

LOCKING ASSEMBLIES

CAPT LOCK LOCKING ASSEMBLIES

Main Feature

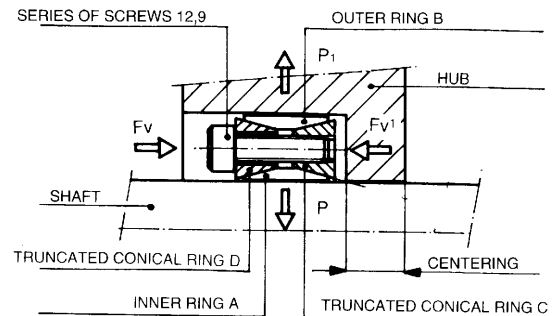
Capt Lock locking assemblies are made up of 2 conical rings:

- inner conical ring A
- outer conical ring B

linked by 2 truncated conical rings:

- inner truncated conical ring C
- outer truncated conical ring D

The axial shift of rings C and D inwards causes contemporary compression and expansion of rings A and B on the working surfaces of the shaft and on the hub respectively. Obviously the pressure caused by the conical rings A and B on their contact surface is proportional to the axial force B on their contact surface in proportional to the axial force F_v expressed by the locking screws on the rings C and D.



Operating diagram Type B

Advantages and application

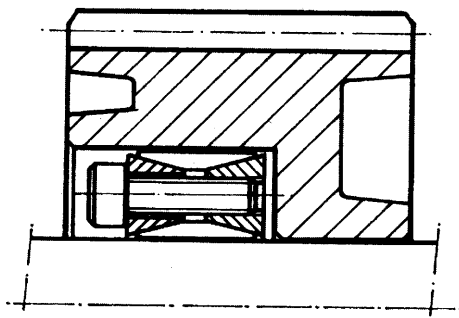
Capt Lock locking assemblies are widely used. They were the first to be introduced onto the market.

They can be installed with large shaft and hub tolerances thanks to the wide angle β .

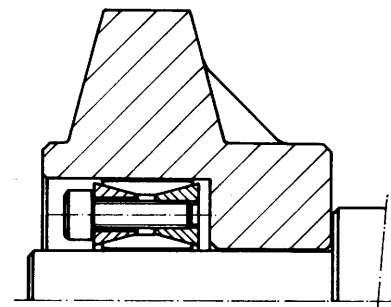
The locking assemblies Type B can be assembled in series. It is important to take into consideration the transmittable torque that can be almost doubled (with 2 locking assemblies) and triplicated (with 3 locking assemblies).

They are widely used with large diameters (over 200 mm. \varnothing) as they are economical; their bands (quota h1) are quite narrow, and can reduce raw material costs.

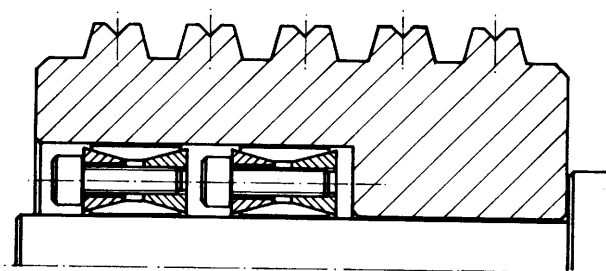
As they have a narrow band and a wide angle, they are not self-centring, so it is always necessary to provide an adequate and precise centering guide.



Shaft-gear connection with Capt lock Type B



Cam-shaft connection with Capt lock Type B



Pulley Keying using 2 Capt lock assemblies Type B

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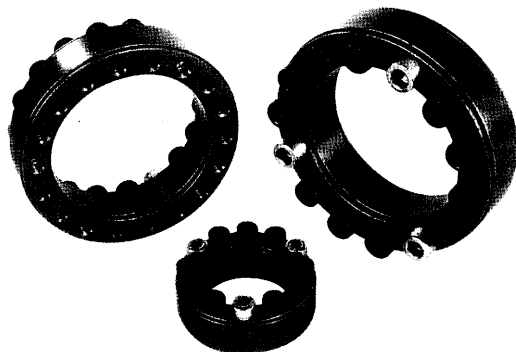
CAPT LOCK Type B

