

Series QN short-stroke cylinders

Single-acting, non magnetic
 $\varnothing$ 8, 12, 20, 32, 50, 63 mm



Series QN single-acting short-stroke cylinders have been designed so that they can be installed in very small spaces.
 Due to the compactness and sturdiness of these cylinders, they are mainly suitable for positioning and locking.

The available strokes are indicated in the tables.

GENERAL DATA

Type of construction	compact
Operation	single-acting
Materials	aluminium body - NBR seals - other materials in stainless steel and brass
Operating pressure	P. min 2 bar P. max 10 bar
Operating temperature	0°C ÷ 80°C (with dry air - 20°C)
Fluid	clean air, without lubrication. If lubricated air is used, it is recommended to use oil ISO VG32. Once applied the lubrication should never be interrupted.
Bore	$\varnothing$ 8, 12, 20, 32, 50, 63
Stroke	see table
Type of mounting	by means of screws in the body

STANDARD STROKES FOR CYLINDERS SERIES QN

STANDARD STROKES				
Ø	4	5	10	25
8	x			
12	x		x	
20	x		x	
32		x	x	x
50			x	x
63			x	x

1

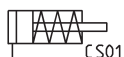
MOVEMENT

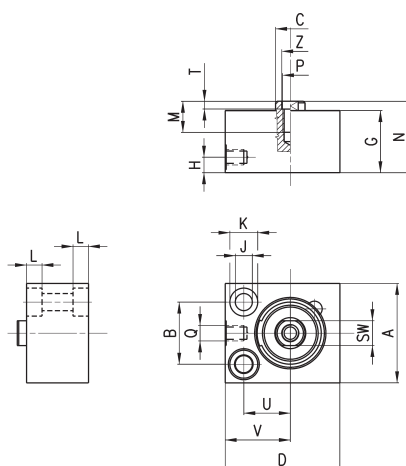
CODING EXAMPLE

QN	1	A	50	A	25
QN	SERIES				
1	OPERATING 1 = single-acting			PNEUMATIC SYMBOL CS01	
A	MATERIALS A = rolled stainless steel rod - aluminium body				
50	BORE 08 = 8 mm 12 = 12 mm 20 = 20 mm 32 = 32 mm 50 = 50 mm 63 = 63 mm				
A	TYPE OF DESIGN A = standard				
25	STROKE (see the table)				

PNEUMATIC SYMBOLS

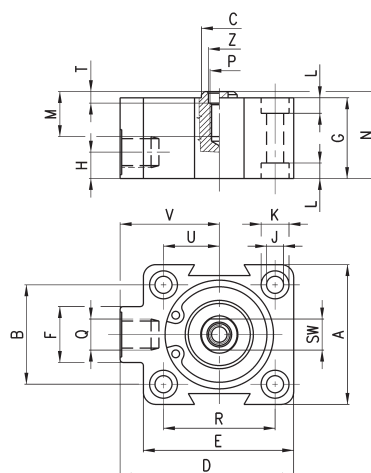
The pneumatic symbols which have been indicated in the CODING EXAMPLE are shown below.



Short-stroke cylinders Series QN - bores $\varnothing$ 8, 12 and 20


DIMENSIONS

Mod.	$\varnothing$	A ^{h8}	B	$\varnothing$ C	D	G	H	$\varnothing$ J	$\varnothing$ K	L	M	N	P	Q ^{H13}	SW	T ^{+0,1}	U	V	Z ^{+0,10}
QN1A08A04	8	18	11	4	20	16	5	3,2	5,8	3	-	17	-	M5	-	-	8	13,5	-
QN1A12A04	12	20	13	5	25	16	5	3,2	5,8	3	-	17	-	M5	-	-	9	16	-
QN1A12A10	12	20	13	5	25	26	5	3,2	5,8	3	-	30	-	M5	-	-	9	16	-
QN1A20A04	20	32	20	10	37	20	5	5,5	9	5	8	21	M5	M5	8	2,5	15	21	5,5
QN1A20A10	20	32	20	10	37	32	5	5,5	9	5	8	33	M5	M5	8	2,5	15	21	5,5

Short-stroke cylinders Series QN - bores $\varnothing$ 32, 50 and 63


DIMENSIONS

Mod.	$\varnothing$	A ^{h8}	B	$\varnothing$ C	D	E	F	G	H	$\varnothing$ J	$\varnothing$ K	L	M	N	P	Q ^{H13}	R	SW	T ^{+0,1}	U	V	Z ^{+0,10}
QN1A32A05	32	45	32	12	56	48,5	18	26	8,5	5,5	9	5	14,5	27	M6	G1/8	36	10	2,5	18	32	7
QN1A32A10	32	45	32	12	56	48,5	18	32	8,5	5,5	9	5	14,5	33	M6	G1/8	36	10	2,5	18	32	7
QN1A32A25	32	45	32	12	56	48,5	18	57,5	8,5	5,5	9	5	14,5	58,5	M6	G1/8	36	10	2,5	18	32	7
QN1A50A10	50	64	50	16	72	64	20	30	8,5	6,5	10,5	6,3	15,5	31	M8	G1/8	50	13	3,5	25	40	8,5
QN1A50A25	50	64	50	16	72	64	20	57,5	8,5	6,5	10,5	6,3	15,5	58,5	M8	G1/8	50	13	3,5	25	40	8,5
QN1A63A10	63	80	62	16	88	80	20	35	8,5	8,5	14	8,5	14,5	36	M8	G1/8	62	13	3,5	31	48	8,5
QN1A63A25	63	80	62	16	88	80	20	60,5	8,5	8,5	14	8,5	14,5	62,5	M8	G1/8	62	13	3,5	31	48	8,5

Series QP - QPR short-stroke cylinders

Series QP: single and double-acting, magnetic
Series QPR: double-acting magnetic, non-rotating
ø 12, 16, 20, 25, 32, 40, 50, 63, 80, 100 mm



The guides are manufactured in the external profile parallel to the sliding axis on three sides. These are used to locate the switches that sense the piston position. The non rotating guides make the QPR suitable for supply operations and for handling equipment.

Series QP - QPR cylinders are available in 10 bore sizes, from ø12 to ø100. Their compact dimension allows the installation in small spaces. Because of their particular construction, they can be mounted by means of feet or trunnion.

GENERAL DATA

Type of construction	Series QP: compact profile Series QPR: compact with non rotating guides
Operation	Series QP: single and double-acting Series QPR: double-acting
Materials	body: anodized AL rod: rolled stainless steel piston seals: PU rod seals: PU (Ø 12 ÷ 25 mm) - NBR (Ø 32 ÷ 100 mm)
Operating temperature	0°C ÷ 80°C (with dry air -20°C)
Assembly	by means of screws or brackets
Operating pressure	1 ÷ 10 bar (double-acting) 2 ÷ 10 bar (single-acting)
Fluid	filtered air, without lubrication. If lubricated air is used, it is recommended to use oil ISOVG32. Once applied the lubrication should never be interrupted.
Strokes (min-max)	Series QP: 1 ÷ 150 mm (ø12 ÷ ø 25) - 1 ÷ 200 mm (ø 32 ÷ ø 100) Series QPR: 1 ÷ 50 mm (ø 12) - 1 ÷ 75 mm (ø 16) - 1 ÷ 100 mm (ø 20 ÷ ø 100)
Strokes	the minimum stroke for use of the sensors is 10 mm
Bores	ø 12, 16, 20, 25, 32, 40, 50, 63, 80, 100

STANDARD STROKES FOR SHORT-STROKE CYLINDERS SERIES QP AND QPR

■ = Double-acting

✕ = Single-acting

● = Non-rotating

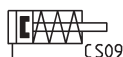
STANDARD STROKES														
Ø	5	10	15	20	25	30	35	40	45	50	60	75	80	100
12	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ✕	■ ✕ ●	■ ●	■	■	■					
16	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■	■
20	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●
25	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●
32	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●
40	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●
50	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●
63	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●
80	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●
100	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ✕ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●	■ ●

CODING EXAMPLE

QP	2	A	050	A	050
QP	SERIES QP = standard QPR = standard non-rotating				
2	OPERATION 1 = single-acting, front spring (only QP) 2 = double-acting 3 = double-acting, through-rod			PNEUMATIC SYMBOLS CS09 CD07 CD14	
A	MATERIALS A = rolled stainless steel rod - AL tube profile				
050	BORE 012 = 12 mm 016 = 16 mm 020 = 20 mm 025 = 25 mm 032 = 32 mm 040 = 40 mm 050 = 50 mm 063 = 63 mm 080 = 80 mm 100 = 100 mm				
A	TYPE OF MOUNTING A = standard				
050	STROKE (see the table)				
= standard V = FKM rod seal W = all FKM seals (Ø 12 excepted)					

PNEUMATIC SYMBOLS

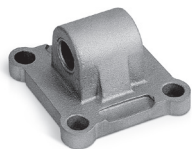
The pneumatic symbols which have been indicated in the CODING EXAMPLE are shown below.



ACCESSORIES FOR SHORT-STROKE CYLINDERS SERIES QP



Foot mount Mod. B

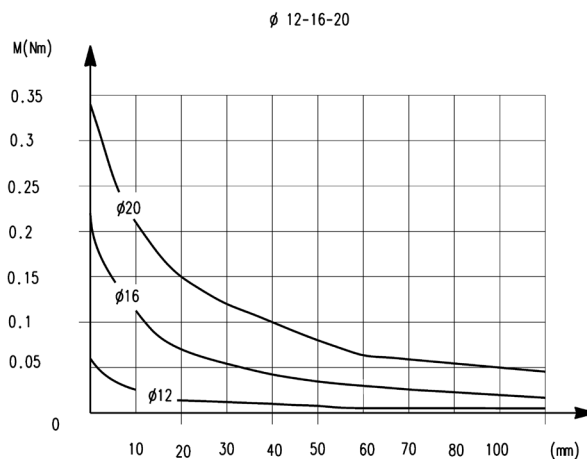
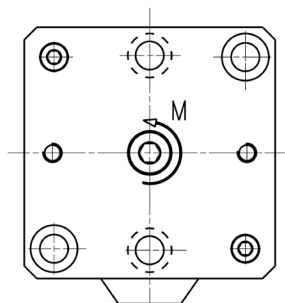


Male trunnion Mod. L

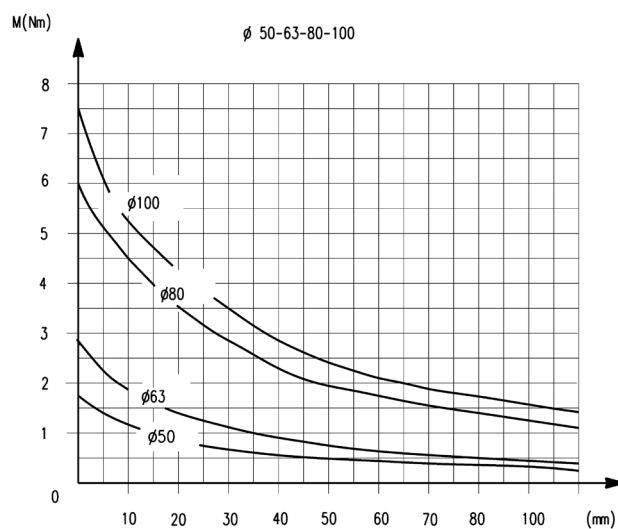
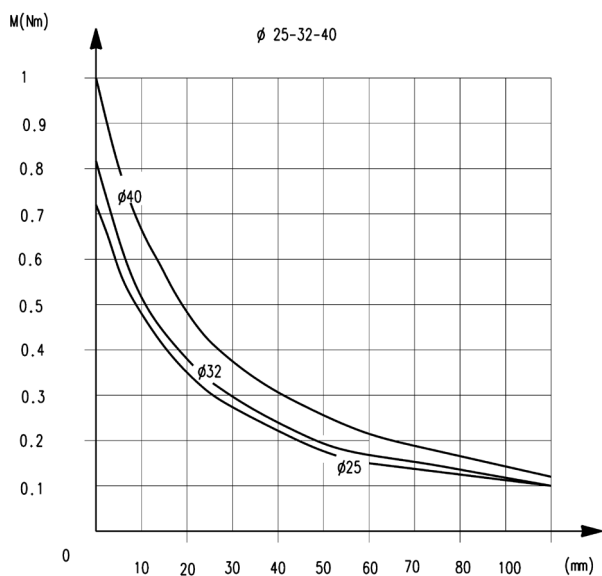


All accessories are supplied separately.

