2/2-Way, DN 13...65 mm



Design/Function

The angle-seat valve system is designed for **On/Off controlled** and **Continuous controlled** process applications with various communication possibilities with sensors and a PLC.

The angle-seat valve system consists of three variable modules, the valve body, the pneumatic actuator and the TopControl.

Function On/Off control version: Type 8631

On/Off control of an angle-seat valve

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



Function Continuous control version: Type 8630

Position control or process control with an integrated PID controller

- Internal or external setpoint
- Autotune function
- Progammable flow curves
- Sensor input signals (4...20 mA, Frequency, PT 100)
- Binary inputs and outputs
- Modular electrical interfaces
- Analogue position output
- Up to 2 limit switches with position feedback
- Profibus DP and DeviceNet communication



Advantages/Benefits



Decentralized Intelligence for On/Off and Continuous control of processes



Customized System Solutions for Easy Link and Easy Networking together with sensors



Up to 80% lower Total Cost of Ownership

Applications

Fluids

- Gases and liquids up to 16 bar
- Steam up to 10 bar/180 °C
- Slightly aggressive fluids

Industries

- Chemical process engineering
- Food and feed processing
- Machine industry
- Textile dyeing and bleaching
- Water treatment
- Paper and pulb industry
- Medical technology (i.e. sterilizers)



An optional variety of modules for your choice



TopControl System 2000



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On/Off Control 🔎



Actuator Configuration

Integrated pilot valve

Functions:

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

Power consumption:

• < 2 W

Power supply:

- 24 V/DC ± 10% (no technical direct voltage) Residual ripple 10%
- 110 V/50 Hz
- 230 V/50 Hz



Pneumatic connections

Supply port: • G 1/4 • 1/4 NPT • Rc 1/4	Service port: G 1/8 (pre-mounted)	Exhaust port: ① G 1/4 1/4 NPT Rc 1/4
Pheumatic dat	a	_
Medium: Pressure range QNn-value:	Instrument ai (filtered, non- : 37 bar 100 l/min.	r -lubricated)
Operation data	a	
Rating: Ambient temp.:	IP65 050°C	

Electrical Interfaces

Multipole

M12 ASI plug (4 pins)

PG Cable gland

Round cable

with ASI clip

PG cable glands (wiring on terminal strip)

Command line

EaseOn box

Command line Power supply

(wiring by push-in and turn-off)

(Power supply)





Blind plate

Blind plate

2 Limit switches

2 Limit switches





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Technical data

Circuit functions

A 2/2 way valve normally closed by spring return -+₽



B 2/2 way valve

I 2/2 way valve

normally open by spring return

with double-acting actuator



Specifications

opeointeatione												
Valve size (orifice)	Kv-value		N	lax. opera	ting press	ure		Actuator		We	eight	
DN	water	for circ	uit functio	n (A/B/I) –	flow direc	tion (abov	/e/below)	size ø	threaded	weld	Tri-clamp®	flanged
		• thread	ed connec	tion	• Tri-cla	mp®			conn.	end		conn.
		• weld e	nds		 with st 	eam						
		• flange	connectio	ns								
		A-above*	A-below	B/I-below*	A-above*	A-below	B/I-below*					
[mm]	[m³/h]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[mm]	[kg]	[kg]	[kg]	[kg]
15.0	4.2	16.0	16.0	16.0	10.0	10.0	10.0	63	1.9	1.9	1.9	3.2
20.0	8.0	16.0	16.0	16.0	10.0	10.0	10.0	63	2.2	2.2	2.2	4.0
25.0	19.0	16.0	11.0	16.0	10.0	10.0	10.0	63	2.6	2.6	2.6	4.9
32.0	27.5	16.0	6.0	13.0	10.0	6.0	10.0	63	3.5	3.5	3.5	6.9
32.0	27.5	-	15.0	-	-	10.0	-	80	3.9	3.9	3.9	7.3
40.0	42.0	16.0	4.0	16.0	10.0	4.0	10.0	63	3.8	3.8	3.8	7.6
40.0	42.0	16.0	10.0	16.0	10.0	10.0	10.0	80	4.3	4.3	4.3	8.1
40.0	42.0	16.0	12.5	16.0	10.0	10.0	10.0	100	4.8	4.8	4.8	9.6
50.0	55.0	16.0	2.5	14.0	10.0	2.5	10.0	63	6.8	6.8	6.8	12.0
50.0	55.0	16.0	6.0	16.0	10.0	6.0	10.0	80	7.3	7.3	7.3	12.5
50.0	55.0	16.0	7.2	16.0	10.0	7.2	10.0	100	7.9	7.9	7.9	13.0
50.0	55.0	16.0	10.0	16.0	10.0 10.0 10.0			125	11.1	11.1	11.1	16.5
(**) 65.0	90.0	15.0	3.5	15.0	10.0 9.5 10.0			80	9.1	9.1	-	-
(**) 65.0	90.0	16.0	5.2	16.0	10.0	5.2	10.0	125	11.9	11.9	-	-

