



**SPIRAL BEVEL GEARBOXES  
RANGE "ISK"**

**SPARES LIST &  
MAINTENANCE  
INSTRUCTIONS**

**Manual: MM-SBG(ISK)-E-02**

**SUPPLIED BY: POWER JACKS LIMITED**

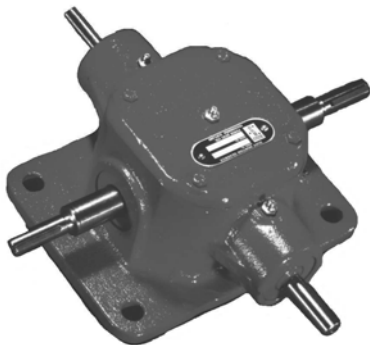
# Range ISK – Spiral Bevel Gearboxes

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## 1. Unit Details

The units are shipped with the following nameplate attached, it is worthwhile noting down the numbers on this unit and keeping them in a safe place as they will be required if spares need to be ordered and some installations may not allow access to the unit once installed or the name plate maybe obscured.



Model Number	
Serial Number	
Power Jacks Sales Order	

# Range ISK – Spiral Bevel Gearboxes

## 2. Technical Specification

### 2.1 Range ISK – Technical Information

#### 2.2 3 way Gearbox

Shaft Size	16mm	19mm	25mm
Model Number (L or R)	F822503	ISK2658M2	ISK2658M3
Gear Ratio	1:1	1:1	1:1
Max. Torque (Nm)	125	285	350
Max Power (Kw)	2.2	4.5	7.5
Max Speed RPM (No Load)	1500	1500	1500
Weight (Kgs)	16.5	16.5	16.5

#### 2.3 4 way Gearbox

Shaft Size	16mm	19mm	25mm
Model Number (L or R)	F822504-16	ISK2717M2	ISK2717M3
Gear Ratio	1:1	1:1	1:1
Max. Torque (Nm)	125	285	350
Max Power (Kw)	2.2	4.5	7.5
Max Speed RPM (No Load)	1500	1500	1500
Weight (Kgs)	19	19	19

# Range ISK – Spiral Bevel Gearboxes

## 3. General Instructions

### 3.1 Installation and Maintenance Recommendations

#### 3.1.1 Installation

1. Select a gearbox, which has a rated capacity greater than the input power.
2. Ensure speed of rotation is within specification.
3. Check your gear unit for damage during shipment
4. Take care when fitting couplings; a blow on a shaft end can cause gear overmeshing.
5. Shaft alignment is critical, check on installation
6. The structure on which the gearboxes are mounted should be rigid enough to prevent undue deflection or distortion when operating under load.

#### 3.1.2 Maintenance Instructions

A new gear unit should be lubricated once every sixteen weeks of operation using grease specified in section 4. If different lubricant is used clean out gearboxes and clean with a flushing solution – never mix different greases.

The dust should be removed from the grease nipples before applying the grease gun. Where severe operating conditions are encountered more frequent lubrication is advised.

Regular maintenance as described above will ensure that the gearboxes give good service for many years. Even with regular maintenance parts will eventually wear out and should be replaced. We recommend that spare parts should be carried.

#### 3.1.3 Spares

When ordering spares always specify the part number and serial number stamped on the nameplate.

