

RCK 13 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:

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

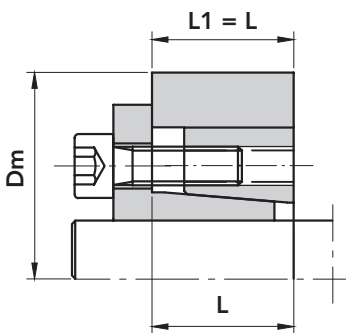
Where: D_m = Extern diameter of the hub (mm)

D = Extern diameter of the clamping element (mm)

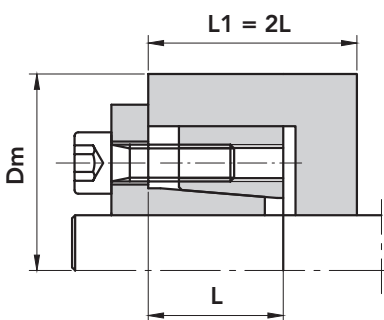
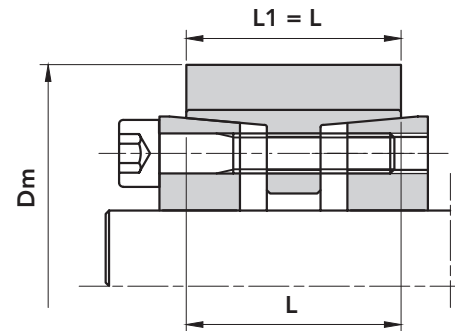
$R_{s 0.2}$ = Yield point for permanent elongation of 0.2% (N/mm²)

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

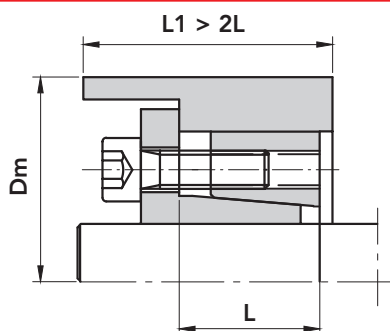
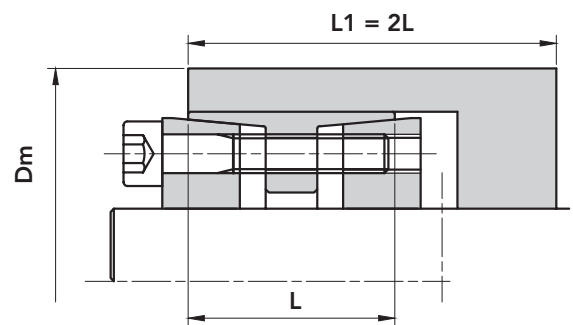
C = coefficient of the utilization in function of the hub profile (Look at the pictures below)



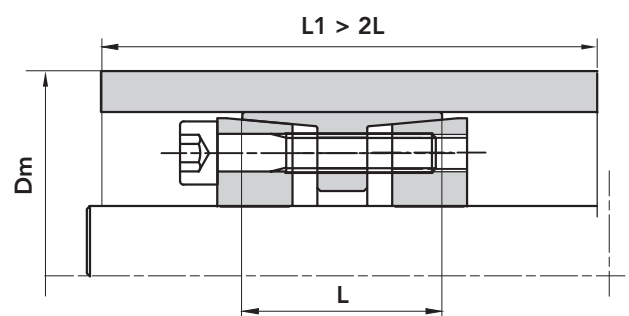
$C = 1$



$C = 0.8$



$C = 0.6$



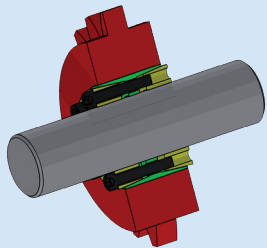


The clamping system connects one or two components parts solidly to the drive shaft, which allows motion to be transmitted or to withstand an axial thrust. Friction connection enables gaps to be eliminated, thereby ensuring greater precision of the keyed components without requiring strict processing 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.



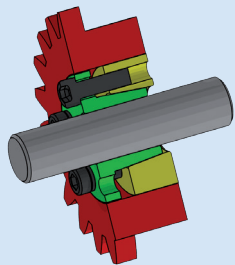
SHAFT CLAMPING ELEMENTS



RCK 11

SELF CENTRING RCK 11 TYPE

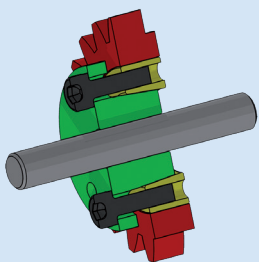
Suitable for assemblies where special, even heavy-duty conditions are required, achieving maximum friction clamping results. It incorporates the best features of all the models which have been presented. It operates with very high torque values.



RCK 13

SELF CENTRING RCK 13 TYPE

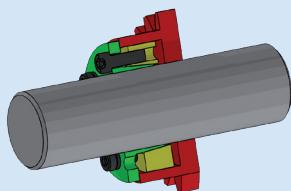
Suitable for assemblies where good concentricity is required in small spaces with medium- high torque values. It can substitute RCK 40 in some cases.



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.



