

OPERATING INSTRUCTIONS AND PARTS LIST

SHAW-BOX

HELICAL, HOLLOW SHAFT, TRAVERSE REDUCER

GENERAL

The reducer uses an adapter that goes between the reducer and the face mounted motor. For a triple reduction only, an additional reducer occurs between the base reducer and the motor. Units are intended to be used within 30 days after receipt. If they are to be stored for a longer period of time, contact the factory for storage precautions.

START-UP

Check the motor nameplate to verify that the phase, hertz and voltage agrees with the available power supply. Connect the motor to the power supply according to the furnished wiring diagram.



WARNING

Be certain that electrical power supply is off and locked in the open position before attempting any electrical connections. This equipment must be effectively grounded according to the National Electrical Code. Follow National, State and Local Electric Codes when providing electrical Service.

All units are lubricated before shipment. The breather is plugged for shipment. Remove the plastic wick from the breather before start-up. The breather should be located at the highest point on the reducer when it is mounted. The lubricant level should be checked with the unit mounted in the correct operating position. See back page for location of the oil level hole.

MAINTENANCE

Reducers using mineral base oils should have the oil changed every 10,000 hours or 2 years. Synthetic lubricants should be changed every 20,000 hours or 4 years. For adverse operating conditions these intervals should be shorter. **DO NOT MIX SYNTHETIC AND MINERAL BASE OILS.** The units should be checked periodically for increased noise, surface temperature, vibration, shaft movement and amperage draw.

A label on the reducer lists the approximate quantity, in quarts, of oil for the reducers. Actual capacity should be established by filling until the oil runs out of the oil level hole.

The following lubricants, or their equivalents, are recommended.

Type of Lubricant	Temperature Range	AGMA	Mobil	Texaco
Mineral Base	15 to 125°F	5EP	Mobilgear 630	Meropa 220
Mineral Base	-10 to 75°F	4EP	Mobilgear 629	Meropa 150
Synthetic	-20 to 140°F	--	SHC 634	Syn-Star GL 75W-140

