

This information was downloaded from the HP KEYMARK database on 9 Jan 2020

Summary of	ESTIA HWS-1105H8/HWS-1405H8-E/HWS1605H8-E	Reg. No.	011-1W0344
Certificate Holder			
Name	TOSHIBA AIR CONDITIONING		
Address	Porsham Close, Belliver Industrial Estate	Zip	PL6 7DB
City	Plymouth	Country	Germany
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH		
Name of testing laboratory	Heat Pump Test Center WPZ		
Subtype title	ESTIA HWS-1105H8/HWS-1405H8-E/HWS1605H8-E		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	HFC-410a		
Mass Of Refrigerant	2.7 kg		
Certification Date	26.11.2019		
Testing basis	n/a		

Model: HWS-1105H8-E/HWS-1405XWHM3-E

General Data

Power supply	1x230V 50Hz
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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	161 %	130 %
Prated	10.00	9.00
SCOP	4.12	3.34
Tbiv	-7 °C	-7 °C
TOL	-7 °C	-7 °C
Pdh Tj = -7 °C	8.60 kW	7.80 kW
COP Tj = -7 °C	2.90	2.09
Pdh Tj = +2 °C	6.00 kW	4.70 kW
COP Tj = +2 °C	4.48	3.59

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Pdh Tj = +7°C	3.40 kW	3.20 kW
COP Tj = +7°C	5.44	4.29
Pdh Tj = 12°C	2.80 kW	2.80 kW
COP Tj = 12°C	6.34	5.50
Pdh Tj = Tbiv	8.60 kW	7.80 kW
COP Tj = Tbiv	2.90	2.09
Pdh Tj = TOL	8.60 kW	7.80 kW
COP Tj = TOL	2.90	2.09
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	4924 kWh	5486 kWh

Heating

This information was downloaded from the HP KEYMARK database on 9 Jan 2020

EN 14511-2		
	Low temperature	Medium temperature
Heat output	10.52 kW	10.05 kW
El input	2.19 kW	3.49 kW
COP	4.80	2.88
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-1105H8-E/HWS-1405XWHT6-E

General Data

Power supply	1x230V 50Hz
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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	161 %	130 %
Prated	10.00	9.00
SCOP	4.12	3.34
Tbiv	-7 °C	-7 °C
TOL	-7 °C	-7 °C
Pdh Tj = -7 °C	8.60 kW	7.80 kW
COP Tj = -7 °C	2.90	2.09
Pdh Tj = +2 °C	6.00 kW	4.70 kW
COP Tj = +2 °C	4.48	3.59

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Pdh Tj = +7 °C	3.40 kW	3.20 kW
COP Tj = +7 °C	5.44	4.29
Pdh Tj = 12 °C	2.80 kW	2.80 kW
COP Tj = 12 °C	6.34	5.50
Pdh Tj = Tbiv	8.60 kW	7.80 kW
COP Tj = Tbiv	2.90	2.09
Pdh Tj = TOL	8.60 kW	7.80 kW
COP Tj = TOL	2.90	2.09
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	4924 kWh	5486 kWh

Heating

This information was downloaded from the HP KEYMARK database on 9 Jan 2020

EN 14511-2		
	Low temperature	Medium temperature
Heat output	10.52 kW	10.05 kW
El input	2.19 kW	3.49 kW
COP	4.80	2.88
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-1105H8-E/HWS-1405XWHT9-E

General Data

Power supply	1x230V 50Hz
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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	161 %	130 %
Prated	10.00	9.00
SCOP	4.12	3.34
Tbiv	-7 °C	-7 °C
TOL	-7 °C	-7 °C
Pdh Tj = -7 °C	8.60 kW	7.80 kW
COP Tj = -7 °C	2.90	2.09
Pdh Tj = +2 °C	6.00 kW	4.70 kW
COP Tj = +2 °C	4.48	3.59

