



# Thermia Atlas



## Atlas

### Superior performance in every respect

The Atlas ground source heat pump is constructed using the very latest technology and equipped with all the latest features. With no compromises and perfection in every detail, Atlas is the most efficient and complete heat pump on the market today.

#### Unmatched performance

Atlas is an inverter-driven ground source heat pump that continuously adapts its output to provide the optimum effect at the lowest possible power consumption. So far, its performance remains unmatched – Atlas is the first geothermal heat pump with a SCOP value > 6.0 (SCOP 6.15 \*).

Thanks to this outstanding seasonal performance heat factor, Atlas provides maximum comfort with minimal energy consumption throughout the year.

#### Extra hot water at low cost

Atlas produces domestic hot water at a speed and temperature in a class of its own. The secret lies in our HGW\*\* technology, which uses the normal room heating function to produce hot water. The result is that when the heat pump heats your home, it generates hot water at the same time.

The built-in HGW and TWS\*\*\* technology make Atlas the fastest and most cost-efficient producer of hot water in its segment. When fully deployed, the HGW function can give you as much as 545 liters of hot water! \*\*\*\*

#### Quiet, good looking and safe

During the development of Atlas, a great deal of emphasis was placed on acoustic performance. The goal was to create the quietest heat pump on the market. As well as its incredibly quiet operation, Atlas features a modern design with an elegant glass panel, along with smart and intuitive control via color touchscreen. Our Thermia Online solution is included as part of the package and enables you to both control and monitor your Atlas heat pump via smartphone, tablet or computer.



A+++ energy class when the heat pump is part of an integrated system

A+++ energy class when the heat pump is the sole heat generator

Energy class according to Eco-design Directive 811/2013



# Technical data Atlas

## Atlas Duo

### Connections Atlas

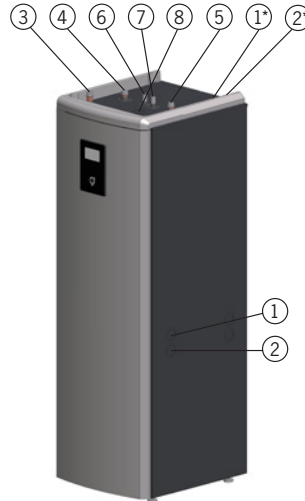
The brine lines can be connected on either the left or right-hand sides of the heat pump.

- 1 Brine return line (Brine in), 28 mm
- 2 Brine supply line (Brine out), 28 mm
- 3 Heating system supply line, 28 mm
- 4 Heating system return line, 28 mm
- 5 Connection for bleed valve, 28 mm
- 6 Hot water pipe, 22 mm
- 7 Cold water pipe, 22 mm
- 8 Lead-in for incoming power supply, sensors and communication cable

### Connections Atlas Duo

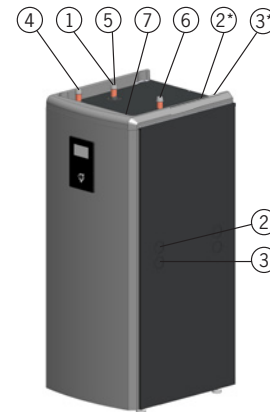
The brine lines can be connected on both the left and right-hand sides and also to the top of the heat pump.

- 1 Return line from heating system and hot water heater, 28 mm
- 2 Brine return line (Brine in), 28 mm
- 3 Brine supply line (Brine out), 28 mm
- 4 Heating system supply line, 28 mm
- 5 Heating system return line, 28 mm
- 6 Supply line to hot water heater, 28 mm
- 7 Lead-in for incoming power supply, sensors and communication cable



Atlas

\*Additional pipes needed for this type of connection



Atlas Duo

(A lower model with separate hot water tank)

