

SHORT-STROKE CYLINDER SERIES SSCY, Ø 12-100 mm AND ACCESSORIES

Compact cylinders suitable for installation in limited spaces:

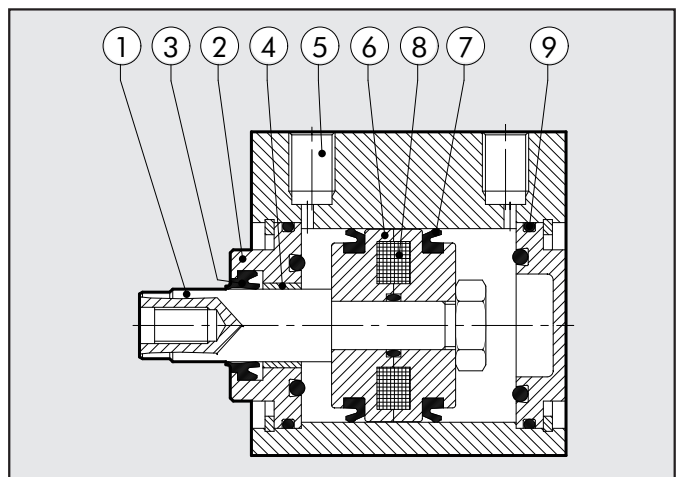
- configuration with or without magnet
- single or double-acting - single or through-rod
- anti-rotation version and with built-in fixings
- possible choice of NBR, POLYURETHANE or FKM/FPM gaskets
- special design on request.



TECHNICAL DATA	Polyurethane	NBR	FKM/FPM	Low Temperature
Operating pressure	max 10 bar (max 1 MPa - 145 psi)			
Temperature range	-10°C to +80°C	-10°C to +80°C	-10°C to +150°C (non-magnetic cylinders)	-35°C to +80°C
Fluid	Unlubricated air. Lubrication, if used, must be continuous			
Bores	Ø 12 ; Ø 16 ; Ø 20 ; Ø 25 ; Ø 32 ; Ø 40 ; Ø 50 ; Ø 63 ; Ø 80 ; Ø 100			
Design	With profile			
Standard strokes †	Double acting:	Ø 12 to Ø 25, stroke 5 to 50 mm Ø 32 to Ø 40, stroke 5 to 70 mm Ø 50 to Ø 63, stroke 5 to 110 mm Ø 80 to Ø 100, stroke 5 to 150 mm		
	Single-acting:	Ø 12 to Ø 25, stroke 5 to 25 mm Ø 32 to Ø 63, stroke 5 to 50 mm		
	Anti-rotation:	Ø 12 to Ø 63, stroke 5 to 120 mm Ø 80 to Ø 100, stroke 5 to 150 mm		
	Perforated through-rod:	Ø 20 to Ø 40, stroke 5 to 100 mm Ø 50 to Ø 63, stroke 5 to 130 mm Ø 80 to Ø 100, stroke 5 to 165 mm		
Versions	Double-acting, Double-acting through-rod, Single-acting retracted piston rod, Single acting extended piston rod, Single-acting through-rod, Perforated through-rod, Anti-rotation, Oscillating male, Oscillating female, no-stick slip*			
Magnet for sensors	All versions come complete with magnet. Supplied without magnet on request			
Inrush pressure	Ø 12 to Ø 32: 0.6 bar - Ø 40 to Ø 100: 0.4 bar			
Forces generated at 6 bar thrust/retraction	See GENERAL TECHNICAL DATA PAGE 1.1/04			
Weight	See GENERAL TECHNICAL DATA PAGE 1.1/06			
	† Maximum recommended strokes. Higher values can create operating problems			
	*Using for speeds lower than 0.2m/s, to prevent surging.			
	For no-stick-slip versions use no-lubricated air only			

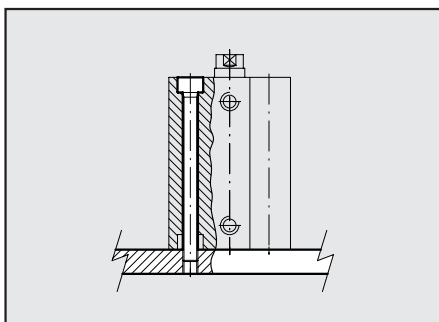
COMPONENTS

- ① PISTON ROD: C45 steel or stainless steel, thick chromed
- ② HEAD: Ø 12 to 25 nichel-plated brass
Ø 32 to 100 anodised aluminium
- ③ PISTON ROD GASKET: polyurethane, NBR or FKM/FPM
- ④ GUIDE BUSHING: steel strip with bronze and PTFE insert
- ⑤ BARREL: drawn anodised aluminium alloy
- ⑥ HALF-PISTON:
Ø 12 to 63 acetal resin
Ø 80 to 100 in aluminium with PTFE guide pad
- ⑦ PISTON GASKET :polyurethane , NBR or FKM/FPM
- ⑧ MAGNET: Ø 12 to 25 in neodymium - Ø 32 to 100 in plasto-ferrite
- ⑨ Static O-rings: NBR or FKM/FPM



