

COMPACT CYLINDER 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.

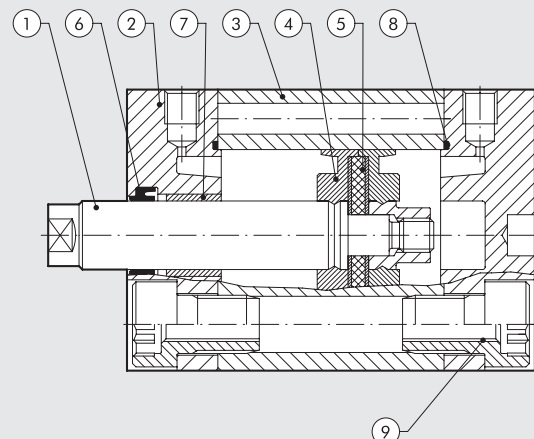
The special profile and outer heads locked onto the barrel by screws ensure optimal guiding of the cylinder and multiple fixing options with a wide range of mountings. To determine the position in the relevant cylinder slots, it is possible to mount retracting magnetic limit switches. Available also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



TECHNICAL DATA		Ø12	Ø16	Ø20	Ø25	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
Max operating pressure	bar	10									
	MPa	1									
	psi	145									
Temperature range	POLYURETHANE °C	-10 to +80									
	FKM/FPM °C	-10 to +150 (non-magnetic cylinders)									
Design		With profile, heads with screws									
Fixing centre distances	ISO 15552	*	*	-	-	x	x	x	x	x	x
	NFE 49-004-1 e 2 (UNITOP)	*	*	x	x	x	x	x	x	x	x
Fluid		Unlubricated air. Lubrication, if used, must be continuous									
Versions		Double-acting, Double-acting through-rod, Single-acting extended or retracted rod, Single-acting through-rod, Single-acting through piston rod perforated, Double-acting through-rod perforated, Double-acting non-rotating, Double-acting through-rod non-rotating, No stick-slip.									
		All versions are available with male or female piston rod.									
		Available magnetic and non-magnetic versions.									
Sensor magnet		Available magnetic and non-magnetic versions.									
Inrush pressure	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 cylinder "General technical data" at the beginning of the chapter									
Weights		See cylinder "General technical data" at the beginning of the chapter									
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.									
		* Interchangeable with similar products.									

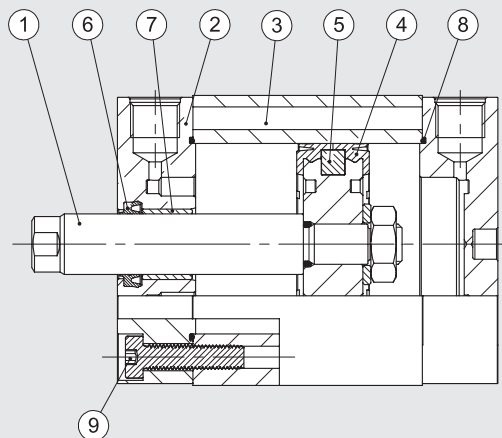
COMPONENTS Ø 12 to 25

- PISTON ROD: stainless steel, thick chromed
- HEAD: extruded anodized aluminium alloy
- BARREL: drawn anodized and calibrated aluminium alloy
- PISTON GASKET: polyurethane or FKM/FPM
- MAGNET: neodymium-plastic
- PISTON ROD GASKET: polyurethane or FKM/FPM
- GUIDE BUSHING: steel strip with bronze and PTFE insert
- STATIC O-RINGS: NBR or FKM/FPM
- SECURING SCREWS: zinc-plated steel



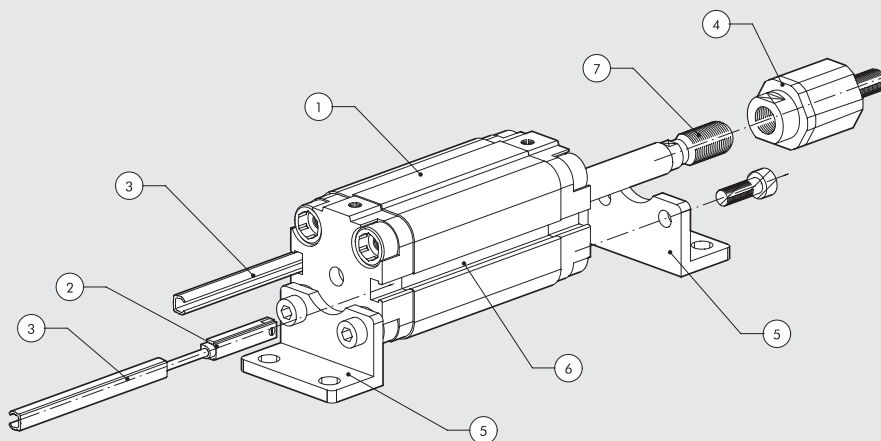
COMPONENTS Ø 32 to 100

- ① PISTON ROD: C45 steel or stainless steel, thick chromed
- ② HEAD: extruded anodized aluminium alloy
- ③ BARREL: drawn anodized 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

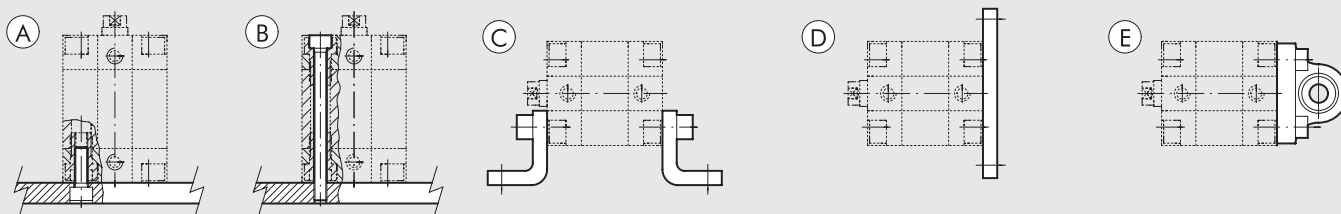


TECHNICAL DATA

- 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



- (A) Fixing to structural work with a through screw, using the thread in the heads
- (B) Direct fixing from above using long through screws or tie rods. Non-magnetic stainless steel must be used (e.g. AISI 304)
- (C) Fixing with feet; the ordering code covers the supply of one foot and two screws for fixing to the cylinder
- (D) 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
- (E) 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

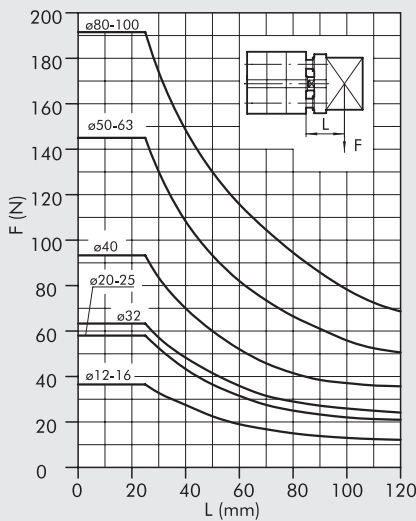
STROKES FOR COMPACT CYLINDERS

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 → from 5 to 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 → from 5 to 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		

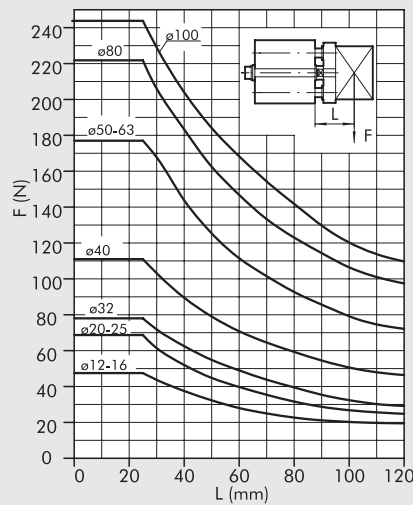
Maximum recommended strokes. Higher values can create operating problems

MAXIMUM LOADS FOR NON-ROTATING VERSION

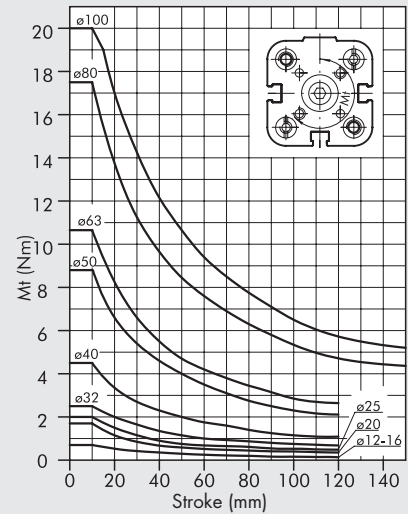
TRANSVERSAL FORCE FOR NON-ROTATING



TRANSVERSAL FORCE FOR NON-ROTATING THROUGH-ROD

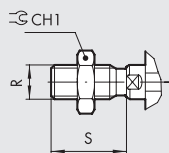


TORQUE DEPENDING ON STROKE



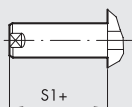
DIMENSIONS OF DOUBLE-ACTING Ø 12 to 25 AND SINGLE-ACTING Ø 12 to 25

SE-DE MALE PISTON ROD

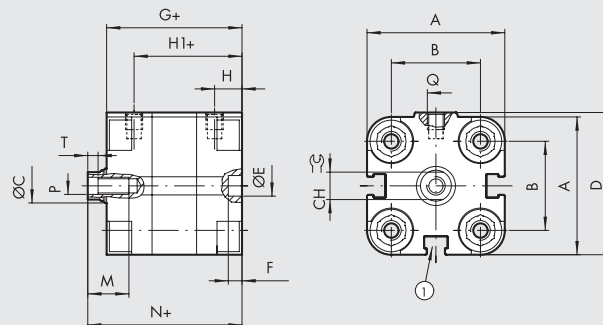
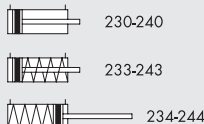
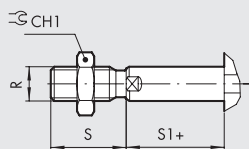


+ = ADD THE STROKE
1 = SENSOR SLOT

SE EXTENDED PISTON ROD



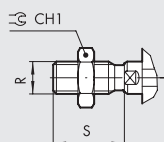
SE MALE EXTENDED PISTON ROD



Ø	A	B	ØC	CH	CH1	D	ØE ^{H9}	F	G	H	H1	L	M	N	O	ØO1	P	Q	R	S	S1	T	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	2	-
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	2	-
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	2	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	2	UNITOP

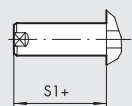
DIMENSIONS OF DOUBLE-ACTING Ø 32 to 100 AND SINGLE-ACTING Ø 32 to 100

SE-DE MALE PISTON ROD

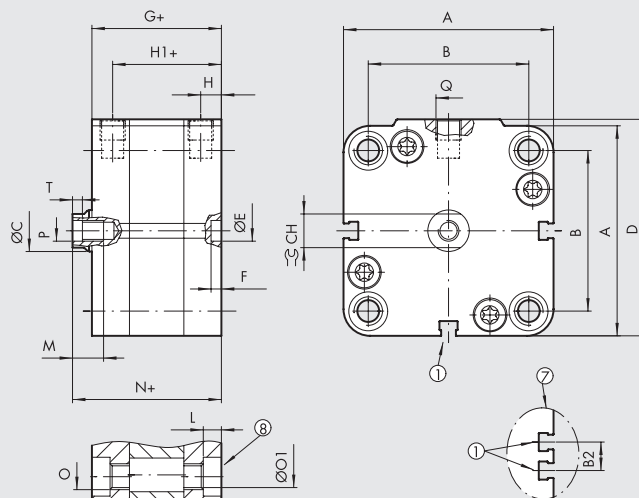
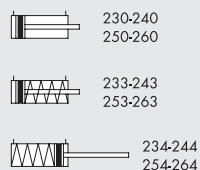
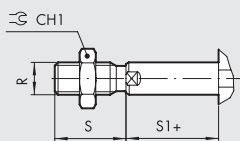


+ = ADD THE STROKE
1 = SENSOR SLOT
7 = ONLY FOR Ø 63 to Ø 100
8 = SEAT FOR DIN 7984 SCREWS

SE EXTENDED PISTON ROD



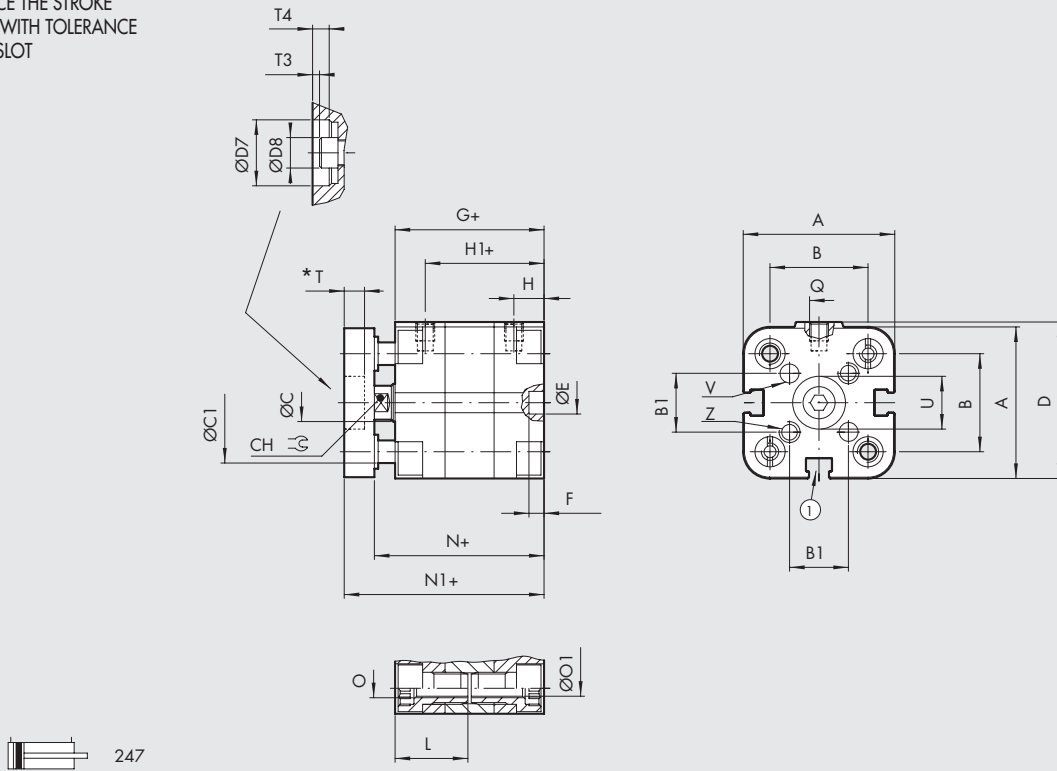
SE MALE EXTENDED PISTON ROD



Ø	A	B		ØC	CH	CH1	D	ØE ^{H9}	F	G	H	H1	L	M	N	O		ØO1		Q	R	S	S1	T		
		ISO	UNITOP													ISO	UNITOP	P								
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	2.5
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	2.5
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	3.5
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	3.5
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	4
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	5

DIMENSIONS OF NON-ROTATING Ø 12 to 25

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

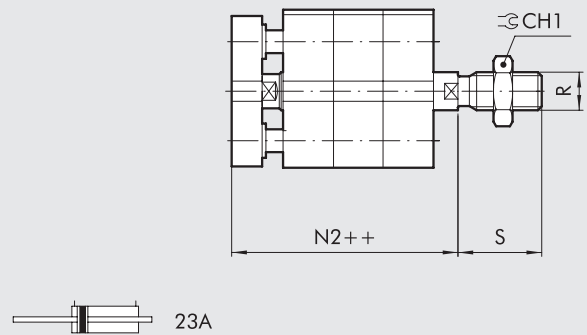
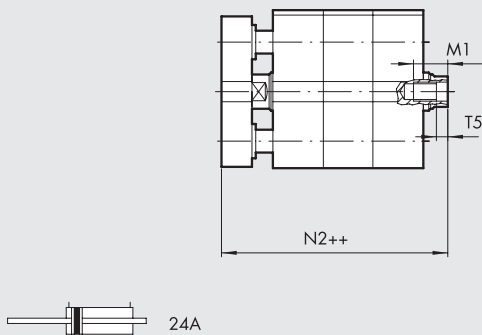


