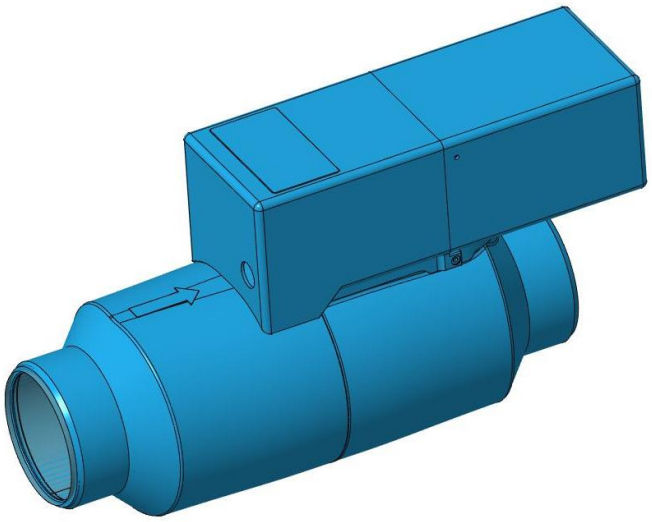
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MEDICVENT

Cleaning air in healthcare



100234 Electrical Valve SMART
Installation

Contents

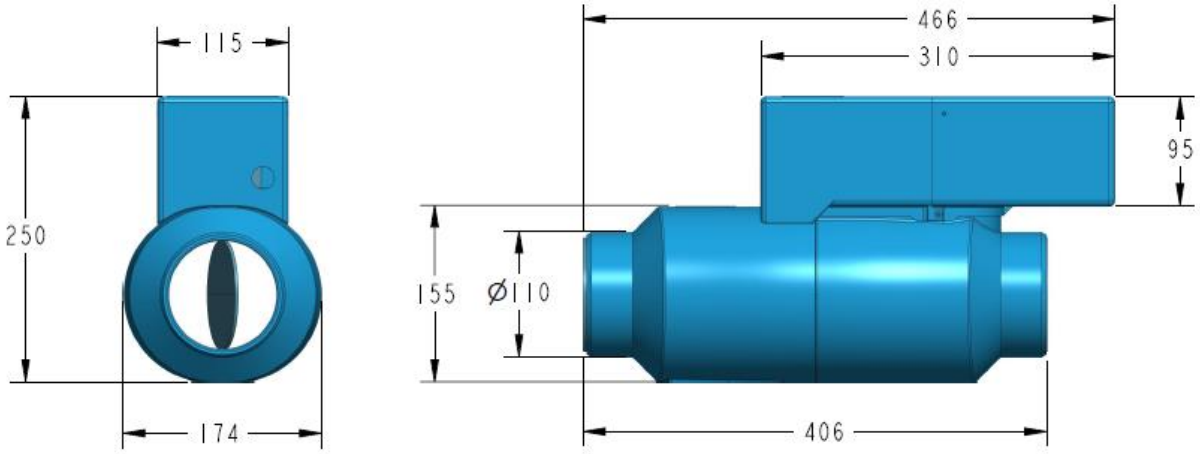
General 3
Technical data 4
Function 4
Installation 5
Fitting 5
Connection 6
Configuration 6
Troubleshooting 7

General

- **This manual is intended for Electrical valve SMART with part number 100234 and serial numbers starting with 1-.**
- **Before the product is put into use, this manual must be studied in detail.**
- **Only MEDICVENT authorized personnel may perform repairs and adjustments on this equipment.**
- **For repairs, only genuine MEDICVENT parts may be used.**
- **MEDICVENT reserves the right to make changes to design and use without notice.**

Technical data

Dimensions:	250x174x466 mm (HxWxL)
Pipe connections:	2xØ110 mm
Weight:	2,8 kgs
Voltage:	24 VDC
Power consumption:	2 W



