

New generation of butterfly valves and actuators

BELIMO[®]



Main menu

New generation of butterfly valves and actuators



2-way butterfly valve



3-way butterfly valve



Product benefits



Butterfly valve product range and technical data



Butterfly valve actuator product range and technical data



Butterfly valve actuator combinations



Retrofit



Product benefits



Butterfly valve product range and technical data



Parameterisation



Main menu

New generation of butterfly valves and actuators

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Product benefits



Menu

Benefits at a glance

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BACnet communication protocol

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- Comprehensive access to the application data
- Simple commissioning, programming and trouble shooting

Advantages

Menu

Easy commissioning and diagnosis via NFC

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- Simple commissioning, parameterisation and maintenance directly via smartphone – even without an actuator power supply
- Diagnosis indicators show the health status of the actuator
- Installation, operation and system parameters are accessible with the Belimo Assistant App via Near Field Communication (NFC) or via Bluetooth with the ZIP-BT-NFC converter

Advantages

Menu

Degree of protection IP66/67

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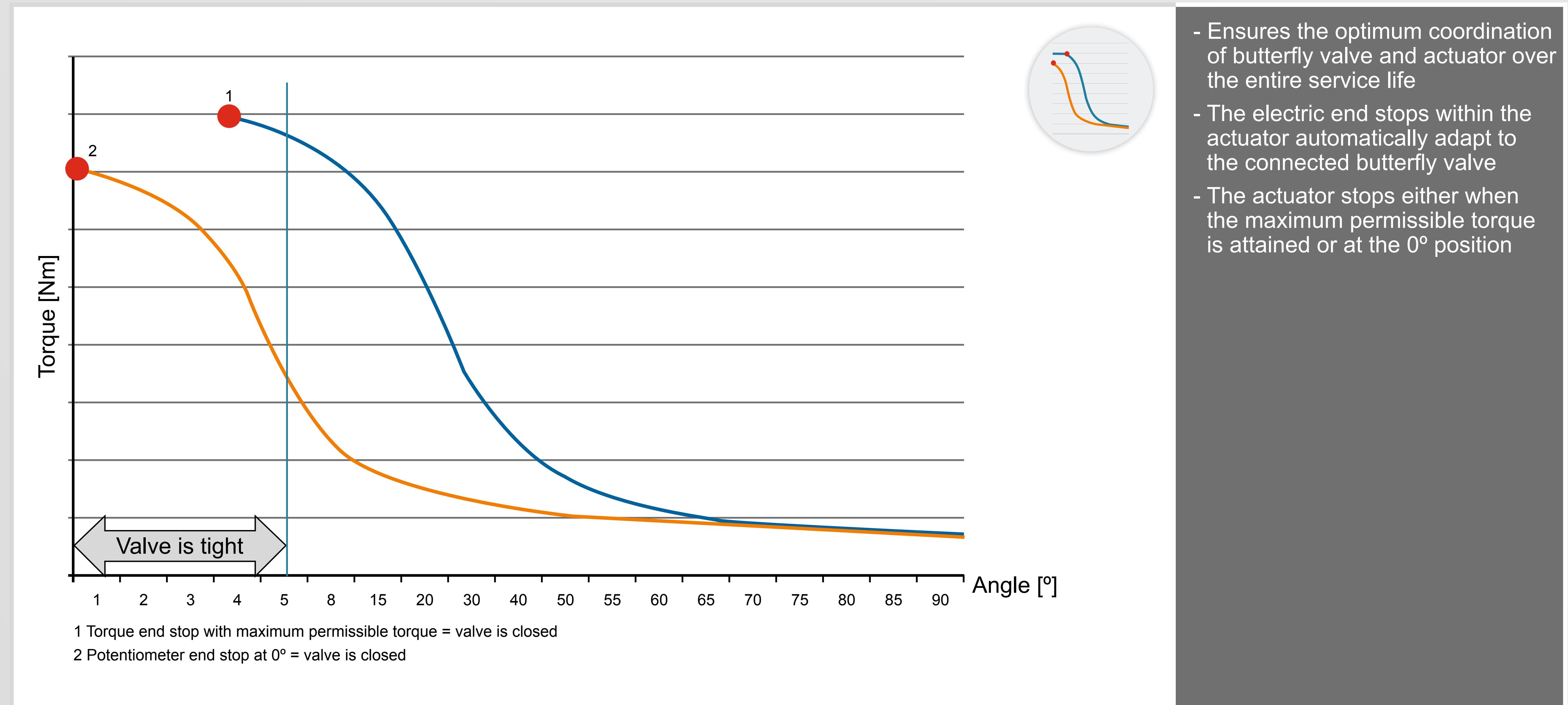


- Outdoor applications possible
- Protects the actuator from UV radiation, rain, snow, dirt, dust and humidity

Advantages

Menu

Intelligent, self-adjusting design

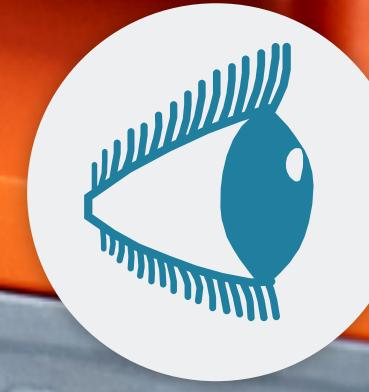


Advantages

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Visual position indicator

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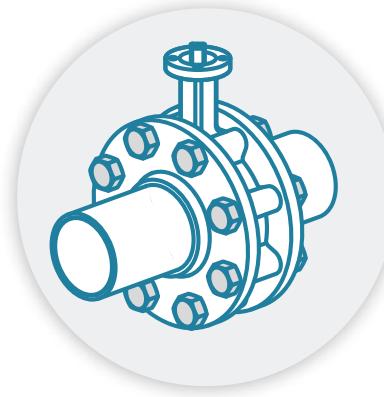
- Good visibility of butterfly valve position – even from a great distance
- As "linkage", at the same time performs the function of thermal insulation and prevents condensation in the actuator

Advantages

Menu

Various connection flanges

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Wafer type or lug type flanges
available in accordance with:

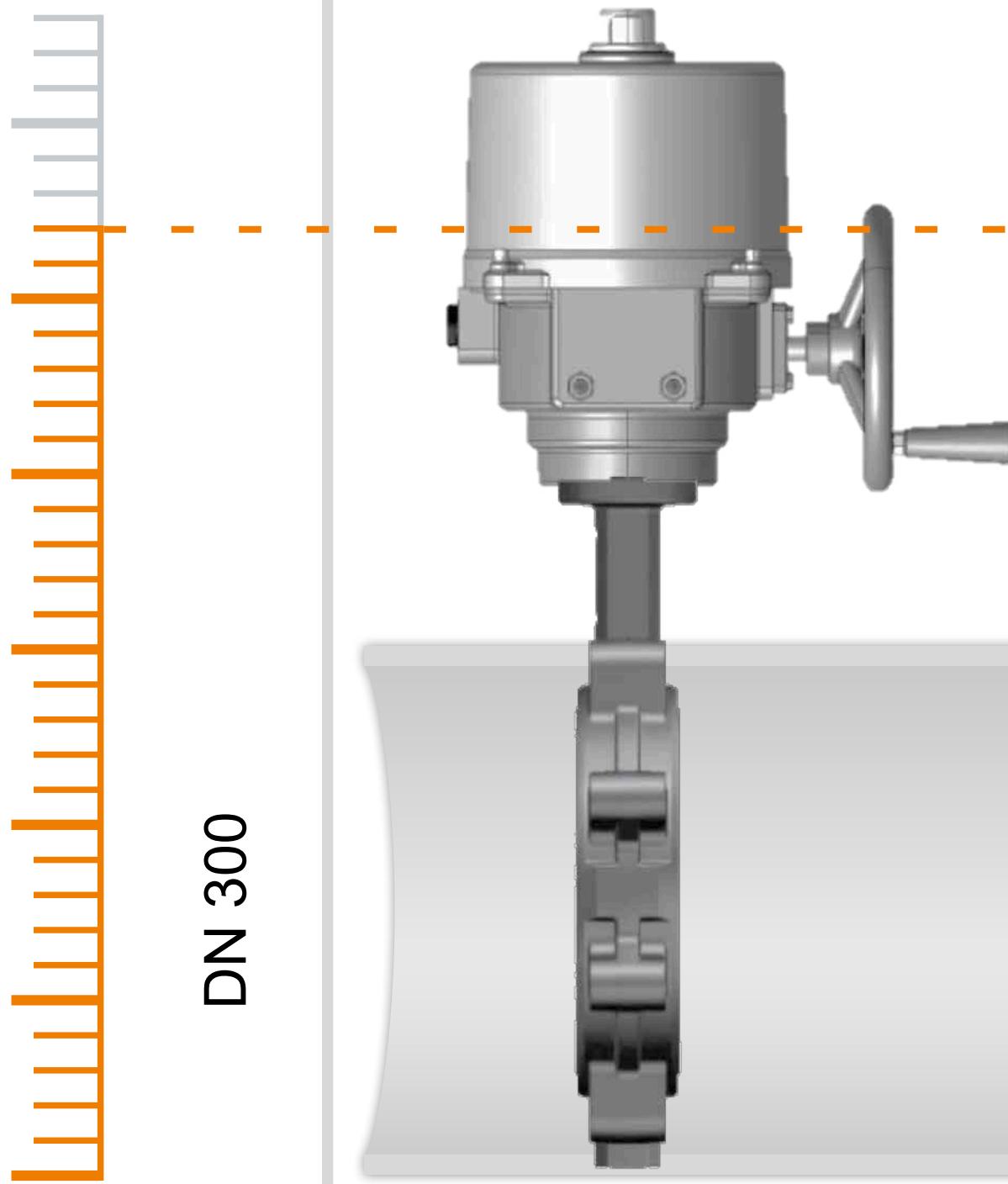
- ISO 7005-1/-2
- EN 1092-1/-2
- DIN 2641/2642

