



# Thermia Atec

Лучший воздушный тепловой насос на рынке



# Atec – Fast facts

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- **The best seasonal performance** based on non-stop optimisation of key performance parameters air flow (variable speed EC fan), heat pump (electronic EXP valve) and heating distribution (Optimum technology)
- Thermia Atec is developed to deliver **the lowest sound level in the market** in operational mode, enabled by the unique acoustic engineered mechanical design and an optimised air flow (incl. special low sound feature)
- **Plug and play** electrical installation to main supply and controller unit
- Thermia Atec supports **heating and cooling** applications for both **new build and renovation**, regardless of the temperature levels needed in the heating system
- Pre-fabricated in-door kits, **easy to install** and for adaptation to customer needs
- The unique **self-commissioning flow adjustment** of Thermia Atec ensuring proper system flow non-stop (Optimum technology)
- Capacity range from **6kW to 36kW**, all fulfilling Ecolabel requirements



# Atec – The new air/water platform

- **The best seasonal performance** based on non-stop optimisation of key performance parameters: (1) air flow, (2) heating circuit and (3) heating distribution
  1. **EC-fan (Regulated fan speed):** Fan speed on demand; Reduced noise level; High efficiency; Leading technology compared to competitors
  2. **Electronic Expansion valve (EEV):** Always running at optimized conditions both in heating and cooling mode and over the whole operating range
  3. **The unique self-commissioning** flow adjustment of the Thermia Atec ensuring proper system flow non-stop (Optimum technology)
- Integrated stand with integrated heated drip tray



