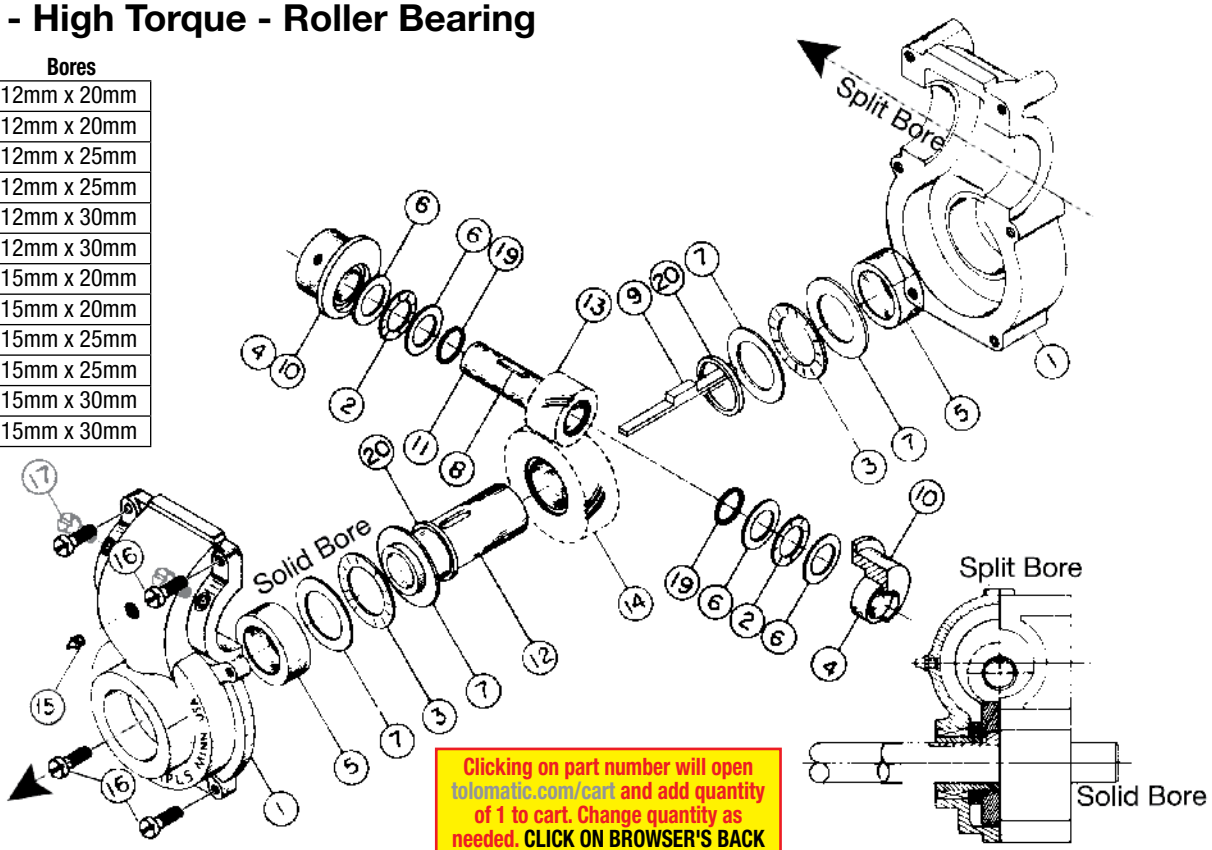
FLOAT-A-SHAFT® Standard Series – 2:1 Ratio - METRIC

Flat Base - High Torque - Roller Bearing

Model	R/LH	Bores
0414-0200	RH	12mm x 20mm
0415-0200	LH	12mm x 20mm
0416-0200	RH	12mm x 25mm
0417-0200	LH	12mm x 25mm
0418-0200	RH	12mm x 30mm
0419-0200	LH	12mm x 30mm
0422-0200	RH	15mm x 20mm
0423-0200	LH	15mm x 20mm
0424-0200	RH	15mm x 25mm
0425-0200	LH	15mm x 25mm
0426-0200	RH	15mm x 30mm
0427-0200	LH	15mm x 30mm