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Pdh Tj = +7°C	3.40 kW	3.20 kW
COP Tj = +7°C	5.44	4.29
Pdh Tj = 12°C	2.80 kW	2.80 kW
COP Tj = 12°C	6.34	5.50
Pdh Tj = Tbiv	8.60 kW	7.80 kW
COP Tj = Tbiv	2.90	2.09
Pdh Tj = TOL	8.60 kW	7.80 kW
COP Tj = TOL	2.90	2.09
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	4924 kWh	5486 kWh

Heating

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EN 14511-2		
	Low temperature	Medium temperature
Heat output	10.52 kW	10.05 kW
El input	2.19 kW	3.49 kW
COP	4.80	2.88
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-1405H8-E/HWS-1405XWHM3-E

General Data

Power supply	1x230V 50Hz
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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	157 %	129 %
Prated	10.00	9.00
SCOP	4.02	3.31
Tbiv	-7 °C	-7 °C
TOL	-7 °C	-7 °C
Pdh Tj = -7 °C	8.80 kW	8.20 kW
COP Tj = -7 °C	2.76	1.96
Pdh Tj = +2 °C	6.00 kW	5.10 kW
COP Tj = +2 °C	4.34	3.56

This information was downloaded from the HP KEYMARK database on 9 Jan 2020

Pdh Tj = +7°C	3.50 kW	3.20 kW
COP Tj = +7°C	5.35	4.38
Pdh Tj = 12°C	2.80 kW	2.70 kW
COP Tj = 12°C	6.35	5.56
Pdh Tj = Tbiv	8.80 kW	8.20 kW
COP Tj = Tbiv	2.76	1.96
Pdh Tj = TOL	8.80 kW	8.20 kW
COP Tj = TOL	2.76	1.96
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	5156 kWh	5772 kWh

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	13.15 kW	12.03 kW
El input	2.96 kW	4.29 kW
COP	4.44	2.81
Indoor water flow rate	2.41 m ³ /h	1.29 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-1405H8-E/HWS-1405XWHT6-E

General Data

Power supply	1x230V 50Hz
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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	157 %	129 %
Prated	10.00	9.00
SCOP	4.02	3.31
Tbiv	-7 °C	-7 °C
TOL	-7 °C	-7 °C
Pdh Tj = -7 °C	8.80 kW	8.20 kW
COP Tj = -7 °C	2.76	1.96
Pdh Tj = +2 °C	6.00 kW	5.10 kW
COP Tj = +2 °C	4.34	3.56

This information was downloaded from the HP KEYMARK database on 9 Jan 2020

Pdh T _j = +7 °C	3.50 kW	3.20 kW
COP T _j = +7 °C	5.35	4.38
Pdh T _j = 12 °C	2.80 kW	2.70 kW
COP T _j = 12 °C	6.35	5.56
Pdh T _j = T _{biv}	8.80 kW	8.20 kW
COP T _j = T _{biv}	2.76	1.96
Pdh T _j = TOL	8.80 kW	8.20 kW
COP T _j = TOL	2.76	1.96
Rated airflow rate	5590 m ³ /h	5590 m ³ /h
WTOL	55 °C	55 °C
P _{off}	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 Q _{he}	5156 kWh	5772 kWh

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	13.15 kW	12.03 kW
El input	2.96 kW	4.29 kW
COP	4.44	2.81
Indoor water flow rate	2.41 m ³ /h	1.29 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-1405H8-E/HWS-1405XWHT9-E

General Data

Power supply	1x230V 50Hz
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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	157 %	129 %
Prated	10.00	9.00
SCOP	4.02	3.31
Tbiv	-7 °C	-7 °C
TOL	-7 °C	-7 °C
Pdh Tj = -7 °C	8.80 kW	8.20 kW
COP Tj = -7 °C	2.76	1.96
Pdh Tj = +2 °C	6.00 kW	5.10 kW
COP Tj = +2 °C	4.34	3.56

