bürkert
FLUID CONTROL SYSTEMS



Pneumatic rotary actuator, single-acting and double-acting

- Can be combined with position feedback or control head
- Flange acc. ISO 5211 and DIN 3337
- Long life cycle
- Optical position indicator
- Pilot valve connection NAMUR

Type 2050 can be combined with…



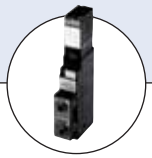
Type 2652/55
Ball valve
stainless steel



Type 2658
Ball valve
plastic



Type 2675
Butterfly valve



Type 5470
Solenoid valve



Type 6519 NAMUR
Solenoid valve



Type 8631
Control head

The pneumatic rotary actuator, Type 2050, consists of a single or double-acting pneumatic linear piston actuator with internal quick-acting screw thread coupling to a turn element and a universal mechanical interface to DIN 3337 and ISO 5211.

During the linear movement of the piston under the pressure of the control air or the force of the return spring, the actuator shaft is turned through 90° by the quick-acting screw thread coupling. This rotary movement can be used to operate corresponding armatures such as ball valves, flap valves, etc. The actuator has an optical display for the piston position.

The materials employed permit use under heavy-duty, slightly aggressive environmental conditions.

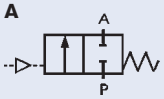
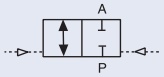
In order to ensure the full functionality of the rotary actuator, a minimum control pressure of 2 bar (control function I) or 3.5/4.0 bar (control function A, see Technical data) is required. The drive operates maintenance-free.

Technical data	
Actuator material, flange	PA6 GF30
Pilot air ports material	Stainless steel 1.4305
Seal material	NBR
Internal parts material	POM and PBT
Actuator shaft material	Stainless steel 1.4308
Ambient temperature	-10 to +60°C
Actuator size	Ø 63 mm, Ø 100 mm
Control medium	Neutral gases, air
Pilot pressure Double-acting actuator Single-acting actuator	 2 to 10 bar (Ø 63 mm), 2 to 6 bar (Ø 100 mm) 4.0 to 10 bar (Ø 63 mm), 3.5 to 6 bar (Ø 100 mm)
Flange	F04, F05 and F07 according DIN 3337 and ISO 5211 (universal)
Rotation	90° ±3°
Rotation time for 90°	1 to 3.5 s (depending on load and pilot pressure)
Torques	please refer to charts on p. 3
Installation	As required, preferably with actuator in upright position

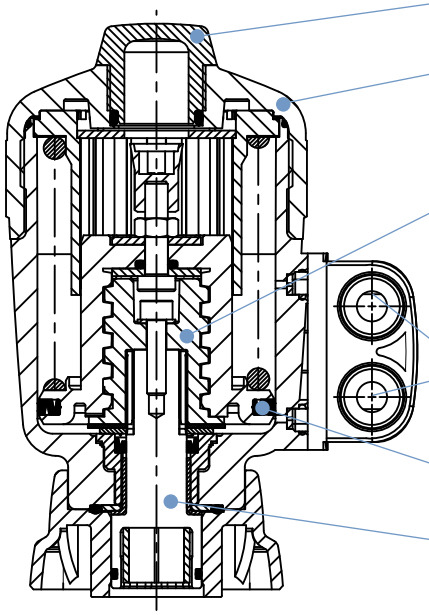
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Ordering chart for pneumatic actuator (further versions on request)

Pilot air port G 1/4, flange interface according DIN 3337 and ISO 5211
Pilot air ports, thread inserts and flange screws; stainless steel

Control function	Actuator size Ø [mm]	Material pilot air ports	Pressure range [bar]	Flange	Item no.
A  Single-acting (spring return)	63	Stainless steel	4.0 - 10	F04	142 621
				F05	142 622
	100	Stainless steel	3.5 - 6	F05	140 809
				F07	140 810
I  Double-acting	63	Stainless steel	2 - 10	F04	140 805
				F05	140 806
	100	Stainless steel	2 - 6	F05	140 807
				F07	140 808

Materials



Optical position indicator: Polycarbonate (PC)

Actuator: PA6 GF30

Internal parts: POM and PBT

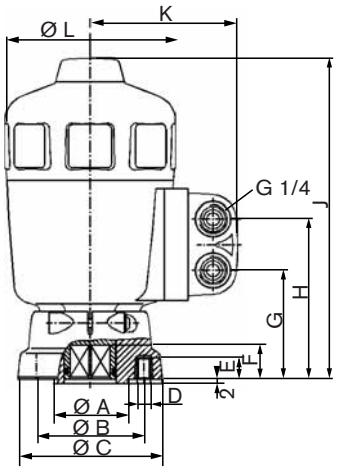
Pilot air ports: Stainless steel 1.4305

Piston seal: NBR

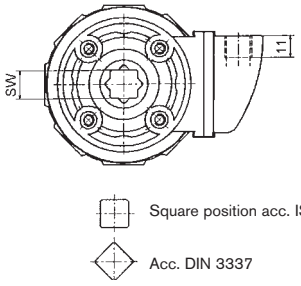
Actuator shaft material: Stainless steel 1.4308

