

Change Notification

Replacement of MH/MIS motors by Coveo® motors in After-Sales Service

History			
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00	05/04/16	Creation	E. Miralles
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1 Introduction

This document presents the operations to be carried out for the replacement of above-ground MH2 and immersed MIS motors by the Coveo® range of motors during on-site after-sales service.

By comparison with the older range's motors (MIS and MH2), the Coveo® range presents identical performances (equivalent or superior maximum torque, similar speeds) and is compatible with the electrical boxes already present (however, there may be a software update for MIS boxes with or without automated control).

There are still some assembly and wiring rules to be respected, which we describe below.

2 Above-ground motors

2.1 *Choice of equipment*

The motors run on a 12VDC power supply and are to be replaced as follows:

Old range motor installed on site	Coveo® motor to be installed as a replacement
MH2 80 Nm (12VDC)	Coveo® Above-ground 150 Nm (12VDC) + INIT button
MH2 150 Nm (12VDC)	

The Sirem 12VDC electrical boxes do not have to be changed.

2.2 *Mechanical assembly*

As a supporting rod for the motor's structure, the MH2 is equipped with a 16 mm square shaft. This is generally mounted in a rectangular tube on one of the sides, with a 16 mm square drilled through the tube wall.

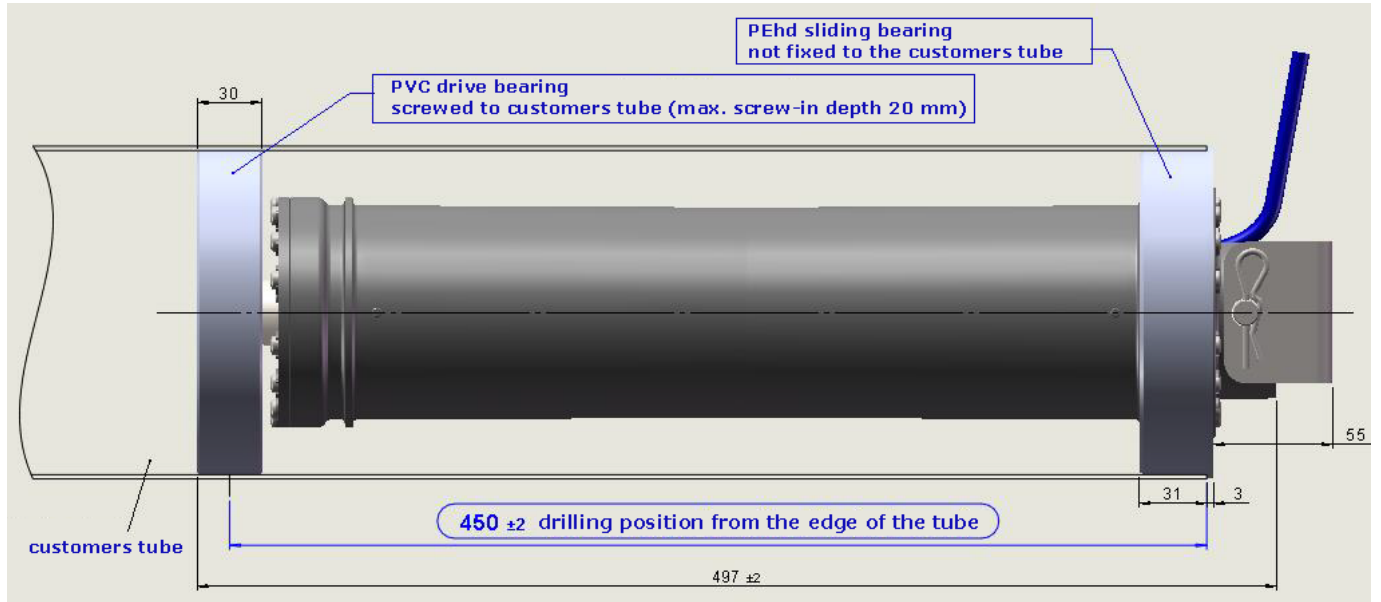
The Coveo®'s attachment (bolt, flange or coupling) being free to pivot, the force exerted by the cover develops a bending force on the supporting tube (whereas in the case of an MH2, with the 16 mm square shaft connected to the motor, this force is top to bottom shear with no bending component).

