

2/2-Way, 1/2" – 2"



## Advantages/Benefits



- **Decentralized Intelligence** for ON/OFF and Proportional control of processes



- **Customized System Solutions for Easy LINK™ and Easy Networking** together with sensors



- **Up to 80% lower Total Cost of Ownership**

## Design/Function

The diaphragm valve system is designed for **ON/OFF control** and **Proportional control** process applications with various communication possibilities with sensors and a PLC. The diaphragm valve system consists of three variable modules, the valve body, the pneumatic actuator and the TOP Control.

### ON/OFF control version:

ON/OFF control of a diaphragm valve

- Integrated pilots for single acting or double acting versions
- Integrated mechanical or inductive limit switches
- Position feedback
- Modular electrical interfaces
- ASI Bus communications

### Proportional control version:

Position control or process control with an integrated PID controller

- Internal or external setpoint
- Autotune function
- Programmable flow curves
- Sensor input signals (4–20 mA, Frequency, Pt 100)
- Binary inputs and outputs
- Modular electrical interfaces
- Analog position output
- Up to 2 limit switches with position feedback
- PROFIBUS DP and DeviceNet communication



DeviceNet™

**Burkert Contromatic USA**  
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Irvine, CA 92614  
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**Burkert Contromatic Inc.**  
760 Pacific Road, Unit 3  
Oakville, Ontario, Canada  
L6L 6M5  
Tel. 905.847.5566  
Fax 905.847.9006

## Applications

### Body Materials

- **Plastic:**  
Contaminated, aggressive fluids up to 248°F
- **Cold formed stainless steel:**  
Polluted, dirty, abrasive, highly viscous liquids up to 284°F
- **Forged stainless steel:**  
Ultra-pure, sterile, aggressive, abrasive, highly viscous liquids up to 284°F

### Industries

- Water treatment
- Pharmaceutical industry
- Bio-technology
- Cosmetic industry
- Chemical processing
- Food and feed industry
- Textile dyeing and bleaching
- Medical technology
- Pulp and paper industry
- Machine industry

**bürkert**  
Fluid Control Systems

# A Variety of Optional Modules to Choose from

## Actuator

### Actuator Sizes:

- ø63.0 mm
- ø80.0 mm
- ø100.0 mm
- ø125.0 mm

### Materials:

- PA with Stainless Steel thread connections
- PPS with Stainless Steel thread connections

### Circuit Functions:

- Single acting
  - normally closed by spring return
  - normally open by spring return (ON/OFF control only)
- Double acting



## Proportional

### Power supply (3-wire technology):

- 24 VDC
- 24 V 2-wire standard signal
- 24 V 2-wire bus

**CONTROL**

## Valve Bodies

### Diaphragm Materials:

- EPDM
- PTFE and EPDM
- FKM
- CSM

### Valve Sizes [inch (mm)]:

- ø1/2" (15)
- ø3/4" (20)
- ø1" (25)
- ø1-1/4" (32)
- ø1-1/2" (40)
- ø2" (50)

### Valve Materials and Corresponding Connections:

- **Plastic**
  - PVC with true union or solvent spigot
  - PP with fusion spigot
  - PVDF with fusion spigot
- **Cold formed stainless steel**
  - Threaded ends: G, NPT and Rc
  - Butt weld ends: ISO 4220, DIN 11850 R2, O.D. tubing (BS 4825 Part 1)
  - Flange: DIN 2633, ANSI Class 150, JIS 10K
- **Forged stainless steel**
  - Butt weld ends: ISO 4200, DIN 11850 series 2, SMS 3008, BS O.D. tubing, JIS sanitary, JIS utility
  - Clamp connection: ISO 2852, BS 4825 (Tri-Clamp®)
  - Dairy union: DIN 11851

## On/Off

### Power supply:

- 24 VDC
- 24 V 2-wire bus
- 120 V/60 Hz
- 240 V/60 Hz

## TOP Control

### Pneumatic connection:

- G 1/4
- 1/4 NPT
- Rc 1/4



## Proportional as

- Position Controller
- Process Controller

### Integrated pilot valve:

- 2 x 2/2-way (single acting)
- 4 x 2/2-way (double acting)

### Limit switches (0, 1 or 2):

- Inductive

## Signal Inputs and Outputs

### Inputs:

- Frequency
- Pt 100
- 4 – 20 mA
- Setpoint 4 – 20 mA  
0 – 10 V  
0 – 5 V  
0 – 20 mA

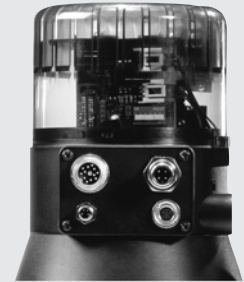
- Binary

### Outputs:

- Binary position feedback
- 2 x binary
- Analog position feedback

## Electrical Interfaces

- PG cable glands
- EaseOn box
- Multipin
- Field Bus  
PROFIBUS/  
DeviceNet



*Eas4* Proportional Control



*Eas4* ON/OFF Control



## Control Head

### Pneumatic connection

- G 1/4
- 1/4 NPT
- Rc 1/4



## ON / OFF

### Integrated pilot valve:

- 3/2-way (single acting)
- 5/2-way (double acting)

### Limit switches (0, 1 or 2):

- Mechanical
- Inductive

## Signal Outputs

- Position feedback
- ASI-bus

## Electrical Interfaces

- PG cable glands
- EaseOn box
- Multipin (ASI-bus)
- Cable end with ASI-clip



## Actuator Configuration

### Integrated Pilot Valve

①

#### Functions:

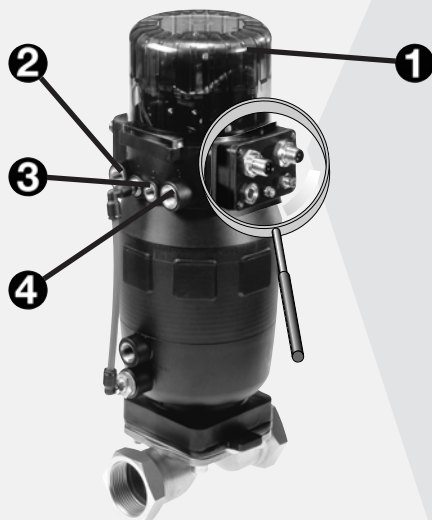
- Single acting (NC or NO by spring return): 3/2-way
- Double acting: 5/2-way

#### Power consumption:

- < 2 W

#### Power supply:

- 24 VDC  $\pm 10\%$   
(no technical direct voltage)  
Residual ripple 10%
- 120 V/60 Hz
- 240 V/60 Hz



### Pneumatic Connections

②

#### Supply port:

- G 1/4
- 1/4 NPT
- Rc 1/4

③

#### Service port:

- G 1/8  
(pre-mounted)

④

#### Exhaust port:

- G 1/4
- 1/4 NPT
- Rc 1/4

### Pneumatic Data

Medium:	Instrument air (filtered, non-lubricated)
Pressure range:	45 to 102 PSI
$C_v$ :	.15

### Operation Data

Rating:	NEMA 4
Ambient temp.:	32°F to 122°F

## Electrical Interfaces

### Multipin



M12 ASI plug (4 pins)

Blind plate

### PG Cable gland



Round cable  
with ASI clip

Blind plate

### PG cable glands

(wiring on terminal strip)

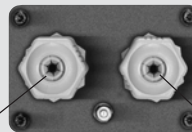


Command line  
(Power supply)

2 Limit switches

### EaseOn box

(wiring by push-in and turn-off)



Command line  
Power supply

2 Limit switches



## Communication Line



## Command Line On/Off



## Outputs



## Communication

### ASI Bus

#### Wiring:

- 2-wire ASI-cable for ON/OFF command, position feedback and power supply 30 V



PLC with ASI-interface



### Topology of Network

- Line
- Tree
- Star
- Ring



### Easy LINK™

### Easy LINK™ with Sensor (Control)



- Sensor switch or relay output



- *Easy* Flow Control (dosing / batching / filling)
- *Easy* Analytical Control (dosing)
- *Easy* Pressure Control (stabilizing pressure range)
- *Easy* Level Control (filling / stabilizing / discharging & overflow protection)
- *Easy* Temperature Control (stabilizing temperature range)

for details, please see corresponding datasheets

### Easy Networking



- PLC



### Position Feedback

→ 0, 1 or 2 →

#### Limit switch(es):

- **Inductive**  
(24 VDC)  
- Upper / Lower (NO),  
binary output 0/24 V
- **Mechanical**  
(24 VDC, ≤ 5 A)  
- Upper / Lower (NO),  
0/24 V  
- Upper / Lower (NC),  
24/0 V  
(120 and 240 V/60 Hz, ≤ 5 A)  
- Upper / Lower (NO),  
0/120 or 240 V  
- Upper / Lower (NC),  
120 or 240/0 V
- Upper position and / or
- Lower position





## Actuator Configuration

### Intelligent Actuator

- **Positioner**
- **Process controller - integrated PID**

### Integrated Pilot Valve

1

#### Functions:

- Single acting (NC by spring return):  
2 x 2/2-way + exhaust valve (optional)
- Double acting:  
4 x 2/2-way

#### Power consumption:

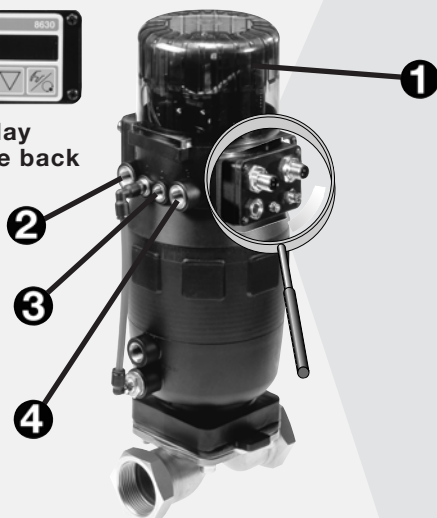
- < 5 W

#### Power supply:

- 24 VDC  $\pm 10\%$   
(no technical direct voltage)  
Residual ripple 10%



Display  
at the back



### Pneumatic Connections

2	3	4
<b>Supply port:</b>	<b>Service port:</b>	<b>Exhaust port:</b>
<ul style="list-style-type: none"> <li>• G 1/4</li> <li>• 1/4 NPT</li> <li>• Rc 1/4</li> </ul>	<ul style="list-style-type: none"> <li>• G 1/8 (pre-mounted)</li> </ul>	<ul style="list-style-type: none"> <li>• G 1/4</li> <li>• 1/4 NPT</li> <li>• Rc 1/4</li> </ul>