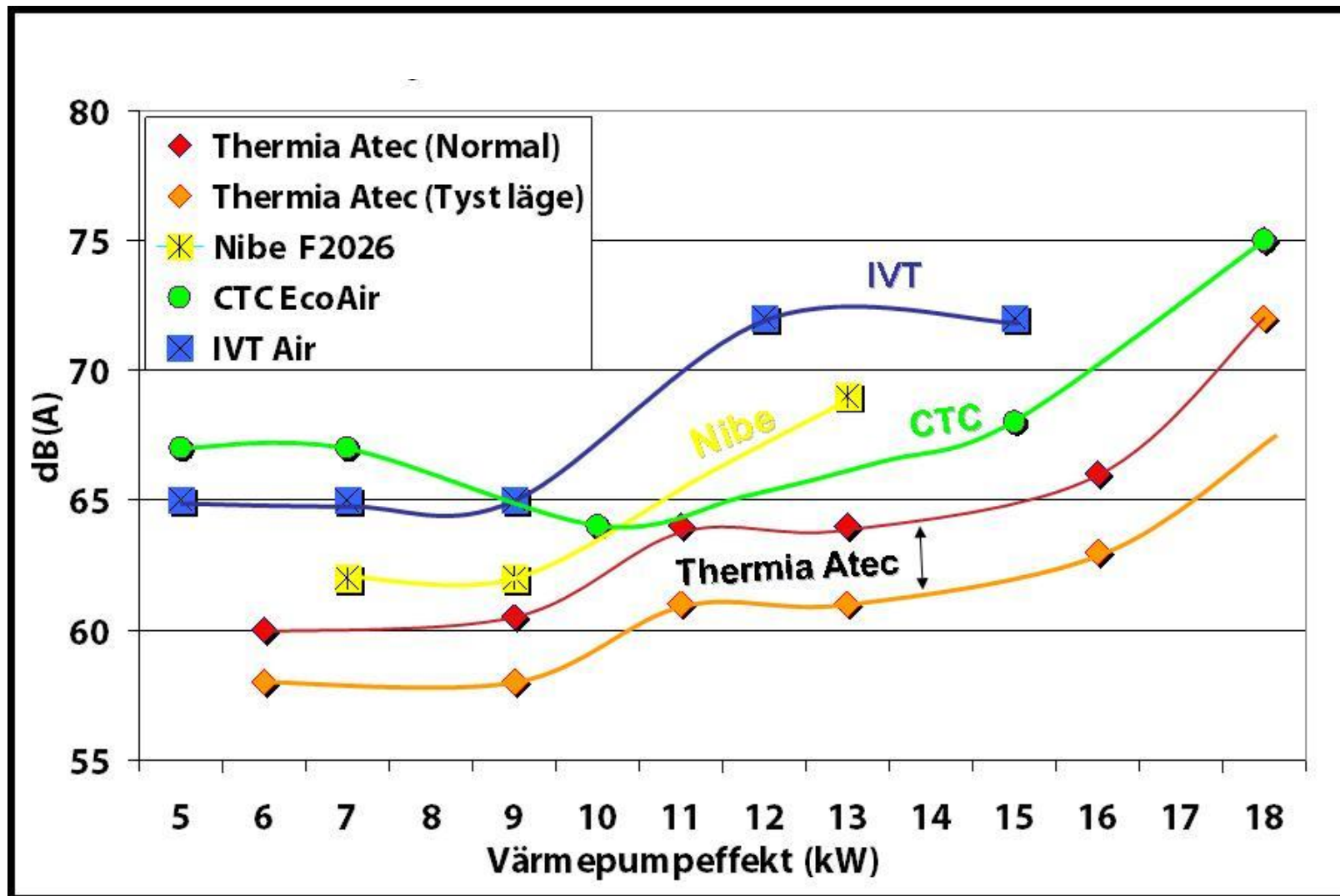


# Atec – Звуковой тест

	dB(A) ref. 1 pW
Thermia Atec 9	61,5
Thermia Atec 9 (low noise mode)	59
Daikin ERQH008BV3	62
Mitsubishi PUHZ-W85VHA	64,6
IVT Air	XX






# Atec – Звуковой тест





# Atec – Варианты внутренних блоков

<b>Standard</b>	<b>Plus</b>	<b>Total</b>
<ul style="list-style-type: none"><li>• Контроллер</li><li>• Электрические подключения</li></ul> 	<ul style="list-style-type: none"><li>• Контроллер</li><li>• Электрические подключения</li><li>• Циркуляционный насос</li><li>• 3х ходовой воды</li><li>• Электронагреватель (15kW 3~400VAC; 9kW 1~230VAC)</li></ul> 	<ul style="list-style-type: none"><li>• Контроллер</li><li>• Электрические подключения</li><li>• Бак ГВС (180 l)</li><li>• Циркуляционный насос</li><li>• 3х ходовой воды</li><li>• Электронагреватель (15kW 3~400VAC; 9kW 1~230VAC)</li></ul> 