Advantages

Menu

Simple installation

Butterfly valve with
SY actuator
Weight: 22 kg



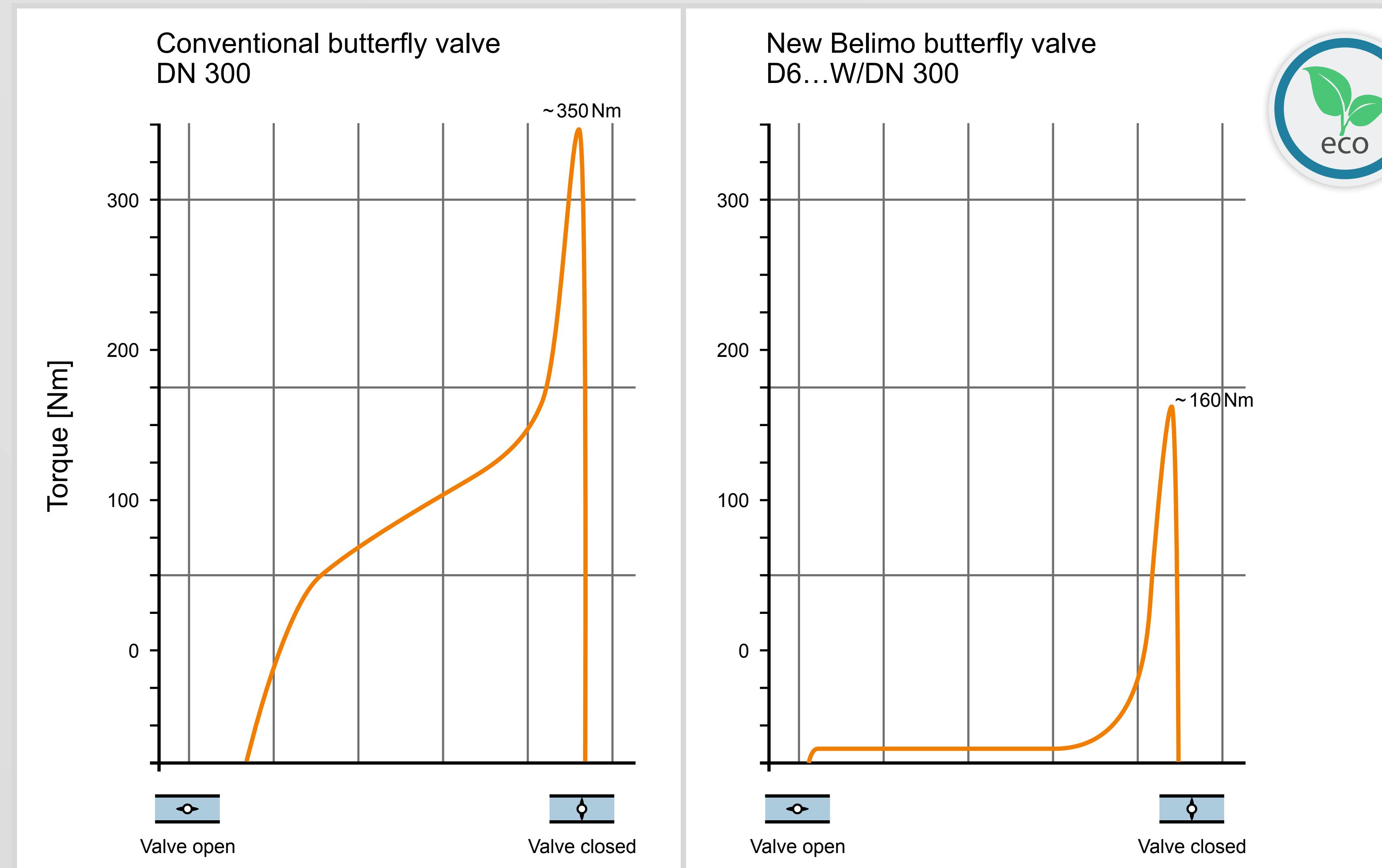
NEW generation

Butterfly valve with
PR actuator
Weight: 6 kg



- Low height and reduced weight of actuator
- Mounting on butterfly valve with just two screws
- Easily accessible connection box for quick and straightforward wiring

Energy savings of 80 percent



Reduced contact surface between valve seal and valve disk:

- Guarantees low torque for entire service life
- Cuts power consumption by 80 percent
- Reduces the costs of transformer and wiring

High safety – even during power failure

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Actuator types with BACnet and SuperCap emergency control function:

