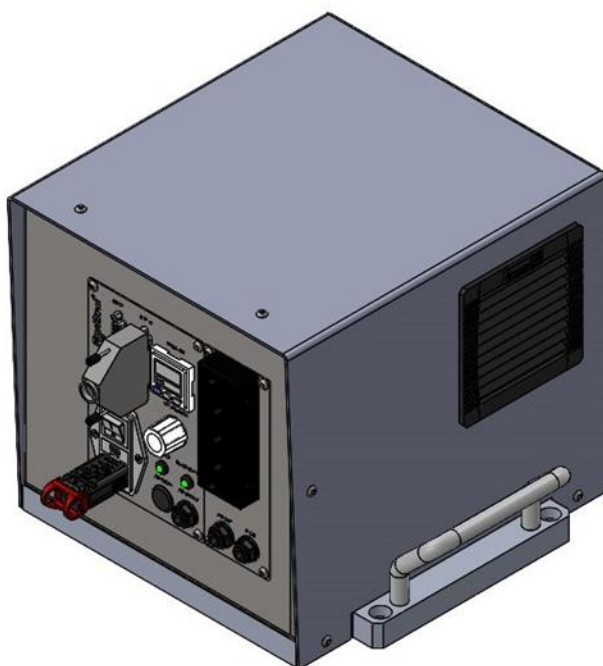


INSTRUCTIONS FOR USE AND WARNINGS



ENGLISH TRANSLATION OF THE ORIGINAL INSTRUCTIONS



FlexiBowl® remote control box

Revision 1 – Edition 08/2021



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1 Preliminary information

1.1 Purpose

The external control box for FlexiBowl® can be used in dirty environments or where there is conductive dust that could cause malfunctions or failures of the electronic components contained inside the supply unit.

1.2 Components

The table below contains the main components found inside FlexiBowl® and, on the other hand, the components that have been inserted in the box:

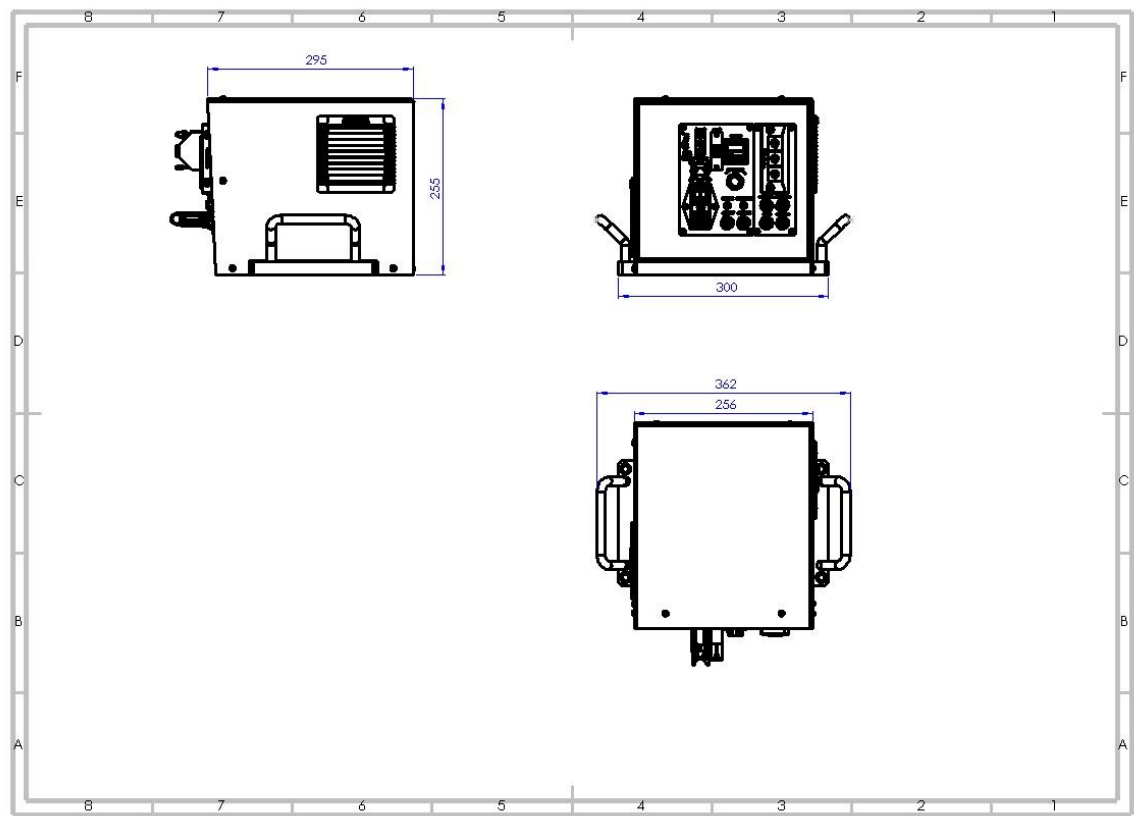
Internal Components of FlexiBowl®	External Components of FlexiBowl®
Motor and encoder	24Vdc supply unit
Backlight (if applicable)	Driver
Mechanical/pneumatic unit	Interface board
Quick emptying sliding block (if applicable)	Compressed air filter
Emptying sliding block position sensors (if applicable)	Network power supply filter
Flip Solenoid	-
Blow Solenoid (if applicable)	-
Quick emptying sliding block solenoid (if applicable)	-

