

3/2-Way, Servo-assisted, G 1/4 - G 1 1/2



Advantages/Benefits

- ▶ Body material: brass
- ▶ Isolating diaphragm separates solenoid from the fluid
- ▶ Lockable manual override standard

### Design/Function

Type 344 is a servo-assisted 3-way solenoid valve with a servo piston. It is available in the circuit functions C (when de-energized, service port exhausted) and D, (when de-energized, service port connected to the pressure port).

The solenoid epoxy encapsulation efficiently dissipates the heat generated by the coil.

### Applications

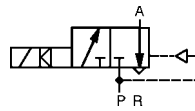
- Neutral gases
- Pneumatic control
- Suitable for vacuum
- Low pressure

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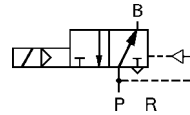
## Technical Data

### Circuit Functions

**C** 3/2-way valve, when de-energized  
flow direction from A to R.  
Connect vacuum pump to R,



**D** 3/2-way valve, when de-energized  
flow direction from P to B.  
Connect vacuum pump to R,  
external air to P.



### Body Material

Body and seat of brass

### Specifications

Orifice DN [mm]	Qn-Value Air <sup>1)</sup> [l/min]	Pressure Range [bar]	Weight [kg]
8	1030	Vacuum	1,0
12	2800	bis	1,2
20	7200	3 bar	2,2
25	11000		2,7
40	26000		6,8

<sup>1)</sup> For more detailed information please refer to resistance chart (Leaflet-No. 1896009).

A min. pressure differential of 0.25 bar is required to provide a reliable switching operation of the low-friction servo piston.  
All pressures quoted are gauge pressures with respect to the prevailing atmospheric pressure.

### Operating Data (Valve)

#### Seal Materials/Fluids Handled/Temp.- Range

NBR Neutral gases, preferably dry compressed air  
0 to +90 °C

For more detailed information please refer to resistance chart (Leaflet-No. 1896009).

Max. ambient temperature +55 °C

#### Response Times

DN	Cycling Rate [c.p.m.]	opening [ms]	closing [ms]
8	approx. 1050	25	25
12	approx. 850	30	30
20	approx. 650	40	40
25	approx. 430	70	70
40	approx. 160	120	120

Times measured at outlet A or B from switching on until pressure rise to 90 % / pressure drops to 10 % of the operating pressure.

