195	154
M09340425	340	425	124	136	156	20	M 20	690	384 100	2 260	184	147
M09360455	360	455	140	160	182	20	M 22	930	498 700	2 770	170	135
M09380475	380	475	140	160	182	20	M 22	930	526 400	2 770	161	129
M09400495	400	495	140	160	182	22	M 22	930	609 500	3 050	168	136

- **Tmax** Maximum Transmitting torque **Nm**
- **Ts** Screw tightening torque **Nm**
- **Fax** Axial Force **kN**
- **Ps** Specific Pressure on shaft **N/mm²**
- **Ph** Specific Pressure on hub **N/mm²**

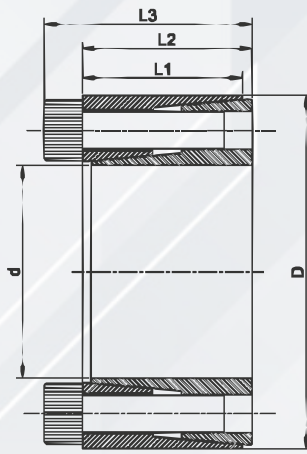
Instruction:

- 1 Surface finish require for shaft and hub bore Ra<=3.2 m
- 2 Recommend mounting tolerance for shaft h8 for hub H8
- 3 Do not use lubricants, Molykote molybdenum disulfide based oil.



**SELF CENTERING
MEDIUM HIGH TORQUE**

M10



Product Code	Dimensions [mm]				SCREWS			SPECIFICATION			
	d	D	L1	L2	No.	SIZE	Ts Nm	T max Nm	Fax kN	Ps N/mm ²	Ph N/mm ²
M10020047	20	47	29	35	5	M 6	17	280	28	154	65
M10022047	22	47	29	35	5	M 6	17	310	28	140	65
M10024050	24	50	29	35	6	M 6	17	400	33	154	74
M10025050	25	50	29	35	6	M 6	17	420	33	148	74
M10028055	28	55	29	35	6	M 6	17	470	33	132	67
M10030055	30	55	29	35	6	M 6	17	500	33	123	67
M10032060	32	60	29	35	8	M 6	17	710	45	154	82
M10035060	35	60	29	35	8	M 6	17	780	45	141	82
M10038065	38	65	29	35	8	M 6	17	850	45	130	76
M10040065	40	65	29	35	8	M 6	17	890	45	123	76
M10042075	42	75	36	44	7	M 8	41	1510	72	152	85
M10045075	45	75	36	44	7	M 8	41	1620	72	142	85
M10048080	48	80	36	44	7	M 8	41	1730	72	133	80
M10050080	50	80	36	44	7	M 8	41	1800	72	127	80
M10055085	55	85	36	44	8	M 8	41	2260	82	132	86
M10060090	60	90	36	44	8	M 8	41	2470	82	121	81
M10065095	65	95	36	44	9	M 8	41	3010	93	136	86
M10070110	70	110	46	56	8	M 10	83	4730	135	160	102
M10075115	75	115	46	56	8	M 10	83	5070	135	149	97
M10080120	80	120	46	56	8	M 10	83	5410	135	112	75
M10085125	85	125	46	56	9	M 10	83	6460	152	119	81
M10090130	90	130	46	56	9	M 10	83	6840	152	112	78
M10095135	95	135	46	56	10	M 10	83	8020	169	118	83
M10100145	100	145	56	68	8	M 12	145	10100	202	107	74
M10110155	110	155	56	68	8	M 12	145	11100	202	97	69
M10120165	120	165	56	68	9	M 12	145	13600	227	100	73

- **Tmax** Maximum Transmitting torque **Nm**
- **Ts** Screw tightening torque **Nm**
- **Fax** Axial Force **kN**
- **Ps** Specific Pressure on shaft **N/mm²**
- **Ph** Specific Pressure on hub **N/mm²**

