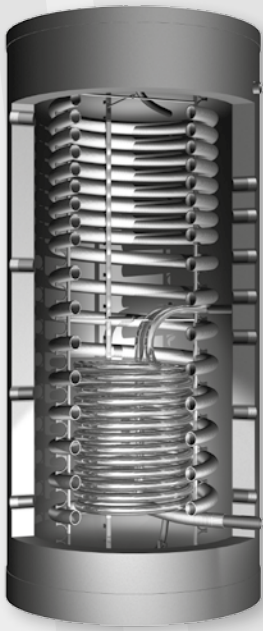


FS/1R FRESH WATER TANK

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PRODUCT DESCRIPTION



FS/1R – Solar fresh water tank with one coil

Simple combination tank made of steel (S 235 JR) for heating operation and domestic hot water preparation with a solar system. Solar charging is by a smooth pipe coil in the lower half of the tank. The tank has an integrated corrugated stainless steel pipe (1.4401/1.4404) in which the water is heated using the hygienic continuous heating process. All necessary connections are at hand; includes 1x 2" sleeves for electric screw-in heating elements. The tank stands on a stand ring. The polyester fibre fleece insulation must be ordered separately (compare accessories).

Area of use

Water heating and heating operation with a solar system for single-family and semi-detached houses.

Product benefits

- Simple, cost-effective utilisation of solar energy for hot water and heating
- Backup heating from all common systems possible; attention: heat pump with restrictions!
- Hygienic water heating due to a special corrugated stainless steel pipe¹ (DN 40, 1.4404)
- 6 temperature measuring points (contact sensor sleeves) on tank
- Option to install our solar station and expansion container on tank
- Prepared for use with 1 electric screw-in heating element

Standards, guidelines and regulations

- "Pressure Equipment Directive" 97/23/EC
- "Directive on the quality of water intended for human consumption" 98/83/EC
- Sized according to guideline AD-2000
- Welding as per EN 287-1 and EN ISO 3834-2

SPECIFICATIONS

Max. operating temperature	110°C
Max. tank operating pressure:	3 bar
Max. stainless steel pipe operating pressure:	6 bar
Max. operating pressure of smooth pipe coil	10 bar
Boiler/heating connections	Rp 6/4"
Domestic hot water connections	Rp 1"
Cylinder feed and drain cock connections	Rp ½"
Thermometer connection	Rp ½"

Specifications

Type	FS 375/1R	FS 500/1R	FS 800/1R	FS 1000-S/1R	FS 1250/1R
Item no.	1610603	1610303	1610304	1610305	1611165
Nominal volume [l]	352	530	766	937	1260
Height without insulation [mm] ²	1675	1790	1940	2150	2200
Height with insulation [mm] ²	1725	1860	2010	2220	2300
Diameter without insulation [mm] ²	550	650	750	790	900
Diameter with insulation [mm] ²	710	850	950	990	1100
Tilt height [mm] ²	1695	1820	1975	2185	2270
Weight [kg]	136	172	217	248	282

¹For problem free maintenance of the corrugated stainless steel pipe (e.g. decalcification), when installing the tank, our staff recommends installation of flush connections with isolation valves at the hot water connections of the tank. Also, to protect the corrugated stainless steel pipe from excessive calcification, we recommend measures to stabilise or soften the water at tank temperatures of over 60 °C and water hardness of over 2.5 millimoles calcium carbonate per litre (= 14 °dH) (compare DIN 1988-200).

