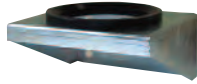




CLAMPS type C

7.1



BRACKETS type MA and SUPPORT RING type AG

7.2



U-BOLTS type U and PLASTIC SADDLES type P

7.3



SINGLE ACCUMULATOR UNIT type BA1S

7.4

### 7.1.1 DESCRIPTION

The mounting clamps can be used with all type of accumulators. Secure design provides independent mounting on installations. Rubber insert provided to reduce mechanical vibration, to compensate for shell manufacturing tolerances and to not lie with outward stresses on the connection.

The clamp type C90 has one piece construction with one central screw. All other types have a two pieces construction for easy installation and removal while improving the strength to weight ratio.

We recommend using a single clamp when the length of the accumulator is less than twice the diameter.

For greater lengths, we recommend using two clamps or one clamp and one bracket with support ring.

### 7.1.2 CONSTRUCTION

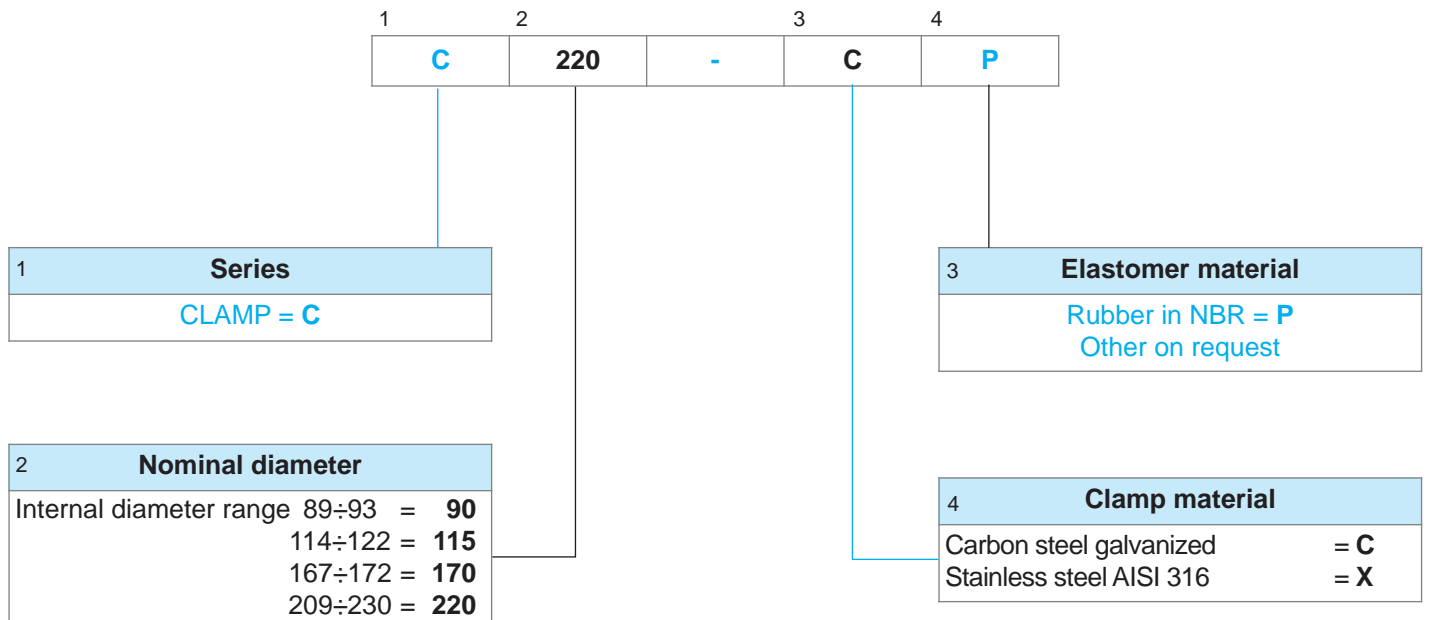
The clamps are manufactured of galvanized carbon steel in compliance to directive 2002/95/CE (RoHS) for resist to the corrosion, on request they can be supplied in stainless steel version.

The rubber insert is black NBR rubber nitrile at 80 Shore A.



