

PIPELIFE RENEWABLE BROCHURE

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Discover our full product range at www.pipelife.ie

PIPELIFE 
always part of your life

ABOUT PIPELIFE

50 YEARS OF PROUD IRISH MANUFACTURING & SERVING THE IRISH PLUMBING & HEATING INDUSTRY

Pipelife is Ireland's leading manufacturer and provider of plastic piping systems. Specialising in the extrusion of polyethylene (PE) pipes, Pipelife offers industry leading products for the heating & plumbing, water pressure, electricity, cable ducting, gas and agricultural sectors.

Drawing on 50 years of manufacturing experience from our production plant in Cork, Pipelife has been to the forefront in developing innovative products, and has been an industry leader for many years. Quality and innovation continue to be the terms that define our philosophy and this is reflected in the range of products and systems that we manufacture to this day.

As well as being a leading edge manufacturer (ISO 9001 2015) of pipe for the Plumbing and Heating Industry, Pipelife has developed a true expertise in the design of heating systems to maximize the potential of Qual-PEX pipe.

Many systems are straight-forward and are simply adapted from traditional metal pipe plumbing systems, but new methods of heating buildings are now being opened up with the use of

thermoplastic pipe in applications such as wall heating, ceiling heating and most especially Underfloor Heating.

The experience and expertise of our Renewables Department coupled with the security of our design indemnity insurance, top quality materials, and comprehensive before and after sales technical support ensures that we continue to offer an industry leading service. Selling exclusively through merchants our service is tailored to making the supply of renewable products & services easy, professional and painless.

PIPELIFE IS ONE OF THE WORLD'S LEADING SUPPLIERS OF PLASTIC PIPE SYSTEMS, CURRENTLY PRESENT IN 26 COUNTRIES. PIPELIFE MANUFACTURES AND MARKETS A WIDE RANGE OF QUALITY PIPE SYSTEMS, WITH ANNUAL SALES OF APPROXIMATELY 1BN.

WHAT WE CAN OFFER YOU

BESPOKE SYSTEMS

INTEGRATED SYSTEMS

STANDALONE
SYSTEMS

TECHNICAL
KNOW HOW

20 + YEARS
EXPERIENCE

UNRIVALLED
EXPERIENCE

BACKUP SERVICE

IRISH COMPANY

LATEST TECHNOLOGY

IN-HOUSE SPECIAL
DESIGN SOFTWARE

COMMITMENT TO YOU

PEACE OF MIND



OUR PRODUCTS- YOUR BENEFITS



Tried & Tested Technology -

Pipelife is Ireland's leading manufacturer of underfloor heating systems comprising of our new Qual-Pex Plus+ 'Easy-Lay' Heating & Plumbing Pipe. Get the Plus+ Advantage.

Full Design Service

Our in-house engineers can provide detailed plans for the application of renewable technologies specific to an individual projects from domestic to commercial. These include full heat loss calculations, energy saving estimates, plus a complete product and accessory specification.

Customer service

When you choose Pipelife, you have the support of our experienced customer service team, as well as backup provided by our specialist service engineers. Our in-house designers work with homeowners, contractors, architects & consulting engineers across the country in projects ranging from residential homes, hospitals and nursing homes to warehouses and car showrooms.

Wide Distribution Network

Our full product range can be found in all leading merchants throughout Ireland. You can obtain a list of merchants within your area through our website www.pipelife.ie

Your One Stop Shop

At Pipelife we believe in providing our customers with a one-stop-shop for complete package solutions; from market-leading products, free initial advice, through to bespoke design, installation, final commissioning and technical support, allowing you to purchase with confidence.

Our Commitment

Pipelife is Ireland's leading and trusted supplier to the plumbing industry for the last 50 years and with the financial strength of being part of a leading multi-national group you can be sure that your Pipelife system will be fully supported. As an added re-assurance for our customers, Pipelife accepts full responsibility for the design of your system along with the specification, and supply of materials. We also carry full design indemnity and product liability insurance to cover all designs thus giving our customers peace of mind that when they choose Pipelife they choose quality products, reliable systems and an after sales commitment that other operators cannot compete with. For more information and to talk to our team call us on 021 488 4700 or e-mail us at ireland@pipelife.com



TRAINING ACADEMY

KEEP UP TO DATE AND ENHANCE YOUR KNOWLEDGE...

Renewable Heating Systems have become an important area for the building services industry. Understanding how to provide these sources, systems and applications is seen as key in meeting the future needs of both commercial and domestic heating.

Expertise is vital to renewables success and so Pipelife are delighted to offer a range of courses that have been specifically designed to provide experienced heating, plumbing, installation and building professionals with a real understanding of the potential for renewable energy sources, installation and their application. Relevant, practical, industry-leading training courses delivered at our state-of-the-art Academy in Cork or Dublin by fully qualified professionals in a relaxed, informal environment.

The courses are free to attend and will be led by members of our Technical Team who have a wealth of practical knowledge and installation practices, and feature a detailed tour of the Pipelife manufacturing facility where visitors are given the opportunity to see first-hand where our products are designed and manufactured. The free courses will be available to installers, service engineers, plumbers, merchants, architects, local authorities and BER Assessors. By offering a valuable insight into each of our heating technologies, those who attend our courses will be equipped with the best product knowledge and installation techniques, ensuring that our customers are fully satisfied. We are also a registered training provider with Engineers Ireland.

TRAINING COURSES

Heat Pump Training-

Intended for domestic heating and renewable installers who wish to know more about our Air to Water heat pump range. Training covers both the Hitachi Yutaki S Split Combi and Midea Monobloc Heat pumps. This course covers its construction, principles of operation, electrical wiring, controller settings, sizing, selection of the correct unit(s) to suit the property concerned, installation considerations, requirements and commissioning the complete system.



Underfloor Heating -

Intended for domestic heating installers of boilers or Air to Water Heat Pumps either with Underfloor Heating experience or those wishing to know more about Pipelife underfloor heating systems. This training course covers the basic principles of underfloor heating and the system design considerations, as well as full details of the Pipelife systems, their installation, filling, pressure testing and commissioning. Also included are full details of the Pipelife UFH control system, the options, operation, installation and set-up.

CPD TRAINING FOR ARCHITECTS, ENGINEERS, ENERGY ASSESSORS, ETC

Continuous Personal Development (CPD) is training we provide here and off site for architects, engineers, energy assessors and similar minded professionals. These certified courses are available in many technologies, give insight and knowledge on current and new products and areas for which are relevant to attendees.

Our course titles are -

- Underfloor Heating Systems Design & Control
- An Introduction to Air to Water Heat Pumps – Split Combi Unit
- An Introduction to Air to Water Heat Pumps – Monobloc

To book your training day with Pipelife please contact us at Ireland@pipelife.com, contact us on 021 4884700 or visit our website www.pipelife.ie/training



TRAINING ACADEMY

TO BOOK YOUR PLACE -
CALL 021 488 4700

E-MAIL - IRELAND@PIPELIFE.COM

COMPLETE PACKAGE SOLUTIONS



At Pipelife we believe in providing our customers with a one-stop-shop for complete package solutions; from market-leading products, free initial advice, through to bespoke design, final commissioning and technical support, allowing you to purchase with confidence.

Multiple Package Solutions Design Service

Designing and building a new home, apartment block or offices? Then look no further than Pipelife for your full heating solution! To meet building standards compliance and other requirements, we offer a free of charge Heating Design Service. With a diverse product portfolio all the heating requirements for a property can be met under one roof.

Pipelife is 100% committed to the correct design, sizing and installation of our heating solution. Our reputation is built on 50 years of manufacturing history in Ireland and this reputation matters immensely to us. As heating solutions have become more complex we have continually invested in new expertise and technology to ensure we stay to the forefront of this evolution.

Every Pipelife home heating solution is fully designed in-house by our experienced design engineering department and is supported by our extensive field service support/engineering team. All our solutions come complete with detailed design drawings, top quality components and an unrivalled expertise built up over many decades.

We provide full design indemnity insurance on all our heating solution systems so you can rest assured our system will deliver on what we promise, providing you with a home heating solution you can rely on for decades to come, safe in the knowledge we will always be there to support you if the need ever arises.

With our fully qualified and dedicated team, who can work directly with the homeowner, the architect, engineer or specifier designing the property / heating system to ensure this is a hassle-free process and saves valuable time on the project.

1. Heat Loss Calculations –

Our Engineering Team carry out room by room heat loss calculations in line with SR:50 requirements. This information provides the heat load requirement for each room and helps to prove compliance with Part L of the building regulations and calculate the heat pump output, the hot water demands and underfloor heating and/or radiators for the property. If further information is needed, a member of the Pipelife Renewable Team will contact you as required.

2. Sizing of the Heat Pump –

Once heat loss calculations are finalised and the heat load for each room within the property is known, a correctly sized Air to Water Heat Pump is specified.

3. Quotations -

A detailed quotation will be provided including a list of materials. The price will include a breakdown of the required sized air to water heat pump, underfloor heating and/or aluminium radiators if required and smart control system and any other plumbing accessories.

4. Ensuring Compliance –

We ensure compliance on all heating requirements for your heating solution. Our team works with BER assessors to ensure future compliance and Building Energy Rating (BER) certification for the property that complies with Part L of the Building Regulations. Compliance includes, Carbon Performance Coefficient (CPC), Energy Performance Coefficient (EPC) and that the property meets a specific Renewable Contribution.

5. Commissioning Your System –

As part of our service Pipelife commission all our air to water heat pump on site by one of our technical engineers at no extra charge. The installer will contact Pipelife to arrange this and agree a suitable date and time. This process will ensure that the unit is installed correctly, set up to match the requirements of the building as well as showing the client how to operate the system controls.