### Operating Data (Actuator)

Operating voltages 24, 110, 230, 240 V/50 Hz  
230 V/ 50-60 Hz  
12, 24 V/=

Voltage tolerance ±10 %

Power consumption AC 30 VA (inrush)  
15 VA/8 W (hold)  
DC 8 W

Duty cycle 100% continuously rated

Lockable manual override

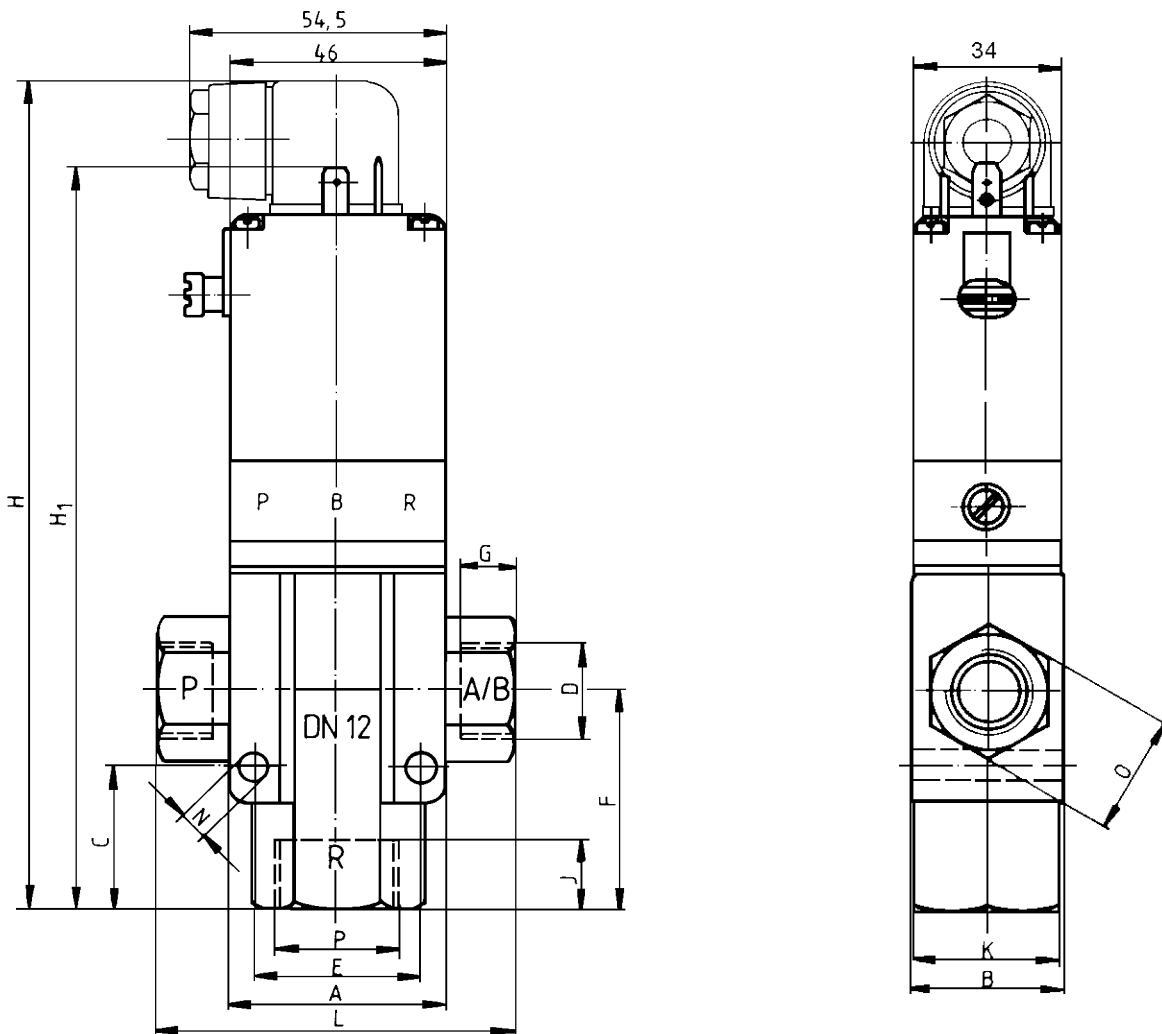
Rating with cable plug IP 65

### Installation / Accessories

Installation as required

Electrical connection cable plug for 7mm ø cable  
(supplied as standard)

Dimensions in mm



This dimensional drawing shows a valve in circuit function C with the port specifications P, R and A/B (manual override via port P).

In circuit function D the manual override is located above the port A/B (pilot rotated 180° compared to circuit function C).

DN	A	B	C	D	E	F	G	H	H1	J	K	L	N	O	P
8	46	33	23	G 1/4	30	34,5	12	154,5	135,5	12	SW 22	65	7	SW 22	G 3/8
12	46	33	31	G 1/2	34	47	14	179,5	160,5	16	SW 32	76	7	SW 27	G 3/4
20	62	50	42	G 3/4	48	63	16	214,5	195,5	18	SW 41	90	9	SW 36	G 1
25	72	60	44	G 1	66	74,5	18	239,5	220,5	20	ø 54	110	9	SW 41	G 1 1/4
40	100	88	65	G 1 1/2	93	104	22,5	293,0	274,0	26,5	ø 78	153	13	SW 55	G 2

## Ordering Chart (Other Versions on Request)

Circuit Function	Orifice DN [mm]	Flow Rate Air <sup>1)</sup> Q/Nn [l/min]	Port Connection (ISO 228)	Pressure Range [bar]	Body Material	Seal Material	Weight [kg]	Voltage/ Frequency [V/Hz]	Order-No.								
C	8,0	1 030	G 1/4	Vacuum - 3 bar	Brass	NBR	1,0	024/50	047 787 Z								
								024/=	047 383 U								
								110/50	053 658 M								
								230/50	045 134 Q								
									240/50	062 263 A							
									12,0	2 800	G 1/2	Vacuum - 3 bar	Brass	NBR	1,2	024/50	047 897 Q
																024/=	046 580 V
																110/50	048 577 F
	230/50	046 180 U															
									230/50-60	067 576 Z							
									240/50	042 433 R							
									20,0	7 200	G 3/4	Vacuum - 3 bar	Brass	NBR	2,2	024/50	053 492 Q
024/=																046 833 N	
110/50	050 837 S																
230/50	046 461 Z																
								240/50	052 076 Y								
								25,0	11 000	G 1	Vacuum - 3 bar	Brass	NBR	2,7	024/50	050 367 J	
															024/=	043 691 V	
															110/50	049 067 C	
230/50	055 445 S																
								240/50	056 288 E								
								40,0	26 000	G 1 1/2	Vacuum - 3 bar	Brass	NBR	6,8	024/=	057 829 V <sup>2)</sup>	
															230/50	047 853 T	
															D	8,0	1 030
024/=	049 582 W <sup>3)</sup>																
024/=	046 986 Q																
110/50	048 029 D																
								230/50	046 408 D								
								240/50	087 361 W								
								12,0	2 800	G 1/2	Vacuum - 3 bar	Brass	NBR	1,2		012/=	018 562 S
																024/50	051 354 A
024/=	046 246 H																
110/50	051 851 V																
								230/50	046 373 G								
								240/50	049 241 P								
								20,0	7 200	G 3/4	Vacuum - 3 bar	Brass	NBR	2,2	024/50	057 636 T	
															024/=	046 087 N	
110/50	046 212 X																
230/50	047 616 V																
								240/50	087 362 X								
								25,0	11 000	G 1	Vacuum - 3 bar	Brass	NBR	2,7	024/50	043 479 G	
															024/=	047 873 X	

<sup>1)</sup> Measured with 6 bar upstream pressure and 1 bar pressure drop across the valve at +20 °C.

<sup>2)</sup> With lockable manual override, <sup>3)</sup> Without cable plug

## Ordering Chart (Other Versions on Request)

Circuit Function	Orifice DN [mm]	Flow Rate Air <sup>1)</sup> Q/Nn [l/min]	Port Connection (ISO 228)	Pressure Range [bar]	Body Material	Seal Material	Weight [kg]	Voltage/ Frequency [V/Hz]	Order-No.
D	25,0	11 000	G 1	Vacuum	Brass	NBR	2,7	110/50	056 407 W
				- 3 bar				230/50	041 681 Z
								240/50	087 363 Y

<sup>1)</sup> Measured with 6 bar upstream pressure and 1 bar pressure drop across the valve at +20 °C.

