

# RCK 80 Clamping Elements



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**RANKIN**   
COMPONENTS THAT AUTOMATE



## 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:

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

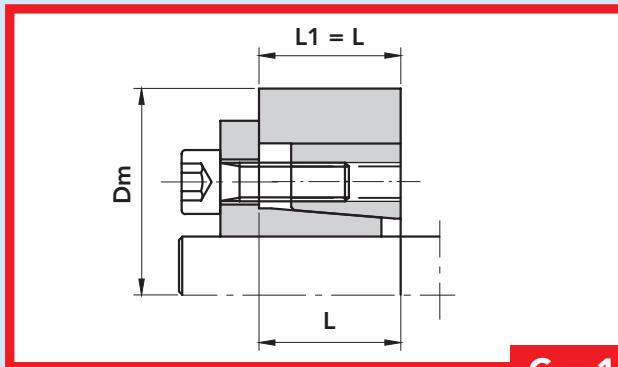
Where:  $D_m$  = Extern diameter of the hub (mm)

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

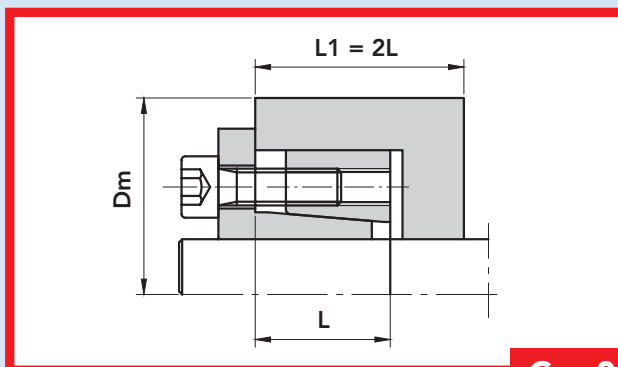
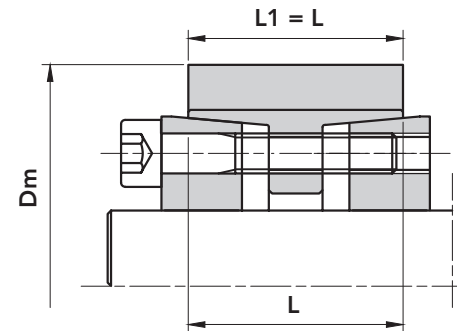
$R_{s 0.2}$  = Yield point for permanent elongation of 0.2% (N/mm<sup>2</sup>)

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

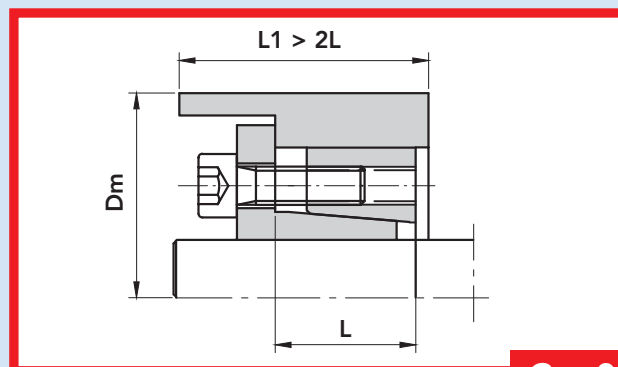
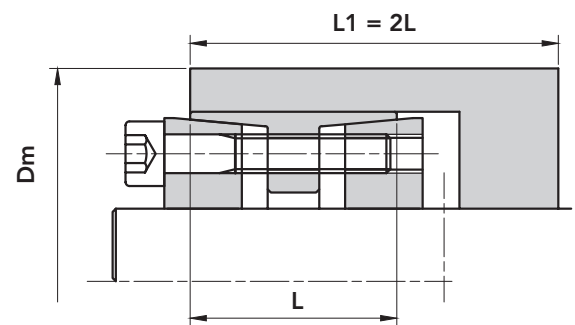
$C$  = coefficient of the utilization in function of the hub profile (Look at the pictures below)