Helical Reducer

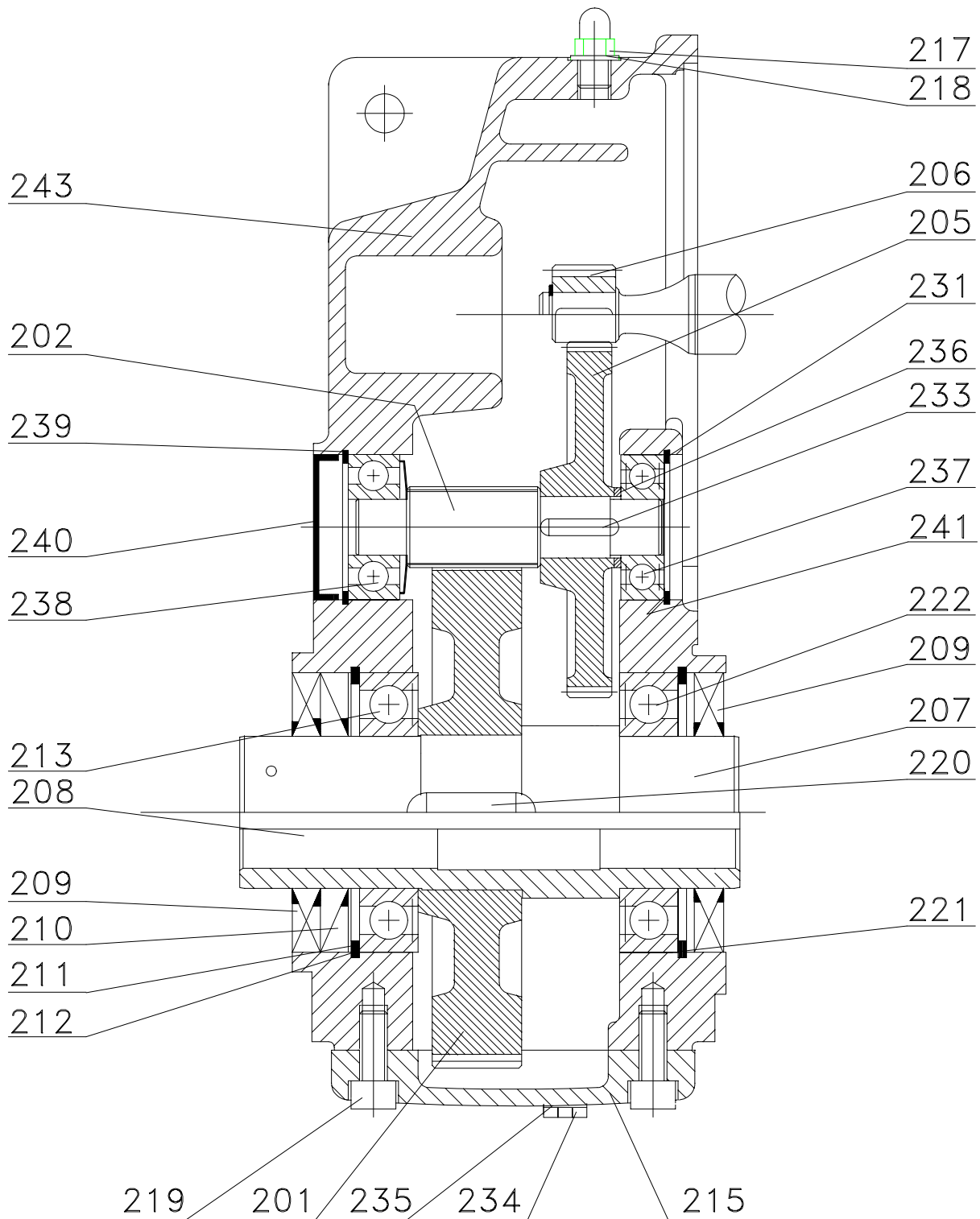


Figure 1.

Helical Reducer

Item Number	Part Number	Description	Quantity Required
201	SBR-101	Output Gear	1
202	SBR-102	Output Pinion	1
205	SBR-103	Input Gear	1
206	SBR-104	Input Pinion/Shaft	1
207	SBR-105	Hollow Output Shaft	1
208	SBR-106	Output Key	2
209	SBR-107	Oil Seal	2
210	SBR-108	Oil Seal	2
211	SBR-109	Snap Ring	1
212	SBR-110	Shim (.1mm thick)	2
	SBR-111	Shim (.3mm thick)	2
213	SBR-112	Bearing	1
215	SBR-113	Inspection Cover	1
217	SBR-114	Auto Vent	1
218	SBR-115	Gasket	1
219	SBR-116	Socket Head Bolt	6
220	SBR-117	Hardened Key	1
221	SBR-118	Snap Ring	1
222	SBR-119	Bearing	1
229	SBR-120	Spacer *	1
231	SBR-121	Snap Ring	1
233	SBR-122	Hardened Key	1
234	SBR-123	Drain Plug	2
235	SBR-124	Gasket	2
236	SBR-125	Spacer (not on all reducers)	1
237	SBR-126	Bearing	1
238	SBR-127	Bearing	1
239	SBR-128	Snap Ring	1
240	SBR-129	Seal Plug	1
241	SBR-130	Shim (.1mm thick)	2
	SBR-131	Shim (.3mm thick) (not on all reducers)	2
242	SBR-132	Spacer *	1
243	SBR-133	Housing	1

* Not Shown. Occurs outside of roller bearings only.

Please provide nameplate data for all reducers.

Figure 1.

