1. Installation Manual

COMPACT DOSING ROBOT CDR-25

CE

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1. SAFETY INSTRUCTIONS

1.1 Intended use and reasonably foreseeable misuse

The In-Fluid Compact Dosing Robot is intended to be used as a dosing pump for filtered liquid substances, such as chemicals, medicines and other additives. The Compact Dosing Robot is intended to be used as a water treatment device in the agricultural, horticultural, wastewater treatment and similar sectors.

The product is not intended to be used in explosive environments. The product shall be used with original accessories and original components only. All use other than as described in this manual is seen as unintended use.

1.2 How to use the in-fluid dosing robot safely

Read and understand this manual before using the In-Fluid Compact Dosing Robot. The Compact Dosing Robot shall only be used by persons who have fully read and understood the contents of this manual. Ensure that each person who uses the product has read this manual and follows the instructions. Failure to do so can result in serious injury. Keep all instructions for future reference and pass them on to subsequent users of the product. The manufacturer is not liable for cases of material damage or personal injury caused by incorrect handling or non-compliance with the instructions. In such cases, the warranty will be voided.

- All personnel involved in the operation, installation, inspection and maintenance of the product must be qualified to carry out the work involved. If the personnel in question do not already possess the necessary knowledge and skill, appropriate training and instruction must be provided. All local regulations must be followed
- Be vigilant at all times, and always be careful what you are doing. Do not use electrical equipment if you are lacking in concentration or awareness, or are under the influence of drugs, alcohol or medication. Even a moment of inattentiveness can lead to serious accidents and injuries when using electrical equipment.

- Use this product only for its intended use as described in this manual.
- Use the product within the specified performance limits as described in the section TECHNICAL SPECIFICATIONS.
- Always refer to the SDS of the liquids that you want to use with the product. Hazardous substances can result in serious injury or damage to the product. When the product is handling hazardous liquids care must be taken to avoid exposure to the liquid by appropriate siting of the pump, limiting personnel access and by operator training. If the liquid is flammable and/or explosive, strict safety procedures must be applied
- Be careful when mixing substances. This may change their chemical properties and can result in serious injury, or damage to the product.
- Wear protective clothing, safety goggles and hand gloves when handling pump parts during operation mode. Be aware of any fumes from hazardous substances when opening the pump.
- Check the product for any damage before use. If there is any visible damage, a strong odour, or excessive overheating of components, stop using the product. Avoid running the pump dry. This may damage certain parts. Make sure that any inlet valves are fully open when the pump is running. Running the pump at zero flow or below the recommended minimum flow continuously will cause damage to the pump itself and to the teflon ring around the piston.
- Never carry out maintenance work when the product is connected to a power source. If your product will not be used for an extended period of time, store the product in a cool, dry place away from direct sunlight.
- Do not attempt to open, modify or repair the product other than as described in these instructions. Do not drop, puncture, break or expose the product to high pressure. Dropping the product may break some of the silica glass components.
- Alterations to the product and technical modifications are not permitted.
- Drain the product and isolate pipework before dismantling the product Appropriate safety precautions should be taken when the liquids used are hazardous.

2. INSTALLING THE PRODUCT

2.1 How to install the product

For accurate measurements, it is important that the In-Fluid Compact Dosing Robot has 30cm (12") of straight ø 32mm (1") piping before and after the hydro block. If your water pipe has a different diameter, you must assemble a ø 32mm (1") water pipe and connect it with transition couplings to your existing piping.

WARNING! Always mount the product to the wall with the wall bracket to reduce stress/ strain on the water pipe and couplers. If this is not possible make sure the water pipe is supported at a distance of 10-15 cm from both sides of the product

