

## Gas-fired thermal unit with built-in water tank

# Altair B



### ALTAIR BTNE - ALTAIR BTFSE

Thermal unit for CH and DHW supply through a storage tank managed by the "Aqua Premium" system. Cast-iron heat exchanger with 3-pass technique. Available in natural draught (BTNE) and forced draught models (BTFSE).

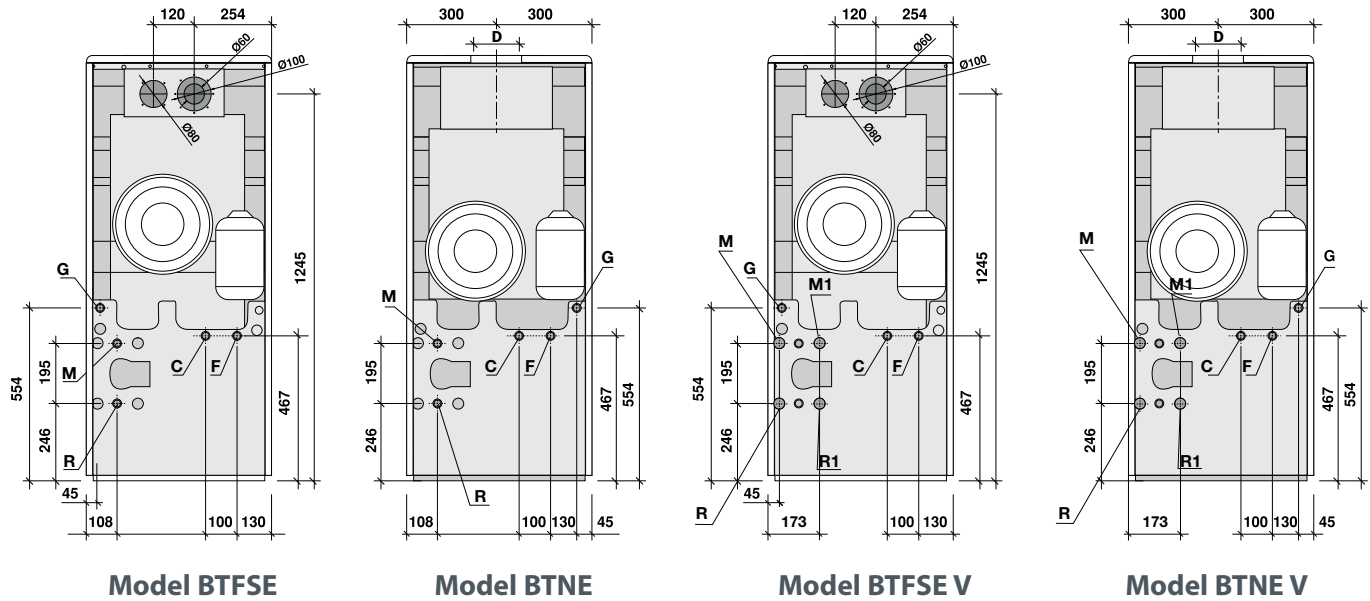
- Pre-set to run on methane or LPG
- Electronic ignition, on/off pilot flame and ionization flame detection
- Secondary plate heat exchanger
- Stainless steel atmospheric burner
- Stainless steel, 60 l, stratification water storage tank
- Large DHW supply
- Efficiency rating according to 92/42/EEC:  
BTNE 25, 32, 42, BTFSE 24 ★★  
BTFSE 32, 36 ★★★
- **V versions are equipped with two outlets: one for high temperature and one for low temperature areas**
- An optional kit allows to create a system with different zones
- Dimensions (mm): L 600 x H 1370 x D 800
- **DHW supply through "Aqua Premium" system, with secondary plate heat exchanger and 60 l water tank which can be left inoperative when not needed**

