



Pressures

1 bar (0.1 MPa)
10 bar (1 MPa)



Reference Standard

1907/2006
REACH ✓

2011/65/CE
RoHS ✓

SILICON
FREE

ATEX
2014/34/UE



Temperature

0 °C (-20 °C con aria secca)
+ 80 °C



Sensors recommended

DSL con staffa MFX
DF con staffa DH

CHARACTERISTICS

Fluids	Filtered compressed air, lubricated or non-lubricated
Nut	Galvanized steel
Rod	AISI 303 stainless steel
Rod seal	Polyurethane
Front and rear head	Anodized aluminum
Locking ring	Galvanized steel
Bushing	Sintered bronze
O-ring seals	NBR (Nitrile rubber)
Bumpers	Neoprene
Piston	Brass
Piston seal	Polyurethane
Magnet	Plastoferrite
Mini cylinder barrel	AISI 304 stainless steel

Functioning	Single acting magnetic. Double acting single or double end rod, magnetic, cushioned or non-cushioned.
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II 2GD c T6 -20°C < Tamb < +80°C



Series	Ø mm	Stroke	Special version
M F	0 0 8	0 0 2 5	V S
MB Single-Acting Magnetic MD Single-Acting Magnetic - Spring Thrust MF Double Acting Magnetic MFA Double acting magnetic hexagonal anti-rotation MFN Double Acting Magnetic Head Cut, Feed At 90° MFX Double Acting Magnetic Head Cut Feed On Axis MH Double Acting Cushioned Magnetic MJ Double Acting Magnetic With Double Rod End ML Double Acting Cushioned Magnetic With Double Rod End	Ø08 Ø10 Ø12 Ø16 Ø20 Ø25	Ø010 Ø025 Ø050 Ø080 Ø100 Ø125 Ø150 Ø160 Ø200 Ø250 Ø320 Intermediate or higher strokes are available on request	VS Rod Seals in FKM V Seals in FKM

Thrust and traction forces

Cylinder	Rod	Effective area	Working pressure										
Ø	Ø	mm ²	bar										
			1	2	3	4	5	6	7	8	9	10	
Developed force													
8	4	S =	50,2	5	10	15	20	25	30	35	40	45	50
		T =	37,7	3	6	9	12	15	18	21	24	27	30
10	4	S =	78,5	7	14	21	28	35	42	49	56	63	70
		T =	66	6	12	18	24	30	36	42	48	54	60
12	6	S =	113	10	20	30	40	50	60	70	80	90	100
		T =	85	7,5	15	22	30	37	45	52	60	68	75
16	6	S =	200	18	36	54	72	90	108	126	144	162	180
		T =	173	16	32	48	64	80	96	112	128	144	160
20	8	S =	314	28	56	84	112	140	168	196	224	252	280
		T =	264	24	48	72	96	120	144	168	192	216	240
25	10	S =	490	44	88	132	176	220	264	308	352	396	440
		T =	412	36	72	108	144	180	216	252	288	324	360

S Thrust; T Traction

Forze della molla

Cylinder	Carico molla	Stroke		
Ø		10	25	50
Developed force				
8	R	4,1	3,5	2,6
	C	4,5	4,5	4,5
10	R	4,1	3,5	2,6
	C	4,5	4,5	4,5
12	R	5,5	4,8	3,5
	C	6	6	6
16	R	16,5	13,7	9
	C	18,3	18,3	18,3
20	R	19	15,5	9,5
	C	21,5	21,5	21,5
25	R	27	24	13,5
	C	29	29	29