6. Aftercare Service –

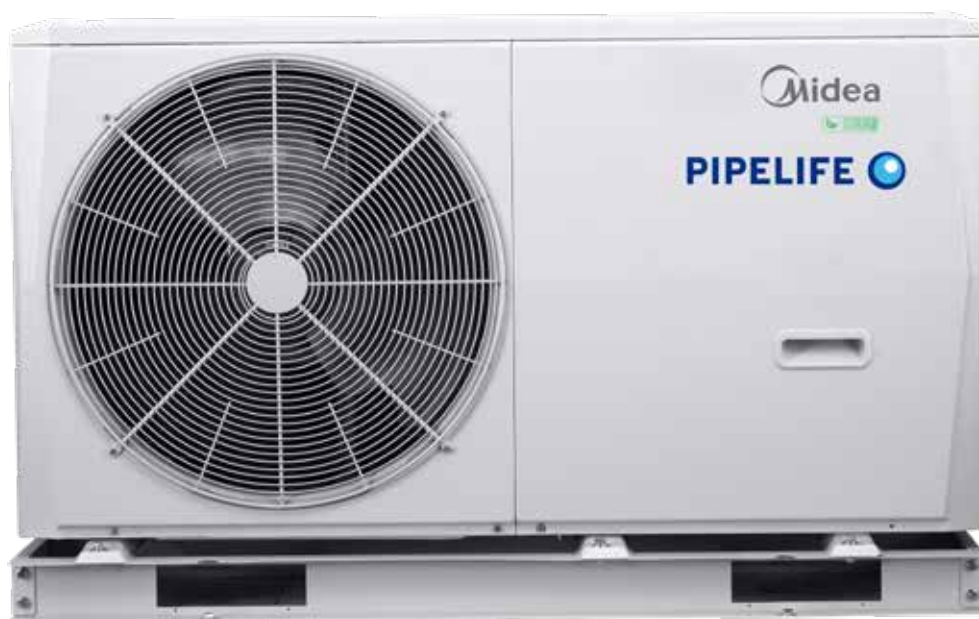
A full aftercare service is provided by the nationwide Pipelife Technical Support Team. Should any spare parts be required at any time, these can be supplied promptly to the local installer. The Engineering Team at Pipelife is also available for any other information you may require.



What we can offer you

BESPOKE SYSTEMS	INTEGRATED SYSTEMS	STANDALONE SYSTEMS	TECHNICAL KNOW HOW
20 + YEARS EXPERIENCE	UNRIVALLED EXPERIENCE	BACKUP SERVICE	IRISH COMPANY
LATEST TECHNOLOGY	IN-HOUSE SPECIAL DESIGN SOFTWARE	COMMITMENT TO YOU	PEACE OF MIND

M THERMAL R32 MONOBLOC AIR TO WATER HEAT PUMP



The Midea M Thermal provides an energy efficient solution that delivers space heating and cooling and domestic hot water. It is a complete all-year round, integrated heating system which can replace, or work in synergy with traditional gas or oil boilers.

WIDE OPERATION RANGE

Available in single phase capacities of 4 kW - 16 kW, or three phase capacities of 12 kW to 30 kW

DOMESTIC HOT WATER AND UNDERFLOOR HEATING

The M Thermal can provide domestic hot water (up to 80°C) and underfloor heating, improving room comfort.

PERFECT FOR SMALL SPACES

The M Thermal is designed for installation in any type of property, especially homes with limited space. Being a compact system with a single unit installed outdoors means the available space indoors remains unchanged.

PERFORMANCE

A+++ ErP Energy Rating

Efficient heating capacity even when at -7°C air temperature. Maintains continuous hot water supply up to 80°C even with outdoor temperatures as low as -20°C

EASY INSTALLATION & MAINTENANCE

All functions are achieved with a single outdoor unit, bringing significant cost savings. Furthermore, installation is quicker and easier as there is no need for refrigerant piping, and the product is pre-charged at the factory. Two-door design for easy access to internal components for easy maintenance.

QUIET OPERATION

The M Thermal produces 35D dB(A) sound pressure level at 3 meters.

ENERGY MONITORING AS STANDARD

Energy consumption data for running cost analysis.

INTUITIVE CONTROL

The remote controller can be used for daily and weekly programming managing water production temperature, operating modes, etc. It also has built-in Wi-Fi as standard which can connect to the 'CONNECT SMART HOME APP'. The unit can be controlled via the App and energy consumption can be viewed along with energy-saving suggestions.

Model	Output	Dimensions (mm)			SCOPS		Weight	Refrigerant
	-2/50	W	H	D	35°C	50°C		
MHC-V4W/D2N8-B	5.1kW	1295	792	429	4.66	3.56	95 Kg	R32
MHC-V6W/D2N8-B	5.7kW	1295	792	429	4.77	3.72	98 Kg	R32
MHC-V8W/D2N8-B	7.25kW	1385	945	453	5.03	3.67	121 Kg	R32
MHC-V10W/D2N8-B	8kW	1385	945	453	5.03	3.78	121 Kg	R32
MHC-V12W/D2N8-B	11kW	1385	945	453	4.67	3.68	144 Kg	R32
MHC-V14W/D2N8-B	14kW	1385	945	453	4.5	3.64	145 Kg	R32
MHC-V16W/D2N8-B	14kW	1385	945	453	4.49	3.59	146 Kg	R32

FEATURES & BENEFITS



- **10 Year Warranty –**
Nothing says you are confident in the quality of your heat pump, more than a 10 year warranty



- **Incredible Value –**
Midea have come to the market with a single purpose of realising as much market share as possible. This is very evident in the incredibly low pricing available.



- **On Board Internet –**
Internet connectivity as standard provides the means to monitor your heat pump, and your heating system from anywhere in the world, helping prevent you arriving to a cold home



- **R32 Refrigerant –**
With a global warming potential of 675 (two-thirds less than R410a) R32 is better for the environment



- **So So Quiet –**
Engineered to be no noisier than 35db(A) at 3m, the Midea M Thermal range need never bother your neighbours ever again.



- **Super Efficient –**
503%* efficiency at a 35 degree flow temperature puts this heat pump in a class clearly of its own!

Specifications

M Thermal Mono

Model name MHC			V5W/D2N8	V7W/D2N8	V9W/D2N8	V12W/D2N8	V14W/D2N8	V16W/D2N8	V12W/D2RN8	V14W/D2RN8	V16W/D2RN8
Power supply			220-240/1/50			220-240/1/50			380-415/3/50		
Heating ¹	Capacity	kW	4.65	6.65	8.60	12.30	14.10	16.30	12.30	14.10	16.30
	Rated input	kW	0.93	1.35	1.87	2.56	3.07	3.66	2.54	3.05	3.63
	COP		5.00	4.94	4.60	4.81	4.60	4.45	4.84	4.63	4.49
Heating ²	Capacity	kW	4.80	6.70	8.60	12.40	14.10	16.20	12.40	14.10	16.20
	Rated input	kW	1.33	1.88	2.50	3.52	4.06	4.72	3.45	3.99	4.70
	COP		3.60	3.57	3.44	3.53	3.47	3.43	3.59	3.54	3.45
Heating ³	Capacity	kW	4.65	6.80	8.60	11.90	14.20	16.10	11.90	14.20	16.10
	Rated input	kW	1.77	2.42	3.13	4.28	5.17	5.91	4.24	5.10	5.83
	COP		2.63	2.81	2.75	2.78	2.75	2.73	2.81	2.79	2.76
Cooling ⁴	Capacity	kW	4.60	6.45	8.00	12.20	14.00	15.50	12.20	14.00	15.50
	Rated input	kW	0.95	1.39	1.92	2.55	3.10	3.64	2.53	3.11	3.63
	EER		4.82	4.65	4.16	4.78	4.52	4.26	4.83	4.50	4.27
Cooling ⁵	Capacity	kW	4.85	6.30	7.95	10.90	12.90	13.80	10.90	12.90	13.80
	Rated input	kW	1.63	2.27	3.15	3.74	4.64	5.21	3.72	4.62	5.19
	EER		2.98	2.77	2.53	2.92	2.78	2.65	2.93	2.80	2.66
Seasonal space heating energy efficiency class ⁶	LWT at 35°C	class	A+++	A+++	A+++	A++	A++	A++	A++	A++	A++
	LWT at 55°C	class	A++	A++	A++	A++	A++	A++	A++	A++	A++
SCOP	LWT at 35°C		4.47	4.47	4.51	4.29	4.27	4.30	4.29	4.27	4.30
	LWT at 55°C		3.24	3.24	3.22	3.23	3.26	3.27	3.23	3.26	3.27
SEER	LWT at 7°C		4.71	4.99	4.92	4.85	4.73	4.54	4.85	4.73	4.54
	LWT at 18°C		7.61	8.58	7.88	7.50	7.16	6.78	7.50	7.16	6.78
Air flow		m³/h	3050	3050	3050	6150	6150	6150	6150	6150	6150
Sound power level ⁷		dB(A)	61	64	67	68	71	71	68	71	71
Sound pressure level ⁷ (1m)		dB(A)	48.8	52.3	54.5	57.6	58.0	58.1	57.2	58.1	59.0
Net dimensions (WxHxD)		mm	1210x945x402			1404x1414x405			1404x1414x405		
Packed dimension (WxHxD)		mm	1500x1140x450			1475x1580x440			1475x1580x440		
Net/Gross weight		kg	92/111			158/178			172/193		
Water piping connections Dia.		inch	1" Male BSP			1-1/4" Male BSP			1-1/4" Male BSP		
Safety valve set pressure		MPa	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Expansion tank volume		L	2	2	2	5	5	5	5	5	5
Total water volume		L	2	2	2	3.2	3.2	3.2	3.2	3.2	3.2
Ambient temperature range	Cooling	°C	-5-43			-5-46			-5-46		
	Heating	°C	-25-35			-25-35			-25-35		
	DHW	°C	-25-43			-25-43			-25-43		
LWT range	Cooling	°C	5-25			5-25			5-25		
	Heating	°C	25-60			25-60			25-60		
	DHW	°C	40-60			40-60			40-60		
Refrigerant	Type		R32			R32			R32		
	Charged volume	kg	2.0			2.8			2.8		
Throttle type			Electronic expansion valve			Electronic expansion valve			Electronic expansion valve		
Backup electric heater	Standard mounted	kW	/	/	/	/	/	/	/	/	/
	Optional	kW	3	3	3	3	3	3	4.5	4.5	4.5
	Capacity steps		1	1	1	1	1	1	1	1	1

