

This is the Original Document in English Language



The designation ATEX (Atmosphere Explosibles) has established itself for the new guidelines. ATEX 100a controls all regulations for the condition of explosion-proof equipment.

Model No. _____ Category _____ Reference _____
Mfg Year _____ Max Temperature _____

1. General Information

- 1.1. Omega Couplings are designed to provide a mechanical connection between the rotating shafts of mechanical equipment, using a torsionally soft flexible element to accommodate inherent misalignment while transmitting the power and torque between the shafts.
- 1.2. These instructions are intended to help you to install and maintain your Omega coupling. Please read these instructions prior to installing the coupling, and prior to maintenance of the coupling and connected equipment. Keep these instructions near the coupling installation and available for review by maintenance personnel.
- 1.3. Rexnord Industries, LLC owns the copyright of this material. These Installation and Maintenance instructions may not be reproduced in whole or in part for competitive purposes.
- 1.4. Symbol descriptions:



Danger of injury to persons.



Damages on the machine possible.



Pointing to important items.

2. Safety and Advice Hints



DANGER!

- 2.1. Safety should be a primary concern in all aspects of coupling installation, operation, and maintenance.
- 2.2. All rotating power transmission products are potentially dangerous and can cause serious injury. They must be guarded in compliance with OSHA, ANSI, ATEX and any other local standard for the applications they are used. It is the responsibility of the user to provide proper guarding.
- 2.3. Failure to secure capscrews properly could cause coupling component(s) to dislodge during operation and result in personal injury. See table 3 for proper tightening torques.
- 2.4. Do not use on turbine drives if the coupling cannot be protected from steam leakage or overspeed situations beyond the couplings published speed rating.
- 2.5. Before installing this coupling on systems involving sleeve bearings, herringbone gearsets or other axially sensitive devices, consult Rexnord.
- 2.6. Elastomeric couplings can hold a static electric charge that may discharge and ignite in an explosive environment. Both shafts of the connected equipment must have a path to ground.

3. Rexnord Omega Coupling Design and Part Numbers



Table 1 - Omega part numbers

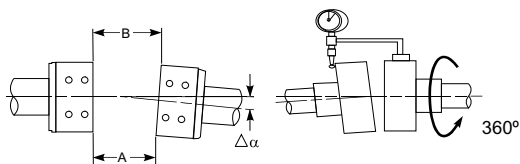
Size	Elastomer Element		Hubs				Element capscrews METRIC ⑥	High speed rings ⑦	Sleeve extension
	E ①	ES ②	Rough bore ③	BSW Taper Bush hub ④	UNF Taper Bush hub ④	QD hub ⑤			
2	7300005M	7300075M	7300215M	-	-	-	7301410		-
3	7300010M	7300080M	7300240M	7300795M	7300730M	-	7301420		7369574M
4	7300015M	7300085M	7300270M	7300800M	7300740M	7300860M	7301420		7369575M
5	7300020M	7300090M	7300305M	7300805M	7300745M	7300865M	7301420		7369576M
10	7300025M	7300095M	7300340M	7300810M	7300750M	7300870M	7301450		7369577M
20	7300030M	7300100M	7300650M	7300815M	7300755M	7300875M	7393101	7301100M	7369578M
30	7300035M	7300105M	7300660M	7300820M	7300760M	7300880M	7393101	7301105M	7369579M
40	7300040M	7300110M	7300670M	7300825M	7300765M	7300885M	7393105	7301110M	7369580M
50	7300045M	7300115M	7300680M	7300830M	7300770M	7300890M	7393105	7301115M	7369581M
60	7300050M	7300120M	7300690M	7300835M	7300775M	7300895M	7393109	7301120M	7369582M
70	7300055M	7300125M	7300700M	7300840M	7300780M	7300900M	7393109	7301125M	7369583M
80	7300060M	7300130M	7300710M	7300845M	7300785M	7300905M	7393109	7301130M	7369584M
100	7300065M	-	7300720M	7300850M	7300850M	-	7301530	-	7369834M
120	7300070M	-	7300725M	7300855M	7300855M	-	7301540	-	7369835M
140	7300071M	-	7300727M	7300858M	7300857M	-	7301545	-	-

4. Drive Alignment



Stop the motor and lock it out to prevent start-up during installation of coupling.

STEP 1

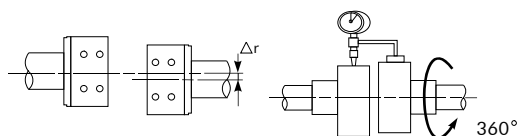


b (max) _____ mm

a (min) _____ mm

$$\Delta K = (b-a)$$

STEP 2



ΔKr _____ mm

ATTENTION! Improper alignment of the equipment or hubs may result in hub contact and sparking.

