



PN16 Fully Lugged Electric Actuated

# BUTTERFLY VALVE

DATA SHEET



## Fully Lugged Actuated Butterfly Valve

### Description

Wide range of PN16 Fully Lugged Butterfly Valve and Electric Actuator Assemblies to provide automated ON/OFF control. Fitted with manual override, visual position indication and end position indication as standard.

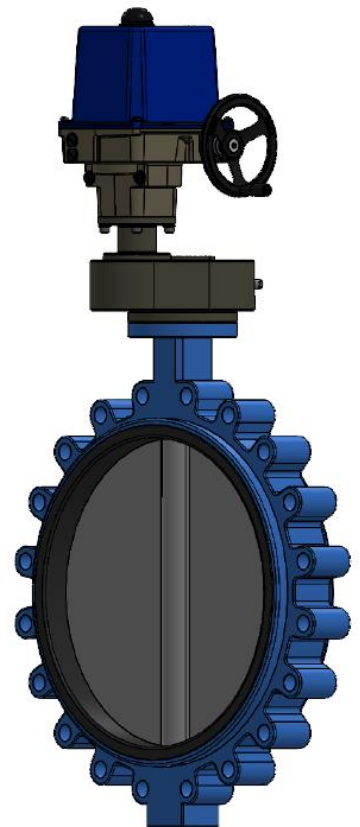
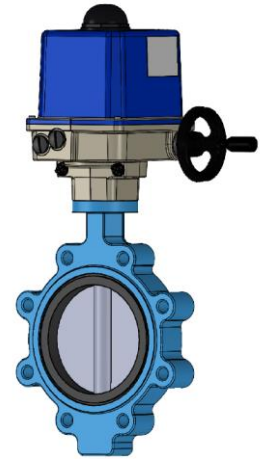
### Technical Details & Features

#### Butterfly Valve:

- Fully lugged bolt pattern suitable for PN16
- Body material – Spheroidal Graphite Ductile Iron
- Disc, Pin and Spindle material – AISI 431 Stainless Steel
- Seat material – Bonded Vulcanised EPDM
- Coating – Epoxy RAL 5015 [thickness 250  $\mu$ ]
- Maximum working pressure – 16bar
- Operating temperature range – minus 15 - 120°C

#### Electric Actuator:

- Electric quarter turn suitable for modulation
- Selected for Open/Closed duty
- Modulation Class C EN 15714-2
- Power supply options – 230VAC, 24V VAC and 24VDC
- Ambient temperature conditions – minus 20 - 80°C
- Well proven, very robust and maintenance free
- Enclosure IP67
- Visual position indication
- Manual de-clutchable override handle
- Fitted with end position limit switches as standard
- Compact design
- All actuators are self-locking
- Optional extra's – position transmitter & Space heater



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### Product Information

Valve size [mm]	230VAC		24VAC		24VDC	
	Operating Time [s]	Part Number	Operating Time [s]	Part Number	Operating Time [s]	Part Number
65	17.0	65FL16-230VAC.17	17.0	65FL16-24VAC.17	9.0	65FL16-24DC.9
80	17.0	80FL16-230VAC.17	17.0	80FL16-24VAC.17	9.0	80FL16-24DC.9
100	6.0	100FL16-230VAC.6	6.0	100FL16-24VAC.6	16.0	100FL16-24DC.16
	12.0	100FL16-230VAC.12	33.0	100FL16-24VAC.33		
	33.0	100FL16-230VAC.33	80.0	100FL16-24VAC.80		
	80.0	100FL16-230VAC.80				
125	23.0	125FL16-230VAC.23	23.0	125FL16-24VAC.23	32.0	125FL16-24DC.32
150	23.0	150FL16-230VAC.23	23.0	150FL16-24VAC.23	32.0	150FL16-24DC.32
200	20.0	200FL16-230VAC.20	28.0	200FL16-24VAC.28	16.0	200FL16-24DC.16
	28.0	200FL16-230VAC.28	69.0	200FL16-24VAC.69	60.0	200FL16-24DC.60
	69.0	200FL16-230VAC.69				
250	29.0	250FL16-230VAC.29	43.0	250FL16-24VAC.43	43.0	250FL16-24DC.43
	43.0	250FL16-230VAC.43	93.0	250FL16-24VAC.93		
	93.0	250FL16-230VAC.93				
300	29.0	300FL16-230VAC.29	43.0	300FL16-24VAC.43	43.0	300FL16-24DC.43
	43.0	300FL16-230VAC.43	93.0	300FL16-24VAC.93		
	93.0	300FL16-230VAC.93				
350	29.0	350FL16-230VAC.29	43.0	350FL16-24VAC.43	43.0	350FL16-24DC.43
	43.0	350FL16-230VAC.43	93.0	350FL16-24VAC.93	93.0	350FL16-24DC.93
	93.0	350FL16-230VAC.93				
400	29.0	400FL16-230VAC.29	93.0	400FL16-24VAC.93	43.0	400FL16-24DC.43
	43.0	400FL16-230VAC.43			120.0	400FL16-24DC.120
	93.0	400FL16-230VAC.93				
450	75.0	450FL16-230VAC.75	90.0	450FL16-24VAC.90	60.0	450FL16-24DC.60
500	75.0	500FL16-230VAC.75	90.0	500FL16-24VAC.90	60.0	500FL16-24DC.60
600	120.0	600FL16-230VAC.120	172.0	600FL16-24VAC.172	172.0	600FL16-24DC.172