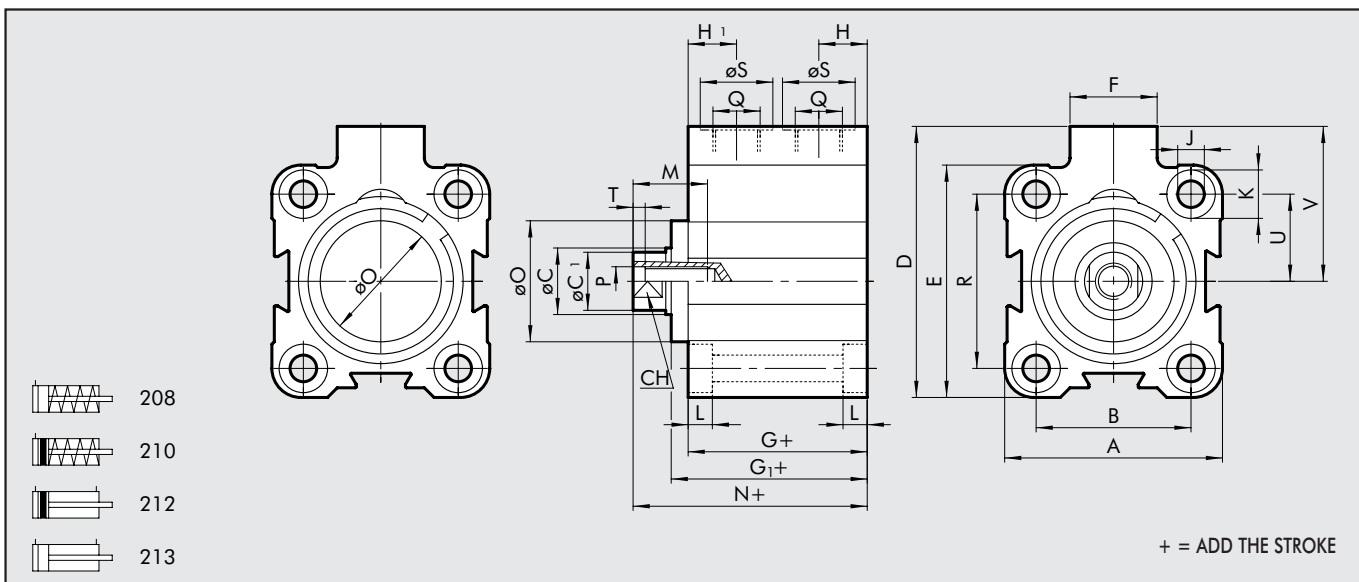


FIXING METHOD FOR SSC CYLINDERS



Fix directly from above using long through-screws or tie rods. Non-magnetic stainless steel must be used (e.g. AISI 304).

