CATALOGUE THERMOHYDRAULICS

STORAGE
HEATING
COOLING
SOLAR

FEBRUARY **2014**

BLADDER AUTOCLAVES FOR SANITARY WATER

MULTI-FUNCTIONAL TANKS

EXPANSION TANKS FOR HEATING

TANKS FOR SOLAR SYSTEMS

PLASTO - POLYETHYLENE STORAGE TANKS
FOR ABOVE GROUND

PLASTO – POLYETHYLENE STORAGE TANKS
FOR UNDERGROUND & WASTEWATER TREATMENT

GALVANIZED/GLASSLINED TANKS

HOT WATER TANKS

ASME TANKS

elbi

History

ESTABLISHED IN 1965 IN VIGODARZERE NEAR PADUA, ELBI HAS ALWAYS DISTINGUISHED ITSELF FOR ITS LARGE VARIETY OF PRODUCTS AND ITS INTERNATIONAL VOCATION. THE COMPANY HAS BEEN OPERATING FOR ABOUT 50 YEARS IN THE FIELD OF THERMO-HYDRAULICS, GRADUALLY ACHIEVING A SOLID REPUTATION AND STANDING IN THE MAJOR WORLD MARKETS.

Originally established as a producer of hot water cylinders and central-heating boilers, after about a decade of activity in this field the company dedicated its efforts to the production of tanks for the thermo hydraulics industry. In the mid 70's Elbi began producing surge tanks and BLADDER expansion tanks, becoming one of the major European manufacturers in the field of Thermo hydraulics. In 1981, having overgrown the capacity of the Vigodarzere facility, the company moved to its present headquarters in Limena, thus expanding its production capacity.

In 1989 the company branched off into a new line of products, processing plastic materials and manufacturing rotational-moulded polyethylene tanks.

In 1990 Elbi of America, Inc. was founded in Houston, Texas. Initially the new company concentrated on simple marketing/sales activities, learning about the culture and mentality of the vast and complex American continent.

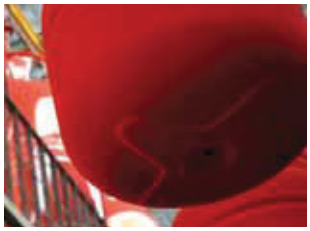
In 1994 the Green System sales division was established to manufacture and market pots for plants and flowers made of rotational-moulded polyethylene. Thus the company entered the new market of gardening, which enabled it to expand its know-how both in the technological and marketing fields.

Firmly established in the American market, in 1996 Elbi of America became the official manufacturing headquarters for the fixed-bladder tanks, thus bringing production closer to the target market.

The company's third sales division, Environment, was established in 1997 to design and produce containers and bells for selective collection of waste, and to market a wide range of accessories for urban hygiene and decor.

In 2001 a new production facility was opened.
at Modugno (BA), mainly dedicated to the manufacture of products made of rotational-moulded polyethylene. Elbi's activity in the Environmental Services started in 2006 and is mainly focused as preventive maintenance which is performed by special purpose structures (local units) where only qualified personnel are employed and adequate equipment used.
In 2006 Elbi also started the Playground Division becoming the Italian distributor of a range of playground equipment for parks and schools offering a range for children from 18 months through 16 years of age. In 2008 Elbi also entered the Well-being market, becoming the Italian distributor of a range composed of an innovative "well-being track" formed by several sporting gear that facilitates open-air physical exercise in adults and elderly people.

In 2008 a new business unit consisting of design products for the furniture market took shape. The need to manage a new brand dedicated to such target brought about a restyling of the traditional Green System Division, thus giving life to the TWENTY-FIRST Division, distinguished in GARDENART for the traditional collection of garden pots, and LIVINGART for the collection of furnishing accessories for the living market. Today, Elbi concentrates its production activities in the business divisions (Thermo-hydraulics - Environment - 21st Garden Art - 21st Living Art) whose products are manufactured in the production plants in Limena and Modugno, yet again confirming the company's industrial reality.



TECHNOLOGY

Active since 1981, the Limena plant is sub-divided into various production areas, each specialising In specific processes.

MECHANICS

The transformation of metals currently makes up around 70% of production activities, and uses technologies for: moulding, cutting and sheet bending; welding of carbon steel and stainless steel; epoxy powder painting and assembly.