### Pneumatic Data

Medium:	Instrument air (filtered, non-lubricated)
Pressure range:	45 to 102 PSI
C <sub>v</sub> :	.15

### Operation Data

Rating:	NEMA 4
Ambient temp.:	32°F to 122°F

## Electrical Interfaces

### DeviceNet (Multipin) (\*: Pins)

Power supply (plug not  
necessary when power  
supplied by bus) M12 plug (4\*)

DeviceNet  
M16 plug  
(4\*)

Sensor input incl. Sensor  
supply (actual process  
value) M8 plug (4\*)

2 Outputs:  
Limit switches  
M8 socket (4\*)

### PROFIBUS DP (Multipin) (\*: Pins)

Power supply  
M12 plug (4\*)

PROFIBUS  
DP  
Rect. plug  
(9\*)

Sensor input incl. Sensor  
supply (actual process  
value) M8 plug (4\*)

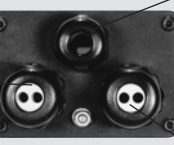
2 Outputs:  
Limit switches  
M8 socket (4\*)

### PG Cable Glands

(wiring on terminal strip)

Power supply

External  
setpoint  
Analog  
position  
feedback



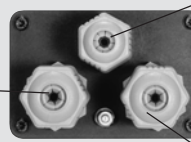
Actual process value  
Sensor input incl. Sensor supply  
or alternatively 2 Binary outputs  
(selection by jumper)

### EaseOn Box

(wiring by push-in and turn-off)

Power supply

External  
setpoint  
Analog  
position  
feedback



Actual process value  
Sensor input incl. Sensor supply  
or alternatively 2 Binary outputs  
(selection by jumper)

### Multipin (\*: Pins)

Signals to PLC: Analog position feedback

2 Binary outputs  
Binary input  
External  
setpoint  
M16 plug (12\*)

Power supply  
M12 plug (4\*)

Sensor input incl.  
Sensor supply  
(actual process value)  
M8 plug (4\*)

2 Outputs:  
Limit switches  
M8 socket (4\*)

## Communi- cation Line



DeviceNet™



## Inputs



## Outputs





## Communication

### Inputs

#### 1 Input



**Actual process value:**

- Sensor



- *Easy* Flow Control (dosing / batching / filling)
- *Easy* Analytical Control (dosing)
- *Easy* Pressure Control (stabilizing pressure range)
- *Easy* Level Control (filling / stabilizing / discharging & overflow protection)
- *Easy* Temperature Control (stabilizing temperature range)

### 2 Outputs

#### Binary 24 V / 0 V:

- PG / EaseOn version: instead of input actual process value



### Communication Line

- DeviceNet
- PROFIBUS DP



PLC with Bus interface



for details, please see corresponding data sheets



#### Easy LINK™

#### Easy LINK™ with Sensor (Control)



**Actual process value:**

- Sensor (only for versions with integrated PID)



- *Easy* Flow Control (dosing / batching / filling)
- *Easy* Analytical Control (dosing)
- *Easy* Pressure Control (stabilizing pressure range)
- *Easy* Level Control (filling / stabilizing / discharging & overflow protection)
- *Easy* Temperature Control (stabilizing temperature range)

#### 1 Input



#### External setpoint:

- PLC - 4 - 20 mA
- - 0 - 20 mA
- - 0 - 10 V
- - 0 - 5 V



#### 1 Input (Binary)

- 0 - 10 V / 0 - 30 V:
- Switch (sensor or mechanical)

for details, please see corresponding data sheets

### 2 Outputs

#### Position feedback limit switch(es):

- Inductive
- Upper / Lower (NC), 24 V / 0 V



Display



Visual alarm



Acoustic alarm



### 2 Outputs

#### Binary 24 V / 0 V:

- PG / EaseOn version: instead of input actual process value (sensors)



Visual alarm



Acoustic alarm



### 1 Output

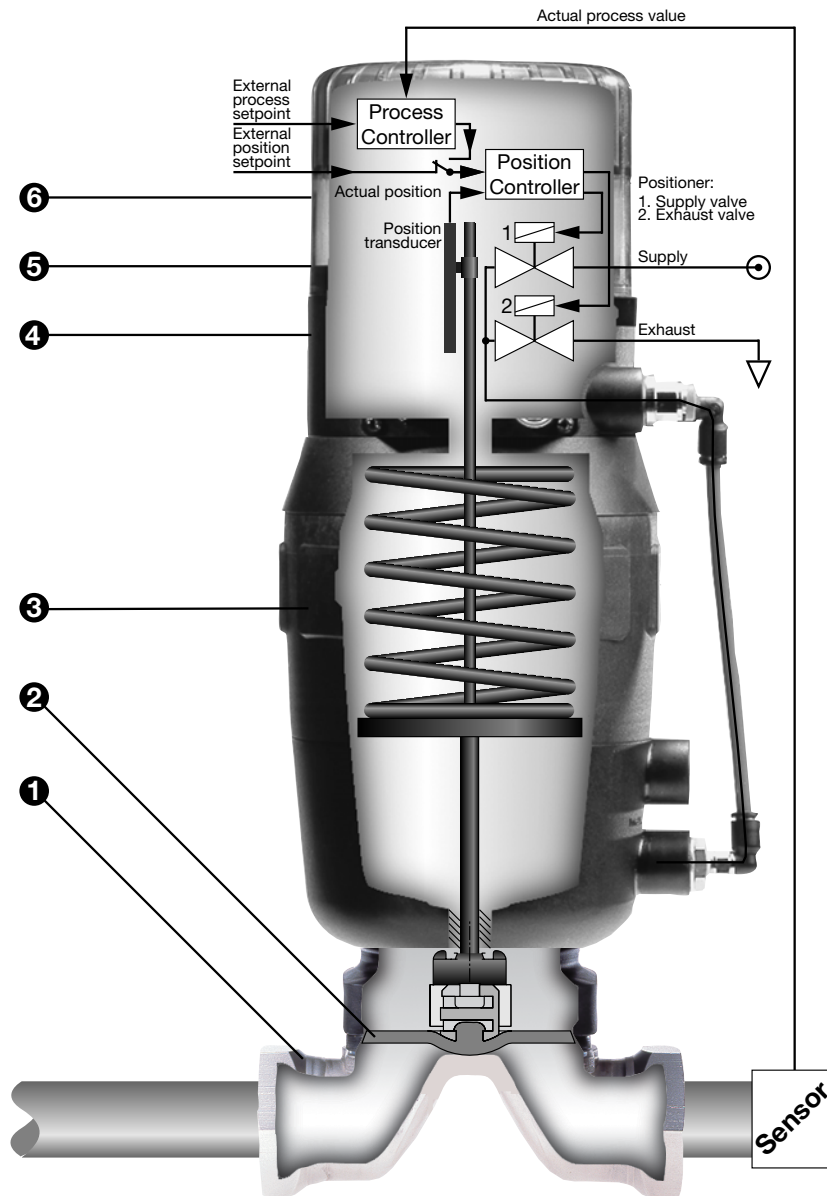
#### Analog position feedback:



Display



Functional Diagram / Materials



The TOP Control as **position controller** has standard signal inputs to preset the external position set points.

An integrated microprocessor compares the actual position with the external set point and adjusts the valve to the desired position by activating the internal pilot valves. Position feedback, binary outputs and limit switch outputs can be connected to a central PLC.

The TOP Control as **process controller** uses an external process signal (i.e. coming from a sensor as frequency, Pt 100 or 4-20 mA) to adjust the position of the valve to the desired process setpoint, preset by an external PLC or fed into the TOP Control manually. The process control as a main control circuit dominates with a PID algorithm the position control circuit in a cascade function.

Materials:

1 Valve Body

- Plastic
  - PVC with true union or solvent spigot
  - PVDF with fusion spigot
- Cold formed stainless steel
  - G, NPT and Rc threaded
  - Butt weld ends
  - ISO 4220, DIN 11850 R2, O.D. tubing (BS 4825 Part 1)
  - Flange
  - DIN 2633, ANSI Class 150, JIS 10K
- Forged stainless steel
  - Butt weld ends
  - ISO 4200, DIN 11850 series 2, SMS 3008, BS O.D. tubing, JIS sanitary, JIS utility
  - Clamp connection
  - ISO 2852, BS 4825 (Tri-Clamp®)
  - Dairy union per DIN 11851

2 Diaphragm

- EPDM
- PTFE and EPDM
- FKM
- CSM

3 Actuator

PA (Poly Amide) or PPS (Poly Phenylene Sulfide)

4 TOP Control (lower cap - black)

POM (Poly Oxy Methylene)

5 TOP Control (sealing)

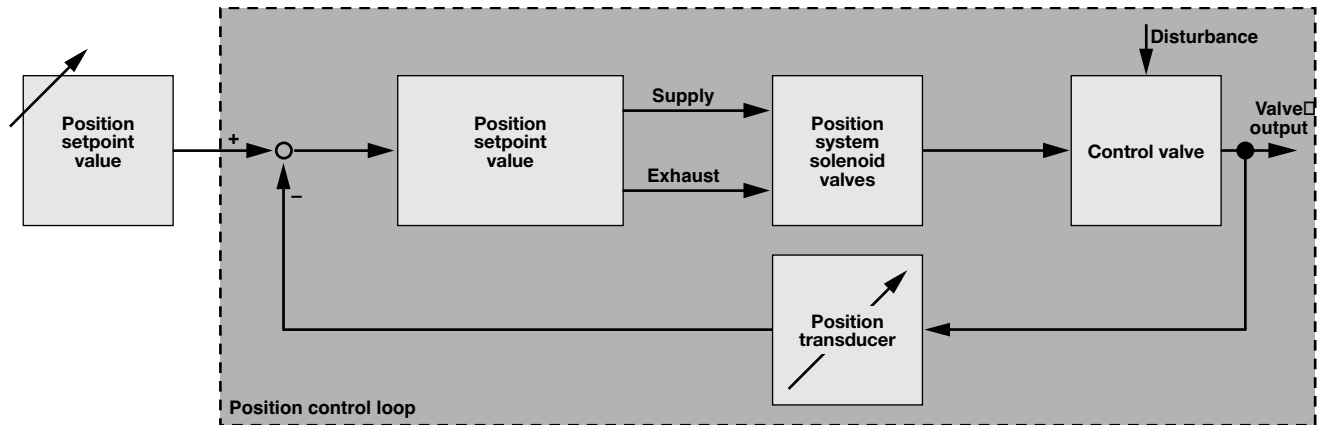
NBR (Nitril Buna Rubber)