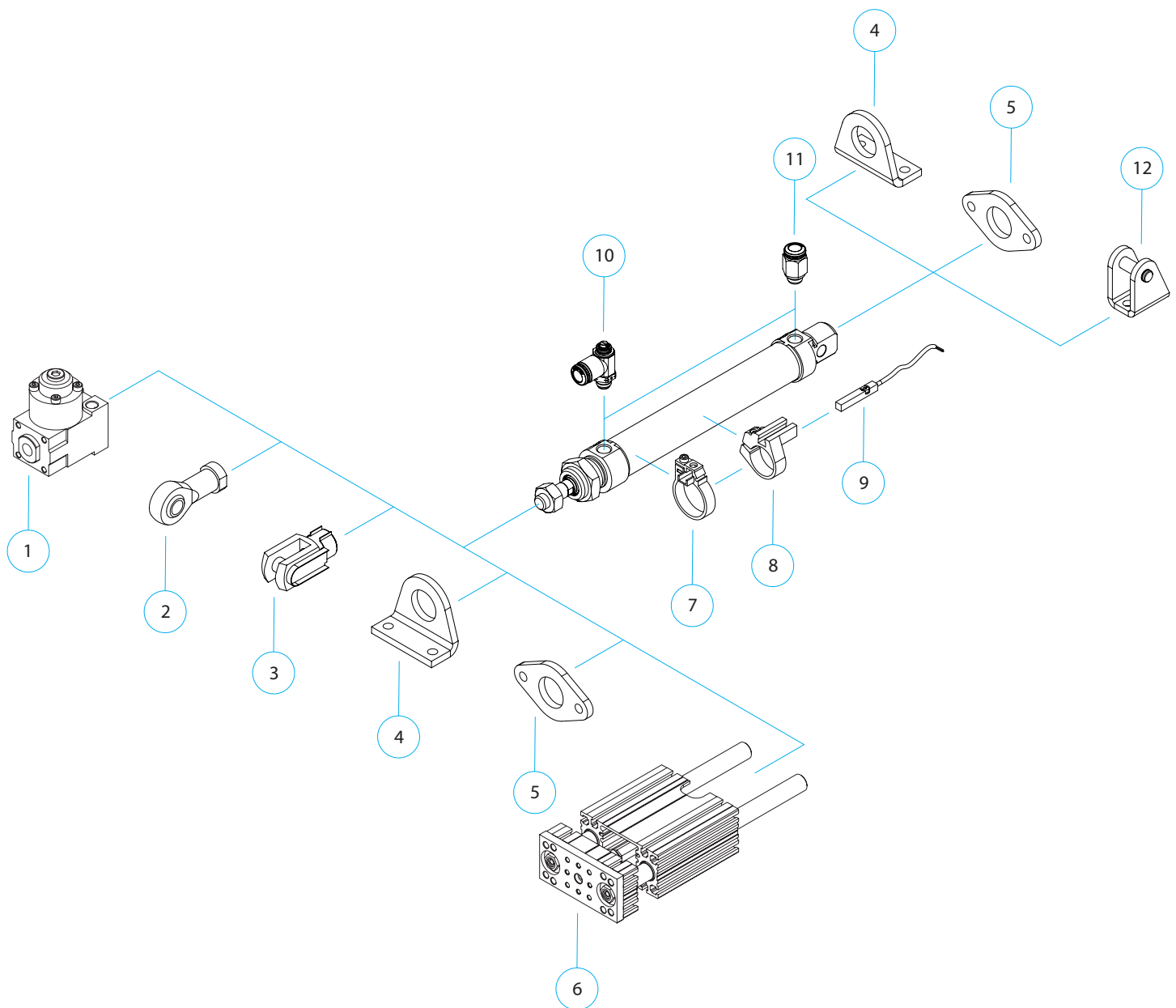
R Spring load at rest; C Compressed spring load

Consumi cilindro

Cylinder	Rod	Effective area	Working pressure										
Ø	Ø	mm ²	bar										
			1	2	3	4	5	6	7	8	9	10	
Air consumption per 10 mm of stroke													
8	4	S =	50,2	0,001	0,002	0,002	0,003	0,003	0,004	0,004	0,005	0,005	0,006
		T =	37,7	0,001	0,001	0,002	0,002	0,002	0,003	0,003	0,003	0,004	0,004
10	4	S =	78,5	0,002	0,002	0,003	0,004	0,005	0,005	0,006	0,007	0,008	0,009
		T =	66	0,001	0,002	0,003	0,003	0,004	0,005	0,005	0,006	0,007	0,007
12	6	S =	113	0,002	0,003	0,005	0,006	0,007	0,008	0,009	0,010	0,011	0,012
		T =	85	0,002	0,003	0,003	0,004	0,005	0,006	0,007	0,008	0,009	0,009
16	6	S =	200	0,004	0,006	0,008	0,010	0,012	0,014	0,016	0,018	0,020	0,022
		T =	173	0,003	0,005	0,007	0,009	0,010	0,012	0,014	0,016	0,017	0,019
20	8	S =	314	0,006	0,009	0,013	0,016	0,019	0,022	0,025	0,028	0,031	0,035
		T =	264	0,005	0,008	0,011	0,013	0,016	0,018	0,021	0,024	0,026	0,029
25	10	S =	490	0,010	0,015	0,020	0,025	0,029	0,034	0,039	0,044	0,049	0,054
		T =	412	0,008	0,012	0,016	0,021	0,025	0,029	0,033	0,037	0,041	0,045

