

# RCK 50 Clamping Elements



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## MINIMUM HUB DIAMETER CHECK $D_m$

After choosing the clamping element type with the required characteristics it is necessary to make a check on the minimum extern diameter of the hub ( $D_m$ ), which has to resist to the solicitations caused by the high pressures developed by the clamping element. The check is purely static and concerns just solicitations caused by the clamping element:

$$D_m \geq D \times \sqrt{\frac{R_{s 0.2} + (P_m \times C)}{R_{s 0.2} - (P_m \times C)}}$$

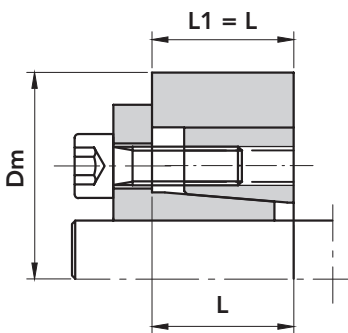
Where:  $D_m$  = Extern diameter of the hub (mm)

$D$  = Extern diameter of the clamping element (mm)

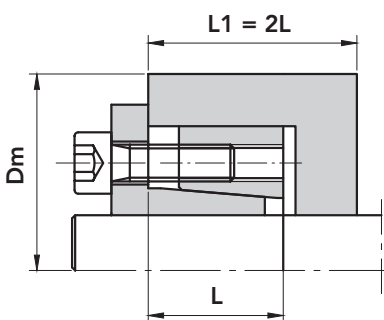
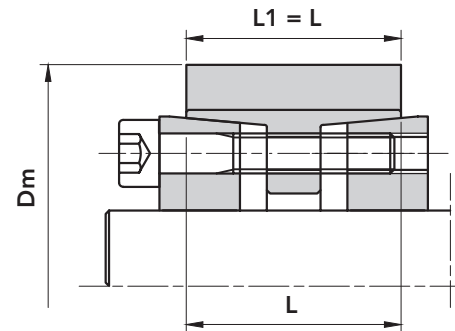
$R_{s 0.2}$  = Yield point for permanent elongation of 0.2% (N/mm<sup>2</sup>)

$P_m$  = Specific pressure exercised by the clamping element on the hub (N/mm<sup>2</sup>)

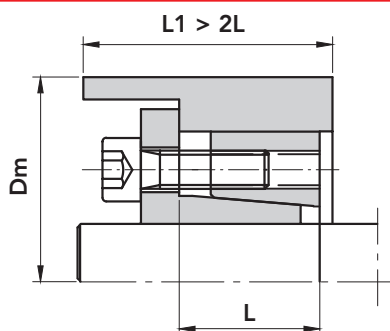
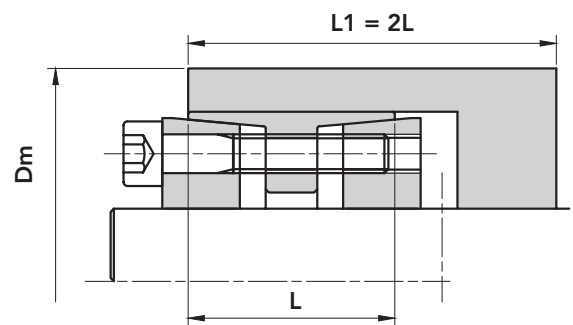
$C$  = coefficient of the utilization in function of the hub profile (Look at the pictures below)



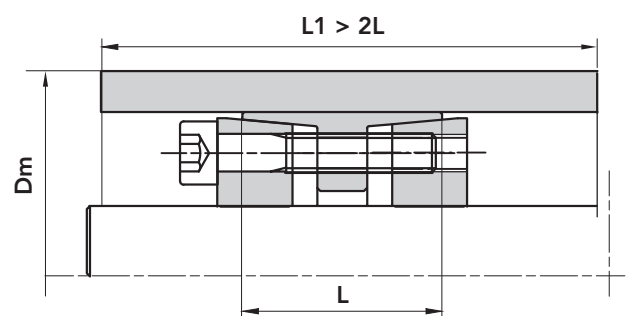
$C = 1$

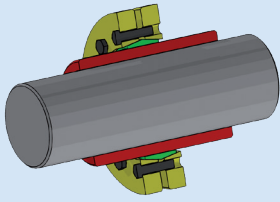


$C = 0.8$

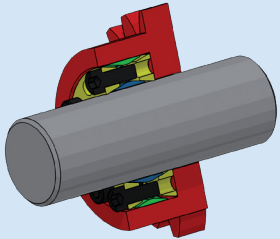


$C = 0.6$

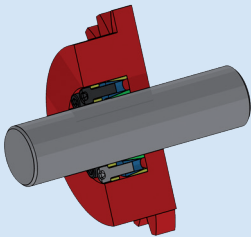


**RCK 19****SELF CENTRING RCK 19 TYPE**

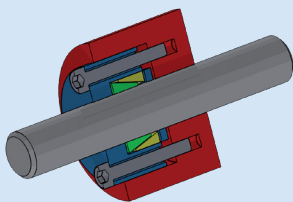
Suitable for hollow shafts, it operates by compressing the hollow shafts on the solid shafts enabling transmission of medium high twisting moments to be achieved.