* max. operating pressure circuit function A, above seat and circuit function B / I below seat (see Operating Pressure Diagrams on next page) ** for threaded and weld ends only

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

Operating data

Threaded connection Weld ends Tri-Clamp [®] connection Flange connection	G, NPT and Rc ISO 4200 ISO 2852 DIN 2501,2633 and 2576 ANSI class 150 JIS 10 K	Body material Gunmetal or Stainless Steel	1.4435 (316L) threaded connection 1.4581 weld ends, Tri-Clamp®
Flow direction Circuit function A	flow above or below seat	Seal material	or flange connection
B	flow below seat flow below seat	Packing gland	self-adjusting PTFE-stem
Nominal pressure Gunmetal	PN16		relieve and strainer/wiper
Stainless Steel	PN10* - PN16 (*Tri-Clamp [®] , steam)	Fluids (examples)	water, alcohols, oils, fuels, hydraulic liquids,
Min. control pressure	2 bar		salt solutions, lyes,
Max. control pressure	see diagram and		CIP fluids, beverages,
Max. viscosity	600 mm²/s		pharmaceutical products
Ambient temperature	min. $0 ^{\circ}\text{C}$		and cosmetics, acids
Fluid temperature	min 10 °C max. +180 °C		

Electrical data (ASI version)

Electrical connection

Power supply Max. current M12 ASI round plug
cable end with ASI clip
29.5 up to 31.6 V/DC
120 mA

Outputs Max. rupturing capacity

1 W above AS-interface integrated watchdog function

Control pressures













Circuit Function B and I with flow below seat



Circuit Function B and I with flow below seatActuator size Ø 80ℵ♀



Circuit Function B and I with flow below seatActuator size \emptyset 100 \Im \Im



Circuit Function B and I with flow below seat Actuator size ø 125 응 방 금 금



Dimensions [mm] On/Off - without display (threaded and weld end connection)

