

Ferroli

FB

Puffere - Rezervoare de acumulare agent termic



CE

INSTRUCȚIUNI PENTRU UTILIZARE, INSTALARE ȘI UTILIZARE

Introducere

Stimate client,

Speram ca echipamentul pe care l-ati cumparat de la noi va contribui la confortul casei si la reducerea cheltuielilor de energie. Acest manual de utilizare cuprinde descrierea tehnica a unitatii pe care ati cumparat-o si instructiunile de functionare. Manualul a fost intocmit pentru a va familiariza cu instalarea, operarea si intretinerea acestuia.

Respectarea instructiunilor din acest manual este una din conditiile garantiei.

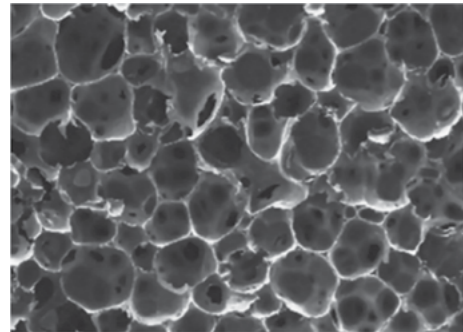
Avantaje:

1. Pufferul este utilizat in instalatii de incalzire pentru stocarea de agent termic. Acesta protejeaza functionarea cazanului si maresta considerabil durata de viata a acestuia.
2. Pufferul este fabricat din otel de inalta calitate S235JR (EN 10025).
3. Presiunea de lucru a rezervorului de acumulare este de 3 bari.
4. Izolatia exterioara este realizata din poliuretan moale 100 mm grosime cu invelis din PVC, in conformitate cu DIN 4753-8.

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1. Izolatie



Puferele cu capacitate intre 150 si 5000 litri sunt izolate cu spuma poliuretan moale 100 mm grosime rezistente la temperatura cu densitate de 23 kg / m² . Invelisul decorativ al pufferelor este din folie de PVC moale, in diverse culori.

Figura 1
Vedere microscopica a poliuretanului

2. Schema de conectare a supapei rezervorului de acumulare (Puffer)

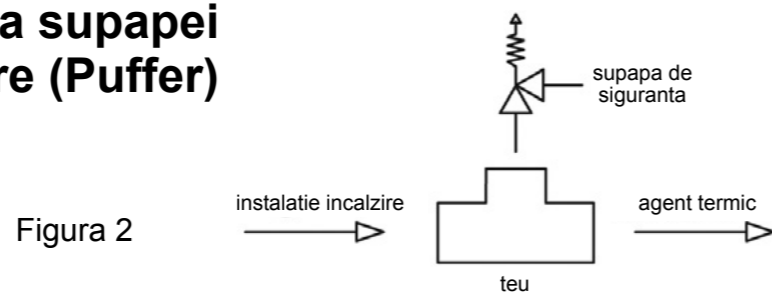


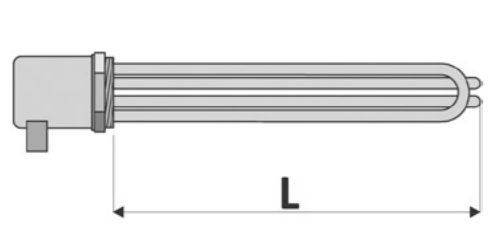
Figura 2

3. Rezistenta electrica (optional)


Optional urmatoarele rezistente electrice pot fi conectate la puffer:

- 1) 3000W / 230V
- 2) 4500W / 230V
- 3) 6000W / 230V
- 4) 7500W / 400V

Acestea au termostate de protectie cu dubla siguranta cu intervalul de temperatura de la 30 ° C pana la 80 ° C. Temperatura de declansare 95 ° C; 3 +2 contacte 10 (2.5) 230V , protectie IP 40 ; diferential 8 ° C ± 3 ° C.



Putere (W)	L (mm)	Conectare	Voltaj (V)
3000	210	1½"	230/400
4500	320	1½"	230/400
6000	410	1½"	230/400
7500	590	1½"	230/400

 Conectarea elementului electric de incalzire la sursa de energie electrica trebuie sa fie facuta de electricieni specializati. Cand conectati elementul de incalzire la retea electrica, asigurati-va ca aceasta are impamantare.