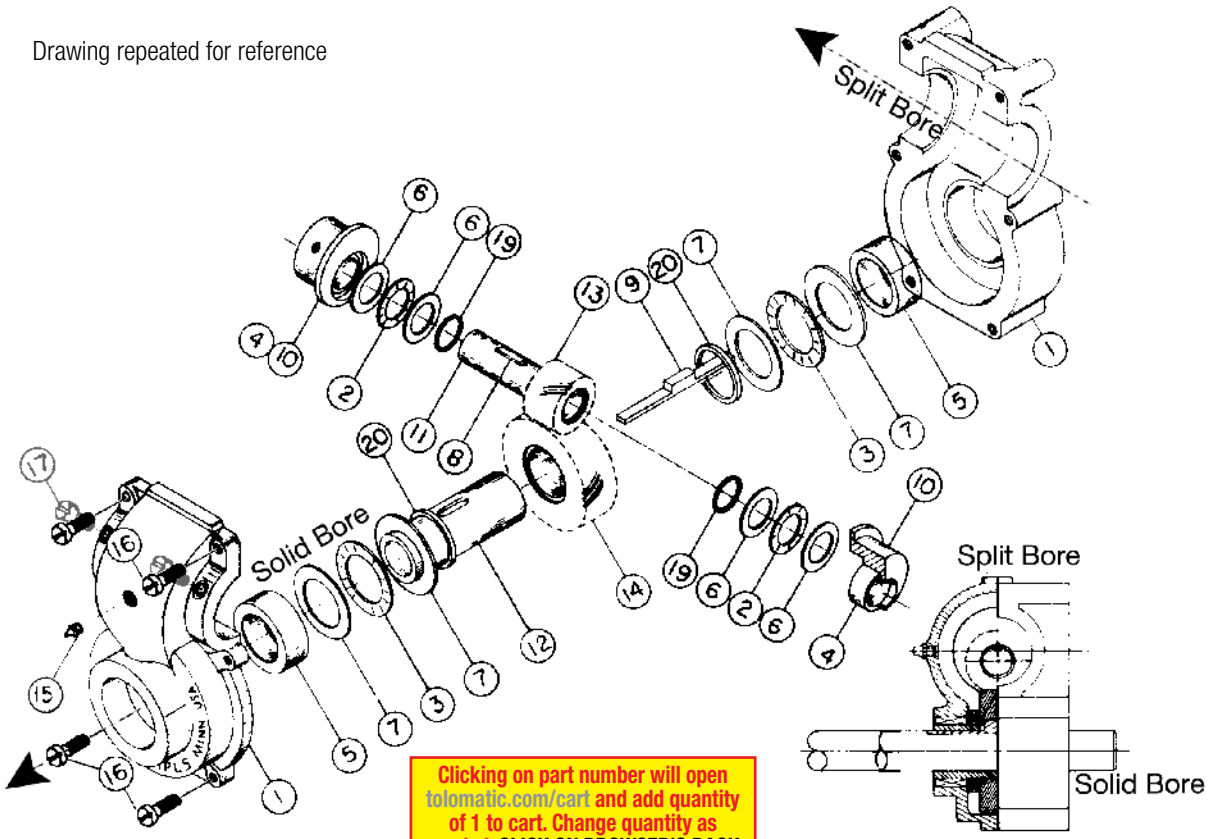


Clicking on part number will open tolomatic.com/cart and add quantity of 1 to cart. Change quantity as needed. CLICK ON BROWSER'S BACK BUTTON TO RETURN TO PARTS SHEET.

Click on Part No. to Add to Cart

ITEM	PART NO.	DESCRIPTION	Quantity											
			0414-0200	0415-0200	0416-0200	0417-0200	0418-0200	0419-0200	0422-0200	0423-0200	0424-0200	0425-0200	0426-0200	0427-0200
1	0275-9208	Gear Case Housing, Flat Base	1	1	1	1	1	1	1	1	1	1	1	1
2	0200-1214	Bearing, Thrust	2	2	2	2	2	2	2	2	2	2	2	2
3	0200-1222	Bearing, Thrust	2	2	2	2	2	2	2	2	2	2	2	2
4	0200-1527	Bearing, Needle, Roller	2	2	2	2	2	2	2	2	2	2	2	2
5	0200-1526	Bearing, Needle, Roller	2	2	2	2	2	2	2	2	2	2	2	2
6	0200-1317	Washer, Thrust	4	4	4	4	4	4	4	4	4	4	4	4
7	0200-1326	Washer, Thrust	4	4	4	4	4	4	4	4	4	4	4	4
8	0200-1537	Key, Step, 8mm x 9.53mm					1	1					1	1
	0200-1536	Key, Step, 8mm x 11.89mm			1	1					1	1		
	0200-1535	Key, Step, 6mm x 13.36mm	1	1					1	1				
9	0200-1531	Key, Step, 5mm x 8.53mm							1	1	1	1	1	1
	0200-1530	Key, Step, 4mm x 9mm	1	1	1	1	1	1						
10	0275-7709	Bushing, Steel, Eccentric	2	2	2	2	2	2	2	2	2	2	2	2
11	0200-3542	Bushing, Steel, 12mm bore												
	0200-3543	Bushing, Steel, 15mm bore	1	1	1	1	1	1						

