

### **Micro-Cylinders**

## MD 8-NG series S version

Type ...... Single and double acting pneumatic microcylinders, with or without magnetic piston
Standards ...... Main dimensions according to ISO 6432 -

CETOP RP 52 P

Cushioning ...... With elastic ring in end position

Rated temperature ...... -20...80 °C (-4...176 °F)

Fluid ...... Filtered compressed air with or without

lubrication

Working pressure ....... 0,5...10 bar (7,3...145 psi)

Proximity switch ...... See page 1.2.2.2

See page 1.2.2.1

Mounting and accessories ...... Each micro-cylinder includes a mounting nut

and a rod nut

Materials ...... Aluminum end caps, stainless steel tube

and piston rod, PUR seals



			+
Ø	Single acting	Single acting rear spring	Double acting
8	0.001.510	0.001.520	0.001.530
10	0.002.510	0.002.520	0.002.530
12	0.003.510	0.003.520	0.003.530
16	0.004.510	0.004.520	0.004.530
20	0.005.510	0.005.520	0.005.530
25	0.006.510	0.006.520	0.006.530

Strokes Single acting	Strokes Double acting	Min. stroke with 1 sensor	Min. stroke with 2 sensors
10, 25, 50	10, 25, 40, 50, 80, 100	15	25
10, 25, 50	10, 25, 40, 50, 80, 100	5	20
10, 25, 50	10, 25, 40, 50, 80, 100, 125, 160, 200	15	25
10, 25, 50	10, 25, 40, 50, 80, 100, 125, 160, 200	5	20
10, 25, 50	10, 25, 40, 50, 80, 100, 125, 160, 200, 250, 300	5	20
10, 25, 50	10, 25, 40, 50, 80, 100, 125, 160, 200, 250, 300, 400, 500	5	20

ø	Single acting magnetic piston	Single acting rear spring magnetic piston	Double acting magnetic piston
8	0.021.710	0.021.720	0.021.730
10	0.022.710	0.022.720	0.022.730
12	0.023.710	0.023.720	0.023.730
16	0.024.710	0.024.720	0.024.730
20	0.025.710	0.025.720	0.025.730
25	0.026.710	0.026.720	0.026.730

When ordering replace dashes by stroke value in mm, completing with zeros at the left if less than 3 digits. i.e.: a cylinder 0.026.710.- - - with stroke 50 mm must be ordered as 0.026.710.050
Strokes in table are according to ISO 4393 standard.

YΑ

28

30

32

36

40

XC

62

62

72

78

88.5

XC,

94

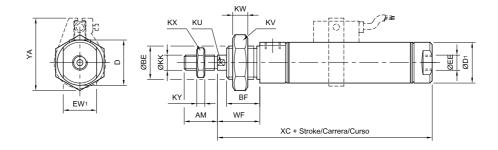
94

108,5

113,5

126

However other strokes can be ordered on request.



Ø	А	М	ØBE	BF	D	D1	EE	EW <sub>1</sub>	КК	KU	KV	KW	кх	KY	WF
8	1	2	M12 x 1,25	12	15	12	M5 x 0,8	10	M4 x 0,7		19	7	7	3,2	16
10	1	2	M12 x 1,25	12	15	12	M5 x 0,8	10	M4 x 0,7		19	7	7	3,2	16
12	1	6	M16 x 1,5	17	20	18	M5 x 0,8	15	M6 x 1	5	24	8	10	5	22
16	1	6	M16 x 1,5	17	20	18	M5 x 0,8	15	M6 x 1	5	24	8	10	5	22
20	2	Ö	M22 x 1,5	18	27	27	G 1/8"	22	M8 x 1,25	7	32	10	13	5	24
25	2	2	M22 x 1,5	22	27	27	G 1/8"	22	M10 x 1,25	9	32	10	17	6	28



## MD 8-NG series U version



		= ±		
Ø	Single acting	Single acting rear spring	Double acting	
8	0.001.010	0.001.020	0.001.030	
10	0.002.010	0.002.020	0.002.030	
12	0.003.010	0.003.020	0.003.030	
16	0.004.010	0.004.020	0.004.030	
20	0.005.010	0.005.020	0.005.030	
25	0.006.010	0.006.020	0.006.030	