Helical Reducer NEMA Input Adapter

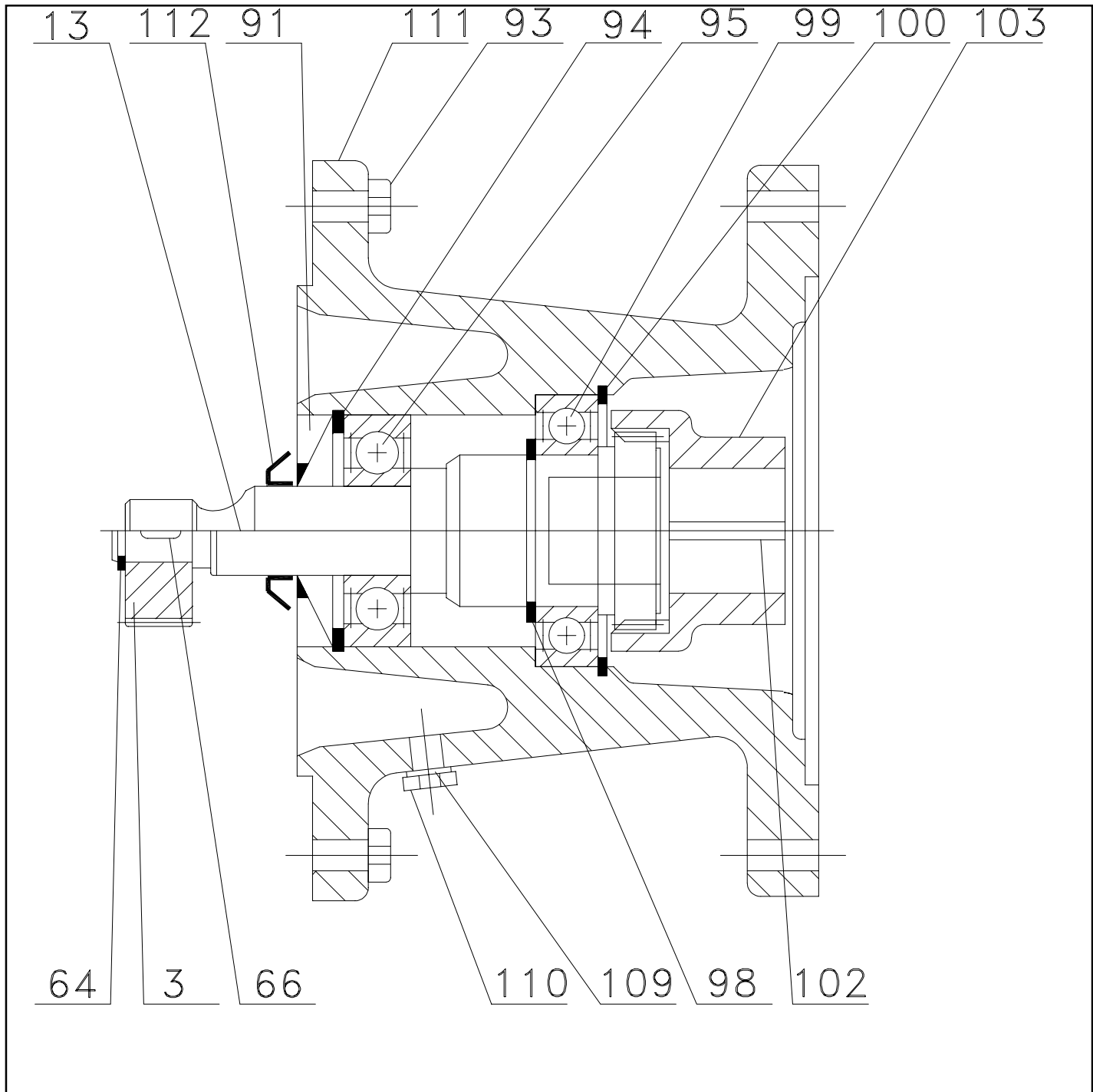


Figure 2.

Helical Reducer NEMA Input Adapter

Item Number	Part Number	Description	Quantity Required
3	SBR-201	Input Pinion	1
13	SBR-202	Input Pinion Shaft	1
64	SBR-203	Snap Ring	1
66	SBR-204	Hardened Key	1
91	SBR-205	Oil Seal	1
93	SBR-206	Hex Head Bolt	4
94	SBR-207	Snap Ring (not on all reducers)	1
95	SBR-208	Ball Bearing	1
98	SBR-209	Snap Ring	1
99	SBR-210	Ball Bearing	1
100	SBR-211	Snap Ring	1
102	SBR-212	Key	1
103	SBR-213	Coupling	1
109	SBR-214	Gasket	1
110	SBR-215	Drain Plug	1
111	SBR-216	Adapter Housing	1
112	SBR-217	Oil Slinger	1

Please provide nameplate data for all reducers.

Figure 2.