²All size specifications have a tolerance range of +/- 3%

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SPECIFICATIONS

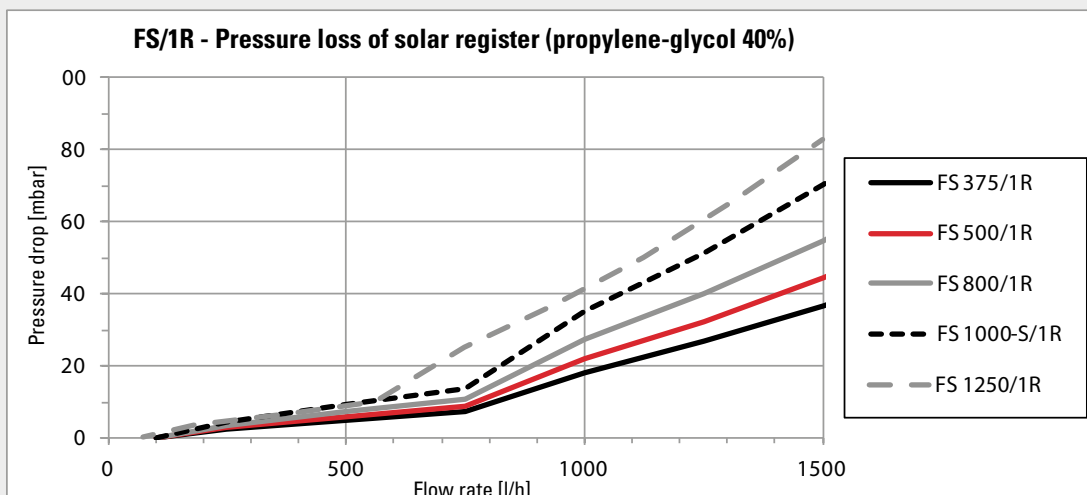
Corrugated pipe

Type	FS 375/1R	FS 500/1R	FS 800/1R	FS 1000-S/1R	FS 1250-S/1R
Dimension corrugated pipe	DN 40	DN 40	DN 40	DN 40	DN 40
Volume corrugated pipe	26 l	35 l	45 l	45 l	45 l
Length	15 m	19 m	24 m	24 m	24 m
Surface	3,87 m ²	4,90 m ²	6,19 m ²	6,19 m ²	6,19 m ²

Type	FS 375/1R	FS 500/1R	FS 800/1R	FS 1000-S/1R	FS 1250 1/R
Domestic hot water discharge capacity					
One-time discharge capacity ¹⁾ at 60°C	270 l	380 l	540 l	700 l	900 l
One-time discharge capacity ¹⁾ at 55°C	216 l	304 l	432 l	560 l	720 l
One-time discharge capacity ¹⁾ at 50°C	186 l	262 l	372 l	483 l	620 l
Domestic hot water tap output					
ΔT ²⁾ at 30 l/min	7 K	6 K	5 K	5 K	5 K
ΔT ²⁾ at 40 l/min	9 K	8 K	7 K	7 K	7 K
ΔT ²⁾ at 50 l/min	16 K	14 K	12 K	12 K	12 K

Solar heat exchanger

Type	FS 375/1R	FS 500/1R	FS 800/1R	FS 1000-S/1R	FS 1250/1R
Material	S 235 JR (straight pipe)				
Outer diameter	33,7 mm				
Inner diameter	29,1 mm				
Wall thickness	2,3 mm				
Volume	10 l	12 l	14 l	18 l	22 l
Length	15 m	17 m	21 m	27 m	32 m
Surface area	1,5 m ²	1,9 m ²	2,3 m ²	3,0 m ²	3,4 m ²
Max. collector area	8 m ²	10 m ²	13 m ²	15 m ²	18 m ²



All size specifications have a tolerance range of +/- 5%.

1) Schüttmenge (Warmwasser bis 38°C) with fully loaded tank at 50/55/60°C

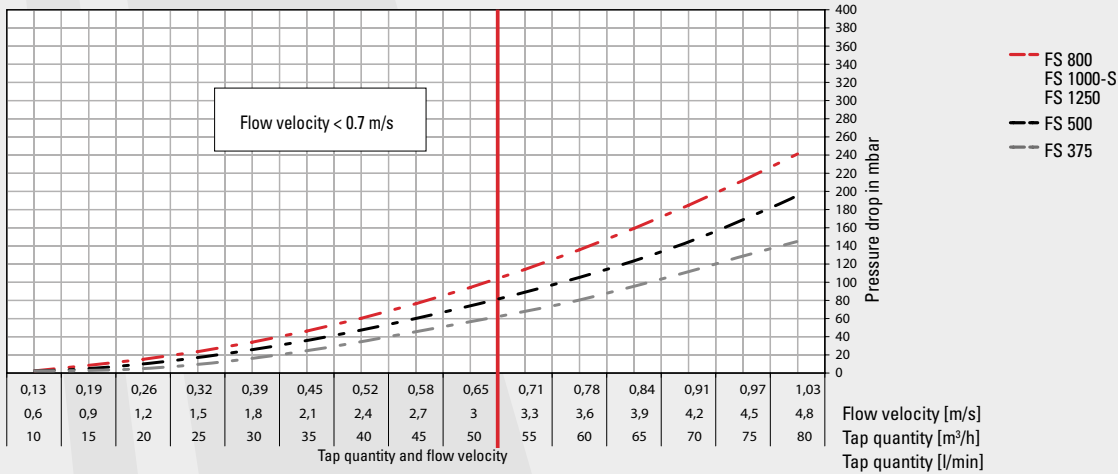
2) Temperature difference between tank temperature and domestic hot water output temperature with half loaded tank

