COMPACT CYLINDERS SERIES CMPC

Compact cylinder series CMPC available in numerous versions to meet a full range of requirements:

- With or without magnet
- Single-acting extended rod, retracted or through-rod
- Dual-acting non-rotating and dual-acting through-rod versions
- Tandem with two, three or four stages
- Multi-position with two and three stages
- Fixing centre distances to ISO 15552 from Ø 32 to Ø 100 and from Ø 20 to Ø 100 complying with French standard NFE 49-004-1 and 2 (UNITOP). Ø 12 and Ø 16 have centre distances compatible with trade cylinders.

The special profile and outer heads locked onto the barrel by screws ensure optimal guiding of the cylinder and multiple fixing options with a wide range of mountings. To determine the position in the relevant cylinder slots, it is possible to mount retracting magnetic limit switches.
Available also in a version having FKM/FPM gaskets (for high temperature) from Ø 20 to Ø 100.



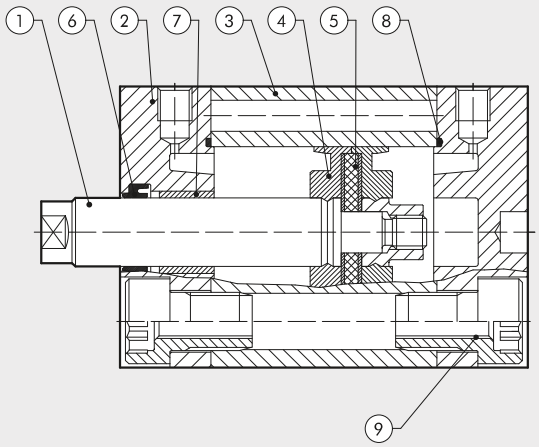
TECHNICAL DATA		POLYURETHANE	FKM/FPM
Max operating pressure	bar	10	
	MPa	1	
	psi	145	
Temperature range	°C	–10 to +80	–10 to +150 (non-magnetic cylinders)
Fluid		Unlubricated air. Lubrication, if used, must be continuous	
Bores	mm	Ø 12; 16; interchangeable with similar products	
	mm	Ø 32; 40; 50; 63; 80; 100 with ISO 15552 fixing centre distances	
	mm	Ø 20; 25; 32; 40; 50; 63; 80; 100 with NFE 49-004-1 and 2 fixing centre distances	
Design		With profile, heads with screws	
Versions		Double-acting, Single-acting extended or retracted rod, Through-rod, Through-rod perforated, Single-acting through-rod, Through-rod non-rotating, no-stick slip	
Magnet for sensors		All versions come complete with magnet. Supplied without magnet on request.	

Inrush pressure		Ø 12	Ø 16	Ø 20	Ø 25	Ø 32	Ø 40	Ø 50	Ø 63	Ø 80	Ø 100
single piston rod	bar	0.6	0.6	0.6	0.6	0.6	0.4	0.4	0.4	0.4	0.4
through-rod	bar	1	0.8	0.8	0.8	0.6	0.4	0.4	0.4	0.4	0.4

Forces generated at 6 bar thrust/retraction		See page 1-7
Weights		See page 1-8
Notes		For correct operation, it is advisable to use 50 µm filtered air
		For speeds lower than 0.2 m/s to prevent surging, use the version No stick-slip and non-lubricated air.

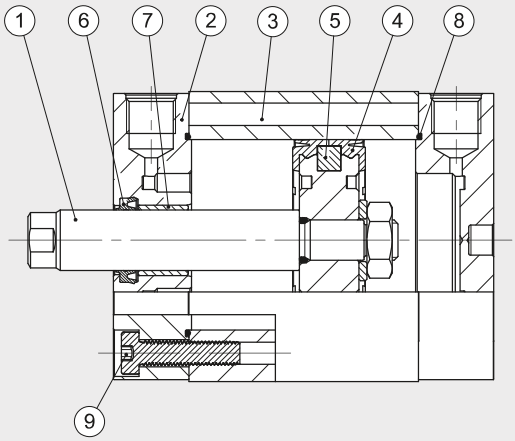
COMPONENTS Ø 12 to 25

① PISTON ROD: stainless steel, thick chromed
② HEAD: extruded anodised aluminium alloy
③ BARREL: drawn anodised and calibrated aluminium alloy
④ PISTON GASKET: polyurethane or FKM/FPM
⑤ MAGNET: neodymium-plastic
⑥ PISTON ROD GASKET: polyurethane or FKM/FPM
⑦ GUIDE BUSHING: steel strip with bronze and PTFE insert
⑧ STATIC O-RINGS: NBR or FKM/FPM
⑨ SECURING SCREWS: zinc-plated steel



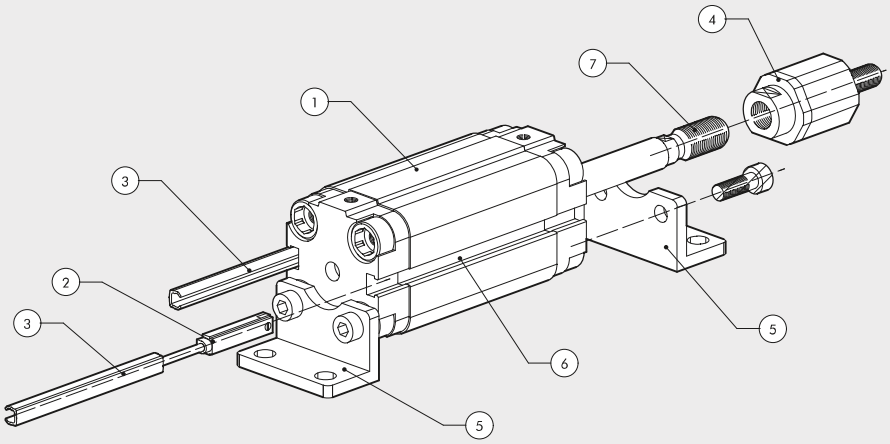
COMPONENTS Ø 32 to 100

① PISTON ROD: C45 steel or stainless steel, thick chromed
② HEAD: extruded anodised aluminium alloy
③ BARREL: drawn anodised and calibrated aluminium alloy
④ PISTON GASKET: polyurethane or FKM/FPM
⑤ MAGNET: Ø 12 to 32 neodymium-plastic
Ø 40 to 100 plastoferrite
⑥ PISTON ROD GASKET: polyurethane or FKM/FPM
⑦ GUIDE BUSHING: steel strip with bronze and PTFE insert
⑧ STATIC O-rings: NBR or FKM/FPM
⑨ SECURING SCREWS: zinc-plated steel

