Twin-piston semi-rotary drives DRRD-8 ... 12

Type codes

Product type	
Double-acting	
DRRD	Semi-rotary drive

Size	

Nominal swivel angle	
180	180°

Output shaft	
FH	Flanged shaft, hollow

Cushioning	
P	Elastic cushioning at both ends
Y9	Linear shock absorber, self-adjusting at both ends, internal
Y12	Linear shock absorber, self-adjusting at both ends, external

Position sensing	
A	Via proximity sensor

Operating instructions	
–	With operating instructions
DN	Without operating instructions

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Operating and environmental conditions		
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
Note on operating/pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)
Operating pressure		
DRRD-...-P	[bar]	3 ... 8
DRRD-...-Y9/-Y12	[bar]	2 ... 10
Ambient temperature	[°C]	–10 ... +60
Storage temperature	[°C]	–20 ... +60

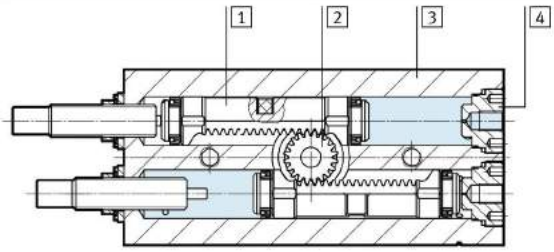
Weight [g]			
Size	8	10	12
DRRD-...-P	155	245	380
DRRD-...-Y9	–	–	385
DRRD-...-Y12	–	–	500

Forces and torques				
Size		8	10	12
Theoretical torque at 6 bar	[Nm]	0.2	0.4	0.8
Max. permissible mass moment of inertia				
DRRD-...-P	[kgcm²]	15	20	80
DRRD-...-Y9	[kgcm²]	–	–	300
DRRD-...-Y12	[kgcm²]	–	–	300

Note	
If, in the end positions, a torque which exceeds 50% of the theoretical torque acts against the direction of rotation, no exact end position is guaranteed.	This can be avoided by using external shock absorbers (Y12) or a semi-rotary drive with double the torque.

Materials

Sectional view



Semi-rotary drive		
1	Piston	Copper base alloy
2	Flanged shaft	High-alloy stainless steel
3	Housing	Wrought aluminium alloy, smooth-anodised
4	Port plug	High-alloy stainless steel
	Seals	NBR
	Piston seal	TPE-U(PU)
	Note on materials	RoHS-compliant
		Contains PWIS (paint-wetting impairment substances)

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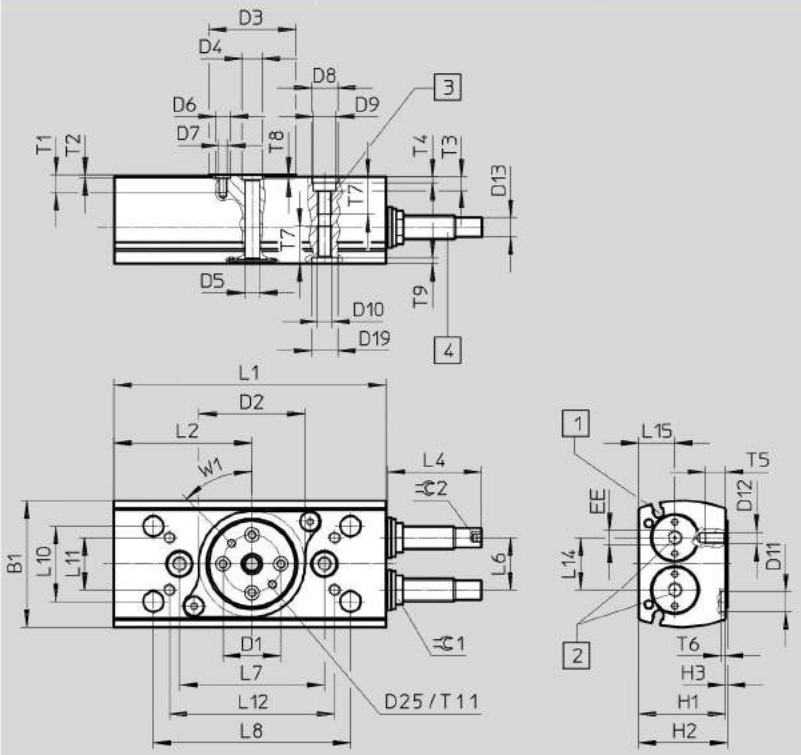
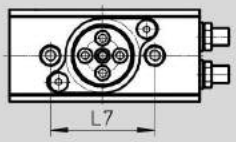
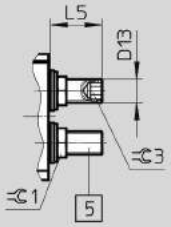
Dimensions



DRRD-8/10



DRRD-...-P



Note

Illustrated position of the flanged shaft corresponds to the mid-position (swivel angle 90°).
Dimension D25, T11 and W1 only for size 12.