# Atec – Спецификации

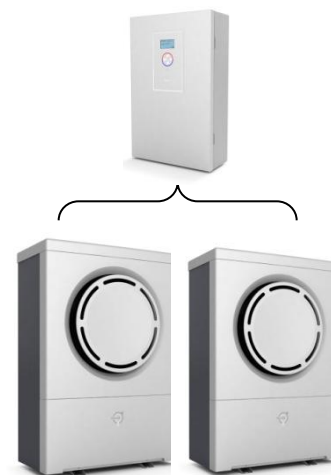


Specifications		Atec 6	Atec 9	Atec 11	Atec 13	Atec 16	Atec 18
<b>Размеры</b> <i>Вх Шх Г</i>	mm	1265x856x~450		1475x1016x~490		1550x1166x~490	
<b>Отопление A7/W35</b>	Capacity (kW)	6,2	8,6	10,8	12,2	15,3	17,9
	COP	4,0	4,4	4,3	4,3	4,2	3,9
<b>Отопление A2/W35</b>	COP	3,1	3,2	3,1	3,1	3,1	3,1
<b>Холод A35/W7</b>	EER	2,2	2,4	2,3	2,3	2,3	2,1
<b>Хладагент</b>		R407C					
<b>Диапазон рабочих температур (наружных)</b>		-20~+45°C	-20~+45°C	-20~+45°C	-20~+45°C	-20~+45°C	-20~+45°C
	1~230VAC	Yes	Yes	Yes	Yes	Yes	N/A
	Fuse (A)	20	20	32	32	40	-
	3~400VAC	Yes	Yes	Yes	Yes	Yes	Yes
<b>Электрические подключения</b>	Fuse (A)	10	10	16	16	16	16



