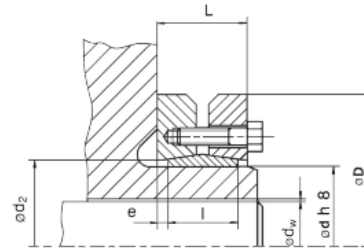
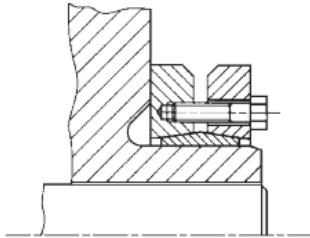


## SIT-LOCK® 11 - External Shrink Discs

Shrink discs are external locking devices which are installed over hub projections. By locking the screws, radial pressures act on the hub allowing an effective and solid connection.

Recommended for medium and high torque. SIT-LOCK® 11S is also available in "SPLIT" and "HALF" for special applications.



### Installation

Carefully remove, if present, protection spacers used during transport. Check if the screws and the rings' cone surfaces are well lubricated, otherwise, lightly oil them with molybdenum disulfide lubricants, like "Molykote" or similar. Clean, with care, contact surfaces of shaft and hub.

Position the components to connect. In uniform sequence, tighten the clamping screws to the tightening torque ( $M_s$ ). Check optically that the gap between outer rings is the most uniform possible.

*Note: once the tightening torque is reached, do not tighten the screws.*

### Removal

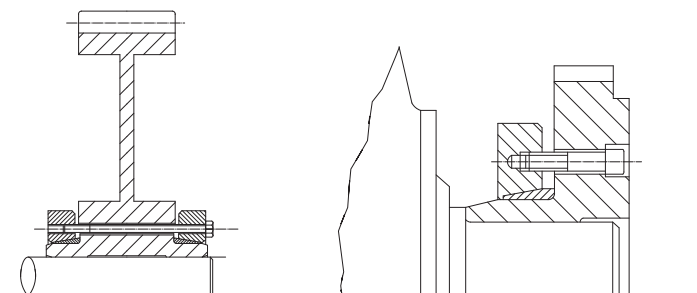
Loosen the screws uniformly and gradually to prevent rings from jamming. When all the screws are loose, remove the shaft or separate the hub and shaft itself.

*Note: To reuse the locking element, carefully disassemble, clean and inspect all the components; oil the screws and the conical surfaces, then follow Installation instructions.*

### Maximum recommended tolerance

diameter shaft  $d$ ; h 8  
 diameter shaft  $d_w$ ;  
 j6 for  $\varnothing \leq 30$   
 h6 for  $\varnothing$  between 30 to 50  
 g6 for  $\varnothing$  between 50 to 80  
 g6 for  $\varnothing > 80$

diameter bore  $d_w$ ;  
 H6 for  $\varnothing \leq 30$   
 H6 for  $\varnothing$  between 30 to 50  
 H6 for  $\varnothing$  between 50 to 80  
 H7 for  $\varnothing > 80$