#### DHW production (ΔT 30K - EN 625)

<b>ALTAIR BTNE 25</b>	220 litres/10'	<b>ALTAIR BTFSE 24</b>	215 litres/10'
<b>ALTAIR BTNE 32</b>	242 litres/10'	<b>ALTAIR BTFSE 32</b>	245 litres/10'
<b>ALTAIR BTNE 42</b>	280 litres/10'	<b>ALTAIR BTFSE 36</b>	253 litres/10'

Model	Fuel	Code	Heat output kW	Gross weight
ALTAIR BTNE 25	METHANE	<b>CASxx2BF25</b>	25.05	Kg. 179.2
	LPG	<b>CASxx3BF25</b>		
ALTAIR BTNE 25 V	METHANE	<b>CASxx2VV25</b>	25.05	Kg. 194.0
	LPG	<b>CASxx3VV25</b>		
ALTAIR BTNE 32	METHANE	<b>CASxx2BF32</b>	31.4	Kg. 195.2
	LPG	<b>CASxx3BF32</b>		
ALTAIR BTNE 32 V	METHANE	<b>CASxx2VV32</b>	31.4	Kg. 210.0
	LPG	<b>CASxx3VV32</b>		
ALTAIR BTNE 42	METHANE	<b>CASxx2BF42</b>	42.54	Kg. 213.4
	LPG	<b>CASxx3BF42</b>		
ALTAIR BTNE 42 V	METHANE	<b>CASxx2VV42</b>	42.54	Kg. 228.2
	LPG	<b>CASxx3VV42</b>		
ALTAIR BTFSE 24	METHANE	<b>CASxx2BG24</b>	24	Kg. 196.6
	LPG	<b>CASxx3BG24</b>		
ALTAIR BTFSE 24 V	METHANE	<b>CASxx2VZ24</b>	24	Kg. 211.4
	LPG	<b>CASxx3VZ24</b>		
ALTAIR BTFSE 32	METHANE	<b>CASxx2BG32</b>	32	Kg. 241.6
	LPG	<b>CASxx3BG32</b>		
ALTAIR BTFSE 32 V	METHANE	<b>CASxx2VZ32</b>	32	Kg. 256.4
	LPG	<b>CASxx3VZ32</b>		
ALTAIR BTFSE 36	METHANE	<b>CASxx2BG36</b>	36.5	Kg. 241.6
	LPG	<b>CASxx3BG36</b>		
ALTAIR BTFSE 36 V	METHANE	<b>CASxx2VZ36</b>	36.5	Kg. 256.4
	LPG	<b>CASxx3VZ36</b>		

## Dimensions



Model BTFSE

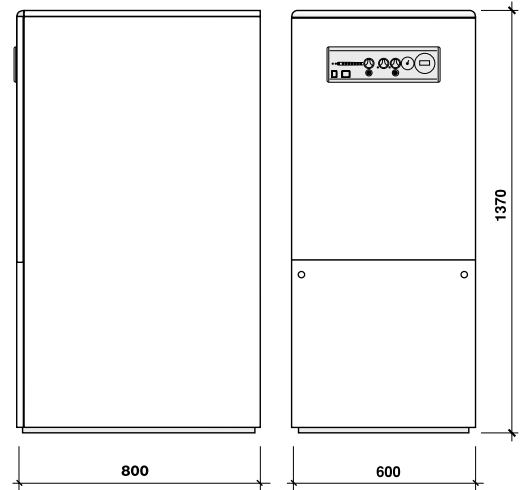
Model BTNE

Model BTFSE V




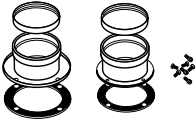
Model BTNE V

Model	M	R	M1	R1	C	F	G	D (mm)
BTNE 25 / BTNE 25 V	G 1	G 1	G 1	G 1	G ¾	G ¾	G ½	130
BTNE 32 / BTNE 32 V	G 1	G 1	G 1	G 1	G ¾	G ¾	G ½	150
BTNE 42 / BTNE 42 V	G 1	G 1	G 1	G 1	G ¾	G ¾	G ½	150
BTFSE 24 / BTFSE 24 V	G 1	G 1	G 1	G 1	G ¾	G ¾	G ½	--
BTFSE 32 / BTFSE 32 V	G 1	G 1	G 1	G 1	G ¾	G ¾	G ½	--
BTFSE 36 / BTFSE 36 V	G 1	G 1	G 1	G 1	G ¾	G ¾	G ½	--