1 Sensor slots for proximity sensor
2 Supply ports
3 Mounting threads
4 Shock absorbers (DRRD-...-Y9)
5 Cushioning components (DRRD-...-P)

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Size	B1 ±0.25	D1 Ø ±0.025	D2 Ø +0.1	D3 Ø	D4 Ø H7	D5 Ø	D6 Ø H7	D7	D8 Ø H7	D9 Ø	D10
8	31.5	12	26	20.4	5	3	5	M3	7	6	M4
10	38	15	32	24	5	3	5	M3	7	6	M4
12	43.5	20	37	30	7	5	5	M3	9	8	M5

Size	D11 Ø H7	D12	D13	D19 Ø H7	D25	H1 +0.4	H2	H3	L1 ±0.1	L2 +0.1	L6
8	–	–	M6x0.5	7	–	24.5	25.3	0.8	65.6	32.2	$13_{-0.1}$
10	–	–	M6x0.5	7	–	27.5	28.3	0.8	74	38.3	$15.2_{-0.1}$
12	7	M4	M8x1	9	M3	30	30.8	0.8	93.9	47.7	$18^{+0,1}$

Size	L7 ±0.02	L8 ±0.2	L10 ±0.02	L11 ±0.15	L12 ±0.2	L14	L15 –0.1	T1	T2 +0.1	T3	T4 +0.4/–0.1
8	36	–	–	–	–	13	11.1	4.8	1.2	3.4	1.5
10	44	–	–	–	–	15.2	11.1	6.2	1.2	3.4	1.5
12	50	68	26	18	57	18	12.5	5.4	1.2	4.7	2.1

Size	T5	T6 +0.4/–0.1	T7	T8 +0.1	T9 +0.1	T11	EE	W1	⫧1	⫧2	⫧3
8	–	–	10.5	1.2	1.6	–	M3	45°	10	–	3
10	–	–	10	1.2	1.6	–	M3	45°	10	–	3
12	7	1.6	13	1.6	2.1	5.5	M5	45°	10	2.5	5

Size	Dimension with 180° swivel angle		Swivel angle adjustment range		
	L4	L5	L4 min./max.	L5 min./max.	1 mm = ...°
8	–	11.1	–	–6.1/+0.8	16.4
10	–	12.6	–	–7.6/+1.2	13.64
12	28	17	–1.9/+1.9	–11/+1.8	9.6

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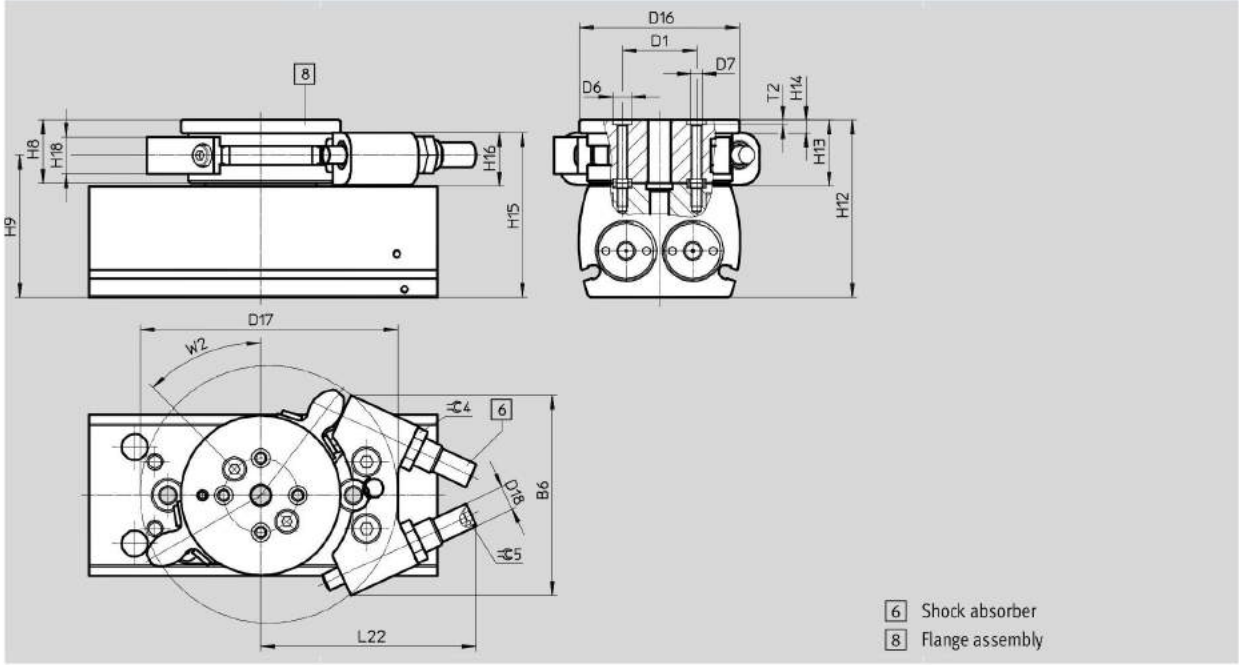
Dimensions – Variants

Y12 – With external shock absorber



Size	B6	D1 Ø	D6 Ø	D7	D16 Ø	D17	D18	H8	H9	H12
	±0.2	±0.025	H7					±0.1		
12	54	20	5	M3	43	69.4	M8x1	17	38.3	47.8

Size	H13	H14	H15	H16	H18	L22	T2	W2	⌀ 4	⌀ 5
						max.	+0.1			
12	17.8	3.5	44	14	10	58.2	1.2	45°	10	2.5