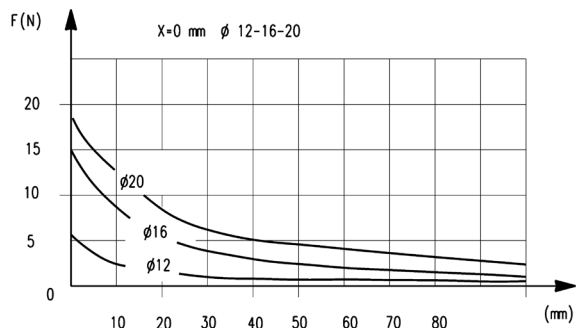
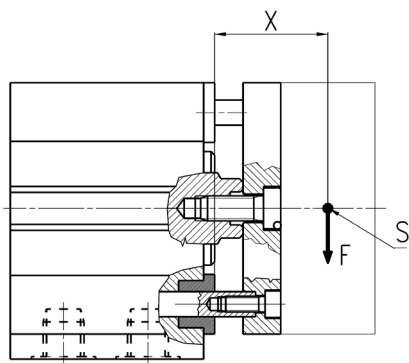
TORQUE MOMENT ACCORDING TO STROKE C



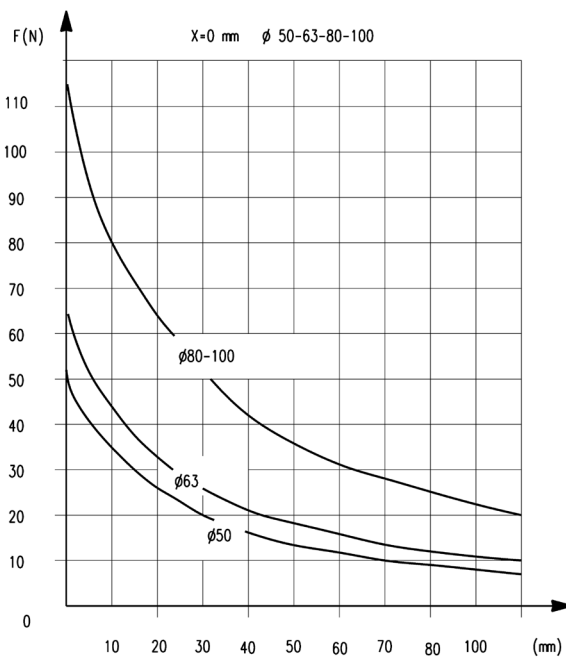
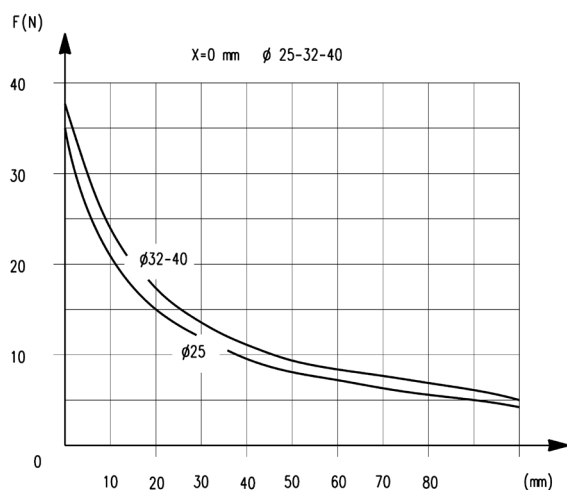
TORQUE MOMENT ACCORDING TO STROKE C



TRANSVERSAL LOAD ACCORDING TO PROJECTION "X"



TRANSVERSAL LOAD ACCORDING TO PROJECTION "X"



F = transversal force

Short-stroke cylinders Series QP

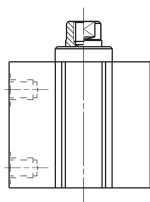
Note:

The cylinder's end stop must be provided externally.
For single-acting cylinders $\varnothing$ 12, 16, 20 and 25 add 5 mm to G+, G1+ and N+ dimensions.

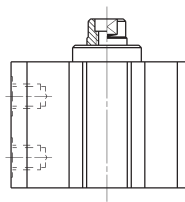
+ = add the stroke



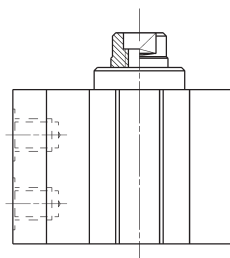
$\varnothing$ 12/ $\varnothing$ 20



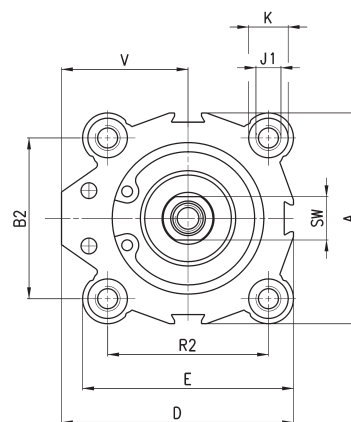
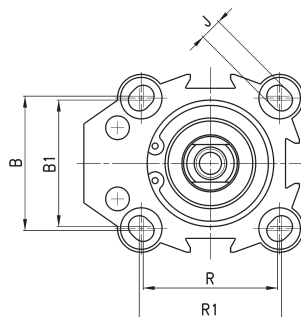
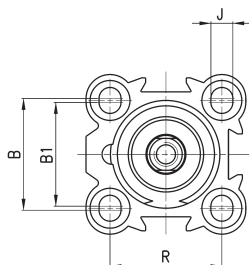
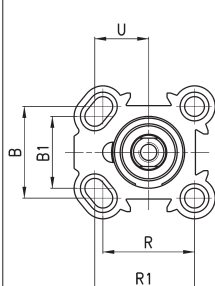
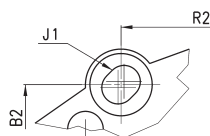
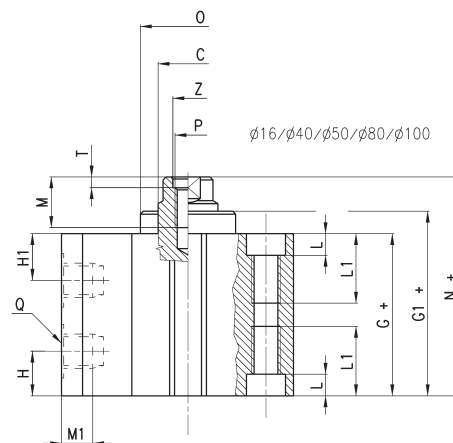
$\varnothing$ 25



$\varnothing$ 32/ $\varnothing$ 63



$\varnothing$ 16/ $\varnothing$ 40/ $\varnothing$ 50/ $\varnothing$ 80/ $\varnothing$ 100



DIMENSIONS

$\varnothing$	A	B	B1	B2	$\varnothing$ C	D	E	G +	G1 +	H1	H	J	J1	K	L	L1	M	M1	N +	$\varnothing$ O	P	Q	R	R1	R2	SW	T	U	V	Z
12	23.8	15.5	13	-	6	25	25	29.6	29.6	12.3	7.8	3.5	-	5.8	3	-	5.5	4.5	32.9	-	M3	M5	15.5	16.75	-	5	-	9	13.15	-
16	29	20	-	-	8	29	29	32	32.4	10.9	8.7	3.5	-	5.8	3	-	8	4.5	36.4	16.6	M4	M5	20	-	-	6	-	-	14.5	-
20	37	25.5	20	-	10	39.25	39.25	31.2	31.7	9.8	9.8	5.5	-	9	6	-	8	4.5	36	19.5	M6	M5	25.5	27.75	-	8	-	15	20.75	-
25	40	28	26	-	10	40	40	32.1	33.5	8	6.9	5.5	-	10	5.5	-	8	4.5	37.5	22	M6	M5	28	-	-	8	-	-	20	-
32	45	34	32	33	12	55.5	47	39.5	40	9.5	9.5	5.5	M8	10.5	6	21	10	7.5	44	23.5	M6	G1/8	34	36	35	10	2.5	-	32	7
40	52	-	-	40	16	57	52	42.4	43.4	10.7	10.7	5.5	M8	9	6	21	13.5	7.5	47.9	29.6	M8	G1/8	-	-	40	13	3.5	-	31	8.5
50	64	-	-	50	16	72	64	42.2	44	11.2	11.2	6.5	M8	10.5	6	21	13.5	9	48.4	37.5	M8	G1/4	-	-	50	13	3.5	-	40	8.5
63	80	62	60	61	20	88	80	49.5	50.1	13	13	8.5	M12	15	8.5	31.5	13.5	9	54	50	M8	G1/4	60	62	61	17	4	-	48	8.5
80	98	-	-	77	25	104	98	57.5	58.1	16.2	16.2	10.5	M12	17	10.5	31.5	15	10.5	63.5	62	M16	G3/8	-	-	77	22	4	-	55	16.5
100	117	-	-	94	25	123.5	117	68.5	69.1	20.3	20.3	10.5	M12	17	10.5	31.5	15	10.5	74.5	80	M16	G3/8	-	-	94	22	4	-	65	16.5

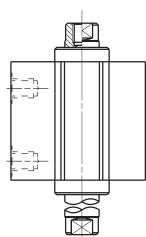
Short-stroke cylinders Series QP

Note:
The cylinder's end stop must be provided externally.

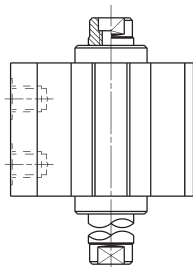


+ = add the stroke once
+ = add the stroke twice

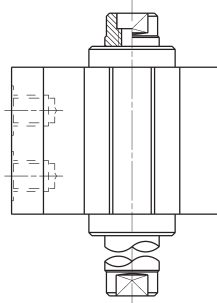
ø12/ø20



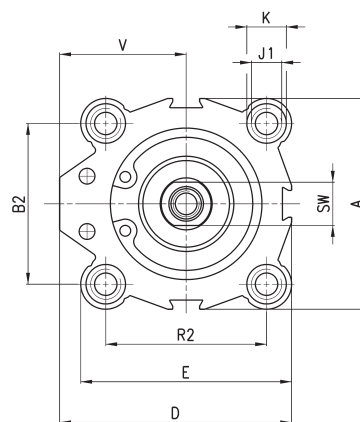
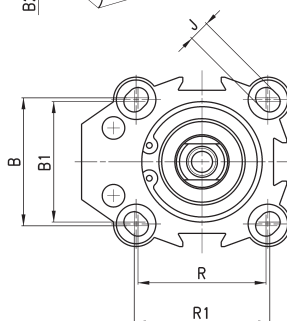
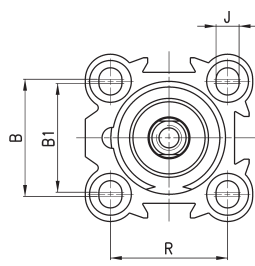
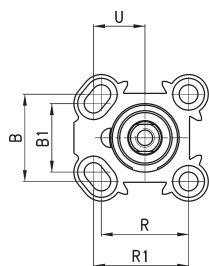
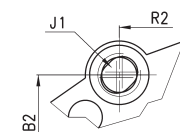
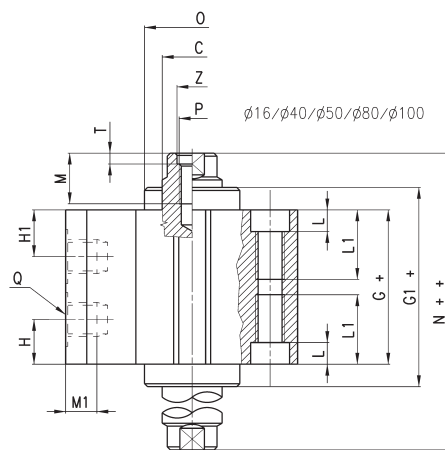
ø25



