

Pneumatic rotary drive



Type 2051 can be combined with...



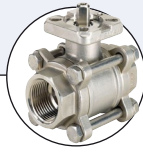
Type 6518/6519

Solenoid valve



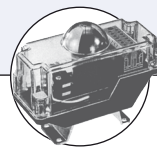
Type 8792/93

Positioner SideControl



Type 2654

Stainless steel ball valve



Type TEUXXX

Position feedback



Type 2671

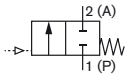
Metal butterfly valve

- Modular program for mounting of quarter turn valves such as ball valves and butterfly valves
- NAMUR and ISO 5211 interfaces
- Position feedback (including Ex-Versions)
- SideControl Positioner ready

The 2051 pneumatic rotary drives are low maintenance single or double-acting pneumatic linear piston actuators where linear movement of the piston due to the pilot air causes a 90° rotation of the connected valve. Actuator-valve coupling is made via a universal ISO 5211 mechanical interface and the status of ball or butterfly valve can be monitored at a control system through a range of rugged feedback switches. The drives can also be used as modulating control actuators by the addition of Bürkert's range of SideControl positioners.

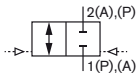
Control function A

Single-acting actuator for pneumatically activated open/closed valve, normally closed by spring force.



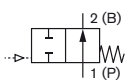
Control function I

Open/close operation on either side without spring, bidirectional



Control function B

Single-acting actuator for pneumatically activated open/closed valve, normally opened by spring force.



Function principles see p. 3

Technical data

Materials

Actuator	aluminium alloy
Piston	aluminium
Seal	special NBR

Control medium

filtered compressed air
with or without oil

Control pressure

3-8 bar single-acting
2.5-8 bar double-acting
max. 8 bar

T_{umg}

-40 up to +80 °C (FKM: -15 up to +150 °C)

Rotation

90°, adjustable before -5 up to 95°

Adjustable angle

every 20°

Interface

Pilot air ports

NAMUR Flange interface VDE/VDI 3845

Feedback signal

NAMUR VDE/VDI 3845

Fittings

ISO 5211

Ordering chart (other versions on request)

Double-acting actuator (Control function I)

Actuator-size	Torque (Nm) dependent on control pressure							Air volume(l)		Weight [kg]	Article no.
	Control pressure (bar)							opening	closing		
	3	4	5	5.5	6	7	8				
15	10	13.3	16.6	18.3	19.9	23.3	26.6	0.09	0.15	1	214520
30	17.6	23.5	29.3	32	35.2	41	46.9	0.16	0.26	1.6	214522
60	34.9	46.5	58.2	64	69.8	81.4	93.1	0.31	0.49	2.7	214524
100	54.9	73.2	91.5	101	110	128	146	0.51	0.78	3.7	214525
150	79.8	106	133	146	160	186	213	0.71	1.11	5.2	214526
220	129	172	215	236	258	301	344	1.19	1.8	8	214527
300	166	222	277	305	332	388	433	1.54	2.34	9.8	214528

Single-acting actuator (Control function A, 6 spring packages per side)

Actuator size	Torque (Nm) dependent on control pressure								Air volume(l)			Article no. (Control function A)	Article no. (Control function B)
	Control pressure (bar)								opening	closing	Weight [kg]		
	5.5		6		8		spring force						
0°	90°	0°	90°	0°	90°	90°	0°						
15	10.2	6.6	11.9	8.2	18.5	14.9	11.7	8.1	0.09	0.15	1.1	214529	214537
30	18.9	12	21.9	14.9	33.6	26.7	20.2	13.3	0.16	0.26	1.7	214530	214538
60	37.5	22.4	43.3	28.3	66.5	51.5	41.5	26.5	0.31	0.49	3.1	214531	214539
100	56.7	31.4	65.8	40.5	102	77.1	69.3	44	0.51	0.78	4.3	214532	214540
150	85.4	51.7	99	65	152	118	94.5	60.8	0.71	1.11	6.1	214533	214541
220	138	79	159	101	245	187	157	98.4	1.19	1.8	9.3	214534	214542
300	179	107	206	135	317	245	198	126	1.54	2.34	12	214535	214543
450	281	169	324	213	498	386	309	198	2.41	3.78	17	214536	214545

