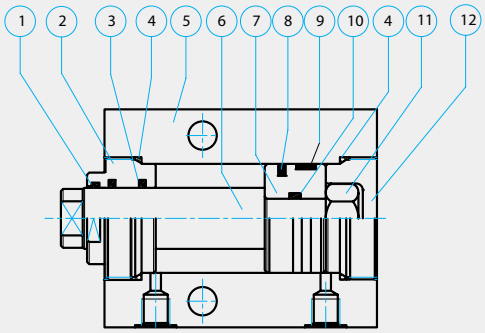
Double acting hydraulic cylinders, realized in high resistance aluminum with wear-resistant coating. Suitable for industrial automation applications, not in heavy duty conditions, when a light, compact and highly modular construction is required. Designed also for use with integrated magnetic sensors to control the piston position.

		SPECIFICATIONS	
Bore	mm	*from 25 to 63*	*from 80 to 100*
Max pressure	bar	160	100
Stroke	mm	20, 50, 80, 100	

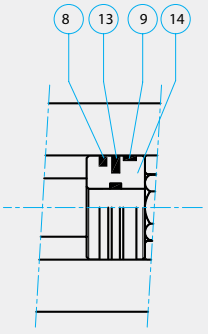
For piston speed higher than 0.1 m/s, we recommend to limit the stroke externally, avoiding that the piston hits the guide bushing or the rear cap. Pressure peaks, cyclic hits and stresses can reduce the aluminum cylinder life. In these cases, we recommend to consider using RQ cylinders in steel (see page 48).

Seal code	Performance					Fluid		
	High sealing	Low friction	Max speed	Temp °C Min	Temp °C Max	Hydraulic oil	Phosphoric esters	HFC-fluid
S	√		0,5 m/s	- 20	+ 80	√		
L		√	1 m/s	- 20	+ 80	√		
H		√	1 m/s	- 20	+ 150	√	√	
G		√	0,5 m/s	- 20	+ 80			√

STANDARD CYLINDER

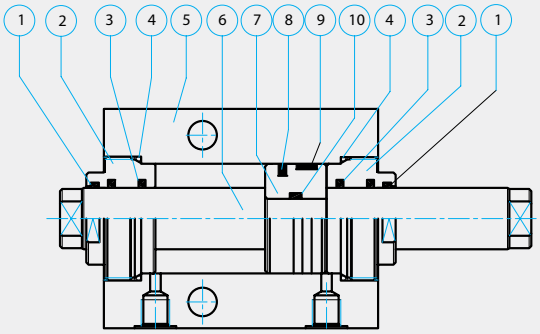


MAGNETIC VERSION



Temperatura massima 80°C
Maximum temperature 80°C

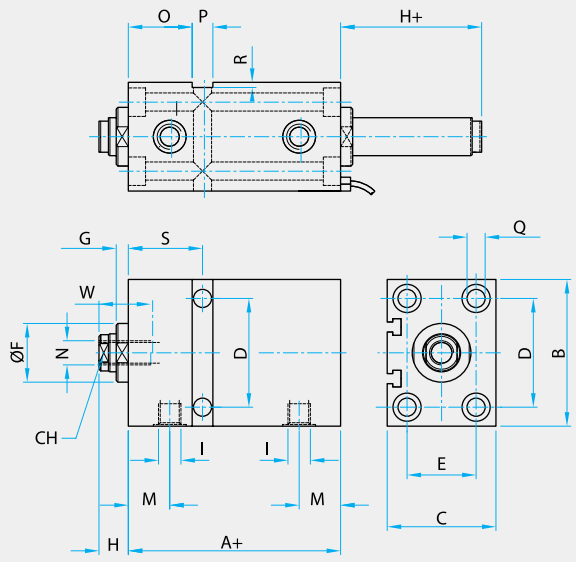
DOUBLE ROD CYLINDER



	Component	Material
2	*Guide bushing*	*Bronze*
5	*Cylinder body*	*Special light alloy*
6	*Rod*	*Chromeplated steel*
7	*Piston*	*Steel*
11	*Rod nut*	*Steel*
12	*Rear cap*	*Steel*
13	*Magnet*	
14	*Magnetic piston (MP)*	*Stainless steel*

