RCK 40 Clamping Elements

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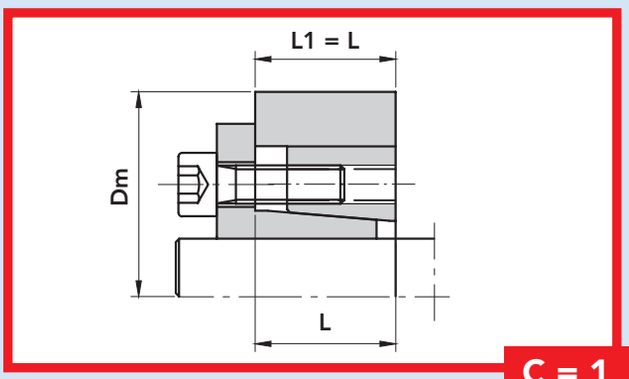
RANKIN
COMPONENTS THAT AUTOMATE

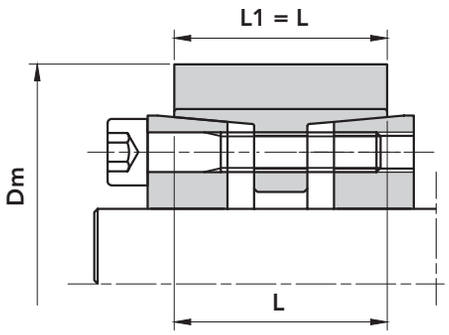
MINIMUM HUB DIAMETER CHECK Dm

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 (Dm), 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:

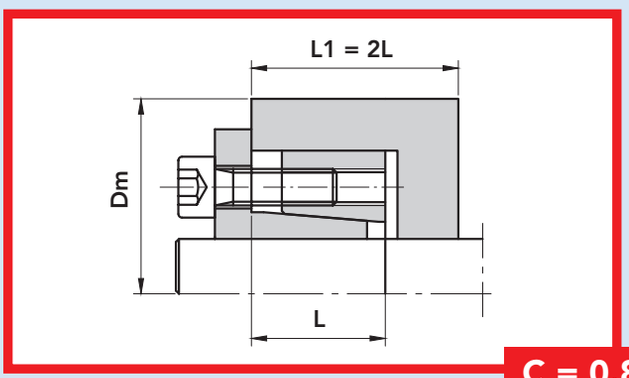
$$Dm \geq D \times \sqrt{\frac{Rs\ 0.2 + (Pm \times C)}{Rs\ 0.2 - (Pm \times C)}}$$

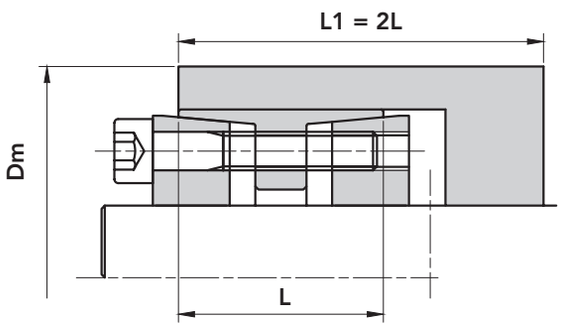
Where:
- **Dm** = Extern diameter of the hub (mm)
- **D** = Extern diameter of the clamping element (mm)
- **Rs 0.2** = Yield point for permanent elongation of 0.2% (N/mm²)
- **Pm** = Specific pressure exercised by the clamping element on the hub (N/mm²)
- **C** = coefficient of the utilization in function of the hub profile (Look at the pictures below)



