

Application for testing of brine to water heat pump and water to water heat pump

1 Interested party / applicant

Company:

Address:

Zip, City:

Contact person:

Phone number:

Fax:

E-Mail:

1.1 Name of the heat pump to be inspected

Manufacturer:

Description of type:

1.2 Application

This application shall be deemed to be an official firm order for the specified heat pump in accordance of the general terms and conditions of the Heat Pump Test Center WPZ.

Site and date:

Stamp and signature:

You can send this application form as email to mick.eschmann@ost.ch

To be completed by WPZ:

Eingang Datum: Prüfnummer: SW -

Prüfnummer: WW -

2 Tests

Test of brine to water heat pump OR water to water heat pump according to the EHPA test regulation V1.5

CHF 5'900.-

Test conditions for brine to water heat pump:

	test conditions for low application	test conditions for medium application
1	B0 / W30-35	B0 / W47-55
A	B0 / W34	B0 / W52
B	B0 / W30	B0 / W42 (eventuell)
C	B0 / W27	
D	B0 / W24	
E	B0 / W35	
F	Bivalenzpunkt	Bivalenzpunkt

Test conditions for water to water heat pump:

	test conditons for low application	test conditions for medium application
1	W10 / W30-35	W10 / W47-55
A	W10 / W34	W10 / W52
B	W10 / W30	W10 / W42 (eventuell)
C	W10 / W27	
D	W10 / W24	
E	W10 / W35	
F	Bivalent point	Bivalent point

- Bivalent point W35 for colder and warmer + 1 part load W35 colder
- Measurement of the operating range defined by a maximum of 3 boundary conditions
- Safety test (EN14511-4:2011, cause 4.4 and 4.5)
- Measurement of starting current
- Sound measurement of sound power level
- Measurement of high and low pressure on cooling cycle
- Publication of the test results in WPZ-Bulletin and on our website www.wpz.ch

NO publication of the test results in WPZ-Bulletin and on our website

CHF 200.-

2.1 Optional measurements and tests

Compined test of brine to water AND water to water heat pump

+ CHF 3'000.-

- Test conditions on both source mediums (brine and water)
- Measurement of the operating range on both source mediums
- Safety test on both source mediums
- Measurement of starting current with brine as source medium
- Sound measurement of sound power level with brine as source medium

Further optional test conditions

CHF 680.- per test condition

Test conditions	source temperature			supply temperature		
	T _{in} (°C)	T _{outs} (°C)	V.(m ³ /h)	T _{out} (°C)	T _{in} (°C)	V.(m ³ /h)
B ... / W ...						
B ... / W ...						
B ... / W ...						
W ... / W ...						
W ... / W ...						
W ... / W ...						

Determination of drop pressure coefficient ξ

CHF 650.-

Mesasurement of the hydraulic drop pressure in condenser by 5 different volume flows.
The drop pressure coefficient $\xi(V.)$ is determined arithemically

Further optional measurements or tests

according to offer of WPZ

3 Equipment under test

3.1 Technical specifications

Power modulate heat pump O no / 1-ary
 O n-ary, number:
 O continuous

Heating capacity (B0/W35) respectively (W10/W35) kW
 Sink volume flow at $\Delta T = 5$ K m³/h
 Sink volume flow minimum m³/h
 Sink volume flow maximum m³/h
 Hydraulic pressure drop (condenser) mbar

Hydraulic connection of condenser in inch:

..... Description:
 O Internal screw thread O External screw thread O threaded connection

Cooling output (B0/W35) respectively (W10/W35) kW
 Source volume flow at $\Delta T = 3$ K m³/h
 Source volume flow minimum m³/h
 Source volume flow maximum m³/h
 Hydraulic pressure drop (evaporator) mbar

Hydraulic connection of evaporator in inch:

..... Description:

..... Internal screw thread External screw thread threaded connection

Voltage / frequency V / Hz

Total electrical input B0/W35 kW

Type of refrigerant

Capacity of refrigerant kg

Dimension (W x H x D) mm

Transport weight kg

3.2 Operating range

The operating range defined by a maximum of 6 boundary conditions shall be declared by the manufacturer. You can inscribe the boundary conditions in table 1. The corresponding relative humidities are determined according to the test regulation.

Brine to water heat pump:

Conditions	Source Tin [°C]	Supply Tout [°C]
B..... / W.....		
B..... / W.....		
B..... / W.....		
B..... / W.....		
B..... / W.....		
B..... / W.....		

Water to water heat pump:

Conditions	Source Tin [°C]	Supply Tout [°C]
W..... / W.....		
W..... / W.....		
W..... / W.....		
W..... / W.....		
W..... / W.....		
W..... / W.....		

Table1: Boundary conditions (maximum 6 conditions) of the operating range of brine to water and water to water heat pump