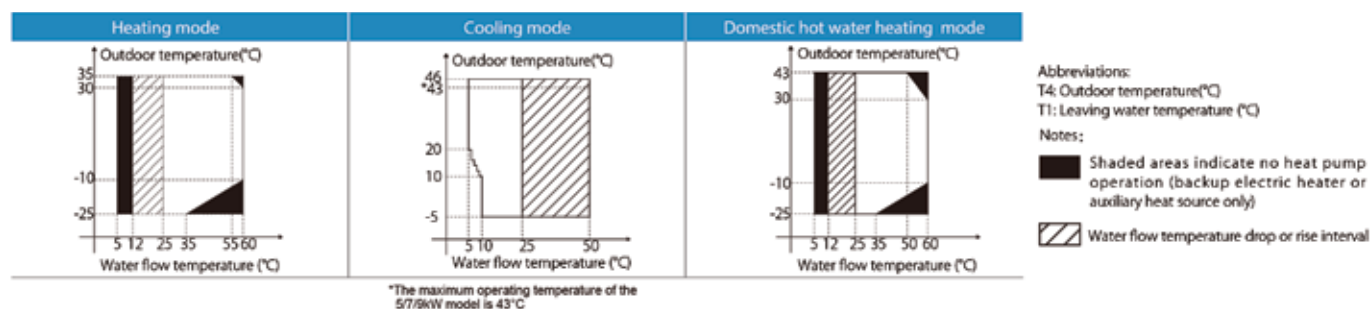
Notes:

1. Evaporator air in 7°C, 85% RH, Condenser water in/out 30/35°C
2. Evaporator air in 7°C, 85% RH, Condenser water in/out 40/45°C
3. Evaporator air in 7°C, 85% RH, Condenser water in/out 47/55°C
4. Condenser air in 35°C, Evaporator water in/out 23/18°C
5. Condenser air in 35°C, Evaporator water in/out 12/7°C
6. Seasonal space heating energy efficiency class testes in average climate general conditions.
7. Sound power level and sound pressure level are the maximum value tested under the three conditions of Notes1, Notes3 and Notes5.
8. The above data test reference standard EN14511; EN14825; EN50564; EN12102; (EU) No 811/2013; (EU)No 813/2013; OJ 2014/C 207/02.2014.

Abbreviations:

DHW: Domestic hot water
EWT: Entering water temperature
LWT: Leaving water temperature

Operating Limits



THE MIDEA M THERMAL R32 MONOBLOC AIR-TO-WATER HEAT PUMP



A REAL CONTENDER



Discover Easy-Comfort with our New Midea Monobloc Heat Pump which comes with a Market Leading 10 Year Warranty! Another Plus+ Advantage from Pipelife!



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Discover our full range at www.pipelife.ie

PIPELIFE 
always part of your life

HITACHI YUTAKI S SPLIT COMBI AIR TO WATER HEAT PUMP

HITACHI

Hitachi has more than 60 years' experience in manufacturing heating equipment, with over 4.5 million ASHP systems produced and in excess of 400,000 customers throughout Europe. Their European factory produces the entire Yutaki air source heat pump range, designing it to meet the needs of the local European market.

The Hitachi Yutaki range is one of the most efficient and easy to operate heat pump ranges available in the market today. It's minimalist design and low noise level allow the S-Combi indoor units to seamlessly integrate into any kitchen or utility space. Making this unit an excellent choice for any heating system. The Yutaki range has the maximum A+++ energy classification in all its ranges ensuring you make savings on your energy bills, reduce electricity.

The Hitachi Yutaki S-Combi Split range is one of the most efficient and easy to operate heat pump ranges available in the market today. It's minimalist design and low noise level allow the S-Combi indoor units to seamlessly integrate into any kitchen or utility space. The Yutaki range has the maximum A+++ energy classification in all its ranges ensuring you make savings on your energy bills, reduce electricity. This range of heat pumps is smart grid ready and can be controlled through an app, and monitored online using Hitachi's Hi-Kumo Pro system (optional extra). The Yutaki S Combi is designed for any type of installation thanks to its wide range of models. From 1.85 kW up to 17.80 kW for heating, and from 3.80 kW to 13.70 kW for cooling. Making this unit an excellent choice for any heating system whether new build or retrofit.





Best performances for a high level of comfort

The most efficient range all year long, whatever the function is

- Seasonal efficiency up to A+++
- Best efficiency: COP 5.25 and EER 5.4
- 60°C down to -10°C outside

Exclusive European-designed unit

Better support installers in their work

- Optimized integration into the house
- Reduced installation footprint
- Easy to get familiar with the LCD controller



R32 Refrigerant Models

Switch to low GWP refrigerant is well underway at JCH

- Environmentally friendly
- More efficient
- In line with FGas target

Plus & Play units -

Make installation easy and quick for all installers

- Connections aligned on the top
- Easy access to all components
- Exclusive functionalities on the LCD controller (Wizard, Live view, Commissioning menu)

Keymark Certified -

100% of the range HP Keymark certified

- Unique European certification
- Highest level of quality and performances guaranteed

Connected Solutions -

Take the control of Yutaki from anywhere!

- Remote control
- Remote maintenance



Yutaki SCombi

Model		R32			R410A		
		YUTAKI SCOMBI 4.3kW	YUTAKI SCOMBI 6kW	YUTAKI SCOMBI 8kW	YUTAKI SCOMBI 11kW	YUTAKI SCOMBI 14kW	YUTAKI SCOMBI 16kW
Heating performances <small>(preliminary data)</small>							
Min./nom./max. heating capacity (A7/W35)	kW	1.85 / 4.3 / 6.5	1.85 / 6 / 8.6	2.1 / 8 / 11	4.3 / 11 / 15.2	4.8 / 14 / 16.7	5.5 / 16 / 17.8
Nom./max. heating capacity (A-T/W35)	kW	4.5 / 5.3	5.3 / 6.2	5.8 / 7.5	9.7 / 10.6	11.5 / 12	12 / 13
Nom./max. heating capacity (A-T/W45)	kW	- / 5	- / 5.8	- / 6.67	10 / 10	11 / 11.6	11.5 / 12.5
Nom./max. heating capacity (A-T/W55)	kW	4 / 4.2	4.7 / 5	5 / 5.5	8.7 / 9.7	9.7 / 11.2	10.5 / 12
Nom. power input (A7/W35)	kW	0.82	1.25	1.74	2.2	2.97	3.5
COP (A7/W35) according to EN14511	-	5.25	4.8	4.6	5	4.71	4.57
SCOP average climate 35°C / 55°C according to EN14825	-	4.6 / 3.4	4.5 / 3.25	4.5 / 3.2	4.8 / 3.5	4.48 / 3.43	3.9 / 3.23
Seasonal heating energy efficiency $\eta_{s,35}$ (35°C) 1~3~	%	181	177	177	187 / 186	175 / 174	153 / 152
Seasonal heating energy efficiency $\eta_{s,55}$ (55°C) 1~3~	%	133	127	125	136 / 135	133 / 133	125 / 125
Energy class 35°C / 55°C	-	-	A+++ / A++	-	A+++ / A++	-	A++ / A++
Water outlet temperature range (heating mode)	°C	-	20 / 60°C	-	-	20 / 60°C	-
Max. water temperature outlet in thermodynamic mode only	°C	-	60°C down to -5°C outside	-	-	60°C down to -10°C outside	-
DHW performances <small>(preliminary data)</small>							
DHW COP (220L) according to EN16147	-	-	3.2	-	-	3.1	-
Seasonal energy efficiency $\eta_{s,220}$ (L cycle)	%	-	130	-	-	127	-
Energy class	-	-	A+	-	-	A+	-
Heat up time	h:min	-	1:55	-	-	1:05	-
Stand-by power input (P _{es})	W	-	30	-	-	34	-
Max. volume of usable hot water (V _{max})	L	-	288	-	-	288	-
Temperature range of water outlet (DHW mode)	°C	-	30 / 55°C	-	-	30 / 55°C	-
Cooling performances (optional) <small>(preliminary data)</small>							
Nom./max. cooling capacity (A35/W7)	kW	4 / 5	5.3 / 6	6.5 / 7	7.2 / 11.8	9.5 / 12.6	10.5 / 13.7
Nom. power input (A35/W7)	kW	1	1.47	1.94	2.18	2.95	3.72
EER	-	4	3.6	3.35	3.54	3.54	3.31
INDOOR UNITS							
		RWD-2.0RW1E-220S	RWD-2.5RW1E-220S	RWD-3.0RW1E-220S	RWD-4.0RW1E-220S	RWD-5.0RW1E-220S	RWD-6.0RW1E-220S
Electric heater / 3 steps	kW	3 (1+1+1)	3 (1+1+1)	3 (1+1+1)	6 (2+2+2)	6 (2+2+2)	6 (2+2+2)
Tank's heater	kW	2.7	2.7	2.7	2.7	2.7	2.7
Net weight	kg	120	120	121	124	126	126
Dimensions (H x L x D)	mm	-	1788 x 595 x 598	-	-	1788 x 595 x 598	-
Sound power	dB(A)	-	37	-	-	39	-
DHW tank volume / material	L	-	220 / Duplex	-	-	220 / Duplex	-
Hydraulic data							
Expansion vessel	L	-	6	-	-	6	-
Water flow (min./nom./max.)	m³/h	0.5 / 0.77 / 1.9	0.6 / 1.03 / 2	0.6 / 1.29 / 2.1	1 / 1.89 / 2.7	1.1 / 2.41 / 2.8	1.2 / 2.75 / 2.8
Shutdown valves (male/male valves supplied)	inches	-	1"	-	-	1" 1/4	-
Connections for DHW	inches	-	3/4"	-	-	3/4"	-
Min. installation water volume	L	-	28	-	38	46	55
Electrical data							
Power supply	-	-	230V / 1Ph / 50Hz or 400V / 3Ph / 50Hz	-	-	230V / 1Ph / 50Hz or 400V / 3Ph / 50Hz	-
1~230V	Max. current with electric heater + tank heater	A	27.1	-	-	44.8	-
	Cable width (mm²) / max. length (m) ⁽¹⁾	-	3 x 6 / 28	-	-	3 x 10 / 30	-
1~400V	Max. current with electric heater + tank heater	-	-	-	-	24.7	-
	Cable width (mm²) / max. length (m) ⁽¹⁾	-	-	-	-	5 x 6 / 20	-
OUTDOOR UNITS							
		RAS-2WHVRP1	RAS-2.5WHVRP1	RAS-3WHVRP1	RAS-4WH(V)NPE	RAS-5WH(V)NPE	RAS-6WH(V)NPE
Sound pressure level at 1m / sound power level in Heating mode	dB(A)	46 / 61	47 / 63	54 / 67	49 / 64	50 / 65	50 / 67
Air flow rate	m³/h	-	2436	2682	4800	5400	6000
Dimensions (H x L x D)	mm	-	629 x 799 x 300	-	-	1380 x 950 x 370	-
Net weight	kg	-	45	44	-	103	-
Operating ranges in Cooling / Heating / DHW	°C	-	+10~+46 // -20~+25 // -20~+35	-	-	+10~+46 // -25~+25 // -25~+35	-
Refrigerant data							
Piping diameter (Liquid - Gas)	inches	-	1/4" - 1/2"	1/4" - 5/8" 3 to 27m* 3/8" 5/8" 27 to 50m*	-	3/8" 5/8"	-
Min./max. piping length / Height difference	m	-	3 - 50 / 20	3-40 / 20	-	5 - 75 / 20	-
Refrigerant charge / Additional refil. charge needed	kg / g	-	1.2 for 10m / 15	1.3 for 10m / 15	1.3 for 10m / 30	3.3 for 15m / 60	3.4 for 15m / 60
Refrigerant	-	-	R32	-	-	R410A	-
Compressor	-	-	SCROLL	ROTARY	-	SCROLL	-
Electrical data							
Power supply	-	-	230V / 1Ph / 50Hz	-	-	230V / 1Ph / 50Hz or 400V / 3Ph / 50Hz	-
1~230V	Max. current	A	10.4	12.9	15.8	30.5	-
	Cable width (mm²) / max. length (m) ⁽¹⁾	-	3 x 2.5 / 28	3 x 2.5 / 24	3 x 4 / 21	3 x 6 / 30	-
3~400V	Max. current	-	-	-	-	14	16
	Cable width (mm²) / max. length (m) ⁽²⁾	-	-	-	-	5 x 2.5 / 16	5 x 2.5 / 16
Transmitting cables (protected)	mm²	-	2 x 0.75	-	-	2 x 0.75	-