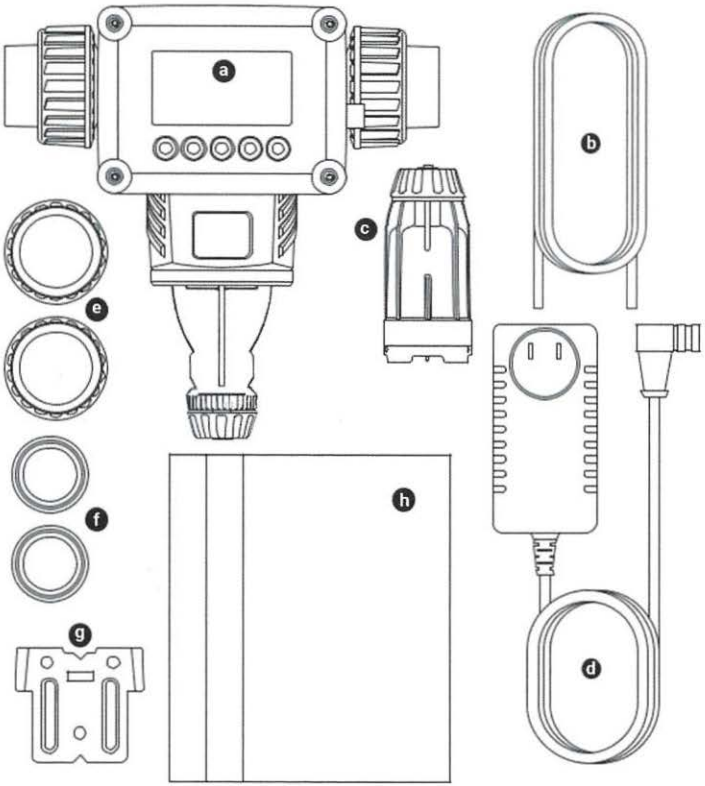
Prerequisites:

- ø 32mm (1") water pipe, if necessary
- ø 32mm (1") transition couplings, if necessary
- Adhesive compound (for example Oatey PVC cement or Griffon UNI-100XT)

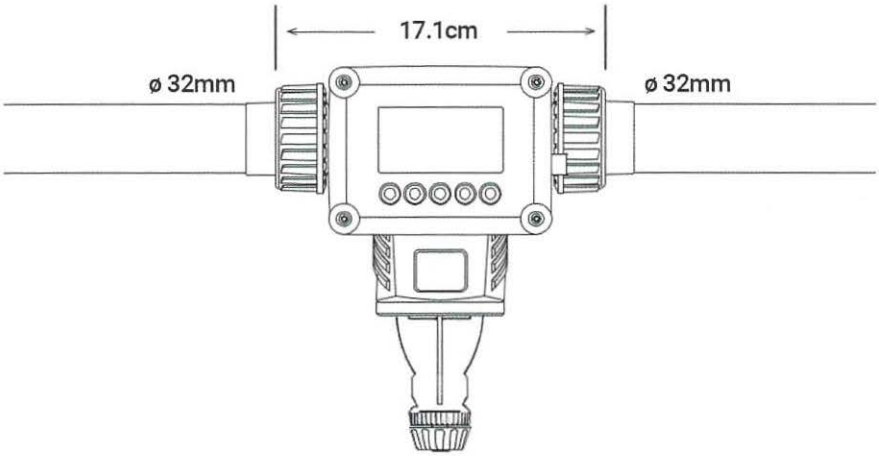
To install the product:

1. Unpack the product. Dispose of the packaging material in a proper way. See the DISPOSAL section.

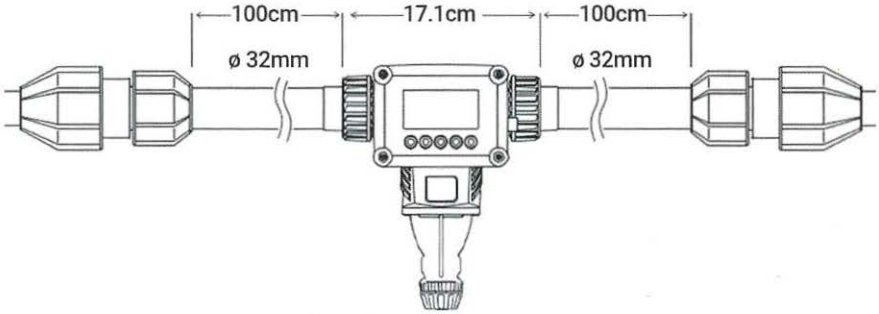
2. Make sure that the packaging contains the following contents
   a. Dosing pump
   b. Hose (300cm)
   c. Foot valve
   d. Power supply
   e. 2x 1.5" coupler
   f. 2x US IMPERIAL glue sockets
   g. Wall bracket
   h. User manual