DIMENSIONS STANDARD VERSIONS



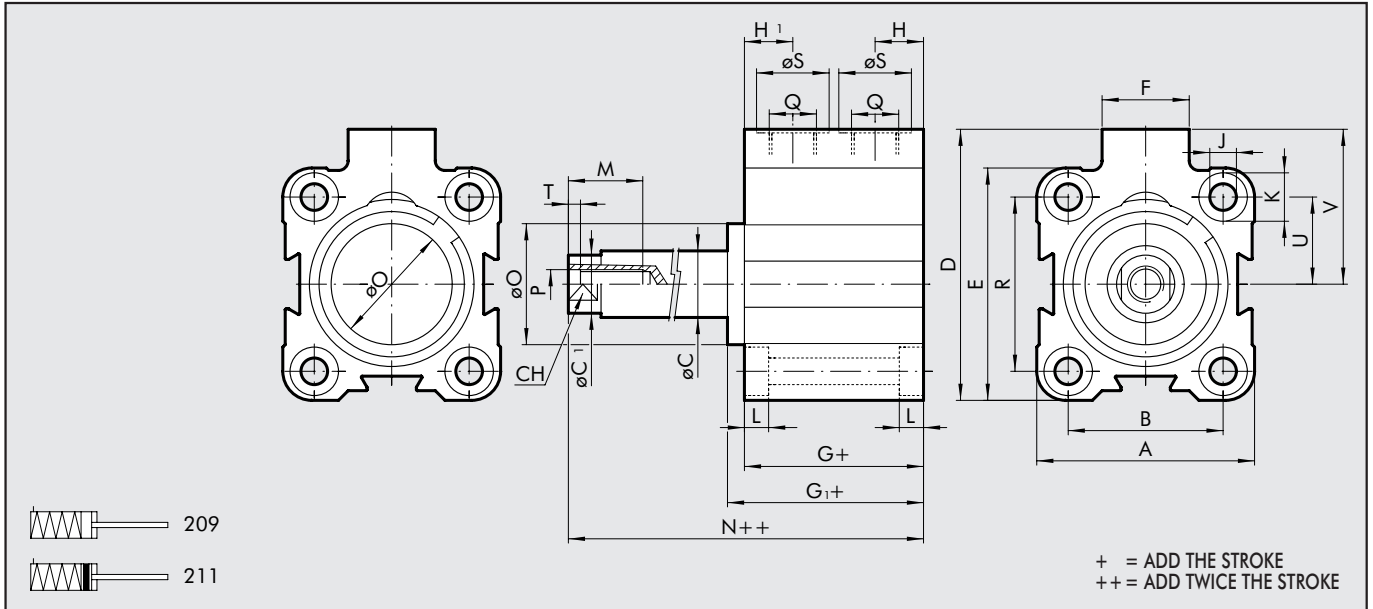
DIMENSIONS OF DOUBLE ACTING

Ø	A	B	øC	øC ₁	D	E	F	G	G ₁	H	H ₁	J	K	L	M	N	øO	P	Q	R	øS	CH	T	U	V
12	23.5	13	6	5.5	28	26	11	32.5	-	6.5	10.5	3.7	6	3.7	7	38	-	M3	M5	-	8	5	2	9.5	16.5
16	28	20	8	7.5	33	28	11	33	-	6.7	10.5	3.7	6	3.7	10	37.5	-	M5	M5	20	8	7	2	10	19
20	32	22	10	9	37	32	11	32	-	6.5	10.5	4.6	7.5	4.6	10	36.5	-	M5	M5	22	8	8	2	11	21
25	37	26	10	9	47.5	39	18	33	36.5	8.5	8.5	4.6	7.5	4.6	10	42.5	20	M5	G1/8	28	15	8	2	14	28
32	45	32	12	11	56	48	18	37	40.8	10	10	5.5	10	5.7	15	48.3	25	M6	G1/8	36	15	10	2.5	18	32
40	54.5	40	12	11	62.7	54.5	18	39.5	44.7	10	10	5.5	10	5.7	15	53.2	30	M6	G1/8	40	15	10	2.5	20	35.5
50	66	50	16	15	73	66	18	39.5	46.2	11	11	6.6	11	6.8	18	53.2	35	M8	G1/8	50	15	13	3.5	25	40
63	80	62	16	15	88	80	23	42	48.7	12	12	9	15	9	18	57.7	35	M8	G1/8	62	15	13	3.5	31	48
80	100	82	20	19	110	100	26	57	67.2	14	14	9	15	9	18	75.2	44	M10	G1/4	82	19	17	4	41	60
100	124	103	25	24	134	124	26	64	74.7	15	15	11	18	11	20	84.3	56	M12	G1/4	103	19	22	5	51.5	72

DIMENSIONS OF SINGLE-ACTING, RETRACTED PISTON ROD

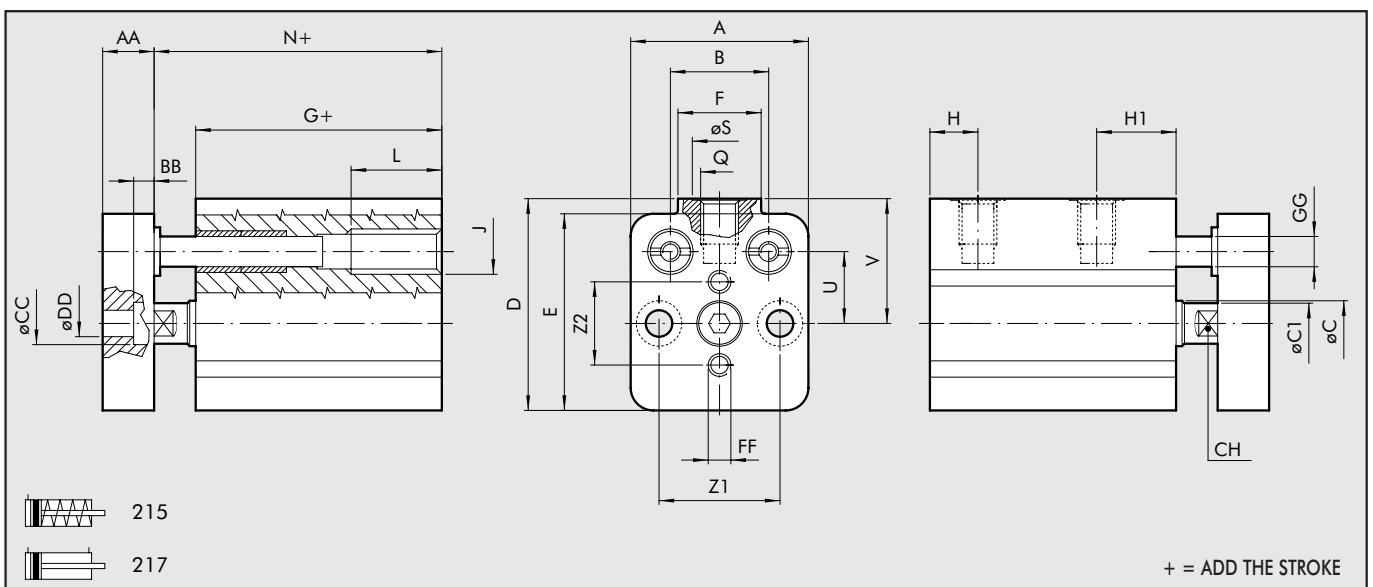
Ø	stroke	A	B	øC	øC ₁	D	E	F	G	G ₁	H	H ₁	J	K	L	M	N	øO	P	Q	R	øS	CH	T	U	V
12	5÷25	23.5	13	6	5.5	28	26	11	32.5	-	6.5	10.5	3.7	6	3.7	7	38	-	M3	M5	-	8	5	2	9.5	16.5
16	5÷25	28	20	8	7.5	33	28	11	33	-	6.7	10.5	3.7	6	3.7	10	37.5	-	M5	M5	20	8	7	2	10	19
20	5÷25	32	22	10	9	37	32	11	32	-	6.5	10.5	4.6	7.5	4.6	10	36.5	-	M5	M5	22	8	8	2	11	21
25	5÷25	37	26	10	9	47.5	39	18	33	36.5	8.5	8.5	4.6	7.5	4.6	10	42.5	20	M5	G1/8	28	15	8	2	14	28
32	5÷25	45	32	12	11	56	48	18	37	40.8	10	10	5.5	10	5.7	15	48.3	25	M6	G1/8	36	15	10	2.5	18	32
	>25÷50								45	48.8							56.3									
40	5÷25	54.5	40	12	11	62.7	54.5	18	39.5	44.7	10	10	5.5	10	5.7	15	53.2	30	M6	G1/8	40	15	10	2.5	20	35.5
	>25÷50								47.5	52.7							61.2									
50	5÷25	66	50	16	15	73	66	18	39.5	46.2	11	11	6.6	11	6.8	18	53.2	35	M8	G1/8	50	15	13	3.5	25	40
	>25÷50								47.5	54.2							61.2									
63	5÷25	80	62	16	15	88	80	23	42	48.7	12	12	9	15	9	18	57.7	35	M8	G1/8	62	15	13	3.5	31	48
	>25÷50								50	56.7							65.7									

