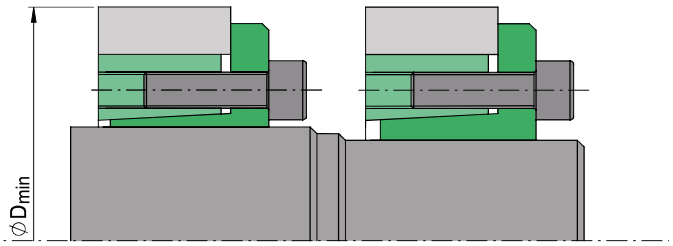
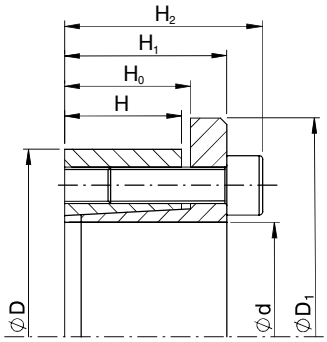
SIT-LOCK® 8 internal locking device - self-centering





Features

Composed of an inner ring and outer ring both with splits. This type of locking device is particularly suitable for applications that require excellent hub-to-shaft concentricity and perpendicularity. **Allows the same hub, with the same external diameter, to be used on shafts of different diameters.**

Example:
shaft diameter 30 mm: SIT-LOCK® 8 30 x 55
shaft diameter 20 mm: SIT-LOCK® 8 20 x 55

The table shows performance data for the following tolerances:

shaft d h8 - coupling seat on hub H8

Designed for applications that require quick installation, resulting in lower costs. It has the following advantages over SIT-LOCK® 1:

SIT-LOCK® 8 40 x 65
Transmissible torque: **1051 Nm**
Number of screws: **5 M8**
SELF-Centering

SIT-LOCK® 1 40 x 65
Transmissible torque: **1145 Nm**
Number of screws: **14 M6**
NOT SELF-Centering

Notes: using SIT-LOCK® 8 rather than SIT-LOCK® 1 allows for a 65% reduction in installation time and considerably lower application costs.

High torque transmission

With the same shaft size, e.g. 30 mm, it allows for higher torque transmission at a very low cost, for example:

SIT-LOCK® 8 30 x 55 M_t = 473 Nm
SIT-LOCK® 8 30 x 65 M_t = 789 Nm
SIT-LOCK® 8 30 x 80 M_t = 1103 Nm

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® 8 locking device is self-centering so it does not require a centering base between the shaft and hub.

Installation with non-lubricated surfaces (dry)

See SIT-LOCK® 7 specifications as they are the same.

Axial displacement

When tightening the screws there is no hub to shaft axial displacement.

Surface finish

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

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

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 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 screws have not been deformed. Oil the screws and assemble the locking device as originally supplied.

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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	D_1	Number	Type	M_s [Nm]	M_t [Nm]	F_{ax} [kN]	P_w [N/mm²]	P_n [N/mm²]
14 x 55	17	22	30	38	62	3	M8	41	221	32	351	90
16 x 55	17	22	30	38	62	3	M8	41	252	32	307	90
18 x 55	17	22	30	38	62	3	M8	41	284	32	273	90
19 x 55	17	22	30	38	62	3	M8	41	299	32	259	90
20 x 55	17	22	30	38	62	3	M8	41	315	32	246	90
22 x 55	17	22	30	38	62	3	M8	41	347	32	224	90
24 x 55	17	22	30	38	62	3	M8	41	378	32	205	90
25 x 55	17	22	30	38	62	3	M8	41	394	32	197	90
28 x 55	17	22	30	38	62	3	M8	41	441	32	176	90
30 x 55	17	22	30	38	62	3	M8	41	473	32	164	90
24 x 65	17	22	30	38	72	5	M8	41	630	53	341	125
25 x 65	17	22	30	38	72	5	M8	41	657	53	328	125
28 x 65	17	22	30	38	72	5	M8	41	735	53	293	125
30 x 65	17	22	30	38	72	5	M8	41	788	53	273	125
32 x 65	17	22	30	38	72	5	M8	41	840	53	256	125
33 x 65	17	22	30	38	72	5	M8	41	866	53	246	125
35 x 65	17	22	30	38	72	5	M8	41	919	53	234	125
38 x 65	17	22	30	38	72	5	M8	41	998	53	216	125
40 x 65	17	22	30	38	72	5	M8	41	1.051	53	205	125
30 x 80	20	25	33	41	87	7	M8	41	1.103	74	325	120
32 x 80	20	25	33	41	87	7	M8	41	1.177	74	305	120
33 x 80	20	25	33	41	87	7	M8	41	1.213	74	296	120
35 x 80	20	25	33	41	87	7	M8	41	1.287	74	279	120
38 x 80	20	25	33	41	87	7	M8	41	1.397	74	257	120
40 x 80	20	25	33	41	87	7	M8	41	1.471	74	244	120
42 x 80	20	25	33	41	87	7	M8	41	1.544	74	232	120
45 x 80	20	25	33	41	87	7	M8	41	1.655	74	217	120
48 x 80	20	25	33	41	87	7	M8	41	1.765	74	203	120
50 x 80	20	25	33	41	87	7	M8	41	1.838	74	195	120

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

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.