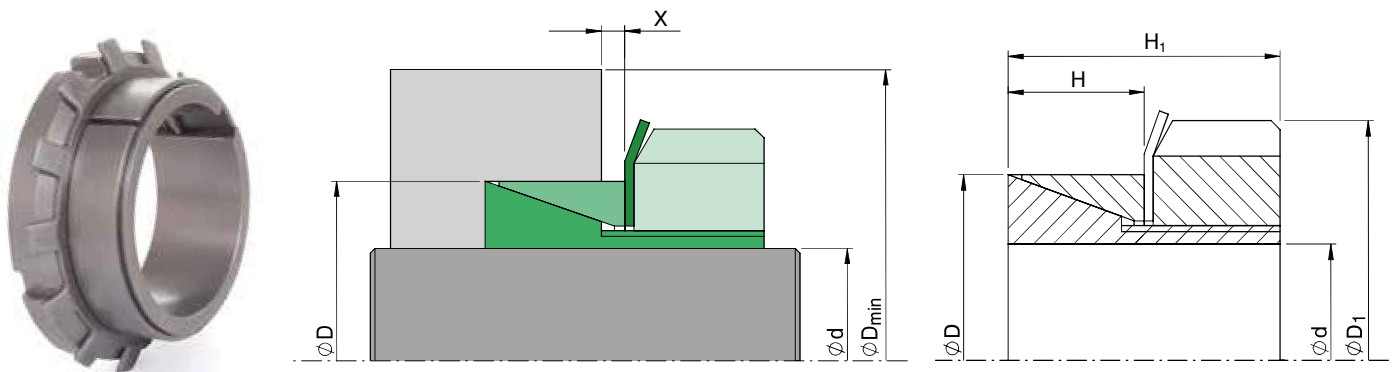


SIT-LOCK® 9 internal locking device - not self-centering



Features

Composed of two tapered rings, an inner ring, a split outer ring and a ring nut with locking washer. It is suitable for applications that require reduced radial and axial dimensions. Particularly suitable for applications without screw tightening space. The ring nut can actually be tightened from above using a special key of very reduced size. 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® 9 locking device is not self-centering so it requires a centering base between the shaft and hub. A centering width of $\geq 2 \cdot H_1$ is recommended.

Axial displacement

Application 1: When tightening the ring nut, there is no hub to shaft axial displacement. The values in the table are valid for application 1.

Application 2: When tightening the ring nut, there is hub to shaft axial displacement. The M_t , F_{ax} , P_w and P_n values increase by 28% compared to the values shown in the table.

Surface finish

The following values are recommended:

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

Considering that using the SIT-LOCK® 2 model requires tight tolerances, precise surface finishes, and additional accessory costs (flange, screw threads), we recommend using SIT-LOCK® 9.

Installation

Clean the shaft and hub contact surfaces thoroughly. Insert the shaft, the hub and SIT-LOCK® 9 locking device in the desired position.

Nut tightening sequence:

- tighten the ring nut to the tightening torque M_s indicated in the table;
- lock the ring nut using the appropriate locking washer as shown in the figure.

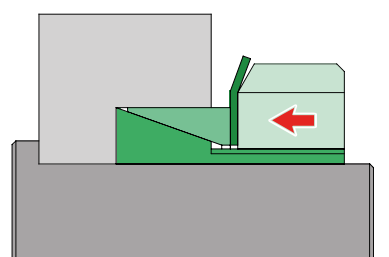
Removal

- unlock the ring nut from the locking washer. Loosen the ring nut until the locking device is fully removed;
- removal may be difficult in some applications because there are no disassembly threads as a ring nut is used for locking.

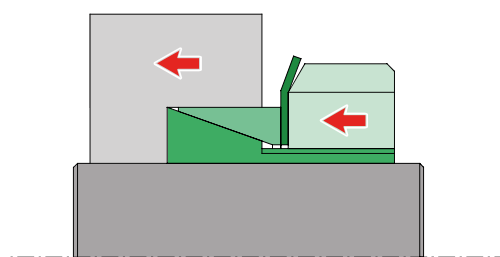
Reusing the locking device

When reusing the locking device, check all the surfaces are clean and show no obvious signs of deformation or seizing. Clean and oil all surfaces and threads. Check the ring nut and washer have not been deformed. Oil the screws and assemble the locking device as originally supplied.