6 TOP Control (upper cap - transparent)

PSU (Ultrason S)

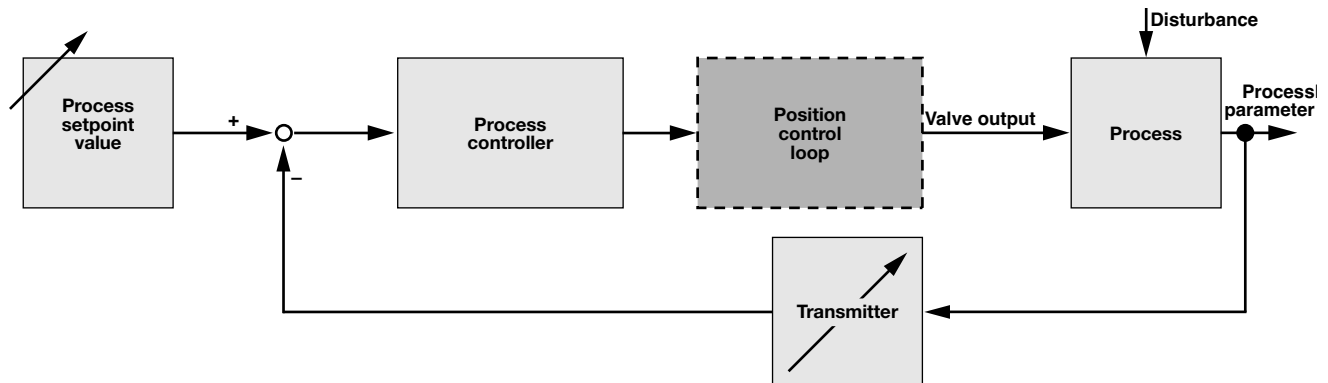


### TOP Control as Position Controller



The actual position of the pneumatic actuator is sensed by a position transducer. The position controller compares this actual value with an internal or external setpoint value. In case of a control difference, a pulse width modulated voltage signal transmits the new position value to the position system.

### TOP Control as Process Controller



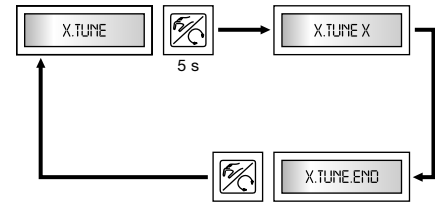
When the TOP Control is used for process control, the position control loop works as a secondary service control loop. The process controller in the main control loop has a PID algorithmic function. The process setpoint value will be compared with the actual value of the process parameter to be controlled. This actual value is a sensor signal.

## Software Characteristics

### Specific Functions of the Positioner:

#### ★ Autotune Function

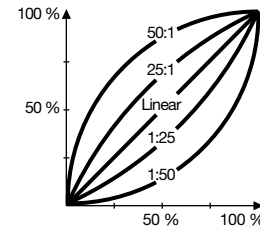
Automatic adjustment to the connected valve (self calibration).



#### ★ Characteristic Curves for Process Valve Adjustment

(correction characteristics)

- linear curve
- equal percentage curve; rangeability 1 : 25
- equal percentage curve; rangeability 1 : 33
- equal percentage curve; rangeability 1 : 50
- inverse equal percentage curve; rangeability 25 : 1
- inverse equal percentage curve; rangeability 33 : 1
- inverse equal percentage curve; rangeability 50 : 1
- freely programmable curve; user defined (21 points)

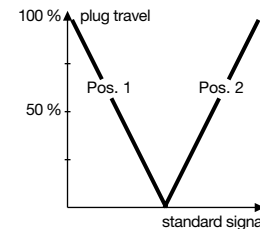


#### • Different Inputs

4–20 mA, 0–20 mA, 0–10 V or 0–5 V

#### • Split Range of the Set Value Signal Range

The signal is split in two or more positions.  
This allows the standard signal to split into two or more ranges (with or without overlap), which are transferred to two or more positioners. This again enables you to use two or more valves partially either simultaneously or in sequence as a final controlling element.



#### • Dead Band

The positioner acts only if a specified control difference is measured.

#### • Inversion of the Effective Direction of Actual Value and External Setpoint

#### • Closed Tight Function

The valve is tightly closed over the tightness process range.

#### • Stroke Limitation

#### • Speed Limitation

To open or close the valve with a defined maximum speed.

#### • Safety Position / Code Lock

The valve moves to a specified safety position.

### Additional Specific Functions of the Positioner with Integrated PID:

#### ★ Control Type: PID

#### ★ Autotune Function

Self adaptation of the process controller to the actual process conditions.

#### ★ Teach In (for Flow Control Systems)

#### • Calibration of Parameters

Proportional coefficient, reset time, action rate and operating point.

#### • Input Signals to be Scaled

Analog input 4–20 mA, frequency or Pt 100

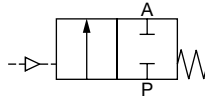
#### • Internal (via display keys) or External Setpoint

## Technical Data

### Circuit Functions

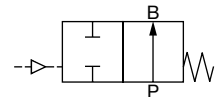
**A** – 2/2-way valve

normally closed by spring return



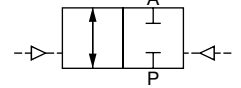
**B** – 2/2-way valve

normally open by spring return



**I** – 2/2-way valve

with double-acting actuator



### Specifications

Valve Size (Orifice)		On/Off Control	C <sub>v</sub> Continuous Control	Control Pressure for Circuit Function A <sup>1)</sup>	Max. Operating Pressure for Circuit Function (A, B and I) • PVC, True Union • PVC, Solvent Spigot • PVDF, Fusion Spigot	Actuator Size ø	Seal (Diaphragm)	Weight	
NPT	[mm]							On/Off [lbs.]	Continuous [lbs.]
1/2"	15	4.1	Please See Separate Chart Below	68 - 87	145	63	EPDM	6.17	6.61
1/2"	15	4.1		68 - 87	145	63	PTFE/EPDM	6.17	6.61
3/4"	20	8.2		65 - 87	145	80	EPDM	7.93	8.37
3/4"	20	8.2		65 - 87	145	80	PTFE/EPDM	7.93	8.37
1"	25	14.6		65 - 87	145	80	EPDM	8.15	8.59
1"	25	14.6		65 - 87	125	80	PTFE/EPDM	8.15	8.59
1-1/4"	32	22.2		58 - 87	145	100	EPDM	11.46	11.90
1-1/4"	32	22.2		58 - 87	116	100	PTFE/EPDM	11.46	11.90
1-1/2"	40	32.8		67 - 87	145	125	EPDM	15.87	16.31
1-1/2"	40	32.8		67 - 87	145	125	PTFE/EPDM	15.87	16.31
2"	50	46.8		58 - 87	112	125	EPDM	18.51	18.96
2"	50	46.8		58 - 87	102	125	PTFE/EPDM	18.51	18.96

All pressures quoted are gauge pressures with respect to the prevailing atmospheric pressure.

1) Control pressures circuit functions B and I, please see control pressure charts on next page.

### Flow Capacity – Plastic 2030

Plug Travel [%]	1/2" (DN 15)	3/4" (DN 20)	1" (DN 25)	C <sub>v</sub> 1-1/4" (DN 32)	1-1/2" (DN 40)	2" (DN 50)
0	0.00	0.00	0.00	0.00	0.00	0.00
10	0.08	0.15	0.46	1.17	2.22	3.51
20	0.17	0.37	1.28	3.04	6.55	10.53
30	0.32	0.93	2.45	5.96	11.81	18.72
40	0.51	1.87	4.21	10.06	20.12	30.42
50	0.77	3.04	7.13	16.14	28.19	40.95
60	1.19	4.33	10.88	22.23	34.16	49.14
70	1.80	5.61	13.92	24.57	39.19	57.33
80	2.53	6.78	15.79	25.74	41.53	64.35
90	3.52	8.19	16.61	26.91	43.05	67.86
100	4.44	8.54	16.96	27.50	43.29	70.20

### Operating Data

#### Connections

PVC, true union  
PVC, solvent spigot  
PVDF, fusion spigot

#### Circuit function

A, B and I

#### Nominal pressure

145 PSI

#### Min. control pressure

29 PSI

#### Max. control pressure

109 PSI

#### Max. viscosity

600 centistokes

#### Ambient temperature

min. 32°F (0°C)  
max. 122°F (50°C)

#### Fluid temperature

##### with PVC

min. 32°F (0°C)  
max. 140°F (60°C)

##### with PVDF

min. 32°F (0°C)  
max. 248°F (120°C)

##### with PP

min. 14°F (-10°C)  
max. 248°F (120°C)

#### Body material

PVC, PVDF or PP

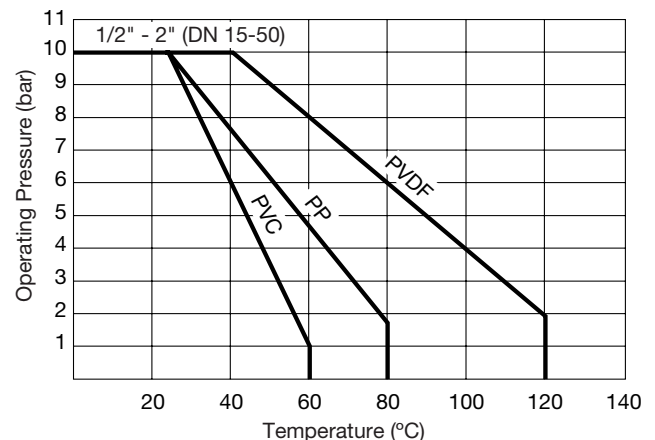
#### Seal material

EPDM or EPDM/PTFE

#### Fluids

Contaminated / Aggressive

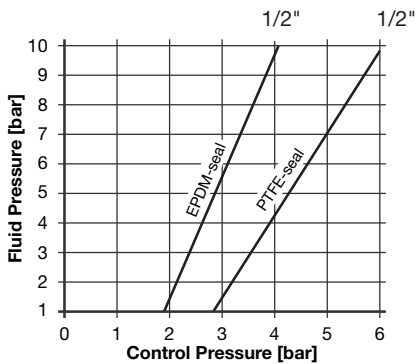
### Operating pressure depending on fluid temperature



