



# EXPANSION TANKS FOR HEATING

**EXPANSION TANKS ARE DEVICES DESIGNED TO ABSORB THE VOLUME CHANGE OF WATER OR SOME OTHER LIQUIDS, THUS ALLOWING THE CORRECT OPERATION OF A HEATING PLANT DURING ALL ITS OPERATING PHASES.**

Elbi produces closed expansion tanks composed of a tank in sheet steel and a bladder in synthetic material which separates the heating circuit from a chamber previously charged with air.

Expansion tanks with bladder are made of quality sheet steel in compliance with EN standards and welded according to strict qualitative standards; they are produced on automated lines, welded with procedures and certified weld materials, equipped with bladders in rubber suitable to resist up to 110°C; they are pre-charged with pressure of 0.5 - 1.0 - 1.5 - 2 - 2.5 - 3 bar according to the static height of the water column.

All models are subject to a hydraulic test with a pressure of 1.5 times higher than the design pressure.

Versions manufactured according to the most important European standards in force are available and are supplied with a Declaration of Conformity pursuant to the essential safety requirements outlined by Directive 97/23/EC (PED).

## **ELBI BLADDERS**

Designed by the Elbi technical office, bladders are tested by the quality control service once the manufacturing cycle is completed.



# ERCE

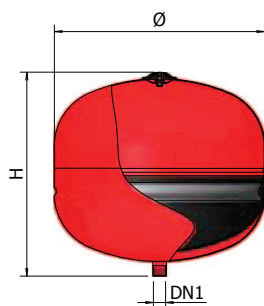


## FIXED BLADDER EXPANSION TANKS FOR HEATING

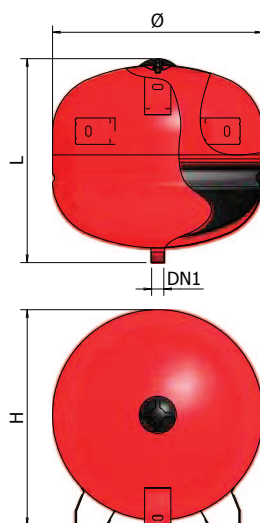
(35 - 500 LITRES)



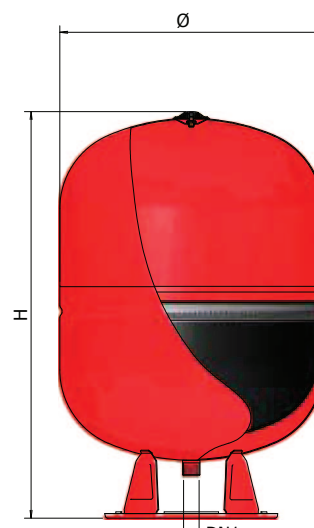
ERCE 35 - 50



ERCE 35/P - 50/P



ERCE 80 - 500



CE certified product



For non-drinking water



For heating systems



For air conditioning systems

### Characteristics:

- Working temperature: -10° / +99°C
- Long lasting epoxy powder paint, red.
- Fixed bladder in SBR rubber  
**(Model AC-2: replaceable butyl bladder)**
- Wall fixing bracket on request (see page 239)