ACTUATORS

COMPACT CYLINDER – SERIES CMPC

NON-ROTATING FEMALE THROUGH-ROD

NON-ROTATING MALE THROUGH-ROD

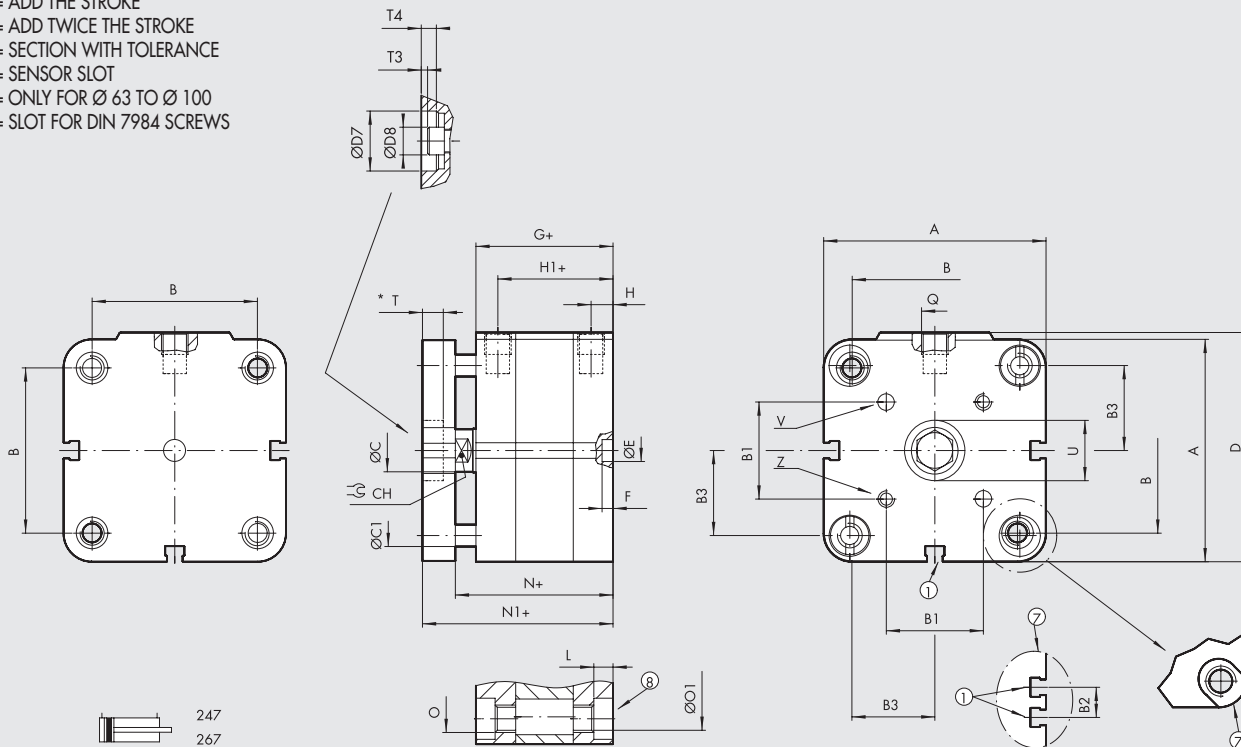


Ø	A	B	B1	ØC	ØC1	CH	CH1	D	ØD7 ^{H9}	ØD8	ØE ^{H9}	F	G	H	H1	L	M1 x strokes		N	N1	N2	O	Ø01	P	Q	R	S	T
																	< 5	≥ 5										
12	29	18	9.9	6	5	5	10	30	6	5.5	6	4	38	8	30	18.5	5	8	42.5	48.5	53	M4	3.2	M3	M5	M6	16	2
16	29	18	9.9	8	5	7	13	30	8	7	6	4	38	8	30	18.5	5	10	42.5	48.5	53	M4	3.2	M4	M5	M8	20	2
20	36.5	22	12	10	6	8	17	37.5	10	8.5	6	4	38	8	30	18.5	7	12	42.5	50.5	55	M5	4.2	M5	M5	M10x1.25	22	3.5
25	40.5	26	15.6	10	6	8	17	41.5	14	8.5	6	4	39.5	8	31.5	19	7	12	45	53	58.5	M5	4.2	M5	M5	M10x1.25	22	4

Ø	T3	T4	T5	ØU ^{H9}	ØV ^{H8}	Z	NORM
12	1	2	2	6	3	M3	-
16	0.5	2	2	8	3	M3	-
20	1.7	3.5	2	10	4	M4	UNITOP
25	2.2	4	2	14	5	M5	UNITOP

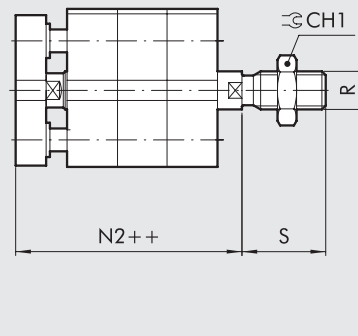
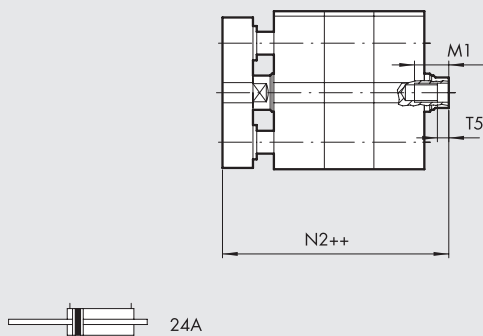
DIMENSIONS OF NON-ROTATING Ø 32 to 100

- + = 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

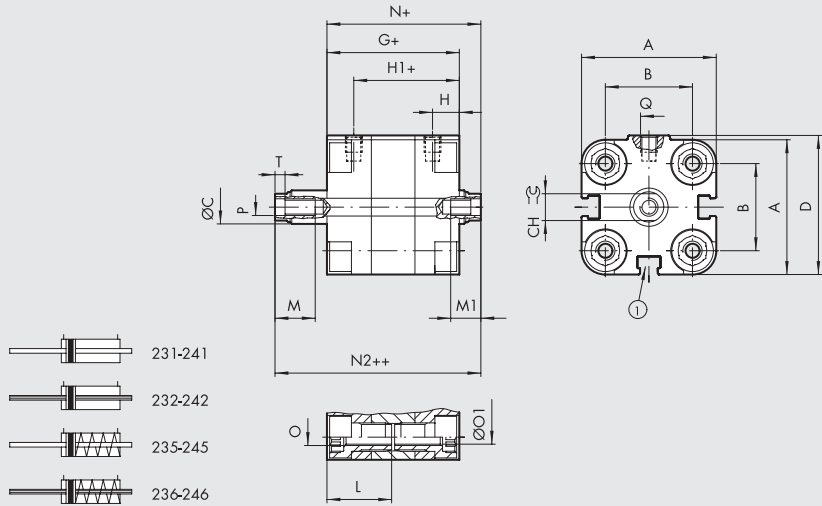


Ø	A		B		B1	B2	B3	ØC	ØC1	CH	CH1	D	ØD7 ^{HP}	ØD8	ØE ^{HP}	F	G	H	H1	L
	ISO	UNITOP	ISO	UNITOP																
32	47	32.5 ^{+0.1} _{-0.4}	32 ^{+0.4} _{-0.1}	19.8	-	16.1	12	8	10	17	48.5	17	11.5	6	4	44.5	7.5	37	4	
40	56	38	42	23.3	-	20	12	8	10	17	57.5	17	11.5	6	4	45.5	7.5	38	4.5	
50	67	46.5	50	29.7	-	24	16	10	13	19	69	22	15	6	4	45.5	7.5	38	4.5	
63	80	56.5	62	35.4	13	30	16	10	13	19	82	22	15	8	4	50	7.5	42.5	5.5	
80	102	72	82	46	17	38.5	20	12	17	24	105	28	18.5	8	4	56	8.5	47.5	5.5	
100	123	89	103	56.6	21	48	25	12	22	30	126	30	21	8	4	66.5	10.5	56	5.5	

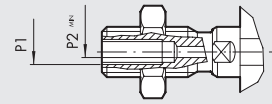
Ø	M1 x strokes		N			O		Ø1			P	Q	R	S	T	T3	T4	T5	ØU ^{HP}	ØV ^{H8}	Z
	< 5	≥ 5	N	N1	N2	ISO	UNITOP	ISO	UNITOP												
32	14	9	50.5	60.5	66.5	M6	M6	5.2	5.2	M6	G1/8	M10x1.25	22	4.5	1	4.5	2.5	17	5	M5	
40	14	9	52	62	68.5	M6	M6	5.2	5.2	M6	G1/8	M10x1.25	22	4.5	1	4.5	2.5	17	5	M5	
50	16	11	53	65	72.5	M8	M8	6.2	6.2	M8	G1/8	M12x1.25	24	6	1	6	3.5	22	6	M6	
63	16	11	57.5	69.5	77	M8	M10	6.2	8.5	M8	G1/8	M12x1.25	24	6	1	6	3.5	22	6	M6	
80	20	15	64	78	86	M10	M10	8.5	8.5	M10	G1/8	M16x1.5	32	8	1	8	4	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	-	8.5	5	30	10	M10	

DIMENSIONS OF THROUGH-ROD Ø 12 to 25

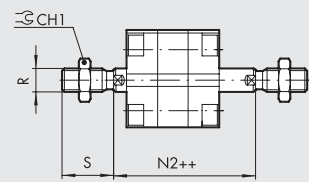
+ = ADD THE STROKE
 ++ = ADD TWICE THE STROKE
 1 = SENSOR SLOT



SE-DE MALE PERFORATED THROUGH-ROD



SE-DE MALE THROUGH-ROD

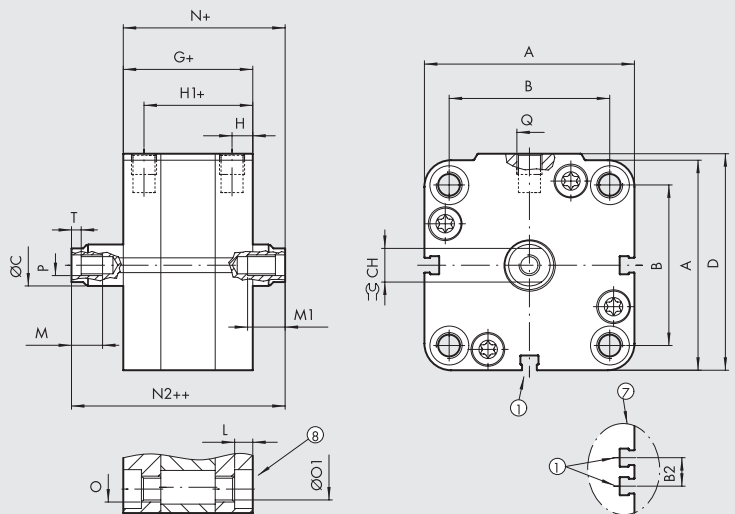


Ø	A	B	ØC	CH	CH1	D	G	H	H1	L	M	M1 x strokes		N	N2	O	ØO1	P	P2	Q	R	S	T	NORM
												< 5	≥ 5											
12	29	18	6	5	10	30	38	8	30	18.5	8	5	8	42.5	47	M4	3.2	M3	-	M5	M6	16	2	-
16	29	18	8	7	13	30	38	8	30	18.5	10	5	10	42.5	47	M4	3.2	M4	-	M5	M8	20	2	-
20	36.5	22	10	8	17	37.5	38	8	30	18.5	12	7	12	42.5	47	M5	4.2	M5	1.5	M5	M10x1.25	22	2	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	2	UNITOP

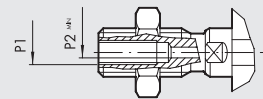
DIMENSIONS OF THROUGH-ROD Ø 32 to 100

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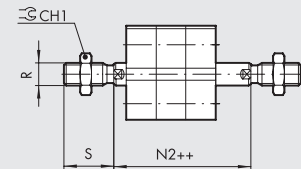
1 = SENSOR SLOT
 7 = ONLY FOR Ø 63 TO Ø 100
 8 = SLOT FOR DIN 7984 SCREWS



SE-DE MALE PERFORATED THROUGH-ROD



SE-DE MALE THROUGH-ROD



- 231-241
251-261
- 232-242
252-262
- 235-245
255-265
- 236-246
256-266

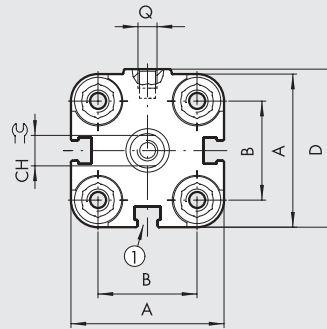
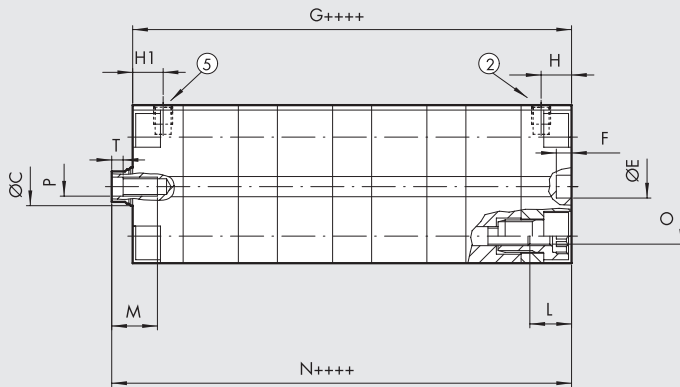
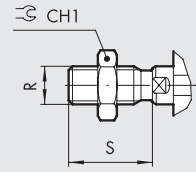
Ø	A	B		ØC	CH	CH1	D	G	H	H1	L	M	M1 x strokes		N	N2	O		ØO1		P	P1	P2	Q	R	S	T	
		ISO	UNITOP										B2	< 5			≥ 5	ISO	UNITOP	ISO								UNITOP
32	47	32.5 ^{+0.1} _{-0.4}	32 ^{+0.4} _{-0.1}	-	12	10	17	48.5	44.5	7.5	37	4	14	14	9	50.5	56.5	M6	M6	5.2	5.2	M6	-	2.5	G1/8	M10x1.25	22	2.5
40	56	38	42	-	12	10	17	57.5	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	2.5
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	3.5
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	3.5
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	4
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	5

DIMENSIONS OF TANDEM Ø 20 to 25 - 4-STAGES

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

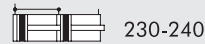
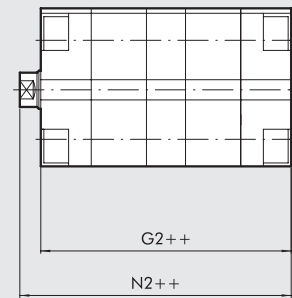
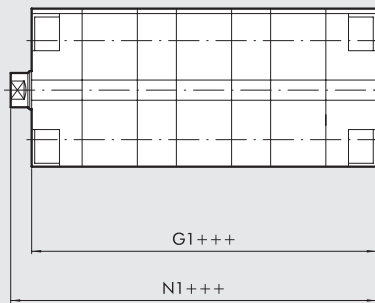
- 1 = SENSOR SLOT
- 2 = CYLINDERS OUT
- 5 = CYLINDERS IN

MALE PISTON ROD



TANDEM 3 STAGES

TANDEM 2 STAGES



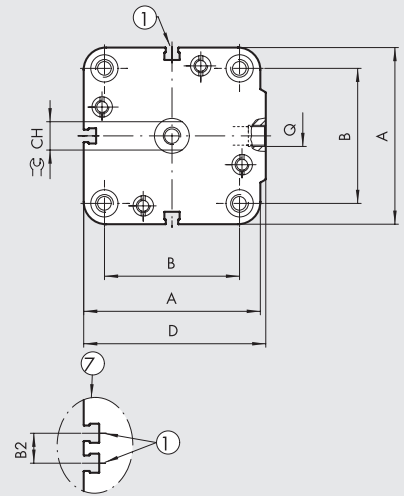
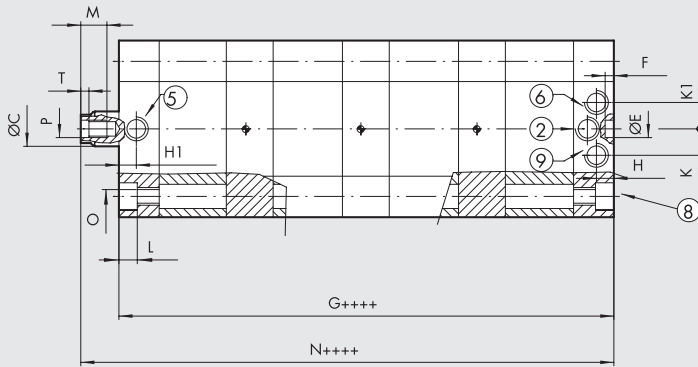
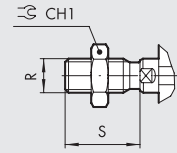
Ø	A	B	ØC	CH	CH1	D	ØE ^{H9}	F	G	G1	G2	H	H1	L	M	N	N1	N2	O	P	Q	R	S	T	NORM
20	36.5	22	10	8	17	37.5	6	4	114.5	89	63.5	8	8	10	12	119	93.5	68	M5	M5	M5	M10x1.25	22	2	UNITOP
25	40.5	26	10	8	17	41.5	6	4	118	92	66	8	8	10	12	123.5	97.5	71.5	M5	M5	M5	M10x1.25	22	2	UNITOP

DIMENSIONS OF TANDEM Ø 32 to 100 - 4-STAGES

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

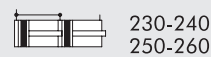
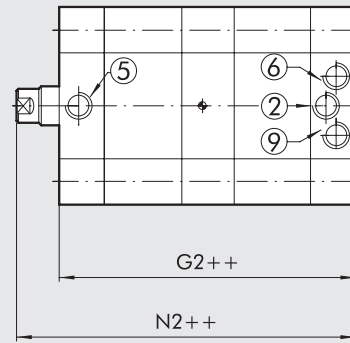
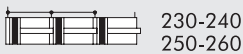
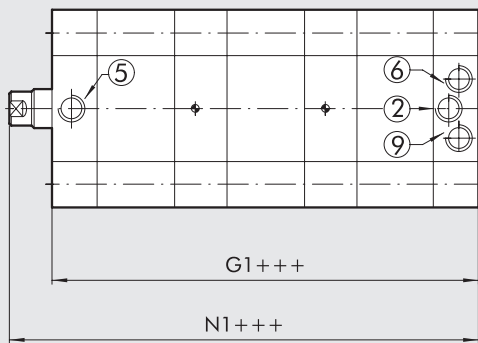
2 = CYLINDERS OUT FOR Ø 32 to 63
 5 = CYLINDERS IN FOR Ø 32 to 63
 6 = CYLINDERS IN FOR Ø 80; 100
 9 = CYLINDERS OUT FOR Ø 80; 100
 1 = SENSOR SLOT
 7 = ONLY FOR Ø 63 to 100
 8 = SLOT FOR DIN 7984 SCREWS