## 4. Recommended Lubricants

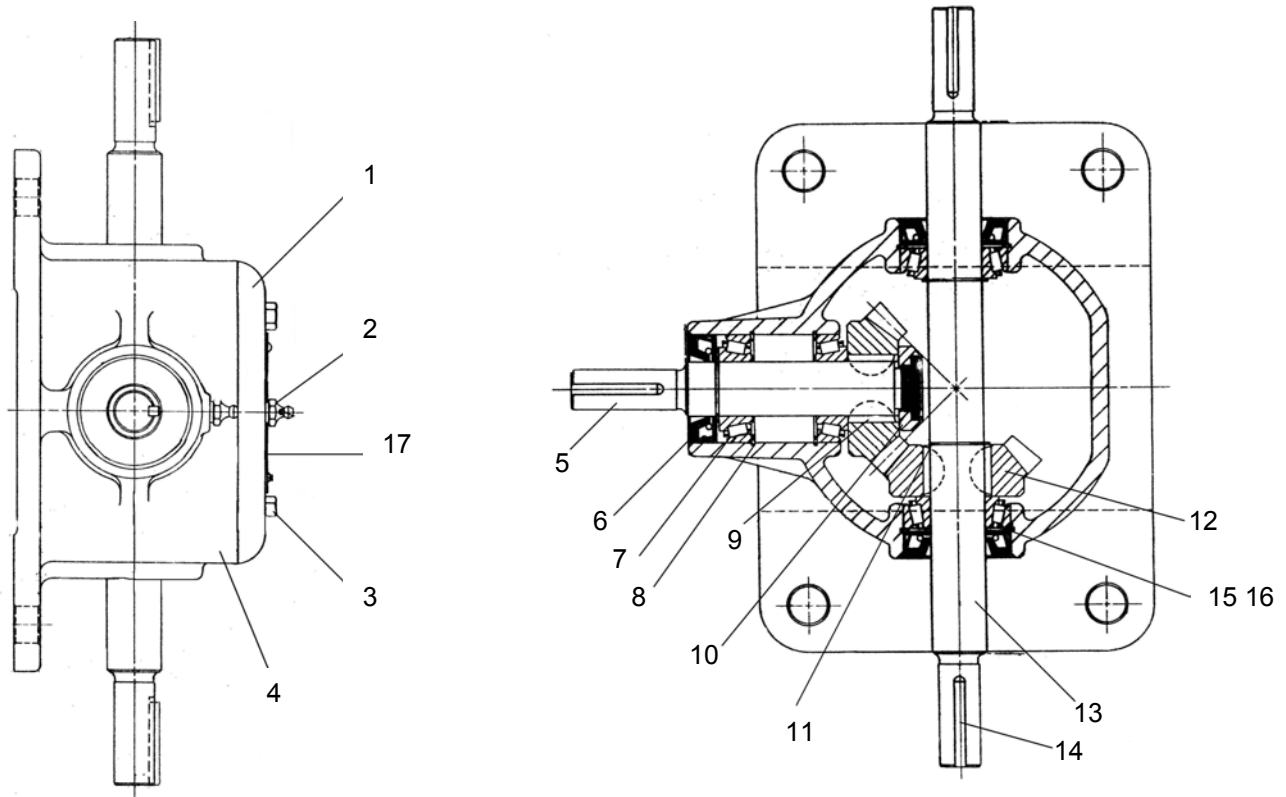
### 4.1 Grease Specification

Shell Calathia EPT2 Grease or equivalent – do not mix different types of grease in the gearbox, see section 3

