

AlphaChill

Scalable Chiller and Heat Pump

24kW–102kW

AlphaChill

AlphaChill™ is Airedale's range of smaller capacity, scalable chillers and reversible heat pumps. It is part of our more sustainable range of cooling and heating solutions, offering efficient performance using refrigerant R32.

AlphaChill is a flexible solution, scalable to fit your project needs now and in the future. Connect up to 16 units in a local cooling/heating network.



Capacities

From:

24 to 102kW



High Seasonal Efficiencies

SEER up to: **5.37**

EER up to: **3.30**



Water Production

Chilled water down to: **-8°C**

Domestic hot water up to: **60°C**



Silent Operation

Silent mode: **-6dB**

Super silent mode for night operation: **-10dB**

Sustainable as standard

At Airedale, we believe that energy efficiency should be driven not only by legislation, but by a genuine will to reduce air conditioning's cost to our customers and the environment. As part of this commitment, the AlphaChill range includes the following energy saving technologies as standard:



Climatic Compensation

Cooling:
If ambient temperature increases, the outlet water set point automatically decreases to deliver a higher cooling capacity.

Heating:
If ambient temperature decreases, heating capacity supplied will automatically increase.



Electronic Expansion Valve

- Included on all units as standard
- Quickly and precisely adapts to the effective load required
- Provides significant energy savings that can result in an EER (energy efficiency ratio) increase of up to 30%



Scroll/rotary compressors

- Inverter technology means output precisely matches energy demand
- Optimised for part load efficiencies
- Start-up time is reduced
- Comfort conditions achieved more quickly
- Lower levels of temperature fluctuation



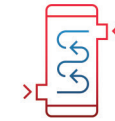
High Efficiencies

- SEER up to 5.37
- EER up to 3.30
- Class A Eurovent



Microchannel Coil (cooling only)

Up to 30% reduction in the refrigerant charge compared to traditional coils.



Heat Exchanger

Plate heat exchanger delivers large exchange surfaces to maximise thermal efficiency.



Water Production

Chilled water down to -8°C
Domestic hot water up to 60°C



Scalable

Connect up to 16 units in a local cooling/heating network



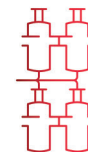
Ambient Operation

Cooling: -20°C to 48°C
Heat Pump: -15°C to 48°C



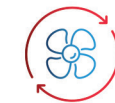
Refrigerant R32

- Lower GWP of 675
- Zero ODP
- 16% less refrigerant volume per kW when compared to R410A
- In line with F-Gas phase-down regulations
- A2L rated - low toxicity and lower flammability
- Eligible for 2 BREEAM points due to lower carbon footprint



Pump Options

- Reduction in footprint, set-up time and costs
- Integrated hydronic assembly
- On/off or inverter pump
- System tank for improved control and stability



DC Inverter Fan

Brushless fan motors, designed with CFD technology, ensuring silent and highly efficient operation.

AlphaChill Controls

Controls

The inbuilt, pre-programmed controller offers:

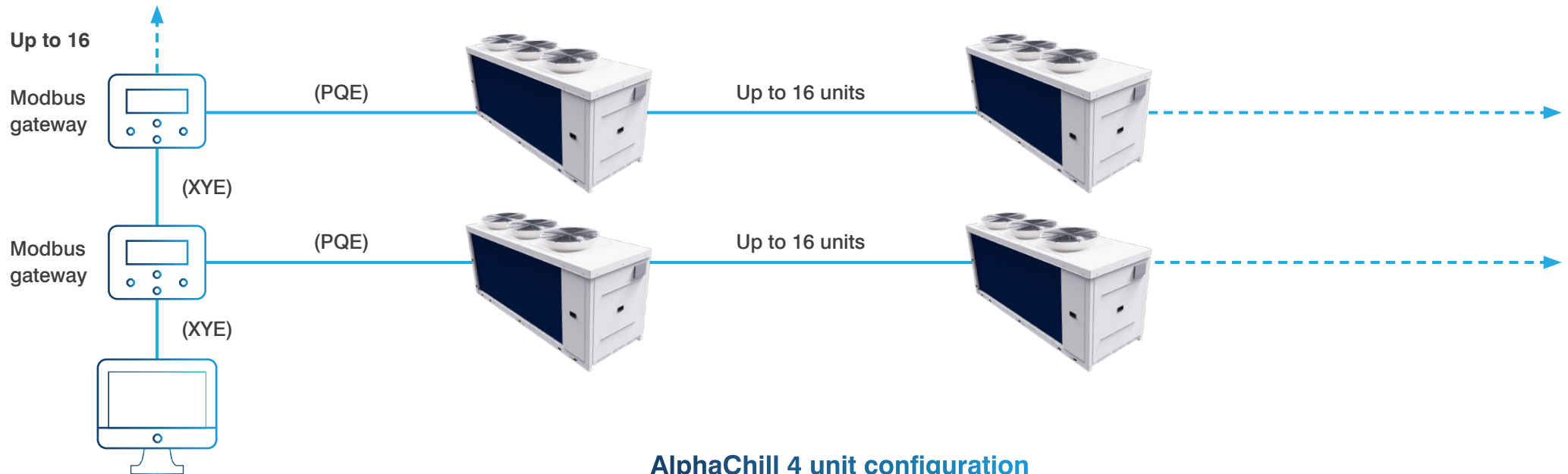
- Auto-restart function
- Timer on/off setting; day/weekly schedule
- Display components status
- Alarm management and set point adjustment
- Two multi-authorisation control levels
- Modbus connection as standard
- Connection of up to 16 units in parallel
- Suitable for remote use
- Climatic compensation with outdoor air temperature

Scalable Configuration

AlphaChill is available as a scalable system, enabling the management of up to 16 units within a local network, delivering up to 1568kW of installed capacity (cooling only; 960kW heat pump). This scalable system is easy to connect and activate through the user interface and can be operated by a building management system, as a result of the Modbus connection that comes as standard.

Benefits include:

- Improved system efficiency due to balanced load across multiple units
- Extended compressor lifespan, due to duty cycling of the units in a multiple-unit system
- Redundancy – if one unit fails, the other modules provide backup
- Simplified handling and installation as a result of standard Modbus connection
- Scalability to suit project demands, and any future change in demand



AlphaChill 4 unit configuration

AlphaChill

Technical and Performance Data

AlphaChill cooling only and reversible heat pump chiller

The tables opposite detail the model selections available, based on chilled water at 7/12°C in a 35°C ambient and hot water at 40/45°C in a 7°C ambient.



AlphaChill Heat Pump Excellence

Range Name	Number of circuits	Nominal cooling capacity	EER	Nominal heating capacity	Sound pressure @ 10m dB(A)	Dimensions (H x W x L)	SEER (gross)	SSCEE compliance	SEPR	Weight
ACHP 10.1	1	24.1	3.21	24.3	42.1	1340 x 1005 x 1960	4.81	189	N/A	323
ACHP 12.1	1	26.6	2.93	28.8	43.1	1341 x 1005 x 1960	4.65	183	N/A	323
ACHP 14.1	1	30.3	2.87	34.2	44.1	1342 x 1005 x 1960	4.53	178	N/A	323
ACHP 16.2	1	43.8	3.10	50.5	43.6	1480 x 1060 x 2304	4.32	170	N/A	500
ACHP 18.2	1	49.7	3.03	54.7	43.6	1481 x 1060 x 2304	4.32	170	N/A	500
ACHP 22.2	1	56.8	2.85	63.4	46.6	1482 x 1060 x 2304	4.25	167	N/A	500
ACHP 30.2	1	70.1	3.06	74.9	46.3	1510 x 1100 x 3330	4.24	167	N/A	830
ACHP 35.2	1	80.2	2.86	85.2	49.3	1511 x 1100 x 3330	4.23	166	N/A	830