(1) Data given for reference purposes only. Compliant with the applicable electrical standards. (N) = mono. * 2/2.5/3HP R32 models have different diameters for the cooling gas pipes, cooler connection groups, and indoor units. For that reason, use the adapters provided with the outdoor unit.

FEATURES & BENEFITS

NEW INDOOR UNIT DESIGN, MORE FUNCTIONALITIES

Controls & connectivity

Newest LCD controller generation

- Outstanding design and user experience.
- With a sleek, award-winning design, our new advanced colour controller offers elegance and ease-of-use.
- New Yutaki S Combi LCD controller can be detached from indoor units and be used as a wired room thermostat.
- All controls embedded in the LCD controller of Yutaki: second circuit, boiler combination, swimming pool operation, electric heater, etc.
- Configuration of the unit is done in few clicks through the LCD controller!

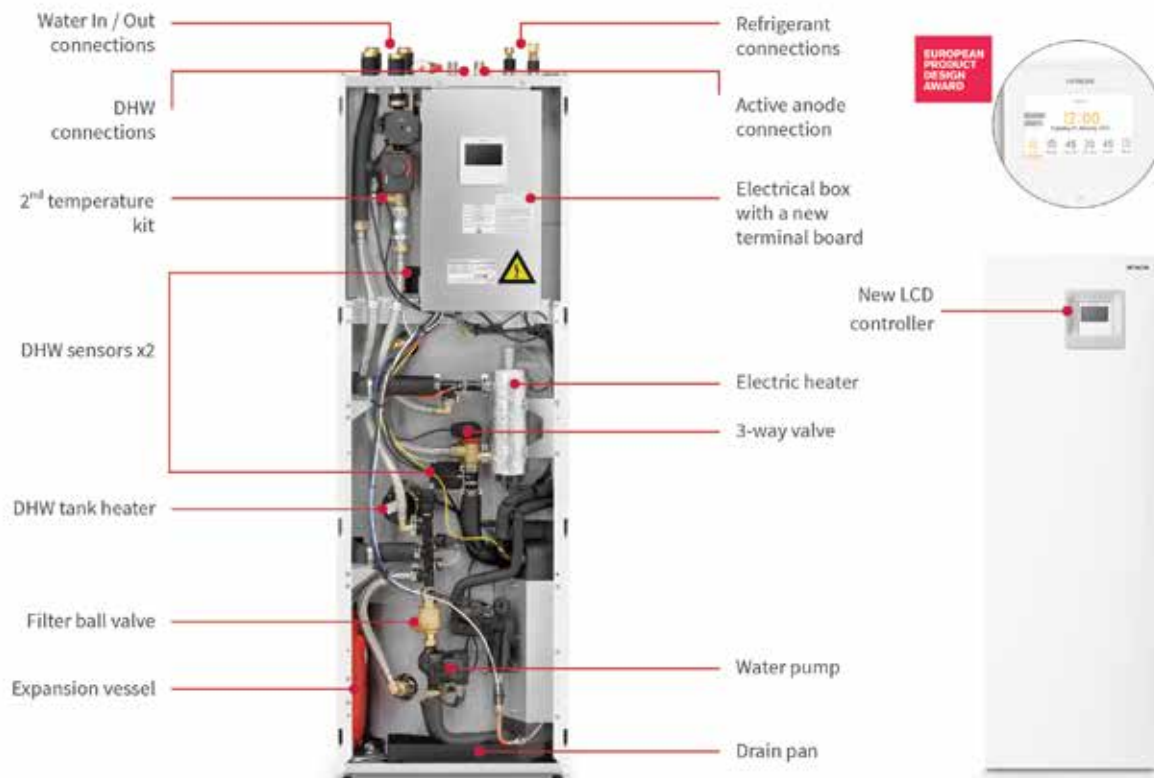


**Outstanding design
and user experience.**

With a sleek, award-winning design, our new advanced color controller offers elegance and ease-of-use. New Yutaki S & S Combi LCD controller can be detached from indoor units and be used as a wired room thermostat.



YUTAKI SCOMBI : MOST COMPACT ALL-IN-ONE MODEL OF THE MARKET



QUAL-PEX PLUS+ EASY-LAY PIPE



Guaranteed
Irish



- Qual-PEX Plus+ Easy-Lay Pipe is the next generation plumbing & heating pipe, for hot and cold water distribution services, as well as for central heating and underfloor heating systems.
- Qual-PEX Plus+ Easy-Lay Pipe is extremely flexible, with exceptional lay-flat capability, enabling faster, easier and more cost-effective installations.
- Qual-PEX Plus+ Easy-Lay Pipe has been developed, tested and approved for hot and cold water services, central and underfloor heating systems.
- Qual-PEX Plus+ Easy-Lay is available in the following sizes in both lengths & coils.
Irish Sizes:- 1/2" (14.7mm), 3/4" (21.0mm) and 1" (27.4mm) & Metric sizes of - 16mm, 20mm, 26mm & 32mm
- Qual-PEX Plus+ Easy-Lay Pipe can also be purchased pre-insulated - Qual-PEX Plus+ 'Easy-Lay' Eco.
- Is 100% Irish Made and is manufactured to the most stringent standards allowing you to install with confidence.
- 50 Year Guarantee.
- The 'Qual-PEX Pipe Family', inclusive of Qual-PEX Plus+ 'Easy-Lay', Qual-PEX, Qual-PEX Pipe-in-Pipe, Eco-PEX & Qual-PEX Eco-Duo, are supplied by Pipelife Ireland Limited, from a manufacturing facility that operates under a Quality Management System that is fully certified, by BSI, to the internationally recognized standard 'ISO9001:2015'.
- Qual-PEX Plus+ 'Easy-Lay', in particular, produced in both 'white / metric sizes', and 'traditional tan coloured imperial sizes', is certified to 'BS EN 21003', and has been designed to provide the plumbing professional with a 'universal piping solution', and both the service conditions under which the pipe may be used, and the fittings with which the pipe is fully compatible, are listed in the tables below.

- o Qual-PEX Plus+ 'Easy-Lay' is approved for use under the following service conditions:
 - 12 Bar at 20°C
 - 8 Bar at 80°C
- o Qual-PEX Plus+ Easy-Lay is designed to complement, with full compatibility, fitting ranges as follows:
 - Qual-PEX Crimp Fittings
 - Tectite Fittings
 - Suitably approved 'Push-Fit fittings'
 - Suitably approved 'Compression fittings'
 - Suitably approved 'Press Fittings'

Pipelife Ireland Limited fully guarantees the 'Qual-PEX Pipe Family', inclusive of Qual-PEX Plus+'Easy-Lay', Qual-PEX, Qual-PEX Pipe-in-Pipe, Eco-PEX & Qual-PEX Eco-Duo against material or manufacturing defects, for fifty years, provided the products are installed correctly, with suitably certified / approved fittings (i.e. meeting Irish Agrément Board requirements, and / or relevant European standards), in accordance with best practice, and the stipulations in our technical literature, as well as any specific guidelines provided by relevant third party fittings manufacturers, and also that the plumbing installation is suitably maintained / controlled, with a system operating temperature / pressure profile in line with our recommended criteria.



Other relevant certifications / approvals, applicable to the 'Qual-PEX Pipe Family', include Irish Agrément Board, BS7291, and WRAS.

GET THE PLUS+ ADVANTAGE

WITH OUR



MULTILAYER PIPE

Our Qual-Pex Plus+ 'Easy-Lay' Multilayer Pipe is a universal pipe that can be used with any suitably approved/certified press fitting*



Tiemme

PF press

Emmett

Instantor Press

Presstite

Ape

Comisa



* (i.e. meeting Irish Agreement Board requirements and/or relevant European Standards, i.e. fittings manufactured to EN ISO 21003)
This guarantee is subject to our standard terms and conditions

PIPELIFE Ireland Limited, White's Cross, Cork.
1B Damastown Way, Mulhuddart, Dublin 15
T +353 21 488 4700 E ireland@pipelife.com , pipelife.ie

PIPELIFE 
always part of your life

QUAL-PEX PLUS+ 'EASY-LAY' ECO



PRE-Insulated Qual-PEX Plus+ 'Easy-Lay Pipe. From Pipelife Ireland Limited, Ireland's leading manufacturer of Heating & Plumbing solutions.

