2-way Control Valve type H2FR

Cast Steel, PN 40, DN 20 – 80 mm, 2 Seats, Reverse acting

0-2.4.09-I

APPLICATIONS

Valves type H2FR are mainly intended for control of cooling systems. The valves are used in conjunction with temperature or pressure differential regulators for controlling industrial processes or cooling systems. As the reverse acting valves are held in closed position by means of a built-in spring, the max. differential pressure, Δp_L, against which a valve can close depends on the spring. When opening the valve, the actuator has to overcome the spring force. The table on the next page shows max. allowable values of Δp_L as well as the max. allowable inlet pressures for opening the valves, p_{1max}, for various actuator forces.

DESIGN

The valve components – spindle, seat and cone - are made of stainless steel. The valve body is made of cast steel GP240GH (GS-C25) with flanges drilled according to EN 1092-1. The thread for the actuator connection is G1B ISO 228. The valves are double-seated. The leakage rate is less than 0.5% of the full flow (according to VDI/VDE 2174).

FUNCTION
REVERSE ACTING

Without an actuator being connected, the valve is held in closed position by means of a spring. With pressure on the spindle the valve opens. In connection with our actuators, the valves act as “cooling” valves, i.e. they open at rising temperatures. The quadratic characteristic will not cease until the flow has dropped below 4% of the full flow.

TECHNICAL DATA

Materials:	
- Valve body	Cast steel GP240GH (GS-C25)
- Trim	Stainless steel
- Nuts, bolts	24 CrMo 4/A4
- Gasket	Graphite with stainless steel foil and copper
Nominal pressure	PN 40
Seating	Double seated
Flow characteristic	Quadratic
Leakage rate	≤ 0.5% of Kvs
Regulating capability	Kvs/Kvr > 25
Function	Opens by pressing the spindle
Flanges drilled according to	EN 1092-1 PN 40
Counter flanges	DIN 2635/BS 4504

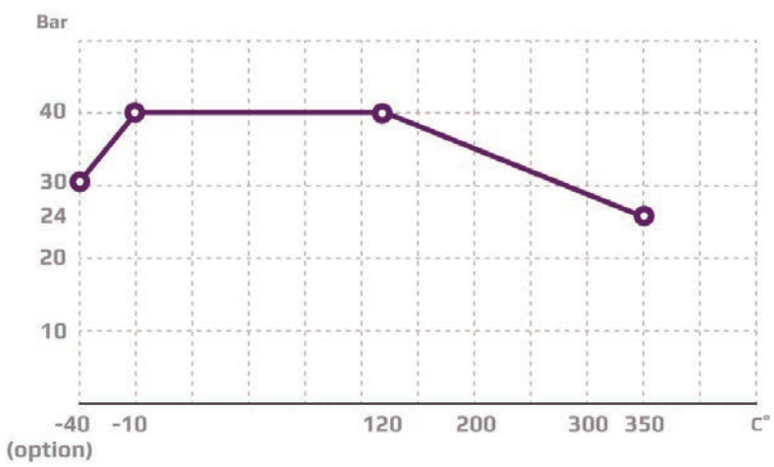
Reverse acting (normally closed)
For cooling systems or similar
Adjustable seat interspace

FEATURES

- Simple design secures reliable controls.
- Location of the pack box in the actuator makes the valve service friendly
- Reliable and secure due to internal parts of stainless steel

PRESSURE/TEMPERATURE DIAGRAM

According to DIN 2401

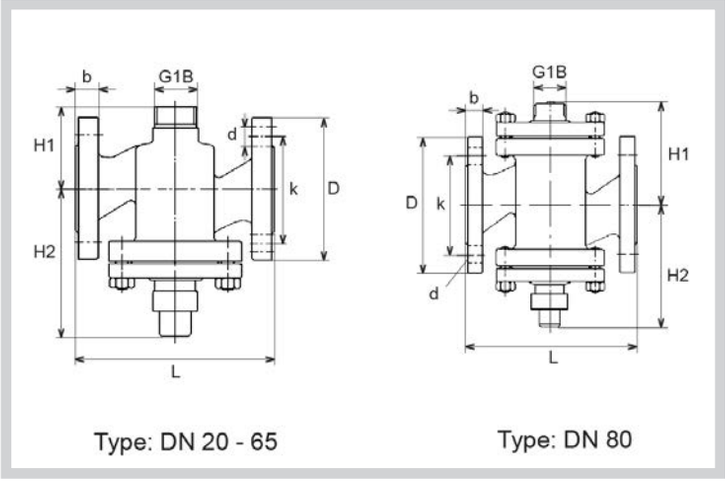


Subject to change without notice.

MOUNTING

The valve can be installed with vertical as well as horizontal spindles. For valve temperatures of max. 170 ºC, the thermostat/ actuator can be fitted below or above the valve. For valve mounted with thermostats in media temperatures above 170 ºC, a cooling unit has to be applied with connection downwards (please refer to data sheet for thermostat accessories). For electric actuators a high temperature adaptor must be used (please refer to datasheets for the electric actuators).

DIMENSION SKETCH



Type	L mm	H1 mm	H2 mm	D (dia.) mm	b mm	k (dia.) mm	d mm dia. (number)
20 H2FR	150	63	112	105	18	75	14x(4)
25 H2FR	160	70	117	115	18	85	14x(4)
32 H2FR	180	75	151	140	18	100	18x(4)
40 H2FR	200	85	155	150	18	110	18x(4)
50 H2FR	230	95	169	165	20	125	18x(4)
65 H2FR	290	110	180	185	22	145	18x(8)
80 H2FR	310	155	195	200	24	160	18x(8)

SPECIFICATIONS

Type	Flange connection Dn in mm	Opening mm	k_{vs}-value m^3/h	Lifting height mm	Max. Δp_L bar	Actuat. force N	Corresp. p_{1max} bar	Weight kg
20 H2FR	20	20	5	6.5	8.3	200 400	9.4 25	5
25 H2FR	25	25	7.5	7	8	200 400	8.8 25	6.5
32 H2FR	32	32	12.5	8	7	400	16	9
40 H2FR	40	40	20	9	6.6	400	16	11
50 H2FR	50	50	30	10	5.8	400	15	16
65 H2FR	65	65	50	11	10	400 800	10 40	21
80 H2FR	80	80	80	13	6.7	400 800	10 40	38