3.1.1 TECHNICAL DATA

MAX OPERATING PRESSURE (PS): 360 bar

PRESSURE TEST (PT): 1.43 x PS

NOMINAL CAPACITIES:
0.2 - 0.7 - 1 - 1.5 - 3 - 5 - 10 - 15 - 20 - 25 - 35 - 55 litres

WORKING TEMPERATURE: -40 ÷ +150 °C

COMPRESSION RATIO (Po : P2): max. 1 : 4

FLUID VISCOSITY RANGE: 10 ÷ 400 cSt

RECOMMENDED VISCOSITY: 36 cSt

FLUID CONTAMINATION DEGREE:
class 21/19/16 according to ISO 4406/99

BODY MATERIAL:
- carbon steel shell painted with rust inhibitor RAL 8012
- nickel coating 25 - 40 µ
- stainless steel AISI 316L
- internal and external coating with RILSAN th. 0.6 mm

VALVES MATERIAL:
- phosphated or galvanized carbon steel in compliance with Directive 2002/95/EC (RoHS) to resist to corrosion
- stainless steel AISI 316L
- nickel coating 25-40 µ

BLADDER MATERIAL:
- P = Nitrile rubber (NBR)
- F = Low temp. nitrile rubber
- H = Nitrile for hydrocarbons
- K = Hydrogenated nitrile (HNBR)
- B = Butyl (IIR)
- E = Ethylene-propylene (EPDM)
- N = Chloroprene (Neoprene)
- Y = Epichlorohydrin (ECO)
- V = Fluorocarbon (FPM)

See Table 3.1c and/or Chapter 1.5

FILLING VALVE CONNECTION:
- 5/8"-UNF std
- 7/8" UNF
- ¼" BSP

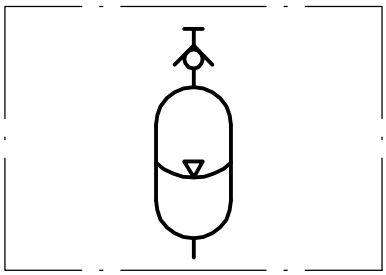
FLUID PORT CONNECTION: see 3.1dc - 3.1df - 3.1eb - 3.1ec - 3.1fb - 3.1fd

FLOW RATE: see Table 3.1db

WEIGHT: see Table 3.1db - 3.1df

3.1a

3.1.2 HYDRAULIC SYMBOL



3.1b

3.1.8 ORDER CODE

1	2	3	4	5	6	7 - 8	9	10	11	12	13	14	15	16
AS	25	P	360	C	R	G4	V	-	8	-	C	0	C	0	R250	/	30

1 Series

Bladder accumulator	= **AS**
Bladder accumulator for fluid gr. 1 (dangerous)	= **ASP**

2 Nominal capacity

0.2 lt	= **0.2**
0.7 lt	= **0.7**
1 lt	= **1**
1.5 lt	= **1.5**
3 lt	= **3**
5 lt	= **5**
10 lt	= **10**
15 lt	= **15**
20 lt	= **20**
25 lt	= **25**
35 lt	= **35**
55 lt	= **55**

3 Bladder material

Nitrile rubber (NBR)	= **P**
Nitrile for low temp.	= **F**
Nitril for hydrocarbons	= **H**
Hydrogenated nitrile (HNBR)	= **K**
Butyl (IIR)	= **B**
Ethylene-propylene (EPDM)	= **E**
Chloroprene (Neoprene)	= **N**
Epichlorohydrin (ECO)	= **Y**
Fluorocarbon (FKM)	= **V**

4 Max working pressure (PS)

See the table on front page

5 Body material

Carbon steel	= **C**
Nickel coated carbon steel 25 µ	= **N**
Nickel coated carbon steel 40 µ	= **M**
Stainless steel	= **X**
Rilsan coating	= **V**