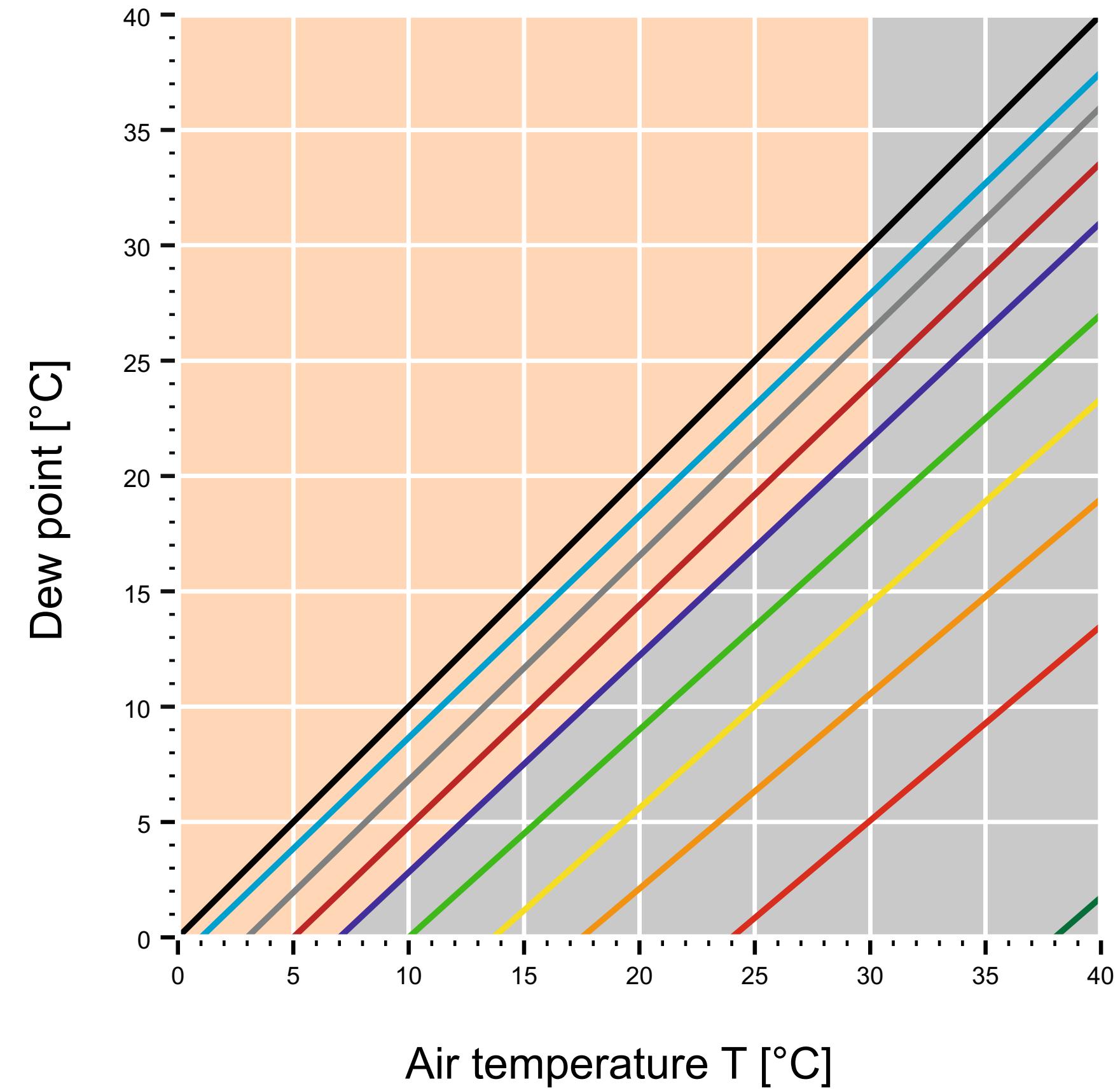
- Simple diagnosis and comprehensive data access
- Flexible configuration options (open-close, 3-point, modulating, MP-Bus[®], BACnet MS/TP, Modbus RTU)
- Power-off position (PoP): 0...100% adjustable

The PRK SuperCap actuator automatically moves into the desired safety position during voltage interruptions

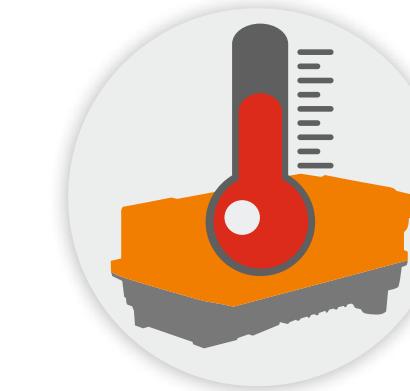
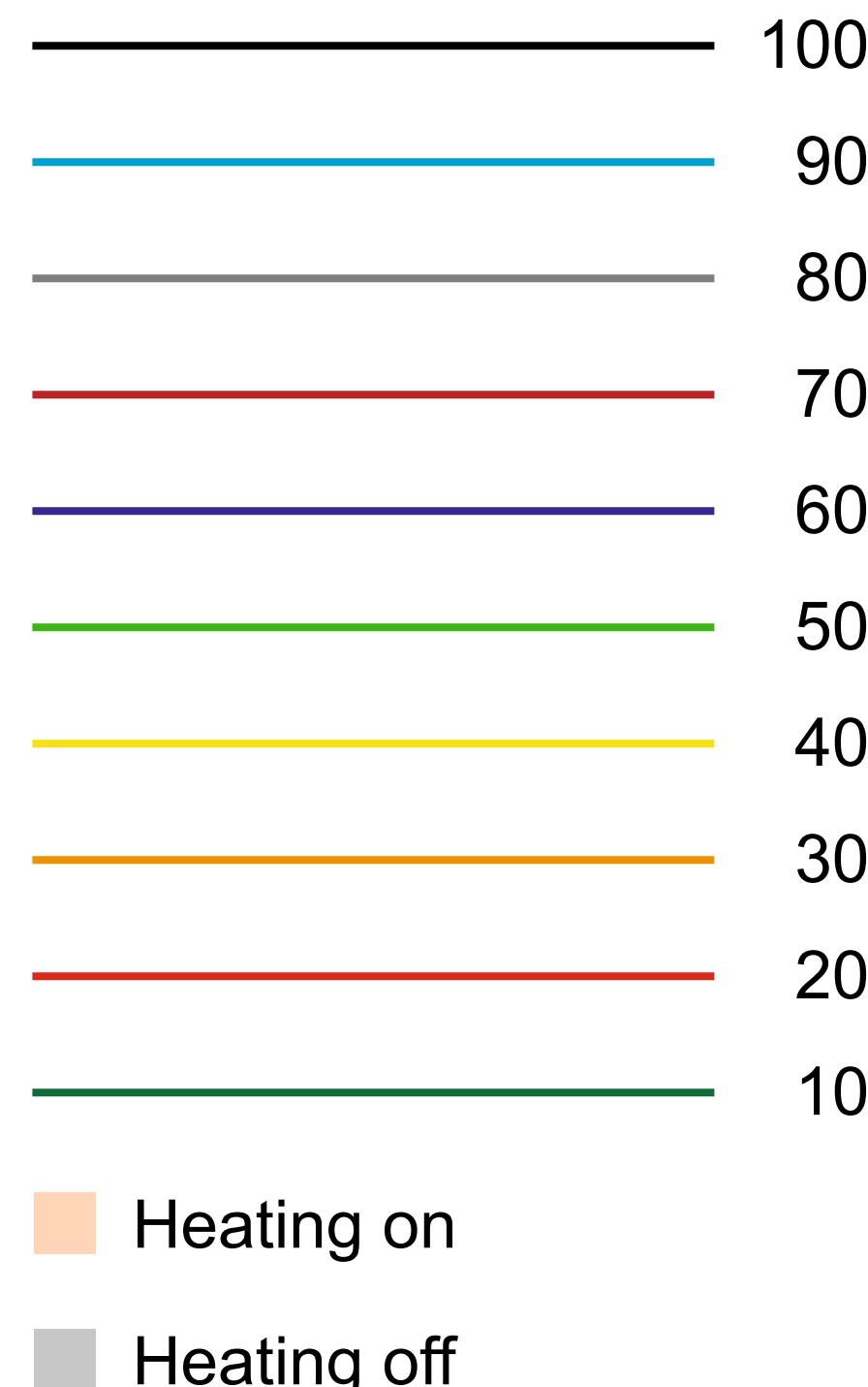
Advantages

Menu

Smart heating



Relative humidity [%]
(actuator):



- Thanks to the integrated temperature and humidity sensor, the internal heating function is switched on when required by the application
- Prevents condensation in the actuator and thus increases operating safety and service life

New generation of butterfly valves

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Product range and
technical data



Menu

2-way butterfly valve product range

		DN [mm]
D625N	D625NL	25
D632N	D632NL	32
D640N	D640NL	40
D650N	D650NL	50
D665N	D665NL	65
D680N	D680NL	80
D6100N	D6100NL	100
D6125N	D6125NL	125
D6150N	D6150NL	150
D6200W	D6200WL	200
D6250W	D6250WL	250
D6300W	D6300WL	300
D6350N	D6350NL	350
D6400N	D6400NL	400
D6450N	D6450NL	450
D6500N	D6500NL	500
D6600N	D6600NL	600
D6700N	D6700NL	700