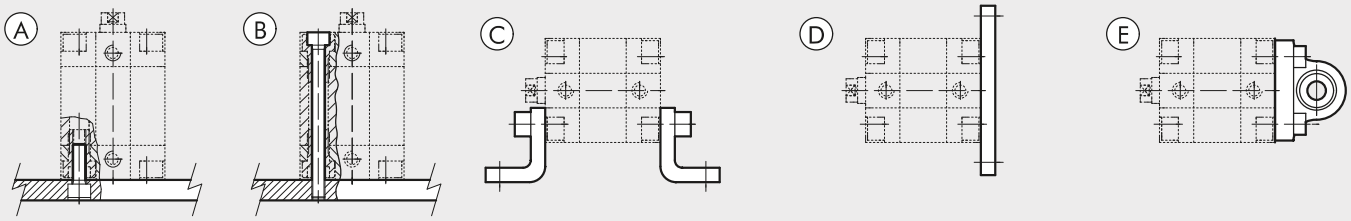


TECHNICAL DATA

① Compact cylinder available
with two separate fixing centre distances
• Ø 32 to 100 to ISO 15552
• Ø 20 to 100 to NFE 49-004-1 and 2
② Pre-wired retracting sensor
with or without connector
③ Plastic strip to keep out dirt and/or protect
the sensor wire cod. W0950000160
④ Ball-and-socket joint code W095_ _ _2030
⑤ Example of cylinder mounting
with feet code W095_ _ _6001.
All mountings come complete
with cylinder assembly screws
⑥ Sensor slot
⑦ Piston rod with male or female thread
as required



COMPACT CYLINDER FIXING OPTIONS



Ⓐ Fixing to structural work with a through screw, using the thread in the heads
Ⓑ Direct fixing from above using long through screws or tie rods. Non-magnetic stainless steel must be used (e.g. AISI 304)
Ⓒ Fixing with feet; the ordering code covers the supply of one foot and two screws for fixing to the cylinder
Ⓓ Fixing with a flange mounted on the front or rear head; the ordering code covers the supply of a flange and four screws for fixing to the cylinder
Ⓔ Fixing with articulated hinge to compensate for slight system misalignment and turn freely
The ordering code covers the supply of a hinge and four screws for fixing to the cylinder

FORCE OF SPRINGS IN SINGLE-ACTING CYLINDERS (THEORETICAL)

Bore	Ø 12	Ø 16	Ø 20	Ø 25	Ø 32	Ø 40	Ø 50	Ø 63	Ø 80	Ø 100
Min. load (N)	4.40	4.90	8.40	13.90	19.00	24.80	36.30	50.20	77.60	131.80
Max. load (N)	9.80	14.20	20.90	33.20	35.90	53.70	62.20	82.30	118.90	183.30

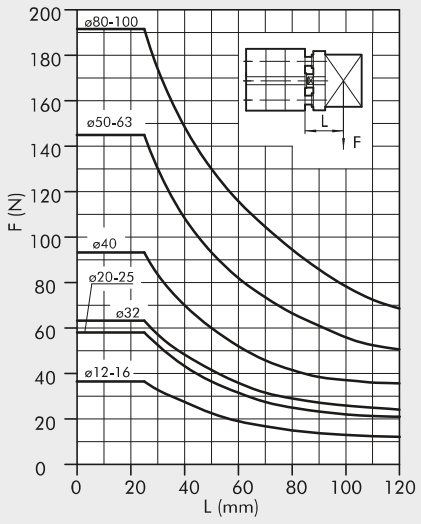
STROKES FOR COMPACT CYLINDERS

Standard stroke for single-acting cylinders	Standard stroke for other types	Max. recommended strokes for other types	Max. recommended strokes for non-rotating cylinders	Max recommended strokes for through-rod perforated
Ø 12 → 10 mm	Ø 12 to 16 → from 5 to 40 mm	Ø 12 to 25 → 200 mm	Ø 12 to 63 → 120 mm	Ø 20 to 40 → from 5 to 80 mm
Ø 16 to 100 → 25 mm	Ø 20 to 25 → from 5 to 50 mm	Ø 32 to 40 → 300 mm	Ø 80 to 100 → 150 mm	Ø 50 to 63 → from 5 to 100 mm
	Ø 32 to 100 → from 5 to 80 mm	Ø 50 to 63 → 400 mm		Ø 80 to 100 → from 5 to 160 mm
		Ø 80 to 100 → 500 mm		

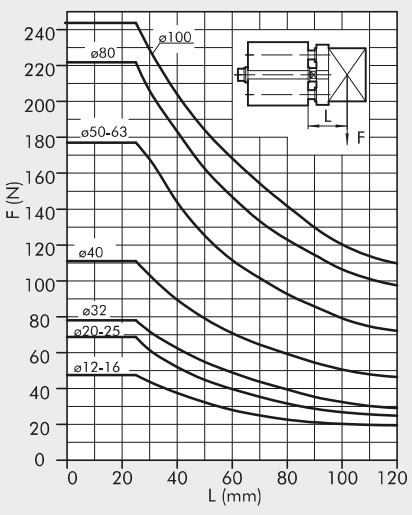
Maximum recommended strokes. Higher values can create operating problems

