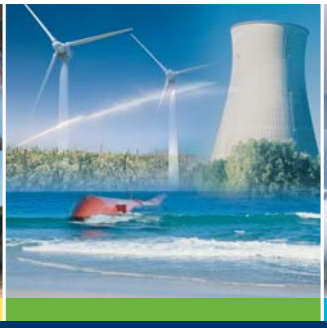
Accumulators

Low pressure bladder type
conform to EC regulations

EBV Range





The Professional Choice

How to secure your installations ?

The principle of precaution is always essential for everything related to the Oil activity.
It is based on anticipating and adopting measures to prevent major risks.

Sudden flow changes in pipes (starting and stopping a pump, opening and closing a valve) cause pressure waves that propagate in pipes and cause leaks at connections, maladjustments of regulation devices, measurement devices, deterioration to the pump and the network. If correctly sized, the new range of EBV accumulators absorbs these oscillations, guaranteeing operation of your installations in complete safety within an acceptable pressure range.
With our new EBV range, we offer to measure overpressures on your network and make a commitment to provide the best technical solution adapted to your needs, so that you can benefit from our experience.

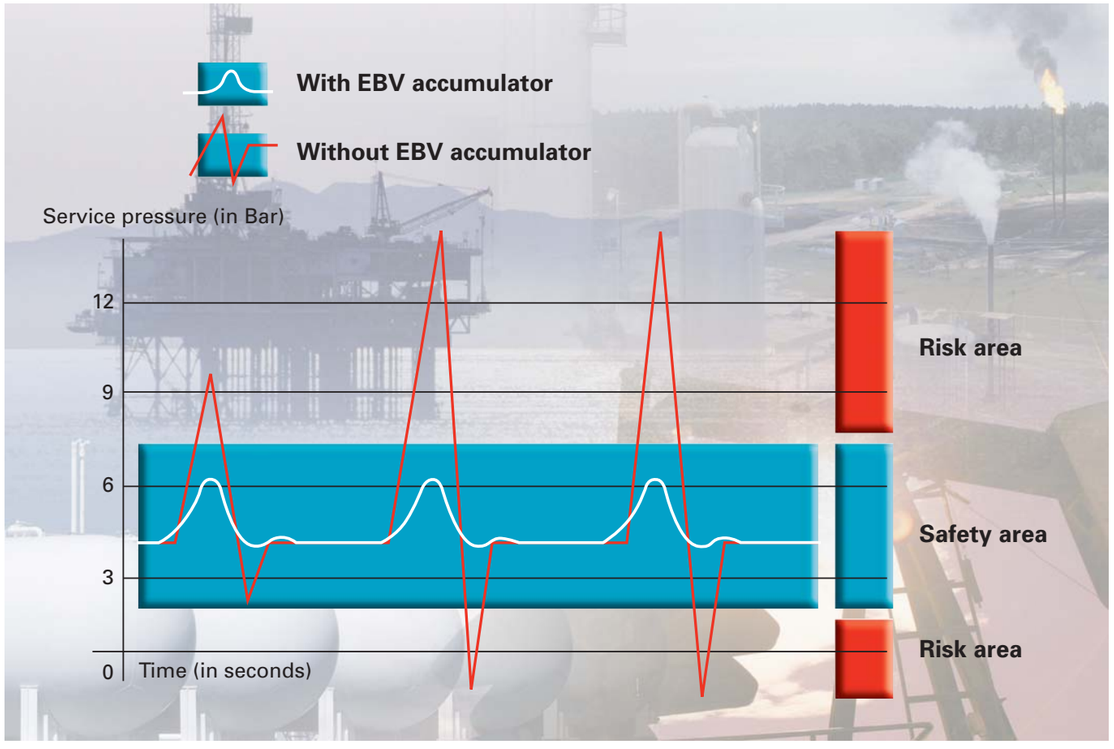
OLAER INDUSTRIES contributes to improving your Safety.

An example application*

that means a lot

Considering the need to make its network of truck loading stations conform, an oil depot leader would like to optimize operation of his installations by taking all safety measures necessary in this field.

Comparative survey of pressures in an oil depot



* study carried out on a “lead free gasoline” line equipped with source loading stations.

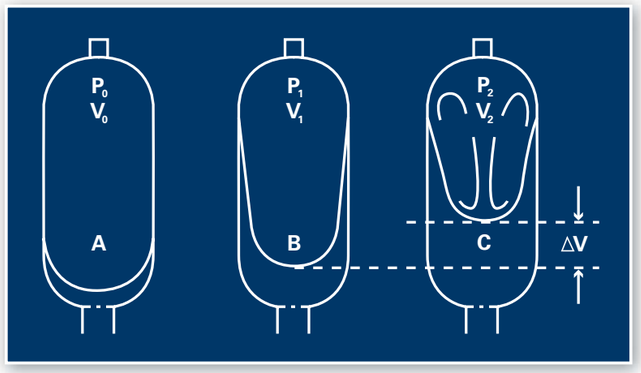
Main Futures

EBV OLAER

OPERATING PRINCIPLE

Due to the compressibility of the gas, nitrogen, the bladder accumulator enables to store, stock and return a liquid under pressure.

