

2/2-Way; NPT  $3/8'' - 1/2''$ ; True Union  $\varnothing 16 - 20$  mm; 7 - 85 PSI



### Advantages/Benefits



- ▶ Low power consumption, no relay necessary when used on a PLC
- ▶ Medium is separated from the actuator system
- ▶ Low weight and robust
- ▶ Long service life
- ▶ CE Approval

### Design/Function

The Type 6642 is a servo-assisted 2/2-way solenoid valve with a separating servo diaphragm and a plastic body. Its pilot valve is a rocker valve Type 6126.

The valve is normally closed by spring force. Energized, the solenoid opens the pilot valve first. Then the medium pressure opens the valve against the pressure drop above the diaphragm.



Optimized point-to-point connection between Burkert-Sensors and Actuators



Ability of communication with conventional controlling or Fieldbus connections

### Applications

#### Fluids

- Neutral media, oxidizing acids and liquids, saline solutions, oils with additives
- Acids up to middle concentration, alkaline media up to pH 12, washing and bleaching lyes

#### Applications

- Chemical industry
- Textile machinery
- Cleaning and washing
- ON/OFF control in process systems
- Medical service

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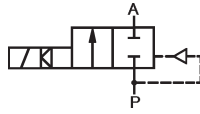
**burkert**  
Fluid Control Systems

### Technical Data Type 6642

#### Circuit function

#### Symbol

A- 2/2-way, normally closed, with 3-way pilot control and coupled solenoid system



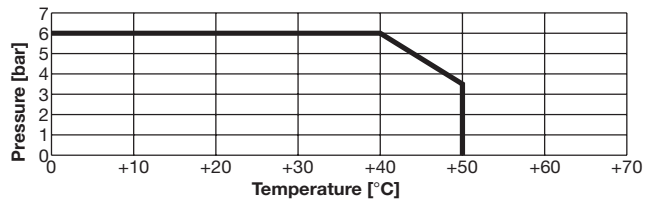
#### Operating Data (Valve)

Pressure range	7 - 85 PSI
Port connection	
Threaded connection	3/8" NPT – 1/2" NPT
True union	ø 16 mm – ø 20 mm
Fluid	
EPDM sealing	Acids up to middle concentration, alkaline media up to pH value of 12, washing and bleaching lyes
FKM sealing	Neutral media, oxidizing acids and liquids, saline solutions, oils with additives
Medium temperature	
EPDM sealing	32°F up to 122°F
FKM sealing	32°F up to 122°F
Ambient temperature	32°F up to 104°F
Max. viscosity	21 cSt
Flow rate (Cv value water)	Measured at 68°F, 14 PSI pressure at valve inlet port and open outlet port
Pressure rate [PSI]	Overpressure to atmospheric pressure
Response times [ms]	Measured at 68°F, 85 PSI pressure at outlet port
Opening pressure raise	0% to 90%
Closing pressure drop	100% to 10%
Installation	as required, but preferably with solenoid system upright

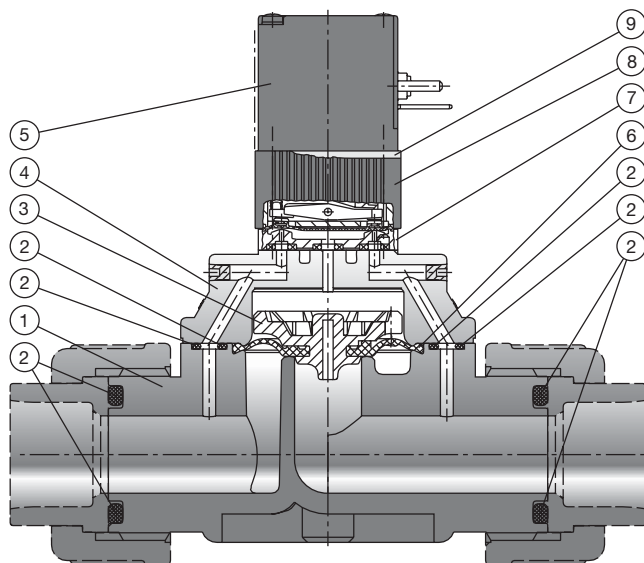
#### Operating Data (Actuator)