- G Gas inlet (½")
- M CH flow (¾")
- C DHW outlet (½")
- F Domestic cold water inlet (½")
- R CH return (¾")



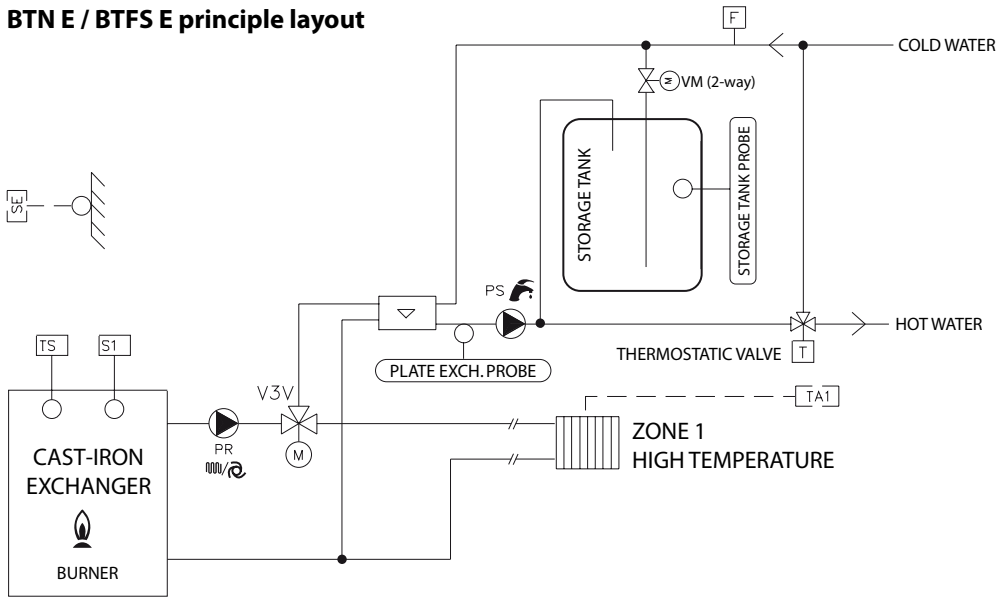
## Accessories

Item	Description	Code
	Remote control	<b>OCREMOTO05</b>
	Outdoor probe	<b>OSONDAES01</b>
	Electric kit for management of three different CH zones through a remote control. Complete with outdoor probe.	<b>OCIRCSTA11</b>
	Standard kit for split air-intake/flue gas ducts (model TFS)	<b>OSDOPPIA05</b>

For the complete range of flue gas accessories see page 172-175.