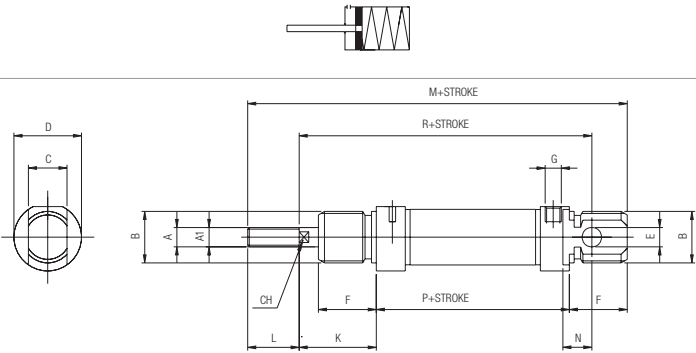
S Thrust; T Traction

FIXING ELEMENTS AND ACCESSORIES - MINI CYLINDERS ISO 6432



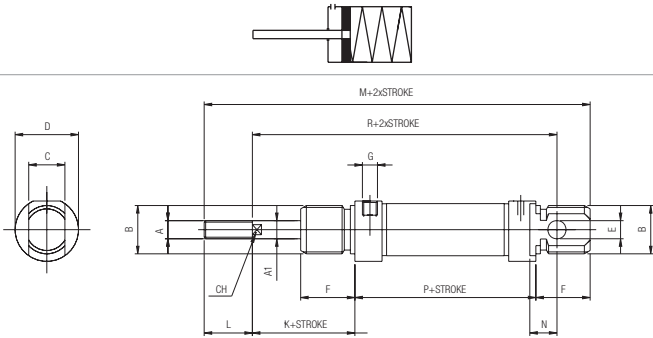
1	LOCKING BLOCK - L1N
2	FORK WITH ANGLED JOINT PIN - TF
3	FORK WITH IN-LINE JOINT PIN - FC
4	FOOT - MPD
5	FLANGE - MFL
6	GUIDE UNIT - J11
7	BRACKET MFX FOR SENSOR - DSL
8	DH BRACKET FOR DF SENSOR
9	SENSOR DF - DSL
10	FLOW REGULATOR
11	QUICK FITTING
12	HINGE - MCC

MB - SINGLE-ACTING MAGNETIC



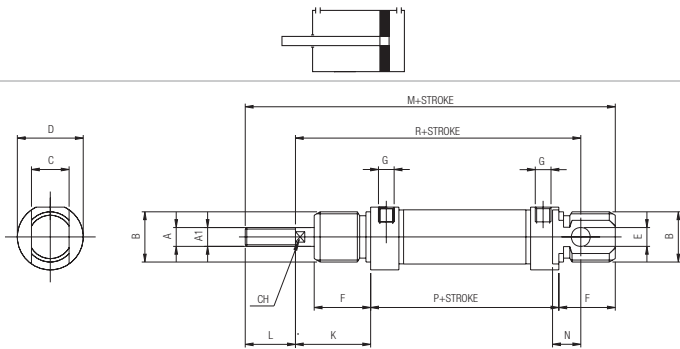
Ø	A	A'	B	C	D	E	F	G	K	L	M	N	P	R	CH
8	M4	4	M12x1.25	8	16	4	12	M5	16	12	86	6	46	64	-
10	M4	4	M12x1.25	8	16	4	12	M5	16	12	86	6	46	64	-
12	M6	6	M16x1.5	12	19	6	18	M5	22	16	104	9	48	75	5
16	M6	6	M16x1.5	12	19	6	18	M5	22	16	109	9	53	82	5
20	M8	8	M22x1.5	16	27	8	20	1/8G	24	20	131	12	67	95	7
25	M10x1.25	10	M22x1.5	16	30	8	22	1/8G	28	22	140	12	68	104	9