Operating voltages	
DC	24 V
UC	110 – 120 V and 230 – 240 V (for 24 V/AC, use cable plug with rectifier and varistor)
Voltages tolerance	±10%
Power consumption	DC   UC
Inrush and hold	3.4 W   4 W
Duty cycle	100% continuously rated up to 15 c.p.m.
Cycling rate	
Electr. connection	Tag connectors sideways acc. to DIN 43650, Form C Tag connectors upwards for 110/230 V UC
Cable plugs	
Standard delivery	With Type 2506, 0 – 250 V (others, please see accessories)
EaseOn technology	Type 2510

#### Pressure-Temperature Diagram



#### Materials



- |   |                               |                     |
|---|-------------------------------|---------------------|
| 1 | Valve body:                   | PVC                 |
| 2 | O-rings:                      | FKM and EPDM        |
| 3 | Diaphragm support and holder: | PVDF                |
| 4 | Cover:                        | PVC                 |
| 5 | Coil:                         | PA (Polyamide)      |
| 6 | Diaphragm:                    | FKM and EPDM        |
| 7 | Pilot flange:                 | PEEK                |
| 8 | Pilot valve body:             | PPS                 |
| 9 | Isolating plate:              | 301 Stainless Steel |

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

**24 V DC Version with Standard Cable Plug Type 2506 - with Connector Sets (see Accessories)  
Seal Material EPDM, Temperature Range 32° up to 122°F, Pressure Range 7 up to 85 PSI**

Circuit Function	Orifice DN [in]	Port Connection [in] NPT	C <sub>v</sub> -Value	Response Times		Weight [lbs]	Item-No. Voltage		
				Opening [ms]	Closing [ms]		24 V/DC	110 - 120 V/UC	230 - 240 V/UC
A	3/8	3/8	2.10	200 - 400	400 - 600	0.33	US05975	US05976	US05977
	1/2	1/2	4.68	200 - 400	400 - 600	0.44	US05981	US05982	US05983

**24 V DC Version with Standard Cable Plug Type 2506 - with Connector Sets (see Accessories)  
Seal Material FKM , Temperature Range 32° up to 122°F, Pressure Range 7 up to 85 PSI**

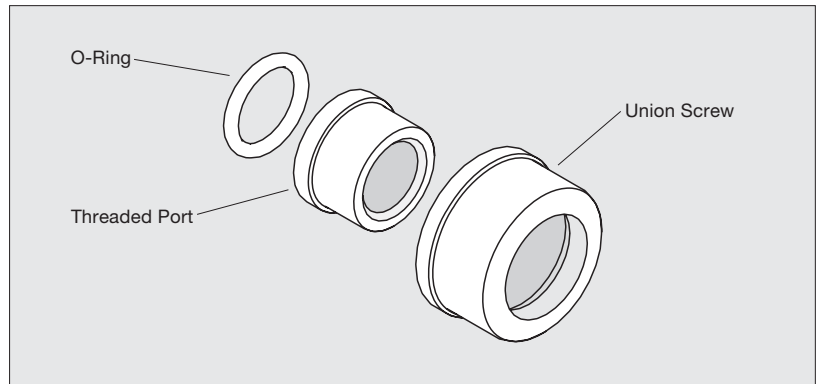
Circuit Function	Orifice DN [in]	Port Connection [in] NPT	C <sub>v</sub> -Value	Response Times		Weight [lbs]	Item-No. Voltage		
				Opening [ms]	Closing [ms]		24 V/DC	110 - 120 V/UC	230 - 240 V/UC
A	3/8	3/8	2.10	200 - 400	400 - 600	0.33	US05978	US05979	US05980
	1/2	1/2	4.68	200 - 400	400 - 600	0.44	US05984	US05985	US05986

**Accessories**

**Connector Set, Material PVC**

**Three-Piece Connector Set, Material PVC**

Orifice DN [mm]	Port Connection	Seal Material O-Ring	Item-No. Voltage
10	NPT 3/8 in	EPDM	142 418 T
	NPT 3/8 in	FKM	142 415 Q
	ø 16 mm	EPDM	142 416 R
	ø 16 mm	FKM	142 413 N
13	NPT 1/2 in	EPDM	142 424 R
	NPT 1/2 in	FKM	142 421 N
	ø 20 mm	EPDM	142 422 P
	ø 20 mm	FKM	142 419 U