MALE PISTON ROD



TANDEM 3-STAGES

TANDEM 2-STAGES



Ø	A	B			ØC	CH	CH1	D	ØE ^{HP}	F	G	G1	G2	H	H1	K	K1
		ISO	UNITOP	B2													
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

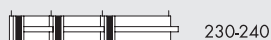
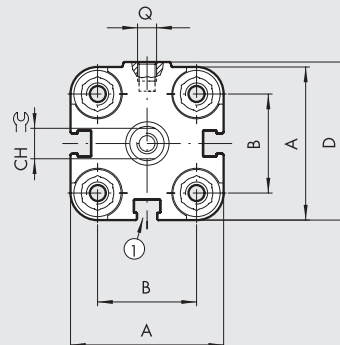
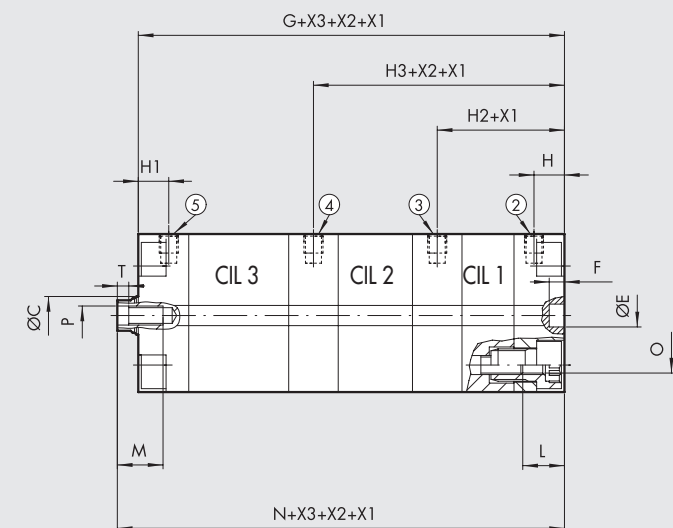
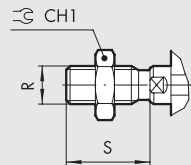
Ø	L	M	N	N1	N2	O		P	Q	R	S	T
						ISO	UNITOP					
32	4	14	160	123.5	87	M6	M6	M6	G1/8	M10x1.25	22	2.5
40	4.5	14	169	130	91	M6	M6	M6	G1/8	M10x1.25	22	2.5
50	4.5	16	171	131.5	92.5	M8	M8	M8	G1/8	M12x1.25	24	3.5
63	5.5	16	189.5	145.5	101.5	M8	M10	M8	G1/8	M12x1.25	24	3.5
80	5.5	20	212.5	163	113.5	M10	M10	M10	G1/8	M16x1.5	32	4
100	5.5	24	253	194	135.5	M10	M10	M12	G1/4	M20x1.5	40	5

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

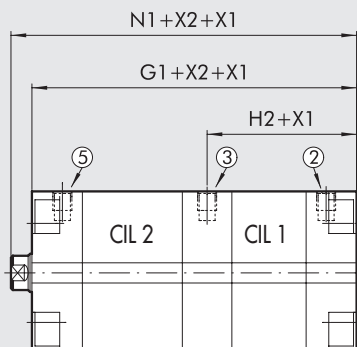
MALE PISTON ROD



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



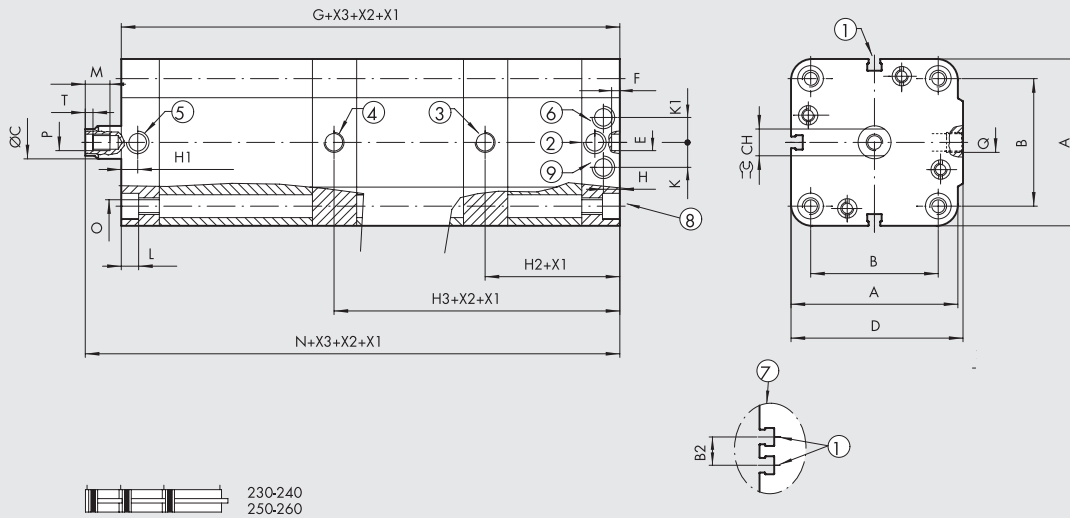
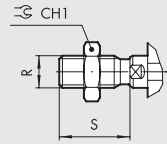
Ø	A	B	ØC	CH	CH1	D	ØE ^{HP}	F	G	G1	H	H1	H2	H3	L	M	N	N1	O	P	Q	R	S	T	NORM
12	29	18	6	5	10	30	6	4	89	63.5	8	8	33.5	59	10	8	93.5	68	M4	M3	M5	M6	16	2	-
16	29	18	8	7	13	30	6	4	89	63.5	8	8	33.5	59	10	10	93.5	68	M4	M4	M5	M8	20	2	-
20	36.5	22	10	8	17	37.5	6	4	89	63.5	8	8	33.5	59	10	12	93.5	68	M5	M5	M5	M10x1.25	22	2	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	2	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

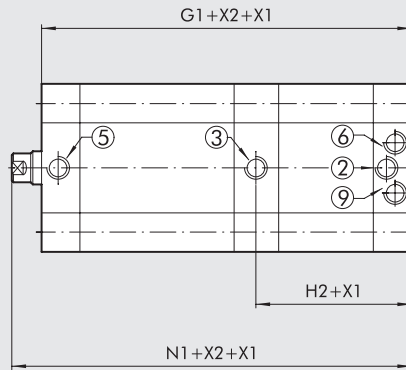


230-240
250-260

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



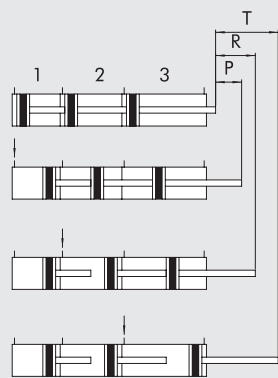
230-240
250-260

Ø	A	B			ØC	CH	CH1	D	ØE ^{HP}	F	G	G1	H	H1	H2	H3
		ISO	UNITOP	B2												
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		P	Q	R	S	T
							ISO	UNITOP					
32	-	-	4	14	123.5	87	M6	M6	M6	G1/8	M10x1.25	22	2.5
40	-	-	4.5	14	130	91	M6	M6	M6	G1/8	M10x1.25	22	2.5
50	-	-	4.5	16	131.5	92.5	M8	M8	M8	G1/8	M12x1.25	24	3.5
63	-	-	5.5	16	145.5	101.5	M8	M10	M8	G1/8	M12x1.25	24	3.5
80	10.5	10.5	5.5	20	163	113.5	M10	M10	M10	G1/8	M16x1.5	32	4
100	14.5	14.5	5.5	24	194	135.5	M10	M10	M12	G1/4	M20x1.5	40	5

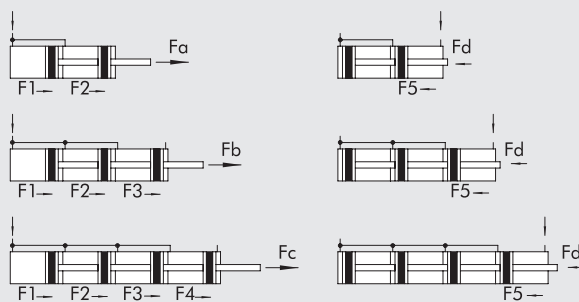
FUNCTIONAL DIAGRAMS

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

$F_a = F_1 + F_2$ [N]
 $F_b = F_1 + F_2 + F_3$ [N]
 $F_c = F_1 + F_2 + F_3 + F_4$ [N]
 $F_d = F_5$ [N]

KEY TO CODE

CYL	2 3	1	0	2 5	0	0 5 0	X	P
	TYPE			BORE		STROKE **	MATERIAL	GASKETS
	23 Compact cylinder centre distances to UNITOP male piston rod	0 Double-acting 1 Double-acting through-rod + 2 Double-acting through-rod perforated	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		* C C45 piston rod chromium-plated ▷ X Stainless steel piston rod and nut	P Polyurethane gaskets ▶ + V FKM/FPM gaskets
	24 Compact cylinder centre distances to UNITOP female piston rod	● 3 Single-acting retracting piston rod ● 4 Single-acting extended piston rod ● 5 Single-acting through-rod			MULTI-POSITION ●● P Stage 1 ●● R Stage 2 ●● T Stage 3		◁ A C45 chromed piston rod, aluminium piston ○ Z Stainless steel piston rod and nut aluminium piston	
	■ 25 Compact cylinder centre distances to ISO male piston rod	● + 6 Single-acting through-rod piston rod perforated ▼ 7 Double-acting non-rotating						
	■ 26 Compact cylinder centre distances to ISO female piston rod	A Double-acting through-rod non-rotating						

** For the maximum suppliabe stroke, see page A1.105

- ◆ In the code of cylinder with letter in fourth position Ø 100 becomes A1
- Codes only for cylinders Ø 32 to 100
- 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 100 P version (Polyurethane gaskets)
- ▷ Only for Ø 12 to 100 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 25 strokes 15 + 30 + 40 (total stroke 85 mm) male rod:
1° STADIO (P) : 230025P015XP +
2° STADIO (R) : 230025R045XP +
3° STADIO (T) : 230025T085XP

COMPACT CYLINDER SERIES CMPC TWO-FLAT



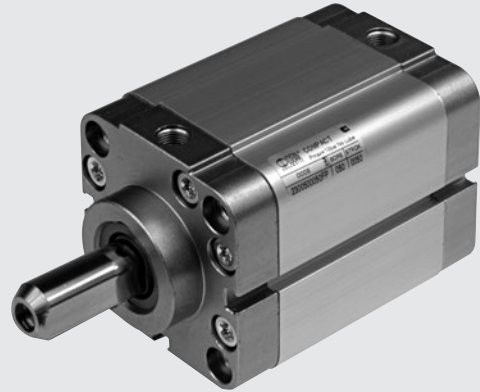
This version is used to keep at an angle the objects fixed onto the piston rod and to apply torques within the specified limits.

The piston rod in Two-Flat cylinders has two opposing longitudinal surfaces and is made entirely of stainless steel. The front head of the cylinder includes a sintered bronze bush that engages the piston rod and prevents it from rotating. A special polyurethane gasket guarantees air-tightness and dirt removal. This technical solution is more airtight and reliable than square or hexagonal piston rods.

These compact cylinders come in the following versions:

- with or without a magnet
- dual-acting, single piston rod
- dual-acting, through piston rod – one piston rod is Two-Flat, and the other is cylindrical
- fixing centre distances compatible with ISO 15552 or with French standard NFE 49-004-1 and 2 (UNITOP).

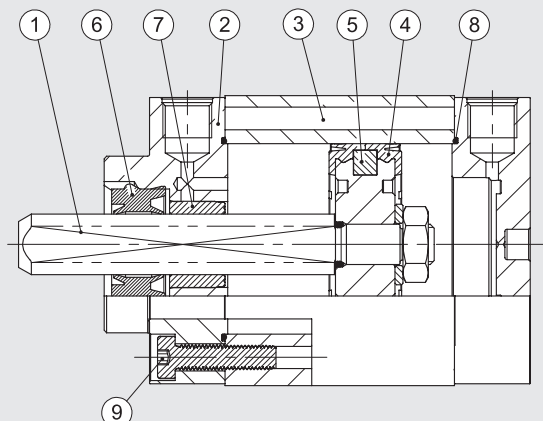
The special profile and the fact that the external heads are screwed onto the liner give an excellent guide. Numerous fixing options are available thanks to wide range of anchor points. Retractable magnetic limit switches can be mounted in slots in the cylinder to measure the position.



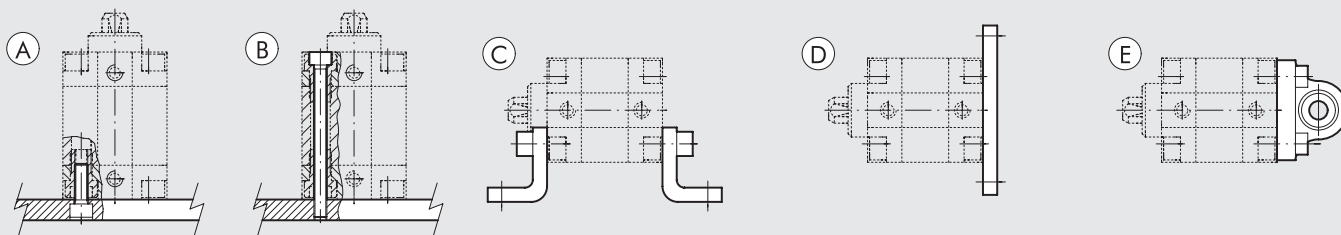
TECHNICAL DATA		Ø32	Ø40	Ø50	Ø63	Ø80
Max operating pressure	bar			10		
	MPa			1		
	psi			145		
Temperature range	POLYURETHANE °C			-10 to +80		
Design				With profile, heads with screws		
Fixing centre distances				ISO 15552 - VDMA 24562 o NFE 49-004-1 e 2 (UNITOP)		
Fluid				Unlubricated air. Lubrication, if used, must be continuous		
Maximum stroke †	mm	300		400		500
Versions				Double-acting, Double-acting Through-rod		
Sensor magnet				Available magnetic and non-magnetic versions.		
Inrush pressure	bar	0.8		0.6		
Max torque on piston rod	Nm		0.2	0.4		1
Maximum rotation on the rod	degrees		1° 30°	1° 30°		1°
Weights				See cylinder "General technical data" at the beginning of the chapter		
Notes				For speeds lower than 0.2 m/s to prevent surging, use the version No stick-slip and non-lubricated air. † Maximum recommended strokes. Higher values can create operating problems		

COMPONENTS Ø 12 to 25

- ① PISTON ROD: stainless steel, Two-Flat
- ② HEAD: extruded anodized aluminium alloy
- ③ BARREL: drawn anodized and calibrated aluminium alloy
- ④ PISTON GASKET: polyurethane
- ⑤ MAGNET: Ø 32 neodymium - Ø 40 to 100 plastoferrite
- ⑥ PISTON ROD GASKET TWO-FLAT: polyurethane
- ⑦ GUIDE BUSHING: steel strip with bronze
- ⑧ STATIC O-rings: NBR
- ⑨ SECURING SCREWS: zinc-plated steel



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

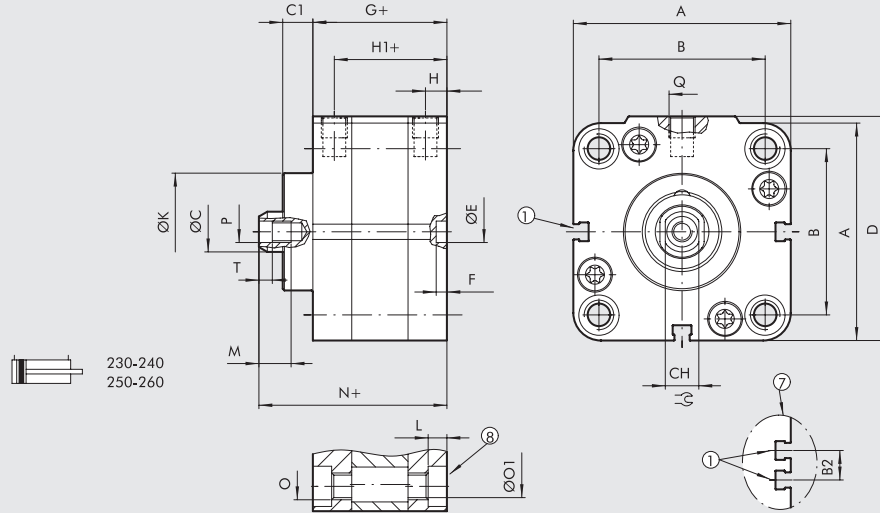
KEY TO CODE

CYL	2 3 TYPE	1	0	3 2 BORE	0	0 5 0 STROKE *	F MATERIAL	P GASKETS
	23 Compact cylinder centre distances to UNITOP male piston rod	0 Double-acting 1 Double-acting through-rod	0 Magnetic S Non-magnetic ▲ G No stick-slip	32 40 50 63 80	0 Standard		F "Two-Flat" piston rod AISI 303 stainless steel	P Polyurethane gaskets
	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							