4. Termometru (optional)

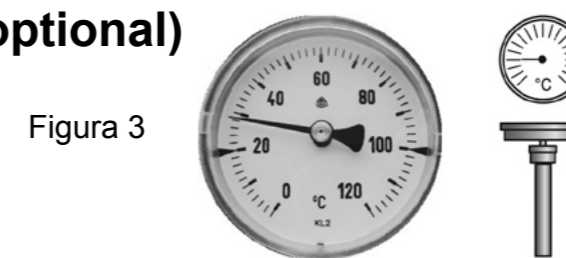


Figura 3

5. Termostat (optional)



Figura 4

Acesta este un termostat dublu reglabil care este conceput sa regleze temperatura apei si sa asigure o toleranta de siguranta; acesta poate fi reglat manual (modelul TLSC) sau automat (TLSC/A model).

STANDARDE DE CONFORMITATE

Acest produs este in conformitate cu:
- EN 60730 - 1 editiile ulterioare;
- EN 60730 - 2 - 9

CONFORMITATE CU REGLEMENTARILE

Acest produs este conform cu:
- Directiva de joasa tensiune 73/23 CEE
- Directiva privind compatibilitatea electromagnetica 89/336/EC

CARACTERISTICI TEHNICE

Gama temperatura - reglare: 0 ° C ÷ 90 ° C, limita: 90°C÷110°C
Toleranta - reglare: ± 5K , limita - 15k ; - 6k (depinde de model)
Diferenta de temperatura - reglare: 6 ± 2K, 4 ± 1K (depinde de model), limita de 25 ± 8K, 15 ± 8k (depinde de model)
Reglaj automat (TLSC/A) si manual (TLSC).
Grad de protectie IP = 40 .
Clasa de izolatie = I.
Rata schimbari de temperatura ≤ 1K/min .
Punct Temperatura maxima = 80 ° C.
Temperatura maxima lampa electrica = 125 ° C
Temperatura acumulare = 15 ° C ÷ 55 ° C.
Presiunea maxima a cartusului = 10 bari.
Constanta de timp ≤ 1 " ; .

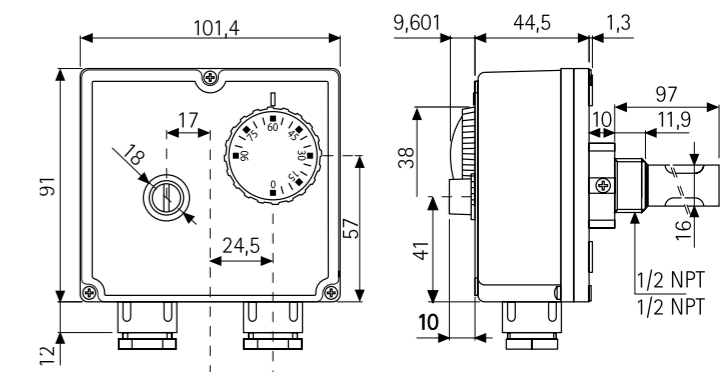


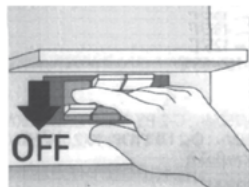
Figura 5.1

Conexiune electrica:

C-1 ADJ.: 10(2,5)A/250V~;
 C-2 ADJ.: 6(2,5)A/250V~;
 C-1 LIM.: 0,5A/250V~;
 C2 LIM.: 10(2,5)A/250V~;

Terminal - intrerupator de circuit sau contact de pornire.
 Comutator - actiune - 2B .
 Locul de instalare - NORMAL.
 Tip de cablu - M20 x 1,5.

INSTALARE SI CONECTARE



Instructiuni de siguranta:
 Inainte de a conecta termostatul, fiti siguri ca UNITATEA NU ESTE CONECTATA LA RETEAUA DE ALIMENTARE CU ENERGIE.

Figura 5.2

! ATENTIE! Toate operatiunile de instalare, inclusiv ajustarile manuale, trebuie sa fie indeplinite de catre un specialist calificat.

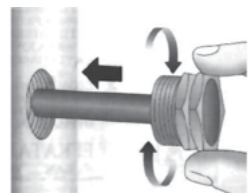


Figura 5.3

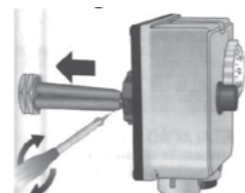


Figura 5.4

A) Vezi Figura 5.3 si 5.4;
 B) Desfaceti cele trei suruburi si scoateti partea frontala a termostatalui. Se desfac firele de alimentare si se conecteaza la bornele termostatalui (figura 5.5) urmand instructiunile.

