

RCK 45 Clamping Elements





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:

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

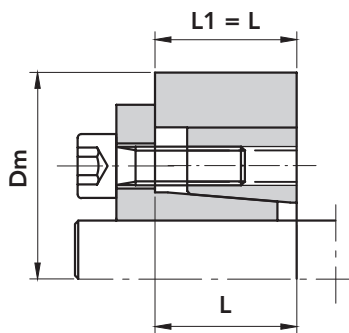
Where: D_m = Extern diameter of the hub (mm)

D = Extern diameter of the clamping element (mm)

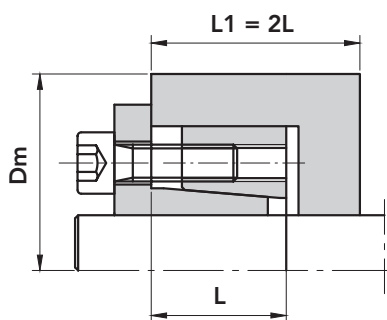
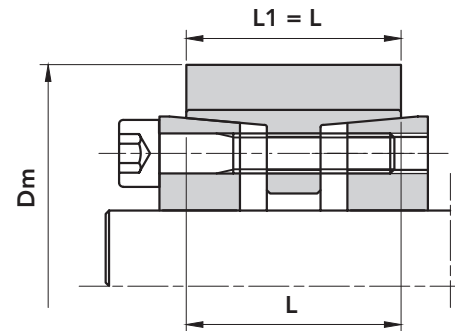
$R_{s\ 0.2}$ = Yield point for permanent elongation of 0.2% (N/mm²)

P_m = Specific pressure exercised by the clamping element on the hub (N/mm²)

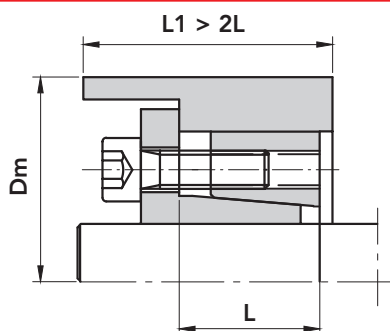
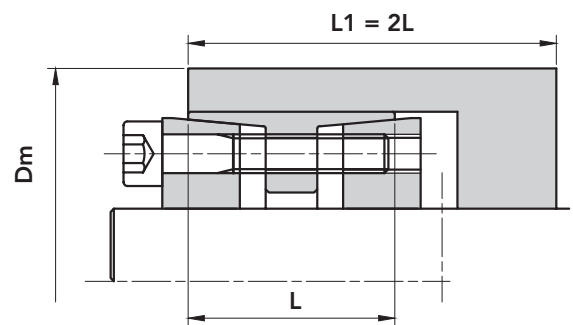
C = coefficient of the utilization in function of the hub profile (Look at the pictures below)



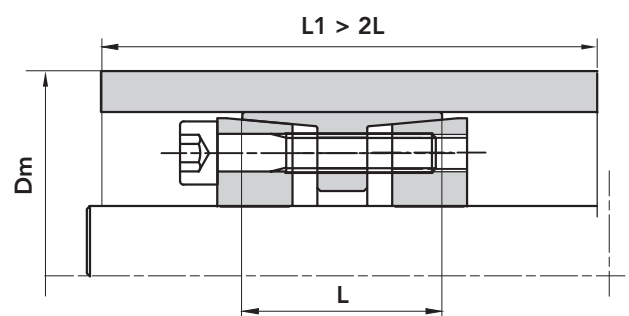
$C = 1$

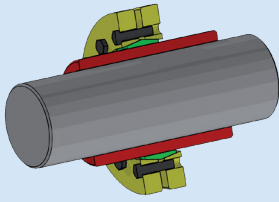


$C = 0.8$

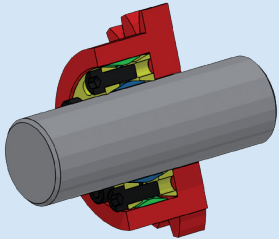


$C = 0.6$

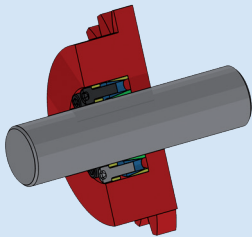


**RCK 19****SELF CENTRING RCK 19 TYPE**

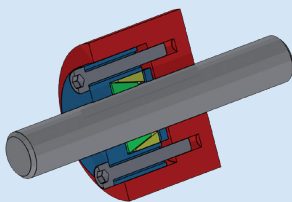
Suitable for hollow shafts, it operates by compressing the hollow shafts on the solid shafts enabling transmission of medium high twisting moments to be achieved.