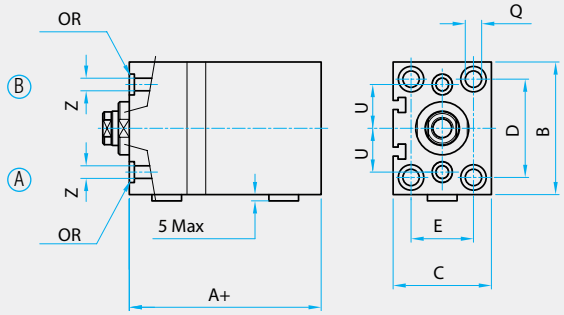
	Component	Groove	Material			
			S	L	H	G
1	*Rod wiper*		NBR + PTFE	NBR + PTFE	Viton® + PTFE	NBR + PTFE CG
3	*Rod seal*	ISO 7425/2	NBR + PTFE	NBR + PTFE	Viton® + PTFE	NBR + PTFE CG
4	*Body seal*		NBR + PTFE	NBR + PTFE	Viton® + PTFE	NBR + PTFE CG
8	*Piston seal*	ISO 7425/1	NBR + PU	NBR + PTFE	Viton® + PTFE	NBR + PTFE CG
9	*Piston guide*		*Resin*	*Resin*	*Resin*	*Resin*
10	*Piston seals*		NBR	NBR	Viton®	NBR

X THREADED OIL CONNECTIONS



Bore	25	32	40	50	63	80	100
Rod	18	22	22	28	28	36	45
A	57+	60+	73+	75+	85+	100+	110+
B	65	75	85	100	115	140	170
C	45	55	63	75	90	110	140
CH	15	19	19	22	22	30	36
D	50	55	63	76	90	110	135
E	30	35	40	45	55	75	95
F f8	32	34	34	42	50	60	72
G	6.5	8	7	8	7	7	8
H	14	15	17	20	20	20	25
I	G 1/4"	G 1/4"	G 1/4"	G 1/4"	G 3/8"	G 1/2"	G 1/2"
M	17	18	23.5	23.5	26	30	35
N	M10	M12	M14	M20	M20	M27	M33
O	32	34	37	37.5	47.5	50	60
P $^{+0.1}_{+0.2}$	10	12	12	15	15	20	20
Q	8.5	10.5	10.5	13	13	17	17
R	2	3	3	5	5	5	5
S	37	40	43	45	55	60	70
W	23	23	30	30	30	40	50

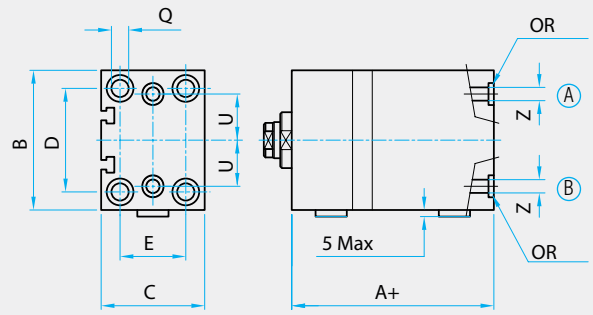
A FRONT SIDE OIL SUPPLY



Bore	25	32	40	50	63	80	100
A	57+	60+	73+	75+	85+	100+	110+
B	65	75	85	100	115	140	170
C	45	55	63	75	90	110	140
D	50	55	63	76	90	110	135
E	30	35	40	45	55	75	95
OR	OR106(610)	OR106(610)	OR106(610)	OR108(611)	OR108(611)	OR108(611)	OR108(611)
Q	8.5	10.5	10.5	13	13	17	17
U	25.5	30	32.5	40	47.5	59	70
Z	4	4	5	7	7	7	7