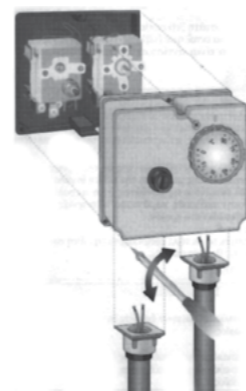


Figura 5.5

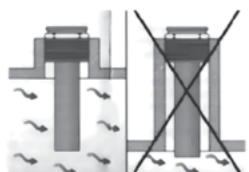


Figura 5.6

NOTA: Vezi Figura 5.6.
 Pentru a inchide partea din fata, deschiderea cartusului trebuie sa se alinieze cu cuplarea butonului de reglare .

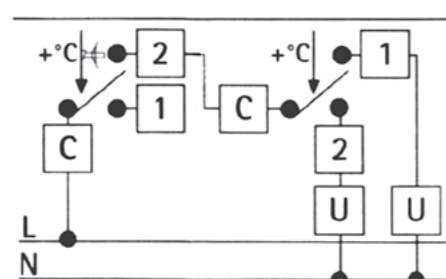


Figura 5.7

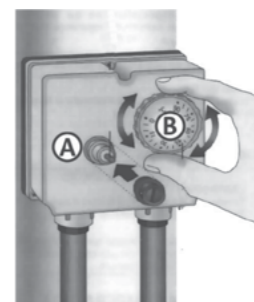


Figura 5.8

LIMITAREA CONEXIUNILOR

TERMINAL 2 – deschide circuitul cand temperatura creste.
 TERMINAL C – contact obisnuit.

TERMOSTAT

TERMINAL 1 – deschide circuitul cand temperatura creste.
 TERMINAL 2 – inchide circuitul atunci cand temperatura creste
 TERMINAL C – contact obisnuit