The bending distorts the supporting tube's wall and the 16 mm square shaft is unsuitable: a firm connection to the supporting tube is required.

The above-ground Coveo® comes with a U-shaped flange (see diagram below) attached to the supporting tube via 4 holes (either smooth or threaded with a counter-plate to be added behind on the inside of the tube for tightening with nuts). Nylstop® nuts are recommended.

It is therefore necessary to:

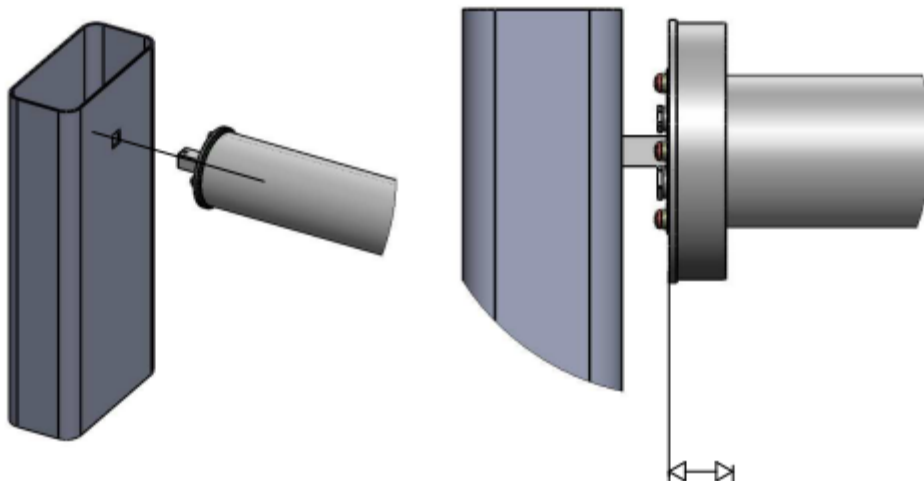
- ① **Drill new holes in the rectangular supporting post to adapt the new U-shaped flange to it,**
- ② **Drill new holes in the customer's tube because the distance between the motor's front bearing and rear bearing is not the same as on the MH2 (drilling pattern to be changed).**



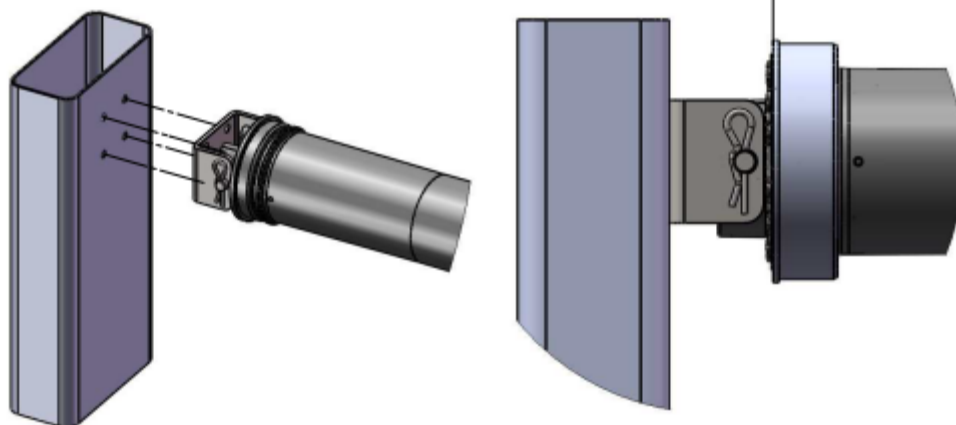
Adapting the U-shaped flange involves moving the cover's position (see the diagram below, on the right, to a varying degree, either more or less, depending on the customer's assembly) and requires:

- ③ **Checking if, on the other side of the pool, it is necessary to sink or remove the telescopic bearing shaft,**
- ④ **Checking if it is necessary to move the straps on the shaft (so that the apron is still centrally positioned in relation to the pool walls).**

MH2



Coveo®



2.3 Electrical wiring

The motor's electrical wiring to the power supply box remains very similar to that of the MH2 to the same box except that:

- ⑤ **Unlike the MH2, the INIT button has to be wired.**

⇒ See the Coveo® notice for assembly and wiring instructions.