Benefits:

- A pre-insulated Pipe to save time, money and energy costs for Domestic, Commercial and Industrial applications. Available in imperial sizes of 1/2", 3/4" & 1" in 50m Coils which are approved for use with Qual-Pex Plus+ 'Easy-Crimp', Tectite and compression fittings.
- Also available in multilayer sizes of 16mm, 20mm, 26mm & 32mm & are approved for use with suitably approved/certified Press-Fittings.
- Manufactured in Ireland.
- 50 Year guarantee.
- Available through all leading merchants.
- Standard Pipe Insulation 6mm – Also available in 9mm and 13mm insulation on special request

PERFORMANCE CHARACTERISTICS

Thermal Conductivity

0°C	0.036 W(m - K)
40°C	0.040 W(m - K)

Wall Thickness of Insulation

6mm	STANDARD
-----	----------

Density

25kg/m ³	
---------------------	--

HEAT LOSS RATES (in W/M)

Hot Water Line Temp. 60°C - Ambient Temp. 15 °C

Pipe Size	Insulation Wall Thickness	
	0mm	6mm
1/2" / 15mm / 16mm	33.38	13.45
3/4" / 22mm / 20mm	39.93	15.24
1" / 28mm / 26mm	45.25	17.88

Central Heating Line Temp. 75 °C - Ambient Temp. 15 °C

Pipe Size	Insulation Wall Thickness	
	0mm	6mm
1/2" / 15mm / 16mm	47.87	18.12
3/4" / 22mm / 20mm	57.28	21.43
1" / 28mm / 26mm	66.95	23.89



Product Description:

It is insulated with a high quality CFC-free and HCFC free, blue or red flexible closed cell polyethylene pipe insulation. It has been designed to save time, money and energy costs and will improve the energy rating (BER) of any building.

The Insulation:

The insulation is a high quality insulation with a low thermal conductivity. It is highly efficient in energy conservation and frost protection. It is non fibrous and creates no dust during installation or use. It has a durable PE-film covering allowing maximum protection against water penetration and maximum bonding with concrete. It is also designed to give mechanical protection for in-wall cavity pipelines, which includes resistance to building materials and has a pleasing coating for exposed areas.

QUAL-PEX PLUS+ 'EASY-LAY' ECO DUO



PRE-Insulated and Ducted Qual-PEX Plus+ 'Easy-Lay' for Local & District Heating from Pipelife, Ireland's leading manufacturer of Heating & Plumbing Solutions.

Benefits:

- Irish size pipe eliminates the need for expensive adaptors
- Use with standard 1" compression fittings & Qual-PEX inserts
- Manufactured in IRELAND
- 50 year guarantee
- Available in coils of 100m
- Coils can be cut to order
- Range of end caps & junction covers available
- Available in all leading Merchants

Product Description:

Two pre-insulated, 1" Qual-PEX Plus+ 'Easy-Lay' Pipes encapsulated in 110mm of high performance insulation protected within a corrugated PE-HD twin wall outer casing for maximum protection. Delivering industry leading thermal insulation properties using Ireland's leading plumbing and heating pipe. Qual-PEX Plus+ 'Easy-Lay' ECO Duo has been designed to simplify and speed up installation by utilising standard Irish size fittings and pipe and to greatly enhance energy conservation, thus reducing energy costs.

The Pipe: Approvals & Testing

Qual-PEX Plus+ 'Easy-Lay', in particular, produced in both 'white / metric sizes', and 'traditional tan coloured imperial sizes', is certified to 'IS EN 21003', and has been designed to provide the plumbing professional with a 'universal piping solution'. Other relevant certifications / approvals, applicable to the 'Qual-PEX Pipe Family', include Irish Agrément Board, BS7291, and WRAS.

APPROVED PIPE SERVICE CONDITIONS:

- 12 Bar at 20°C
- 8 Bar at 80°C

Installation:

Consists of micro-cellular cross-linked polyethylene foam with a closed cellular structure, permitting low water vapour diffusion with good insulation resistance to extreme temperatures. Moreover, Qual-PEX Plus+ 'Easy-Lay' ECO Duo maintains these high insulation properties over time. This is due to the superior characteristics of the cross linked PE foam, compared to other insulation materials (e.g. PUR foam) which show a decline in their insulation capabilities over time. Its unique moving layers design allows maximum flexibility and very easy installation.

Description	Value	Standard
Density	28 kg/m ³	ISO 845
Tensile Strength	270kPa	ISO 1926
Water Absorption	<1.0 %	ISO 2896
Thermal Conductivity	0.036 W/mK	EN 12677
Flammability	B2 Normal	DIN 4102
Recommended Service t°	-50°C up to +95C	

SMART SYSTEM CONTROL

WHAT LEVEL OF CONTROL DO YOU REQUIRE?
EXPLORE OUR VARIOUS LEVELS OF ENERGY
EFFICIENT THERMOSTAT TECHNOLOGY.



The Range

Our comprehensive range of thermostats offer a wide variety of solutions and are ideal for new builds and retro fit projects. We can offer a standard room thermostat all the way up to latest smart technology controls, the possibilities are endless and the result is always an energy saving efficient system. All our thermostat range are programmable and available in hard wired (230v or 12v), wireless and Smart versions.

SLIMLINE THERMOSTATS

Our range of mains thermostats are “standard” products enabling the replacement of existing thermostats. These products can be used in conjunction with the Pipelife - UH8, our mains voltage central wiring switch box.

TOUCH SCREEN THERMOSTATS ALSO AVAILABLE ON REQUEST

THREE RANGES

230v Models can be used to upgrade existing thermostats and can be used in conjunction with our Pipelife - UH8 wiring centre.

12v Network Models have been designed to work as part of a network system, and can be used in conjunction with our UH1 wiring centre and network products.

Air/Floor Models are supplied with a remote floor sensor and provide the ability to measure room temperature, floor temperature or both.

Modern Slimline Appearance

The slimline thermostat series is flush mounting, resulting in a depth of only 13mm after installation.

Energy Saving Optimum start

Most home owners manually allow for a heat up time when programming their heating system. This manual method does not allow for seasonal changes. Optimum start is an energy saving feature that calculates the amount of heat up time required to ensure your home is warm when you wake and return home from work. The thermostat will automatically adjust the heat up time



throughout the year, saving you energy.

Temperature Hold Facility

This function allows you to hold a set temperature for a specific duration - ideal for parties. After the hold duration, the thermostat will revert back to the programmed setting.

Holiday Function

The holiday function reduces the set temperature in your home for the duration of your holiday. At the end of your holiday, the thermostat will revert back to the programmed setting, ensuring your home is warm on your return.

Optional Remote Control

All models within our slimline series are compatible with our Infrared remote control

Temperature Override

The override facility allows you to adjust the desired temperature in your home without the need to fully re-program the thermostat. This new set temperature will be maintained until the next programmed setting. An override limit function allows you to limit the use of temperature override keys.

	230v Models			12v Network Models				230v Air/Floor Models	
	DT	PRT	PRT/HW	DT-N	PRT-N	PRT/HW-N	PRT-EN	DT-E	PRT-E
Temperature Range	05-35°C 05-95°F	05-35°C 05-95°F	05-35°C 05-95°F	05-35°C 05-95°F	05-35°C 05-95°F	05-35°C 05-95°F	05-35°C 05-95°F	05-35°C 05-95°F	05-35°C 05-95°F
5/2 Day Programming Mode	No	Yes	Yes	No	Yes	Yes	Yes	No	Yes
7 Day Programming Mode	No	Yes	Yes	No	Yes	Yes	Yes	No	Yes
No of Heating Levels	1	4	4	1	4	4	4	1	4
Optimum Start	No	Yes	Yes	No	Yes	Yes	Yes	No	Yes
No of HW Times	0	0	4	0	0	4	0	0	0
Holiday Function	No	Yes	Yes	No	Yes	Yes	Yes	No	Yes
Keylock Function	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Temperature Hold Function	No	Yes	Yes	No	Yes	Yes	Yes	No	Yes
Temperature Override	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Temperature Override Limit	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Frost Protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Networking Protection	No	No	No	Yes	Yes	Yes	Yes	No	No
°C / °F Option	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Built In Air Sensor	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Floor Sensing Mode	No	No	No	No	No	No	Yes	Yes	Yes
Floor Sensor Included	No	No	No	No	No	No	Yes	Yes	Yes
Max Switching Current	3A	3A	3A	3A	3A	3A	3A	13A	13A
Accuracy	+/-1°C	+/-1°C	+/-1°C	+/-1°C	+/-1°C	+/-1°C	+/-1°C	+/-1°C	+/-1°C
Infrared Remote Control Option	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjustable Switching Differential	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Changeover Output Option	Yes	Yes	No	No	No	No	No	No	No
Supply	230v	230v	230v	12v	12v	12v	12v	230v	230v
Dimensions	98x85x13mm	98x85x13mm	98x85x13mm	98x85x13mm	98x85x13mm	98x85x13mm	98x85x13mm	98x85x13mm	98x85x13mm
Weight	195g	195g	195g	195g	195g	195g	195g	195g	195g

4 channel time clock for time control of rads and hot water.

Four switches operated by a clock to control 4 separate heating systems independently. The user can choose one or more on or off cycles, daily and even weekly cycles depending on user preference. Time control of underfloor heating is controlled at room thermostats.

Two Ranges

230v Models are designed to work with our UH8 wiring centre and dial thermostat with set back function, providing simple but effective control.

12v Network Models have been designed to work as part of a network system, and can be used in conjunction with our UH1 wiring centre and network products.

No of Switching Times

4 On/Off times are provided on all time clock models, allowing flexible control of your heating system.

On/Off/Constant

A mode select button providing an easy method of switching between permanent on, permanent off or auto (time clock mode) TM4 only.

Touchscreen Time Clock



Available in 3 plastic finishes:



Silver



White



Brass



Countdown Timer

A simple yet useful function that enables the output for the duration of the programmed countdown time.

+Boost Facility

The programmable boost function allows you to extend the program time, in 30 minute increments - ideal for unscheduled operation of the system.



Pipelife UH8

The underfloor heating system for both ground and first floor (if required), domestic hot water and a radiator system. It is extremely versatile due to the fact that it has priority to hot water, connection On/Off/Constant for boiler and primary pump, boiler interlock provision, motorized individual zone control provision. It is suitable for pumped zone systems and has

WIRELESS THERMOSTATS

Wiring a conventional thermostat often includes lifting floor-boards or chasing out plaster work. Our wireless thermostats offer an effective alternative, and are the ideal choice for extensions or when you are looking to relocate your thermostat.

Relocate

Many thermostats are sited incorrectly, causing your boiler to come on more than necessary. A wireless thermostat allows you to move your thermostat to a more suitable position, without the need to run additional cables. What's more, our Touchscreen models have a desk stand, enabling you to move the thermostat around the house with you.