REGLAREA TEMPERATURII

A - buton de Reset (numai pentru TLSC)
 B - Buton pentru reglarea temperaturii

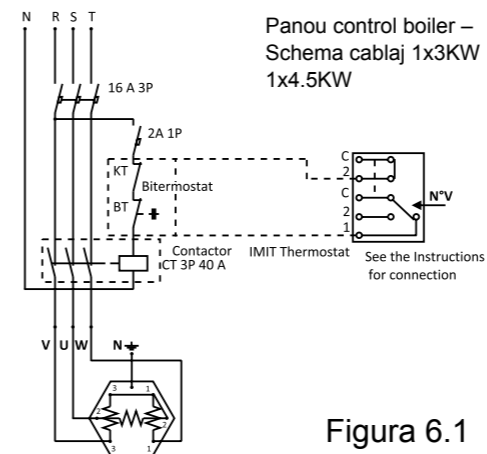


Figura 6.1

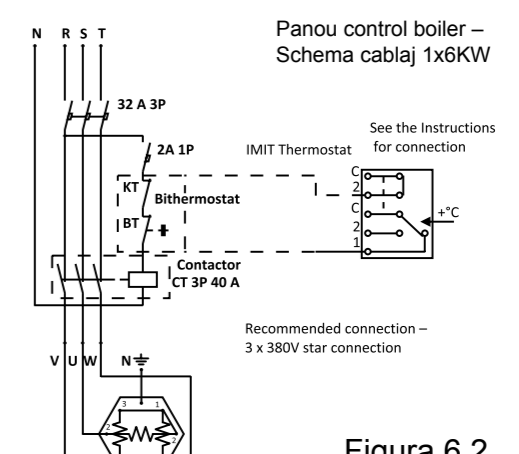


Figura 6.2

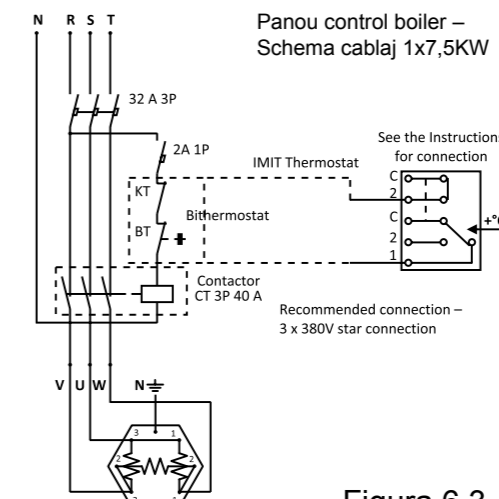
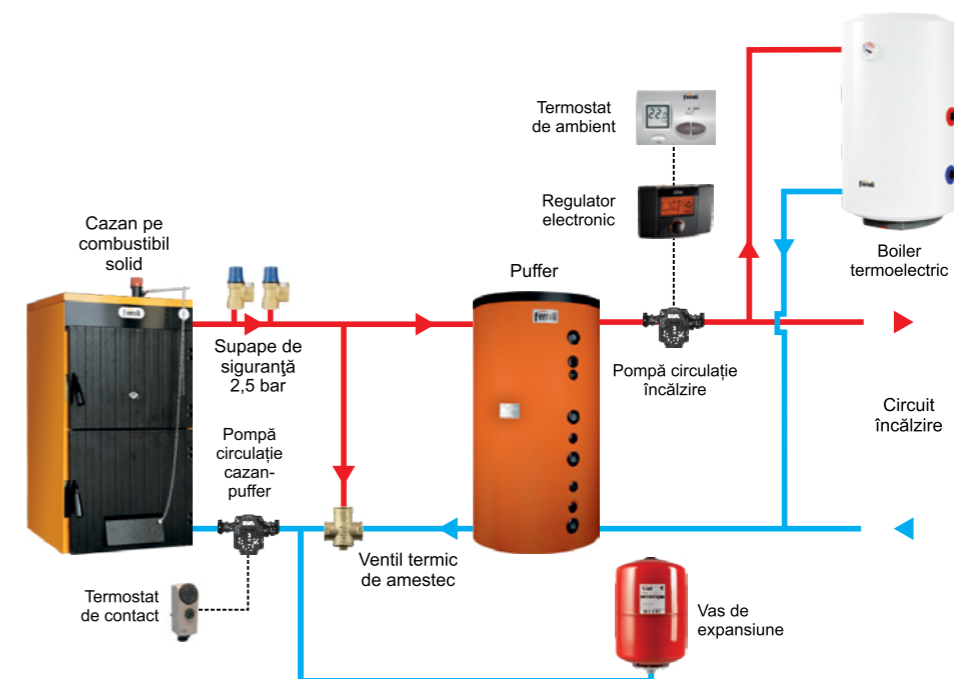
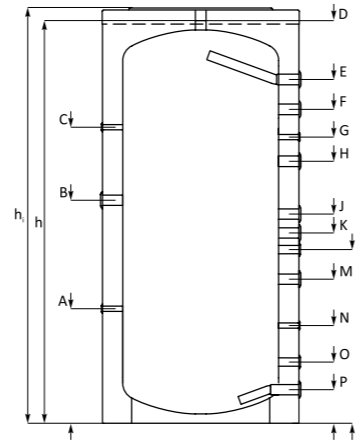


Figura 6.3

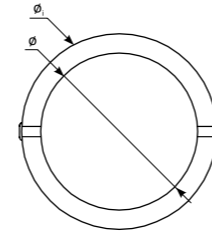
6. Schema hidraulica de principiu cazan - puffer