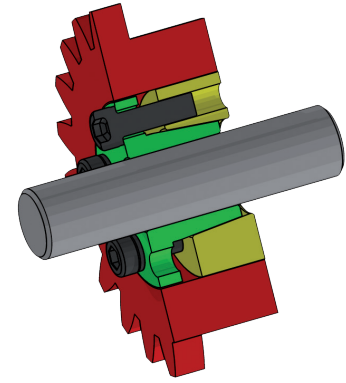
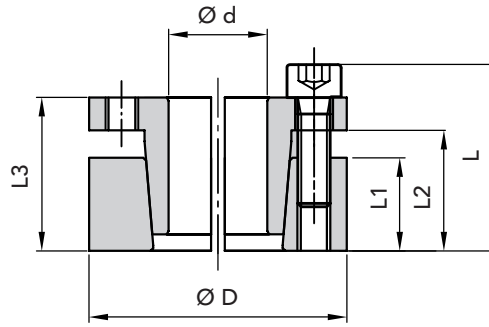
RCK 13 TYPE CLAMPING ELEMENTS

SELF CENTRING

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

$\varnothing h 8$ FOR SHAFT

$\varnothing H 8$ FOR HUB



DIMENSIONS

PART NUMBER	Ød	ØD	L1	L2	L3	L	maximum torque Mt Nm	CLAMPING PRESSURE		CLAMPING SCREWS DIN 912 MAT. 12.9			EXTRACTION THREAD		WEIGHT Kg
								Shaft N/mm ²	Hub N/mm ²	N.	Type	Torque Nm	Type	N.	
06130018	18	47	17	22	28	34	310	314	120	5	M6x20	14	M6	3	0,15
06130019	19	47	17	22	28	34	330	300	120	5	M6x20	14	M6	3	0,15
06130020	20	47	17	22	28	34	380	295	125	5	M6x20	14	M6	3	0,15
06130022	22	47	17	22	28	34	410	270	125	5	M6x20	14	M6	3	0,30
06130024	24	50	17	22	28	34	440	243	120	6	M6x20	14	M6	3	0,30
06130025	25	50	17	22	28	34	560	285	140	6	M6x20	14	M6	3	0,30
06130028	28	55	17	22	28	34	630	255	130	6	M6x20	14	M6	3	0,35
06130030	30	55	17	22	28	34	660	235	130	6	M6x20	14	M6	3	0,35
06130032	32	60	17	22	28	34	960	295	155	8	M6x20	14	M6	4	0,40
06130035	35	60	17	22	28	34	1050	270	155	8	M6x20	14	M6	4	0,40
06130038	38	65	17	22	28	34	1140	250	145	8	M6x20	14	M6	4	0,40
06130040	40	65	17	22	28	34	1200	235	145	8	M6x20	14	M6	4	0,40
06130045	45	75	20	25	33	41	2180	290	170	7	M8x25	35	M8	3	0,60
06130050	50	80	20	25	33	41	2430	260	160	7	M8x25	35	M8	3	0,80
06130055	55	85	20	25	33	41	3070	270	175	8	M8x25	35	M8	4	0,80
06130060	60	90	20	25	33	41	3350	245	165	8	M8x25	35	M8	4	0,80
06130065	65	95	20	25	33	41	4080	255	175	9	M8x25	35	M8	3	0,90
06130070	70	110	24	30	40	50	6280	280	180	8	M10x30	70	M10	4	1,59
06130075	75	115	24	30	40	50	6680	260	170	8	M10x30	70	M10	4	1,80
06130080	80	120	24	30	40	50	7130	250	160	8	M10x30	70	M10	4	1,80
06130085	85	125	24	30	40	50	8480	260	180	9	M10x30	70	M10	3	2,00
06130090	90	130	24	30	40	50	9080	250	170	9	M10x30	70	M10	3	2,10
06130095	95	135	24	30	40	50	10580	260	180	10	M10x30	70	M10	4	2,10
06130100	100	145	26	32	44	56	13380	270	190	8	M12x35	125	M12	4	2,80
06130110	110	155	26	32	44	56	14580	240	180	8	M12x35	125	M12	4	3,00
06130120	120	165	26	32	44	56	17880	250	180	9	M12x35	125	M12	4	3,20
06130130	130	180	34	40	52	64	26000	240	170	12	M12x35	125	M12	6	4,80
06130140	140	190	34	40	54	68	26980	210	150	9	M14x40	190	M14	4	5,20
06130150	150	200	34	40	54	68	32980	230	170	10	M14x40	190	M14	5	5,40
06130160	160	210	34	40	54	68	37980	230	170	11	M14x40	190	M14	4	5,70
06130170	170	225	44	50	64	78	44980	180	130	12	M14x40	190	M14	6	8,00
06130180	180	235	44	50	64	78	46980	170	130	12	M14x40	190	M14	6	0,30

ORDERING EXAMPLE:

The following will be ordered with a shaft having $\varnothing d$ 30 with a torque value less than or equal 660 Nm:

RCK 13 - 30 x 55

Part Number 06130030

CAD drawings available on our site

www.chiaravalli.com

3D simulation available on the website.

Quantity, availability and prices on B2B Chiaravalli

