



AIR SOURCE HEAT PUMPS

DELIVERING SUSTAINABLE HEATING



DECARBONISATION OF DOMESTIC HEATING

Decarbonisation and the drive towards Net Zero by 2050 is fast becoming a reality, with the UK government committing to a national target of net-zero carbon emissions by 2050. This means the way we provide heating and hot water to homes will fundamentally change over the coming years.

The Ideal Alfea heat pump takes all the experience we have across the globe and throughout Europe to deliver heat pump technology that works. The Ideal heat pump combines 3 revolutionary products:

- 1. Our quiet, compact and highly efficient heat pump**
- 2. Our industry leading heat pump hot water cylinder**
- 3. The effortlessly simple heat pump thermostat**

Our Heat pumps are designed to work in new build and retrofit installations to provide optimum comfort and efficiency, working with traditional radiators and underfloor heating.

“We have the knowledge, experience and skills to play our part in ensuring the nation achieves its **Net Zero** targets and so our customers have the best and most advanced solutions for heating and hot water, whatever their needs and requirements.”



SHAUN EDWARDS
CEO

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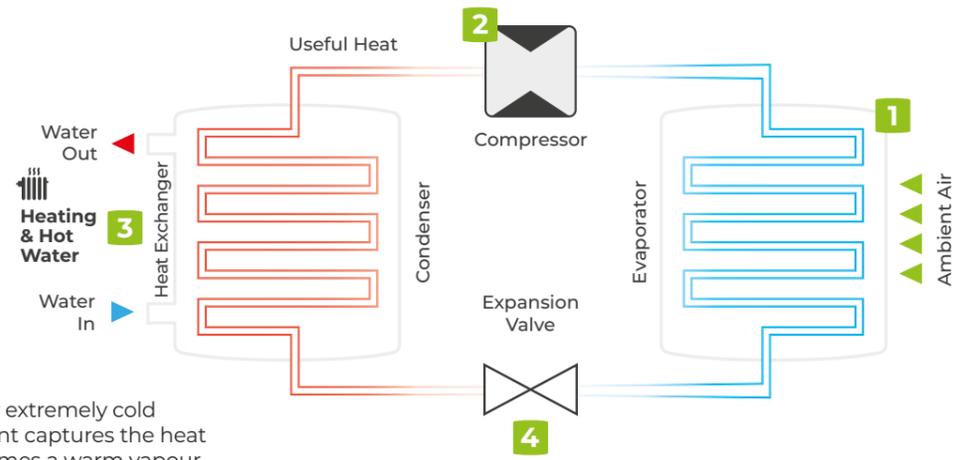
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At Ideal we believe in complete comfort and the last thing anyone should worry about is their heating. That's why we rigorously test each and every one of our products with dozens of safety and reliability checks before they leave our factory. We confidently offer industry leading warranties on our products so we can go the extra mile for our customers.

welcome

THE TECHNOLOGY

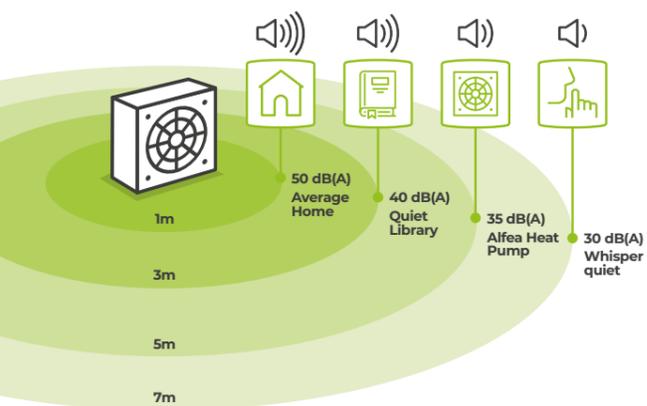
HEAT PUMP CYCLE



- 1. CAPTURE**
The fan passes ambient air over extremely cold liquid refrigerant. The refrigerant captures the heat from the ambient air and becomes a warm vapour.
- 2. COMPRESS**
The warm refrigerant vapour passes through a compressor which produces hot refrigerant and usable heat.
- 3. EXCHANGE**
The heat in the hot refrigerant is then transferred to the heating and hot water cylinder through a heat exchanger.

4. EXPAND
Once the heat has been transferred to the house, the refrigerant passes through an expansion valve which reduces its temperature, making it really cold again and enabling it to capture heat from the ambient air, continuing the cycle.

SOUND PRESSURE AND SOUND POWER



SOUND POWER
The way we calculate the sound a heat pump makes is by measuring the sound power and sound pressure. The sound power level is the sound that is emitted from the unit in laboratory conditions and is displayed on the ErP label.

SOUND PRESSURE
The sound noise level (sound pressure) measures the level of sound that you hear above the sound that already exists in the background. Sound pressure is lower than sound power. Alfea heat pumps have a sound pressure level that goes as low as 35 dB(A).