DIMENSIONS OF SINGLE-ACTING EXTENDED PISTON ROD



Ø	stroke	A	B	øC	øC ₁	D	E	F	G	G ₁	H	H ₁	J	K	L	M	N	øO	P	Q	R	øS	CH	T	U	V
12	5÷25	23.5	13	6	5.5	28	26	11	32.5	-	6.5	10.5	3.7	6	3.7	7	38	-	M3	M5	-	8	5	2	9.5	16.5
16	5÷25	28	20	8	7.5	33	28	11	33	-	6.7	10.5	3.7	6	3.7	10	37.5	-	M5	M5	20	8	7	2	10	19
20	5÷25	32	22	10	9	37	32	11	32	-	6.5	10.5	4.6	7.5	4.6	10	36.5	-	M5	M5	22	8	8	2	11	21
25	5÷25	37	26	10	9	47.5	39	18	33	36.5	8.5	8.5	4.6	7.5	4.6	10	42.5	20	M5	G1/8	28	15	8	2	14	28
32	5÷25	45	32	12	11	56	48	18	37	40.8	10	10	5.5	10	5.7	15	48.3	25	M6	G1/8	36	15	10	2.5	18	32
	>25÷50								45	48.8							56.3									
40	5÷25	54.5	40	12	11	62.7	54.5	18	39.5	44.7	10	10	5.5	10	5.7	15	53.2	30	M6	G1/8	40	15	10	2.5	20	35.5
	>25÷50								47.5	52.7							61.2									
50	5÷25	66	50	16	15	73	66	18	39.5	46.2	11	11	6.6	11	6.8	18	53.2	35	M8	G1/8	50	15	13	3.5	25	40
	>25÷50								47.5	54.2							61.2									
63	5÷25	80	62	16	15	88	80	23	42	48.7	12	12	9	15	9	18	57.7	35	M8	G1/8	62	15	13	3.5	31	48
	>25÷50								50	56.7							65.7									

DIMENSIONS OF Ø 12 ANTI-ROTATION

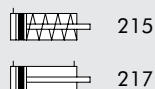
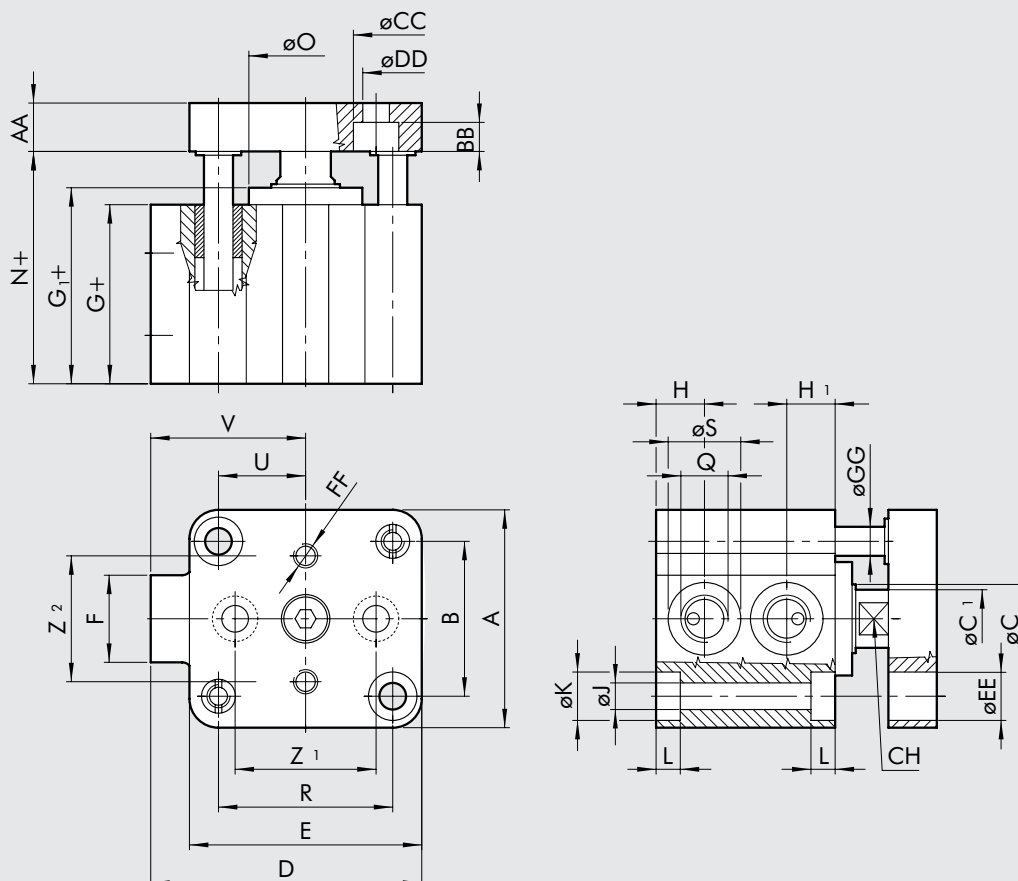


Ø	A	B	øC	øC ₁	D	E	F	G	H	H ₁	J	L	N	Z ₁	Z ₂	Q	øS	U	V	AA	BB	øCC	øDD	FF	øGG
12	23.5	13	6	5.5	28	26	11	32.5	6.5	10.5	M6	12	38	16	11	M5	8	9.5	16.5	8	3.5	6	3.5	M3	4



