

## **CLORIUS CONTROLS BALANCED 2-WAY CONTROL VALVES**

DN15-80 M1FBN, G1FBN & H1FBN

Instructions for

- Installation
- Commissioning
- Operation and maintenance
- Transport and storage
- Spare parts



## General safety instructions

The valves must be installed and serviced by fully trained and qualified personnel only, observing the accepted industry codes and practices. Make sure employees or third persons are not exposed to any danger.

## Design

The valve components - seat and cone and spindle - are made of stainless steel.

The leakage rate is less than 0.05% of the full flow.

## Technical Data

- Seat and cone material: Stainless steel (W. No. 1.4305)
- Spindle material: Stainless steel (W. No. 1.4305)
- Colour: RAL7024

## Installation

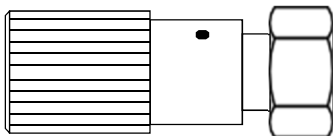
It is recommended to use a strainer in front of the control valve if the liquid contains suspended particles.

A cooling unit must be applied corresponding to the actuators temperature limitations.

Up to 170°C the valve can be installed vertically as well as horizontally. For media temperature above 170°C it must then be installed with electric actuator/ thermostat downwards.

## Comissioning

### *Manual adjusting device*



The device has a built-in stuffing box. For tightening and manual operation of valves when an actuator has not been fitted, e.g. during periods of construction (max. 170°C).

## Flow directional marking

The valve is marked with an arrow indicating the correct flow direction of the media. The arrow is located on the attached valve label.

## Operation

Without an actuator being installed, the valve is completely open by means of a spring. By increasing pressure on the spindle, the internal cone will close the valve. In connection with our thermostats or electric actuators, the valves will close at rising temperatures.

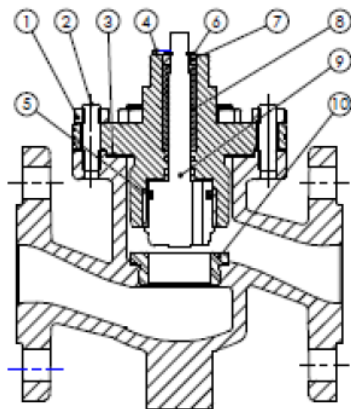
## Maintenance schedule - age management.

The gaskets have a durability of approximately 8 years at continuous use. However, it is recommended that the gaskets are inspected and changed every 4 years if possible.

## Maintenance: disassembly actuator from the valve:

- a. Follow the separate instructions manual according to the actuator type which is installed on the valve.

## Maintenance



DN15-80

Pos.	Component
1	Nut
2	Stud bolt
3	Gasket
4	Gasket
5	O-ring
6	Locking ring
7	Disc
8	Spring
9	Cone
10	Lower seat

- a. Remove actuator (and positioner if installed) following separate actuator instructions – Note: When the actuator is removed the valve will no longer be tight.
- b. Replace gaskets positions 3 & 4.
- c. Replace O-ring position 5.
- d. Replace flange gaskets.
- e. Important note for position 4: A new gasket must be installed after each time the graphite gasket has been tightened and loosened again otherwise it will leak.
- f. Follow separate instructions for the actuator how to calibrate and install the actuator. If the actuator will not be mounted, it is possible to install a manual adjusting device in order to secure no external leakage from the valve.

**Important! Use Loctite for all screw connections that were disassembled.**

## **Transport and storage**

The valve must be transported and stored dry and clean. In humid rooms, a drying material or heating must be used to avoid condensation.

During transport and intermediate storage the valve should not be exposed to temperatures lower than -10°C.

The valves are painted (top coated) on the outside. This coating must remain without damage, otherwise the faulty spots must be repaired immediately.

The standard packaging protects valves and equipment against rain and snow during trucking.

For critical transports, such as sea freight, equipment will be protected by VCI (Volatile Corrosion Inhibitor) material.

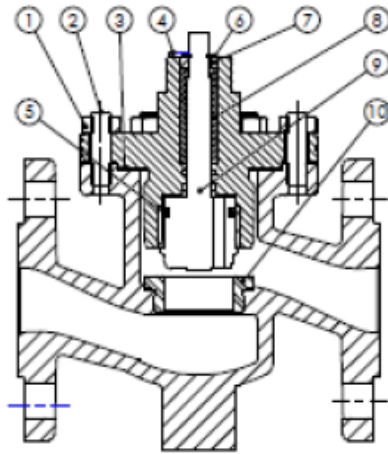
If protected by VCI do not remove the packaging until the equipment is going to be installed.

## APPENDIX – Spare part manual

### H1FBN SPARE PARTS

Balanced 2-way Control Valves  
Cast steel, PN 40, DN 15-80 mm

S-2.4.03.01-A



DN15-80

Pos.	Component
1	Nut
2	Stud bolt
3	Gasket
4	Gasket
5	O-ring
6	Locking ring
7	Disc
8	Spring
9	Cone
10	Lower seat

### Order Information:

Packing set	Pos.	Valve	Item No.	Trim set	Pos.	Valve	Item No.
components pos.	1 to 5	15 H1FBN	1-2992335	components pos.	1 to 10	15 H1FBN	1-2992345
	1 to 5	20 H1FBN	1-2992336		1 to 10	20 H1FBN	1-2992346
	1 to 5	25 H1FBN	1-2992337		1 to 10	25 H1FBN	1-2992347
	1 to 5	32 H1FBN	1-2992338		1 to 10	32 H1FBN	1-2992348
	1 to 5	40 H1FBN	1-2992339		1 to 10	40 H1FBN	1-2992349
	1 to 5	50 H1FBN	1-2992340		1 to 10	50 H1FBN	1-2992350
	1 to 5	65 H1FBN	1-2992341		1 to 10	65 H1FBN	1-2992351
	1 to 5	80 H1FBN	1-2992342		1 to 10	80 H1FBN	1-2992352

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