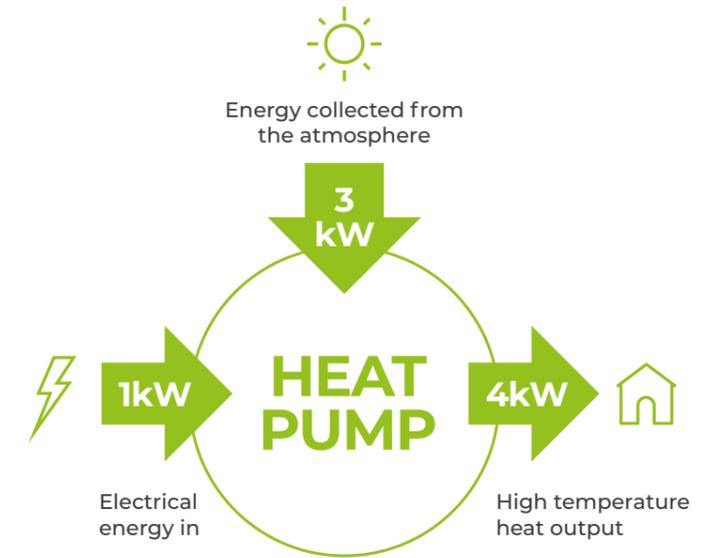
WHY AIR SOURCE HEAT PUMPS?

HIGHLY EFFICIENT PERFORMANCE

Heat pumps are a highly efficient, eco-friendly way of providing heating and hot water. By taking “free energy” from the air via a refrigerant cycle they generate heat without releasing any carbon emissions.

The COP measures how efficiently a heat pump performs by comparing the amount of electricity it uses to the amount of heat it is able to produce. For example, when a heat pump uses 1kW of electricity and captures 3kW of energy from the atmosphere, it will produce 4kW of heat and therefore have a COP of 4 (See diagram). The higher the COP, the more energy is generated per unit of electricity, and the more efficient the heat pump is.

When this calculation is carried out over the full heating season, it's called the seasonal coefficient of performance (SCOP). With SCOPs as high as 4.51 the Ideal Alfea is one of the most efficient heat pumps on the market.



BENEFITS OF THE ALFEA HEAT PUMP

- ✓ Low carbon, zero ozone depletion and low global warming potential
- ✓ Noise levels as low as 35 dB(A)**
- ✓ Highly efficient COP up to 4.74*
- ✓ Seasonal efficiency up to 4.51 SCOP (MCS)
- ✓ No Glycol treatment required
- ✓ Eligible for government incentives
- ✓ Suitable for new build, social housing and retrofit
- ✓ Outdoor unit can be located up to 30m away

* Efficiency Co-efficient of Performance (COP) rated at EN14511 / EN14825 test conditions Water 35°C, Air 7°C.
** 35dB(A) is the rated sound Pressure Level of the Alfea 5kW/6kW outdoor unit(s) from a distance of 5m.

ALFEA A.I. HEAT PUMPS

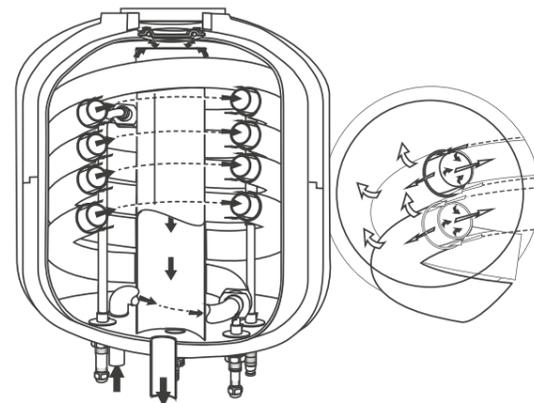
The Ideal Alfea heat pump is redefining how we heat our homes, providing low carbon heating that is efficient, reliable, and effortlessly simple to use.



ENGINEERED FOR RELIABILITY

The Alfea A.I. range has a patented coaxial heat exchanger, a unique technology that has been developed to maximise the heat pump's performance.

This enables us to achieve unrivaled reliability and drives up efficiency. Our heat exchanger uses large water ways and tube in tube technology to ensure a really good flow rates. We then capture all from the energy from the heat exchanger by immersing it into our buffer tank and combining it with our backup immersion to speed up installation time and free up space.



IDEAL HEAT PUMP CYLINDER

The Ideal stainless steel unvented heat pump cylinder is specifically designed for installation with the Ideal heat pump. Capacities are available up to 300 litres, which includes slimline models to ensure the Ideal heat pump range provides a flexible system solution.

IDEAL HEAT PUMP DHW

		180	210	250	300
Heat loss (per hour)	watts	55	62	74	86
Capacity	litres	178	208	248	287
Height	mm	1306	1494	1744	1990
Diameter	mm	550	550	550	550
Weight (empty)	kg	34	38	43	47
Weight (full)	kg	212	246	291	334
Surface area of HP coil	m ²	2.5	3	3	3
Immersion heater rating	kW	3	3	3	3
Secondary return connection		No	Yes	Yes	Yes

IDEAL HEAT PUMP DHW SLIMLINE

		180	210
Heat loss (per hour)	watts	67	74
Capacity	litres	183	202
Height	mm	1791	1963
Diameter	mm	475	475
Weight (empty)	kg	38	40
Weight (full)	kg	219	237
Surface area of HP coil	m ²	3	3
Immersion heater rating	kW	3	3
Secondary return connection		No	Yes

25

25 year warranty*



Lightest cylinder on the market



Highly efficient multi-coil heat exchanger

KEY FEATURES

- ✓ Surface area is maximised by a single external connection splitting into internal multi-pass coils
- ✓ High flow enables faster heat transfer
- ✓ Additional surface area increases flow rate and reduces pressure loss
- ✓ Wide range of capacities available:
 - Standard model (550mm wide) - 180, 210, 250 and 300 litres
 - Slimline model (475mm wide) - 180 and 210 litres



*Subject to terms and conditions 25 year vessel warranty, 2 year parts and labour warranty when registered within 30 days of install

ALFEA EXTENSA A.I. R32

5 6 8 10 kW

The Ideal Alfea uses intelligent technology to redefine how we heat our homes. Our new refrigerant balances industry-leading efficiencies with an ultra-low environmental impact, using patented technology to match performance with reliability.