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2.4 Summary of actions to be carried out for the replacement of an above-ground motor.

- ① Drill new holes in the rectangular supporting post to adapt the new U-shaped flange to it,
- ② Drill new holes in the customer's tube because the distance between the motor's front bearing and rear bearing is not the same as on the MH2 (drilling pattern to be changed),
- ③ Check if, on the other side of the pool, it is necessary to sink or remove the telescopic bearing shaft,
- ④ Check if it is necessary to move the straps on the shaft (so that the apron is still centrally positioned in relation to the pool walls).
- ⑤ Unlike the MH2s, the INIT button has to be wired.

3 Immersed motors

3.1 Choice of equipment

The motors run on a 24VDC power supply and are to be replaced as follows:

Old range motor installed on site	Coveo® motor to be installed as a replacement
MIS 120 Nm (24VDC)	Coveo® Immersed 120 Nm (24VDC)
MIS 200 Nm (24VDC)	Coveo® Immersed 300 Nm (24VDC)
MIS 300 Nm (24VDC)	Coveo® Immersed 300 Nm (24VDC)

Please bear in mind that it is **not** possible to use the Coveo® Immersed **300+** Nm (24VDC) in connection with the controller version V2.1/2.2.

This motor can only be used in connection with the new controller V3.X

Changing the motor requires the following updates on the control boxes so they can adapt to the Coveo® revolution counting system (the motor can still operate without changing the box but this will lead to an eventual lag of the limit switches, which might require a reset operation by the user after a few months).

Box installed on site	Intervention on the box
MIS control box with automated control	Same box but updating the controller via a memory cartridge (v2.2)
MIS SFC/MH control box	Nothing to report

3.2 Mechanical assembly

The MIS is equipped with a supporting rod for the motor's structure (generally a rounded shaft). This is generally mounted on a customer's end-plate, via a connecting flange.

The Coveo®'s attachment (shaft) being free to pivot, the cover develops a bending force on the end-plate.

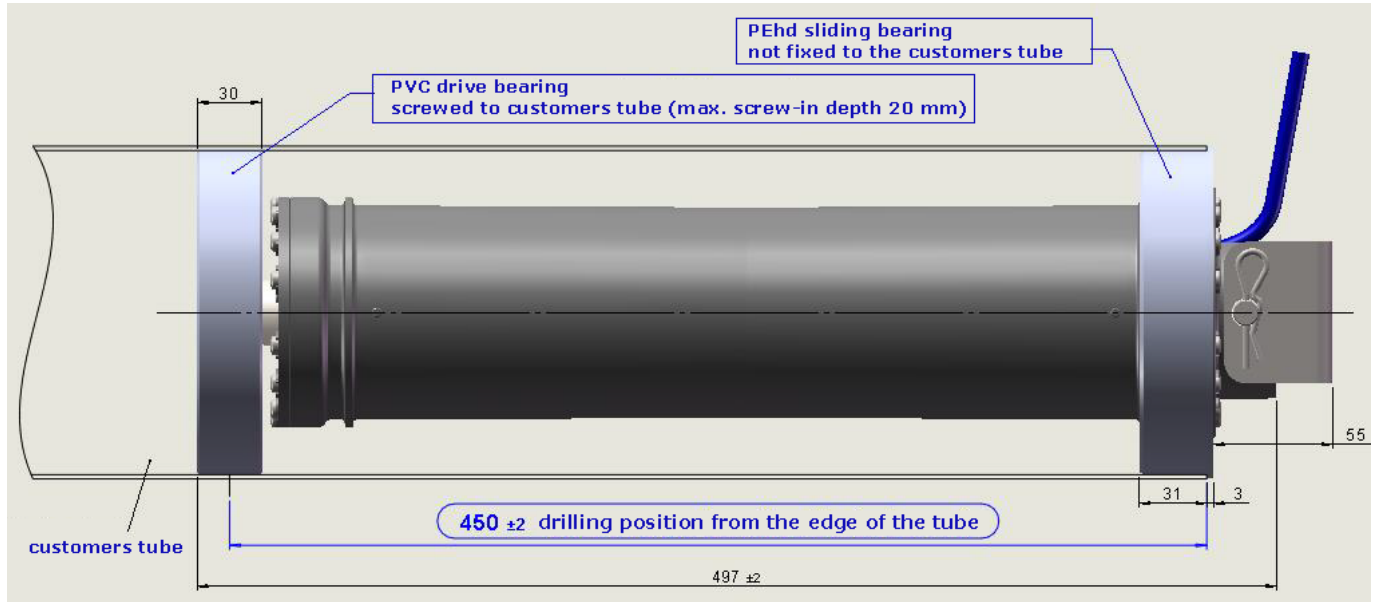
The bending can distort the end-plate depending on the latter's rigidity.

