



Engineering Note

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## Instructions for fitting a Rotating Connector

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Products affected: Hydro-Probe Orbiter – ORB1

Summary: New fitting instructions for rotating connector

### Introduction

The Rotating Connector for the Hydro-Probe Orbiter is designed to fit many different types of static pan mixer where cable access is possible through the centre of the mixer.

The Rotating Connector has been redesigned to make it easier to install and connect. This engineering note should be read in conjunction with the Hydro-Probe Orbiter User Guide HD0256. It shows the main components together with the additional parts that comprise the different types A, B and C; all necessary to enable the rotating connector to fit to different types of mixer.

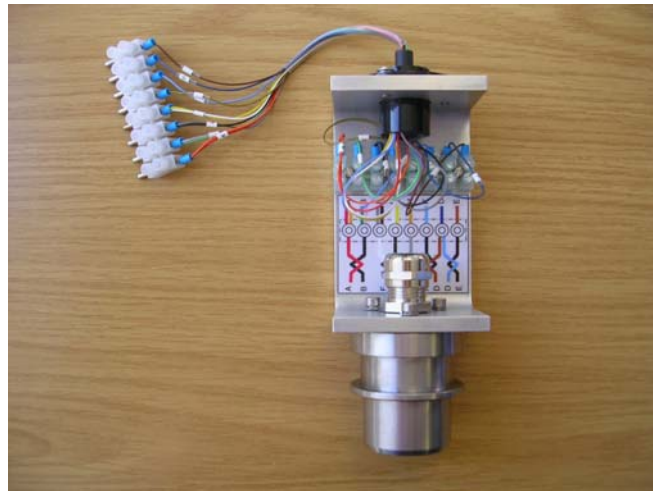
The installation of a Type A rotating connector on a 0.75m<sup>3</sup> OMG Galletti planetary mixer is also shown.

### Common Parts to all Rotating Connector Types

Housing



Slip Ring Sub Assembly



Lid



Wiring diagram is shown on the inside

Bearing Housing



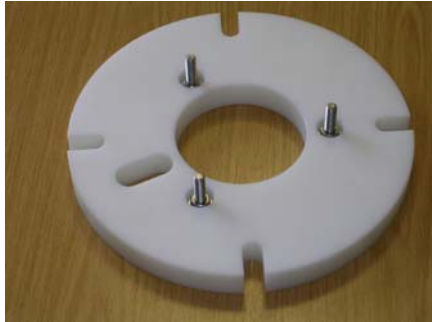
## Type A

The Type A rotating connector is suitable for mixers with a hollow central shaft through the gearbox where the motor is not positioned centrally, i.e. planetary mixers such as those manufactured by OMG Galletti

### Type A Additions

In addition to the common parts the following parts are required.

Fixing Plate



Slots are pre-machined for ease of fitting to an OMG gearbox lid

1½"-1" BSP Brass Adapter



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## Type B

The Type B rotating connector is suitable for turbo pan mixers where the motor is fitted to the underside of the mixer. The cable is taken through a central hole in the top of the lid of the mixer.

### Type B Additions

In addition to the common parts the following parts are required.

Bearing



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## Type C

The Type C rotating connector is suitable for planetary mixers manufactured by Couvrot. This is a direct replacement for the HydroStop rotating connector, where the cable runs through a rotating threaded shaft in the centre of the mixer.

### Type C additions

In addition to the common parts the following parts are required.

Flanged Spigot



Bearing



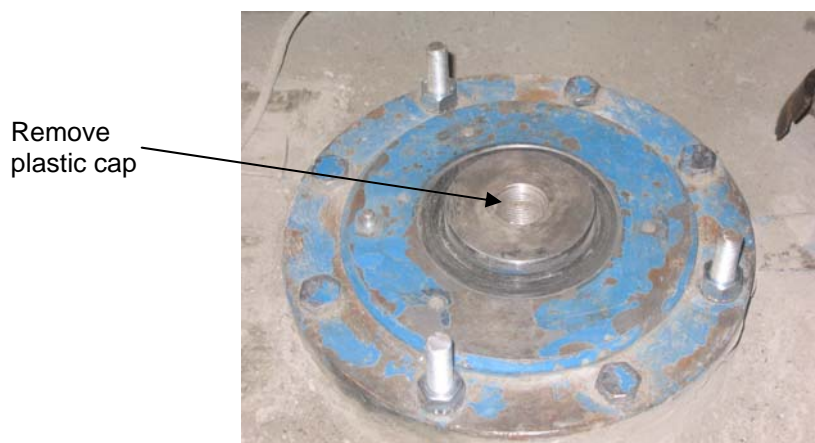
## Fitting a Rotating Connector Type A

The following set of photographs show a typical installation of a Type A Rotating Connector. A 0.75m<sup>3</sup> OMG Planetary mixer is used in this example. Note should be made that this was a preliminary design where three fixing studs and holes in the Fixing Plate were used. The current design utilises four studs and slots in the Fixing Plate to ease assembly.

