


	Heat Pump KEYMARK	 TÜVRheinland® DIN CERTCO Genau. Richtig.
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Data has to be declared for all Models inside a sub-type.

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|--|----------|
| 1. AIR/WATER; BRINE/WATER; WATER/WATER HEAT PUMPS (IF APPLICABLE) | 2 |
| 2. HEAT PUMPS FOR DOMESTIC HOT WATER (DHW) (IF APPLICABLE) | 8 |



Certificate data	
Certificate holder name	tecalor GmbH
Address	Lüchtringer Weg 3 37603 Holzminden Germany
Type of heat pump	Air/Water
Reg. No.	011-1W0116
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Name of testing laboratory	VDE Prüf- und Zertifizierungsinstitut

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1. Air/Water; Brine/Water; Water/Water heat pumps (if applicable)

	TTL 3.5 ACS		
General data			
Refrigerant	R410		
Mass of refrigerant [kg]	1,10 kg		
GWP according to EU Nr. 517/2014 [CO _{2eq} in t]	2,296		
Frequency [Hz]	50		
Voltage [V]	230		
Test points EN 14511-2 Air/Water heat pump (if applicable)			
A7/W35			
heat output [kW]	2,27		
El input [kW]	0,5		
COP	4,54		
A7/W55 (if applicable)			
heat output [kW]	1,92		
El input [kW]	0,72		
COP	2,68		
Test points EN 14511-2 Brine/Water heat pump (if applicable)			
B0/W35			
heat output [kW]			
El input [kW]			
COP			
B0/W55			
heat output [kW]			
El input [kW]			
COP			
Test points EN 14511-2 Water/Water heat pump (if applicable)			
W10/W35			
heat output [kW]			
El input [kW]			
COP			
W10/W55			
heat output [kW]			
El input [kW]			
COP			



In case of gas driven heat pump, EN14511 shall be replaced by EN 12309:2015-03

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Test points EN 14511-4			
operating Range A.../W... lower limit-lower limit (min)			
Please state if the requirement is passed or failed	passed		
operating Range A.../W... upper limit- upper limit (min)			
Please state if the requirement is passed or failed	passed		
Shutting off the heat transfer medium flow			
Please state if the requirement is passed or failed	passed		
Complete power supply failure			
Please state if the requirement is passed or failed	passed		
Defrost test only for AirT Water heat pumps (if applicable)			
Please state if the requirement is passed or failed	passed		

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Average Climate Low temperature application (if applicable)			
Declared values EN 14825			
T_{biv} [°C]	T_{biv} at low temperature conditions		
heat output [kW]	3,2		
El input [kW]	1,11		
COP	2,88		
Sound power level according EN 12102			
Sound power level indoor if relevant) [dB(A)]	(See 55 °C application)		
Sound power level outdoor [dB(A)]	(See 55 °C application)		
Declared data regarding ErP regulation			
η_s	166		
P_{rated} [kW]	4		
SCOP	4,15		
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T_j			
Pdh: $T_j = -7$ °C [kW]	3,2		
COPd: $T_j = -7$ °C	2,88		
Pdh: $T_j = +2$ °C [kW]	1,95		
COPd: $T_j = +2$ °C	4,11		
Pdh: $T_j = +7$ °C [kW]	1,63		
COPd: $T_j = +7$ °C	6,06		
Pdh: $T_j = +12$ °C [kW]	1,8		
COPd: $T_j = +12$ °C	8,14		
Pdh: $T_j =$ bivalent temperature [kW]	3,2		
COPd: $T_j =$ bivalent temperature []	2,88		
Pdh: $T_j = -15$ °C (if $TOL < -20$ °C) [kW]	0,0		
COPd: $T_j = -15$ °C (if $TOL < -20$ °C)	0,0		
T_{biv} [°C]	-7		
TOL [°C]	-10		
WTOL [°C]	60		
Annual energy consumption Q_{HE} [kWh]	1769		
Power input „compressor off“ [kW]	0		
P_{OFF} [W]	17		
P_{TO} [W]	30		
P_{SB} [W]	17		
P_{CK} [W]	5		
P_{SUP} [kW]	0,47		
Type of energy input (e.g. electricity)	electricity		

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Average Climate Medium temperature application (if applicable)			
Declared values EN 14825			
T_{biv} [°C]			
heat output [kW]	2,37		
El input [kW]	1,09		
COP	2,17		
Sound power level according EN 12102			
Sound power level indoor if relevant) [dB(A)]	-		
Sound power level outdoor [dB(A)]	52		
Declared data regarding ErP regulation			
η_s	113		
P_{rated} [kW]	3		
SCOP	2,85		
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T_j			
Pdh: $T_j = -7$ °C [kW]	3,05		
COPd: $T_j = -7$ °C	2,07		
Pdh: $T_j = +2$ °C [kW]	1,58		
COPd: $T_j = +2$ °C	2,93		
Pdh: $T_j = +7$ °C [kW]	1,25		
COPd: $T_j = +7$ °C	4,13		
Pdh: $T_j = +12$ °C [kW]	1,54		
COPd: $T_j = +12$ °C	5,97		
Pdh: $T_j =$ bivalent temperature [kW]	2,37		
COPd: $T_j =$ bivalent temperature []	2,17		
Pdh: $T_j = -15$ °C (if $TOL < -20$ °C) [kW]	0,0		
COPd: $T_j = -15$ °C (if $TOL < -20$ °C)	0,0		
T_{biv} [°C]	-5		
TOL [°C]	-7		
WTOL [°C]	60		
Annual energy consumption Q_{HE} [kWh]	2089		
Power input „compressor off“ [kW] (if applicable)	0		
P_{OFF} [W]	17		
P_{TO} [W]	30		
P_{SB} [W]	17		
P_{CK} [W]	5		
P_{SUP} [kW]	2,93		
Type of energy input (e.g. electricity)	electricity		