6 Fluid port connection

See the table on front page

7 - 8 Dimension of the connection fluid or 7+8 table

See the table on front page

9 Type of filling valve

Standard filling valve 5/8" UNF thread	= **V**
Standard filling valve with 5/8" UNF thread in stainless steel	= **VX**
Without filling valve (thread hole M12x1.5)	= **V0**
Brass filling valve ¼" BSP	= **V2**
Filling valve 7/8" UNF	= **V4**

10 Test and certification

Factory testing	= **0**
Australian Standard	= **2**
ML (China)	= **3**
RINA	= **4**
Lloyd's Register	= **5**
PED 2014/68/EU (for capacities greater than 1 l)	= **8**
ATEX 2014/34/EU (for surface)	= **9**
ATEX 2014/34/EU (for mine)	= **9M**
DNV	= **10**
EAC (Russia)	= **11**
Algeria passport	= **12**
Standard regulation (NR13) (Brazil)	= **13**
Tunisian passport	= **14**
Bureau Veritas	= **15**
ABS	= **16**
CCS	= **17**
Dosh	= **20**
CRN	= **21**

11 Fluid valve material

Carbon steel	= **C**
Nickel coated carbon steel 25 µ	= **N**
Nickel coated carbon steel 40 µ	= **M**
Stainless steel	= **X**

12 Variants of fluid side

Standard	= **0**
Adapter in stainless steel (R)	= **1**
Button and spring in stainless steel	= **2**
Other numbers/variants to be requested EPE	

13 Gas valve material

Carbon steel	= **C**
Nickel coated carbon steel 25 µ	= **N**
Nickel coated carbon steel 40 µ	= **M**
Stainless steel	= **X**

14 Variants of gas side

Standard	= **0**
Only cap in stainless steel	= **1**
Brass nameplate	= **2**
Other numbers/variants to be requested EPE	

15 Other variants

See the table on front page

16 Precharge pressure (bar)

Standard 30 bar = **0 ÷ 300** (< PS)

Special variants upon request

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4 Max working pressure (PS)

Capacity litres	Carbon steel	Stainless steel
0,2 ÷ 3	**360** (100 only for ASP type)	**150 - 210**
5 ÷ 55	**360** (100 only for ASP type: 210 only for the version with connection L or other pressure related to connections B or U)	**30 - 40 - 60 80 - 150 - 210**
1 ÷ 55	**343** (for Certification RINA [4])	**-**

6 Fluid port connection

For AS0.7÷55	BSP ISO 228 with chamfer for OR (std)	=	**A**
For AS0.2	BSP ISO 228 (std)	=	**G**
For AS3÷55	Metric	=	**M**
For AS0.7÷55	NPT-F	=	**P**
For AS3÷55	internal thread SAE	=	**S**
For AS3÷55	adapter for flange SAE 3000 Psi	=	**L**
For AS3÷55	adapter for flange SAE 6000 Psi	=	**H**
For AS0.7÷55	flange ANSI	=	**B**
For AS0.7÷55	flange UNI - DIN	=	**U**
For AS0.7÷55	square flange	=	**Q**
For AS0.7÷55	adapter *	=	**R**

* assembled on the fluid valve connection type A

7 Dimension of the fluid connection

For the type of connection:

A	(0.7÷1.5 l) ¾"	= **5**
	(3÷5 l) 1" ¼	= **7**
	(10÷55 l) 2"	= **9**
G	(0.2 l) ½"	= **4**
M	(3÷5 l) 40x1.5	= **40/1.5**
	(10÷55 l) 50x1.5	= **50/1.5**
P	(0.7÷1.5 l) ¾"	= **5**
	(3÷5 l) 1" ¼	= **7**
	(10÷55 l) 2"	= **9**
S	(0.7÷1.5 l) 1" 1/16 12UN	= **1 1/16-12**
	(3÷5 l) 1" 5/8 12UN	= **1 5/8-12**
	(10÷55 l) 1" 7/8 12UN	= **1 7/8-12**
L	(3÷5 l) 1" ¼ SAE3000	= **7**
	(10÷55 l)1" ½ SAE 3000	= **8**
	2" SAE 3000	= **9**
H	(3÷5 l) 1" ¼ SAE6000	= **7**
	(10÷55 l)1" ½ SAE 6000	= **8**
	2" SAE 6000	= **9**
B	(0.7÷55 l)	**DIMENSION/RATING**