Suitable for new build, social housing and retrofit



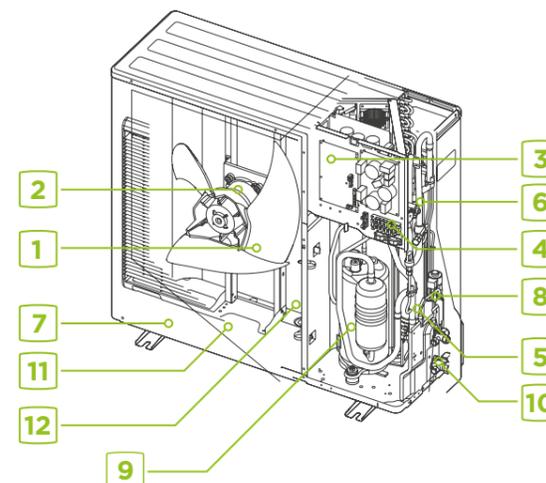
ERP A+++



Quiet Noise Level:
35 dB(A)



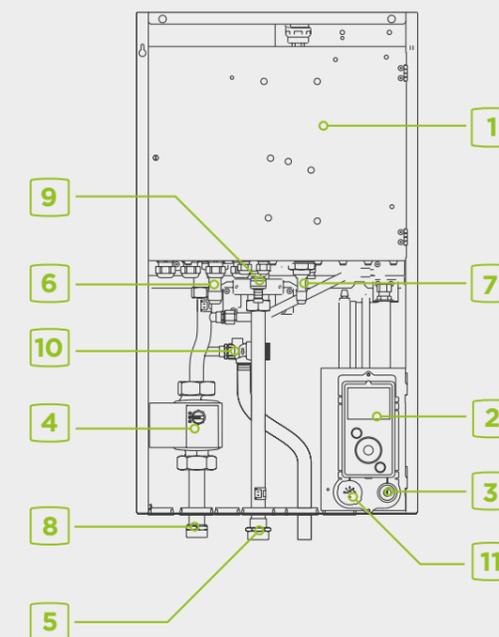
474% Rated
Efficiency (COP)



Alfea Extensa A.I. R32 OUTDOOR UNIT

KEY

1. High performance and low noise fan
2. Electrical motor with variable "inverter" operation
3. "Inverter" control unit
4. Refrigerant storage bottle
5. 4-way valve
6. Anti-corrosion treated bodywork
7. Main circuit electronic expansion valve
8. Noise and thermally insulated "inverter" compressor
9. Refrigeration connection valves (flared connectors) with protective caps
10. High-performance exchange surface evaporator; anti-corrosion treated hydrophilic aluminium fins and grooved copper tubes