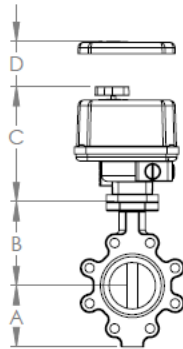
Simplified Valve Actuator combination Selection based on line size and closing time.



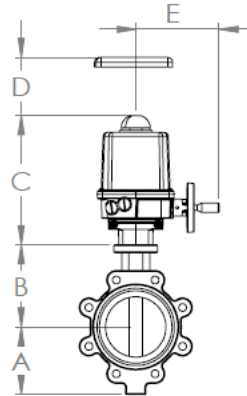
## Fully Lugged Actuated Butterfly Valve

### Dimensions

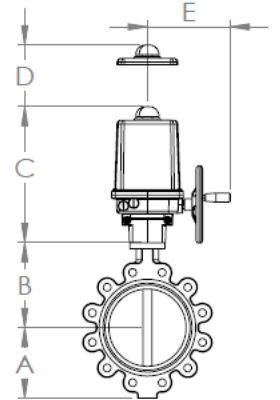
PSR- E25 / E50



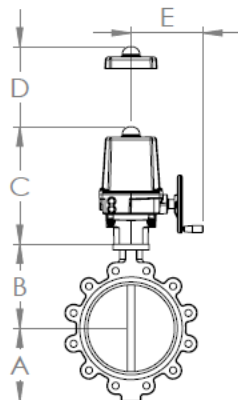
PSQ-E130



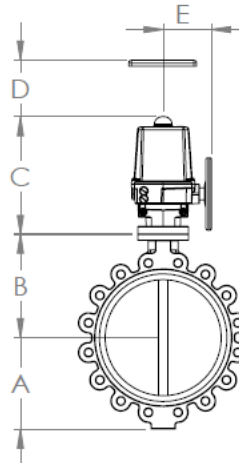
PSQ203



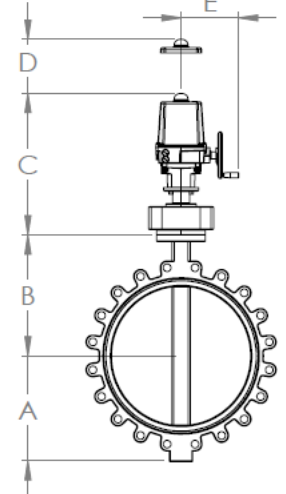
PSQ503 / 703



PSQ1003 / 1503



PSQ2803

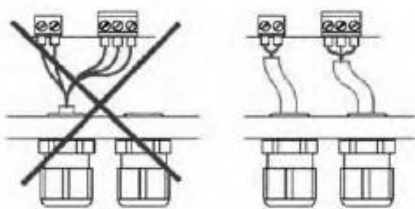