Threaded connection



Weld end connection



Orifice	Actuator size ø	Measurements												
DN		Ε,	E2	A ₁	A ₂	в	C ,	C ₂	D	G ₂	H ₂	J_2		
		threaded	weld end											
		connection	connection											
[mm]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		
15	63.0	G / Rc / NPT 1/2	21.3	85.0	100.0	262.0	305.0	306.0	79.6	1.6	20.0	34.0		
20	63.0	G / Rc / NPT 3/4	26.9	95.0	115.0	273.0	309.0	312.0	79.6	1.6	25.0	39.0		
25	63.0	G / Rc / NPT 1	33.7	105.0	130.0	276.0	315.0	319.0	79.6	2.0	30.0	43.0		
32	63.0	G / Rc / NPT 11/4	42.4	120.0	145.0	289.0	329.0	333.0	79.6	2.0	30.0	45.0		
32	80.0	G / Rc / NPT 1 1/4	42.4	120.0	145.0	307.5	352.5	356.5	100.6	2.0	30.0	45.0		
40	63.0	G / Rc / NPT 11/2	48.3	130.0	160.0	292.0	333.0	341.0	79.6	2.0	30.0	49.0		
40	80.0	G / Rc / NPT 11/2	48.3	130.0	160.0	310.5	347.5	355.5	100.6	2.0	30.0	49.0		
40	100.0	G / Rc / NPT 11/2	48.3	130.0	160.0	353.8	394.8	402.8	126.6	2.0	30.0	49.0		
50	63.0	G / Rc / NPT 2	60.3	150.0	175.0	308.0	353.0	358.0	79.6	2.6	30.0	50.0		
50	80.0	G / Rc / NPT 2	60.3	150.0	175.0	322.5	367.5	372.5	100.6	2.6	30.0	50.0		
50	100.0	G / Rc / NPT 2	60.3	150.0	175.0	364.8	409.8	414.8	126.6	2.6	30.0	50.0		
50	125.0	G / Rc / NPT 2	60.3	150.0	175.0	388.0	433.0	438.0	157.6	2.6	30.0	50.0		
65	80.0	G / Rc / NPT 21/2	-	185.0	-	336.5	393.5	-	100.6	-	-	-		
65	125.0	G / Rc / NPT 21/2	-	185.0	-	402.0	459.0	-	157.6	-	-	-		

Dimensions [mm] On/Off - without display (DIN flange and tri-clamp® connection)

Tri-clamp[®] connection



Flange connection acc. DIN 3202, F1



Orifice	Actuator	Measurements															
DN	size ø	E ₃	E₄	A ₃	A ₄	в	C ₃	C4	D	F ₃	F₄	H₃	J_3	J₄	к	L	м
		Tri-clamp [®]	flange														
		connection	connection														
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
15	63.0	21.3	21.3	130.0	130.0	262.0	321.0	301.0	79.6	34.0	95.0	35.0	49.0	29.0	14.0	14.0	65.0
20	63.0	26.9	26.9	150.0	150.0	273.0	329.5	309.0	79.6	50.5	105.0	42.5	56.5	36.0	16.0	14.0	75.0
25	63.0	33.7	33.7	160.0	160.0	276.0	334.0	311.0	79.6	50.5	115.0	45.0	58.0	35.0	16.0	14.0	85.0
32	63.0	42.4	42.4	180.0	180.0	289.0	354.5	328.0	79.6	50.5	140.0	47.5	62.5	40.0	16.0	18.0	100.0
32	80.0	42.4	42.4	180.0	180.0	307.5	374.0	351.5	100.6	50.5	140.0	47.5	62.5	40.0	16.0	18.0	100.0
40	63.0	48.3	48.3	200.0	200.0	292.0	361.0	336.0	79.6	64.0	150.0	50.0	69.0	44.0	16.0	18.0	110.0
40	80.0	48.3	48.3	200.0	200.0	310.5	375.5	350.5	100.6	64.0	150.0	50.0	69.0	44.0	16.0	18.0	110.0
40	100.0	48.3	48.3	200.0	200.0	353.8	423.3	397.8	126.6	64.0	150.0	50.0	69.0	44.0	16.0	18.0	110.0
50	63.0	60.3	60.3	230.0	230.0	308.0	385.5	368.0	79.6	77.5	165.0	57.5	77.5	60.0	18.0	18.0	125.0
50	80.0	60.3	60.3	230.0	230.0	322.5	400.0	382.5	100.6	77.5	165.0	57.5	77.5	60.0	18.0	18.0	125.0
50	100.0	60.3	60.3	230.0	230.0	364.8	442.3	424.8	126.6	77.5	165.0	57.5	77.5	60.0	18.0	18.0	125.0
50	125.0	60.3	60.3	230.0	230.0	388.0	465.5	448.0	157.6	77.5	165.0	57.5	77.5	60.0	18.0	18.0	125.0

Dimensions [mm] On/Off - without display (ANSI and JIS flange connection)