"Split" version

"Half" version

Maximum allowable roughness

Rt 16  $\mu\text{m}$

SIT-LOCK® 11S - standard version

Dimensions [mm]							Performances		Clamping screws (DIN 931 - 10,9)		
d	D	d <sub>w</sub>	l	L	d <sub>2</sub>	e	M <sub>T</sub> [Nm]	F <sub>ax</sub> [kN]	N°	Tipo	M <sub>s</sub> [Nm]
24	50	19	14	19,5	26	2,75	170	30	6	M 5	4
		20					210	30			
		21					250	30			
30	60	24	16	21,5	32	2,75	300	30	7	M 5	4
		25					340	30			
		26					380	30			
36	72	28	18	23,5	38	2,75	440	50	5	M 6	12
		30					570	60			
		31					630	60			
44	80	32	20	25,5	47	2,75	620	60	7	M 6	12
		35					780	70			
		36					860	80			
50	90	38	22	27,5	53	2,75	940	90	8	M 6	12
		40					1.160	90			
		42					1.380	90			
55	100	42	23	30,5	58	3,75	1.160	80	8	M 6	12
		45					1.520	90			
		48					1.880	100			
62	110	48	23	30,5	66	3,75	1.750	100	10	M 6	12
		50					2.000	110			
		52					2.250	120			
68	115	50	23	30,5	72	3,75	2.000	100	10	M 6	12
		55					2.600	110			
		60					3.150	120			
75	138	55	25	32,5	79	3,75	2.400	120	7	M 8	30
		60					3.200	140			
		65					3.950	160			
80	145	60	25	32,5	84	3,75	3.200	120	7	M 8	30
		65					3.900	140			
		70					4.600	160			
90	155	65	30	39	94	4,5	4.750	170	10	M 8	30
		70					6.000	190			
		75					7.250	210			
100	170	70	34	44	104	5,0	6.900	200	12	M 8	30
		75					7.500	220			
		80					9.000	240			
110	185	75	39	50	114	5,5	7.200	230	9	M10	59
		80					9.000	250			
		85					10.800	260			
125	215	85	42	54	134	6,0	11.000	300	12	M10	59
		90					13.000	320			
		95					15.000	350			
140	230	95	46	60,5	146	7,25	15.100	370	10	M12	100
		100					17.600	400			
		105					20.100	430			
155	265	105	50	64,5	165	7,25	22.000	450	12	M12	100
		110					25.000	480			
		115					28.000	510			
165	290	115	56	71	175	7,5	31.000	600	8	M16	250
		120					35.000	630			
		125					39.000	660			
175	300	125	56	71	185	7,5	36.000	610	8	M16	250
		130					41.000	640			
		135					45.000	680			
185	330	135	71	86	195	7,5	52.000	780	10	M16	250
		140					57.000	820			
		145					62.000	860			

Notes:

Dimensions representing the total length of the hub are indicative; they are calculated according to the geometric rules.

For assemblies requiring larger dimensions, contact our Technical Department.

M <sub>s</sub>	Screw tightening torque	Nm
M <sub>T</sub>	Transmissible torque moment	Nm
F <sub>ax</sub>	Transmissible axial load	N

## SIT-LOCK® 11S - standard series

Dimensions [mm]							Performances		Clamping screws (DIN 931 - 10,9)		
d	D	d <sub>w</sub>	l	L	d <sub>2</sub>	e	M <sub>T</sub> [Nm]	F <sub>ax</sub> [kN]	N°	Tipo	M <sub>s</sub> [Nm]
195	350	140	71	86	210	7,5	65.000	930	12	M16	250
		150					76.000	1.030			
		155					81.500	1.070			
200	350	150	71	86	210	7,5	74.000	990	12	M16	250
		155					80.000	1.040			
		160					86.000	1.080			
220	370	160	88	104	230	8	95.000	1.190	15	M16	250
		165					102.000	1.240			
		170					110.000	1.290			
240	405	170	92	109	248	8,5	120.000	1.460	12	M20	490
		180					138.000	1.580			
		190					156.000	1.680			
260	430	190	103	120	268	8,5	164.000	1.760	14	M20	490
		200					184.000	1.880			
		210					205.000	2.010			
280	460	210	114	134	288	10	217.000	2.090	16	M20	490
		220					244.000	2.220			
		230					270.000	2.350			
300	485	230	122	142	308	10	275.000	2.470	18	M20	490
		240					295.000	2.570			
		245					315.000	2.640			
320	520	240	122	142	328	10	312.000	2.650	20	M20	490
		250					340.000	2.790			
		260					374.000	2.900			
340	570	250	134	156	348	11	390.000	3.120	24	M20	490
		260					422.500	3.250			
		270					460.000	3.400			
350	580	270	140	162	358	11	442.000	3.280	24	M20	490
		280					480.000	3.430			
		285					500.000	3.500			
360	590	280	140	162	368	11	463.000	3.310	24	M20	490
		290					502.000	3.460			
		295					522.000	3.540			
380	645	290	144	168	387	12	567.000	3.910	20	M24	840
		300					610.000	4.080			
		310					658.000	4.250			
390	660	300	144	168	397	12	624.000	4.160	21	M24	840
		310					671.000	4.330			
		320					718.000	4.480			
400	680	315	144	168	407	12	670.000	4.260	21	M24	840
		320					695.000	4.350			
		330					744.000	4.500			
420	690	330	164	188	427	12	780.000	4.850	24	M24	840
		340					840.000	5.040			
		350					900.000	5.220			
440	750	340	177	202	447	12,5	806.000	4.740	24	M24	840
		350					860.000	4.910			
		360					917.000	5.090			
460	770	360	177	202	468	12,5	1.000.000	5.670	28	M24	840
		370					1.070.000	5.860			
		380					1.140.000	6.050			
480	800	380	188	213	488	12,5	1.170.000	6.150	30	M24	840
		390					1.240.000	6.350			
		400					1.310.000	6.550			