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

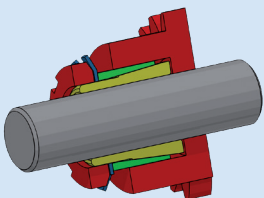
Suitable for general applications, it is not self centring and therefore requires a centring band to ensure perfect concentricity. It operates with medium- high torque values.

**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.

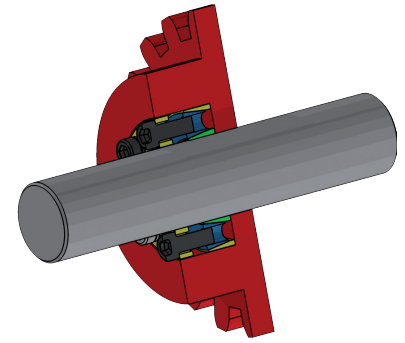
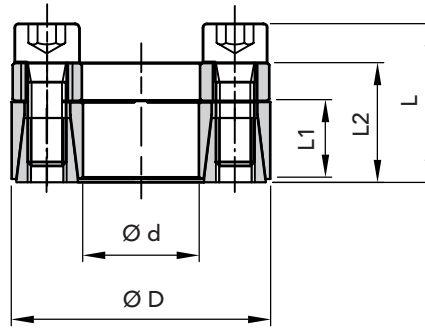


NOT SELF CENTERING

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

$\varnothing h 8$ FOR SHAFT

$\varnothing H 8$ FOR HUB



PART NUMBER	DIMENSIONS					maximum torque Mt Nm	CLAMPING PRESSURE		CLAMPING SCREWS DIN 912 MAT. 12.9			EXTRACTION THREAD		WEIGHT Kg
	Ød	ØD	L1	L2	L		Shaft N/mm ²	Hub N/mm ²	N.	Type	Torque Nm	Type	N.	
06450018	18	40	12	18,5	24,5	190	260	120	6	M6x16	16	M8	2	0,20
06450019	19	41	12	18,5	24,5	210	260	120	6	M6x16	16	M8	2	0,25
06450020	20	42	12	18,5	24,5	240	250	120	6	M6x16	16	M8	2	0,24
06450024	24	46	12	18,5	24,5	290	250	120	6	M6x16	16	M8	2	0,25
06450025	25	47	12	18,5	24,5	330	230	120	8	M6x16	16	M8	2	0,25
06450028	28	50	12	18,5	24,5	370	220	120	8	M6x16	16	M8	2	0,30
06450030	30	52	12	18,5	24,5	430	210	120	8	M6x16	16	M8	2	0,30
06450035	35	57	15	22	28	610	170	100	12	M6x16	16	M8	3	0,32
06450038	38	60	15	22	28	680	170	100	12	M6x16	16	M8	3	0,36
06450040	40	62	15	22	28	780	170	100	12	M6x16	16	M8	3	0,40
06450042	42	70	18	28	36	1480	190	110	12	M8x22	41	M10	3	0,45
06450045	45	73	18	28	36	1500	210	130	12	M8x22	41	M10	3	0,57
06450048	48	76	18	28	36	1550	210	130	12	M8x22	41	M10	3	0,59
06450050	50	78	18	28	36	1650	190	120	12	M8x22	41	M10	3	0,61
06450055	55	83	18	28	36	2000	190	120	16	M8x22	41	M10	4	0,63
06450060	60	88	18	28	36	2350	190	120	16	M8x22	41	M10	4	0,69
06450070	70	105	22	35	35	3900	180	120	12	M10x25	70	M12	3	1,25
06450080	80	115	22	35	35	4800	170	120	16	M10x25	70	M12	4	1,40

ORDERING EXAMPLE:

The following will be ordered with a shaft having $\varnothing d$ 55 with a torque value less than or equal 2000 Nm:

RCK 45 - 55 x 83

Part Number 06450055

CAD drawings available on our site
www.chiaravalli.com

3D simulation available on the website.

Quantity, availability and prices
on B2B Chiaravalli

