

## Device description

## DR6/..M20/M100 ring throttle valve

### Application

The DR6/.. ring throttle valve with the reversible M20/M100 actuator is used in heating, ventilation, and air conditioning systems as a throttle unit or shut-off unit.

### Types

DR6/.. grey cast iron ring throttle valve for 6/16 nominal pressure with M20/M100 actuator for water up to 120°C, 16 bar

	DN	kvs	$\Delta p$ (bar)	t (s)	Weight (kg)
DR6/25M20	25	12	16/6 for PN6	130	3.5
DR6/32M20	32	20	16/6 for PN6	130	3.8
DR6/40M20	40	47	14/6 for PN6	130	4.0
DR6/50M20	50	85	10/6 for PN6	130	4.4
DR6/65M20	65	165	4.6	130	5.0
DR6/80M20	80	250	3.8	130	5.7
DR6/100M20	100	435	2.0	130	6.3
DR6/125M100	125	745	1.5	130	9.4
DR6/150M100	150	1350	0.8	130	10.3
DR6/200M100	200	2300	0.3	130	15.5

### Technical data - DR6/.. ring throttle valve

Nominal diameter	DN25 to DN200	
Nominal pressure	PN6/PN16	
Connection	Between DIN flanges PN6/PN16	
Medium	Water 0 to 120°C, Antifreeze (max. 50%) glycol, ethylene glycol, propylene glycol, monoethylene, ethanol, methanol, Antifrogen® N + L	
Oncoming flow	Optionally from both sides	
Leak rate	≤ 0.5% from kvs value	
Housing	Grey cast iron GG-25	
Seat ring	Metal	
Shaft	CrNi steel	1.4057
Valve disc	Red brass	RG5, with travel stop
Rotational angle	90°	
Shaft seals	O-rings	EPDM

### Technical data – M20/M100 actuator

Mains power supply	M20	AC 230 V, 9.6 VA
	M20-A90	AC 24 V, 3.4 VA
	M100	AC 230 V, 4.5 VA
	M100-A90	AC 24 V, 5 VA
Motor	Reversible synchronous motor	
Control	2-point or 3-point	
Drive	Sintered bronze bearing	
Torque	M20	20 Nm at the drive shaft
	M100	35 Nm at the drive shaft
Rotational angle	90°, switch-off motor with path-dependent end switch	
Positioning time	130 s for 90° rotational angle	
Ambient temp.	0 to 50°C	
Degree of protection	M20	IP41
	M100	IP54
Installation position	Actuator over the valve as far as a horizontal position to the actuator shaft	
Maintenance	Maintenance-free	

### Accessories

E	Additional end switch on both sides, 3 A/AC 250V
R1/100	Feedback resistance 100 Ω
R1/1000	Feedback resistance 1000 Ω



Fig. DR6/25M20



Fig. DR6/125M100

**Installation**



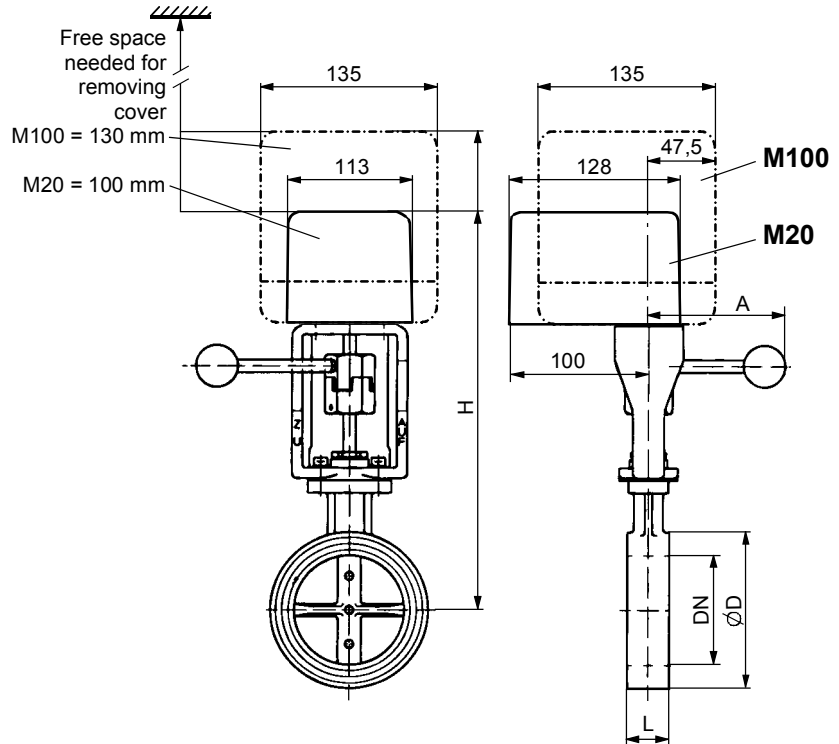
**Danger**

**Installation may only be carried out by qualified technicians.**

In addition to the generally valid installation guidelines, the following items are to be observed:

- The pipeline system and the fixture interior must be free of foreign objects. In the case of contaminated media, dirt collectors are to be installed.
- There must be no tension between the flange connections of the pipeline.
- The installation location is to be selected so that the ambient temperature at the actuator is kept between 0 and 50°C.
- When the valve is being installed, the permissible max. pressure difference  $\Delta p$  is to be observed. See the table in the "Types" section.
- The actuating drive can be installed vertically over the fixture, or in any position as far as a horizontal position to the drive shaft.
- There needs to be a free space of approximately 100 mm (M20) or approximately 130 mm (M100) above the base of the cover for the cover to be removed.
- The actuator is delivered with a protective box. Up until commissioning, this cover protects the drive during the installation phase and pipeline work.