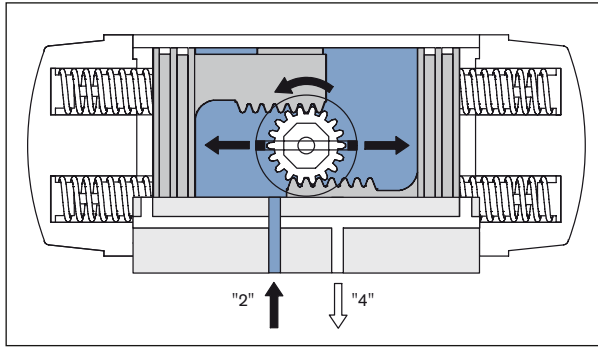
Ordering chart – Accessories

Specifications	Article no.
universal adapter for shaft	787338
universal assembly bridge	770294

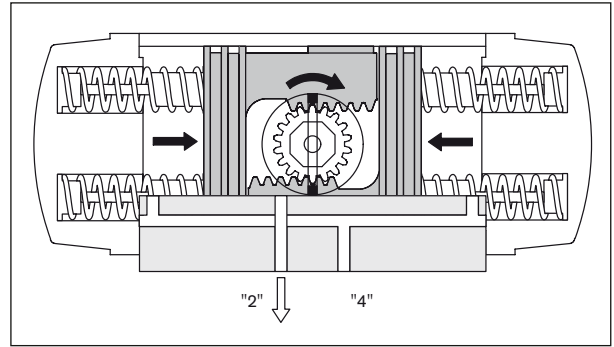
Functional principle

Control function A

Air supplied to Port "2" forces the pistons toward the actuator end caps, compressing the springs. A counter-clockwise rotation is achieved. Exhaust air exits from Port 4.



The loss of air pressure (air or electric failure) at Port "2" allows the springs to force the pistons inward. A clockwise rotation is achieved. Exhaust air exits from Port 2.

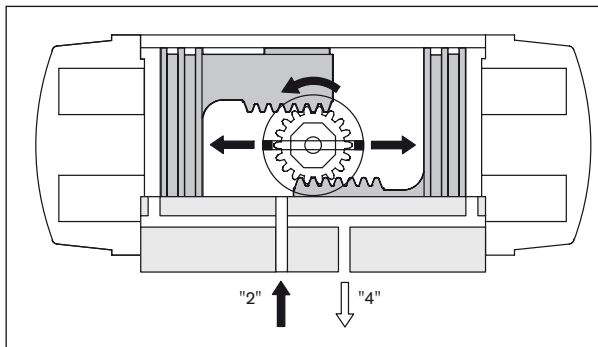


Control function B

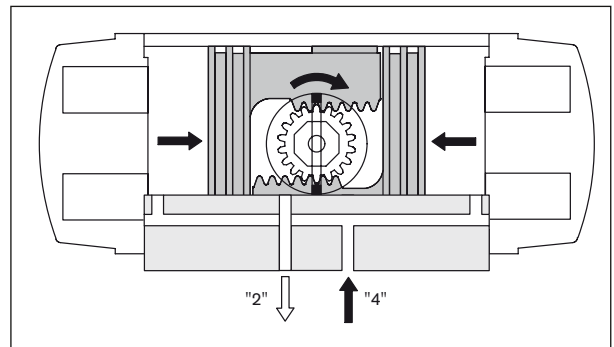
Is the opposite rotating direction of control function A.

Control function I

Air supplied to port 2 forces the pistons towards the actuator end caps. A counter-clockwise rotation is achieved. Exhaust air exits from Port 4.