Ⓐ *pull* Ⓑ *push*

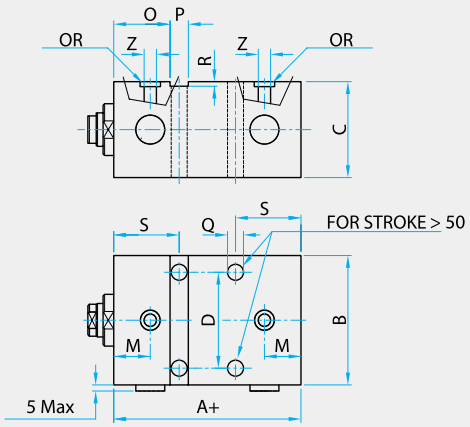
B REAR SIDE OIL SUPPLY



Bore	25	32	40	50	63	80	100
A	57+	60+	73+	75+	85+	100+	110+
B	65	75	85	100	115	140	170
C	45	55	63	75	90	110	140
D	50	55	63	76	90	110	135
E	30	35	40	45	55	75	95
OR	OR106(610)	OR106(610)	OR106(610)	OR108(611)	OR108(611)	OR108(611)	OR108(611)
Q	8.5	10.5	10.5	13	13	17	17
U	25.5	30	32.5	40	47.5	59	70
Z	4	4	5	7	7	7	7

Ⓐ *pull* Ⓑ *push*

E LATERAL OIL SUPPLY

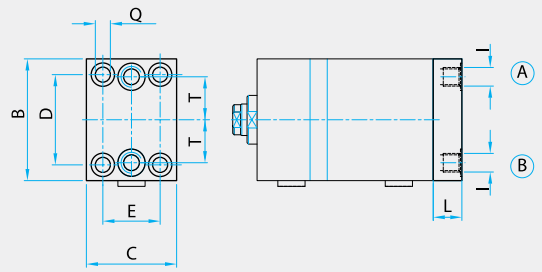


Bore	25	32	40	50	63	80	100
A	57+	60+	73+	75+	85+	100+	110+
B	65	75	85	100	115	140	170
C	45	55	63	75	90	110	140
D	50	55	63	76	90	110	135
M	17	18	23.5	23.5	26	30	35
O	32	34	37	37.5	47.5	50	60
OR	OR106(610)	OR106(610)	OR106(610)	OR108(611)	OR108(611)	OR108(611)	OR108(611)
P $^{+0.1}_{+0.2}$	10	12	12	15	15	20	20
Q	8.5	10.5	10.5	13	13	17	17
R	2	3	3	5	5	5	5
S	37	40	43	45	55	60	70
Z	4	4	5	7	7	7	7

\+ = *add the stroke*

SPECIAL OPTIONS AND VERSIONS

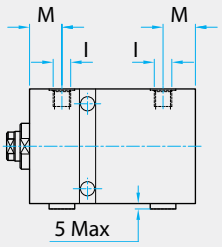
BU PLATE CONNECTIONS - VERSION "B"



Bore	25	32	40	50	63	80	100
B	65	75	85	100	115	140	170
C	45	55	63	75	90	110	140
D	50	55	63	76	90	110	135
E	30	35	40	45	55	75	95
I	G 1/4"	G 1/4"	G 1/4"	G 1/4"	G 3/8"	G 1/2"	G 1/2"
L	20	20	20	24	30	30	30
Q	8.5	10.5	10.5	13	13	17	17
T	16	20	30	37	40	50	65

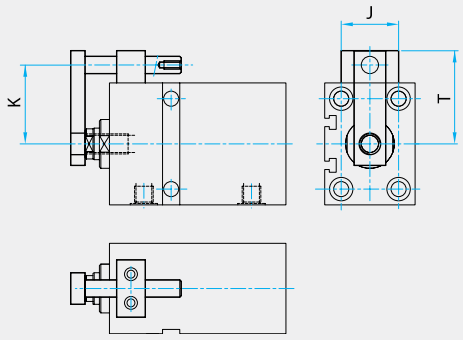
(A) *pull* (B) *push*

AS ADDITIONAL CONNECTIONS



Bore	25	32	40	50	63	80	100
I	G 1/4"	G 1/4"	G 1/4"	G 1/4"	G 3/8"	G 1/2"	G 1/2"
M	17	18	23.5	23.5	26	30	35

