

Stratification efficiency of combi storage tanks without solar heat

Factsheet

General



Model	JVS79R36
Manufacturer	Jenni Energietechnik AG
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Internet	www.jenni.ch
Test year	2018
Certificate Nr.	SPF-18-023-SE

Stratification test according to SPF Prüfvorschrift 86, Version 2.2
SPF Speicherschichtungs-Zertifizierungsvorschrift, Version 2.0

Solar heat and stratification efficiency

The heat supply by collectors is dependent on the current temperature in the storage tank and the solar radiation volume. The heat is stored in advance - not according to the current demand. This has a negative effect on the exergetic balance of a storage tank and thus leads to a lower stratification efficiency.

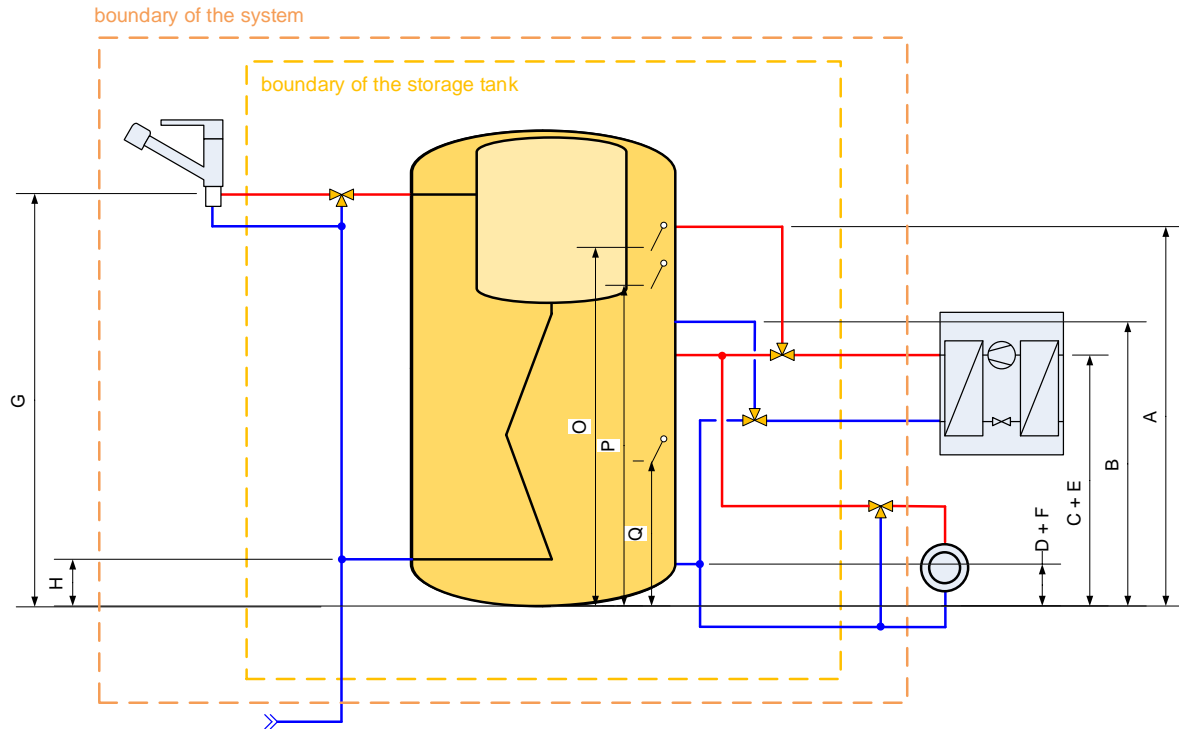
Results

Test conditions			Stratification efficiency ⁽¹⁾	
Heat output of the heat pump (HP) ⁽²⁾	HP mass flow	DHW time slots ⁽³⁾	Storage tank	System
15 kW	2570 kg/h	Yes	87.1 %	84.1 %
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0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

■ mixing hydraulics ■ mixing storage tank

* Only one test with predefined DHW (Domestic Hot Water charging) time slots was carried out.



Connections

	Designation	Height from floor [cm]
A	HP supply DHW	154
B	HP return DHW	119
C	HP supply space heating	89
D	HP return space heating	16
E	Space heating supply	89
F	Space heating return	16
G	DHW outlet	183
H	DHW inlet	51

Temperature sensors

	Designation	Height from floor [cm]	Temperature / Hysteresis
O	DHW on	151	45 °C
P	DHW off	136	50 °C
Q	Space heating on/off	86	28 °C / 32 °C

(1) The stratification efficiency is determined for a storage tank including its hydraulic connections and three-way valves. These have a decisive influence on the efficiency of the entire heating system. For a standard heating load (3500 kWh of DHW and 8000 kWh space heating with 35/30 °C supply / return temperature at design conditions) a reduction of the stratification efficiency by 10 % corresponds to 16 % (413 kWh/a) increase of the electricity demand of a connected heat pump. The corresponding increase in final energy demand is 4 % for a condensing gas boiler and 2 % for a non-condensing pellet boiler..

(2) (A7/W35)

(3) The default time slots for DHW preparation are used to limit the electricity-intensive hot water preparation. As a result, the stratification efficiency can be positively influenced.

A ≥ 80 %

B ≥ 75 %

C ≥ 70 %

D ≥ 65 %

E ≥ 60 %

F ≥ 55 %

G < 55 %

Zertifikat Schichtungseffizienz

Handelsname: **JVS79R36**
Firma: **Jenni Energietechnik AG**
Zertifikat-Nr.: **SPF-18-023-SE**
Gültigkeit: **04.2018 – 04.2023**

Der Kombispeicher **JVS79R36** der Firma **Jenni Energietechnik AG** erfüllt die Anforderungen zur Verwendung mit einem Wärmerezeuger gemäss „SPF Schichtungseffizienz Zertifizierungsvorschrift Version 1.1“.

Als Grundlage gilt der Prüfbericht vom **03. April 2018**.

Der Kombispeicher mit der im Factsheet SE023 dargestellten hydraulischen Einbindung ist für den Einsatz mit Wärmerezeugern bis zu einem Massenstrom der Beladung von 2570 l/h geeignet und wird deshalb mit dem SPF Qualitätzertifikat **SPF-18-023-SE** ausgezeichnet.

Das Zertifikat ist auch gültig für folgende Speicher (jeweils bis zu einem Massenstrom der Beladung von 2570 l/h):

Modell	Nennvolumen [l]	Modell	Nennvolumen [l]
KVS79R24	970	JVS16R60	3930
KVS10R24	1580	JVS90J42	1280
JVS79R36	970	JVS10J48	1580
JVS90R42	1280	JVS11J48	1920
JVS10R48	1580	JVS12J48	2260
JVS11R48	1920	JVS13J60	2640
JVS12R48	2260	JVS14J60	3120
JVS13R60	2640	JVS15J60	3570
JVS14R60	3120	JVS16J60	3930
JVS15R60	3570		

Die Gültigkeit des Zertifikates kann jederzeit unter www.spf.ch überprüft werden.

Rapperswil, 04.04.2018

Robert Haberl