

RCK 61 Clamping Elements



800.909.4988
info@rankinusa.com

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:

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

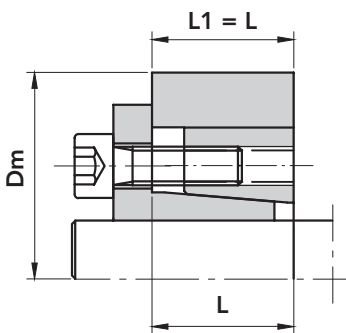
Where: D_m = Extern diameter of the hub (mm)

D = Extern diameter of the clamping element (mm)

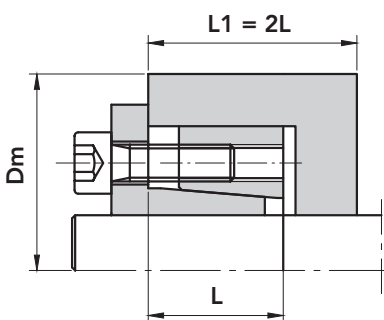
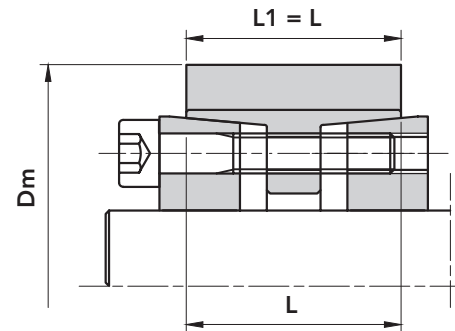
$R_{s 0.2}$ = Yield point for permanent elongation of 0.2% (N/mm²)

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

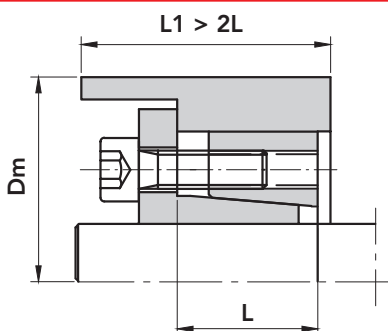
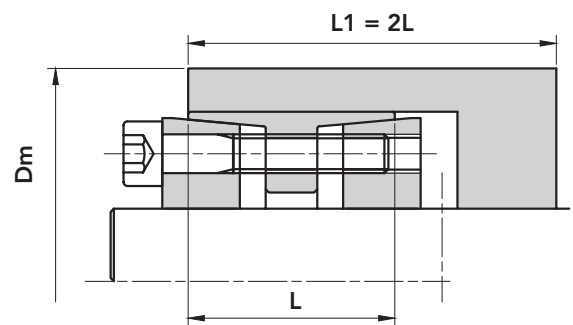
C = coefficient of the utilization in function of the hub profile (Look at the pictures below)



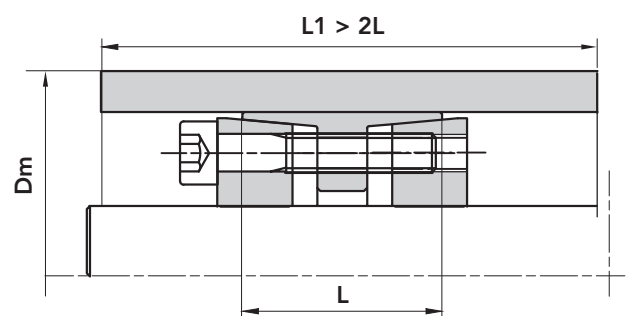
C = 1

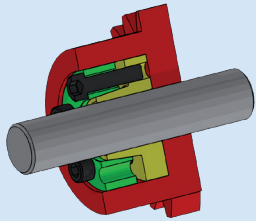


C = 0.8



C = 0.6

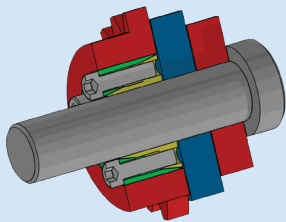




RCK 60

SELF CENTRING RCK 60 TYPE

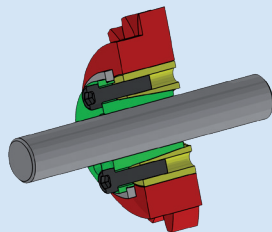
Suitable for assemblies where a medium-high twisting moment is required. It operates in the opposite mode to RCK 13.