Rechargeable Battery (TouchScreen models only)

Our Wireless Touchscreen series incorporate a rechargeable battery, saving money on replacement batteries. A USB recharge cable is provided, and an optional plug-in charger is available.

Fail Safe

A loss of wireless connection could leave your home vulnerable to frost damage. The fail safe function enables the heating for 20% of



the time, ensuring the temperature in your home does not drop to dangerous levels.

Locking Facility

A simple way to reduce tampering of the system settings, and standard across our wireless thermostat series.

Electric Floor Heating

The electric floor heating models are capable of switching up to 16A and use a floor limiting sensor to protect the floor surface.



Touchscreen Wireless Thermostat Series



Slimline Wireless Thermostat Series



Wireless 230v 8 Zone Wiring Centre

The UH8-W is designed to be used in conjunction with our slimline wireless thermostats. The UH8-W provides central switching and is therefore ideally situated next to the underfloor heating manifold. 8 zones can be controlled as well as providing an output for a hot water cylinder. On demand from any zone, a 230v output is provided to switch the relevant zone actuators, underfloor heating pump and valve. A volt free connection is supplied for the boiler, making it compatible with almost all types of boilers. Up to 6 actuators can be connected to each zone. An external aerial is available for use when the UH8-W is being mounted in a metal cupboard or when the wireless signal is restricted.

A software option in the thermostat allows you to configure which zones are underfloor heating and which zones are radiators. Radiator zones will not enable the underfloor heating pump and underfloor heating valve when there is a call for heat.



NEO CONTROLS

Neo is the Smart Way to Control your Heating and Hot Water from Anywhere. Up to 32 Rooms can be controlled from your iPhone, Android and Windows Phone. NeoStat's are stylish, feature rich and are perfect for controlling underfloor heating, electric floor heating and conventional radiator heating systems.

Now Featuring Geo Location

- Geo Location is an exciting new feature that makes it even easier to reduce your energy costs. Neo will lower the temperature in your home when it detects the last person has left and will turn the heating back on when it detects someone is on their way home.
- Using Location Services feature on your iPhone or Android SmartPhone, Neo can now help you reduce your energy consumption by turning the heating off when you are out.
- Supporting Multi Users, Neo can automatically reduce the temperature in your home when the last person leaves and increase the temperature when the first person returns.
- Neo has always been about Multi Zone and our Geo Location Feature is no different by allowing you to select which zones you want to control when you leave or return. Geo Location is perfect for busy households when a fixed heating schedule just isn't practical.

How does Geo Location work?

Geo Location uses the mobile phone masts, nearby WiFi and your GPS to calculate your position. When you setup Geo Location on Neo, you set a leaving and returning trigger. When you pass these triggers, Neo will adjust the temperature in your house.

Reduce your Energy Cost and return to a Cozy Home

You can decide the temperature that Neo will control to when you leave home and again when you return. The temperature you ask for will depend on the type of heating system you have and the time your home takes to warm up.

Notifications on your SmartPhone

You will see a notification on your phone when Neo has adjusted the temperature in your home - so you always know when Neo is saving you energy.



LOW TEMPERATURE RADIATORS

Choose the Master radiator, choose the heat evolution:

Master stems from a research project aimed at optimizing radiator performances in order to offer a product with high mechanical and energetic capabilities.

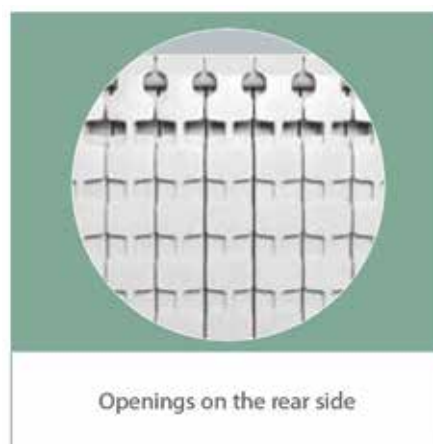
A high degree of innovation, achieved thanks to the two patents this product was able to obtain, allows the Master radiator to be ideal for renovations and low temperature heating systems.

Choose the Master radiator, discover all its advantages designed for You:

- Ideal for low temperature heating systems;
- Excellent weight/power ratio, which facilitates handling and installation;
- Modular: perfect for any space;
- High technological content: 3 international patents;
- Unalterable over time, thanks to its double varnish coating: anaphoresis and powder;
- 100% made in Italy;
- Nominal pressure: 16 bar;
- Pressure Test (undergone by 100% of manufactured products): 24 bar;
- Bursting pressure: 60 bar;
- Greater heat exchange = outstanding performances, low power consumption.

Choose the Master radiator, install the product of the future:

The openings at the rear of the radiator increase convective heat exchange.



Openings on the rear side

Model	Depth	Height	Centre distance	Length	Connection diameters	Water capacity	Heat output ΔT 50K	Heat output ΔT 30K	Exponent	Coefficient
	mm	mm	mm	mm	inches	litres/sect.	W/sect.	W/sect.	n	K_m
MASTER B4 350/100	97	407	350	80	G1	0,20	89,9	47,2	1,2598	0,6506
MASTER B3 500/100	97	557	500	80	G1	0,24	114,9	59,9	1,2768	0,7783
MASTER B3 600/100	97	657	600	80	G1	0,27	132,2	68,9	1,2763	0,8973
MASTER B3 700/100	97	757	700	80	G1	0,39	149,5	77,7	1,2819	0,9928
MASTER B3 800/100	97	857	800	80	G1	0,42	165,0	85,1	1,2962	1,0360

Maximum working pressure: 1600 kPa (16 bar)

Characteristic equation of the model $\Phi = K_m \Delta T^n$. The thermal efficiency values shown comply with the European Standard EN 442-1:2014 and are certified by the MRT Lab of the Milan Polytechnic, notified body no. 1695.

BROOKVENT

MVHR | CONSULTANTS SPECIFICATION

OPERATION

The MVHR system shall operate by extracting air from all wet rooms (Bathroom, kitchen, WC, utility etc.) whilst simultaneously supplying fresh pre-heated, filtered air to the habitable rooms (bedrooms, living room, dining room etc.) via a highly efficient counter flow heat exchanger with a thermal efficiency of up to 93%.

The system shall operate at the whole dwelling supply rate (trickle rate) as standard and shall offer a boost facility which increases the ventilation rate in line with the applicable building regulation requirements.

Boost control shall be by means of a switched live signal from light switches in wet rooms/ bathroom areas, an integral humidistat within the MVHR system and manual two way boost switches in the Kitchen area (or as required).

MVHR UNIT SPECIFICATION

The MVHR system shall have 100% variable, independent fan speed control (Trickle and boost settings for each fan) enabling precise on-site commissioning.

The heat exchanger shall be protected by 2 no. G2/3 grade filters. Filter access to be 'tool free' on the front of the system ensuring ease of maintenance. The system shall also come complete with automatic frost protection to protect the internal heat exchanger from extreme temperatures.

The MVHR system shall contain low energy EC fan/ motor assemblies with sealed for life bearings and the impellers shall be the backward curved centrifugal type resulting in a specific fan power (SFP) down to 0.37 W/l/s.

The MVHR system shall be complete with a power free, automatic tempering summer bypass facility which offers 100% filtration. The summer bypass facility shall operate by gradually increasing the amount of air directed around the heat exchanger in a linear scale from 20-27 degree Celsius as the temperature of the extract air from the home raises, thus ensuring occupier comfort during summer months.

The MVHR system shall also be complete with an integral humidistat that continuously monitors the RH% of the air being extracted from the wet rooms. The humidistat shall automatically operate the boost when the set RH% is reached (Factory Set: 70% RH).

The system shall have the facility to operate its boost mode upon receiving any 230V switched live signal (as required). The system shall also come complete with an in-built, automatic boost over-run timer of 15 minutes with the ability to disable as required.

The MVHR unit shall be manufactured from EPP (Expanded Polypropylene) material with excellent thermal and acoustic properties. The system shall be wall or floor mounted in

BROOKVENT

aircycle^{3.1}

accordance with the design requirements. The system also shall be capable of on-site inversion of the external and internal ducting connections and shall come complete with top and side mount ducting connections for ease of installation.

The system shall be complete with a dedicated condensate tray and drainage connection.



The Aircycle 3.1 operates by efficiently recovering heat from the air extracted from wet rooms (bathroom, kitchen etc.) that would normally be expelled to the atmosphere.

This heat is then transferred to the fresh air being drawn into the system, which is then filtered and distributed throughout the habitable rooms (living room, bedroom etc.).

The aircycle 3.1 can significantly reduce the space heating demand of a property whilst also delivering a healthier and more comfortable indoor environment for the occupier.

Core Features

- Up to 93% heat recovery efficiency
- Down to 0.37 W/l/s specific fan power
- 4 Airflow modes (100% variable): Night, General, Boost, Purge
- Programmable 25%+ boost setting
- Remote digital control
- Status & airflow mode Indication
- Filter maintenance alert
- Fault alert
- Hours run meter
- 230V Auto-boost compatible
- Integral humidistat
- Automated frost protection
- Automatic Summer bypass, 100% filtered



TGD F & L 2019 & NZEB COMPLIANCE

CONTROL INDICATION

The digital control indicates to the occupant that the system is operating correctly, if a fault has occurred, if maintenance is required, and which mode it is in.

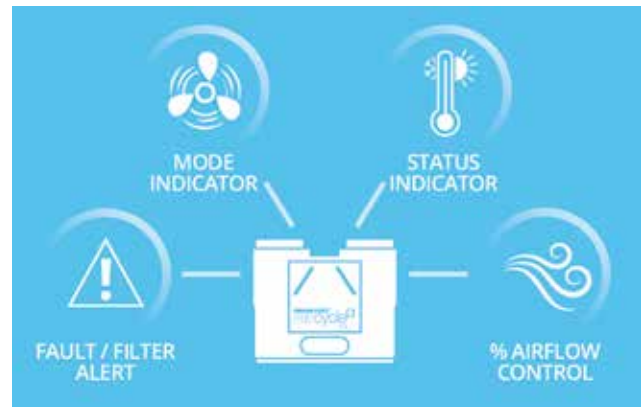
This can be mounted in a visible location to the occupant to aid interaction; one of the key requirements of TGD F 2019.

