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Summary of	ESTIA HWS-1105/HWS-1405H	Reg. No.	011-1W0343
Certificate Holder			
Name	TOSHIBA AIR CONDITIONING		
Address	Porsham Close, Belliver Industrial Estate	Zip	PL6 7DB
City	Plymouth	Country	United Kingdom
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH		
Name of testing laboratory	Heat Pump Test Center WPZ		
Subtype title	ESTIA HWS-1105/HWS-1405H		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R410a		
Mass Of Refrigerant	2.7 kg		
Certification Date	26.11.2019		

Model: HWS-1105H-E/HWS-1405XWHM3-E

General Data	
Power supply	1x230V 50Hz

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	163 %	130 %
Prated	10.00 kW	9.00 kW
SCOP	4.17	3.35
Tbiv	-7 °C	-7 °C
TOL	-7 °C	-7 °C
Pdh Tj = -7°C	8.50 kW	8.20 kW
COP Tj = -7°C	2.86	2.12
Pdh Tj = +2°C	4.80 kW	4.90 kW
COP Tj = +2°C	4.61	3.56
Pdh Tj = +7°C	3.20 kW	3.20 kW

COP Tj = +7°C	5.34	4.34
Pdh Tj = 12°C	2.70 kW	2.70 kW
COP Tj = 12°C	6.37	5.54
Pdh Tj = Tbiv	8.50 kW	8.20 kW
COP Tj = Tbiv	2.86	2.12
Pdh Tj = TOL	8.50 kW	8.20 kW
COP Tj = TOL	2.86	2.12
Rated airflow rate	5310 m³/h	5310 m³/h
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	120 W	120 W
PSB	17 W	17 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	10.00 kW	9.00 kW
Annual energy consumption Qhe	4785 kWh	5718 kWh

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	10.52 kW	10.05 kW
El input	2.15 kW	3.43 kW
COP	4.88	2.93
Indoor water flow rate	1.93 m^3/h	1.08 m^3/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

Model: HWS-1105H-E/HWS-1405XWHT6-E

General Data	
Power supply	1x230V 50Hz

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	163 %	130 %
Prated	10.00 kW	9.00 kW
SCOP	4.17	3.35
Tbiv	-7 °C	-7 °C
TOL	-7 °C	-7 °C
Pdh Tj = -7°C	8.50 kW	8.20 kW
COP Tj = -7°C	2.86	2.12
Pdh Tj = +2°C	4.80 kW	4.90 kW
COP Tj = +2°C	4.61	3.56
Pdh Tj = +7°C	3.20 kW	3.20 kW

COP Tj = +7°C	5.34	4.34
Pdh Tj = 12°C	2.70 kW	2.70 kW
COP Tj = 12°C	6.37	5.54
Pdh Tj = Tbiv	8.50 kW	8.20 kW
COP Tj = Tbiv	2.86	2.12
Pdh Tj = TOL	8.50 kW	8.20 kW
COP Tj = TOL	2.86	2.12
Rated airflow rate	5310 m³/h	5310 m³/h
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	120 W	120 W
PSB	17 W	17 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	10.00 kW	9.00 kW
Annual energy consumption Qhe	4785 kWh	5718 kWh

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	10.52 kW	10.05 kW
El input	2.15 kW	3.43 kW
COP	4.88	2.93
Indoor water flow rate	1.93 m^3/h	1.08 m^3/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

Model: HWS-1105H-E/HWS-1405XWHT9-E

General Data	
Power supply	1x230V 50Hz

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	163 %	130 %
Prated	10.00 kW	9.00 kW
SCOP	4.17	3.35
Tbiv	-7 °C	-7 °C
TOL	-7 °C	-7 °C
Pdh Tj = -7°C	8.50 kW	8.20 kW
COP Tj = -7°C	2.86	2.12
Pdh Tj = +2°C	4.80 kW	4.90 kW
COP Tj = +2°C	4.61	3.56
Pdh Tj = +7°C	3.20 kW	3.20 kW

COP Tj = +7°C	5.34	4.34
Pdh Tj = 12°C	2.70 kW	2.70 kW
COP Tj = 12°C	6.37	5.54
Pdh Tj = Tbiv	8.50 kW	8.20 kW
COP Tj = Tbiv	2.86	2.12
Pdh Tj = TOL	8.50 kW	8.20 kW
COP Tj = TOL	2.86	2.12
Rated airflow rate	5310 m³/h	5310 m³/h
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	120 W	120 W
PSB	17 W	17 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	10.00 kW	9.00 kW
Annual energy consumption Qhe	4785 kWh	5718 kWh