Picture 1, Dimensions

Function

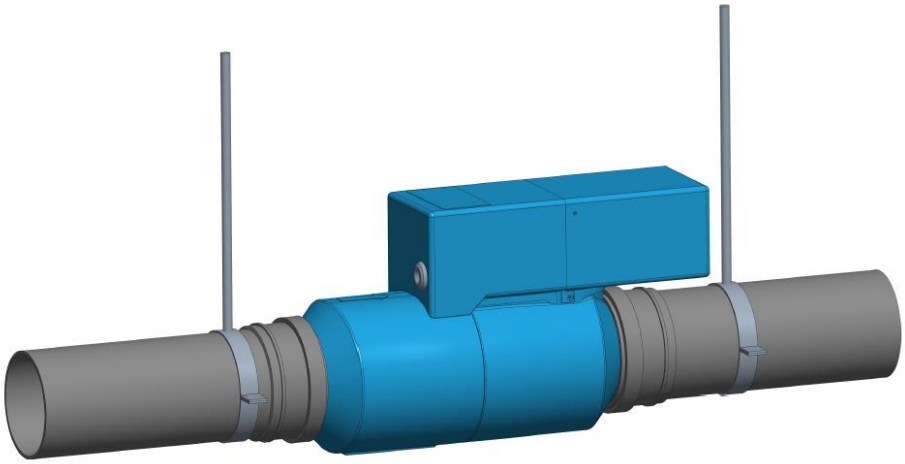
Electrical valve SMART is used to maintain the correct flow in Medicvent's evacuation system for Double Mask or surgical smoke. The valve is only used for Medicvent Central System SMART as communication via Modbus takes place continuously between the valve and the control cabinet. The valve can be used for both Double mask evacuation (OFF/Low/High) and fume extraction (0-100%).

Installation

Fitting

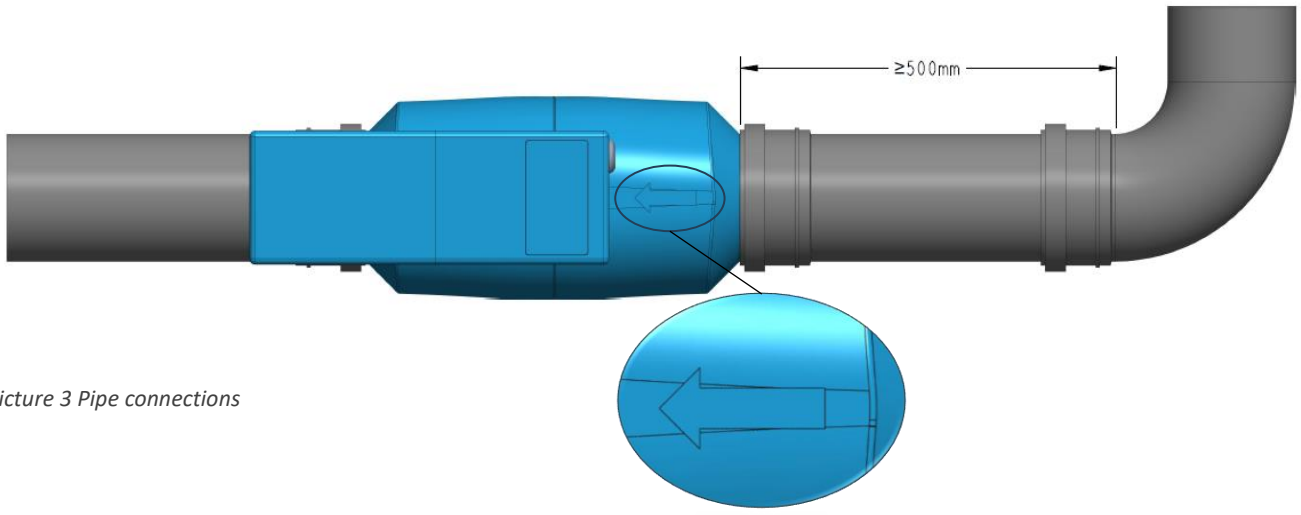
The valve is installed as part of the pipe system between the Central System SMART and the suction outlets in each room. The valve can be mounted both horizontally and vertically, but it is important that the direction of flow through the valve is correct. The valve's direction of flow arrow should point from the outlet towards the fan system.

1. Hang the pipe connections without fixing them in their brackets
2. Lubricate the connections with lube for rubber seals
3. Insert the valve into the pipe connections
4. Push the pipe connections until fully seated and fixate the brackets



Picture 2 Mounting example

Note! As flow measurement takes place inside the valve, the pipe must be without bends and changes in dimensions at least 50 cm before the valve (upstream).