MD - SINGLE-ACTING MAGNETIC - SPRING THRUST

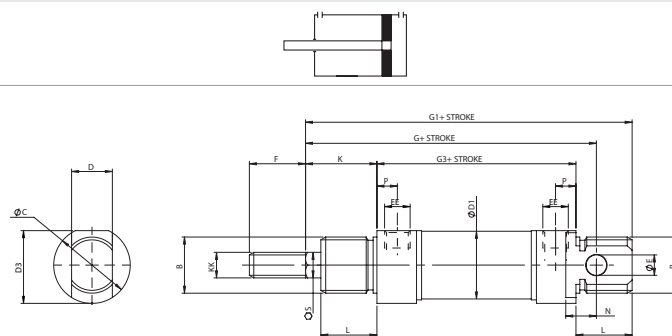


Ø	A	A'	B	C	D	E	F	G	K	L	M	N	P	R	CH
16	M6	6	M16x1.5	12	19	6	18	M5	22	16	134,5	9	78,5	107,5	5
20	M8	8	M22x1.5	16	27	8	20	1/8G	24	20	154	12	90	118	7
25	M10x1.25	10	M22x1.5	16	30	8	22	1/8G	28	22	166	12	94	130	9

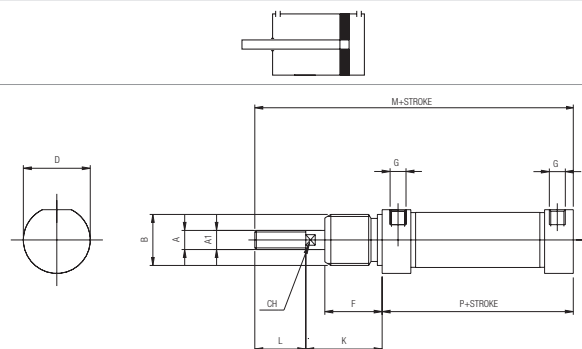
MF - DOUBLE ACTING MAGNETIC



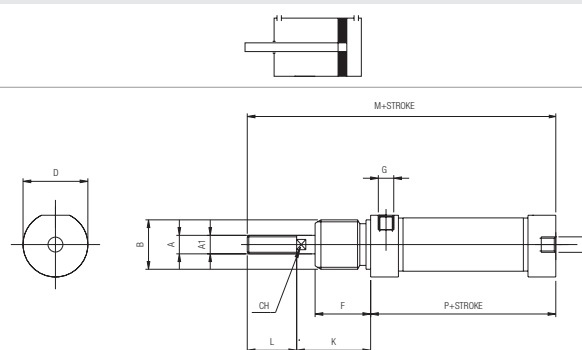
Ø	A	A1	B	C	D	E	F	G	K	L	M	N	P	R	CH
8	M4	4	M12x1.25	8	16	4	12	M5	16	12	86	6	46	64	-
10	M4	4	M12x1.25	8	16	4	12	M5	16	12	86	6	46	64	-
12	M6	6	M16x1.5	12	19	6	18	M5	22	16	104	9	48	75	5
16	M6	6	M16x1.5	12	19	6	18	M5	22	16	109	9	53	82	5
20	M8	8	M22x1.5	16	27	8	20	1/8G	24	20	131	12	67	95	7
25	M10x1.25	10	M22x1.5	16	30	8	22	1/8G	28	22	140	12	68	104	9

MFA - DOUBLE ACTING MAGNETIC HEXAGONAL ANTI-ROTATION


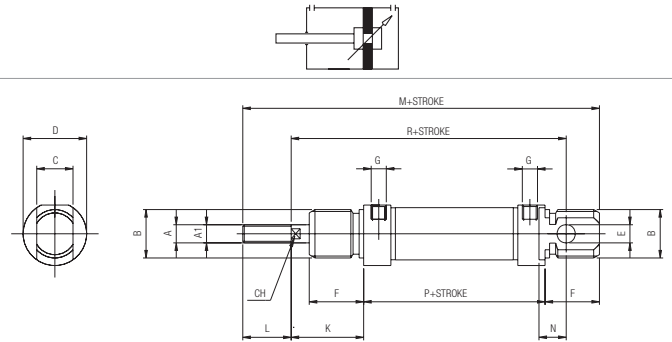
Ø	B	5	ØC	D	ØD1	D3	ØE	EE	F	G	G1	G3	K	KK	L	N	P
16	M6x1.5	6	19	12	17.27	18	6	M5	16	82	93	53	22	M6x1	18	9	4.5
20	M22x1.5	8	27	16	21.27	25.5	8	1/8" G	20	95	111	67	24	M8x1.25	20	12	8
25	M22x1.5	10	30	16	26.5	28.5	8	1/8" G	22	104	118	68	28	M10x1.25	22	12	8