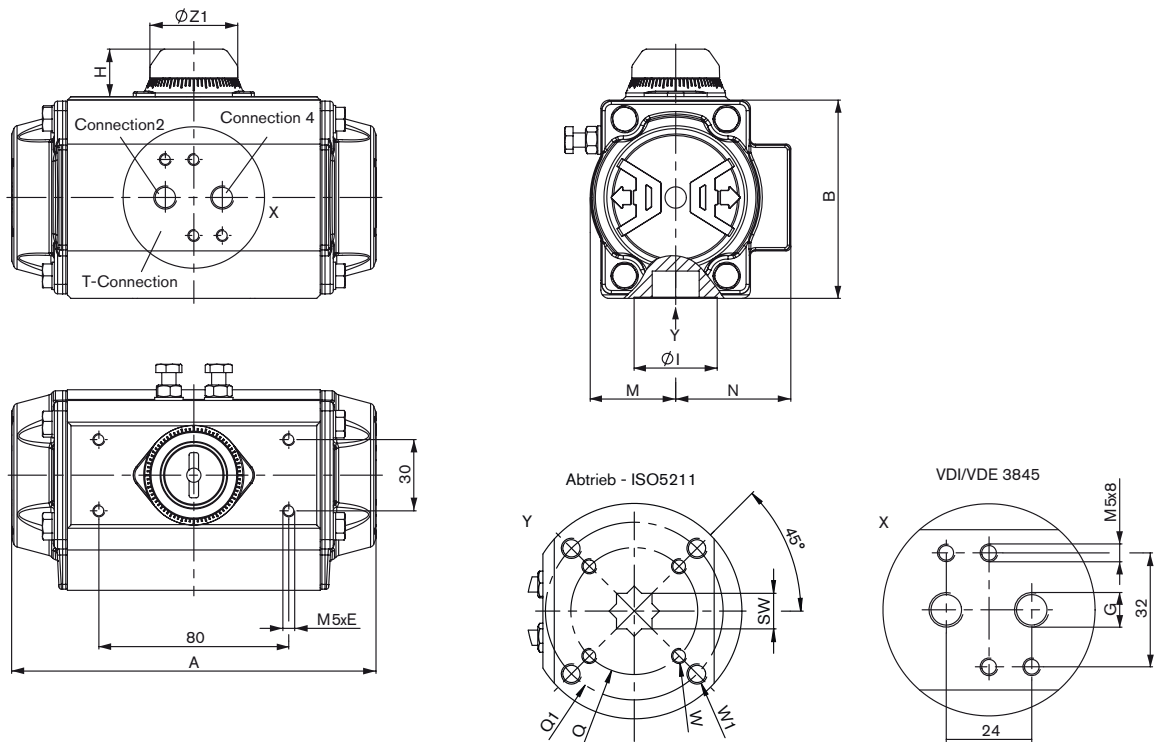


Air supplied to Port 4 forces the pistons inward. A clockwise rotation is achieved. Exhaust air exits from Port 2.



Note: Top view

Dimensions [mm]



Size	A	B	E	H	ØI	M	N	Q	Q1	W	W1	ØZ1	G	SW	ISO 5211
15	136	69	4	20	30	29	43	36	50	M5	M6	37	1/8"	11	F03-05
30	153.5	85	8	20	35	36	48.5	50	70	M6	M8	37	1/8"	14	F05-07
60	203.5	102	8	20	35	42.5	50.5	50	70	M6	M8	37	1/8"	14	F05-07
100	241	115	8	20	55	49.5	56.5	50	70	M6	M8	37	1/8"	17	F05-07
150	259	127	8	20	55	55.5	63	70	102	M8	M10	37	1/4"	17	F07-10
220	304	145	8	30	70	64	72	70	102	M8	M10	51	1/4"	22	F07-10
300	333	157	8	30	70	69.5	77	70	102	M8	M10	51	1/4"	22	F07-10
450	394.5	177	8	30	85	80	86	102	125	M10	M12	60	1/4"	27	F10-12

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In case of special application conditions, please consult for advice.

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