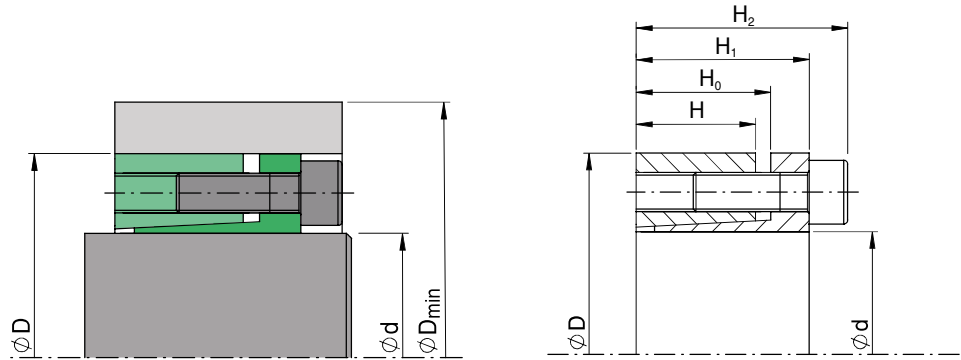


SIT-LOCK® 12 internal locking device - self-centering



Features

Composed of an inner ring and outer ring both with splits. This type of locking device is particularly suitable for applications that require good hub-to-shaft concentricity and perpendicularity. The table shows performance data for the following tolerances:

shaft d h8 - coupling seat on hub H8

Do not use molybdenum disulphide-based oils or greases that reduce the coefficient of friction μ . The values in the table are calculated with μ 0.12.

Hub to shaft centering

The SIT-LOCK® 12 locking device is self-centering so it does not require a centering base between the shaft and hub. This allows for hubs with reduced widths which saves on materials and leads to reduced costs.

Installation with non-lubricated surfaces (dry)

The SIT-LOCK® 12 locking device is lubricated with oil before delivery to protect it from oxidation during storage. The values shown in the table have been calculated for applications with oiled contact surfaces. For dry installation, the values are:

$M_t, F_{ax} +8\%$

$P_w, P_n -13\%$

To get these values, the locking device must be completely disassembled and all its component surfaces must be cleaned with solvent. The shaft and hub contact surfaces must also be completely clean and oil-free.

Axial displacement

When tightening the screws there is a hub to shaft axial displacement. The extent of axial displacement depends on the tolerances.

Radial loads

The SIT-LOCK® 12 locking device is suitable for applications subject to high radial loads. For further information, please contact our Technical Department.

Surface finish

Normal surface finish is sufficient. The following values are recommended:

$R_a \leq 3,2 \mu\text{m} - R_t \leq 16 \mu\text{m}$

Installation

The locking device is supplied ready to assemble. Clean the shaft contact surfaces thoroughly and apply oil. Mount the shaft, hub and locking device in the desired position.

Screw tightening sequence:

- tighten two diametrically opposed screws until the locking device surfaces make contact with the shaft and hub;
- tighten all screws to 50% of the screw tightening torque value M_s indicated in the table in a 'criss-cross' sequence;
- repeat to 100% of the M_s tightening torque indicated in the table;
- in continuous sequence, check that the tightening torque M_s has been achieved.

Removal

Gradually loosen the clamping screws. Remove the clamping screws and insert them into the special removal threads on the inner ring flange.

Tighten the screws in a 'criss-cross' sequence until the locking device is released.

Reusing the locking device

When the locking device is being reuse, make sure that all the surfaces are clean and show no obvious signs of deformation or seizing. Clean and oil all surfaces and threads. Check the screws have not been deformed. Oil the screws and assemble the locking device as originally supplied.

SIT-LOCK® 12 internal locking device - self-centering

Dimensions [mm]					Clamping screws DIN 912 12.9			Values with tolerances for shaft h8/hub H8			
d x D	H	H ₀	H ₁	H ₂	Number	Type	M _s [Nm]	M _t [Nm]	F _{ax} [kN]	P _w [N/mm ²]	P _n [N/mm ²]
18 x 40	12	15	20	24	6	M4	5	218	24	297	135
19 x 41	12	15	20	24	6	M4	5	230	24	282	130
20 x 42	12	15	20	24	7	M4	5	283	28	312	150
22 x 44	12	15	20	24	7	M4	5	311	28	284	140
24 x 46	12	15	20	24	7	M4	5	339	28	260	135
25 x 47	12	15	20	24	7	M4	5	353	28	250	135
28 x 50	12	15	20	24	9	M4	5	509	36	287	160
30 x 52	12	15	20	24	9	M4	5	545	36	268	155
32 x 54	12	15	20	24	9	M4	5	581	36	251	150
35 x 57	16	19	24	28	10	M4	5	706	40	191	115
36 x 58	16	19	24	28	10	M4	5	727	40	186	115
38 x 60	16	19	24	28	11	M4	5	844	44	194	125
40 x 62	16	19	24	28	11	M4	5	888	44	184	120
42 x 70	19	23	30	36	8	M6	17	1.532	73	243	145
45 x 73	19	23	30	36	8	M6	17	1.641	73	226	140
48 x 76	19	23	30	36	8	M6	17	1.751	73	212	135
50 x 78	19	23	30	36	8	M6	17	1.824	73	204	130
55 x 83	19	23	30	36	8	M6	17	2.006	73	185	125
56 x 84	19	23	30	36	8	M6	17	2.043	73	182	120
60 x 88	19	23	30	36	9	M6	17	2.462	82	191	130
63 x 91	19	23	30	36	9	M6	17	2.585	82	182	125
65 x 93	19	23	30	36	9	M6	17	2.667	82	176	125
70 x 105	23	28	37	45	8	M8	41	4.718	135	222	150
75 x 110	23	28	37	45	8	M8	41	5.055	135	207	140
80 x 115	23	28	37	45	8	M8	41	5.392	135	194	135
85 x 120	23	28	37	45	8	M8	41	5.729	135	183	130
90 x 125	23	28	37	45	10	M8	41	7.582	168	216	155
95 x 130	23	28	37	45	10	M8	41	8.000	168	205	150

M _s	Screw tightening torque	Nm
M _t	Transmissible torque	Nm
F _{ax}	Transmissible axial force	kN
P _w	Pressure on shaft	N/mm ²
P _n	Pressure on hub	N/mm ²

IMPORTANT: The screw tightening torque M_s can be reduced by 40% of the value indicated in the table. M_t, F_{ax}, P_w, P_n decrease proportionally. For further information, please contact our Technical Department.

For larger diameters or dimensions different to those in the table, please contact us.