7.1a

### 7.1.3 ORDER CODE



## 7.1.4 DIMENSIONS

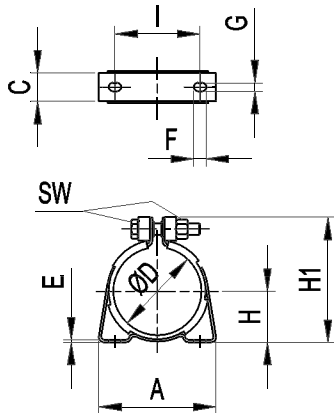


fig. I

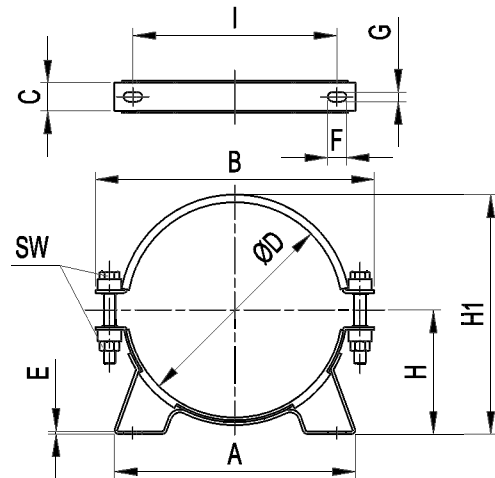


fig. II

7.1b

Clamp nominal size	Clamp order code	Fig.	A mm	B mm	C mm	Ø D mm	E mm	F mm	G mm	H mm	H1 mm	I mm	SW mm	Acc. dry weight kg
90	C90-**/*	II	125	-	30	89+93	2.5	13	9	53 ÷ 55 (9 + 1/2 ØD)	132.5	90	18	0,65
115	C115-**/*	II	135	195	30	114+122	3	13	9	66 ÷ 70 (9 + 1/2 ØD)	131+139 (17+ØD)	100	18	0,85
170	C170-**/*	II	185	250	30	167+172	3	13	9	95.5 ÷ 98 (12 + 1/2 ØD)	187 ÷ 192 (20+ØD)	146	18	1,1
220	C220-**/*	II	255	295	30	209+230	3	20	10	117 ÷ 127.5 (12.5 + 1/2 ØD)	230 ÷ 251 (21+ØD)	216	18	1,35

7.1c

## 7.1.5 USAGE TABLE

Clamp nominal size	Int. Ø dimension	Bladder accumulator type	Piston accumulator type	Diaphragm accumulator type	Additional bottle type
90	89 ÷ 93	AS / ASP 0.7 ASL 0.7	-	AMS 0.32 - 0.75	
115	114+122	AS / ASP 1 - 1.5 - 3 ASL / AST 1 - 1.5 - 3 ASB 1.5 - 3 ASBL / ASBT 1.5 - 3 ASA 1/4	-	AM 0.5 - 0.75 - 1.5 - 2.5 AML 0.8 - 1.5	ASS 3 ASSA 1/4
170	167+172	AS / ASP 5 ASL / AST 5 ASB 1.5 - 3 ASBL / ASBT 1.5 - 3 ASA 1	-	-	ASS 5 ASSA 1
220	209+230	AS / ASP 10 ÷ 55 ASL / AST 10 ÷ 55 ASB 10 ÷ 55 ASBL / ASBT 10 ÷ 55 ASA 2.5 ÷ 15	AP ****/* 180	-	B 52-75 ASS 10 ÷ 55 ASSA 2.5 ÷ 15 AB ****/* 180

7.1d

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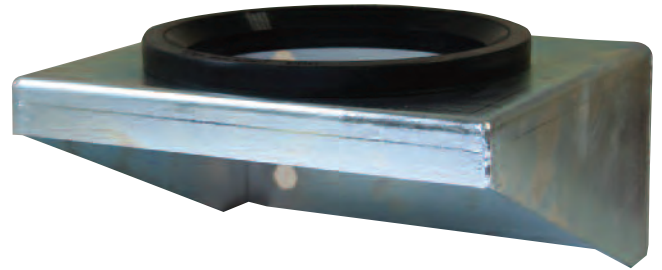
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## 7.2.1 DESCRIPTION

Brackets can be used with all type of accumulators. Secure design provides independent mounting on installations.

Rubber insert provided to reduce mechanical vibration, to compensate for shell manufacturing tolerances and to not lie with outward stresses on the connection.

The brackets can be easily bolted to the system. We recommend using a bracket and support ring with one or two clamps or U-bolts.