● Advantages

- Capt Lock Type B can be used in connecting the shaft and boss when it requires a high transfer torque.
- Easy assembling and no need for other parts.
- Required shaft : $\phi 20 \sim \phi 400$ mm

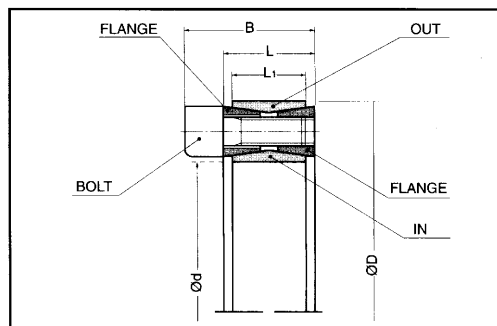
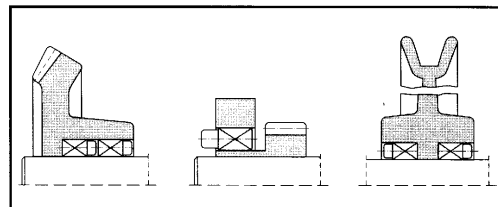
● Usage

- Pulley, gear, flywheel, cam, lever etc.



● Features

- Material : DIN C45, JIS S45C, KS S45C
- Hardness : HRC 22~25
- Surface treatment : Barrel grinding



● Dimensions (mm)

dxD	Dimensions			Axial Load		Surface Pressure		Bolt			Weight (g)
	L	L1	B	Torque Mt(kgf-m)	Axial Load Pax(kgf)	Shaft kgf/mm ²	Boss kgf/mm ²	Holes	Thread Dia	Torque (kgf-m)	
20 x 47	20	17	27	27	2760	27	11	8	M 6	1.4	208
22 x 47	20	17	27	30	2760	24.5	11.5	8	M 6	1.4	198
24 x 50	20	17	27	37	3110	25	12	9	M 6	1.4	216
25 x 50	20	17	27	39	3110	24	12	9	M 6	1.4	210
28 x 55	20	17	27	48	3450	24	12	10	M 6	1.4	256
30 x 55	20	17	27	52	3460	22.5	12.5	10	M 6	1.4	244
32 x 60	20	17	27	66	4150	25	13.5	12	M 6	1.4	294
35 x 60	20	17	27	72	4150	23	13.5	12	M 6	1.4	276
38 x 65	20	17	27	91	4840	25	14.5	14	M 6	1.4	320
40 x 65	20	17	27	96	4840	23.5	14.5	14	M 6	1.4	308
42 x 75	24	20	33	158	7520	30	17	12	M 8	3.4	556
45 x 75	42	20	33	170	7520	28	17	12	M 8	3.4	522
48 x 80	24	20	33	181	7520	26	15.5	12	M 8	3.4	578
50 x 80	24	20	33	190	7520	25	15.5	12	M 8	3.4	564
55 x 85	24	20	33	242	8800	26.5	17	14	M 8	3.4	610
60 x 90	24	20	33	264	8800	24.5	16	14	M 8	3.4	644
65 x 95	24	20	33	327	10000	26	17.5	16	M 8	3.4	690
70 x 110	28	24	39	480	13600	27	17	14	M 10	6.6	1,214
75 x 115	28	24	39	510	13600	25	16.5	14	M 10	6.6	1,280
80 x 120	28	24	39	540	13600	24	16	14	M 10	6.6	1,346
85 x 125	28	24	39	660	15600	25.5	17.5	16	M 10	6.6	1,424
90 x 130	28	24	39	700	15600	24	16.5	16	M 10	6.6	1,472
95 x 135	28	24	39	830	17600	25.5	18	18	M 10	6.6	1,546
100 x 145	33	26	47	990	19800	25.5	17.5	14	M 12	11.5	2,132
110 x 155	33	26	47	1090	19800	23	16.5	14	M 12	11.5	2,306
120 x 165	33	26	47	1360	22700	24	17.5	16	M 12	11.5	2,400
130 x 180	38	34	52	1840	28400	21.5	15.5	20	M 12	11.5	3,500
140 x 190	38	34	52	2180	31200	22	16	22	M 12	11.5	3,848
150 x 200	38	34	52	2550	34000	22	16.5	24	M 12	11.5	4,100
160 x 210	38	34	52	2950	36900	22.5	17	26	M 12	11.5	4,400
170 x 225	44	38	60	3560	41900	21.5	16.5	22	M 14	18.0	5,800
180 x 235	44	38	60	4110	45700	22	17	24	M 14	18.0	6,100
190 x 250	52	46	68	5060	53300	20	15.5	28	M 14	18.0	8,300
200 x 260	52	46	68	5710	57100	20.5	16	30	M 14	18.0	8,700
220 x 285	56	50	74	7410	67400	20.5	15.5	26	M 16	28.0	11,300
240 x 305	56	50	74	9330	77800	21.5	17	30	M 16	28.0	12,200
260 x 325	56	50	74	11400	88100	22.5	18	34	M 16	28.0	13,200
280 x 355	66	60	86.5	14300	102000	20	16	32	M 18	39.0	19,500
300 x 375	66	60	86.5	17300	115000	21	17	36	M 18	39.0	20,500
320 x 405	78	72	100.5	23400	146000	21	16.5	36	M 20	55.0	30,000
340 x 425	78	72	100.5	24900	146000	20	16	36	M 20	55.0	31,200
360 x 455	90	84	116	35700	181000	20	16	36	M 22	75.0	42,200
380 x 475	90	84	116	34500	181000	19	15	36	M 22	75.0	44,000
400 x 495	90	84	116	36300	181000	18	14.5	36	M 22	75.0	46,000