MAXIMUM LOADS FOR NON-ROTATING VERSION

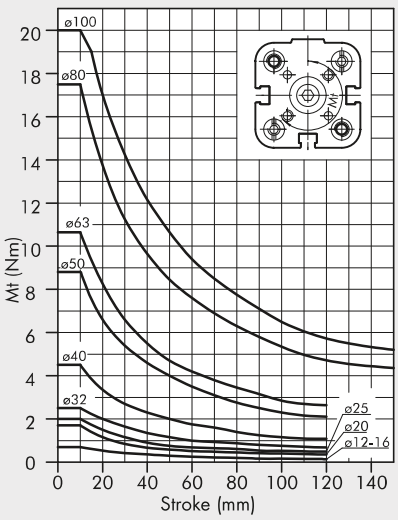
TRANSVERSAL FORCE FOR NON-ROTATING



TRANSVERSAL FORCE FOR NON-ROTATING THROUGH-ROD

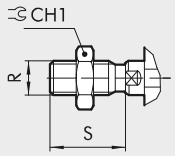


TORQUE DEPENDING ON STROKE

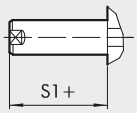


DIMENSIONS OF DOUBLE-ACTING Ø 12 to 25 AND SINGLE-ACTING Ø 12 to 25

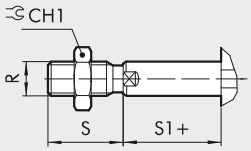
SE-DE MALE PISTON ROD



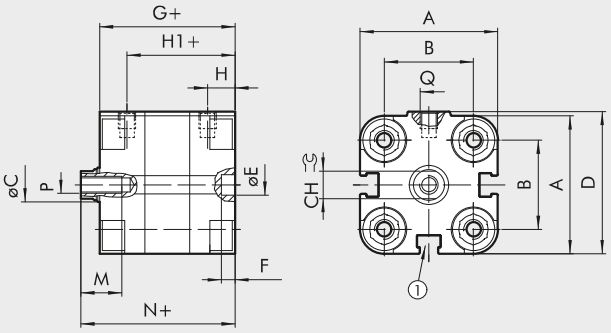
SE EXTENDED PISTON ROD

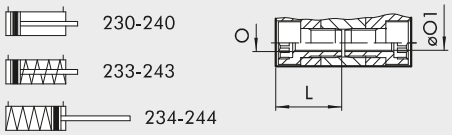


SE MALE EXTENDED PISTON ROD



+ = ADD THE STROKE
1 = SENSOR SLOT

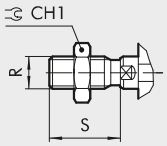




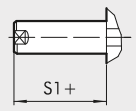
Ø	A	B	ØC	CH	CH1	D	ØE H9	F	G	H	H1	L	M	N	O	ØO1	P	Q	R	S	S1	NORM
12	29	18	6	5	10	30	6	4	38	8	30	18.5	8	42.5	M4	3.2	M3	M5	M6	16	4.5	-
16	29	18	8	7	13	30	6	4	38	8	30	18.5	10	42.5	M4	3.2	M4	M5	M8	20	4.5	-
20	36.5	22	10	8	17	37.5	6	4	38	8	30	18.5	12	42.5	M5	4.2	M5	M5	M10x1.25	22	4.5	UNITOP
25	40.5	26	10	8	17	41.5	6	4	39.5	8	31.5	19	12	45	M5	4.2	M5	M5	M10x1.25	22	5.5	UNITOP

DIMENSIONS OF DOUBLE-ACTING Ø 32 to 100 AND SINGLE-ACTING Ø 32 to 100

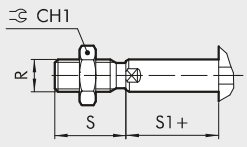
SE-DE MALE PISTON ROD



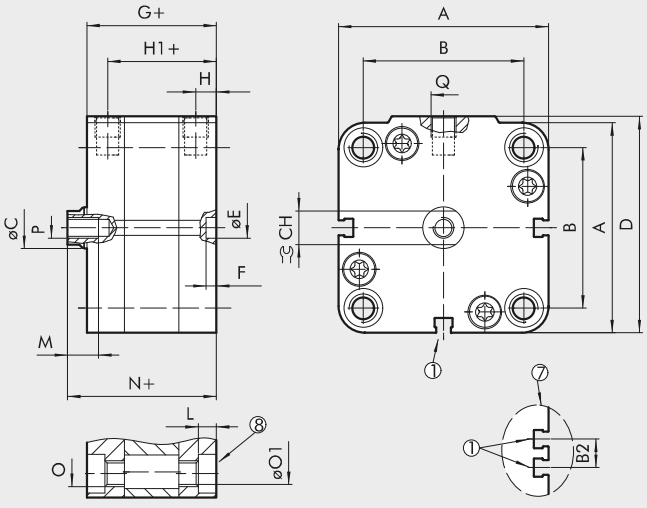
SE EXTENDED PISTON ROD

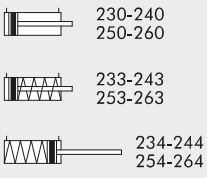


SE MALE EXTENDED PISTON ROD



+ = ADD THE STROKE
1 = SENSOR SLOT
7 = ONLY FOR Ø 63 to Ø 100
8 = SEAT FOR DIN 7984 SCREWS

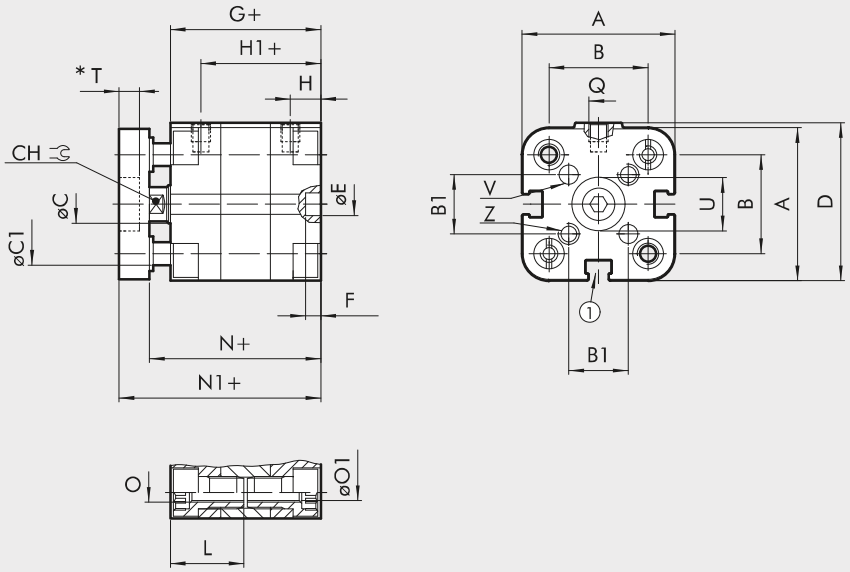




		B															O		ØO1						
Ø	**A**	**ISO**	**UNITOP**	**B2**	**ØC**	**CH**	**CH1**	**D**	**ØE H9**	**F**	**G**	**H**	**H1**	**L**	**M**	**N**	**ISO**	**UNITOP**	**ISO**	**UNITOP**	**P**	**Q**	**R**	**S**	**S1**
32	47	32.5 +0.1 -0.4	32 +0.4 -0.1	–	12	10	17	48.5	6	4	44.5	7.5	37	4	14	50.5	M6	M6	5.2	5.2	M6	G1/8	M10x1.25	22	6
40	56	38	42	–	12	10	17	57.5	6	4	45.5	7.5	38	4.5	14	52	M6	M6	5.2	5.2	M6	G1/8	M10x1.25	22	6.5
50	67	46.5	50	–	16	13	19	69	6	4	45.5	7.5	38	4.5	16	53	M8	M8	6.2	6.2	M8	G1/8	M12x1.25	24	7.5
63	80	56.5	62	13	16	13	19	82	8	4	50	7.5	42.5	5.5	16	57.5	M8	M10	6.2	8.5	M8	G1/8	M12x1.25	24	7.5
80	102	72	82	17	20	17	24	105	8	4	56	8.5	47.5	5.5	20	64	M10	M10	8.5	8.5	M10	G1/8	M16x1.5	32	8
100	123	89	103	21	25	22	30	126	8	4	66.5	10.5	56	5.5	24	76.5	M10	M10	8.5	8.5	M12	G1/4	M20x1.5	40	10

DIMENSIONS OF NON-ROTATING Ø 12 to 25

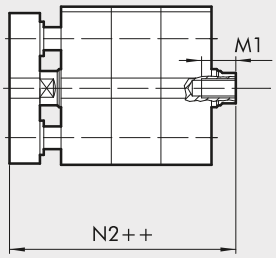
\+ = ADD THE STROKE
++ = ADD TWICE THE STROKE
* = SECTION WITH TOLERANCE
1 = SENSOR SLOT

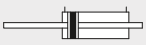




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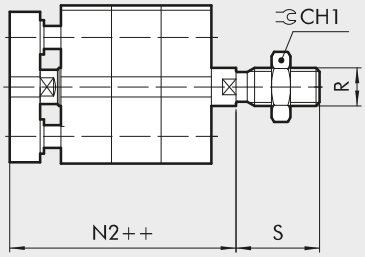
NON-ROTATING FEMALE THROUGH-ROD