With wafer type flanges

D6...N



D6...W



With lug type flanges

D6...NL

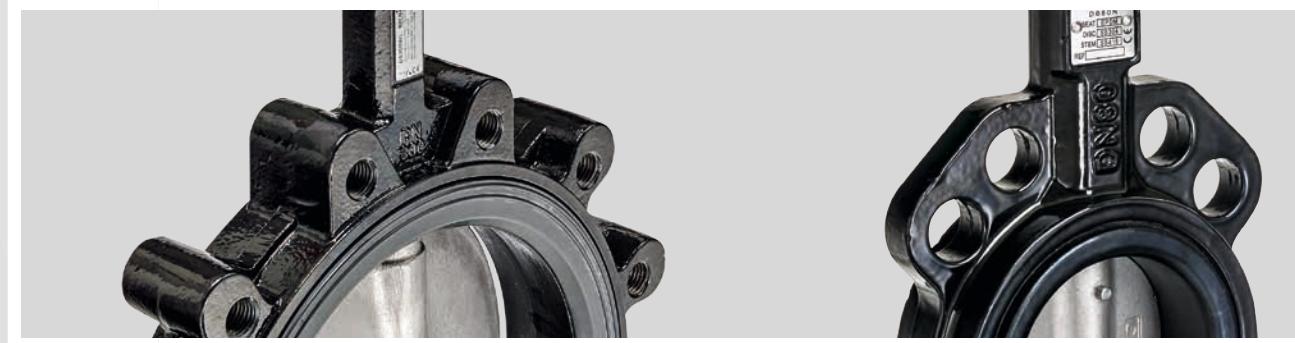


D6...WL



D6...N/NL 2-way butterfly valve product range

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D6...N wafer type flanges

D6...NL lug type flanges

		D6...N wafer type flanges	D6...NL lug type flanges
Functional data	Nominal diameters	DN 25...DN 150 DN 350...DN 700	
	Media	Cold and hot water Water with max. 50 % volume of glycol	
	Medium temperature		-20...120°C
	Leakage rate		Leakage rate A, tight (EN 12266-1)
	Pipe connections	DN 25...150: PN 6/10/16 DN 350: PN 10/16 DN 400...700: PN 16	DN 25...150: PN 10/16 DN 350...700: PN 16
Materials	Suitable connection flange	In accordance with ISO 7005-2 and EN 1092-2	
	Housing	EN-JS1030 spheroidal cast iron with epoxy powder coating	
	Closing element	Stainless steel 1.4301	
	Stem	Stainless steel 1.4005/sealing: EPDM	
	Seat	EPDM	

Menu

D6...W/WL 2-way butterfly valve product range



		D6...W wafer type flanges	D6...WL lug type flanges
Functional data	Nominal diameters	DN 200...DN 300	
	Media	Cold and hot water Water with max. 50 % volume of glycol	
	Medium temperature	–20...120°C	
	Leakage rate	Leakage rate A, tight (EN 12266-1)	
	Pipe connections	PN 6/10/16	PN 16
	Suitable connection flange	In accordance with ISO 7005-2 and EN 1092-2 In accordance with ISO 7005-1 and EN 1092-1 Crimped flange in accordance with DIN 2641 PN 6 & DIN 2642 PN 10	
	Housing	EN-GJS-400-15 spheroidal cast iron with polyester powder coating	
	Closing element	Stainless steel 1.4301	
	Stem	Stainless steel 1.4021/sealing: EPDM	
Materials	Seat	EPDM	

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New generation of butterfly valve actuators

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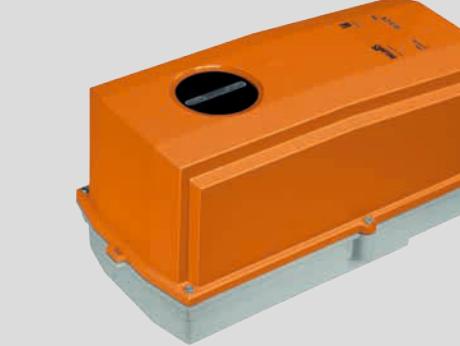
Product range and
technical data



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Butterfly valve actuator product range

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SR	GR	DR	PR	SY
20 Nm	40 Nm	< 90 Nm	160 Nm	650...3500 Nm
 SR... IP54	 GR... IP54	 DR... IP54	 PR... IP66/67	 SY6... IP67
 SRF... IP54	 GRK... IP54	 DRK... IP54	 PRK... IP66/67	 SY7... SY8... IP67
 SR...P IP66	 GR...G IP66	 DR...G IP66		 SY9... SY10... SY11... SY12... IP67

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SR actuators: Functions and technical details

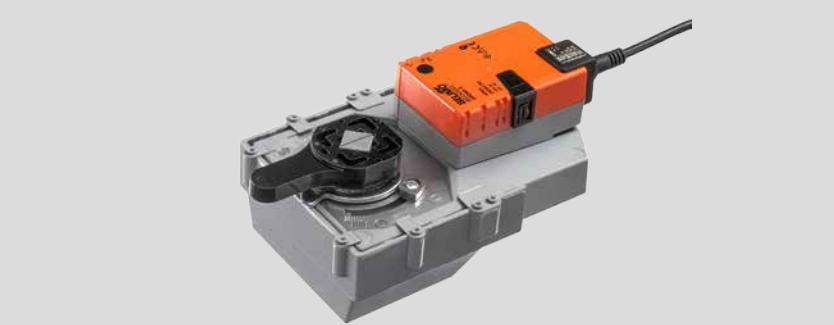
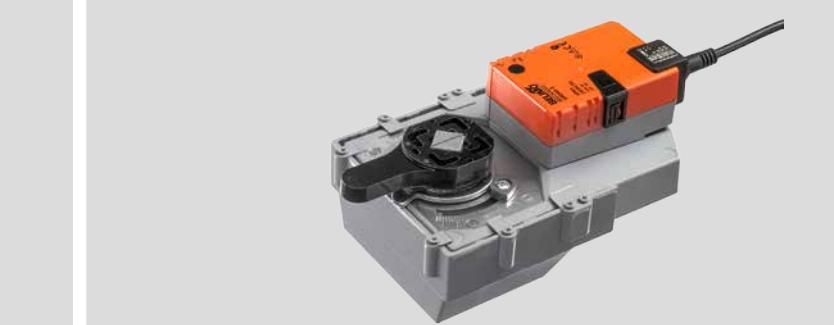


Technical Data	SR...-5	SRC...-5	SRF...-5	SR...P-5
Control	Open-close, 3-point, modulating, MP-Bus®, LON	Open-close, 3-point, modulating	Open-close, 3-point, modulating	Open-close, 3-point
Torque			20 Nm	
Voltage	AC 230 V, AC/DC 24 V	AC/DC 24 V	AC 24...240 V/DC 24...125 V	AC 230 V, AC/DC 24 V
Running time	90 s	35 s	75 s	90 s
Auxiliary switch	As accessories: S1A, S2A		Version with 2 integrated auxiliary switches	As accessories: S1A, S2A
Manual operation			Yes	
Position indicator			Yes	
Emergency control function	No	No	Yes	No
Degree of protection	IP54	IP54	IP54	IP66
Ambient temperature			-30 ... 50 °C	

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GR actuators: Functions and technical details



				
Technical Data	GR...-5	GRC...-5	GRK...-5	GR...G-5
Control	Open-close, modulating, MP-Bus®, Modbus RTU	Open-close, modulating	Open-close, modulating	Open-close, modulating
Torque			40 Nm	
Voltage	AC 230 V, AC/DC 24 V	AC 230 V, AC/DC 24 V	AC/DC 24 V	AC 230 V, AC/DC 24 V
Running time	150s, 90s, 75...270s	35s	150s	150s
Auxiliary switch		As accessories: S1A, S2A		
Manual operation		Yes		
Position indicator		Yes		
Emergency control function	No	No	Yes	No
Degree of protection	IP54	IP54	IP54	IP66
Ambient temperature		–30...50 °C		

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DR actuators: Functions and technical details