MFN - DOUBLE ACTING MAGNETIC HEAD CUT, FEED AT 90°


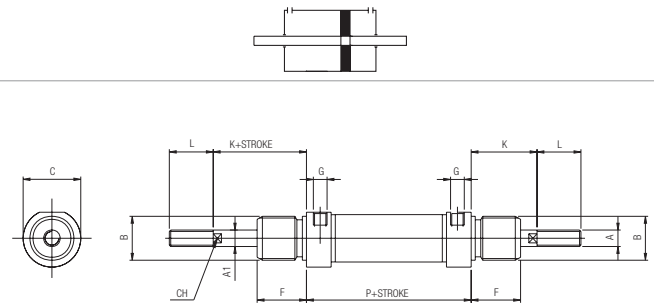
Ø	A	A'	B	D	G	K	L	M	P	CH	F	N	P	R	CH
16	M6	6	M16x1.5	21	M5	22	16	91.5	53	5	18	9	78,5	107,5	5
20	M8	8	M22x1.5	27	1/8G	24	20	111.5	67	7	2	12	90	118	7
25	M10x1.25	10	M22x1.5	30	1/8G	28	22	118.5	68	9	22	12	94	130	9

MFX - DOUBLE ACTING MAGNETIC HEAD CUT FEED ON AXIS


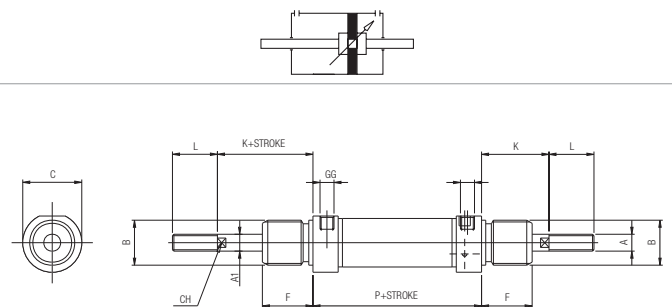
Ø	A	A'	B	D	G	K	L	M	P	CH	F
16	M6	6	M16x1.5	21	M5	22	16	91.5	53	5	18
20	M8	8	M22x1.5	27	1/8G	24	20	111.5	67	7	2
25	M10x1.25	10	M22x1.5	30	1/8G	28	22	118.5	68	9	22

MH - DOUBLE ACTING CUSHIONED MAGNETIC


Ø	A	A1	B	C	D	E	F	G	K	L	M	N	P	R	CH
16	M6	6	M16x1.5	12	21	6	18	M5	22	16	109	9	53	82	5
20	M8	8	M22x1.5	16	27	8	20	1/8G	24	20	131	12	67	95	7
25	M10x1.25	10	M22x1.5	16	30	8	22	1/8G	28	22	140	12	68	104	9

MJ - DOUBLE ACTING MAGNETIC WITH DOUBLE ROD END


Ø	A	A1	B	C	F	G	K	L	P	CH
16	M6	6	M16x1.5	19	18	M5	22	16	53	5
20	M8	8	M22x1.5	27	20	1/8G	24	20	67	7
25	M10x1.25	10	M22x1.5	30	22	1/8G	28	22	68	9

ML - DOUBLE ACTING CUSHIONED MAGNETIC WITH DOUBLE ROD END


Ø	A	A1	B	C	F	G	K	L	P	CH
16	M6	6	M16x1.5	21	18	M5	22	16	53	5
20	M8	8	M22x1.5	27	20	1/8G	24	20	67	7
25	M10x1.25	10	M22x1.5	30	22	1/8G	28	22	68	9

MINI CYLINDERS ISO 6432 WITH LOCKING UNIT L1-N

Reference Standard

ATEX
2014/34/UE


Pressures

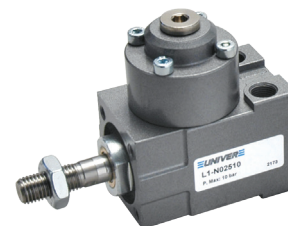
4 bar (0.4 MPa)
10 bar (1 MPa)