**Manual adjustment**

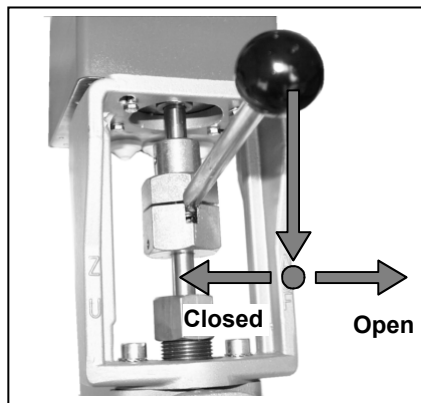


DN	L	Ø D	H	A
25	30	62	321	160
32	30	75	331	160
40	30	85	336	160
50	35	95	346	160
65	35	115	351	160
80	40	130	361	160
100	40	150	371	160
125	45	180	443	160
150	45	205	463	160
200	50	260	538	170

Dimensions in mm

**Manual adjustment**

The throttle valve can be set to a desired valve position using the hand lever on the drive shaft.



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Danger

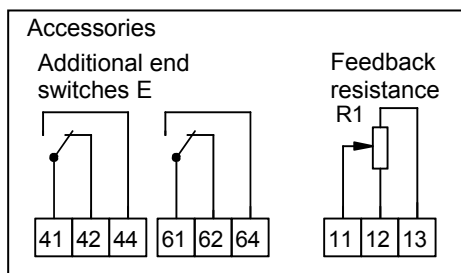
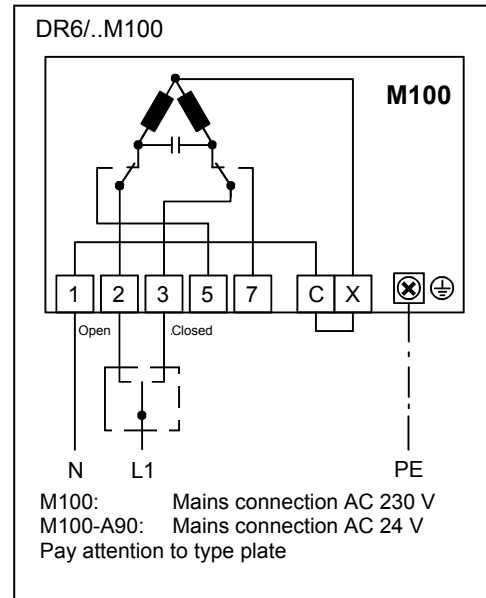
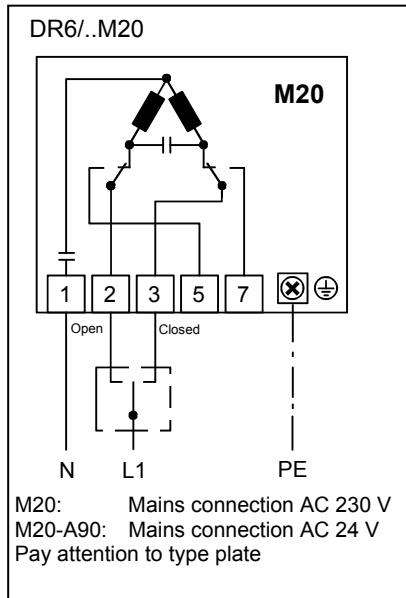
**Caution! Mains voltage!**

Electrical installation and unit connection may only be carried out by qualified technicians, e.g. an electrician.

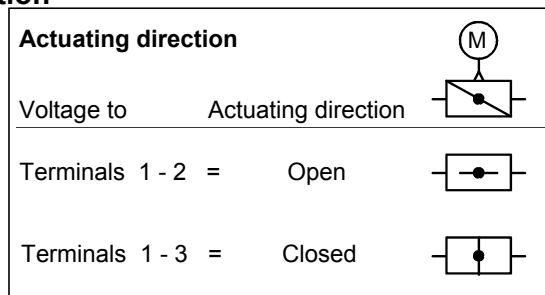
Install the unit in accordance with VDE guidelines and local regulations.

The unit is connected according to the terminal connection diagram or the legally binding wiring diagram.

Connection



Actuating direction



Danger

**Only the commissioning technician is allowed to change the actuating direction.**

Changing the actuating direction:

1. Disconnect actuator from voltage supply.
2. Remove actuator cover.
3. Switch connection lines of terminals 2 and 3.
4. Replace and screw down the cover, switch on mains power supply, and check valve function.