24A

NON-ROTATING MALE THROUGH-ROD



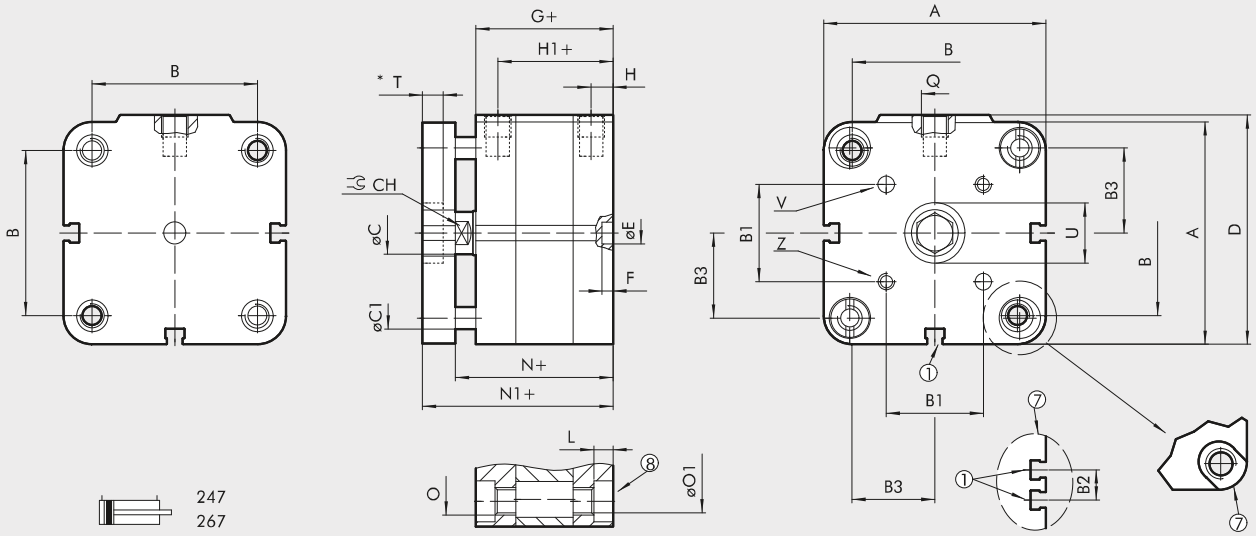


23A

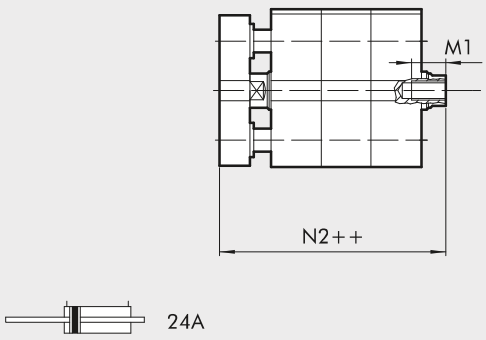
Ø	A	B	B1	ØC	ØC1	CH	CH1	D	ØE H9	F	G	H	H1	L	M1 x strokes < 5	M1 x strokes ⩾ 5	N	N1	N2	O	ØO1	P	Q	R	S	T	ØU H9	ØV H8	Z	NORM
12	29	18	9.9	6	5	5	10	30	6	4	38	8	30	18.5	5	8	42.5	48.5	53	M4	3.2	M3	M5	M6	16	2	6	3	M3	-
16	29	18	9.9	8	5	7	13	30	6	4	38	8	30	18.5	5	10	42.5	48.5	53	M4	3.2	M4	M5	M8	20	2	8	3	M3	-
20	36.5	22	12	10	6	8	17	37.5	6	4	38	8	30	18.5	7	12	42.5	50.5	55	M5	4.2	M5	M5	M10x1.25	22	3.5	10	4	M4	UNITOP
25	40.5	26	15.6	10	6	8	17	41.5	6	4	39.5	8	31.5	19	7	12	45	53	58.5	M5	4.2	M5	M5	M10x1.25	22	4	14	5	M5	UNITOP

DIMENSIONS OF NON-ROTATING Ø 32 to 100

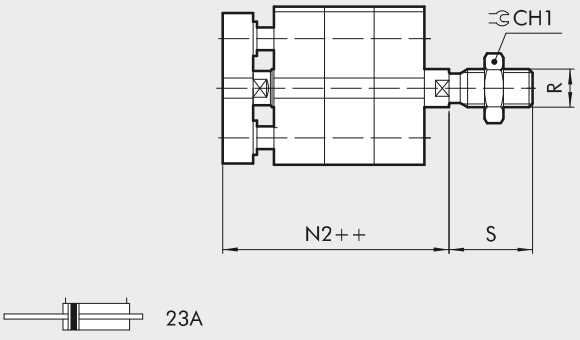
\+ = ADD THE STROKE
++ = ADD TWICE THE STROKE
* = SECTION WITH TOLERANCE
1 = SENSOR SLOT
7 = ONLY FOR Ø 63 TO Ø 100
8 = SLOT FOR DIN 7984 SCREWS



NON-ROTATING FEMALE THROUGH-ROD



NON-ROTATING MALE THROUGH-ROD

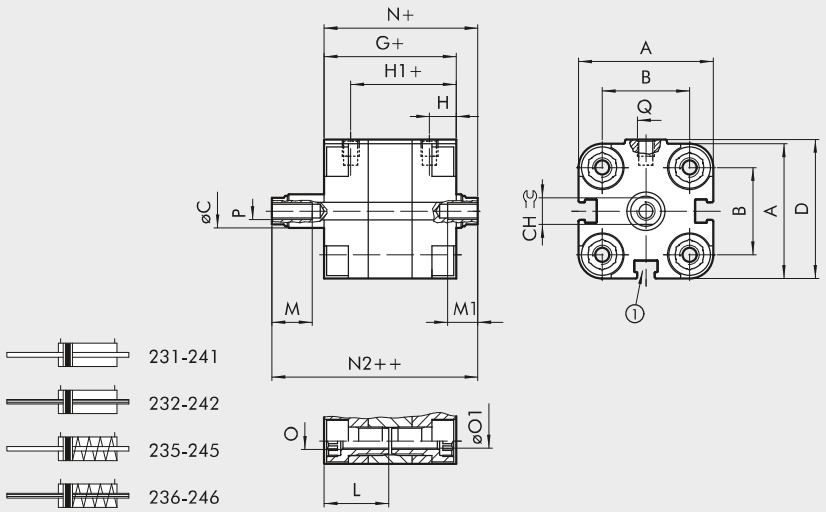


Ø	A	B ISO	B UNITOP	B1	B2	B3	ØC	ØC1	CH	CH1	D	ØE H9	F	G	H	H1	L
32	47	32.5 +0.1 -0.4	32 +0.4 -0.1	19.8	–	16.1	12	8	10	17	48.5	6	4	44.5	7.5	37	4
40	56	38	42	23.3	–	20	12	8	10	17	57.5	6	4	45.5	7.5	38	4.5
50	67	46.5	50	29.7	–	24	16	10	13	19	69	6	4	45.5	7.5	38	4.5
63	80	56.5	62	35.4	13	30	16	10	13	19	82	8	4	50	7.5	42.5	5.5
80	102	72	82	46	17	38.5	20	12	17	24	105	8	4	56	8.5	47.5	5.5
100	123	89	103	56.6	21	48	25	12	22	30	126	8	4	66.5	10.5	56	5.5