Additional Reduction for Triple Reduction for Helical Reducer

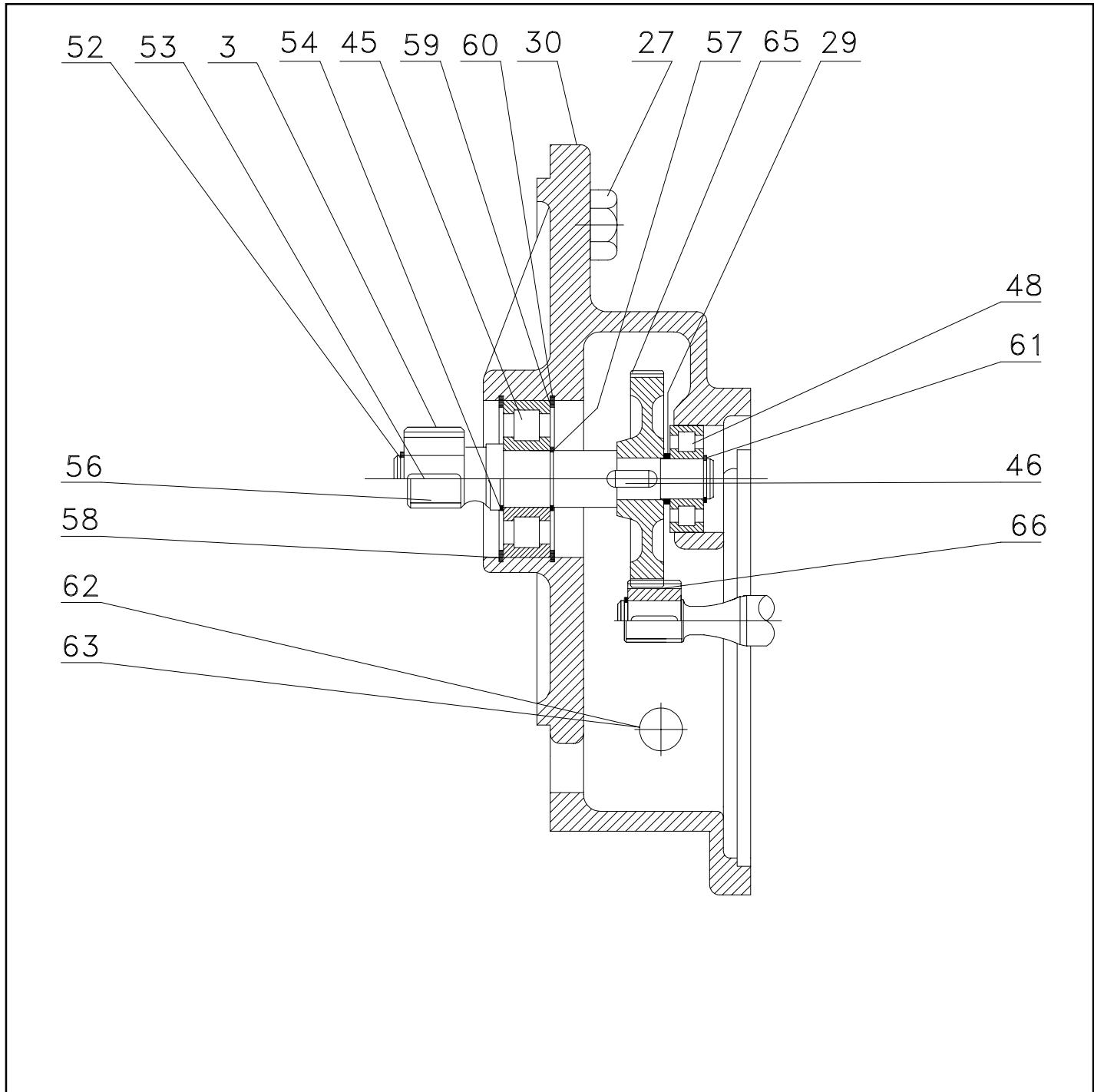


Figure 3.