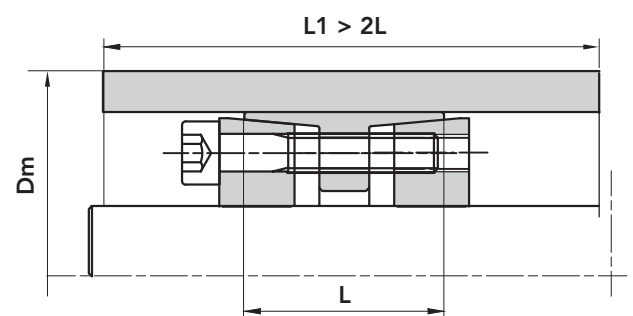
$C = 1$

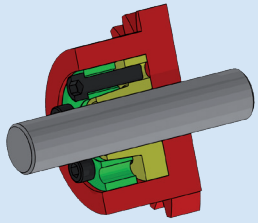


$C = 0.8$



$C = 0.6$

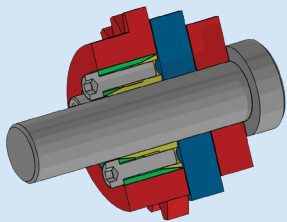




**RCK 60**

### SELF CENTRING RCK 60 TYPE

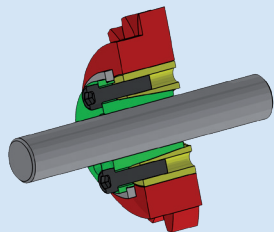
Suitable for assemblies where a medium-high twisting moment is required. It operates in the opposite mode to RCK 13.



**RCK 61**

### SELF CENTRING RCK 61 TYPE

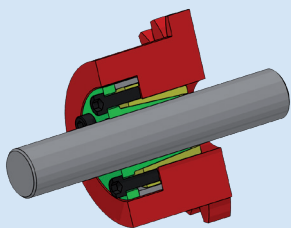
Enables adjacent components to be clamped to the hub thanks to an axial force achieved during the clamping phase. It operates with medium torque values.



**RCK 70-71**

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

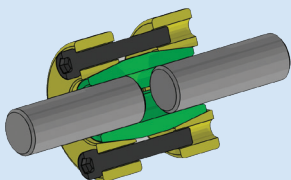
The RCK version is suitable for assemblies where concentricity and orthogonal positioning of the parts is required. The RCK 71 version has the same features as RCK 70 with the addition of a spacer ring to completely avoid possible axial displacements. These components operate with medium- high torque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

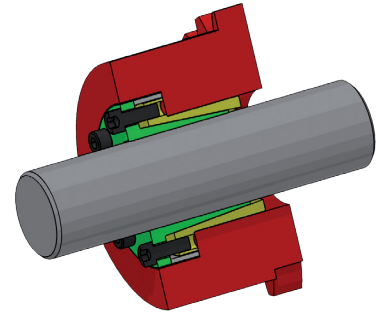
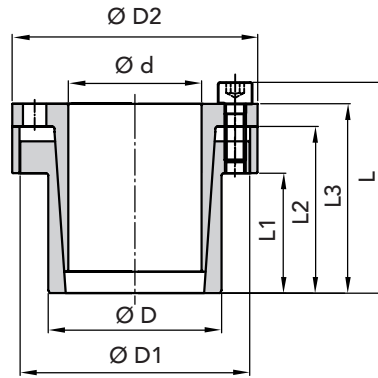