Note: 1 bar = 14.5 PSI

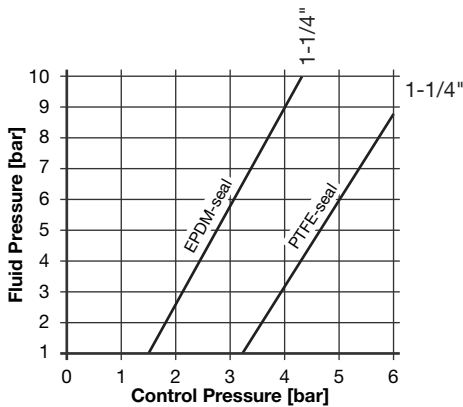
Control Pressures

Circuit Function B and I  
Actuator size ø63 mm



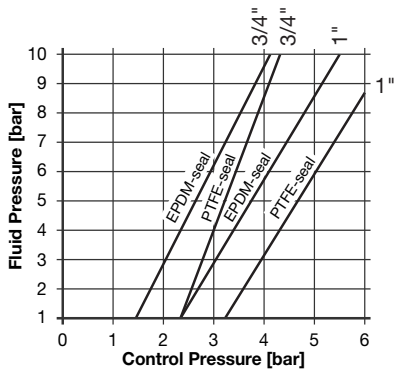
Note: 1 bar = 14.5 PSI

Circuit Function B and I  
Actuator size ø100 mm



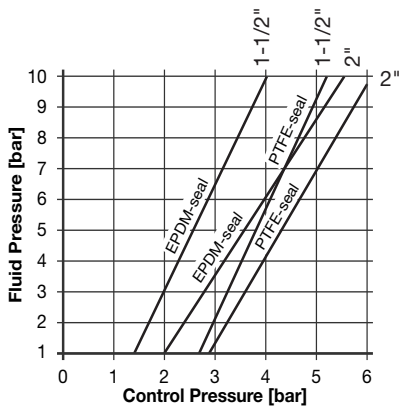
Note: 1 bar = 14.5 PSI

Circuit Function B and I  
Actuator size ø80 mm



Note: 1 bar = 14.5 PSI

Circuit Function B and I  
Actuator size ø125 mm



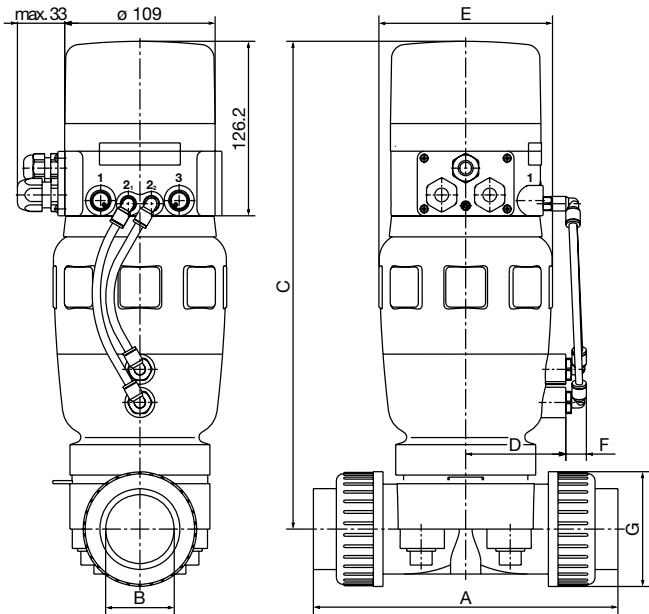
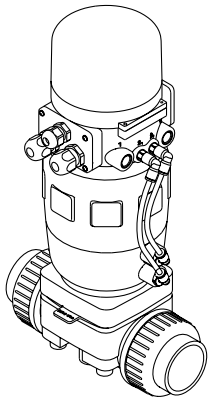
Note: 1 bar = 14.5 PSI

DTS 1000082558 EN Version: - Status: RL (released | freigegeben | valide) printed: 13.08.2008

Dimensions [inch]

• PVC with True Union

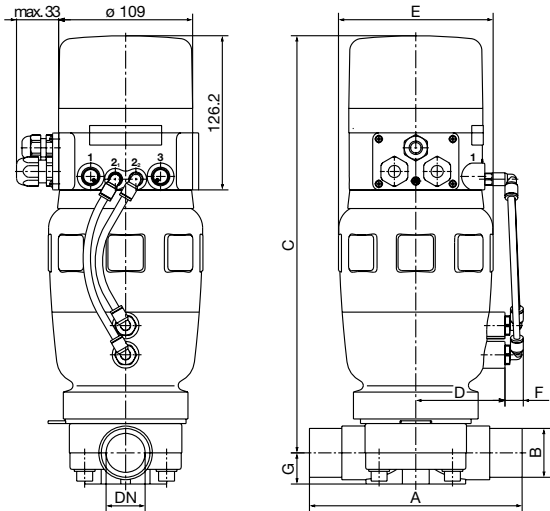
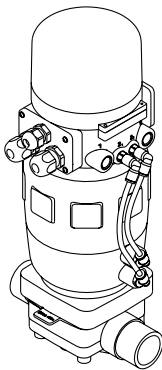
Orifice		Actuator Size ø [mm]	Measurements						
NPT	[mm]		A [inch]	B [inch]	C [inch]	D [inch]	E [inch]	F [inch]	G [inch]
1/2"	15	63	5.03	0.78	10.00	2.04	3.13	1.06	1.69
3/4"	20	80	5.98	0.98	11.33	2.36	3.96	0.59	2.08
1"	25	80	6.53	1.25	11.45	2.36	3.96	0.59	2.36
1-1/4"	32	100	7.55	1.57	13.62	2.87	4.98	0.59	2.91
1-1/2"	40	125	8.74	1.96	15.43	3.38	6.20	0.59	3.26
2"	50	125	10.47	2.48	15.70	3.38	6.20	0.59	4.05



Dimensions [inch]

- PVC with Solvent Spigot
- PP with Fusion Spigot
- PVDF with Fusion Spigot

Orifice		Actuator Size ø [mm]	Measurements						
NPT	[mm]		A [inch]	B [inch]	C [inch]	D [inch]	E [inch]	F [inch]	G [inch]
1/2"	15	63	4.88	0.78	9.96	2.04	3.13	1.06	0.55
3/4"	20	80	5.66	0.98	11.33	2.36	3.96	0.59	0.70
1"	25	80	6.06	1.25	11.45	2.36	3.96	0.59	0.82
1-1/4"	32	100	6.85	1.57	13.58	2.87	4.98	0.59	1.02
1-1/2"	40	125	7.63	1.96	15.39	3.38	6.20	0.59	1.30
2"	50	125	8.81	2.48	16.06	3.38	6.20	0.59	1.53

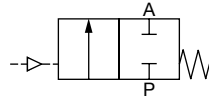




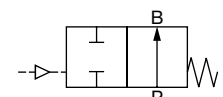
**Technical Data**

**Circuit Functions**

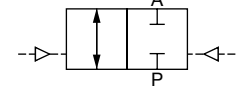
**A** – 2/2-way valve  
normally closed by spring return



**B** – 2/2-way valve  
normally open by spring return



**I** – 2/2-way valve  
with double-acting actuator



**Specifications for Threaded Ends, Butt Weld\* Ends (\*ISO 4220 only) and Flange**

Valve Size (Orifice)		On/Off Control	C <sub>v</sub> Continuous Control	Control Pressure (A, B and I) [PSI]	Maximum Operating Pressure for Circuit Function (A, B and I) [PSI]	Actuator Size ø [mm]	Seal (Diaphragm)	Weight			
NPT	[mm]							• Threaded Ends • Butt Weld Ends ISO 4220		• Flange	
								On/Off [lbs.]	Continuous [lbs.]	On/Off [lbs.]	Continuous [lbs.]
1/2"	15	6.3	Please See Separate Chart on Next Page	68 - 102	145	63	EPDM	3.74	4.18	6.56	7.01
1/2"	15	6.3		68 - 102	145	63	PTFE/EPDM	3.74	4.18	6.56	7.01
3/4"	20	15.8		65 - 102	145	80	EPDM	5.07	5.51	9.21	9.65
3/4"	20	15.8		65 - 102	145	80	PTFE/EPDM	5.07	5.51	9.21	9.65
1"	25	25.7		65 - 102	145	80	EPDM	6.17	6.61	10.58	11.02
1"	25	25.7		65 - 102	116	80	PTFE/EPDM	6.17	6.61	10.58	11.02
1-1/4"	32	38.6		58 - 102	145	100	EPDM	9.70	10.14	16.31	16.75
1-1/4"	32	38.6		58 - 102	116	100	PTFE/EPDM	9.70	10.14	16.31	16.75
1-1/2"	40	50.3		68 - 102	145	125	EPDM	15.87	16.31	22.92	23.36
1-1/2"	40	50.3		68 - 102	145	125	PTFE/EPDM	15.87	16.31	22.92	23.36
2"	50	86.6		65 - 102	116	125	EPDM	16.97	17.41	27.11	27.55
2"	50	86.6		65 - 102	102	125	PTFE/EPDM	16.97	17.41	27.11	27.55