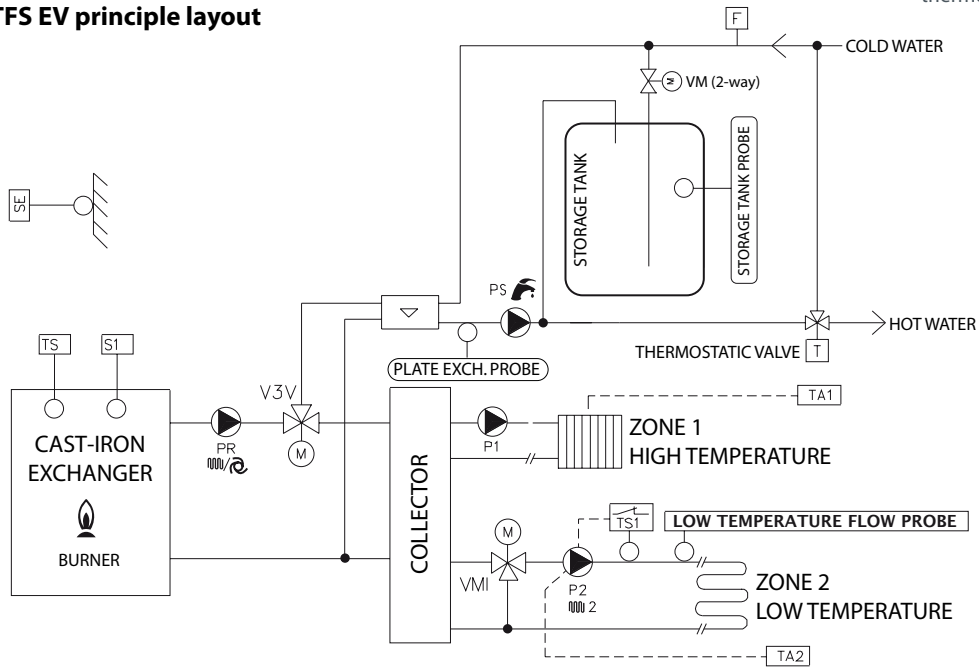
## ALTAIR B hydraulic layout (BTNE - BTFSE)

### BTN E / BTFS E principle layout



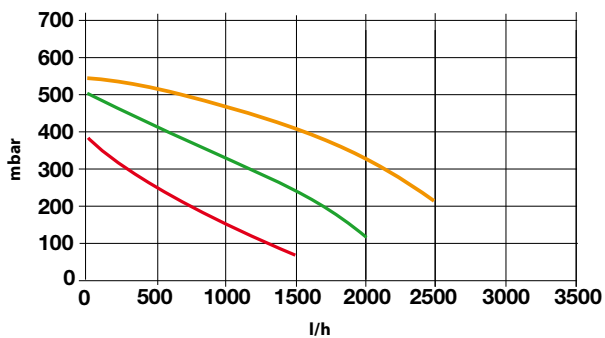
- S1:** CH probe
- TS:** limit thermostat
- V3V:** motorized 3-way valve
- VM:** motorized 2-way valve
- PR:** CH pump with air-purging device
- PS:** DHW pump
- F:** priority flow meter
- SE:** outdoor probe (option)
- VMI:** mixer valve
- TS1:** low temperature safety thermostat