**IMPORTANT!**

For further information on the operation of the individual parts, refer to the attached FlexiBowl® User Manual.

2 Layout

2.1 Dimensions



2.2 Net weight

Weight	Box
Net weight	15 Kg

3 Transport and installation



IMPORTANT!

Lifting and handling operations must only be carried out by specialised and trained staff who are qualified for these activities.

3.1 Packaging

The machine is shipped by **ARS s.r.l.** from the production factory to the Customer's premises.

Based on the distance it needs to be transported, on the specific requests from the Customer, and on how long the load will remain in the packaging, the machine will be shipped in the following ways:

- normal protective packaging for short and medium distances;
- special protective packaging for long distances.

It must be shipped using closed or curtain-sided vehicles depending on the type of load.

When the machine is received, it is mandatory for the customer to check that there is no damage caused by the mode of transport or by the personnel in charge of the specific operations.

- **If any damage is discovered**, leave the packaging in question as it was found and immediately ask the competent shipping company to assess the damage; afterwards, send a damage report to inform the transport company's insurance company and the point of sale of the discovered damage.

3.1.1 Table of units and weights - with packaging

Follow the table below for the weights and dimensions including packaging.

Specification	External control box for FlexiBowl
Gross weight (with packaging)	18 kg
Cardboard box dimensions (mm)	500 x 500 x 500

3.1.2 Removing the packaging

Proceed as follows to **remove the packaging**:

Step	Action
1	Put the machine in its intended place.
2	Grip the box by the handles, to lift it and remove it from the package.

To handle the machine and/or its parts, see the "**Transport and handling**" section.

3.1.3 Disposing of the packaging

The packaging is an integral part of the supply and is not collected, hence it must be disposed of by the buyer.

Any disposal or destruction must be carried out in compliance with the regulations in force in the user's country, taking into account the nature of the materials:

- cardboard for the package;
- plastic sheet to protect the machine and adhesive tape to secure the plastic;
- moisture absorber sachets;
- etc

3.2 Transport and handling

ARS s.r.l. uses packaging and fasteners according to the mode of transport to guarantee integrity and conservation during transport.

When the machine is received, make sure no part was damaged during transport and/or handling.

If damage is found, it is mandatory to immediately inform the Manufacturer.



CAUTION!

ARS S.r.l. shall not be held liable for damage, to property or to people, due to accidents caused by failure to follow the instructions in this manual.

3.3 Installation



IMPORTANT!

The work surface must be sufficiently lit. If there are shady or uneven zones in the workplace, it is up to the user to provide suitable lighting devices. If these requirements are not met, the manufacturer disclaims all liability.

3.3.1 Box position

Step	Action
1	Place the box on a stable surface at a maximum distance of 5 metres from FlexiBowl®.
2	Fix the box through the holes. Note: the box has 4 holes for M8 screws on the pallet, for fixing.
3	Connect as necessary (see the “ Connections ” section).



CAUTION!

Make sure the machine support surface is flat and horizontal and can withstand its weight.



CAUTION!

Make sure that the supporting surface can release the heat generated by the operation of the device.



CAUTION!

Leave a space of approximately 100mm for the power supply connectors.



IMPORTANT!

For further information on installation specifications, refer to the attached FlexiBowl® User Manual.

3.4 Connections

To start the machine, it must be properly connected to the local networks:

- **electrical connection** (including connection to the earthing system),
- **compressed air connection**, in compliance with the regulations in force in the country of installation.

It might also be necessary to connect the machine to the **LAN**.

It is the user's responsibility to guarantee the requested connection characteristics.



CAUTION!

The required connections must be set up by qualified and authorised personnel.



IMPORTANT!