7.1 Specificatii tehnice FB

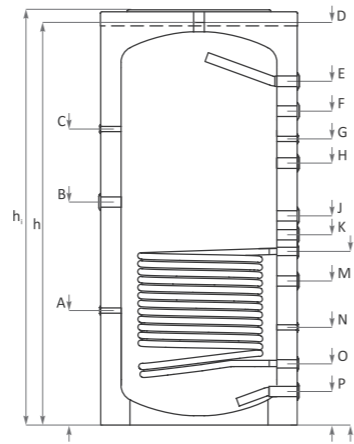


Model	um	FB 300	FB 500	FB 800	FB 1000
Capacitate	litri	300	500	800	1000
Diametru D Φ /cu izolatia Φ	mm	550/750	650/850	790/990	790/990
Inaltime h /cu izolatia h	mm	1410/1460	1610/1660	1860/1910	2040/2090
Presiune functionare / temp. max puffer	bar/ $^{\circ}$ C	3/95	3/95	3/95	3/95
Cazan recomandat pentru conectare la puffer	kW	6-10	10-17	15-27	18-33
Termometru	optional	optional	optional	optional	optional
Manta PVC cu izolatia (optional)		poliuretan moale			
Greutate puffer / Izolatia	kg	77/9,5	99/12,3	126/16,4	152/18
Teaca senzor A	mm	G1/2"/410	G1/2"/410	G1/2"/570	G1/2"/580
Element electric incalzire B	mm	G11/2"/760	G11/2"/790	G11/2"/920	G11/2"/1130
Teaca senzor C	mm	G1/2"/1060	G1/2"/1120	G1/2"/1290	G1/2"/1500
Racord aerisire D	mm	G11/2"/1410	G11/2"/1610	G11/2"/1860	G11/2"/2040
Tur agent termic cazan E	mm	G11/2"/1170	G11/2"/1370	G11/2"/1573	G11/2"/1742
Tur agent termic / Serpentina superioara S2 F	mm			G11/2"/1390	G11/2"/1520
Teaca senzor G	mm	G1/2"/1010	G1/2"/1120	G1/2"/1290	G1/2"/1450
Racord agent termic H	mm	G11/2"/880	G11/2"/990		
Racord agent termic J	mm	G11/2"/770	G11/2"/880	G11/2"/980	G11/2"/1060
Teaca suplimentara K	mm				
Tur agent termic / Serpentina inferioara S1 L	mm	G1"/660	G1"/770	G1"/820	G1"/880
Tur agent termic cazan M	mm	G11/2"/540	G11/2"/620	G11/2"/670	G11/2"/730
Teaca senzor N	mm	G1/2"/420	G1/2"/460	G1/2"/465	G1/2"/495
Retur agent termic / Serpentina inferioara S1 O	mm	G1"/260	G1"/250	G1"/310	G1"/310
Retur agent termic cazan P	mm	G11/2"/150	G11/2"/150	G11/2"/170	G11/2"/170

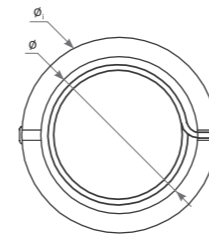


FB 1500	FB 2000	FB 2500	FB 3000	FB 4000	FB 5000
1500	2000	2500	3000	4000	5000
1000/1200	1150/1350	1150/1350	1250/1450	1400/1600	1600/1800
2170/2220	2200/2250	2680/2730	2720/2770	2746/2796	2841/2891
3/95	3/95	3/95	3/95	3/95	3/95
27-50	36-67	45-83	55-100	55-100	100-167
optional	optional	optional	optional	optional	optional
poliuretan moale					
274/23,2	382/26,5	423/30	520/35	474/40	560/40
G1/2"/875	G1/2"/920	G1/2"/920	G1/2"/822	G1/2"/908	G1/2"/951
G11/2"/1130	G11/2"/1170	G11/2"/1170	G11/2"/1356	G11/2"/1182	G11/2"/1505
G1/2"/1500	G1/2"/1690	G1/2"/1690	G1/2"/1832	G1/2"/1658	G1/2"/2001
G11/2"/2170	G11/2"/2200	G11/2"/2680	G11/2"/2720	G11/2"/2245	G11/2"/2938
G11/2"/1808	G11/2"/1820	G11/2"/2300	G11/2"/2289	G11/2"/1795	G11/2"/2438
G11/2"/1635					
G1/2"/1525	G1/2"/1590	G1/2"/1670	G1/2"/2652	G1/2"/1588	G1/2"/2231
G11/2"/1305	G11/2"/1420	G11/2"/1670	G11/2"/1686	G11/2"/1472	G11/2"/2115
G11/2"/1085	G11/2"/1170	G11/2"/1420	G11/2"/1346	G11/2"/1182	G11/2"/1735
G1/2"/975		G11/2"/1170			
G1"/895	G1"/980	G1"/980	G1"/1195	G1"/1080	G1"/1373
G11/2"/765	G11/2"/735	G11/2"/735	G11/2"/926	G11/2"/862	G11/2"/1155
G1/2"/520	G1/2"/500	G1/2"/500	G1/2"/672	G1/2"/608	G1/2"/691
G1"/375	G1"/380	G1"/380	G1"/390	G1"/475	G1"/518
G11/2"/235	G11/2"/230	G11/2"/230	G11/2"/256	G11/2"/342	G11/2"/385