# Atec – 2 блока, 1 контроллер

Два наружных блока могут работать на одном контроллере. Мощность такой системы - до 36 кВт



Specifications Master/Slave		Atec 22	Atec 26	Atec 32	Atec 36
<b>Комбинация наружных блоков</b>		2xAtec 11	2xAtec 13	2xAtec 16	2xAtec 18
<b>Отопление A7/W35</b>	Мощность(kW)	2x10,8	2x12,2	2x15,3	2x17,9
	COP	4,3	4,3	4,2	3,9
<b>Охлаждение A35/W7</b>	EER	2,3	2,3	2,3	2,2
<b>Диапазон рабочих температур (наружная)</b>		-20~+45°C	-20~+45°C	-20~+45°C	-20~+45°C
<b>Электрические подключения</b>	1~230VAC	Yes	Yes	Yes	N/A
	3~400VAC	Yes	Yes	Yes	Yes





# Atec – Легкость подключения

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- Подключение между наружным и внутренним блоком только специальным коммуникационным кабелем. Вывод силы к наружному блоку не нужен
- Подключается только только 2 трубами





# Atec – Контроллер

- **Функция календаря** for further adaptation to customer specific needs
- **Экономный режим:** night set back; Vacation mode/Energy saving mode e.g. decrease or increase indoor temperature during certain periods
- **Выкл ГВС** e.g. enable or disable hot water production on certain periods, pre-heat before shut off period to secure hot water comfort
- **Блокировка внешним устройством** to turn-off the heat pump at a certain time
- **Тихий режим** i.e. when a lower sound level is more important than high heating or cooling performance e.g. during night, possibility to halve the sound level at desired time of the day
- **Режим кондиционирования:** simple cooling with in the controller set desired and fixed supply line temperature
- **Режим сушки стяжки**





# Atec – Сравнение

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## **Объект для сравнения:**

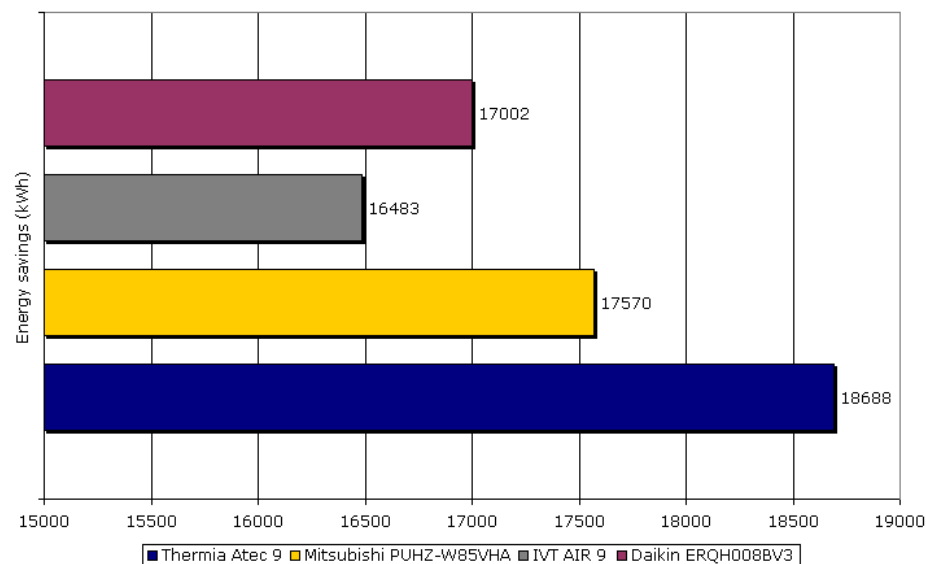
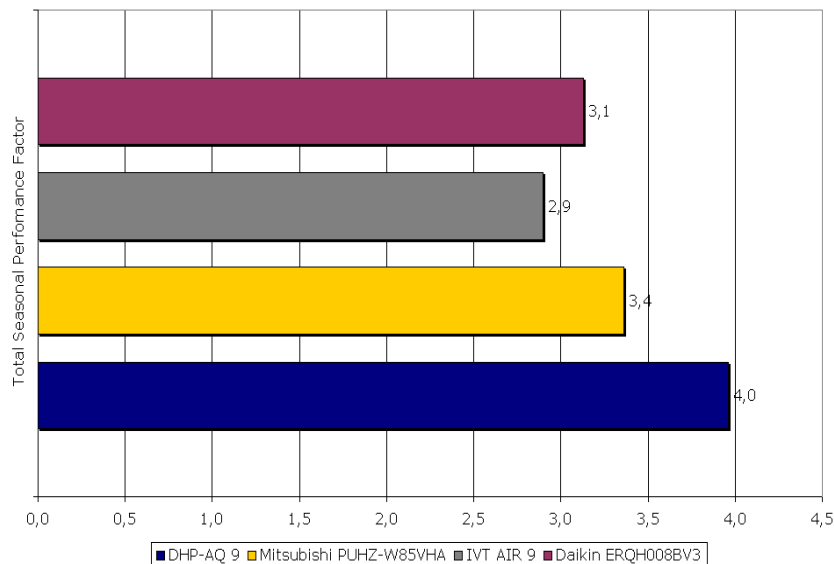
- One family house, detached
- Годовая потребность 21,000 kWh
- ГВС 4000kWh
- Радиаторы (макс. 55°C), теплые полы (40°)
- Локация: Sheffield, U.K.