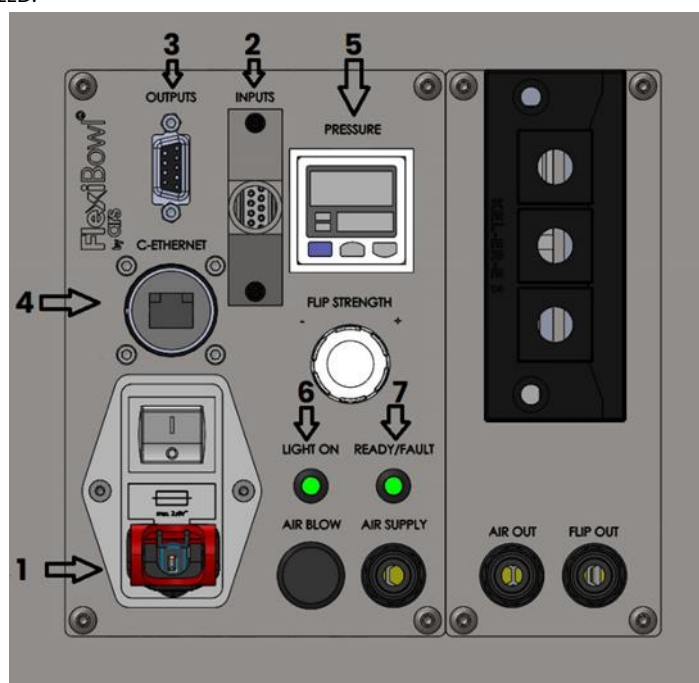
For further information on starting up the box, refer to the attached FlexiBowl® User Manual.

4 Electrical connections

4.1 Standard electrical and user interface connections

Standard electrical and user interface connections on the box are identical to those on the FlexiBowl® control panel. Below are:

1. 110/220 Vac power supply connection with relative switch;
2. Inputs connector;
3. Outputs connector;
4. Connecting the user interface (Ethernet);
5. Pressure indicator;
6. Backlight operating LED (if applicable);
7. "READY/FAULT" status LED.



CAUTION!

The required connections must be set up by qualified and authorised personnel.



CAUTION!

Before doing any electrical connections, it is important to ensure that the machine is turned off.



IMPORTANT!

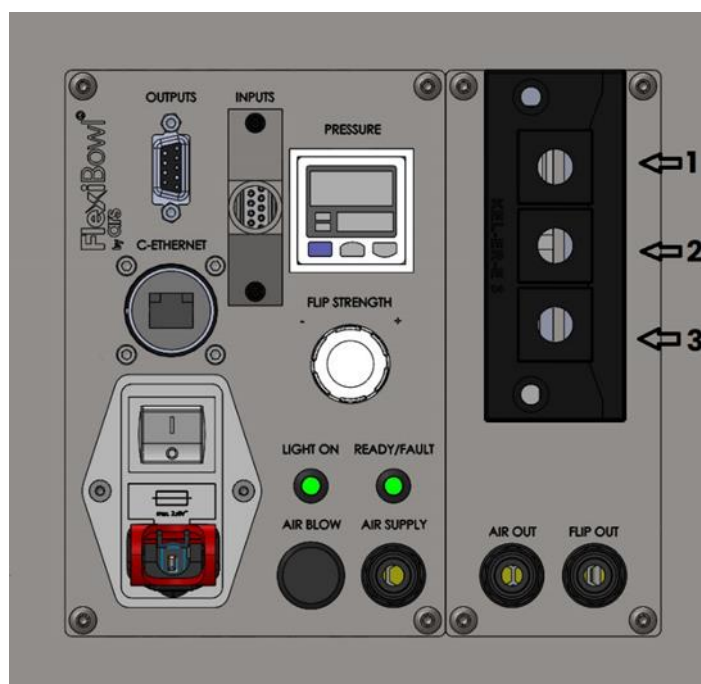
Further information on the control panel connections is in the attached FlexiBowl® User Manual.

4.2 Additional electrical connections on the box side

The additional electrical connections have the purpose of connecting the components inside the box with the components inside the FlexiBowl®. They are normally not visible, as all connections are set up inside the supply unit. Below are:

1. Motor electrical power supply cables: this provides the electrical power supply to the motor;
2. Encoder connection cable: this connects and provides the data (detected by the encoder) to the driver;
3. Quick emptying status REED sensor cables (if applicable) and backlight power supply cables (if applicable): the former provide information on the status of the quick emptying sliding block (sliding block open/sliding block closed); the latter provide +24 Vdc power supply to the backlighting (if applicable).

All cables are included in the supply.