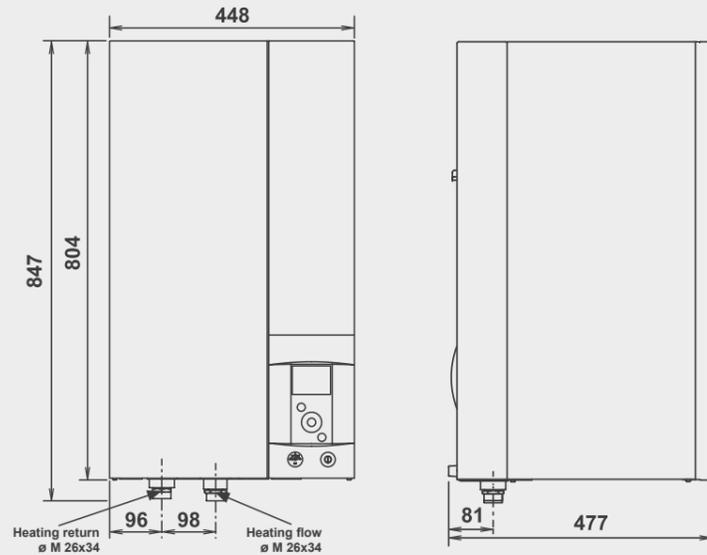
Alfea Extensa A.I. R32 INDOOR UNIT

KEY

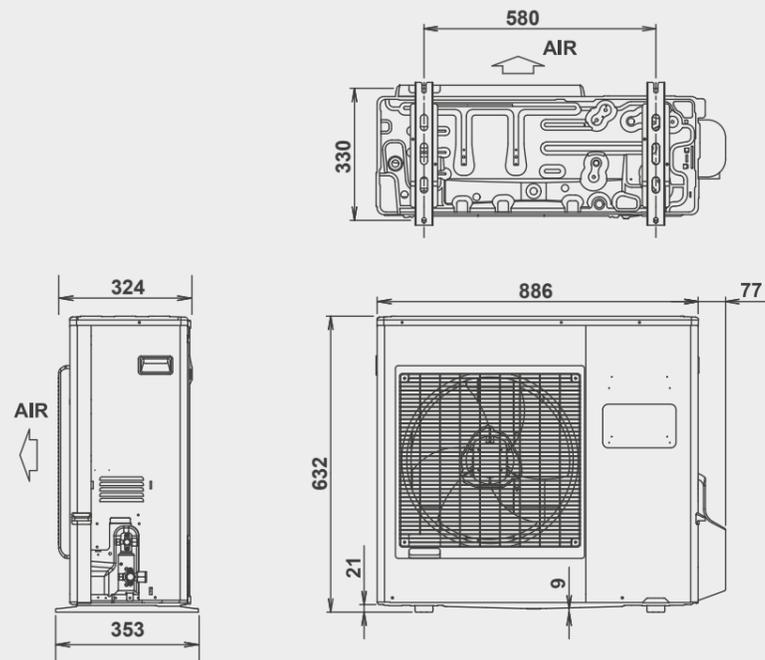
1. Wiring centre
2. Controller / User interface
3. Start/stop switch
4. Heating circulation pump
5. Heating flow connection
6. "Gas" refrigeration connection
7. "Liquid" refrigeration connection
8. Heating return connection
9. Drain valve
10. Safety valve
11. Pressure gauge

DIMENSIONS

INDOOR UNIT

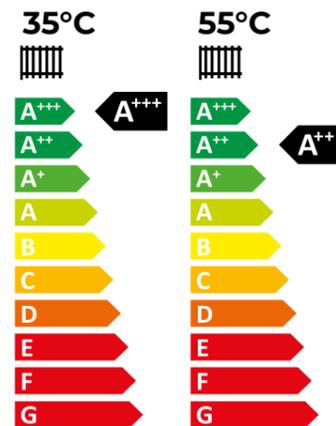


OUTDOOR UNIT



KEY FEATURES

- ✓ Highly efficient: COP up to 4.74*
- ✓ Seasonal efficiency: up to 4.51 SCOP (MCS)
- ✓ Impressively quiet: outdoor unit 35 dB(A)**
- ✓ Compatibility: radiator and underfloor heating systems
- ✓ Intuitive control: intelligent weather compensating controls
- ✓ Low carbon: zero ozone depletion and low global warming potential
- ✓ Incomparable reliability: patented co-axial heat exchanger
- ✓ Space saving: integrated buffer tank and expansion vessel
- ✓ Domestic Hot Water: hot, efficient and fast re-heat times with the Ideal heat pump cylinder



TECHNICAL SPECIFICATION

		Alfea Extensa A.I R32 5	Alfea Extensa A.I R32 6	Alfea Extensa A.I R32 8	Alfea Extensa A.I R32 10
	MCS ref	KIWA 00027/017 HP	KIWA 00027/018 HP	KIWA 00027/019 HP	KIWA 00027/020 HP
Heat Pump Space Heating [35°C]	ErP Rating	A+++	A+++	A+++	A+++
	η_s	175%	175%	177%	159%
	SCOP	4.39	4.38	4.46	4.51
Heat Pump Space Heating [55°C]	ErP Rating	A++	A++	A++	A++
	η_s	125%	125%	128%	117%
	SCOP	2.92	3.15	3.22	3.28
Heating (A7/W35)	Capacity (kW)	4.50	5.50	7.50	9.50
	Power Input (kW)	0.95	1.18	1.69	2.11
	COP	4.74	4.64	4.43	4.50
Air Temperature Range (°C)	Min/Max	-20/ +35	-20/ +35	-20/ +35	-20/ +35
Sound Data Outdoor Unit / Indoor Unit	Pressure Level 5m Outdoor / 1m Indoor dB(A)*	35/32	35/32	38/32	39/32
	Power Level dB(A)**	57/40	57/40	60/40	62/40
	MCS 020 (Q2) 4m to assessment point	Visible 42dB(A) Pass	Visible 42dB(A) Pass	Barrier (partial view) 42dB(A) Pass	Barrier (partial view) 42dB(A) Pass
Primary Flow Rate	Min / Max (l/min)	8.1/16.2	9.9/19.8	13.5/26.9	17.01/34.12
	Heating F/R (mm)	28	28	28	28
Pipework Connection Sizes	Gas Pipe - refrigeration (in)	1/2	1/2	1/2	5/8
	Liquid Pipe - refrigeration (in)	1/4	1/4	1/4	3/8
Dimensions Outdoor Unit (mm)	Width	866	866	907	940
	Depth	324	324	349	365
	Height	632	632	716	996
Dimensions Indoor Unit (mm)	Width	448	448	448	448
	Depth	477	477	477	477
	Height	847	847	847	847
Weight (kg)	Outdoor Unit / Indoor Unit	39/42	39/42	42/42	60/46
	Electrical Supply (50 Hz)	230 V	230 V	230 V	230 V
Electrical Data	Phase	Single	Single	Single	Single
	Maximum Running Current (A)	13	13	18	19
	Back-up Heater (kW)	3	3	3	3
	Fuse Rating - MCB Sizes Type D (A)*****	16	16	25	25
	Refrigerant Charge (kg)****	R32	0.97	0.97	1.02

Dimensions based on the Ideal Extensa A.I. R32 5kW & 6kW.