3. Close the water supply
4. Choose one of the following:
   a. If your existing water pipe has a diameter of 32mm (1"), cut a 20cm (8") piece of water pipe from your existing water pipe

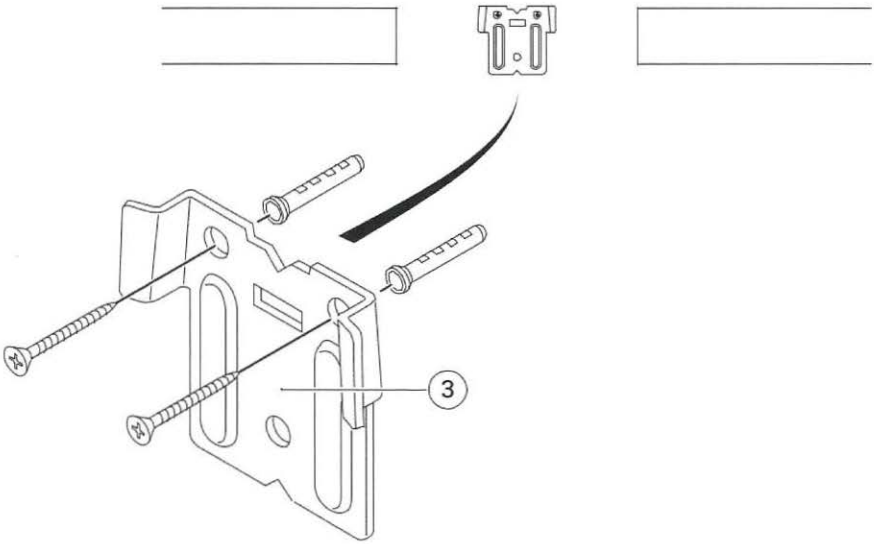


   b. If your existing water pipe does not have a diameter of 32mm (1"), cut a 220cm (87") piece of water pipe from your existing water pipe. Use ø 32mm (1") water pipe and ø 32mm (1") transition couplings to create the configuration shown below

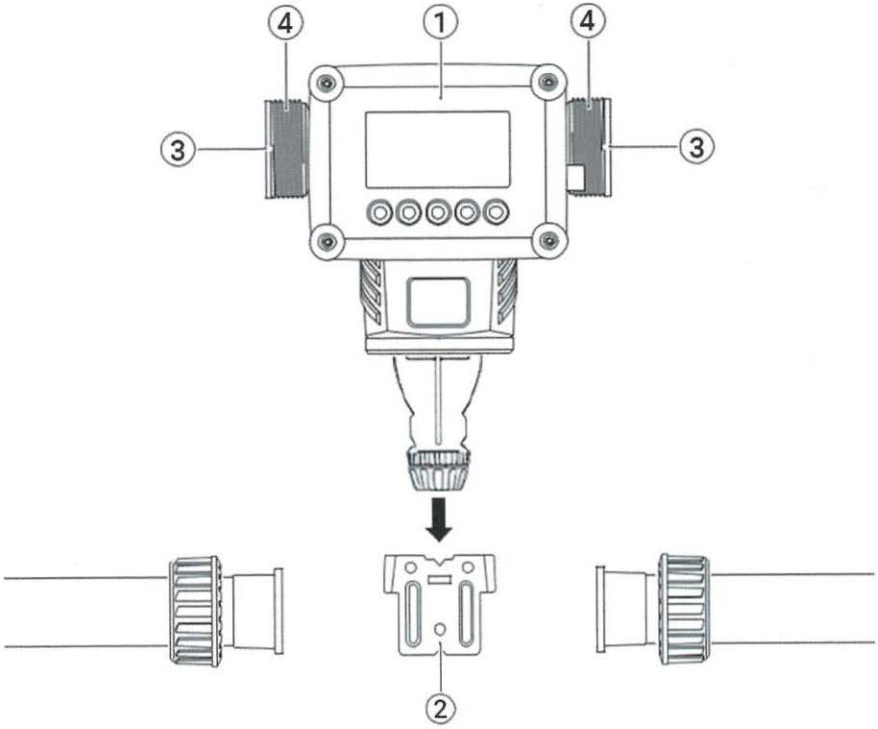


5. Place the **couplers 1** on both sides of the piping
6. Lightly sand the inner surface of the **glue sockets 2** and the outer surface of the piping ends. Clean with a PVC cleaner for a proper bond
7. Bond the **glue sockets 2** to both ends of the piping with the adhesive compound. Let the bonding material cure