DIMENSIONS OF Ø 16 TO Ø 100 ANTI-ROTATION

1

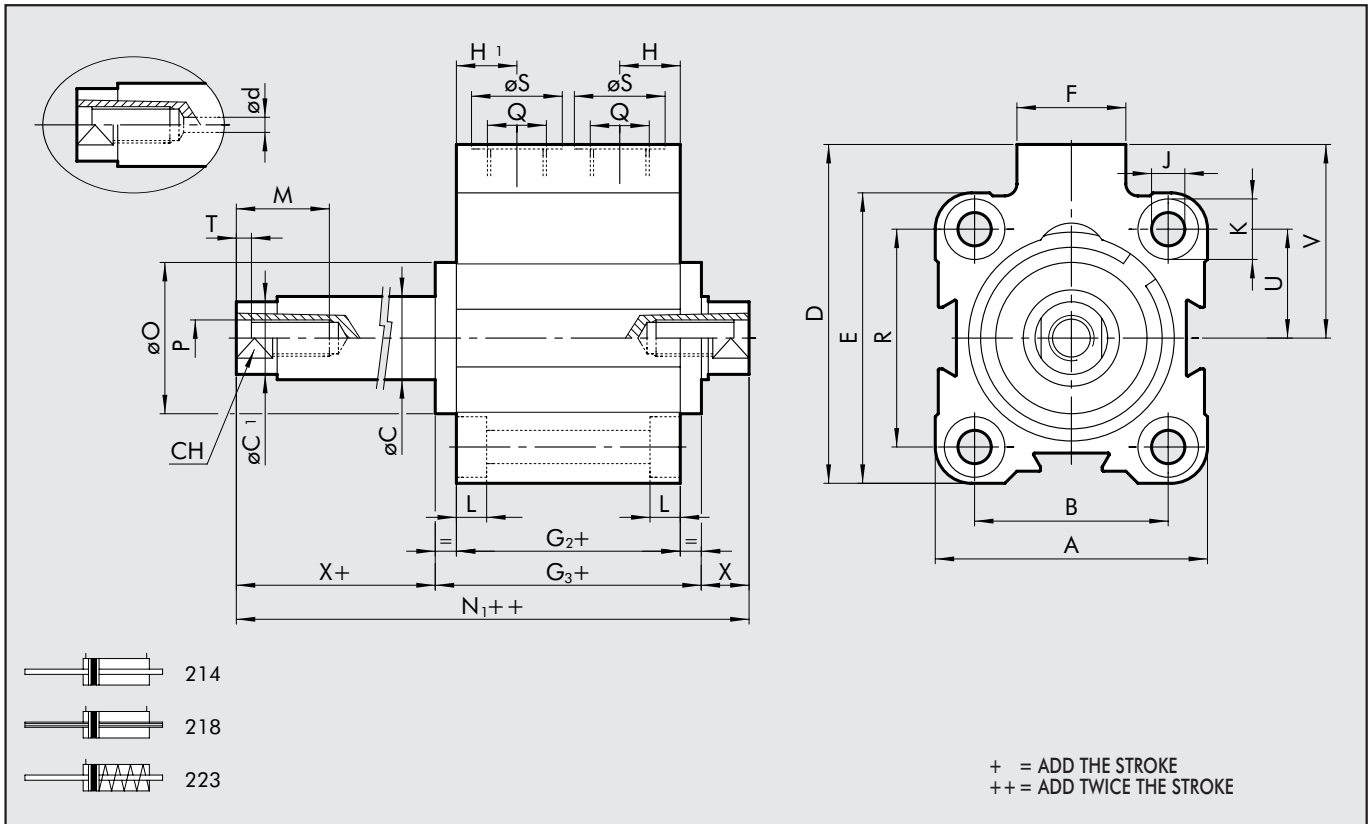


+ = ADD THE STROKE

Ø	A	B	øC	øC ₁	D	E	F	G	G ₁	H	H ₁	J	K	L	N	Z ₁	Z ₂	Q	R	øS	CH	U
16	28	20	8	7.5	33	28	11	33	-	6.7	10.5	3.7	6	3.7	37.5	20	15	M5	20	8	7	10
20	32	22	10	9	37	32	11	32	-	6.5	10.5	4.6	7.5	4.6	36.5	22	18	M5	22	8	8	11
25	37	26	10	9	47.5	39	18	33	36.5	8.5	8.5	4.6	7.5	4.6	42.5	22	22	G1/8	28	15	8	14
32	45	32	12	11	56	48	18	37	40.8	10	10	5.5	10	5.7	48.3	26	26	G1/8	36	15	10	18
40	54.5	40	12	11	62.7	54.5	18	39.5	44.7	10	10	5.5	10	5.7	53.2	34	34	G1/8	40	15	10	20
50	66	50	16	15	73	66	18	39.5	46.2	11	11	6.6	11	6.8	53.2	43	43	G1/8	50	15	13	25
63	80	62	16	15	88	80	23	42	48.7	12	12	9	15	9	57.7	55	55	G1/8	62	15	13	31
80	100	82	20	19	110	100	26	57	67.2	14	14	9	15	9	75.2	70	70	G1/4	82	19	17	41
100	124	103	25	24	134	124	26	64	74.7	15	15	11	18	11	84.3	94	94	G1/4	103	19	22	51.5

Ø	V	AA	BB	øCC	øDD	øEE	FF	øCG	øO
16	19	8	3.5	6	3.5	6	M3	4	-
20	21	8	5	7.5	4.5	7.5	M4	6	-
25	28	8	5	7.5	4.5	8	M4	6	20
32	32	10	6	10	5.5	10	M5	8	25
40	35.5	10	6	10	5.5	10	M5	8	30
50	40	12	7	11	6.5	11	M6	10	35
63	48	12	9	14	9	15	M6	10	35
80	60	14	9	14	9	15	M8	12	44
100	72	17	9	14	9	18	M8	12	56