### Notes:

Dimensions representing the total length of the hub are indicative; they are calculated according to the geometric rules.

For assemblies requiring larger dimensions, contact our Technical Department.

M <sub>S</sub>	Screw tightening torque	Nm
M <sub>T</sub>	Transmissible torque moment	Nm
F <sub>ax</sub>	Transmissible axial load	N

SIT-LOCK® 11H - heavy series

Dimensions [mm]							Performances		Clamping screws (DIN 931 - 10,9)		
d	D	d <sub>w</sub>	l	L	d <sub>2</sub>	e	M <sub>T</sub> [Nm]	F <sub>ax</sub> [kN]	Tipo	N°	M <sub>s</sub> [Nm]
125	215	85	55	65	129	5	15.000	360	10	M12	100
		90					390				
		95					420				
140	230	95	60	74	144	7	20.600	430	12	M12	100
		100					470				
		105					500				
155	265	105	66	80	164	7	28.600	550	15	M12	100
		110					590				
		115					630				
165	290	115	72	88	174	8	41.000	740	10	M16	250
		120					790				
		125					820				
175	300	125	72	88	184	8	47.000	750	10	M16	250
		130					800				
		135					840				
185	330	135	92	112	194	10	72.000	1.100	14	M16	250
		140					1.150				
		145					1.200				
195	350	140	92	112	199	10	75.000	1.080	14	M16	250
		150					1.180				
		155					1.240				
200	350	145	92	112	204	10	85.000	1.170	15	M16	250
		150					1.230				
		155					1.290				
220	370	160	114	134	2224	10	127.000	1.590	20	M16	250
		165					1.650				
		170					1.720				
240	405	170	120	144	244	12	155.000	1.820	15	M20	490
		180					1.960				
		190					2.080				
260	430	190	136	160	265	12	213.000	2.260	18	M20	490
		200					2.420				
		210					2.580				
280	460	210	148	172	285	12	285.000	2.740	21	M20	490
		220					2.910				
		230					3.090				
300	485	230	152	176	305	12	341.000	2.960	22	M20	490
		240					3.130				
		245					3.220				
320	520	240	160	184	325	12	378.500	3.150	24	M20	490
		250					3.330				
		260					3.470				
340	570	250	176	200	345	12	489.500	3.910	21	M24	840
		260					4.080				
		270					4.280				
350	580	270	176	200	355	12	556.000	4.120	21	M24	840
		280					4.320				
		285					4.420				
360	590	280	180	204	365	12	612.000	4.370	22	M24	840
		290					4.570				
		295					4.670				
380	645	290	180	204	387	12	618.000	4.270	22	M24	840
		300					4.460				
		310					4.650				
390	660	300	188	212	397	12	708.000	4.720	24	M24	840
		310					4.910				
		320					5.090				
400	680	315	188	212	407	12	765.000	4.860	24	M24	840
		320					4.930				
		330					5.130				
420	690	330	214	238	427	12	999.000	6.060	30	M24	840
		340					6.290				
		350					6.520				
440	750	340	224	252	448	14	1.058.000	6.230	24	M27	1.250
		350					6.460				
		360					6.690				
460	770	360	224	252	468	14	1.320.000	7.440	28	M27	1.250
		370					7.700				
		380					7.950				

Notes:  
Dimensions representing the total length of the hub are indicative; they are calculated according to the geometric rules.