8. Determine the correct position for the **wall bracket 3**. Mount the **wall bracket 3** to the wall. **WARNING!** Always mount the product to the wall with the wall bracket to reduce stress/strain on the water pipe and couplers. If this is not possible make sure the water pipe is supported at a distance of 10-15 cm from both sides of the product

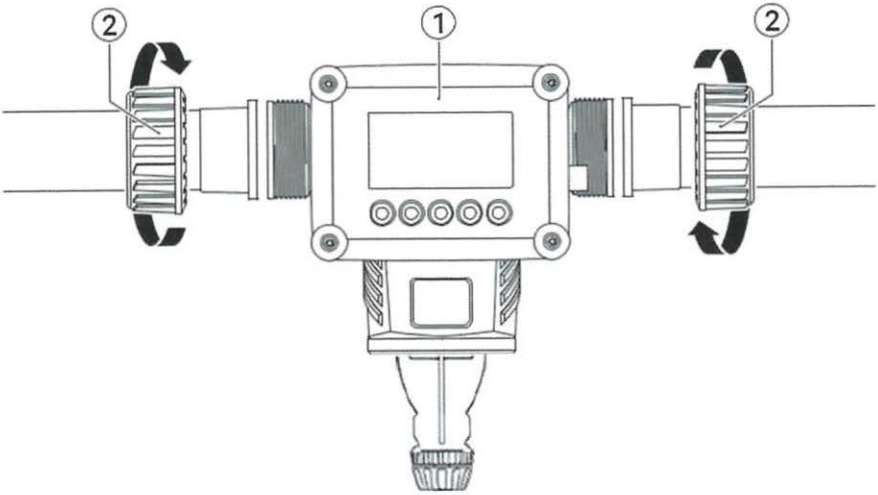


9. Attach the **dosing pump 1** to the **wall bracket 2**. Make sure that the **o-rings 3** are attached to the **hydro block 4**. **NOTICE** To remove the dosing pump from the wall bracket, loosen couplers first, then lift the pump up and out.