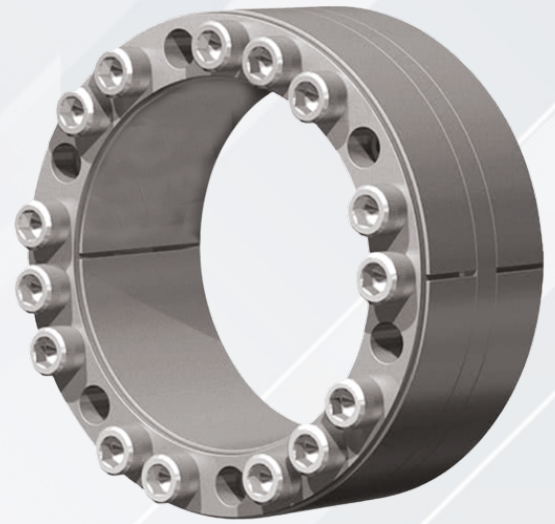
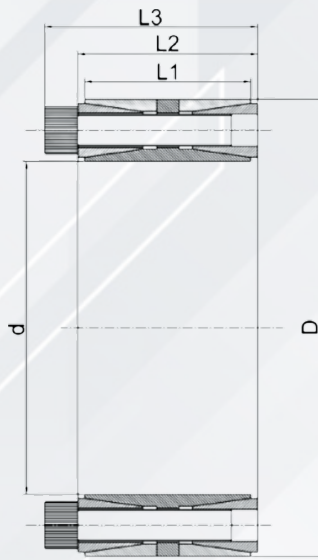
Instruction:

- 1 Surface finish require for shaft and hub bore Ra<=3.2 m
- 2 Recommend mounting tolerance for shaft h8 for hub H8
- 3 Do not use lubricants, Molykote molybdenum disulfide based oil.



**SELF CENTERING
HIGH TORQUE**

M11



Product Code	Dimensions [mm]					SCREWS			SPECIFICATION			
	d	D	L1	L2	L3	No.	SIZE	Ts Nm	T max Nm	Fax kN	Ps N/mm ²	Ph N/mm ²
M11100145	100	145	60	65	77	10	M 12	145	14400	290	190	130
M11110155	110	155	60	65	77	10	M 12	145	15850	290	180	120
M11120165	120	165	60	65	77	12	M 12	145	20750	350	190	140
M11130180	130	180	68	74	86	15	M 12	145	28100	430	190	140
M11140190	140	190	68	74	86	18	M 12	145	36300	520	210	160
M11150200	150	200	68	74	86	18	M 12	145	39000	520	200	150
M11160210	160	210	68	74	86	21	M 12	145	48500	600	220	170
M11170225	170	225	75	81	95	18	M 14	230	60600	710	220	160
M11180235	180	235	75	81	95	18	M 14	230	64100	710	200	160
M11190250	190	250	88	94	108	20	M 14	230	75200	790	180	140
M11200260	200	260	88	94	108	24	M 14	230	95000	950	200	160
M11220285	220	285	98	104	120	18	M 16	355	109000	990	180	140
M11240305	240	305	98	104	120	24	M 16	355	158000	1320	220	180
M11260325	260	325	98	104	120	25	M 16	355	178000	1370	220	170
M11280355	280	355	120	126	144	24	M 18	485	222500	1590	190	150
M11300375	300	375	120	126	144	25	M 18	485	248000	1650	180	150
M11320405	320	405	135	142	162	25	M 20	690	344000	2140	190	150
M11340425	340	425	135	142	162	25	M 20	690	365000	2140	180	140
M11360455	360	455	158	165	187	25	M 22	930	480000	2670	180	140
M11380475	380	475	158	165	187	25	M 22	930	508000	2670	170	130
M11400495	400	495	158	165	187	25	M 22	930	535000	2670	160	140

- **Tmax** Maximum Transmitting torque **Nm**
- **Ts** Screw tightening torque **Nm**
- **Fax** Axial Force **kN**
- **Ps** Specific Pressure on shaft **N/mm²**
- **Ph** Specific Pressure on hub **N/mm²**

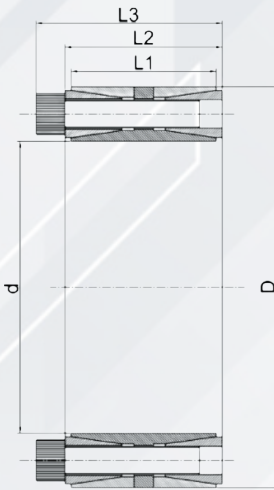
Instruction:

- 1 Surface finish require for shaft and hub bore Ra<=3.2 μm
- 2 Recommend mounting tolerance for shaft h8 for hub H8
- 3 Do not use lubricants, Molykote molybdenum disulfide based oil.