ø32/ø63



ø16/ø40/ø50/ø80/ø100



DIMENSIONS

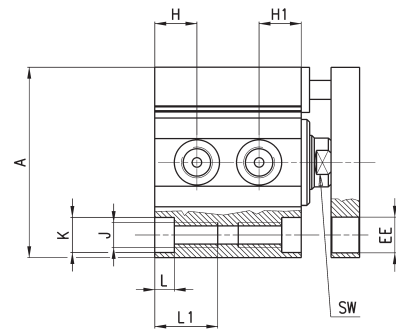
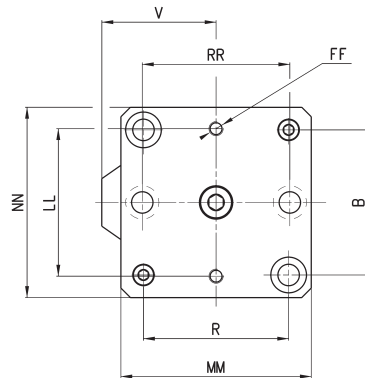
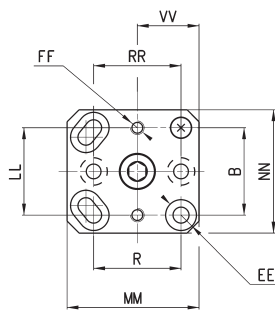
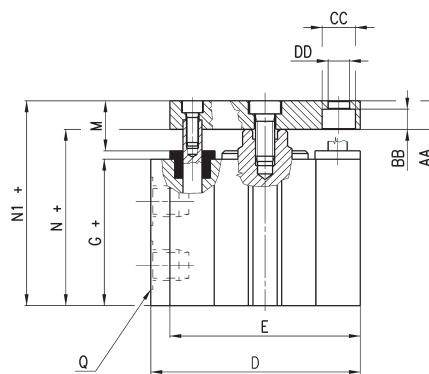
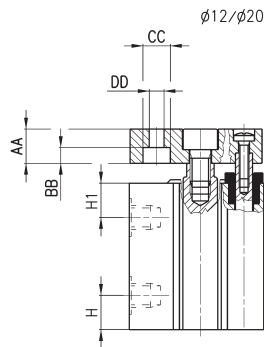
Ø	A	B	B1	B2	øC ^{h8}	D	E	G+	G1+	H1	H	J	J1	K	L	L1	M	M1	N++	øO	P	Q	R	R1	R2	SW	T	U	V	Z
12	23.8	15.5	13	-	6	25	25	34.5	34.5	12.3	12.3	3.5	-	5.8	3	-	5.5	4.5	41	-	M3	M5	15.5	16.75	-	5	-	9	13.15	-
16	29	20	-	-	8	29	29	38	38.8	10.9	10.9	3.5	-	5.8	3	-	8	4.5	52	16.6	M4	M5	20	-	-	6	-	-	14.5	-
20	37	25.5	20	-	10	39.25	39.25	38.1	39.1	9.8	9.8	5.5	-	9	6	-	8	4.5	47.7	19.5	M6	M5	25.5	27.75	-	8	-	15	20.75	-
25	40	28	26	-	10	40	40	36.3	39.1	8	8	5.5	-	10	5.5	-	8	4.5	47.1	22	M6	M5	28	-	-	8	-	-	20	-
32	45	34	32	33	12	55.5	47	39.5	40.5	9.5	9.5	5.5	M8	10.5	6	21	10	7.5	48.5	23.5	M6	G1/8	34	36	35	10	2.5	-	32	7
40	52	-	-	40	16	57	52	42.4	44.4	10.7	10.7	5.5	M8	9	6	21	13.5	7.5	53.4	29.6	M8	G1/8	-	-	40	13	3.5	-	31	8.5
50	64	-	-	50	16	72	64	42.2	45.8	11.2	11.2	6.5	M8	10.5	6	21	13.5	9	54.8	37.5	M8	G1/4	-	-	50	13	3.5	-	40	8.5
63	80	62	60	61	20	88	80	49.5	50.7	13	13	8.5	M12	15	8.5	31.5	13.5	9	58.5	50	M8	G1/4	60	62	61	17	4	-	48	8.5
80	98	-	-	77	25	104	98	57.5	58.7	16.2	16.2	10.5	M12	17	10.5	31.5	15	10.5	69.5	62	M16	G3/8	-	-	77	22	4	-	55	16.5
100	117	-	-	94	25	123.5	117	68.5	69.7	20.3	20.3	10.5	M12	17	10.5	31.5	15	10.5	80.5	80	M16	G3/8	-	-	94	22	4	-	65	16.5

Short-stroke cylinder Series QPR

Note:
The cylinder's end stop must be provided externally.



+ = add the stroke



DIMENSIONS

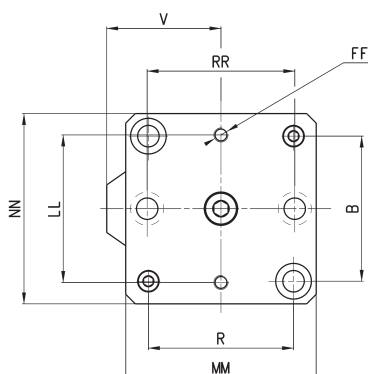
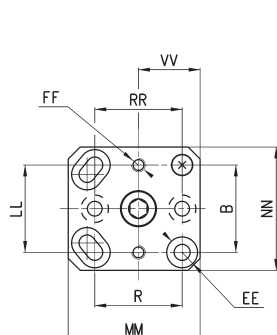
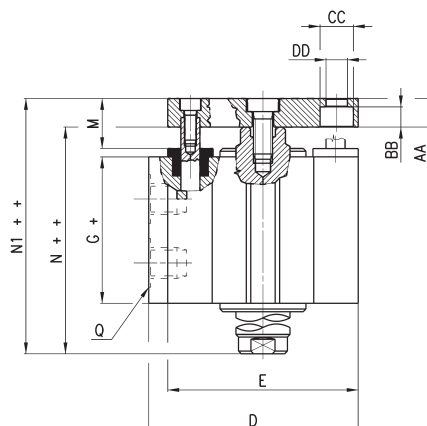
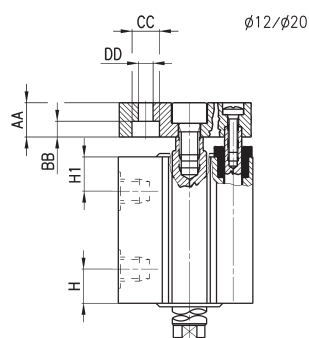
Ø	A	B	D	E	G+	H1	H	J	K	L	L1	N+	N1+	Q	R	SW	V	AA	BB	φCC	φDD	EE	FF	LL	MM	NN	RR	VV
12	23.8	15.5	25	25	29.6	12.3	7.8	3.5	5.8	3	-	32.9	37.9	M5	15.5	5	13.15	5	3.5	6.2	3.2	5.8	M3	15.5	25	24	15.5	12
16	29	20	29	29	32	10.9	8.7	3.5	5.8	3	-	36.4	41.4	M5	20	6	14.5	5	3.5	6.2	3.2	6.5	M3	20	28	28	20	-
20	37	25.5	39.25	39.25	31.2	9.8	9.8	5.5	9	6	-	36	46	M5	25.5	8	20.75	10	4.6	8	4.2	9	M4	25.5	38.5	36	25.5	18
25	40	28	40	40	32.1	8	6.9	5.5	10	5.5	-	37.5	47.5	M5	28	8	20	10	4.6	8	4.2	10	M4	27	40	40	28	-
32	45	33	55.5	47	39.5	9.5	9.5	M8	10.5	6	21	44	54	G1/8	35	10	32	10	6	9	5.5	9	M5	32	47	45	36	-
40	52	40	57	52	42.4	10.7	10.7	M8	9	6	21	47.9	57.9	G1/8	40	13	31	10	6	9	5.5	9	M5	40	52	50	40	-
50	64	50	72	64	42.2	11.2	11.2	M8	10.5	6	21	48.4	60.4	G1/4	50	13	40	12	6.8	10.5	6.5	10	M6	50	65	65	50	-
63	80	61	88	80	49.5	13	13	M12	15	8.5	31.5	54	66	G1/4	61	17	48	12	8.5	14	9	15	M6	62	80	80	62	-
80	98	77	104	98	57.5	16.2	16.2	M12	17	10.5	31.5	63.5	78.5	G3/8	77	22	55	15	10	16.5	11	17	M8	77	100	100	77	-
100	117	94	123.5	117	68.5	20.3	20.3	M12	17	10.5	31.5	74.5	89.5	G3/8	94	22	65	15	10	16.5	11	17	M8	94	115	115	94	-

Short-stroke cylinder Series QPR - through-rod

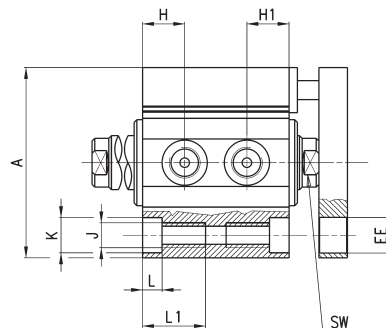
Note:
The cylinder's end stop must be provided externally.



+ = add the stroke once
++ = add the stroke twice



16/25/32/40/50/63/80/100

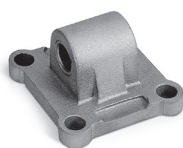


DIMENSIONS

Ø	A	B	D	E	G +	H1	H	J	K	L	L1	N ++	N1 ++	Q	R	SW	V	AA	BB	CC	DD	EE	FF	LL	MM	NN	RR	VV
12	23.8	15.5	25	25	37.3	12.3	12.3	3.5	5.8	3	-	41	46	M5	15.5	5	13.15	5	3.5	6.2	3.2	5.8	M3	15.5	25	24	15.5	12
16	29	20	29	29	38	10.9	10.9	3.5	5.8	3	-	52	57	M5	20	6	14.5	5	3.5	6.2	3.2	6.5	M3	20	28	28	20	-
20	37	25.5	39.25	39.25	38.1	9.8	9.8	5.5	9	6	-	47.7	57.5	M5	25.5	8	20.75	10	4.6	8	4.2	9	M4	25.5	38.5	36	25.5	18
25	40	28	40	40	36.3	8	8	5.5	10	5.5	-	47.1	57.1	M5	28	8	20	10	4.6	8	4.2	10	M4	27	40	40	28	-
32	45	33	55.5	47	39.5	9.5	9.5	M8	10.5	6	21	48.5	58.5	G1/8	35	10	32	10	6	9	5.5	9	M5	32	47	45	36	-
40	52	40	57	52	42.4	10.7	10.7	M8	9	6	21	53.4	63.4	G1/8	40	13	31	10	6	9	5.5	9	M5	40	52	50	40	-
50	64	50	72	64	42.2	11.2	11.2	M8	10.5	6	21	54.8	66.8	G1/4	50	13	40	12	6.8	10.5	6.5	10	M6	50	65	65	50	-
63	80	61	88	80	49.5	13	13	M12	15	8.5	31.5	58.5	70.5	G1/4	61	17	48	12	8.5	14	9	15	M6	62	80	80	62	-
80	98	77	104	98	57.5	16.2	16.2	M12	17	10.5	31.5	69.5	84.5	G3/8	77	22	55	15	10	16.5	11	17	M8	77	100	100	77	-
100	117	94	123.5	117	68.5	20.3	20.3	M12	17	10.5	31.5	80.5	95.5	G3/8	94	22	65	15	10	16.5	11	17	M8	94	115	115	94	-

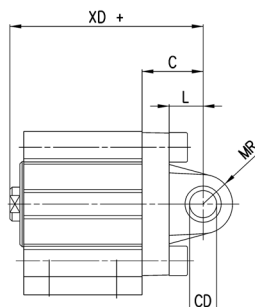
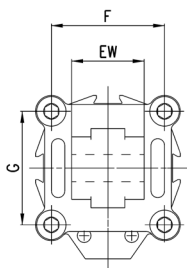
Male trunnion bracket Mod. L

Material: Aluminium



Supplied with:
1x trunnion
4x screws

+ = add the stroke



DIMENSIONS

Mod.	Ø	CD ^{H9}	MR	L	C	XD+	F	G	EW
L-QP-32	32	10	9	12	22	66	33	35	26
L-QP-40	40	12	13	15	25	73	40	40	28
L-QP-50	50	12	13	15	27	75,5	50	50	32
L-QP-63	63	16	15	20	32	86	61	61	40
L-QP-80	80	16	15	24	36	99,5	77	77	50
L-QP-100	100	20	18	29	41	115,5	94	94	60

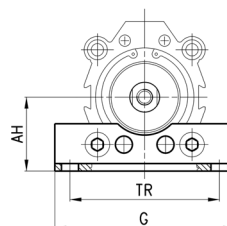
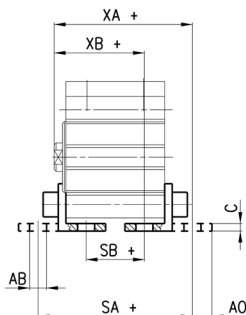
Feet bracket Mod. B

Material: zinc-plated steel.