Atlas/ Atlas Duo		12	18
<b>Heating capacity</b>		3 - 12 kW	4 - 18 kW
<b>Refrigerant</b>	Type	R410A	R410A
	Amount <sup>1</sup>	1,4	1,95
	Design pressure	45	45
<b>Compressor</b>	Type	Scroll	Scroll
	Oil	POE	POE
<b>Electrical data 3N (400V version)</b>	Mains power supply	V	400
	Max working power, compressor	kW	4,5
	Rated power, circulation pumps	kW	0,2
	Auxiliary heater, 3 steps	kW	(0)/3/6/9
	Fuse (heat pump + auxiliary heater) <sup>2</sup>	A	(10)/16/20/25
			(13)/20/25/32
<b>Electrical data 1N (230V version) (Preliminary data)</b>	Mains power supply	V	230
	Max working power, compressor	kW	4,5
	Rated power, circulation pumps	kW	0,2
	Auxiliary heater, 3 steps	kW	(0)/3/5/8
	Fuse (heat pump + auxiliary heater) <sup>2</sup>	A	(25)/40/50/63
	Fuse separate supply (compressor only)		25
	Fuse <sup>2</sup> (only auxiliary heater)		16/25/40
<b>Performance</b>	SCOP Floor heating (35°C) <sup>3</sup>	5,86	6,15
	SCOP Radiator heating (55°C) <sup>3</sup>	4,39	4,55
	COP <sup>4</sup>	4,75	4,98
<b>Energy class - system</b> <sup>5</sup>	Floor heating (35°C), Radiator (55°C)	A+++	A+++
<b>Energy class - product</b> <sup>6</sup>	Floor heating (35°C), Radiator (55°C)	A+++	A+++
	Hot water (Economy) <sup>7</sup>	A+	A+
	Hot water (Normal/Comfort) <sup>8</sup>	A	A
<b>Max/min temperature</b>	Cooling circuit	°C	20/-10
	Heating circuit	°C	65/20
<b>Anti-freeze</b> <sup>9</sup>		Ethanol + water solution -17°C ± 2	
<b>Max/min refrigerant circuit</b>	Low pressure	Bar(g)	2,3
	Operating pressure	Bar(g)	41,5
	High pressure	Bar(g)	45,0
<b>Sound power level</b>	Atlas	dB(A)	30-43 <sup>10</sup> (33) <sup>11</sup>
	Atlas Duo	dB(A)	31-45 <sup>10</sup> (34) <sup>11</sup>
<b>Hot water performance</b>	Volume 40°C hot water <sup>12</sup>	l	307
	COP, hot water <sup>7</sup>		3,07
	Hot water incl. HGW <sup>13</sup>	l	488
<b>Water tank</b>	Atlas	l	184
	Atlas Duo	l	optional
<b>Weight</b>	Atlas, Empty	kg	177
	Atlas, Filled	kg	367
	Atlas Duo	kg	137
<b>Dimensions (WxDxH)</b>	Atlas	mm	598x703x1863 ± 10
	Atlas Duo	mm	598x703x1450 ± 10

<sup>\*</sup> SCOP 6.15 for Atlas 18 according to measurement standard EN14825 (cold climate, Helsinki). <sup>\*\*</sup> HGW (Hot Gas Water): our patented technology uses the standard room heating function to produce domestic hot water simultaneously <sup>\*\*\*</sup> Tap Water Stratification, our patented technology developed to ensure that stored heat is always used optimally <sup>\*\*\*\*</sup> Applies to Atlas 18 with fully deployed HGW (Hot Gas Water) function.

The measurements are performed on a limited number of heat pumps which can cause variations in the results. Tolerances in the measuring methods can also cause variations.

1) The refrigerant circuit is hermetically sealed and contains refrigerants covered by the F-gas regulation. GWP for R410A according to EC 517/2014 is 2088, which gives a CO<sub>2</sub> equivalent corresponding to Atlas 12: 2.923 tons, Atlas 18: 4.072 tons.  
2) The minimum recommended fuse size depends on the limitation of the electrical immersion heater in combination with the compressor. The maximum permissible power for immersion heater can also be set differently with and without compressor for further adjustment at low fuses.  
- 400V versions: The power supply and the frequency converter for the compressor are powered by L1, L2 and L3. Control and circulation pumps are operated with L1. Meets IEC61000-3-12 at Ssc connection point <1.3 MVA for Atlas 12 and for Atlas 18 <2.1 MVA without action  
- 230V versions: The feeding for auxiliary heater and compressor can be physically

separated. The 230V version can in addition to 1N also be connected to 230V 3phase grids, for fuse sizes see technical documentation.  
3) SCOP according to EN14825, cold climate (Helsinki), P-design Atlas 12: 10.5 kW (BOW55), 11.5 kW (BOW35). P-design Atlas 18: 15.7 kW (BOW55), 15.1 kW (BOW35).  
4) At B0 / W35, according to EN14511  
5) When the heat pump is installed in a heating system that is controlled via the heat pump's control computer. According to EU regulation 811/2013.  
6) When the heat pump is not connected to a heating system, and the function of the built-in control computer is not taken into account. According to EU regulation 811/2013.  
7) Hot water performance according to EN16147, COP according to XL cycle with the control computer set for Economy mode and built-in hot water tank.  
8) Hot water performance according to EN16147, COP according to XL cycle with the control

computer set for Normal / Comfort mode and built-in processor.  
9) Local regulations and regulations must always be checked before antifreeze agents are used.  
10) Sound power level measured according to EN12102 and EN 3741 (min / max BOW35).  
11) Sound power level according to energy labeling, measured according to EN12102 and EN3741 (BOW55).  
12) Hot water performance according to EN16147, V40 according to XL cycle with the control computer set for comfort mode and built-in hot water tank.  
13) Maximum available amount of hot water when the boiler has been able to fully charge using HGW operation and subsequent V40 discharge in accordance with EN16147