Drawing repeated for reference



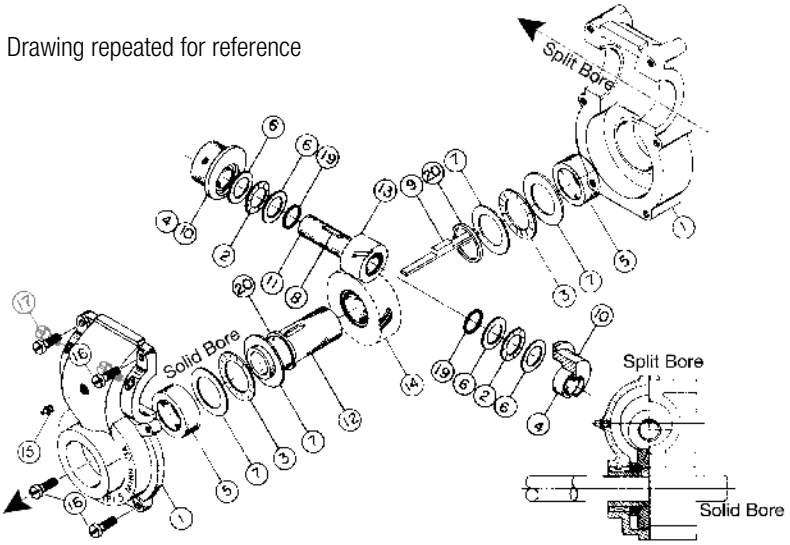
Clicking on part number will open tolomatic.com/cart and add quantity of 1 to cart. Change quantity as needed. CLICK ON BROWSER'S BACK BUTTON TO RETURN TO PARTS SHEET.

Parts Listing (cont.)

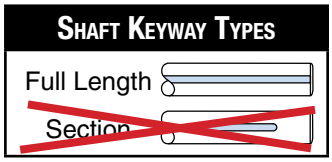
Click on Part No. to Add to Cart

ITEM	PART NO.	DESCRIPTION	Quantity											
			0414-0200	0415-0200	0416-0200	0417-0200	0418-0200	0419-0200	0422-0200	0423-0200	0424-0200	0425-0200	0426-0200	0427-0200
12	0200-3547	Bushing, Sleeve, Steel, 20mm bore	1	1					1	1				
	0200-3548	Bushing, Sleeve, Steel, 25mm bore			1	1					1	1		
	0200-3549	Bushing, Sleeve, Steel, 30mm bore					1	1					1	1
13	0200-1138	Gear, 15 T, LH		1		1		1						
	0200-2138	Gear, 15 T, RH	1		1		1							
14	0200-1144	Gear, 30 T, LH								1		1		1
	0200-2144	Gear, 30 T, RH							1		1		1	
	0200-1145	Gear, 30 T, LH		1						1				
	0200-2145	Gear, 30 T, RH	1						1					
	0200-1137	Gear, 30 T, LH				1		1				1		1
15	0100-1601	Zerk Grease Fitting, 1/4-28	1	1	1	1	1	1	1	1	1	1	1	1
16	0200-1812	Screw, Fill Hd, 1/4-20	6	6	6	6	6	6	6	6	6	6	6	6
17	0200-1557	Screw, Fill Hd, 1/4-20	2	2	2	2	2	2	2	2	2	2	2	2
18	0100-2604	Screw, Fill Hd, 1/4-28	1	1	1	1	1	1	1	1	1	1	1	1
19	0200-1331	Spacer, PL, Nylon Ring, .09" Thick	2	2	2	2	2	2	2	2	2	2	2	2
20	0200-1332	Spacer, PL, Celcon Ring, .09" Thick	2	2	2	2	2	2	2	2	2	2	2	2

Drawing repeated for reference



INSTALLATION



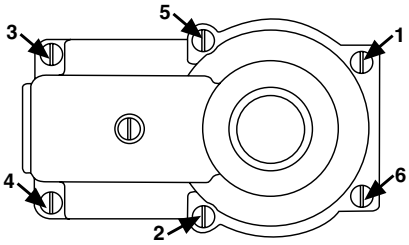
Keyway MUST extend to end of shaft IT IS NOT POSSIBLE TO USE A SECTIONED SHAFT WITH A ROLLER BEARING FLOAT-A-SHAFT®. Without removing the plastic tubes, align the Float-A-Shaft® with the shaft on which it is to be used and gently press it on. Be sure the key is properly aligned with the keyway. The plastic tubes will fall out as the shaft extends through the unit. Save the plastic tubes for removal of the Float-A-Shaft® for maintenance or repair. Be sure to reinsert the plastic tubes as the shaft is withdrawn, otherwise the internal parts will slip out of position and disassembly may be required to restore proper alignment.