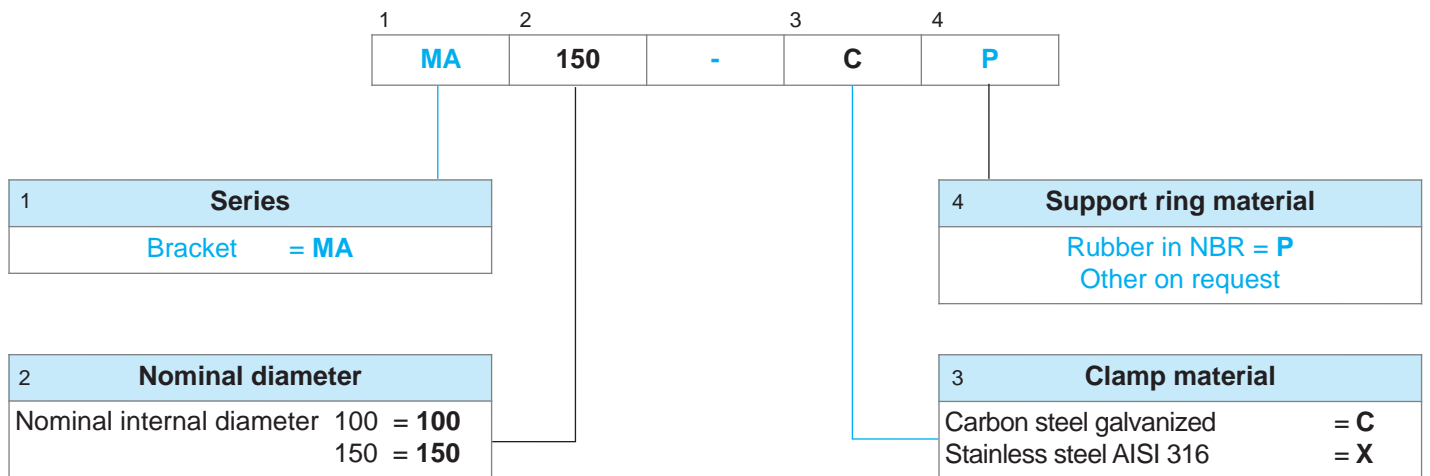
7.2a

## 7.2.2 CONSTRUCTION

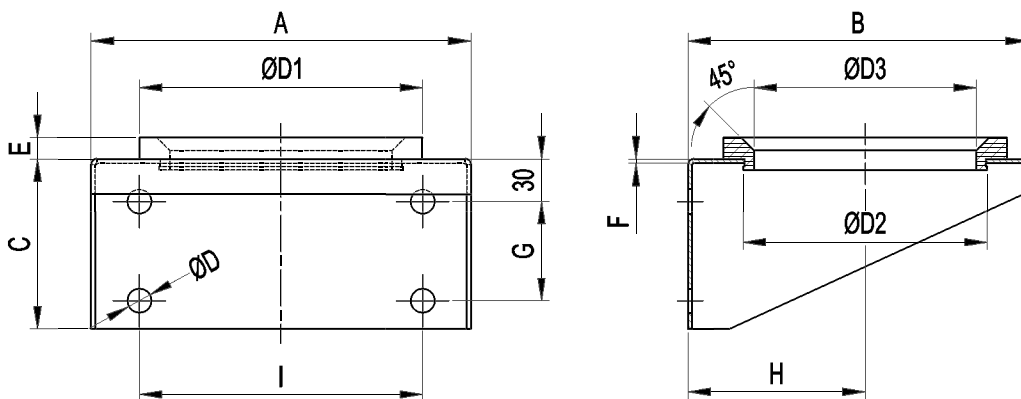
All the brackets are manufactured of galvanized carbon steel in compliance to directive 2002/95/CE (RoHS) for resist to the corrosion, on request they can be supplied in stainless steel version.

The support ring is manufactured of black NBR rubber nitrile at 85 Shore A.