Picture 3 Pipe connections

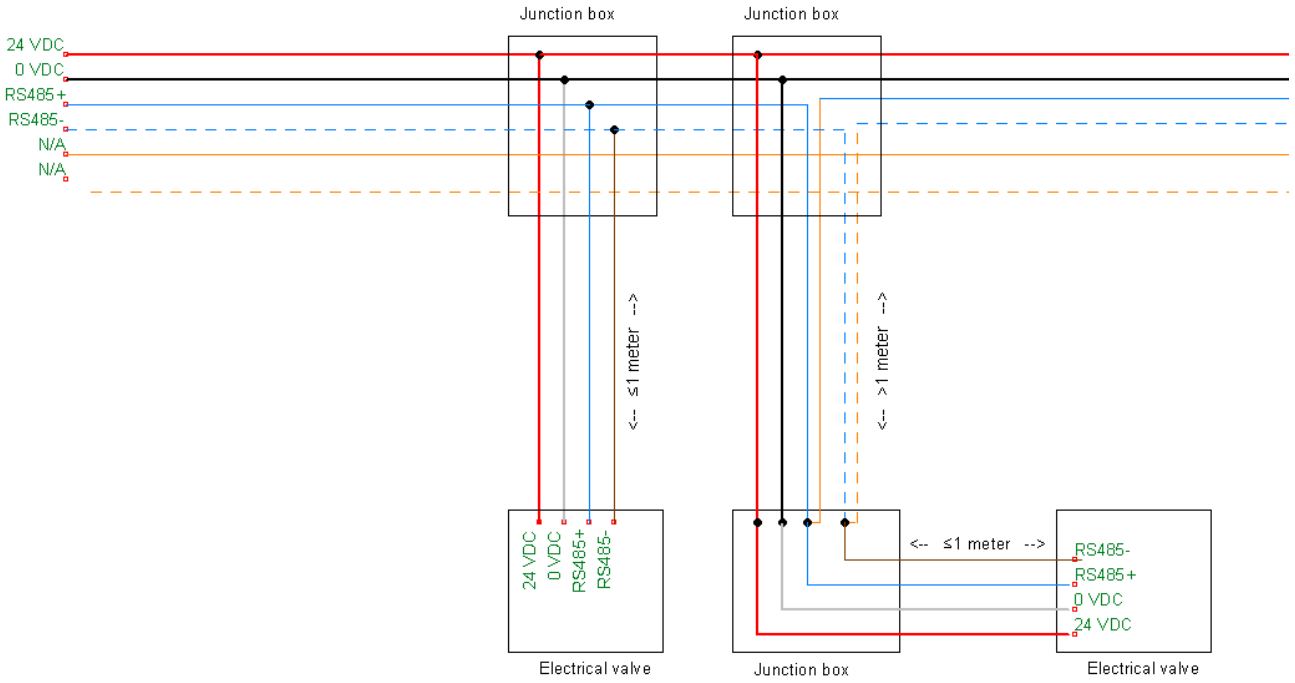
Connection

Communication between the components of the extraction system (e.g. flow sensors, electrical valves and control panels) takes place via the protocol Modbus RTU with physical interface RS485. The recommended cable type is Medicvent article 100222 (2x1.5 mm² + 2x2x0.5 mm²).
The cable from the valve must be connected to the common loop according to table 1. If the valve is placed more than 1 meter from the common loop, a communication cable with signal return leads must be used to expand the common loop. See examples in pictue 4

WARNING! Proceed with caution. If possible, switch off +24 VDC feed in the cable prior to connection.

Lead color valve	Lead color common loop	Connection
Brown	Blue/white	MODBUS B (-)
Yellow	Blue	MODBUS A (+)
White	Black	Power feed 0 VDC (-)
Red	Red	Power feed 24VDC ±10% (+)

NOTE! It is not permitted to create a star network out to several units from a junction box.



Picture 4 Connection examples

Configuration

Electrical valve SMART is pre-configured upon delivery. The configuration is confirmed during commissioning of Central fan system SMART, see 391-2000-IFU.

Troubleshooting

In case of valve malfunction, error codes will be sent to the control system in Central fan system SMART. To access these error codes, refer to Troubleshooting in 391-2000-IFU.

For additional information, contact Medicvent.



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