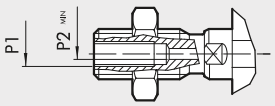
Ø	M1 x strokes < 5	M1 x strokes ⩾ 5	N	N1	N2	O ISO	O UNITOP	ØO1 ISO	ØO1 UNITOP	P	Q	R	S	T	ØU H9	ØV H8	Z
32	14	9	50.5	60.5	66.5	M6	M6	5.2	5.2	M6	G1/8	M10x1.25	22	4.5	17	5	M5
40	14	9	52	62	68.5	M6	M6	5.2	5.2	M6	G1/8	M10x1.25	22	4.5	17	5	M5
50	16	11	53	65	72.5	M8	M8	6.2	6.2	M8	G1/8	M12x1.25	24	6	22	6	M6
63	16	11	57.5	69.5	77	M8	M10	6.2	8.5	M8	G1/8	M12x1.25	24	6	22	6	M6
80	20	15	64	78	86	M10	M10	8.5	8.5	M10	G1/8	M16x1.5	32	8	28	8	M8
100	24	19	76.5	90.5	100.5	M10	M10	8.5	8.5	M12	G1/4	M20x1.5	40	9	30	10	M10

DIMENSIONS OF THROUGH-ROD Ø 12 to 25

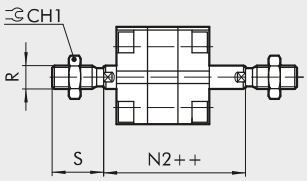
\+ = ADD THE STROKE
++ = ADD TWICE THE STROKE
1 = SENSOR SLOT



SE-DE MALE PERFORATED THROUGH-ROD



SE-DE MALE THROUGH-ROD

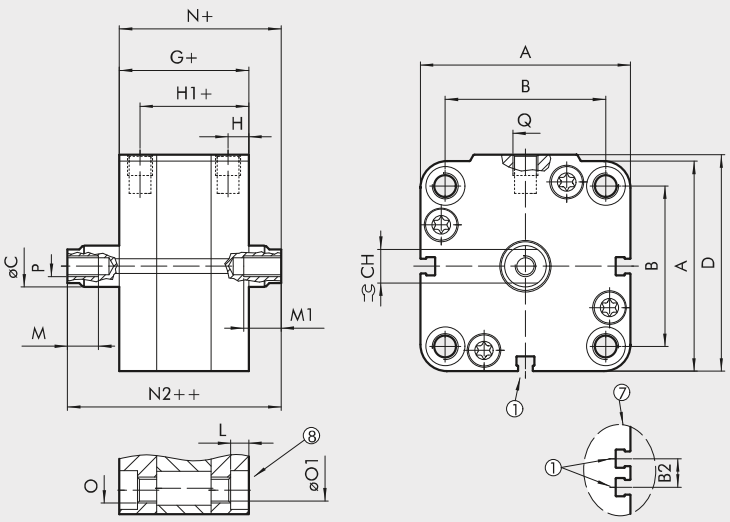


Ø	A	B	ØC	CH	CH1	D	G	H	H1	L	M	M1 x strokes < 5	M1 x strokes ⩾ 5	N	N2	O	ØO1	P	P2	Q	R	S	NORM
12	29	18	6	5	10	30	38	8	30	18.5	8	5	8	42.5	47	M4	3.2	M3	–	M5	M6	16	-
16	29	18	8	7	13	30	38	8	30	18.5	10	5	10	42.5	47	M4	3.2	M4	–	M5	M8	20	-
20	36.5	22	10	8	17	37.5	38	8	30	18.5	12	7	12	42.5	47	M5	4.2	M5	1.5	M5	M10x1.25	22	UNITOP
25	40.5	26	10	8	17	41.5	39.5	8	31.5	19	12	7	12	45	50.5	M5	4.2	M5	1.5	M5	M10x1.25	22	UNITOP

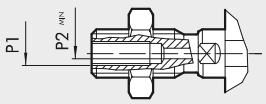
DIMENSIONS OF THROUGH-ROD Ø 32 to 100

\+ = ADD THE STROKE
++ = ADD TWICE THE STROKE

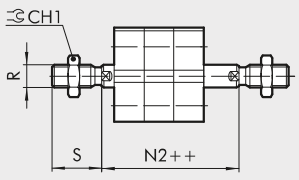
1 = SENSOR SLOT
7 = ONLY FOR Ø 63 TO Ø 100
8 = SLOT FOR DIN 7984 SCREWS

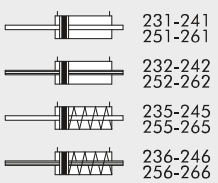


SE-DE MALE PERFORATED THROUGH-ROD



SE-DE MALE THROUGH-ROD





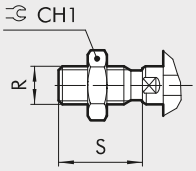
Ø	A	B ISO	B UNITOP	B2	ØC	CH	CH1	D	G	H	H1	L	M	M1 x strokes < 5	M1 x strokes ⩾ 5	N	N2	O ISO	O UNITOP	ØO1 ISO	ØO1 UNITOP	P	P1	P2	Q	R	S
32	47	32.5 $^{+0.1}_{-0.4}$	32 $^{+0.4}_{-0.1}$	–	12	10	17	48.5	44.5	7.5	37	4	14	14	9	50.5	56.5	M6	M6	5.2	5.2	M6	–	2.5	G1/8	M10x1.25	22
40	56	38	42	–	12	10	17	57.5	45.5	7.5	38	4.5	14	14	9	52	58.5	M6	M6	5.2	5.2	M6	–	2.5	G1/8	M10x1.25	22
50	67	46.5	50	–	16	13	19	69	45.5	7.5	38	4.5	16	16	11	53	60.5	M8	M8	6.2	6.2	M8	–	4	G1/8	M12x1.25	24
63	80	56.5	62	13	16	13	19	82	50	7.5	42	5.5	16	16	11	57.5	65	M8	M10	6.2	8.5	M8	–	4	G1/8	M12x1.25	24
80	102	72	82	17	20	17	24	105	56	8.5	47.5	5.5	20	20	15	64	72	M10	M10	8.5	8.5	M10	1/8	5	G1/8	M16x1.5	32
100	123	89	103	21	25	22	30	126	66.5	10.5	56	5.5	24	24	19	76.5	86.5	M10	M10	8.5	8.5	M12	1/4	6	G1/4	M20x1.5	40