Supplied with:
2x feet
4x screws

+ = add the stroke



DIMENSIONS

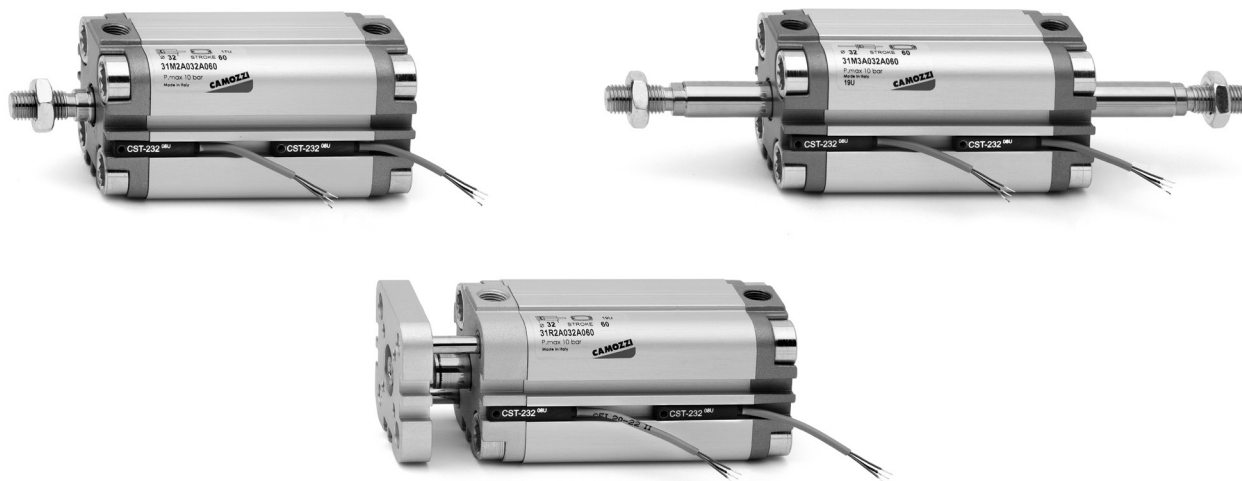
Mod.	Ø	C	SA+	XA+	SB+	XB+	TR	G	AB	AH	AO
B-QP-32	32	3	61.9	55.2	23.1	35.8	57	71	6.6	30	8.8
B-QP-40	40	3	64.8	59.1	26	39.7	64	78	6.6	33	8.8
B-QP-50	50	4	71.6	63.1	20.8	37.7	79	95	9	39	10.3
B-QP-63	63	4	81.9	70.2	25.1	41.8	95	113	11	46	13.8
B-QP-80	80	6	96.5	83	30.5	49	118	140	13	59	10.5
B-QP-100	100	6	114.5	97.5	22.5	51.5	137	162	13	71	17

Series 31 compact cylinders

Double and single-acting, double-acting non-rotating, magnetic
 ø12, 16, 20, 25 mm
 ø 32, 40, 50, 63, 80, 100 mm UNITOP

1

MOVEMENT



The compact dimensions allow Series 31 single and double-acting magnetic cylinders to be installed within confined spaces. These cylinders are suitable for use with feet, brackets.

These cylinders are available in 10 different bore sizes from ø 12 to ø 100. The guides are inserted in the external profile parallel to the sliding axis on three sides. These guides are used to locate the switches that sense the piston position. The construction design of these cylinders provides excellent axis stability. They are available either with a male or female thread. These cylinders can be supplied in W version for high temperatures (140°C). This last version is not magnetic.

- » Compact design
- » Wide range of models available
- » Standard magnetic
- » High temperature (double-acting and non magnetic)

GENERAL DATA

Type of construction	compact profile
Operation	single and double-acting
Materials	AL body and end-blocks - rolled stainless steel AISI 303 rod - AL piston rod PU seals or FKM seals for high temperatures (140°C)
Brackets	flange, feet, trunnion
Stroke min - max	Series 31R, 31M and 31F: ø12+25 = 1+200mm, ø32 + 63 = 1+300 mm, ø80+100 = 1+400mm The min. stroke for the use of sensors is 10 mm. Single-acting = 5+25 mm (see the table of standard strokes)
Operating temperature	0°C ÷ 80°C (with dry air - 20°C)
Operating pressure	1 + 10 bar (double-acting); 2 + 10 bar (single-acting)
Fluid	filtered air, without lubrication. If lubricated air is used, it is recommended to use oil ISOVG32. Once applied the lubrication should never be interrupted.
Speed	10 ÷ 1000 mm/sec (without load)

STANDARD STROKES

■ = Double-acting female, male ✕ = Non-rotating • = Single-acting female, male

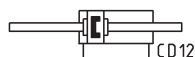
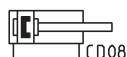
STANDARD STROKES										
Ø	5	10	15	20	25	30	40	50	60	80
12	■ ✕ •	■ ✕ •	■ ✕	■ ✕	■ ✕	■ ✕	■ ✕			
16	■ ✕ •	■ ✕ •	■ ✕ •	■ ✕ •	■ ✕ •	■ ✕	■ ✕			
20	■ ✕ •	■ ✕ •	■ ✕ •	■ ✕ •	■ ✕ •	■ ✕	■ ✕	■ ✕		
25	■ ✕ •	■ ✕ •	■ ✕ •	■ ✕ •	■ ✕ •	■ ✕	■ ✕	■ ✕		
32	■ ✕ •	■ ✕ •	■ ✕ •	■ ✕ •	■ ✕ •	■ ✕	■ ✕	■ ✕		
40	■ ✕ •	■ ✕ •	■ ✕ •	■ ✕ •	■ ✕ •	■ ✕	■ ✕	■ ✕	■ ✕	■ ✕
50		■ ✕ •	■ ✕ •	■ ✕ •	■ ✕ •	■ ✕	■ ✕	■ ✕	■ ✕	■ ✕
63		■ ✕ •	■ ✕ •	■ ✕ •	■ ✕ •	■ ✕	■ ✕	■ ✕	■ ✕	■ ✕
80		■ ✕ •	■ ✕ •	■ ✕ •	■ ✕ •	■ ✕	■ ✕	■ ✕	■ ✕	■ ✕
100		■ ✕ •	■ ✕ •	■ ✕ •	■ ✕ •	■ ✕	■ ✕	■ ✕	■ ✕	■ ✕

CODING EXAMPLE

31	M	2	A	032	A	050	
31	SERIES 31 = compact magnetic						
M	VERSION M = male rod thread, mounted with rod nut Mod. U F = female rod thread R = non-rotating with flange only double-acting						
2	OPERATION 1 = single-acting, front spring 2 = double-acting 3 = double-acting, through-rod 4 = single-acting, rear spring 7 = single-acting, through-rod			PNEUMATIC SYMBOLS CS06 CD08 CD12 CS08 CS10			
A	MATERIALS A = rolled stainless steel AISI 303 rod - AL tube profile						
032	BORE 012 = 12 mm 016 = 16 mm 020 = 20 mm 025 = 25 mm 032 = 32 mm 040 = 40 mm 050 = 50 mm 063 = 63 mm 080 = 80 mm 100 = 100 mm						
A	DESIGN TYPE A = standard						
050	STROKE (see the table)						
	= standard S = special V = rod seal FKM W = seals in FKM for high temperatures (140°C), only available in the double-acting, non magnetic version						

PNEUMATIC SYMBOLS

The pneumatic symbols which have been indicated in the CODING EXAMPLE are shown below.



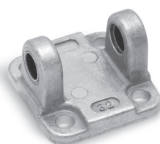
ACCESSORIES FOR COMPACT MAGNETIC CYLINDERS SERIES 31



Swivel ball joint Mod. GA
(cyl. Mod. 31M)



90° swivel combination
for trunnion Mod. I



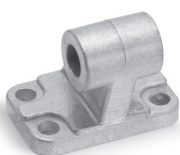
Rear trunnion Mod. C



Rod fork end Mod. G
(cyl. Mod. 31M)



Piston rod lock nut
Mod. U (cyl. Mod. 31M)



90° swivel combin. for
fem. trunnion Mod. ZC



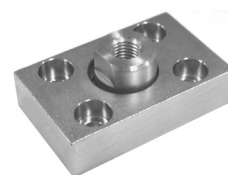
Rear trunnion Mod. L



Rear and front flange
Mod. D



Foot mount Mod. B



Coupling piece
Mod. GKF



Self aligning rod
Mod. GK



Piston rod socket joint
Mod. GY (cyl. Mod. 31M)

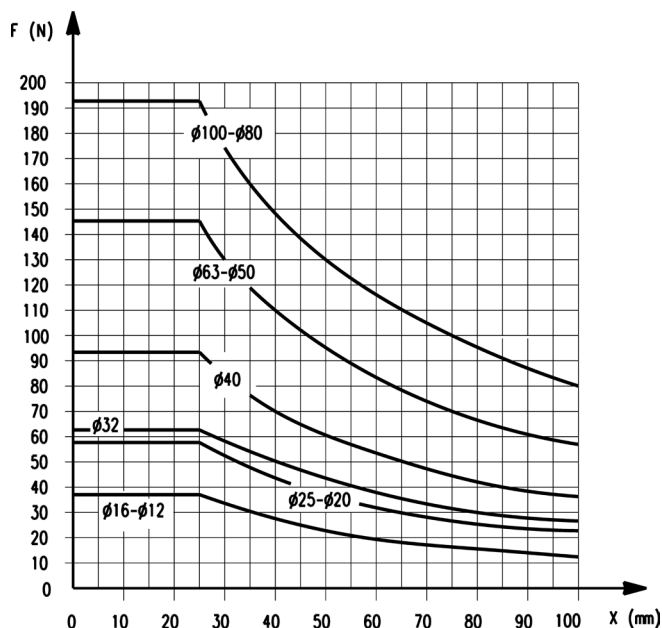
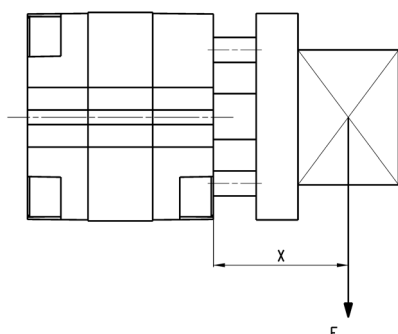


All accessories are supplied separately.

ANTI-ROTATION - Transversal load dependant on projection

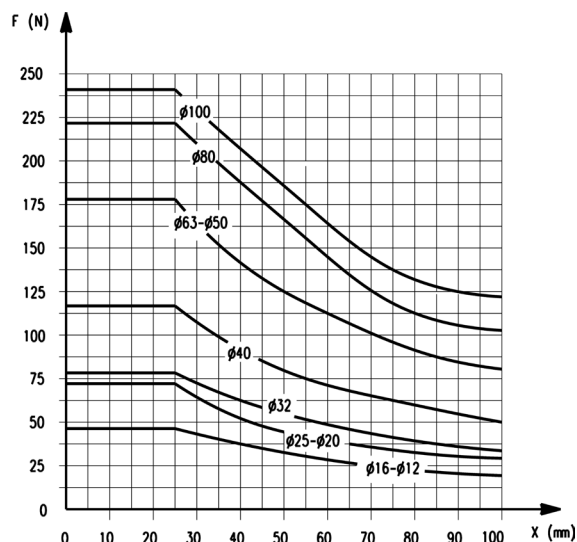
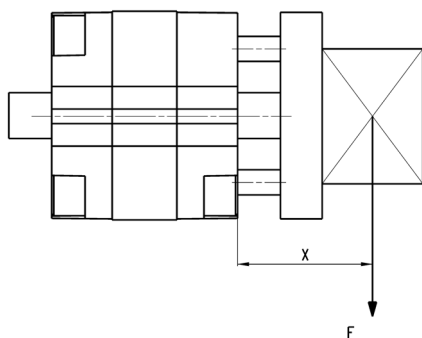
1

MOVEMENT



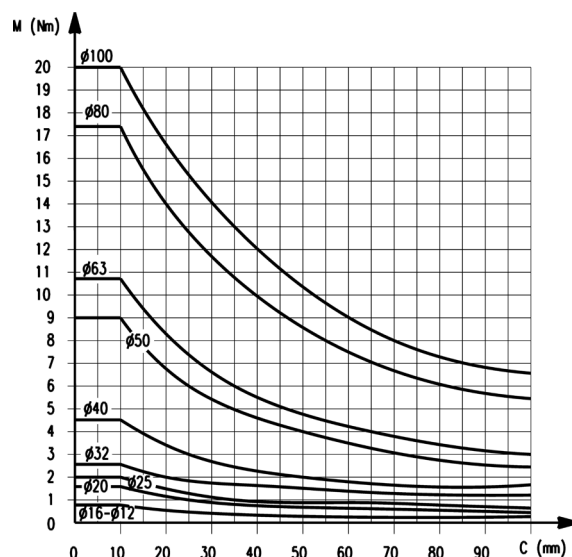
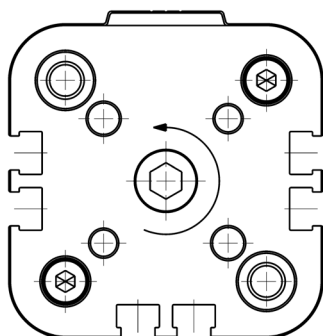
It is possible to determine the strokes required as shown in the general data in the absence of radial loads and torque moments. When imposing radial loads on the cylinder it is important to respect the maximum projection of the baricenter. In the presence of torque moments, it is recommended to respect the maximum stroke as shown in the diagrams.