Flange connection acc. ANSI class 150 and JIS 10 K



Orifice	Actuator		Measurements															
DN	size ø	E₄	A	4	A B		24	D	F	4	J	4	۲	(L	-	N	A
		flange	ANSI	JIS		ANSI	JIS		ANSI	JIS	ANSI	JIS	ANSI	JIS	ANSI	JIS	ANSI	JIS
		connection																
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
15	63.0	21.3	195.0	165.0	262.0	354.0	338.5	79.6	89.0	95.0	82.0	66.5	11.2	12.0	15.8	15.0	60.3	70.0
20	63.0	26.9	218.0	184.0	273.0	364.0	346.5	79.6	99.0	100.0	91.0	73.5	12.7	14.0	15.8	15.0	69.8	75.0
25	63.0	33.7	241.0	196.0	276.0	375.0	341.0	79.6	108.0	125.0	99.0	65.0	14.3	14.0	15.8	19.0	79.4	90.0
32	63.0	42.4	258.0	208.0	289.0	390.0	364.5	79.6	117.0	135.0	102.0	76.5	15.9	16.0	15.8	19.0	88.9	100.0
32	80.0	42.4	258.0	208.0	307.5	413.5	388.0	100.6	117.0	135.0	102.0	76.5	15.9	16.0	15.8	19.0	88.9	100.0
40	63.0	48.3	283.0	235.0	292.0	403.0	378.5	79.6	127.0	140.0	111.0	86.5	17.5	16.0	15.8	19.0	98.4	105.0
40	80.0	48.3	283.0	235.0	310.5	417.5	393.0	100.6	127.0	140.0	111.0	86.5	17.5	16.0	15.8	19.0	98.4	105.0
40	100.0	48.3	283.0	235.0	353.8	464.8	440.3	126.6	127.0	140.0	111.0	86.5	17.5	16.0	15.8	19.0	98.4	105.0
50	63.0	60.3	300.0	247.0	308.0	421.0	394.0	79.6	152.0	156.0	113.0	86.0	19.1	16.0	19.0	19.0	120.6	120.0
50	80.0	60.3	300.0	247.0	322.5	435.5	408.5	100.6	152.0	156.0	113.0	86.0	19.1	16.0	19.0	19.0	120.6	120.0
50	100.0	60.3	300.0	247.0	364.8	477.8	450.8	126.6	152.0	156.0	113.0	86.0	19.1	16.0	19.0	19.0	120.6	120.0
50	125.0	60.3	300.0	247.0	388.0	501.0	474.0	157.6	152.0	156.0	113.0	86.0	19.1	16.0	19.0	19.0	120.6	120.0

Functional Diagram / Materials



The TopControl as **position controller** has standard signal inputs to preset the external position set points. An integrated micro-processor 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 initiator outputs can be connected to a central PLC.

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

Materials:



Continuous Control 🐖





Intelligent actuator

- Positioner
- Process controller integrated PID

Integrated pilot valve

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 V/DC ± 10% (no technical direct voltage) Residual ripple 10%





DeviceNet (Multipole) (*: Pins) Power supply (plug not necessary when power DeviceNet M16 plug (4*) M12 plug (4*) 2 Outputs: Sensor input incl. Sensor suppl Limit switches (actual process value) M8 plug (4*) M8 socket (4*) Profibus DP (Multipole) (*: Pins) Power supply M12 plug (4*) Profibus DP Rect. plug (9*) 2 Outputs: Sensor input incl. Sensor supply Limit switches (actual process value) M8 plug (4*) M8 socket (4*) PG cable glands (wiring on terminal strip) Power supply

Electrical Interfaces





Communication Line Device Net COCCO Inputs



Communication







TopControl as Position Controller



The actual position of the pneumatic actuator is acquired 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.