## 7.2.3 BRACKET ORDER CODE



## 7.2.4 BRACKET DIMENSIONS



7.2b

Bracket nominal size	A	B	C	ØD	ØD1	ØD2	ØD3	E	F	G	H	I	Weight (Kg)
100	200	175	90	11	140	120	90	10	3	40	96	140	1,5
150	260	232	120	17	200	170	150	15	3	70	125	200	3,6

7.2c

## 7.2.5 SUPPORT RING ORDER CODE

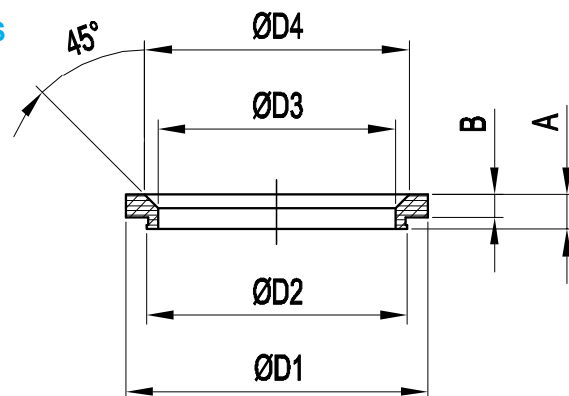


1	<b>Series</b>
	Support ring = <b>AG</b>

2	<b>Nominal diameter</b>
	Nominal internal diameter 100 = <b>100</b> 150 = <b>150</b>

3	<b>Support ring material</b>
	Rubber in NBR = <b>P</b> Other on request

## 7.2.6 SUPPORT RING DIMENSIONS



7.2e

Support Ring nominal size	A	B	øD1	øD2	øD3	øD4	Weight (Kg)
100	18	10	140	120	90	112	0,13
150	23	15	200	170	150	175	0,22

7.2f

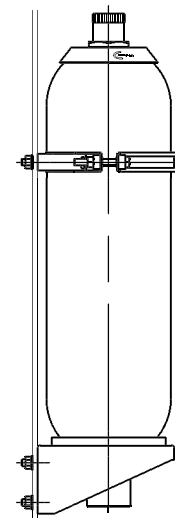
## 7.2.7 USAGE TABLE

Bracket nominal size	Supporting ring nominal size	Bladder accumulator type	Additional bottle type
100	100	AS / ASP 5 ASL / AST 5 ASB 1.5-3 ASBL / ASBT 1.5-3 ASA 1	ASS 5 ASSA 1
150	150	AS / ASP 10 + 55 ASL / AST 10 + 55 ASB 10 + 55 ASBL / ASBT 10 + 55 ASA 2.5 + 15	B 52-75 ASS 10 + 55 ASSA 2.5 + 15 AB */**/* 180

7.2g

## 7.2.8 MOUNTING

Example for mounting.



7.2h

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### 7.3.1 DESCRIPTION

Round U-bolts clamp with plastic saddles can be used with all type of accumulators.

Secure design provides independent mounting on installations. The plastic saddle provided to reduce mechanical vibration, to compensate for shell manufacturing tolerances and to not lie with outward stresses on the connection.

We recommend using a single U-bolt when the length of the accumulator is less than twice the diameter. For greater lengths, we recommend using two or three U-bolts with saddles.

### 7.3.2 CONSTRUCTION

The all U-bolts are manufactured of galvanized carbon steel in compliance to directive 2002/95/CE (RoHS) for resist to the corrosion, on request they can be supplied in stainless steel version.

The U-bolts are supplied with two hex nuts UNI 5588 CLASS 8 A 2-70 and two washer UNI6592 class 100 HV.

The plastic saddles are manufactured of green polypropylene.



### 7.3.3 U-BOLT ORDER CODE



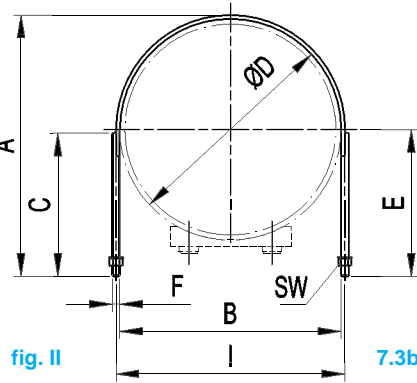
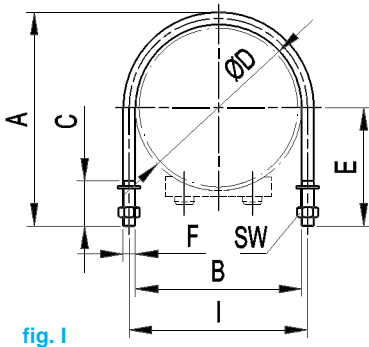
7.3a