Additional Reduction for Triple Reduction for Helical Reducer

Item Number	Part Number	Description	Quantity Required
3	SBR-301	Input Pinion	1
27	SBR-302	Hex Head Bolt	4
29	SBR-303	Spacer	1
30	SBR-304	Third Reduction Housing	1
45	SBR-305	Roller Bearing	1
46	SBR-306	Hardened Key	1
48	SBR-307	Roller Bearing	1
52	SBR-308	Snap Ring	1
53	SBR-309	Hardened Key	1
54	SBR-310	Snap Ring	1
56	SBR-311	Third Reduction Shaft	1
57	SBR-312	Snap Ring	1
58	SBR-313	Snap Ring	1
59	SBR-314	Shim (.3mm thick)	2
	SBR-315	Shim (.1mm thick)	2
60	SBR-316	Snap Ring	1
61	SBR-317	Snap Ring	1
62	SBR-318	Drain Plug	1
63	SBR-319	Gasket	1
65	SBR-320	Input Gear	1
66	SBR-321	Input Pinion	1

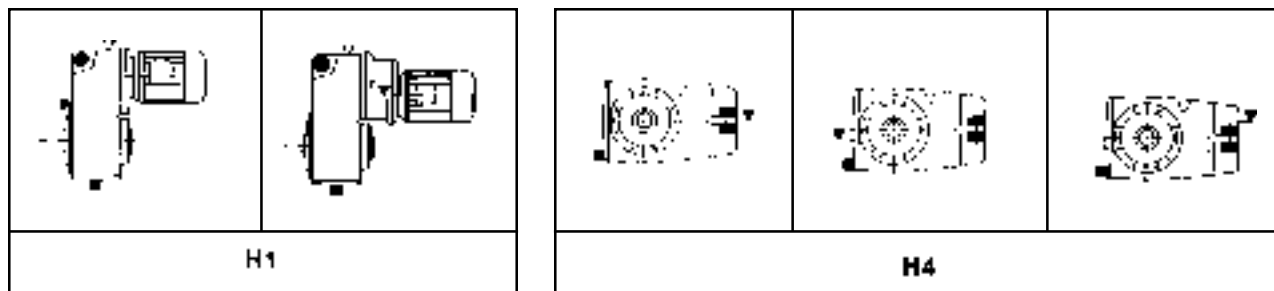
Please provide nameplate data for all reducers.

Figure 3.

OIL LEVEL, DRAIN & VENT PLUG LOCATIONS

SHAFT MOUNT HELICAL GEARMOTORS & REDUCERS

HOLLOW SHAFT OR SOLID SHAFT



▽ = Vent Plug

■ = Drain Plug

★ = Oil Level

The oil level, drain plug and vent plug positions shown apply to Gearmotors, C-Face Gear Units and Reducers.

WARRANTY

WARRANTY AND LIMITATION OF REMEDY AND LIABILITY

A. Seller warrants that its products and parts, when shipped, and its work (including installation, construction and start-up), when performed, will meet applicable specifications, will be of good quality and will be free from defects in material and, workmanship. All claims for defective products or parts under this warranty must be made in writing immediately upon discovery and in any event, within one (1) year from shipment of the applicable item unless Seller specifically assumes installation, construction or start-up responsibility. All claims for defective products or parts when Seller specifically assumes installation, construction or start-up responsibility, and all claims for defective work must be made in writing immediately upon discovery and, in any event, within one (1) year from completion of the applicable work by Seller, provided; however, all claims for defective products and parts must be made in writing no later than eighteen (18) months after shipment. Defective items must be held for Seller's inspection and returned to the original f.o.b. point upon request. THE FOREGOING IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES WHATSOEVER, EXPRESS, IMPLIED AND STATUTORY, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS.

B. Upon Buyer's submission of a claim as provided above and its substantiation, Seller shall at its option either (i) repair or replace its product, part or work at either the original f.o.b. point of delivery or at Seller's authorized service station nearest Buyer or (ii) refund an equitable portion of the purchase price.

C. This warranty is contingent upon Buyer's proper maintenance and care of Seller's products, and does not extend to fair wear and tear. Seller reserves the right to void warranty in event of Buyer's use of inappropriate materials in the course of repair or maintenance, or if Seller's products have been dismantled prior to submission to Seller for warranty inspection.

D. The foregoing is Seller's only obligation and Buyer's exclusive remedy for breach of warranty, and is Buyer's exclusive remedy hereunder by way of breach of contract, tort, strict liability or otherwise. In no event shall Buyer be entitled to or Seller liable for incidental or consequential damages. Any action for breach of this agreement must be commenced within one (1) year after the cause of action has accrued.

LIFT/LOIT

LIFT-TECH INTERNATIONAL
Division of Columbus McKinnon
MUSKEGON, MICHIGAN 49443