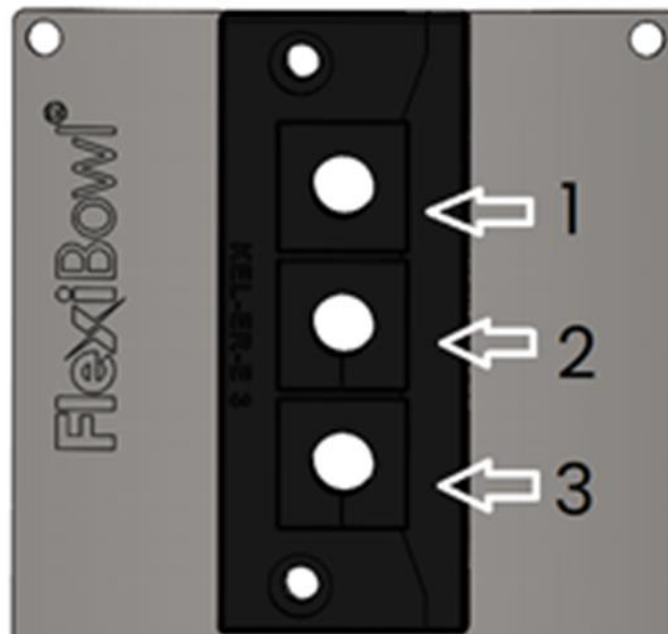
4.3 Electrical connections on FlexiBowl side

These have the purpose of connecting the components inside the box with the components inside the FlexiBowl®. Below are:

1. Motor electrical power supply cables: this provides the electrical power supply to the motor;
2. Encoder connection cable: this connects and provides the data (detected by the encoder) to the driver;
3. Quick emptying status REED sensor cables (if applicable) and backlight power supply cables (if applicable): the former provide information on the status of the quick emptying sliding block (sliding block open/sliding block closed); the latter provide +24 Vdc power supply to the backlighting (if applicable).

The arrangement of the cables leading out of the FlexiBowl panel cable gland support is identical to that of the box-side panel. The cables will only be connected to the FlexiBowl part; the connection to the box is set up by the end customer.

All cables are included in the supply.



4.4 Box-FlexiBowl electrical connection procedure

4.4.1 Box casing removal

To remove the box casing, observe the following procedure:

1. Unscrew the 6 fixing screws.



2. Remove the casing, pulling it upwards.

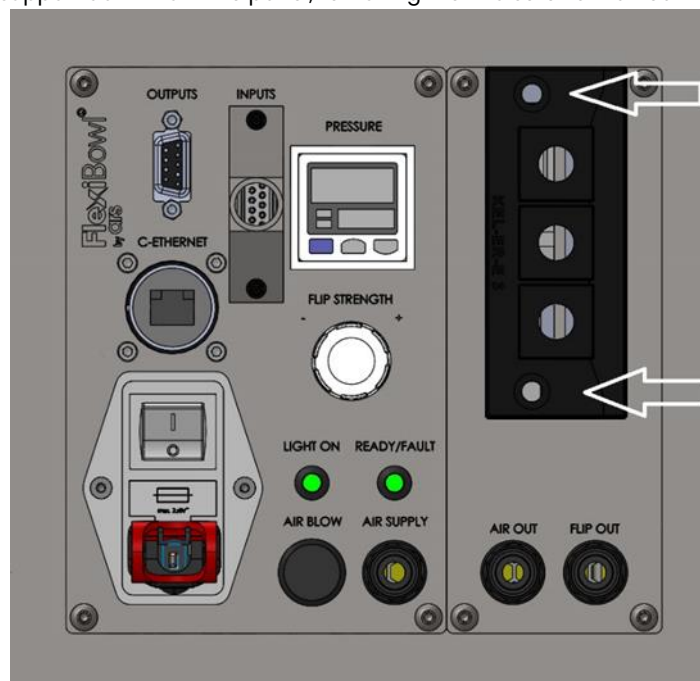


3. For the next fixing procedure, position the casing back in place, inserting it from above and proceeding to tighten the screws.

4.4.2 Cable gland support disassembly

To take down the box-side cable gland, observe the following procedure:

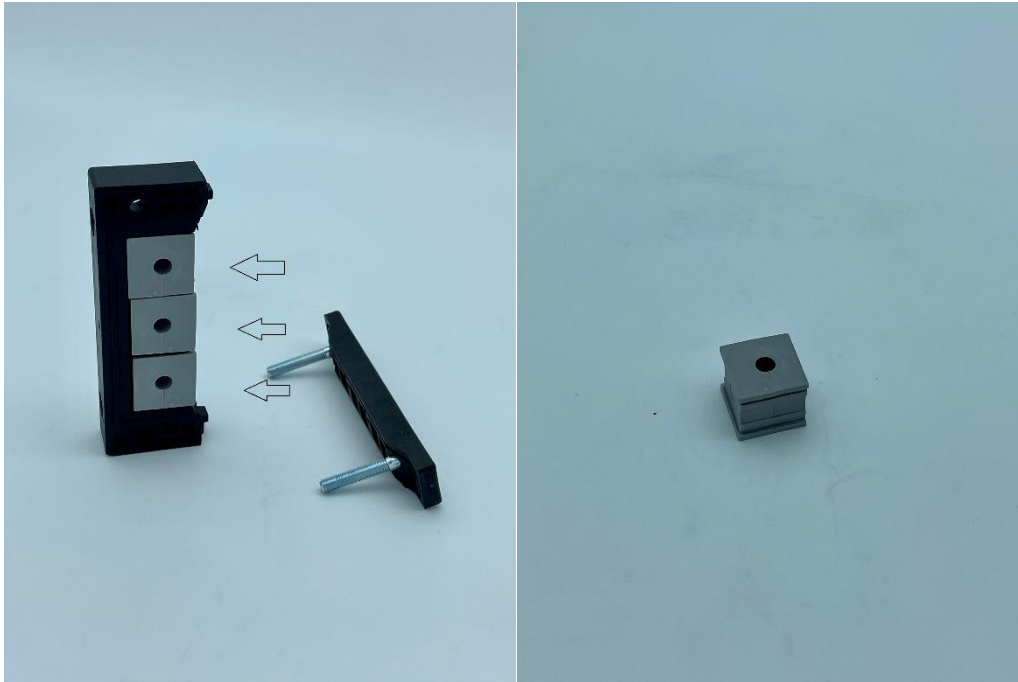
1. Take the cable gland support down from the panel, removing the two screws marked in the figure.



2. Remove the fixing screws and take out the plastic edge.



3. Remove the cable glands from their support and insert the relative cables in the order listed in the previous paragraph.



4. For the next re-assembly operation, re-insert the cable glands into the support and once the edge is re-inserted, proceed with tightening the screws.

4.4.3 Electrical cable connection

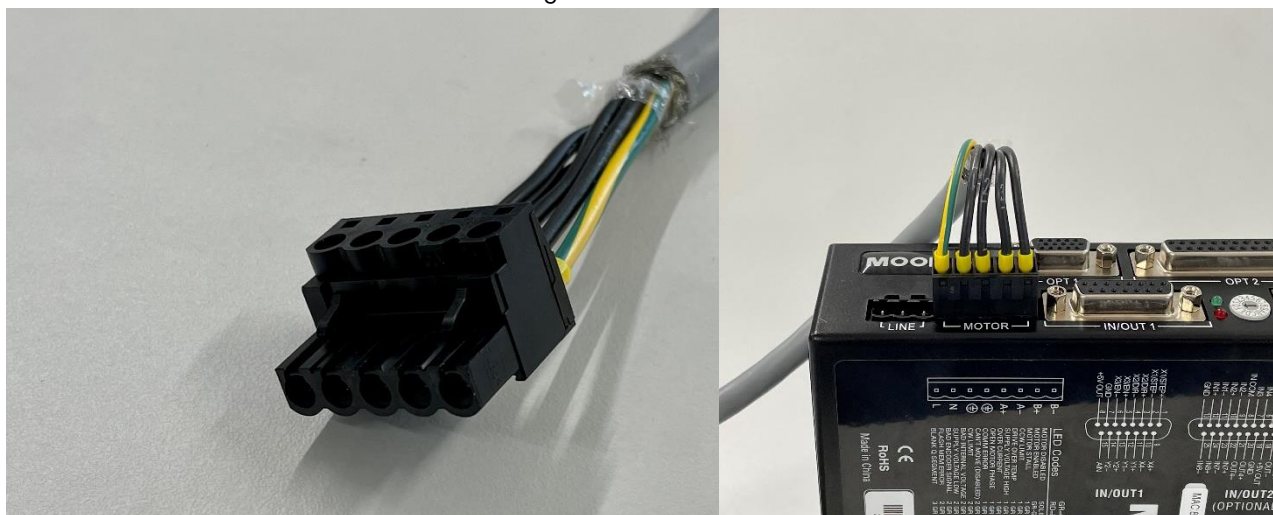


CAUTION!

Before doing any electrical connections, it is important to ensure that the machine is turned off.

