

### 2/2-Way Valve, G 1/4 - G 3/8



### Advantages/Benefits

- ▶ Teflon diaphragm hermetically isolates the solenoid system from the fluid
- ▶ Resistant to contamination and does not magnetize particles
- ▶ Lockable manual override standard
- ▶ Body material: PTFE, stainless steel
- ▶ G 1/4 - G 3/8, solvent joint, tube connection

### Design/Function

The Type 121 is a direct-acting solenoid valve with flipper armature. The special design makes the valve less sensitive to contaminated fluids than plunger-type valves and provides long service life even under dry-run conditions.

The isolation of the solenoid from the fluid is achieved by the use of a teflon diaphragm on the fluid side and a viton diaphragm on the solenoid side.

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

The valve is available as 2-way normally closed circuit function. Other circuit functions including 3/2-way are available on request.

### Applications

- Surface treatment
- Photochemistry
- Dairies
- Breweries
- Food processing industry
- Biochemistry
- Analytical instruments
- Plastic production
- Colour chemistry
- Pharmaceutical industry

**bürkert**  
Easy Fluid Control Systems

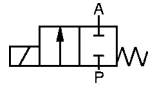
# Flipper Solenoid Valve with Isolating Diaphragm for Analytical Applications

## Type 121

### Technical Data

#### Circuit Function

A 2/2-way valve,  
normally closed



Other functions on request

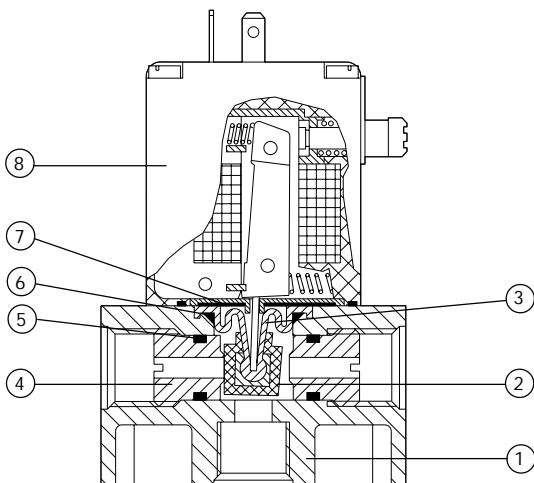
#### Operating Data (Valve)

Pressure range max.	0 - 4 bar (see specifications)
Port connection Orifice	Threaded port G1/4, G 3/8 DN 4.0 - 6.0 mm
Body material	Teflon (TE), 1.4401 Stainless Steel (PVC, PVDF, PP on request)
Seal material	FPM, EPDM, FFKM (Simriz)
Fluids	EPDM: Alkalis, acids up to a medium concentration, washing and bleaching lyes. FPM: Oxydizing acids, salt solutions, exhaust gas. FFKM: Flavors, ether, ester kezones
Fluid temperature	-10 to +90 °C (FPM) -30 to +90 °C (EPDM) -10 to +90 °C (FFKM)
Ambient temperature	max. +50 °C
Max. viscosity	approx. 37 mm <sup>2</sup> /s
Response Times	opening: 15 - 25 ms closing: 15 - 25 ms

#### Operating Data (Actuator)

Operating voltages	110, 230 V/50 Hz 24 V/= 24 V/UC
Voltage tolerance	±10 %
Power consumption	AC 40 VA (inrush), 18 VA/7 W (hold) DC 8,5 W UC 40 W (inrush), 3 W (hold)
Duty cycle	100 % continuously rated with stainless steel body. intermittent operation: PTFE-body 40 % 10 min AC or DC use: 100 % continuously rated
Cycling rate	approx. 600 c.p.m. AC or DC use: approx. 10 c.p.m.
Protection class	IP65 with cable plug type 2508
Electrical connection	Cable plug type 2508 (DIN 43650, form A) for 7 mm ø cable (supplied as standard)
Installation	as required

### Materials



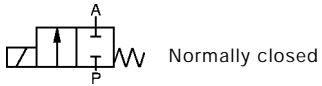
1 Valve body:	PTFE, Stainless steel 1.4401 (PVC, PVDF, PP on request)
2 Seal:	FFKM FPM, EPDM
3 Toggle pin:	Hostafion TF 1502
4 Seat:	Stainless steel 1.4401
5 O-Rings:	FPM, EPDM
6 Seal:	PTFE
7 Isolating diaphragm:	FPM, EPDM, FFKM (Simriz)
8 Coil body:	Epoxy