+25% AIRFLOW SETTING

TGD F 2019 requires an MVHR system to be able to provide 25% over the calculated general (trickle) ventilation rate. The aircycle 3.1's digital control allows for a 3rd speed (in addition to general and boost) to be set precisely to this +25% rate.

AIR QUALITY CONTROL

TGD F & L 2019 aims to minimise uncontrollable infiltration by means of increasing air-tightness while supplying sufficient, purpose-provided ventilation. This means ultimate reliance on the MVHR system to be capable of managing occupier comfort. The Brookvent aircycle 3.1 automatically works for the occupier in each season, recovering heat in the winter months, bypassing heat in the summer, and the ability to further help control summertime overheating by activating a temperature sensitive airflow setting.



QUIET BY DESIGN

The aircycle 3.1's streamlined airflow path design coupled with custom engineered fan scrolls help to ensure low internal air turbulence and guaranteed balanced fan operation, greatly minimising occurrences of in-duct noise transference.

A high density, expanded polypropylene casing further succeeds in limiting any potential break-out noise from the fan operation.

aircycle 3.1 Acoustic Performance												
Airflow %	Measurement	Airflow l/s	Full Octave LwA dB								Overall Sound Power Level (A Weighted) LwA dB @3m	Dba @3m
			63	125	250	500	1 k	2 k	4 k	8 k		
20	Inlet	25	3.2	24.6	32.5	32.1	26.6	17.3	15	20.6	36.5	22
	Outlet		-0.3	11	19.8	22.8	14.7	10.8	13.3	19.9	26.6	12.1
	Breakout		5.7	26.5	29.3	25.3	19.6	10.8	13.4	19.9	32.8	15.3
40	Inlet	51	15.5	29.9	36.6	40.5	37.4	30.9	20.2	21.9	43.8	29.3
	Outlet		7.3	22.2	28.8	33.6	28.8	17.2	13.6	19.9	36.1	21.6
	Breakout		9	30.2	35	38.4	31.1	21.7	15.5	19.9	41	23.5
60	Inlet	78	21.2	35.9	44.9	48.8	45.8	42.4	31.4	26.9	52.3	37.8
	Outlet		13.2	28.3	39.1	38.7	35.4	27.1	16.1	20.3	43.2	28.7
	Breakout		15.3	39.4	39.3	41.3	36.5	29.6	20.9	20.1	45.6	28.1
80	Inlet	105	22.9	43.8	52.6	55.7	53.2	51.1	41.7	37.1	59.7	45.2
	Outlet		14.3	33.2	44.1	44.1	40.4	33.6	21.2	21	48.3	33.8
	Breakout		18.4	42	43.3	47	39.4	35.5	27.4	22.5	50	32.5
100	Inlet	135	23.3	47.4	53.9	64.3	59.6	56.5	48.4	44.5	66.4	51.9
	Outlet		18.4	37.7	46.3	51.9	46.9	39.8	29.4	25.7	54.2	39.7
	Breakout		20.4	38.6	48.3	54.7	47.1	42.9	36.2	26.4	56.4	38.9

* Case radiated sound at 3m is calculated based on Hemi-spherical propagation.

** Inlet and Extract sound at 3m is calculated based on uniform line source.

*** Airflow values shown plotted from fan curves.



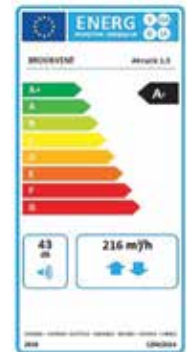
The Aircycle 1.3 range operates by efficiently recovering heat from the air extracted from wet rooms (bathroom, kitchen etc.) that would normally be expelled to the atmosphere.

This heat is then transferred to the fresh air being drawn into the system, which is then filtered and distributed throughout the habitable rooms (living room, bedroom etc.).

The aircycle 1.3 range can significantly reduce the space heating demand of a property whilst also delivering a healthier and more comfortable indoor environment for the occupier.

Core Features

- Up to 92% heat recovery efficiency
- Down to 0.42 W/l/s specific fan power
- 4 Airflow modes (100% variable):
Night, General, Boost, Purge
- Programmable 25%+ boost setting
- Remote digital control
- Status & airflow mode Indication
- Filter maintenance alert
- Fault alert
- Hours run meter
- 230V Auto-boost compatible
- Integral humidistat
- Automated frost protection
- Automatic Summer bypass, 100% filtered
- Variable Boost over-run timer



aircycle 1.3 Acoustic Performance													
Airflow l/s	Speed %		Frequency Hz										LwA dB @3m
			63	125	250	500	1 k	2 k	4 k	8 k	Lw dB	LwA dB	
20.6	30%	Inlet	30.1	30.8	33.3	30.3	22.1	7.8	7.2	17.8	37.5	30.3	20.5
		Outlet	16.0	24.7	25.3	22.8	10.8	7.5	7.4	17.6	29.8	23.4	13.6
		Breakout	23.3	22.6	26.6	22.3	11.2	5.5	6.9	17.6	30.4	23.4	8.8
34.5	50%	Inlet	27.8	30.4	33.2	30.7	24.9	7.6	7.2	17.8	37.3	31.0	21.2
		Outlet	18.4	29.2	28.3	23.0	14.7	9.6	8.6	18.0	32.8	24.9	15.2
		Breakout	20.0	21.7	26.4	22.3	10.5	5.7	7.1	17.7	29.7	23.3	8.8
48.7	70%	Inlet	26.5	30.3	31.3	35.9	26.0	7.7	7.2	17.8	38.6	34.1	24.3
		Outlet	15.3	24.2	23.5	20.2	13.6	7.2	7.4	17.6	28.6	22.3	12.5
		Breakout	21.3	22.4	25.7	22.8	11.3	5.6	6.9	17.6	29.8	23.4	8.8
62.8	90%	Inlet	36.2	40.3	45.6	48.5	37.1	21.1	12.9	18.2	51.1	46.5	36.7
		Outlet	23.1	36.0	39.3	37.4	26.4	20.5	17.9	21.5	42.8	36.7	27.0
		Breakout	25.2	28.7	39.6	36.4	23.8	13.4	8.3	17.6	41.7	35.7	21.1
69.4	100%	Inlet	35.3	41.3	48.6	49.6	40.1	28.1	14.2	18.4	52.8	48.2	38.4
		Outlet	27.1	42.6	43.5	39.8	27.6	21.5	18.4	22.1	47.1	39.6	29.8
		Breakout	24.4	28.1	40.1	36.5	23.1	13.3	8.6	17.6	42.0	35.9	21.3

aircycle 1.3+ Acoustic Performance													
Airflow l/s	Speed %		Frequency Hz										LwA dB @3m
			63	125	250	500	1 k	2 k	4 k	8 k	Lw dB	LwA dB	
24.6	30%	Inlet	28.1	30.3	34.1	33.0	23.6	7.6	7.0	17.6	38.2	32.1	22.4
		Outlet	18.1	27.8	28.0	23.3	12.9	8.6	7.7	17.6	32.1	24.6	14.8
		Breakout	20.4	23.3	28.0	30.6	13.5	5.8	6.9	17.6	33.4	28.6	11.1
41.3	50%	Inlet	27.5	30.8	33.8	33.2	23.7	7.2	7.0	17.6	38.2	32.2	22.4
		Outlet	17.4	31.8	30.0	23.7	14.6	9.7	8.4	17.6	34.6	25.8	16.1
		Breakout	20.3	22.7	27.7	30.6	12.6	5.9	7.2	17.7	33.3	28.6	11.0
57.6	70%	Inlet	28.0	29.7	31.6	42.1	29.9	12.4	7.2	17.6	43.1	39.6	29.8
		Outlet	15.4	20.1	21.0	18.5	14.0	7.1	7.4	17.6	26.3	21.4	11.6
		Breakout	21.2	24.0	27.9	31.1	13.4	6.5	6.9	17.6	33.8	29.0	11.4
74.1	90%	Inlet	36.7	40.2	49.4	45.7	38.0	22.9	14.5	18.4	51.7	45.7	35.9
		Outlet	24.6	39.3	41.6	37.6	28.2	22.6	20.1	22.9	44.8	37.9	28.1
		Breakout	27.0	30.1	40.0	38.9	26.9	15.2	9.2	17.5	43.0	37.6	20.0
82.4	100%	Inlet	35.8	39.6	45.4	46.8	38.7	24.1	15.3	18.5	50.2	45.6	35.8
		Outlet	22.7	38.4	42.8	37.6	29.2	23.0	20.5	24.0	45.2	38.5	28.7
		Breakout	26.5	28.9	40.6	38.6	27.1	15.3	9.8	17.6	43.1	37.6	20.0

Tested according to BS EN 13141-7:2012: Breakout quoted spherical. Supply and extract quoted hemispherical. For sound data at a specific airflow duty, please contact us directly for a bespoke acoustic schedule for your project. Further sound data at increasing pressure (Pa) levels is also available in the O&M manual.

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PIPELIFE PRE-PLUMBED CYLINDERS

TEMPEST AIR SOURCE HEAT PUMP CYLINDER

Pre-plumbed, indirect, unvented stainless-steel hot water storage cylinder.

Tempest Heat Pump hot water storage cylinders are designed for use with an air source heat pump as the main heat source. They feature a purpose-designed coil with a large surface area to allow maximum heat transfer of renewable energy into the stored water.

Manufactured from Duplex stainless-steel, the cylinders are pre-plumbed with pre-fabricated pipework, wiring, and factory-fitted 3 kW immersion heaters to provide back-up heat.

