

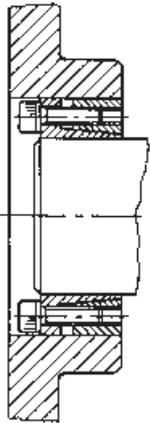
Clamping Elements Type RCK 13



Email: sales@crossmorse.com Fax: +44 121 325 1079 Tel: +44 121 360 0155



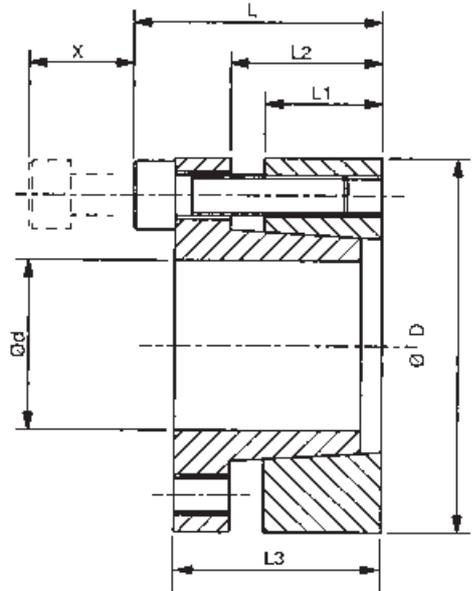
These shaft clamping elements are very compact units capable of transmitting medium torques. Their design ensures good concentricity between hubs and shafts, without any other means of location. A slight axial movement between hub and shaft occurs during clamping. These units can be installed totally within the hub providing optimum safety, and minimal axial length.



Recommended tolerances for full torque transmission are:-

Shaft h8
Hub H8

Clamping surfaces to be finished to $Rz \leq 15 \mu\text{m}$.



X = Distance required to remove screws, additional clearance for alan key may be required.

Dimensions

Part No.	Dimensions mm							Torque Cap. M Nm	Axial Force F kN	Surface Pressure		Clamping Screws		Approx. Weight kg	Min. Hub Dia* mm		
	d	D	L	L ₁	L ₂	L ₃	X			Shaft Ps N/mm ²	Hub Ph N/mm ²	Size	Torque Nm		Assy Type A	Assy Type B	Assy Type C
RCK13-18x47	18	47	34	17	22	28	20	350	39	280	120	M6	14	0.27	70	64	59
RCK13-19x47	19	47	34	17	22	28	20	355	37	280	120	M6	14	0.27	70	64	59
RCK13-20x47	20	47	34	17	22	28	20	360	36	280	120	M6	14	0.26	70	64	59
RCK13-22x47	22	47	34	17	22	28	20	400	36	268	123	M6	14	0.25	70	65	59
RCK13-24x50	24	50	34	17	22	28	20	440	37	243	120	M6	14	0.28	74	68	63
RCK13-25x50	25	50	34	17	22	28	20	560	45	280	138	M6	14	0.27	79	72	65
RCK13-28x55	28	55	34	17	22	28	20	625	45	250	128	M6	14	0.32	84	77	70
RCK13-30x55	30	55	34	17	22	28	20	650	43	235	128	M6	14	0.30	84	77	70
RCK13-32x60	32	60	34	17	22	28	20	950	59	290	150	M6	14	0.37	100	89	80
RCK13-35x60	35	60	34	17	22	28	20	1050	60	268	150	M6	14	0.34	100	89	80
RCK13-38x65	38	65	34	17	22	28	20	1140	60	252	146	M6	14	0.41	106	95	86
RCK13-40x65	40	65	34	17	22	28	20	1200	60	232	146	M6	14	0.38	106	95	86
RCK13-45x75	45	75	41	20	25	33	25	2180	97	285	168	M8	35	0.63	134	117	104
RCK13-50x80	50	80	41	20	25	33	25	2430	97	258	158	M8	35	0.68	137	121	109
RCK13-55x85	55	85	41	20	25	33	25	3050	111	268	173	M8	35	0.73	156	135	119
RCK13-60x90	60	90	41	20	25	33	25	3350	112	243	163	M8	35	0.78	158	139	123
RCK13-65x95	65	95	41	20	25	33	25	4080	126	253	173	M8	35	0.83	174	151	133
RCK13-70x110	70	110	50	24	30	40	30	6280	179	278	178	M10	70	1.33	206	177	156
RCK13-75x115	75	115	50	24	30	40	30	6680	178	258	168	M10	70	1.39	206	180	159
RCK13-80x120	80	120	50	24	30	40	30	7130	178	248	168	M10	70	1.48	215	188	166
RCK13-85x125	85	125	50	24	30	40	30	8450	199	258	178	M10	70	1.55	234	202	177
RCK13-90x130	90	130	50	24	30	40	30	9080	202	248	168	M10	70	1.63	233	203	180
RCK13-95x135	95	135	50	24	30	40	30	10580	223	258	178	M10	70	1.70	253	218	191
RCK13-100x145	100	145	56	26	32	44	35	13380	268	268	188	M12	125	2.60	284	241	210
RCK13-110x155	110	155	56	26	32	44	35	14580	265	238	178	M12	125	2.80	290	250	219
RCK13-120x165	120	165	56	26	32	44	35	17880	298	248	178	M12	125	3.00	309	266	233
RCK13-130x180	130	180	64	34	40	52	35	25950	399	238	168	M12	125	4.60	323	282	249
RCK13-140x190	140	190	68	34	40	54	40	26950	385	208	148	M14	190	4.90	313	280	253
RCK13-150x200	150	200	68	34	40	54	40	32950	439	228	168	M14	190	5.20	358	313	277
RCK13-160x210	160	210	68	34	40	54	40	38800	485	213	170	M14	190	5.50	380	331	292
RCK13-170x225	170	225	78	44	49	64	50	41300	486	188	130	M14	190	7.70	346	315	289
RCK13-180x235	180	235	78	44	49	64	50	43700	486	178	125	M14	190	8.10	355	325	298
RCK13-190x250	190	250	78	44	49	64	50	57700	607	173	145	M14	190	8.60	408	365	330
RCK13-200x260	200	260	78	44	49	64	50	60700	607	165	140	M14	190	9.00	416	375	340
RCK13-220x285	220	285	88	51	57	72	55	78100	710	180	132	M16	290	12.00	442	402	367
RCK13-240x305	240	305	88	51	57	72	55	106500	848	182	154	M16	290	13.00	515	458	411
RCK13-260x325	260	325	88	51	57	72	55	138500	1017	198	174	M16	290	13.90	598	518	456
RCK13-280x355	280	355	102	60	66	84	65	160300	1094	169	143	M18	400	20.40	574	516	467
RCK13-300x375	300	375	102	60	66	84	65	193200	1230	174	152	M18	400	21.60	629	559	503