**Specifications for Butt Weld\* Ends (\*DIN 11850 R2 only)**

Valve Size (Orifice)		On/Off Control	C <sub>v</sub> Continuous Control	Control Pressure (A, B and I) [PSI]	Maximum Operating Pressure for Circuit Function (A, B and I) [PSI]	Actuator Size ø [mm]	Seal (Diaphragm)	Weight	
NPT	[mm]							• Butt Weld Ends DIN 11850 R2	
								On/Off [lbs.]	Continuous [lbs.]
1/2"	15	5.3	Please See Separate Chart on Next Page	68 - 102	145	63	EPDM	3.52	3.96
1/2"	15	5.3		68 - 102	145	63	PTFE/EPDM	3.52	3.96
3/4"	20	5.3		65 - 102	145	63	EPDM	3.52	3.96
3/4"	20	5.3		65 - 102	145	63	PTFE/EPDM	3.52	3.96
1"	25	15.8		65 - 102	145	80	EPDM	5.29	5.73
1"	25	15.8		65 - 102	145	80	PTFE/EPDM	5.29	5.73
1-1/4"	32	21.1		58 - 102	145	80	EPDM	6.17	6.61
1-1/4"	32	21.1		58 - 102	145	80	PTFE/EPDM	6.17	6.61
1-1/2"	40	28.7		68 - 102	145	100	EPDM	9.70	10.14
1-1/2"	40	28.7		68 - 102	145	100	PTFE/EPDM	9.70	10.14
2"	50	43.3		65 - 102	145	125	EPDM	16.09	16.53
2"	50	43.3		65 - 102	145	125	PTFE/EPDM	16.09	16.53

**Specifications for Butt Weld\* Ends (\*O.D. Tubing BS 4825 Part 1 only)**

Valve Size (Orifice)		On/Off Control	C <sub>v</sub> Continuous Control	Control Pressure (A, B and I) [PSI]	Maximum Operating Pressure for Circuit Function (A, B and I) [PSI]	Actuator Size ø [mm]	Seal (Diaphragm)	Weight	
NPT	[mm]							• Butt Weld Ends O.D. Tubing (BS 4825 Part 1)	
								On/Off [lbs.]	Continuous [lbs.]
3/4"	20	5.3	Please See Separate Chart on Next Page	65 - 102	145	63	EPDM	3.52	3.96
3/4"	20	5.3		65 - 102	145	63	PTFE/EPDM	3.52	3.96
1"	25	14.0		65 - 102	145	80	EPDM	5.29	5.73
1"	25	14.0		65 - 102	145	80	PTFE/EPDM	5.29	5.73
1-1/2"	40	31.6		68 - 102	145	100	EPDM	9.70	10.14
1-1/2"	40	31.6		68 - 102	145	100	PTFE/EPDM	9.70	10.14
2"	50	49.1		65 - 102	145	125	EPDM	16.09	16.53
2"	50	49.1		65 - 102	145	125	PTFE/EPDM	16.09	16.53

All pressures quoted are gauge pressures with respect to the prevailing atmospheric pressure.

## Technical Data

### Flow Capacity

for threaded ends, butt weld\* ends  
(\*ISO 4220 only) and flange

Plug Travel [%]	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
0	0.00	0.00	0.00	0.00	0.00	0.00
10	0.05	0.09	0.32	0.46	0.70	1.75
20	0.23	0.81	1.40	1.87	3.62	6.20
30	0.58	2.45	2.92	4.91	8.30	9.82
40	1.28	5.03	6.31	10.29	15.91	21.41
50	2.10	7.13	10.06	15.44	21.41	35.21
60	3.27	9.47	14.74	20.70	30.53	49.95
70	4.44	11.81	18.36	26.20	41.06	68.21
80	5.49	14.15	21.99	32.99	47.73	79.09
90	6.08	15.67	25.38	37.44	49.95	85.17
100	6.31	15.79	25.74	38.10	50.31	86.58

### Flow Capacity

for butt weld\* ends  
(\*DIN 11850 R2 only)

Plug Travel [%]	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
0	0.00	0.00	0.00	0.00	0.00	0.00
10	0.04	0.04	0.09	0.12	0.35	0.60
20	0.19	0.19	0.81	1.08	1.39	3.12
30	0.49	0.49	2.45	3.27	3.65	7.14
40	1.07	1.07	5.03	6.70	7.64	13.68
50	1.75	1.75	7.13	9.51	11.46	18.42
60	2.72	2.72	9.47	12.63	15.37	26.27
70	3.70	3.70	11.81	15.76	19.45	35.33
80	4.58	4.58	14.15	18.87	24.49	41.07
90	5.06	5.06	15.67	21.06	27.32	42.98
100	5.26	5.26	15.79	21.06	28.66	43.29

### Flow Capacity

for butt weld\* ends  
(\*O.D. tubing BS 4825 Part 1 only)

Plug Travel [%]	3/4"	1"	1-1/2"	2"
0	0.00	0.00	0.00	0.00
10	0.04	0.08	0.39	0.69
20	0.19	0.72	1.72	3.54
30	0.49	2.18	3.59	8.10
40	1.07	4.46	7.75	15.53
50	1.75	6.34	12.34	20.90
60	2.72	8.42	18.08	29.82
70	3.70	10.50	22.54	40.10
80	4.58	12.58	26.99	46.62
90	5.06	13.93	31.15	48.80
100	5.26	14.04	31.59	49.14

## Operating Data

### Connections

Threaded ends

G, NPT and Rc

Butt weld ends

ISO 4220

DIN 11850 R2

O.D. tubing (BS 4825 Part 1)

Flange

DIN 2633

ANSI Class 150

JIS 10K

Circuit function

A, B and I

Body material

Cold formed stainless steel

Seal material

EPDM or EPDM/PTFE

Fluids

Polluted, dirty, abrasive or  
highly viscous liquids

Nominal pressure

145 PSI

Min. control pressure

29 PSI

Max. control pressure

102 PSI

Max. viscosity

600 centistokes

Ambient temperature

min. 32°F (0°C)

max. 122°F (50°C)

Fluid temperature

min. 14°F (-10°C)

max. 284°F (140°C)

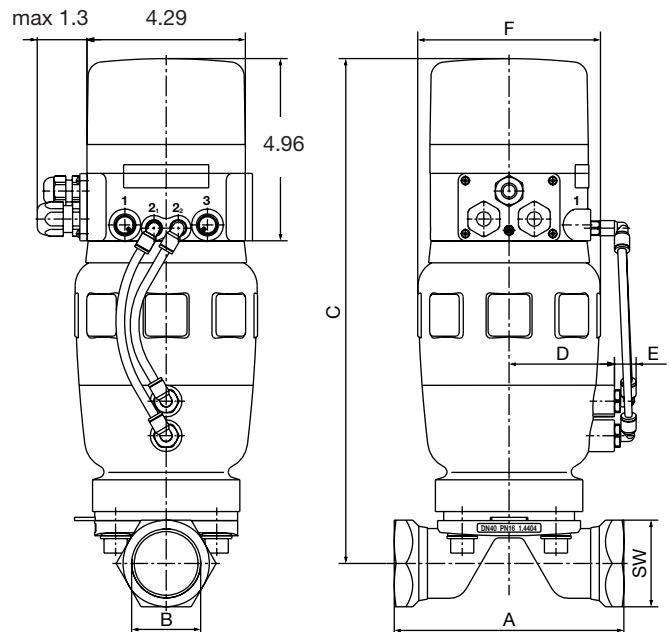
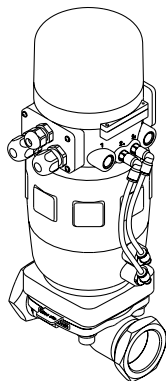
## Dimensions [inch]

### • Stainless steel - G

- NPT

- Rc

Orifice		Actuator Size ø [mm]	Measurements						
NPT	[mm]		A [inch]	B [inch]	C [inch]	D [inch]	E [inch]	F [inch]	G [inch]
1/2"	15	63	4.01	1/2	10.00	2.04	1.06	3.13	1.06
3/4"	20	80	4.64	3/4	11.37	2.36	0.59	3.96	1.25
1"	25	80	5.00	1	11.49	2.36	0.59	3.96	1.61
1-1/4"	32	100	5.74	1-1/4	13.58	2.87	0.59	4.98	1.96
1-1/2"	40	125	6.25	1-1/2	15.31	3.38	0.59	6.20	2.36
2"	50	125	7.51	2	15.47	3.38	0.59	6.20	2.75



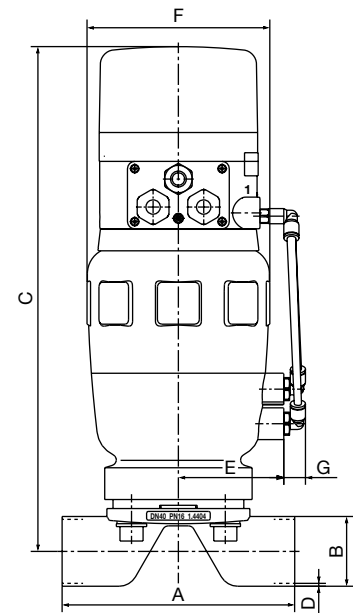
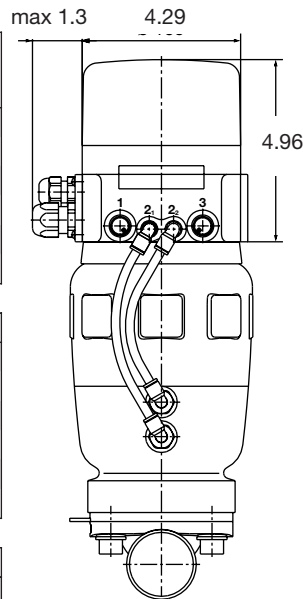
**Dimensions [inch]**

- **Stainless Steel** - Butt weld ends per ISO 4220
- Butt weld ends per DIN 11850 R2
- Butt weld ends O.D. tubing (BS 4825 Part 1)

Orifice		Actuator Size ø [mm]	Measurements per ISO 4220						
NPT	[mm]		A [inch]	B [inch]	C [inch]	D [inch]	E [inch]	F [inch]	G [inch]
1/2"	15	63	4.33	0.83	10.00	0.06	2.04	3.13	1.06
3/4"	20	80	4.68	1.05	11.37	0.06	2.36	3.96	0.59
1"	25	80	5.07	1.32	11.49	0.07	2.36	3.96	0.59
1-1/4"	32	100	5.82	1.66	13.58	0.07	2.87	4.98	0.59
1-1/2"	40	125	6.33	1.90	15.31	0.07	3.38	6.20	0.59
2"	50	125	7.55	2.37	15.47	0.07	3.38	6.20	0.59