AlphaChill Heat Pump Premium

Range Name	Number of circuits	Nominal cooling capacity	EER	Nominal heating capacity	Sound pressure @ 10m dB(A)	Dimensions (H x W x L)	SEER (gross)	SSCEE compliance	SEPR	Weight
ACHP 10.1	1	25.2	3.03	27.0	44.1	1340 x 1005 x 1960	4.50	177	N/A	323
ACHP 12.1	1	27.6	2.75	29.8	45.1	1341 x 1005 x 1960	4.40	173	N/A	323
ACHP 14.1	1	32.2	2.74	35.7	46.1	1342 x 1005 x 1960	4.24	167	N/A	323
ACHP 16.2	1	45.7	2.96	52.5	45.6	1480 x 1060 x 2304	4.04	159	N/A	500
ACHP 18.2	1	52.1	2.88	57.9	46.6	1481 x 1060 x 2304	4.09	161	N/A	500
ACHP 22.2	1	60.7	2.75	66.6	48.6	1482 x 1060 x 2304	4.07	160	N/A	500
ACHP 30.2	1	74.3	2.91	78.5	48.3	1510 x 1100 x 3330	3.96	155	N/A	830
ACHP 35.2	1	86.2	2.73	91.2	51.3	1511 x 1100 x 3330	3.91	153	N/A	830
ACHP 40.2	1	94.2	2.63	102.0	51.3	1512 x 1100 x 3330	3.87	152	N/A	830

AlphaChill Cooling Only

Range Name	Number of circuits	Nominal cooling capacity	EER	Nominal heating capacity	Sound pressure @ 10m dB(A)	Dimensions (H x W x L)	SEER (gross)	SSCEE compliance	SEPR	Weight
ACCO 16.2	1	43.0	3.30	N/A	50.0	1320 x 1060 x 2280	4.97	196	N/A	450
ACCO 20.2	1	54.0	3.14	N/A	51.0	1320 x 1060 x 2280	4.81	189	N/A	450
ACCO 24.2	1	65.0	2.76	N/A	52.0	1320 x 1060 x 2280	4.65	183	N/A	450
ACCO 30.2	1	76.0	3.25	N/A	51.7	1510 x 1100 x 3300	5.37	212	N/A	650
ACCO 35.2	1	87.0	3.07	N/A	53.7	1510 x 1100 x 3300	5.15	203	N/A	650
ACCO 40.2	1	98.0	2.79	N/A	54.7	1510 x 1100 x 3300	4.95	195	N/A	650

Alternative data for other selections is available on request.

We are there when you need us



Life cycle support for critical cooling

Our UK based 24/7 emergency helpline and call out service is available 365 days of the year, ensuring that we are always on hand to provide expert advice and immediate help, day or night. Guaranteed emergency response times mean that a qualified Airedale engineer will be with you in an agreed timeframe, therefore maximising your system's uptime.

For non-UK clients, we offer a service partner network across Europe and the Middle East.

Choose the right service and maintenance contract for you

Our air conditioning service plans offer a preventative air conditioning maintenance service solution to improve system resilience and increase the longevity of your cooling system.

Planned maintenance not only assists in preventing unit breakdowns in business-critical environments, but also helps to improve energy efficiency and enhance system optimisation for improved performance. Over the life cycle of the product this can lead to reduced running costs, improved carbon footprint and quicker returns on investment.

Unrivalled spares service

With approximately £3 million worth of stock on site at its Leeds headquarters, Airedale is the UK's largest stockist for air conditioning parts and specialist HVAC spares and can deliver worldwide.



Vodafone data
centre update

“Reliability and the level of service that Airedale offers are key issues for a business critical location such as this. The project ran very smoothly.”



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