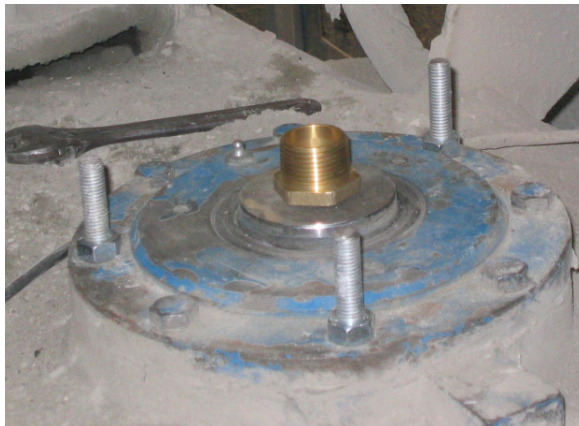
### Stage 1 – Securing the Fixing Plate to the mixer gearbox cover

The gearbox cover is secured using 8 off M12 bolts (bolt lengths may vary between different sizes of mixer). Remove four alternate bolts (only 3 are shown) and replace with the four threaded studs supplied. Tighten to re-secure the cover with a shake-proof washer and nut (also supplied).

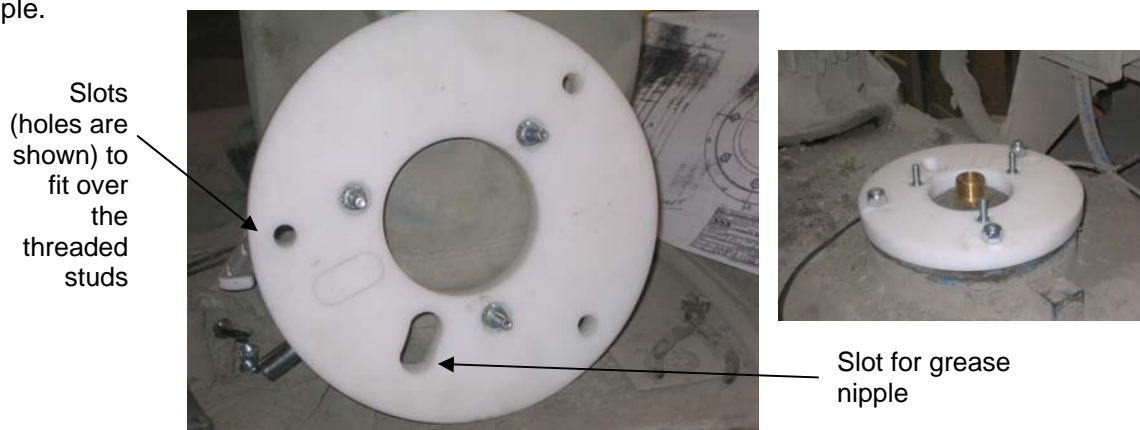
Remove the plastic cap that is screwed into the rotating central shaft.



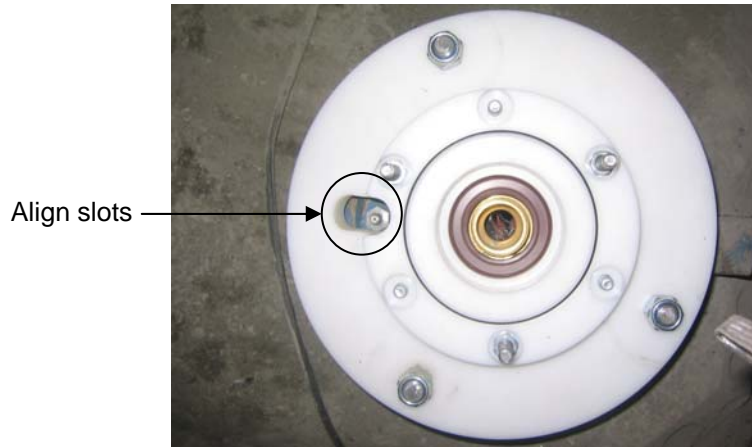
Screw the 1½”-1”BSP adapter in to the central shaft.