* Efficiency Co-efficient of Performance (COP) rated at EN14511 / EN14825 test conditions Water 35°C, Air 7°C.
** 35dB(A) is the rated sound Pressure Level of the Alfea 5kW/6kW outdoor unit(s) from a distance of 5m

ErP in accordance with EN 14825, EN 12102-1, EN 14511, EN 16147. The energy efficiency provided may not correspond to the actual energy once installed in a building, as the efficiency is influenced by other factors such as heat loss in the distribution system and the capacity of the products in relation to building size and characteristics. *Hydraulic unit: Sound pressure level at 5m from the appliance, 1.5m off the ground, open field directionality 2 / Outdoor unit: Sound pressure level at 5m from the device, halfway between the ground and top of the outdoor unit, open field directionality 2. **The EN 12102-1, sound power level is a laboratory measurement of the emitted sound power. *** Calculation in accordance to MIS:MCS 020 Issue 1.3. ****Refrigerant R32 as per NF EN 378.1 standard. Thermal and acoustic performances are measured with 7.5m length refrigerant lines. ***** Fuse rating for Outdoor Heat Pump Unit.

ALFEA EXCELLIA A.I.

R410A 11 14 16 kW

The Ideal Alfea Excellia uses intelligent control to redefine how we heat our homes. With outputs suitable for larger homes or retrofit installations and patented heat exchanger technology the Alfea Excellia combines performance and reliability.



Suitable for new build, social housing and retrofit



A⁺⁺

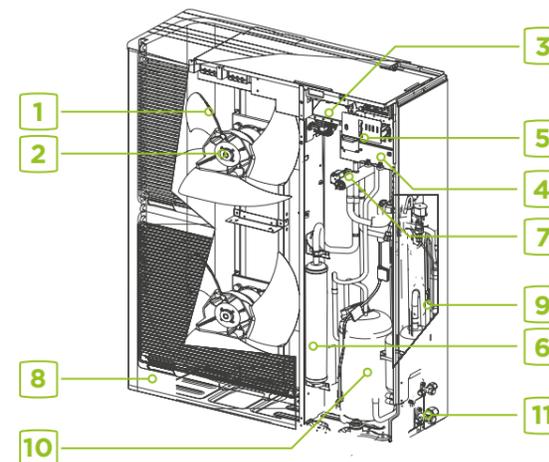
ERP A⁺⁺

47
dB(A)

Quiet Noise Level:
47 dB(A)

425%

425% Rated
Efficiency (COP)

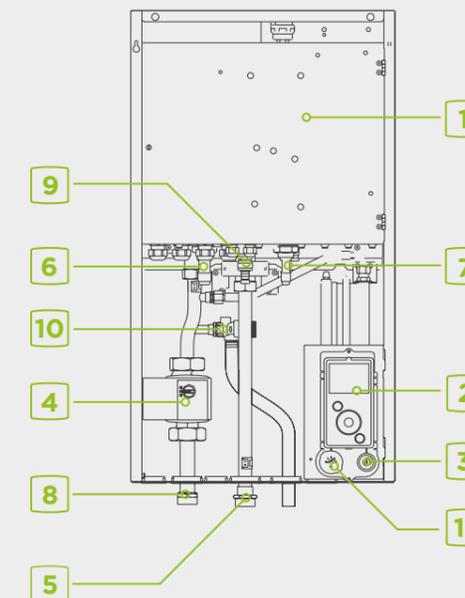


Alfea Excellia A.I.

OUTDOOR UNIT

KEY

1. High performance and low noise impeller
2. Electrical motor with variable "inverter" operation
3. "Inverter" control unit
4. Check lights and buttons
6. Refrigerant storage bottle
7. 4-way valve
8. Anti-corrosion treated bodywork
9. Main circuit electronic expansion valve
10. Noise and thermally insulated "inverter" compressor with liquid injection port
11. Refrigeration connection valves (flared connectors) with protective caps



Alfea Excellia A.I.