				
Technical Data	DR...-5	DRC...-5	DRK...-5	DR...G-5
Control	Open-close, modulating, MP-Bus®	Open-close	Open-close	Open-close
Torque	<90 Nm			
Voltage	AC 230 V, AC/DC 24 V	AC 230 V, AC/DC 24 V	AC/DC 24 V	AC 230 V, AC/DC 24 V
Running time	150 s	35 s	150 s	150 s
Auxiliary switch	As accessories: S1A, S2A			
Manual operation	Yes			
Position indicator	Yes			
Emergency control function	No	No	Yes	No
Degree of protection	IP54	IP54	IP54	IP66
Ambient temperature	–30...50 °C			

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PR actuators: Functions and technical details



			
Technical Data	PRCA-S2-T	PRCA-BAC-S2-T	PRKCA-BAC-S2-T
Control	Open-close, 3-point	BACnet MS/TP, Modbus RTU, MP-Bus®, open-close, 3-point, modulating	BACnet MS/TP, Modbus RTU, MP-Bus®, open-close, 3-point, modulating
Torque		160 Nm	
Voltage		AC 24...240V/DC 24...125V	
Running time		35 s [30...120 s adjustable]	
Auxiliary switch		1 x 10° fixed / 1 x 85° [0...90° adjustable]	
Manual operation		Yes	
Position indicator		Yes	
Emergency control function	No	No	Yes
BACnet MS/TP	No	Yes	Yes
Sensor inputs	No	2 passive (e.g. PT1000)	2 passive (e.g. PT1000)
Degree of protection		IP66/IP67	
Ambient temperature		–30 ... 50°C	

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SY actuators: Functions and technical details



Technical Data	SY6...	SY7...	SY8...	SY9...	SY10...	SY12...
Suitable butterfly valves	D6350N/NL D6400N/NL	D6350N/NL D6400N/NL	D6450N/NL D6500N/NL	D6500N/NL	D6600N/NL	D6600N/NL D6700N/NL
Control	Open-close, 3-point, modulating					
Torque	650 Nm	1000 Nm	1500 Nm	2000 Nm	2500 Nm	3500 Nm
Voltage	AC 230 V					
Running time	32s, 38s	44s, 58s	55s, 59s	61s, 68s	72s, 73s	47s, 74s
Auxiliary switch	2x SPDT					
Manual operation	Yes					
Position indicator	Yes					
Emergency control function	No					
Degree of protection	IP67					
Ambient temperature	–30 ... 65 °C					

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New generation of butterfly valves and actuators

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Butterfly
valve-actuator
combinations



Menu

Butterfly valve-actuator combinations



DN 25...700 with closing pressures [kPa]

DN	SR	GR	DR	PR	SY6	SY7	SY8	SY9	SY10	SY12
23	1200	1200								
32	1200	1200								
40	1200	1200								
50	1200	1200								
65	1200	1200								
80		1200	1200							
100			1200	1200 ¹⁾						
125			1200	1200 ²⁾						
150				1200 ²⁾						
200				1400 ²⁾						
250				1400 ²⁾						
300				1400 ²⁾						
350					600	1200 ³⁾				
400					600 ⁴⁾	1000 ⁵⁾				
450						600 ⁶⁾	1000 ⁶⁾			
500							600 ⁶⁾	1000 ⁷⁾		
600									600 ⁸⁾	1000 ⁸⁾
700										200 ⁹⁾

¹⁾ ZPR03 ²⁾ ZPR01 ³⁾ ZSY-703 ⁴⁾ ZSY-401 ⁵⁾ ZSY-701 ⁶⁾ ZSY-702 ⁷⁾ ZSY-901 ⁸⁾ ZSY-902 ⁹⁾ ZSY-903

New generation of butterfly valves and actuators

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Retrofit

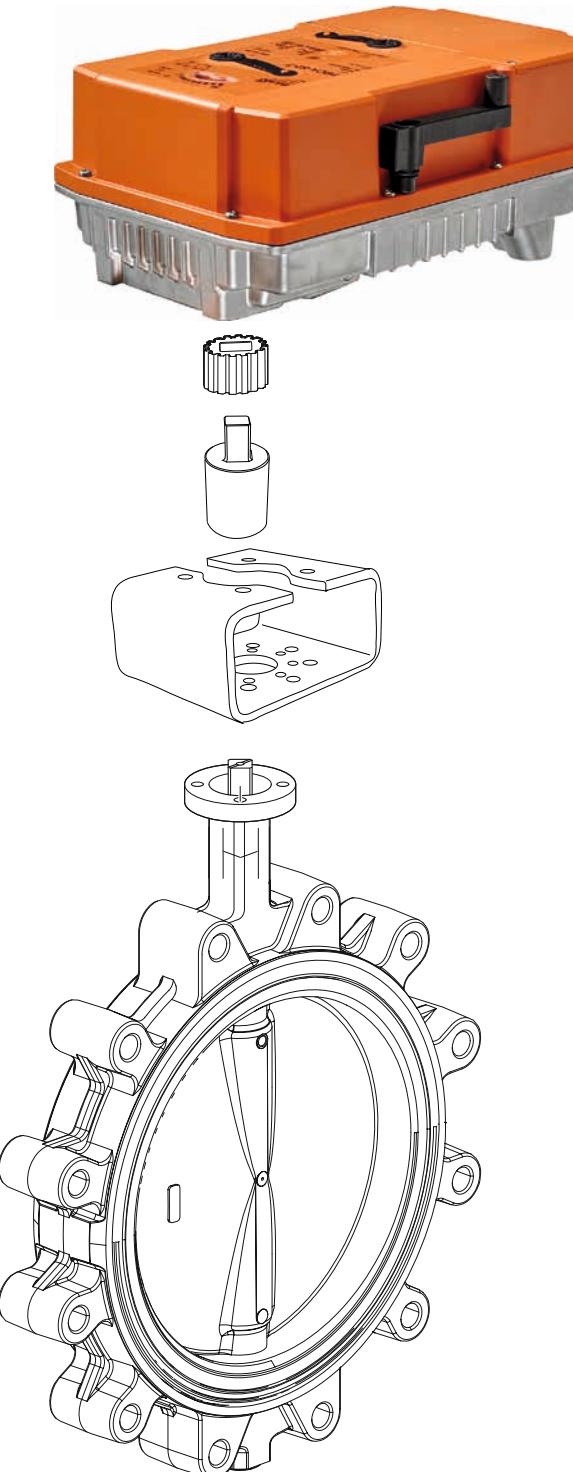


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Retrofit rotary actuators for butterfly valves of other manufacturers