For the connection of the motor, encoder, backlight (if applicable) cables and emptying sliding block sensor (if applicable), perform the following procedure:

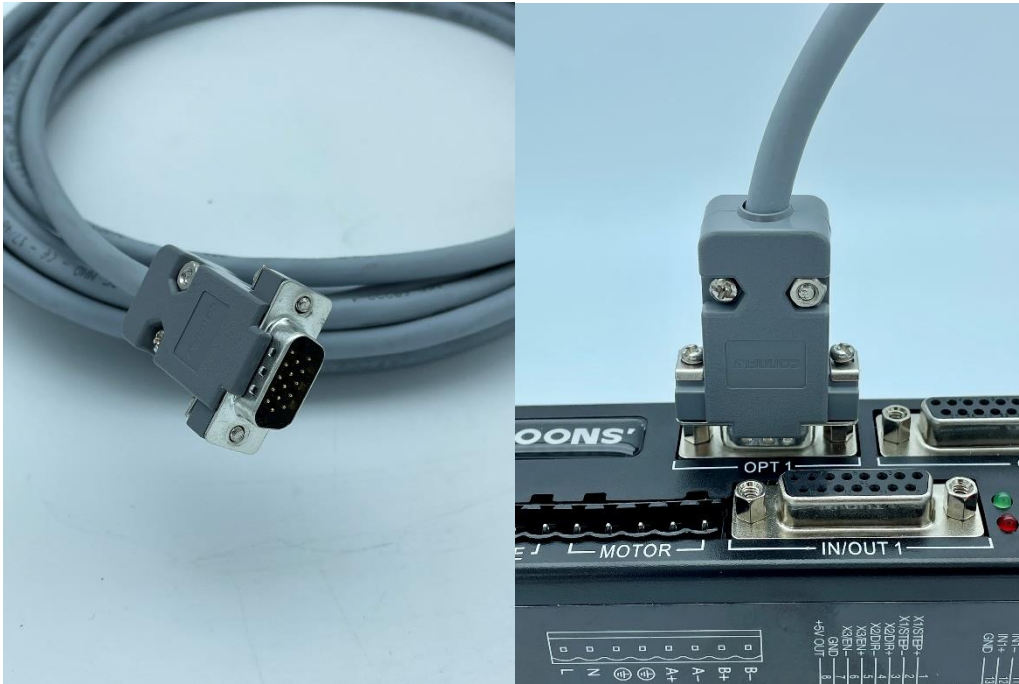
1. Insert the motor cable into the relative cable gland (refer to the “**Cable gland support disassembly**” paragraph) and connect the relative connector to the matching slot on the driver.