V0 = Capacity in nitrogen of the accumulator
V1 = Gaz volume at the minimum hydraulic pressure
V2 = Gaz volume at the maximum hydraulic pressure
ΔV = Returned and/or stored volume between P1 and P2
P0 = Initial preload of the accumulator
P1 = Gaz pressure at the minimum hydraulic pressure
P2 = Gaz pressure at the maximum hydraulic pressure



A - The bladder in the precharge position, which means that it is only filled with nitrogen. The anti-extrusion system (perforated bushing) closes the hydraulic orifice and prevents the destruction of the bladder.

B - Position at the minimum operating pressure ; there must be a certain amount of fluid between the bladder and the hydraulic orifice, such that the anti-extrusion system (perforated bushing) does not close the hydraulic orifice. Thus, P0 must always be < P1.

C - Position at the maximum operating pressure : the volume change ΔV between the minimum and maximum positions of the operating pressures represents the fluid quantity stored.

YOUR BENEFITS

For flows greater than 130 m3/h in the networks, the EBV accumulator absorbs overpressures and compensates for pressure reductions generated by fast valve closures.

For example:

- Lead free gasoline network
- Maximum network pressure = 10 Bar
- Feed : three 130 m3/h pumps at 4 Bar
- Valve closure in 3 s.

Results :

- Without accumulator
  Pmin = - 1 Bar
  Pmax = 14 Bar
- With EBV accumulator
  100-40/90 01180
  Pmin = 2.5 Bar
  Pmax = 8 Bar

When starting pumps on a pressurized network, the overpressure generated by “putting the fluid mass into circulation” is compensated by the EBV accumulator.

The EBV and ELG accumulator ranges are conform with the new EC regulations.

TECHNICAL CHARACTERISTICS

This accumulator is composed of a forged or welded steel or stainless steel body, an elastomer bladder compatible with a large number of fluids and a steel strainer.

Due to its profile, the strategically shaped bladder deforms in 3 lobes such that the accumulator can absorb and dampen pressure peaks.

How to size ?

OLAER has developed software to design accumulators to absorb the shock.
You can use two different procedures to evaluate and to find a shock absorber solution with guaranteed results*. * (complete procedure)

	Procedure Complete	Partial
• Pressure readings and validation of assumptions on site	☑	☐
• Shock absorber calculation starting from a correctly filled in questionnaire with isometric drawing (supplied by you)	☑	☑
• Validation of calculations on site by pressure readings after installation of the selected accumulators	☑	☐

FORMULAR TO RETURN

Company ..... Service : ..... Name : .....

Phone : ..... E-mail : ..... Fax : .....

I want : (tick the appropriate box) ❑ A complete procedure ❑ A partial procedure

YOUR INSTALLATION

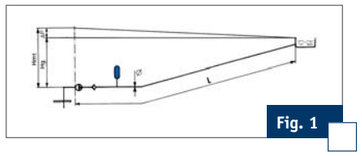


Fig. 1

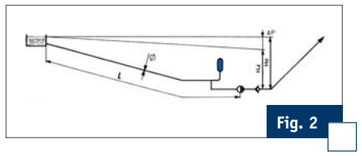


Fig. 2

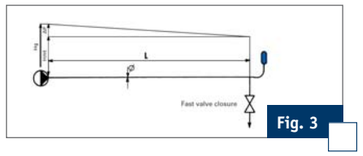


Fig. 3

Your installation (tick the appropriate box)

Hmt : Total pressure head - Hg : geometric head - ΔP : Pressure loss - Ø : Pipe diameter - Hd : Intake head - He : Static head

Application type (fill in according to your installation)

Starting and stopping the pump (fig. 1) Pump stop time (secondes) : .....
Pressurized intake (fig. 2) Pump stop time (secondes) : .....
Closes valves (fig. 3) Valves closure time (secondes) : .....

Fluid : .....
Pipe material : .....
Pipe lengh (L) : ..... m
Pipe inner diameter (ø) : ..... mm
Pipe thickness : ..... mm
Max. flow rate of the pump : ..... L/mn

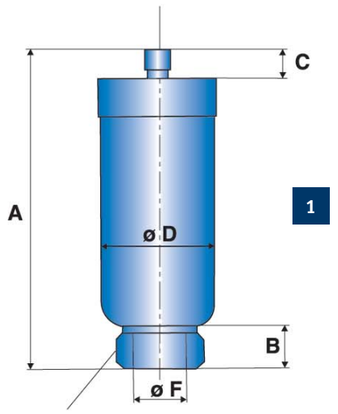
Max.flow rate at valve closure : ..... L/mn
Total pressure head (Hmt) : ..... Mcl
Geometric head (Hg) : ..... Mcl
Intake head (Hd) : ..... Mcl
Static head (He) : ..... Mcl