Former. 1" ANSI 1500 = 1/1500 (Pmax = 250 bar)

U	(0.7÷55 l)	**DN/PN**

Former. DN50 PN100 = 50/100 (Pmax = 100 bar)

Q	(3÷5 l) 1" ¼	= **7**
	(10÷55 l) 2"	= **9**

R	(0.7÷55 l) Blind	=	**0**
R	(0.7÷55 l) internal thread BSP ISO 228	=	**G***
	NPT-F	=	**P***
	BSPT	=	**N***
	SAE	=	**S***
	Metric	=	**M***

*Variant in table 8

15 Other variants

Adapter + rupture disc set at xxx bar	= **Rxxx**

(see Section 8.2)

Adapter with connection for pressure gauge + rupture disk	= **RxxxM**
Adapter + Safety valve type VS224X set at xxx bar	= **Vxxx**
Adapter + Needle Valve of ¼" BSP	= **EG2**
Adapter + Stainless steel needle Valve of ¼ BSP	= **EG2X**
Adapter + excluding device with with full scale pressure gauge of xxx bar	= **EMxxx**
Adapter + excluding device of 90° with full scale pressure gauge of xxx bar	= **ELMxxx**
Adapter + safety valve VS11	= **T11**
Adapter + safety valve VS16	= **T16**
Adapter + shut off 2-way valve	= **S2**
Adapter + shut off 3-way valve	= **S3**
Flushing with degree of contamination ≤ ...class	= **Fx**
75-80 µ thick polyurethane paint with colour to be specified	= **Wxxx**
Off-shore paint with colour to be specified	= **Zxxx**
NORSOK System 1 paint with colour to be specified	= **K1**
NORSOK System 7B paint with colour to be specified	= **K7B**

other variants upon request

8 Dimension

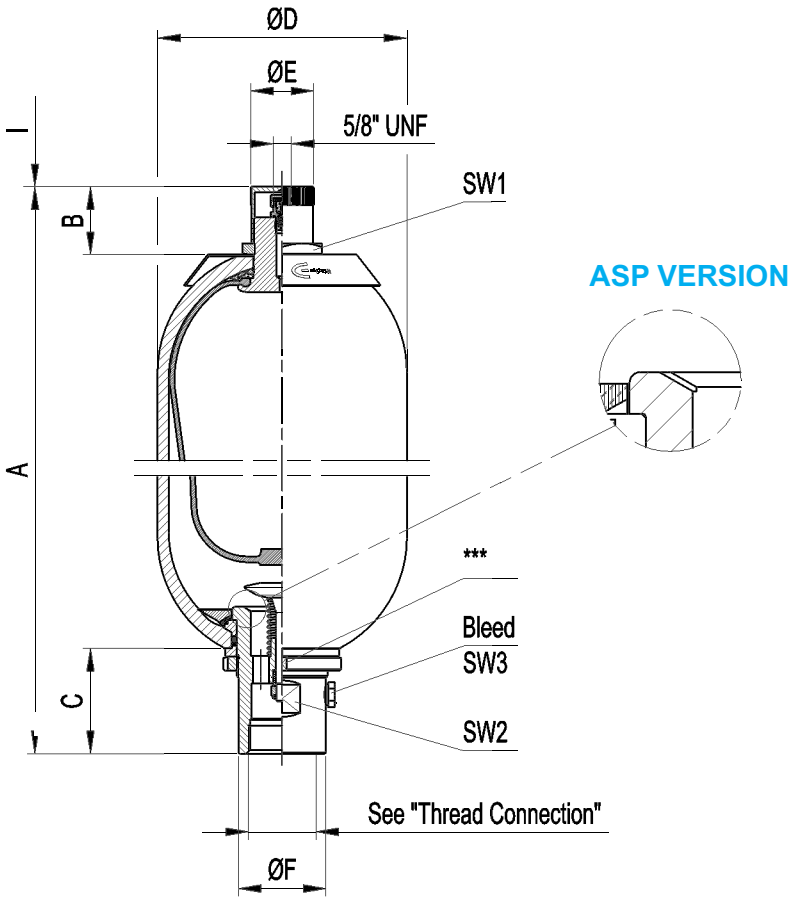
1/8"	= **1**	4/4"	= **5**
1/4"	= **2**	1"	= **6**
3/8"	= **3**	1" ¼"	= **7**
1/2"	= **4**	1" ½"	= **8**

