

RCK 15 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:

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

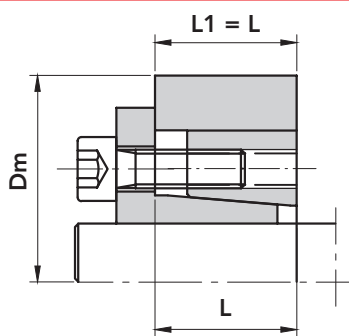
Where: D_m = Extern diameter of the hub (mm)

D = Extern diameter of the clamping element (mm)

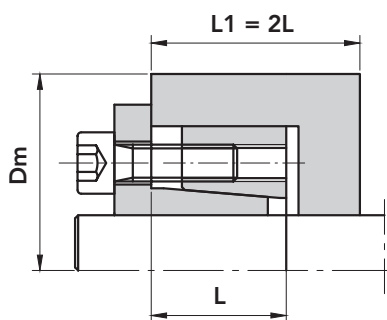
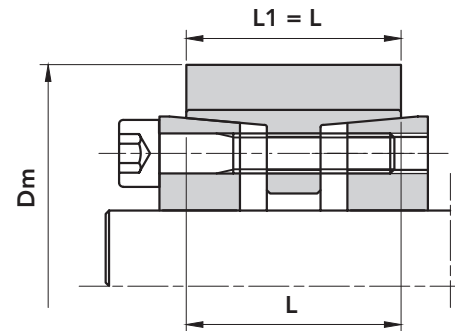
$R_{s 0.2}$ = Yield point for permanent elongation of 0.2% (N/mm²)

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

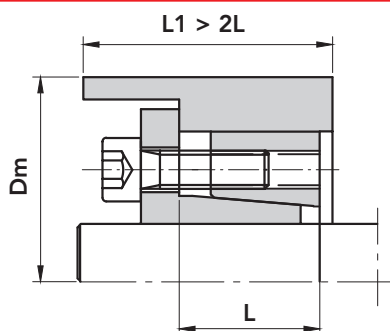
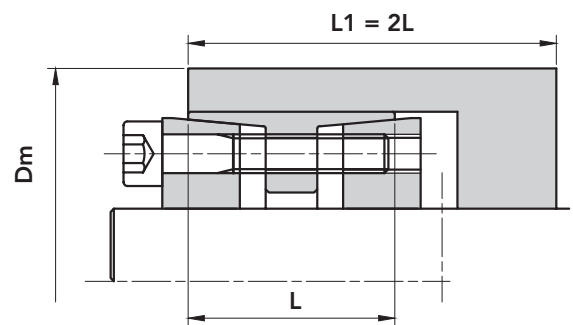
C = coefficient of the utilization in function of the hub profile (Look at the pictures below)



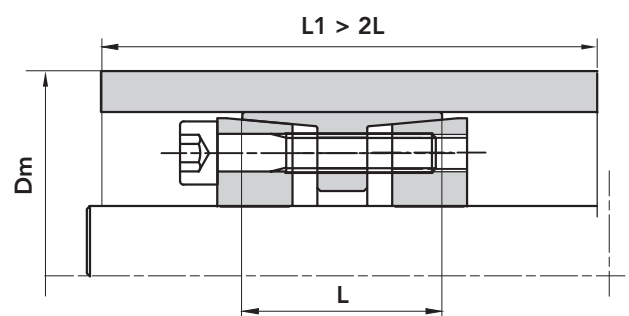
$C = 1$



$C = 0.8$



$C = 0.6$



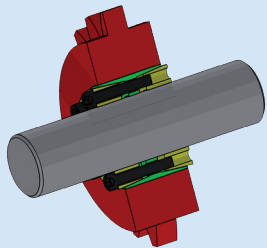


The clamping system connects one or two components parts solidly to the drive shaft, which allows motion to be transmitted or to withstand an axial thrust. Friction connection enables gaps to be eliminated, thereby ensuring greater precision of the keyed components without requiring strict processing tolerances. The thrust cones develop a pressure between the shaft and the hub, which enables pulleys, gears, chain sprockets, drums, flywheels, etc. to be anchored safely. The easy assembly and disassembly features give users many advantages, leading to a further cost saving.

Chiaravalli Group S.p.A. provides its customers with different types of clamping elements, which are designed to cover a broad range of applications.



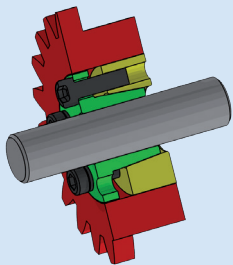
SHAFT CLAMPING ELEMENTS



RCK 11

SELF CENTRING RCK 11 TYPE

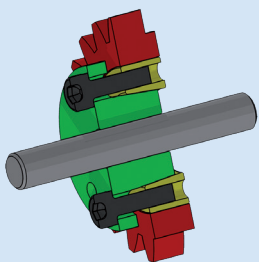
Suitable for assemblies where special, even heavy-duty conditions are required, achieving maximum friction clamping results. It incorporates the best features of all the models which have been presented. It operates with very high torque values.



RCK 13

SELF CENTRING RCK 13 TYPE

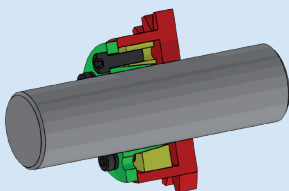
Suitable for assemblies where good concentricity is required in small spaces with medium- high torque values. It can substitute RCK 40 in some cases.



