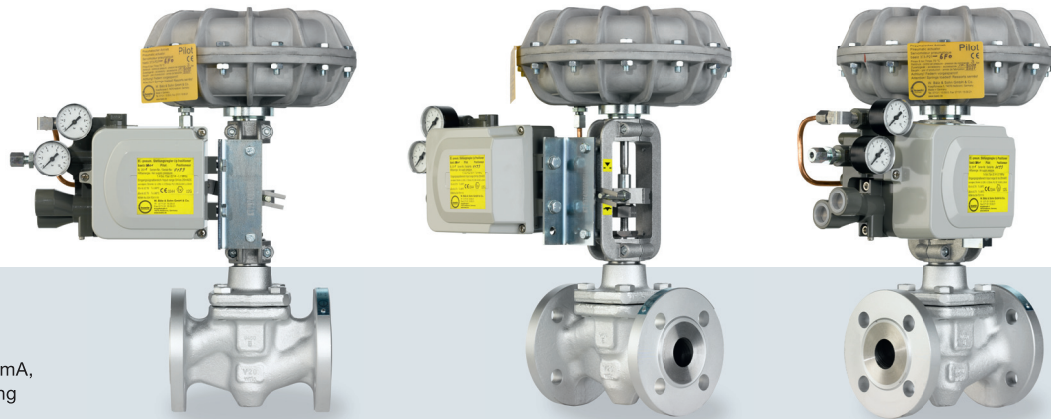




Baelz-electrodyn®  
Control valves for industrial applications





Example 4:  
Pneumatic two-way control valve  
baelz 356-1 with positioner 4–20 mA,  
two-wire connection, self-regulating

Pneumatic membrane lift actuators

Single acting	
Control air:	max. 6 bar
Ambient temperature:	0 °C to 70 °C, other temperatures available on request
Actuation force:	1000 N to 32,000 N, other actuation forces available on request Closed without compressed air OPG   Open without compressed air Pressluft OPO
Intelligent positioner:	Input 0/4–20 mA   0/2–10 V [three-wire connection, supply voltage 24 V DC] Input 4–20 mA [two-wire connection] self regulating, low internal air consumption, also available as explosion proof

Control	Adjustments
➔ Two-point open-closed	➔ Control air solenoid valves for two-point/three-point control
➔ Three-point, PID three point step open-stop-closed	➔ Positioner for continuous control 0/4–20 mA   0/2–10 V
➔ Continuous PID PID 0/4 to 20 mA	➔ Potentiometer, position feedback
➔ Continuous PID 0/2 to 10 V	➔ Additional end switches
	➔ Hand wheel

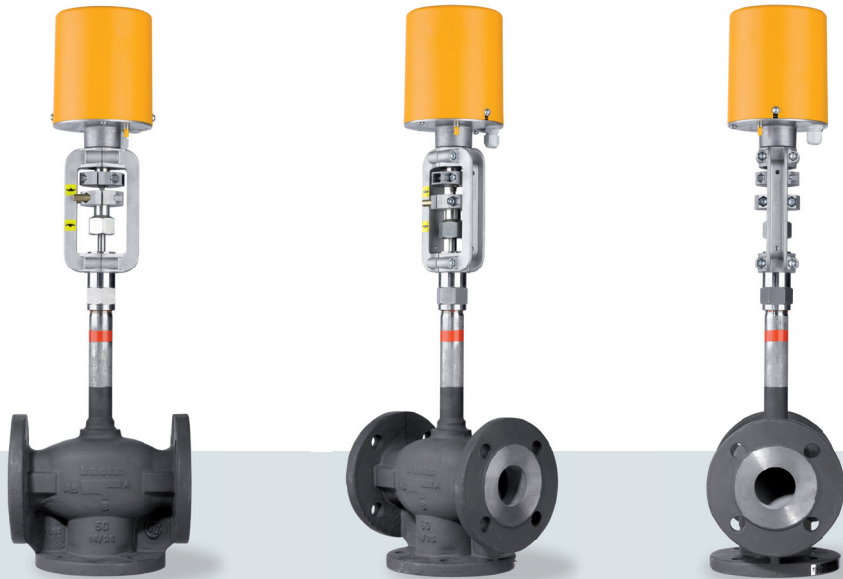
Maximum differential pressure [bar] for two-way valves and mixing valves with pneumatic actuator:												 A → AB		 A → AB ↑ B	
Nominal diameter DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300	
Standard [bar]*	40	40	40	40	40	34	20	13	8	5	17	8,5	5,2	3,6	
Balanced [bar]**	–	–	–	–	40	40	40	40	40	40	–	–	–	–	

\*the pneumatic actuator with the greatest possible actuation force is always mounted | \*\*our standard actuator with an actuation force of 2040 N is always mounted

Diverting values: standard: 0.6 bar for all nominal diameters | balanced: on request

In order to send you a quote as quickly as possible, we require the following actuator information:

- Pneumatic actuator? Motor actuator, voltage?
- Control: Two-point open-closed? | Three-point / Three-point step open-stop-closed?  
4–20 mA? | 0–20 mA, 0/2–10 V? | Position feedback?
- Additional end switches? Explosion proof?
- Against which max. pressure must the valve close?



Example 1:  
Motor-three-way control valve  
baelz 342-BK-SS with cooling tube.  
Spindle seal via bellows. Generally  
for thermal oil.

Two-way and three-way valves with motor actuator or pneumatic actuator for steam, condensate, thermal oil, hot water, water, oxygen, nitrogen, etc.