		Actuator Size ø [mm]	Measurements per DIN 11850 R2						
NPT	[mm]		A [inch]	B [inch]	C [inch]	D [inch]	E [inch]	F [inch]	G [inch]
1/2"	15	63	4.33	0.74	10.00	0.05	2.04	3.13	1.06
3/4"	20	63	4.68	0.90	10.07	0.05	2.04	3.13	1.06
1"	25	80	5.07	1.14	11.49	0.05	2.36	3.96	0.59
1-1/4"	32	80	5.82	1.37	11.61	0.05	2.36	3.96	0.59
1-1/2"	40	100	6.33	1.61	13.70	0.05	2.87	4.98	0.59
2"	50	125	7.55	2.08	15.47	0.05	3.38	6.20	0.59

		Actuator Size ø [mm]	Measurements per O.D. Tubing						
NPT	[mm]		A [inch]	B [inch]	C [inch]	D [inch]	E [inch]	F [inch]	G [inch]
3/4"	20	63	4.01	0.75	9.96	0.05	2.04	3.13	1.06
1"	25	80	4.48	1.00	11.33	0.06	2.36	3.96	0.59
1-1/4"	40	100	5.51	1.50	13.50	0.06	2.87	4.98	0.59
1-1/2"	50	125	6.33	2.00	15.35	0.06	3.38	6.20	0.59



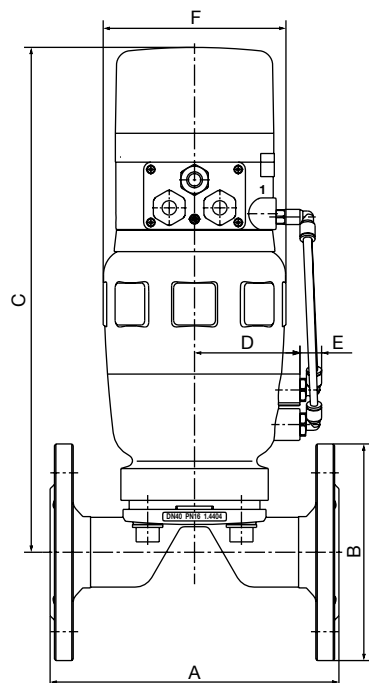
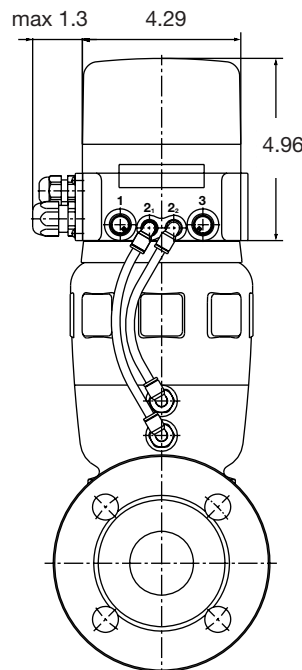
**Dimensions [inch]**

- **Stainless Steel** - Flange per DIN 2633
- Flange per ANSI Class 150
- Flange per JIS 10K

Orifice		Actuator Size ø [mm]	Measurements per DIN 2633						
NPT	[mm]		A [inch]	B [inch]	C [inch]	D [inch]	E [inch]	F [inch]	G [inch]
1/2"	15	63	5.11	3.74	10.00	2.04	1.06	3.13	
3/4"	20	80	5.90	4.13	11.37	2.36	0.59	3.96	
1"	25	80	6.29	4.52	11.49	2.36	0.59	3.96	
1-1/4"	32	100	7.08	5.51	13.58	2.87	0.59	4.98	
1-1/2"	40	125	7.87	5.90	15.31	3.38	0.59	6.20	
2"	40	125	7.87	5.90	15.31	3.38	0.59	6.20	

		Actuator Size ø [mm]	Measurements per ANSI Class 150						
NPT	[mm]		A [inch]	B [inch]	C [inch]	D [inch]	E [inch]	F [inch]	G [inch]
1/2"	15	63	5.11	3.74	10.00	2.04	1.06	3.13	
3/4"	20	80	5.90	4.13	11.37	2.36	0.59	3.96	
1"	25	80	6.29	4.52	11.49	2.36	0.59	3.96	
1-1/4"	32	100	7.08	5.51	13.58	2.87	0.59	4.98	
1-1/2"	40	125	7.87	5.90	15.31	3.38	0.59	6.20	

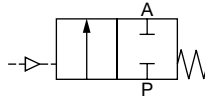
		Actuator Size ø [mm]	Measurements per JIS 10K						
NPT	[mm]		A [inch]	B [inch]	C [inch]	D [inch]	E [inch]	F [inch]	G [inch]
1/2"	15	63	5.11	3.74	10.00	2.04	1.06	3.13	
3/4"	20	80	5.90	4.13	11.37	2.36	0.59	3.96	
1-1/4"	32	100	7.08	5.51	13.58	2.87	0.59	4.98	
1-1/2"	40	125	7.87	5.90	15.31	3.38	0.59	6.20	



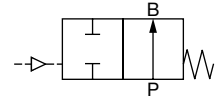
## Technical Data

### Circuit Functions

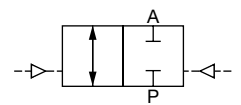
**A** – 2/2-way valve  
normally closed by spring return



**B** – 2/2-way valve  
normally open by spring return



**I** – 2/2-way valve  
with double-acting actuator



### Specifications

Valve Size (Orifice)		On/Off Control	C <sub>v</sub> Continuous Control	Control Pressure for Circuit Function (A, B and I) [PSI]	Maximum Operating Pressure for Circuit Function (A, B and I) [PSI]	Actuator Size ø [mm]	Seal (Diaphragm)	Weight	
NPT	[mm]							On/Off [lbs.]	Continuous [lbs.]
1/2"	15	5.6	Please See Separate Chart Below	68 - 102	145	63	Elastomere <sup>1)</sup>	4.0	4.4
1/2"	15	5.6		68 - 102	145	63	PTFE	4.0	4.4
3/4"	20	8.2		65 - 102	145	80	Elastomere <sup>1)</sup>	6.2	6.6
3/4"	20	8.2		65 - 102	145	80	PTFE	6.2	6.6
1"	25	15.2		65 - 102	145	80	Elastomere <sup>1)</sup>	6.5	7.0
1"	25	15.2		65 - 102	116	80	PTFE	6.5	7.0
1-1/2"	40	40.7		65 - 102	145	125	Elastomere <sup>1)</sup>	14.5	10.2
1-1/2"	40	40.7		65 - 102	145	125	PTFE	14.5	10.2
2"	50	60.8		65 - 102	124	125	Elastomere <sup>1)</sup>	18.5	18.9
2"	50	60.8		65 - 102	102	125	PTFE	18.5	18.9

All pressures quoted are gauge pressures with respect to the prevailing atmospheric pressure.

1) Elastomere: EPDM, FKM, CSM

### Flow Capacity – Forged Stainless Steel

Plug Travel [%]	1/2"	3/4"	C <sub>v</sub> 1"	1-1/2"	2"
0	0.00	0.00	0.00	0.00	0.00
10	0.05	0.11	0.32	0.70	3.27
20	0.23	0.46	1.40	3.62	6.20
30	0.58	1.40	2.92	8.30	11.11
40	1.28	2.69	6.31	16.61	21.41
50	2.10	3.74	10.06	23.51	35.21
60	3.27	5.38	12.40	31.35	45.16
70	4.44	6.90	13.92	37.55	52.06
80	5.38	7.83	14.85	40.36	56.86
90	5.73	8.07	15.09	40.59	60.60
100	5.85	8.19	15.21	40.71	60.84

## Operating Data

### Connections

Butt weld ends

ISO 4220

DIN 11850 R2

SMS 3008

O.D. tubing (BS 4825 Part 1)

JIS sanitary

JIS utility

Clamp connections

ISO 2852

BS 4825 (Tri-Clamp®)

Dairy union

DIN 11851

Circuit function

A, B and I

Nominal pressure

145 PSI

Control pressure

Min. 29 PSI / Max. 102 PSI

Maximum viscosity

600 centistokes

Ambient temperature

32°F to 122°F

(0°C to 50°C)

Fluid temperature

14°F to 266°F

(-10°C to +130°C)

Max. 302°F (150°C) (CIP)

(Short time temp.)

Body material

Stainless Steel (316L)