The entire production process is implemented with wide use of industrial automation and robots to handle and move the manufactured parts.

Production is organised and monitored using an integrated company information system, starting with the analysis and planning of production up to sale of the end product. This information structure is supported by our Data Processing Service, which meets the particular information requirements by implementing and developing ad hoc part of the software.

PLASTIC MATERIAL

In the early 90's Elbi wanted to undertake a new production path by processing plastic materials, obtaining considerable results in terms of technological innovation. Elbi has been a member of ARM (Association of Rotational Molders) since 1996, an international category association that represents its members composed of rotational-moulding companies and professionals in the industry from 66 nations. The rotational moulding division has furnaces for polyethylene moulding,

7 in the main plant and 2 in the Modugno (Bari) plant. The biggest furnace can mould products with a capacity of up to 15.000 litres, among the biggest in Europe. Through rotational moulding technology, Elbi can manufacture a vast range of products in non-toxic and recyclable polyethylene: other than the first collection tanks (water. alimentary liquids, chemicals and other types of fluids). Elbi designs and manufactures design furnishing accessories, vases for plants and flowers, dog and cat houses, bins for differentiated waste collection, bins for urban waste collection and containers for composting of organic waste, thereby contributing to reduced environmental pollution.

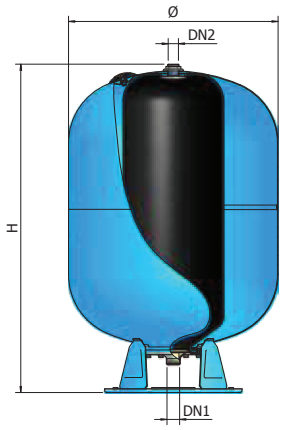
AF-CE

REPLACEABLE BLADDER AUTOCLAVES FOR SANITARY WATER

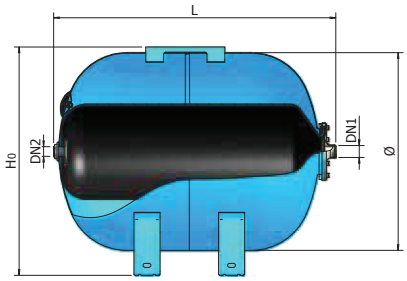
(35 - 500 LITRES)

AFV 500 16 BAR

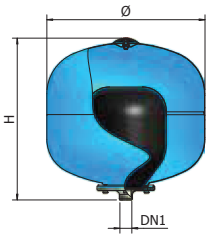
AFV 50 - 500



AFH 50 - 300



AF35



CE certified product

For drinking water

For pressurisation systems

The AF series replaceable bladder tanks are suitable for most residential and industrial installations where considerable water capacities are required. The standard version supplied is 10 bar. CE certified, the AF series autoclaves are also available in customized versions in compliance with the most important international standards. The horizontal version is equipped with an universal engine support bracket to allow the pump to be fastened directly above the tank. Valve and gauge supplied on request.

Galvanized version available from 60 to 500 litres (see page 18)

Characteristics:

• Working temperature: -10° / +99°C.

• Alimentary tested EPDM rubber bladder, with elastic characteristics to enable total expansion inside the tank to ensure the best performance and longer product life cycle.

• Epoxy powder paint with long duration for better protection against atmospheric agents. Blue.
Model AFV 500 16 Bar, solvent-based paint, grey.

• Water and air completely separate.

• Water completely separate from metal parts of the tank.