Flange valves: DIN oder ANSI
Medium temperature: -10 °C to 350 °C, other temperatures available on request
Inner parts: Stainless steel
Seal: PTFE-V sleeves

Casing: Material and nominal pressure								
Material	Nominal pressure [PN]	6	16	25	40	63	100	160
Spheroidal graphite iron [GJS-400-18-LT]								
Stainless steel [1.4571, 1.4408]								
Cast steel [GP 240 GH]								
High temperature steel [P 250 GH]								
High temperature high-quality structural steel / cast steel [13CrMo4-5 / G17CrMo5-5]								
Other materials available on request.								

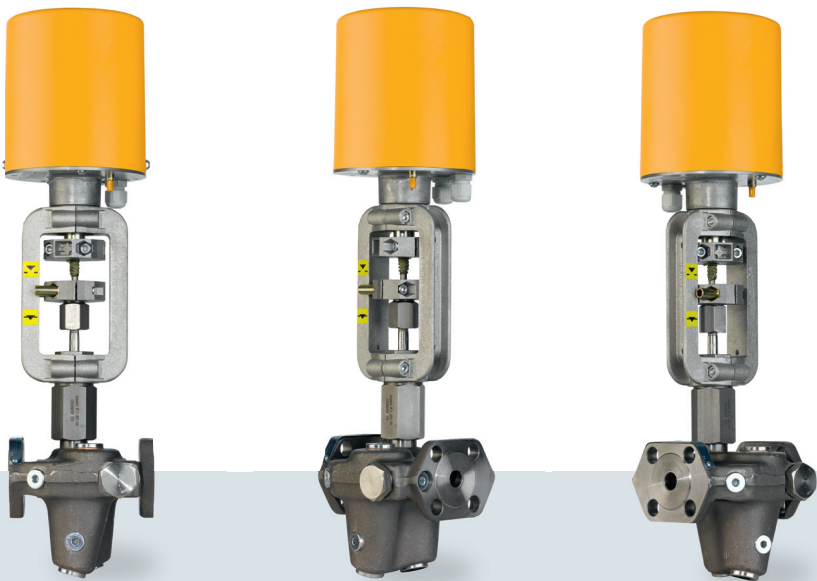
Nominal diameters, strokes and Kvs values														
Nominal diameter DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Valve stroke [mm]	12–16	12–16	12–16	22	22	22	22	22	22	22	44	66	66	66
Standard Kvs	0,025–5,6	1,6–6,3	3,2–9,3	4,0–16	6,3–25	10–40	16–63	25–105	40–130	63–200	130–360	320–580	580–960	960–1340

Other Kvs values available on request.

**Example 2:**  
Pneumatic two-way valve  
**baelz 340-B** with positioner 0/4–20 mA,  
0/2–10 V, connection 24 V DC, self-regulating



**Example 3:**  
Motor-two-way control valve **baelz 185**,  
full stainless steel.  
Very small Kvs values: 0,025 | 0,04 | 0,1 |  
0,12 | 0,16 | 0,3 | 0,6 | 1,0 | 1,2 | 1,4  
Generally for condensate.



Leakage rates for metal sealing valves

<b>Two-way valves:</b>	Kvso = <b>0,004</b> % [A-AB]	
<b>Three-way valves:</b>	Standard	Both ways sealed
	Kvso = <b>0,004</b> % [A-AB]	Kvso = <b>0,004</b> % [A-AB]
	Kvso = 2 % [B-AB]	Kvso = <b>0,004</b> % [B-AB]

Soft sealing cone in accordance with EN 1349 – leakage class VI.

Adjustments

- ➔ Cooling tube for high temperatures
  - ➔ Bellows sealing for thermal oil valves
  - ➔ Balanced cones for high differential pressures
  - ➔ Special cones against noises and cavitation
- ➔ Cones with reduced Kvs value
  - ➔ Soft sealing cones
  - ➔ Special flanges [sealing surface]

In order to send you a quote as quickly as possible, we require the following valve information:

- Two-way valve or three-way valve? DIN valve or ANSI valve?
- Which medium flows through the valve? What is the pressure and temperature of the medium?
- Which flow rates are intended for the valve?

Your additional wishes [specifications are not absolutely necessary – we will gladly suggest a solution]:

- Casing material? Nominal diameter DN? Nominal pressure PN?
- How much pressure should the valve require during normal operation?
- Others?

Motor lift actuators

**Power supply:** 230 V | 115 V | 24 V AC

Thrust depending shutdown

**Ambient temperature:** 0 °C to 50 °C, other temperatures available on request

**Actuation force:** 800 N to 15,000 N, other actuation forces available on request

**Actuation speed:** 6 mm/min to 60 mm/min

**Covers made of plastic, steel, aluminium, stainless steel**

**Spring return:** Closed without voltage OSG | Open without voltage OSO

Control

- ➔ Two-point open-closed
- ➔ Three-point, PID three point step open-stop-closed
- ➔ Continuous PID 0/4–20 mA
- ➔ Continuous PID 0/2–10 V

Adjustments

- ➔ Spring return actuator nc/no
- ➔ Positioner for continuous control 0/4–20 mA | 0/2–10 V
- ➔ Potentiometer, position feedback
- ➔ Additional end switches
- ➔ Manual intervention

Maximum differential pressures [bar] for two-way valves and mixing valves with motor actuator:

Nominal diameter DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Standard [bar] *	40	40	40	40	27	16	10	6,9	4,4	2,8	4,3	2,4	1,5	1
Balanced [bar] **	–	–	–	–	40	40	40	40	40	40	40	33	23	17

Higher differential pressures available on request.

\* the motor actuator with the greatest possible actuation force is always mounted

\*\* our standard actuator with an actuation force of 2000 N is always mounted

**Diverting values:** standard: 0.6 bar for all nominal diameters | balanced: on request

