

## Pneumatic rotary drive



Type 2051 can be combined with...



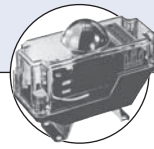
**Type 6518/6519**  
Solenoid valve



**Type 8792/93**  
Positioner SideControl



**Type 2654**  
Stainless steel ball valve



**Type TEUXXX**  
Position feedback



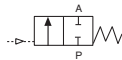
**Type 2671**  
Metal butterfly valve

- 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.

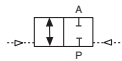
**Control function A**

Single-acting actuator return by spring, operating e.g. with pilot valve



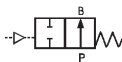
**Control function I**

Double-acting actuator, operating e.g. with pilot valve



**Control function B**

Single-acting actuator return by spring



Function principles see p. 3

| Technical data          |  |
|-------------------------|--|
| <b>Materials</b>        |  |
| Actuator                | aluminium alloy  |
| Piston                  | aluminium  |
| Seal                    | special NBR  |
| <b>Control medium</b>   | filtered compressed air with or without oil                                    |
| <b>Control pressure</b> | 3-8 bar single-acting<br>2.5-8 bar double-acting<br>max. 8 bar                 |
| <b>T<sub>umg</sub></b>  | -40 up to + 80 °C (FKM: -15 up to +150 °C)                                     |
| <b>Rotation</b>         | 90°, adjustable before -5 up to 95°  |
| <b>Adjustable angle</b> | every 20°  |
| <b>Interface</b>        |  |
| Pilot air ports         | NAMUR Flange interface VDE/VDI 3845<br>Size 10-100: G 1/8, Size 150-450: G 1/4 |
| 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] | Item 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           | 214 520  |
| 30            | 17.6                                      | 23.5 | 29.3 | 32   | 35.2 | 41   | 46.9 | 0.16          | 0.26    | 1.6         | 214 522  |
| 60            | 34.9                                      | 46.5 | 58.2 | 64   | 69.8 | 81.4 | 93.1 | 0.31          | 0.49    | 2.7         | 214 524  |
| 100           | 54.9                                      | 73.2 | 91.5 | 101  | 110  | 128  | 146  | 0.51          | 0.78    | 3.7         | 214 525  |
| 150           | 79.8                                      | 106  | 133  | 146  | 160  | 186  | 213  | 0.71          | 1.11    | 5.2         | 214 526  |
| 220           | 129                                       | 172  | 215  | 236  | 258  | 301  | 344  | 1.19          | 1.8     | 8           | 214 527  |
| 300           | 166                                       | 222  | 277  | 305  | 332  | 388  | 433  | 1.54          | 2.34    | 9.8         | 214 528  |

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

| Actuator size | Torque (Nm) dependent on control pressure |      |      |      |      |      |              |         | Air volume(l) |             |                               | Item no. (Control function A) | Item 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°           | opening | closing       | Weight [kg] | Item no. (Control function A) | Item no. (Control function B) |                               |
| 15            | 10.2                                      | 6.6  | 11.9 | 8.2  | 18.5 | 14.9 | 11.7         | 8.1     | 0.09          | 0.15        | 1.1                           | 214 529                       | 214 537                       |
| 30            | 18.9                                      | 12   | 21.9 | 14.9 | 33.6 | 26.7 | 20.2         | 13.3    | 0.16          | 0.26        | 1.7                           | 214 530                       | 214 538                       |
| 60            | 37.5                                      | 22.4 | 43.3 | 28.3 | 66.5 | 51.5 | 41.5         | 26.5    | 0.31          | 0.49        | 3.1                           | 214 531                       | 214 539                       |
| 100           | 56.7                                      | 31.4 | 65.8 | 40.5 | 102  | 77.1 | 69.3         | 44      | 0.51          | 0.78        | 4.3                           | 214 532                       | 214 540                       |
| 150           | 85.4                                      | 51.7 | 99   | 65   | 152  | 118  | 94.5         | 60.8    | 0.71          | 1.11        | 6.1                           | 214 533                       | 214 541                       |
| 220           | 138                                       | 79   | 159  | 101  | 245  | 187  | 157          | 98.4    | 1.19          | 1.8         | 9.3                           | 214 534                       | 214 542                       |
| 300           | 179                                       | 107  | 206  | 135  | 317  | 245  | 198          | 126     | 1.54          | 2.34        | 12                            | 214 535                       | 214 543                       |
| 450           | 281                                       | 169  | 324  | 213  | 498  | 386  | 309          | 198     | 2.41          | 3.78        | 17                            | 214 536                       | 214 545                       |

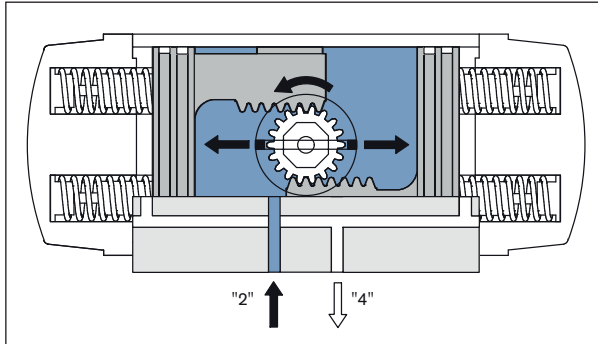
## Ordering chart – Accessories

| Specifications              | Item no. |
|-----------------------------|----------|
| universal adapter for shaft | 787 338  |
| universal assembly bridge   | 770 294  |

