

Dimplex®

Comfort. By design

September 2007

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www.dimplex.co.uk

heat pumps

working with nature's energy
for environmentally friendly heating





A name you can trust

For nearly 60 years, Dimplex has been making life more comfortable, in more ways, in more places than any other company. Dimplex has long been the number one name in electric heating technology, having established an unmatched reputation for quality, reliability and innovation.

The Dimplex brand is well known in both the public and private sectors, particularly with local authorities, housing associations and major home builders where the brand has become synonymous with a commitment to excellence and customer satisfaction.

implex®

Our experience

For Dimplex, there's nothing new about renewables. As part of the worldwide Glen Dimplex Group, Dimplex has been producing innovative heat pumps for over 30 years with thousands of installations throughout Europe. We are committed to developing heating solutions which utilise sustainable and renewable energy with the aim of reducing CO₂ emissions and its impact on the environment.

From its manufacturing plant in Kulmbach, Germany, Dimplex produces the widest range of heat pumps available on the UK market and leads the way in the development of energy efficient heat pump technologies.

Quality assured

Over the years, Dimplex has established strong relationships with its customers in all aspects of the construction and heating industries. Today Dimplex electric heating and heat pump systems are operating efficiently across the UK in schools, offices, social housing and libraries in both the private and public sectors.

In order to ensure the highest levels of quality and to provide peace of mind, Dimplex has an established network of Approved Heat Pump Installer Partners, all fully trained and experienced in the installation, commissioning and after sales support of Dimplex heat pump products.

No other company can provide the depth of range, expertise and service back-up for economical, sustainable heating solutions.

Contents

Why choose a heat pump	4
The global challenge	5
Harnessing nature's energy	6
Trusted technology	7
The natural solution, with so many applications	8-9
Renewable energy grants	10
Installers	11
Range overview	12-13
Air source heat pumps	14-21
Ground source heat pumps	22-29
Water to water heat pumps	30-31
Reversible heat pumps	32-33
Swimming pool heat pumps	34-35
Heat pump accessories	36-39
Technical specifications	40-47

Why choose a heat pump?

In the context of ever rising energy costs and climate change, every household is in need of a heating technology that is future-proof, cost-effective and independent of fossil fuels.

Using nature's energy



Heat pumps make a significant contribution towards solving the problems associated with increasingly scarce and evermore expensive energy resources – supplying more energy than they consume by tapping into the freely available, inexhaustible solar energy stored in the earth, the ambient air or water and converting this for use in a heating system.

In fact up to 75% of the energy needed by the heating system is extracted from the environment, so the only energy required is electricity needed to drive the heat pump compressor.

Put another way, for every 1kWh of electricity used to run the heat pump, up to 4kWh of useful heat is provided, giving the heat pump an efficiency of up to 400%.

A low carbon heating solution

Whenever fossil fuels such as gas or oil are burnt, carbon dioxide is released. CO₂ is the principle contributor to the greenhouse effect which is leading to long term climate change.

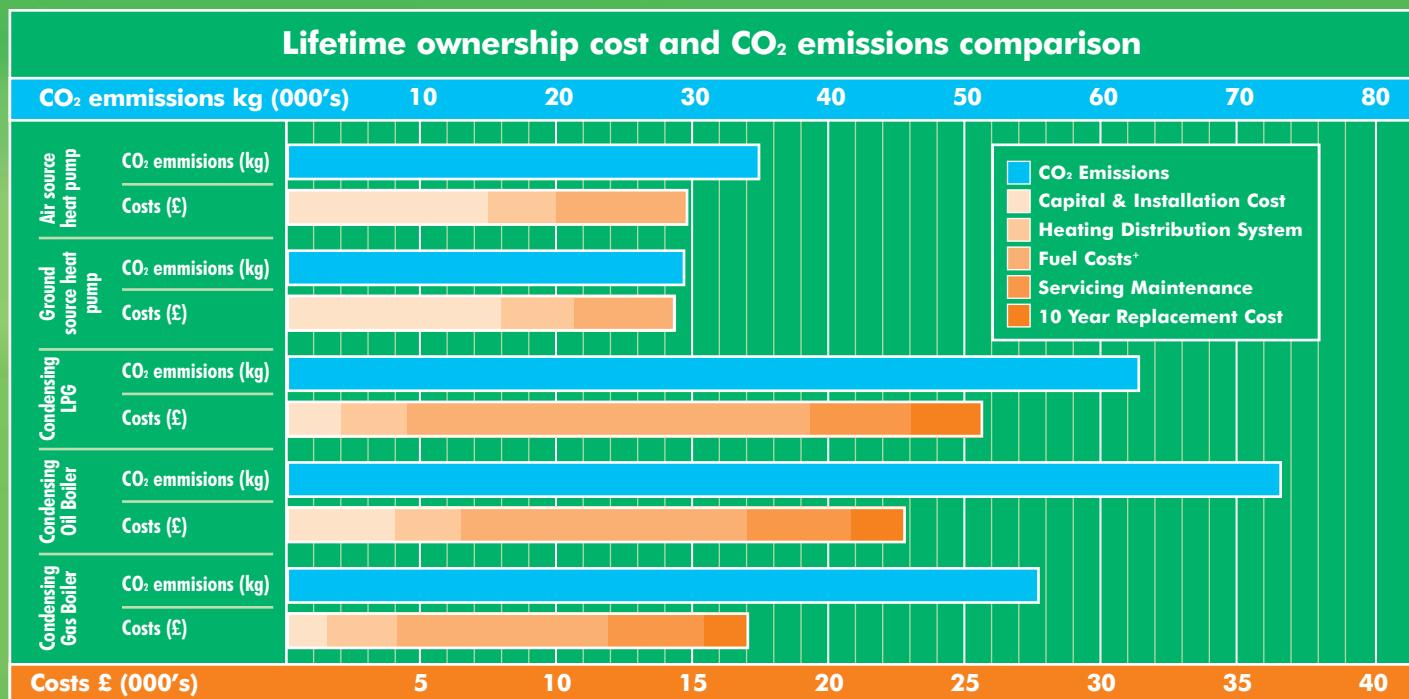
However as heat pumps extract as much as 75% of their heating energy from the environment, building carbon emissions for heating can be reduced by as much as 50% compared with gas fuelled heating systems.

This is an obvious benefit when considering building regulations Part L compliance, planning obligations requiring minimum contributions from renewable energy and EcoHome / Code for Sustainable Homes ratings.

Low running costs Low ownership costs

The considerable contribution from renewable energy sources also helps to provide running cost savings over fossil fuelled heating systems and arguably more importantly, future proofs the system against future energy price increases.

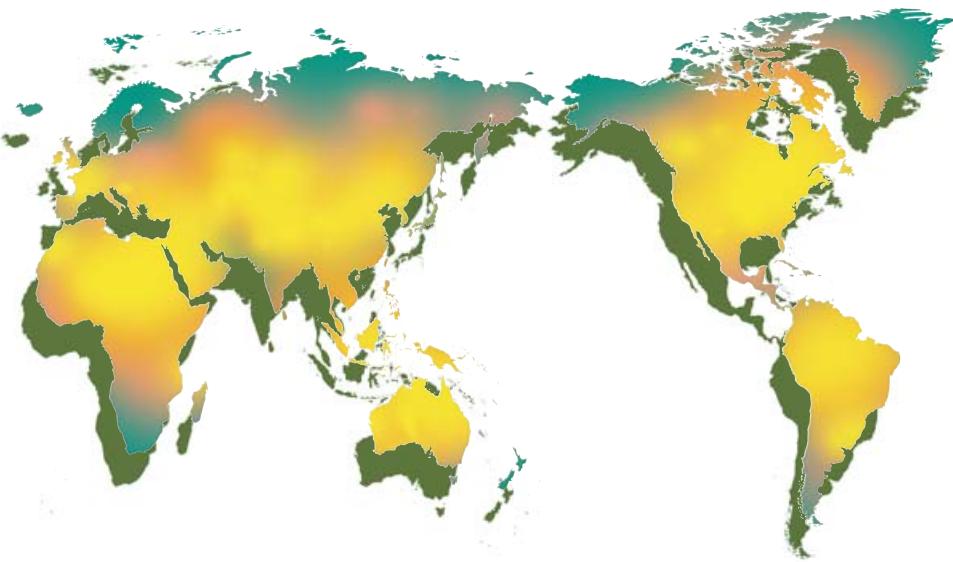
But fuel costs are only part of the story. Unlike gas and oil based systems, heat pumps require no costly regular maintenance or annual safety inspections. And because a heat pump has a reasonable life expectancy of 20 – 25 years, typically twice that of a boiler, the investment costs can be recovered over a longer period meaning the ownership costs over the working life of the system are demonstrably lower.



Figures compared over a 20 year period for space and water heating for a typical 3 bed semi detached home (new build)

* Fuel costs based on 2007 gas and electricity prices

The global challenge



Climate change is the greatest threat facing the planet, with rising temperatures causing sea levels to rise and more droughts, floods and storms.

In the last 20 years, use of the Thames Barrier (designed to protect London from flooding) has risen from once every two years to six times a year.

According to the latest figures from Intergovernmental Panel on Climate Change (IPCC), 11 of the last 12 years rank in the 12 warmest years since 1850 and 2003 was the third hottest year on record. The impacts of weather related disasters are also increasing two to three times more rapidly than impacts due to earthquakes.

Most scientists agree that climate change is largely due to human activity, mainly the increased use of fossil fuels. The main human influence on the global climate is likely to be emissions of greenhouse gases such as carbon dioxide (CO_2) and methane.

What difference can we make?

Emerging nations such as China and India are today consuming more and more energy to fuel their enormous economic growth, so what difference can a tiny island like the UK make?

Indeed if the UK became 100% zero carbon tomorrow, it would take China less than 3 months to replace the UK's carbon emissions.

However, carbon emissions per capita in the UK are one of the highest in the world – in fact if every nation had such high emissions per head of population, global emissions would increase 3-fold.

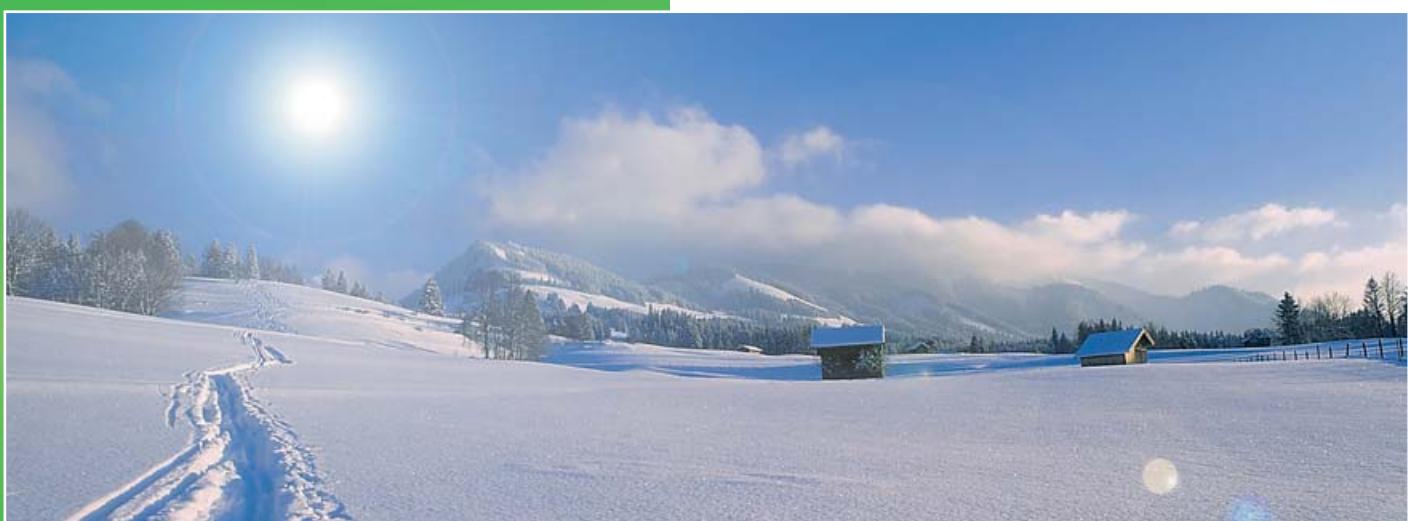
So the UK has a responsibility to demonstrate to the developing nations of the world that it is possible to achieve economic growth while reducing its carbon emissions and environmental impact.

Planning for the future

Currently we all have the freedom to choose whether or not to voluntarily install greener technologies to reduce our homes or businesses carbon footprint. Some experts predict that greener technologies will be compulsory through legislation in the near future as has the recycling of our rubbish. The sooner you switch the sooner you can start to save money and the planet.



Harnessing nature's energy



Our environment is full of energy, even at sub-zero temperatures there is plenty of energy available.

Heat pumps use conventional refrigeration technology to extract the sun's energy stored in the environment and raise it to a temperature suitable for heating purposes.

This method even works in the middle of winter at temperatures as low as -25°C.

One system for all types of heat sources

Dimplex heat pumps offer you three different future-proof heat sources: outside air, the ground or water.



Air Source heat pumps utilise the outside air as their energy source. Heat pumps can even extract heating energy from the outside air at temperatures as low as -25°C.



Ground source heat pumps extract heat from the earth all year-round via closed loop ground heat collectors buried beneath the ground.

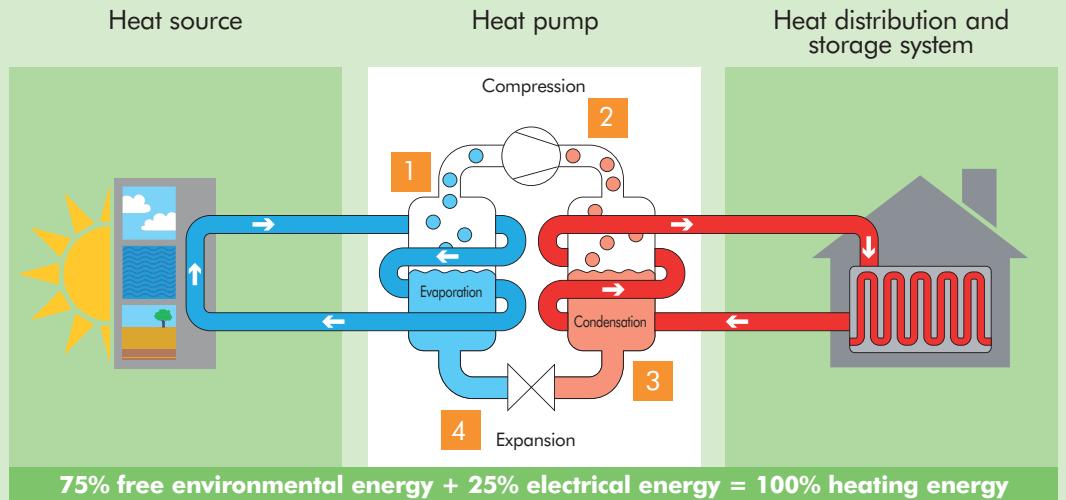


Water-to-water heat pumps extract thermal energy from ground water. If the supply is readily available and the quality is sufficient, ground water is the most efficient source of heat.

Trusted technology

A heat pump heating system consists of 3 components: the heat source, the heat pump itself and a heat distribution and storage system.

Heat pumps are able to produce more energy than they consume by using the conventional refrigeration cycle to absorb heat from the environment and raise it to a suitable level for heating.



1 A large quantity of low grade energy absorbed from the environment is transferred to the refrigerant inside the heat pump (evaporator). This causes the temperature of the refrigerant to rise (even at sub zero temperatures) causing it to change from a liquid to a gaseous state.

2 The refrigerant is then compressed, using an electrically driven compressor, reducing its volume but causing its temperature to rise significantly.

3 A heat exchanger (condenser) then extracts the heat from the refrigerant to heat water for central heating, underfloor heating or domestic hot water.

4 After giving up its heat energy the refrigerant turns back into a liquid and after passing through an expansion valve can once again absorb energy from the environment, allowing the cycle to begin again.

Built to last



Using nature's energy efficiently

Heat pumps are among the most efficient heating and hot water systems available today. Approximately 75% of the energy needed for heating comes from the environment. This means that for every 1kWh of electricity used to power the heat pump compressor, between 3 and 4 kWh of heating energy are produced, giving the heat pump an efficiency of 300 - 400% or higher.