TopControl as Process Controller



In case of the TopControl as 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.

standard signal

Software characteristics





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

Invertion 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
 Analogue input 4...20 mA, frequency or PT100
- Internal (via display keys) or external setpoint

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Technical data

Circuit functions

A 2/2 way valve normally closed by spring return



B 2/2 way valve normally open by spring return (on request)

with double-acting actuator

I 2/2 way valve



Specifications

Valve size (ori	fice)	Kv-value		Max. opera	ting pressure		Actuator		N	/eight	
DN		water	for circu	it function (A/B	/I) – flow direct	ion (below)	size ø	threaded	weld	Tri-clamp®	flanged
			• threaded co	onnection	ction • Tri-clamp®			conn.	end		conn.
			• weld ends		• with steam						
			• flange conr	nections	ons						
			A-below	B- and I-below	- and I-below A-below B- and I-below						
[mm]		[m³/h]	[bar]	[bar]	[bar]	[bar]	[mm]	[kg]			[kg]
	15.0	t	16.0	16.0	10.0	10.0	80		3.9		5.4
	20.0	e ha	16.0	16.0	10.0	10.0	80		4.1		6.1
	25.0	see	16.0	16.0	10.0	10.0	80		5.0		7.5
	32.0	× at se	15.0	16.0 10.0 10.0			80		6.4		9.9
	40.0	eat	12.5	16.0 10.0 10.0			100	7.8			11.8
	50.0	per sed	7.2	16.0	7.2	100		9.1		14.1	

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

Flow capacity

	Kv-value (water) [m ³ /h]											
Plug travel [%]	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50						
0	0.00	0.00	0.00	0.00	0.00	0.00						
10	0.07	0.13	0.40	1.00	1.90	3.00						
20	0.15	0.32	1.10	2.60	5.60	9.00						
30	0.28	0.80	2.10	5.10	10.10	16.00						
40	0.44	1.60	3.60	8.60	17.20	26.00						
50	0.66	2.60	6.10	13.80	24.10	35.00						
60	1.02	3.70	9.30	19.00	29.20	42.00						
70	1.54	4.80	11.90	21.00	33.50	49.00						
80	2.17	5.80	13.50	22.00	35.50	55.00						
90	3.01	7.00	14.20	23.00	36.80	58.00						
100	3.80	7.30	14.50	23.50	37.00	60.00						

Operating data

Threaded connection Weld ends Tri-Clamp[®] connection Flange connection Flow direction

Circuit function A B I Nominal pressure

Stainless Steel Min. control pressure

Max. control pressure Max. viscosity Ambient temperature

Fluid temperature

G, NPT and Rc ISO 4200 ISO 2852 DIN 2501,2633 and 2576 ANSI class 150 JIS 10 K

flow below seat flow below seat (on request) flow below seat

PN10* - PN16 (*Tri-Clamp®, steam) 5.5 bar 7.0 bar 600 mm²/s min. 0 °C max. + 50 °C min. - 10 °C max. +180 °C Body material Stainless Steel

Seal material Packing gland

Fluids (examples)

1.4581 (body) 1.4404 (flange) PTFE self-adjusting PTFE-stem seals, intermediate relieve and strainer/wiper water, alcohols, oils, fuels, hydraulic liquids, salt solutions, lyes, organic solvents, steam, CIP fluids, beverages, pharmaceutical products and cosmetics, acids

Dimensions [mm] Continuous - with display (threaded and weld end connection)

Threaded connection *170 î ш **F**\$\$0 45° A, C_1



Orifice	Actuator	Measurements												
DN	size ø	E,	E2	Α,	A2	в	C ₁	C ₂	D	G ₂	- a	9	b	
		threaded	weld end								G	Rc/NPT		
		connection	connection								thread.	thread.		
[mm]	[mm]	[inch]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
15	80.0	G / Rc / NPT 1/2	21.3	65.0	75.0	293.0	312.0	317.0	100.6	1.6	19.0	26.0	24.0	
20	80.0	G / Rc / NPT 3/4	26.9	75.0	83.0	296.0	315.0	319.0	100.6	1.6	19.0	25.0	23.0	
25	80.0	G / Rc / NPT 1	33.7	90.0	99.0	305.0	327.0	332.0	100.6	2.0	22.0	29.0	27.0	
32	80.0	G / Rc / NPT 11/4	42.4	110.0	115.0	310.0	348.0	351.0	100.6	2.0	32.0	37.0	34.5	
40	100.0	G / Rc / NPT 11/2	48.3	120.0	115.0	346.0	403.0	401.0	126.6	2.0	35.0	35.0	32.5	
50	100.0	G / Rc / NPT 2	60.3	149.0	144.0	360.0	428.0	425.0	126.6	2.6	37.0	37.0	34.0	