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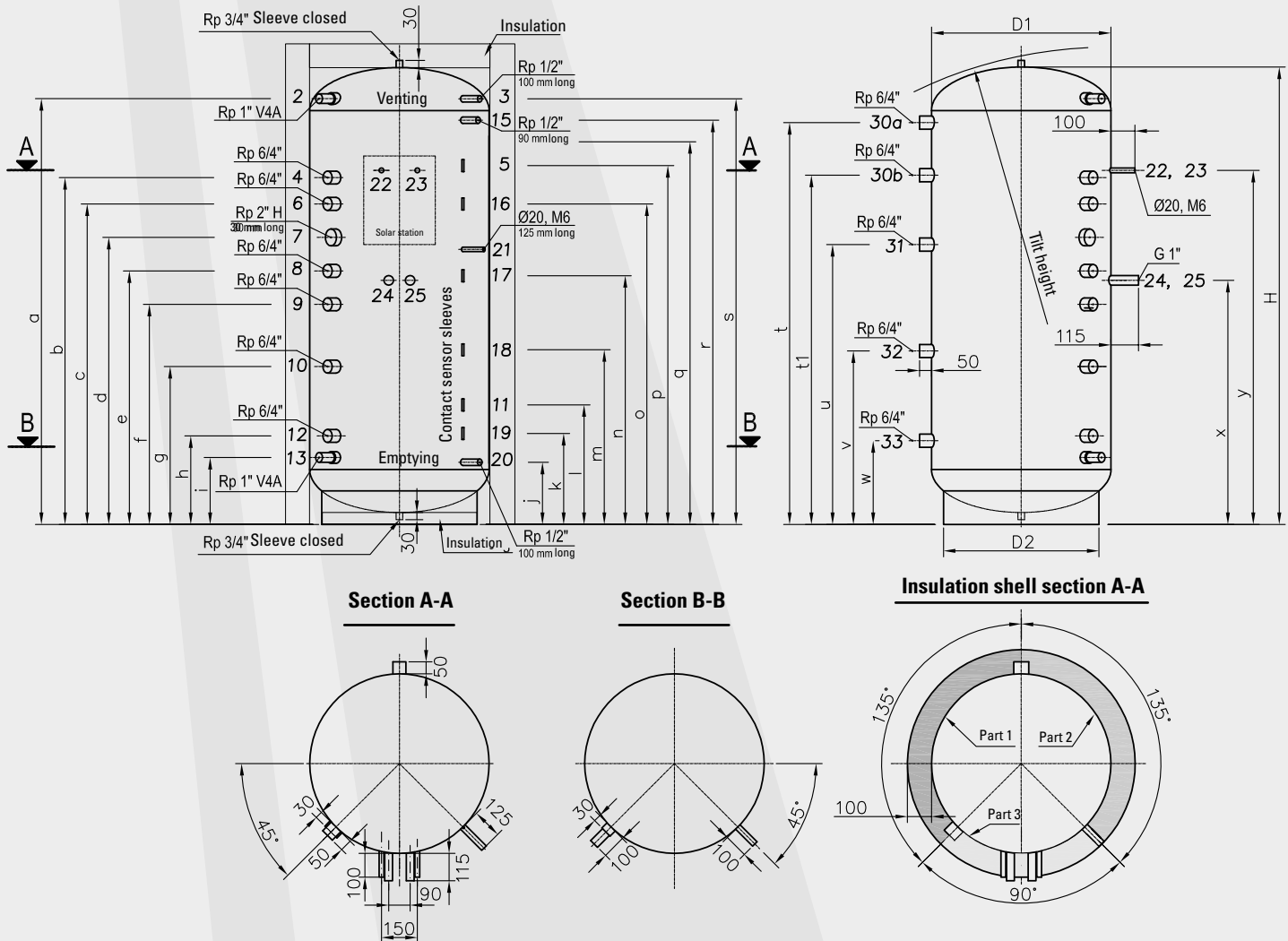
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SPECIFICATIONS

