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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	United Kingdom
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH			
Subtype title	ESTIA HWS-1105H8/HWS-1405H8-E/HWS1605H8-E			
Heat Pump Type	Outdoor Air/Water			
Refrigerant	R410A			
Mass of Refrigerant	2.7 kg			
Certification Date	26.11.2019			

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

Configure model	
Model name	HWS-1105H8-E/HWS-1405XWHM3-E
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

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

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

This information was generated by the HP KEYMARK database on 21 Jun 2022

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 kW	9.00 kW
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
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

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COP $T_j = T_{biv}$	2.90	2.09
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	8.60 kW	7.80 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.90	2.09
Rated airflow rate	5310 m ³ /h	5310 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	Electricity	Electricity
Supplementary Heater: PSUP	10.00 kW	9.00 kW
Annual energy consumption Q _{he}	4924 kWh	5486 kWh

Model: HWS-1105H8-E/HWS-1405XWHT6-E

Configure model	
Model name	HWS-1105H8-E/HWS-1405XWHT6-E
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	10.52 kW	10.05 kW
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EN 14825

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PTO	120 W	120 W
PSB	17 W	17 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10.00 kW	9.00 kW
Annual energy consumption Q _{he}	4924 kWh	5486 kWh

Model: HWS-1105H8-E/HWS-1405XWHT9-E

Configure model	
Model name	HWS-1105H8-E/HWS-1405XWHT9-E
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	10.52 kW	10.05 kW
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EN 14825

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Pdh Tj = +7°C	3.40 kW	3.20 kW
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$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	8.60 kW	7.80 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.90	2.09
Rated airflow rate	5310 m ³ /h	5310 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	Electricity	Electricity
Supplementary Heater: PSUP	10.00 kW	9.00 kW
Annual energy consumption Q _{he}	4924 kWh	5486 kWh

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

Configure model

Model name	HWS-1405H8-E/HWS-1405XWHM3-E
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data

Power supply	1x230V 50Hz
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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

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 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 kW	9.00 kW
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
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

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COP $T_j = T_{biv}$	2.76	1.96
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	8.80 kW	8.20 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	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	Electricity	Electricity
Supplementary Heater: PSUP	10.00 kW	9.00 kW
Annual energy consumption Q _{he}	5156 kWh	5772 kWh

Model: HWS-1405H8-E/HWS-1405XWHT6-E

Configure model	
Model name	HWS-1405H8-E/HWS-1405XWHT6-E
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

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

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 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 kW	9.00 kW
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
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
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COP $T_j = T_{biv}$	2.76	1.96
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	8.80 kW	8.20 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	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	Electricity	Electricity
Supplementary Heater: PSUP	10.00 kW	9.00 kW
Annual energy consumption Q _{he}	5156 kWh	5772 kWh

Model: HWS-1405H8-E/HWS-1405XWHT9-E

Configure model	
Model name	HWS-1405H8-E/HWS-1405XWHT9-E
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	13.15 kW	12.03 kW
El input	2.96 kW	4.29 kW
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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

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EN 14825

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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	Electricity	Electricity
Supplementary Heater: PSUP	10.00 kW	9.00 kW
Annual energy consumption Q _{he}	5156 kWh	5772 kWh

Model: HWS-1605H8-E/HWS-1405XWHM3-E

Configure model	
Model name	HWS-1605H8-E/HWS-1405XWHM3-E
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

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

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 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 kW	10.00 kW
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
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

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COP $T_j = T_{biv}$	2.65	2.01
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	9.00 kW	8.70 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.65	2.01
Rated airflow rate	5860 m ³ /h	5860 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	Electricity	Electricity
Supplementary Heater: PSUP	10.00 kW	10.00 kW
Annual energy consumption Q _{he}	5212 kWh	6154 kWh

Model: HWS-1605H8-E/HWS-1405XWHT6-E

Configure model	
Model name	HWS-1605H8-E/HWS-1405XWHT6-E
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

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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	Electricity	Electricity
Supplementary Heater: PSUP	10.00 kW	10.00 kW
Annual energy consumption Q _{he}	5212 kWh	6154 kWh

Model: HWS-1605H8-E/HWS-1405XWHT9-E

Configure model	
Model name	HWS-1605H8-E/HWS-1405XWHT9-E
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.91 kW	13.40 kW
El input	3.47 kW	4.95 kW
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Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

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