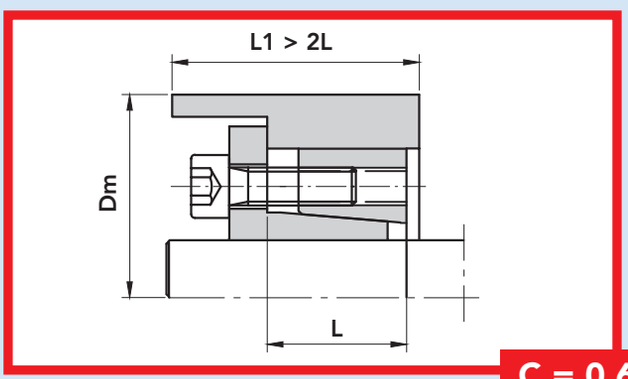


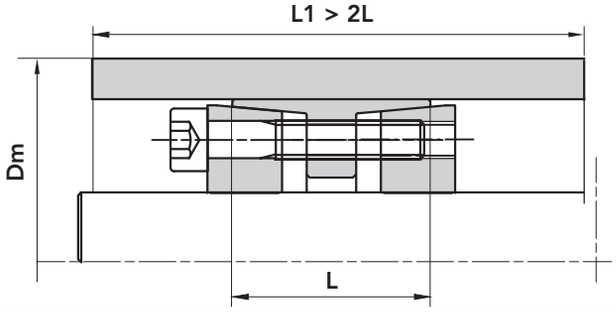
C = 1



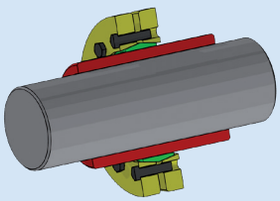


C = 0.8





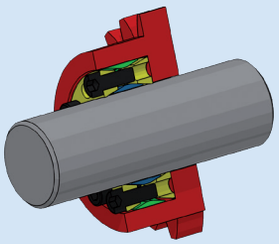
C = 0.6



RCK 19

SELF CENTRING RCK 19 TYPE

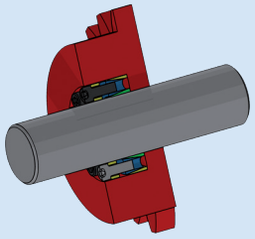
Suitable for hollow shafts, it operates by compressing the hollow shafts on the solid shafts enabling transmission of medium high twisting moments to be achieved.



RCK 40

NOT SELF CENTRING RCK 40 TYPE

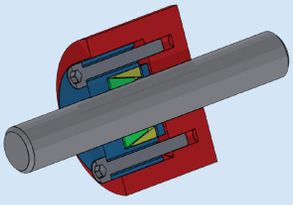
Suitable for general applications, it is not self centring and therefore requires a centring band to ensure perfect concentricity. It operates with medium- high torque values.



RCK 45

NOT SELF CENTRING RCK 45 TYPE

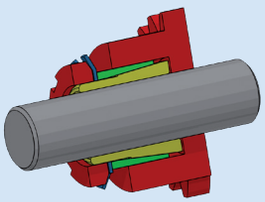
Suitable for applications where medium-low twisting moments are required with, easy rapid assembly and disassembly operation. Not self centring.



RCK 50

NOT SELF CENTRING RCK 50 TYPE

Comprising two tapered rings, must always be mounted with a tightening flange.
It operates with low torque values; it isn't self centring.



RCK 55

SELF CENTRING RCK 55 TYPE

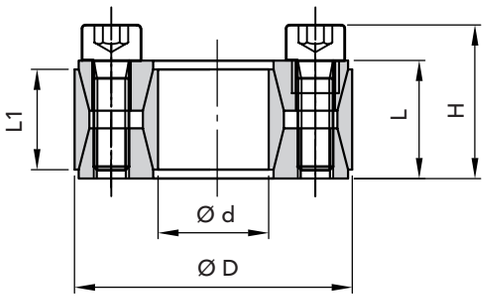
Suitable for assemblies where limited overall dimensions and times are required. It operates with medium-low torque values.