RCK 15

SELF CENTRING RCK 15 TYPE

Suitable for assemblies where axial and radial positioning accuracy is required with medium- high torque values. The main feature is the possibility of varying the internal bores while maintaining the external dimensions constant at only three diameters.



RCK 16

SELF CENTRING RCK 16 TYPE

Suitable for assemblies where concentricity and positioning accuracy is required. It operates with medium- high torque values.

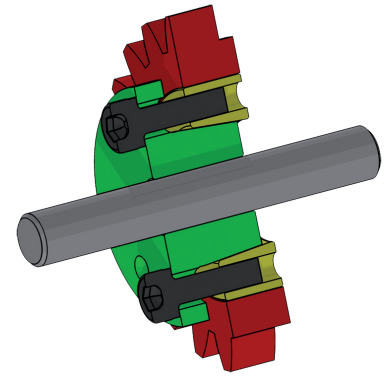
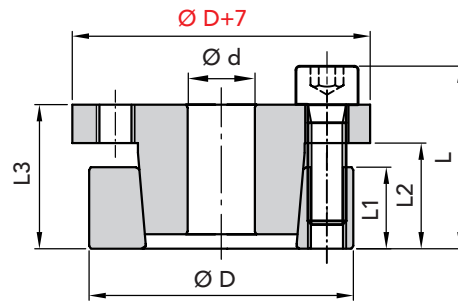


SELF CENTRING

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 ²	Hub N/mm ²	N°	Ø x L	Torque Max Nm	Ø	N°	
06150014	14	55	17	22	31	39	290	458	118	4	M8x25	41	M8	2	0,50
06150016	16	55	17	22	31	39	320	400	118	4	M8x25	41	M8	2	0,50
06150018	18	55	17	22	31	39	360	356	118	4	M8x25	41	M8	2	0,50
06150019	19	55	17	22	31	39	380	337	118	4	M8x25	41	M8	2	0,50
06150020	20	55	17	22	31	39	400	320	118	4	M8x25	41	M8	2	0,50
06150022	22	55	17	22	31	39	440	290	118	4	M8x25	41	M8	2	0,50
06150024	24	55	17	22	31	39	480	265	118	4	M8x25	41	M8	2	0,50
06150025	25	55	17	22	31	39	500	255	118	4	M8x25	41	M8	2	0,50
06150028	28	55	17	22	31	39	560	228	118	4	M8x25	41	M8	2	0,40
06150030	30	55	17	22	31	39	600	213	118	4	M8x25	41	M8	2	0,40
06151024	24	65	17	22	31	39	620	332	122	5	M8x25	41	M8	3	0,70
06151025	25	65	17	22	31	39	640	320	122	5	M8x25	41	M8	3	0,70
06151028	28	65	17	22	31	39	720	285	122	5	M8x25	41	M8	3	0,60
06151030	30	65	17	22	31	39	770	267	122	5	M8x25	41	M8	3	0,60
06151032	32	65	17	22	31	39	820	250	122	5	M8x25	41	M8	3	0,60
06151033	33	65	17	22	31	39	850	235	122	5	M8x25	41	M8	3	0,60
06151035	35	65	17	22	31	39	900	228	122	5	M8x25	41	M8	3	0,50
06151038	38	65	17	22	31	39	980	210	122	5	M8x25	41	M8	3	0,50
06151040	40	65	17	22	31	39	1030	200	122	5	M8x25	41	M8	3	0,50
06152030	30	80	20	25	33	41	1080	315	120	7	M8x25	41	M8	3	1,00
06152032	32	80	20	25	33	41	1150	298	120	7	M8x25	41	M8	3	1,00
06152033	33	80	20	25	33	41	1200	282	120	7	M8x25	41	M8	3	1,00
06152035	35	80	20	25	33	41	1260	272	120	7	M8x25	41	M8	3	1,00
06152038	38	80	20	25	33	41	1370	250	120	7	M8x25	41	M8	3	1,00
06152040	40	80	20	25	33	41	1440	238	120	7	M8x25	41	M8	3	0,90
06152042	42	80	20	25	33	41	1510	226	120	7	M8x25	41	M8	3	0,90
06152045	45	80	20	25	33	41	1620	212	120	7	M8x25	41	M8	3	0,80
06152048	48	80	20	25	33	41	1730	198	120	7	M8x25	41	M8	3	0,80
06152050	50	80	20	25	33	41	1800	190	120	7	M8x25	41	M8	3	0,80
06153040	40	80	20	25	33	41	2150	340	169	10	M8x25	41	M8	4	0,95
06153045	45	80	20	25	33	41	2420	302	169	10	M8x25	41	M8	4	0,85
06153050	50	80	20	25	33	41	2700	272	169	10	M8x25	41	M8	4	0,85

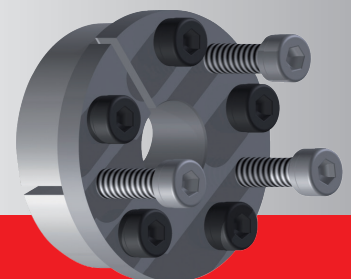
ORDERING EXAMPLE:

The following will be ordered with a shaft having ød 40 with a torque value less than or equal 1030 Nm:

RCK 15 - 40 x 65
Part Number 06151040

CAD drawings available on our site
www.chiaravalli.com

3D simulation available on the website.



Quantity, availability and prices
on B2B Chiaravalli