## SELF CENTRING

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

**Ø h 8 FOR SHAFT**

**Ø H 8 FOR HUB**



### DIMENSIONS

PART NUMBER	Ød	ØD	ØD1	ØD2	L1	L2	L3	L	maximum torque	CLAMPING PRESSURE		CLAMPING SCREWS DIN 912 MAT. 12.9			EXTRACTION THREAD		WEIGHT Kg
									Mt Nm	Shaft N/mm <sup>2</sup>	Hub N/mm <sup>2</sup>	N.	Type	Torque Nm	Type	N.	
06800006	6	14	22	25	10	18,5	22,5	25,5	12	190	80	3	M3x10	2,2	M3	2	0,10
06800008	8	15	24	27	12	21,5	25,5	29,5	29	205	110	3	M4x12	5	M4	2	0,10
06800009	9	16	25	28	14	23,5	27,5	31,5	31	150	85	3	M4x12	5	M4	2	0,10
06800010	10	16	25	28	14	23,5	27,5	31,5	35	140	85	3	M4x12	5	M4	2	0,11
06800011	11	18	28	32	14	23,5	27,5	31,5	52	170	105	4	M4x12	5	M4	2	0,11
06800012	12	18	28	32	14	23,5	27,5	31,5	58	150	100	4	M4x12	5	M4	2	0,12
06800014	14	23	35	39	14	23,5	27,5	31,5	69	140	80	4	M4x12	5	M4	2	0,12
06800015	15	24	40	45	16	29,5	36,5	42,5	170	158	98	4	M6x18	17	M6	2	0,21
06800016	16	24	40	45	16	29,5	36,5	42,5	180	148	98	4	M6x18	17	M6	2	0,23
06800017	17	26	42	47	19	32,5	39,5	45,5	200	180	125	4	M6x18	17	M6	2	0,25
06800018	18	26	42	47	19	32,5	39,5	45,5	200	180	125	4	M6x18	17	M6	2	0,27
06800019	19	27	43	49	19	32,5	39,5	45,5	210	170	120	4	M6x18	17	M6	2	0,27
06800020	20	28	44	50	19	32,5	39,5	45,5	220	160	115	4	M6x18	17	M6	2	0,27
06800022	22	32	48	54	26	39,5	46,5	52,5	250	115	80	4	M6x18	17	M6	2	0,38
06800024	24	34	50	56	26	39,5	46,5	52,5	395	146	102	6	M6x18	17	M6	3	0,41
06800025	25	34	50	56	26	39,5	46,5	52,5	410	140	102	6	M6x18	17	M6	3	0,45
06800028	28	39	55	61	25,5	39,5	46,5	52,5	465	135	98	6	M6x18	17	M6	3	0,47
06800030	30	41	57	62	25,5	39,5	46,5	52,5	510	127	90	6	M6x18	17	M6	3	0,48
06800032	32	43	59	65	25,5	39,5	46,5	52,5	705	146	108	8	M6x18	17	M6	4	0,49
06800035	35	47	62	69	31,5	45,5	52,5	58,5	790	105	80	8	M6x18	17	M6	4	0,63
06800038	38	50	66	72	31,5	45,5	52,5	58,5	860	100	76	8	M6x18	17	M6	4	0,67
06800040	40	53	69	75	31,5	45,5	52,5	58,5	900	96	72	8	M6x18	17	M6	4	0,73
06800042	42	55	71	78	31,5	45,5	52,5	58,5	940	90	70	8	M6x18	17	M6	4	0,78
06800045	45	59	80	86	45	62,5	71	79	1840	110	85	8	M8x22	41	M8	4	1,23
06800048	48	62	81	87	45	62,5	71	79	2000	105	80	8	M8x22	41	M8	4	1,24
06800050	50	65	86	92	45	62,5	71	79	2100	100	75	8	M8x22	41	M8	4	1,40
06800055	55	71	92	98	55	72,5	81	89	2580	85	65	9	M8x22	41	M8	3	1,70
06800060	60	77	98	104	55	72,5	81	89	2800	75	60	9	M8x22	41	M8	3	1,76
06800065	65	84	105	111	55	72,5	81	89	3050	70	55	9	M8x22	41	M8	3	2,21
06800070	70	90	113	119	65	86,5	96,5	106,5	5250	90	70	9	M10x25	83	M10	3	3,05
06800075	75	95	119	126	65	86,5	96,5	106,5	5600	80	65	9	M10x25	83	M10	3	3,32
06800080	80	100	125	131	65	86,5	96,5	106,5	8000	100	80	12	M10x25	83	M10	4	3,50
06800090	90	112	137	144	65	86,5	96,5	106,5	9000	90	75	12	M10x25	83	M10	4	3,90
06800100	100	125	147	154	65	86,5	96,5	106,5	15000	120	95	18	M10x25	83	M10	4	4,60
06800110	110	140	172	180	90	114	128	140	16000	80	65	12	M12x35	145	M12	4	8,70
06800120	120	155	187	198	90	114	128	140	17500	70	55	12	M12x35	145	M12	4	10,70

### ORDERING EXAMPLE:

The following will be ordered with a shaft having Ød 95 with a torque value less than or equal 8000 Nm:

**RCK 80 - 80 x 100**

**Part Number 06800080**

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