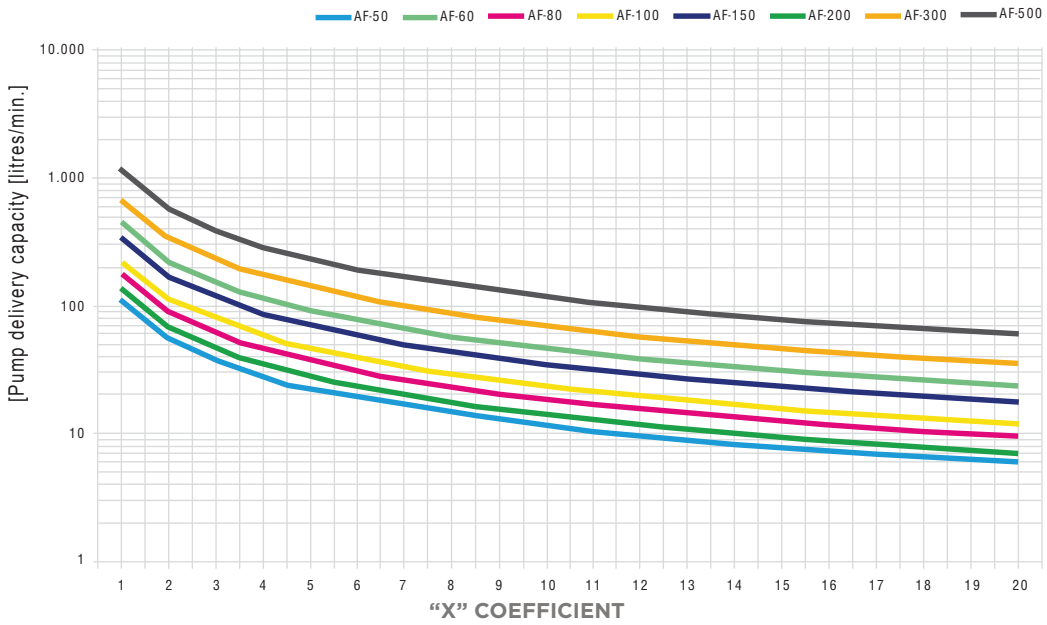
Reference standard:

• Declaration of conformity to essential safety requirements specified in Directive 97/23/EC (PED).

DIMENSIONS

MODEL	CODE	LITRES	Ppre bar	Pmax bar	max	mm	mm	mm	DN1	DN2	mm	NOTES
AF 35 CE	A032L31	35	1,5	10	+99°C	400	400	–	1"	–	410 x 410 x 410	
AFV 50 CE	A032L34	50	1,5	10	+99°C	400	600	–	1"	–	410 x 410 x 610	
AFV 60 CE	A032L35	60	1,5	10	+99°C	400	750	765	1"	1/2"F 3/4"M	410 x 410 x 760	
AFV 80 CE	A032L37	80	1,5	10	+99°C	400	815	970	1"	1/2"F 3/4"M	410 x 410 x 860	
AFV 100 CE	A032L38	100	1,5	10	+99°C	500	805	–	1"	1/2"F 3/4"M	510 x 510 x 830	
AFV 150 CE	A032L43	150	1,5	10	+99°C	500	1030	–	1"1/4	1/2"F 3/4"M	510 x 510 x 1040	
AFV 200 CE	A032L47	200	1,5	10	+99°C	600	1065	–	1"1/4	1/2"F 3/4"M	610 x 610 x 1110	
AFV 300 CE	A032L51	300	1,5	10	+99°C	650	1270	–	1"1/4	1/2"F 3/4"M	660 x 660 x 1290	
AFV 500 CE	A032L55	500	1,5	10	+99°C	775	1420	–	1"1/4	1/2"F 3/4"M	785 x 785 x 1440	
AFH 50 CE	A042L34	50	1,5	10	+99°C	400	425	515	1"	–	410 x 530 x 440	
AFH 60 CE	A042L35	60	1,5	10	+99°C	400	480	675	1"	1/2"F 3/4"M	410 x 685 x 490	
AFH 80 CE	A042L37	80	1,5	10	+99°C	400	480	720	1"	1/2"F 3/4"M	410 x 775 x 490	
AFH 100 CE	A042L38	100	1,5	10	+99°C	500	585	1130	1"	1/2"F 3/4"M	510 x 730 x 600	
AFH 200 CE	A042L47	200	1,5	10	+99°C	600	665	–	1"1/4	1/2"F 3/4"M	610 x 950 x 680	
AFH 300 CE	A042L51	300	1,5	10	+99°C	650	705	–	1"1/4	1/2"F 3/4"M	660 x 1140 x 720	
AFV 100/16 CE	A032R38	100	1,5	16	+99°C	500	805	–	1"	1/2"F 3/4"M	510 x 510 x 830	
AFV 200/16 CE	A032R47	200	1,5	16	+99°C	600	1065	–	1"1/4	1/2"F 3/4"M	610 x 619 x 1110	
AFV 300/16 CE	A032R51	300	1,5	16	+99°C	650	1270	–	1"1/4	1/2"F 3/4"M	660 x 660 x 1290	
AFV 500/16 CE	A032R55	500	2,5	16	+99°C	650	1865	–	G 2"	1/2"F 3/4"M	–	

