



# 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.

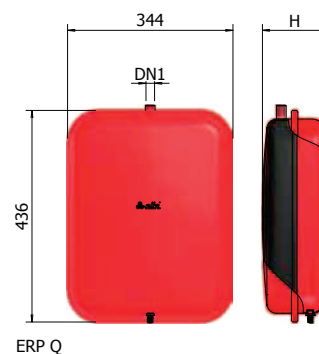


# ERP

## FIXED-BLADDER FLAT EXPANSION TANKS, FOR BURNERS

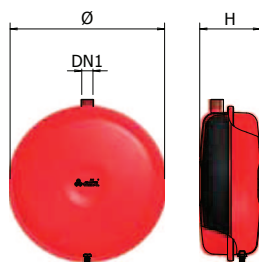
(6 - 24 LITRES)

### ERP Q

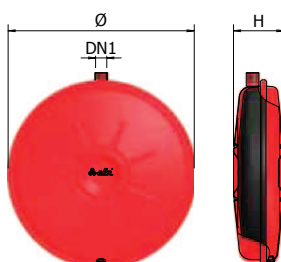


ERP Q

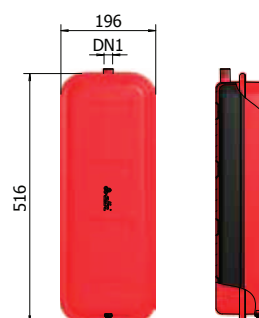
### ERP 320



### ERP 385



### ERP RET



For non-drinking water



For heating systems






#### Characteristics:

- Working temperature:  $-10^{\circ}$  /  $+90^{\circ}\text{C}$ .
- Long lasting epoxy powder paint, red.
- SBR rubber bladder with characteristics to guarantee the best performance and long duration.

**ERP 320 and ERP 385:**  
Articles supplied in packs of 4 pieces.

**WARRANTY: 2 YEARS**

## DIMENSIONS

MODEL	CODE		Ppre	Pmax					DN1	NOTES
		LITRES	bar	bar	max	mm	mm	mm		
ERP 320/6	1120106	6	1	3	+90°C	320	94	-	3/4"	
ERP 320/8	1120203	8	1	3	+90°C	320	121	-	3/4"	
ERP 320/10	1120301	10	1	3	+90°C	320	131	-	3/4"	
ERP 320/12	1120408	12	1	3	+90°C	320	165	-	3/4"	
ERP 385/7	1121101	7	1	3	+90°C	385	83	-	3/4"	
ERP 385/8	1121209	8	1	3	+90°C	385	98	-	3/4"	
ERP 385/10	1121306	10	1	3	+90°C	385	108	-	3/4"	
ERP 385/12	1121403	12	1	3	+90°C	385	139	-	3/4"	
ERP 385/14	1121501	14	1	3	+90°C	385	146	-	3/4"	
ERP 416/8	1135007	8	1	3	+90°C	416	75	-	3/8"	
ERP RET/6	1140601	6	1	3	+90°C	-	-	516 x 196 x 95	3/4"	
ERP RET/8	1140701	8	1	3	+90°C	-	-	516 x 196 x 110	3/4"	
ERP RET/10	1140901	10	1	3	+90°C	-	-	516 x 196 x 124	3/4"	
ERP RET/12	1141001	12	1	3	+90°C	-	-	516 x 196 x 152	3/4"	
ERP-Q/7	1150007	7	1	3	+90°C	-	-	436 x 344 x 77	3/8"	
ERP-Q/10	1150009	10	1	3	+90°C	-	-	436 x 344 x 97	1/2"	
ERP-Q/12	1150010	12	1	3	+90°C	-	-	436 x 344 x 117	1/2"	
ERP-Q/14	1150011	14	1	3	+90°C	-	-	436 x 344 x 132	1/2"	
ERP-Q/16	1150013	16	1	3	+90°C	-	-	436 x 344 x 147	1/2"	
ERP-Q/18	1150014	18	1	3	+90°C	-	-	436 x 344 x 155	1/2"	
ERP-Q/20	1150015	20	1	3	+90°C	-	-	436 x 344 x 162	1/2"	
ERP-Q/24	1150016	24	1	3	+90°C	-	-	436 x 344 x 177	1/2"	

## 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 8 litres per 1000 Kcal/h of power, a precharge pressure of 1 bar and a plant's maximum working pressure of 3 bars.

$\Delta T = (90 - 14)^\circ\text{C}$   
 $\Delta$  expansion coefficient 0.035

MODEL	PRE-CHARGE PRESSURE	PLANT HEIGHT	TANK ACCEPTABLE VOLUME	TANK ABSORPTION CAPACITY	TOTAL WATER CONTENT IN THE PLANT	HEAT GENERATOR POWER	
	[BAR]	[m]	[litres]	[%]	[litres]	kcal/h	kW
ERP 320/6	1,0	10	3,0	50	86	10.700	12,44
ERP 320/8	1,0	10	4,0	50	114	14.300	16,63
ERP 320/10	1,0	10	5,0	50	143	17.900	20,80
ERP 320/12	1,0	10	6,0	50	172	21.500	25,00
ERP 385/7	1,0	10	3,5	50	100	12.500	14,53
ERP 385/8	1,0	10	4,0	50	114	14.300	16,63
ERP 385/10	1,0	10	5,0	50	143	17.900	20,81
ERP 385/12	1,0	10	6,0	50	172	21.500	25,00
ERP 385/14	1,0	10	7,0	50	200	25.000	29,10
ERP 416/8	1,0	10	4,0	50	114	14.300	16,63
ERP RET 6	1,0	10	3,0	50	86	10.700	12,44
ERP RET 8	1,0	10	4,0	50	114	14.300	16,63
ERP RET 10	1,0	10	5,0	50	143	17.900	20,81
ERP RET 12	1,0	10	6,0	50	172	21.500	25,00
ERP Q 7	1,0	10	3,5	50	100	12.500	14,53
ERP Q 10	1,0	10	5,0	50	143	17.900	20,81
ERP Q 12	1,0	10	6,0	50	172	21.500	25,00
ERP Q 14	1,0	10	7,0	50	200	25.000	29,10
ERP Q 16	1,0	10	8,0	50	228	28.500	33,14
ERP Q 18	1,0	10	9,0	50	258	32.200	37,44
ERP Q 20	1,0	10	10,0	50	286	35.800	41,63
ERP Q 24	1,0	10	12,0	50	343	42.900	49,88

1MPa = 10 bar  
 Max press. 3 bar  
 t max 90°C  
 t min 10°C