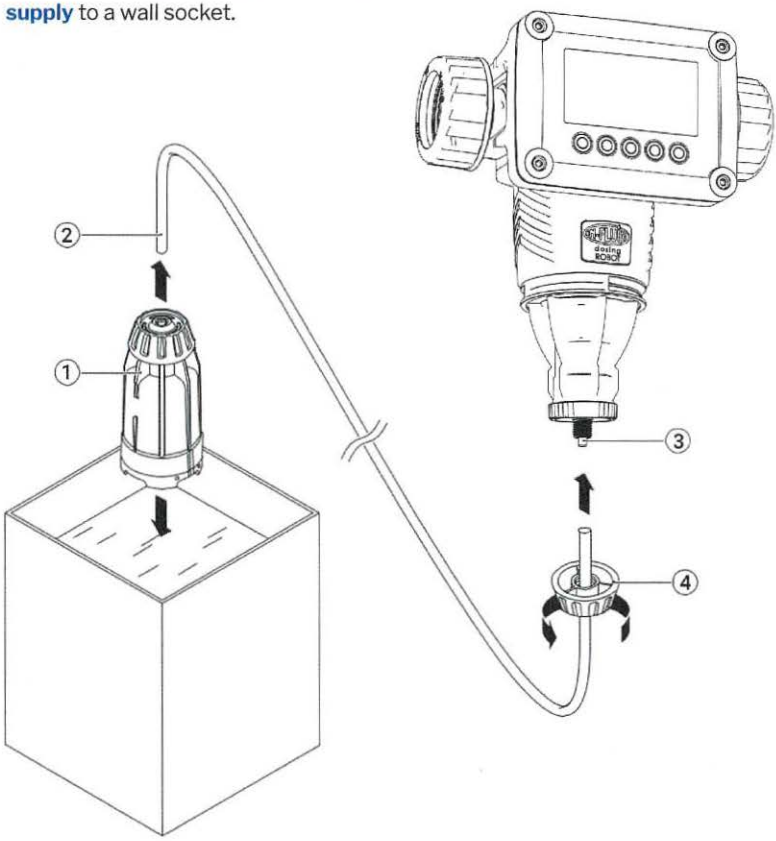


10. Attach the **dosing pump 1** to the piping by turning the **couplers 2**

WARNING! Do not use tools to tighten any pieces on the pump, all parts should only be hand tight. Any damages caused to threads or parts by using tools are seen as misuse. (Refer to section 1.2)



11. Attach the **foot valve 1** to the **hose 2**
12. Attach the other side of the **hose 2** to the **dosing pump 3**
    a. Loosen and remove the **hose gland 4**
    b. Put the **hose 2** through the **hose gland 4**
    c. Attach the **hose 2** to the **dosing pump 3**
    d. Turn the **hose gland 4** on the threaded end of the **dosing pump 3**
13. Put the **hose 2** with **foot valve 1** in the container with the filtered liquid substance
14. Open the water supply.
15. Connect the **power supply** to the **input port**. Connect the other end of the **power supply** to a wall socket.



3. CLEANING AND MAINTENANCE

3.1 How to clean the product

1. Disconnect the power supply from the input port.
2. Use a damp cloth to wipe the entire surface of the product when dirty. Make sure the product is completely dry.

   NOTICE Do not use wipes or chemicals as these could damage the surface.

3.2 Maintenance Inspection

Depending on frequency of usage, regular inspections should be made to ensure there is no fatigue or damage to internal components. We recommend disassembling the pump every 3-6 months and inspect the o-rings between components, any/all visible seals, and watch for potential mineral build-up from water.

Spare parts can be ordered at www.in-fluid.com

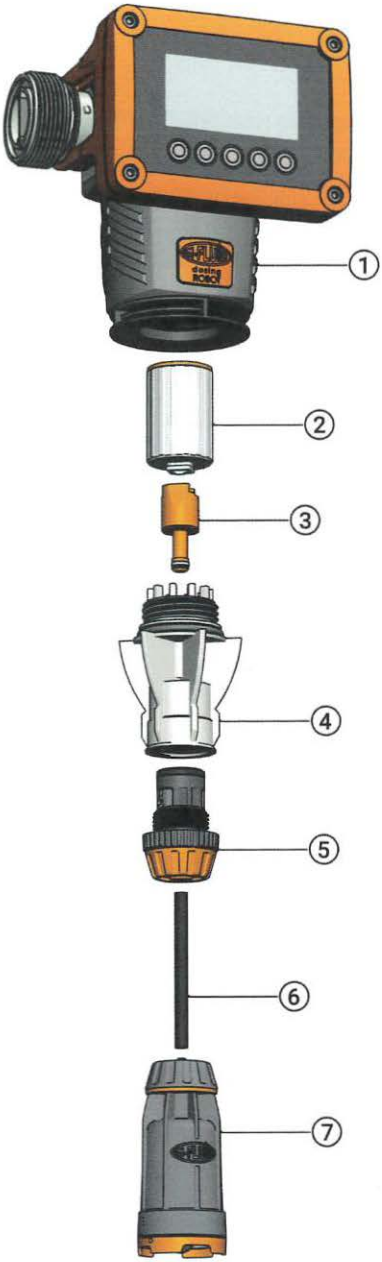
3.3 Disassembly guide for customer serviceable parts

WARNING! According to section 1.2: The manufacturer is not liable for cases of material damage or personal injury caused by incorrect handling or non-compliance with the instructions. In such cases, the warranty will be voided.