DIMENSIONS OF THROUGH-ROD



DIMENSION OF DOUBLE ACTING THROUGH-ROD AND PERFORATED THROUGH-ROD

Ø	A	B	øC	øC ₁	D	ød**	E	F	G ₂	G ₃	H	H ₁	J	K	L	M	N ₁	øO	P	Q	R	øS	CH	T	U	V	X*
12	23.5	13	6	5.5	28	-	26	11	36.7	-	10.5	10.5	3.7	6	3.7	7	47.7	-	M3	M5	-	8	5	2	9.5	16.5	5.5
16	28	20	8	7.5	33	-	28	11	36.8	-	10.5	10.5	3.7	6	3.7	10	45.8	-	M5	M5	20	8	7	2	10	19	4.5
20	32	22	10	9	37	1.5	32	11	36	-	10.5	10.5	4.6	7.5	4.6	10	45.0	-	M5	M5	22	8	8	2	11	21	4.5
25	37	26	10	9	47.5	1.5	39	18	35.7	42.7	8.5	8.5	4.6	7.5	4.6	10	54.7	20	M5	G1/8	28	15	8	2	14	28	6
32	45	32	12	11	56	2.5	48	18	37	44.5	10	10	5.5	10	5.7	15	59.5	25	M6	G1/8	36	15	10	2.5	18	32	7.5
40	54.5	40	12	11	62.7	2.5	54.5	18	39.5	49.9	10	10	5.5	10	5.7	15	66.9	30	M6	G1/8	40	15	10	2.5	20	35.5	8.5
50	66	50	16	15	73	2.5	66	18	39.5	52.9	11	11	6.6	11	6.8	18	66.9	35	M8	G1/8	50	15	13	3.5	25	40	7
63	80	62	16	15	88	4	80	23	42	55.4	12	12	9	15	9	18	73.4	35	M8	G1/8	62	15	13	3.5	31	48	9
80	100	82	20	19	110	5	100	26	57	77.4	14	14	9	15	9	18	93.4	44	M10	G1/4	82	19	17	4	41	60	8
100	124	103	25	24	134	6	124	26	64	85.4	15	15	11	18	11	20	104.6	56	M12	G1/4	103	19	22	5	51.5	72	9.6

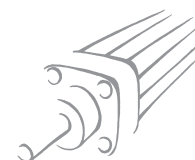
*for Ø12, Ø16, Ø20: (N₁++) = (G₂+) + (X) + (X+)

**column for perforated through-rod only

DIMENSION OF SINGLE-ACTING THROUGH-ROD

Ø	stroke	A	B	øC	øC ₁	D	E	F	G ₂	G ₃	H	H ₁	J	K	L	M	N ₁	øO	P	Q	R	øS	CH	T	U	V	X*
12	5÷25	23.5	13	6	5.5	28	26	11	36.7	-	10.5	10.5	3.7	6	3.7	7	47.7	-	M3	M5	-	8	5	2	9.5	16.5	5.5
16	5÷25	28	20	8	7.5	33	28	11	36.8	-	10.5	10.5	3.7	6	3.7	10	45.8	-	M5	M5	20	8	7	2	10	19	4.5
20	5÷25	32	22	10	9	37	32	11	36	-	10.5	10.5	4.6	7.5	4.6	10	45.0	-	M5	M5	22	8	8	2	11	21	4.5
25	5÷25	37	26	10	9	47.5	39	18	35.7	42.7	8.5	8.5	4.6	7.5	4.6	10	57.7	20	M5	G1/8	28	15	8	2	14	28	6
32	5÷25	45	32	12	11	56	48	18	37	44.5	10	10	5.5	10	5.7	15	59.5	25	M6	G1/8	36	15	10	2.5	18	32	7.5
	>25÷50								45	52.5							67.5										7.5
40	5÷25	54.5	40	12	11	62.7	54.5	18	39.5	49.9	10	10	5.5	10	5.7	15	66.9	30	M6	G1/8	40	15	10	2.5	20	35.5	8.5
	>25÷50								47.5	57.9							74.9										8.5
50	5÷25	66	50	16	15	73	66	18	39.5	52.9	11	11	6.6	11	6.8	18	66.9	35	M8	G1/8	50	15	13	3.5	25	40	7
	>25÷50								47.5	60.9							74.9										7
63	5÷25	80	62	16	15	88	80	23	42	55.4	12	12	9	15	9	18	73.4	35	M8	G1/8	62	15	13	3.5	31	48	9
	>25÷50								50	63.4							81.4										9

*for Ø12, Ø16, Ø20: (N₁++) = (G₂+) + (X) + (X+)