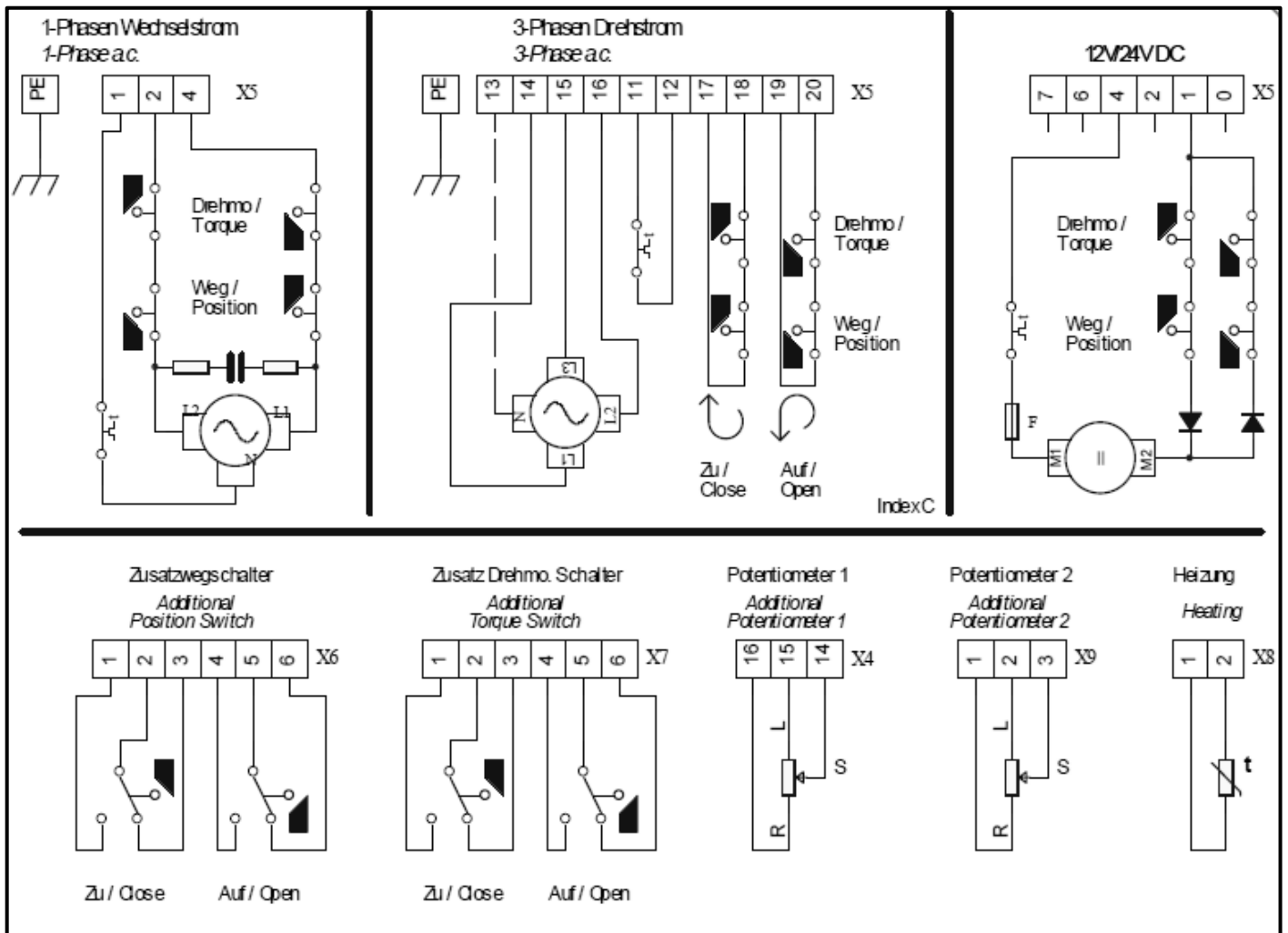


Valve Size	Actuator Selection	A	B	C	D	E
65	PSR-E25	94	140	186	100	-
80	PSR-E25	105	145	186	100	-
100	PSR-E50	126	160	186	100	-
125	PSQ-E130	140	170	268	161	172
150	PSQ-E130	151	190	268	161	172
200	PSQ203	183	220	355	228	214.5
250	PSQ503	217	260	406	240	248
300	PSQ503	252	290	406	240	248
350	PSQ703	285	320	406	240	248
400	PSQ1003	315	356	409	240	166
450	PSQ1503	384	387	409	240	166
500	PSQ1503	390	424	409	240	166
600	PSQ2803	455	524	608	240	248