ANTI-ROTATION THROUGH-ROD - Transversal load dependant on projection



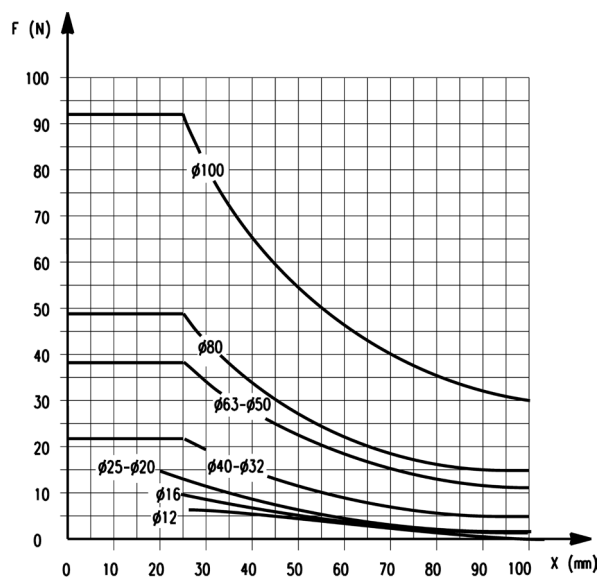
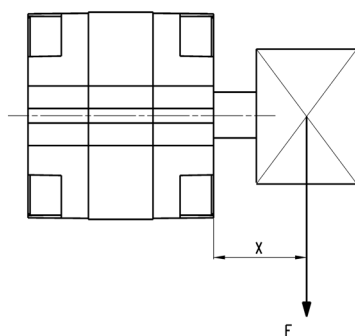
It is possible to determine the strokes required as shown in the general data in the absence of radial loads and torque moments. When imposing radial loads on the cylinder it is important to respect the maximum projection of the baricenter. In the presence of torque moments, it is recommended to respect the maximum stroke as shown in the diagrams.

TORQUE MOMENT - dependant on stroke C



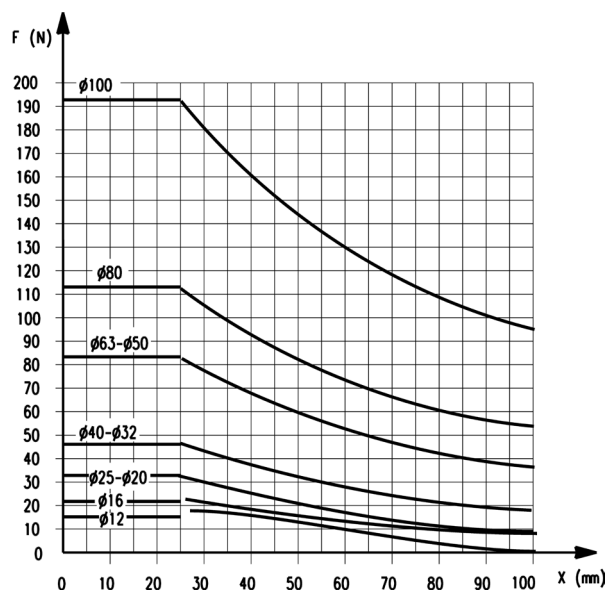
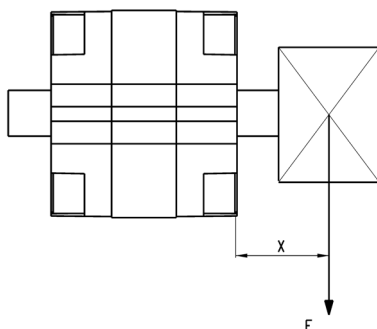
It is possible to determine the strokes required as shown in the general data in the absence of radial loads and torque moments. When imposing radial loads on the cylinder it is important to respect the maximum projection of the baricenter. In the presence of torque moments, it is recommended to respect the maximum stroke as shown in the diagrams.

TRANSVERSAL LOAD - dependant on projection



It is possible to determine the strokes required as shown in the general data in the absence of radial loads and torque moments. When imposing radial loads on the cylinder it is important to respect the maximum projection of the baricenter. In the presence of torque moments, it is recommended to respect the maximum stroke as shown in the diagrams.

TRANSVERSAL LOAD THROUGH-ROD - dependant on projection



It is possible to determine the strokes required as shown in the general data in the absence of radial loads and torque moments. When imposing radial loads on the cylinder it is important to respect the maximum projection of the baricenter. In the presence of torque moments, it is recommended to respect the maximum stroke as shown in the diagrams.

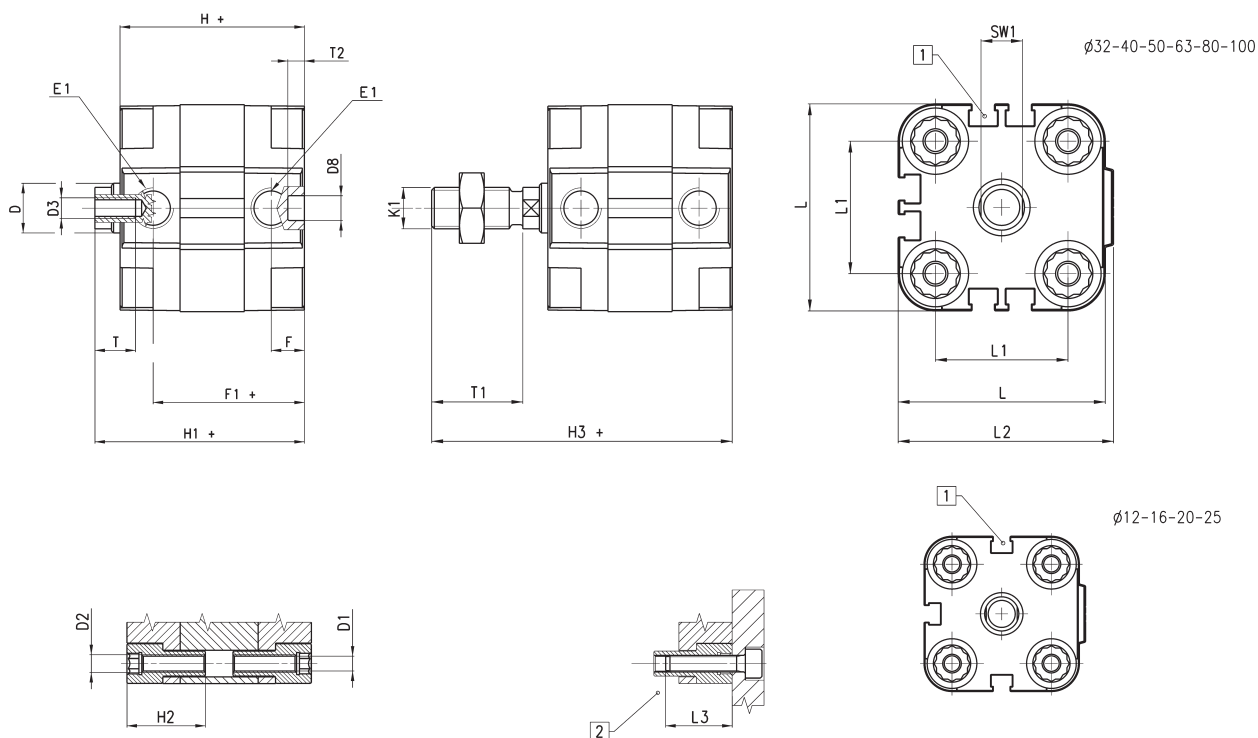
Compact magnetic cylinders Mod. 31F and 31M



1 = Groove for sensor CST
 2 = Keep to the minimum screwing depth.
 + = add the stroke

1

MOVEMENT



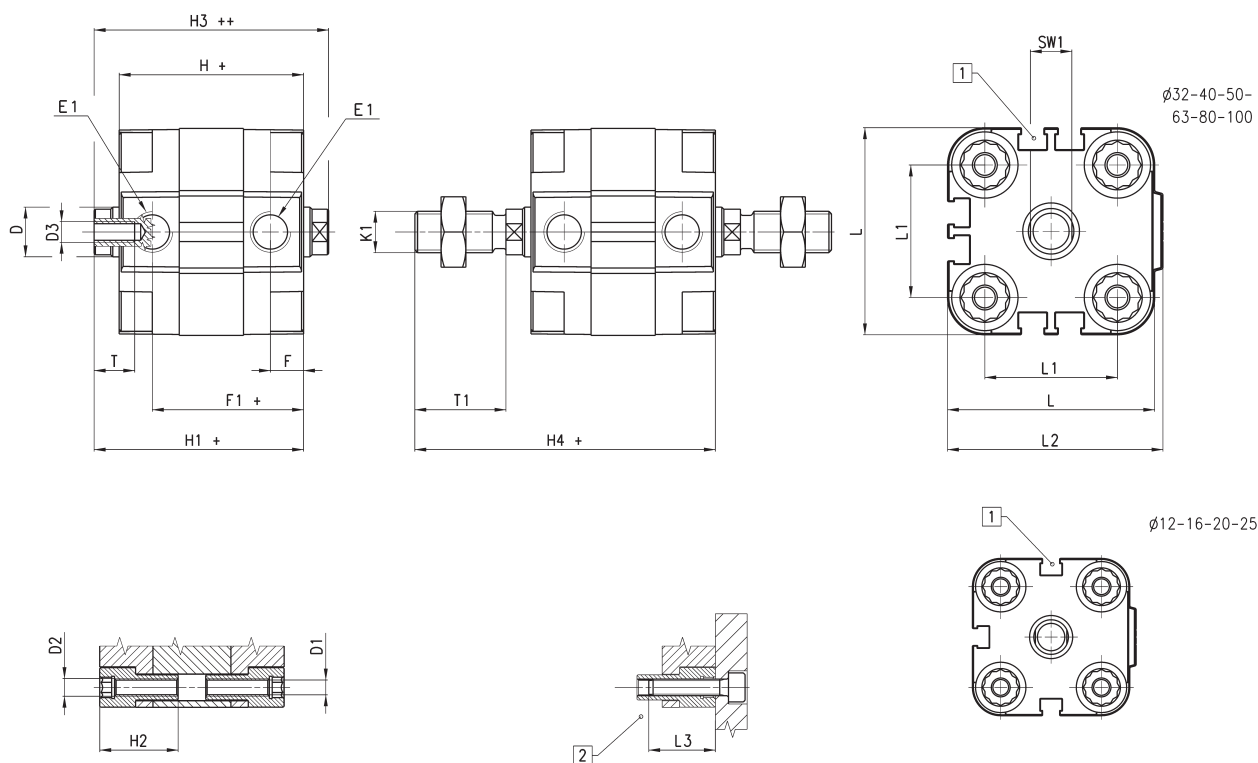
DIMENSIONS

Ø	øD	øD1	D2	D3	øD8 (H9)	E1	F	F1+	H+	H1+	H2	H3+	K1	L	L1	L2	L3	T	T1	T2	SW1
12	6	3,5	M4	M3	6	M5	8	30	38	42,5	18,5	58,5	M6	29	18	30	16	6	16	4	5
16	8	3,5	M4	M4	6	M5	8	30	38	42,5	18,5	62,5	M8	29	18	30	16	8	20	4	7
20	10	4,5	M5	M5	6	M5	8	30	38	42,5	18,5	64,5	M10x1,25	36	22	37,5	18	10	22	4	8
25	10	4,5	M5	M5	6	M5	8	31,5	39,5	45	18,5	67	M10x1,25	40	26	41,5	18	10	22	4	8
32	12	5,5	M6	M6	6	G1/8	8	36,5	44,5	50,5	21,5	72,5	M10x1,25	50	32	52	20	12	22	4	10
40	12	5,5	M6	M6	6	G1/8	8	37,5	45,5	52	21,5	74	M10x1,25	60	42	62,5	20	12	22	4	10
50	16	6,5	M8	M8	6	G1/8	8	37,5	45,5	53	22,5	77	M12x1,25	68	50	71	20	12	24	4	13
63	16	8,5	M10	M8	8	G1/8	8	42	50	57,5	24,5	81,5	M12x1,25	87	62	91	25	12	24	4	13
80	20	8,5	M10	M10	8	G1/8	8,5	47,5	56	64	24,5	96	M16x1,5	107	82	111	25	16	32	4	17
100	25	8,5	M10	M12	8	G1/4	10,5	56	66,5	76,5	31,5	116,5	M20x1,5	128	103	133	25	20	40	4	22

