

# RCK 70 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:

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

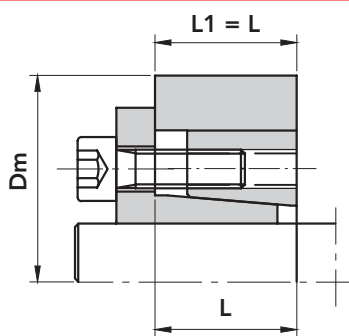
Where:  $D_m$  = Extern diameter of the hub (mm)

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

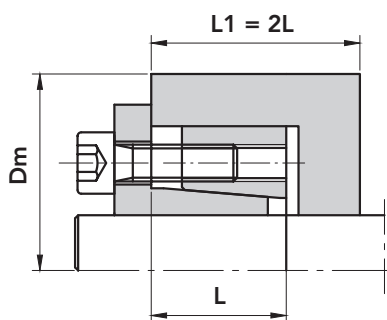
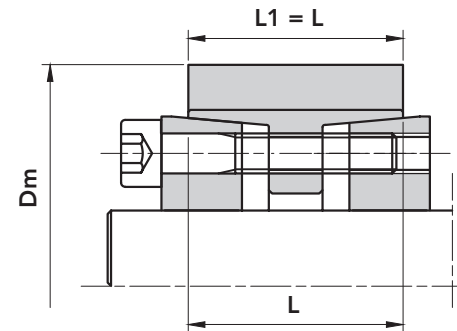
$R_{s 0.2}$  = Yield point for permanent elongation of 0.2% (N/mm<sup>2</sup>)

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

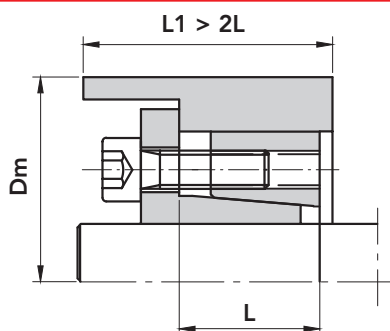
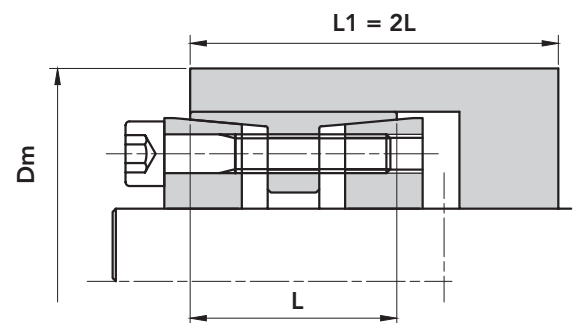
$C$  = coefficient of the utilization in function of the hub profile (Look at the pictures below)



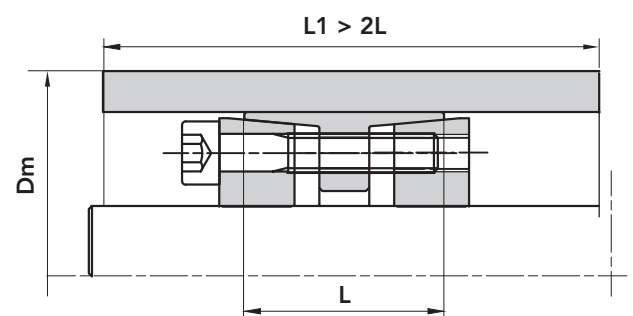
$C = 1$

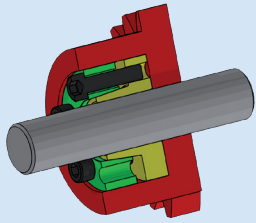


$C = 0.8$



$C = 0.6$

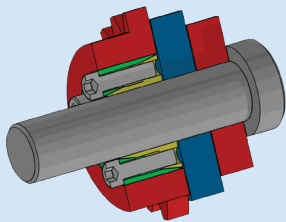




**RCK 60**

### SELF CENTRING RCK 60 TYPE

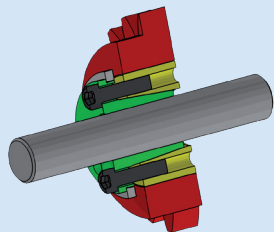
Suitable for assemblies where a medium-high twisting moment is required. It operates in the opposite mode to RCK 13.



**RCK 61**

### SELF CENTRING RCK 61 TYPE

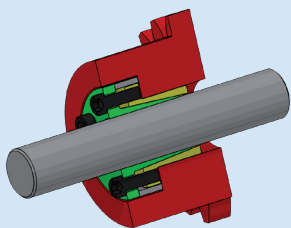
Enables adjacent components to be clamped to the hub thanks to an axial force achieved during the clamping phase. It operates with medium torque values.



**RCK 70-71**

### SELF CENTRING RCK 70-71 TYPE (RCK 71 eventually with spacer)

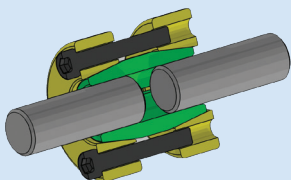
The RCK version is suitable for assemblies where concentricity and orthogonal positioning of the parts is required. The RCK 71 version has the same features as RCK 70 with the addition of a spacer ring to completely avoid possible axial displacements. These components operate with medium- high torque values.