FEATURES & BENEFITS

- Remote expansion vessel with factory-fitted wall mounting bracket
- Full unvented kit supplied
- Pre-plumbed with pre-fabricated pipework and wiring saves installation time
- Duplex stainless steel provides superior corrosion resistance
- White steel cased finish (other colours available on request)
- 316L grade stainless-steel 22mm compression fittings and coils
- Supplies mains pressure hot water and high flow rates
- Fast reheat
- Factory-fitted temperature and pressure relief valve set at 7 bar / 90°C
- Up to 3 bar max pressure
- Highly efficient
- Fully insulated to minimise any heat loss
- Factory-fitted 3kW immersion heater(s)
- Cylinders available in 170-300 litre capacities
- Lifetime manufacturing warranty on inner container (2 years on components)*

*Terms & conditions apply



Supplied with:

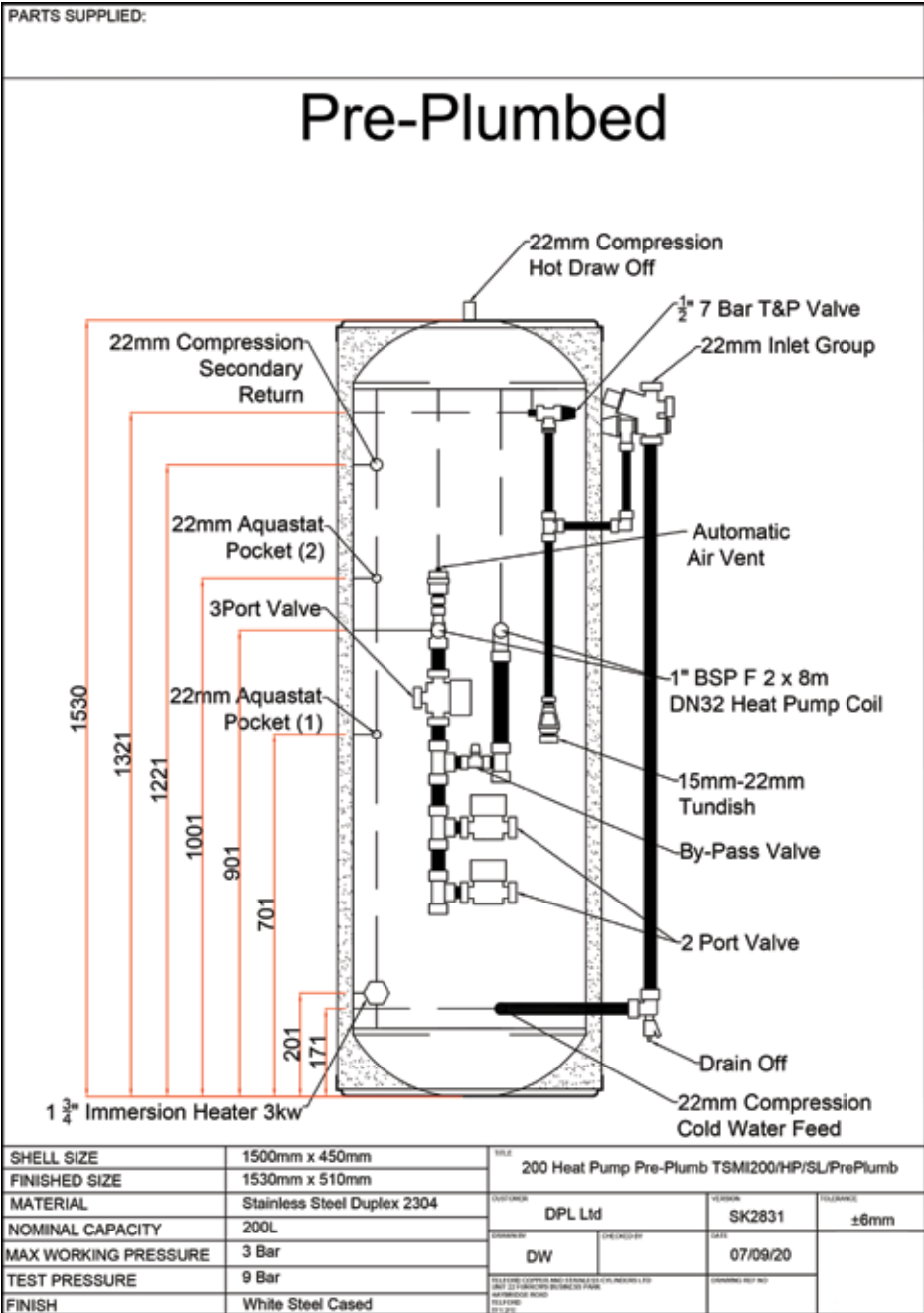
- 22mm monobloc reducer & relief valve*
- External expansion vessel with bracket
- TPRV 7bar/90°C*
- 15-22mm acetal tundish*
- Cylinder stat*
- 10 way junction box*
- 22mm two port valve*
- 22mm three port valve*
- 25/8m Wilo circulating pump and ISO valves*
- Automatic bypass valve*
- Dual probe thermostat
- Temperature & pressure relief valve*
- 3kW Incoloy immersion heater(s)*
- Inlet control group
- Filter
- LG control panel
- Sanitary water kit

*Factory-fitted



TEMPEST AIR SOURCE HEAT PUMP CYLINDER

TECHNICAL DATA



COMPARING QUOTES OR WHAT CAN GO WRONG?

When comparing quotations from multiple heating solutions providers it is important that you remember the following, as the price quoted in many cases can mask many future problems shortcomings.

Not all heating systems are equal. There are four very common ways in which heating solution providers can reduce the purchase costs of their systems thus making them look more competitive but these reduced upfront costs get passed onto you, the home owner in the form of much higher heating bills and reduced life time of your heating system.

1. THE HEAT PUMP

Heat Pumps come in many shapes and sizes from a multitude of manufacturers. What is vital is that the heat pump chosen is manufactured to suit the climatic conditions prevailing in Ireland, that it is manufactured by a reputable company with a stellar reputation for quality and service, and that the size (power output) of the heat pump is sufficient to heat the required volume of water to supply your home optimally.

Using an undersized heat pump is unfortunately an all too regular occurrence in the Irish heating market. The advantage for the provider is being able to quote you a 'cheaper' solution. An undersize heat pump will struggle to heat your property, at best, to the required temperature. It can only do so by burning up a lot of extra fuel thus pushing your heating bills way up past what you will be expecting. An undersized heat pump will also burn out many years before expected as its motors and parts will be running at very high levels of stress to compensate for its smaller size.

It is important to note that in most cases you will have no recourse in such an eventuality unless the provider of your heating solution has given you a written guarantee of performance, and this is rarely the case.



2. THE QUALITY AND LAYOUT OF THE UNDERFLOOR HEATING PIPES

The second way in which companies can provide you with a 'cheaper' quotation is to use cheaper imported pipes and/or to reduce the quantity of pipe in the design thus lowering their overall costs. The quality and the design layout of the pipe used are the most important elements in your heating solution for your home.

To reduce the cost of a system many providers reduce the quantity of pipe that will be buried in your concrete floor. In a properly designed system the spacing of the pipe is carefully planned to ensure enough low temperature water flows through each room to reach the desired heat output.

If this pipe spacing is increased, less pipe is buried in your rooms and thus less low temperature water flows through, resulting in lower heat outputs than required to reach the necessary room temperatures.

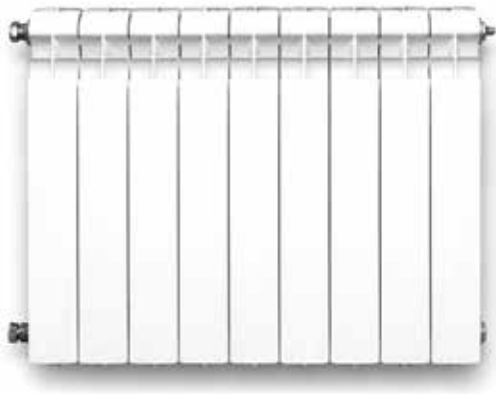
The heat output in these circumstances can only be reached by pumping much higher temperature water through the pipes which will result in much higher heating bills that you would otherwise pay for a well designed solution.

The underfloor heating pipe is physically buried within the concrete floor of your home and thus inaccessible. If it is laid incorrectly, if

it is of inferior quality and fails, or if the layout of the pipe is poorly designed then the associated problems can be massively expensive and disruptive to fix.

Buried pipe can only be fixed/replaced by digging up your floors. The pipe buried in your floors should have an operational life expectancy of at least 50 years so ensuring the pipe is from a reputable source is paramount.

Pipelife is the only provider of underfloor heating in Ireland who manufactures its own pipe in Ireland, in contrast with others who import pipe from multiple sources in many countries as far afield as China and Iran. Pipelife's Guaranteed Irish "Qual-PEX" pipe is Ireland's leading heating pipe and has been manufactured by Pipelife in Cork for the last 30 years, with over 1bn metres of Qual-PEX sold in that period.



3. UNDERSIZED RADIATORS

Undersizing radiators in a heating solution is again an all too common occurrence. While smaller radiators reduce the purchase cost of the system, using undersized radiators place's huge extra demands on your heat pump to compensate. These radiators will need to be heated to a far higher temperature to achieve the desired heat output than properly sized radiators thus pushing your heating bills far higher than expected.

Ultimately an undersized heat pump or undersized radiators can be replaced, albeit at major expense, as they are above ground and are accessible. The heating pipe though is far more costly and problematic to 'fix' or replace as it is buried in the floor of your home. Replacing the pipe would entail your entire home being vacated, all the furnishings being moved out, your carpets, wooden floors and tiled floors being removed, and your entire concrete floor being dug up and replaced after the pipe has been replaced.

4. REDUCED CONTROL OF YOUR SYSTEM

A well designed heating solution will give you maximum control to vary the level of heat you wish to have in each room of your home. This level of control is achieved by placing individual thermostatic controls in each room. These thermostats allow you to set the temperature you want for each room individually. This system will allow you to easily control, individual rooms to different temperatures at different times.

To reduce costs many providers reduce the amount of thermostats in their designs, sometimes only offering one for downstairs and one for upstairs. This means you can only set an overall temperature per floor rather than choosing your preferred temperature per room. Having only one temperature setting per floor will increase your heating bills and reduce your comfort. The result being some rooms overheating and some rooms under-heating as well as the heat source having to work harder.

Pipelife is 100% committed to the correct design, sizing and installation of your home heating solution. Our reputation is built on 50 years of manufacturing history in Ireland and this reputation matters immensely to us. As heating solutions have become more complex we have continually invested in new expertise and technology to ensure we stay to the forefront of this evolution.

Every Pipelife home heating solution is fully designed in-house by our experienced design engineering department and is supported by our extensive field service support/engineering team. All our solutions come complete with detailed design drawings, top quality components and an unrivalled expertise built up over many decades.

We provide full design indemnity insurance on all our heating solution systems so you can rest assured our system will deliver on what we promise, providing you with a home heating solution you can rely on for decades to come, safe in the knowledge we will always be there to support you if the need ever arises.



NOTES



27 manufacturing facilities across 26 countries and growing.

**We are one of the world's leading providers of plastic pipe
and heating solutions and we provide current and future generations
around the world with safe, healthy and carefree living.**