

## Subtype S-Therm Yukon commercial Monoblock heat pump 65 75

Certificate Holder	SINCLAIR Global Group s.r.o.
Address	Purkyňova 45
ZIP	61200
City	Brno
Country	CZ
Certification Body	BRE Global Limited
Subtype title	S-Therm Yukon commercial Monoblock heat pump 65 75
Registration number	041-K037-31
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	9 kg
Certification Date	21.03.2025
Testing basis	HP KEYMARK certification scheme rules rev. no.15
Testing laboratory	Intertek Testing Services Shenzhen LTD. Guangzhou Branch, CN

## Model SMHM-650B-3

Model name	SMHM-650B-3
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Colder, Warmer
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	3x400V 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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	64 kW	65 kW
El input	15.24 kW	18.3 kW
COP	4.2	3.55

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	80 dB(A)	80 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	177 %	133 %
Prated	48 kW	40 kW
SCOP	4.5	3.4
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	42.18 kW	35.59 kW
COP Tj = -7°C	3.24	2.42
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	24.59 kW	21.61 kW
COP Tj = +2°C	4.15	3.18
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	24 kW	15.06 kW
COP Tj = +7°C	6.2	4.46

Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	20.68 kW	18.43 kW
COP Tj = 12°C	8.23	6.06
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	42.18 kW	35.59 kW
COP Tj = Tbiv	3.24	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	47.6 kW	39.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.71	1.83
WTOL	65 °C	65 °C
Poff	80 W	80 W
PTO	350 W	350 W
PSB	80 W	80 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.4 kW	0.2 kW
Annual energy consumption Qhe	22032 kWh	24290 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	80 dB(A)	80 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	152 %	106 %
Prated	40.00 kW	34.00 kW
SCOP	3.88	2.73
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-18 °C
Pdh Tj = -7°C	24.57 kW	21.53 kW
COP Tj = -7°C	3.11	2.55
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	15.59 kW	12.29 kW
COP Tj = +2°C	4.65	3.03
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	12.61 kW	11.14 kW
COP Tj = +7°C	5.63	3.80
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	15.31 kW	14.28 kW
COP Tj = 12°C	7.37	5.77
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	32.81 kW	27.88 kW
COP Tj = Tbiv	2.71	1.83
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	37.22 kW	31.81 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.97	1.71
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	65 °C	65 °C
Poff	80 W	80 W
PTO	350 W	350 W
PSB	80 W	80 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.78 kW	34.00 kW
Annual energy consumption Qhe	25415 kWh	30683 kWh
Pdh Tj = -15°C (if TOL	32.81	27.88
COP Tj = -15°C (if TOL	2.71	1.83
Cdh Tj = -15 °C	0.900	0.900

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	80 dB(A)	80 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	237 %	161 %
Prated	48 kW	40 kW
SCOP	6	4.12
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	47.76 kW	39.82 kW
COP Tj = +2°C	3.23	2.01
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	30.59 kW	24.93 kW
COP Tj = +7°C	5.47	3.71
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	15.7 kW	12.35 kW
COP Tj = 12°C	7.65	5.27
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	30.59 kW	24.93 kW
COP Tj = Tbiv	5.47	3.71
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	47.76 kW	39.82 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.23	2.01
WTOL	65 °C	65 °C
Poff	80 W	80 W
PTO	350 W	350 W
PSB	80 W	80 W

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.24 kW	0.18 kW
Annual energy consumption Q <sub>he</sub>	10683 kWh	12970 kWh

## Model SMHM-650BH-3

Model name	SMHM-650BH-3
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Colder, Warmer
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	3x400V 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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	64 kW	65 kW
El input	16.37 kW	19.43 kW
COP	3.95	3.38

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	83 dB(A)	83 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	175 %	131 %
Prated	48 kW	40 kW
SCOP	4.47	3.36
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	42.15 kW	35.53 kW
COP Tj = -7°C	3.25	2.43
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	24.57 kW	21.55 kW
COP Tj = +2°C	4.1	3.15
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	23.95 kW	14.99 kW
COP Tj = +7°C	6.17	4.35

Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	20.62 kW	18.37 kW
COP Tj = 12°C	8.27	6
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	42.15 kW	35.53 kW
COP Tj = Tbiv	3.25	2.43
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	47.5 kW	39.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.71	1.86
WTOL	65 °C	65 °C
Poff	80 W	80 W
PTO	350 W	350 W
PSB	80 W	80 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.5 kW	0.3 kW
Annual energy consumption Qhe	22171 kWh	24568 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	83 dB(A)	83 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	151 %	103 %
Prated	40.00 kW	34.00 kW
SCOP	3.87	2.67
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-18 °C
Pdh Tj = -7°C	24.52 kW	21.46 kW
COP Tj = -7°C	3.12	2.56
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	15.51 kW	12.23 kW
COP Tj = +2°C	4.62	2.87
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	12.54 kW	11.07 kW
COP Tj = +7°C	5.57	3.75
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	15.24 kW	14.21 kW
COP Tj = 12°C	7.52	5.85
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	32.73 kW	27.81 kW
COP Tj = Tbiv	2.73	1.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	37.16 kW	31.74 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.97	1.72
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	65 °C	65 °C
Poff	80 W	80 W
PTO	350 W	350 W
PSB	80 W	80 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.84 kW	34.00 kW
Annual energy consumption Qhe	25464 kWh	31338 kWh
Pdh Tj = -15°C (if TOL	32.73	27.81
COP Tj = -15°C (if TOL	2.73	1.81
Cdh Tj = -15 °C	0.900	0.900

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	83 dB(A)	83 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	235 %	159 %
Prated	48 kW	40 kW
SCOP	5.96	4.05
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	47.62 kW	39.87 kW
COP Tj = +2°C	3.23	2.02
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	30.57 kW	24.86 kW
COP Tj = +7°C	5.48	3.68
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	15.63 kW	12.28 kW
COP Tj = 12°C	7.5	5.1
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	30.57 kW	24.86 kW
COP Tj = Tbiv	5.48	3.68
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	47.62 kW	39.87 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.23	2.02
WTOL	65 °C	65 °C
Poff	80 W	80 W
PTO	350 W	350 W
PSB	80 W	80 W



PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.38 kW	0.13 kW
Annual energy consumption Q <sub>he</sub>	10767 kWh	13207 kWh

## Model SMHM-750B-3

Model name	SMHM-750B-3
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Colder, Warmer
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	3x400V 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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	77 kW	75 kW
El input	19.74 kW	22.06 kW
COP	3.9	3.4

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	86 dB(A)	86 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	177 %	133 %
Prated	48 kW	40 kW
SCOP	4.5	3.4
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	42.18 kW	35.59 kW
COP Tj = -7°C	3.24	2.42
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	24.59 kW	21.61 kW
COP Tj = +2°C	4.15	3.18
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	24 kW	15.06 kW
COP Tj = +7°C	6.2	4.46

Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	20.68 kW	18.43 kW
COP Tj = 12°C	8.23	6.06
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	42.18 kW	35.59 kW
COP Tj = Tbiv	3.24	2.42
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	47.6 kW	39.8 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.71	1.83
WTOL	65 °C	65 °C
Poff	80 W	80 W
PTO	350 W	350 W
PSB	80 W	80 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.4 kW	0.2 kW
Annual energy consumption Qhe	22032 kWh	24290 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	86 dB(A)	86 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	152 %	106 %
Prated	40.00 kW	34.00 kW
SCOP	3.88	2.73
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-18 °C
Pdh Tj = -7°C	24.57 kW	21.53 kW
COP Tj = -7°C	3.11	2.55
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	15.59 kW	12.29 kW
COP Tj = +2°C	4.65	3.03
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	12.61 kW	11.14 kW
COP Tj = +7°C	5.63	3.80
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	15.31 kW	14.28 kW
COP Tj = 12°C	7.37	5.77
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	32.81 kW	27.88 kW
COP Tj = Tbiv	2.71	1.83
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	37.22 kW	31.81 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.97	1.71
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	65 °C	65 °C
Poff	80 W	80 W
PTO	350 W	350 W
PSB	80 W	80 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.78 kW	34.00 kW
Annual energy consumption Qhe	25415 kWh	30683 kWh
Pdh Tj = -15°C (if TOL	32.81	27.88
COP Tj = -15°C (if TOL	2.71	1.83
Cdh Tj = -15 °C	0.900	0.900

