

Boston

Gear

600A Series

(Enclosed Helical Gear Drives)

INSTALLATION, LUBRICATION AND OPERATION INSTRUCTIONS

Warning: Boston Gear speed reducers are normally shipped without lubricant. They must be filled to the proper level with the recommended lubricant before operation.

These instructions must be read thoroughly before installing or operating speed reducers. File instructions for future reference.

CAUTION

- For safe operation of any gear drive, all rotating shafts and auxiliary components must be shielded to conform with applicable safety standards. You must consider overall operational system safety at all times.
- When using a speed reducer to raise or lower a load, such as in hoisting applications, provision must be made for external braking. Under no conditions should a speed reducer be considered self-locking.
- Mounting of speed reducers in overhead positions may be hazardous. Use of external guides or supports is strongly recommended for overhead mounting.

General Instructions

1. Remove the protective coating on the shaft and/or flange. Use solvent if necessary.
2. Align all shafts accurately. Improper alignment can result in failure. Use of flexible couplings is recommended to compensate for slight misalignment.
3. When mounting, use maximum possible bolt size and secure reducer to a rigid foundation. Periodic inspection of all bolts is recommended.
4. Arrange the drain and breather plug per your mounting position as indicated on the reverse side. The breather plug should be located in the *Fill* position.
5. Auxiliary drive components (such as sprockets, gears and pulleys) should be mounted on the shafts as close as possible to the housing to minimize effects of overhung loads. Avoid force fits that might damage bearings or gears.
6. Gear drives are nameplated for 1750 RPM Input Speed and Class I Service. For lower Input Speeds and other Service Class, refer to catalog rating information.

7. Input Speeds of 1750 and lower are shown in catalog rating tables for speed reducing applications. This does not represent the maximum speed. Since speed limitation is based on pitching velocity and varies with size and ratio.

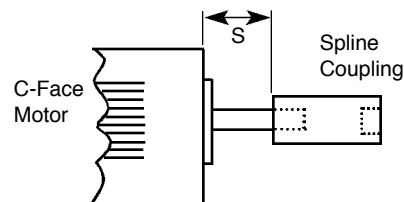
Instructions for Flanged Models

F600A (Quill Type Input)

1. Assemble the key to the motor shaft and coat the shaft with anti-seize compound. Insert the motor shaft into the reducer input shaft.
2. Rotate the motor into proper position and firmly secure to flange with four hex-head cap screws.

RF600A (Coupling Input)

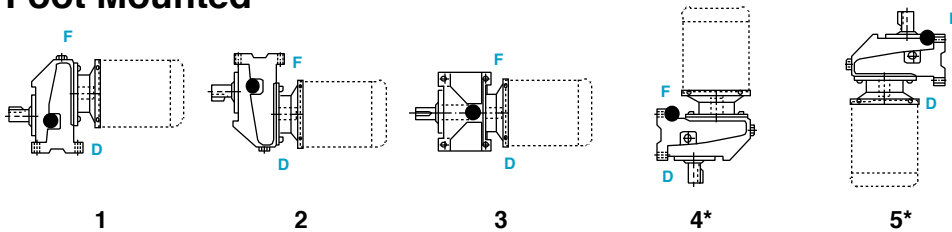
1. Assemble the key to the motor shaft and coat the shaft with anti-seize compound. Insert the motor shaft into the coupling per the chart below and tighten setscrews.