PLUMBING SECTOR

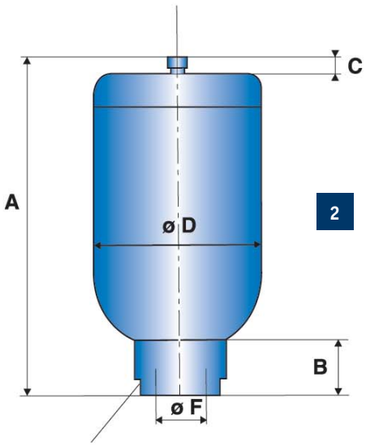
Table provided for guidance, valid for a residual fluid pressure of about 3 bar at the end of the column and for a flow speed in the pipe of 2.5 m/s max. Precharge pressure equivalent to the residual pressure at the end of the column. Precharge done by us at the factory outlet.

Pipe Ø	Pipe length or height (m) 10-20-30	40-50-60	70-80-90
8/13	OLG 0.13-50/00 01925	OLG 0.13-50/00 01925	OLG 0.13-50/00 01925
15/21	OLG 0.13-50/00 01925	OLG 1-20/00 03325	OLG 1-20/00 03325
20/27	OLG 0.13-50/00 01925	OLG 1-20/00 03325	OLG 1-20/00 03325
26/34	OLG 1-20/00 03325	OLG 1-20/00 03325	ELG 4-20/90 01925
33/42	OLG 1-20/00 03325	ELG 4-20/90 01925	ELG 4-20/90 01925
40/49	OLG 1-20/00 03325	ELG 4-20/90 01925	ELG 4-20/90 01925
50/60	ELG 4-20/90 01925	ELG 4-20/90 01925	Consult OLAER

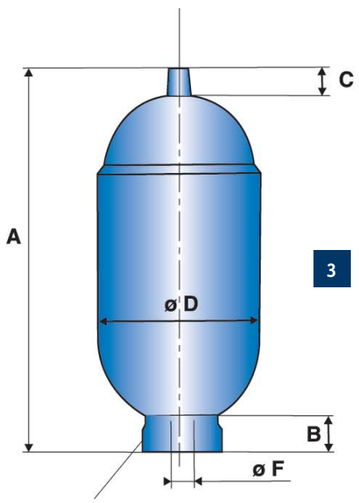
Technical Characteristics



SW sur plats



SW sur plats



SW sur plats

	1	2	3
Designation	**OLG 0,13-50/00**	**OLG 1-20/00**	**ELG 4-20/90**
Maximum pressure in bar	50	20	20
Nominal gas volume in litres	0.13	1	3.8
Weight in kg	0.3	1.3	3.7
ø D maxi	50	107	155
A max height	136	209	340
Connection ø F	G 3/4" cyl.	G 1" cyl.	4 G2" cyl.
ø spot facing x proof	33 x 0.5	-	73 x 1.5
B	16	30.5	40
C	13	11	16
SW on flats	36	46	82
P/N clamps x (quantity)	-	E 106 x 1	E 155 x 1

1 Conforming to the EC regulation 3.3 stainless steel
2 Conforming to the EC regulation 3.3
3 Conforming to the EC regulation stainless steel
4 Possibility with connection G3/4" cyl.

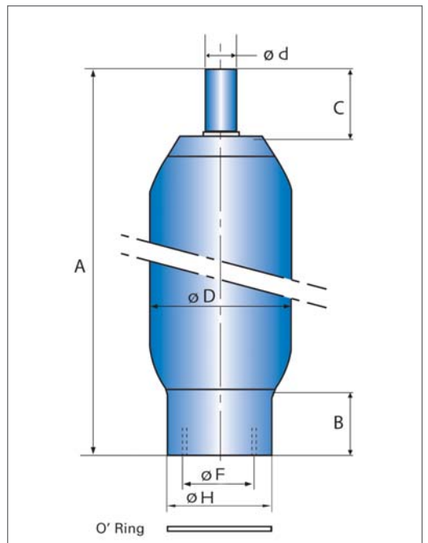
The above measurements are given in mm and do not take manufacturing tolerances into consideration.

Technical Characteristics

EBV Range from 0,5 to 5 litres - STANDARD CONSTRUCTION

Designation	EBV 0,5-50/00*	EBV 1-80/00*	EBV 2,5-80/90	EBV 5-80/90
Maximum pressure in bar	50	80	80	80
Nominal gas volume in litres	0,5	1	2,5	5
Weight in kg	2,2	5	9	16
Ø D maxi	90	116	116	116
A max height	243	310	482	805
Connection ø F	G 2" cyl.	G 2" cyl.	G 2" cyl.	G 2" cyl.
Ø H	68	68	68	68
B	52	47	47	47
C	28	66	66	66
Ø d	16	22,5	22,5	22,5
Fittings & Flanges	Consult page 9			
O' Ring ø int x ø tore	54 x 3	54 x 3	54 x 3	54 x 3
P/N clamps x (quantity)	B 90 x 1	B 114 x 1	B 114 x 2	B 114 x 2
P/N support bracket	-	CE 89	CE 89	CE 89