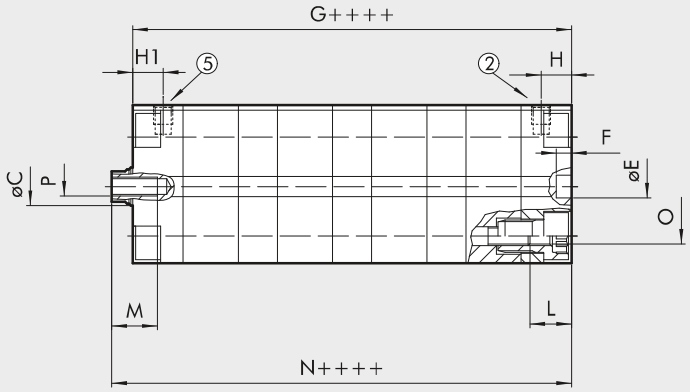
DIMENSIONS OF TANDEM Ø 20 to 25 - 4-STAGES

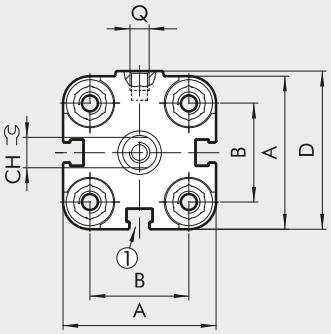
++ = ADD TWICE THE STROKE
+++ = ADD THREE TIMES THE STROKE
++++ = ADD FOUR TIMES THE STROKE

1 = SENSOR SLOT
2 = CYLINDERS OUT
5 = CYLINDERS IN

MALE PISTON ROD



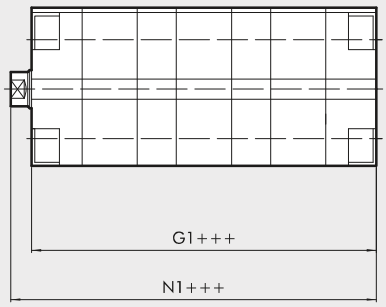






230-240

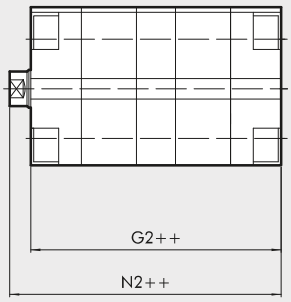
TANDEM 3 STAGES





230-240

TANDEM 2 STAGES





230-240

Ø	A	B	ØC	CH	CH1	D	ØE H9	F	G	G1	G2	H	H1	L	M	N	N1	N2	O	P	Q	R	S	NORM
20	36.5	22	10	8	17	37.5	6	4	114.5	89	63.5	8	8	10	12	119	93.5	68	M5	M5	M5	M10x1.25	22	UNITOP
25	40.5	26	10	8	17	41.5	6	4	118	92	66	8	8	10	12	123.5	97.5	71.5	M5	M5	M5	M10x1.25	22	UNITOP

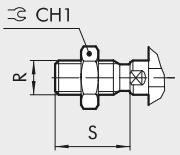
DIMENSIONS OF TANDEM Ø 32 to 100 - 4-STAGES

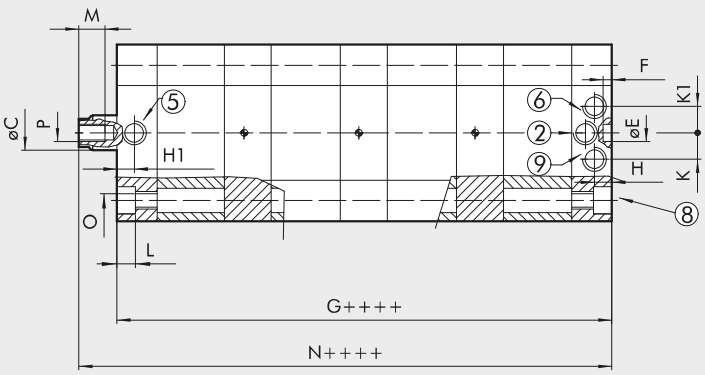
++ = ADD TWICE THE STROKE
+++ = ADD THREE TIMES THE STROKE
++++ = ADD FOUR TIMES THE STROKE

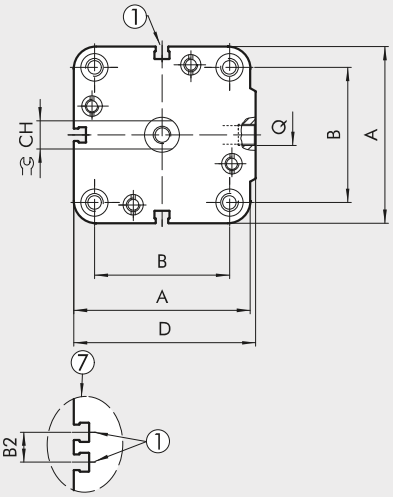
2 = CYLINDERS OUT FOR Ø 32 to 63
5 = CYLINDERS IN FOR Ø 32 to 63
6 = CYLINDERS IN FOR Ø 80; 100
9 = CYLINDERS OUT FOR Ø 80; 100

1 = SENSOR SLOT
7 = ONLY FOR Ø 63 to 100
8 = SLOT FOR DIN 7984 SCREWS

MALE PISTON ROD



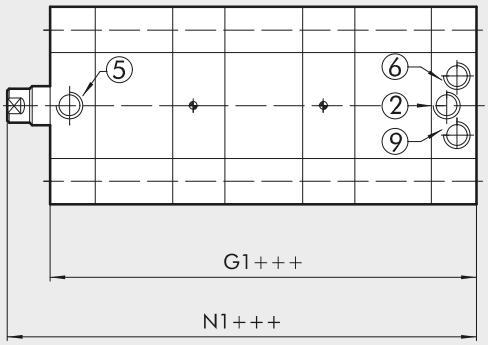






230-240
250-260

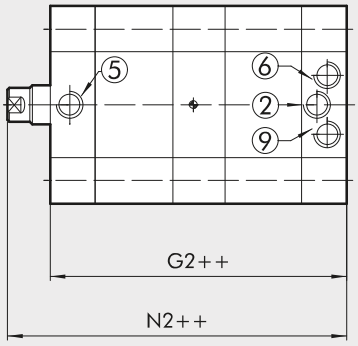
TANDEM 3-STAGES





230-240
250-260

TANDEM 2-STAGES





230-240
250-260

Ø	A	B ISO	B UNITOP	B2	ØC	CH	CH1	D	ØE H9	F	G	G1	G2	H	H1	K	K1
32	47	32.5 +0.1 -0.4	32 +0.4 -0.1	–	12	10	17	48.5	6	4	154	117.5	81	7.5	7.5	–	–
40	56	38	42	–	12	10	17	57.5	6	4	162.5	123.5	84.5	7.5	7.5	–	–
50	67	46.5	50	–	16	13	19	69	6	4	163.5	124	85	7.5	7.5	–	–
63	80	56.5	62	13	16	13	19	82	8	4	182	138	94	7.5	7.5	–	–
80	102	72	82	17	20	17	24	105	8	4	204.5	155	105.5	8.5	–	10.5	10.5
100	123	89	103	21	25	22	30	126	8	4	243	184	125.5	10.5	–	14.5	14.5