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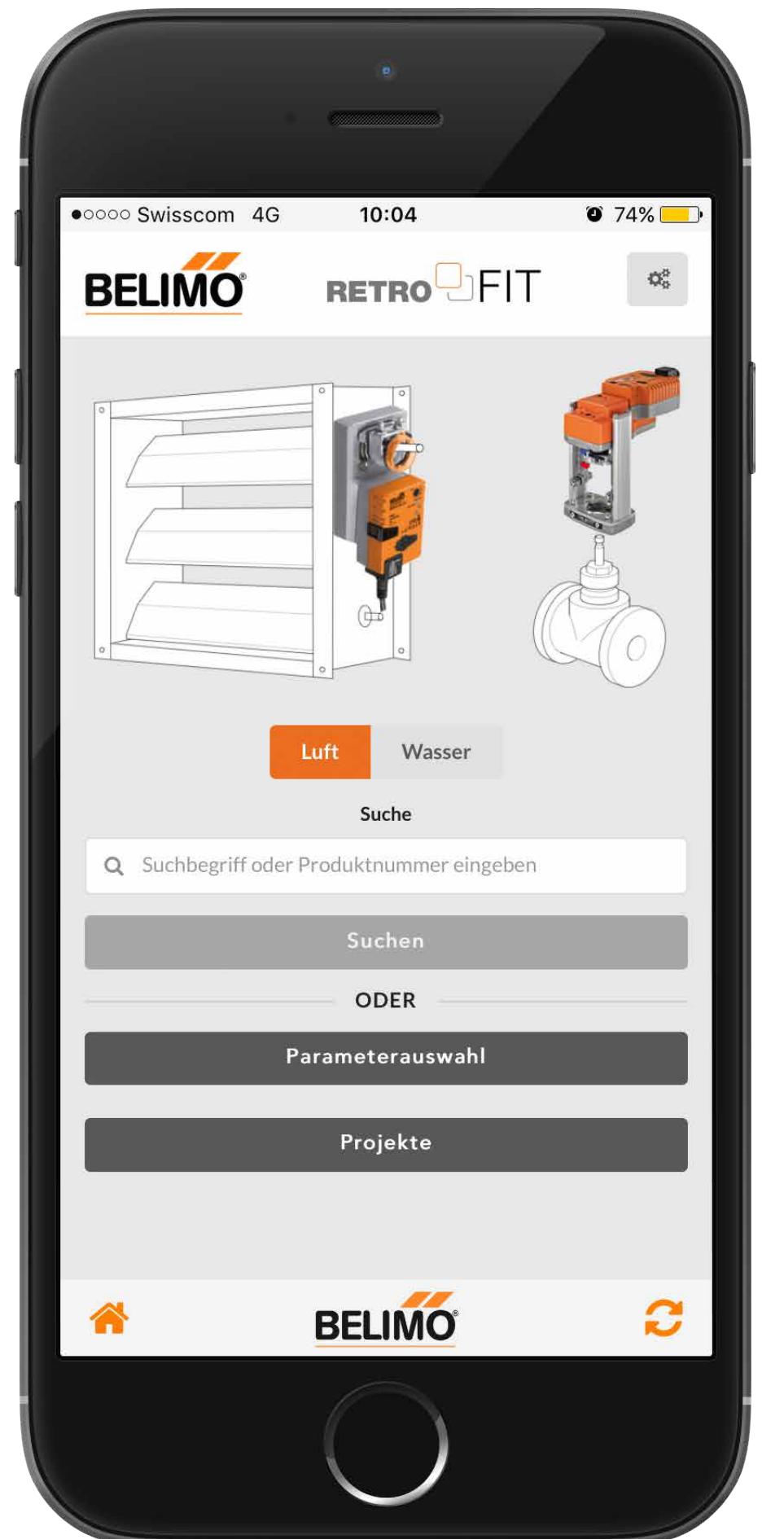
RETROFIT[®]



- Universal actuators for motorising existing installations
- With the help of simple adapters, the actuators can be mounted on installed butterfly valves from a variety of manufacturers
- Retrofit actuators from Belimo:
SR...-R/SRF...-R/SR...P-R
GR...-R
DR...-R
PR...
SY...

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Retrofit App

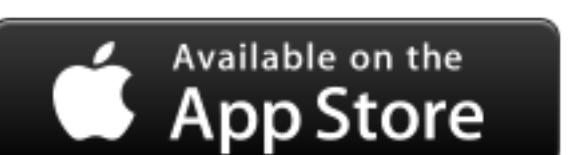


RETROFIT®



toolbox.belimo.xiag.ch/retrofit

App available for:



Retrofit App

- Convenient replacement and modernisation of actuators in existing installations
- To start the Retrofit App, simply scan the QR code or go to the web address

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New generation of butterfly valves and actuators

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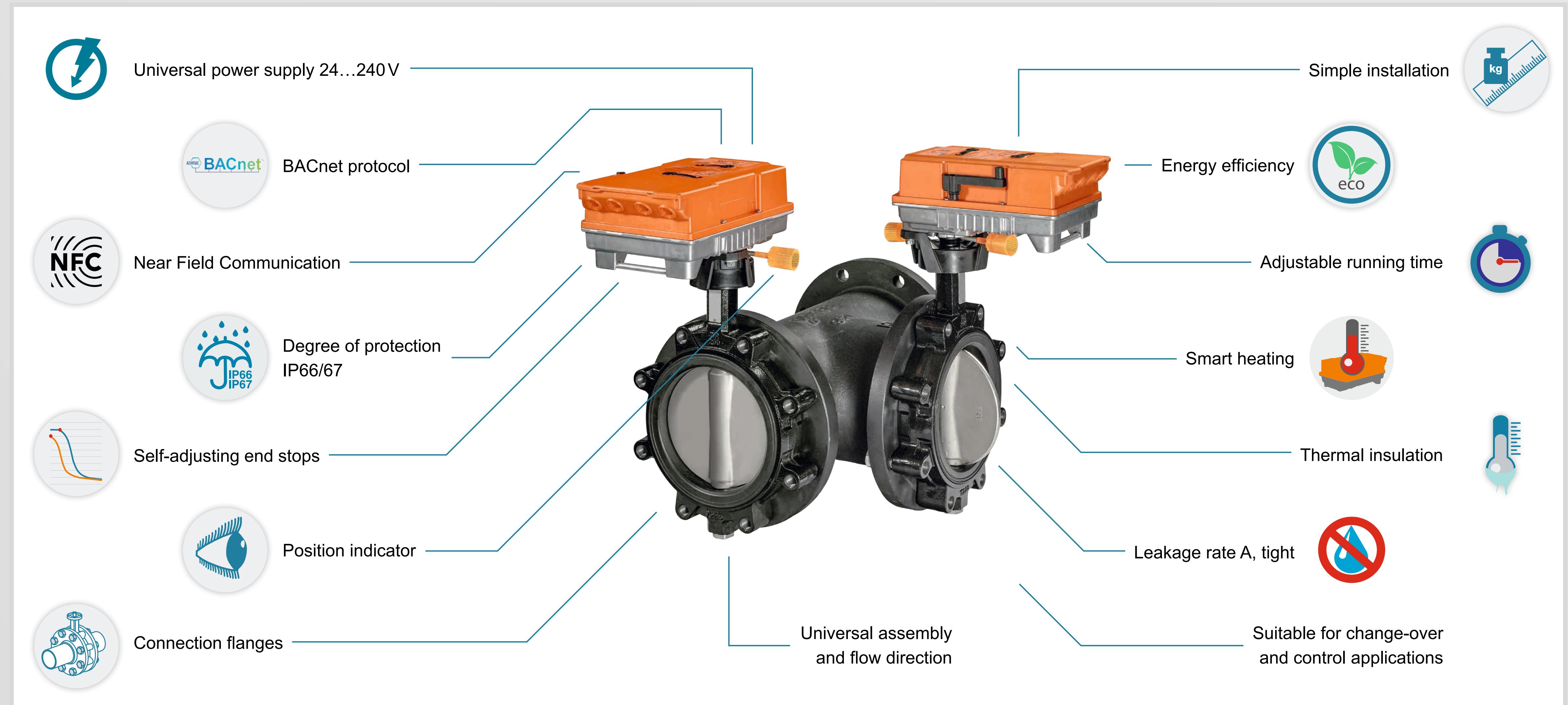
Product benefits
3-way butterfly
valve



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Benefit overview 3-way butterfly valve