1	<b>Series</b>
	U - bolt = <b>U</b>

3	<b>Material</b>
	Carbon steel galvanized = <b>C</b>
	Stainless steel AISI 316 = <b>X</b>

### 7.3.4 U-BOLT DIMENSIONS

2	<b>Nominal diameter</b>
	Nominal internal diameter 115 = <b>115</b>
	130 = <b>130</b>
	168 = <b>168</b>
	220 = <b>220</b>
	312 = <b>312</b>
	420 = <b>420</b>
	585 = <b>585</b>



U-Bolt nominal size	fig.	A	B	C	øD	E	F	I	SW	Weight (Kg)
115	I	149	115	35	115	84	M8	123	13	0,12
130	I	177	140	35	140	99	M8	148	13	0,15
168	I	211	168	45	168	118	M10	178	17	1,74
220	I	282	220	60	220	157	M16	236	24	2,75
312	I	399	324	70	324	217	M20	344	30	2,16
420	I	475	425	75	425	298	M20	445	30	3
585	II	611	585	75	585	308	M20	605	30	3,78

7.3.5 PLASTIC SADDLE ORDER CODE

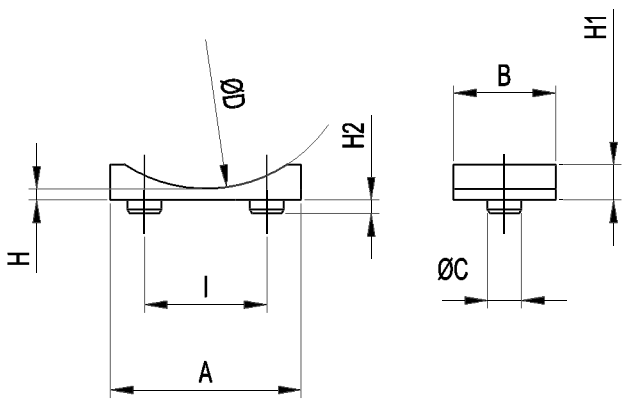


1	<b>Series</b>
	Plastic saddle = <b>P</b>

3	<b>Material</b>
	Green polypropylene = <b>PP</b> Other on request

7.3.6 PLASTIC SADDLE DIMENSIONS

2	<b>Nominal diameter</b>
	Nominal diameter of the tube 114 = <b>115</b> 133 = <b>130</b> 168 = <b>168</b> 219 = <b>220</b> 316 = <b>312</b> 419 = <b>420</b>

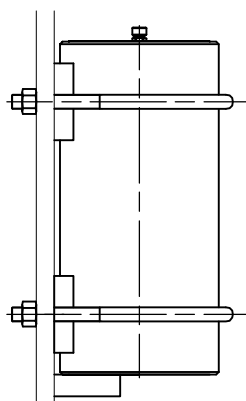


7.3c

Saddles nominal size	A	B	ØC	øD	H	H1	H2	I
115	75	70	15	113	8	17	10	40
130	75	70	15	133	8	17	10	40
168	140	75	25	168	8	26	10	90
220	140	75	25	219	8	26	10	90
312	220	75	30	318	8	32	10	150
420	220	75	30	419	8	32	10	150

7.3.7 MOUNTING

Example for mounting.



7.3c

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### 7.4.1 DESCRIPTION

The single accumulator unit consist of a bladder accumulator (1 ÷ 50 liters or 1/4 ÷ 15 gallons), a safety and shut-off block and the appropriate steel support.

This solution is designed in order to simplify the mounting at the installation site, the connection of the accumulator to the hydraulic system, and in order to reduce the assembling costs.

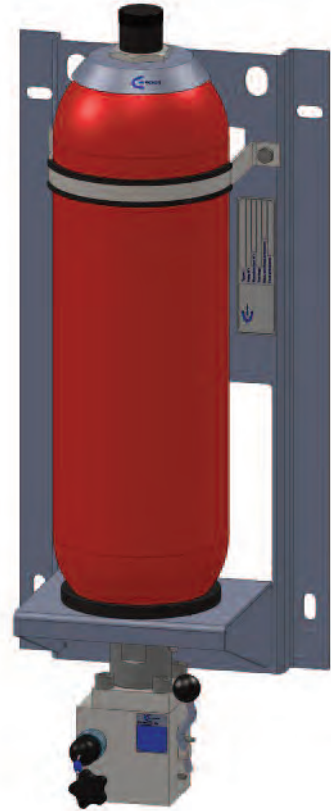
### 7.4.2 CONSTRUCTION

All the single accumulator units are manufactured of galvanized carbon steel in compliance to directive 2002/95/CE (RoHS) for resist to the corrosion, on request they can be supplied in stainless steel version.