Bladder accumulator selection chart



To make sizing easier, a chart has been drawn up to select the most appropriate accumulator according to both working pressure and delivery criteria. Note that the chart is based on the following hypothesis: standard precharge and 15 pump starts per hour (see p. 27 to identify the "X" coefficient)

Maximum delivery capacity of the pump [litres/min.]	Δp System working pressure 1,5 - 3,0			2,0 - 3,5			2,5 - 4,0			2,5 - 4,0		
	Number of pump starts per hour											
	15	8	5	15	8	5	15	8	5	15	8	5
10		50	60	35	50	100	50	100	150	35	50	80
20	50	80	150	60	100	200	100	200	300	50	100	200
25	60	100	150	80	150	250	150	250	300	80	150	250
40	100	200	250	150	250	500	200	300	500	100	250	300
45	100	200	300	150	200	500	250	500	–	150	250	500
55	150	250	300	200	300	500	300	500	–	150	300	500
75	200	300	500	250	500	–	300	–	–	200	500	–
95	200	500	–	300	500	–	500	–	–	300	500	–
115	250	500	–	500	–	–	500	–	–	300	–	–
150	300	–	–	500	–	–	–	–	–	500	–	–
200	500	–	–	–	–	–	–	–	–	–	–	–

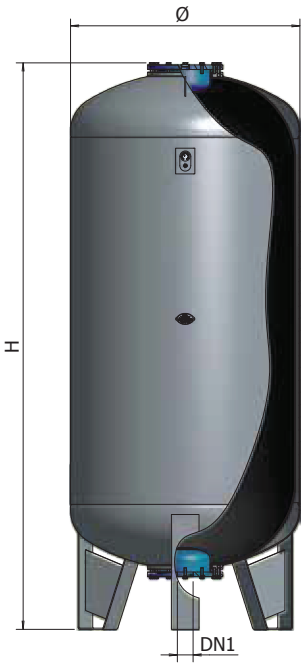
DL-CE

REPLACEABLE BLADDER MULTI-FUNCTIONAL TANKS

(750- 5000 LITRES)

DL 750 - 2000

DL 3000 - 5000



CE certified product

For drinking water

For sanitary hot water

For heating systems

For air conditioning systems

For pressurisation systems

Models from 750 to 2000 litres with upper tie rod.
The 3000 and 5000 litre models have an upper flange.

The DL series replaceable bladder tanks represent an effective alternative for installation in plants with high water contents which conventionally made us use traditional tanks without any bladders or install series of smaller tanks.
Installation of DL tanks allows therefore considerable cost savings for installation and maintenance.
The DL series is equipped with an exclusively designed bladder which work without mechanical stress even in high pressure conditions or an air cushion leak, thus ensuring an almost unlimited bladder life.

Characteristics:

- Working temperature: -10° / +99°C.
- Water and air completely separate.
- Water completely separate from metal parts of the tank.
- Counter-flange with Top-Pro treatment (750 - 1000 litres)
- Glasslined counter-flange (2000 - 5000 litres)

The sizes of DL series bladders trace the inner volume of the tank, enabling the bladder to work without any lengthening and ensuring its almost unlimited duration.