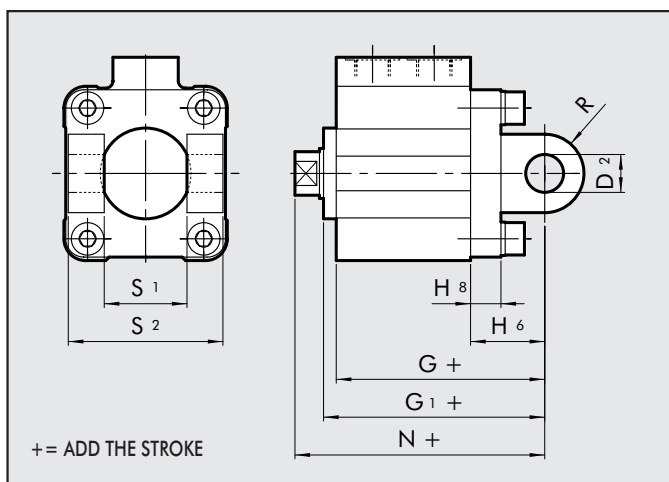


KEY TO CODES

CYL	2	1	2	0	4	0	0	0	1	0	C	P			
	TYPE			BORE		STROKE									
■ 208	Single-acting retracted rod, non-magnetic			0	Magnetic	12	For the maximum suppliable strokes, look at the technical data					C	C45 chrome piston rod, technopolymer piston Ø 12÷63 mm	P	polyurethane
■ 209	Single-acting extended rod, non-magnetic			S	Non-magnetic	16									
■ 210	Single-acting, retracted rod			▲ G	No stick slip	25									
■ 211	Single acting, extended rod					32									
■ 212	Double acting, magnetic					40									
■ 213	Double acting, non-magnetic					50									
■ 214	Double acting, through-rod					63									
■ 215	Single-acting, retracted, anti-rotation					80									
▼ 217	Double acting, anti-rotation					◆ 100									
▼ 218	Double acting, perforated through-rod														
■ 221	Oscillating male hinge (up to Ø 63 only)						Z	Stainless steel piston rod aluminium piston (standard Ø 80÷100 mm)							
■ 222	Oscillating female hinge (up to Ø 63 only)														
■ 223	Single-acting, through-rod														

- ◆ In the code of cylinder with letter in fourth position Ø 100 becomes A1
- Available up to Ø63
- ▼ Available from Ø20
- Only available for non-magnetic versions (S) and with aluminium piston (A or Z)
- ▲ For speeds lower than 0.2m/s, to prevent surging. Use no-lubricated air only

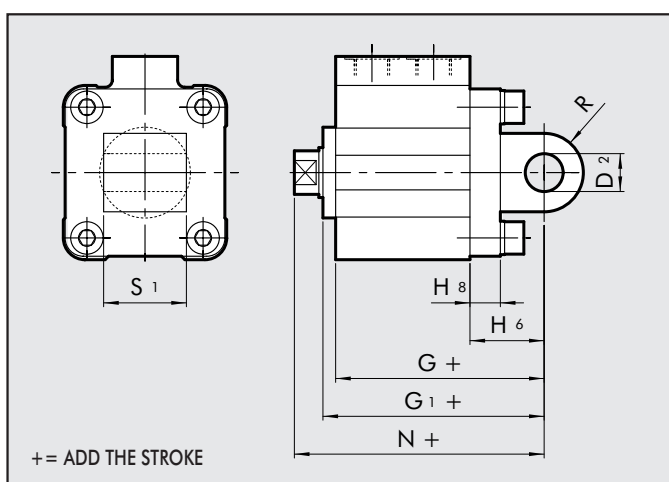
DIMENSIONS: SAME AS 222 VERSION (FEMALE HINGE MOD. B)



Ø	stroke	D ₂	G	G ₁	H ₆	H ₈	N	R	S ₁	S ₂
32	5÷70	10	59	62.8	22	10	70.3	11	26	45
40	5÷70	12	64.5	69.7	25	10	78.2	13	28	52
50	5÷110	12	66.5	73.2	27	12	80.2	13	32	60
63	5÷110	16	74	80.7	32	12	89.7	17	40	70

Note: For other dimensions, refer to the standard version.

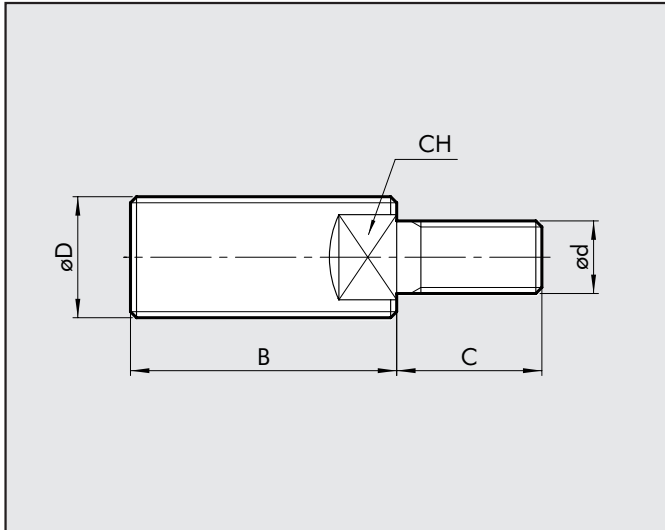
DIMENSIONS: SAME AS 221 VERSION (MALE HINGE MOD. BA)



Ø	stroke	D ₂	G	G ₁	H ₆	H ₈	N	R	S ₁
32	5÷70	10	59	62.8	22	10	70.3	11	26
40	5÷70	12	64.5	69.7	25	10	78.2	13	28
50	5÷110	12	66.5	73.2	27	12	80.2	13	32
63	5÷110	16	74	80.7	32	12	89.7	17	40

