INTRODUCTION

The following instructions apply to assembling of motors to Mercury/Mars/Venus/Atlas/Luna/Earth/Polaris/Delta/Neptune/Neptune Plus/Orion Plus Planetgear™ 7000 speed reducers.

NOTE: Consult Rexnord for any reducer/motor combinations that require non T-frame motors, fluid couplings or other devices that require a coupling gap larger than 1/4" (6 mm).

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ASSEMBLY OF MOTOR TO REDUCER

1. Mount the reducer C-face coupling or IEC motor flange coupling onto the motor shaft with the appropriate size key. The motor shaft to coupling fir should be snug and may require light tapping (**NOTE**: Warming up the coupling and applying an Anti-seize compound to the motor shaft is helpful). **NOTE**: A loose fit coupling should be avoided and a heavy fit could damage motor bearings if the coupling is pressed onto the motor shaft with extreme force.

CAUTION: Never turn down the motor shaft diameter to allow for easy coupling installation, as this will cause coupling movement and wear during operation.

2. **Mercury, Mars, Venus (Quad), Atlas (Quad)**
   a. **C-Face**: Locate the C-Face coupling 0.688" to 0.750" from the motor face (**Hint**: Standard key stock is helpful for this purpose). Refer to the illustration in Figure 1A.
   b. **IEC Motor Flange Coupling:** Locate the coupling 13.0 mm to 14.0 mm from the motor face. Refer to the illustration in Figure 1B.
3. **Venus, Atlas, Luna, Earth, Polaris, Delta, Neptune (Quad), Neptune Plus (Quad), Orion Plus (Quad)**
   a. **C-Face:** Locate the C-Face coupling 0.500" to 0.625" from the motor face (**Hint**: Standard 1/2" to 5/8" key stock is helpful for this purpose). Refer to the illustration in Figure 2A.
   b. **IEC Motor Flange Coupling:** Locate the coupling 13.0 mm to 15.0 mm from the motor face. Refer to the illustration in Figure 2B.
4. Loosen two setscrews to expose threads. Apply a thread sealant (Loctite® #592 or equivalent) around the threads. Tighten the coupling setscrews; one located over the key and the other located at 90° (degrees). After tightening the setscrews, the gap between the motor face and the coupling should be measured again to insure that the tolerance has been maintained. If the tolerance is not within the specification, loosen the setscrews and repeat steps 2 and 3.
5. Mount the motor with coupling to the reducer. Align the internal spline end of the coupling with the external spline end of the reducer input gear.

   CAUTION: Be careful not to roll the seal when installing or removing the coupling and motor. This could result in oil leakage during operation.
6. Aling the mounting holes of the motor with the mounting holes of the reducer, and fasten, reference Table 2 (Page 2) for recommended bolt torques.