**SELF CENTERING
MEDIUM TORQUE**

M12



Product Code	Dimensions [mm]					SCREWS			SPECIFICATION			
	d	D	L1	L2	L3	No.	SIZE	Ts Nm	T max Nm	Fax kN	Ps N/mm ²	Ph N/mm ²
M12100145	100	145	60	65	75	9	M 10	83	6700	130	90	60
M12110155	110	155	60	65	75	10	M 10	83	8200	150	90	60
M12120165	120	165	60	65	75	12	M 10	83	10700	180	100	70
M12130180	130	180	68	74	84	15	M 10	83	14500	220	90	70
M12140190	140	190	68	74	84	15	M 10	83	15650	220	90	60
M12150200	150	200	68	74	84	16	M 10	83	18000	240	90	60
M12160210	160	210	68	74	84	18	M 10	83	22000	280	90	70
M12170225	170	225	75	81	93	15	M 12	145	27700	330	90	70
M12180235	180	235	75	81	93	16	M 12	145	31200	350	90	70
M12190250	190	250	88	94	106	18	M 12	145	37100	390	80	60
M12200260	200	260	88	94	106	20	M 12	145	43400	430	90	70
M12220285	220	285	98	104	116	21	M 12	145	55000	500	80	60
M12240305	240	305	98	104	116	24	M 12	145	70000	580	90	70
M12260325	260	325	98	104	116	27	M 12	145	90000	690	90	70
M12280355	280	355	120	126	140	28	M 14	230	120000	830	90	70
M12300375	300	375	120	126	140	28	M 14	230	125000	830	90	70
M12320405	320	405	135	142	158	28	M 16	355	185000	1160	100	80
M12340425	340	425	135	142	158	28	M 16	355	200000	1160	90	70
M12360455	360	455	158	165	183	24	M 18	485	215200	1200	70	60
M12380475	380	475	158	165	183	27	M 18	485	256000	1350	80	60
M12400495	400	495	158	165	183	32	M 18	485	320000	1600	90	70

- **Tmax** Maximum Transmitting torque **Nm**
- **Ts** Screw tightening torque **Nm**
- **Fax** Axial Force **kN**
- **Ps** Specific Pressure on shaft **N/mm²**
- **Ph** Specific Pressure on hub **N/mm²**

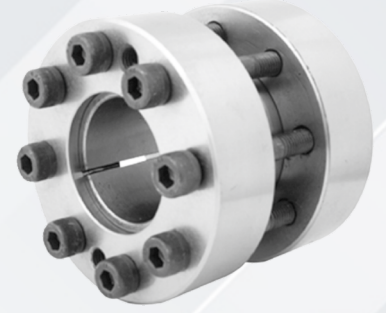
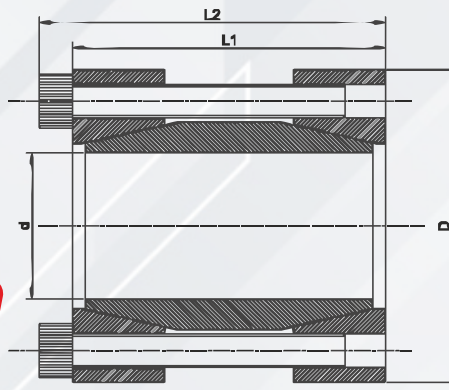
Instruction:

- 1 Surface finish require for shaft and hub bore Ra<=3.2 m
- 2 Recommend mounting tolerance for shaft h8 for hub H8
- 3 Do not use lubricants, Molykote molybdenum disulfide based oil.



**SELF CENTERING
MEDIUM TORQUE**

MR01



Product Code	Dimensions [mm]				SCREWS			SPECIFICATION		
	d	D	L1	L2	No.	SIZE	Ts Nm	T max Nm	Fax kN	Ps N/mm ²
MR1015045	15	45	50	56	4	M 6	17	100	14	191
MR1016045	16	45	50	56	4	M 6	17	110	14	191
MR1017045	17	45	50	56	4	M 6	17	120	14	191
MR1018050	18	50	50	56	4	M 6	17	130	15	168
MR1019050	19	50	50	56	4	M 6	17	140	15	168
MR1020050	20	50	50	56	4	M 6	17	150	15	168
MR1022055	22	55	60	66	6	M 6	17	180	17	177
MR1024055	24	55	60	66	6	M 6	17	190	16	177
MR1025055	25	55	60	66	6	M 6	17	200	16	177
MR1028060	28	60	60	66	6	M 6	17	280	20	148
MR1030060	30	60	60	66	6	M 6	17	330	22	148
MR1032065	32	65	60	66	6	M 6	17	370	23	140
MR1035075	35	75	75	83	4	M 8	41	490	28	106
MR1038075	38	75	75	83	4	M 8	41	540	28	106
MR1040075	40	75	75	83	4	M 8	41	590	29	106
MR1042078	42	78	75	83	4	M 8	41	640	30	102
MR1045085	45	85	85	93	6	M 8	41	880	39	126
MR1048090	48	90	85	93	6	M 8	41	1 050	44	116
MR1050090	50	90	85	93	6	M 8	41	1 140	46	116
MR1055095	55	95	85	93	8	M 8	41	1 450	53	142
MR1060100	60	100	85	93	8	M 8	41	1 700	57	132