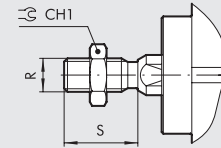
* For the maximum suppliable strokes, look at the technical data
▲ For speeds lower than 0.2 m/s, to prevent surging. Use no-lubricated air only

DIMENSIONS OF DOUBLE-ACTING

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



DE MALE PISTON ROD

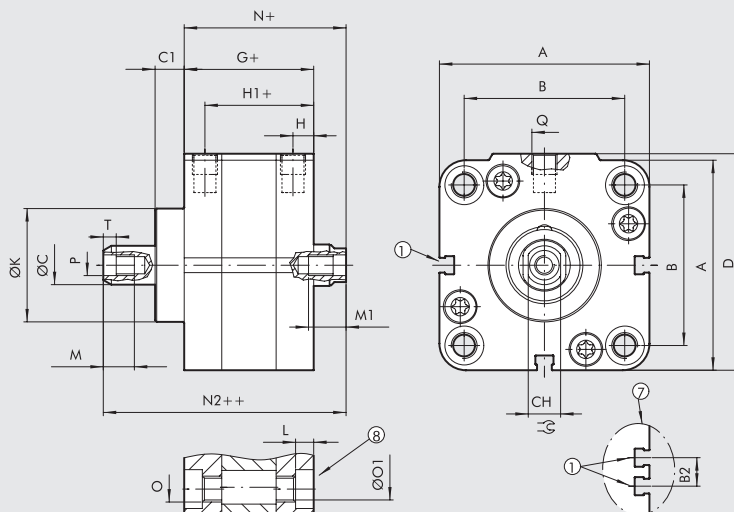


Ø	A	B		B2	ØC	C1	CH	CH1	D	ØE ^{H9}	F	G	H	H1	ØK	L	M	N	O		Ø01		P	Q	R	S	T
		ISO	UNITOP																ISO	UNITOP							
32	47	32.5 ^{+0.1} _{-0.4}	32 ^{+0.4} _{-0.1}	-	12	9	10	17	48.5	6	4	44.5	7.5	37	30	4	14	59.5	M6	M6	5.2	5.2	M6	G1/8	M10x1.25	22	2.5
40	56	38	42	-	12	9	10	17	57.5	6	4	45.5	7.5	38	35	4.5	14	61	M6	M6	5.2	5.2	M6	G1/8	M10x1.25	22	2.5
50	67	46.5	50	-	16	11.5	13	19	69	6	4	45.5	7.5	38	40	4.5	16	64.5	M8	M8	6.2	6.2	M8	G1/8	M12x1.25	24	3.5
63	80	56.5	62	13	16	11.5	13	19	82	8	4	50	7.5	42.5	45	5.5	16	69	M8	M10	6.2	8.5	M8	G1/8	M12x1.25	24	3.5
80	102	72	82	17	20	13	17	24	105	8	4	56	8.5	47.5	45	5.5	20	77	M10	M10	8.5	8.5	M10	G1/8	M16x1.5	32	4

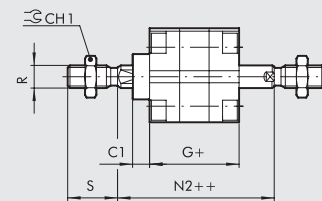
DIMENSIONS OF THROUGH-ROD

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

1 = SENSOR SLOT
 7 = ONLY FOR Ø 63 TO Ø 80
 8 = SLOT FOR DIN 7984 SCREWS



DE MALE PISTON ROD



231-241
 251-261

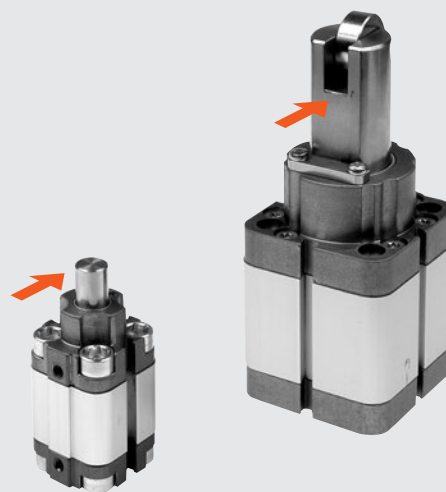
Ø	A	B		B2	ØC	C1	CH	CH1	D	G	H	H1	ØK	L	M	M1 x strokes		N2	N	O		Ø01		P	Q	R	S	T
		ISO	UNITOP													ISO	UNITOP			ISO	UNITOP							
32	47	32.5 ^{+0.1} _{-0.4}	32 ^{+0.4} _{-0.1}	-	12	9	10	17	48.5	44.5	7.5	37	30	4	14	14	9	50.5	65.5	M6	M6	5.2	5.2	M6	G1/8	M10x1.25	22	2.5
40	56	38	42	-	12	9	10	17	57.5	45.5	7.5	38	35	4.5	14	14	9	52	67.5	M6	M6	5.2	5.2	M6	G1/8	M10x1.25	22	2.5
50	67	46.5	50	-	16	11.5	13	19	69	45.5	7.5	38	40	4.5	16	16	11	53	72	M8	M8	6.2	6.2	M8	G1/8	M12x1.25	24	3.5
63	80	56.5	62	13	16	11.5	13	19	82	50	7.5	42	45	5.5	16	16	11	57.5	76.5	M8	M10	6.2	8.5	M8	G1/8	M12x1.25	24	3.5
80	102	72	82	17	20	13	17	24	105	56	8.5	47.5	45	5.5	20	20	15	64	85	M10	M10	8.5	8.5	M10	G1/8	M16x1.5	32	4


COMPACT STOPPER CYLINDER

Compact stopper cylinders designed for stopping moving parts or chucks.

- With or without magnet execution
- Single-acting, oversize extended piston rod
- Can be also used as double-acting with spring return
- Fixing centre distances to ISO 15552 for $\varnothing 32$, $\varnothing 50$, $\varnothing 80$ and French standard NFE 49-004-1 and 2 (UNITOP).

In the relevant cylinder slots, it is possible to mount retracting magnetic sensor.

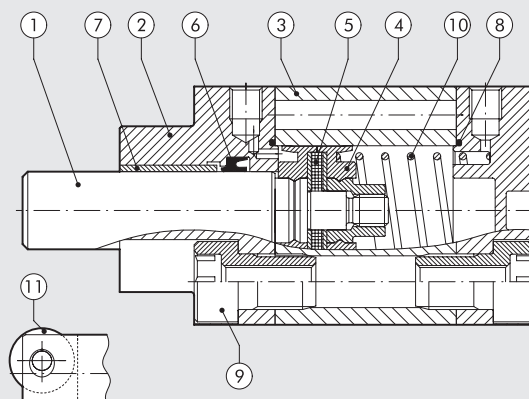


 Chuck impact direction

TECHNICAL DATA		$\varnothing 20$	$\varnothing 32$	$\varnothing 50$	$\varnothing 80$	
		Stroke 15	Stroke 20	Stroke 30	Stroke 30	Stroke 40
Max operating pressure	bar			10		
	MPa			1		
	psi			145		
Temperature range	$^{\circ}\text{C}$			-10 to +80		
Design		With profile, heads with screws				
Fixing centre distances	ISO 15552	-	x	x	x	x
	NFE 49-004-1 e 2 (UNITOP)	x	x	x	x	x
Fluid		Unlubricated air. Lubrication, if used, must be continuous				
Versions		Single-acting extended rod, Can be also used as double-acting with spring return				
Sensor magnet		Available magnetic and non-magnetic versions.				
Inrush pressure	bar	1.2	1	1	0.5	0.5
Weights		See cylinder "General technical data" at the beginning of the chapter				
Notes		For correct operation, it is advisable to use 50 μm filtered air				

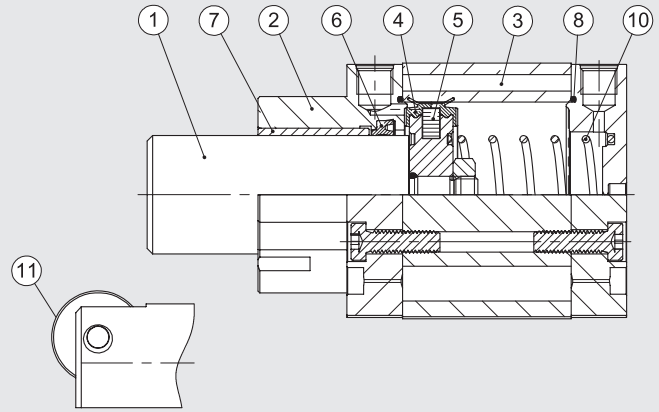
COMPONENTS $\varnothing 20$

- PISTON ROD: Stainless steel, thick chromed
- HEAD: extruded anodized aluminium alloy
- BARREL: drawn anodized and calibrated aluminium alloy
- PISTON GASKET: polyurethane
- MAGNET: neodymium-plastic
- PISTON ROD GASKET: polyurethane
- GUIDE BUSHING: steel strip with bronze and PTFE insert
- STATIC O-RINGS: NBR
- SECURING SCREWS: zinc-plated steel
- RETURN SPRING: spring stainless steel
- WHEEL: zinc-plated steel



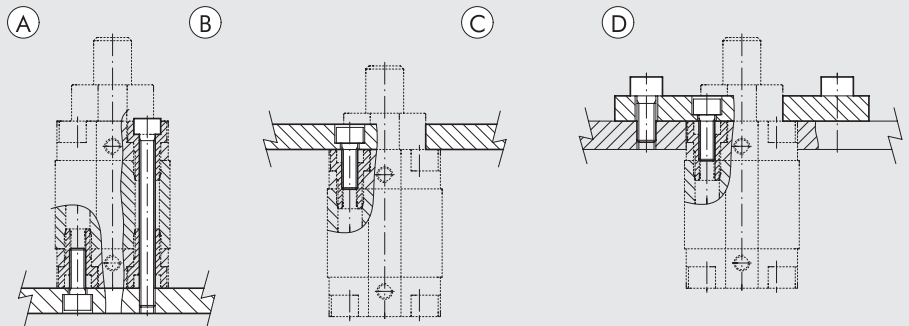
COMPONENTS Ø 32, Ø 50, Ø 80

- ① PISTON ROD: Stainless steel, thick chromed
- ② HEAD: extruded anodized aluminium alloy
- ③ BARREL: drawn anodized and calibrated aluminium alloy
- ④ PISTON GASKET: polyurethane
- ⑤ MAGNET: Ø 32 neodymium-plastic - Ø 50 to 80 plastoferrite
- ⑥ PISTON ROD GASKET: polyurethane
- ⑦ GUIDE BUSHING: steel strip with bronze and PTFE insert.
- ⑧ STATIC O-rings: NBR
- ⑨ SECURING SCREWS: zinc-plated steel
- ⑩ RETURN SPRING: spring stainless steel
- ⑪ WHEEL: zinc-plated steel



COMPACT STOPPER CYLINDER FIXING OPTIONS

- Ⓐ Fixing with screws, using the thread in the rear 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 screws, using the thread in the front heads.
- Ⓓ Fixing using flange fixed onto the cylinder.

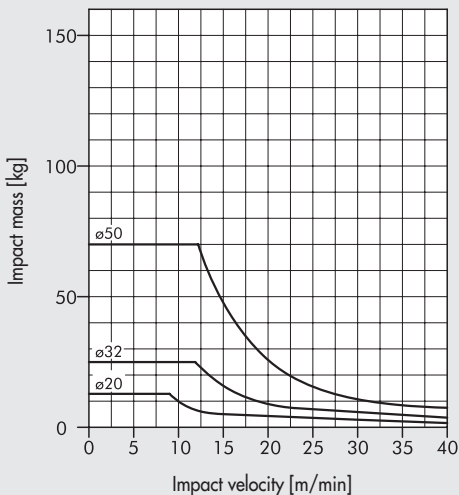


FORCE OF SPRINGS IN COMPACT STOPPER CYLINDERS (THEORETICAL)

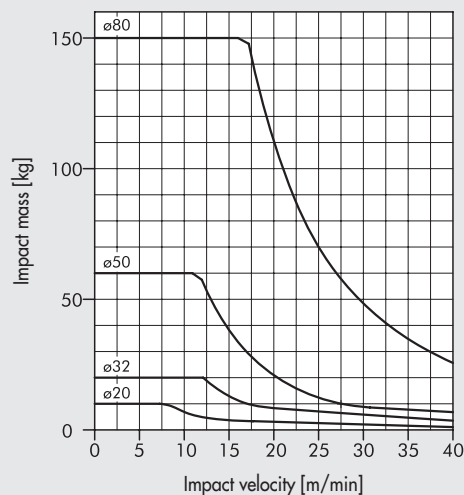
Stroke bore	Ø 20 x 15	Ø 32 x 20	Ø 50 x 30	Ø 80 x 30	Ø 80 x 40
Min. load (N)	13.7	22.4	50.2	97.9	71.0
Max. load (N)	21.2	36.0	115.9	178.5	178.5

LOAD GRAPH

TRUNNION VERSION



ROLLER VERSION

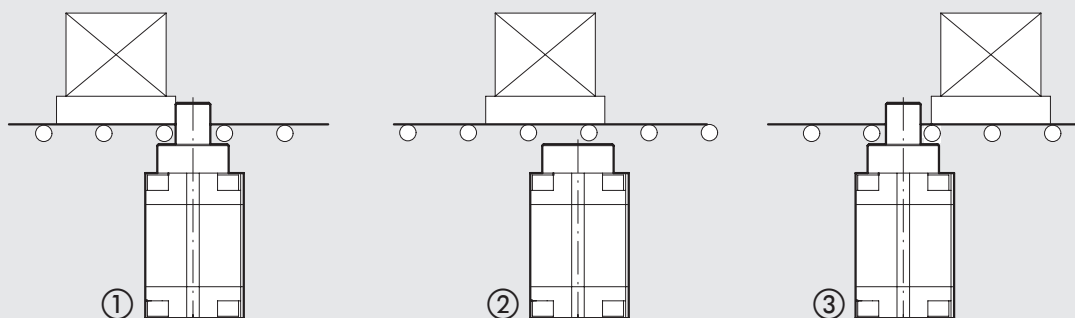
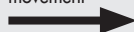


With stopper cylinders it is important to keep to the values shown in the graph to prevent early breakage of the mechanical parts. The values shown are only valid with about 1 mm plastic deformation (stopper on chuck).

OPERATING DIAGRAMS

TRUNNION VERSION

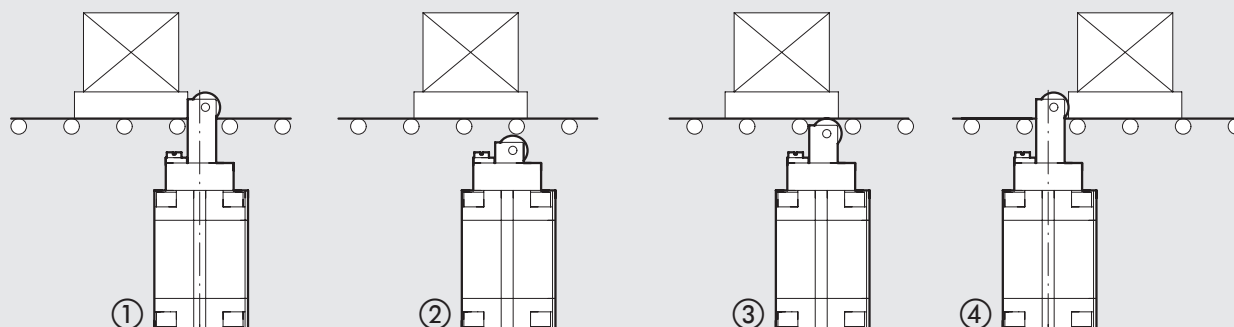
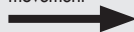
Direction of movement



- ① Deceleration of the chuck as it comes into contact with the piston rod, with elastic deformation of about 1 mm.
- ② The cylinder is pressurized to release the chuck.
- ③ The pressure in the front chamber is maintained until the chuck has passed the stopper cylinder. The piston rod extends due to the effect of the spring and any pressure in the opposite chamber. The system is now ready to stop the next chuck.

ROLLER VERSION

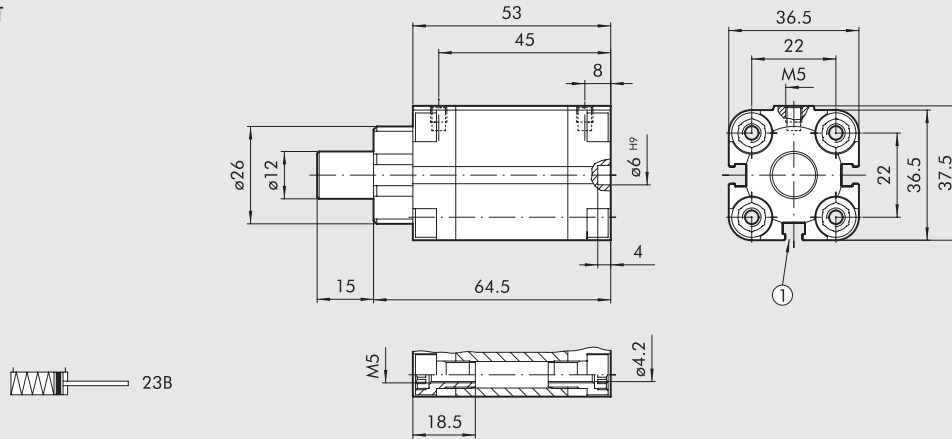
Direction of movement



- ① Deceleration of the chuck as it comes into contact with the piston rod, with elastic deformation of about 1 mm.
- ② The cylinder is pressurized to release the chuck.
- ③ When the pressure in the front chamber drops, the piston rod extends due to the effect of the spring or any pressure until the wheel reaches the chuck and moves it on.
- ④ After the chuck has passed, the cylinder extends the piston rod fully. The system is now ready to stop the next chuck.