**RCK 40****NOT SELF CENTRING RCK 40 TYPE**

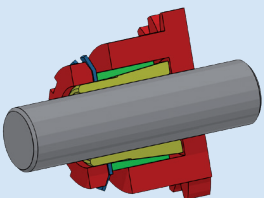
Suitable for general applications, it is not self centring and therefore requires a centring band to ensure perfect concentricity. It operates with medium- high torque values.

**RCK 45****NOT SELF CENTRING RCK 45 TYPE**

Suitable for applications where medium-low twisting moments are required with, easy rapid assembly and disassembly operation. Not self centring.

**RCK 50****NOT SELF CENTRING RCK 50 TYPE**

Comprising two tapered rings, must always be mounted with a tightening flange. It operates with low torque values; it isn't self centring.

**RCK 55****SELF CENTRING RCK 55 TYPE**

Suitable for assemblies where limited overall dimensions and times are required. It operates with medium-low torque values.



# RCK 50 TYPE CLAMPING ELEMENTS

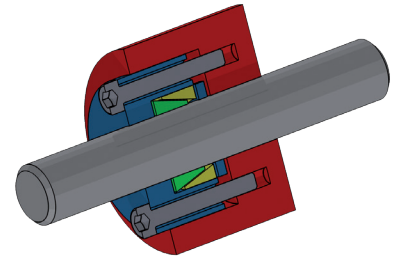
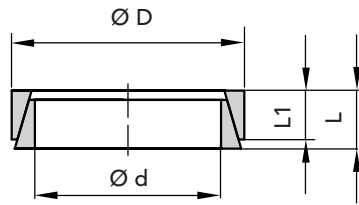
## NOT SELF CENTERING

THE RECOMMENDED MACHINING TOLERANCES FOR THE PRESSURE SURFACES ARE AS FOLLOWS:

**Ø h 8 FOR SHAFT**

**Ø H 8 FOR HUB**

\* cut horizontally



PART NUMBER	DIMENSIONS				Necessary force Kg	maximum torque Mt Nm	CLAMPING PRESSURE		WEIGHT Kg
	Ød	ØD	L1	L			Shaft N/mm <sup>2</sup>	Hub N/mm <sup>2</sup>	
06500006	*6	9	3,7	4,5	380	2,4	115	75	0,01
06500007	*7	10	3,7	4,5	390	3,0	105	70	0,01
06500008	*8	11	3,7	4,5	530	4,7	120	90	0,01
06500009	9	12	3,7	4,5	1560	7,9	140	105	0,01
06500010	10	13	3,7	4,5	1560	9,5	135	105	0,01
06500012	12	15	3,7	4,5	1560	11,4	115	90	0,01
06500013	13	16	3,7	4,5	1560	13,1	110	90	0,01
06500014	14	18	5,3	6,3	2540	22,3	115	90	0,01
06500015	15	19	5,3	6,3	2540	24,3	110	85	0,01
06500016	16	20	5,3	6,3	2540	27,3	105	85	0,01
06500017	17	21	5,3	6,3	2540	29,8	105	85	0,01
06500018	18	22	5,3	6,3	2540	32,4	100	80	0,01
06500019	19	24	5,3	6,3	3600	49	140	110	0,01
06500020	20	25	5,3	6,3	3600	53	135	105	0,01
06500022	22	26	5,3	6,3	3600	66	135	115	0,01
06500024	24	28	5,3	6,3	3600	73	130	110	0,01
06500025	25	30	5,3	6,3	3600	72	115	95	0,01
06500028	28	32	5,3	6,3	3600	86	115	100	0,01
06500030	30	35	5,3	6,3	3600	91	100	85	0,01
06500032	32	36	5,3	6,3	4500	131	130	115	0,02
06500035	35	40	6	7	5400	171	125	110	0,02
06500036	36	42	6	7	5400	169	115	100	0,02
06500038	38	44	6	7	5400	181	110	95	0,02
06500040	40	45	6,6	8	6600	231	115	105	0,03
06500042	42	48	6,6	8	6600	235	110	95	0,04
06500045	45	52	8,6	10	9900	353	105	95	0,04
06500048	48	55	8,6	10	13200	572	155	135	0,05
06500050	50	57	8,6	10	13200	602	150	130	0,05
06500055	55	62	8,6	10	13200	670	140	125	0,06
06500056	56	64	10,4	12	15720	790	130	115	0,07
06500060	60	68	10,4	12	15720	860	125	110	0,07
06500063	63	71	10,4	12	15720	910	120	105	0,08
06500065	65	73	10,4	12	15720	950	115	100	0,08
06500070	70	79	12,2	14	20960	1380	125	110	0,11
06500071	71	80	12,2	14	20960	1400	120	110	0,12
06500075	75	84	12,2	14	20960	1450	115	100	0,12
06500080	80	91	15	17	29000	2200	125	105	0,20

### ORDERING EXAMPLE:

The following will be ordered with a shaft having Ød 24 with a torque value less than or equal 73 Nm:

**RCK 50 - 24 x 28**

**Part Number 06500024**

CAD drawings available on our site  
[www.chiaravalli.com](http://www.chiaravalli.com)

3D simulation available on the website.

Quantity, availability and prices on B2B Chiaravalli