- **Tmax** Maximum Transmitting torque **Nm**
- **Ts** Screw tightening torque **Nm**
- **Fax** Axial Force **kN**
- **Ps** Specific Pressure on shaft **N/mm²**
- **Ph** Specific Pressure on hub **N/mm²**

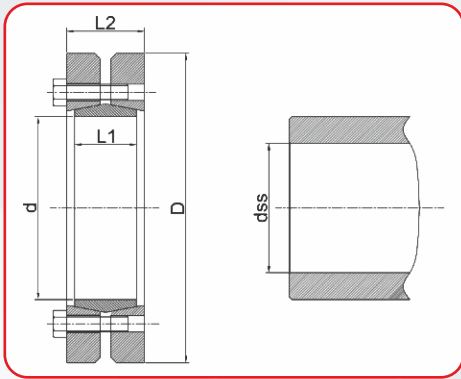
Instruction:

- 1 Surface finish require for shaft and hub bore Ra<=3.2 μm
- 2 Recommend mounting tolerance for shaft h8 for hub H8
- 3 Do not use lubricants, Molykote molybdenum disulfide based oil.



**SELF CENTERING
MEDIUM TORQUE**

MS01



Product Code	Dimensions [mm]					SCREWS			SPECIFICATION			
	dss	d x D	L1	L2	L3	No.	SIZE	Ts Nm	T max Nm	Fax kN	Pss N/mm ²	Ph N/mm ²
MS1024050	19	24x50	14	18	22	6	M 5	4	200	21	151	280
	20								25	146	280	
	21								30	202	280	
MS1030060	24	30x60	16	20	24	7	M 5	4	310	26	127	229
	25								30	144	229	
	26								34	160	229	
	28								51	188	297	
MS1036072	30	36x72	18	22	26	5	M 6	12	910	61	214	297
	31								60	210	297	
	34								68	180	306	
MS1044080	35	44x80	20	24	28	7	M 6	12	1 160	73	192	306
	36								79	204	306	
	40								86	179	280	
MS1050090	42	50x90	22	26	30	8	M 6	12	1 440	75	161	280
	40								86	179	280	
	42								97	199	280	
MS1055100	42	55x100	23	29	33	8	M 6	12	1 580	75	137	243
	45								90	160	243	
	48								100	184	243	
MS1062110	48	62x110	23	29	33	10	M 6	12	2 550	100	167	270
	50								110	181	270	
	52								110	182	270	
MS1068115	50	68x115	23	29	33	10	M 6	12	2 350	90	135	246
	55								100	151	246	
	60								130	185	246	
MS1075138	55	75x138	25	31	36,5	7	M 8	30	3 370	120	147	276
	60								150	176	276	
	65								180	206	276	
MS1080145	60	80x145	25	31	36,5	7	M 8	30	3 890	120	142	259
	65								150	168	259	
	70								180	196	259	
MS1085155	60	85x155	30	38	43,5	10	M 8	30	5 180	170	156	290
	65								200	180	290	
	70								240	205	290	
MS1090155	65	90x155	30	38	43,5	10	M 8	30	5 910	180	152	274
	70								210	174	274	
	75								240	196	274	
MS1095170	65	95x170	34	43	48,5	12	M 8	30	6 400	190	144	274
	70								230	164	274	
	75								260	184	274	
MS1100170	70	100x170	34	43	48,5	12	M 8	30	7 300	200	141	274
	75								240	158	261	
	80								270	177	261	
MS1105185	70	105x185	39	49	56	9	M 10	59	7 700	220	129	261
	75								250	145	253	
	80								290	162	253	
MS1110185	75	110x185	39	49	56	9	M 10	59	8 700	230	127	242
	80								260	142	242	
	85								270	144	242	
MS1115200	80	115x200	40	50	57	10	M 10	59	11 100	270	140	250
	85								280	140	250	
	90								320	157	250	
MS1120200	85	120x200	40	50	57	10	M 10	59	10 900	250	122	240
	90								290	137	240	
	95								330	152	240	

dss		Tolerances ISO	Maximum clearance mm
from	to		
18	30	H6-j6	0.017
30	50	H6-h6	0.032
50	80	H6-g6	0.048
80	120	H7-g6	0.069

Instruction:

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- **Tmax** Maximum Transmitting torque **Nm**
- **Ts** Screw tightening torque **Nm**
- **Fax** Axial Force **kN**
- **Ps** Specific Pressure on shaft **N/mm²**
- **Ph** Specific Pressure on hub **N/mm²**