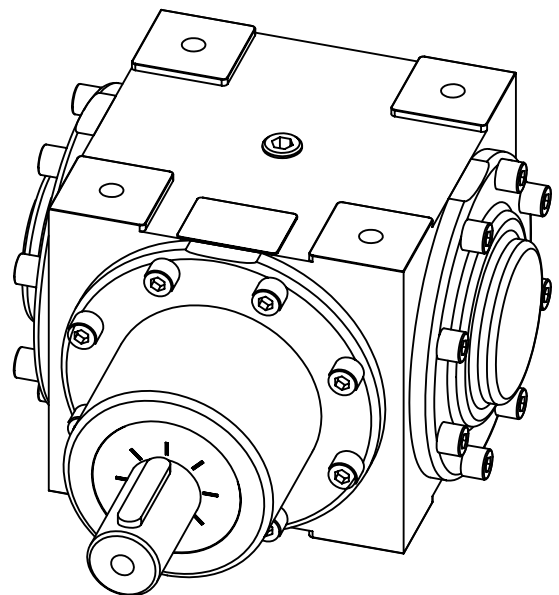
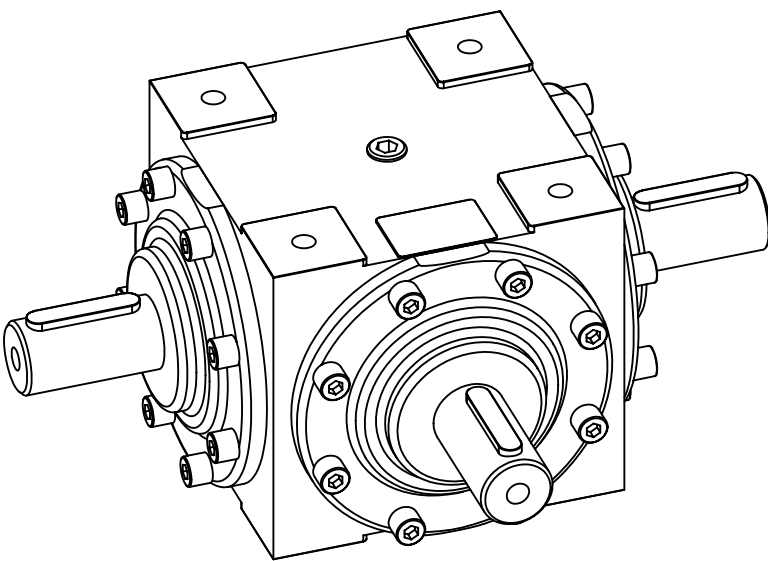


Q GUIDES **Range-N Bevel Gearbox**
Quick Guide to Operation & Maintenance

MMQG-SBG-N-EN-01



Range-N Bevel Gearbox

A full copy of the Range-N Bevel Gearbox Operation and Maintenance manual can be downloaded at www.powerjacks.com/manuals. Alternatively a paper copy can be ordered from Power Jacks.