*Minimum outside diameter of hubs manufactured in medium carbon steels with yield strength $\geq 320 \text{ N/mm}^2$.
For hub types, and other materials, refer to page 3.
For assembly and disassembly instructions refer to page 24.

Installation Instructions

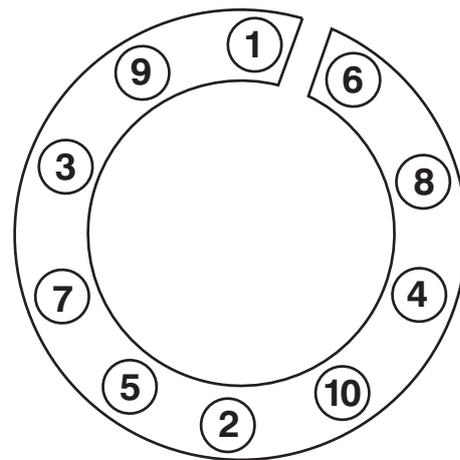


Installation and Removal of Cross Shaft Clamping Elements

Types RCK 10, 11, 12, 13, 15, 16, 61, 70, 71, 80 and ACE81

Installation:-

1. Slacken all screws in element by approx. two turns.
2. Remove two or three screws completely, and fit into equally spaced empty release thread holes. Tighten these screws lightly so as to ensure inner and outer cones are kept apart.
3. Clean all contact surfaces including screw threads, and lightly oil with clean thin unmodified oil.*
4. Insert clamping element into hub and push onto shaft and locate.
5. Remove screws from release holes and replace in original holes.
6. Tighten all screws finger tight and align hub.
7. Tighten all screws evenly in a diametrically opposite sequence (see typical progression in sketch) using a torque wrench, initially at half screw catalogue torque, then 3/4 value, and finally full torque. Check all screws at full torque until no further rotation of screws occurs.



Disassembly:-

1. Slacken all clamping screws by couple of turns, completely removing as many as release holes in element.
2. Fit screws in release holes and tighten in sequence as clamping to force inner and outer cones apart.
3. Carefully remove hub and clamping element from shaft, and take element from hub.

Types RCK 40 and 45

Installation:-

1. Clean all contact surfaces, and lightly oil with clean thin unmodified mineral oil.*
2. Fit hub to shaft and insert clamping element.
3. Tighten all screws finger tight and align hub.
4. Tighten all screws evenly in a diametrically opposite sequence (see typical progression in sketch) using a torque wrench, initially at half catalogue torque for screw, then at 3/4 value, and finally at full torque. Check all screws are at full torque until no further rotation of screws can be achieved.

Disassembly:-

1. Release clamping screws in same sequence as for clamping. Element should now self release. If required lightly tap clamping screws to aid release. If still not released remove light coloured screws completely and replace with next larger metric size and tighten these screws to jack the cones apart.

Type RCK 50

Installation procedure depends detailed design, but following is typical:-

1. Clean all contact surfaces, and lightly oil with clean thin unmodified mineral oil.*
2. Push hub onto shaft and insert spacer sleeves and clamping ring sets according to application drawing.
3. Insert distance ring if fitted and attach clamping flange lightly tightening screws. Align hub.
4. Tighten all screws in a diametrically opposite sequence, in several stages up to max. torque for screw size.

Disassembly:-

The taper of the individual rings is such that the assembly should automatically release when the locking screws are slackened. If not light tapping on the hub circumference should release them.

Types CCE 54 and 55

Installation:-

1. Clean all contact surfaces, and lightly oil with clean unmodified mineral oil.*
2. Turn locking nut anticlockwise until outer sleeve loose on inner cone.
3. Position hub on shaft and insert clamping element.
4. Align hub and tighten locking nut to catalogue torque value, and bend suitable tab on lock washer to prevent further rotation.

Disassembly:-

1. Release bent washertab and undo nut until sleeve loose.
2. Remove clamping element, If tight give end of tab gentle tap to release.

Types RCK 19/20 and 95

Installation:-

1. Clean all contact surfaces, and lightly oil with clean thin unmodified mineral oil.*
2. Slacken all clamping bolts by a couple of turns.
3. (RCK 19/20 only) Fit clamping element on outer diameter of hub, and slide assembly onto shaft and position.
(RCK 95 only) Fit shaft ends equally into clamping element ensuring small clearance between shafts.
4. Tighten all bolts in a diametrically opposite sequence, in several stages up to max. specified torque.

Disassembly:-

Slacken all bolts and gently tap on bolts to release clamping element.

*WARNING: Never use, lubricant containing Molydenum or E.P additives, synthetic lubricant, or grease.

Email: sales@crossmorse.com
Fax: +44 121 325 1079
Tel: +44 121 360 0155