Temperature

-20 °C
+80 °C

CHARACTERISTICS

Fluid	Filtered air, with or without lubrication	
Body	Die-cast aluminum	
Cover	Die-cast aluminum	
Piston	Aluminum	
Seals	NBR	
Springs	Special steel	

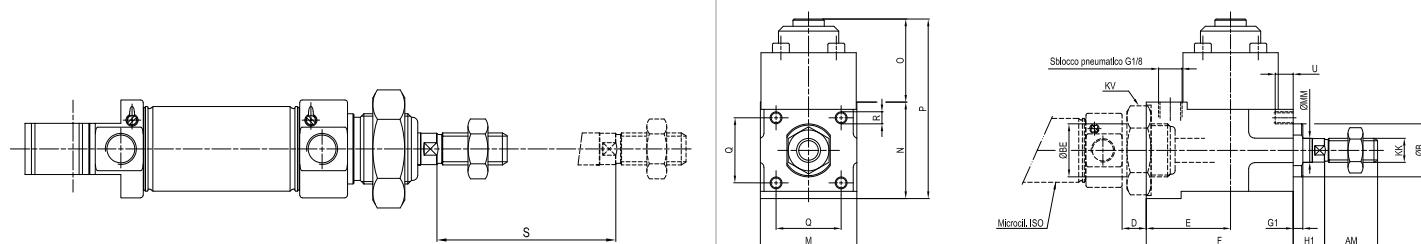
For Mini series cylinders


Series	Ø mm	Ø mm	Stroke	
M F	L	0 1 6	0 0 2 5	
MB Single-Acting Magnetic MD Single-Acting Magnetic - Spring Thrust MF Double Acting Magnetic MFN Double Acting Magnetic Head Cut, Feed At 90° MFN Double Acting Magnetic Head Cut Feed On Axis MH Double Acting Cushioned Magnetic MJ Double Acting Magnetic With Double Rod End ML Double Acting Cushioned Magnetic With Double Rod End	L Rod lock for mini cylinders and rods	Ø16 Ø20 Ø25	Ø010 Ø025 Ø050 Ø080 Ø100 Ø125	Ø150 Ø160 Ø200 Ø250 Ø320

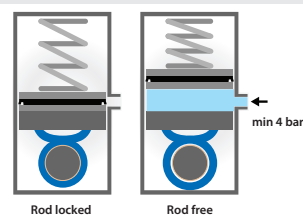
Intermediate or higher strokes are available on request

ROD LOCK FOR MINI CYLINDERS Ø 16 - 20 - 25 MM

S Additional length to standard rod

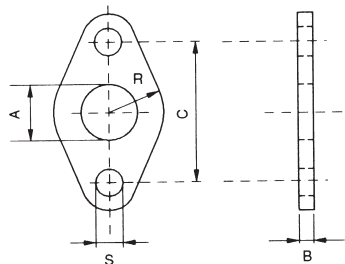


Ø	AM	B	BE	D	E	F	G1	H1	KK	KV	M	MM	N	O	P	Q	R	S	U
16	16	16	M16x1.5	10	35	61	1,5	7	M6 x 1	es. 24	40	6	40	34,5	74,5	27	M5	55	7,5
20	20	20	M22x1.5	10	35	61	4	9	M8 x 1,25	es. 32	40	8	40	34,5	74,5	27	M5	55	7,5
25	22	22	M22x1.5	10	35	61	4	13	M10 x 1,25	es. 32	40	10	40	34,5	74,5	27	M5	55	7,5