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	10.52 kW	10.05 kW
El input	2.15 kW	3.43 kW
COP	4.88	2.93
Indoor water flow rate	1.93 m^3/h	1.08 m^3/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

Model: HWS-1405H-E/HWS-1405XWHM3-E

General Data	
Power supply	1x230V 50Hz

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	159 %	129 %
Prated	10.00 kW	9.00 kW
SCOP	4.08	3.31
Tbiv	-7 °C	-7 °C
TOL	-7 °C	-7 °C
Pdh Tj = -7°C	9.20 kW	8.00 kW
COP Tj = -7°C	2.68	2.07
Pdh Tj = +2°C	5.10 kW	4.80 kW
COP Tj = +2°C	4.43	3.48
Pdh Tj = +7°C	3.40 kW	3.20 kW

COP Tj = +7°C	5.39	4.34
Pdh Tj = 12°C	2.70 kW	2.70 kW
COP Tj = 12°C	6.37	5.93
Pdh Tj = Tbiv	9.20 kW	8.00 kW
COP Tj = Tbiv	2.68	2.07
Pdh Tj = TOL	9.20 kW	8.00 kW
COP Tj = TOL	2.68	2.07
Rated airflow rate	5590 m³/h	5590 m³/h
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	120 W	120 W
PSB	17 W	17 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	10.00 kW	9.00 kW
Annual energy consumption Qhe	5278 kWh	5701 kWh

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	13.15 kW	11.52 kW
El input	2.92 kW	3.98 kW
COP	4.50	2.89
Indoor water flow rate	2.41 m³/h	1.24 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

Model: HWS-1405H-E/HWS-1405XWHT6-E

General Data	
Power supply	1x230V 50Hz

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	159 %	129 %
Prated	10.00 kW	9.00 kW
SCOP	4.08	3.31
Tbiv	-7 °C	-7 °C
TOL	-7 °C	-7 °C
Pdh Tj = -7°C	9.20 kW	8.00 kW
COP Tj = -7°C	2.68	2.07
Pdh Tj = +2°C	5.10 kW	4.80 kW
COP Tj = +2°C	4.43	3.48
Pdh Tj = +7°C	3.40 kW	3.20 kW

COP Tj = +7°C	5.39	4.34
Pdh Tj = 12°C	2.70 kW	2.70 kW
COP Tj = 12°C	6.37	5.93
Pdh Tj = Tbiv	9.20 kW	8.00 kW
COP Tj = Tbiv	2.68	2.07
Pdh Tj = TOL	9.20 kW	8.00 kW
COP Tj = TOL	2.68	2.07
Rated airflow rate	5590 m³/h	5590 m³/h
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	120 W	120 W
PSB	17 W	17 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	10.00 kW	9.00 kW
Annual energy consumption Qhe	5278 kWh	5701 kWh

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	13.15 kW	11.52 kW
El input	2.92 kW	3.98 kW
COP	4.50	2.89
Indoor water flow rate	2.41 m³/h	1.24 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

Model: HWS-1405H-E/HWS-1405XWHT9-E

General Data	
Power supply	1x230V 50Hz

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	159 %	129 %
Prated	10.00 kW	9.00 kW
SCOP	4.08	3.31
Tbiv	-7 °C	-7 °C
TOL	-7 °C	-7 °C
Pdh Tj = -7°C	9.20 kW	8.00 kW
COP Tj = -7°C	2.68	2.07
Pdh Tj = +2°C	5.10 kW	4.80 kW
COP Tj = +2°C	4.43	3.48
Pdh Tj = +7°C	3.40 kW	3.20 kW

COP Tj = +7°C	5.39	4.34
Pdh Tj = 12°C	2.70 kW	2.70 kW
COP Tj = 12°C	6.37	5.93
Pdh Tj = Tbiv	9.20 kW	8.00 kW
COP Tj = Tbiv	2.68	2.07
Pdh Tj = TOL	9.20 kW	8.00 kW
COP Tj = TOL	2.68	2.07
Rated airflow rate	5590 m³/h	5590 m³/h
WTOL	55 °C	55 °C
Poff	17 W	17 W
PTO	120 W	120 W
PSB	17 W	17 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	electric	electric
Supplementary Heater: PSUP	10.00 kW	9.00 kW
Annual energy consumption Qhe	5278 kWh	5701 kWh

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	13.15 kW	11.52 kW
El input	2.92 kW	3.98 kW
COP	4.50	2.89
Indoor water flow rate	2.41 m³/h	1.24 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