Using the threaded studs now fitted, place the Fixing plate on the mixer cover and secure using the nyloc nuts supplied. Note that the slot provides clearance around the grease nipple.



Fit the Bearing Housing to the Fixing Plate using the nuts provided. The slots should be aligned.



## Stage 2 - Cabling

The 4m sensor cable (part number 0090A) should be used to connect the sensor to the Rotating Connector. Attach the cable to the sensor and pass through any protective hoses inside the mixer and up through the central shaft to the outside of the mixer. Cutting the bare ends off the cable will make this easier.



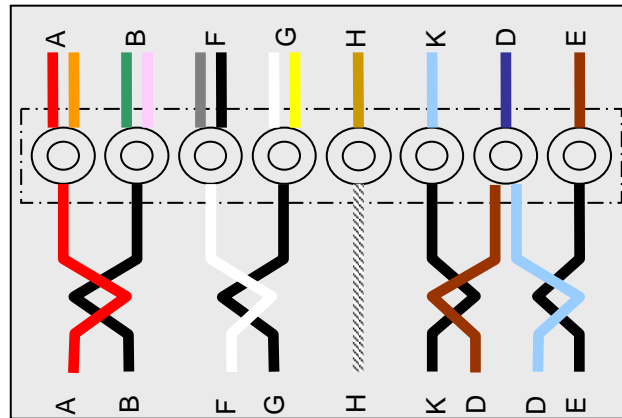
Feed the cable through the slip-ring assembly and screw the assembly to the brass adapter.



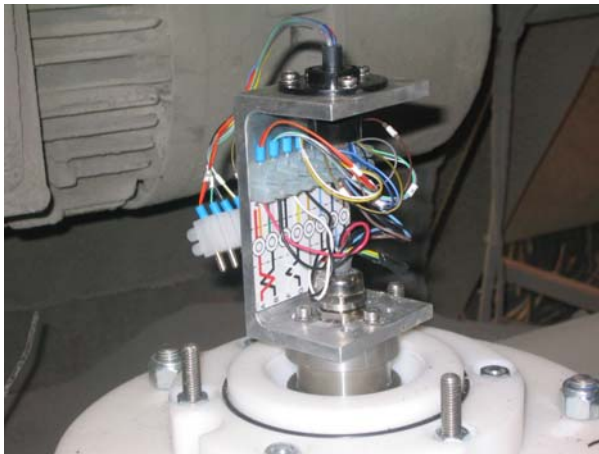
Ensure the cable is still connected to the sensor and running through any hoses that are fixed in place inside the mixer. Pull the cable up and then strain relieve the cable by tightening the metal cable gland on the slip-ring assembly. This is the point that the cable will be cut so having the correct length is important. Cut the cable approximately 10cm (4") above the gland.



Strip the wires and connect to the connector block. Removing the connector block from the assembly may ease fitting. A wiring diagram is included below the connector block to aid assembly.



Tape any unused wires ensuring that none are shorted to each other.

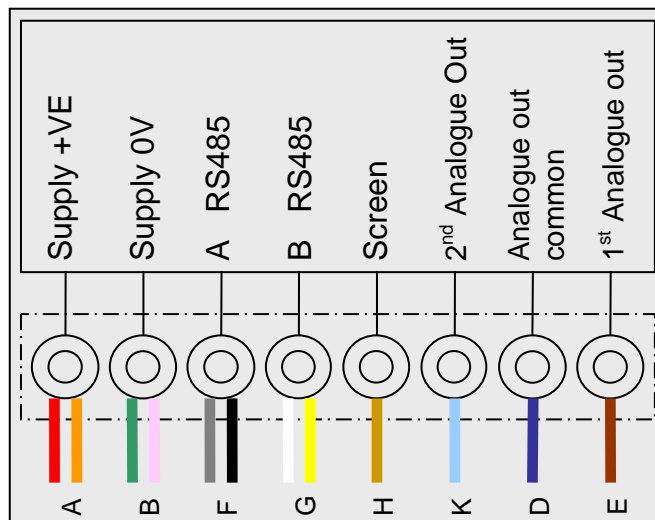


### Stage 3 – Fitting the Housing

Fit the Housing over the whole assembly and secure. Connect the slip-ring connector block to the housing block.



Pass the plant cable through the Housing cable gland and secure it. Strip back the cable and wires and connect to the rotating connector. A wiring diagram is included in the lid to help with the connection.



Secure the lid.



End