- Either the customer's validation of the end-plate's holding with an immersed Coveo® with shaft is sufficient, and in this case the shaft can have the same interfaces of attachment to the end-plate, which avoids any modification of the end-plate,
- Or, in the case of a too flexible end-plate, we can offer attachment using a coupling on the end-plate, which has the advantage of reducing the end-plate - force distance and therefore, the bending time.

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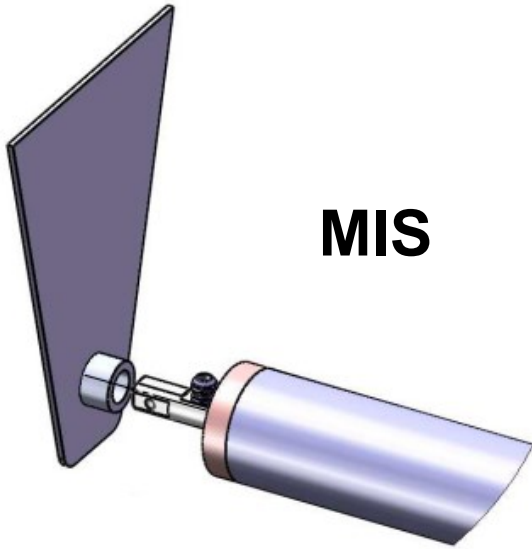
In all cases it will be necessary to:

- ① **Validate the choice of either a similar shaft or a coupling,**
- ② **Drill new holes in the customer's tube because the distance between the motor's front bearing and rear bearing is not the same as on the MIS (drilling pattern to be changed).**

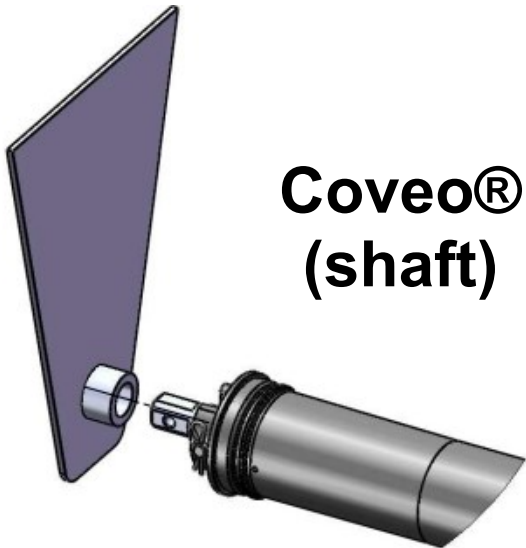


Adapting the Coveo®, whether with a similar shaft or a coupling, involves moving the cover's position (see the diagram below, on the right, with varying value, either more or less, depending on the customer's assembly) and requires:

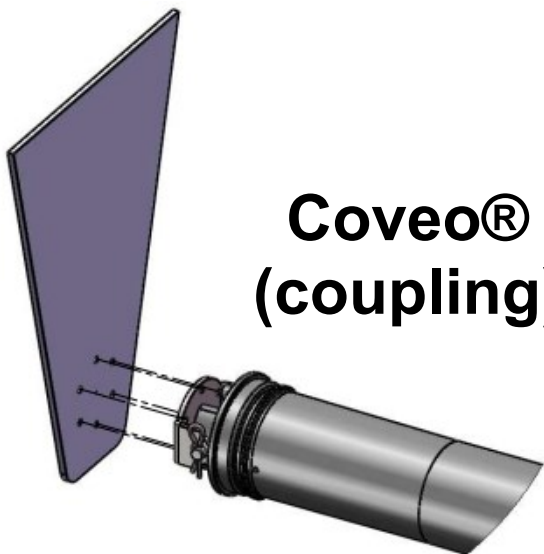
- ③ **Checking if, on the other side of the pool, it is necessary to sink or remove the telescopic bearing shaft,**
- ④ **Checking if it is necessary to move the straps on the shaft (so that the apron is still centrally positioned in relation to the pool walls).**



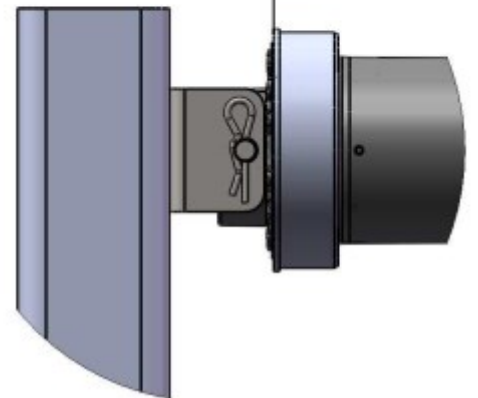
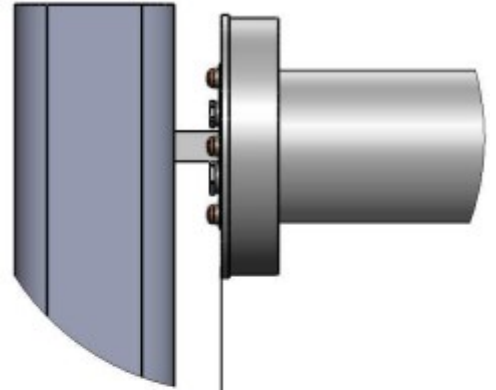
MIS



**Coveo®
(shaft)**

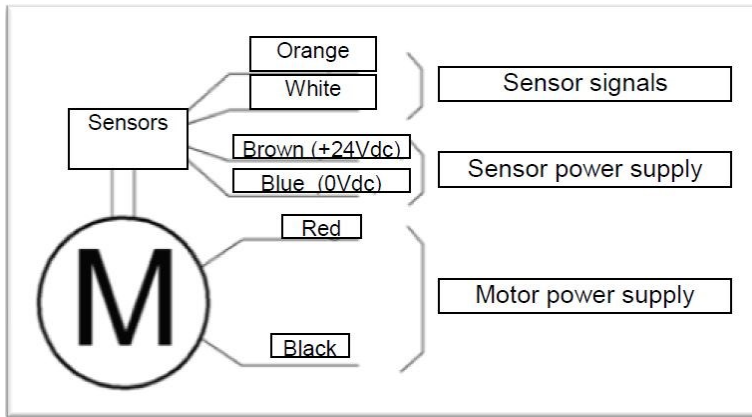


**Coveo®
(coupling)**



3.3 Electrical wiring

- Wiring the electrical motor to the control box remains the same except for the sensor wires in the case of a limit switched motor:
 - o Unlike the MIS, the Coveo® immersed motors have 2 sensors, therefore one extra wire,
 - o You only have to connect one of the 2 wires: either the orange one or the white one.



⇒ See the Coveo® notice for assembly and wiring instructions.

3.4 Summary of actions to be carried out to replace an immersed motor.

- ① **Validate the choice of either a similar shaft or a coupling,**
- ② **Drill new holes in the customer's tube because the distance between the motor's front bearing and rear bearing is not the same as on the MIS (drilling pattern to be changed),**
- ③ **Check if, on the other side of the pool, it is necessary to sink or remove the telescopic bearing shaft,**
- ④ **Check if it is necessary to move the straps on the shaft (so that the apron is still centrally positioned in relation to the pool walls),**
- ⑤ **Only connect one wire sensor (either the orange one or the white one).**