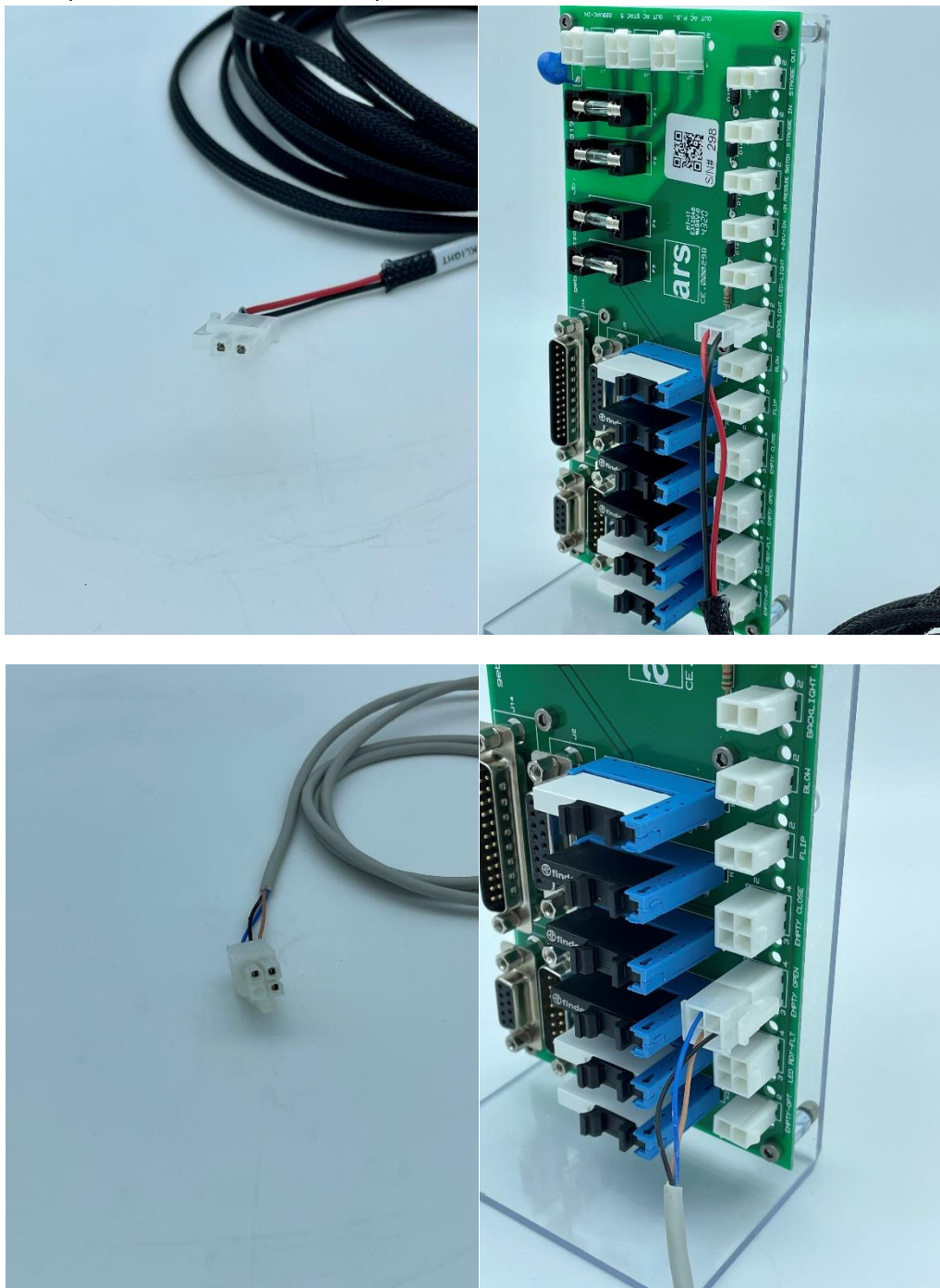
PINOUT MOTOR CONNECTOR

CABLE N.	DRIVER PIN MATCHING
1	A+
2	A-
3	B+
4	B-

2. Insert the encoder cable into the relative cable gland (refer to the “**Cable gland support disassembly**” paragraph) and connect the relative connector to the matching slot on the driver.



3. Insert the backlight (if applicable) and emptying sliding block sensor (if applicable) cables on the relative cable gland (refer to the "**Cable gland support disassembly**" paragraph) and connect the relative connectors to the matching slots on the board ("BACKLIGHT" and "EMPTY OPEN").



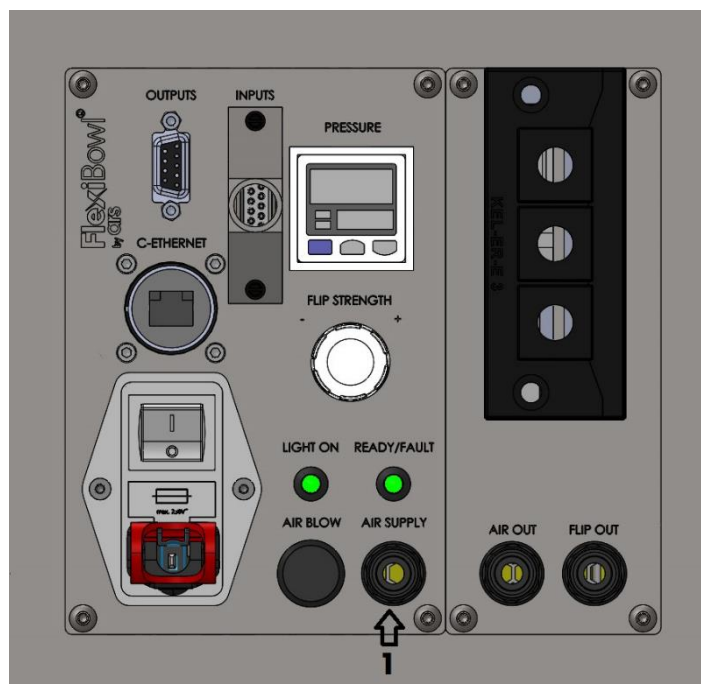
4. Secure the cable gland support to the box-side panel and close the casing (see previous paragraphs).

5 Pneumatic connections

5.1 Standard pneumatic connections

The standard pneumatic connections on the box are similar to those on the FlexiBowl® control panel. The following are listed:

1. AIR SUPPLY" inlet.



CAUTION!

Never exceed 6 bar pressure in the machine's pneumatic system.



CAUTION!

Ensure that there is a shut-off valve between the local air supply and the FlexiBowl®.



IMPORTANT!

Further information about the control panel connections can be found in the attached FlexiBowl® User's Manual.

5.2 Additional pneumatic connections on box side

The purpose of the additional pneumatic connections is to connect the components inside the box with the components inside the FlexiBowl®. Normally they are not visible as all connections are made inside the power supply unit. The following are listed:

1. "AIR OUT" outlet: supplies compressed air to the FlexiBowl® ("AIR IN") for supplying the blow and/or emptying solenoid valves (if installed);
2. FLIP OUT" outlet: supplies compressed air to the FlexiBowl® ("FLIP IN") for supplying the flip solenoid valve.

Air hoses are not included in the delivery.



