

Twin piston semi-rotary drive DRQD/DRQD-B

FESTO



The stronger, faster, smaller and more powerful unit.

Its unique features are: repetition accuracy of less than 0.03 mm and a 2.5-fold increase in its mass moment of inertia capability.

Flexible and precise

The powerful and load capable twin piston principle enables a top performance of 50 Nm. It has compact, space-saving versions, e.g. for the electronics and medical technology industries, as well as larger versions for machine construction and production engineering. The DRQD-B: simply ideal for handling and assembly work.

Modular

Its design includes various types of end-position cushioning, rotation angles and custom angles, a drive shaft or mid-position module as well as tubing and energy through-feeds.

Three choices of cushioning

You choose! Pneumatic end-position cushioning for high speeds and low mass moments of inertia. Adjustable elastomer cushioning for low to medium values. Or hydraulic shock absorbers for high mass moments of inertia.

Reliable

Thanks to its sturdy design, standardised cylinder sensors for sensing end or mid-positions and air connections at 2 locations. In addition, a clever flanged shaft through-feed for air tubing and sensor cables.



Precise,

powerful,

space saving!

117.1.PSI →

Product Short Information

Twin piston semi-rotary drive DRQD/DRQD-B

Convincing

Altogether, the new DRQDB makes a convincing impression as the well-known advantages of the DRQD have been combined with increased torque resistance and optimised repetition accuracy.

Process reliable and space saving

Rotating cables and tubes don't get tangled up as they are fed through the flanged shaft of the semi-rotary drive, even for the smallest available size, the DRQD-16.

Fast assembly

All connections are ready for use, thus the user does not have to fit or lay any sensor cables and tubing.

Clearly defined

Adapter plates and direct mounting are used as interfaces for grippers, linear modules or slides. Precisely adapted to Festo's modular system for handling and assembly technology.

Technical data for DRQD 6-12

Piston diameter [mm]		6	8	12
Operating pressure	[bar]	1 ... 8	1.5 ... 8 (with SD32)	1 ... 8
Max. permissible swivelling frequency at 6 bar (for completed movement cycle)	[Hz]	5	4	3
	90°	3.5	2.5	2
Repetition accuracy	[°]	< 0.2		
Theoretical torque at 6 bar	[Nm]	0.16	0.33	0.76
Max. permissible mass moment of inertia (unthrottled)	[kgm ² x 10 ⁻⁴]	0.075	0.25	0.7

Variants DRQD 6-12

- 90° and 180° swivel angle
- Flexible end-position cushioning with precision end-position adjustment
- Flanged shaft or spigot shaft
- Air through-feed (hollow bolt or tubing through-feed)

Technical Data DRQD-B 16-32 and DRQD 40-50

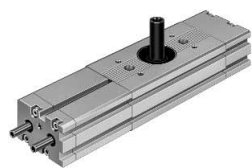
Piston diameter [mm]		DRQD-B				DRQD			
		16	20	25	32	40	50		
Operating pressure	[bar]	PPVJ							
		P1J							
		YSRJ							
Max. permissible characteristic Swivelling frequency at 6 bar (for completed movement cycle)	[Hz]	PPVJ	90°	4	3	2	1.2	1.2	1.2
			180°	3	2.2	1.3	0.8	0.9	0.9
			360°	1.5	1.2	0.8	0.5	0.5	0.5
	P1J	90°	3.6	3	2.5	2.2	–	–	
		180°	2.5	2.2	1.9	1.6	–	–	
		360°	1.5	1.2	1.0	0.8	–	–	
	YSRJ	90°	2	2	1.5	1.2	1	0.9	
		180°	1.8	1.8	1.5	1.2	1	0.8	
		360°	1	1	0.9	0.8	0.7	0.6	
Repetition accuracy (approached from both ends)	[°]	PPVJ/YSRJ				≤ 0.05			
		P1J				–			
Theoretical torque at 6 bar	[Nm]	1.6	3.1	6.1	12.5	25	50		
Max. permissible mass moment of inertia	[kgm ² x 10 ⁻⁴]	PPVJ ¹⁾		5	10	20	40	200	500
		P1J ²⁾		175	350	500	800	–	–
		YSRJ ²⁾		750	1000	1750	3750	7000	11000

¹⁾unthrottled ²⁾throttled

Variants DRQD-B 16-32 and DRQD 40-50

- 90°, 180° and 360° swivel angles and custom angles
- Adjustable end-position cushioning with precision end-position adjustment:
 - pneumatic
 - adjustable elastomer cushioning
 - hydraulic shock absorbers
- Flanged shaft or spigot shaft
- Intermediate position
- Flanged shaft through-feed for pneumatic/electrical connections

Mid-position Z1 for DRQD-B 16-32, DRQD 40-50



The mid-position module facilitates adjustable, backlash-free drive positioning in half of its nominal rotation angle. The mid-position module is available for swivel angles of 90° and 180°.

Flanged shaft through-feed (pneumatic) for DRQD 8, 12, 40,50 and DRQD-B 16-32



The air through-feed is available with 1 to 4 DUO tubing. This effectively means that the user has eight single lengths of tubing.

Flanged shaft through-feed (pneumatic and electrical)



For sizes 16 to 50, energy throughfeeds are available with a maximum swivel angle of 180°: A maximum of four tubes and four sensor cables are guided reliably through the flanged shaft.

Festo AG & Co. KG

Ruiter Strasse 82
73734 Esslingen
www.festo.com
Tel. +49 711 347-0
Fax +49 711 347-2144
service_international@festo.com