1-General

- 1.1 Before installing new parts, remove any rust preventative, protection grease etc.
- 1.2 Check before immediate installation for possible transit damage.
- 1.3 Components which have been stored for a long time (over 1 year) should be re-lubricated in working conditions before they are put into operation.
- 1.4 Before putting the Range-N bevel gearbox(es) into service, the User must ensure that the plant in which it is installed complies with all applicable directives, especially those regarding health and safety at work.
- 1.5 Handle the bevel gearbox with care. The Range-N bevel gearboxes should be handled with care to avoid damaging the machined drive shafts.
- 1.6 Before putting the units into service, check the lubricant level. If necessary top up the lubricant to the required level.
- 1.7 All Neeter Drive Range-N gearboxes are shipped without lubrication, except for grease filled units
- 1.7 Do not mix greases of different nature or specifications.
- 1.8 If the same type of lubricant already in use is not available, remove all of the existing lubricant completely and flush its interior thoroughly with a light solvent before refilling with a new lubricant.
- 1.9 The structure on which the Range-N bevel gearbox(es) are mounted must have ample strength to carry the maximum torque, and should be rigid enough to prevent undue deflection or distortion of the bevel gearbox supporting members.
- 1.10 It is essential that the Range-N bevel gearbox(es) be carefully aligned during installation so that the drive shafts are running true and the connecting shafts are exactly in line with each drive shafts.
- 1.11 When installing several bevel gearbox(es) to move a common item / structure, the gearboxes should first be connected to the structure (refer 4.4). The bevel gearbox drive shafts should then be connected taking care not to turn the drive shaft and lose the any relative position for the installation.
- 1.12 After the Range-N bevel gearbox(es) is installed, shafting, gearboxes, motors, etc., are coupled together it should be possible to turn the main drive by hand (no load on condition). If there are no signs of binding or misalignment, the bevel gearbox system is then ready for normal operation.
- 1.13 After the Range-N bevel gearbox(es) are installed, they should be operated through their full rotation ten to twenty times under minimum load conditions. If the arrangement operates satisfactorily and there are no signs of binding or misalignment the Range-N bevel gearbox(es) are ready for normal operation. Refer to section 5 for typical operating performance checks.
- 1.14 Select a bevel gearbox which has a rated capacity greater than the maximum input power that may be imposed on it.
- 1.15 The maximum input shaft speed for these bevel gearboxes should not exceed 3000 R.P.M. Refer to Power Jacks Limited for higher shaft speeds.
- 1.16 The bevel gearbox operates with a maximum case temperature of 80°C. If this temperature is exceeded Power Jacks should be consulted.

2-Lubrication of the Bevel Gearbox

- 2.1 IMPORTANT NOTE – The bevel gearboxes are shipped dry and are fitted with a warning label. Before operation the gearbox must be filled with the correct lubricant type and quantity.
- 2.3 IMPORTANT NOTE – Lubricant suitability is dependent on duty cycle and ambient temperature. However in general recommended lubricants in section 7 are suitable for operation in an ambient temperature of -10°C to +50°C. If in doubt consult with Power Jacks prior to installation and operation.
- 2.4 The maintenance engineer should establish a lubrication programme based on the bevel gearboxes duty and use.
- 2.5 The information given below assumes that the gear unit is positioned with all shafts in a horizontal plane.
- 2.6 For input speeds up to 1500 RPM the oil level in the gear unit should be maintained just below the centerline of the shafts. A sight glass or level plug is provided for level indication.
- 2.7 A change of oil may be required for speeds of 1500 RPM or above, and Power Jacks should be consulted.
- 2.8 For input speeds of 250 RPM or below grease lubrication should be used.
- 2.9 Important Power Jacks should be advised when a gear unit is installed with a shaft positioned vertically.
- 2.10 If the gearbox uses a grease lubricant then excessive grease application should be avoided.
- 2.11 If the bevel gearbox or its system is fitted with a brake ensure that under no circumstances lubricant gets into the brake as this can cause brake failure due to loss of friction.

3-Recommended Lubricants

Table 1 - Normal Operation

Ambient Temperature	Gear Oil	
Below +5°C	ISO 150	Mobilgear 629 or equivalent
+5°C to +40°C	ISO 220	Mobilgear 630 or equivalent
Above +40°C	ISO 320	Mobilgear 320 or equivalent

Table 2 - Oil Lubrication Fill Quantities (average)

Series No.	35	37	38	39	40	42
Litres	0.14	0.29	0.75	1.71	3.27	7
Pints	0.24	0.50	1.32	3.00	5.75	12.3

Note:

The oil levels stated in the table above assumes that the gearbox is positioned with all shafts in a horizontal plane. For other shaft orientations please consult Power Jacks.

Table 3 - Grease Filled (Input Speed =< 250 rpm)

Manufacturer	Lubricant
Mobil	Mobilux EP1 Grease or Equivalent



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