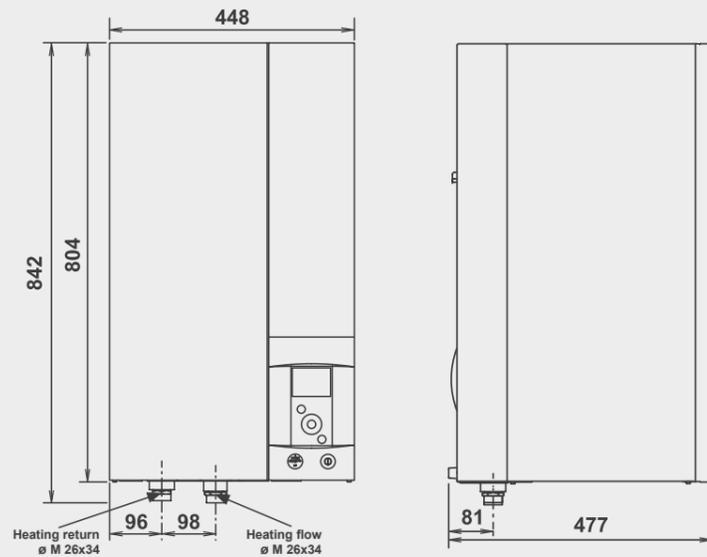
INDOOR UNIT

KEY

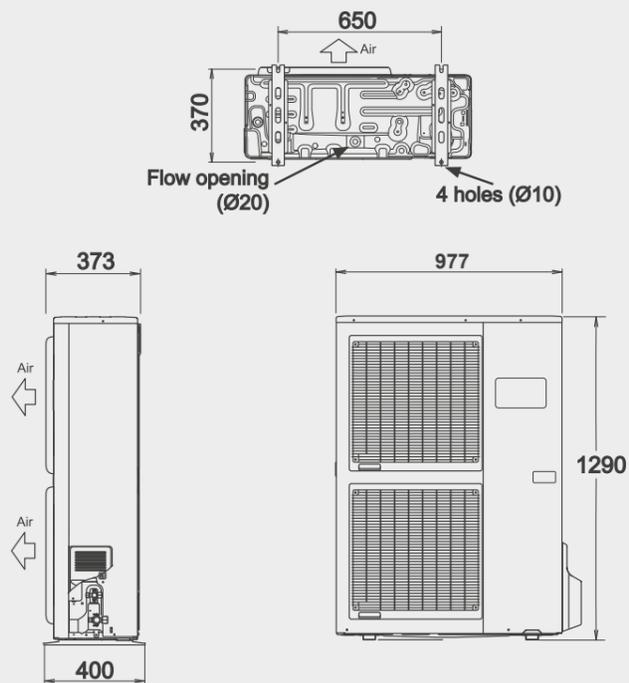
1. Electric box
2. Controller / User interface
3. Start/stop switch
4. Heating circulation pump
5. heating flow connection
6. "Gas" refrigeration connection
7. "Liquid" refrigeration connection
8. Heating return connection
9. Drain valve
10. Safety valve
11. Pressure gauge

DIMENSIONS

INDOOR UNIT



OUTDOOR UNIT

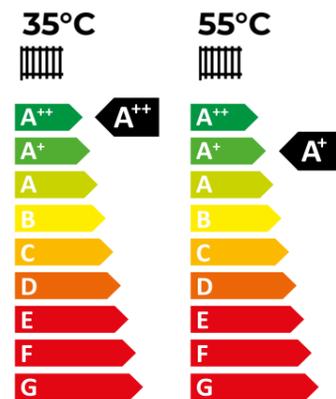


Dimensions based on the Ideal Excellia A.I. 11kW & 14kW.

*Efficiency Co-efficient of Performance (COP) rated at EN14825 test conditions Water Water 35°C, Air 7°C. **MCS SCoP is a theoretical indication of the anticipated efficiency of a heat pump aggregated over a year using standard climate data across Europe. It indicates the units of total heat energy generated (output) for each unit of energy (electricity) consumed (input). ***47dB(A) is the rated sound Pressure Level of the Alfea 11kW, 14kW & 16kW outdoor unit(s) from a distance of 5m, 1.5m off the ground, open field directionality.

KEY FEATURES

- ✓ Highly efficient: COP up to 4.25*
- ✓ Seasonal efficiency: up to 3.85 SCOP (MCS)**
- ✓ Impressively quiet: outdoor unit 47 dB(A)***
- ✓ Compatibility: radiator and underfloor heating systems
- ✓ Intuitive control: intelligent weather compensating controller
- ✓ Incomparable reliability: patented co-axial heat exchanger
- ✓ Space saving: integrated buffer tank and expansion vessel
- ✓ Domestic Hot Water: hot, efficient and fast re-heat times with the Ideal heat pump cylinder



TECHNICAL SPECIFICATION

		Alfea Excellia A.I R410A 11	Alfea Excellia A.I R410A 14	Alfea Excellia A.I R410A 16
	MCS ref	KIWA 00027/014 HP	KIWA 00027/015 HP	KIWA 00027/016 HP
Heat Pump Space Heating [35°C]	ErP Rating	A++	A++	A++
	η_s	151%	148%	149%
	SCOP	3.85	3.77	3.80
Heat Pump Space Heating [55°C]	ErP Rating	A+	A+	A+
	η_s	112%	113%	117%
	SCOP	2.87	2.90	3.00
Heating (A7/W35)	Capacity (kW)	10.80	13.50	15.17
	Power Input (kW)	2.54	3.23	3.70
	COP	4.25	4.18	4.10
Air Temperature Range (°C)	Min/Max	-20/+35	-20/+35	-20/+35
	Pressure Level 5m Outdoor / 1m Indoor dB(A)*	47/39	47/39	47/39
Sound Data Outdoor Unit / Indoor Unit	Power Level dB(A)**	69/46	69/46	69/46
	MCS 020 (Q2) 6m to assessment point	Barrier (no view) 42dB(A) Pass	Barrier (no view) 42dB(A) Pass	Barrier (no view) 42dB(A) Pass
Primary Flow Rate	Min / Max (l/min)	19.5/39.0	24.3/48.7	27.5/54.8
	Heating F/R (mm)	28	28	28
Pipework Connection Sizes	Gas Pipe - refrigeration (in)	5/8	5/8	5/8
	Liquid Pipe - refrigeration (in)	3/8	3/8	3/8
Dimensions Outdoor Unit (mm)	Width	977	977	900
	Depth	400	400	400
	Height	1290	1290	1290
Dimensions Indoor Unit (mm)	Width	448	448	448
	Depth	477	477	477
	Height	842	842	842
Weight (kg)	Outdoor Unit / Indoor Unit	92/42	92/42	99/42
	Electrical Supply (50 Hz)	230 V	230 V	400 V
Electrical Data	Phase	Single	Single	Triple
	Maximum Running Current [Nominal] (A)	22.0 [11.4]	25.0 [14.2]	10.5 [5.5]
	Back-up Heater (kW)	3	3	9
	Fuse Rating - MCB Sizes Type D (A)*****	32	32	20
	Refrigerant Charge (kg)****	R410A	2.5	2.5