DESIGN: Pressure Equipment Directive PED 97/23/EC (others on request)

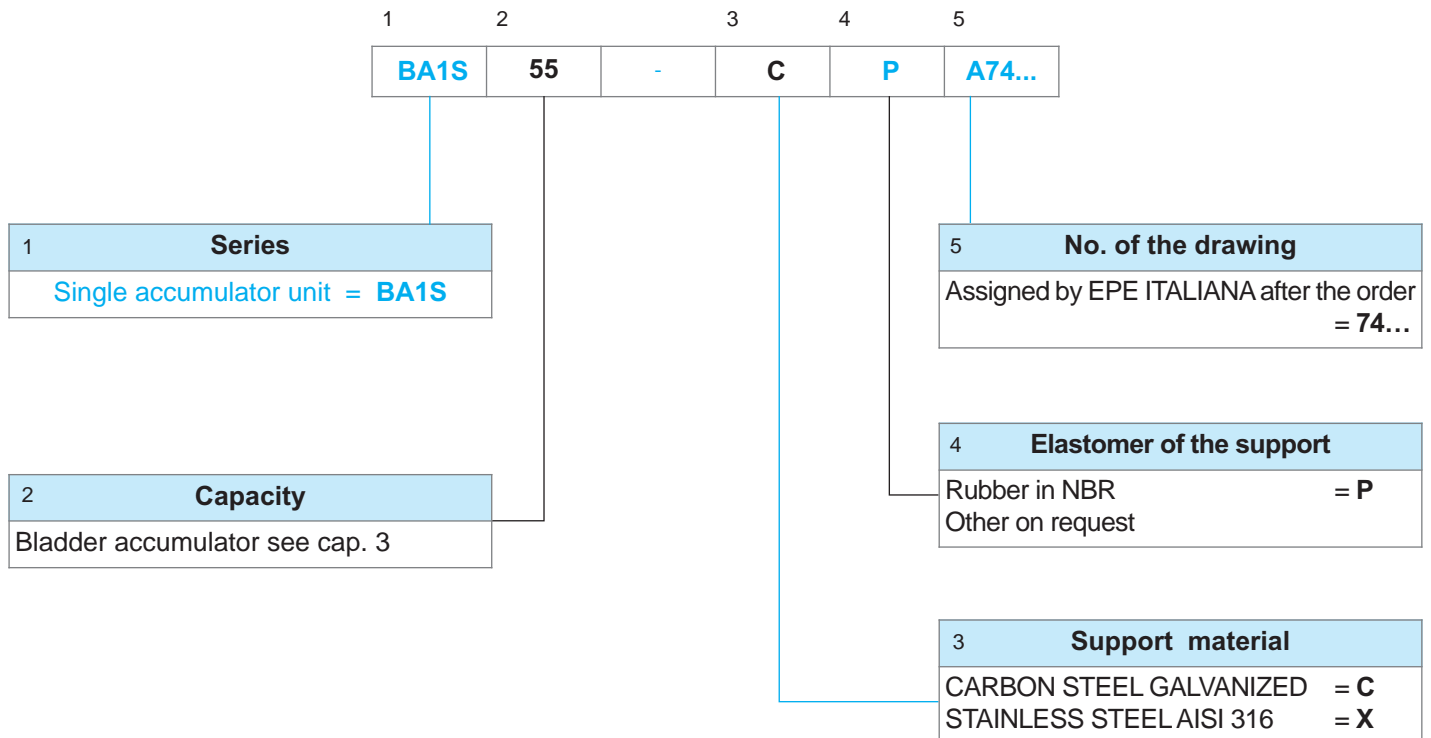
CONSTRUCTION:

- accumulator AS: see section 3.1
- accumulator low pressure type ASB: see section 3.3
- accumulator ASA: see section 3.5
- safety and shut-off block: see section 8 and 9