Seal material

EPDM, FKM,

CSM or PTFE

Fluids

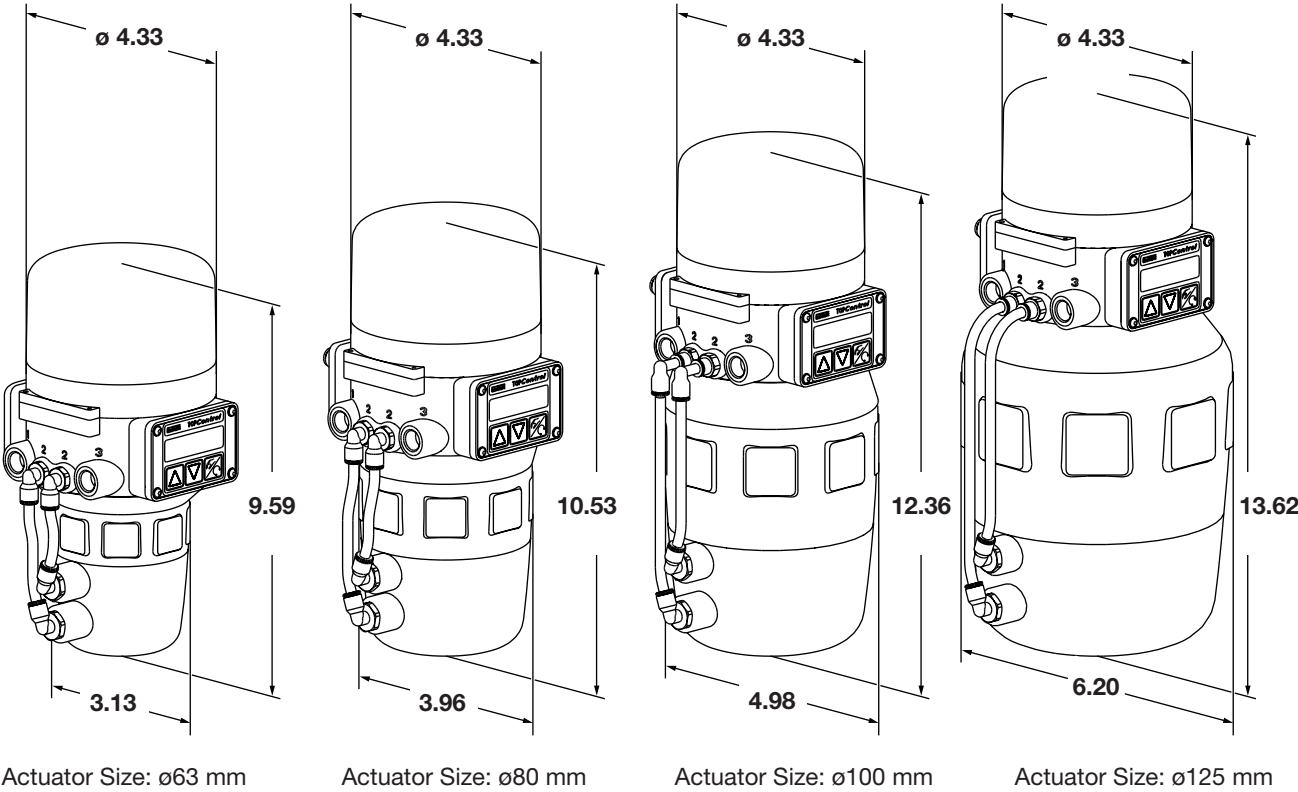
Ultra-pure, sterile,

aggressive, abrasive or

highly viscous fluids

**Operating pressure depends on fluid temperature**  
Please see diaphragm selection

Sizes of Assembled TOP Control and Actuator Unit [inch]





### Valve Body Material



#### Forged Bodies

Burkert high quality valve bodies are forged of 316L stainless steel, with Ferrite < 0.5%, C ≤ 0.03% to satisfy the requirements of high purity applications.

#### Defect free surface

- High quality surface of finished product - free from pinholes, crevices, impurities and subsurface porosity.
- Imperfections, well accepted in many industrial applications, could present enormous problems as bacteria traps in cell culture or other critical systems.

#### Low ferrite content

- Relatively ferrite-free alloy eliminates concern regarding ferrite contamination of the process.

### Surface Finishes

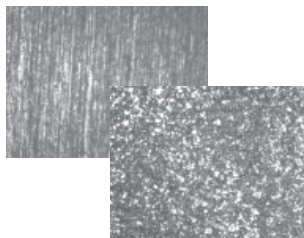
Burkert valve bodies meet and exceed the increasingly rigorous industry requirements for surface finishes. The exterior of Burkert valve bodies are glass beaded to a smooth patina, while a choice of two grit specifications is offered for interior surface finish, plus an electropolishing option.

Surface finish can be described by using the roughness average (Ra) parameter. Ra is defined as the average value of all absolute distances of the roughness profile from the center line within the measuring length.

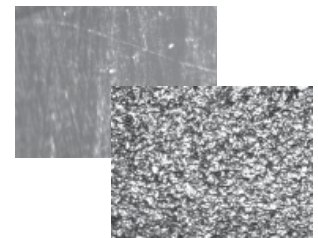
Electropolishing - A process that combines an electrical current and a chemical bath that removes metal from polished forgings at various rates. This process creates a superior surface finish over that produced by mechanical polishing. The results are more desirable in the critical services found in pharmaceutical and bioprocessing industries. Inherent benefits of electropolishing are:

- Contaminants such as lubricants and grit particles are removed with the surface layer
- Improves quality control by exposing surface pits and defective welding
- Surface leveling or balancing reduces the total surface height by up to 50% and alleviates much of the surface tension created by mechanical polishing
- Surface corrosion resistance is improved with the deposition of a continuous layer of chromium enhanced oxide
- High luster improves overall appearance
- All surfaces are easier to clean and sterilize

Burkert's forged bodies are available with a wide variety of custom surface finishes as low as 10 Ra. Standard combinations of internal and external surface finishes are:



Internal Ra ~ 20 to 25  $\mu$  in.  
Satin finish  
(180 grit)  
External Ra ~ 63  $\mu$  in.  
Glass Beaded



Internal Ra ~ 15 to 20  $\mu$  in.  
Electro-polish  
(240 grit)  
External Ra ~ 30  $\mu$  in.  
Electro-polish

Diaphragms

Specifically developed to handle the unique challenges of hygienic and sterile applications, Burkert diaphragms are manufactured with exacting material formulation and physical tolerances.

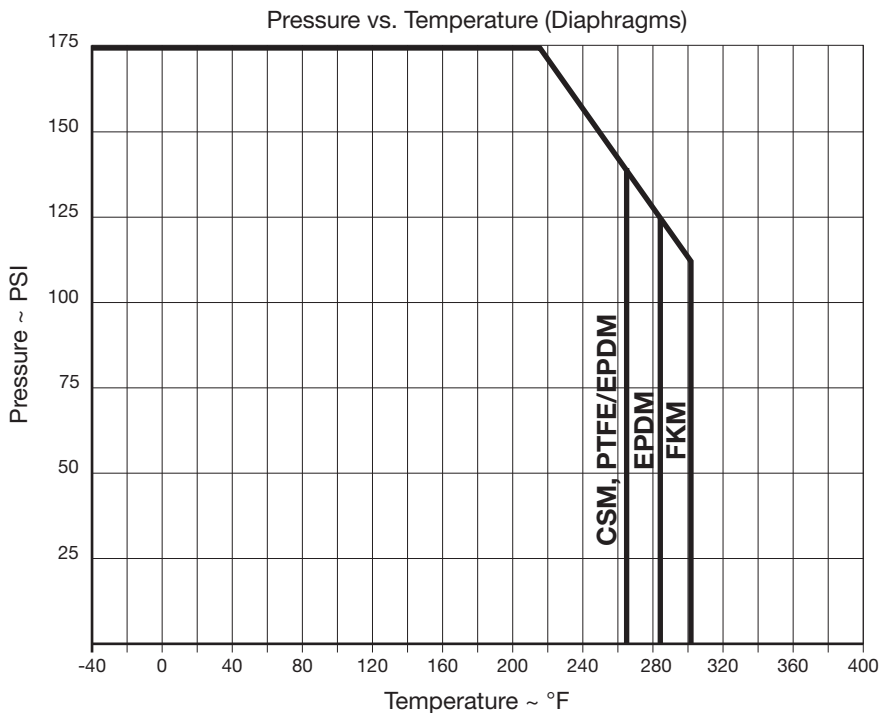
They are available in a range of materials which have been proven in the food, biotechnology, pharmaceutical and cosmetic industries.

Diaphragms are tested during development and manufacturing to ensure reliability in processing application environments.



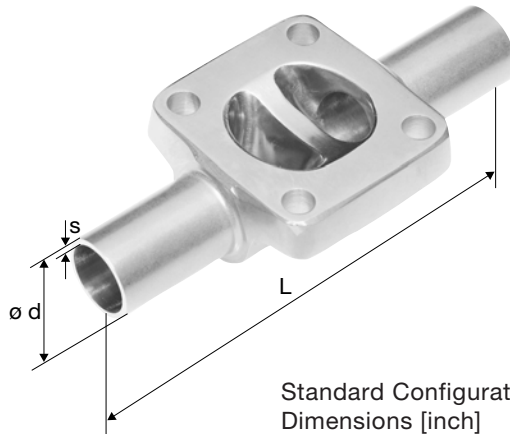
Diaphragm Materials

Material	Color	Temperature Range	Standards
EPDM (Ethylene-Propylene-Dien Monomer)	black	-40°F to 284°F	FDA and 3-A
PTFE & EPDM	white/black	+14°F to 266°F	FDA and 3-A
FKM	black	+20°F to 302°F	FDA and 3-A
CSM	black	-40°F to 266°F	FDA and 3-A

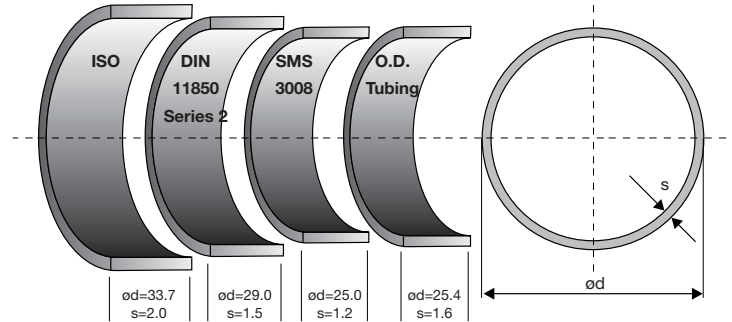


## End Types

### Butt Weld



Example: DN25 (1 inch)



Standard Configuration  
Dimensions [inch]

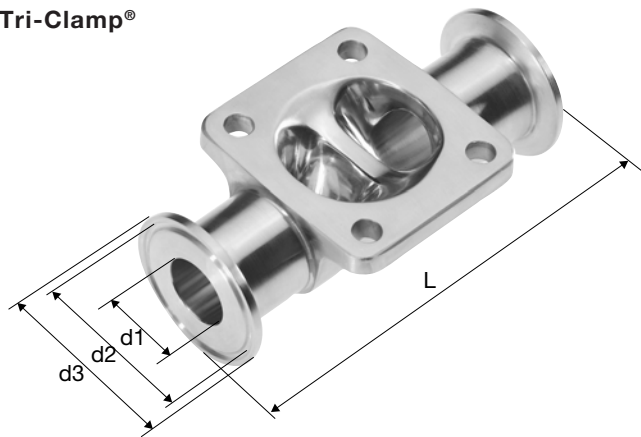
Valve Size	L	O.D. Tubing ød	s
1/4	3.54	.25	.065
1/2	4.33	.50	.065
3/4	4.69	.75	.065
1	5.08	1.00	.065
1-1/2	6.34	1.50	.065
2	7.56	2.00	.065