ErP in accordance with EN 14825, EN 12102-1, EN 14511, EN 16147. The energy efficiency provided may not correspond to the actual energy once installed in a building, as the efficiency is influenced by other factors such as heat loss in the distribution system and the capacity of the products in relation to building size and characteristics. *Hydraulic unit: Sound pressure level at 5m from the appliance, 1.5m off the ground, open field directionality 2 / Outdoor unit: Sound pressure level at 5m from the device, halfway between the ground and top of the outdoor unit, open field directionality 2. **The EN 12102-1, sound power level is a laboratory measurement of the emitted sound power. It does not correspond to a measurement of the perceived sound power. *** Calculation in accordance to MIS:MCS 020 Issue 1.3. Thermal and acoustic performances are measured with 7.5m length refrigerant lines. **** Fuse rating for Outdoor Heat Pump Unit

SOCIAL LANDLORD CASE STUDY

Client: Home Group, housing association with a property portfolio of over 55000 homes of which 3000 are off-gas.

Location: Cockfield, County Durham

Building type: Three-bedroom semi-detached home

Incumbent heating system: Solid fuel system powered by coal

Tenant: Family of 6

Challenge: Home Group are rolling heat pumps out across their portfolio at pace to meet decarbonisation targets, challenges faced during this include:

- Product Supply
- Engineer feedback that commissioning can be complicated
- Householders struggling to understand the technology and control their heating easily.

Product Solution: Alfea Extensa A.I. 10kW Heat Pump and Slimline Ideal Heat Pump Cylinder and an Ideal A59 Heat Pump Room Thermostat.

Product Install: A Home Group engineer and apprentice installed the heat pump in 2 days

Product Support: Before install Ideal Heating technical support worked with an engineer to select the correct product size and specification.

During and after install Ideal Heating technical support was available at the end of the phone to assist and, if required, attend site.

Engineer Feedback: Switching to the Ideal Alfea 10kW helped simplify the commissioning process for the engineer, who found it a far easier process than with other suppliers.

Householder Feedback: The heat pump is straightforward to control and the thermostat is easy to use and understand.



Results: The Ideal Alfea 10kW air source heat pump supplied by Ideal Heating has now been in place for more than six months. The heat pump kept the house warm (21°C) throughout the coldest winter in a decade, and the DHW cylinder continues to meet the hot water needs of the whole family. Annual running costs are almost £350 less than a comparable new, efficient oil-fired central heating system, and CO2 emissions are more than 52% lower.

RUNNING COSTS DOWN
BY **32%**

CARBON SAVING:
>52%



DESIGNED FOR LANDLORDS



SIMPLE CONTROLS, RELIABLE PERFORMANCE

- Simple user controls
- Easy setup
- Quick commissioning
- Engineered for reliability
- No glycol treatment required



MCS CERTIFIED

- MCS certified heat pump range
- Low running costs
- Low MCS O20 noise levels
- MCS COP levels up to 4.74



INDUSTRY LEADING CUSTOMER SERVICE

- In house heat pump design team
- Nationwide service engineers
- Customer service contact centre
- Online warranty registration with Connect



DESIGNED FOR NEW BUILDS



SPLIT TECHNOLOGY

- Compact and Modular
- Can be located up to 30m away
- Inbuilt buffer tank reduces space requirements and speeds up installation
- Easy set up and installation



SAP

- High system performance increases the properties SAP rating (Increased SAP rating by an average of 88 on modeled new build properties).
- High efficiencies reduce the properties fuel cost's and carbon emissions (41% DER<TER improvement on modeled new build property).



PLUG & PLAY

- Pre-assembled
- Plug and Play Set Up
- Quick set up and commissioning



DESIGNED FOR HOME OWNERS



USER FRIENDLY

- Simple user controls
- Low running costs
- Easy maintenance and installation
- Engineered for reliability



INDUSTRY LEADING CUSTOMER SERVICE

- In house heat pump design team
- Nationwide service engineers
- Customer service contact centre
- Online warranty registration with Connect



CUTTING EDGE TECHNOLOGY

- Auto Adapt - Autopilot for your heating
- Engineered for reliability
- Remarkably quiet