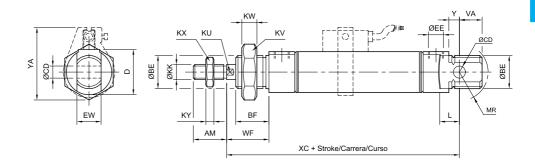
Strokes single acting	Strokes double acting
10, 25, 50	10, 25, 40, 50, 80, 100
10, 25, 50	10, 25, 40, 50, 80, 100
10, 25, 50	10, 25, 40, 50, 80, 100, 125, 160, 200
10, 25, 50	10, 25, 40, 50, 80, 100, 125, 160, 200
10, 25, 50	10, 25, 40, 50, 80, 100, 125, 160, 200, 250, 300
10, 25, 50	10, 25, 40, 50, 80, 100, 125, 160, 200, 250, 300, 400, 500

Ø	Single acting magnetic piston	Single acting rear spring magnetic piston	Double acting magnetic piston	Double acting with cushioning and
	magnetic piston	spring magnetic piston	magnetic piston	magnetic piston
8	0.021.210	0.021.220	0.021.230	
10	0.022.210	0.022.220	0.022.230	
12	0.023.210	0.023.220	0.023.230	
16	0.024.210	0.024.220	0.024.230	0.024.260
20	0.025.210	0.025.220	0.025.230	0.025.260
25	0.026.210	0.026.220	0.026.230	0.026.260

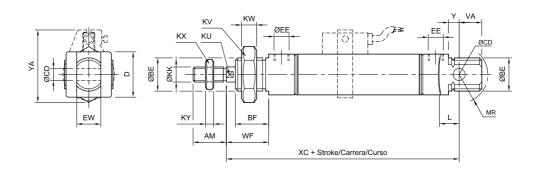
Min. stroke with 1 sensor	Min. stroke with 2 sensors
20	30
20	20
15	25
5	20
5	20
5	20

When ordering replace dashes by stroke value in mm, completing with zeros at the left if less than 3 digits. i.e.: a cylinder 0.026.210. - - with stroke 50 mm must be ordered as 0.026.210.050
Strokes in table are according to ISO 4393 standard. However other strokes can be ordered on request.

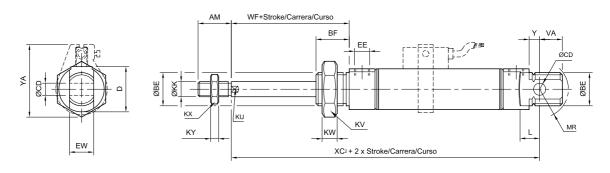
Single or double acting



Double acting with adjustable cushioning



Single acting with rear spring return



Ø	AM	ØBE	BF	D	ØCD	EE	EW	ØKK	KU	KV	KW	кх	KY	L	MR	VA	WF	XC	XC <sub>2</sub>	Υ	ΥA
8	12	M12 x 1,25	12	15	4	M5 x 0,8	8	M4 x 0,7		19	7	7	3,2	6	12	10	16	64	96	2	28
10	12	M12 x 1,25	12	15	4	M5 x 0,8	8	M4 x 0,7		19	7	7	3,2	6	12	10	16	64	96	2	30
12	16	M16 x 1,5	17	20	6	M5 x 0,8	12	M6 x 1	5	24	8	10	5	9	13	14	22	75	111,5	3	32
16	16	M16 x 1,5	17	20	6	M5 x 0,8	12	M6 x 1	5	24	8	10	5	9	15,5	13	22	82	117,5	4	36
20	20	M22 x 1,5	18	27	8	G 1/8"	16	M8 x 1,25	7	32	10	13	5	12	17,5	15	24	95	132,5	3	40
25	22	M22 x 1,5	22	27	8	G 1/8"	16	M10 x 1,25	9	32	10	17	6	12	19	15	28	104	141,5	7	45



## **Micro-Cylinders**

#### MD 8-NG series Double-ended rod cylinder

Type ...... Double acting double-ended rod pneumatic micro-cylinders, with magnetic piston

Standards ...... Main dimensions according to ISO 6432 -

CETOP RP 52 P

Cushioning ..... Elastic ring or adjustable cushioning in end

position

Rated temperature ...... -20...80 °C (-4...176 °F)

Fluid ...... Filtered compressed air with or without

lubrication

Working pressure ....... 0,5...10 bar (7,3...145 psi).