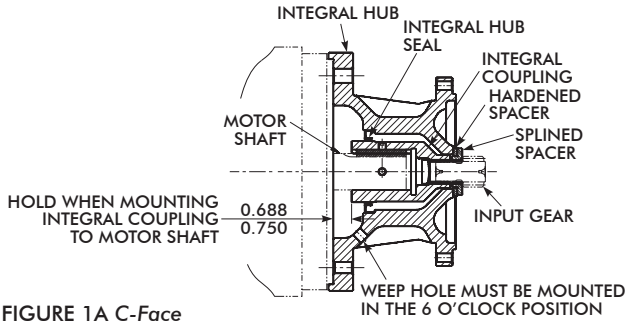

FIGURE 1A *C-Face*

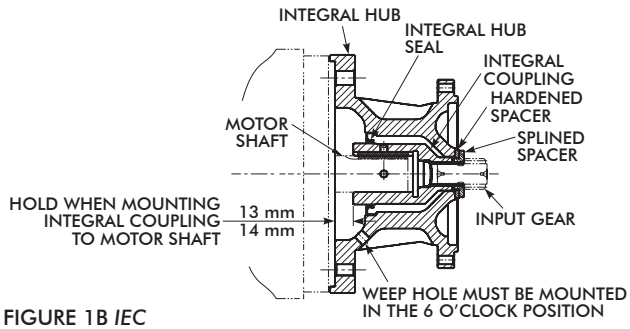

FIGURE 1B *IEC*

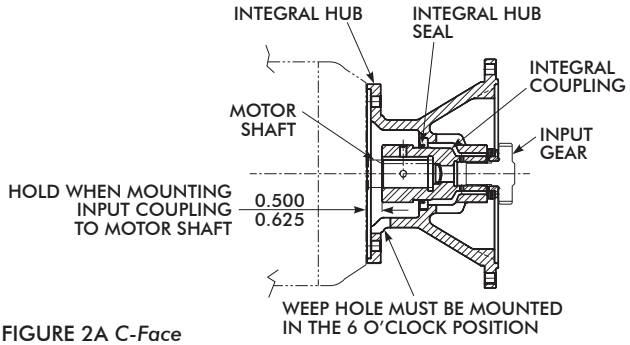

FIGURE 2A *C-Face*

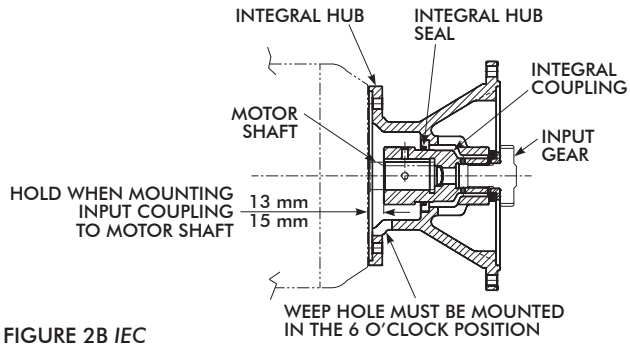

FIGURE 2B *IEC*

TABLE 1A — C-Face Coupling Part Numbers

REDUCER SERIES	Motor Frame						Sectional View
	56C	143TC/145TC	182TC/184TC	213TC/215TC	254TC/256TC	284TC/286TC	
Mercury (s,d,t,q) Mars (s,d,t,q) Venus (q) Atlas (q) Luna (q)	MR 2100209A (0.625)	MR2100208A (0.875)	MR2100207A (1.125)	MR2100206A (1.375)	MR2100205A (1.625)	. . .	Figure 1A
Venus (s,d,t) Atlas/Luna (s,d,t) Earth (s,d,t,q) Polaris/Delta (s,d,t,q) Neptune/Neptune Plus (q) Orion Plus (q)	. . .	SR1100205A (0.875)	SR1100204A (1.125)	SR1100203A (1.375)	SR1100202A (1.625)	SR1100201A (1.875)	Figure 2A

TABLE 1B — IEC Motor Flange Coupling Part Numbers

REDUCER SERIES	Motor Frame						Sectional View (Page 1)
	80	90SN/90LN	100L/112M	132S/132M	160M/160L	180M/180L	
Mercury (s,d,t,q) Mars (s,d,t,q) Venus (q) Atlas (q) Luna (q)	MMR2100201A (19 mm)	MMR2100202A (24 mm)	MMR2100203A (28 mm)	MMR2100204A (38 mm)	. . .	. . .	Figure 1B
Venus (s,d,t) Atlas (s,d,t) Luna (s,d,t) Earth (s,d,t,q) Polaris (s,d,t,q) Delta (s,d,t,q) Neptune (q) Neptune Plus (q) Orion Plus (q)	. . .	MRS2100201A (24 mm)	MRS2100202A (28 mm)	MRS2100203A (38 mm)	MRS2100204A (42 mm)	MRS2100205A (48 mm)	Figure 2B

s = single reduction, d = double reduction, t = triple reduction, q = quadruple reduction, ( ) = nominal bore size.

TABLE 2 — Torque Requirements ★

For Dry Fasteners (Inch)

SAE	Diameter	1/4	5/16	3/8	7/16	1/2	1/16	5/8	3/4	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2
General Purpose Grade 2	Torque (ft lb)	6	12	21	34	52	75	104	178	184	265	380	530	700	930
High Strength Grade 5	Torque (ft lb)	9	18	33	53	80	116	160	285	460	690	850	1200	1570	2080
Allow Steel Grade 8	Torque (ft lb)	13	26	47	74	114	164	225	400	650	970	1370	1940	2540	3370

For Dry Fasteners (Metric)

Grade	Nominal Diameter Standard Pitch	M5	M6	M7	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30
8.8	Torque (Nm)	6.15	10.5	17.5	26	51	89	141	215	295	420	570	725	1070	1450
10.9	Torque (Nm)	8.65	15	25	36	72	125	198	305	420	590	800	1020	1510	2050
12.9	Torque (Nm)	10.4	18	29	43	87	150	240	365	500	710	960	1220	1810	2450

The torques shown produce a clamp load of 80% of proof load. They assume clean, dry threads with a torque coefficient of 0.2, and a coefficient of friction of 0.14.
Plated threads need only 3/4 torque shown.
Well lubricated threads need only 1/2 torque shown.
Source: Rexnord Engineering Specification: GES8-19, 04/10/79.

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