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	86 dB(A)	86 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	237 %	161 %
Prated	48 kW	40 kW
SCOP	6	4.12
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	47.76 kW	39.82 kW
COP Tj = +2°C	3.23	2.01
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	30.59 kW	24.93 kW
COP Tj = +7°C	5.47	3.71
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	15.7 kW	12.35 kW
COP Tj = 12°C	7.65	5.27
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	30.59 kW	24.93 kW
COP Tj = Tbiv	5.47	3.71
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	47.76 kW	39.82 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.23	2.01
WTOL	65 °C	65 °C
Poff	80 W	80 W
PTO	350 W	350 W
PSB	80 W	80 W

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.24 kW	0.18 kW
Annual energy consumption Q <sub>he</sub>	10683 kWh	12970 kWh

## Model SMHM-750BH-3

Model name	SMHM-750BH-3
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Colder, Warmer
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	3x400V 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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	77 kW	75 kW
El input	21.61 kW	23.51 kW
COP	3.59	3.22

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	89 dB(A)	89 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	175 %	131 %
Prated	48 kW	40 kW
SCOP	4.47	3.36
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	42.15 kW	35.53 kW
COP Tj = -7°C	3.25	2.43
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	24.57 kW	21.55 kW
COP Tj = +2°C	4.1	3.15
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	23.95 kW	14.99 kW
COP Tj = +7°C	6.17	4.35

Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	20.62 kW	18.37 kW
COP Tj = 12°C	8.27	6
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	42.15 kW	35.53 kW
COP Tj = Tbiv	3.25	2.43
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	47.5 kW	39.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.71	1.86
WTOL	65 °C	65 °C
Poff	80 W	80 W
PTO	350 W	350 W
PSB	80 W	80 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.5 kW	0.3 kW
Annual energy consumption Qhe	22171 kWh	24568 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	89 dB(A)	89 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	151 %	103 %
Prated	40.00 kW	34.00 kW
SCOP	3.87	2.67
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-18 °C
Pdh Tj = -7°C	24.52 kW	21.46 kW
COP Tj = -7°C	3.12	2.56
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	15.51 kW	12.23 kW
COP Tj = +2°C	4.62	2.87
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	12.54 kW	11.07 kW
COP Tj = +7°C	5.57	3.75
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	15.24 kW	14.21 kW
COP Tj = 12°C	7.52	5.85
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	32.73 kW	27.81 kW
COP Tj = Tbiv	2.73	1.81
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	37.16 kW	31.74 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.97	1.72
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	65 °C	65 °C
Poff	80 W	80 W
PTO	350 W	350 W
PSB	80 W	80 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.84 kW	34.00 kW
Annual energy consumption Qhe	25464 kWh	31338 kWh
Pdh Tj = -15°C (if TOL	32.73	27.81
COP Tj = -15°C (if TOL	2.73	1.81
Cdh Tj = -15 °C	0.900	0.900

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	89 dB(A)	89 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	235 %	159 %
Prated	48 kW	40 kW
SCOP	5.96	4.05
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	47.62 kW	39.87 kW
COP Tj = +2°C	3.23	2.02
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	30.57 kW	24.86 kW
COP Tj = +7°C	5.48	3.68
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	15.63 kW	12.28 kW
COP Tj = 12°C	7.5	5.1
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	30.57 kW	24.86 kW
COP Tj = Tbiv	5.48	3.68
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	47.62 kW	39.87 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.23	2.02
WTOL	65 °C	65 °C
Poff	80 W	80 W
PTO	350 W	350 W
PSB	80 W	80 W



PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.38 kW	0.13 kW
Annual energy consumption Q <sub>he</sub>	10767 kWh	13207 kWh