The heat pump's "efficiency" is known as its "Coefficient of Performance" (CoP). This is simply a ratio between the proportion of the total energy supplied that can be extracted from the environment and the amount supplied by electricity to run the heat pump compressor. The higher the CoP, the more "free" environmental energy the heat pump is using!

- 1** **Powerful, quiet, safe and reliable.** The "heart" of the heat pump is the Copeland scroll compressor, providing high levels of efficiency, reliability and low noise operation.
- 2** **Always in control.** The WPM heat pump manager monitors, regulates and controls the entire system to ensure optimum performance and efficiency for heating, domestic hot water and where applicable, cooling.
- 3** **Evaporator.** Large surface area plate heat exchangers allow for efficient heat transfer of energy from the environment. They are compact, efficient and reliable.
- 4** **Insulated casing.** Sound insulation around the insides of the heat pump casing reduce operating noise to a minimum.

The natural solution, with so many applications

Increasingly stringent legislation and escalating fuel costs make heat pumps the ideal choice for so many applications, both domestic and non domestic.

Whether for new build or retro fit, for self builders, commercial housing developments or schools, for heating, cooling or for use with underfloor heating systems or radiators, heat pumps provide the ideal low carbon energy solution whatever the application.



Social housing

- Suitable for new build and refurbishment projects.
- Help to reduce running costs and therefore fuel poverty.
- No mandatory service or maintenance requirements.
- Significantly reduces carbon emissions, so helps with Building Regulations Part L compliance and Code for Sustainable Homes ratings for new developments.
- **35% grants against the total installation costs through Low Carbon Buildings Programme Phase 2.**



Self builders

- 50% lower carbon emissions than gas boilers, so makes significant contribution towards Building Regulations Part L compliance, particularly in contemporary styled homes with large areas of glazing.
- High renewable energy contribution so helps ease planning consent.
- Reduces long term energy bills and maintenance costs.



Schools and non-domestic buildings

- Can be applied to a wide range of non-domestic buildings, for example schools and other educational establishments, offices, retail premises, hotels, communal accommodation, community centres and places of worship.
- 50% lower carbon emissions than gas boilers, so makes significant contribution towards Building Regulations Part L compliance.
- Over 70% renewables contribution for heating and hot water, so helps with renewables planning consent obligations.
- Helps reduce long term running and maintenance costs.
- Can provide both heating and cooling facilities.
- **Schools, public sector, charitable and not-for-profit organisations can take advantage of 35% grants against the total installation costs through Low Carbon Buildings Programme Phase 2.**

Housing developers

- 50% lower carbon emissions than gas boilers, so makes significant contribution towards Building Regulations Part L compliance.
- Over 70% renewables contribution for heating and hot water, so helps with renewables planning consent obligations.
- Will help towards achieving high energy efficiency scores for Code for Sustainable Homes ratings.
- Highly marketable 'eco' credentials



Renewable energy grants

A number of grant schemes and financial incentives are available to help subsidise the cost of renewable energy installations across the UK and Ireland.

UK Wide

Low Carbon Buildings Programme (Phase 1)

Launched in 2006, phase one of the DTI's Low Carbon Buildings Programme is managed by the Energy Savings Trust and will run until 2008. It replaces the previous DTI Clear Skies and Solar PV grant programmes.

Open to householders, public, not for profit and commercial organisations across the UK (except the Channel Islands and the Isle of Man), the programme demonstrates how energy efficiency and microgeneration can work hand in hand to create low carbon buildings.

Phase 1 provides grants to householders of up to £1,200 for the installation of ground, air* and water* source heat pumps or 40-50% of the total installation cost for medium to large microgeneration projects by public, not for profit and commercial organisations.

For more information visit: www.lowcarbonbuildings.org.uk
*anticipated Autumn 2007

Low Carbon Buildings Programme (Phase 2)

Phase 2 of the DTI Low Carbon Buildings Programme is managed by the Building Research Establishment and provides £50 million of capital grant funding for the installation of various microgeneration technologies – including ground source heat pumps – by organisations in the UK public and not-for-profit sectors, including local authorities, housing associations, schools, colleges, universities, hospitals and registered charities.

The scheme is operating in England, Wales, Scotland and Northern Ireland and aims to commit the bulk of its funding by mid 2010.

Dimplex has been appointed as one of only 3 "Framework Suppliers" of ground source heat pumps under the scheme, meaning Dimplex systems are subject to grants of 35% of their total installation cost.

For more information visit:
www.lowcarbonbuildingsphase2.org.uk
or email lcbp@dimplex.co.uk



Scotland

Scottish Community & Householder Renewables Initiative

The Scottish Community Householder Renewables Initiative (SCHRI) provides grants for properties in Scotland. This is funded by the Scottish Executive and managed by the Energy Saving Trust.

Grants are available for a variety of renewable energy technologies including ground source and air source heat pumps. Funding for householders is set at 30% of the installed cost up to £4,000.

If you live in Scotland you can choose to have an SCHRI or a Low Carbon Buildings Programme grant. However, you can only apply for one grant per technology from either of these programmes.

For more information visit: www.energysavingtrust.org.uk/schri

Northern Ireland

Environment and Renewable Energy Fund

The Environment and Renewable Energy Fund provides renewable energy grants for householders in Northern Ireland.

The scheme is managed by Action Renewables and provides grants of upto £3,000 for the installation of ground or water source heat pumps and up to £2,400 for the installation of air source heat pumps.

For more information visit: www.reconnect.org.uk
or contact Glen Dimplex Northern Ireland (details on back page).

Republic of Ireland

Greener Homes Scheme

The Greener Homes Scheme provides assistance to homeowners who intend to purchase a new renewable energy heating system for either new or existing homes. The scheme is administered by Sustainable Energy Ireland and aims to increase the use of sustainable energy technologies within Irish homes.

Phase 2 of the scheme provides grants of €2,500 for ground source heat pumps (with horizontal collectors) or water source heat pumps, €3,500 for ground source heat pumps with vertical borehole collectors or €2,000 for air source heat pumps.

For more information visit: www.sei.ie/greenerhomes/
or contact Dimpco (details on back page).

Installers

Approved Installer Partners

Heat pumps are one of the most efficient and economical heating systems available provided the individual components of the system – the heat source, the heat pump itself and the connected heating system – are properly matched.

In order to ensure the highest levels of quality and to provide peace of mind, Dimplex has an established network of Approved Heat Pump Installer Partners, all fully trained and experienced in the installation, commissioning and after sales support of Dimplex heat pump products.



Installer Training

Dimplex believe that the key to success in the heat pump market is through thorough and robust installer training to ensure installations are provided to a high standard and maximise the energy efficiency of our customers investment.

In addition to an approved installer partner network we also provide dedicated training courses for new installers, covering installation of our range of heat pumps. As the public interest in the environment and renewable energy products in particular increases, training ensures our installers are better equipped to satisfy our customers' requirements.



UK Microgeneration Certification Scheme

The new UK Microgeneration Certification Scheme (UKMCS) is intended to provide a robust third party certification scheme for microgeneration products and installers. It replaces the previous ClearSkies Programme and also underpins the DTI grant scheme, the Low Carbon Buildings Programme. Grants will only be available to applicants using both products and installers certified under the UK Microgeneration Certification Scheme.

The scheme evaluates products and installers against robust criteria for each of the microgeneration technologies, providing greater protection for consumers and ensuring that the Government's grant money is spent in an effective manner.

Dimplex recognises the importance of such schemes in helping to build a UK heat pump industry based on quality and good practice, which will make a substantial contribution to cutting the UK's dependency on fossil fuels and its carbon dioxide emissions.

Dimplex actively supports the scheme and we encourage all Dimplex heat pump installers to also become certified, giving our customers assurance as to the quality of our products and their installation and providing a means of accessing government grants.

For more information visit: www.uk-microgeneration.org.uk/



Range overview



Dimplex is setting new standards with its latest generation of heat pumps. With the widest range of heat pumps in the UK, no matter what your choice of energy source (ground, air or water), there will be a solution in the Dimplex range ideally suited to your needs.

Flexible

Our "integrated" heat pumps – containing key hydraulic system components – provide space saving and simple installation, while our stand alone models can be combined with a wide range of fully coordinated system accessories, including buffer tanks and domestic hot water cylinders, to provide complete flexibility in terms of system design.

Performance

The Dimplex ethos is always to aim for the highest level of system efficiency, with our heat pumps designed to minimise energy use – no matter what the temperature or operating conditions.

Quality and Reliability

German engineering from one of the UK's most respected heating brands! The international quality label for heat pump systems guarantees the highest, environmental, safety and quality standards.



Attractive

Innovative technology in a new look. The entire Dimplex range, including buffer tanks and hot water cylinders, is designed to fully coordinate in a new standardised design.

Control

The comprehensive Dimplex heat pump manager provides complete system control over multiple heating and hot water circuits and, where needed, cooling functions. Self explanatory display text provides simple operation.

<p>Outdoor air source heat pumps</p>	<p>LA MS/LA AS ranges</p>  <ul style="list-style-type: none"> • Outdoor installation • Flow temperature up to 55°C • Heating capacities: 11 – 28kW • Connection voltages: 230V single phase 400V three phase <p>Options available:</p> <ul style="list-style-type: none"> • Heating only • Heating and active/dynamic cooling • Two level output capacity • Flow temperature up to 55°C, 65°C (LA PS range) or 75°C (LA HS range) 	<p>LA MR/LA TR ranges</p>  <ul style="list-style-type: none"> • Outdoor installation • Integrated system components • Flow temperature up to 60°C • Heating capacities: 6 – 16kW • Connection voltages: 230V single phase 400V three phase <p>Options available:</p> <ul style="list-style-type: none"> • Heating and dynamic cooling • Swimming pool (LAS range)
<p>Indoor air source heat pumps</p>	<p>LI MEK range</p>  <ul style="list-style-type: none"> • Indoor installation in corners or on walls • Integrated system components and buffer • Flow temperature up to 58°C • Heating capacity: 8kW • Connection voltage: 230V single phase <p>Options available:</p> <ul style="list-style-type: none"> • Heating only • Heating and active/dynamic cooling 	<p>LI ME/LI TE ranges</p>  <ul style="list-style-type: none"> • Indoor installation in corners or on walls • Flow temperature up to 58°C • Heating capacities: 11 – 28kW • Connection voltages: 230V single phase 400V three phase <p>Options available:</p> <ul style="list-style-type: none"> • Heating only • Heating and active/dynamic cooling • Two level output capacity • Flow temperature up to 58°C or 75°C (LI TEH range)
<p>Ground source heat pumps</p>	<p>SI MEK range</p>  <ul style="list-style-type: none"> • Indoor installation • Integrated system components • Flow temperature up to 58°C • Heating capacities: 11 – 16kW • Connection voltage: 230V single phase <p>Options available:</p> <ul style="list-style-type: none"> • Heating only • Passive cooling via optional passive cooling station 	<p>SI ME/SI TE ranges</p>  <ul style="list-style-type: none"> • Indoor installation • Flow temperatures up to 58°C • Heating capacities: 5 – 21kW • Connection voltages: 230V single phase 400V three phase <p>Options available:</p> <ul style="list-style-type: none"> • Heating only • Heating and active/dynamic cooling
<p>Ground source heat pumps</p>	<p>SI TE range</p>  <ul style="list-style-type: none"> • Indoor installation • Flow temperatures up to 60°C • Two level output capacity • Heating capacities: 24 – 130kW • Connection voltage: 400V three phase <p>Options available:</p> <ul style="list-style-type: none"> • Heating only • Heating and active/dynamic cooling (SI 75 TER only) 	<p>SI TEH range</p>  <ul style="list-style-type: none"> • Indoor installation • Flow temperatures up to 70°C • Heating capacities: 20 – 40kW • Connection voltage: 400V three phase <p>Options available:</p> <ul style="list-style-type: none"> • Heating only
<p>Water to water heat pumps</p>	<p>WI ME/WI TE/WI CS ranges</p>  <ul style="list-style-type: none"> • Indoor installation • Flow temperature up to 58°C • Heating capacities: 9 – 90kW • Connection voltage: 230V single phase 400V three phase <p>Options available:</p> <ul style="list-style-type: none"> • Heating only 	<p>Heat Pump accessories</p> <ul style="list-style-type: none"> • Domestic hot water cylinders (G3 regulations approved) • Buffer cylinders • Hydraulic system accessories • Ground collector circuit manifolds and accessories • Cooling accessories

Air source heat pumps



Even cold air is full of energy and Dimplex air source heat pumps use the freely available heat in the ambient air to provide efficient heating and hot water at air temperatures as low as -25°C. Because the source of heat – the air – is abundantly available all around us, air source heat pumps have the advantage of low installation costs and minimal space requirements, while relatively mild winter temperatures in the UK mean excellent levels of efficiency and performance are achieved throughout the year.

Benefits of the outside air as a heat source:

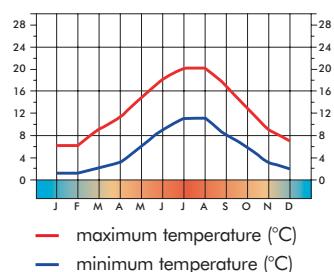
- Can be utilised all year round between +35°C and -25°C.
- Always available and inexhaustible source of heat.
- No requirement for the cost and land area of ground collectors.
- Ideal for new build or retro fit applications, especially where space is limited.
- Can be used for heating, cooling, domestic hot water and swimming pools.

Air source heat pumps – benefits of the UK climate

Compared with central Europe (where air source heat pumps are already very popular), the UK has a relatively moderate winter climate.

With average winter temperatures of around 5°C, seasonal co-efficients of performance comparable with ground source heat pumps are achievable, without the additional cost of expensive ground loop systems having to be installed.

Average UK temperatures over 12 month period



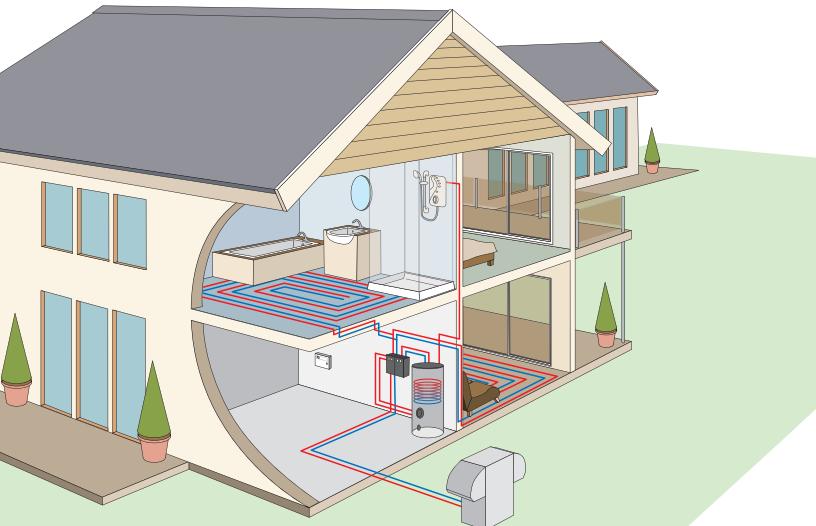
CASE STUDIES

Optional outdoor or indoor installation

Air source heat pumps are suitable for either outdoor or indoor installation.

Dimplex outdoor air source heat pumps are constructed from robust, powder-coated metal casings to provide year round protection against the elements. The heat pump is connected to the indoor heating system simply by laying two heat insulated pipes and the electric connection cables under the ground.