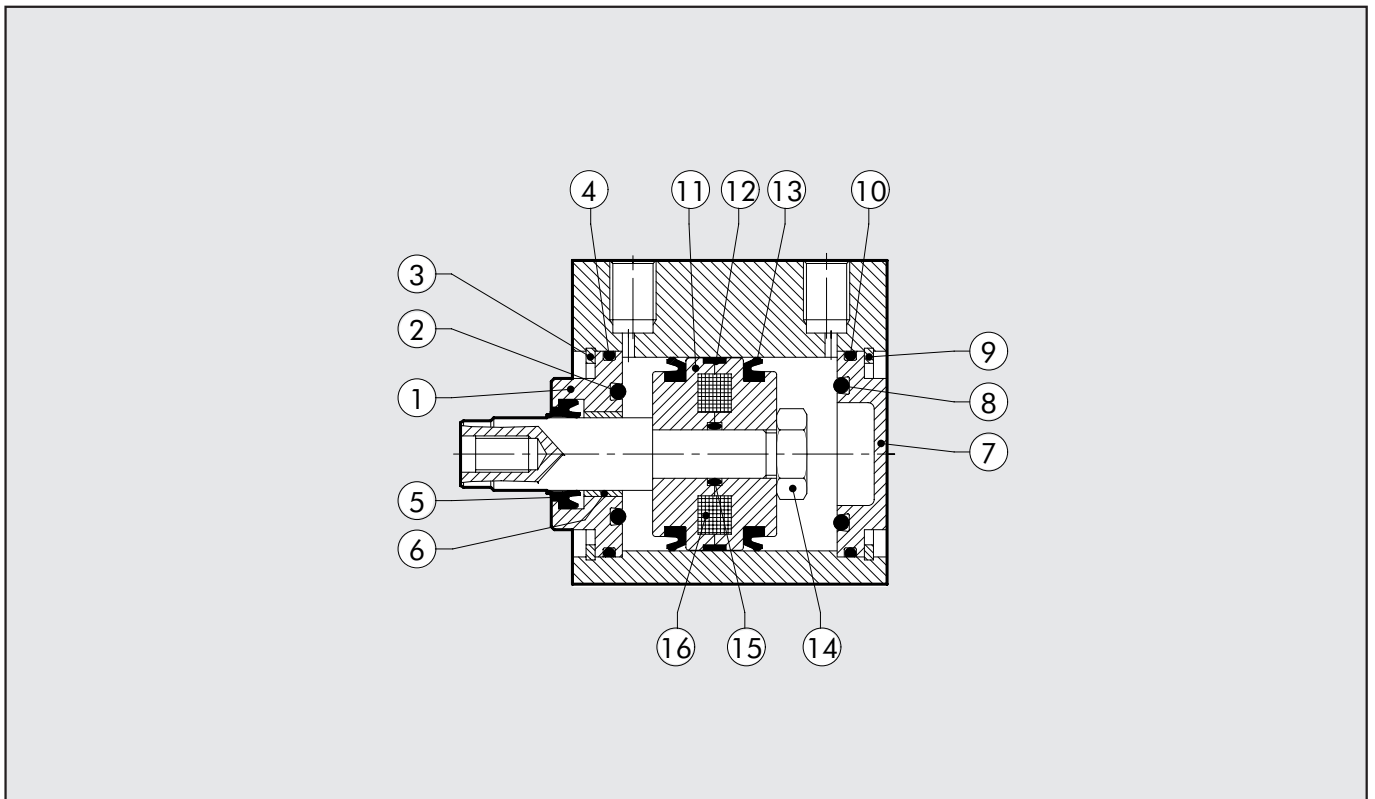
Note: For other dimensions, refer to the standard version.

DIMENSIONS OF MALE NIPPLE FOR PISTON ROD

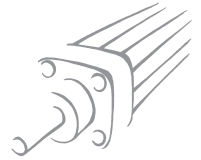


Code	Ø	Ø D	Ø d	B	C	CH	Weight [g]
219001200	12	M6	M3	16	6	4	3
219001600	16	M8	M5	20	9	6	8
219001600	20	M8	M5	20	9	6	8
219002500	25	M10x1.25	M5	22	9	7	12
219003200	32	M10x1.25	M6	22	12	7	14
219004000	40	M12x1.25	M6	24	12	10	14
219005000	50	M16x1.5	M8	32	15	13	20
219005000	63	M16x1.5	M8	32	15	13	20
219008000	80	M20x1.5	M10	40	15	17	96
219010000	100	M20x1.5	M12	40	18	17	102

SPARES FOR SSCY



Type	Parts	Bores	Code
Complete polyurethane front head kit	1-2-3-4-5-6	Ø 12÷100	009 ... 0010
Complete NBR front head kit	1-2-3-4-5-6	Ø 12÷100	009 ... 0011
Complete NBR rear head kit	7-8-9-10	Ø 12÷100	009 ... 0015
Complete polyurethane piston kit	11-12-13-14-15	Ø 12÷100	009 ... 0021
Complete NBR piston kit	11-12-13-14-15	Ø 12÷100	009 ... 0023
Complete set of polyurethane gaskets	2-4-5-8-10-13-15	Ø 12÷100	009 ... 0005
Complete set of NBR gaskets	2-4-5-8-10-13-15	Ø 12÷100	009 ... 0006
Complete polyurethane front+rear head kit + piston	1-2-3-4-5-6-7-8-9-10-11-12-13-14-15	Ø 12÷100	009 ... 0031
Complete NBR front+rear head kit + piston	1-2-3-4-5-6-7-8-9-10-11-12-13-14-15	Ø 12÷100	009 ... 0033
Magnet	16	Ø 12÷100	009 ... 0001



ACCESSORIES: MAGNETIC SENSORS

1

	Code	Version	Bore	Model
	W0950000252	Reed connector + bracket - CB	12-100	REED SENSOR DCB 2C-425
	W0950000253	Hall PNP connector + bracket - CB	12-100	SENSOR AND HALL PNP DCB3-N225

PROXIMITY SENSORS – TECHNICAL DATA

Type		REED+VARISTOR+LED 2 wires	HALL VERSION PNP/NPN 3 wires
Contact		REED+VARISTOR+LED NO	HALL EFFECT NO PNP/NPN
Max AC/DC voltage	V	3 to 48 (DC): 3 to 110 (AC)	6-24 V DC
Max current at 25°C	mA	300	250
Power with inductive load	VA	8	-
Power with resistive load	Watt	15	6
Switch-on time	m sec	0.5	0.8
Switch-off time	m sec	0.1	3
Switch-on point	Gauss	110	15
Switch-off point	Gauss	60	8
Operating life	-	10 ⁷ impulses	10 ⁹ impulses
Contact resistance		0.1	-
Cable length	m	2.5	2.5
Cable cross section	mm ²	0.35	0.35
Cable material		Soft PVC	Soft PVC

Circuit			
	DC		Version NPN
	AC		Version PNP