Proximity switch ...... See page 1.2.2.2

See page 1.2.2.1

Mounting and accessories ...... Each micro-cylinder includes a mounting nut

and a rod nut

Materials ...... Aluminum end caps, stainless steel tube

and piston rod, PUR seals



:		
Ø	Double acting	Double acting with cushioning
16	0.024.330	0.024.360
20	0.025.330	0.025.360
25	0.026.330	0.026.360

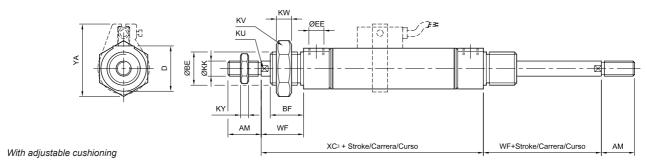
	Strokes
1	10, 25, 40, 50, 80, 100, 125, 160
1	10, 25, 40, 50, 80, 100, 125, 160, 200
1	10, 25, 40, 50, 80, 100, 125, 160, 200, 250, 300

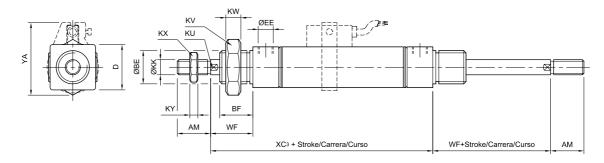
When ordering replace dashes by stroke value in mm, completing with zeros at the left if less than 3 digits. i.e.: a cylinder 0.026.330.- - - with stroke 50 mm must be ordered as 0.026.330.050

Strokes in table are according to ISO 4393 standard. However other strokes can be ordered on request.

- 5 mm minimum stroke with 1 sensor
- 20 mm minimum stroke with 2 sensors

#### Without adjustable cushioning





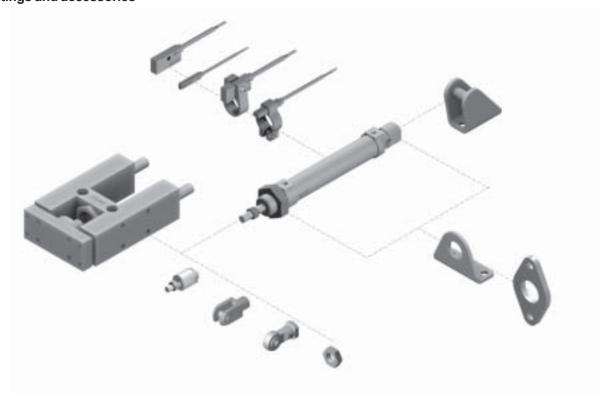
Ø	AM	ØBE	BF	D	EE	ØKK	KU	KV	KW	кх	KY	WF	XC <sub>3</sub>	YA
16	16	M16 x 1,	5 17	20	M5 x 0,8	M6 x 1	5	24	8	10	5	22	78	36
20	20	M22 x 1,	5 18	27	G 1/8"	M8 x 1,25	7	32	10	13	5	24	92	40
25	22	M22 x 1,	5 22	27	G 1/8"	M10 x 1,25	9	32	10	17	6	28	97	45