For assemblies requiring larger dimensions, contact our Technical Department.

M <sub>S</sub>	Screw tightening torque	Nm
M <sub>T</sub>	Transmissible torque moment	Nm
F <sub>ax</sub>	Transmissible axial load	N

**SIT-LOCK® 11L - light series**

Dimensions [mm]							Performances		Clamping screws (DIN 931 - 10,9)		
d	D	d <sub>w</sub>	l	L	d <sub>2</sub>	e	M <sub>T</sub> [Nm]	F <sub>ax</sub> [kN]	N°	type	M <sub>s</sub> [Nm]
125	185	95	39	51	129	6	10.550	220	8	M10	59
		100					12.100	240			
		105					13.800	260			
140	220	110	39	51	144	6	14.800	270	9	M10	59
		120					18.640	310			
		125					20.500	330			
155	245	130	39	51	159	6	24.000	370	11	M10	59
		135					26.400	390			
		140					29.000	410			
165	260	135	46	62	169	8	32.000	480	10	M12	100
		140					35.200	500			
		145					38.500	530			
175	275	145	46	62	179	8	39.000	540	11	M12	100
		150					42.400	560			
		155					46.000	590			
185	295	155	46	62	189	8	46.600	600	12	M12	100
		160					50.300	630			
		165					54.000	650			
195	315	165	56	72	199	8	63.000	760	15	M12	100
		170					67.700	800			
		175					72.500	830			
200	330	175	56	72	204	8	74.000	850	16	M12	100
		180					79.500	890			
		185					84.500	920			
220	345	180	66	84	224	9	82.800	920	10	M16	250
		190					93.500	980			
		200					105.000	1.060			
240	370	200	66	84	244	9	113.000	1.140	12	M16	250
		210					127.500	1.210			
		215					134.500	1.250			
260	395	220	72	92	265	10	149.000	1.350	14	M16	250
		230					165.000	1.440			
		235					173.000	1.480			
280	425	230	84	104	285	10	171.000	1.490	16	M16	250
		240					189.000	1.570			
		250					208.000	1.660			
300	460	250	84	104	305	10	215.000	1.720	18	M16	250
		260					234.000	1.800			
		270					255.000	1.890			
320	495	270	84	106	325	11	260.000	1.940	20	M16	250
		280					284.000	2.030			
		290					306.000	2.120			
340	535	290	84	106	345	11	300.000	2.070	21	M16	250
		300					324.400	2.160			
		305					337.000	2.210			
350	545	300	100	122	355	11	372.000	2.480	16	M20	490
		305					385.000	2.540			
		310					400.000	2.590			
360	555	300	100	122	365	11	360.000	2.400	16	M20	490
		310					388.000	2.500			
		320					415.000	2.590			
380	585	320	112	136	387	12	435.000	2.720	18	M20	490
		325					451.000	2.780			
		330					467.000	2.840			
390	595	330	112	136	397	12	505.000	3.060	20	M20	490
		340					540.000	3.180			
		350					577.000	3.300			
400	615	340	112	136	407	12	550.000	3.230	21	M20	490
		350					587.000	3.360			
		360					626.000	3.480			
420	630	350	120	144	427	12	578.000	3.300	22	M20	490
		360					617.000	3.430			
		370					655.000	3.550			
440	660	370	120	144	447	12	677.000	3.660	24	M20	490
		380					719.000	3.790			
		390					762.000	3.910			
460	685	390	132	158	468	13	840.000	4.320	28	M20	490
		400					890.000	4.460			
		410					935.000	4.580			

*Notes:*  
Dimensions representing the total length of the hub are indicative; they are calculated according to the geometric rules.

For assemblies requiring larger dimensions, contact our Technical Department.

M <sub>S</sub>	Screw tightening torque	Nm
M <sub>T</sub>	Transmissible torque moment	Nm
F <sub>ax</sub>	Transmissible axial load	N