

1. Information

In cases of ambient temperatures not envisaged in the table, call our Technical Service. In the case of temperatures under -22°F or over 140°F it is necessary to use oil seals with special properties. For operating ranges with temperatures under 32°F it is necessary to consider the following:

1. The motors need to be suitable for operation at the envisaged ambient temperature.
2. The power of the electric motor needs to be adequate for exceeding the higher starting torques required.
3. In case of cast-iron gear reducers, pay attention to impact loads since cast iron may have problems of fragility at temperatures under 5°F.
4. During the early stages of service, problems of lubrication may arise due to the high level of viscosity taken on by the oil and so it is wise to have a few minutes of rotation under no load.

Oil must be changed after approx. 10000 hours/2 years of operation; this time varies based on the type of service and on the environment inside which the gear reducer is installed. Units not featuring any oil plug are life-lubricated, and therefore maintenance-free.

2. Lubricants

Specifications of lubricants recommended by Motovario.

The units **B063 ÷ 123** are supplied with LAND OIL GEAR POWER 220 oil, unless otherwise specified by the client.

The units **B143 ÷ 163** are supplied without lubricant.

| | B063 - 163 | | BA42 - A72/3 |
|--------------------------------|-----------------------------|---------------------------|--------------------------------|
| | Mineral oil | | Mineral oil |
| T _{amb} °F ISO/SAE | (+23) - (+104) ISO VG220 | (+5) - (+77) ISO VG150 | (+23) - (+104) SAE 85W-140 |
| LAND OIL | GEAR POWER 220 | - | - |
| ENI | BLASIA 220 | BLASIA 150 | ROTRA MP (85W-140) |
| SHELL | OMALA S2 G 220 | OMALA S2 G 150 | SPIRAX S2 A 85W-140 |
| KLUBER | Kluberoil GEM 1-220N | Kluberoil GEM 1-150N | Kluberoil GEM 1-460N |
| MOBIL | MOBILGEAR 600 XP220 | MOBILGEAR 600 XP150 | - |
| CASTROL | ALPHA SP 220 | ALPHA SP 150 | - |
| BP | ENERGOL GR-XP220 | ENERGOL GR-XP150 | - |
| PETRONAS | GEAR MEP 220 | GEAR MEP 150 | TUTELA TRANSMISSION W 140/M-DA |

3. Special lubricants

| | $T_{amb}^{\circ F}$ | Polyglycol synthetic oil |
|--------|---------------------|---|
| ENI | (-22) - (+86) | Blasia S 150 (ISO VG150) |
| | (-4) - (+104) | Blasia S 220 (ISO VG220) |
| MOBIL | (-49) - (+32) | SHC 624 (ISO VG32) |
| | (-40) - (+41) | SHC 626 (ISO VG68) |
| KLUBER | (-40) - (+41) | Klubersynth GH 6-32 (ISO VG32) |
| | (-31) - 50) | Klubersynth GH 6-80 (ISO VG80) |
| | (-22) - (+104) | Klubersynth GH 6-150 (ISO VG150) |
| | (-13) - (+104) | Klubersynth GH 6-220 (ISO VG220) |
| | (+5) - (+122) | Klubersynth GH 6-460 (ISO VG460) |
| | (+14) - (+158) | Klubersynth GH 6-680 (ISO VG680) |
| | $T_{amb}^{\circ F}$ | Polyglycol synthetic oil for food grade |
| KLUBER | (-22) - (+59) | Klubersynth UH1-6 100 (ISO VG100) |
| | (-13) - (+104) | Klubersynth UH1-6 220 (ISO VG220) |
| | (+5) - (+104) | Klubersynth UH1-6 320 (ISO VG320) |
| | (+5) - (+122) | Klubersynth UH1-6 460 (ISO VG460) |
| | (+14) - (+122) | Klubersynth UH1-6 680 (ISO VG680) |

If 'special' lubricant is required please contact for Technical Assistance.

4. Quantity

- For the reduction units B series it is always necessary to specify the mounting position.
- The reduction units BA.. series with 2, 3 stages and B060, are supplied complete with lubricant, have no oil plugs and need no maintenance.
- The gear reducer B series sizes 080, 100 are supplied complete with lubricant and are fitted with oil plugs to suit any mounting position included in the catalogue.
- The gear reducer B series sizes 140, 150, 160 have no lubricant and are fitted with oil plugs to suit any mounting position included in the catalogue. The oil filling can be done on request, in this case it is recommended, after installation, to replace the closed plug used for transportation with the supplied breather plug. When the reduction unit is supplied without lubricant, it is provided with a label to be filled.

It is recommended, after installation, to replace the closed plug used for transportation with the supplied breather plug. Oil quantity in the table (litres -) are indicative; for a proper use you will have to refer to the level plug or the dipstick. Any level difference could depend on construction tolerances, but also by the placement of the unit or by the mounting surface at the customer's premises. It is appropriate to check and, if necessary, restores the level when the units are installed.

| B | A42 | A52 | A53 | A72 | A73 |
|-------|------|------|------|-----|------|
| B3 | 0,33 | 0,42 | 0,63 | 1 | 1,21 |
| B8 | | | | | |
| B6/B7 | | | | | |
| V5 | | | | | |
| V6 | | | | | |

| CB | A42 | A52 | A53 | A72 | A73 |
|-------|------|------|------|-----|------|
| B3 | 0,33 | 0,42 | 0,55 | 1 | 1,13 |
| B8 | | | | | |
| B6/B7 | | | | | |
| V5 | | | | | |
| V6 | | | | | |

| B-CB | 063 | 083 | 103 | 123 | 143 | 153 | 163 |
|------|-----|-----|-----|-----|------|------|------|
| B3 | 1,2 | 2,5 | 3,7 | 5,7 | 11,1 | 19 | 33 |
| B8 | 1,5 | 2,8 | 4,2 | 7,9 | 13 | 17,5 | 42,8 |
| B6 | 1,5 | 3,5 | 6 | 8,5 | 14,5 | 26 | 43 |
| B7 | 1,5 | 2,8 | 3,9 | 7,3 | 11,8 | 19 | 30 |
| V5 | 2,1 | 3,7 | 7 | 9,9 | 18,5 | 32,5 | 54,5 |
| V6 | 1,3 | 2,6 | 4,5 | 6,7 | 10,8 | 16,5 | 37,3 |