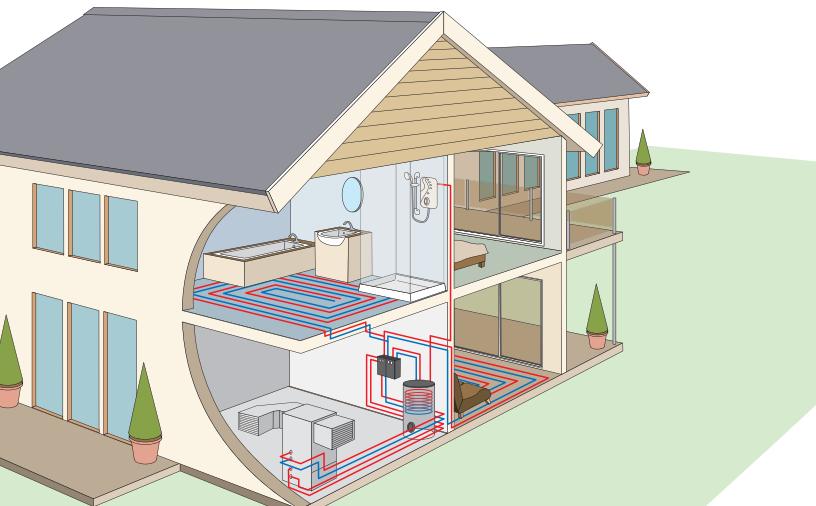
In some instances it may not be desirable for the heat pump to be installed in the garden. Indoor air source heat pumps offer a practical alternative and can be installed for example in a garage, basement or utility room. The heat pump is connected to the outside air via air ducts.



Note: Combined DHW / buffer tank shown

Air to water heat pumps for outdoor installation

- The heat source is easy to tap.
- The weatherproof heat pump is installed on a sturdy concrete foundation.
- The water pipes and electric cables are securely laid under ground.



Air to water heat pumps for indoor installation

- The heat source is tapped via air ducts.
- Heat pump is installed against an external wall.
- The insulated opening is protected by a rain guard.

Heat pumps in action

Dimplex air source heat pumps offer many benefits to all types of installations. Our recent installations for a Scottish social housing project and a National trust centre in Wales demonstrate the flexibility of the Dimplex air source range of heat pumps in completely different applications:



National Trust gets future fit with Dimplex

A new information and community resource centre built near Aberdulais Falls, Vale of Neath embraced the latest principles of sustainable design in a low energy building, using power from the on-site hydro-electric scheme. A Dimplex LA20AS air source heat pump was installed, to provide the energy needed by the underfloor heating system. Power to drive the heat pump is supplied by a water turbine, meaning the entire heating system is entirely sustainable and effectively zero carbon emission.

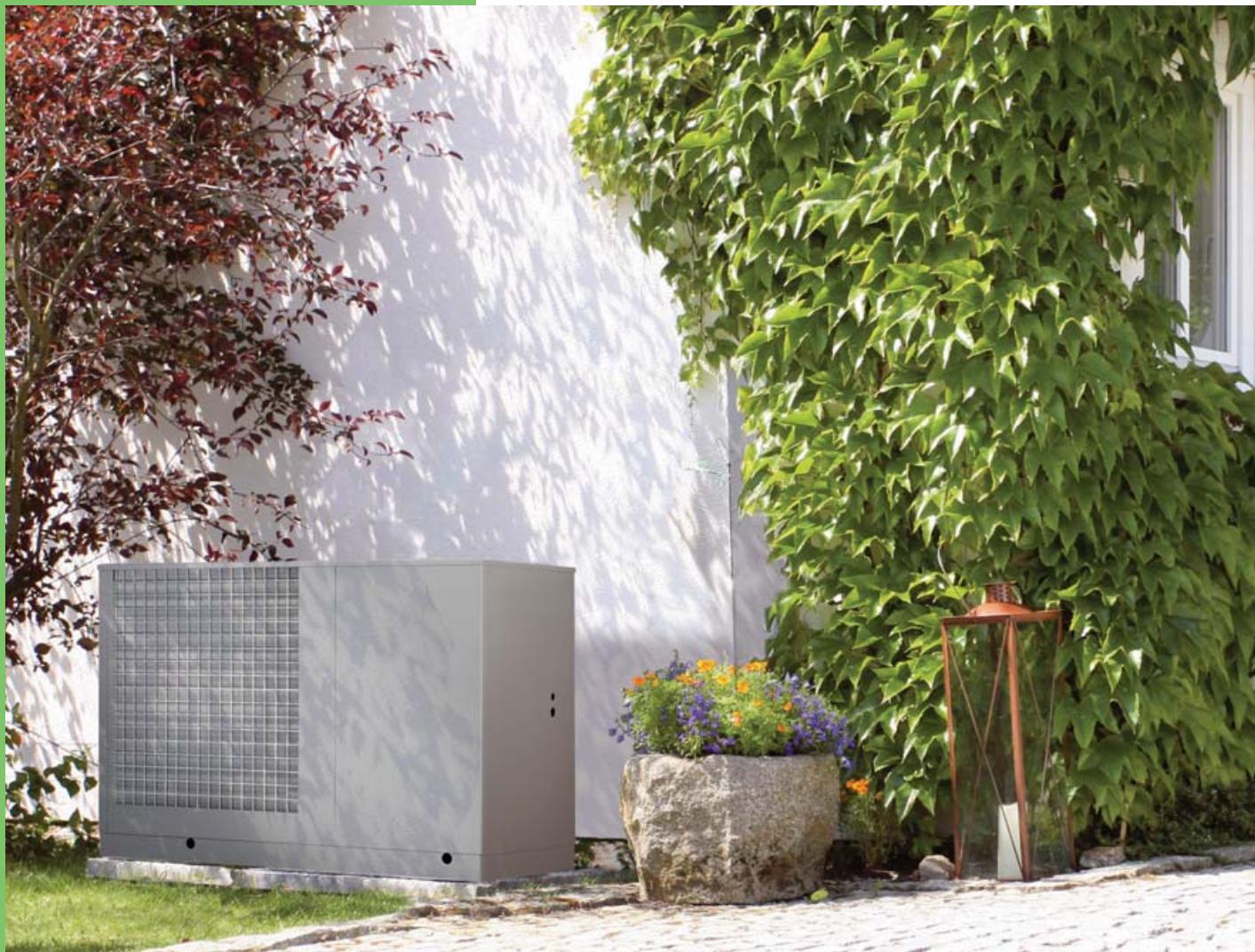
This project was awarded Installation of the Year by Dimplex in 2007.

Moray Housing Partnership pilots Dimplex heat pumps

When Scotland's Moray Housing Partnership (MHP) decided to test the potential energy savings to be made with renewable energy sources they came to Dimplex and chose two Dimplex air source heat pumps for their retro-fit installation. With landscaped gardens and a limited surface area the Dimplex LA8MR and LA10MR were selected for outdoor installation and minimum disruption. Raymond Duguid from MHP said "The systems have only been running for a couple of months but the tenants are already telling us that they are delighted with their systems and there's also a significant fuel bill reduction."

Air source heat pumps

Outdoor installation



Our robust outdoor air source heat pumps are constructed to withstand the best and worst of the British climate, with powder-coated metal casings and a stainless steel base frame. They're ideal where internal space is limited and can be installed up to 30m from the building.

Single phase devices are available in outputs of 6-16kW and up to 28kW for 3 phase connection providing a range of solutions for both domestic and commercial applications.

An air source heat pump system is normally designed to deliver 100% of the heating and hot water demand, with the heat pump itself typically sized to provide at least 95% of the heating requirement. To minimise investment costs, it is normal to provide the remaining energy demand from a supplementary heat source, most commonly an electric immersion heater, however in retro-fit applications it is also possible to combine the heat pump with an existing boiler.

LA MR/LA TR

Integrated air source heat pumps

Dimplex LA MR and LA TR ranges provide extra low installation costs with the help of fully integrated system components, including the heating system circulating pump, 8 litre expansion vessel, hydraulic safety devices and a three capacity supplementary electric heating element (2, 4 or 6kW)

The range also offers the option of reverse cycle operation for energy efficient cooling by extracting heat from the home in the summer time.

Range features

- 5 models with nominal heating capacities from 6 – 16kW.
- Variable heating water flow temperatures from 35°C – 60°C.
- Integrated system components, including immersion heater and circulating pump.
- Suitable for use with underfloor heating or radiator systems and to provide domestic hot water.
- Reversible for summer time cooling (dynamic only).
- Electronic soft start reduces starting current loads.



LA 8 MR

Model	LA 6 MR	LA 8 MR	LA 10 MR	LA 12 TR	LA 16 TR
Connection Voltage (V)	230	230	230	400	400
Maximum flow temp (°C)	60	60	60	60	60
Heat output (kW) A7/W35	6.1	7.4	8.5	11.9	15.3
CoP A7/W35	3.3	3.3	3.4	3.3	3.3
Cooling capacity A35/W18	7.9	9.4	11.1	15.8	18.5
CoP A35/W18	3.2	3.3	3.3	3.3	3.3

Please see page 40 for full technical specifications.



LA 16 MS

LA MS/LA AS

Free standing air source heat pumps

Dimplex LA MS and LA AS ranges utilise air deflector hoods to minimise sound transmission.

An auto-adaptive defrost cycle minimises energy consumption, while models with twin compressors (20kW and over) incorporate intelligent load switching to maximise compressor life.

Range features

- 5 models with nominal heating capacities from 11 – 16kW single phase and 20 – 28kW three phase.
- Three phase models fitted with twin compressors for higher capacity output and two performance capacities.
- Variable heating water flow temperature from 35°C – 55°C with weather compensation.
- Suitable for use with underfloor heating or radiator systems and to provide domestic hot water.
- Extensive sound insulation minimises noise emissions.
- Energy optimised auto adaptive defrost cycle.
- Electronic soft start reduces starting current loads.

Model	LA 11 MS	LA 16 MS	LA 20 AS	LA 24 AS	LA 28 AS
Connection Voltage (V)	230	230	400	400	400
Maximum flow temp (°C)	55	55	55	55	55
Heat output (kW) A7/W35					
1 Compressor	10.9	15.4	9.8	13.1	14.2
2 Compressors	-	-	16.6	24.8	25.8
CoP A7/W35					
1 Compressor	4.1	3.7	3.2	3.4	3.1
2 Compressors	-	-	3.1	3.6	3.4

Please see page 40 for full technical specifications.

Air source heat pumps

Indoor installation



Indoor air source heat pumps can be installed in a utility room, garage or basement and are designed with low noise emissions in mind.

Single phase models are available in outputs of 8-11kW, with outputs up to 28kW available for 3 phase connection, providing solutions for both domestic and light commercial applications alike.

The 8kW LI 8 MEK 'integrated' heat pump is designed to fit neatly into the corner of room with no need for additional ducting. Many of the hydraulic system components are built in providing simple and convenient installation.

Alternatively, the LI ME and LI TE ranges provide flexible system design, allowing buffer tanks, domestic hot water cylinders and hydraulic components to be specified and installed as and when required.

LI MEK

Integrated air source heat pump

The LI 8 MEK saves valuable space and is easy to install, with the WPM2007 heat pump manager and key system components fully integrated into one compact unit.

Range features

- Nominal heating capacity 8kW.
- Variable heating water flow temperatures from 35°C – 58°C with weather compensation.
- Integrated system components, including 50L buffer tank, 2kW immersion heater, circulating pump and expansion vessel.
- WPM2007 heat pump manager with removable control panel for installation in a preferred location.
- Designed for ‘through wall’ installation in the corner of a room against two outside walls – no additional ducts needed.
- Suitable for use with underfloor heating or radiator systems and to provide domestic hot water.
- Energy optimised auto adaptive defrost cycle.
- Electronic soft start reduces starting current loads.



LI 8 MEK



LI 11 ME

LI ME/LI TE

Universal design air source heat pumps

LI indoor air source heat pumps are available in outputs from 11-28kW and incorporate low noise fans to minimise sound transmission.

Models with twin compressors (20kW and over) incorporate intelligent load switching to maximise compressor life.

Range features

- 5 models with nominal heating capacities of 11kW single phase and 16 – 28kW three phase.
- 20kW and above models fitted with twin compressors for higher capacity output and two performance capacities.
- Variable heating water flow temperatures from 35°C – 58°C with weather compensation.
- WPM2007 heat pump manager with removable control panel for installation in a preferred location.
- Suitable for use with underfloor heating or radiator systems and to provide domestic hot water.
- Energy optimised, auto adaptive defrost cycle.
- Complementary built-under buffer tank for space saving.
- Air ducting kits provided as accessories.
- Electronic soft start reduces starting current loads.

Model	LI 8 MEK	LI 11 ME	LI 16 TE	LI 20 TE	LI 24 TE	LI 28 TE
Connection Voltage (V)	230	230	400	400	400	400
Maximum flow temp (°C)	58	58	58	58	58	58
Heat output (kW) A7/W35						
1 Compressor	9.2	10.9	15.1	10.4	12.6	13.9
2 Compressors	-	-	-	17.0	24.2	25.1
CoP A7/W35						
1 Compressor	3.8	3.9	3.6	3.5	3.3	3.1
2 Compressors	-	-	-	3.4	3.4	3.3

Please see page 42 for full technical specifications.

Air source heat pumps

Medium and high temperature air source heat pumps



Improving a buildings thermal insulation can often be enough to allow the heating system to be operated at low temperatures. However higher water flow temperatures are sometimes needed where high volumes of hot water are required at temperatures of 60°C or higher, or where the heat pump is intended for use in older buildings with existing radiator systems.

The Dimplex ranges of medium and high temperature air source heat pumps provide just this facility, providing water output temperatures of 65°C and 75°C respectively.

LA PS medium temperature models utilise the environmentally sensitive R290 refrigerant and are available for outdoor installation only, while high temperature models are available for installation either indoors or outdoors.

LA PS

Medium temperature air source heat pumps

The LA PS medium temperature heat pumps are available for outdoor installation and provide variable water flow temperatures of up to 65°C.

Range features

- 5 models with nominal heating capacities from 9 – 26kW.
- Variable heating water flow temperatures from 35°C – 65°C with weather compensation.
- Higher output models (17kW and above) fitted with twin compressors for high capacity output and two performance capacities.
- Intelligent switching between single and dual compressor modes, maximising efficiency and compressor duty cycle.
- For outdoor installation only.
- Utilises environmentally sensitive R290 refrigerant.
- WPM2006 heat pump manager.
- Suitable for use with underfloor heating or radiator systems and to provide domestic hot water at stored water temperatures of 60°C.
- Electronic soft start reduces starting current loads.



LA 9 PS



LA 17 PS

Model	LA 9 PS	LA 11 PS	LA 17 PS	LA 22 PS	LA 26 PS
Connection Voltage (V)	400	400	400	400	400
Maximum flow temp (°C)	65	65	65	65	65
Heat output A7/W35(kW)					
1 Compressor	8.5	11.5	9.6	12.0	13.3
2 Compressors	-	-	16.6	21.1	22.9
CoP A7/W35					
1 Compressor	3.6	3.8	3.4	3.6	3.5
2 Compressors	-	-	3.4	3.5	3.5

Please see page 40 for full technical specifications.

LA HS/LI TEH

High temperature air source heat pumps

Dimplex high temperature heat pumps are available for either outdoor or indoor installation and provide variable water flow temperatures of up to 75°C.

Range features

- Nominal heating capacities of 22kW and 26kW in both outdoor and indoor installation options.
- Variable heating water flow temperatures from 35°C – 75°C with weather compensation.
- Twin compressors for high temperature output.
- Intelligent switching between single and dual compressor modes, maximising efficiency and compressor duty cycle.
- LI HS models fitted with integrated WPM2007 heat pump manager with removable control panel.
- LA HS models supplied with WPM2006 heat pump manager.
- Suitable for use with underfloor heating or radiator systems and to provide domestic hot water at stored water temperatures of 60°C.
- Electronic soft start reduces starting current loads.



LI 26 TEH



LA 22 HS

Model	LI 22 TEH	LI 26 TEH	LA 22 HS	LA 26 HS
Connection Voltage (V)	400	400	400	400
Maximum flow temp (°C)	75	75	75	75
Heat output A7/W35(kW)	15.2	19.5	15.2	19.5
CoP A7/W35	3.2	3.6	3.2	3.6

Please see pages 40-42 for full technical specifications.

Ground source heat pumps



Drawing as much as 75% of the energy needed by the heating system from freely available, inexhaustible solar energy stored in the ground, Dimplex ground source heat pumps are available in an extensive range of models types and capacities suitable for either domestic or commercial applications.