Ø 20 STROKE 15 mm TRUNNION VERSION

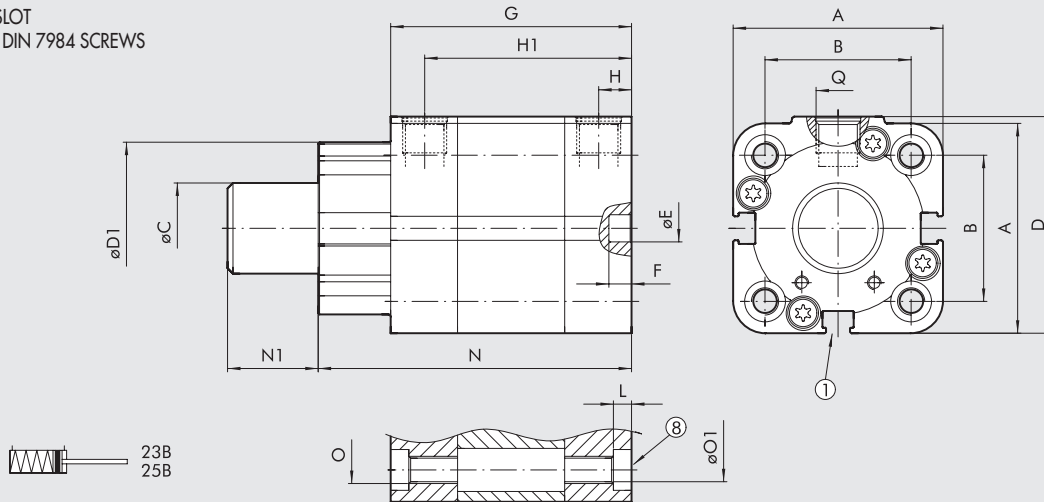
1 = SENSOR SLOT



Code	Description
23B0200015XP	Compact stopper cylinder, trunnion Ø 20, stroke 15
23B5200015XP	Compact stopper cylinder, trunnion Ø 20, stroke 15 (non-magnetic version)

Ø 32 STROKE 20 mm; Ø 50 STROKE 30 mm TRUNNION VERSION

1 = SENSOR SLOT
8 = SEAT FOR DIN 7984 SCREWS

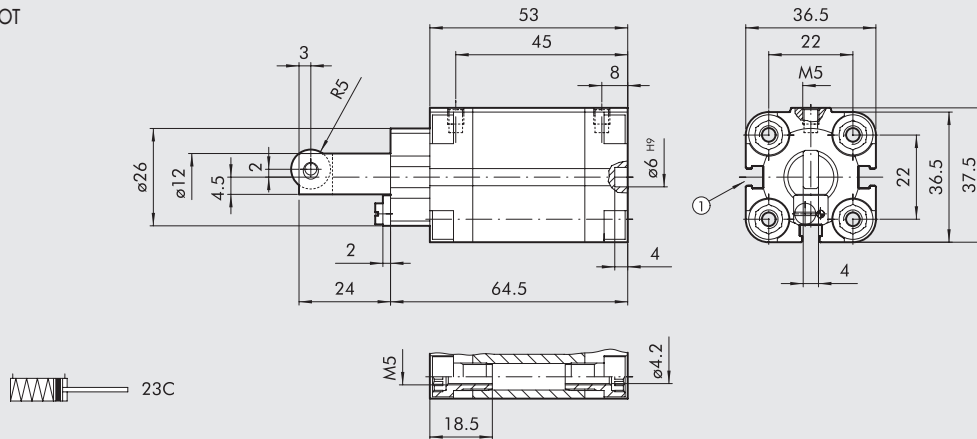


Ø	A	B		ØC	D	D1	ØE ^{H9}	F	G	H	H1	L	N	N1	O		ØO1		Q
		ISO	UNITOP												ISO	UNITOP			
32x20	47	32.5 ^{+0.1} _{-0.4}	32 ^{+0.4} _{-0.1}	20	48.5	38	6	4	64.5	7.5	57	4	80.5	20	M6	M6	5.2	5.2	G1/8
50x30	67	46.5	50	32	69	53	6	4	75.5	7.5	68	4.5	99.5	30	M8	M8	6.2	6.2	G1/8

Code	Description
23B0320020XP	Compact stopper cylinder, trunnion Ø 32, stroke 20 UNITOP
25B0320020XP	Compact stopper cylinder, trunnion Ø 32, stroke 20 ISO 15552
23B5320020XP	Compact stopper cylinder, trunnion Ø 32, stroke 20 UNITOP (non-magnetic version)
25B5320020XP	Compact stopper cylinder, trunnion Ø 32, stroke 20 ISO 15552 (non-magnetic version)
23B0500030XP	Compact stopper cylinder, trunnion Ø 50, stroke 30 UNITOP
25B0500030XP	Compact stopper cylinder, trunnion Ø 50, stroke 30 ISO 15552
23B5500030XP	Compact stopper cylinder, trunnion Ø 50, stroke 30 UNITOP (non-magnetic version)
25B5500030XP	Compact stopper cylinder, trunnion Ø 50, stroke 30 ISO 15552 (non-magnetic version)

Ø 20 STROKE 15 mm ROLLER VERSION

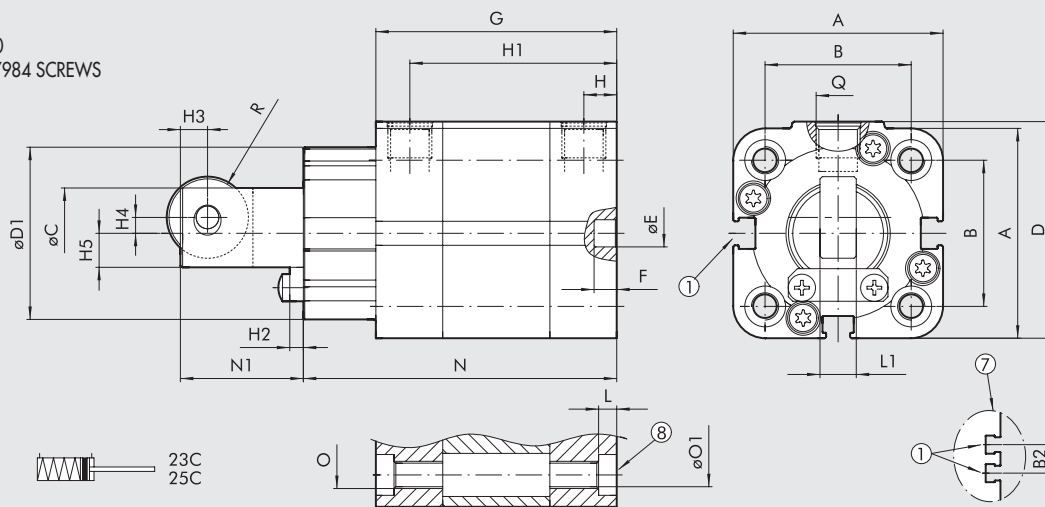
1 = SENSOR SLOT



Code	Description
23C0200015XP	Compact stopper cylinder, roller Ø 20, stroke 15
23CS200015XP	Compact stopper cylinder, roller Ø 20, stroke 15 (non-magnetic version)

Ø 32 STROKE 20 mm; Ø 50 STROKE 30 mm; Ø 80 STROKE 30 AND 40 mm ROLLER VERSION

1 = SENSOR SLOT
 7 = ONLY FOR Ø 80
 8 = SEAT FOR DIN 7984 SCREWS



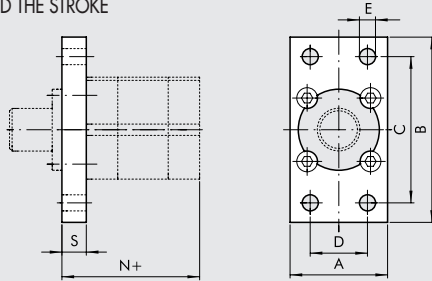
Ø	A	ISO	B		ØC	D	D1	ØE ^{H9}	G	F	H	H1	H2	H3	H4	H5	ISO	O		ØO1		L	L1	N	N1	Q	R
			UNITOP	B2														ISO	UNITOP	ISO	UNITOP						
32x20	47	32.5 ^{+0.1} _{-0.4}	32 ^{+0.1} _{-0.1}	-	20	48.5	38	6	64.5	4	7.5	57	3	6	3.5	7.5	M6	M6	5.2	5.2	4	8	80.5	38	G1/8	9	
50x30	67	46.5	50	-	32	69	53	6	75.5	4	7.5	68	4	6	7	12	M8	M8	6.2	6.2	4.5	10	99.5	50.5	G1/8	12.5	
80x30	102	72	82	17	50	105	76	8	126	4	8.5	117.5	8	10	11	18	M10	M10	8.5	8.5	5.5	18	141	63	G1/8	18	
80x40	102	72	82	17	50	105	76	8	136	4	8.5	127.5	8	10	11	18	M10	M10	8.5	8.5	5.5	18	151	73	G1/8	18	

Code	Description
23C0320020XP	Compact stopper cylinder, roller Ø 32, stroke 20 UNITOP
25C0320020XP	Compact stopper cylinder, roller Ø 32, stroke 20 ISO 15552
23CS320020XP	Compact stopper cylinder, roller Ø 32, stroke 20 UNITOP (non-magnetic version)
25CS320020XP	Compact stopper cylinder, roller Ø 32, stroke 20 ISO 15552 (non-magnetic version)
23C0500030XP	Compact stopper cylinder, roller Ø 50, stroke 30 UNITOP
25C0500030XP	Compact stopper cylinder, roller Ø 50, stroke 30 ISO 15552
23CS500030XP	Compact stopper cylinder, roller Ø 50, stroke 30 UNITOP (non-magnetic version)
25CS500030XP	Compact stopper cylinder, roller Ø 50, stroke 30 ISO 15552 (non-magnetic version)
23C0800030XP	Compact stopper cylinder, roller Ø 80, stroke 30 UNITOP
25C0800030XP	Compact stopper cylinder, roller Ø 80, stroke 30 ISO 15552
23CS800030XP	Compact stopper cylinder, roller Ø 80, stroke 30 UNITOP (non-magnetic version)
25CS800030XP	Compact stopper cylinder, roller Ø 80, stroke 30 ISO 15552 (non-magnetic version)
23C0800040XP	Compact stopper cylinder, roller Ø 80, stroke 40 UNITOP
25C0800040XP	Compact stopper cylinder, roller Ø 80, stroke 40 ISO 15552
23CS800040XP	Compact stopper cylinder, roller Ø 80, stroke 40 UNITOP (non-magnetic version)
25CS800040XP	Compact stopper cylinder, roller Ø 80, stroke 40 ISO 15552 (non-magnetic version)

ACCESSORIES FOR STOPPER CYLINDER

FLANGE Ø 32, Ø 50, Ø 80

+ = ADD THE STROKE



UNITOP

Code	Ø	A	B	C	D	E	N	S	Weight [g]
W0950326302	32	50	80	64	32	7	54.5	10	210
W0950506302	50	68	110	90	45	9	57.5	12	502
W0950806302	80	107	160	135	63	12	111	15	1575

ISO

Code	Ø	A	B	C	D	E	N	S	Weight [g]
W0950326302	32	50	80	64	32	7	54.5	10	210
W0950506312	50	65	110	90	45	9	57.5	12	447
W0950806312	80	95	153	126	63	12	112	16	1190

Note: Supplied with 4 screws.

NOTES

COMPACT CYLINDER WITH INTEGRATED VALVE, SERIES CCIV

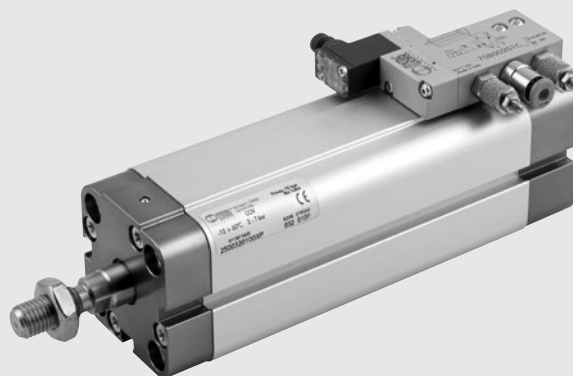
How many times would we have liked to have a pneumatic actuator complete with a control system, so that we would simply need to connect a compressed air hose and a power cable to control the movement of the piston rod?

CCIV is the simple, direct answer to this requirement.

In order to control a standard cylinder, you need a solenoid valve, the required space and a system to fix the solenoid valve, 3 or 5 fittings, 3 pipes, flow regulators, if needed, silencers on the exhaust side; this means 12-14 component parts to be handled and assembled. With CCIV a code is enough to obtain a fully assembled and tested product, in line with the "plug & play" philosophy.

They are double-acting cylinders derivatives from the CMPC series, with a low power consumption solenoid valve. The solenoid valve is the 5/2 monostable type, so the piston rod comes out when it is powered on, and retracts when it is powered off.

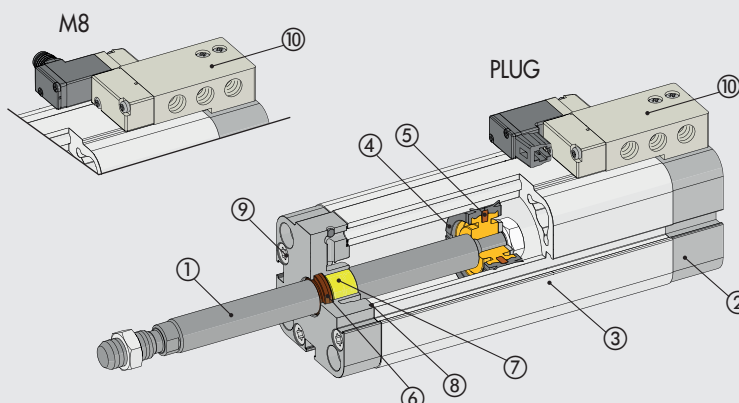
You can choose whether to have a product ready assembled with automatic fitting on the inlet port and fixed or adjustable silencers on the exhaust ports or simply with threaded connections of the inlet and outlet ports.



