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Summary of	CHA-10/400V	Reg. No.	011-1W0381
Certificate Holder			
Name	WOLF GmbH		
Address	Industriestr. 1	Zip	84048
City	Mainburg	Country	Germany
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH		
Name of testing laboratory	Strojírenský zkušební ústav, s.p. (SZU)		
Subtype title	CHA-10/400V		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R290		
Mass Of Refrigerant	3.4 kg		
Certification Date	30.06.2020		

Model: CHA-10/400V

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	4.10 kW	3.99 kW
El input	0.75 kW	1.29 kW
COP	5.54	3.09
Indoor water flow rate	0.71 m³/h	0.60 m³/h

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	191 %	141 %
Prated	7.58 kW	7.40 kW
SCOP	4.86	3.60
Tbiv	-10 °C	-10 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.25 kW	7.03 kW
COP Tj = -7°C	2.92	2.09
Cdh	0.90	0.90
Pdh Tj = +2°C	4.33 kW	4.28 kW
COP Tj = +2°C	4.69	3.45
Cdh	0.90	0.90
Pdh Tj = +7°C	3.72 kW	3.54 kW
COP Tj = +7°C	6.89	5.07
Cdh	0.97	0.98
Pdh Tj = 12°C	3.75 kW	4.09 kW

COP Tj = 12°C	7.43	6.60
Cdh	0.97	0.98
Pdh Tj = Tbiv	7.58 kW	7.40 kW
COP Tj = Tbiv	2.52	1.75
Pdh Tj = TOL	7.58 kW	7.40 kW
COP Tj = TOL	2.52	1.75
WTOL	35 °C	55 °C
Poff	13 W	13 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3225 kWh	4255 kWh

Warmer Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825		
	Low temperature	**Medium temperature**

η_s	272 %	185 %
Prated	8.57 kW	8.64 kW
SCOP	6.88	4.71
Tbiv	2 °C	2 °C
TOL	-22 °C	-22 °C
Pdh Tj = +2°C	8.57 kW	8.64 kW
COP Tj = +2°C	3.51	2.40
Cdh	0.90	0.90
Pdh Tj = +7°C	5.99 kW	5.93 kW
COP Tj = +7°C	6.41	4.14
Cdh	0.90	0.90
Pdh Tj = 12°C	4.14 kW	3.82 kW
COP Tj = 12°C	8.36	5.99
Cdh	0.97	0.98
Pdh Tj = Tbiv	8.57 kW	8.64 kW
COP Tj = Tbiv	3.51	2.40
Pdh Tj = TOL	8.57 kW	8.64 kW
COP Tj = TOL	3.51	2.40
WTOL	35 °C	55 °C
Poff	13 W	13 W
PTO	15 W	15 W

PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1665 kWh	2451 kWh

Colder Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	177 %	135 %
Prated	8.78 kW	8.17 kW
SCOP	4.50	3.44
Tbiv	-17 °C	-17 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.32 kW	5.44 kW
COP Tj = -7°C	4.00	2.84
Cdh	0.90	0.90

Pdh Tj = +2°C	3.36 kW	3.30 kW
COP Tj = +2°C	5.10	4.25
Cdh	0.90	0.90
Pdh Tj = +7°C	3.73 kW	3.61 kW
COP Tj = +7°C	7.24	5.52
Cdh	0.97	0.98
Pdh Tj = 12°C	4.03 kW	3.90 kW
COP Tj = 12°C	7.70	6.57
Cdh	0.97	0.97
Pdh Tj = Tbiv	7.62 kW	7.09 kW
COP Tj = Tbiv	2.47	1.70
Pdh Tj = TOL	6.70 kW	5.95 kW
COP Tj = TOL	2.19	1.35
WTOL	35 °C	55 °C
Poff	13 W	13 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	2.08 kW	2.22 kW
Annual energy consumption Qhe	4812 kWh	5852 kWh

Pdh Tj = -15°C (if TOL<-20°C)	7.10	7.28
COP Tj = -15°C (if TOL<-20°C)	2.77	1.99
Cdh	0.90	0.90