# Competitor comparison @ under floor heating conditions<sup>1</sup>

Heating supply line temperature 40° at DOT

	Thermia Atec 9	Mitsubishi PUHZ-W85VHA	IVT AIR 9	Daikin ERQH008BV3
Earlier energy consumption (heating & hot water)	25000	25000	25000	25000
Energy supplied by the HP	24546	24848	24757	24643
Electricity supplied to the HP	5858	7278	8274	7641
Electricity supplied to the add. heater	454	152	243	357
Electricity supplied total	6312	7430	8517	7998
Energy coverage by HP	98%	99%	99%	99%
Seasonal performance HP	4,4	3,8	3,3	3,6
Total Seasonal Performance Factor	4,0	3,4	2,9	3,1
Energy savings (kWh)	18688	17570	16483	17002
Difference to best HP	0	1118	2205	1686

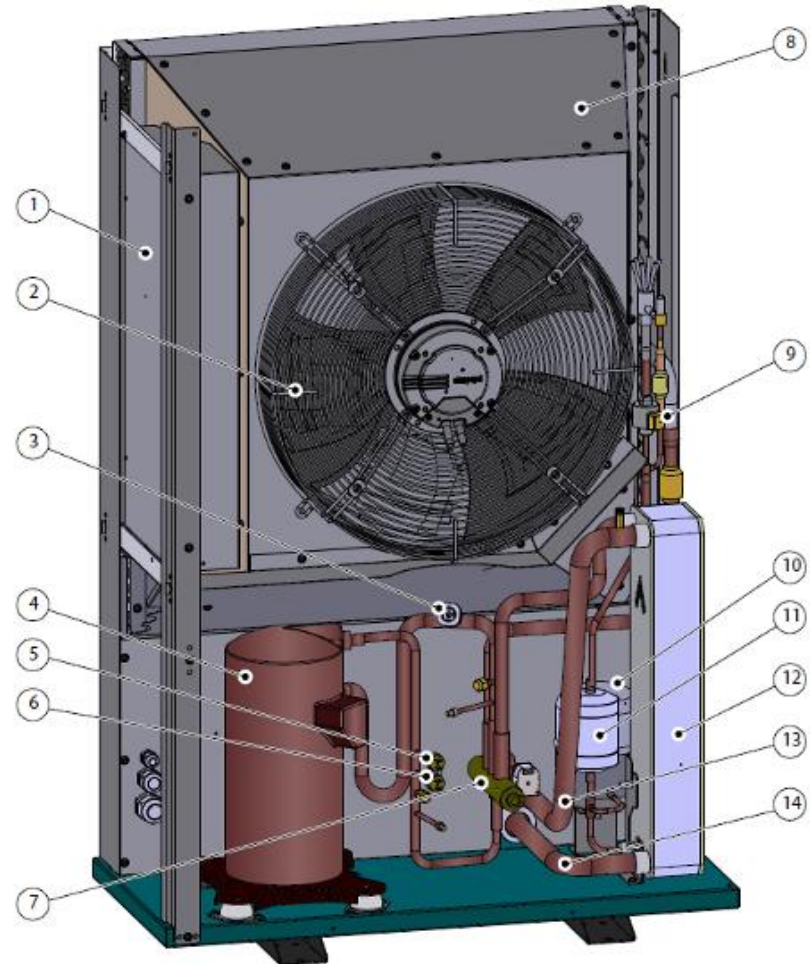


1. The units compared are tested for performance in the laboratory at the Thermia R&D center in Arvika or by 3rd party institutes. Subsequently the test have been incorporated in the HPC software to calculate energy savings and SPF according to the same demands. This means that the effects of the controller will not be shown, as doing the HPC calculation assumes the same efficient (Thermia) controller for all units, hence the above is pure product performance



# Atec – Inside

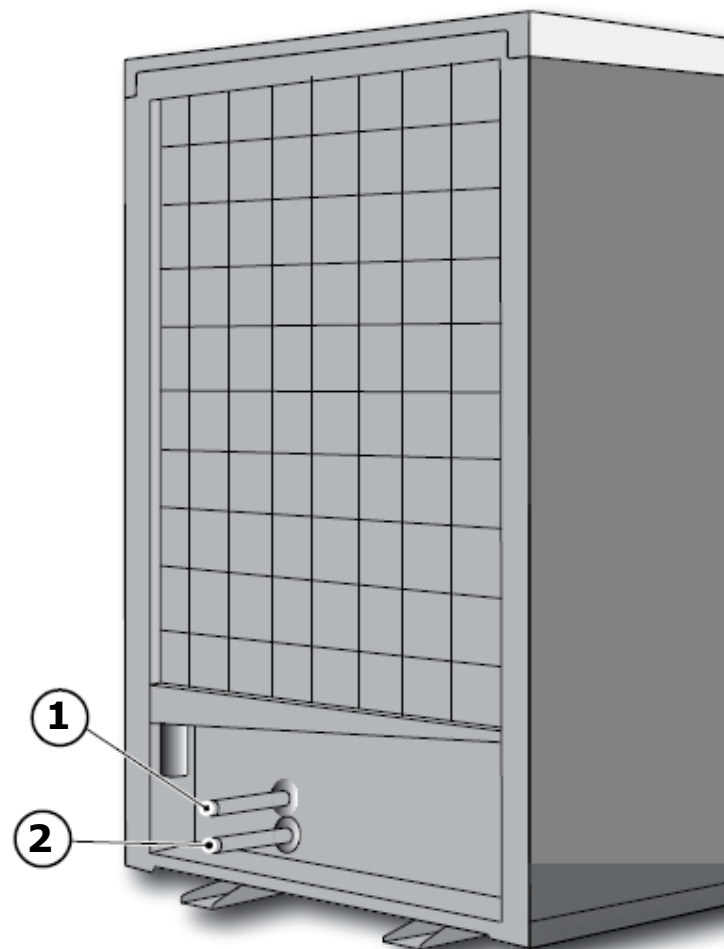
1. Electrical cabinet
2. Fan
3. Pressure transmitter
4. Compressor
5. High pressure pressostat
6. Operating pressure pressostat
7. 4-way valve
8. Air heat exchanger
9. Electronic expansion valve
10. Receiver
11. Drying filter
12. Condenser
13. Supply line heating system
14. Return line heating system