SIT-LOCK® 9 internal locking device - not self-centering



Application 1
 M_t, F_{ax}, P_w, P_n
 values as indicated in the table



Application 2
 M_t, F_{ax}, P_w, P_n
 greater than +28% of values in the table

Dimensions [mm]					Ring nut		Ring nut tightening torque	Values with tolerances for shaft h8/hub H8			
d x D	D ₁	H	H ₁	X	Type	Thread	M _s [Nm]	M _t [Nm]	F _{ax} [kN]	P _w [N/mm ²]	P _n [N/mm ²]
14 x 25	32	9	17	2,5	KM4	M20x1	95	45	6	238	130
15 x 25	32	9	17	2,5	KM4	M20x1	95	56	6	220	130
16 x 25	32	9	17	2,5	KM4	M20x1	95	51	6	207	130
17 x 26	38	9	18	2,5	KM5	M25x1,5	160	65	7,1	234	135
18 x 26	38	9	18	2,5	KM5	M25x1,5	160	69	7,1	221	155
18 x 30	38	9	17,5	2,5	KM5	M25x1,5	160	69	7,1	221	135
19 x 30	38	9	18	2,5	KM5	M25x1,5	160	73	8,3	210	135
20 x 30	38	9	18	2,5	KM5	M25x1,5	160	78	8,3	198	130
22 x 32	45	9	18	2,5	KM6	M30x1,5	220	114	9,5	240	165
24 x 35	45	9	18	2,5	KM6	M30x1,5	220	125	10,7	220	150
25 x 35	45	9	18	2,5	KM6	M30x1,5	220	130	10,7	211	150
28 x 36	52	10	18	3	KM7	M35x1,5	340	178	11,9	209	160
28 x 40	52	9	18	3	KM7	M35x1,5	340	178	11,9	209	145
30 x 40	52	11	20	3	KM7	M35x1,5	340	190	13,1	195	145
32 x 42	58	11	22	3	KM8	M40x1,5	480	250	15,5	200	150
35 x 45	58	11	22	3	KM8	M40x1,5	480	250	15,5	200	145
36 x 45	58	11	22	3	KM8	M40x1,5	480	285	15,5	177	145
38 x 48	65	14	25	4	KM9	M45x1,5	680	345	16,7	150	120
40 x 50	65	14	25	4	KM9	M45x1,5	680	369	17,8	143	115
40 x 52	65	14	25	4	KM9	M45x1,5	680	369	17,8	143	110
42 x 55	70	14	26	4	KM10	M50x1,5	870	440	20,2	156	120
45 x 55	70	14	26	4	KM10	M50x1,5	870	476	21,4	145	120
48 x 62	75	14	26	4	KM11	M55x2	970	595	25	160	125
50 x 60	75	14	26	4	KM11	M55x2	970	618	25	155	130
50 x 62	75	14	26	4	KM11	M55x2	970	618	25	155	125
55 x 65	80	15	27	4	KM12	M60x2	1.100	725	26,1	122	105
55 x 68	80	15	27	4	KM12	M60x2	1.100	725	26,1	122	100
56 x 68	80	15	27	4	KM12	M60x2	1.100	737	26,1	120	95
60 x 70	85	15	29	4	KM13	M65x2	1.300	952	32,1	134	110
60 x 73	85	15	29	4	KM13	M65x2	1.300	952	32,1	134	110
63 x 79	92	17	31	4	KM14	M70x2	1.600	1.166	36,9	127	100
65 x 79	92	17	31	4	KM14	M70x2	1.600	1.200	36,9	124	100
70 x 84	98	17	31	4	KM15	M75x2	2.000	1.475	41,6	131	110

M_s Screw tightening torque Nm
 M_t Transmissible torque Nm
 F_{ax} Transmissible axial force kN
 P_w Pressure on shaft N/mm²
 P_n Pressure on hub N/mm²

For dimensions not included in the table, please contact our Technical Department.

Internal - not self-centring