This information was downloaded from the HP KEYMARK database on 9 Jan 2020

Pdh Tj = +7°C	3.50 kW	3.20 kW
COP Tj = +7°C	5.35	4.38
Pdh Tj = 12°C	2.80 kW	2.70 kW
COP Tj = 12°C	6.35	5.56
Pdh Tj = Tbiv	8.80 kW	8.20 kW
COP Tj = Tbiv	2.76	1.96
Pdh Tj = TOL	8.80 kW	8.20 kW
COP Tj = TOL	2.76	1.96
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	5156 kWh	5772 kWh

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	13.15 kW	12.03 kW
El input	2.96 kW	4.29 kW
COP	4.44	2.81
Indoor water flow rate	2.41 m ³ /h	1.29 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-1605H8-E/HWS-1405XWHM3-E

General Data

Power supply	1x230V 50Hz
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Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	69 dB(A)	69 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	159 %	130 %
Prated	10.00	10.00
SCOP	4.07	3.33
Tbiv	-7 °C	-7 °C
TOL	-7 °C	-7 °C
Pdh Tj = -7 °C	9.00 kW	8.70 kW
COP Tj = -7 °C	2.65	2.01
Pdh Tj = +2 °C	6.00 kW	5.50 kW
COP Tj = +2 °C	4.26	3.54

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Pdh Tj = +7°C	3.70 kW	3.30 kW
COP Tj = +7°C	5.95	4.38
Pdh Tj = 12°C	2.80 kW	2.80 kW
COP Tj = 12°C	6.07	5.67
Pdh Tj = Tbiv	9.00 kW	8.70 kW
COP Tj = Tbiv	2.65	2.01
Pdh Tj = TOL	9.00 kW	8.70 kW
COP Tj = TOL	2.65	2.01
Rated airflow rate	5860 m³/h	5860 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	10.00 kW
Annual energy consumption Qhe	5212 kWh	6154 kWh

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.91 kW	13.40 kW
El input	3.47 kW	4.95 kW
COP	4.30	2.70
Indoor water flow rate	2.75 m ³ /h	1.44 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-1605H8-E/HWS-1405XWHT6-E

General Data

Power supply	1x230V 50Hz
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Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	69 dB(A)	69 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	159 %	130 %
Prated	10.00	10.00
SCOP	4.07	3.33
Tbiv	-7 °C	-7 °C
TOL	-7 °C	-7 °C
Pdh Tj = -7 °C	9.00 kW	8.70 kW
COP Tj = -7 °C	2.65	2.01
Pdh Tj = +2 °C	6.00 kW	5.50 kW
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COP Tj = 12°C	6.07	5.67
Pdh Tj = Tbiv	9.00 kW	8.70 kW
COP Tj = Tbiv	2.65	2.01
Pdh Tj = TOL	9.00 kW	8.70 kW
COP Tj = TOL	2.65	2.01
Rated airflow rate	5860 m³/h	5860 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	10.00 kW
Annual energy consumption Qhe	5212 kWh	6154 kWh

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.91 kW	13.40 kW
El input	3.47 kW	4.95 kW
COP	4.30	2.70
Indoor water flow rate	2.75 m ³ /h	1.44 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-1605H8-E/HWS-1405XWHT9-E

General Data

Power supply	1x230V 50Hz
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Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	69 dB(A)	69 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	159 %	130 %
Prated	10.00	10.00
SCOP	4.07	3.33
Tbiv	-7 °C	-7 °C
TOL	-7 °C	-7 °C
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COP Tj = 12°C	6.07	5.67
Pdh Tj = Tbiv	9.00 kW	8.70 kW
COP Tj = Tbiv	2.65	2.01
Pdh Tj = TOL	9.00 kW	8.70 kW
COP Tj = TOL	2.65	2.01
Rated airflow rate	5860 m³/h	5860 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	10.00 kW
Annual energy consumption Qhe	5212 kWh	6154 kWh

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.91 kW	13.40 kW
El input	3.47 kW	4.95 kW
COP	4.30	2.70
Indoor water flow rate	2.75 m ³ /h	1.44 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