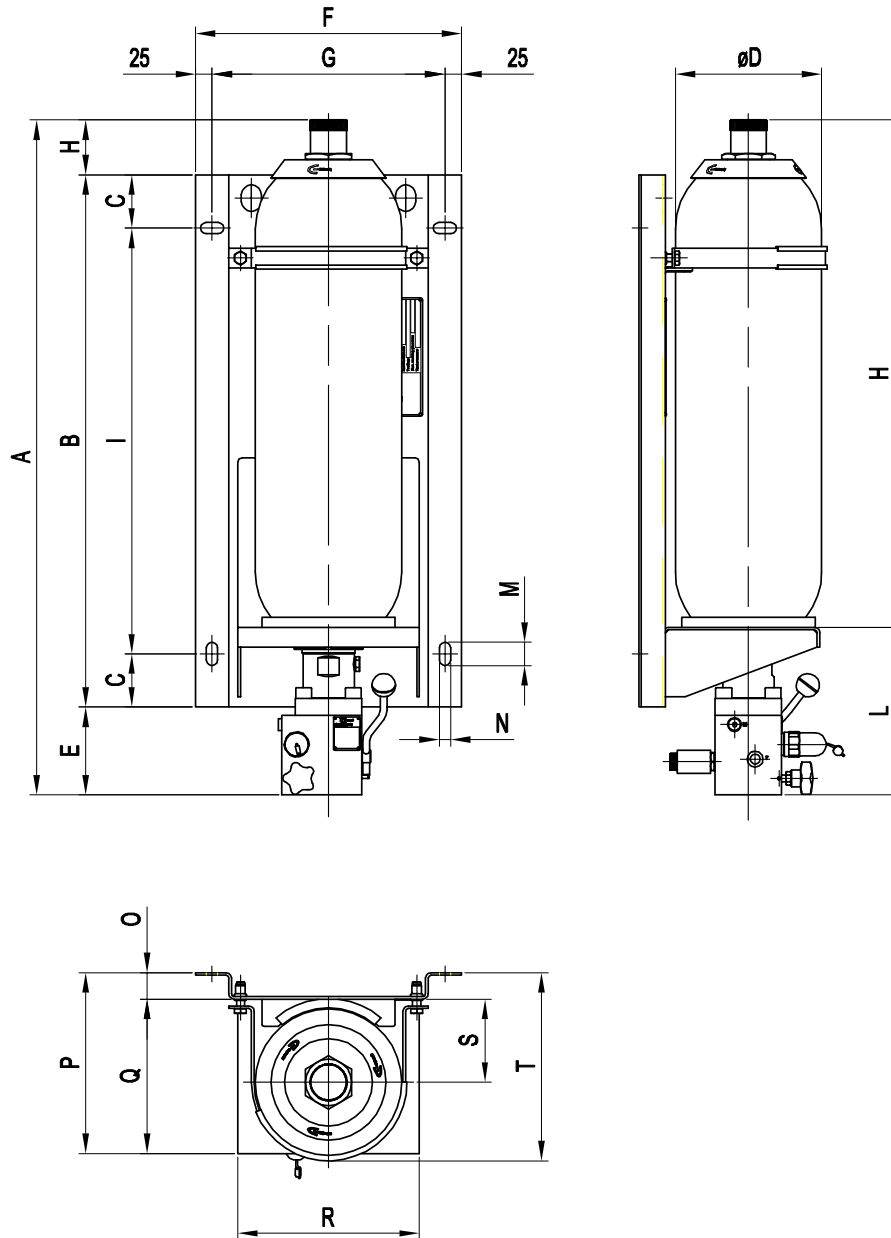
7.4a

### 7.4.3 ORDER CODE





7.4.5 DIMENSIONS



7.4b

Accumulator type	A	B	C	$\phi D$	E	F	G	H	H1	H2	I	L	M	N	O	P	Q	R	S	T	U	V	Z
AS10	707	540	40	220	142	25	350	445	635	120	460	400	25	17	35	262	232	270	125	283	40	4	272
AS15	857	540	40	220	142	175	350	595	785	120	460	400	25	17	35	262	232	270	125	283	40	4	272
AS20	1017	790	60	220	142	85	350	755	945	120	670	400	25	17	35	262	232	270	125	283	40	4	272
AS25	1182	790	60	220	142	250	350	920	1110	120	670	400	25	17	35	262	232	270	125	283	40	4	272
AS35	1532	1360	80	220	142	30	350	1270	1460	120	1200	400	25	17	35	262	232	270	125	283	40	4	272
AS55	2042	1360	80	220	142	540	350	1780	1970	120	1200	400	25	17	35	262	232	270	125	283	40	4	272

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