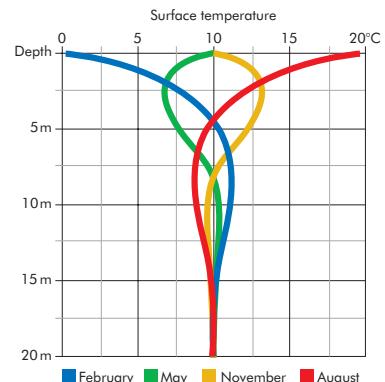
Due to highly stable temperatures below the earth's surface, ground source heat pumps provide high levels of efficiency for space and water heating all year round.

Benefits of the ground as a heat source

- Consistent temperatures below ground throughout the year provides a high Co-efficient of Performance.
- Can be used for heating, domestic hot water and swimming pools.
- Borehole systems can be used for either passive or active cooling (see page 32).

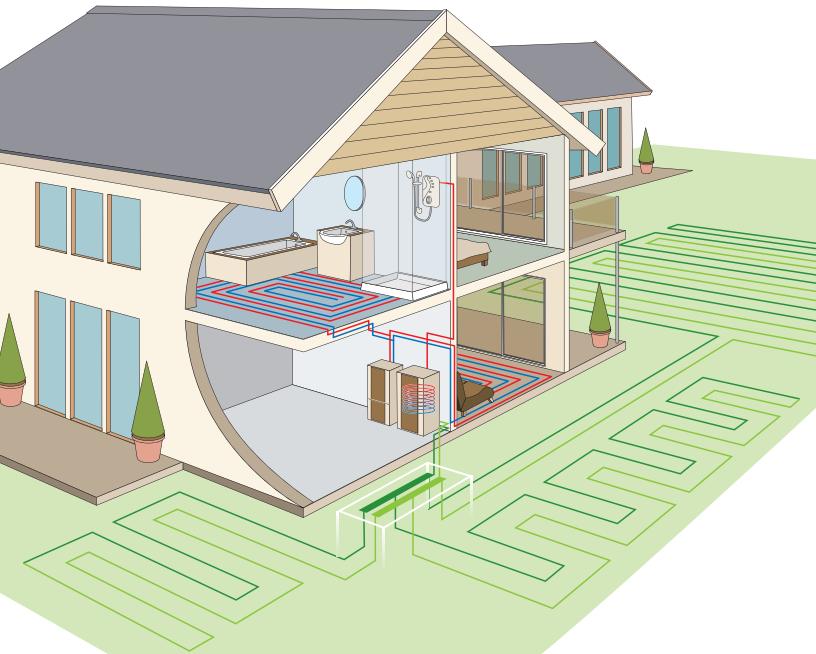
At just 1m below the surface, the earth provides a stable source of heat throughout the year.

At depths of 15m or more, the earth provides a constant 10°C temperature.



Heat from your garden

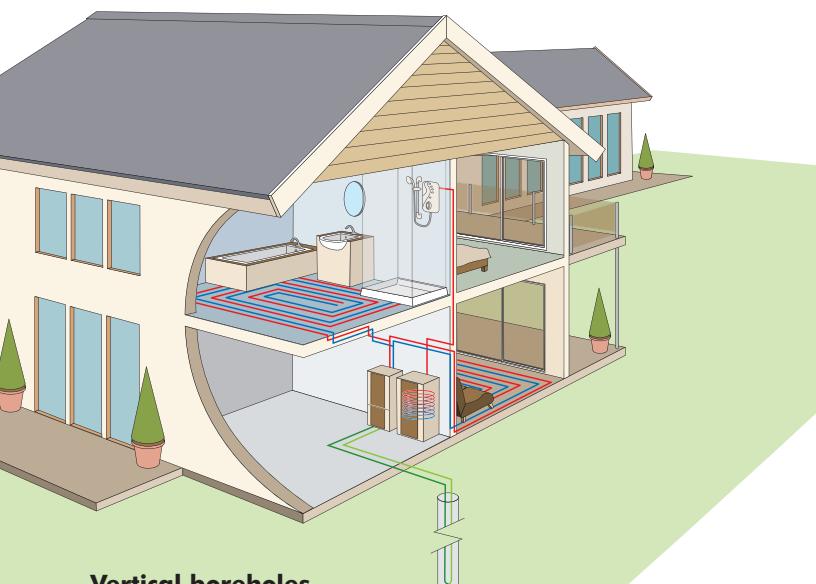
The earth stores an enormous amount of solar energy from both solar radiation and rainfall. To extract this energy, ground collectors consisting of flexible poly ethylene pipes are buried in the earth, either horizontally or vertically. A mixture of water and anti-freeze is then circulated through the pipe loops, attracting the heat energy and transferring it to the heat pump.



Horizontal ground collectors

If a large enough land area is available, horizontal ground collectors provide an effective method of extracting heat from the ground. The pipework is buried at a depth of approximately 1.25m and spaced 0.75m apart. The land area required is dependent on both the capacity of the heat pump and heat conductance of the soil type in which the pipes are buried.

As a space saving alternative to horizontal collectors, slinkies - consisting of coiled pipes buried in a trench – can be used.



Vertical boreholes

If land space is limited the ground collectors can be installed vertically in a borehole, drilled up to 100m deep in the ground.

Multiple boreholes are commonly used in large installations where very high levels of heat extraction are required.

CASE STUDIES

Heat pumps in action

With our extensive range of models and capacities Dimplex have a ground source heat pump for nearly all commercial and domestic applications. From a tourist visitor centre in the Peak district to a domestic barn development we've got it covered.



The Moorland Centre

Conserving the Peak District for the future

The Moorland Centre, a £1million visitor centre located in Edale in the Peak District, incorporated a Dimplex ground source heat pump as part of its model for conservation present and future.

Although there was plenty of room externally to install two ground loop collection systems, availability of space in the plant room was a practical aspect to consider, so the National Park Authority specified a Dimplex SI 30 CG ground source heat pump to operate the building's underfloor heating system as the 30kW output from just one unit made this heat pump the perfect choice.

Modern open plan living heated by the sun

Brickfield Barn is a single storey, open plan four-bedroom family home designed for maximum energy efficiency. The luxury conversion is heated by two Dimplex ground source heat pumps, installed indoors in a plant room. Set in 16 acres of land, the site offered plenty of space for horizontal ground collectors, but they were installed vertically in four 100m bore holes to avoid disturbance to the beautiful landscape. The heat pumps together provide enough heat to run both the new low temperature underfloor heating – a very safe system for a family home – and meet all the families domestic hot water requirements.

Ground source heat pumps



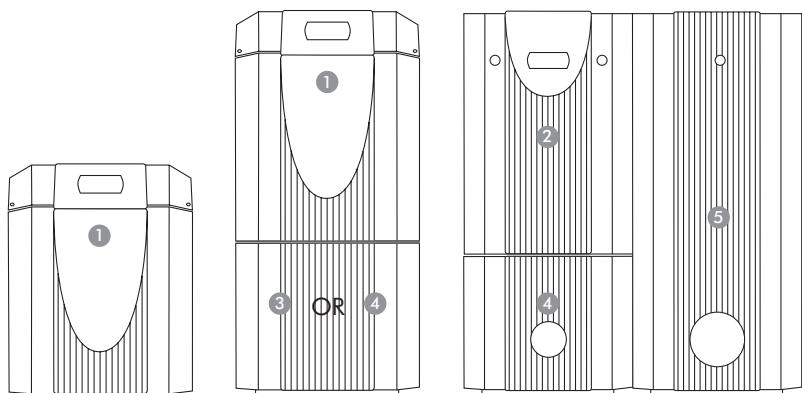
Available in a wide range of sizes and configurations, Dimplex ground source heat pumps provide a sustainable heating solution for virtually any scenario.

As well as being perfectly suitable for use with either radiators or underfloor heating systems, Dimplex ground source heat pumps are also able to provide domestic hot water.

Single phase models are available in outputs from 5-16kW making them ideal for both domestic and light non domestic applications alike, while the option of either stand alone or fully integrated formats provides maximum flexibility to meet the needs of virtually any scenario.

Flexible system options

The Dimplex ground source range, including buffer tanks and hot water cylinders are designed to fully co-ordinate and provide a range of flexible system options:



① SI ME ground source heat pump

② SI MEK integrated ground source heat pump

③ WWSP229EUK 200L domestic hot water cylinder

④ PSP100E 100L buffer cylinder

⑤ WWSP442EUK 400L domestic hot water cylinder

SI ME

Ground source heat pumps

The popular range of SI ME ground source heat pumps provide flexible system design making them ideal for domestic or light commercial applications.

Where space saving is required the SI ME range can be combined with a 200L domestic hot water cylinder, which fits neatly below the heat pump unit.

Range features

- 5 models with nominal heating capacities from 5 – 14kW, single phase.
- Variable heating water flow temperatures from 35°C – 58°C with weather compensation.
- WPM2007 heat pump manager with removable control panel for installation in a preferred location.
- Electronic soft start reduces starting current loads.
- Suitable for use with underfloor heating or radiator systems and to provide domestic hot water.
- Complementary built under 200L domestic hot water cylinder for space saving.



SI 5 ME

Model	SI 5 ME	SI 7 ME	SI 9 ME	SI 11 ME	SI 14 ME
Connection Voltage (V)	230	230	230	230	230
Maximum flow temp (°C)	58	58	58	58	58
Heat output B0/W35 (kW)	4.9	6.3	8.9	10.8	14.8
CoP B0/W35	3.8	3.7	3.8	3.9	3.9

Please see page 44 for full technical specifications.



SI 16 MEK

Model	SI 11 MEK	SI 16 MEK
Connection Voltage (V)	230	230
Maximum flow temp (°C)	58	58
Heat output B0/W35 (kW)	11.8	15.8
CoP B0/W35	4.4	4.2

Please see page 44 for full technical specifications.

SI MEK

Integrated ground source heat pumps

The SI MEK range of fully integrated ground source heat pumps provide easy installation and minimises space requirements, with the heat pump manager and key system components all fully integrated into one compact unit.

A complementary 100L buffer tank and 400L domestic hot water cylinder are also available to complete the system.

Range features

- Available with nominal heating capacities of 11 and 16kW, single phase.
- Integrated system components, including circulating pumps, expansion vessels and safety assemblies for both the heating and ground collector circuits.
- WPM2007 heat pump manager with removable control panel.
- Variable heating water flow temperatures from 35°C – 58°C with weather compensation.
- Suitable for use with underfloor heating or radiator systems and to provide domestic hot water.
- Matching built-under buffer tank for space saving and 400L domestic hot water cylinder.

Ground source heat pumps

High output ground source heat pumps

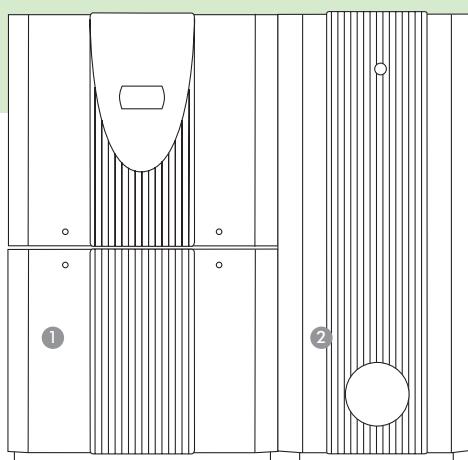


Dimplex high output ground source heat pumps expand the scope of applications for high efficiency heating solutions with a range of increased output models ranging from 17 – 130kW.

Optimised twin compressor operation allows buildings with high heat consumption to be catered for, in the shape of either non-domestic applications such as offices or schools. High output heat pumps are also ideal for multiple occupancy buildings such as flats and apartments where centralised heat pump systems are able to provide a building wide heating solution.

Flexible system options

SI 24 TE and SI 37 TE heat pumps are designed to co-ordinate with the WWSP442EUK hot water cylinder.



① SI 24-37 TE ground source heat pump
② WWSP442EUK 400L hot water cylinder

SI TE

High output ground source heat pumps

The Dimplex SI TE range of high output 3 phase ground source heat pumps provide a flexible range of solutions for higher capacity heating systems.

All models utilise the WPM2007 heat pump manager, allowing independent control over multiple heating circuits at differing flow temperatures.

Models with outputs of 24kW and above incorporate twin compressors, enabling them to flexibly and efficiently adapt to fluctuating heat demand by automatically switching between single and dual compressor modes depending on the outside temperature and heat demand of the building.

Range features

- Range of 8 models with nominal heating capacities from 17 – 130kW.
- Variable heating water flow temperatures from 35°C – 60°C with weather compensation.
- Twin compressors on outputs of 24kW and over for higher capacity output.
- Intelligent switching between single and dual compressor modes, maximising efficiency and compressor duty cycle.
- WPM2007 heat pump manager with removable control panel.
- Suitable for use with underfloor heating or radiator systems and to provide domestic hot water.
- Three phase electrical connection, with electronic soft start to reduce start current loads.
- Able to use ground water as a heat source with the addition of an intermediate heat exchanger.
- Matching 400 litre domestic hot water cylinder.



SI 21 TE



SI 17 TE



SI 50 – 130 TE



SI 24 – 37 TE

Model	SI 17 TE	SI 21 TE	SI 24 TE	SI 37 TE	SI 50 TE	SI 75 TE	SI 100 TE	SI 130 TE
Connection Voltage (V)	400	400	400	400	400	400	400	400
Maximum flow temp (°C)	58	58	60	60	60	60	60	60
Heat output B0/W35(kW)	-	-	-	-	-	-	-	-
1 Compressor	16.9	20.8	12.7	18.3	23.0	37.6	48.4	63.3
2 Compressors	-	-	23.7	35.4	46.7	75.2	96.3	125.8
CoP B0/W35								
1 Compressor	4.4	4.1	4.3	4.5	4.4	4.3	4.6	4.2
2 Compressors	-	-	4.1	4.3	4.5	4.4	4.6	4.3

Please see pages 44-46 for full technical specifications.

Ground source heat pumps

High temperature ground source heat pumps



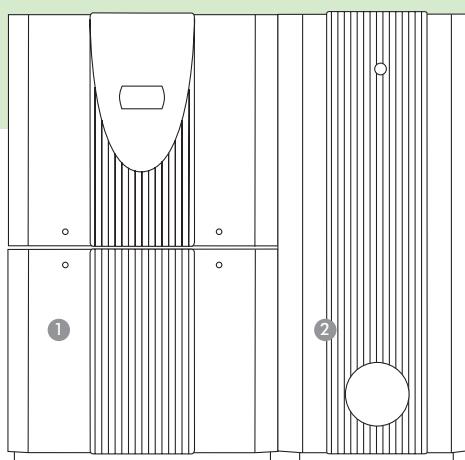
Dimplex high temperature ground source heat pumps have the ability to provide high water flow temperatures of up to 70°C.

This makes them ideal for applications where high volumes of stored hot water are required at temperatures of 60°C or higher, or where the heat pump is required to be connected to a high temperature heating system using radiators.

Optimised twin compressor operation allows the SI TEH range to be used in buildings with high heat consumption, for example commercial applications, schools or for centralised heat production in multiple occupancy residential buildings such as flats.

Flexible system options

SI 20 TEH is designed to co-ordinate with the WWSP442EUK hot water cylinder.



- ① SI 20 TEH ground source heat pump
- ② WWSP442EUK 400L hot water cylinder

SI TEH

High temperature ground source heat pumps

The Dimplex SI TEH range of high temperature ground source heat pumps provide variable water flow temperatures up to 70°C, providing a solution for buildings with high temperature heating systems (radiators) or where high temperature hot water storage is required.

Available in 20kW and 40kW options, both models utilise the WPM2007 heat pump manager, allowing independent control over multiple heating circuits at differing flow temperatures.

Both models incorporate twin compressors, enabling them to flexibly and efficiently adapt to fluctuating heat demand by automatically switching between single and dual compressor modes depending on the outside temperature and heat demand of the building.

Range features

- Nominal heating capacities of 20kW and 40kW.
- Variable heating water flow temperatures from 35°C – 70°C with weather compensation.
- Twin compressors for higher capacity output.
- Intelligent switching between single and dual compressor modes, maximising efficiency and compressor duty cycle.
- WPM2007 heat pump manager with removable control panel.
- Suitable for use with underfloor heating or radiator systems and to provide domestic hot water at stored water temperatures of up to 60°C.
- Three phase electrical connection, with electronic soft start to reduce start current loads.
- Able to use ground water as a heat source with the addition of an intermediate heat exchanger.
- Matching 400 litre domestic hot water cylinder.