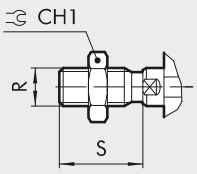
Ø	L	M	N	N1	N2	O ISO	O UNITOP	P	Q	R	S
32	4	14	160	123.5	87	M6	M6	M6	G1/8	M10x1.25	22
40	4.5	14	169	130	91	M6	M6	M6	G1/8	M10x1.25	22
50	4.5	16	171	131.5	92.5	M8	M8	M8	G1/8	M12x1.25	24
63	5.5	16	189.5	145.5	101.5	M8	M10	M8	G1/8	M12x1.25	24
80	5.5	20	212.5	163	113.5	M10	M10	M10	G1/8	M16x1.5	32
100	5.5	24	253	194	135.5	M10	M10	M12	G1/4	M20x1.5	40

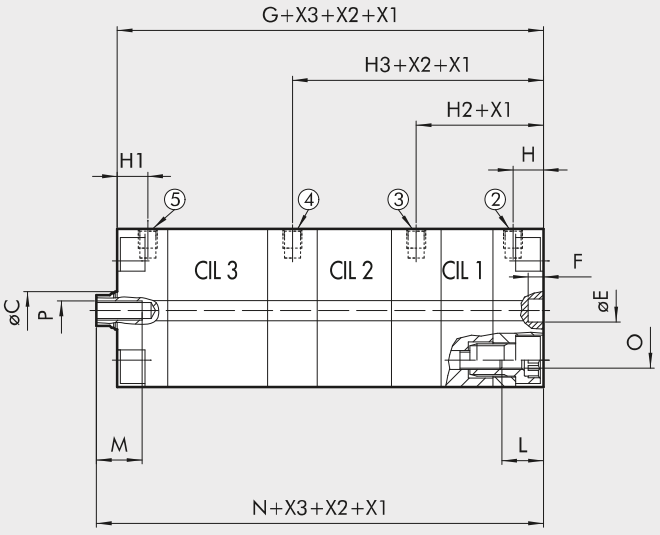
DIMENSIONS OF MULTI-POSITION Ø 12 to 25 - 3-STAGES

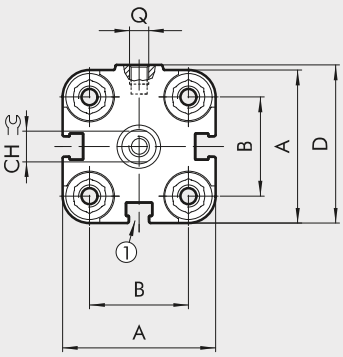
1 = SENSOR SLOT
2 = CYLINDER 1 OUT
3 = CYLINDER 2 OUT
4 = CYLINDER 3 OUT
5 = CYLINDERS 1-2-3 IN

X1 = CYLINDER 1 STROKE
X2 = CYLINDER 2 STROKE
X3 = CYLINDER 3 STROKE

MALE PISTON ROD







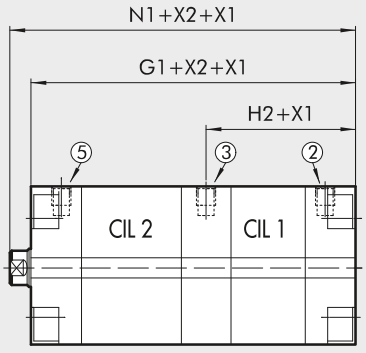


230-240

MULTI-POSITION 2-STAGES

2 = CYLINDER 1 OUT
3 = CYLINDER 2 OUT
5 = CYLINDERS 1-2 IN

X1 = CYLINDER 1 STROKE
X2 = CYLINDER 2 STROKE





230-240

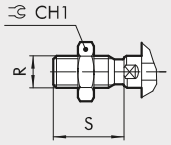
Ø	A	B	ØC	CH	CH1	D	ØE H9	F	G	G1	H	H1	H2	H3	L	M	N	N1	O	P	Q	R	S	NORM
12	29	18	6	5	10	30	6	4	89	63.5	8	8	33.5	59	10	8	93.5	68	M4	M3	M5	M6	16	-
16	29	18	8	7	13	30	6	4	89	63.5	8	8	33.5	59	10	10	93.5	68	M4	M4	M5	M8	20	-
20	36.5	22	10	8	17	37.5	6	4	89	63.5	8	8	33.5	59	10	12	93.5	68	M5	M5	M5	M10x1.25	22	UNITOP
25	40.5	26	10	8	17	41.5	6	4	92	66	8	8	34	60	10	12	97.5	71.5	M5	M5	M5	M10x1.25	22	UNITOP

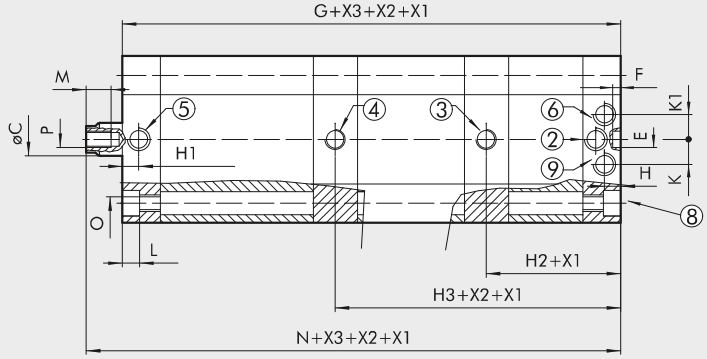
DIMENSIONS OF MULTI-POSITION Ø 32 to 100 - 3-STAGES

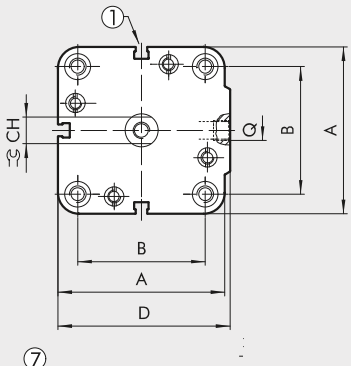
1 = SENSOR SLOT
2 = CYLINDER 1 OUT FOR Ø 32 to 63
3 = CYLINDER 2 OUT FOR Ø 32 to 100
4 = CYLINDER 3 OUT FOR Ø 32 to 100
5 = CYLINDER 1-2-3 IN FOR Ø 32 to 63
6 = CYLINDER 1-2-3 IN FOR Ø 80 to 100
7 = ONLY FOR Ø 63 to 100
8 = SLOT FOR DIN 7984 SCREWS
9 = CYLINDER 1 OUT FOR Ø 80 to 100