## Fully Lugged Actuated Butterfly Valve

### Wiring Diagram

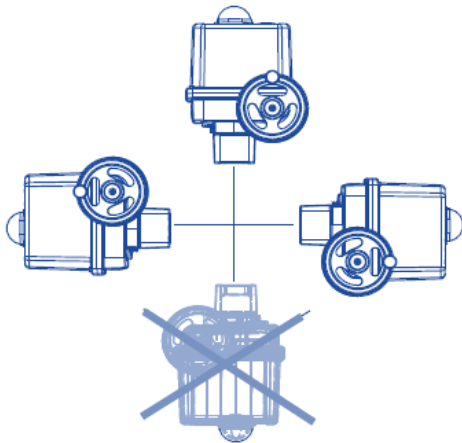


Please protect all of the power supply and control cables in front of the terminals mechanically by using suitable measures against unintentional loosening. Never install the power supply and the control cables together in one line but instead please always use two different lines.



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### Mounting Position



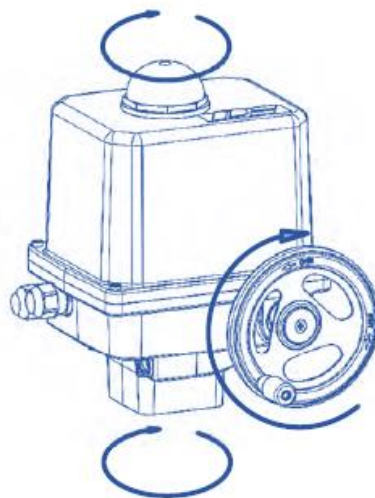
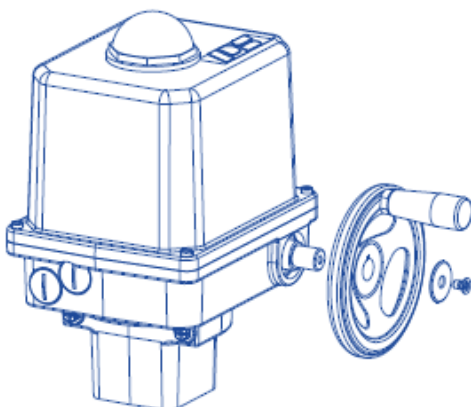
### Outdoor Usages:



When using actuator in environments with high temperature fluctuation or high humidity, we suggest fitting a heating resistor to prevent condensation build-up within the enclosure.

### Manual Operation

The actuators are supplied with the handwheel supplied loose, once fitted it will provide manual operation in case of power failure or commissioning. The handwheel will idle when the motor is operational without the need for declutching.



## Fully Lugged Actuated Butterfly Valve

### Accessories

Various accessories are available in order to adapt the actuator to the various installation conditions. The table provides a selection overview. Please see the actuator data sheets for technical data. Mounting and commissioning instructions are available separately for each accessory. We will be pleased to advise you for any questions you may have.

Power Supply		230VAC 1~	115VAC 1~	24VAC 1~	400VAC 3~	24VDC
Position Signal Switches	2WE	✓	✓	✓	✓	✓
Position Signal Switches Gold	2WE Gold	✓	✓	✓	✓	✓
Additional Torque Switches	2DE	✓	✓	✓	✓	✓
Additional Torque Switches Gold	2DE Gold	✓	✓	✓	✓	✓
Positioner	PSAP	✓	✓) <sup>1</sup>	✓) <sup>1</sup>	✓) <sup>2</sup>	✓
Position Transmitter	PSPT	✓	✓	✓	✓) <sup>3</sup>	✓
Heating resistor	HR	✓	✓	✓	✓	✓
Potentiometer	PD	✓	✓	✓	✓	✓
Reversing Starter Contactor	WSM 01				✓	
Corrosion Protection	K2	Corrosion Protection K2 incl. Heating Resistor				
Inclosure IP67	IP	IP68 incl. Heating Resistor and corrosion Protection K2				

✓ = available

)<sup>1</sup> = PSAP with external relay required

)<sup>2</sup> = only to be used with reversing starter contactor

)<sup>3</sup> = supply voltage 24V or 115-230 V

#### For additional position and torque switches:



Standard switches with silver contacts are suitable for currents 100 mA at voltages in the range of 24 V to 230 V AC/DC. For lower power up to 0.12 VA (0.1 mA to 100 mA at 1 V to 24 V AC/DC) we recommend switches with gold contacts (2WE Gold and 2DC Gold).



With power supply 24 VAC the open motor phase can produce voltages up to 35 V due to motor-generated induction voltage.