### BTN EV / BTFS EV principle layout

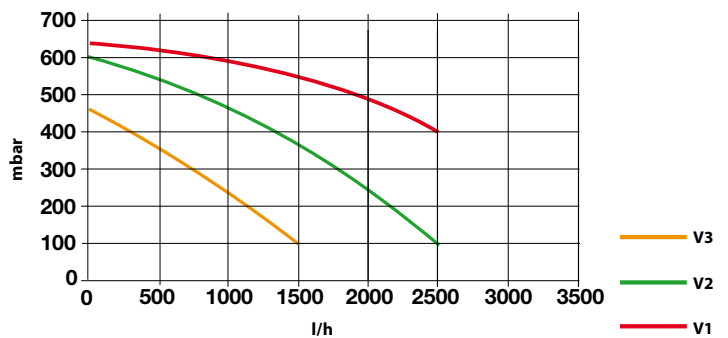


## Head available for boiler (by-pass closed)

**Model 24 - 25**



**Model 32 - 36 - 42**



TECHNICAL SPECIFICATIONS		BTN E 25 BTN E 25 V	BTN E 32 BTN E 32 V	BTN E 42 BTN E 42 V	BTFS E 24 BTFS E 24 V	BTFS E 32 BTFS E 32 V	BTFS E 36 BTFS E 36 V	
Category		II 2H3+	II 2H3+	II 2H3+	II 2H3+	II 2H3+	II 2H3+	
No. of primary heat exchanger elements		4	5	6	3	4	4	
Heat output	kW	25.05	31.4	42.54	24	32	36.5	
Heat input	kW	27.87	34.8	47	26.6	34.4	39.2	
Efficiency at nominal load	%	89.90	90.22	90.51	90.20	93.10	93.10	
Efficiency at reduced load (30%)	%	89.00	90.00	89.75	89.23	92.08	92.14	
CE efficiency rating		★★	★★	★★	★★	★★★	★★★	
Chimney heat loss with burner on	%	9.7	9.28	8.99	7.6	5	5.4	
Maintenance loss (ΔT=50°)	%	0.4	0.5	0.5	2.2	1.9	1.5	
Value of CO <sub>2</sub>	G20	%	5.1	4.5	6	7.6	8.3	8.2
	G30	%	6.2	5.4	7.1	9.8	9.7	11.1
Flue gas temperature	G20	°C	111	103	121	120/130	110/120	120/130
	G30	°C	110	105	122	120/130	120/130	120/130
Flue gas mass flow rate	G20	Kg/h	101.16	133.56	162	55	67	76
	G30	Kg/h	101.16	133.56	162	55	67	76
Number of burner nozzles		3	4	5	3	3	3	
Burner nozzle diameter	G20	mm	2.95	3.7	4.97	2.81	3.64	4.15
	G30	mm	1.55	1.55	1.55	1.5	1.7	1.7
Pilot burner nozzle diameter	G20	mm	2 holes x 0.27					
	G30		0.5	0.5	0.5	0.5	0.5	0.5
Gas pressure at burner	G20	mbar	11.5	9.5	9.5	11	9.5	9.5
	G30	mbar	26.5	26.5	26.5	26	25.5	25.5
Gas flow rate (15°C / 1013 mbar)	G20	Stm <sup>3</sup> /h	2.95	3.7	4.97	2.81	3.64	4.15
	G30	Kg/h	2.2	2.76	3.7	2.1	2.7	3.1
Water content	l		16.4	19.8	23	13	16.4	16.4
Water content (Model V)			20.4	23.8	27	17	20.4	20.4
CH water minimum flow rate	l/h		540	690	900	520	690	780
CH temperature regulation	°C		40 - 90	40 - 90	40 - 90	40 - 90	40 - 90	40 - 90
Maximum CH pressure	bar		3	3	3	3	3	3
Minimum CH pressure	bar		0.8	0.8	0.8	0.8	0.8	0.8
CH expansion vessel	l		12	12	18	12	12	12
Maximum suggested system capacity	l		240	240	240	240	240	240
DHW expansion vessel	l		5	5	5	5	5	5
Maximum DHW temperature	°C		65	65	65	65	65	65
Maximum DHW working pressure	bar		6	6	6	6	6	6
Minimum DHW working pressure	bar		1	1	1	1	1	1
DHW minimum flow rate	l/min		3	3	3	3	3	3
Storage tank volume	l		60	60	60	60	60	60
DHW supply (ΔT=30°K according to EN 625)	l/10'		220	242	280	215	245	256
DHW efficiency rating according to prEN 13203		★★★	★★★	★★★	★★★	★★★	★★★	
CH fittings diameter	inches		1"	1"	1"	1"	1"	1"
DHW fittings diameter	inches		¾"	¾"	¾"	¾"	¾"	¾"
Gas connection diameter	inches		½"	½"	½"	½"	½"	½"
<b>TN version</b>								
Flue gas duct diameter	mm	130	150	150	-	-	-	
<b>TFS version</b>								
Air intake/flue gas duct diameter	mm	-	-	-	100/60   80 + 80	100/60   80 + 80	100/60   80 + 80	
Electrical power supply	V-Hz	230/50	230/50	230/50	230/50	230/50	230/50	
Power supply fuse	A	4	4	4	4	4	4	
Total absorbed electric power	W	160	200	200	200	250	250	
L x H x D	mm	600 x 1370 x 800						
Net weight	Kg	164.2	180.2	198.4	189.6	226.6	226.6	
Net weight Model V	Kg	179.0	195.0	213.2	204.4	241.4	241.4	
Gross weight	Kg	179.2	195.2	213.4	196.6	241.6	241.6	
Gross weight Model V	Kg	194.0	210.0	228.2	211.4	256.4	256.4	