SI 20 TEH

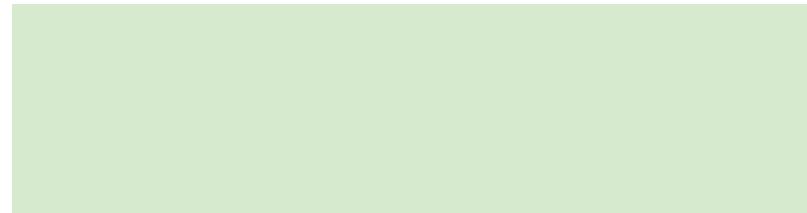


SI 40 TEH

Model	SI 20 TEH	SI 40 TEH
Connection Voltage (V)	400	400
Maximum flow temp (°C)	70	70
Heat output B0/W35(kW)		
1 Compressor	11.5	17.4
2 Compressors	21.4	34.2
CoP B0/W35		
1 Compressor	4.6	4.1
2 Compressors	4.4	4.1

Please see page 46 for full technical specifications.

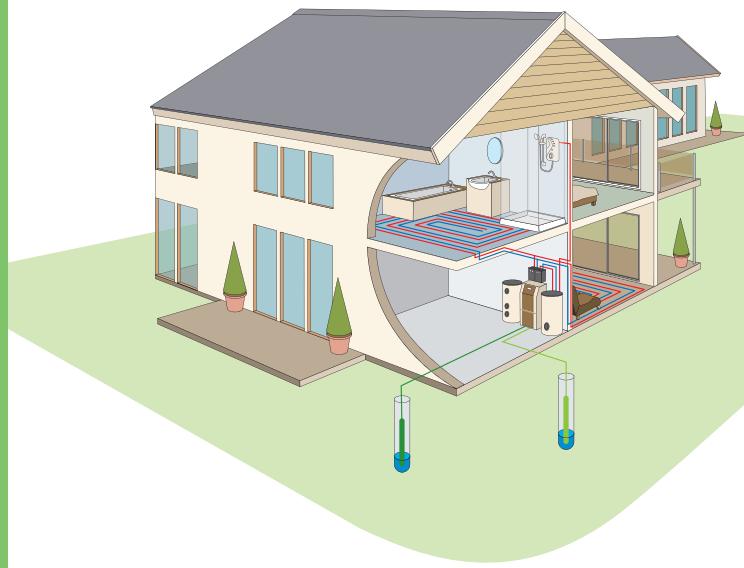
Water to water heat pumps



Water to water heat pumps work in a similar way to ground source systems, with the exception that they use "open loop" collectors, where underground water is circulated through the pipes.

The Dimplex range is available in an extensive range of model types and capacities suitable for either domestic or commercial applications.

High year round water temperatures allow water to water heat pumps to provide very high levels of efficiency with CoP's of 5 or over achievable.



Underground water stores an enormous amount of solar energy which can be extracted at very high levels of energy efficiency by circulating it directly through the heat pump evaporator.

Ground water as a heat source

- Year round availability at temperatures of 7-12°C.
- Can be used for heating, domestic hot water and swimming pools.
- Requires environment agency consent to extract and discharge water from/to the water course.

WI ME/WI TE

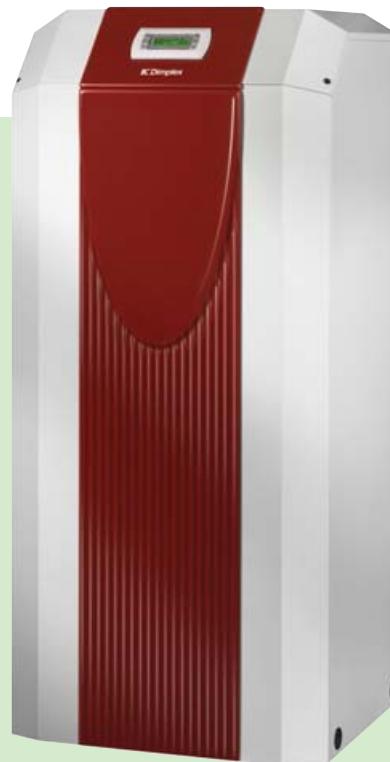
Water to water heat pumps

Dimplex WI ME and WI TE water to water heat pumps provide flexible system design in heating outputs from 9 – 27kW, making them ideal for domestic or light commercial applications.

Stainless steel coil heat exchangers provide high levels of corrosion resistance, preventing the need for water analysis prior to installation.

Range features

- 5 models with nominal heating capacities from 9 – 27kW.
- Variable heating water flow temperatures from 35°C – 58°C with weather compensation.
- Stainless steel coil heat exchanger providing the opportunity for use with virtually all water qualities without the need for water analysis.
- WPM2007 heat pump manager with removable control panel.
- Suitable for use with underfloor heating or radiator systems and to provide domestic hot water.
- Electronic soft start control to reduce start current loads.



WI 14 ME



The new stainless steel spiral heat exchanger is an innovative solution to prevent corrosion and icing up. WI ME and WI TE models can therefore be used with untreated ground water sources with a temperature of up to 13°C.

Model	WI 9 ME	WI 14 ME	WI 18 TE	WI 22 TE	WI 27 TE
Connection Voltage (V)	230	230	400	400	400
Maximum flow temp (°C)	58	58	58	58	58
Heat output W10/W35(kW)	8.2	13.5	16.9	21.3	26.1
CoP W10/W35	4.8	4.7	5.2	5.3	4.9

Please see page 46 for full technical specifications.



WI 40 CS

Model	WI 40 CS	WI 90 CS
Connection Voltage (V)	400	400
Maximum flow temp (°C)	55	55
Heat output W10/W35(kW)		
1 Compressor	23.4	49.8
2 Compressors	44.4	91.2
CoP W10/W35		
1 Compressor	5.9	5.9
2 Compressors	5.7	5.4

Please see page 46 for full technical specifications.

WI CS

High capacity water to water heat pumps

Dimplex WI CS high performance water to water heat pumps provide the solution where higher capacity heating is required.

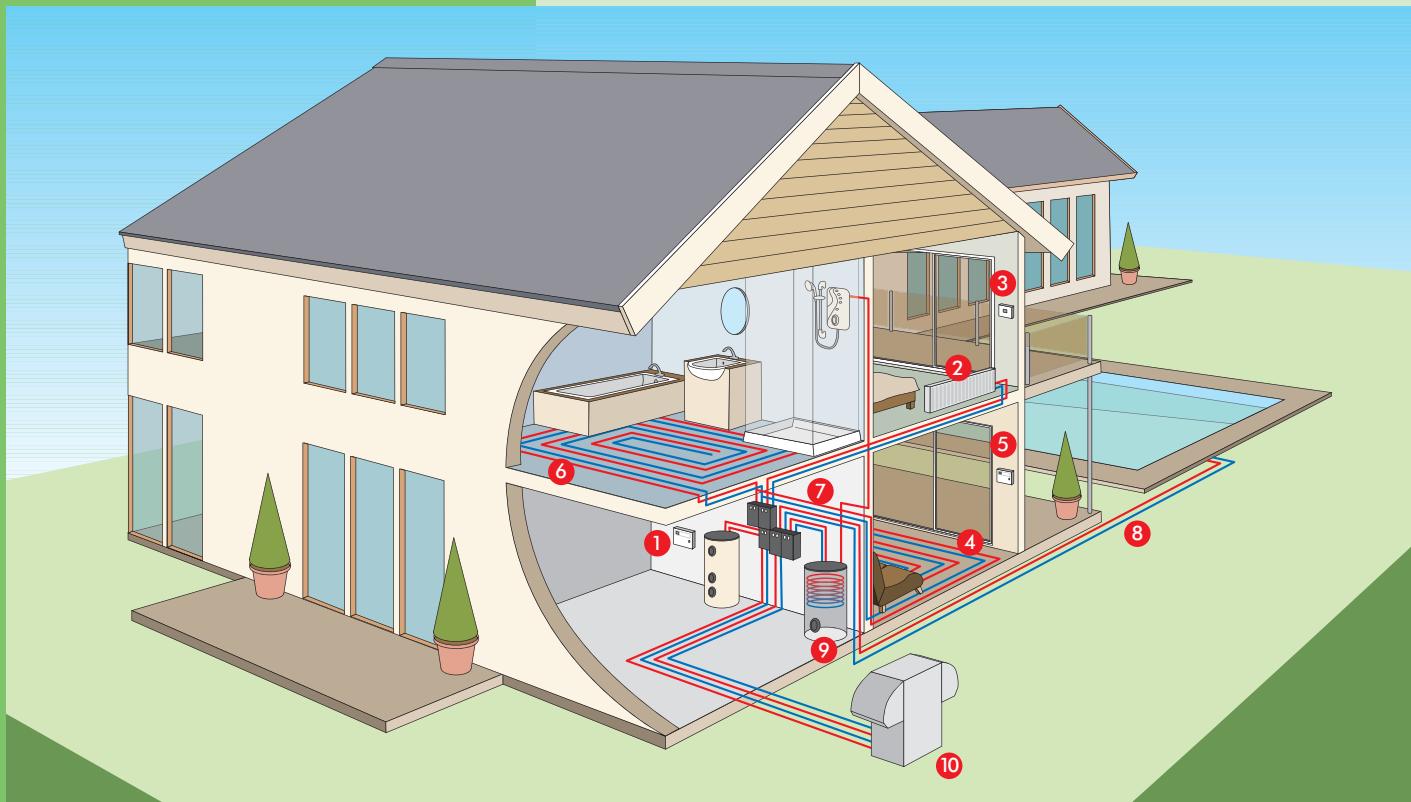
Available in outputs of 40kW and 90kW, both models utilise the WPM 2006 heat pump manager and incorporate twin compressors, enabling them to flexibly and efficiently adapt to fluctuating heat demand by automatically switching between single and dual compressor modes.

Range features

- Available with nominal heating capacities of 40 and 90kW.
- Variable heating water flow temperatures from 35°C – 55°C with weather compensation.
- Twin compressors for high capacity output and two performance capacities.
- WPM2006 heat pump manager.
- Requires ground water analysis prior to installation.

Reversible heat pumps

Innovative heating and cooling



Apart from an efficient heat pump heating system, summer time cooling of well-insulated new buildings is becoming increasingly important to achieve a comfortable environment. Solar gain, higher levels of insulation and increasingly warm summer temperatures are all leading to a rising demand for cooling systems. Dimplex offers an innovative, energy efficient concept for all types of heat sources to also utilise water-bearing heating systems for cooling purposes.

- ① Heat pump manager for heating and cooling
- ② Dynamic cooling via fan convectors with condensate drainage; suitable for domestic buildings with high heat loads and commercial buildings
- ③ Room thermostats switch from heating to cooling via an external signal from the cooling controller
- ④ Silent cooling utilising existing heating surfaces (underfloor, ceiling or wall cooling)
- ⑤ Room climate control station for regulating the flow temperature with silent cooling via a reference room
- ⑥ Underfloor heating for comfortable heat in the winter
- ⑦ Dew point monitor for connection to the cooling controller to interrupt the cooling operation of the system if condensate forms at vulnerable points in the cooling distribution system
- ⑧ The waste heat produced in cooling operation can be utilised for swimming pool water heating
- ⑨ Efficient domestic hot water preparation utilising waste heat recovery in cooling operation
- ⑩ Reversible air source heat pumps for outdoor installation

Reversible air source heat pumps



Indoor Installation



Outdoor Installation

Indoor installation

Models available:

- 8kW single phase, integrated (LI 8 MEKR)
- 11kW single phase (LI 11 TER)
- 11kW three phase with heat recovery (LI 11 TER+)
- 16kW three phase with heat recovery (LI 16 TER+)

Outdoor installation

Models available:

- 11kW single phase (LA 11 MSR)
- 16kW three phase (LA 16 ASR)
- LA MR models also provide cooling (see page 17)

Reversible heat pumps for active cooling

In winter the heat pump functions as an energy efficient heating device and extracts the required energy from the environment. By reversing this process the heat pump can be operated to provide cooling, extracting heat from the building and transferring this to the environment via the heat pump refrigerant and compressor.

Waste heat recovery makes it possible to also produce domestic hot water extremely efficiently during the cooling process, while returning waste heat to the ground (using a ground source heat pump) effectively stores the energy for use later in the year when needed for heating. The entire system is controlled by the heat pump manager.

Passive cooling with borehole heat exchangers or ground water.

Deeper ground layers have constant temperature levels of around 10°C all year round. This allows ground source heat pumps installed with vertical borehole collectors to be used to provide 'passive' cooling, by transferring excess heat from the building to the ground via the collector in the summer months.

This is achieved with the addition of a retro-fittable passive cooling unit, controlled by an additional cooling controller, which

communicates with the heat pump manager to enable a combination of heating and 'comfort' cooling in a single system.

Domestic hot water can still be provided in parallel to the cooling operation as the heat pump compressor is not active in the passive cooling mode.

Depending on the type of heating system installed in the building, cooling can be provided in one of two ways:

Silent (active) cooling via surface heating systems

In summer, the heating surfaces in floors, walls and ceilings are activated for cooling by passing cooled water through them. Large cooled surfaces cool the rooms to a comfortable temperature without draughts or air movement.

Dynamic cooling via fan convectors

Integrated ventilators guide the indoor air to a heat exchanger, which heats or cools the air according to need. Multi-level controllable air recirculation guarantees short response times and high transmission capacities.

Reversible ground source heat pumps



SI 75 TER



SI 5 MER

Models available:

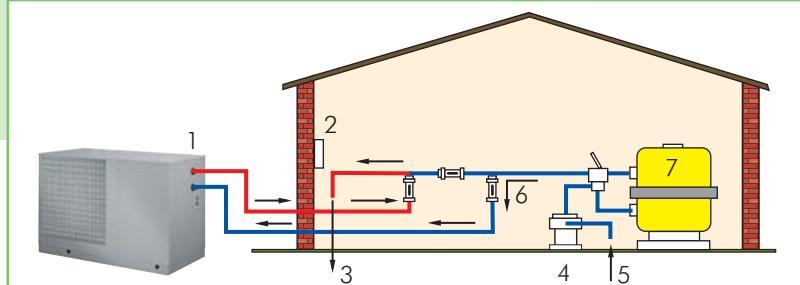
- 75kW three phase (SI 75 TER)
- 5-11kW single phase (SI 5-11 MER)

Swimming pool heat pumps



Heat pumps are the ideal solution for swimming pool heating, providing an economic and energy efficient means of delivering a constant pool water temperature throughout the year.

Air source heat pumps are particularly suitable due to their low installation cost and high efficiency at high ambient temperatures during the summer – the most frequent time of swimming pool use!



1. Swimming pool heat pump
2. Remote control
3. Pure water to the pool
4. Circulating pump
5. Bypass and regulator valves
6. Pipe water from the pool
7. Filter

The heat pump is connected directly to the pool system. No additional control.

LAS MT/ LAS TT

Swimming pool heat pumps – air source

Dimplex LAS MT and LAS TT air source heat pumps provide an energy efficient and cost effective way of providing swimming pool heating throughout the year, irrespective of the weather conditions.

Purpose designed for swimming pool use and incorporating a titanium heat exchanger which allows the heat pump to be used with varying levels of water quality, the range is available in outputs from 10-22kW. The heat pump is installed outdoors and integrated into the swimming pool filter circuit.

A single heat pump setting ensures the required swimming pool water temperature is constantly maintained.

Range features

- Outdoor installation.
- Nominal heating capacities of 10kW, 15kW and 22kW.
- Variable heating water flow temperatures up to 40°C.
- Titanium heat exchanger ensuring safe operation with variable water qualities, including salt water.
- Integrated automatic defrost cycle, allowing operation at temperatures as low as -10°C.



LAS 10 MT

Model	LAS 10 MT	LAS 15 MT	LAS 22 TT
Connection Voltage (V)	230	230	400
Maximum flow temp (°C)	40	40	40
Heat output A20/W24(kW)	12.1	16.6	22.3
CoP A20/W24	4.2	4.7	5.1

Please see page 46 for full technical specifications.