TECHNICAL DATA		Ø 20	Ø 25	Ø 32	Ø 40
Pressure range	bar			3 to 7	
	MPa			0.3 to 0.7	
	psi			44 to 102	
	°C			-10 to +50	
Temperature range	°F			14 to 122	
	Fluid	Unlubricated air; lubrication, if used, must be continuous			
Versions		Double-acting cylinder			
		Monostable 5/2 solenoid valve; when operated, the piston rod comes out. Plug-in or M8 connector With M7 threaded ports or a solenoid valve complete with automatic connector and fixed or adjustable silencers, on the exhaust ports			
Magnet for sensors		YES			
Inrush pressure	bar	0.6	0.6	0.6	0.4
Standard strokes	mm	from 5 to 50	from 5 to 50	from 5 to 80	from 5 to 80
Maximum recommended strokes	mm	200	200	300	300
Maximum speed at 6 bar OUT/IN	m/s	1.4 / 1.2	1 / 0.8	0.6 / 0.5	0.4 / 0.4
Forces generated at 6 bar thrust/retraction		See cylinder "General technical data" at the beginning of the chapter			
Voltage range		24VDC ±10%			
Power	W	0.9			
Solenoid rating		100% ED			
Manual operator		Monostable			
Insulation class		F155			
Degree of protection		With plug-in connector: IP51; with M8 connector: IP65			
Installation		In any position			
Weights	stroke = 0 [g]	220	250	295	420
	each mm stroke [g]	2.35	2.73	3.17	4.41
Air quality required		ISO 8573-1 class 4-7-3			
Notes		For speeds lower than 0.2 m/s to prevent surging, use the version No stick-slip and non-lubricated air			

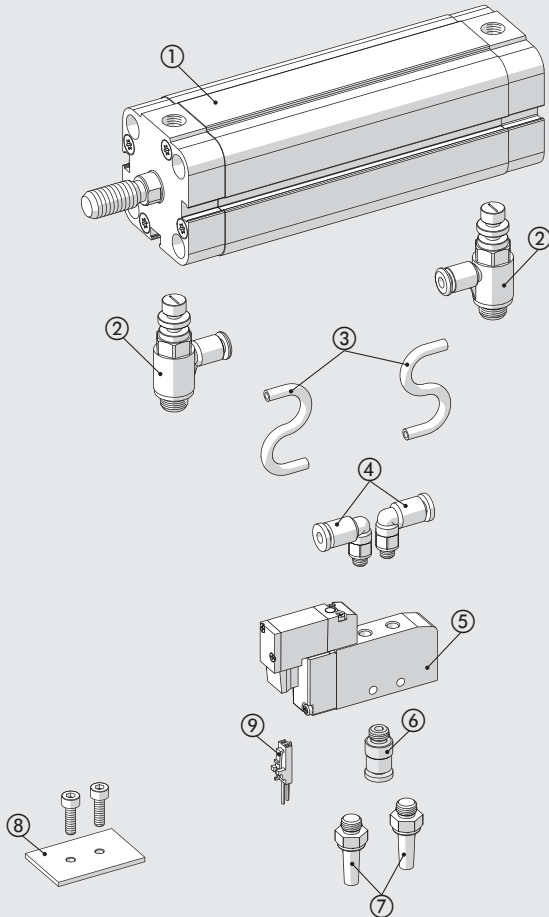
COMPONENTS

- ① PISTON ROD: C45 steel or stainless steel, thick chromed
- ② HEAD: extruded anodized aluminium alloy
- ③ BARREL: drawn anodized and calibrated aluminium alloy
- ④ PISTON GASKET: polyurethane
- ⑤ MAGNET: Ø 20 to 32 neodymium-plastic; Ø 40 plastoferrite
- ⑥ PISTON ROD GASKET: polyurethane
- ⑦ GUIDE BUSHING: steel strip with bronze and PTFE insert
- ⑧ STATIC O-RINGS: NBR
- ⑨ SECURING SCREWS: zinc-plated steel
- ⑩ VALVE: painted aluminium + technopolymer

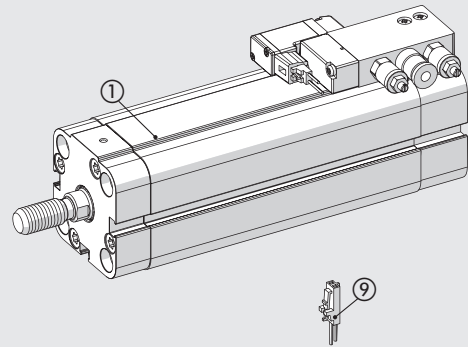


THE ADVANTAGES OF INTEGRATION

TRADITIONAL SOLUTION



CCIV

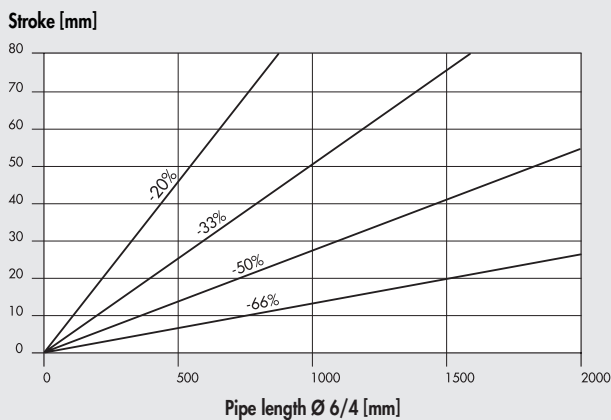


- One code only instead of 10-12 codes when ordering
- Savings in labour costs for assembly operations

- | | | |
|-------------------------------|---------------------|---------------------------------|
| ① CYLINDER | ④ DELIVERY FITTINGS | ⑦ SILENCERS ON THE EXHAUST SIDE |
| ② FITTINGS OR FLOW REGULATORS | ⑤ SOLENOID VALVE | ⑧ VALVE-FIXING SYSTEM |
| ③ PIPES | ⑥ INLET FITTING | ⑨ ELECTRICAL CONNECTOR |

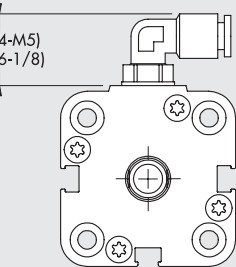
ENERGY SAVING

Reduced air consumption as the result of the elimination of pipes between valves and cylinder.
 The sample diagram shows the air savings as a percentage for a Ø 25 cylinder, depending on the cylinder stroke and the length of Ø 6/4 pipes.



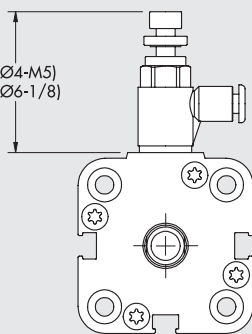
REDUCED OVERALL DIMENSIONS

15 (Ø4-M5)
19 (Ø6-1/8)

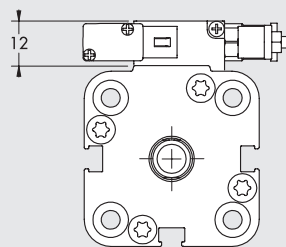


TRADITIONAL SOLUTION
WITH FITTING

27 (Ø4-M5)
31 (Ø6-1/8)



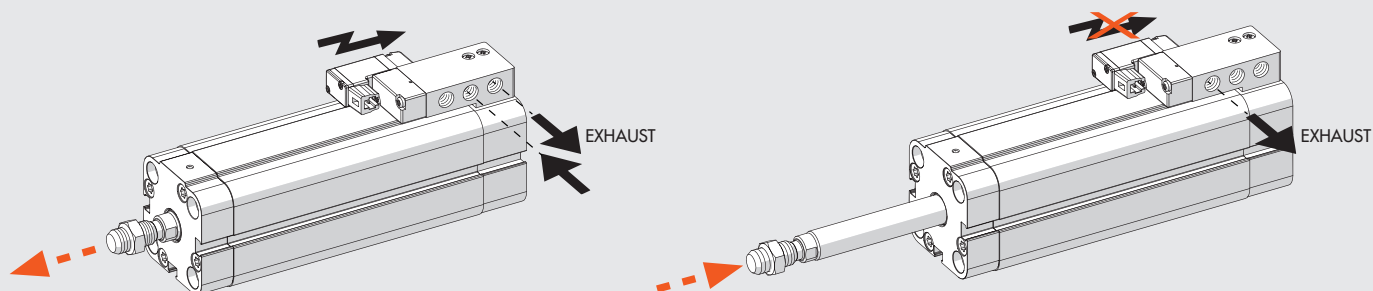
TRADITIONAL SOLUTION
WITH FLOW REGULATOR



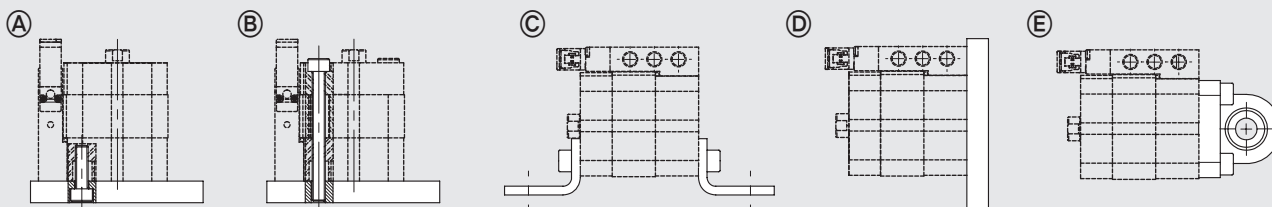
CCIV

OPERATION

The piston rod comes out when the valve is powered on. The piston rod retracts when the valve is powered off.



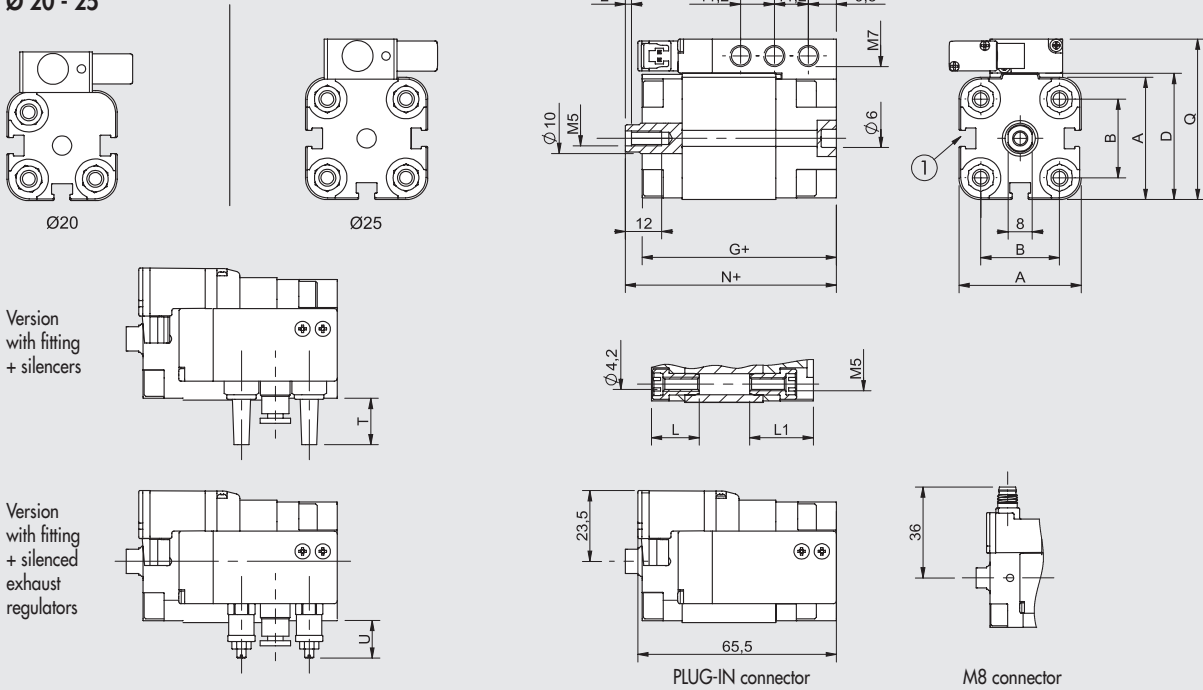
FIXING OPTIONS



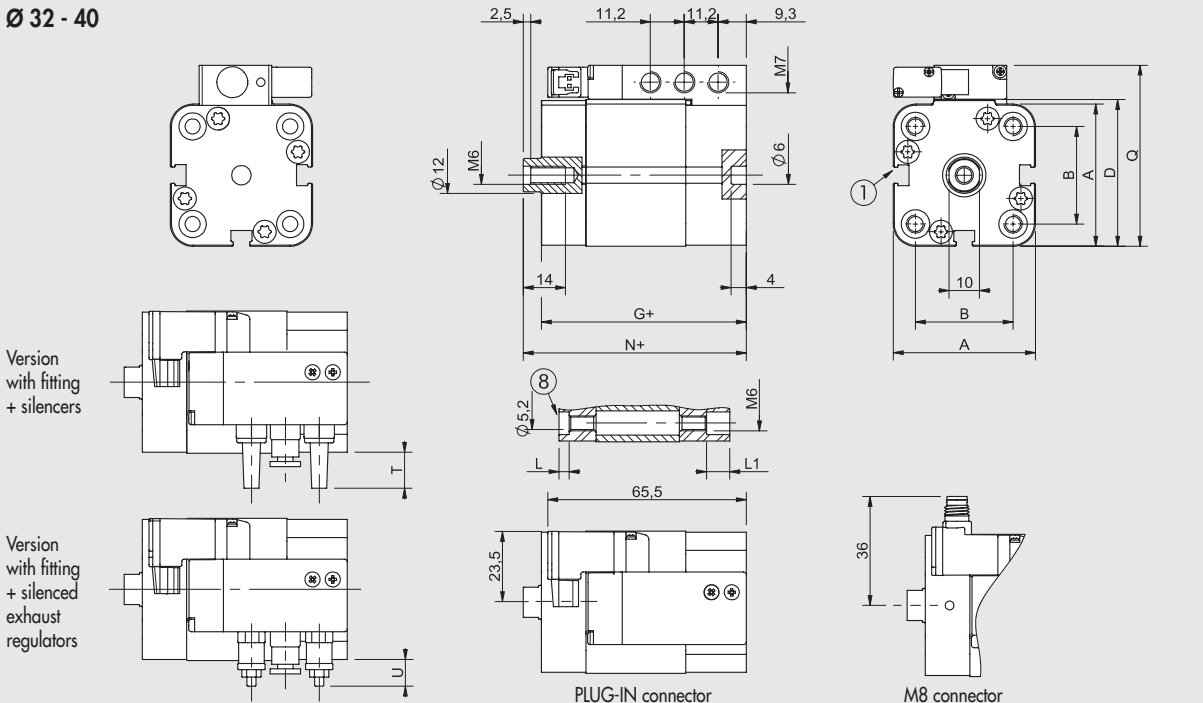
- Ⓐ Fixing to structural work with a screw, using the thread in the heads.
- Ⓑ Direct fixing from above using long through screws or tie rods. Non-magnetic stainless steel must be used (e.g. AISI 304).
- Ⓒ Fixing with feet; the ordering code covers the supply of only one foot and two screws for fixing 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.

DIMENSIONS

Ø 20 - 25



Ø 32 - 40



M8 CONNECTOR

4 = ADD THE STROKE
 1 = SENSOR SLOT
 8 = SEAT FOR DIN 7984 SCREWS

1 Not used
 3 0 V (Operation also with reverse polarity)
 4 +24V

MALE PISTON ROD

Ø	B														
	A	ISO	UNITOP	CH1	D	G	L	N	R	S	S1	L1	Q	T	U
20	36.5	-	22	17	37.5	45.5	18.5	50	M10x1.25	22	4.5	26	49	17	15÷27
25	40.5	-	26	17	41.5	46.5	19	52	M10x1.25	22	5.5	26	53	15	13÷24
32	47	32.5 ^{+0.1} _{-0.4}	32 ^{+0.4} _{-0.1}	17	48.5	50	4	56	M10x1.25	22	6	9.5	60	12	10÷21
40	56	38	42	17	57.5	50.5	4.5	57	M10x1.25	22	6.5	9.5	69	7	5÷17

ACTUATORS
COMPACT CYLINDER WITH INTEGRATED VALVE, SERIES CCIV

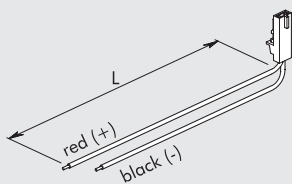
KEY TO CODES

CYL	23	0	0	32	0050	C	P	2	2
	TYPE			BORE	STROKE	MATERIAL	GASKETS	ELECTRICAL CONNECTION	PNEUMATIC FITTINGS
	23 Compact cylinder centre distances to UNITOP male piston rod	0 Double-acting	0 Magnetic S Non-magnetic ◆ G No stick-slip	▲ 20 ▲ 25 32 40	Ø 20 - 25: max 200 mm Ø 32 - 40: max 300 mm	■ C C45 piston rod chromium-plated X Stainless steel piston rod and nut	P Polyurethane gaskets	2 Plug-in M M8	1 M7 port 2 Straight fitting Ø 4 + silencers 3 Straight fitting Ø 4 + silenced exhaust regulators 4 Straight fitting Ø 6 + silencers 5 Straight fitting Ø 6 + silenced exhaust regulators
■	25 Compact cylinder centre distances to ISO male piston rod								
■	26 Compact cylinder centre distances to ISO female piston rod								

- Only for Ø 32 and 40
- ▲ Stainless steel piston rod
- ◆ Standard for Ø 20 and 25

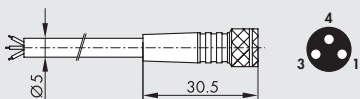
ACCESSORIES

PLUG-IN CONNECTOR



Code	Description
W0970512000	Plug-in connector for Mach 11 L = 300 mm
W0970512007	Plug-in connector for Mach 11 L = 1 m
W0970512002	Plug-in connector for Mach 11 L = 2 m

M8 STRAIGHT CONNECTOR WITH CABLE

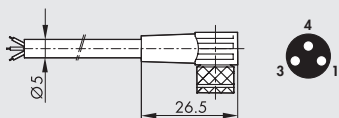


Pin	Cable color
1	Brown
3	Blue
4	Black

Code	Description
02400A0100	M8 female 3 PIN HIGH FLEX CL6 connector with cable L = 1 m
02400A0250	M8 female 3 PIN HIGH FLEX CL6 connector with cable L = 2.5 m
02400A0500	M8 female 3 PIN HIGH FLEX CL6 connector with cable L = 5 m
02400A1000	M8 female 3 PIN HIGH FLEX CL6 connector with cable L = 10 m

Very flexible cables, class 6 according to IEC 60228

90° M8 CONNECTOR WITH CABLE



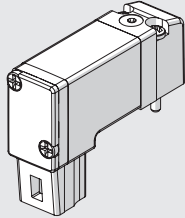
Pin	Cable color
1	Brown
3	Blue
4	Black

Code	Description
02400B0100	M8 female 3 PIN 90° HIGH FLEX CL6 connector with cable L = 1 m
02400B0250	M8 female 3 PIN 90° HIGH FLEX CL6 connector with cable L = 2.5 m
02400B0500	M8 female 3 PIN 90° HIGH FLEX CL6 connector with cable L = 5 m
02400B1000	M8 female 3 PIN 90° HIGH FLEX CL6 connector with cable L = 10 m

Very flexible cables, class 6 according to IEC 60228

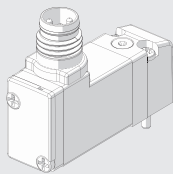
SPARE PARTS

PLUG-IN PILOT



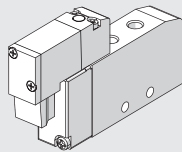
Code	Description
722113541100	PLT-10 3/2 NC 0.8W 24VDC LED plug-in with manual

