

Subtype HPA-O 13 S Premium, HPA-O 13 CS Premium

Certificate Holder	STIEBEL ELTRON GmbH & Co KG
Address	Dr. Stiebel Straße 33
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Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	HPA-O 13 S Premium, HPA-O 13 CS Premium
Registration number	011-1W0231
Heat Pump Type	Outdoor Air/Water
Refrigerant	R410A
Mass of Refrigerant	4.7 kg
Certification Date	08.01.2018

Model HPA-O 13 S Premium

Model name	HPA-O 13 S Premium
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
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
Starting and operating test	passed

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	55 dB(A)	55 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	173 %	136 %
Prated	15.00 kW	15.00 kW
SCOP	4.39	3.47
Tbiv	-5 °C	-5 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	13.00 kW	13.20 kW
COP Tj = -7°C	3.02	2.43
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	8.00 kW	7.70 kW
COP Tj = +2°C	4.40	3.37
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.10 kW	7.90 kW
COP Tj = +7°C	5.64	4.45
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	9.10 kW	9.00 kW
COP Tj = 12°C	8.11	6.66
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.80 kW	12.40 kW
COP Tj = Tbiv	3.18	2.53
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.60 kW	13.40 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.87	2.28
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	65 °C	65 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	43 W	43 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.40 kW	1.60 kW
Annual energy consumption Qhe	7055 kWh	8940 kWh

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	153 %	126 %
Prated	21.00 kW	22.00 kW
SCOP	3.89	3.23
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	12.80 kW	13.50 kW
COP Tj = -7°C	3.21	2.65
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	8.10 kW	7.90 kW
COP Tj = +2°C	4.75	3.75
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	8.20 kW	8.00 kW
COP Tj = +7°C	5.95	4.86
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	9.10 kW	9.00 kW
COP Tj = 12°C	8.11	6.95
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	12.80 kW	13.50 kW
COP Tj = Tbiv	3.21	2.65
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	17.40 kW	19.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	2.38
WTOL	65 °C	65 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	43 W	43 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	21.17 kW	22.26 kW

Annual energy consumption Q_{he}	13312 kWh	16814 kWh
$P_{dh} T_j = -15^{\circ}\text{C}$ (if TOL	17.40	19.30
COP $T_j = -15^{\circ}\text{C}$ (if TOL	2.80	2.38
$C_{dh} T_j = -15^{\circ}\text{C}$	0.90	0.90

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	206 %	155 %
Prated	8.00 kW	7.00 kW
SCOP	5.21	3.95
T_{biv}	2 °C	2 °C
TOL	2 °C	2 °C
$P_{dh} T_j = +2^{\circ}\text{C}$	7.90 kW	7.40 kW
COP $T_j = +2^{\circ}\text{C}$	3.89	2.59
$C_{dh} T_j = +2^{\circ}\text{C}$	0.90	0.90
$P_{dh} T_j = +7^{\circ}\text{C}$	8.10 kW	7.70 kW
COP $T_j = +7^{\circ}\text{C}$	5.10	3.60
$C_{dh} T_j = +7^{\circ}\text{C}$	0.90	0.90
$P_{dh} T_j = 12^{\circ}\text{C}$	9.10 kW	9.00 kW
COP $T_j = 12^{\circ}\text{C}$	7.72	6.11
$C_{dh} T_j = +12^{\circ}\text{C}$	0.90	0.90
$P_{dh} T_j = T_{biv}$	7.90 kW	7.40 kW
COP $T_j = T_{biv}$	3.89	2.59
$P_{dh} T_j = \text{TOL}$ or $P_{dh} T_j = T_{designh}$ if TOL < $T_{designh}$	17.60 kW	19.80 kW
COP $T_j = \text{TOL}$ or COP $T_j = T_{designh}$ if TOL < $T_{designh}$	2.72	2.29
WTOL	65 °C	65 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	43 W	43 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q_{he}	2050 kWh	2367 kWh

Model HPA-O 13 CS Premium

Model name	HPA-O 13 CS Premium
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
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
Starting and operating test	passed

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	55 dB(A)	55 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	178 %	139 %
Prated	15.00 kW	15.00 kW
SCOP	4.53	3.55
Tbiv	-5 °C	-5 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	13.00 kW	13.20 kW
COP Tj = -7°C	3.02	2.43
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	8.00 kW	7.70 kW
COP Tj = +2°C	4.40	3.37
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.10 kW	7.90 kW
COP Tj = +7°C	5.64	4.45
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	9.10 kW	9.00 kW
COP Tj = 12°C	8.11	6.66
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.80 kW	12.40 kW
COP Tj = Tbiv	3.18	2.53

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.60 kW	13.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.87	2.28
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	65 °C	65 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	43 W	43 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.40 kW	1.60 kW
Annual energy consumption Qhe	6839 kWh	8723 kWh

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	154 %	137 %
Prated	21.00 kW	22.00 kW
SCOP	3.93	3.25
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	12.80 kW	13.50 kW
COP Tj = -7°C	3.21	2.65
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	8.10 kW	7.90 kW
COP Tj = +2°C	4.75	3.75
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	8.20 kW	8.00 kW
COP Tj = +7°C	5.95	4.86
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	9.10 kW	9.00 kW
COP Tj = 12°C	8.11	6.95
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	12.80 kW	13.50 kW
COP Tj = Tbiv	3.21	2.65
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	17.40 kW	19.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	2.38
WTOL	65 °C	65 °C
Poff	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	43 W	43 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	21.17 kW	22.26 kW
Annual energy consumption Q _{he}	13182 kWh	16684 kWh
P _{dh} T _j = -15°C (if TOL	17.40	19.30
COP T _j = -15°C (if TOL	2.80	2.38
C _{dh} T _j = -15 °C	0.90	0.90

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	236 %	174 %
Prated	8.00 kW	7.00 kW
SCOP	5.97	4.44
T _{biv}	2 °C	2 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	7.90 kW	7.40 kW
COP T _j = +2°C	3.89	2.59
C _{dh} T _j = +2 °C	0.90	0.90
P _{dh} T _j = +7°C	8.10 kW	7.70 kW
COP T _j = +7°C	5.10	3.60
C _{dh} T _j = +7 °C	0.90	0.90
P _{dh} T _j = 12°C	9.10 kW	9.00 kW
COP T _j = 12°C	7.72	6.11
C _{dh} T _j = +12 °C	0.90	0.90
P _{dh} T _j = T _{biv}	7.90 kW	7.40 kW
COP T _j = T _{biv}	3.89	2.59
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	17.60 kW	19.80 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	2.72	2.29
WTOL	65 °C	65 °C
P _{off}	16 W	16 W
PTO	16 W	16 W
PSB	16 W	16 W
PCK	43 W	43 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	1789 kWh	2107 kWh