#### Mountings and accessories

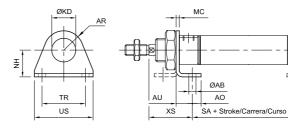
**Micro-Cylinders** 

**ISO 6432** 



#### **Foot mounting**

Ø	MiCRO
8-10	0.001.000.001
12-16	0.003.000.001
20-25	0.005.000.001

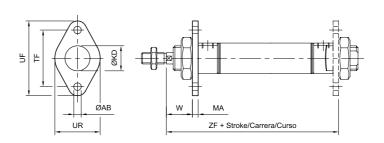


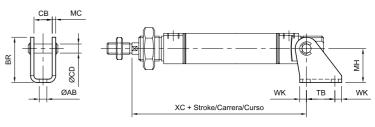
#### Flange mounting

Ø	MiCRO
8-10	0.001.000.003
12-16	0.003.000.003
20-25	0.005.000.003

#### Clevis foot mounting

Ø	MiCRO
8-10	0.001.000.006
12-16	0.003.000.006
20-25	0.005.000.006





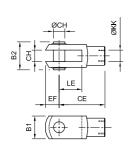


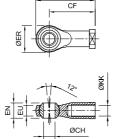
#### Rod clevis

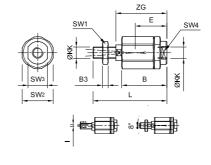
#### Rod eye

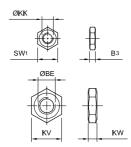
### Self aligning rod coupler

End cover and piston rod nuts









Ø	MiCRO
8-10	0.001.000.010
12-16	0.003.000.010
20	0.005.000.010
25	0.007.000.010

Ø	MiCRO
25	0.007.000.012

Ø	MiCRO
8-10	0.001.000.023
12-16	0.003.000.023
20	0.005.000.023
25	0.007.000.023

Ø	MiCRO
M 4 x 0,7	0.001.000.011
M 6 x 1	0.003.000.011
M 8 x 1,25	0.005.000.011
M 10 x 1,25	0.007.000.011
M 12 x 1,25	0.008.000.011
M 16 x 1,5	0.009.000.011
M 22 x 1,5	0.006.000.011

Ø	ØAB	AO	AR	AU	В	BE	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>	BR	СВ	ØCD	CE	CF	СН	Е	EF	EN	EF	R E	U	3	ı k	.D	ØKI	<
8-10	4,5	5	11	10	20	M12	8	12	3,2	25	8,1	4	16		4	16	5						1 12	2,1	M 4 x	0,7
12-16	5,5	6	13,5	12,5	21,5	M16	12	17	5	32,5	12,1	6	24		6	15,5	7						1 10	3,1	M62	κ 1
20	6,6	8	18	15	33	M22	16	21	5	40	16,1	8	32		8	20,5	10						1 22	2,1 1	M 8 x ′	1,25
25	6,6	8	18	15	46	M22	20	25	6	40	16,1	8	40	43	10	31	12	14	28	10	,5 5	7 2	2 22	2,1 1	/I 10 x	1,25
Ø	KV	KW	L	LE	MA	МС	МН	NH	SA	SW <sub>1</sub>	sw	<sub>2</sub> SV	N <sub>3</sub>	SW <sub>4</sub>	тв	TF	TR	UF	UR	US	W	wĸ	хс	xs	ZF	ZG
8-10	19	7	33	8	3	2	20	16	30	7	12,7	7 6	6	4	14	30	25	40	25	35	13	4	64	24	65	25
12	24	8	37	12	4	2,5	25	20	26	10	14,	5 7	7	5	20	40	32	52	30	42	18	5	75	32	72	25
16	24	8	37	12	4	2,5	25	20	36	10	14,	5 7	7	5	20	40	32	52	30	42	18	5	82	32	82	25
20	32	10	49	16	5	3	30	25	42	13	19	1	1	7	25	50	40	66	40	54	19	6	95	36	95	34
25	32	10	69,5	20	5	3	30	25	45	17	32	1	9	12	25	50	40	66	40	54	23	6	104	40	102	49,5
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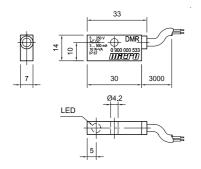
#### **Proximity switch DMR series**

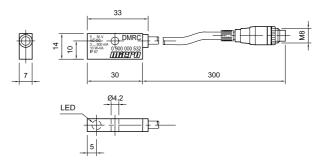
Туре	Voltage	Current	Power	LED	Degree of protection	MiCRO		
DMR	5250 V AC/DC	3500 mA	10 W/VA	•	IP 67	0.900.000.533		
DMRC	530 V AC/DC	3500 mA	10 W/VA	•	IP 67	0.900.000.532		
2 m cable lenght with female M8x1 connector 0.900.000.531								

 ${\it DMR model has 3 m lenght cable; DMRC model has 300mm lenght cable with M8x1 male}$ connector.

With polarity reversal protection (the sensor detects but the LED does not light).







#### **Proximity switch mounting bracket**

Ø	MiCRO
8	0.021.000.017
10	0.022.000.017
12	0.023.000.017
16	0.024.000.017
20	0.025.000.017
25	0.026.000.017