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Warmer Climate (if applicable)			
Declared values EN 14825 – 35°C application			
T_{biv} [°C]			
heat output [kW]	3,04		
El input [kW]	0,86		
COP	3,53		
Sound power level according EN 12102			
Sound power level indoor if relevant) [dB(A)]	(See 55 °C application)		
Sound power level outdoor [dB(A)]	(See 55 °C application)		
Declared data regarding ErP regulation			
η_s	204		
P_{rated} [kW]	3		
SCOP	4,99		
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T_j			
$P_{dhT_j = -7\text{ °C}}$ [kW]	0,0		
$COP_{d T_j = -7\text{ °C}}$	0,0		
$P_{dhT_j = +2\text{ °C}}$ [kW]	3,04		
$COP_{d T_j = +2\text{ °C}}$	3,53		
$P_{dh T_j = +7\text{ °C}}$ [kW]	1,95		
$COP_{d T_j = +7\text{ °C}}$	5,27		
$P_{dh T_j = +12\text{ °C}}$ [kW]	1,69		
$COP_{d T_j = +12\text{ °C}}$	7,72		
$P_{dh T_j = \text{bivalent temperature}}$ [kW]	3,04		
$COP_{d T_j = \text{bivalent temperature}}$	2,53		
$P_{dh T_j = -15\text{ °C (if TOL < -20 °C)}}$ [kW]	0,0		
$COP_{d T_j = -15\text{ °C (if TOL < -20 °C)}}$	0,0		
T_{biv} [°C]	2		
TOL [°C]	2		
WTOL [°C]	60		
Annual energy consumption Q_{HE} [kWh]	783		
Power input „compressor off“ [kW] (if applicable)	0		
P_{OFF} [W]	17		
P_{TO} [W]	30		
P_{SB} [W]	17		
P_{CK} [W]	5		
P_{SUP} [kW]	0		
Type of energy input (e.g. electricity)	electricity		

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Colder Climate (if applicable)			
Declared values EN 14825 – 35°C application			
$T_{biv}/^{\circ}C$			
heat output [kW]	2,76		
El input[kW]	1,08		
COP	2,56		
Sound power level according EN12102			
Sound power level indoor if relevant [dB(A)]	(See 55 °C application)		
Sound power level outdoor [dB(A)]	(See 55 °C application)		
Declared date regarding ErP regulation			
η_s	150		
P_{rated} [kW]	3		
SCOP	3,72		
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T_j			
Pdh: $T_j = - 7^{\circ}C$ [kW]	2,05		
COPd: $T_j = - 7^{\circ}C$	3,2		
Pdh: $T_j = +2^{\circ}C$ [kW]	1,25		
COPd: $T_j = + 2^{\circ}C$	4,55		
Pdh: $T_j = +7^{\circ}C$ [kW]	1,42		
COPd: $T_j = + 7^{\circ}C$	6,34		
Pdh: $T_j = +12^{\circ}C$ [kW]	1,76		
COPd: $T_j = + 12^{\circ}C$	8,0		
Pdh: $T_j =$ bivalent temperature [kW]	2,76		
COPd: $T_j =$ bivalent temperature	2,56		
Pdh: $T_j = - 15^{\circ}C$ (if $TOL < - 20^{\circ}C$) [kW]	2,76		
COPd: $T_j = - 15^{\circ}C$ (if $TOL < - 20^{\circ}C$)	2,56		
T_{biv} [°C]	-15		
TOL [°C]	-20		
WTOL [°C]	60		
Annual energy consumption Q_{HE} [kWh]	2186		
Power input „compressor off“ [kW] (if applicable)	0		
P_{OFF} [W]	17		
P_{TO} [W]	30		
P_{SB} [W]	17		
P_{CK} [W]	5		
P_{SUP} [kW]	3,38		
Type of energy input (e.g. electricity)	electricity		

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2. Heat pumps for Domestic Hot Water (DHW) (if applicable)

	HSBC 200, HSBC 200 S	HSBB 200 classic, HSBB 200 S classic	
General data			
Refrigerant	R410	R410	
Mass of refrigerant [kg]	1,10 kg	1,10 kg	
GWP	2,296	2,296	
Frequency [Hz]	50	50	
Voltage [V]	230	230	
Off-peak product (yes/no)	no	no	
Technical data – average climate			
Declared load profil	XL	XL	
Efficiency η_{dhw} in %	104	104	
Heating up time h:min	2:48	2:52	
Standby power input [W] P_{es}	47,4	42,11	
Reference hot water temperature °C	52,7	52,9	
Mixed water at 40°C	226	245	
Sound power level indoor if relevant) [dB(A)]	(See 55 °C application)	(See 55 °C application)	
Sound power level outdoor [dB(A)]	(See 55 °C application)	(See 55 °C application)	
Technical data – colder climate			
Declared load profil			
Efficiency η_{dhw} in %			
Heating up time h:min			
Standby power input W			
Reference hot water temperature °C			
Mixed water at 40°C			
Sound power level indoor if relevant) [dB(A)]			
Sound power level outdoor [dB(A)]			
Technical data – warmer climate			
Declared load profil			
Efficiency η_{dhw} in %			
Heating up time h:min			
Standby power input W			
Reference hot water temperature °C			
Mixed water at 40°C			
Sound power level indoor if relevant) [dB(A)]			
Sound power level outdoor [dB(A)]			