RCK 61

SELF CENTRING RCK 61 TYPE

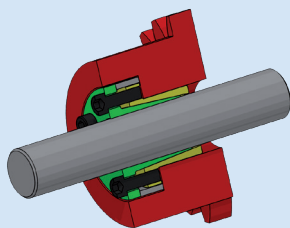
Enables adjacent components to be clamped to the hub thanks to an axial force achieved during the clamping phase. It operates with medium torque values.



RCK 70-71

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

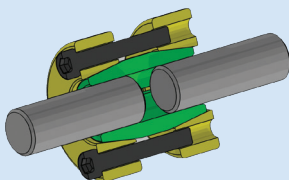
The RCK version is suitable for assemblies where concentricity and orthogonal positioning of the parts is required. The RCK 71 version has the same features as RCK 70 with the addition of a spacer ring to completely avoid possible axial displacements. These components operate with medium-high torque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

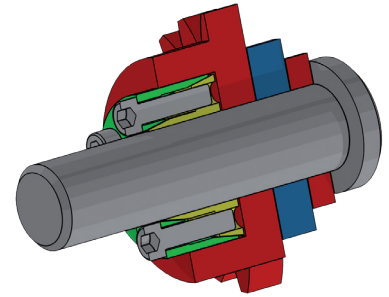
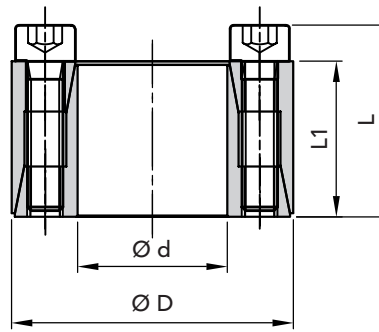


SELF CENTRING

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

Ø h 8 FOR SHAFT

Ø H 8 FOR HUB



PART NUMBER	DIMENSIONS				maximum torque Mt Nm	CLAMPING PRESSURE		CLAMPING SCREWS DIN 912 MAT. 12.9			EXTRACTION THREAD		WEIGHT Kg
	Ød	ØD	L1	L		Shaft N/mm ²	Hub N/mm ²	N.	Type	Torque Nm	Type	N.	
06610010	10	20	13	15,5	15	110	55	4	M2,5x12	1,2	M2,5	2	0,02
06610012	12	22	13	15,5	20	90	50	4	M2,5x12	1,2	M2,5	2	0,02
06610014	14	26	17	20	35	105	55	4	M3x16	2,1	M3	2	0,04
06610015	15	28	17	20	40	100	50	4	M3x16	2,1	M3	2	0,04
06610016	16	32	17	21	70	130	65	4	M4x16	4,9	M4	2	0,07
06610018	18	35	21	25	80	115	60	4	M4x20	4,9	M4	2	0,09
06610019	19	35	21	25	85	110	60	4	M4x20	4,9	M4	2	0,08
06610020	20	38	21	26	220	220	115	6	M5x20	9,7	M5	3	0,10
06610022	22	40	21	26	240	200	110	6	M5x20	9,7	M5	3	0,11
06610024	24	47	26	32	380	220	110	6	M6x25	16,2	M6	3	0,20
06610025	25	47	26	32	390	210	110	6	M6x25	16,2	M6	3	0,19

ORDERING EXAMPLE:

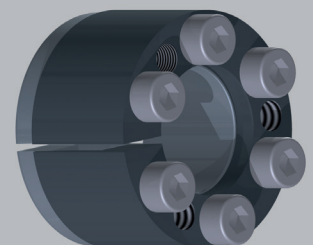
The following will be ordered with a shaft having Ød 15 with a torque value less than or equal 40 Nm:

RCK 61 - 15 x 28

Part Number 06610015

CAD drawings available on our site
www.chiaravalli.com

3D simulation available on the website.



Quantity, availability and prices on B2B Chiaravalli