STEP 3

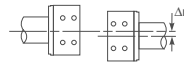
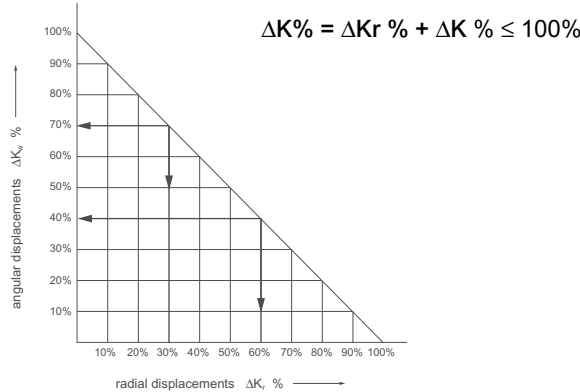
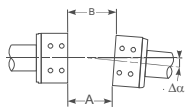


Table 2 - Drive Alignment

	2	3	4	5	10	20	30	40	50	60	70	80	100	120	140
(b-a)mm	3	4	5	6	7	6	7	9	11	8	8	10	9	12	14
ΔK_r mm	2	2	2	2	2	2	2	2	2	3	3	3	5	5	5

5. Rexnord Omega Coupling Installation

STEP 1

- 5.1. Clean dirt and burrs from shafts and hub bores.
- 5.2. Be sure the keys fit shafts properly.
- 5.3. Position both hubs on the shaft without tightening the setscrews.
- 5.4. Use a half element to set proper hub spacing.
- 5.5. When the hubs are properly spaced, tighten the setscrews.
- 5.6. When using tapered bushings, follow bushing manufacturers instructions.



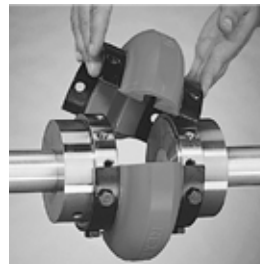
Type E



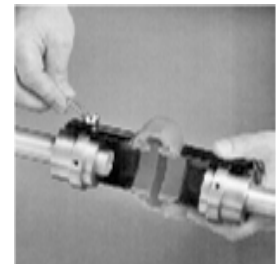
Type ES

STEP 2

- 5.7. Mount first half element to the hubs using cap screws provided.
- 5.8. Rotate the shaft 180 degrees and secure second half element.
- 5.9. If shaft cannot be rotated, mount half elements at 90 degrees.



Type E

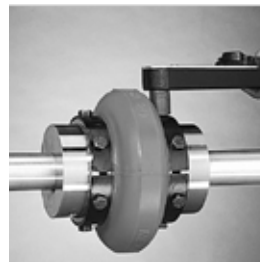


Type ES

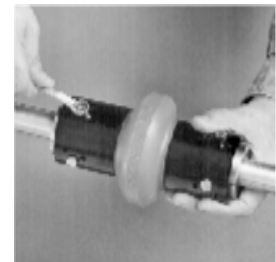
STEP 3

- 5.10. Tighten all cap screws to the torques specified in Table 3.
- 5.11. Align equipment.
- 5.12. Install proper guarding prior to equipment start up.

ATTENTION! When installing the element, first seat all the cap screws with a light torque, then tighten all cap screws to proper torque using a torque wrench.



Type E

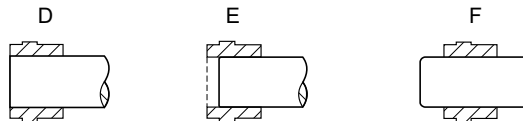


Type ES

6. Rexnord Omega Hub Mounting Options

6.1. Hubs can be installed:

- flush with the shaft end (D)
- extended beyond the end of the shaft (E)
- recessed behind the shaft end (F)



 **ATTENTION!** Shaft engagement length should be >0,8 times shaft diameter, bushed hubs must engage 100%.

7. Cap Screw Torque

7.1. Do not lubricate cap screws threads.

7.2. Cap screws must have a thread-locking adhesive applied.

7.3. Tighten cap screws by using torque wrench.

 **ATTENTION!** Do not lubricate cap screw threads

Table 3 - Cap Screw Torque							
Coupling size	Quantity	Torque - DRY		Metric			
		In. Lbs	Nm	Part number Steel	Part number Stainless steel	Thread size	Wrench size
2	8+8	204	23	7301410	7301417	M6	10
3	8+8			7301420	7301427		
4	8+8			7301420	7301427		
5	8+8			7301420	7301427		
10	12+8			7301450	7301457		
20	12	468	53	7393101	7393102	M10	16
30	12			7393101	7393102		
40	16			7393105	7393106		
50	16			7393105	7393106		
60	16	816	92	7393109	7393110	M12	18
70	16			7393109	7393110		
80	16			7393109	7393110		
100	20	3240	370	7301530	-	M20	30
120	24			7301540	7301547		
140	32	7080	800	7301545	-	M24	