# Range ISK – Spiral Bevel Gearboxes

## 5. General Assembly & Parts List

### 5.1 General arrangement – 3 way

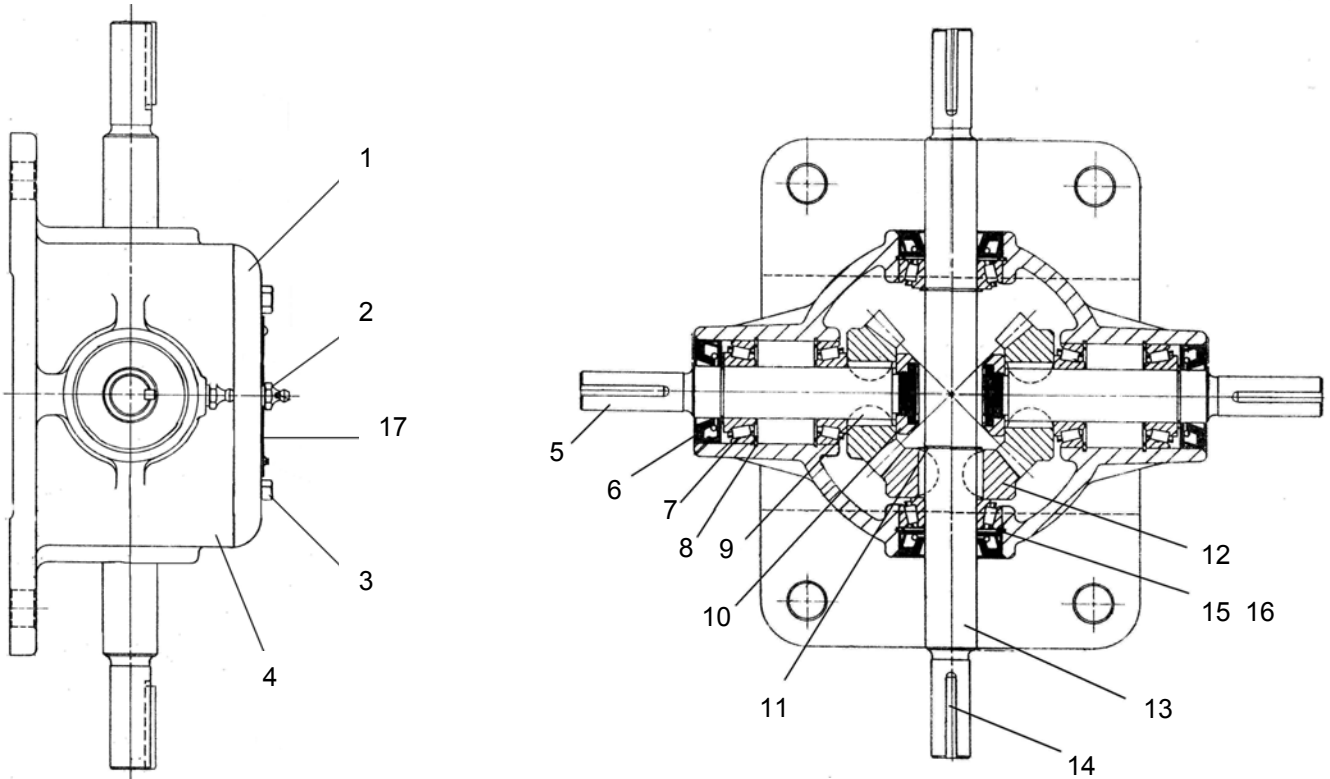


### 5.1.1 Parts List – 3 way

Item No	Description	Qty
1	Gearbox cover	1
2	Grease Nipple	2
3	Hex Screw	4
4	3 Way gear case	1
5	Stub shaft	1
6	Oil Seal	3
7	Bearing	4
8	Retaining ring	4
9	Woodruff Key	4
10	Lock nut	1
11	Retaining ring	3
12	Mitre Gear	2
13	Drive shaft	1
14	Key	3
15	Shim (0.003" Thick)	1
16	Shim (0.010 Thick)	1
17	Name Plate	1

# Range ISK – Spiral Bevel Gearboxes

## 5.2 General arrangement – 4 way



### 5.2.1 Parts List – 4 way

Item No	Description	Qty
1	Gearbox cover	1
2	Grease Nipple	3
3	Hex Screw	4
4	4 Way gear case	1
5	Stub shaft	2
6	Oil Seal	4
7	Bearing	6
8	Retaining ring	6
9	Woodruff Key	6
10	Lock nut	2
11	Retaining ring	4
12	Mitre Gear	3
13	Drive shaft	1
14	Key	4
15	Shim (0.003" Thick)	1
16	Shim (0.010 Thick)	1
17	Name Plate	1

# Range ISK – Spiral Bevel Gearboxes

## 6. Disassembly / Assembly Instructions

### 6.1 3 & 4 Way shaft arrangements

6.1.1 Remove four hex head screws and remove the gearbox cover

6.1.2 Remove as much of the grease from the gearbox as possible

6.1.3 Remove all oil seals – after removal discard and fit new ones on reassembly

6.1.4 Remove the retaining rings from the main drive shaft and remove the retainer rings that retain the drive shaft bearings.

6.1.5 The drive shaft can now be removed from the gear case, remove from the gear end, it is possible that the bearings will also come out with the shaft.

6.1.6 Remove the loose gear and the inner race of the drive shaft bearing

6.1.7 Remove the stop nuts from the stub shaft(s).

6.1.8 Remove the gears from the stub shaft(s)

6.1.9 Remove the bearing retainer rings from the stub shafts

6.1.10 Push the sub shaft(s) towards the centre of the gearbox until the shaft is released from the inner race of the bearing

6.1.11 If necessary the remaining retainer rings and outer bearing races can be removed.

6.1.12 Clean and degrease all components

6.1.13 To reassemble the unit, inspect all parts for wear / damage and replace as required, rebuild unit following the procedures in 6.1.1 to 6.1.11 but in reverse order. Take care not to cause excessive load on bearings when fitting.

6.1.14 When finishing assembly, shims may be required behind gear on drive shaft.

6.1.15 Fit new oil seals

6.1.16 Refill unit with Grease

6.1.17 Re fit top cover

# Range ISK – Spiral Bevel Gearboxes

## 7. Warranty

### 7.1 Limitation of Responsibility

The ratings given in this manual were compiled using standard engineering procedures. The ratings are designed to guide the customer in the selection of a unit. We do not guarantee the ratings in specific applications. Prototype testing of every application is recommended before production. Our engineering facilities are available for consultation at all times. Please ask us for assistance with linear motion and drive application problems. This manual is designed to assist in the selection of a suitable linear motion or power transmission product for economical, long and trouble free service.

Due to Power Jacks policy of continuous improvement, designs may be subject to change without notice. Please ask for certified drawings.

### 7.2 Warranty

Subject to the condition stated herein, Power Jacks will repair or replace, without charge, any parts proven to Power Jacks satisfaction to have been defective in material or workmanship. Claims must be made within one year after date of shipment. Power Jacks will not repair or replace any parts that have become inoperative because of improper maintenance, eccentric loading, overloading, chemical or abrasive action, excessive heat, or other abuse. Equipment which has been altered or modified by anyone without Power Jacks authorisation, is not warranted by Power Jacks. EXCEPT AS STATED HEREIN, POWER JACKS MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

WARNING: The equipment shown in this manual is intended for industrial use only and should not be used to lift support, or otherwise transport people unless you have a written statement from Power Jacks Limited which authorises the specific unit as used in your application for moving people.

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We reserve the right to alter details and specifications without notice.

Since special circumstances may affect the equipment's operation, users should consult **POWER JACKS LIMITED** at the address shown, or take other skilled engineering advice. It is recommended that the application design load is conspicuously displayed.

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