### Reference standard

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

**WARRANTY: 2 YEARS**

## DIMENSIONS

MODEL	CODE		Ppre	Pmax					DN1		NOTES
		LITRES			bar	bar	max	mm		mm	
ERCE 35	A102L31	35	1,5	10	+99°C	400	390	-	3/4"	410 x 410 x 410	
ERCE 35/P*	A122L31	35	1,5	10	+99°C	400	415	390 (LENGTH)	3/4"	410 x 410 x 410	
ERCE 50	A102L34	50	1,5	10	+99°C	400	500	-	3/4"	410 x 410 x 535	
ERCE 50/P*	A122L34	50	1,5	10	+99°C	400	415	390 (LENGTH)	3/4"	410 x 410 x 535	
ERCE 80	A112L37	80	1,5	10	+99°C	400	820	-	3/4"	410 x 410 x 860	
ERCE 100	A112L38	100	1,5	10	+99°C	500	775	-	3/4"	510 x 510 x 830	
ERCE 150	A112L43	150	1,5	10	+99°C	500	1005	-	3/4"	510 x 510 x 1040	
ERCE 200	A112L47	200	1,5	10	+99°C	600	1065	-	1"	610 x 610 x 1110	
ERCE 250	A112L49	250	1,5	10	+99°C	650	1160	-	1"	660 x 660 x 1210	
ERCE 300	A112L51	300	1,5	10	+99°C	650	1240	-	1"	660 x 660 x 1290	
ERCE 500	A112L55	500	1,5	10	+99°C	775	1400	-	1"	785 x 785 x 1440	

1MPa = 10 bar 1MPa = 10 bar

\*Version with feet for wall fixing

## CHOICE OF THE EXPANSION TANK

The table simplifies the choice of the ELBI expansion tank to be installed in hot water systems. The selection of the tank can be effectuated starting from the system's total capacity or from the plant's power, taking into consideration an average content of 12 litres per 1000 Kcal/h of power.

MODEL	PRE-CHARGE PRESSURE	MAXIMUM WORKING PRESSURE OF SYSTEM	PLANT HEIGHT	TANK ACCEPTABLE VOLUME	TANK ABSORPTION CAPACITY	$\Delta T = (90 - 14)^\circ\text{C}$ $\Delta$ expansion coefficient 0.035		
						TOTAL WATER CONTENT IN THE PLANT	HEAT GENERATOR POWER	
						[litres]	kcal/h	kW
ER CE 35	[BAR]	[BAR]	[m]	[litres]	[%]	[litres]		
	1		10	17,6	50	503	41.900	48,72093
	1,5	3	15	13,1	37	374	31.200	36,27907
ER CE 50	2		20	8,8	25	251	20.900	24,30233
	1		10	25	50	714	59.500	69,18605
	1,5	3	15	18,8	38	537	71.400	52,03488
ER CE 80	2		20	12,5	25	357	29.750	34,59302
	1		5	40	50	1.143	95.250	110,7558
	1,5	3	10	30	38	857	71.400	83,02326
ER CE 100	2		20	20	25	571	47.600	55,34884
	1		10	50	50	1.428	119.000	138,3721
	1,5	5	15	38	38	1.086	90.500	105,2326
ER CE 150	2		20	25	25	714	59.500	69,18605
	0,5		5	100	67	2.857	238.000	276,7442
	1	5	10	87	58	2.486	207.000	240,6977
ER CE 200	1,5		15	75	50	2.143	178.600	207,6744
	1		5	133	67	3.800	317.000	368,6047
	1,5	5	15	116	58	3.314	276.000	320,9302
ER CE 250	2		20	100	50	2.857	238.000	276,7442
	2,5		25	83	42	2.371	197.600	229,7674
	3		30	66	33	1.886	157.200	182,7907
ER CE 300	1		5	178	71	5.086	423.800	492,7907
	1,5		15	160	64	4.571	380.900	442,907
	2	5	20	143	57	4.086	340.500	395,9302
ER CE 500	2,5		25	125	50	3.571	297.600	346,0465
	3		30	107	43	3.057	254.800	296,2791
	1		5	214	71	6.114	509.500	592,4419
ER CE 300	1,5		15	193	64	5.514	459.500	534,3023
	2	6	20	171	57	4.886	407.000	473,2558
	2,5		25	150	50	4.286	357.200	415,3488
ER CE 500	3		30	128	43	3.657	304.800	354,4186
	1,5		5	321	64	9.171	764.300	888,7209
	2	6	15	285	57	8.143	678.600	789,0698
ER CE 500	2,5		20	250	50	7.143	595.300	692,2093
	3		25	215	43	6.143	512.000	595,3488
	3,5		30	178	36	5.086	427.000	496,5116