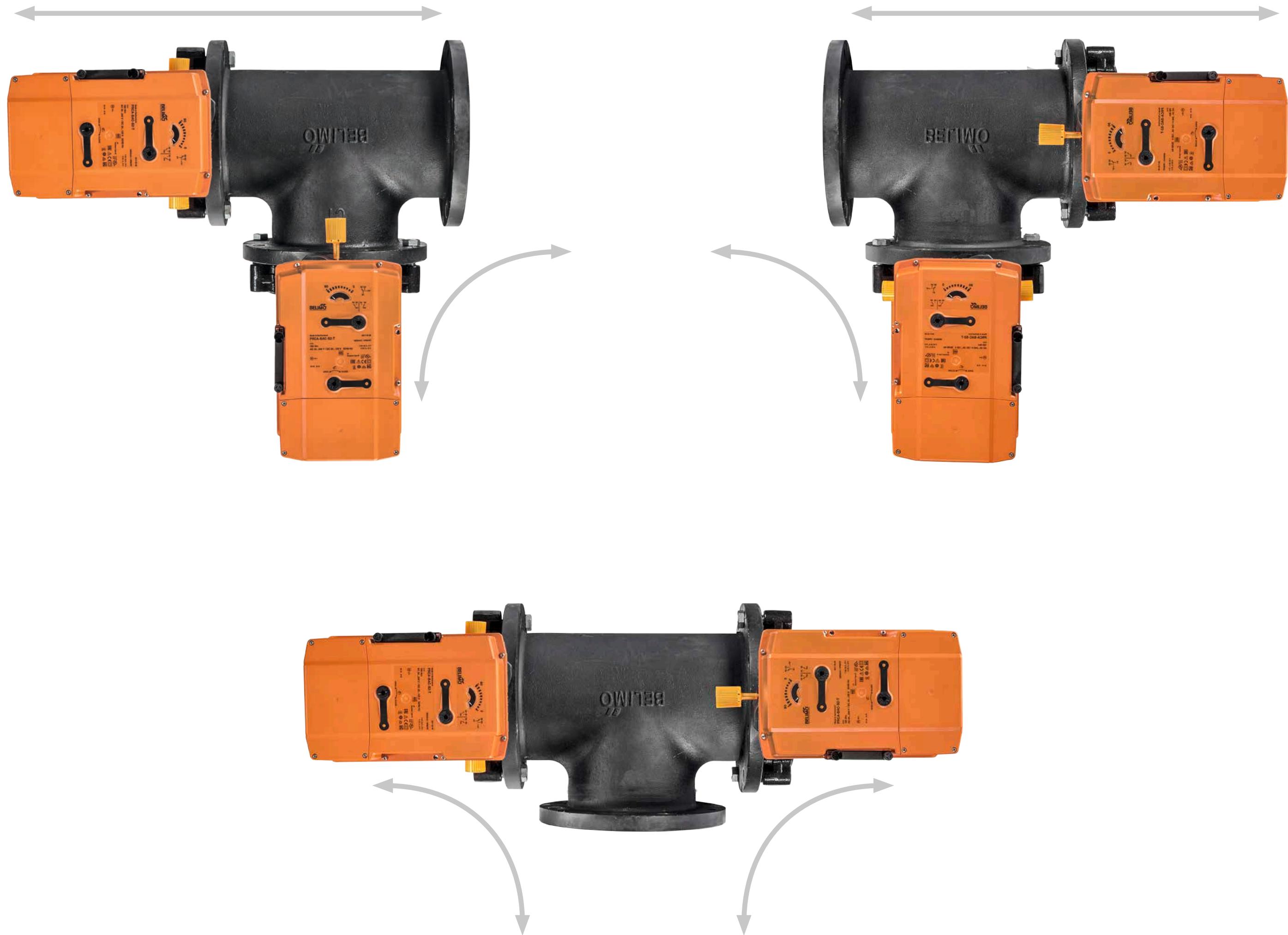
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Versatile change-over and control possibilities

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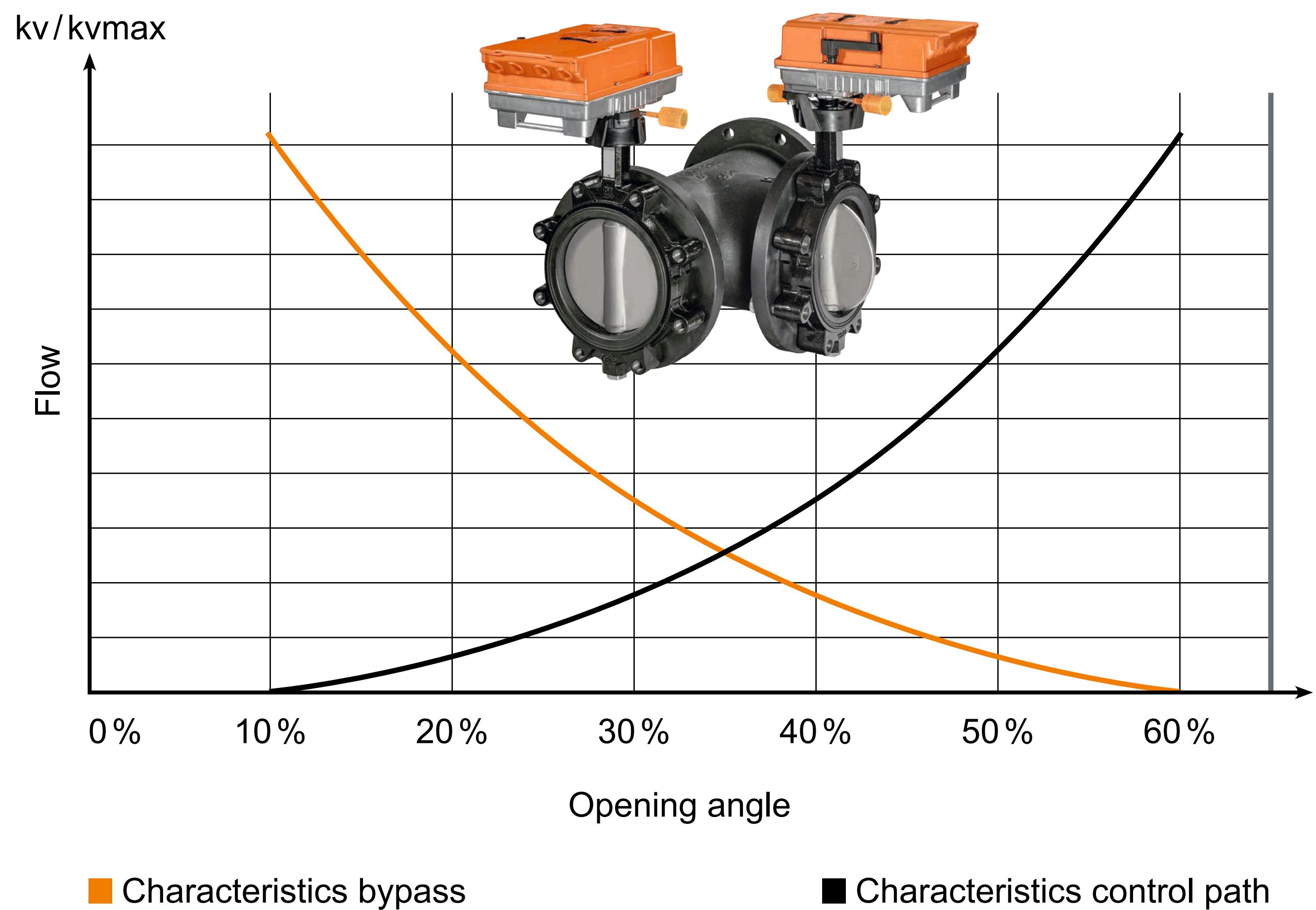


- Numerous installation possibilities on a T piece
- Flexible flow direction through the butterfly valve

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Fit for reliable control tasks

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- Universal for mixing & diverting functions
- Equal percentage characteristics in- control path & invers equal percentage characteristics in bypass path
- Parameterisation via Belimo Assistant App

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New generation of butterfly valves and actuators

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Product range and
technical data
3-way butterfly
valve



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Product range 3-way butterfly valve

Application	change-over and control applications
Power supply	AC 24...240V, DC 24...125V
IP rating	IP66/IP67
Media temperature	-20...120°C
Leakage rate	A, tight (EN 12266-1)

Control signal, opening angle, running time and further parameters can be set with the Belimo Assistant App via NFC



DN size	kvmax [m³/h]	kvs [m³/h]	Control	Type
150	1100	400		D7150NL/BAC
200	1800	800	Open-Close, 2...10V, 0.5...10V, 4...20 mA, BACnet MS/TP, Modbus RTU, MP-Bus®	D7200WL/BAC
250	3000	1200		D7250WL/BAC
300	4700	1700		D7300WL/BAC