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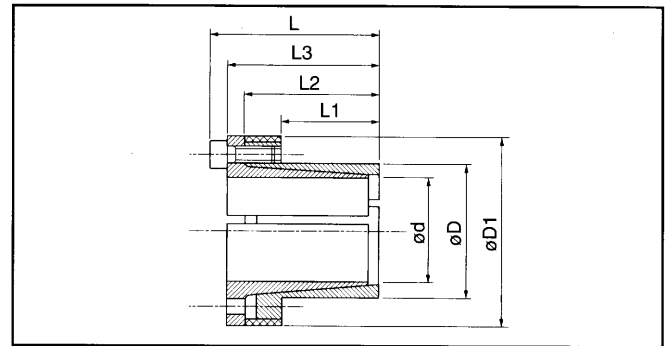
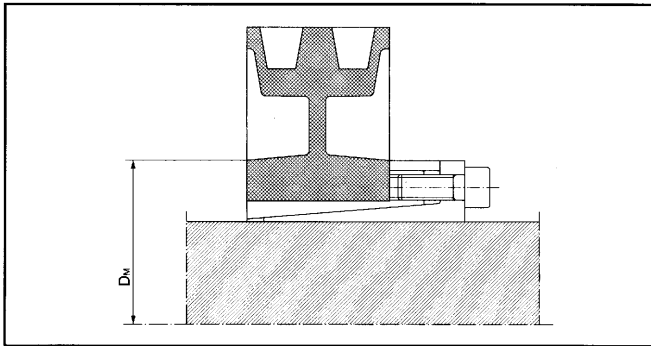
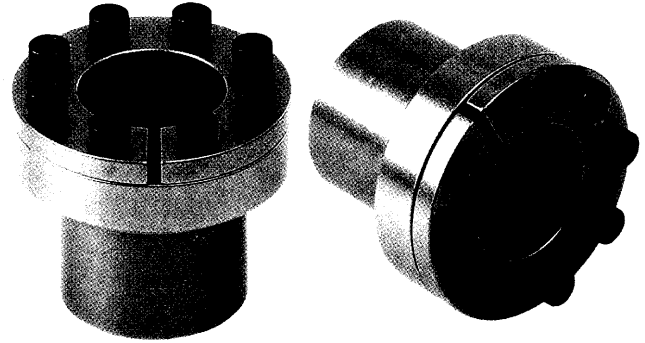
CAPT LOCK Type T