Compact magnetic cylinders Mod. 31F and 31M - through-rod



1 = Groove for sensor CST
 2 = Keep to the minimum screwing depth.
 + = add the stroke once
 ++ = add the stroke twice



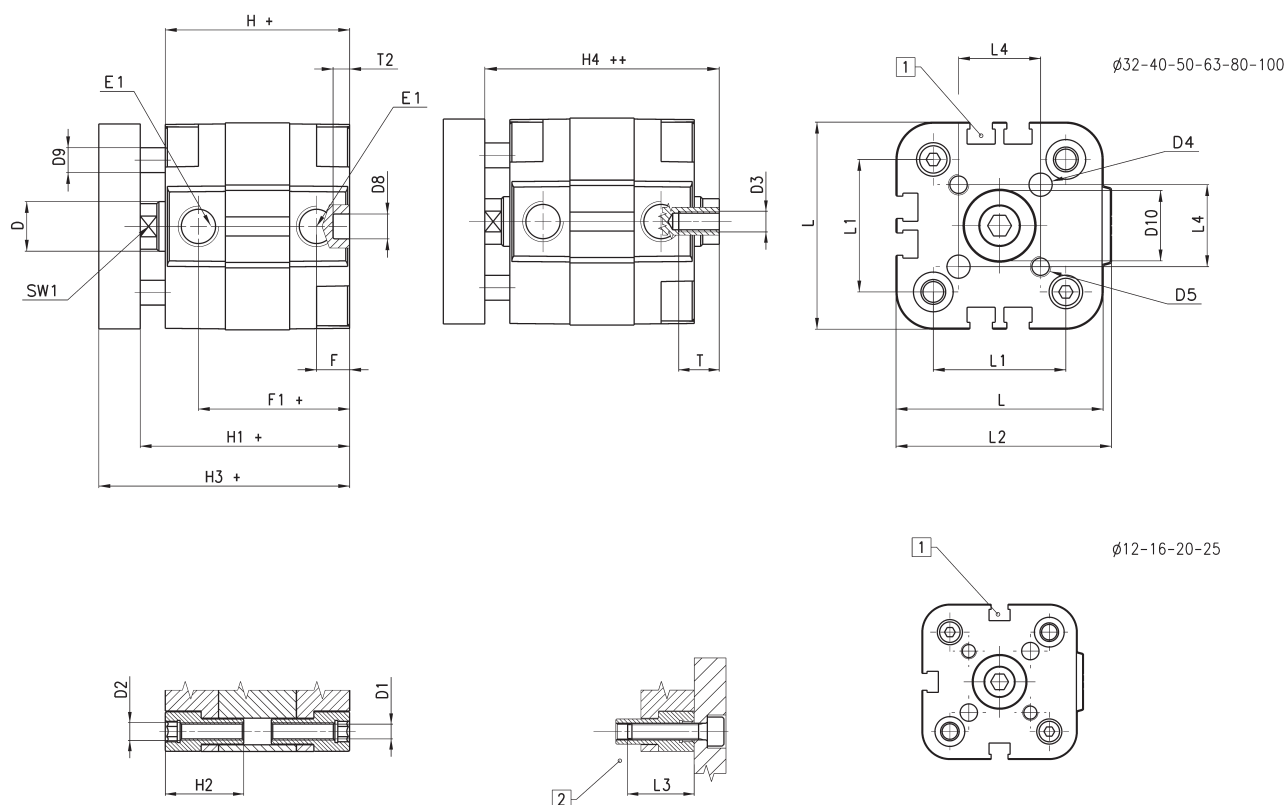
DIMENSIONS

Ø	øD	øD1	D2	D3	E1	F	F1+	H+	H1+	H2	H3++	H4+	K1	L	L1	L2	L3	T	T1	SW1
12	6	3,5	M4	M3	M5	8	30	38	42,5	18,5	47	58,5	M6	29	18	30	16	6	16	5
16	8	3,5	M4	M4	M5	8	30	38	42,5	18,5	47	62,5	M8	29	18	30	16	8	20	7
20	10	4,5	M5	M5	M5	8	30	38	42,5	18,5	47	64,5	M10x1,25	36	22	37,5	18	10	22	8
25	10	4,5	M5	M5	M5	8	31,5	39,5	45	18,5	50,5	67	M10x1,25	40	26	41,5	18	10	22	8
32	12	5,5	M6	M6	G1/8	8	36,5	44,5	50,5	21,5	56,5	72,5	M10x1,25	50	32	52	20	12	22	10
40	12	5,5	M6	M6	G1/8	8	37,5	45,5	52	21,5	58,5	74	M10x1,25	60	42	62,5	20	12	22	10
50	16	6,5	M8	M8	G1/8	8	37,5	45,5	53	22,5	60,5	77	M12x1,25	68	50	71	20	12	24	13
63	16	8,5	M10	M8	G1/8	8	42	50	57,5	24,5	65	81,5	M12x1,25	87	62	91	25	12	24	13
80	20	8,5	M10	M10	G1/8	8,5	47,5	56	64	24,5	72	96	M16x1,5	107	82	111	25	16	32	17
100	25	8,5	M10	M12	G1/4	10,5	56	66,5	76,5	31,5	86,5	116,5	M20x1,5	128	103	133	25	20	40	22

Compact magnetic cylinders Mod. 31R



1 = Groove for sensor CST
 2 = Keep to the minimum screwing depth.
 + = add the stroke once
 ++ = add the stroke twice



DIMENSIONS

Ø	øD	øD1	D2	D3	øD4 ^(H9)	D5	D8 ^(H9)	øD9	D10	E1	F	F1+	H+	H1+	H2	H3+	H4++	L	L1	L2	L3	L4	T	T2	SW1
12	6	3,5	M4	M3	3	M3	6	5	6	M5	8	30	38	42,5	18,5	48,5	47	29	18	30	16	9,9	6	4	5
16	8	3,5	M4	M4	3	M3	6	5	8	M5	8	30	38	42,5	18,5	48,5	47	29	18	30	16	9,9	8	4	7
20	10	4,5	M5	M5	4	M4	6	6	10	M5	8	30	38	42,5	18,5	50,5	47	36	22	37,5	18	12	10	4	8
25	10	4,5	M5	M5	5	M5	6	6	14	M5	8	31,5	39,5	45	18,5	53	50,5	40	26	41,5	18	15,6	10	4	8
32	12	5,5	M6	M6	5	M5	6	6	17	G1/8	8	36,5	44,5	50,5	21,5	60,5	56,5	50	32	52	20	19,8	12	4	10
40	12	5,5	M6	M6	5	M5	6	6	17	G1/8	8	37,5	45,5	52	21,5	62	58,5	60	42	62,5	20	23,3	12	4	10
50	16	6,5	M8	M8	6	M6	6	10	22	G1/8	8	37,5	45,5	53	22,5	65	60,5	68	50	71	20	29,7	12	4	13
63	16	8,5	M10	M8	6	M6	8	10	22	G1/8	8	42	50	57,5	24,5	69,5	65	87	62	91	25	35,4	12	4	13
80	20	8,5	M10	M10	8	M8	8	12	28	G1/8	8,5	47,5	56	64	24,5	78	72	107	82	111	25	46	16	4	17
100	25	8,5	M10	M12	10	M10	8	12	30	G1/4	10,5	56	66,5	76,5	31,5	90,5	86,5	128	103	133	25	56,6	20	4	22

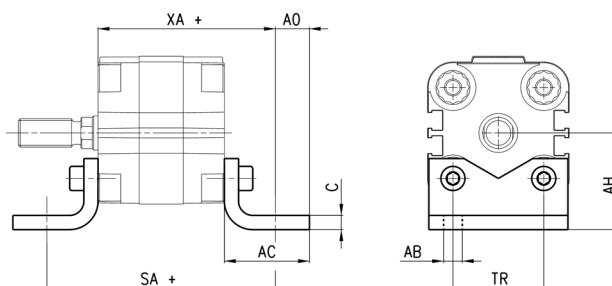
Foot mount Mod. B

Material: zinc-plated steel



Supplied with:
2x feet
4x screws

+ = add the stroke



DIMENSIONS

Mod.	Ø	C	SA+	XA+	TR	AB	AH	AO	AC
B-31-12-16	12 - 16	3	64	51	18	5,5	22	7	20
B-32-20	20	4	70	54	22	6,6	27	9	25
B-31-25	25	4	71,5	55,5	26	6,6	29	9	25
B-31-32	32	5	80,5	62,5	32	6,6	34	12	30
B-31-40	40	5	85,5	65,5	42	9	40,5	10	30
B-31-50	50	5,5	93,5	69,5	50	9	47	11	35
B-31-63	63	5,5	104	77	62	11	56,5	13	40
B-31-80	80	7,5	116	86	82	11	68,5	15	45
B-31-100	100	7,5	132,5	99,5	103	13,5	81	12	45

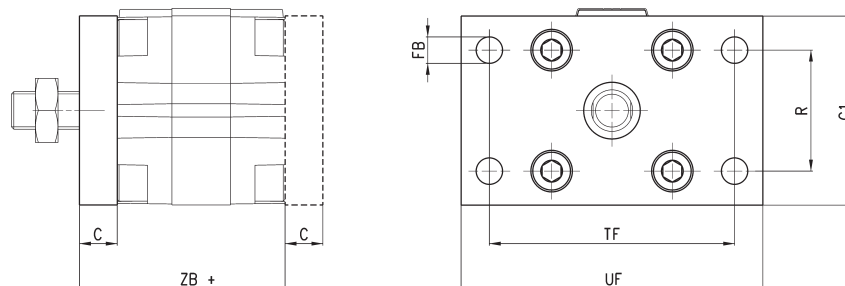
Rear and front flange Mod. D-E

Material: zinc-plated steel



Supplied with:
1x flange
4x screws

+ = add the stroke



DIMENSIONS

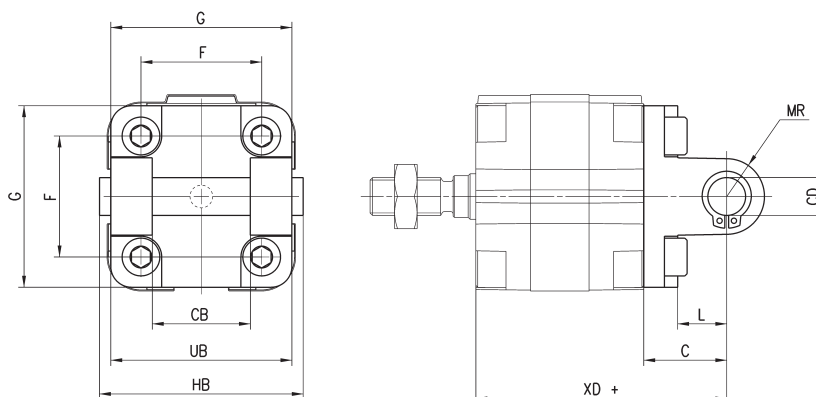
Mod.	Ø	C	ZB+	TF	R	UF	G1	FB
D-E-31-12-16	12 - 16	10	48	43	-	55	29	5,5
D-E-32-20	20	10	48	55	-	70	36	6,6
D-E-32-25	25	10	49,5	60	-	76	40	6,6
D-E-31-32	32	10	54,5	65	32	80	50	7
D-E-31-40	40	10	55,5	82	36	102	60	9
D-E-31-50	50	12	57,5	90	45	110	68	9
D-E-31-63	63	15	65	110	50	130	87	9
D-E-31-80	80	15	71	135	63	160	107	12
D-E-31-100	100	15	81,5	163	75	190	128	14

Female rear trunnion Mod. C

Material: Aluminium



Supplied with:
 4x screws
 1x clevis pin
 1x centering pin
 1x trunnion
 + = add the stroke



DIMENSIONS

Mod.	Ø	ØCD	L	C	XD+	MR	F	G	CB	UB	HB
C-31-32	32	10	13	21	66,5	11	32	50	26	45	54
C-31-40	40	12	16	25	70,5	13	42	60	28	52	62
C-31-50	50	12	16	27	72,5	13	50	68	32	60	70
C-31-63	63	16	21	32	82	17	62	87	40	70	82
C-31-80	80	16	23	36	92	17	82	102	50	90	102
C-31-100	100	20	26	41	107,5	21	103	128	60	110	126

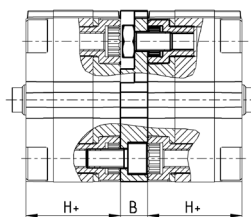
Intermediate bracket Mod. DC

Flange in aluminium



Supplied with:
 1x flange
 1x centering pin
 4x screws

+ = add the stroke

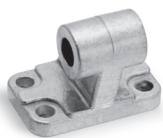


DIMENSIONS

Mod.	Ø	B	H+
DC-31-12-16	12-16	12,5	38
DC-31-20	20	12,5	38
DC-31-25	25	13	39,5
DC-31-32	32	14,5	44,5
DC-31-40	40	14,5	45,5
DC-31-50	50	14,5	45,5
DC-31-63	63	14,5	50
DC-31-80	80	16,5	56
DC-31-100	100	19,5	66,5