Dimensions [mm] Continuous - with display (DIN flange and tri-clamp® connection)

Tri-clamp[®] connection

Flange connection acc. DIN 2576





Orifice	Actuator		Measurements													
DN	size ø	E ₃	E₄	A ₃	A ₄	в	C ₃	C4	D	F ₃	F ₄	c	J₄	к	L	м
		Tri-clamp®	flange													
		connection	connection													
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
15	80.0	21.3	21.3	106.0	130.0	293.0	333.0	337.0	100.6	34.0	95.0	39.5	44.0	14.0	14.0	65.0
20	80.0	26.9	26.9	119.0	150.0	296.0	337.0	353.0	100.6	50.5	105.0	41.0	56.5	16.0	14.0	75.0
25	80.0	33.7	33.7	130.0	160.0	305.0	348.0	365.0	100.6	50.5	115.0	42.5	57.0	16.0	14.0	85.0
32	80.0	42.4	42.4	151.0	180.0	310.0	369.0	396.0	100.6	50.5	140.0	52.5	67.0	16.0	18.0	100.0
40	100.0	48.3	48.3	156.0	200.0	346.0	421.0	452.0	126.6	64.0	150.0	53.0	70.0	16.0	18.0	110.0
50	100.0	60.3	60.3	200.0	230.0	360.0	453.0	484.0	126.6	77.5	165.0	62.0	77.0	18.0	18.0	125.0

Dimensions [mm] Continuous - with display (ANSI and JIS flange connection)

Flange connection acc. ANSI class 150 and JIS 10 K



Orifice	Actuator		Measurements																
DN	size ø	E4	A ₄	в	c	24	D	F	4	J	4	1	<	I	-	r	1	N	I_4
		flange			ANSI	JIS		ANSI	JIS	ANSI	JIS	ANSI	JIS	ANSI	JIS	ANSI	JIS	ANSI	JIS
		connection																	
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
15	80.0	21.3	140.0	293.0	337.0	337.0	100.6	89.0	95.0	44.0	44.0	12.0	12.0	15.8	15.0	60.3	70.0	34.9	-
20	80.0	26.9	152.0	296.0	354.0	354.0	100.6	99.0	100.0	57.5	57.5	14.0	14.0	15.8	15.0	69.8	75.0	42.9	-
25	80.0	33.7	165.0	305.0	368.0	368.0	100.6	108.0	125.0	59.5	59.5	16.0	14.0	15.8	19.0	79.4	90.0	50.8	-
32	80.0	42.4	178.0	310.0	395.0	395.0	100.6	117.0	135.0	66.0	66.0	18.0	16.0	15.8	19.0	88.9	100.0	63.5	-
40	100.0	48.3	190.0	346.0	452.0	449.0	126.6	127.0	140.0	70.0	67.0	19.0	16.0	15.8	19.0	98.4	105.0	73.0	-
50	100.0	60.3	216.0	360.0	477.0	477.0	126.6	152.0	155.0	70.0	70.0	21.0	16.0	19.0	19.0	120.6	120.0	92.1	-



TopControl System 2000

Fax order form		Part 2 of 2
Customer data		2. CO St.
Name of company:		
Department:		
Street / No.:		MARTSHIP
City:		. VERO
Postal code:		
Country:	13 - 21	
Name of contact person:		
Name:	First name:	
Telephone number:		
Telefax number:		
Signature:		

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

Please send part 1 and 2 of this order to your specific Burkert company by fax.

If you have any questions concerning this matter,

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