T piece for 3-way butterfly valve
Spheroidal cast iron
including assembly bolts

DN size	Type
150	ZD7150
200	ZD7200
200	ZD7250
300	ZD7300

New generation of butterfly valves and actuators

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Parameterisation

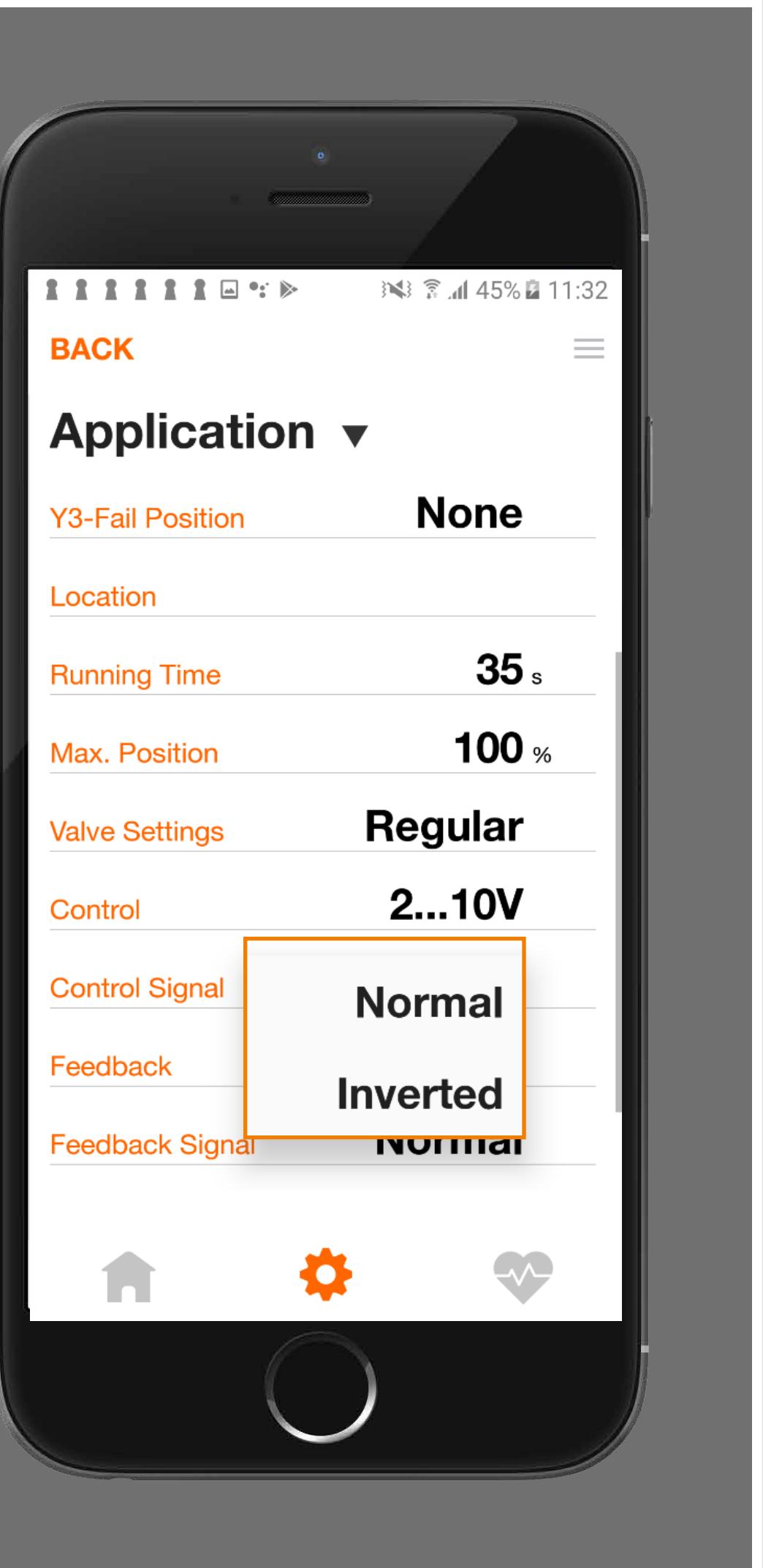


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Parameterisation 3-way butterfly valve

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Control signal for one of the two
actuators must be inverted with
the Belimo Assistant App



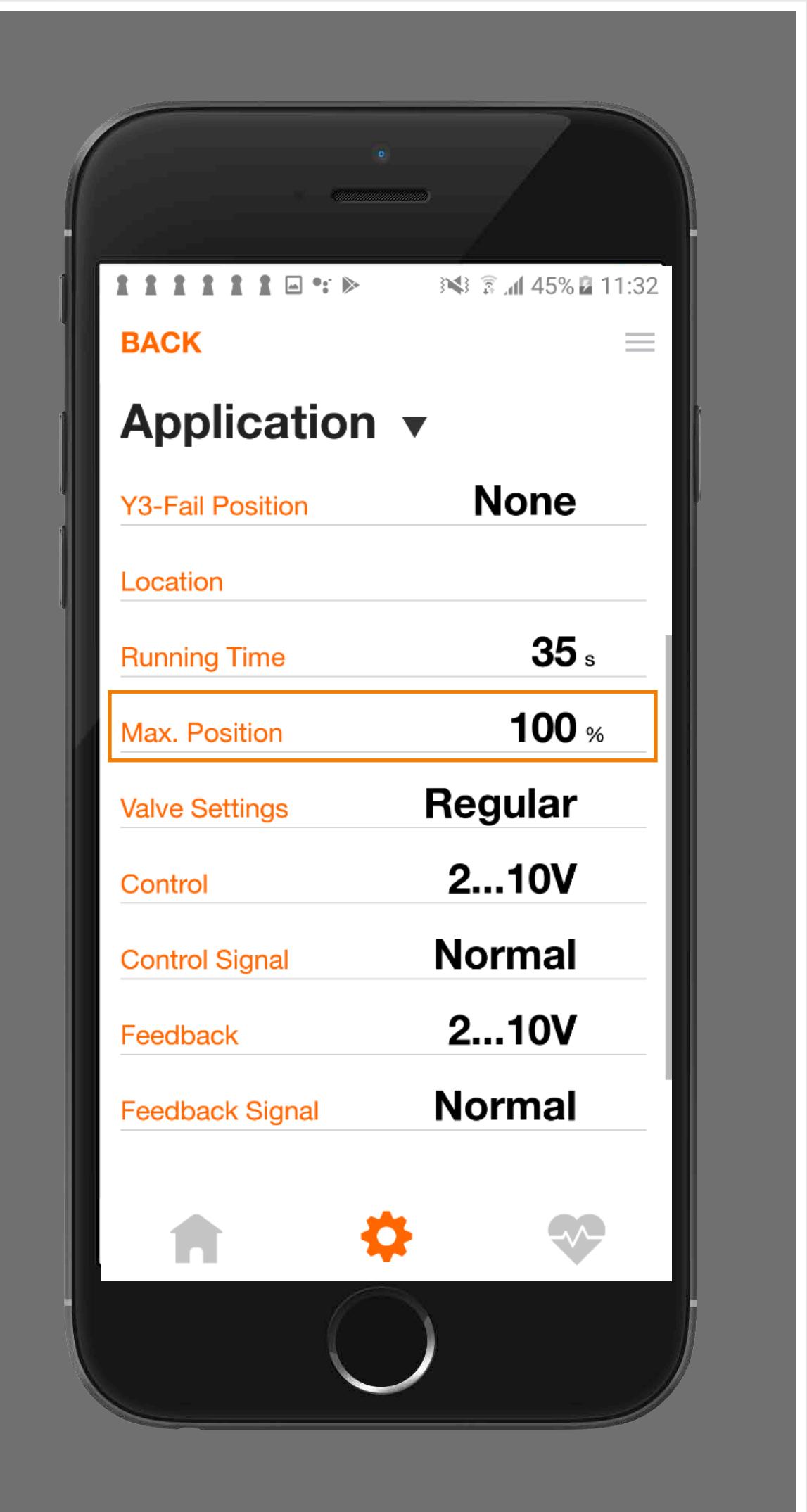
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Parameterisation 3-way butterfly valve



Setting kv value by limitation of the opening angle

m ³ /h	kv 10 %	kv 20 %	kv 30 %	kv 40 %	kv 50 %	kv 60 %	kv 70 %	kv 80 %	kv 90 %	kv 100 %
D7150 ...	1	1	70	140	240	400	580	800	1010	1100
D7200 ...	10	10	170	330	530	800	1120	1450	1690	1800
D7250 ...	10	10	280	520	830	1200	1760	2340	2800	3000
D7300 ...	30	30	400	700	1100	1700	2400	3300	4200	4700



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