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Dimensions [mm]



Bottom view of actuator interface with universal flange

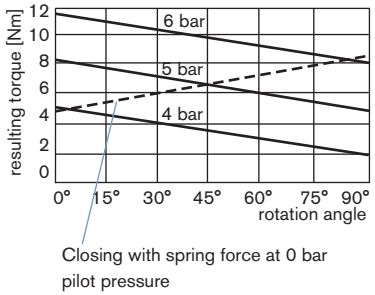


Actuator Ø	Flange	Ø A	Ø B	Ø C	D	E	F	G	H	J	K	Ø L	SW
63	F 04	30	42	67	M5	9	16	51	75	150	69	80	11
	F 05	35	50	67	M6	10	16	51	75	150	69	80	14
100	F 05	35	50	90	M6	10	21	72	102	224	73	127	14
	F 07	55	70	90	M8	12	21	72	102	224	73	127	17

Torque at the actuator shaft [Nm]

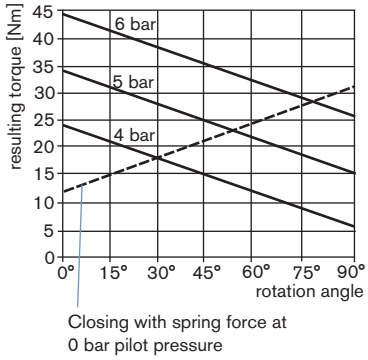
Control function A
Actuator size Ø 63 mm

Opening with 4, 5 or 6 bar pilot pressure against the spring force



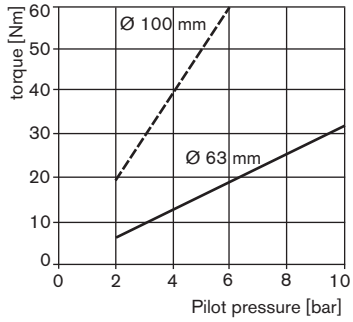
Control function A
Actuator size Ø 100 mm

Opening with 4, 5 or 6 bar pilot pressure against the spring force



Control function I
Actuator size Ø 63 and 100 mm

Double-acting without spring



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Ordering chart for accessories

3/2-way pilot valves with banjo bolts

Seal material valve FKM, seal material banjo bolt NBR

Valve for actuator size [Ø mm]	Type	Pressure inlet P (valve body)	Service port A (banjo bolt)	Orifice [mm]	QNn value air [l/min]	Pressure range [bar]	Electrical coil connection Ind. Std.	Power consumption [W]	Item no. Voltage/ frequency [V/Hz]	
									024/DC	230/50
63	6012P	Tube fitting ø6 mm	G 1/4	1.2	48	0-10	Form B	4	552 283	552 286
63-100	6014P	G 1/4	G 1/4	2	120	0-10	Form A	8	424 103	424 107

Cable plug Type 2507, Form B or Type 2508, Form A

	Item no.
Type 2507, Form B Industrial standard, 0 to 250 V without circuitry (Type 6012 P)	423 845
Type 2508, Form A acc. DIN EN 175301-803, 0 to 250 V without circuitry (Type 6014 P, Type 0331P)	008 376

For further accessories see separate datasheet for Type 1062 or the accessories datasheet Type 2XXX for the full options programme.

Note: For design reasons, some of the accessories cannot be supplied for actuator size Ø 40 mm. Please request the accessories datasheet Type 2XXX.

NAMUR adapter for pilot valves with NAMUR flange

Actuator size Ø [mm]	Material	Item no.
63	Plastic (PA)	427 405
100	Brass	637 114
	Stainless steel	634 275

Further accessories – electropneumatically control unit Type 8631

The pneumatic actuator Type 2050 can easily be controlled by using the TopControl ON/OFF Type 8631. Various levels of extension and electrical connection concepts are made possible by TopControl ON/OFF's modular construction. A position feedback is possible via inductive proximity switches or mechanical terminal switches. TopControl ON/OFF effects advancement to a valve safety position in the event of operational or pneumatic emergency current failure.

The following information is necessary for the selection of a valve Type 2050 with TopControl ON/OFF Type 8631:
- Item no. of the Type 2050 (see Ordering chart)
- Item no. of the TopControl ON/OFF 8631 (see separate datasheet)

For further information please see separate datasheet for Type 8631.

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