AR ANTIROTATION SYSTEM

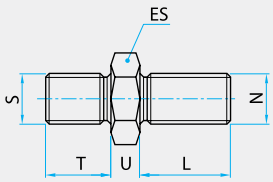


Bore	25	32	40	50	63	80	100
K	45	50	55	62.5	70	82.5	97.5
J	40	40	40	40	40	40	50
T	55	60	65	72.5	80	92.5	107.5

4

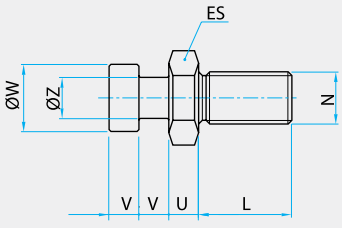
ROD ACCESSORIES

EM MALE ROD END



Bore	25	32	40	50	63	80	100
Type	EM10	EM12	EM14	EM20	EM20	EM27	EM33
ES	17	19	22	30	30	36	46
L	20	20	25	30	30	40	50
N	M10	M12	M14	M20	M20	M27	M33
S	M10x1.25	M12x1.25	M14x1.5	M20x1.5	M20x1.5	M27x2	M33x2
T	14	16	18	28	28	36	45
U	6	7	8	9	9	12	14

ET FLOATING JOINT



Bore	25	32	40	50	63	80	100
Type	ET10	ET12	ET14	ET20	ET20	ET27	ET33
ES	17	19	22	30	30	36	46
L	20	20	25	30	30	40	50
N	M10	M12	M14	M20	M20	M27	M33
U	6	7	8	9	9	12	14
V	7	8	8	10	10	12.5	16
W	16	18	18	22	22	28	35
Z	10	11	11	14	14	18	22

ORDERING CODE

The fields containing sample values are compulsory.

MP [ ] **32** / **22** / [ ] **X** **20** [ ] **S** [ ] **SP** **2**

Only for MP cylinders

Quantity

Type

Standard	RP
Magnetic	MP

Special version (1) **SX** [ ]

Special options/versions

Bore	Rod
25	18
32	22
40	22
50	28
63	28
80	36
100	45

Seals (see page 44)

S	Standard
L	Low friction
H	Viton®
G	HFC-fluid

Spacer (for intermediate strokes)

SJ ...	Spacer length in mm (standard stroke - real stroke)

Possible 2nd rod

Connections	Oil feeder	
Threaded	Standard	X
Wall	Front	A
	Rear	B
	Lateral	E

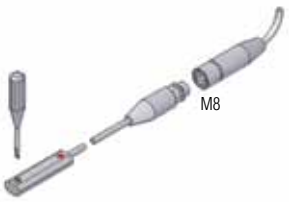
Standard stroke

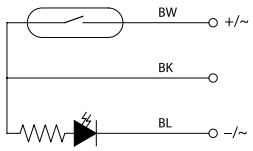
20	20 mm
50	50 mm
80	80 mm
100	100 mm

(1) *Indicate **SX** when the cylinder has special options or versions. Then, indicate in the appropriate box, after the ordering code, the corresponding code followed by the drawing's number, if any.*

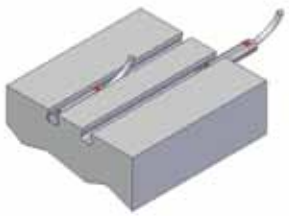
SWITCHES

SP





BW = *brown*
BL = *blue*
BK = *black*



SPECIFICATIONS

Voltage	24 V AC/DC
Max current (25 °C)	0.25 A
Electric circuit	REED
Switch-on time	0.8 ms
Switch-off time	0.1 ms
Electric lifespan	10^7 *pulse*
Protection class	IP 67 EN60529
Temperature range	-20 +80 °C
Indicating	LED
Cable	3 x 0.25 mm²
Length	5 m

CORRECT USE OF MAGNETIC SENSORS

Voltage and current values must never exceed values specified in the table.
Current surges may be caused by capacitive loads (e.g. cables of lengths over 3 metres).
Voltage surges may be caused by inductance (e.g. solenoid valves, relays, contactors, etc.).
Magnetic distortion may be caused by ferrous masses (e.g. cylinder seat inside moulds) or the presence of strong magnetic fields (e.g. electric motors, coils, inverter etc.).
For strokes lower than 20 mm, contact our technical department
High vibration can generate false contacts.