* Complying to the regulation EC 3.3



Fittings & Flanges page 9

STAINLESS STEEL CONSTRUCTION

Designation	EBV 0,5-40/00*	EBV 1-40/00*	EBV 2,5-40/90	EBV 5-40/90
Maximum pressure in bar	40	40	40	40
Nominal gas volume in litres	0,5	1	2,5	5
Weight in kg	2,2	2,8	3,2	6,2
Ø D maxi	90	109	109	109
A max height	240	310	484	867
Connection ø F	G 2" cyl.	G 2" cyl.	G 2" cyl.	G 2" cyl.
Ø H	70	70	70	70
B	54	52	51	51
C	29,5	75	75	75
Ø d	16	22,5	22,5	22,5
Fittings & Flanges	Consult page 9			
O' Ring Ø int x tore	54 x 3	54 x 3	54 x 3	54 x 3
P/N clamps x (quantity)	B 90 x 1	B 108 x 1	B 108 x 2	B 108 x 2
P/N support bracket		CE 89	CE 89	CE 89

* Complying to the regulation EC.
Above dimensions are in mm and are subject to manufacturing tolerances

EBV OLAER

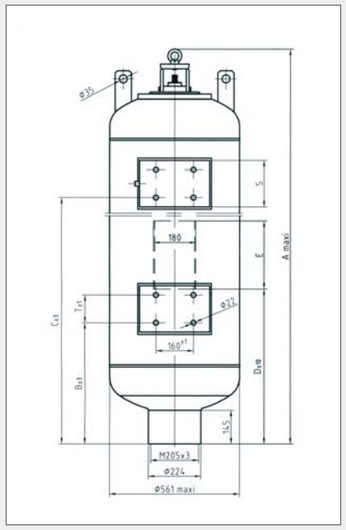
EBV RANGE from 10 to 200 litres

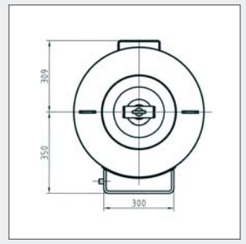
CONSTRUCTION : 1 standard steel & stainless steel version - **2** stainless steel version - **3** standard steel version

	1	1	1	1	2	3	2	3
Designation	**EBV 10-40/90**	**EBV 20-40/90**	**EBV 32-40/90**	**EBV 50-40/90**	**EBV 100-20/90**	**EBV 100-40/90**	**EBV 200-20/90**	**EBV 200-40/90**
Maximum pressure in bar	40	40	40	40	40	40	20	40
Nominal gas volum in litres V0	10	18	34	50	90	90	202	202
Débit maxi en l/mn	900	900	900	900	3000	3000	3000	3000
Weight in kg	11	19	34	49	95	125	168	210
Ø D maxi	212	212	212	212	371	371	371	371
A max height	452	774	1307	1829	1315	1315	2526	2526
Connection ø F	G 3 1/2" cyl.	G 3 1/2" cyl.	G 3 1/2" cyl.	G 3 1/2" cyl.	M 205 x 3	M 205 x 3	M 205 x 3	M 205 x 3
Ø H	118	118	118	118	224	224	224	224
B	51	51	51	51	158	158	158	158
C	75	75	75	83	93	93	93	93
Ø d	22,5	22,5	22,5	51	80	80	80	80
Fittings & Flanges	Consult us							
O' Ring Ø int x tore	96 x 4	96 x 4	96 x 4	96 x 4	196,21 x 5,33	196,21 x 5,33	196,21 x 5,33	196,21 x 5,33
P/N clamps x (quantity)	D 215 x 2	D 215 x 2	D 215 x 2	D 215 x 2	D 368 x 2	D 368 x 2	D 368 x 2	D 368 x 2
P/N support bracket	CE 159	CE 159	CE 159	CE 159	C 300	C 300	C 300	C 300

EBV RANGE from 100 to 575 litres

Designation	EBV 100-20/90	EBV 150-20/90	EBV 200-20/90	EBV 300-20/90	EBV 375-20/90	EBV 475-20/90	EBV 530-20/90	EBV 575-20/90
Maximum pressure in bar	20	20	20	20	20	20	20	20
Nominal gas volum in litres V0	93	139	207	293	379	473	532	565
Weight in kg	145	170	205	250	300	350	380	400
Ø D maxi	561	561	561	561	561	561	561	561
A max height	902	1105	1404	1780	2161	2575	2834	2983
B	244	345,5	465	522	522	522	522	522
C			752	1128	1509	1923	2182	2231
D	291,5	373	600	668	1049	1463	1722	1871
E	255	295	295	295	295	295	295	295
S	430	430	200	200	200	200	200	200
T	350	350	120	120	120	120	120	120
O'ring Ø int x tore	196,21 x 5,33							





View of the top

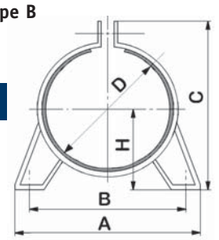
The above measurements are given in mm and to not take manufacturing tolerances into consideration.