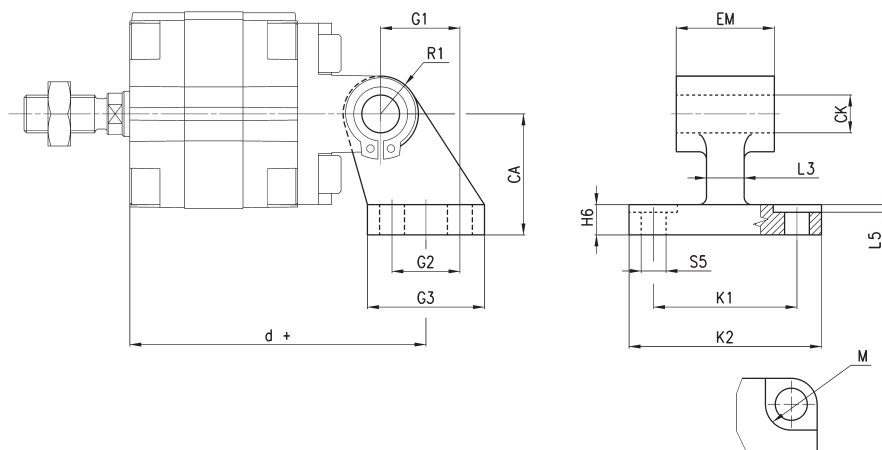
90° Swivel combination for female trunnion Mod. ZC

Male rear
Material: aluminium



Supplied with:
1x male support

+ = add the stroke



DIMENSIONS

Mod.	Ø	M	ø _{CK}	ø _{S5}	d+	K1	K2	L3	G1	L5	G2	EM	G3	CA	H6	R1
ZC-32	32	11	10	6,6	78,5	38	51	10	21	1,6	18	26	31	32	8	10
ZC-40	40	11	12	6,6	83,5	41	54	15	24	1,6	22	28	35	36	10	11
ZC-50	50	15	12	9	90,5	50	65	16	33	1,6	30	32	45	45	12	13
ZC-63	63	15	16	9	101,5	52	67	16	37	1,6	35	40	50	50	14	15
ZC-80	80	18	16	11	119	66	86	20	47	2,5	40	50	60	63	14	15
ZC-100	100	18	20	11	137,5	76	96	20	55	3,2	50	60	70	71	17	19

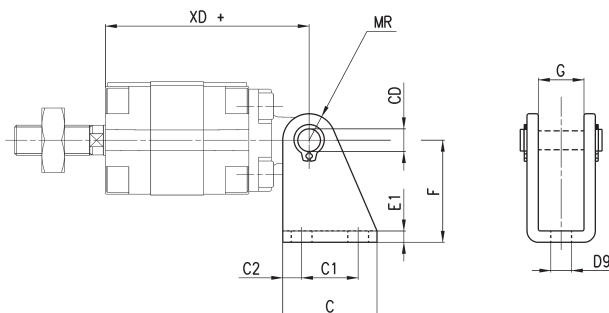
90° swivel combination for trunnion Mod. I

Material: zinc-plated steel



Supplied with:
2x Seeger
1x female support
1x piston pin

+ = add the stroke



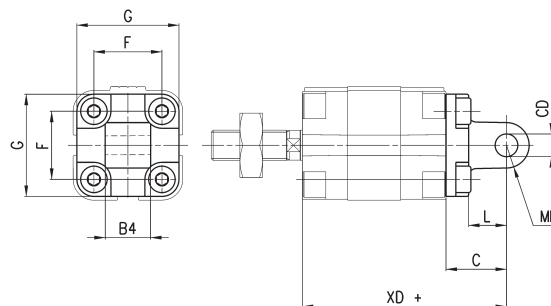
DIMENSIONS

Mod.	Ø	ø _{CD}	C	C1	ø _{C2}	XD+	MR	ø _{D9}	E1	F	G
I-12-16	12	6	25	15	5	54	7	5,5	3	27	12,1
I-12-16	16	6	25	15	5	54	7	5,5	3	27	12,1
I-20-25	20	8	32	20	6	58	10	6	4	30	16,1
I-20-25	25	8	32	20	6	59,5	10	6	4	30	16,1

Rear male trunnion Mod. L



Material: aluminium
 Supplied with:
 4x screws
 1x male trunnion
 1x centering pin



DIMENSIONS

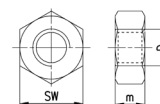
	Ø	ØCD	L	C	XD+	MR	F	G	B4
L-31-12-16	12	6	10	16	54	6	18	30	12
L-31-12-16	16	6	10	16	54	6	18	30	12
L-31-20	20	8	14	20	58	8	22	37,5	16
L-31-25	25	8	14	20	59,5	8	26	41,5	16

+ = add the stroke

Piston rod lock nut Mod. U



Material: zinc-plated steel
 ISO 4035



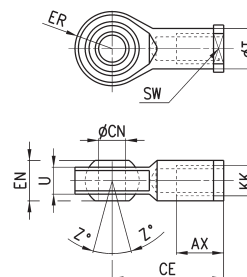
DIMENSIONS

Mod.	Ø cylinder	D	m	SW
U-12-16	12	M6X1	4	10
U-20	16	M8X1,25	5	13
U-25-32	20-40	M10X1,25	6	17
U-40	50-63	M12X1,25	7	19
U-50-63	80	M16X1,5	8	24
U-80-100	100	M20X1,5	9	30

Swivel ball joint Mod. GA



Material: zinc-plated steel
 ISO 8139



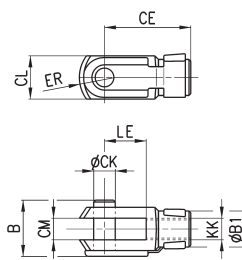
DIMENSIONS

Mod.	Ø	øCN	U	EN	ER	AX	CE	KK	T	Z	SW
GA-12-16	12	6	7	9	10	12	30	M6X1	10	6,5	11
GA-20	16	8	9	12	12	16	36	M8X1,25	12,5	6,5	14
GA-32	20+40	10	10,5	14	14	20	43	M10X1,25	15	6,5	17
GA-40	50+63	12	12	16	16	22	50	M12X1,25	17,5	6,5	19
GA-50-63	80	16	15	21	21	28	64	M16X1,5	22	7,5	22
GA-80-100	100	20	18	25	25	33	77	M20X1,5	27,5	7	30

Rod fork end Mod. G

ISO 8140

Material: zinc-plated steel

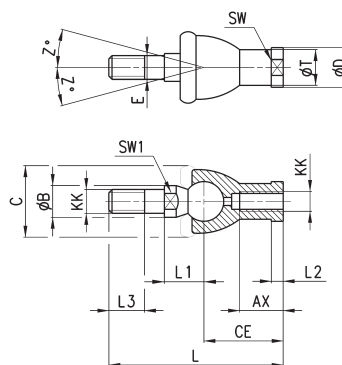


DIMENSIONS

Mod.	Ø	B	øB1	øCK	LE	CM	CL	ER	CE	KK
G-12-16	12	16	10	6	12	6	12	7	24	M6X1
G-20	16	22	14	8	16	8	16	42	32	M8X1,25
G-25-32	20 ÷ 40	26	18	10	20	10	20	12	40	M10X1,25
G-40	50 ÷ 63	32	20	12	24	12	24	14	48	M12X1,25
G-50-63	80	40	26	16	32	16	32	19	64	M16X1,5
G-80-100	100	48	34	20	40	20	40	25	80	M20X1,5

Piston rod socket joint Mod. GY

Material: zama and zinc-plated steel

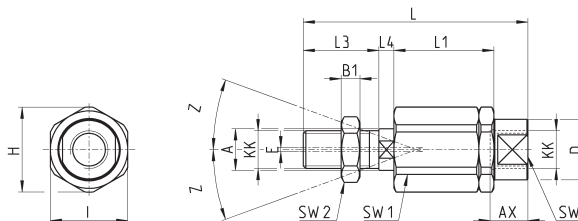


DIMENSIONS

Mod.	Ø	KK	L	CE	L2	AX	E	øB	øC	øT	øD	L1	L3	SW1	SW	Z
GY-12-16	12	M6X1	55	28	5	15	6	10	20	10	13	12,2	11	8	11	15
GY-20	16	M8X1,25	65	32	5	16	8	12	24	12,5	16	16	12	10	14	15
GY-32	20÷40	M10X1,25	74	35	6,5	18	10	14	28	15	19	19,5	15	11	17	15
GY-40	50÷63	M12X1,25	84	40	6,5	20	12	19	32	17,5	22	21	17	17	19	15
GY-50-63	80	M16X1,5	112	50	8	27	16	22	40	22	27	27,5	23	19	22	11
GY-80-100	100	M20X1,5	133	63	10	38	20	27	45	27,5	34	31,5	25	24	30	7,5

Self aligning rod Mod. GK

For cylinders with male rod only.
Material: zinc-plated steel

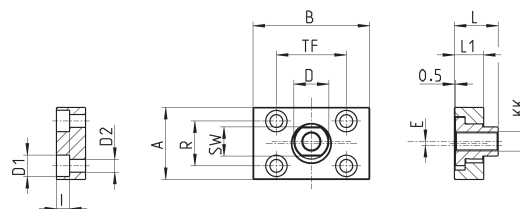
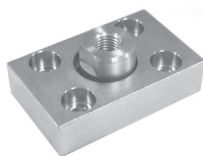


DIMENSIONS

Mod.	Ø	KK	L	L1	L3	L4	Ø A	Ø D	H	I	SW	SW1	SW2	B1	AX	Z	E
GK-20	16	M8x1,25	57	26	21	5	8	12,5	19	17	11	7	13	4	16	4	2
GK-25-32	20-25-32-40	M10x1,25	71,5	35	20	7,5	14	22	32	30	19	12	17	5	22	4	2
GK-40	50-63	M12x1,25	75,5	35	24	7,5	14	22	32	30	19	12	19	6	22	4	2
GK-50-63	80	M16x1,5	104	53	32	10	22	32	45	41	27	20	24	8	30	3	2
GK-80-100	100	M20x1,5	119	53	40	10	22	32	45	41	27	20	30	10	37	3	2

Coupling piece Mod. GKF

Material: zinc-plated steel



DIMENSIONS

Mod.	Ø	KK	A	B	R	TF	L	L1	I	Ø D	Ø D1	Ø D2	SW	E
GKF-20	16	M8x1,25	30	35	20	25	22,5	10	-	14	5,5	-	13	1,5
GKF-25-32	20-25-32-40	M10x1,25	37	60	23	36	22,5	15	6,8	18	11	6,6	15	2
GKF-40	50-63	M12x1,25	56	60	38	42	22,5	15	9	20	15	9	15	2,5
GKF-50-63	80	M16x1,5	80	80	58	58	26,5	15	10,5	25	18	11	22	2,5
GKF-80-100	100	M20x1,5	90	90	65	65	32,5	20	13	30,5	20	14	27	2,5

Series 31 compact cylinders, Tandem and Multi-position versions

Double-acting, magnetic

ø 12, 16, 20, 25, 32, 40, 50, 63, 80, 100 mm



- » Compact design
- » Available in different diameters and strokes
- » Standard magnetic

The compact dimensions allow Series 31 cylinders to be installed within very small spaces. These cylinders are suitable for use with feet, flange and trunnion mountings.

In order to complete the compact cylinder series, two new versions have been introduced: tandem and multi-position.
The new Tandem version with 2, 3 or 4 stages generates a thrust force which is 2, 3 or 4 times that of the normal cylinder (standard traction force).
The Multi-position version allows a maximum of 3 different positions which are determined by the stroke of the individual actuators.