# Atec – Connections




1. Supply line heating system - 28 mm Cu
2. Return line heating system - 28 mm Cu





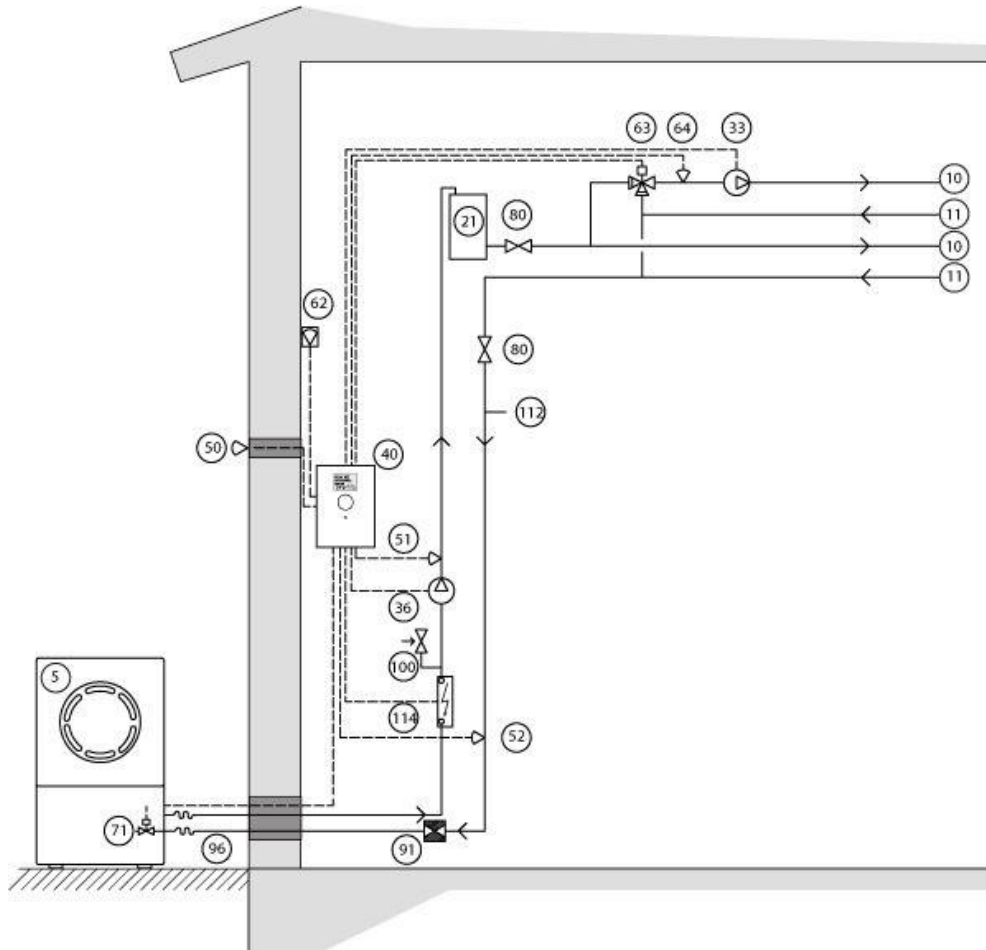
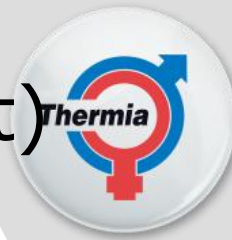
# Atec – Indoor kit and heat pump size

<b>6-9 kW</b>	<b>11-13 kW</b>	<b>16-18 kW</b>
856x510x1272	1016x564x1477	1166x570x1557
		

<b>Standard</b>	<b>Plus</b>	<b>Total</b>
380x204x600	420x255x625 (+50)	596x690x1845 ±10
		

All measures (With x Depth x Height) in mm

# Atec – System solution (example mini kit)



Pos	Qty.	Name
5	1	Heat pump unit
10	1	Supply line
11	1	Return line
12	1	Cold water
13	1	Hot water
18	1	Hot water tank
21	1	Equalization tank
36	1	Circ.pump (radiator)
40	1	Control unit
50	1	Outdoor sensor
51	1	Supply line sensor (hp)
53	1	Hot water sensor start (hp)
55	1	Hot water sensor top (hp)
77	1	Reversing valve
80	4	Shut-off valve
83	1	Non-return valve
84	1	Flow guard
85	1	Venting valve
86	1	Safety valve (3,0 bar)
87	1	Safety valve (9 bar)
91	1	Strainer filter ball
98	2	Flexible hose
102	1	Draining valve
112	1	Expansion tank
114	1	Additional heater





# Atec – Комплектация



4pc sensors (supply and return line sensor, and the sensors for tap water)



Outdoor sensor  
086U2701



Filter ball DN25  
086U6005