7.2 Specificatii tehnice FB-1

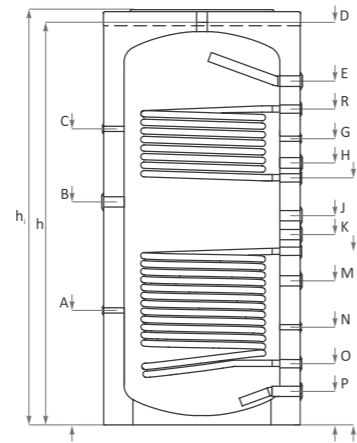


Model	um	FB-1 300	FB-1 500	FB-1 800	FB-1 1000
Capacitate	litri	300	500	800	1000
Diametru D Φ /cu izolatie Φ	mm	550/750	650/850	790/990	790/990
Inaltime h /cu izolatie h	mm	1410/1460	1610/1660	1860/1910	2040/2090
Schimbator caldura serpentina inferioara S1					
Suprafata schimbator caldura	mp	1.0	1.7	2.9	3.0
Capacitate serpentina	litri	6.2	10.5	17.9	18.5
Presiune functionare / temp. max serpentina	bar/ $^{\circ}$ C	16/110	16/110	16/110	16/110
Presiune functionare / temp. max puffer	bar/ $^{\circ}$ C	3/95	3/95	3/95	3/95
Boiler recomandat pentru conectare la puffer	kW	6-10	10-17	15-27	18-33
Termometru		optional			
Manta PVC cu izolatie (optional)		Izolatie moale 100 mm			
Greutate puffer / Izolatie	kg	92/9,5	129/12,3	161/16,4	194/18
Teaca senzor A	mm	G1/2"/410	G1/2"/410	G1/2"/570	G1/2"/580
Element electric incalzire B	mm	G11/2"/760	G11/2"/790	G11/2"/920	G11/2"/1130
Teaca senzor C	mm	G1/2"/1060	G1/2"/1120	G1/2"/1290	G1/2"/1500
Teaca aerisire D	mm	G11/2"/1410	G11/2"/1610	G11/2"/1860	G11/2"/2040
Tur agent termic cazan E	mm	G11/2"/1170	G11/2"/1370	G11/2"/1573	G11/2"/1742
Tur agent termic / Serpentina superioara S2 F	mm			G11/2"/1390	G11/2"/1520
Teaca senzor G	mm	G1/2"/1010	G1/2"/1120	G1/2"/1290	G1/2"/1450
Racord agent termic H	mm	G11/2"/880	G11/2"/990		
Racord agent termic J	mm	G11/2"/770	G11/2"/880	G11/2"/980	G11/2"/1060
Teaca suplimentara K	mm				
Tur agent termic / Serpentina inferioara S1 L	mm	G1"/660	G1"/770	G1"/820	G1"/880
Tur agent termic cazan M	mm	G11/2"/540	G11/2"/620	G11/2"/670	G11/2"/730
Teaca senzor N	mm	G1/2"/420	G1/2"/460	G1/2"/465	G1/2"/495
Retur agent termic / Serpentina inferioara S1 O	mm	G1"/260	G1"/250	G1"/310	G1"/310
Retur agent termic cazan P	mm	G11/2"/150	G11/2"/150	G11/2"/170	G11/2"/170

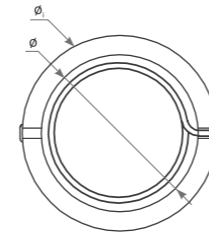


FB-1 1500	FB-1 2000	FB-1 2500	FB-1 3000	FB-1 4000	FB-1 5000
1500	2000	2500	3000	4000	5000
1000/1200	1150/1350	1150/1350	1250/1450	1400/1600	1600/1800
2170/2220	2200/2250	2680/2730	2720/2770	2746/2796	2841/2891
3.4	4.0	4.0	4.5	5.2	6.1
21	24.6	24.6	27.7	32	37.2
16/110	16/110	16/110	16/110	16/110	16/110
3/95	3/95	3/95	3/95	3/95	3/95
27-50	36-67	45-83	55-100	55-100	100-167
optional					
Izolatie moale 100 mm					
316/23,2	424/26,5	465/30	590/35	555/40	665/42
G1/2"/875	G1/2"/920	G1/2"/920	G1/2"/822	G1/2"/908	G1/2"/951
G11/2"/1130	G11/2"/1170	G11/2"/1170	G11/2"/1356	G11/2"/1182	G11/2"/1505
G1/2"/1500	G1/2"/1690	G1/2"/1690	G1/2"/1832	G1/2"/1658	G1/2"/2001
G11/2"/2170	G11/2"/2200	G11/2"/2680	G11/2"/2720	G11/2"/2245	G11/2"/2938
G11/2"/1808	G11/2"/1820	G11/2"/2300	G11/2"/2289	G11/2"/1795	G11/2"/2438
G11/2"/1635					
G1/2"/1525	G1/2"/1590	G1/2"/1670	G1/2"/2652	G1/2"/1588	G1/2"/2231
G11/2"/1305	G11/2"/1420	G11/2"/1670	G11/2"/1686	G11/2"/1472	G11/2"/2115
G11/2"/1085	G11/2"/1170	G11/2"/1420	G11/2"/1346	G11/2"/1182	G11/2"/1735
G1/2"/975		G11/2"/1170			
G1"/895	G1"/980	G1"/980	G1"/1195	G1"/1080	G1"/1373
G11/2"/765	G11/2"/735	G11/2"/735	G11/2"/926	G11/2"/862	G11/2"/1155
G1/2"/520	G1/2"/500	G1/2"/500	G1/2"/672	G1/2"/608	G1/2"/691
G1"/375	G1"/380	G1"/380	G1"/390	G1"/475	G1"/518
G11/2"/235	G11/2"/230	G11/2"/230	G11/2"/256	G11/2"/342	G11/2"/385