**RCK 80**

### SELF CENTRING RCK 80 TYPE

Suitable for assemblies on hubs with thin walls guarantees both axial and radial positioning precision with medium transmission torque values.



**RCK 95**

Enables rigid connection between two aligned shafts. It transmits medium-high twisting moments with the advantage of enabling rapid assembly and disassembly



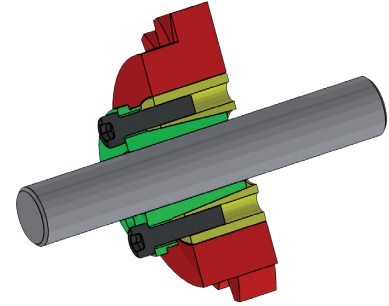
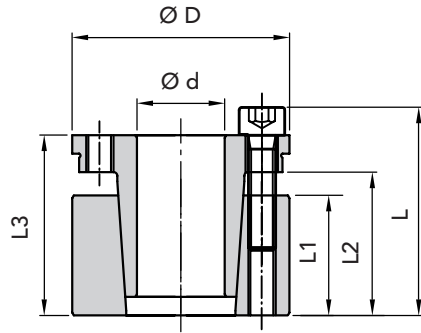
# RCK 70 TYPE CLAMPING ELEMENTS

## SELF CENTRING

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

**Ø h 8 FOR SHAFT**

**Ø 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	L3	L		Shaft N/mm <sup>2</sup>	Hub N/mm <sup>2</sup>	N.	Type	Torque Nm	Type	N.	
06700019	19	47	26	31	39	45	350	228	98	4	M6x25	17	M6	2	0,39
06700020	20	47	26	31	39	45	390	231	100	4	M6x25	17	M6	2	0,38
06700022	22	47	26	31	39	45	440	220	95	4	M6x25	17	M6	2	0,37
06700024	24	50	26	31	39	45	519	215	102	6	M6x25	17	M6	3	0,43
06700025	25	50	26	31	39	45	590	230	105	6	M6x25	17	M6	3	0,42
06700028	28	55	26	31	39	45	700	220	110	6	M6x25	17	M6	3	0,45
06700030	30	55	26	31	39	45	760	200	120	6	M6x25	17	M6	3	0,45
06700032	32	60	26	31	39	45	930	230	114	8	M6x25	17	M6	4	0,60
06700035	35	60	26	31	39	45	1030	200	119	8	M6x25	17	M6	4	0,50
06700038	38	65	26	31	39	45	1240	210	124	8	M6x25	17	M6	4	0,60
06700040	40	65	26	31	39	45	1350	200	125	8	M6x25	17	M6	4	0,60
06700042	42	75	30	36	47	55	2170	236	140	6	M8x30	41	M8	3	1,00
06700045	45	75	30	36	47	55	2350	236	140	6	M8x30	41	M8	3	1,00
06700048	48	80	30	36	47	55	2510	218	135	6	M8x30	41	M8	3	1,10
06700050	50	80	30	36	47	55	2580	218	135	6	M8x30	41	M8	3	1,00
06700055	55	85	30	36	47	55	3200	223	145	8	M8x30	41	M8	4	1,10
06700060	60	90	30	36	47	55	3380	198	157	8	M8x30	41	M8	4	1,20
06700065	65	95	30	36	47	55	4160	213	140	8	M8x30	41	M8	4	1,30
06700070	70	110	40	46	57	67	6840	225	143	8	M10x35	83	M10	4	2,20
06700075	75	115	40	46	62	72	7500	210	138	8	M10x35	83	M10	4	2,50
06700080	80	120	40	46	62	72	8100	200	130	8	M10x35	83	M10	4	2,60
06700085	85	125	40	46	62	72	9700	210	145	10	M10x35	83	M10	4	2,80
06700090	90	130	40	46	62	72	10300	200	138	10	M10x35	83	M10	4	2,70
06700095	95	135	40	46	62	72	12100	210	148	10	M10x35	83	M10	4	2,90
06700100	100	145	46	52	77	89	15700	216	148	8	M12x45	145	M12	4	3,90
06700110	110	155	46	52	77	89	17200	196	139	8	M12x45	145	M12	4	4,20
06700120	120	165	46	52	77	89	22500	216	156	10	M12x45	145	M12	4	4,80
06700130	130	180	46	52	77	89	24000	196	140	12	M12x45	145	M12	4	5,00
06700140	140	190	51	59	84	90	30800	196	145	8	M14x45	230	M14	4	6,50
06700150	150	200	51	59	84	90	37150	205	153	10	M14x45	230	M14	5	7,00
06700160	160	210	51	59	84	90	40500	205	155	10	M14x45	230	M14	5	7,00
06700170	170	225	51	59	84	90	40900	163	123	12	M14x45	230	M14	6	8,50
06700180	180	235	51	59	84	90	41300	160	120	12	M14x45	230	M14	6	9,00

### ORDERING EXAMPLE:

The following will be ordered with a shaft having Ød 48 with a torque value less than or equal 2510 Nm:

**RCK 70 - 48 x 80**

**Part Number 06700048**

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