SECTION KEYWAY: Keyway does not extend to end of shaft. The Float-A-Shaft® must be disassembled for installation.

REASSEMBLY: Reference the numbering diagram on page 1 to complete the following instructions, matching the numbers with corresponding bores.

SOLID BORE REASSEMBLY: Lay Gear Case Housing (1) horizontal, with inside surface facing up. Install Roller Bearing (5) in solid bores of Gear Case Housing (1). Press from inside to outside. Inside face of roller bearing must be flush with inside machined surface of gear case housing. Next, Insert Key (9) into slot of Sleeve Bushing (12) and insert the plastic tube to hold it in place. Install Gear (14) over the Sleeve Bushing (12) positioning it over Key (9). Install Plastic Spacer (20) on both sides of gear. Lubricate Roller Bearing (5), Thrust Bearing (3), and Gear (14) manually (See "Lubrication"). Install a Thrust Washer (7), Thrust Bearing (3), and Thrust Washer (7) on each side of gear. Lay the Gear Case Housing (1) horizontal, with the solid bore vertical and inside surface facing up. Install gear, sleeve and bearing assembly into the solid bore.

SPLIT BORE REASSEMBLY: Insert Key (8) into slot of Sleeve Bushing (11) and insert the plastic tube to hold it in place. Install Gear (13) over the Sleeve Bushing (11) positioning it over Key (8). Install Plastic Spacer (19) on both sides of gear. Lubricate all bearings and the gear manually (See "Lubrication"). Install a Thrust Washer (6), Thrust Bearing (2), and Thrust Washer (6) on each side of gear. Insert a Roller Bearing (4) into the Eccentric Bushing (10) and install on each side of gear. Lay the completed assembly into the split bore of the Gear Case Housing (1), making sure the teeth of the gears mesh. CAUTION: When trying to get the gears to mesh, rotate the gears to prevent possible damage to the teeth. Next, cover gears and bearings with approximately 3 oz. of lubricant. To complete assembly, install the other half of the Gear Case Housing (1) and tighten the Screws (16) in the order shown here. In case of shaft binding, check for possible misalignment of the shafts or for oversized shaft diameters.



SHAFT REQUIREMENTS: Shafts should be made of power transmission steel grade 4140 or better. A tolerance of +.000/- .002 is recommended for the shaft diameters. The shaft surfaces should be 32 RMS maximum for stationary applications, and 16 RMS maximum for traversing applications. Shaft straightness should be .0015 TIR per foot.

LUBRICATION AND MAINTENANCE SCHEDULE: All Float-A-Shaft® gear boxes have been lubricated at the factory with Mobilith® SHC 460. Standard Float-A-Shaft® gear boxes are initially filled with 2.8 oz. (82.8 ml) of grease to achieve 54% fill on the units. However, units require more lubrication prior to operation. Periodic re-lubrication is also necessary for optimum performance. When re-lubricating, inject Mobilith® SHC 460 (maximum operating temperature of 300˚F or higher and EP rated) into gear case, as required, via the grease zerk provided. *Mobilith® SHC 460 - 14 oz grease cartridge • P/N 0100-1605*
Lubrication and maintenance schedules are dependent on the application. General guidance is provided below and a maintenance plan can be developed based on the use case.

	USE CASE		
MAINTENANCE	**Continuous/ Heavy Duty**	**Intermittent/ Light Duty**	**Minimal**
Inject *1/4 oz. of Mobilith SHC460* into gear housing	1 ½ Months	3 Months	6 Months
Disassemble and purge unit. Hand lubricate all bearings and gears with *3 oz. of Mobilith SHC460*	6 Months	1 Year	1 Year

Mobilith® SHC 460 is a registered trademark of Exxon Mobil Corporation, www.mobil.com
Float-A-Shaft® is a registered trademark of Tolomatic, Inc.

Tolomatic™ EXCELLENCE IN MOTION
COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV = ISO 9001 =
3800 County Road 116, Hamel, MN 55340 USA
https://www.Tolomatic.com • Email: Help@Tolomatic.com
Phone: (763) 478-8000 • Toll Free: 1-800-328-2174

All brand and product names are trademarks or registered trademarks of their respective owners. Information in this document is believed accurate at time of printing. However, Tolomatic assumes no responsibility for its use or for any errors that may appear in this document. Tolomatic reserves the right to change the design or operation of the equipment described herein and any associated motion products without notice. Information in this document is subject to change without notice.