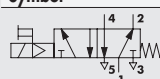
M8 PILOT



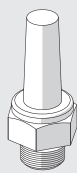
Code	Description
7222M3541100	PLT-10 3/2 NC 0.8W 24VDC LED M8 with manual

CCIV 5/2 SOLENOID-PNEUMATIC MONOSTABLE VALVE 24 VDC



Symbol	Code	Abbrev.	Weight [g]
	70800201C2	MSV 1.5 SOS OO 24VDC PLUG-IN	43.3
	70800201CM	MSV 1.5 SOS OO 24VDC M8	43.3

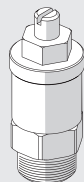
SILENCER MW SE



Code	Description
W0970530020	Silencer MW SE M7

For technical data, see **chapter E5**

SILENCED EXHAUST REGULATOR MW SVL



Code	Description
W0970520009	Silenced exhaust regulator MW SVL M7

For technical data, see **chapter E5**

NOTES

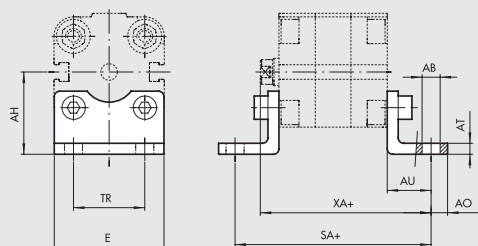
For other spare parts, such as gaskets and magnets, see page A1.136

ACCESSORIES AND SPARE PARTS FOR CMPC, TWO-FLAT, STOPPER AND CCIV COMPACT CYLINDERS

ACCESSORIES

FOOT - MODEL A

+ = ADD THE STROKE



CMPC UNITOP, TWO-FLAT UNITOP, CCIV UNITOP

Code	Ø	E	AO	TR	AU	AB	AH	AT	XA	SA	TWO-FLAT		CCIV		Weight [g]
											XA	SA	XA	SA	
W0950126001 ▲	12	30	4.5	18	13	5.5	22	3	55.5	64	-	-	-	-	26
W0950126001 ▲	16	30	4.5	18	13	5.5	22	3	55.5	64	-	-	-	-	26
W0950206001	20	36	6	22	16	6.6	27	4	58.5	70	-	-	66	77.5	46
W0950256001	25	40	6	26	16	6.6	30	4	58.5	71.5	-	-	65.5	78.5	52
W0950322001	32	45	11	32	24	7	31.9	4	74.5	92.5	83.5	101.5	80	98	76
W0950406001	40	60	8	42	20	9	42.5	5	72	85.5	-	-	77	90.5	88
W0950406001F *	40	60	8	42	20	9	42.5	5	72	85.5	81	94.5	-	-	88
W0950506001	50	68	8	50	24	9	47	6	77	93.5	-	-	-	-	176
W0950506001F *	50	68	8	50	24	9	47	6	77	93.5	88.5	105	-	-	176
W0950636001	63	84	12	62	27	11	59.5	6	84.5	104	-	-	-	-	276
W0950636001F *	63	84	12	62	27	11	59.5	6	84.5	104	96	115.5	-	-	276
W0950806001	80	102	12	82	30	11	65.5	8	94	116	107	129	-	-	392
W0951006001	100	123	12	103	33	13.5	78	8	109.5	132.5	-	-	-	-	558

CMPC ISO, TWO-FLAT ISO, CCIV ISO

Code	Ø	E	AO	TR	AU	AB	AH	AT	XA	SA	TWO-FLAT		CCIV		Weight [g]
											XA	SA	XA	SA	
W0950322001	32	45	11	32	24	7	31.9	4	74.5	92.5	83.5	101.5	80	98	76
W0950402001	40	52	15	36	28	9	36	4	80	101.5	89	110.5	85	106.5	100
W0950502001	50	65	15	45	32	9	45	5	85	109.5	96.5	121	-	-	162
W0950632001	63	75	15	50	32	9	50	5	89.5	114	101	125.5	-	-	266
W0950802001	80	95	20	63	41	12	63	6	105	138	118	151	-	-	456
W0951002001	100	115	25	75	41	14	71	6	117.5	148.5	-	-	-	-	572

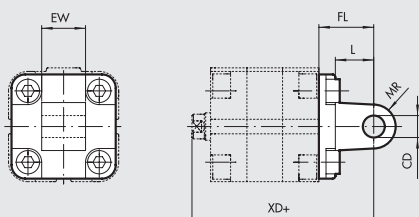
Note: Individually packed with 2 screws.

* Only for Two-Flat version

▲ Non UNITOP norm fixing distance

MALE HINGE-MODEL BA

+ = ADD THE STROKE



CMPC UNITOP, CCIV UNITOP

Code	Ø	EW	FL	CD ^{HP}	MR	L	XD	CCIV		Weight [g]
								XD	XD	
W0950126004 ▲	12	12	16	6	6	10	58.5	-	24	
W0950126004 ▲	16	12	16	6	6	10	58.5	-	24	
W0950206004	20	16	20	8	8	12	62.5	70	44	
W0950256004	25	16	20	8	8	12	62.5	69.5	48	

CMPC ISO, TWO-FLAT ISO, CCIV ISO

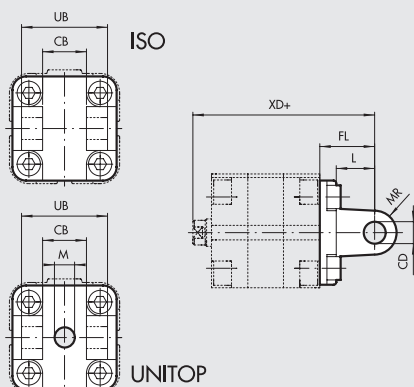
Code	Ø	EW	FL	CD ^{HP}	MR	L	XD	TWO-FLAT		CCIV		Weight [g]
								XD	XD	XD	XD	
W0950322004	32	26	22	10	10	13	72.5	81.5	78	94		
W0950402004	40	28	25	12	12	16	77	86	82	124		
W0950502004	50	32	27	12	12	16	80	91.5	-	220		
W0950632004	63	40	32	16	16	22	89.5	101	-	316		
W0950802004	80	50	36	16	16	22	100	113	-	578		
W0951002004	100	60	41	20	20	27	117.5	-	-	850		

Note: Supplied with 4 screws.

▲ Non UNITOP norm fixing distance

FEMALE HINGE-MODEL B

+ = ADD THE STROKE



CMPC UNITOP, TWO-FLAT UNITOP, CCIV UNITOP

Code	Ø	UB	CB ^{H14}	FL	CD ^{H9}	M	MR	L	XD	TWO-FLAT		CCIV	Weight [g]
										XD	XD	XD	
W0950322003	32	45	26	22	10	14	11	12	72.5	81.5	78	116	
W0950406003	40	52	28	25	12	14	12.5	16	77	86	82	184	
W0950506003	50	60	32	27	12	18	12.5	16	80	91.5	-	266	
W0950636003	63	70	40	32	16	-	15	21	89.5	101	-	470	
W0950806003	80	90	50	36	16	23	15	23	100	113	-	670	
W0951006003	100	110	60	41	20	28	20	26	117.5	-	-	1110	

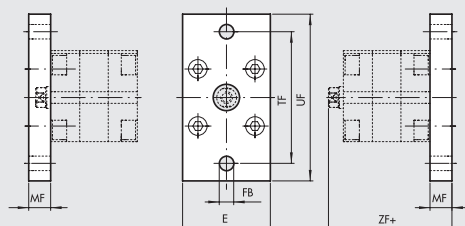
CMPC ISO, TWO-FLAT ISO, CCIV ISO

Code	Ø	UB	CB ^{H14}	FL	CD ^{H9}	MR	L	XD	TWO-FLAT		CCIV	Weight [g]
									XD	XD	XD	
W0950322003	32	45	26	22	10	11	12	72.5	81.5	78	116	
W0950402003	40	52	28	25	12	13	15	77	86	82	160	
W0950502003	50	60	32	27	12	13	15	80	91.5	-	252	
W0950632003	63	70	40	32	16	17	20	89.5	101	-	394	
W0950802003	80	90	50	36	16	17	20	100	113	-	670	
W0951002003	100	110	60	41	23	21	25	117.5	-	-	1085	

Note: Supplied with 4 screws, 4 washers, 2 snap-rings and 1 pin.

FLANGE Ø 12 to 25 - MODEL C (FRONT AND REAR)

+ = ADD THE STROKE



CMPC, CCIV

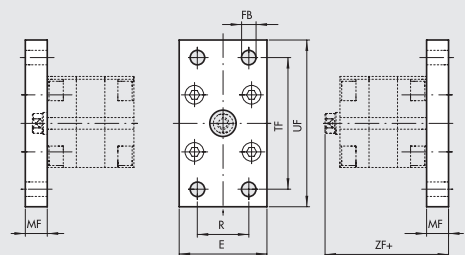
Code	Ø	E	UF	TF	FB	MF	ZF	CCIV		Weight [g]
								ZF	ZF	
W0950126002 ▲	12	29	55	43	5.5	10	52.5	-	112	
W0950126002 ▲	16	29	55	43	5.5	10	52.5	-	112	
W0950206002	20	36	70	55	6.6	10	52.5	60	184	
W0950256002	25	40	76	60	6.6	10	55	62	226	

Note: Supplied with 4 screws

▲ Non UNITOP norm fixing distance

FLANGE Ø 32 to 100 - MODEL C (FRONT AND REAR)

+ = ADD THE STROKE



CMPC UNITOP, CCIV UNITOP

Code	Ø	E	UF	TF	R	FB	MF	ZF	CCIV		Weight [g]
									ZF	ZF	
W0950322002	32	50	80	64	32	7	10	60.5	66	246	
W0950406002	40	60	102	82	36	9	10	62	67	454	
W0950506002	50	68	110	90	45	9	12	65	-	655	
W0950636002	63	87	130	110	50	9	15	72.5	-	1255	
W0950806002	80	107	160	135	63	12	15	79	-	1900	
W0951006002	100	128	190	163	75	14	15	91.5	-	2700	

TWO-FLAT UNITOP

Code	Ø	E	UF	TF	R	FB	MF	ZF	Weight [g]
W0950322002	32	50	80	64	32	7	10	69.5	246
W0950406002F	40	60	102	82	36	9	10	71	454
W0950506002F	50	68	110	90	45	9	12	76.5	655
W0950636002F	63	87	130	110	50	9	15	84	1255
W0950806002F	80	107	160	135	63	12	15	92	1900

CMPC ISO, TWO-FLAT ISO, CCIV ISO

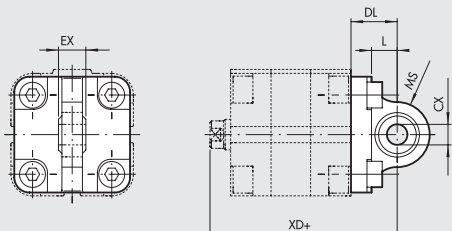
Code	Ø	E	UF	TF	R	FB	MF	ZF	TWO-FLAT		CCIV	Weight [g]
									ZF	ZF	ZF	
W0950322002	32	50	80	64	32	7	10	60.5	69.5	66	246	
W0950402002	40	55	90	72	36	9	10	62	71	67	290	
W0950502002	50	65	110	90	45	9	12	65	76.5	-	522	
W0950632002	63	75	120	100	50	9	12	72.5	84	-	670	
W0950802002	80	95	150	126	63	12	15	79	92	-	1420	
W0951002002	100	115	178	150	75	14	15	91.5	-	-	2040	

Note: Supplied with 4 screws

Note: When installing the flange on the CCIV front heads, the cylinder stroke must be min. 20 mm

ARTICULATED MALE HINGE - MODEL BAS

+ = ADD THE STROKE

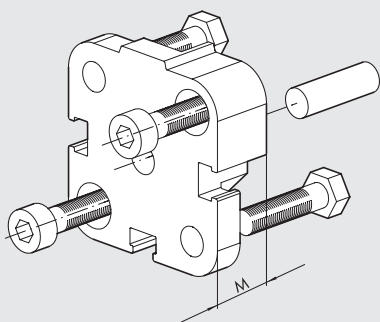


CMPC ISO, TWO-FLAT ISO, CCIV ISO

Code	Ø	EX	DL	CX ^{HP}	MS	L	XD	TWO-FLAT	CCIV	Weight [g]
								XD	XD	
W0950322006	32	14	22	10	16	12	72.5	81.5	78	106
W0950402006	40	16	25	12	18	15	77	86	82	142
W0950502006	50	16	27	12	21	15	80	91.5	-	236
W0950632006	63	21	32	16	23	20	89.5	101	-	336
W0950802006	80	21	36	16	28	20	100	113	-	572
W0951002006	100	25	41	20	30	25	117.5	-	-	840

Note: Supplied with 4 screws, 4 washers

FLANGE FOR OPPOSITE CYLINDERS

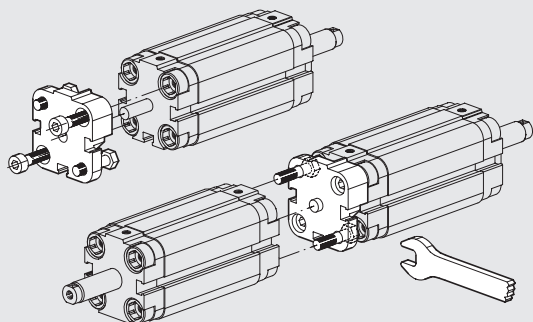


CMPC UNITOP Code	CMPC ISO Code	Ø	M	Weight [g]	
				UNITOP	ISO
0950123060 ▲	-	12	12.5	29	-
0950123060 ▲	-	16	12.5	29	-
0950203060	-	20	12.5	45	-
0950253060	-	25	13	57	-
0950323060	0950323060	32	14.5	88	88
0950403060	0950403061	40	14.5	106	106
0950503060	0950503061	50	14.5	172	158
0950633060	0950633061	63	14.5	274	258
0950803060	0950803061	80	16.5	470	452
0951003060	0951003061	100	19.5	826	801

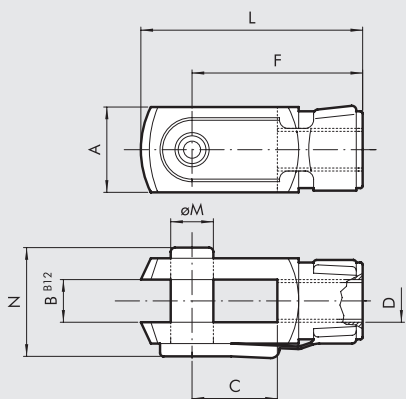
Note: Supplied complete with 1 pin, 4 screws

▲ Non UNITOP norm fixing distance

ASSEMBLING OPPOSING CYLINDERS



FORK - MODEL GK-M

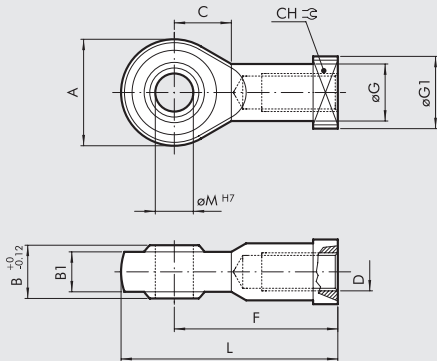


CMPC UNITOP AND ISO, TWO-FLAT UNITOP AND ISO, CCIV UNITOP AND ISO

Code	Ø	A	B	C	D	F	L	ØM	N	Weight [g]
W0950120020	12	12	6	12	M6	24	31	6	16	20
W0950200020	16	16	8	16	M8	32	42	8	22	48
W0950322020	20	20	10	20	M10x1.25	40	52	10	26	92
W0950322020	25	20	10	20	M10x1.25	40	52	10	26	92
W0950322020	32	20	10	20	M10x1.25	40	52	10	26	92
W0950322020	40	20	10	20	M10x1.25	40	52	10	26	92
W0950402020	50	24	12	24	M12x1.25	48	62	12	32	148
W0950402020	63	24	12	24	M12x1.25	48	62	12	32	148
W0950502020	80	32	16	32	M16x1.5	64	83	16	40	340
W0950802020	100	40	20	40	M20x1.5	80	105	20	48	690

Note: Individually packed

ROD EYE - MODEL GA-M

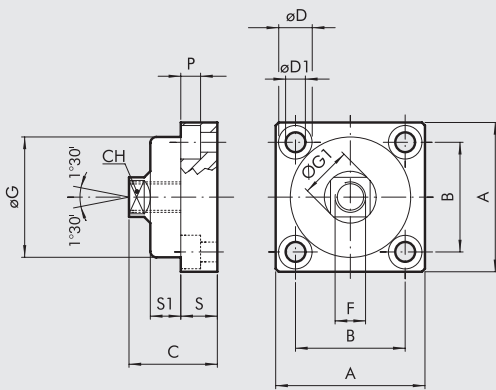


CMPC UNITOP E ISO, TWO-FLAT UNITOP E ISO, CCIV UNITOP AND ISO

Code	Ø	A	B	B1	C	CH	D	F	ØG	ØG1	L	ØM	Weight [g]
W0950120025	12	20	9	6.75	11	11	M6	30	10	13	40	6	28
W0950200025	16	24	12	9	13	14	M8	36	12.5	16	48	8	50
W0950322025	20	28	14	10.5	15	17	M10x1.25	43	15	19	57	10	78
W0950322025	25	28	14	10.5	15	17	M10x1.25	43	15	19	57	10	78
W0950322025	32	28	14	10.5	15	17	M10x1.25	43	15	19	57	10	78
W0950322025	40	28	14	10.5	15	17	M10x1.25	43	15	19	57	10	78
W0950402025	50	32	16	12	17	19	M12x1.25	50	17.5	22	66	12	116
W0950402025	63	32	16	12	17	19	M12x1.25	50	17.5	22	66	12	116
W0950502025	80	42	21	15	23	22	M16x1.5	64	22	27	85	16	226
W0950802025	100	50	25	18	27	30	M20x1.5	77	27.5	34	102	20	404

Note: Individually packed.