Accessories

Clamps

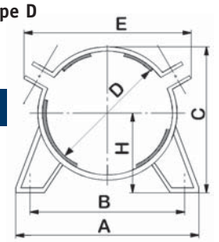
Shape B

F

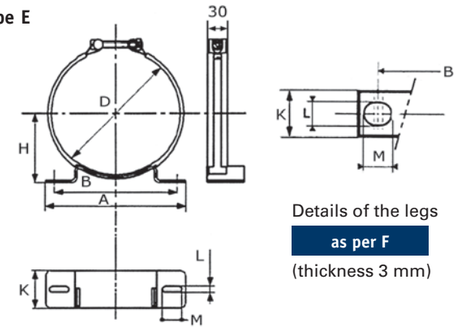


Shape D

F



Shape E



Details of the legs

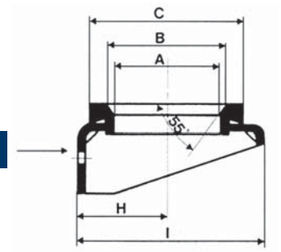
as per F

(thickness 3 mm)

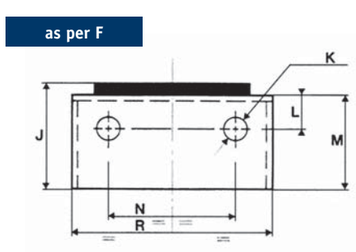
Designation	Form	D	A	B	C	E	H	K	L	M
B 90	B	90	134	97	127	-	53	30	9	14
B 108	B	108	138	100	150	-	65	30	9	14
B 114	B	114	138	100	159	-	76	30	9	14
D 215	D	215	270	216	238	280	123	40	15	21
D 368	D	368	420	340	392	430	200	50	15	21
E 106	E	106	160	148	-	-	72	65	9	35
E 155	E	155	210	198	-	-	90,7	65	9	35

Support brackets

F



as per F



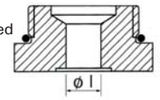
Designation	A	B	C	H	I	J	K	L	M	N	R	Poids
CE 89	89	111	141	73	140	75	13	25	60	75	130	0,7
CE 159	159	170	200	123	235	115	27	25	100	200	260	2,5
C 300*	300	-	-	200	380	-	20	50/200	300	375	475	31

* Without rubber part

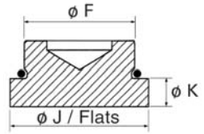
Fittings

Form A - Seal in angle

Threaded

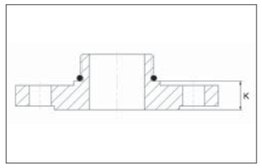


Blind



Designation	Connection of accumulator ø F gaz cyl.	Connection of reducing bush ø l gaz cyl.	J/Flats	K	O' Ring
EBV 0,5 to 5 L	2"	1"		13	54 x 3
		NP	65		
EBV 10 to 50 L	3" 1/2	2"		20	96 x 4
		NP	112	20	196,21 x 5,33
EBV 100 to 200 L 40 Bar	M 205 x 3	2"			
		NP	2 trous opposés ø 8,5		
Others capacities	Consult us				

Flanges



Capacity of accumulator	K
EBV 0,5 to 5 L	13
EBV 10 to 50 L	20
EBV 100 to 200 L 40 Bar	20
Others capacities **consult us**	

Peripheral Materials

CHARGING AND GAUGING ASSEMBLY

The charging and gauging assembly checks, filling and does a nitrogen purge on all accumulators. It is designed to be screwed onto the precharge valve and is connected by a hose to the pressure reducer fitted on the nitrogen source. The assembly delivered in a box is made differently depending on the model (VG3 or VGU).

MODEL VG3

The charging and gauging assembly VG3 is designed solely for use with Olaer accumulators.

Technical data

Maximum working pressure : 550 bar or as shown on gauge.

Ordering code

Example :

VG3 **25** 1 **TS2** 1

25 = Gauges, possible choice between Pressure ranges 6/10/25 bar

TS2 = Flexible hose for maximum working pressure 400 bar.

MODEL VGU

The universal charging and gauging assembly VGU is designed to be used with all accumulators on the market.

Technical data

Maximum working pressure: 340 bar or as shown on gauge.

Ordering code

Example :

VGU/F **6/25** 7 TS2 3

6/25 = Gauges, possible choice between pressure ranges 6/10/25 bar.

INSTALLED ACCUMULATOR RUCK

Olaer designs and manufactures modulable compact assemblies. For any request, please refer to Olaer technical services.

How to order ?