LOCKING UNIT WITH M8 INDUCTIVE POSITION SENSOR


FIXING ELEMENTS AND ACCESSORIES

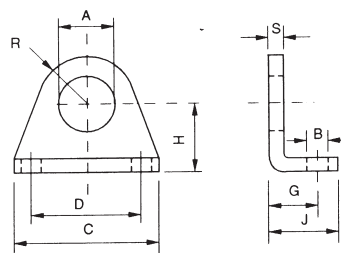
MFL - FLANGE



Code	Ø	A	B	C	R	S
MFL 008	8-10	12	3	30	9	4.5
MFL 012	12-16	16	4	40	13	5.5
MFL 020	20-25	22	5	50	19	6.6

MATERIAL: Steel

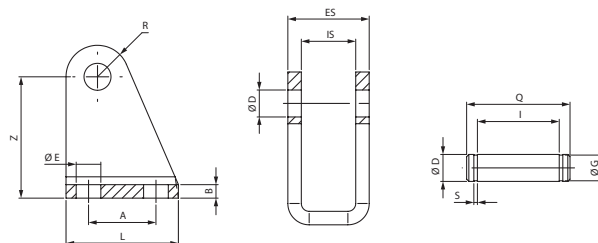
MPD - FOOT



Code	Ø	A	B	C	D	G	H	J	R	S
MPD 008	8-10	12	4.5	35	25	11	16	16	10	3
MPD 012	12-16	16	5.5	42	32	14	20	20	13.5	4
MPD 020	20-25	22	6.6	54	40	17	25	25	18	5

MATERIAL: Steel

MCC - CLEVIS BRACKET

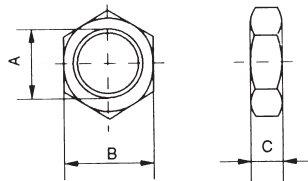


Code	Ø	A	B	R	L	Z	IS	ES	S	I	Q	ØE	ØD	ØG
MCC 008	8-10	12.5	2.5	5	22	24	8.1	13	0.8	14	18	4.5	4	2.3
MCC 012	12-16	15	3	7	25	27	12	18	0.8	19	24	5.5	6	4
MCC 020	20-25	20	4	10	32	30	16	24	0.9	25	30	6.5	8	7

MATERIAL: Steel

FIXING ELEMENTS AND ACCESSORIES

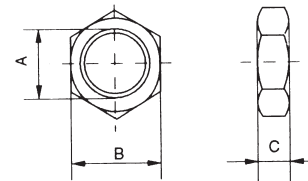
DA - NUT FOR COVERS



Code	A	B	C
0DA00 00 51 D5 ZI	M12x1.25	19	7
0DA00 00 51 E3 ZI	M16x1.5	22	6
0DA00 00 51 F6 ZI	M22x1.5	27	8

MATERIAL: Steel

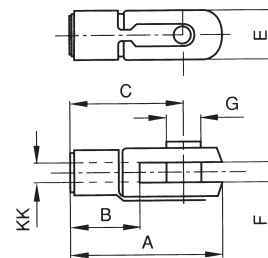
DA - NUT FOR RODS



Code	A	B	C
0DA00 00 51 B1 ZI	M4	7	3.2
0DA00 00 51 B8 ZI	M6	10	5
0DA00 00 51 C3 ZI	M8x1.25	13	6.5
0DA00 00 51 C9 ZI	M10x1.25	17	8

MATERIAL: Steel

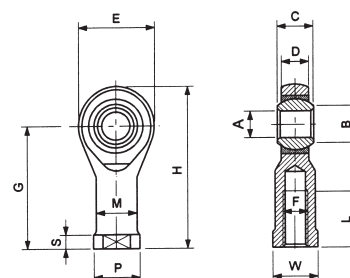
FC - YOKE WITH LOCABLE PIN



Code	KK	A	B	C	E	F	G
FC 008	M4	21	8	16	8	4	4
FC 012	M6	31	12	24	12	6	6
FC 020	M8	42	16	32	16	8	8
FC 025	M10x1.25	52	20	40	20	10	10

MATERIAL: Steel

TF - ROD ENDS SELF-LUBRICATING



Code	Code	F	A	B	C	Ø Sfera	D	E	G	H	L	M	P	S	W	Radial load	Weight
			H7	0	0/- 0.13		±0.13	±0.5	±0.5		±0.7	±0.7	±0.5	+ 0.2/- 0.7	±0.25	kg	kg
TF 008	TFI 008	M4x0,7	5	7,7	8	11,11	6	18	27	36	10	9	11	4	9	-	-
TF 012	TFI 012	M6x1	6	8,9	9	12,7	6,75	20	30	40	9	10	13	5	11	470	1.100
TF 020	TFI 020	M8x1.25	8	10,4	12	15,88	9	24	36	48	12	12,5	16	5	14	780	1.900
TF 025	TFI 025	M10x1,25	10	12,9	14	19,05	10,5	28	43	57	15	15	19	6,5	17	1.200	3.100

MATERIAL: Steel

MATERIAL: Stainless steel

D Dynamic; S Static