BENEFITS OF WORKING WITH IDEAL



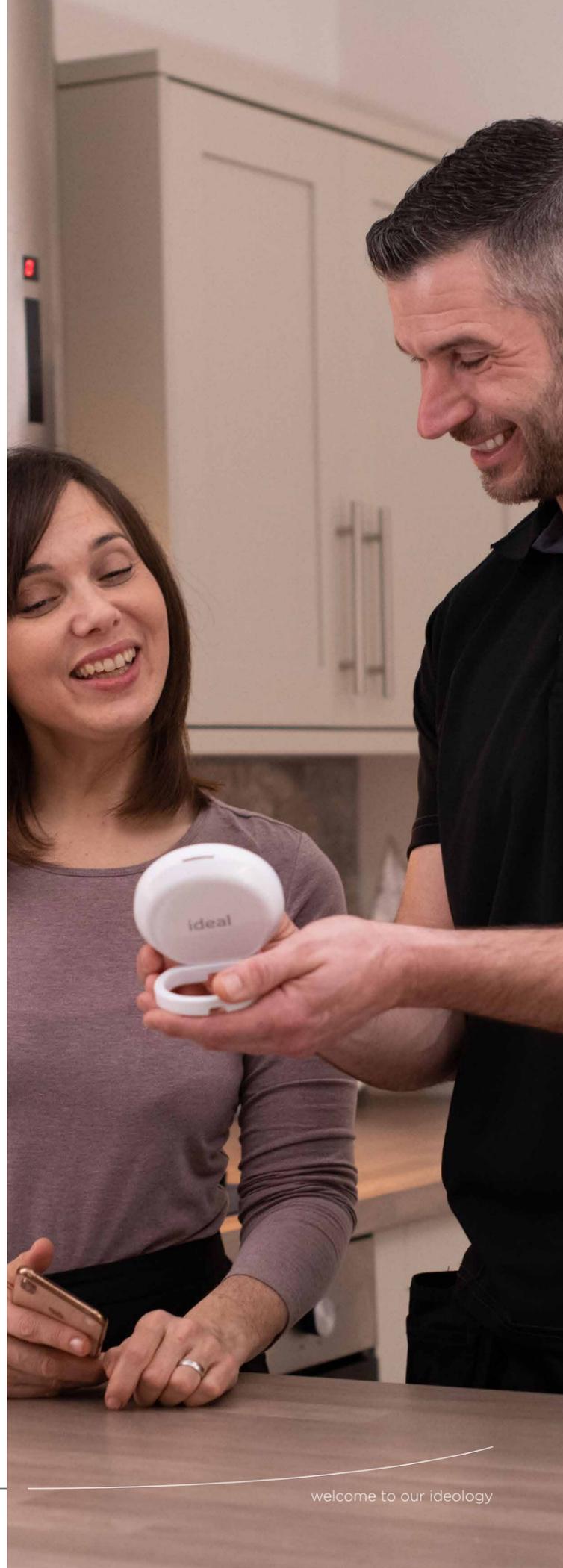
At Ideal Heating, we are committed to delivering the highest level of customer service. With more than 100 years' experience in the heating industry, we know how important confidence and trust are to our customers.



With a range of tools to help you grow your business, Ideal is on hand to ensure you have the support you need. Our dedicated customer service department is available 364 days a year.



We also have a team of expert engineers, fully trained to exacting standards and Gas Safe registered, on hand to provide one-to-one advice on the road, over the phone or online ensuring you're fully supported, wherever and whenever you need.



IDEAL HEAT PUMP SUPPORT

DESIGN

Easy to use Ideal heat pump design tools (incorporating MCS, CIBSE & SAP Requirements)
In-house UK Design Team
ErP A***, optimized SCOP



EASY TO INSTALL & MAINTAIN

Design for 'plug and play' installation
Ideal Service Engineers
Technical Support Call Centre



EASY TO USE AND CUSTOMER SERVICE SUPPORT

Simple & Interactive user controls
UK based customer service team



IDEAL TRAINING

Heat Pump Accredited Training Centre
F-Gas Accredited Training Centre



ALFEA A.I. RANGE ACCESSORIES

IDEAL A59 HEAT PUMP ROOM THERMOSTAT



- Room temperature display
- Wired or wireless installation
- Clear and easy to use

BUFFER TANK



- Compact and versatile buffer tank option
- Wall hung installation in either vertical or horizontal position
- Available in 25 & 50 litre capacities

ACCESSORIES FOR OUTDOOR UNIT



Anti-Vibration Rubber
mounting feet



Wall mounting kit,
5 - 8kW units
560mm (with bar)



Pre-Insulated
Refrigerant pipework -
available in lengths 5m
- 25m

INCENTIVES & SCHEMES

RENEWABLE HEAT INCENTIVE (RHI)

The basic structure of RHI is for payments to be made to households that produce renewable heat on a 'per unit of heat produced' basis. The payment is intended to cover the additional upfront cost of producing heat using a renewable technology as compared with a fossil fuel alternative and includes the additional cost associated with barriers to deployment.

Owners of the installed system who ensure compliance with the necessary RHI criteria will receive quarterly payments over a seven-year period. One crucial aspect of compliance with the scheme is that both the product and installer must be certified by the Microgeneration Certification Scheme (MCS).

MICROGENERATION CERTIFICATION SCHEME (MCS)

The MCS scheme gives installers a mark of quality and demonstrates to the consumer that the installation will be designed and completed to the highest quality. Product certification ensures that the manufacturer undertakes strict factory production audits and is also used to demonstrate that the product installed is of the same high quality as those that have been tested.



Customer Service:

01482 498660

Technical Help:

01482 498663

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