EBV

ORDERING THE EBV ACCUMULATOR

EBV 100-40/90 01180 Po=5b PN40-DN200

Accumulator range
European low pressure with bladder

Volume
in liters

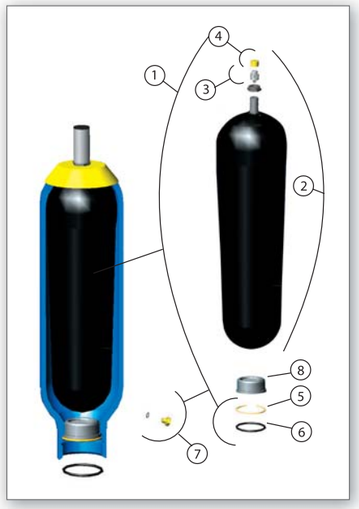
Maximum working pressure
in bar

Regulation code
00 : Regulation EC complying 3.3 for the 0.5 l. and 1L. volume
90 : Regulation EC for all other volumes

Construction
to be determined according to the table

Nitrogen gaz pressure
in bar at 20 °C, limited to 20 bar maximum at the maximum working temperature.

Connection to be specified
NP : With blind connector or with reduction connector (refer to dimension I on the overall dimensions page 9 and specify the connection) or with flange (refer to the flange line on the dimensions pages and specify the type)



Fluid	Operating temperature °C*	Construction
Minerals oils	- 15 + 100	01125
Water	0 + 60	03325
Diesel fuel (Gas oil)	- 5 + 115	01130
Fuel oil	- 5 + 115	01130
Kerosene	- 5 + 115	01130
Gasoline	- 5 + 115	01130
Lead free gasoline	- 20 + 130	01180
Others fluids	Other temperatures	Consult Olaer

* Accumulator's operating temperature range

Mark	Spare parts
1	Replacement kit
2*	Complete bladder
3*	Filling valve
4*	Valve plug
5*	Retaining ring
6*	Sealing ring
7*	Bleeder plug with seal (1)
8	Perforated bushing

* these parts are delivered in the replacement kit with explanatory notice - (1) Depending on model

ORDERING THE ELG ACCUMULATOR

State the designation of the ELG accumulators mentioned in the table in page 4 "plumbing" (other constructions on request)

Nitrogen gaz pressure
in bar at 20 °C, limited to 20 bar maximum at maximum working temperature.
Refer to the plumbing sector section.

ORDER ACCESSORIES AND PERIPHERAL MATERIALS

Indicate the designation of accessories mentioned in the tables in pages 8 and 9 and the peripheral equipment on page 8.

HOW TO ORDER THE REPLACEMENT KIT

Example : For an EBV accumulator 100-40/90 01180
KIT EBV 100-40/90 01180

Installation

Before starting any installation, a visual inspection of the accumulator has to be carried out in order to detect any damage. For optimum operation, the accumulator must be placed as close as possible to the user device.
It may be installed vertically with the filling valve upwards, or horizontally.

- Do not stand in line with the openings,
- Check environmental conditions and protect the accumulator from heat sources, electrical and magnetic fields, lightning, humidity and the weather, if necessary
- Reserve a space of 200 mm above the filling valve for installing the charging and gauging assembly.
- Leave the markings visible,
- Install so as to avoid any abnormal force on the pipes connected directly or indirectly to it,
- Either fix the accumulator body to a support, or surround it by a handrail capable of preventing or limiting its displacement if there is a break in its connections to the hydraulic installation,
- Connect the accumulator to the hydraulic circuit using appropriate connection devices (connectors, flanges),
- Check that the fluid is compatible with the equipment,
- Check that the accumulator precharge pressure is less than 20 bar at the maximum operating temperature or is limited to the pressure of the body if < 20 bar.
- Check that temperature and pressure limits are respected,
- Fit a pressure relief valve to the hydraulic circuit,
- If necessary, provide a burst disk or safety valve to overcome the risk of overpressure related to thermodynamic phenomena,
- Fill with nitrogen only (Typ R, S, U)

IT IS FORBIDDEN TO

- add any part onto the accumulator by welding, rivet or screw,
- carry out any operation that could modify the mechanical properties of the accumulator,
- use the accumulator as a construction part: the accumulator must not resist any stress or load
- modify the accumulator without the prior agreement of the manufacturer,
- inflate the accumulator with oxygen or air, risk of explosion!

COMMISSIONING

For commissioning, refer to the EC instructions delivered with the accumulator.

CHECK THE PRECHARGE PRESSURE

Check the initial inflation pressure when commissioning,
then once every week for the first month, then adjust the intervals of inspections (weekly, monthly, six-monthly, annual) as a function of the drop of the precharge pressure (permeation).

Reglementation CE

Extract from European legislation. Directive 97/23/ EC is applicable from 29-11-1999 and mandatory from 29-05-2002. Decree 99-1046, which applies to new machinery and the ministerial order of 15-03-2000, which applies to the operation of all machinery, transposed the directive into French domestic legislation.

WHAT YOU NEED TO KNOW

Directive 97/23/ EC is applicable from 29-11-1999 and mandatory from 29-05-2002.
Decree 99-1046, which applies to new machinery and the ministerial order of 15-03-2000, which applies to the operation of all machinery, transposed the directive into French domestic legislation.