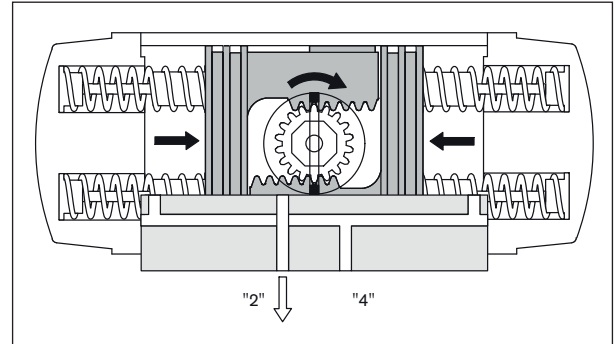
## Functional principle

### 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.

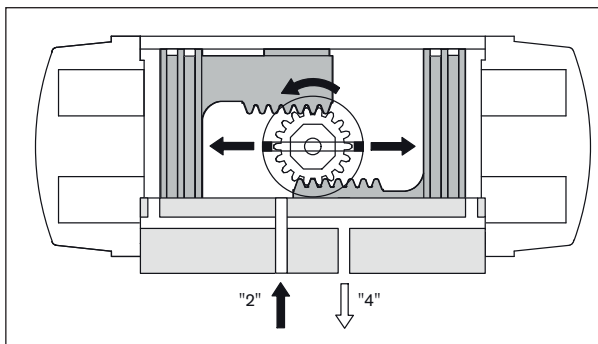


### Control function B

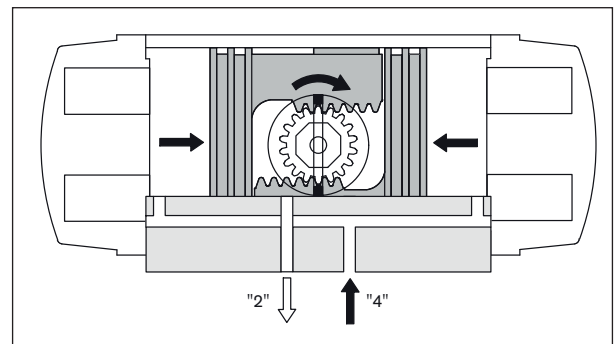
Is the opposite rotating direction of control function A.

### 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.

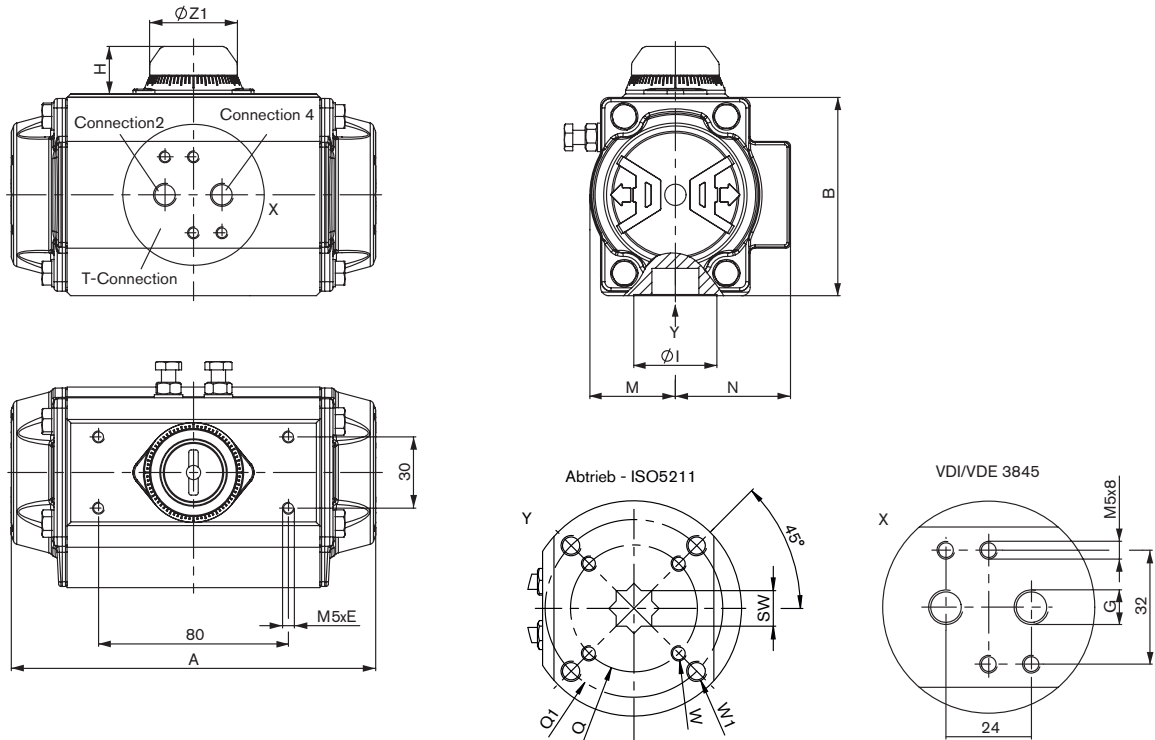


Air supplied to Port 4 forces the pistons inward. A clockwise rotation is achieved. Exhaust air exits from Port 2.



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   |

To find your nearest Bürkert facility, click on the orange box →

[www.burkert.com](http://www.burkert.com)

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

Subject to alteration.  
© Christian Bürkert GmbH & Co. KG

1407/9\_EU-en\_00895035