Dimension in inch - No.of pitch for inch

Diameter/pitch

Special variants on request

3.1.9 DIMENSIONS



3.1d

Acc. type AS-ASP in carbon steel	Nominal gas volume litres	Effective gas volume litres	Working pressure bar	Ped cat. fluids of group 2 AS	Ped cat. fluids of group 1 ASP	Max.diff. pressure P2-P1 bar	Flow rate l/min	Max.comp. ratio P0/P2	A mm	B mm	C mm	ØD mm	ØE mm	ØF mm	I mm	SW 1 mm	SW 2 mm	SW 3 mm	Bleed	Acc. dry weight kg
AS/ASP 0,2	0,2	0,2	360	Art.3 (3)	III	100	160	1:4	252 ± 2	23	40	53	20	26	140	24	23	4*	M5	1,7
AS/ASP 0,7	0,7	0,65	360	Art.3 (3)	III	100	300	1:4	280 ±1,5	47	52	90	25	36	140	32	32	4*	M5	4,2
AS/ASP 1	1	1	360	Art.3 (3)	III	100	300	1:4	296 ± 5	47	52	114	25	36	140	32	32	4*	M5	5,2
AS/ASP 1,5	1,5	1,5	360	II	III	100	300	1:4	355 ±5	47	52	114	25	36	140	32	32	4*	M5	6,3
AS/ASP 3	3	2,95	360	III	IV	100	600	1:4	554 ± 8	47	65	114	25	53	140	32	50	4*	M5	11
AS/ASP 5	5	5	360	III	IV	100	600	1:4	458 ± 10	47	65	168	25	53	140	32	50	4*	M5	15
AS/ASP 10	10	9,1	360	IV	IV	100	1000	1:4	569 ± 10	60	93	220	60	77	140	70	70	19**	1/4" BSP	33
AS/ASP 15	15	14,5	360	IV	IV	100	1000	1:4	719 ± 10	60	93	220	60	77	140	70	70	19**	1/4" BSP	43
AS/ASP 20	20	18,2	360	IV	IV	100	1000	1:4	879 ± 10	60	93	220	60	77	140	70	70	19**	1/4" BSP	48
AS/ASP 25	25	23,5	360	IV	IV	100	1000	1:4	1044 ±15	60	93	220	60	77	140	70	70	19**	1/4" BSP	59
AS/ASP 35	35	33,5	360	IV	IV	100	1000	1:4	1393 ±15	60	93	220	60	77	140	70	70	19**	1/4" BSP	78
AS/ASP 55	55	50	360	IV	IV	100	1000	1:4	1904 ±15	60	93	220	60	77	140	70	70	19**	1/4" BSP	108

* Allen wrench ** Ex. wrench *** see chapter 3.1.12.2 table 3.1ab

3.1db

* The maximum differential pressure is the maximum allowable difference between the maximum pressure and the minimum working pressure (P2-P1) to have an infinite life cycle of the accumulator (greater than 2,000,000 cycles).
** Flow rate measured using mineral oil with viscosity of 36 cSt at 50°C and ΔP = 5 bar

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