7.3 Specificatii tehnice FB-2



Model	um	FB-2 300	FB-2 500	FB-2 800	FB-2 1000
Capacitate	litri	300	500	800	1000
Diametru D Φ /cu izolatie Φ	mm	550/750	650/850	790/990	790/990
Inaltime h /cu izolatie h	mm	1410/1460	1610/1660	1860/1910	2040/2090
Schimbator caldura serpentina inferioara S1					
Suprafata schimbator caldura	mp	1.0	1.7	2.9	3.0
Capacitate serpentina	litri	6.2	10.5	17.9	18.5
Schimbator caldura serpentina superioara S2					
Suprafata schimbator caldura		0.5	1.0	1.8	2.0
Capacitate serpentina		3.1	6.2	11.1	12.3
Presiune functionare / temp. max serpentina	bar/ $^{\circ}$ C	16/110	16/110	16/110	16/110
Presiune functionare / temp. max puffer	bar/ $^{\circ}$ C	3/95	3/95	3/95	3/95
Boiler recomandat pentru conectare la puffer	kW	6-10	10-17	15-27	18-33
Termometru		optional			
Manta PVC cu izolatie (optional)		Izolatie moale 100 mm			
Greutate puffer / Izolatia	kg	100/9,5	140/12,3	185/16,4	220/18
Teaca senzor A	mm	G1/2"/410	G1/2"/410	G1/2"/570	G1/2"/580
Element electric incalzire B	mm	G11/2"/760	G11/2"/790	G11/2"/920	G11/2"/1130
Teaca senzor C	mm	G1/2"/1060	G1/2"/1120	G1/2"/1290	G1/2"/1500
Racord aerisire D	mm	G11/2"/1410	G11/2"/1610	G11/2"/1860	G11/2"/2040
Tur agent termic cazan E	mm	G11/2"/1170	G11/2"/1370	G11/2"/1573	G11/2"/1742
Tur agent termic / Serpentina superioara S2 F	mm	G11/2"/1080	G11/2"/1270	G11/2"/1390	G11/2"/1520
Teaca senzor G	mm	G1/2"/1010	G1/2"/1120	G1/2"/1290	G1/2"/1450
Racord agent termic cazan H	mm	G11/2"/880	G11/2"/990		
Retur serpentina superioara S2 I	mm	G1"/880	G1"/990	G1"/1072	G1"/1172
Racord agent termic cazan J	mm	G11/2"/770	G11/2"/880	G11/2"/980	G11/2"/1060
Teaca suplimentara K	mm				
Tur agent termic / Serpentina inferioara S1 L	mm	G1"/660	G1"/770	G1"/820	G1"/880
Tur agent termic cazan M	mm	G11/2"/540	G11/2"/620	G11/2"/670	G11/2"/730
Teaca senzor N	mm	G1/2"/420	G1/2"/460	G1/2"/465	G1/2"/495
Retur agent termic / Serpentina inferioara S1 O	mm	G1"/260	G1"/250	G1"/310	G1"/310
Retur agent termic cazan P	mm	G11/2"/150	G11/2"/150	G11/2"/170	G11/2"/170