Heat pump accessories

Perfectly matched



Dimplex heat pumps offer a variety of services – providing the home with comfortable warmth is only one of them. It can also provide all the hot water needed for the kitchen and bathroom.

Dimplex provides all the components needed for these applications, including buffer tanks, unvented hot water cylinders and hydraulic accessories, ensuring the components are optimally matched to ensure maximum system efficiency.

A range of ancillary products designed to simplify heating system and ground collector connections are also available, ensuring installation is as compact and simple as possible.

- 1 **Buffer Tank**
- 2 **Heating System Connection**
- 3 **Unvented Hot Water Cylinder**
- 4 **WPM Heat Pump Manager**

Tapping into the heat source

When using the outside air as a heat source, special components for the air circuit are required for heat pumps that are installed indoors.

These include insulated air ducts and specifically designed rain guards.

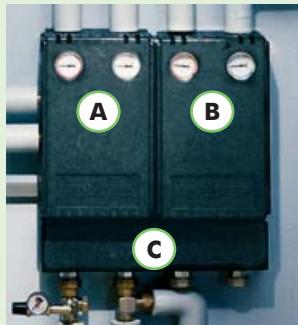


For ground source heat pumps, brine packages and brine circuit manifolds are available. These are specifically matched to the requirements of each type of heat pump.



Distribution system

Modules matching the specific requirements of the heat pumps simplify connection to the heating system and offer the option of flexible expansion for domestic hot water or additional heating circuits.



The most common components are;

- A** Compact manifold (KPV25) allows connection between heat pump, buffer tank and a single heating circuit, simplifying the installation process and reducing space.
- B** Hot water module (WMM25) allows connection between the heat pump and the hot water cylinder or second heating circuit.
- C** Manifold bar (VTB25) allows simultaneous connection of the compact manifold and hot water module.

Buffer tanks

Connection of a buffer tank ensures minimum compressor run times and minimum water flow rates through the heat pump to maintain optimum efficiency. A buffer is essential for air source heat pumps as it provides the energy source for defrosting. Where the heat pump provides the sole source of heating, an electric immersion element can also be integrated to provide supplementary heating if required.



Model	Capacity (litres)	Dimensions (mm)	For use with
PSW100	100	Ø512x850	Up to 12kW
PSP100E	100	740x740x240	All SI ME & SI MEK models
PSW200	200	Ø600x1300	Up to 30kW
PSW500	500	Ø700x1950	All heat pumps
PSP140E	140	750x600x850	Indoor ASHP 11-20kW capacity

Note: a suitably sized immersion element must be ordered separately.

Hot water cylinders

For the central hot water supply Dimplex offers a range of unvented hot water cylinders, sized correctly for the maximum heating capacity of the heat pump.

It is important to remember that due to lower flow temperatures, correctly sized heat exchangers are required to maximise performance.

An integrated temperature sensor is connected to the heat pump manager, allowing the heat pump to automatically manage the production of hot water as well when required.



Model	Capacity (litres)	Dimensions (mm)
WWSP332UK	300	Ø700x1300
WWSP880UK	400	Ø700x1600
WWSP900UK	500	Ø700x1950
WWSP442EUK	400	650x680x1630
PWS332UK	300+100 buffer	Ø700x1800

All Dimplex heat pump cylinders are fully UK approved for G3 Building regulations.



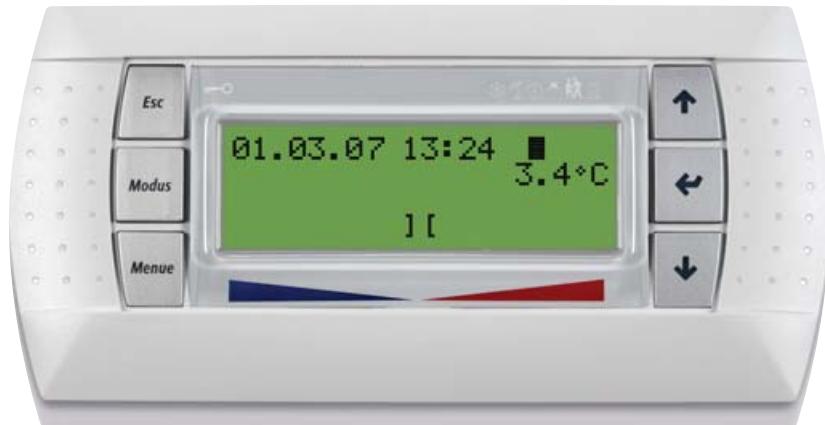
Heat pump manager

Everything is under control



The majority of Dimplex heat pumps utilise the WPM heat pump manager, which is designed to regulate, control and monitor the entire heating system.

Water temperatures for up to 3 heating / hot water circuits are individually programmable, allowing the heat pump to provide maximum flexibility, control and efficiency.



Key features:

- Simple 6 key operation
- Large, well laid out illuminated display
- Dynamic menu based programming, customised to the configuration of the heat pump – settings that are not required are hidden.
- Interface for remote control unit with identical menu options
- Ground source and indoor air source units have removable control panel for convenient positioning remotely from the heat pump
- Weather compensated temperature control
- Control over 3 separate heating / hot water circuits
- Automatic actuation of supplementary heat sources (electric immersion heater or gas / oil boiler).
- Automatic actuation of mixer valves for supplementary heat generators (gas / oil boiler or solar energy storage system)

Two heat generators and three heat consumers: the heat pump has everything under control

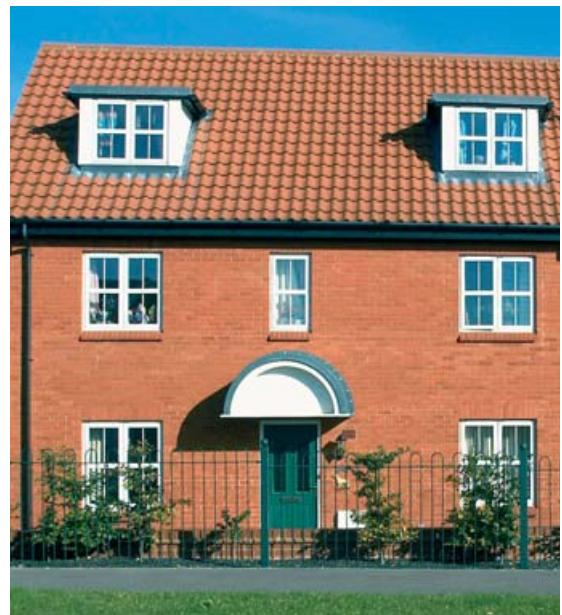
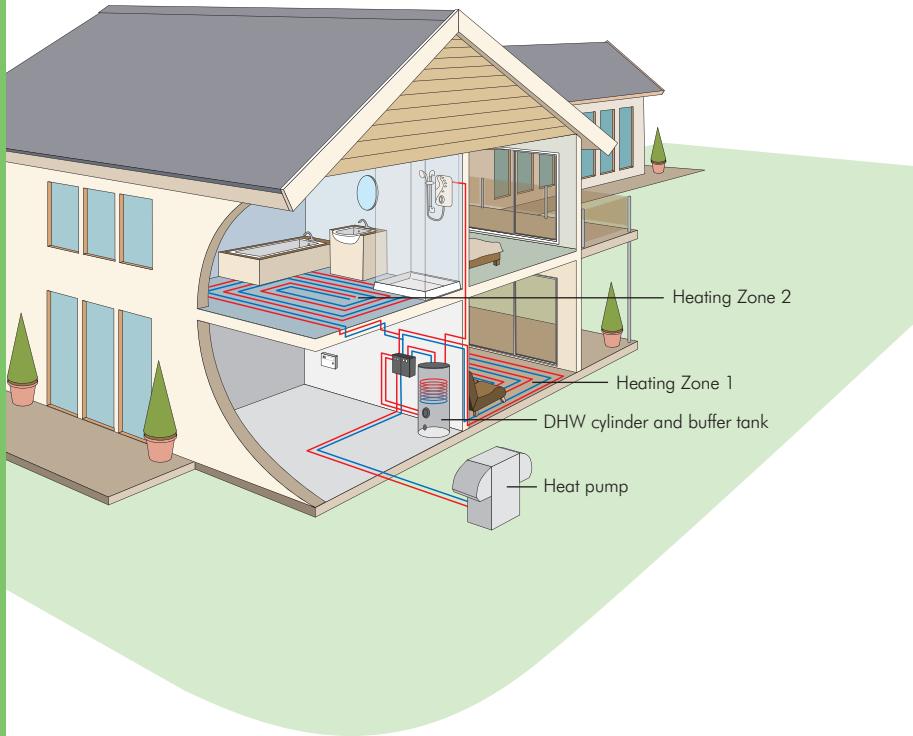
The heat pump manager monitors the operation of the heat pump and provides all the functions of a modern heating regulation system, including remote diagnostics and time programmes for heating and hot water preparation.

The heat pump, heating and hot water pumps, mixer motor and any supplementary heating sources are all automatically activated by the WPM manager. For reversible heat pumps both heating and cooling modes are managed by the same controller.

System integration with existing systems

The WPM controller also allows Dimplex heat pumps to be efficiently integrated in 'bi-valent' mode with existing systems. When combined in parallel with an existing boiler, the heat pump manager regulates the boiler in accordance to need and ensures that no excessive temperatures can enter the heating system.

This way, for example, a filled oil tank can be used up before converting to heat pump only operation later on, or provide the ability for the heat pump to manage the base heating load with supplementary support from an existing gas or oil boiler. Such strategies provide an excellent opportunity for the installation of heat pumps in existing homes and buildings.



Integration with the renewables

For optimal integration of renewable heat sources, the heat pump manager offers an operating mode developed especially for purpose. Thermal solar energy systems or biomass boilers feed into a renewable cylinder fitted with an additional heat exchanger which, at a sufficient temperature level, gives priority to this energy for heating or hot water, overriding the operation of the heat pump.

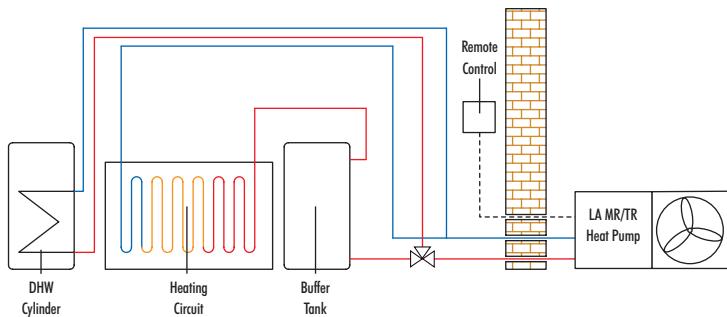


technical specifications

TYPICAL SYSTEM CONFIGURATION AND ACCESSORIES

LA MR / LA TR Outdoor Air Source Heat Pumps

The diagram below shows a typical LA MR / LA TR heat pump configuration for heating and domestic hot water including typical accessories required for a single heating circuit.
(Note this is for illustrative purposes only and is not intended as a full hydraulic schematic)

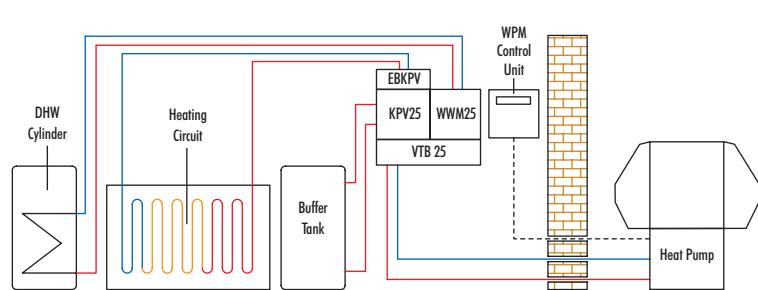


Heat Pump	Qty
LA 6/8/10 MR / LA 12/16 TR Air source heat pump	1
Heating and Hot Water Accessories	
PSW100/200 100L/200L Buffer tank	1
WWSP332UK/880UK 300/400L Hot water cylinder	1

LA MS / LA AS Outdoor Air Source Heat Pumps

LA MSR / LA ASR Reversible Outdoor Air Source Heat Pumps

The diagram below shows typical LA MS / LA AS heat pump configuration for heating and domestic hot water including typical accessories required for a single heating circuit.
(Note this is for illustrative purposes only and is not intended as a full hydraulic schematic)

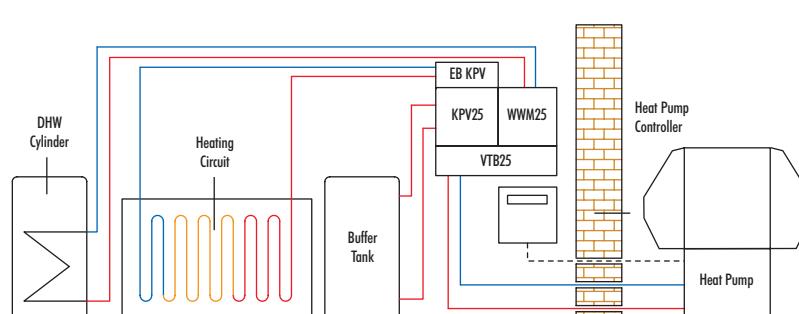


Heat Pump	Qty
LA 11 / 16 MS/LA 20/24/28 AS Air source heat pump (heating)	1
LA 11 MSR/LA 16 ASR Air source heat pump (heating/cooling)	1
Heating and Hot Water Accessories	
WWSP332UK/WWSP880UK 300L/400L domestic hot water cylinder	1
PSW100/PSW200 100L/200L buffer tank	1
KPV25 Compact manifold	1
CTHK631/2/3/4/5/6 Buffer immersion	1
WWM25 Heating circuit/hot water module	1
VTB25 Manifold bar	1
EBKPV* Expansion module	1
Controller Accessories	
EVL 995/6/7/9-1 Controller connecting cable (heating)	1
EVL 10/20/30R Controller connecting cable (heating/cooling)	1

*Required for LA 20/24/28 AS only

LA PS / LA HS Outdoor Air Source Heat Pumps

The diagram below shows typical LA PS / LA HS heat pump configuration for heating and domestic hot water including typical accessories required for a single heating circuit.
(Note this is for illustrative purposes only and is not intended as a full hydraulic schematic)



Heat Pump	Qty
LA 9/11/17/22/26 PS Air source heat pump (medium temp)	1
LA 22/26 HS Air source heat pump (high temp)	1
Heating and Hot Water Accessories	
WWSP332UK/880UK/900UK 300L/400L/500L domestic hot water cylinder	1
PSW100/PSW200 100L/200L buffer tank	1
KPV25 Compact manifold	1
CTHK631/2/3/4/5/6 Buffer immersion	1
WWM25 Heating circuit/hot water module	1
VTB25 Manifold bar	1
EB KPV* Expansion module	1
Controller Accessories	
EVL 995/6/7/9-1 Controller connecting cable (heating)	1

*Required for LA 22PS/26PS/20HS/26HS only

	LA 6 MR	LA8 MR	LA10 MR	LA12TR	LA16TR
Operating Limits					
Heating water system/return °C			max 60 / min 18		
Air °C			-20 to +35		
Cooling flow °C			+7 to +20		
Air °C			+15 to +40		
Performance					
Heating capacity A7 /W35 (kW) ¹	6.1	7.4	8.5	11.9	15.3
Coefficient of performance A7 /W35	3.3	3.3	3.4	3.3	3.3
Cooling Capacity A35/W18 (kW) ¹	7.9	9.3	11.1	15.8	18.5
Coefficient of performance A35 /W18	3.2	3.3	3.3	3.3	3.3
Sound Pressure level at 10m dB (A)	45	46	46	47	47
Refrigerant: total charge type/weight (kg)	R407C /1.5	R407C /2.3	R407C /2.7	R407C /3.4	R407C/3.5
Dimensions HxWxL (mm)	860x1270x670	860x1270x670	860x1270x670	860x1270x670	860x1270x670
Weight (including packaging) (kg)	159	165	170	185	196
Electric heating element (max) (kW)	2/4/6	2/4/6	6	6	6
Normal Voltage / fuse rating (V/A)	230/20	230/20	230/25	400/20	400/25
Starting current with soft starter (A)	26	32	38	26	27