PRESSURE DROP FOR CORRUGATED PIPE DN 40



DIMENSIONS AND SLEEVE ASSIGNMENT



FS/1R FRESH WATER TANK

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TABLE OF DIMENSIONS AND SLEEVE ASSIGNMENT

Table of dimensions as per illustrations [mm]

Type	FS 375/1R	FS 500/1R	FS 800/1R	FS 1000-S/1R	FS 1250/1R
H	1645	1760	1910	2120	2200
D1	550	650	750	790	900
D2	500	600	700	740	800
Tilt height	1695	1820	1975	2185	2270
a	1550	1650	1780	1990	2040
b	1220	1270	1450	1530	1630
c	1110	1160	1340	1420	1520
d	1000	1050	1200	1300	1350
e	890	940	1060	1160	1180
f	780	830	920	1000	1010
g	590	640	660	710	730
h	340	340	370	380	380
i	260	260	280	280	305
j	240	240	260	265	290
k	330	380	380	380	410
l	430	480	500	500	530
m	660	710	730	780	800
n	860	910	1040	1140	1160
o	1030	1080	1230	1235	1315
p	1110	1160	1340	1420	1520
q	1300	1350	1500	1610	1710
r	1470	1570	1690	1900	1950
s	1550	1650	1780	1990	2040
t	1540	1540	1680	1900	1700
t1	-	-	-	1680	-
u	1150	1150	1170	1170	1170
v	720	720	725	725	725
w	270	270	350	350	350
x	820	870	1020	1020	1100
y	1280	1330	1480	1480	1560

Sleeve assignment

No.	Dimension	Use	Comment
2	Rp 1"	Hot water connection (stainless steel)	Possibly with circulation lance
3	Rp ½"	Exhaust pipe	fill and drain valve required
4	Rp 1½"	Feed heat source	Depending on hydraulic schematic
5	Di 6 mm	Sensor sleeve	Measuring point for secondary heating
6	Rp 1½"	Feed heating circuits	Depending on hydraulic schematic
7	Rp 2"	Sleeve for E-heating element	Extension sleeve necessary
8	Rp 1½"	Return secondary heating	Depending on hydraulic schematic
9	Rp 1½"	Return high-temperature heating circuits	Depending on hydraulic schematic
10	Rp 1½"	Return low-temperature heating circuits	Depending on hydraulic schematic
11	Di 6 mm	Sensor sleeve	Measuring point for solar system
12	Rp 1½"	Return secondary heat /high-temperature heating circuits	Optional
13	Rp 1"	Cold water connection (stainless steel)	
15	Rp ½"	Sleeve for boiler thermometer	Optional
16	Di 6 mm	Sensor sleeve	Depending on hydraulic schematic
17	Di 6 mm	Sensor sleeve	Depending on hydraulic schematic
18	Di 6 mm	Sensor sleeve	Depending on hydraulic schematic
19	Di 6 mm	Sensor sleeve	Depending on hydraulic schematic
20	Rp ½"	Drainage	fill and drain valve required
21	M6	Mounting sleeve for solar expansion tank	
22	M6	Attachment point for solar station	
23	M6	Attachment point for solar station	
24	G1"	Solar station connection, solar forward flow (hot)	Flat sealing
25	G1"	Solar station connection, solar return flow (cold)	Flat sealing
30a	Rp 1½"	Sleeve for volume expansion	Possibly with priority flap
30b	Rp 1½"	Sleeve for volume expansion	Possibly with priority flap
31	Rp 1½"	Sleeve for volume expansion	
32	Rp 1½"	Sleeve for volume expansion	
33	Rp 1½"	Sleeve for volume expansion	