FB-2 1500	FB-2 2000	FB-2 2500	FB-2 3000	FB-2 4000	FB-2 5000
1500	2000	2500	3000	4000	5000
1000/1200	1150/1350	1150/1350	1250/1450	1400/1600	1600/1800
2170/2220	2200/2250	2680/2730	2720/2770	2746/2796	2841/2891
3.4	4.0	4.0	4.5	5.2	6.1
21	24.6	24.6	27.7	32	37.2
2.4	2.4	2.4	3.1	3.5	4.2
14.8	14.8	14.8	19.1	21.4	25.6
16/110	16/110	16/110	16/110	16/110	16/110
3/95	3/95	3/95	3/95	3/95	3/95
27-50	36-67	45-83	55-100	55-100	100-167
optional					
Izolatie moale 100 mm					
348/23,2	456/26,5	497/30	640/35	609/40	729/42
G1/2"/875	G1/2"/920	G1/2"/920	G1/2"/822	G1/2"/908	G1/2"/951
G11/2"/1130	G11/2"/1170	G11/2"/1170	G11/2"/1356	G11/2"/1182	G11/2"/1505
G1/2"/1500	G1/2"/1690	G1/2"/1690	G1/2"/1832	G1/2"/1658	G1/2"/2001
G11/2"/2170	G11/2"/2200	G11/2"/2680	G11/2"/2720	G11/2"/2245	G11/2"/2938
G11/2"/1808	G11/2"/1820	G11/2"/2300	G11/2"/2289	G11/2"/1795	G11/2"/2438
G11/2"/1635	G11/2"/1670	G11/2"/1920	G11/2"/2125		
G1/2"/1525	G1/2"/1590	G1/2"/1867	G1/2"/2052	G1/2"/1588	G1/2"/2231
G11/2"/1305	G11/2"/1420	G11/2"/1670	G11/2"/1686	G11/2"/1472	G11/2"/2115
G1"/1225	G1"/1310	G1"/1560	G1"/1575		
G11/2"/1085	G11/2"/1170	G11/2"/1420	G11/2"/1346	G11/2"/1182	G11/2"/1735
G1/2"/975		G11/2"/1170			
G1"/895	G1"/980	G1"/980	G1"/1195	G1"/1080	G1"/1373
G11/2"/765	G11/2"/735	G11/2"/735	G11/2"/926	G11/2"/862	G11/2"/1155
G1/2"/520	G1/2"/500	G1/2"/500	G1/2"/672	G1/2"/608	G1/2"/691
G1"/375	G1"/380	G1"/380	G1"/390	G1"/475	G1"/518
G11/2"/235	G11/2"/230	G11/2"/230	G11/2"/256	G11/2"/342	G11/2"/385

8. Transport si ambalare

Pufferele pot fi cu sau fara izolatie.

Ele sunt securizate pe un palet. Ambalate cu folie .

Toate modelele pana la 2500 de litri sunt fixate pe un palet in pozitie verticala.

Puffer	Dimensiuni palet (fara izolatie)	Dimensiuni palet (cu izolatie)
FB 200	550x550	-
FB 300	550x550	-
FB 500	650x650	900x900
FB 800	790x790	1050x1050
FB 1000	790x790	1050x1050
FB 1500	1000x1000	1250x1250
FB 2000	1150x1150	1400x1400
FB 2500	1150x1150	1400x1400

Toate modelele mai mari de 3000 de litri sunt fixate pe un palet in pozitie orizontala.

Puffer	Dimensiuni palet (fara izolatie)	Dimensiuni (palet cu izolatie)
FB 3000 d=1250	650x650	900x900
FB 3000 d=1400	790x790	1050x1050
P 5000	790x790	1050x1050

Izolatia, capacul decorativ si rozetele poate fi livrate separat.

Avantaje:

- Transport facil (ocupa mai putin spatiu la transport).
- Manevrare usoara la locul de instalare.
- Ambalare usoara si rapida a pufferului cu izolatie moale. Toate deschiderile necesare in carcasa din poliuretan moale sunt realizate in prealabil, iar instalatorul trebuie doar sa le gaseasca si sa le scoata.

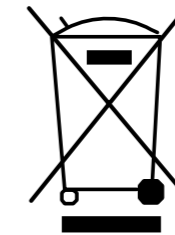
Carcasa este fixata printr-un fermoar la platforma de asamblare.

9. Reciclare si eliminarea deseurilor

La sfarsitul ciclului de viata al fiecarui produs componentele sale urmeaza sa fie eliminate in conformitate cu prescriptiile de reglementare.

Echipamentele inechitate trebuie sa fie colectate separat de alte deseuri reciclabile care contin materiale cu efect negativ asupra sanatatii si mediului.

Parti metalice, precum si cele non - metalice vor fi vandute la centre reciclabile licentiate de metal sau organizatiilor de colectare a deseurilor non-metalice . Acestea nu ar trebui sa fie tratate ca deseuri menajere.



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