¹ Performance standards measured to EN255

	LA 11 MS	LA 11 MSR	LA 16 MS	LA 16 ASR	LA 20 AS	LA 24 AS	LA 28 AS
Operating limits							
Heating water supply/return °C			Max55/min18				
Air °C			-20 to +35				
Cooling flow °C	-	+7 to +20	-	+7 to +20	-	-	-
Air °C	-	+15 to +40	-	+15 to +40	-	-	-
Performance							
Heating capacity A7/W35 (kW) ¹							
1 compressor	10.9	11.1	15.4	15.1	9.8	13.1	14.2
2 compressors	-	-	-	-	16.6	24.8	25.8
Coefficient of performance A7/W35 ¹							
1 compressor	4.1	4.2	3.7	3.8	3.2	3.4	3.1
2 compressors	-	-	-	-	3.1	3.6	3.4
Cooling capacity A27/W18 (kW) ¹	-	10.9	-	16.4	-	-	-
Coefficient of performance A27/W18 ¹	-	3.3	-	2.8	-	-	-
Sound Pressures Level at 10m dB (A)	33	33	34	34	37	41	41
Refrigerant: total charge type/weight (kg)	R404A/2.5	R404A/3.6	RA404A/3.1	R404A/5.7	R404A/3.7	R404A/4.2	R404A/4.2
Dimensions HxWxL (mm)	1360x1360x850	1360x1360x850	1570x1550x850	1570x1550x850	1570x1550x850	1710x1680x1000	1710x1680x1000
Weight (including packaging) (kg)	219	224	264	289	284	351	355
Normal voltage / fuse rating (V/A)	230/25	230/25	230/32	400/20	400/20	400/25	400/25
Starting current with soft starter (A)	38	38	45	25	23	24	25

¹ Performance standards measured to EN255

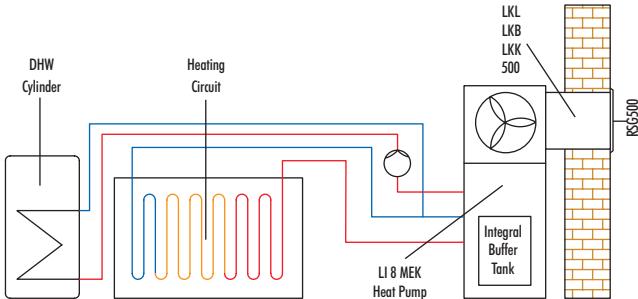
	LA 9 PS	LA11 PS	LA17 PS	LA 22 PS	LA 26 PS	LA 22 HS	LA 26 HS
Operating limits							
Heating water supply/return °C			Max 65/min 18			Max 75/min 18	
Air °C			-20 to + 35				
Performance							
Heating capacity A7 / W35 (kW) ¹							
1 compressor	8.5	11.2	9.6	12.0	13.3	15.4	19.8
2 compressors	-	-	16.6	21.1	22.9	-	-
Coefficient of Performance A7 / W35 ¹							
1 compressor	3.6	3.5	3.4	3.6	3.5	3.4	3.8
2 compressors	-	-	3.4	3.5	3.5	-	-
Sound Pressures Level at 10m dB (A)	34	34	37	41	41		
Refrigerant: total charge type/weight (kg)	R290 / 1.0	R290 / 1.5	R290 / 1.8	R290 / 2.2	R290 / 2.5	R404A / 3.3 R134A / 2.7	R404A / 3.7 R134A / 3.1
Dimensions H x W x L (mm)	1320x770x660	1570x1550x850	1570x1550x850	1710x1680x1000	1710x1680x1000	1710x1680x1000	1710x1680x1000
Weight (including packaging) (kg)	168	258	330	360	371	411	418
Nominal Voltage / fuse rating (V/A)	400 / 16	400 / 16	400 / 20	400 / 20	400 / 25	400 / 25	400 / 25
Starting current with soft starter (A)	28	30	23	25	30	25	30

¹ Performance standards measured to EN1451

LI 8 MEK / LI 8 MEKR Indoor Air Source Heat Pumps

The diagram below shows typical LI 8 MEK and LI 8 MEKR heat pump configuration for heating and domestic hot water including typical accessories required for a single heating circuit.

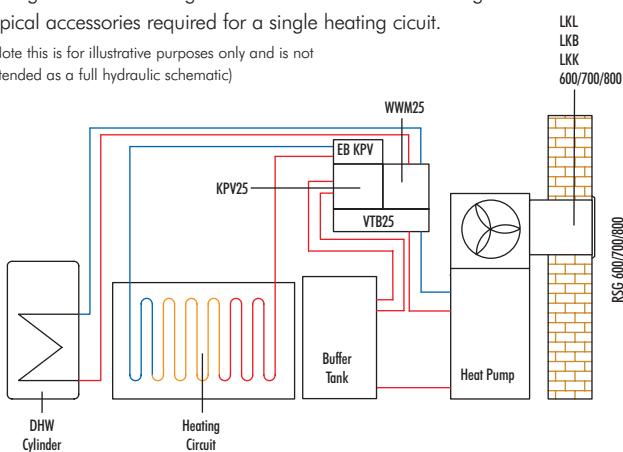
(Note this is for illustrative purposes only and is not intended as a full hydraulic schematic)



LI ME / LI TE / LI TEH Indoor Air Source Heat Pumps

The diagram below shows a typical LI ME, LI TE and LI TEH heat pumps configuration for heating and domestic hot water including typical accessories required for a single heating circuit.

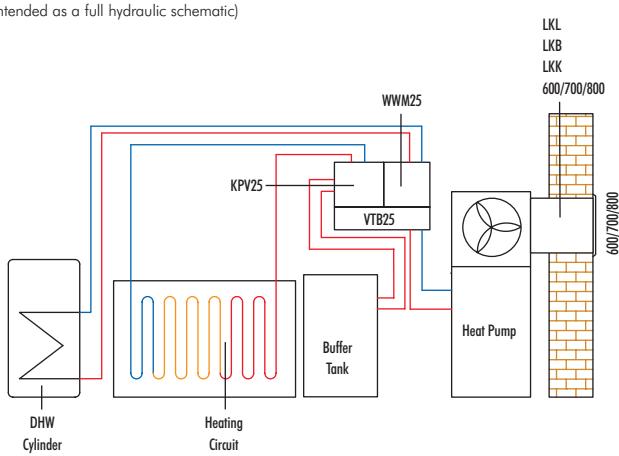
(Note this is for illustrative purposes only and is not intended as a full hydraulic schematic)



LI MER / LI TER Indoor Air Source Heat Pumps

The diagram below shows a typical LI MER / LI TER heat pump configuration for heating and domestic hot water including typical accessories for a single heating circuit.

(Note this is for illustrative purposes only and is not intended as a full hydraulic schematic)



Heat Pump		Qty
LI 8 MEK	Air source heat pump (heating)	1
LI 8 MEKR	Air source heat pump (heating and cooling)	1
Heating and Hot Water Accessories		
WWSP332UK	300L domestic hot water cylinder	1
SAS 100	Heating connection hoses	1
Ducting Accessories		
LKL / LKK / LKB 500	Long, short or 90° elbow ducts (depending on requirement)	1 or 2
DMK500	Sealing collar	2
RSG500	Rain guard	2

Heat Pump		Qty
LI 11 ME / LI 16/20/24/28 TE	Air source heat pump	1
LI 22 / 26 TEH	Air source heat pump (High temp)	1
Heating and Hot Water Accessories		
WWSP332UK / WWSP880UK	300L/400L domestic hot water cylinder	1
PSP140E	140L built under buffer tank (LI 11/16/20)	1
SAS 100 / SAS 110	Heating connection hoses	1
CTHK 631/2/3/4/5/6	Buffer immersion	1
KPV25	Compact manifold	1
WWM25	Heating circuit/hot water module	1
VTB25	Manifold Bar	1
EB KPV*	Expansion module	1
Ducting Accessories		
LKL600 / 700 / 800	Long duct (as required)	1 or 2
LKK600 / 700 / 800	Short duct (as required)	1 or 2
LKB600 / 700 / 800	90° elbow duct (as required)	1 or 2
DMK600 / 700 / 800	Sealing collar	2
RSG600 / 700 / 800	Rain guard	2

* Required for LI 20, LI 24, LI 28 TE and LI 22, LI 26 TEH only

Heat Pump		Qty
LI 11 MER/LI 11 TER +	Air source heat pump	1
LI 16 TER/16 TER+		
Heating and Hot Water Accessories		
WWSP332UK	300L domestic hot water cylinder	1
PSP140E	140L built under buffer tank (LI 11 / 16 / 20)	1
CTHK 631/2/3/4/5/6	Buffer immersion	1
KPV25	Compact manifold	1
WWM25	Heating circuit/hot water module	1
SAS 100	Heating connection hoses	1
VTB25	Manifold Bar	1
Ducting Accessories		
LKL600 / 700 / 800	Long duct (as required)	1 or 2
LKK600 / 700 / 800	Short duct (as required)	1 or 2
LKB600 / 700 / 800	90° elbow duct (as required)	1 or 2
DMK600 / 700 / 800	Sealing collar	2
RSG600 / 700 / 800	Rain guard	2

	LI 8 MEK	LI 8 LEKR
Operating limits		
Heating water supply/return °C	Max 58 / min 18	
Air °C	-25 to +35	
Cooling water supply °C	+7 to +20	
Air °C	+15 to +40	
Performance		
Heating capacity A7 / W35 (kW) ¹	9.2	9.2
Coefficient of Performance A7 / W35 ¹	3.8	3.8
Cooling capacity A27 / W18 (kW) ¹	-	9.6
Coefficient of Performance A27 / W18 ¹	-	3.2
Sound Pressure level at 1m dB (A) (indoors)		
Refrigerant: total charge type/weight (kg)	R404A / 2.0	R404A / 3.3
Dimensions H x W x L (mm)	1900x750x680	1900x750x680
Weight (including packaging) (kg)	245	250
Buffer tank capacity (L)	50	50
Electric heating element (kW)	2	2
Nominal Voltage / fuse rating (V/A)	230 / 20	230 / 20
Starting current with soft starter (A)	30	30

¹ Performance standards measured to EN14511

	LI 11 ME	LI 16 TE	LI 20 TE	LI 24 TE	LI 28 TE	LI 22 TEH	LI 26 TEH
Operating limits							
Heating water supply/return °C		Max 58 / min 18				Max 75 / min18	
Air °C			-25 to +35				
Performance							
Heating capacity A7/W35 (kW) ¹							
1 compressor	10.9	15.1	10.4	12.6	13.9	15.2	19.5
2 compressors	-	-	17	24.2	25.1	-	-
Coefficient of performance A7/W35 ¹							
1 compressor	3.9	3.6	3.5	3.3	3.1	3.2	3.6
2 compressors	-	-	3.4	3.4	3.3	-	-
Sound Pressure level at 1m dB (A) (Indoors)			50	52	54	58	58
Refrigerant: total charge type/weight (kg)	R404A / 2.5	R404A / 3.1	R404A / 3.7	R404A / 4.2	R404A / 4.3	R404A / 3.3 R134A / 2.7	R404A / 3.7 R134A / 3.1
Dimensions H x W x L (mm)	1360x750x880	1570x750x880	1570x1550x880	1710x750x1030	1710x7500x1030	1710x7500x1030	1710x7500x1030
Weight (including packaging) (kg)	200	235	255	310	314	370	377
Electric heating element (kW)	-	-	6	-	-	-	-
Nominal Voltage / fuse rating (V/A)	230 / 25	400 / 32	400 / 20	400 / 25	400 / 25	400 / 25	400 / 25
Starting current with soft starter (A)	38	25	23	24	25	25	30

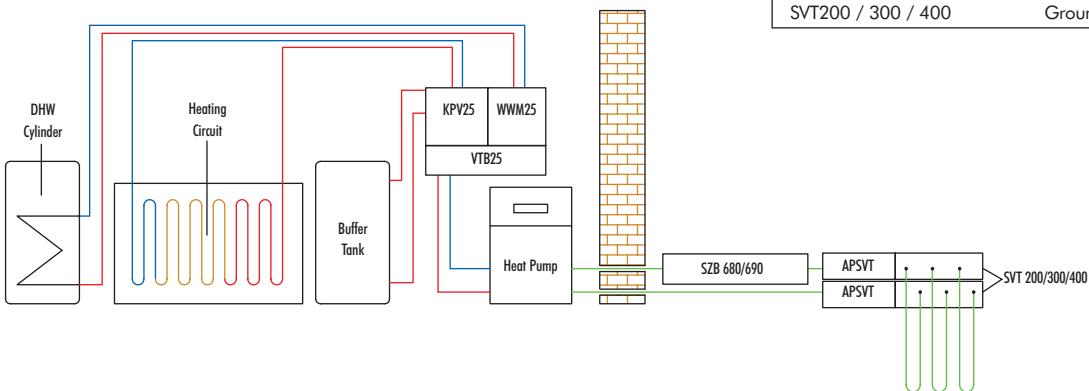
¹ Performance standards measured to EN14511

	LI 11 MER	LI 11 TER+	LI 16 TER	LI 16 TER+
Operating Limits				
Heating water supply/return °C		Max 58 / min 18		
Air °C		-25 to +35		
Cooling water supply °C		+7 to +20		
Air °C		+15 to +40		
Performance				
Heating capacity A7 / W35 (kW) ¹	11.1	11.3	15.1	14.9
Coefficient of Performance A7 / W35 ¹	4.2	3.6	3.8	3.6
Cooling capacity A27 / W18 (kW) ¹	10.9	10.8	16.4	16.4
Coefficient of Performance A27 / W18 ¹	3.3	5.2	2.8	2.8
Heat recovery for DHW	-	•	-	•
Sound Pressure level at 1m dB (A) (Indoors)				
Refrigerant: total charge type/weight (kg)	R404A / 3.6	R404A / 5.1	R404A / 5.7	R404A / 5.7
Dimensions HxWxL (mm)	1360x750x880	1360x750x880	1570x750x880	1570x750x880
Weight (including packaging) (kg)	250	222		260
Normal Voltage / fuse rating (V/A)	230/25	400/16	400/20	400/20
Starting current with soft starter (A)	38	23	25	25

¹ Performance standards measured to EN14511

SI ME / SI MER Ground Source Heat Pumps

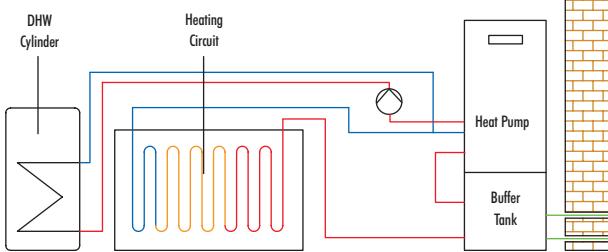
The diagram below shows a typical SI ME / SI MER heat pump configuration for heating and domestic hot water including typical accessories required for a single heating circuit.
(Note this is for illustrative purposes only and is not intended as a full hydraulic schematic)



Heat Pump		Qty
SI 5/7/9/11/14 ME	Ground source heat pump (heating)	1
SI 5/7/9/11 MER	Ground source heat pump (heating and cooling)	1
Heating and Hot Water Accessories		
WWSP332UK/WWSP880UK	300L/400L domestic hot water cylinder	1
PSW100 / PSW200	100L / 200L buffer tank	1
CTHK 631	Buffer immersion	1
KPV25	Compact manifold	1
WWM25	Heating circuit/hot water module	1
VTB25	Manifold Bar	1
Ground Controller Accessories		
SZB 680/690	Ground loop circuit package	1
APSVT	Ground loop circuit manifold connection kit	1
SVT200 / 300 / 400	Ground circuit manifold (2/3/4 circuits)	1

SI MEK Ground Source Heat Pumps

The diagram below shows a typical SI MEK heat pump configuration for heating and domestic hot water including typical accessories required for a single heating circuit.
(Note this is for illustrative purposes only and is not intended as a full hydraulic schematic)

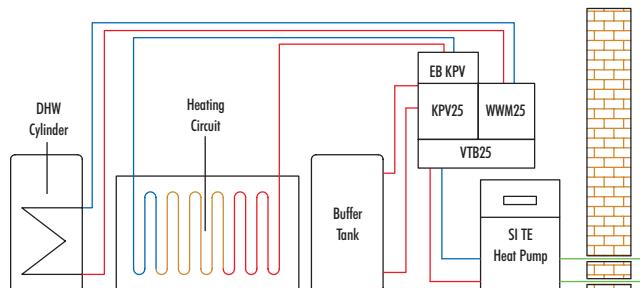


Heat Pump		Qty
SI 11/16/MEK	Ground source heat pump (single phase)	1
Heating and Hot Water Accessories		
PSP100E	100L under-unit buffer tank	1
VSH KS	Buffer tank connection hose	1
WWSP 442EUK	400L hot water storage tank	1
VSW KS	Hot water tank connection hose	1
Ground Loop Accessories		
APSVT	Ground loop manifold connection kit	1 pair
SVT200/300/400	Ground circuit manifold 2/3/4 circuits	1 pair

SI TE Ground Source Heat Pumps

The diagram below shows a typical SI TE heat pump configuration for heating and domestic hot water including typical accessories required for a single heating circuit.