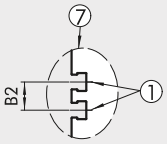
X1 = CYLINDER 1 STROKE
X2 = CYLINDER 2 STROKE
X3 = CYLINDER 3 STROKE

MALE PISTON ROD









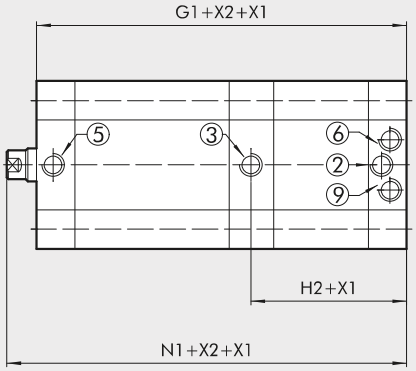


230-240
250-260

MULTI-POSITION 2-STAGES

2 = CYLINDER 1 OUT FOR Ø 32 to 63
3 = CYLINDER 2 OUT FOR Ø 32 to 100
5 = CYLINDER 1-2 IN FOR Ø 32 to 63
6 = CYLINDER 1-2 IN FOR Ø 80 to 100
9 = CYLINDER 1 OUT FOR Ø 80 to 100

X1 = CYLINDER 1 STROKE
X2 = CYLINDER 2 STROKE





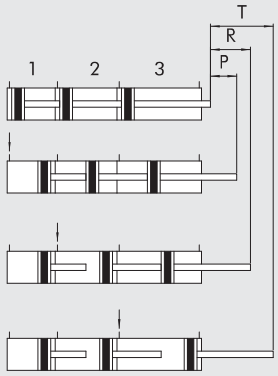
230-240
250-260

Ø	A	B ISO	B UNITOP	B2	ØC	CH	CH1	D	ØE H9	F	G	G1	H	H1	H2	H3
32	47	32.5 +0.1 -0.4	32 +0.4 -0.1	–	12	10	17	48.5	6	4	117.5	81	7.5	7.5	44	80.5
40	56	38	42	–	12	10	17	57.5	6	4	123.5	84.5	7.5	7.5	46.5	85.5
50	67	46.5	50	–	16	13	19	69	6	4	124	85	7.5	7.5	47	86
63	80	56.5	62	13	16	13	19	82	8	4	138	94	7.5	7.5	51.5	95.5
80	102	72	82	17	20	17	24	105	8	4	155	105.5	8.5	–	58	107.5
100	123	89	103	21	25	22	30	126	8	4	184	125.5	10.5	–	69.3	128

Ø	K	K1	L	M	N	N1	O ISO	O UNITOP	P	Q	R	S
32	–	–	4	14	123.5	87	M6	M6	M6	G1/8	M10x1.25	22
40	–	–	4.5	14	130	91	M6	M6	M6	G1/8	M10x1.25	22
50	–	–	4.5	16	131.5	92.5	M8	M8	M8	G1/8	M12x1.25	24
63	–	–	5.5	16	145.5	101.5	M8	M10	M8	G1/8	M12x1.25	24
80	10.5	10.5	5.5	20	163	113.5	M10	M10	M10	G1/8	M16x1.5	32
100	14.5	14.5	5.5	24	194	135.5	M10	M10	M12	G1/4	M20x1.5	40

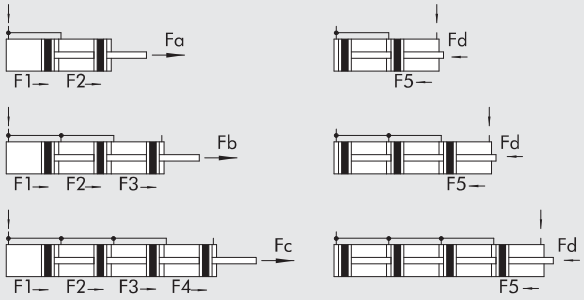
FUNCTIONAL DIAGRAMS

MULTI-POSITION



1 = STAGE 1
2 = STAGE 2
3 = STAGE 3

TANDEM



LEGENDA

P = Stage 1 stroke
R = Stage 2 stroke
T = Stage 3 stroke

Fa = F1+F2 [N]
Fb = F1+F2+F3 [N]
Fc = F1+F2+F3+F4 [N]
Fd = F5 [N]

KEY TO CODE

CYL	23 TYPE	1	0	25 BORE	O	050 STROKE **	X MATERIAL	P GASKETS
	23 Compact cylinder centre distances to UNITOP male piston rod **24** Compact cylinder centre distances to UNITOP female piston rod ■ **25** Compact cylinder centre distances to ISO male piston rod ■ **26** Compact cylinder centre distances to ISO female piston rod	**0** Double-acting **1** Double-acting through-rod ✚ **2** Double-acting through-rod perforated ● **3** Single-acting retracting piston rod ● **4** Single-acting extended piston rod ● **5** Single-acting through-rod ●✚ **6** Single-acting through-rod piston rod perforated ▼ **7** Double-acting non-rotating **A** Double-acting through-rod non-rotating	**0** Magnetic □ **S** Non-magnetic ▲ **G** No stick slip	12 16 20 25 32 40 50 63 80 ◆ 100	**0** Standard ✚ **A** 2-stage tandem ✚ **B** 3-stage tandem ✚ **C** 4-stage tandem **MULTI-POSITION** ●● **P** Stage 1 ●● **R** Stage 2 ●● **T** Stage 3		✱ **C** C45 piston rod chromium-plated ▷ **X** Stainless steel piston rod and nut ◁ **A** C45 chromed rod, aluminium piston ○ **Z** Stainless steel piston rod and nut aluminium piston	**P** Polyurethane gaskets ▶✚ **V** FKM/FPM gaskets

** For the maximum suppliabe stroke, see page 1-80.

◆ In the code of cylinder with letter in fourth position Ø 100 becomes A1
■ Codes only for cylinders Ø 32 to100
● Can also be used as double-acting with spring return
✚ Available from Ø 20
▼ For versions 24 and 26 only (female piston rod)
▲ For Ø 12 to 25 the standard version (0 or S) it's already no stick slip
For Ø 20 to 100 version with gaskets in FKM / FPM (0 or S) is already "no sick slip"
For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only
▶ Only for standard double acting and standard through rod double acting version (for Ø20 and Ø25 only "non-magnetic" version provided)
□ Compulsory for Ø 20 and Ø 25 version Z
✱ Only for Ø 32 to 63 P version (Polyurethane gaskets)
▷ Only for Ø 12 to 63 P version (Polyurethane gaskets)
◁ Only for Ø 32 to 100 V version (FKM/FPM gaskets)
○ Only for Ø 20 to 100 V version (FKM/FPM gaskets)

●● The ordering codes for a Multi-position cylinder is a combination of several codes, each describing a stage.

Coding example for a UNITOP multiposition cylinder
2 stages Ø 20 strokes 40 + 10 (total stroke 50 mm) male rod:
1° STADIO (P) : 230020P040XP +
2° STADIO (R): 230020R050XP

Coding example for a UNITOP multiposition cylinder
3 stages Ø 20 strokes 15 + 30 + 40 (total stroke 85 mm) male rod:
1° STADIO (P): 230025P015XP +
2° STADIO (R): 230025R045XP +
3° STADIO (T): 230025T085XP