Optional Tubing  
Dimensions [mm]

DN	L	ISO 4200 ød	s	DIN 11850 Series 2 <sup>1)</sup> ød	s	SMS 3008 ød	s	JIS Sanitary ød	s	JIS Utility ød	s
8.0	90.0	13.5	1.6	—	—	—	—	13.8	1.65	—	—
15.0	110.0	21.3	1.6	19.0	1.5	—	—	21.7	1.65	—	—
20.0	119.0	26.9	1.6	23.0	1.5	—	—	—	—	27.2	2.0
25.0	129.0	33.7	2.0	29.0	1.5	25.0	1.2	25.4	1.2	34.0	2.0
40.0	161.0	48.3	2.0	41.0	1.5	38.0	1.2	38.1	1.2	48.6	2.0
50.0	192.0	60.3	2.3	53.0	1.5	51.0	1.2	50.8	1.5	60.5	2.0

<sup>1)</sup>DIN 11850 Series 1 and 3 also available

### Tri-Clamp®



Standard Configuration  
Dimensions [inch]

Valve Size	L	d1	d2	d3
1/2	3.50	.37	.78	1.00
3/4	4.00	.63	.78	1.00
1	4.50	.87	1.71	2.00
1-1/2	5.51	1.37	1.71	2.00
2	6.25	1.87	2.22	2.50

Optional Configuration  
Dimensions [mm]

DN	L	ISO 2852, SMS 3017 d1	d2	d3
15.0	110.0	9.5	19.7	25.0
20.0	119.0	15.9	19.7	25.0
25.0	129.0	22.2	43.5	50.5
40.0	161.0	34.9	43.5	50.5
50.0	192.0	47.6	56.5	64.0

On request; Clamp DIN 32676

### Sterile Threaded Ends



Standard Configuration  
Dimensions [inch]

Valve Size	Threaded Ends with Beveled Seat, 3-A-6300 Class 2G	
	L	G
1/2	—	—
3/4	—	—
1	5.00	1.46
1-1/2	6.26	1.99
2	7.50	2.53

Optional Configuration  
Dimensions [mm]

DN	DIN 11851		
	L	port size	G
15.0	89.0	18.10	Rd 34 x 1/8"
20.0	102.0	23.70	Rd 44 x 1/6"
25.0	115.0	29.70	Rd 52 x 1/6"
40.0	140.0	44.30	Rd 65 x 1/6"
50.0	159.0	56.30	Rd 78 x 1/6"

On request; All commonly used dairy unions per RJT, IDF, etc.

All valve bodies from Burkert are machined from forged material.

# Fluid Control System with Diaphragm Valve **TOP Control System 2030/31**

## For Polluted, Dirty, Aggressive and Ultra-Pure Fluids

Fax Order Form: Individual System Configurations

Part 1 of 3

Please select modules according specific application (either ON/OFF or Proportional Control):



### General Data

Configuration number: \_\_\_\_\_  
Quantity: \_\_\_\_\_

### Medium Data

Medium: \_\_\_\_\_  
Temperature: \_\_\_\_\_  
Pressure: Min. / Max. \_\_\_\_\_

## ON/OFF Control

### General Data

Command line coming from: PLC ☐  
Sensor ☐  
Relay/Switch ☐

### Actuator

Circuit function: Single acting ☐  
NC ☐  
NO (on request) ☐  
Double acting ☐  
Material: PA ☐  
PPS ☐



### Control Head

Control Head	No Bus	or	with Bus
Communication:			ASI Bus <input type="checkbox"/>
Power supply:	24 VDC <input type="checkbox"/> 120 VDC <input type="checkbox"/> 240 VDC <input type="checkbox"/>		
Electrical connection:	PG cable glands <input type="checkbox"/> EaseOn box <input type="checkbox"/>		PG cable glands (with round cable end) <input type="checkbox"/> Multipin <input type="checkbox"/>
Limit switches:	0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> Mechanical <input type="checkbox"/> Inductive <input type="checkbox"/> (for 24 VDC version only)		0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>
Pneumatic connection:	Brass <input type="checkbox"/> Stainless Steel <input type="checkbox"/> G <input type="checkbox"/> NPT <input type="checkbox"/> Rc <input type="checkbox"/>		Brass <input type="checkbox"/> Stainless Steel <input type="checkbox"/> G <input type="checkbox"/> NPT <input type="checkbox"/> Rc <input type="checkbox"/>

## Proportional Control

### Actuator

Circuit function: Single acting (NC) ☐  
Single acting (NO) ☐  
Quick exhaust ☐  
Double acting ☐  
Material: PA ☐  
PPS ☐



### TOP Control

Type of control: Position control ☐  
Process control ☐

Communication: DeviceNet ☐  
PROFIBUS DP ☐

Electrical connection: PG cable glands ☐  
EaseOn box ☐  
Multipin ☐

Outputs:  
Limit switches 0 ☐ 0 ☐  
(Multipin version only) 1 ☐ 1 ☐  
2 ☐ 2 ☐

Analog position feedback ☐  
2 Binary outputs (PG cable glands and Ease-On box versions: instead of input actual process value) ☐

Inputs:  
Binary input (Multipin version only) ☐  
Actual process value instead of 2 binary outputs ☐

Pneumatic connection: Brass ☐ Brass ☐  
Stainless Steel ☐ Stainless Steel ☐  
G ☐ G ☐  
NPT ☐ NPT ☐  
Rc ☐ Rc ☐

Please continue on next page

Please select modules according specific application:

Valve Body Type 2030

Type 2030 Item No.: (reference) .....

Material and corresponding ends:	PVC	<input type="checkbox"/>	Ends:	True union	<input type="checkbox"/>	Solvent spigots	<input type="checkbox"/>
	PVDF	<input type="checkbox"/>		Fusion spigots	<input type="checkbox"/>		
	PP	<input type="checkbox"/>		Weld ends	<input type="checkbox"/>		
Diaphragm material:	EPDM	<input type="checkbox"/>					
	PTFE / Butyl	<input type="checkbox"/>					
	PTFE / FKM	<input type="checkbox"/>					
	FKM	<input type="checkbox"/>					
Orifice:	1/2"	DN 15	<input type="checkbox"/>				
	3/4"	20	<input type="checkbox"/>				
	1"	25	<input type="checkbox"/>				
	1-1/4"	32	<input type="checkbox"/>				
	1-1/2"	40	<input type="checkbox"/>				
	2"	50	<input type="checkbox"/>				

Valve Body Type 2031 (General Purpose Version)

Type 2031 Item No.: (reference) .....

Material and corresponding ends:	Formed S.S.	<input type="checkbox"/>	Ends: threaded	G	<input type="checkbox"/>
				NPT	<input type="checkbox"/>
				Rc	<input type="checkbox"/>
			butt weld	ISO 4220	<input type="checkbox"/>
				DIN 11850 R2	<input type="checkbox"/>
			O.D. tubing (BS 4825 Part 1)		<input type="checkbox"/>
			flange	DIN 2633	<input type="checkbox"/>
				ANSI Class 150	<input type="checkbox"/>
				JIS 10K	<input type="checkbox"/>
Diaphragm material:	EPDM	<input type="checkbox"/>			
	PTFE / EPDM	<input type="checkbox"/>			
Orifice:	1/2"	DN 15	<input type="checkbox"/>		
	3/4"	20	<input type="checkbox"/>		
	1"	25	<input type="checkbox"/>		
	1-1/4"	32	<input type="checkbox"/>		
	1-1/2"	40	<input type="checkbox"/>		
	2"	50	<input type="checkbox"/>		

Valve Body Type 2031 (High Purity Version)

Type 2031 Item No.: (reference) .....

Material and corresponding ends:	Forged S.S.	<input type="checkbox"/>	Ends: threaded	G	<input type="checkbox"/>
				NPT	<input type="checkbox"/>
				Rc	<input type="checkbox"/>
			sterile threaded	DIN 11851	<input type="checkbox"/>
			butt weld	ISO 4200	<input type="checkbox"/>
				DIN 11850 - Series 1	<input type="checkbox"/>
				Series 2	<input type="checkbox"/>
				Series 3	<input type="checkbox"/>
				SMS 3008	<input type="checkbox"/>
				BS O.D. Tubing	<input type="checkbox"/>
				JIS sanitary	<input type="checkbox"/>
				JIS utility	<input type="checkbox"/>
			clamp connect.	ISO 2852 / SMS 3017	<input type="checkbox"/>
				BS 4825 Tri-Clamp	<input type="checkbox"/>
				DIN 32676	<input type="checkbox"/>
			others .....		<input type="checkbox"/>
Surface finish:	External	63µ in	<input type="checkbox"/>		
	(electropolished)	30µ in	<input type="checkbox"/>		
	Internal	20-25µ in	<input type="checkbox"/>		
	(electropolished)	15-20µ in	<input type="checkbox"/>		
Diaphragm material:	EPDM	<input type="checkbox"/>			
	PTFE / EPDM	<input type="checkbox"/>			
	FKM	<input type="checkbox"/>			
	CSM	<input type="checkbox"/>			
	Silicon	<input type="checkbox"/>			
	Others .....		<input type="checkbox"/>		
Orifice:	1/2"	DN 15	<input type="checkbox"/>		
	3/4"	20	<input type="checkbox"/>		
	1"	25	<input type="checkbox"/>		
	1-1/2"	40	<input type="checkbox"/>		
	2"	50	<input type="checkbox"/>		



**Customer Data**

Name of company: \_\_\_\_\_

Department: \_\_\_\_\_

Street / No.: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_

Country: \_\_\_\_\_

Name of contact person:

Name: \_\_\_\_\_

Telephone number: \_\_\_\_\_

Fax Number: \_\_\_\_\_ email: \_\_\_\_\_

Signature: \_\_\_\_\_



**Easy** to Order

Thank you very much for filling in our fax order form.

Please fax parts 1, 2 and 3 of this order form, using the appropriate fax number listed on the front page of this datasheet.

If you have any questions concerning this matter, please do not hesitate to contact us.

**bürkert**  
Fluid Control Systems