

Subtype S-Therm Ontario Split 80 100	
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 Ontario Split 80 100
Registration number	041-K037-18
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.6 kg
Certification Date	03.03.2023
Testing basis	Heat Pump Keymark Scheme Rules Rev 11



Model GSH-80IRB/GSH-80ERB		
Model name	GSH-80IRB/GSH-80ERB	
Application	Heating + DHW	
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 16147 Average Climate		
Declared load profile	XL	
Efficiency ηDHW	116 %	
COP	2.76	
Heating up time	2.7 h:min	
Standby power input	54.5 W	
Reference hot water temperature	52.8 °C	
Mixed water at 40°C	341 l	
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	7.98 kW	
El input	2.60 kW	
COP	3.06	
EN 12102-1 Average Climate		
	Law tamparatura	Modium tomporature
Cound newer level indeer	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	
Sound power level outdoor	67 dB(A)	
EN 14825 Average Climate		
	Low temperature	Medium temperature
ης	129 %	
Prated	7.00 kW	



Tbiv	SCOP	3.31
Pdh Tj = -7°C 6.34 kW COP Tj = -7°C 2.24 Cdh Tj = -7 °C 0.99 Pdh Tj = +2°C 4.08 kW COP Tj = +2°C 3.18 Cdh Tj = +2 °C 0.98 Pdh Tj = +7°C 4.26 kW COP Tj = +7°C 4.26 Cdh Tj = +7 °C 0.97 Pdh Tj = 12°C 5.01 kW COP Tj = 12°C 5.93 Cdh Tj = +12 °C 0.97 Pdh Tj = Tbiv 6.34 kW COP Tj = Tbiv 2.24 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 6.29 kW < Tdesignh	Tbiv	-7 °C
COP Tj = -7°C 2.24 Cdh Tj = -7°C 0.99 Pdh Tj = +2°C 4.08 kW COP Tj = +2°C 3.18 Cdh Tj = +2 °C 0.98 Pdh Tj = +7°C 4.26 kW COP Tj = +7°C 4.26 Cdh Tj = +7 °C 0.97 Pdh Tj = 12°C 5.01 kW COP Tj = 12°C 5.93 Cdh Tj = +12 °C 0.97 Pdh Tj = Tbiv 6.34 kW COP Tj = Tbiv 2.24 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 6.29 kW < Tdesignh	TOL	-10 °C
Cdh Tj = -7 °C 0.99 Pdh Tj = +2°C 4.08 kW COP Tj = +2°C 3.18 Cdh Tj = +2 °C 0.98 Pdh Tj = +7°C 4.26 kW COP Tj = +7°C 4.26 Cdh Tj = +7 °C 0.97 Pdh Tj = 12°C 5.93 Cdh Tj = +12 °C 0.97 Pdh Tj = Tbiv 6.34 kW COP Tj = Tbiv 2.24 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 6.29 kW < Tdesignh	Pdh Tj = -7° C	6.34 kW
Pdh Tj = +2°C 4.08 kW COP Tj = +2°C 3.18 Cdh Tj = +2 °C 0.98 Pdh Tj = +7°C 4.26 kW COP Tj = +7°C 4.26 Cdh Tj = +7 °C 0.97 Pdh Tj = 12°C 5.01 kW COP Tj = 12°C 5.93 Cdh Tj = +12 °C 0.97 Pdh Tj = Tbiv 6.34 kW COP Tj = Tbiv 2.24 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 6.29 kW < Tdesignh	$COP Tj = -7^{\circ}C$	2.24
COP Tj = +2°C 3.18 Cdh Tj = +2°C 0.98 Pdh Tj = +7°C 4.26 kW COP Tj = +7°C 4.26 Cdh Tj = +7 °C 0.97 Pdh Tj = 12°C 5.01 kW COP Tj = 12°C 5.93 Cdh Tj = +12 °C 0.97 Pdh Tj = Tbiv 6.34 kW COP Tj = Tbiv 2.24 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 6.29 kW < Tdesignh	Cdh Tj = -7 °C	0.99
Cdh Tj = +2 °C 0.98 Pdh Tj = +7°C 4.26 kW COP Tj = +7°C 4.26 Cdh Tj = +7 °C 0.97 Pdh Tj = 12°C 5.01 kW COP Tj = 12°C 0.97 Pdh Tj = Tbiv 6.34 kW COP Tj = Tbiv 2.24 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 6.29 kW < Tdesignh	Pdh Tj = $+2$ °C	4.08 kW
Pdh Tj = +7°C 4.26 kW COP Tj = +7°C 4.26 Cdh Tj = +7 °C 0.97 Pdh Tj = 12°C 5.01 kW COP Tj = 12°C 5.93 Cdh Tj = +12 °C 0.97 Pdh Tj = Tbiv 6.34 kW COP Tj = Tbiv 2.24 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	$COP Tj = +2^{\circ}C$	3.18
COP Tj = +7°C	•	0.98
Cdh Tj = +7 °C 0.97 Pdh Tj = 12°C 5.01 kW COP Tj = 12°C 5.93 Cdh Tj = +12 °C 0.97 Pdh Tj = Tbiv 6.34 kW COP Tj = Tbiv 2.24 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 6.29 kW < Tdesignh	Pdh Tj = $+7^{\circ}$ C	4.26 kW
Pdh Tj = 12°C 5.01 kW COP Tj = 12°C 5.93 Cdh Tj = +12 °C 0.97 Pdh Tj = Tbiv 6.34 kW COP Tj = Tbiv 2.24 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 6.29 kW < Tdesignh	$COP Tj = +7^{\circ}C$	4.26
COP Tj = 12°C 5.93 Cdh Tj = +12 °C 0.97 Pdh Tj = Tbiv 6.34 kW COP Tj = Tbiv 2.24 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 6.29 kW < Tdesignh	Cdh Tj = +7 °C	0.97
Cdh Tj = +12 °C 0.97 Pdh Tj = Tbiv 6.34 kW COP Tj = Tbiv 2.24 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 6.29 kW < Tdesignh COP Tj = TOL or COP Tj = Tdesignh if TOL 1.79 < Tdesignh WTOL 60 °C Poff 25 W PTO 25 W PSB 25 W PCK 25 W Supplementary Heater: Type of energy input Supplementary Heater: PSUP 0.70 kW	Pdh Tj = 12°C	5.01 kW
Pdh Tj = Tbiv 6.34 kW COP Tj = Tbiv 2.24 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL 6.29 kW < Tdesignh COP Tj = TOL or COP Tj = Tdesignh if TOL 1.79 < Tdesignh WTOL 60 °C Poff 25 W PTO 25 W PSB 25 W PCK 25 W Supplementary Heater: Type of energy input Supplementary Heater: PSUP 0.70 kW	COP Tj = 12°C	5.93
COP Tj = Tbiv Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL Tdesignh COP Tj = TOL or COP Tj = Tdesignh if TOL Tdesignh WTOL Foff Fof Tol Tol Tdesignh WTOL For Tdesignh	Cdh Tj = +12 °C	0.97
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh WTOL Poff PTO 25 W PSB PCK Supplementary Heater: Type of energy input Supplementary Heater: PSUP 0.70 kW	Pdh Tj = Tbiv	6.34 kW
< Tdesignh COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh WTOL Poff 25 W PTO PSB 25 W PCK 25 W Supplementary Heater: Type of energy input Supplementary Heater: PSUP 0.70 kW	COP Tj = Tbiv	2.24
< Tdesignh WTOL 60 °C Poff 25 W PTO 25 W PSB 25 W PCK 25 W Supplementary Heater: Type of energy input Supplementary Heater: PSUP 0.70 kW		6.29 kW
Poff 25 W PTO 25 W PSB 25 W PCK 25 W Supplementary Heater: Type of energy input Supplementary Heater: PSUP 0.70 kW		1.79
PTO 25 W PSB 25 W PCK 25 W Supplementary Heater: Type of energy input Supplementary Heater: PSUP 0.70 kW	WTOL	60 °C
PSB 25 W PCK 25 W Supplementary Heater: Type of energy input Supplementary Heater: PSUP 0.70 kW	Poff	25 W
PCK 25 W Supplementary Heater: Type of energy input Supplementary Heater: PSUP 0.70 kW	PTO	25 W
Supplementary Heater: Type of energy input Supplementary Heater: PSUP 0.70 kW	PSB	25 W
input Supplementary Heater: PSUP 0.70 kW	PCK	25 W
	• • • • • • • • • • • • • • • • • • • •	Electricity
Annual energy consumption Qhe 4371 kWh	Supplementary Heater: PSUP	0.70 kW
	Annual energy consumption Qhe	4371 kWh