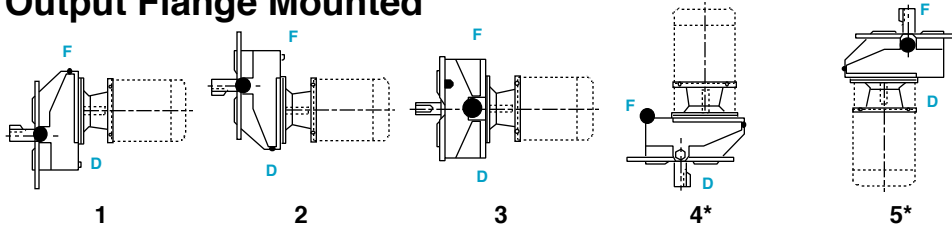
Reducer Size	S (in.)
RF630	0.56
RF640	0.31
RF650	0.38
RF660	1.56

2. Apply anti-seize compound to the spline end or the coupling.
3. Insert the motor into position on the reducer. The coupling should freely engage the reducer spline shaft and the motor flange should meet the reducer flange face without interference.
4. Rotate the motor to proper position and firmly secure to flange with four hex-head cap screws.

Foot Mounted



Output Flange Mounted



Mounting positions are the same for multiple reduction units, and for non-flanged reducers.

F - Fill • - Oil Level, D - Drain.

* Position 4 and 5, Level Should be 1/2" Below Top Fill.

Recommended Lubricant

Synthetic lubricants are recommended for 600A Series reducers, and at all times, the lubricant must remain free from contamination. During the initial break-in of the gear set, higher than normal operating temperatures may result.

An initial oil change should be made after the first 1,500-hours of operation and at 5,000-hour intervals thereafter. Relubrication should be performed at shorter intervals if the reducer operates in high ambient temperatures or unusually contaminated environments.

For operating temperatures in excess of 225°F special seal considerations may be necessary.

CAUTION

Mounting of speed reducers in overhead positions may be hazardous. Use of external guides or supports is strongly recommended for overhead mounting.

Recommended Lubricant	Ambient (Room) Temperature	ISO Viscosity Grade No.	Boston Gear Item Code	
			Quart	Gallon
Mobil SHC634	-30° to 225°F	320/460	51493	51494
Mobile D.T.E.Oil Extra Heavy	50° to 125°F	710/790	N/A	N/A

FOOT MOUNTED REDUCERS†

Frame Size	Quarts per Mounting Position				
	1	2	3	4	5
611B	*	*	*	*	*
621A	0.42	0.53	0.53	0.53	0.53
631A	0.74	1.37	0.95	1.27	1.37
641A	0.95	2.33	1.59	2.22	2.33
651A	1.16	3.81	2.64	3.59	3.81
661A	1.37	6.55	4.12	5.60	6.55
612B/613B	*	*	*	*	*
602A	*	*	*	*	*
622A/623A	0.48	0.90	0.74	1.27	1.06
632A/633A	0.53	1.53	1.32	2.01	1.80
642A/643A	1.48	3.81	3.17	5.18	4.97
652A/653A	2.75	5.81	5.29	7.19	6.98
662A/663A	4.44	15.33	9.09	16.07	16.07

OUTPUT FLANGE MOUNTED REDUCERS†

Frame Size	Quarts per Mounting Position				
	1	2	3	4	5
611BF	*	*	*	*	*
621AF	0.21	0.21	0.21	0.21	0.21
631AF	0.32	0.53	0.32	0.63	0.63
641AF	0.42	1.06	0.42	1.00	1.16
651AF	0.53	1.69	0.53	1.80	1.90
661AF	0.63	3.07	0.63	2.75	3.28
612BF/613BF	*	*	*	*	*
602AF	*	*	*	*	*
622AF/623AF	0.48	††	††	1.27	1.06
632AF/633AF	0.53	††	††	2.01	1.80
642AF/643AF	1.48	††	††	5.18	4.97
652AF/653AF	2.75	††	††	7.19	6.98
662AF/663AF	4.44	††	††	16.07	16.07

† Oil capacities apply to non-flanged reducers as well.

* Prelubricated for life.

†† Use mounting position number 1. Cannot use on mounting position 2 & 3.



Boston Gear

14 Hayward Street

Quincy, MA 02171

tel 617.328.3300

fax 617.479.6238

www.bostongear.com

An Altra Industrial Motion Company