Schematic drawing shows stainless steel version

# Flipper Solenoid Valve with Isolating Diaphragm for Analytical Applications

## Type 121

### Specifications - Ordering Chart (Other Versions on Request)



#### Stainless steel 1.4401 valve body

Port connection	Orifice [mm]	Kv-Value (water) [m³/h]	Q <sub>Nn</sub> -Value (air) [l/min]	Pressure range [bar]	Seal material	Weight [kg]	ITEM - No.		
							Voltage / Frequency [V/Hz]		
							24/DC	110/50	230/50
G 1/4	4.0	0.3	300	0 - 4	EPDM	0.32	136 290 Z	136 291 N	136 292 P
G 1/4	4.0	0.3	300	0 - 4	FPM	0.32	088 780 G	136 296 K	136 297 L
G 1/4	6.0	0.6	600	0 - 2	EPDM	0.32	136 293 Q	136 294 R	136 295 J
G 1/4	6.0	0.6	600	0 - 2	FPM	0.32	136 298 V	136 299 W	136 300 B

#### PTFE valve body

Port connection	Orifice [mm]	Kv-Value (water) [m³/h]	Q <sub>Nn</sub> -Value (air) [l/min]	Pressure range [bar]	Seal material	Weight [kg]	ITEM - No.		
							Voltage / Frequency [V/Hz]		
							24/DC <sup>1)</sup>	110/50	230/50
G 3/8	4.0	0.3	300	0 - 4	FFKM	0.32	126 035 E	136 287 J	136 288 T
G 3/8	6.0	0.6	600	0 - 2	FFKM	0.32	125 243 S	--- ---	136 289 U

<sup>1)</sup> Universal current 24 VDC, 24 VAC

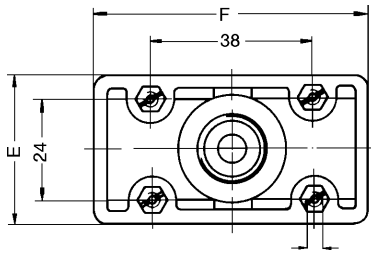
### Options

- Vacuum
- Electrical feedback signaller
- Solvent joint, tube connection
- Electrical connection: moulded in cable

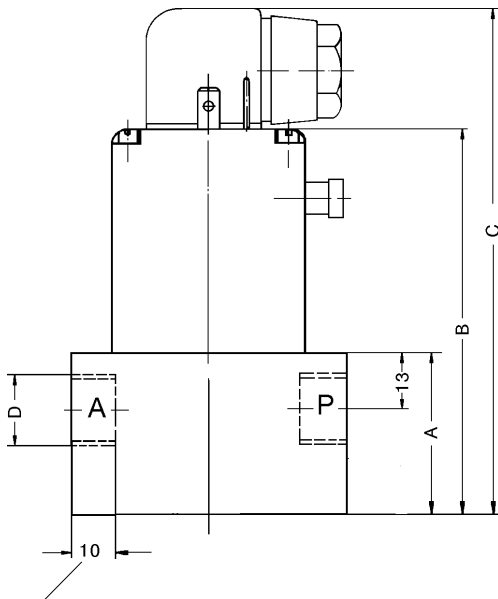
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## Type 121

### Dimensions [mm]



M4 used depth  $\approx$  5

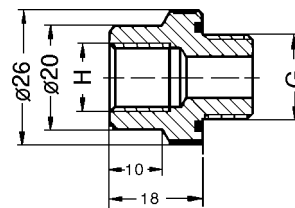


Max. screw-in depth for thread connection with plastic  
Max. screw-in depth for stainless steel 13 mm

The seats on the valve have been set and must not be adjusted.

Body Material	Dimensions [mm]						
	A	B	C	D	E	F	G
PTFE	38	91	120	G 3/8	35	76	14,5
Stainless	36	89	118	G 1/4	32	76	13

### Reducing Fitting



Dimension G: G 3/8

Dimension H: G 1/4 oder  $\varnothing$  12,2

Reducing Fitting	Material	O-Ring	Item-No. Single-part
G 3/8 - G 1/4	PTFE	FPM	005 580 V
G 3/8 - G 1/4	PTFE	EPDM	005 646 A