Model GSH-100IRB/GSH-100ERB		
Model name	GSH-100IRB/GSH-100ERB	
Application	Heating + DHW	
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 16147 Average Climate		
	VI	
Declared load profile Efficiency nDHW	XL 116 %	
COP	2.76	
Heating up time	2.7 h:min	
Standby power input	54.5 W	
Reference hot water temperature	52.8 °C	
Mixed water at 40°C	341	
	-	
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	9.47 kW	·
El input	3.12 kW	
COP	3.04	
EN 12102-1 Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	
Sound power level outdoor	68 dB(A)	
EN 14825 Average Climate		
	Low temperature	Medium temperature
ης	127 %	-
Prated	8.00 kW	



SCOP	3.25
Tbiv	-7 °C
TOL	-10 °C
Pdh Tj = -7 °C	6.91 kW
$COP Tj = -7^{\circ}C$	2.12
Cdh Tj = -7 °C	0.99
Pdh Tj = $+2$ °C	4.22 kW
COP Tj = +2°C	3.09
Cdh Tj = +2 °C	0.98
Pdh Tj = $+7^{\circ}$ C	4.27 kW
$COP Tj = +7^{\circ}C$	4.34
Cdh Tj = +7 °C	0.97
Pdh Tj = 12°C	4.91 kW
COP Tj = 12°C	5.91
Cdh Tj = +12 °C	0.97
Pdh Tj = Tbiv	6.91 kW
COP Tj = Tbiv	2.12
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.85 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.75
WTOL	60 °C
Poff	25 W
PTO	25 W
PSB	25 W
PCK	25 W
Supplementary Heater: Type of energy input	Electricity
Supplementary Heater: PSUP	1.20 kW
Annual energy consumption Qhe	5091 kWh