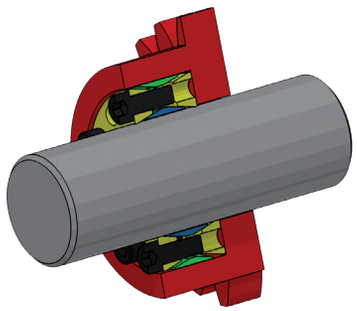
RCK 40 TYPE CLAMPING ELEMENTS

NOT SELF CENTERING

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

Ø h 8 FOR SHAFT
Ø H 8 FOR HUB





PART NUMBER	DIMENSIONS Ød	ØD	L1	L	H	maximum torque Mt Nm	CLAMPING PRESSURE Shaft N/mm²	Hub N/mm²	CLAMPING SCREWS DIN 912 MAT. 12.9 N.	Type	Torque Nm	EXTRACTION THREAD Type	N.	WEIGHT Kg
06400019	19	47	17	20	28	255	220	90	8	M6x18	14	M8	2	0,25
06400020	20	47	17	20	28	270	210	90	8	M6x18	14	M8	2	0,24
06400022	22	47	17	20	28	300	195	90	8	M6x18	14	M8	2	0,23
06400024	24	50	17	20	28	360	195	95	9	M6x18	14	M8	3	0,26
06400025	25	50	17	20	28	380	190	95	9	M6x18	14	M8	3	0,25
06400028	28	55	17	20	28	500	187	96	10	M6x18	14	M8	4	0,27
06400030	30	55	17	20	28	530	176	96	10	M6x18	14	M8	4	0,27
06400032	32	60	17	20	28	630	192	105	12	M6x18	14	M8	4	0,32
06400035	35	60	17	20	28	700	180	105	12	M6x18	14	M8	4	0,32
06400038	38	65	17	20	28	860	183	107	14	M6x18	14	M8	4	0,36
06400040	40	65	17	20	28	910	180	110	14	M6x18	14	M8	4	0,34
06400042	42	75	20	24	34	1500	226	125	12	M8x22	35	M10	4	0,48
06400045	45	75	20	24	34	1610	210	125	12	M8x22	35	M10	4	0,57
06400048	48	80	20	24	34	1700	196	115	12	M8x22	35	M10	4	0,59
06400050	50	80	20	24	34	1770	190	115	12	M8x22	35	M10	4	0,60
06400055	55	85	20	24	34	2270	200	130	14	M8x22	35	M10	4	0,63
06400060	60	90	20	24	34	2470	180	120	14	M8x22	35	M10	4	0,69
06400065	65	95	20	24	34	3040	190	130	16	M8x22	35	M12	4	0,73
06400070	70	110	24	28	40	4600	210	130	14	M10x25	70	M12	4	1,26
06400075	75	115	24	28	40	4900	195	125	14	M10x25	70	M12	4	1,33
06400080	80	120	24	28	40	5200	180	120	14	M10x25	70	M12	4	1,40
06400085	85	125	24	28	40	6300	195	130	16	M10x25	70	M12	4	1,49
06400090	90	130	24	28	40	6600	180	125	16	M10x25	70	M12	4	1,53
06400095	95	135	24	28	40	7900	195	135	18	M10x25	70	M12	4	1,62
06400100	100	145	26	33	47	9600	195	135	14	M12x30	125	M14	4	2,01
06400110	110	155	26	33	47	10500	180	125	14	M12x30	125	M14	4	2,15
06400120	120	165	26	33	47	13100	185	135	16	M12x30	125	M14	4	2,35
06400130	130	180	34	38	52	17600	165	115	20	M12x35	125	M14	4	3,51
06400140	140	190	34	38	52	20900	165	125	22	M12x35	125	M14	4	3,85
06400150	150	200	34	38	52	24200	170	125	24	M12x35	125	M14	4	4,07
06400160	160	210	34	38	52	28000	170	130	26	M12x35	125	M14	4	4,30
06400170	170	225	38	44	60	32800	160	120	22	M14x40	190	M16	4	5,80
06400180	180	235	38	44	60	37800	165	125	24	M14x40	190	M16	4	6,00
06400190	190	250	46	52	68	46500	150	115	28	M14x45	190	M16	4	8,50
06400200	200	260	46	52	68	52500	150	115	30	M14x45	190	M16	5	8,60
06400220	220	285	50	56	74	68000	150	115	26	M16x50	295	M18	3	11,0

ORDERING EXAMPLE:
The following will be ordered with a shaft having Ød 75 with a torque value less than or equal 4900 Nm:
RCK 40 - 75 x 115
Part Number 06400075

CAD drawings available on our site
www.chiaravalli.com

3D simulation available on the website.

Quantity, availability and prices on B2B Chiaravalli