(Note this is for illustrative purposes only and is not intended as a full hydraulic schematic)



Heat Pump		Qty
SI17/21/24/37 TE	Ground Source Heat Pump	1
Heating and Hot Water Accessories		
PSW200/500	200L/500L buffer tank	1
KPV25*	Compact manifold	1
DDV32†	Differential pressure manifold	1
WWM 25*	Heating circuit/hot water module	1
VTB25*	Manifold bar	1
EB KPV**	Bypass module	1
Ground Loop Accessories		
SZB700/710/250/400	Ground loop circuit package	1
APSVT*	Ground circuit manifold connection kit	1
SVT200/300/400*	Ground circuit manifold 2/3/4 circuits	1

*not suitable for SI 24/37 TE

**required for SI 21 TE

†suitable for SI 24 TE only

	SI 5 ME	SI 7 ME	SI 9 ME	SI 11 ME	SI 14 ME
Operating Limits					
Heating water supply/return °C			Max 58 / min 18		
Brine (heating) °C			-5 to +25		
Anti-freeze agent			Monoethylene glycol		
Minimum anti-freeze concentration	25%	25%	25%	25%	25%
Performance					
Heating capacity B0 / W35 ¹	4.9	6.3	8.9	10.8	14.8
Coefficient of Performance B0 / W35 ¹	3.8	3.7	3.8	3.9	3.9
Sound power level dB (A)	54	55	56	56	56
Refrigerant: total charge type/weight (kg)	R407C / 1.2	R407C / 1.4	R407C / 1.7	R407C / 1.9	R407C / 2.2
Dimensions H x W x L (mm)	805x650x462	805x650x462	805x650x462	805x650x462	805x650x462
Weight (including packaging) (kg)	109	111	118	122	130
Nominal Voltage / fuse rating (V/A)	230 / 16	230 / 16	230 / 20	230 / 25	230 / 32
Starting current with soft starter (A)	24	26	38	38	50

	SI 5 MER	SI 7 MER	SI 9 MER	SI 11 MER
Operating Limits (cooling)				
Cooling water supply °C			+7 to +20	
Brine (cooling) °C			-5 to +25	
Performance				
Heating capacity B0 / W35 (kW) ¹	4.9	6.4	9.3	11.6
Coefficient of Performance B0 / W35 ¹	3.9	3.8	4.0	4.1
Cooling capacity B10 / W35 (kW)	6.8	8.8	12.4	14.1
Coefficient of Performance B10 / W18	6.7	6.6	6.7	6.5
Refrigerant: total charge type/weight (kg)	R407C / 0.9	R407C / 0.9	R407C / 1.25	R407C / 1.6
Weight (including packaging) (kg)	115	117	124	128
Nominal Voltage / fuse rating (V/A)	230 / 16	230 / 16	230 / 20	230 / 25
Starting current with soft starter (A)	24	26	38	38

¹ Performance standards measured to EN14511

	SI 11 MEK	SI 16 MEK
Operating limits		
Heating water supply/return °C	Max 58 / min 18	
Brine (heating) °C	-5 to +25	
Anti-freeze agent	Monoethylene glycol	
Minimum anti-freeze concentration	25%	25%
Performance		
Heating capacity B0 / W35 ¹ (kW)	11.8	15.8
Coefficient of Performance B0 / W35	4.4	4.2
Sound power level dB (A)	51	51
Refrigerant: total charge type/weight (kg)	R407C / 2.0	R407C / 2.3
Dimensions H x W x L (mm)	1115x652x688	1115x652x688
Weight (including packaging) (kg)	191	203
Nominal Voltage / fuse rating (V/A)	230 / 25	230 / 32
Starting current with soft starter (A)	38	50

¹ Performance standards measured to EN255

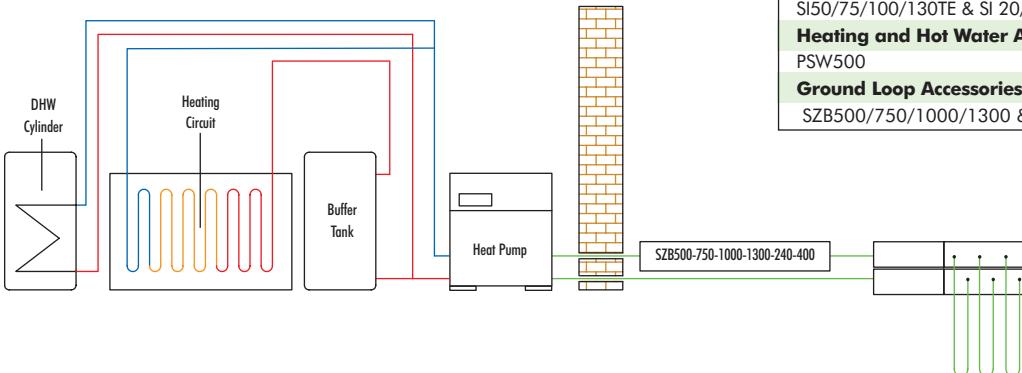
	SI 17 TE	SI 21 TE	SI 24 TE	SI 37 TE
Operating Limits				
Heating water supply/return °C		Max 58 / min 18		Max 60 / min 18
Brine (heating) °C		-5 to +25		
Anti-freeze agent		Monoethylene glycol		
Minimum anti-freeze concentration	25%	25%	25%	125%
Performance				
Heating capacity B0 / W35 (kW) ¹				
1 compressor	16.9	20.8	12.7	18.3
2 compressors	-	-	23.7	35.4
Coefficient of Performance B0 / W35 ¹				
1 compressor	4.4	4.1	4.3	4.5
2 compressors	-	-	4.1	4.3
Sound power level dB (A)	58	59	-	-
Refrigerant: total charge type/weight (kg)	R407C / 2.3	R407C / 4.5	R404A / 3.7	R404A / 6.8
Dimensions H x W x L (mm)	805x650x462	1445x650x575	1660x1000x775	1660x1000x775
Weight (including packaging) (kg)	133	225	282	371
Nominal Voltage / fuse rating (V/A)	400 / 16	400 / 20	400 / 20	400 / 20
Starting current with soft starter (A)	27	29	20	26

¹ Performance standards measured to EN14511

SI TE / SI TEH Ground Source Heat Pumps

The diagram below shows a typical SI TE / SI TEH heat pump configuration for heating and domestic hot water including typical accessories required for a single heating circuit.

(Note this is for illustrative purposes only and is not intended as a full hydraulic schematic)

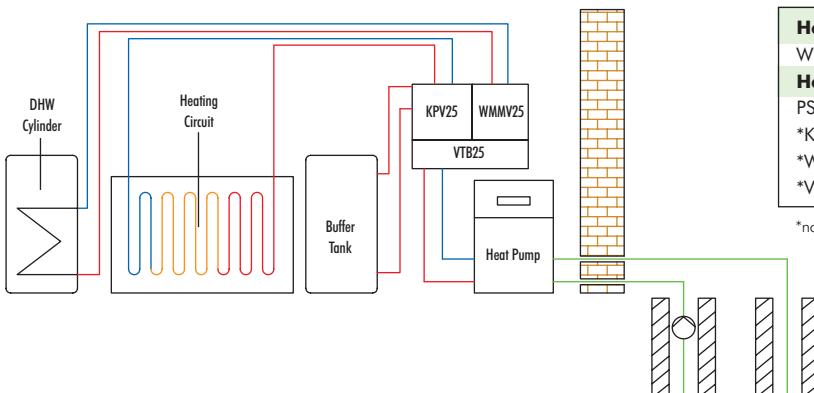


	Qty
Heat Pump	1
SI50/75/100/130TE & SI 20/40TEH Ground Source Heat Pump	
Heating and Hot Water Accessories	
PSW500	500L buffer tank
1/2	
Ground Loop Accessories	
SZB500/750/1000/1300 & SZB250/400	

WI ME /WI TE / WI CS Water to Water Heat Pumps

The diagram below shows a typical WI ME / WI TE / WI CS heat pump configuration for heating and domestic hot water including typical accessories required for a single heating circuit.

(Note this is for illustrative purposes only and is not intended as a full hydraulic schematic)



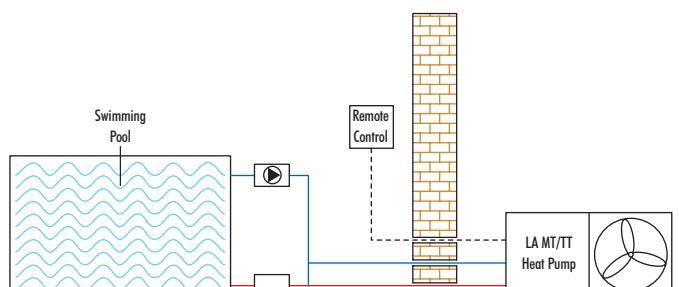
	Qty
Heat Pump	1
WI9/14/18/22/27/40/90	Water Source Heat Pump
Heating and Hot Water Accessories	
PSW100/200/500	200L/500L buffer tank
*KPV25	1
*WWM 25	Compact Manifold
*VTB25	Heating Circuit/hot water module
	1
	Manifold bar
	1

*not suitable for WI 40, 90 CG

LAS MT / LAS TT Swimming Pool Heat Pumps

The diagram shows a typical LAS MT / LAS TT heat pump configuration for swimming pool heating.

(Note this is for illustrative purposes only and is not intended as a full hydraulic schematic)



	SI 50 TE	SI 75 TE	SI 75 TER	SI 100 TE	SI 130 TE	SI 20 TEH	SI 40 TEH
Operating limits							
Heating water supply/return °C				Max 60 / min 18		Max 70 / min 18	
Brine (heating) °C				-5 to +25			
Anti-freeze agent				Monoethylene glycol			
Minimum anti-freeze concentration	25%	25%	25%	25%	25%	25%	25%
Performance							
Heating capacity B0 / W35 (kW)							
1 compressor	23.0 ¹	37.6 ¹	35.1 ¹	48.4 ¹	63.3 ¹	11.5 ²	17.4 ²
2 compressors	46.7 ¹	75.2 ¹	65.3 ¹	96.3 ¹	125.8 ¹	21.4 ²	34.2 ²
Coefficient of Performance B0 / W35							
1 compressor	4.4 ¹	4.3 ¹	3.8 ¹	4.6 ¹	4.2 ¹	4.6 ²	4.1 ²
2 compressors	4.5 ¹	4.4 ¹	3.5 ¹	4.6 ¹	4.3 ¹	4.4 ²	4.1 ²
Cooling capacity B10 / W18 (kW)							
1 compressor	-	-	53.2	-	-	-	-
2 compressor	-	-	98.2	-	-	-	-
Coefficient of Performance B10 / W18							
1 compressor	-	-	8.2	-	-	-	-
2 compressors	-	-	6.3	-	-	-	-
Sound power level dB (A)	50	54	54	55	56	47	50
Refrigerant: total charge type/weight (kg)	R404A / 8.6	R404A / 14.1	R404A / 16.1	R404A / 20.5	R404A / 27.0	R134A / 4.2	R134A / 8.0
Dimensions H x W x L (mm)	1890x1350x775	1890x1350x775	1890x1350x775	1890x1350x775	1890x1350x775	1660x1000x775	1890x1350x775
Weight (including packaging) (kg)	486	571	607	652	860	307	502
Nominal Voltage / fuse rating (V/A)	400 / 50	400 / 63	400 / 63	400 / 80	400 / 80	400 / 25	400 / 63
Starting current with soft starter (A)	56	105	105	120	115	30	84

¹ Performance standards measured to EN255

² Performance standards measured to EN14511

	WI 9 ME	WI 14 ME	WI 18 TE	WI 22 TE	WI 27 TE	WI 40 CS	WI 30 CS
Operating limits							
Heating water supply/return °C			Up to 58			Up to 55	
Water (source) °C				+7 to +25			
Performance							
Heating capacity W10/W35 (kW)							
1 compressor	8.2 ¹	13.5 ¹	16.9 ¹	21.3 ¹	26.1 ¹	23.4 ²	49.8 ²
2 compressors	-	-	-	-	-	44.4 ²	91.2 ²
Coefficient of performance W10/W35							
1 compressor	4.8 ¹	4.7 ¹	5.2 ¹	5.3 ¹	4.9 ¹	5.9 ²	5.9 ²
2 compressors	-	-	-	-	-	5.7 ²	5.4 ²
Refrigerant: total charge type/weight (kg)	R407C / 1.7	R407C / 1.9	R407C / 3.5	R407C / 4.2	R407C / 4.5	R407C / 6.7	R407C / 15
Dimensions H x W x L (mm)	1445x650x575	1445x650x575	1445x650x575	1445x650x575	1445x650x575	830x1480x890	830x1480x890
Weight (including packaging) (kg)	156	165	187	189	259	309	460
Nominal Voltage / fuse rating (V/A)	230 / 16	230 / 25	400 / 16	400 / 20	400 / 20	400 / 35	400 / 63
Starting current with soft starter (A)	26	45	28	27	29	26	60

¹ Performance standards measured to EN255

² Performance standards measured to EN14511

	LAS 10 MT	LAS 15 MT	LAS 22 TT
Operating Limits			
Heating water supply/return °C	+10 to +40	+10 to +40	+10 to +40
Air °C	-10 to +35	-10 to +35	-10 to +35
Performance			
Heating capacity (kW)			
A20/V24	12.1/2.9	16.6/3.5	22.3/4.4
Sound pressure level at a distance of 10m dB (A)	45	45	46
Refrigerant: total charge type/weight (kg)	R407C / 1.5	R407C / 1.6	R407C / 2.5
Dimensions H x W x L (mm)	860x127x67	860x127x67	860x127x67
Weight (including packaging) (kg)	147	155	162
Nominal Voltage / fuse rating (V/A)	230/20	230/25	400/16
Starting current with soft starter (A)	33	43	25

Dimplex Heat Pumps – Always the right solution

CERTIFIED QUALITY

Maximum operational reliability of all Dimplex heat pumps is ensured at all times due to continuous quality assurance during production and quality certification to EN ISO 9001. The international heat pump quality label for heat pump heating systems guarantees highest safety and quality standards. The tests conducted by recognised testing institutes provide comparability of results, ensure compliance with standards and guarantee an extensive after-sales network with at least 10-year spare parts availability. Dimplex is also a Member of the Heat Pump Association [HPA], the Ground Source Heat Pump Association [GSHPA], BEAMA Low Carbon and the European Heat Pump Association.



SPECIFICATIONS

Dimplex policy is one of continuous improvement; the Company therefore reserves the right to alter specifications without notice. Although every care has been taken in the reproduction of product finishes in this brochure, the colour photographs should be taken only as a guide. The information contained in this brochure is correct at the time of printing.

CE MARK

Products carrying the CE mark comply with European safety standards and the European Standard for electro-magnetic compatibility.



THE DIMPLEX RANGE

Dimplex offers the widest range of electric space and water heating products in the world – nearly 400 – to meet almost any heating need. In addition to this publication, we have a wide range of brochures for both domestic and commercial applications.

Choose from:



The guide



Solar heating brochure



Ascari electric boiler brochure



Water heating brochure



Commercial brochure



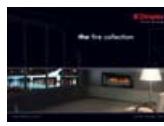
Outdoor heating brochure



Daytona towel rail brochure



Portables brochure



Fires brochure



Suits brochure



Panels brochure

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