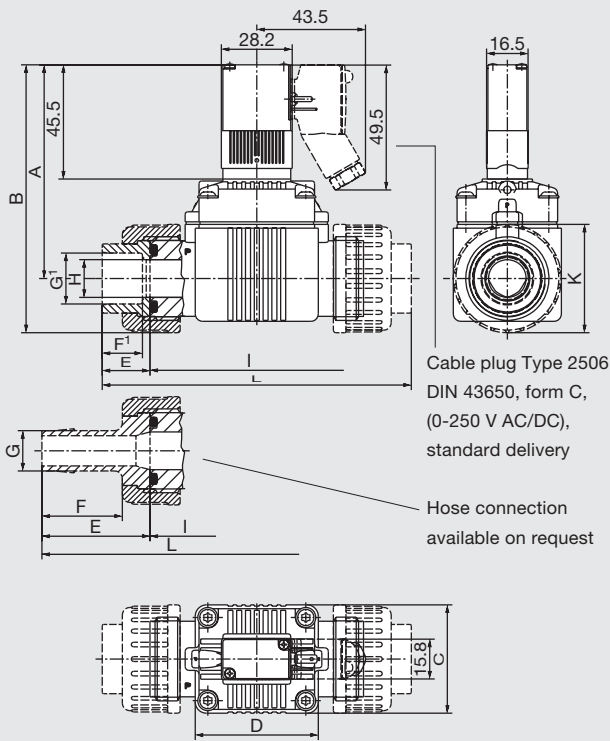
**IMPORTANT!**

**2 Connector Sets are necessary per valve.**

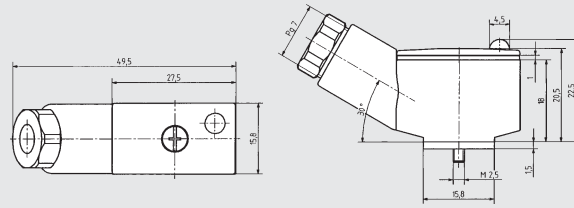
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**Dimensions [mm]**

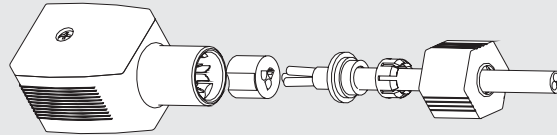
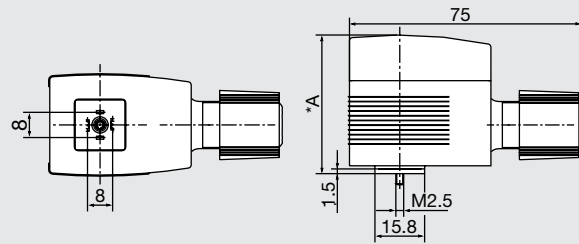
Type 6642 with Standard Cable Plug



Cable Plug Type 2506



Cable Plug Type 2510 (EaseOn Technology)



Orifice DN	Measurements Threaded Conn.				Measurements True Union				Measurements Hose Conn.				Measurements								
	G <sup>1</sup> Port Conn. [mm]	E Thread Depth [mm]	F <sup>1</sup> [mm]	L [mm]	E [mm]	F [mm]	G ø [mm]	L [mm]	E [mm]	F [mm]	G ø [mm]	L [mm]	A [mm]	B [mm]	C [mm]	D [mm]	H ø [mm]	K ø [mm]	I [mm]		
10	NPT3/8	17.0	13.0	107.0	17.0	14.0	16.2	107.0	42.0	32.0	14.0	157.0	78.5	96.0	32.0	32.0	10.5	35.0	73.0		
13	NPT1/2	19.0	13.0	123.0	19.0	16.0	20.2	123.0	43.0	32.0	16.0	171.0	85.0	106.5	43.0	49.0	15.0	43.0	85.0		

**Ordering Chart for Accessories**

A wide selection of further cable plugs is available (see special data sheets Type 2506 and 2510)

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