- **Free movement of machinery within the European Union.**
- **Group 2 fluid accumulators whose V ≤ 1 L and PS ≤ 1000 bar are not entitled to bear EC marking.**
- **The EC marking should be accompanied by the identification number of the notified authority.**

EC type accumulators are delivered with instructions for operation and a declaration of conformity.
Olaer designs and manufactures hydro-pneumatic accumulators for use in all countries and which comply with national regulations in force as ASME / SELO...

International Netwok

EBV

Australia
Olaer Fawcett Christie PTY Limited
13 Boola Place
Cromer NSW 2099 Australia
Tel : + 61.2.9981.6888
Fax : + 61.2.9981.6144
E-mail : info@olaer.com.au
www.olaer.com.au

Austria
Olaer Austria GmbH
Wachtelstraße 25
A-4053 Haid
Tel : + 43.7229.80306
Fax : + 43.7229.80306-21
E-mail : info@olaer.at
www.olaer.at

Belgium
S.A. Olaer Benelux N.V.
Z3, Doornveld 21
B-1731 Zellik
Tel : + 32 2 466 15 15
Fax : + 32 2 466 16 24
E-mail : info@olaer.be
www.olaer.be

China
Olaer Tianjin Hydraulic
Manufacturing Company Ltd
11-A Jimei Industrial Zone
XIQING Economic Development Area
Tianjin - 300 385 CHINA
Tel : + 86 22 2 3889096
Fax : + 86 22 2 3889097
E-mail : olaer@olaer.net.cn
www.olaer.net.cn

Oiltech Hydraulic Manufacturing
(Suzhou) CO, LTD
No.2 workshop, #95 WeiXin Road,
Weiting, Suzhou, Jiangsu, P.R. China
215121
Tel : + 86-512 6289 1000
Fax : + 86-512 6289 0805

Czech Republic
Olaer CZ s.r.o.
Videnská 125
CZ - 61900 BRNO
Tel : + 420 5 4712 5601-10
Fax : + 420 5 4712 5600
E-mail : info@olaer.cz
www.olaer.cz

Denmark
Oiltech AB
Hestehøjvej 1
DK - 9632 MØLDRUP
Tel : + 45.86.69.20.38
Fax : + 45.86.69.23.38
E-mail : oiltech@oiltech-olaer.dk
www.oiltech-olaer.dk

Finland
Oiltech Hydraulics Oy
Veneentekijäntie 2, PI 190
FI-00210 Helsinki
Tel : + 35 8 9 4137 5500
Fax : + 35 8 9 4137 5550
E-mail :info@oiltech.fi
www.oiltech.fi

France
Olaer Industries SA
16 rue de Seine
F-92704 Colombes Cedex
Tel : + 33.01.41.19.17.00
Fax : + 33.01.41.19.17.20
E-mail : olaer@olaer.com
www.olaer.fr

Germany
Olaer Industries GmbH
Zum Gunterstal 4
D - 66440 Blieskastel
Tel : + 49.(0) 6842 92040
Fax : + 49.(0)6842 9204-15
E-mail : info@olaer.de
www.olaer.de

Holland
Olaer Nederland BV
De Lind 10, Postbus 75
NL-4840 AB Prinsenbeek
Tel : + 31 76-5412453
Fax : + 31 76-5411502
E-mail : info@olaer.nl
www.olaer.nl

Hungary
Szalézi út 13/B
H - 2509 Esztergom Hungary
Tel : + 36 (70) 943 8114
Fax : + 36 (33) 319 954
Email : zsold.spednel@olaer.hu
www.olaer.hu

India
Coolers & heatexchangers
Olaer Fawcett Christie Hydraulics
(India) Private Limited No. 29/1&2,
Chunchagatta Road, Konanakunte
post,
Bangalore - 560062
Tel : 28437690, 91
Fax : 080-28437799, 26611716
E-mail : info@olaer.in
www.olaer.in

Accumulators
Fawcett Christie Hydraulics (I) pvt. Ltd.
No. 21/C, 1st Phase, Kiadb
Kumbalgod Industrial area, Mysore
highway,
Bangalore - 560074 - India
Tel : 28437690, 91
Fax : 080-28437799, 26611716
E-mail : info@olaer.in
www.olaer.in

Indonesia
Olaer Fawcett Christie
Jl Lembong No 42 Bandung
Jawa Barat 40111
INDONESIA
Mob : + 62 81 320 94 8833

Italy
Olaer Italiana S.p.A.
Strada Fantasia 83
IT - 10040 Leini (Torino)
Tel : + 39 011 991.85.11
Fax : + 39 011 998.02.02
E-mail : anna.cinque@olaer.it
www.olaer.it

Korea
Hyundai Olaer Hydraulic Co. Ltd
3Ba 204-1 Shiwha Industrial Complex
Jeongwang-dong, Siheung-si
Gyeonggi-do 429-450 KOREA
Tel : + 82.31.499.0797
Fax : + 82.31.499.2249
E-mail : master@hyundaiolaer.co.kr
www.hyundaiolaer.co.kr