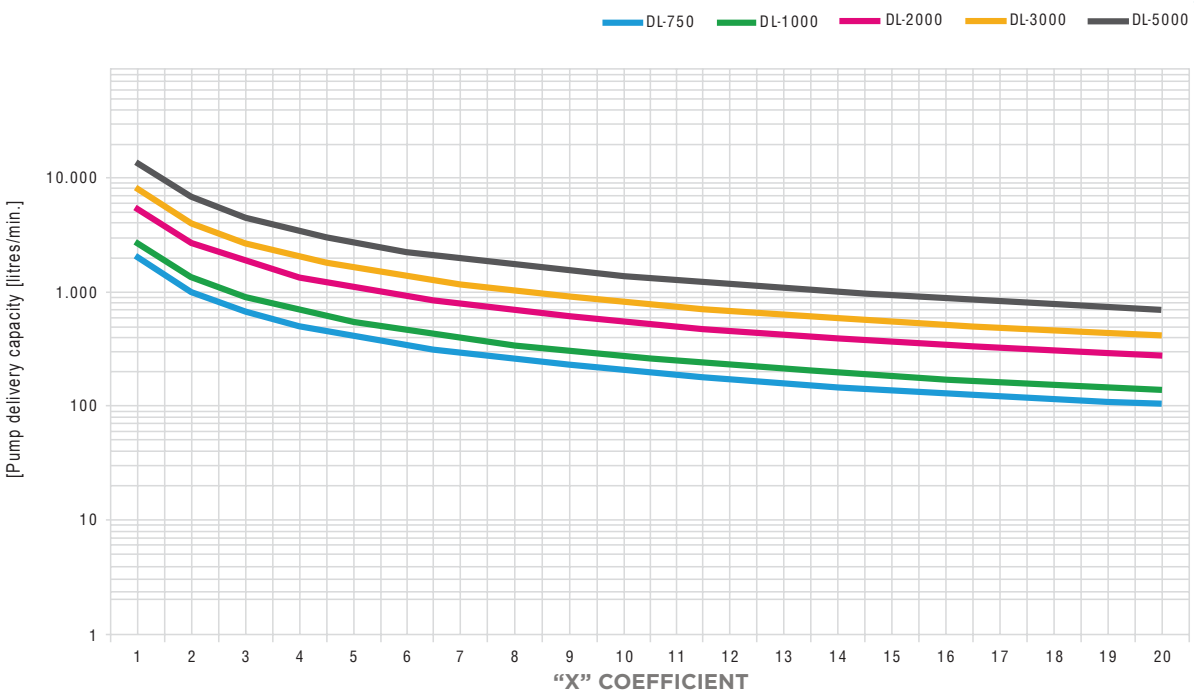
- Pre-charging pressure: 2.5 bar.

Reference standard:
- Declaration of conformity to essential safety requirements outlined by Directive 97/23/EC (PED).

DIMENSIONS

MODEL	CODE	LITRES	Ppre bar	Pmax bar	max	mm	mm	DN1 mm	NOTES
DL 750/10 CE	A282L59	750	2,5	10	+99°C	800	1920	G 2”	
DL 1000/10 CE	A282L62	1000	2,5	10	+99°C	800	2370	G 2”	
DL 2000/10 CE	A282L70	2000	2,5	10	+99°C	1100	2690	G 3”	
DL 3000/10 CE	A282L74	3000	2,5	10	+99°C	1250	3100	G 3”	
DL 5000/10 CE	A282L80	5000	2,5	10	+99°C	1550	3315	G 3”	
DL 750/16 CE	A282R59	750	2,5	16	+99°C	800	1920	G 2”	
DL 1000/16 CE	A282R62	1000	2,5	16	+99°C	800	2370	G 2”	
DL 2000/16 CE	A282R70	2000	2,5	16	+99°C	1100	2690	G 3”	
DL 3000/16 CE	A282R74	3000	2,5	16	+99°C	1250	3100	G 3”	

Bladder accumulator selection chart



To make sizing easier, a chart has been drawn up to select the most appropriate accumulator according to both working pressureand delivery criteria. Note that the chart is based on the following hypothesis: standard precharge and 15 pump starts per hour (see p. 27 to identify the “X” coefficient).

Pump max delivery capacity [litres/min.]	Δp System working pressure 1,5 - 3,0			2,0 - 3,5			2,5 - 4,0			2,5 - 4,0		
	Number of pump starts per hour											
	15	8	5	15	8	5	15	8	5	15	8	5
75	200	300	500	250	500	750	300	750	1000	250	500	750
95	200	500	750	300	750	1000	500	1000	2x750	300	500	1000
115	250	500	750	500	750	1000	500	1000	2x750	300	750	1000
150	300	750	1000	500	1000	2x750	750	2x750	2000	500	1000	2x750
200	500	1000	2x750	750	2x750	2000	1000	2000	3000	750	2x750	2000
300	750	2x750	2000	1000	2000	3000	2x750	3000	2x2000	1000	2x750	3000
500	2x750	2000	3000	2000	3000	5000	3000	5000	5000÷3000	2x750	3000	2x2000
800	2000	3000	5000	3000	5000	4x2000	2x2000	5000÷3000	2x5000	2000	2x2000	5000÷2000
1000	2000	2000	2x3000	2x2000	2x3000	2x5000	5000	2x5000	3x5000	3000	5000	5000÷3000