8. Rexnord Omega “Type E” Mounting Options

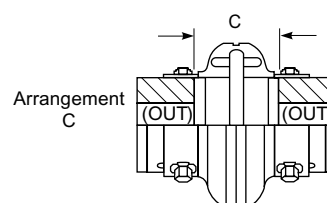
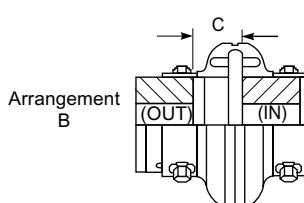
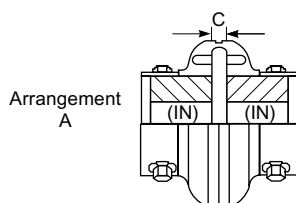


Table 4 - Type E Mounting Options

	2	3	4	5	10	20	30	40	50	60	70	80	100	120	140
A	36	8	8	8	8	13	12	8	11	8	18	17	44	57	76
B	41	27	27	34	34	39	41	42	51	53	64	83	70	91	102
C	46	46	46	59	59	65	69	75	91	97	109	149	95	124	127

9. Rexnord Omega “Type ES” Mounting Options

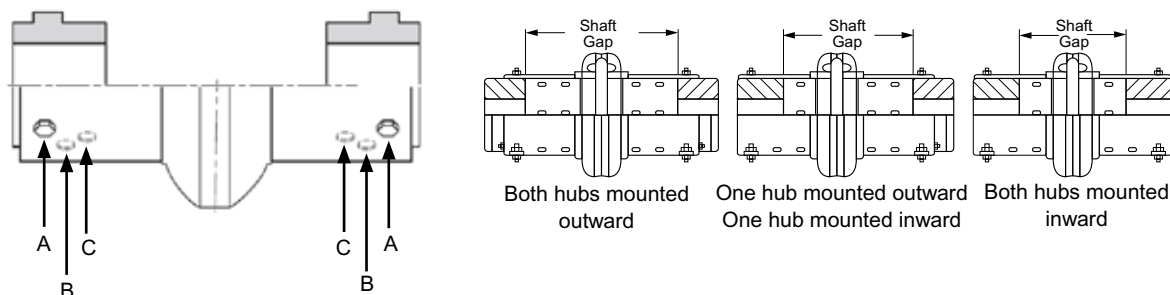


Table 5 - Spacer coupling (ES) Hub mounting options for industry shaft gaps

Coupling size	ISO (mm)				Ansi			
	100	140	180	250	3,5"	5"	7"	9,5"
ES 2-R M	A-A				A*-A*			
	100				4			
ES 3-R M	C-C	A-A			B*-B*	A-B		
	100	140			3	5		
ES 4-R M	C-C	A-A			B*-B*	A-B		
	100	140			3	5		
ES 5-R M	C.C	A-A			A*-A*	A-B		
	100	140			4	5		
ES 10-R M	C.C	B-B			A*-A*	A-B		
	100	140			4	5		
ES 20 M	A*-B*	B-B	A-A		A*-C*	C-C	A-A	
	98	140	180		4	5	7	
ES 30 M	B-C*	B-B	A-A		A*-B*	C-C	A-A	
	106	140	180		3	5	7	
ES 40 M	B-B*	B-B	A-A			C-C	A-A	
	96	140	180			5	7	
ES 50 M	A-C*	B-B	A-A			C-C	A-A	
	104	140	180			5	7	
ES 60 M		A-A*	B-B	A-A		B-B*	B-B	A-A
		136	180	250		5	8	10
ES 70 M			B-B	A-A			B-B	A-A
			180	250			7	10
ES 80 M			B-B	A-A			B-B	A-A
			180	250			7	10

* Hub mounted inboard

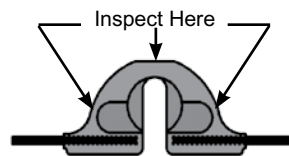
10. Preventative Maintenance



DANGER!

Do not make contact with the coupling when it is rotating and/or in operation

- 10.1. Periodic visual inspection is necessary to evaluate the condition of the flex element. Inspection can be done during the operation using a strobe light.
- 10.2. When inspecting the element look for:
- Fatigue cracks at element splits
 - Discoloration
 - Surface cracking in body of element.



ATTENTION! Replace Element if necessary.

11. Element Replacement



DANGER!

Stop the motor and lock it out to prevent start-up during installation of coupling.

- 11.1. Always replace both half elements.
- 11.2. Install both half elements from the same box.
- 11.3. Follow installation instructions (see Section 5, Rexnord Omega Coupling Installation).
- 11.4. Tighten element cap screws to proper torque (see Table 3).