● Characteristics

- Self centering
- Medium-high torque
- Limited installation time
- Restricted hub diameter
- Very low surface presste

● Features

- Material : DIN C45, JIS S45C, KS S45C
- Hardness : HRC 22-25
- Surface treatment : Barrel grinding



● Dimensions (mm)

dxD	L1	L2	L3	L	D1	Torque Nm	Axial Thrust Fass. KN	Surface pressure on		Tightening screws		Weight g
								Shaft Pw	Hub Pn	Din 912 12.9		
								N/mm ²	N/mm ²	No. x type	Tightening torque Ms Nm	
12 x 18	14	23	26	30	32	58	10	160	105	4 X M4	5	80
13 x 23	14	23	26	30	38	63	10	140	80	4 X M4	5	125
14 x 23	14	23	26	30	38	68	10	130	80	4 X M4	5	120
15 x 24	16	29	36	42	45	127	17	185	115	3 X M6	17	257
16 x 24	16	29	36	42	45	136	17	175	115	3 X M6	17	250
17 x 26	18	31	38	44	47	180	22	190	125	4 X M6	17	280
18 x 26	18	31	38	44	47	200	22	180	125	4 X M6	17	270
19 x 27	18	31	38	44	49	210	22	170	120	4 X M6	17	290
20 x 28	18	31	38	44	50	220	22	160	115	4 X M6	17	300
22 x 32	25	38	45	51	54	250	22	115	80	4 X M6	17	385
24 x 34	25	38	45	51	56	270	22	105	75	4 X M6	17	405
25 x 34	25	38	45	51	56	280	22	100	75	4 X M6	17	390
28 x 39	25	38	45	51	61	465	33	135	97	6 X M6	17	475
30 x 41	25	38	45	51	62	510	33	127	90	6 X M6	17	480
32 x 43	25	38	45	51	65	540	33	120	90	6 X M6	17	520
35 x 47	32	45	52	58	69	790	45	105	80	8 X M6	17	630
38 x 50	32	45	52	58	72	860	45	100	75	8 X M6	17	670
40 x 53	32	45	52	58	75	990	45	95	70	8 X M6	17	735
42 x 55	32	45	52	58	78	950	45	90	70	8 X M6	17	780
45 x 59	45	62	70	78	86	1890	84	110	85	8 X M8	41	1,230
48 x 62	45	62	70	78	87	2010	84	105	80	8 X M8	41	1,240
50 x 65	45	62	70	78	92	2100	84	100	75	8 X M8	41	1,400
55 x 71	55	72	80	88	98	2600	94	85	65	9 X M8	41	1,700
60 x 77	55	72	80	88	104	2840	94	75	60	9 X M8	41	1,950
65 x 84	55	72	80	88	111	3070	94	70	55	9 X M8	41	2,200
70 x 90	65	86	96	106	119	5250	150	90	70	9 X M10	83	3,050
75 x 95	65	86	96	106	126	5600	150	80	65	9 X M10	83	3,300
80 x 100	65	86	96	106	131	8020	200	100	80	12 X M10	83	3,500
85 x 106	65	86	96	106	137	8500	200	95	75	12 X M10	83	3,800
90 x 112	65	86	96	106	144	9000	200	90	75	12 X M10	83	4,200
95 x 120	65	86	96	106	149	11000	230	100	80	14 X M10	83	4,750
100 x 125	65	86	96	106	154	15000	300	120	95	12 X M12	83	4,880
110 x 140	90	114	128	140	180	16000	290	80	65	12 X M12	145	8,950
120 x 155	90	114	128	140	198	17500	290	70	55	12 X M12	145	11,500
130 x 165	90	114	128	140	208	25000	384	90	70	16 X M12	145	12,100