

## Subtype ESTIA HWT-401/601

Certificate Holder	TOSHIBA AIR CONDITIONING
Address	Porsham Close, Belliver Industrial Estate
ZIP	PL6 7DB
City	Plymouth
Country	GB
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	ESTIA HWT-401/601
Registration number	011-1W0467
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	0.9 kg
Certification Date	21.12.2021
Testing basis	HP KEYMARK certification scheme rules V11

## Model HWT-401HW-E / HWT-601XWHM3W-E

Model name	HWT-401HW-E / HWT-601XWHM3W-E
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	n/a

## Outdoor Air/Water

## EN 14511-4 | Heating

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

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	178 %	135 %
Prated	4.97 kW	4.54 kW
SCOP	4.53	3.45
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.4 kW	4 kW
COP Tj = -7°C	3.11	2.18
Cdh Tj = -7 °C	0.97	0.98
Pdh Tj = +2°C	2.99 kW	2.5 kW
COP Tj = +2°C	4.45	3.48
Cdh Tj = +2 °C	0.94	0.94
Pdh Tj = +7°C	1.8 kW	1.6 kW
COP Tj = +7°C	5.87	4.28
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	1.48 kW	1.5 kW
COP Tj = 12°C	7.38	6.35
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	4.4 kW	4 kW

COP $T_j = T_{biv}$	3.11	2.18
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	4 kW	3.5 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.88	1.83
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.8	0.8
WTOL	55 °C	55 °C
P <sub>off</sub>	8 W	8 W
PTO	40 W	40 W
PSB	8 W	8 W
PCK	8 W	8 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.97 kW	1.04 kW
Annual energy consumption Q <sub>he</sub>	2268 kWh	2721 kWh

## Model HWT-401HW-E / HWT-601XWHT6W-E

Model name	HWT-401HW-E / HWT-601XWHT6W-E
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	n/a

## Outdoor Air/Water

### EN 14511-4 | Heating

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

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	178 %	135 %
Prated	4.97 kW	4.54 kW
SCOP	4.53	3.45
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.4 kW	4 kW
COP Tj = -7°C	3.11	2.18
Cdh Tj = -7 °C	0.97	0.98
Pdh Tj = +2°C	2.99 kW	2.5 kW
COP Tj = +2°C	4.45	3.48
Cdh Tj = +2 °C	0.94	0.94
Pdh Tj = +7°C	1.8 kW	1.6 kW
COP Tj = +7°C	5.87	4.28
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	1.48 kW	1.5 kW
COP Tj = 12°C	7.38	6.35
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	4.4 kW	4 kW

COP $T_j = T_{biv}$	3.11	2.18
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	4 kW	3.5 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.88	1.83
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.8	0.8
WTOL	55 °C	55 °C
P <sub>off</sub>	8 W	8 W
PTO	40 W	40 W
PSB	8 W	8 W
PCK	8 W	8 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.97 kW	1.04 kW
Annual energy consumption Q <sub>he</sub>	2268 kWh	2721 kWh

## Model HWT-601HW-E / HWT-601XWHM3W-E

Model name	HWT-601HW-E / HWT-601XWHM3W-E
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	n/a

## Outdoor Air/Water

### EN 14511-4 | Heating

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

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	180 %	132 %
Prated	5.97 kW	5.7 kW
SCOP	4.58	3.37
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.28 kW	5 kW
COP Tj = -7°C	3.02	2.1
Cdh Tj = -7 °C	0.98	0.98
Pdh Tj = +2°C	3.41 kW	3.4 kW
COP Tj = +2°C	4.45	3.22
Cdh Tj = +2 °C	0.95	0.96
Pdh Tj = +7°C	2.14 kW	2 kW
COP Tj = +7°C	6.05	4.58
Cdh Tj = +7 °C	0.9	0.91
Pdh Tj = 12°C	1.48 kW	1.5 kW
COP Tj = 12°C	7.38	6.35
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	5.28 kW	5 kW

COP $T_j = T_{biv}$	3.02	2.1
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	5.1 kW	4.5 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.83	1.81
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.8	0.8
WTOL	55 °C	55 °C
P <sub>off</sub>	8 W	8 W
PTO	40 W	40 W
PSB	8 W	8 W
PCK	8 W	8 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.87 kW	1.2 kW
Annual energy consumption Q <sub>he</sub>	2691 kWh	3497 kWh

## Model HWT-601HW-E / HWT-601XWHT6W-E

Model name	HWT-601HW-E / HWT-601XWHT6W-E
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	n/a

## Outdoor Air/Water

### EN 14511-4 | Heating

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

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

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$\eta_s$	180 %	132 %
Prated	5.97 kW	5.7 kW
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Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.28 kW	5 kW
COP Tj = -7°C	3.02	2.1
Cdh Tj = -7 °C	0.98	0.98
Pdh Tj = +2°C	3.41 kW	3.4 kW
COP Tj = +2°C	4.45	3.22
Cdh Tj = +2 °C	0.95	0.96
Pdh Tj = +7°C	2.14 kW	2 kW
COP Tj = +7°C	6.05	4.58
Cdh Tj = +7 °C	0.9	0.91
Pdh Tj = 12°C	1.48 kW	1.5 kW
COP Tj = 12°C	7.38	6.35
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	5.28 kW	5 kW



COP $T_j = T_{biv}$	3.02	2.1
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	5.1 kW	4.5 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.83	1.81
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.8	0.8
WTOL	55 °C	55 °C
P <sub>off</sub>	8 W	8 W
PTO	40 W	40 W
PSB	8 W	8 W
PCK	8 W	8 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.87 kW	1.2 kW
Annual energy consumption Q <sub>he</sub>	2691 kWh	3497 kWh

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Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

### General data

Power supply	1x230V 50Hz
Off-peak product	n/a

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Pdh Tj = Tbiv	4.4 kW	4 kW
COP Tj = Tbiv	3.11	2.18
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4 kW	3.5 kW

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.88	1.83
$Cd_h T_j = TOL$ or $Pd_h T_j = T_{designh}$ if $TOL < T_{designh}$	0.8	0.8
WTOL	55 °C	55 °C
P <sub>off</sub>	8 W	8 W
PTO	40 W	40 W
PSB	8 W	8 W
PCK	8 W	8 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.97 kW	1.04 kW
Annual energy consumption Q <sub>he</sub>	2268 kWh	2721 kWh

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Model name	HWT-601HW-E / HWT-601XWHM6W-E
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Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

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Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.1 kW	4.5 kW

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.83	1.81
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.8	0.8
WTOL	55 °C	55 °C
P <sub>off</sub>	8 W	8 W
PTO	40 W	40 W
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Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.87 kW	1.2 kW
Annual energy consumption Q <sub>he</sub>	2691 kWh	3497 kWh