The CDR-25 can be disassembled into 7 groups of pieces for maintenance:

1. Hydro Block
2. Armature
3. Piston
4. Pump cylinder
5. Non-return valve (NRV) assembly
6. Hose
7. Foot valve

Instructional videos for pump maintenance, and spare/replacement parts can be found at www.in-fluid.com


1
2
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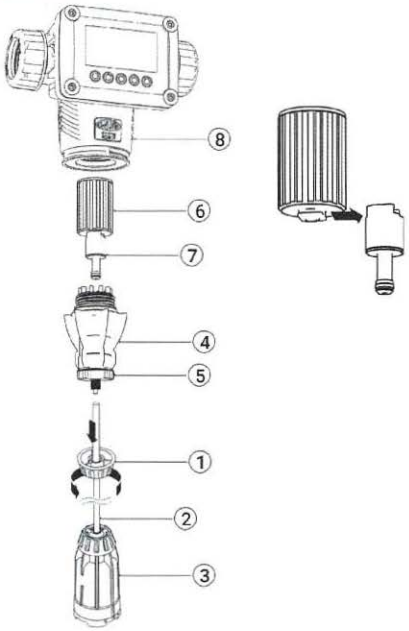
3.4 How to replace the piston

After approximately 1 million pump injections, the piston must be replaced. This will be shown on the display. Spare parts can be ordered at www.in-fluid.com

To replace the piston:

1. Loosen and remove the **hose gland 1**.
2. Remove the **hose 2** and **foot valve 3**.
3. Loosen and remove the **pump cylinder 4** and **NRV assembly 5**.
4. Pull out the **armature assembly 6**. Replace the **piston 7**.
5. Put the **armature assembly 6** back into **hydro block 8**.
6. Put the **pump cylinder 4** back (hand tight only).
7. Attach the **hose 2** with the **foot valve 3** to the **pump cylinder 4**.
8. Turn the **hose gland 1** on the threaded end of the **pump cylinder 4**.
9. Tighten the **hose gland 1**.



4. DISPOSAL

4.1 Disposal of electronic equipment

The symbol on the product or packaging indicates that this device must not be treated as unsorted municipal waste, but must be collected separately! Dispose of the product via a collection point for the recycling of waste electrical and electronic equipment, if you live within the EU and in other European countries that operate separate collection systems for waste electrical and electronic equipment. By disposing of the product in the proper manner, you help to avoid possible hazards for the environment and public health that could otherwise be caused by improper treatment of waste equipment. The recycling of materials contributes to the conservation of natural resources. Therefore, do not dispose of your old electrical and electronic equipment with the unsorted municipal waste

4.2 Disposal of packaging waste

The packaging is made of different materials, which may be disposed of through your local facilities. By disposing of the packaging in the proper manner, you help to avoid possible hazards for the environment and public health.

5. TECHNICAL SPECIFICATIONS

In-Fluid Compact Dosing Robot		Value
Model name		CDR-25
Technical life span[1]		Approximately 5 years
Relative humidity		10% ~ 95%
Frequency	Hz	50/60
Power supply output voltage	V=	24
Power supply input voltage	V~	100 - 240
Power supply input current	A	1.8
Power supply output current	A	2.5
Power Sockets		TYPE F: EUROPE, RUSSIA TYPE I: AUS, NZL, CHN, ARG TYPE G: GBR, IRL, MLT, MAS, SIN TYPE A: USA, MEX, CAN, JAP
IP Rating		IP 65
Storage temperature	°C/°F	+5°- +50° / +41°- +122°
Operating temperature	°C/°F	+10°- +45° / +50°- +113°

[1] Technical life span of the complete product when wearable parts are replaced regularly and the product is used according to the instructions in this manual.

6. SPARE PARTS

Name	Article
Armature assembly	AA500
CDR-25 Flow indicator (6mm)	
Display assembly - front w/ push buttons	DA300-F
Replacement PCB	DP001
Hose gland (foot valve only) grey	FF005
Foot valve assembly w/ hose gland	FF800
Hose gland (pump only) orange	MA006
Glue sleeve, PVC (w/ o-ring) 1" pipe	MA009
Single nut 1.5" PVC	MA011
NRV assembly FKM ball and seal	NA700
High res. piston assembly FFKM ball/seal	PA500-HR
Guide cover, locking ring, o-ring	PC101
Pump cylinder PVDF (glass sleeve)	PC102
Pump cylinder / NRV assembly combo	PC600
Suction hose FKM (L-200cm) black	PP007
Power supply - 24V - 60W (110-240V) 5m cable	PP009
Flow transducer CDR-25, FKM o-ring/cable	PP033
Replacement motor for CDR-25 (complete)	SA200

Revision 0.0
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