5.3 Pneumatic connections on FlexiBowl side

Their purpose is to connect the components inside the box with the components inside the FlexiBowl®. The following are listed:

1. "AIR IN" inlet: receives compressed air from the box ("AIR OUT") for supplying the blow and/or emptying solenoid valves (if installed) inside the FlexiBowl;
2. "FLIP IN" inlet: receives compressed air from the box ("FLIP OUT") to supply the flip solenoid valve;
3. "AIR BLOW" outlet: has the same function as a standard FlexiBowl®.

Air hoses are not included in the delivery.

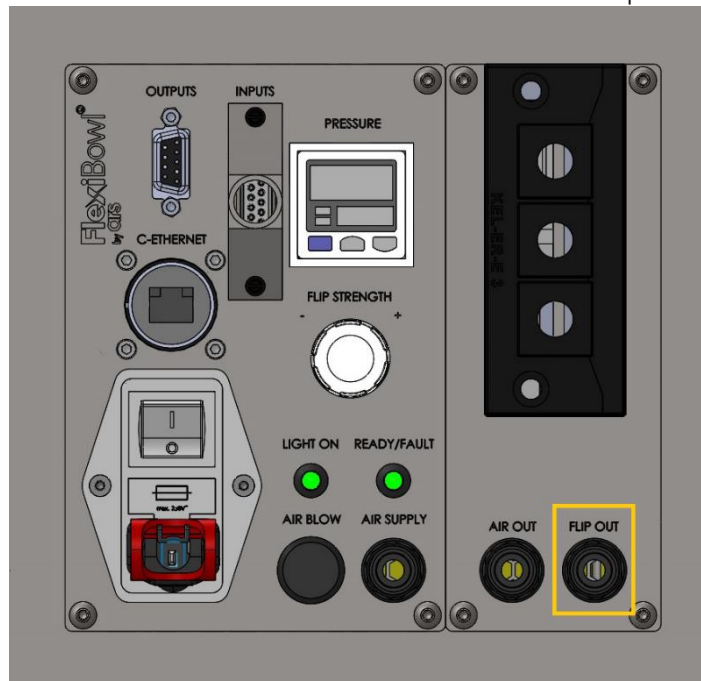


5.4 Box-FlexiBowl pneumatic connection procedure

5.4.1 Flip pneumatic connection

Observe the following procedure for the pneumatic connection of the flip slide:

1. Prepare a Ø6 mm air hose.
2. Connect one end of the first hose to the "FLIP OUT" outlet of the additional control panel of the box:



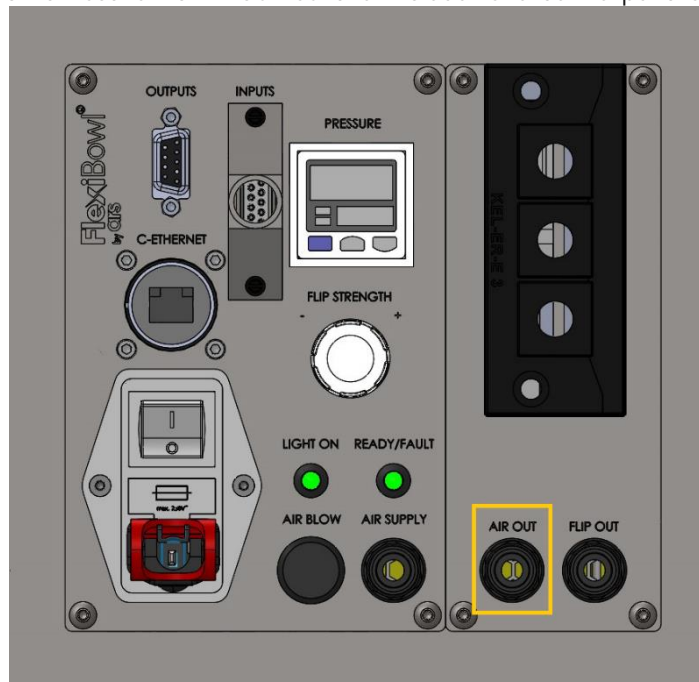
3. Connect the other end of the first hose to the "FLIP IN" inlet of the FlexiBowl® panel:



5.4.2 Blow/emptying pneumatic connection options (if installed)

Observe the following procedure for pneumatic connection of the quick emptying slide:

1. Prepare a Ø6 mm air hose.
2. Connect one end of the first hose to the "AIR OUT" outlet of the additional control panel of the box:



3. Connect the other end of the first hose to the "AIR IN" inlet of the FlexiBowl® panel:



IMPORTANT!

Refer to the FlexiBowl® User Manual for programming and operation, maintenance, decommissioning and disposal.



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