COMPENSATION JOINT - MODEL GA

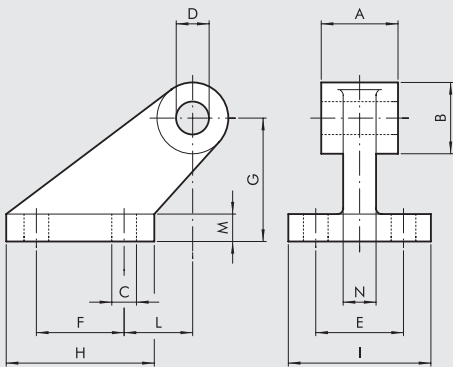


CMPC UNITOP E ISO, TWO-FLAT UNITOP AND ISO, CCIV UNITOP AND ISO

Code	Ø	A	B	C	CH	ØD	ØD1	F	ØG	ØG1	P	S	S1	Weight [g]
W0950326021	20	49	36	30	13	11	6.5	M10x1.25	39.5	17	6.5	12	10	172
W0950326021	25	49	36	30	13	11	6.5	M10x1.25	39.5	17	6.5	12	10	172
W0950326021	32	49	36	30	13	11	6.5	M10x1.25	39.5	17	6.5	12	10	172
W0950326021	40	49	36	30	13	11	6.5	M10x1.25	39.5	17	6.5	12	10	172
W0950406021	50	59	42	36	15	14	8.5	M12x1.25	44	19	8.5	15	13.5	286
W0950406021	63	59	42	36	15	14	8.5	M12x1.25	44	19	8.5	15	13.5	286
W0950506021	80	79	58	44	22	17	10.5	M16x1.5	59	26	10.5	20	15	628
W0950806021	100	89	65	51	27	19	12.5	M20x1.5	69	31	12.5	20	20	1200

Note: Individually packed.

COUNTER-HINGE CETOP Ø 32 to 100

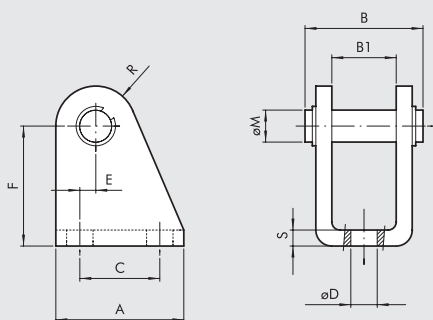


CMPC UNITOP E ISO, TWO-FLAT UNITOP E ISO, CCIV UNITOP AND ISO

Code	Ø	A	B	C	D	E	F	G	H	I	L	M	N	Weight [g]
W0950322008	32	26	19	7	10	25	20	32	37	41	18	8	10	96
W0950402008	40	28	26	9	12	32	32	45	54	52	25	10	12	216
W0950502008	50	32	26	9	12	32	32	45	54	52	25	10	12	212
W0950632008	63	40	33	11	16	40	50	63	75	63	32	12	15	440
W0950802008	80	50	33	11	16	40	50	63	75	63	32	12	15	464
W0951002008	100	60	44	14	20	50	70	90	103	80	40	16	22	985

Note: Supplied complete with 4 screws, 4 washers

COUNTER-HINGE Ø 12 to 25 - MODEL BC

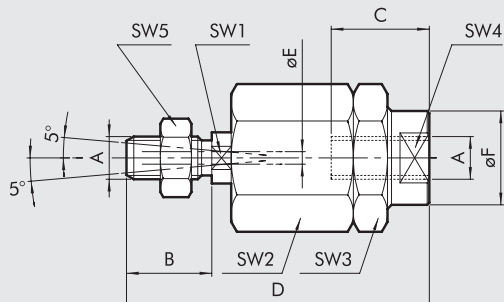


CMPC UNITOP, CCIV UNITOP

Code	Ø	A	B	B1	C	ØD	E	F	ØM	R	S	Weight [g]
W0950120005	12	25	25	12	15	5.5	2	27	6	7	3	40
W0950120005	16	25	25	12	15	5.5	2	27	6	7	3	40
W0950200005	20	32	30	16	20	6.5	4	30	8	10	4	78
W0950200005	25	32	30	16	20	6.5	4	30	8	10	4	78

Note: Supplied complete with 1 pin and and 2 snap rings

SELF ALIGNING ROD COUPLER - MODEL GA-K



CMPC UNITOP AND ISO, TWO-FLAT UNITOP AND ISO, CCIV UNITOP AND ISO

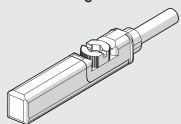
Code	Ø	A	B	C	D	ØE	ØF	SW1	SW2	SW3	SW4	SW5	Weight [g]
W0950120030	12	M6	10	10	35	2	8.5	5	13	13	7	10	24
W0950200030	16	M8	20	20	57	4	12.5	7	17	17	11	13	56
W0950322030	20	M10x1.25	20	20	71	4	22	12	30	30	19	17	216
W0950322030	25	M10x1.25	20	20	71	4	22	12	30	30	19	17	216
W0950322030	32	M10x1.25	20	20	71	4	22	12	30	30	19	17	216
W0950322030	40	M10x1.25	20	20	71	4	22	12	30	30	19	17	216
W0950402030	50	M12x1.25	24	20	75	4	22	12	30	30	19	19	220
W0950402030	63	M12x1.25	24	20	75	4	22	12	30	30	19	19	220
W0950502030	80	M16x1.5	32	32	103	4	32	20	41	41	30	24	620
W0950802030	100	M20x1.5	40	40	119	4	32	20	41	41	30	30	680

Note: Individually packed.

RETRACTABLE SENSOR

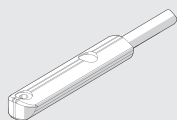
SENSOR, SQUARE TYPE

Latest generation, secure fixing



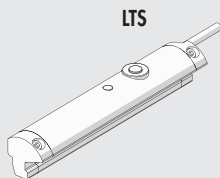
SENSOR, OVAL TYPE

Traditional



For codes and technical data, see **chapter A6**.

POSITION SENSORS



For technical data and usage strokes see **chapter A6**.

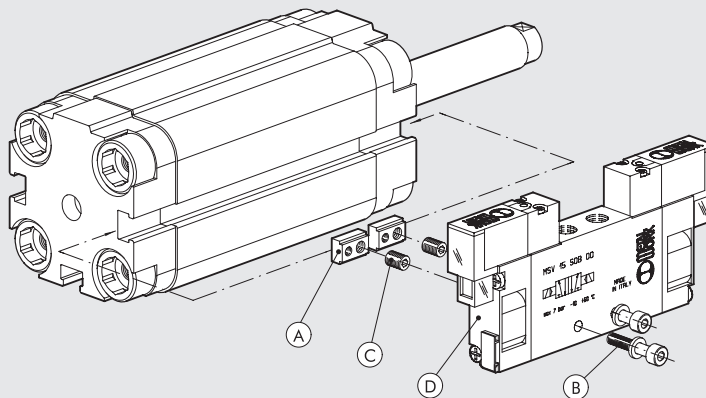
VALVE ASSEMBLY ON CYLINDER

With this type of cylinder, the valves (D) can be mounted directly using the retracting sensor slot, without requiring the use of intermediate brackets. This can be done using the special plates (A) which come with both M3 and M4 threads, and screws (B) of the size, type and quantity shown in the table below.

The plates are supplied complete with 2 stud pins, one M3 and one M4 (C).

After the valve centre distance and the position of the valve have been determined, the plates can be secured to the cylinder.

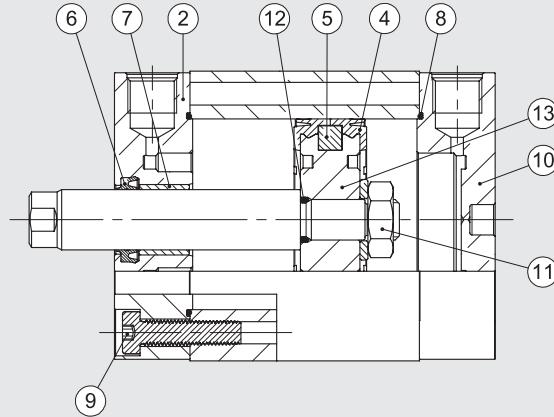
A "position memory" will be created to facilitate subsequent maintenance on the valve.



Type of valve to mount (D)	Fixing plate (A) CODE 0950003000	Position memory: grub screw (C) to be used	Screw (B) for connection to the cylinder (one per plate)	Washer (B) (one per screw)
MINIMACH	n° 2	M4	M3x16 UNI 5931 (DIN 912)	A3.2 UNI 1751 (DIN 127A)
MACH 11	n° 2	M4	M3x16 UNI 5931 (DIN 912)	A3.2 UNI 1751 (DIN 127A)
SERIE 70 1/8	n° 2	M3	M4x25 UNI 5931 (DIN 912)	—
SERIE 70 1/4	n° 2	M3	M4x30 UNI 5931 (DIN 912)	A4.3 UNI 1751 (DIN 127A)

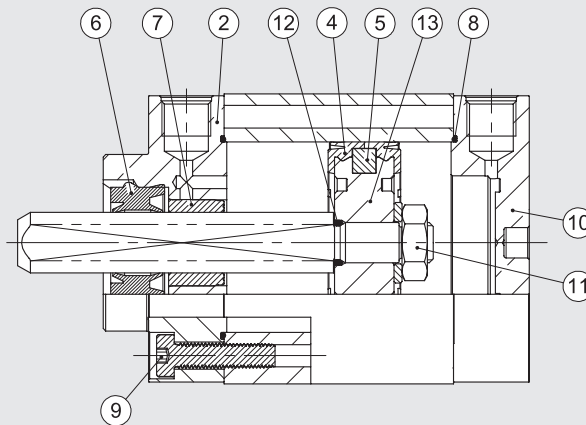
SPARE PARTS

COMPACT CYLINDERS, SERIES CMPC



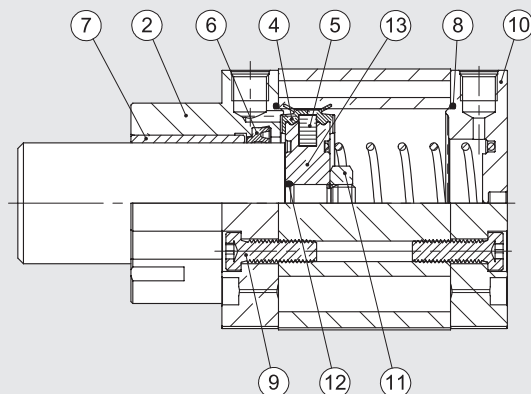
Code	Bores	Type	Parts
009 ... 7001	Ø 12 to 100	Complete set of gaskets polyurethane	4 6 8
009 ... 7008	Ø 20 to 100	Complete set of (high temperature) FKM/FPM gaskets	4 6 8
009 ... 7013	Ø 12 to 100	Polyurethane piston rod gasket kit	6
009 ... 7014	Ø 20 to 100	FKM/FPM piston rod gasket kit	6
009 ... 7101	Ø 12 to 100	Front cylinder head kit for UNITOP polyurethane	2 7 6 8 9
0090327101	Ø 32	Front cylinder head kit for ISO Ø 32 polyurethane	2 7 6 8 9
009 ... 8101	Ø 40 to 100	Front cylinder head kit for ISO polyurethane	2 7 6 8 9
009 ... 7201	Ø 12 to 100	Rear cylinder head kit for UNITOP polyurethane	8 9 10
0090327201	Ø 32	Rear cylinder head kit for ISO Ø 32 polyurethane	8 9 10
009 ... 8201	Ø 40 to 100	Rear cylinder head kit for ISO polyurethane	8 9 10
009 ... 7401	Ø 12 to 100	Piston kit polyurethane	4 5 11 12 13
009 ... 7501	Ø 12 to 100	Magnet	5
009 ... 7901	Ø 12 to 100	Front + rear cylinder head + piston kit for UNITOP polyurethane	2 4 5 6 7 8 9 10 11 12 13
0090327901	Ø 32	Front + rear cylinder head + piston kit for ISO Ø 32 polyurethane	2 4 5 6 7 8 9 10 11 12 13
009 ... 8901	Ø 40 to 100	Front + rear cylinder head + piston kit for ISO polyurethane	2 4 5 6 7 8 9 10 11 12 13

COMPACT CYLINDERS, SERIES CMPC TWO-FLAT



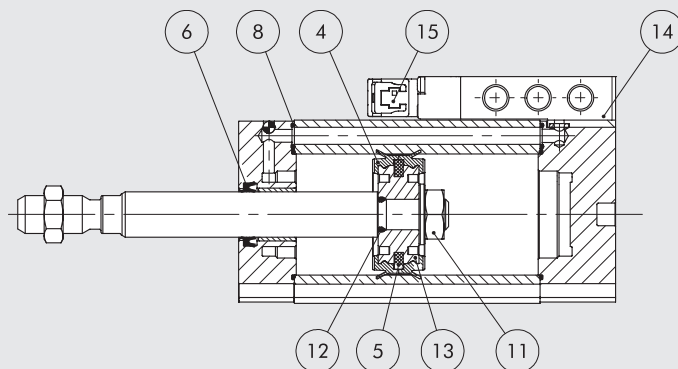
Code	Bores	Type	Parts
009 ... 7001F	Ø 32 to 80	Set of gaskets	4 8 12
009 ... 7101F	Ø 40 to 80	Front cylinder head kit for UNITOP	2 7 6 8 9
0090327101F	Ø 32	Front cylinder head kit for ISO Ø 32	2 7 6 8 9
009 ... 8101F	Ø 40 to 80	Front cylinder head kit for ISO	2 7 6 8 9
009 ... 7201	Ø 40 to 80	Rear cylinder head kit for UNITOP	8 9 10
0090327201	Ø 32	Rear cylinder head kit for ISO Ø 32	8 9 10
009 ... 8201	Ø 40 to 80	Rear cylinder head kit for ISO	8 9 10
009 ... 7401	Ø 32 to 80	Piston kit	4 5 11 12 9 13
009 ... 7501	Ø 32 to 80	Magnet	5
009 ... 7901F	Ø 40 to 80	Front + rear cylinder head + piston kit for UNITOP	2 4 5 6 7 8 9 10 11 12 13
0090327901F	Ø 32	Front + rear cylinder head + piston kit for ISO Ø 32	2 4 5 6 7 8 9 10 11 12 13
009 ... 8901F	Ø 40 to 80	Front + rear cylinder head + piston kit for ISO	2 4 5 6 7 8 9 10 11 12 13

COMPACT CYLINDERS, STOPPER



Code	Bores	Type	Parts
009...7060	Ø 20; 32; 50; 80	Complete set of gaskets	4 6 8
009...7160	Ø 20; 32; 50; 80	Front cylinder head kit for UNITOP	2 7 6 8 9
0090327160	Ø 32	Front cylinder head kit for ISO Ø 32	2 7 6 8 9
009...8160	Ø 50; 80	Front cylinder head kit for ISO	2 7 6 8 9
009...7201	Ø 20; 32	Rear cylinder head kit for UNITOP Ø 20 - Ø 32	8 9 10
009...7260	Ø 50; 80	Rear cylinder head kit for UNITOP	8 9 10
0090327201	Ø 32	Rear cylinder head kit for ISO Ø 32	8 9 10
009...8260	Ø 50; 80	Rear cylinder head kit for ISO	8 9 10
0090207401	Ø 20	Piston kit Ø 20	4 5 11
009...7460	Ø 32; 50; 80	Piston kit	4 5 11 12 13
009...7501	Ø 20; 32; 50; 80	Magnet	5
009...7960	Ø 20; 32; 50; 80	Front + rear cylinder head + piston kit for UNITOP	2 4 5 6 7 8 9 10 11 12 13
0090327960	Ø 32	Front + rear cylinder head + piston kit for ISO Ø 32	2 4 5 6 7 8 9 10 11 12 13
009...8960	Ø 50; 80	Front + rear cylinder head + piston kit for ISO	2 4 5 6 7 8 9 10 11 12 13

COMPACT CYLINDER WITH INTEGRATED VALVE, SERIES CCIV



Code	Bores	Type	Parts
009...7001	Ø 20 to 40	Complete set of gaskets polyurethane	4 6 8
009...7013	Ø 20 to 40	Polyurethane piston rod gasket kit	6
009...7401	Ø 20 to 40	Piston kit polyurethane	4 5 11 12 13
009...7501	Ø 20 to 40	Magnet	5
70800201C2	Ø 20 to 40	CCIV solenoid-pneumatic monostable 24 VDC plug-in valve	14
70800201CM	Ø 20 to 40	CCIV solenoid-pneumatic monostable 24 VDC M8 valve	14
722113541100	Ø 20 to 40	Plug-in pilot	15
7222M3541100	Ø 20 to 40	M8 pilot	15