GENERAL DATA

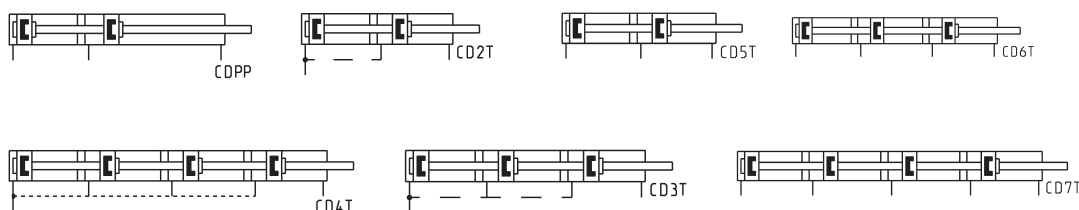
Type of construction	compact profile
Operation	double-acting
Materials	AL body and end-blocks - rolled stainless steel AISI 303 rod - AL piston - PU rod and piston seals
Mounting	flange - feet - trunnion
Min and max strokes (for tandem 31M and 31F)	ø12+25 = 1+80 mm ø32+100 = 1+100 mm
Min and max strokes (for multi-position 31M and 31F)	ø12+25 = dimension for X2 max 200 mm ø32+63 = dimension for X2 max 300 mm ø80+100 = dimension for X2 max 400 mm
Operating temperature	0°C + 80°C (with dry air -20°C)

CODING EXAMPLE

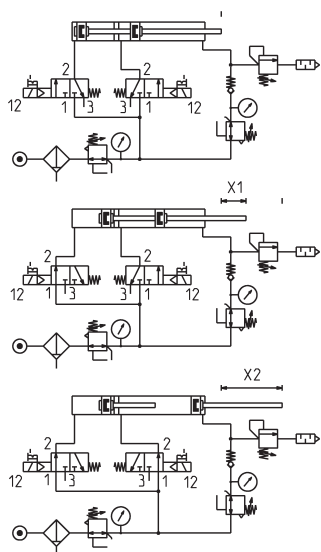
31	M	2	A	032	A	050	N	2
31 SERIES								
M	VERSION M = male rod thread, mounted with rod nut Mod. U F = female rod thread							
2	OPERATION 2 = double-acting					PNEUMATIC SYMBOLS CDPP		
A	MATERIALS A = rolled stainless steel rod AISI 303 - AL tube profile							
032	BORE 012 = 12 mm - 016 = 16 mm - 020 = 20 mm - 025 = 25 mm 032 = 32 mm - 040 = 40 mm - 050 = 50 mm - 063 = 63 mm 080 = 80 mm - 100 = 100 mm					CD5T, CD6T, CD7T CD2T, CD3T, CD4T CD2T, CD3T, CD4T		
A	CONSTRUCTION TYPE A = standard							
050	STROKE - tandem stroke (mm) - multi-position X1mm/X2mm. Insert stroke without the initial 0 (see application scheme).							
N	TANDEM AND MULTI-POSITION							
2	STAGES (only for tandem) 2 = 2 stages - 3 = 3 stages - 4 = 4 stages							

PNEUMATIC SYMBOLS

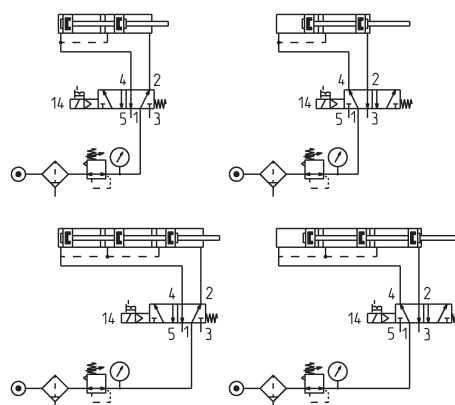
The pneumatic symbols which have been indicated in the CODING EXAMPLE are shown below.



Application schemes



Multi-position
 Example for ordering:
 X1 = 25 mm and X2 = 100 mm
 31M2A032A25/100N



Tandem
 Example for ordering:
 stroke 25 mm
 31M2A032A025N2 (2 stages)

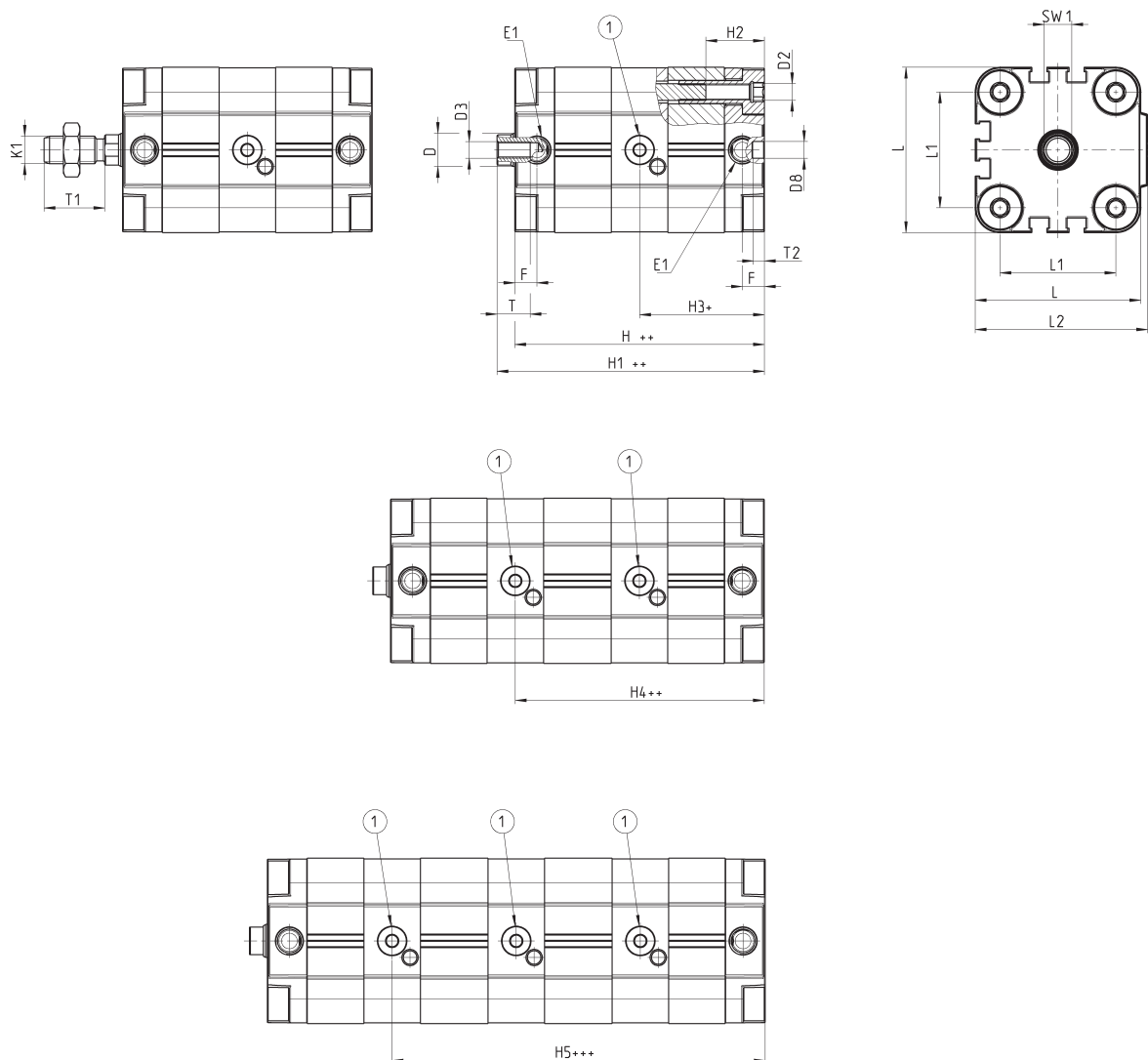
Cylinders Series 31 - Tandem version

Mod. 31F2A...N...

Mod. 31M2A...N...



+ = add the stroke once
 ++ = add the stroke twice
 +++ = add the stroke three times
 ++++ = add the stroke four times
 ① = air inlet cylinders ø12, 16, 20, 25



DIMENSIONS

Ø	øD	D2	D3	øD8	E1	F	H++	H1++	H2	H3+	H4++	H5+++	K1	L	L1	L2	T	T1	T2	SW1	3ST _{H+++}	3ST _{H1+++}	4ST _{H++++}	4ST _{H1++++}
12	6	M4	M3	6	M5	8	63,5	68	12,5	34,5	60,5	85,5	M6	29	18	30	6	16	4	5	89	93,5	114,5	119
16	8	M4	M4	6	M5	8	63,5	68	12,5	34,5	60,5	86,5	M8	29	18	30	8	20	4	7	89,5	94	115,5	120
20	10	M5	M5	6	M5	8	78	82,5	17	43,5	83,5	123,5	M10x1,25	36	22	37,5	10	22	4	8	118	122,5	158	162,5
25	10	M5	M5	6	M5	8	78	83,5	17	39,1	78,1	117,1	M10x1,25	40	26	41,5	10	22	4	8	117	122,5	156	161,5
32	12	M6	M6	6	G1/8	8	90,5	96,5	21,5	46,5	92,6	138,7	M10x1,25	50	32	52	12	22	4	10	136,5	142,5	182,5	188,5
40	12	M6	M6	6	G1/8	8	90,5	97	21,5	46,5	90,2	135,2	M10x1,25	60	42	62,5	12	22	4	10	135,5	142	180,5	187
50	16	M8	M8	6	G1/8	8	90,5	98	18	47,5	92,5	137,5	M12x1,25	68	50	71	12	24	4	13	135,5	143	180	188
63	16	M10	M8	8	G1/8	8	100,5	108	26	50,2	100,7	151,2	M12x1,25	87	62	91	12	24	4	13	151	158,5	201,5	209
80	20	M10	M10	8	G1/8	8,5	112	120	26,5	59	115	171	M16x1,5	107	82	111	16	32	4	17	168	176	224	232
100	25	M10	M12	8	G1/4	10,5	135,5	145,5	26,5	71,3	140,4	209,5	M20x1,5	128	103	133	20	40	4	22	204,5	214,5	237,5	283,5

Cylinders Series 31 - multi-position version

Mod. 31F2A...X1-X2N

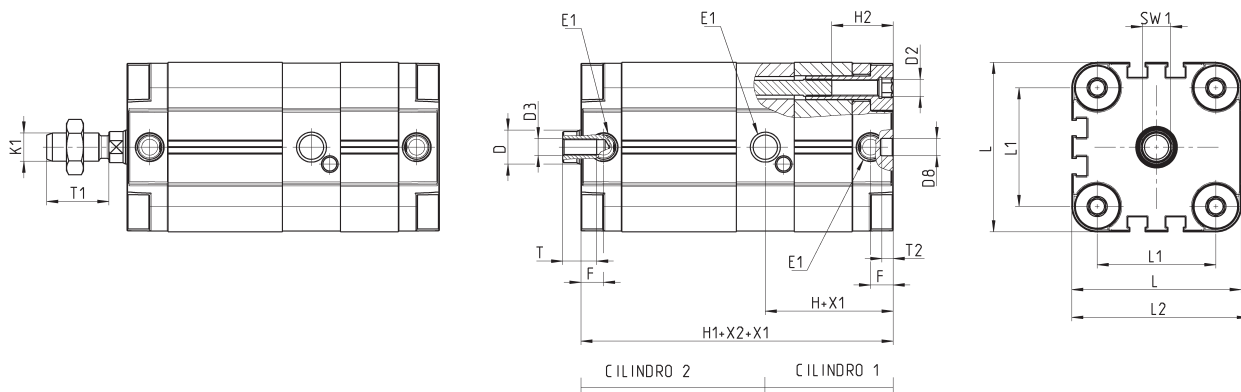
Mod. 31M2A...X1-X2N



X1 = stroke of stage 1
 X2 = total stroke of application scheme
 + = add the stroke

1

MOVEMENT



DIMENSIONS

Ø	øD	D2	D3	øD8	E1	F	H+x1	H1+x2+x1	H2	K1	L	L1	L2	T	T1	T2	SW1
12	6	M4	M3	6	M5	8	34,5	63,5	12,5	M6	29	18	30	6	16	4	5
16	8	M4	M4	6	M5	8	34,5	63,5	12,5	M8	29	18	30	8	20	4	7
20	10	M5	M5	6	M5	8	43,5	78	17	M10x1,25	36	22	37,5	10	22	4	8
25	10	M5	M5	6	M5	8	39,1	78	17	M10x1,25	40	26	41,5	10	22	4	8
32	12	M6	M6	6	G1/8	8	46,5	90,5	21,5	M10x1,25	50	32	52	12	22	4	10
40	12	M6	M6	6	G1/8	8	45	90,5	21,5	M10x1,25	60	42	62,5	12	22	4	10
50	16	M8	M8	6	G1/8	8	47	90,5	18	M12x1,25	68	50	71	12	24	4	13
63	16	M8	M8	8	G1/8	8	50	100,5	26	M12x1,25	87	62	91	12	24	4	13
80	20	M10	M10	8	G1/8	8,5	59	112	26,5	M16x1,5	107	82	111	16	32	4	17
100	25	M12	M12	8	G1/4	10,5	71	135,5	26,5	M20x1,5	128	103	133	20	40	4	22