Norway
Oiltech AS
Dynamitveien 23, PB 133
NO-1401 Ski
Tel : + 47 64 91 11 80
Fax : + 47 64 91 11 81
E-mail : oiltech@oiltech.no
www.oiltech.no

Poland
Oiltech Polska
ul. Gen Bora Komorowskiego 22
PL-03982 WARSZAWA
Tel : + 48 22 6738162
Fax : + 48 22 6738163
krysztof.klepka@oiltech.se
www.oiltech.pl

Singapore
Olaer Singapore
Blk 823, 25 Loyang Crescent
Loyang Offshore Supply Base
Singapore 508988
Tel : + 65 65420278
Fax : + 65 65421083

Slovakia
OLAER
Josef Mezaros
Lotysska 22
SK - 821 06 BRATISLAVA
Slovensko
Tel : + 0421 2 4552 1154
Fax : + 0421 2 4552 1154
E-mail : mesaros@olaer.sk
www.olaer.sk

South Africa
Rolton Products (Pty) Ltd
43 Spokeshave Street
Stormill Ext 2 Po Box 43244
Industria 2042 1725 Roodeport
South Africa
Tel : + 27(0)11 474.3095/6
Fax : + 27(0)11.474.8384
rolton@global.co.za
www.rolton.edx.co.za

Spain
Olaer Oiltech Iberica S.A.U.
Travesia Industrial 29
08907 L'Hospitalet de Llobregat
E-Barcelona
Tel : + 34.933.368.900
Fax : + 34.933.357 186
E-mail : olaer@olaer.es
www. olaer.es

Sweden
Oiltech AB
Postbox 10012 Förrådsvägen 2
SE-181 10 Lidingö
Tel : + 46 8 636 07 00
Fax : + 46 8 767 97 56
E-mail : info@oiltech.se
www.oiltech.se

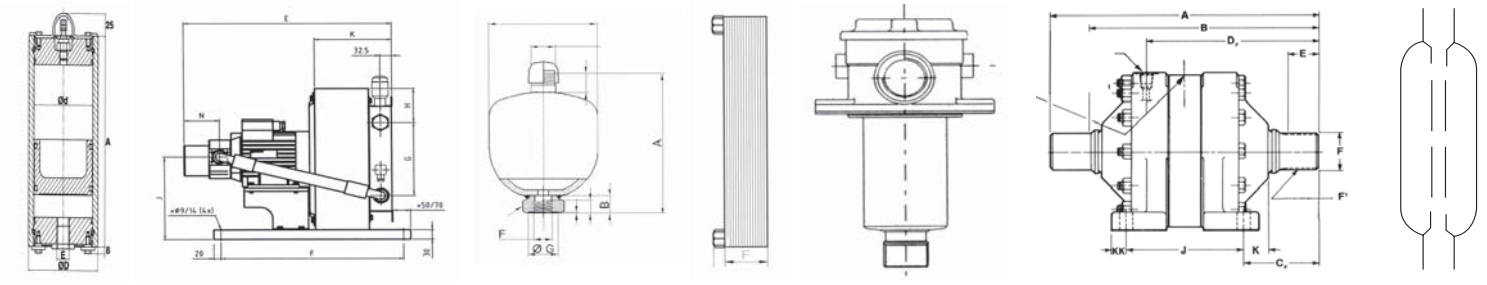
Switzerland
Olaer (Schweiz) AG
Bonnstrasse 3 CH-3186 Düdingen
Tel : + 41 26 492 70 00
Fax : + 41 26 492 70 70
E-mail : info@olaer.ch
www.olaer.ch

UAE
The Kanoo Group, Oil & Gas Division
PO Box 245, Abu Dhabi
United Arab Emirates
Tel : 971 2 6774444
Fax : 971 2 678 5670
E-mail : onseng1@kanoo.co.ae

United Kingdom
Fawcett Christie Hydraulics Ltd
Glendale Avenue
Sandycroft Industrial Estate
Sandycroft - Deeside
Flintshire CH5 2QP
North Wales U.K
Tel : + 44 1244 535515
Fax : + 44 1244 533002
E-mail : sales@fch.co.uk
www. fch.co.uk

United States
OilAir Hydraulics Inc.
11505 West Little York
Houston, Texas 77041
Tel : + 1 713 937-8900
Fax : + 1 713 937-0438
E-mail : info@oilairhydraulics.com
www.oilairhydraulics.com

Design : CLP 02 38 73 02 60 - NAEBV/02/B - February 2007 - No contractual document



OLAER®

France
Olaer Industries SA
16, rue de Seine
92704 Colombes Cedex
Tél. : + 33 01 41 19 17 00
Fax : + 33 01 41 19 17 20
E-mail : olaer@olaer.com
www.olaer.fr

OLAER® OILTECH® OILAIR® FCH®