

AIREDALE

air conditioning for every environment

Ultima Compact Condensing Unit Range (UCCU)

30 - 450kW

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> Ultima Compact Condensing Unit Range (UCCU)

Typical Applications

- > Close Control
- > Comfort Cooling

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Standard Features

- > Multiple scroll compressors provide staged capacity control enabling part load efficiencies to be increased
- > Advanced AireTronix controller allows intelligent control of compressors and fan as well as full communication to BMS systems
- > Standard, Quiet and Super Quiet variants offering extremely low sound levels for noise sensitive areas
- > Enhanced high efficiency condenser coils, ideally positioned to optimise airflow and heat transfer
- > Dual independent refrigeration circuits (on all models except UCCU 30-80 (optional single or dual))
- > High Pressure (manual reset) and Low Pressure (auto reset) safety pressure switches
- > Intelligent head pressure control allows the system to operate in ambient temperatures of -20°C
- > Suction and liquid line shut off valves for ease of installation and servicing
- > Galvanised steel case with a baked epoxy paint finish in light grey RAL 7035. Suitable for use in a wide range of climate conditions
- > High efficiency axial fans offer the perfect compromise between performance and noise
- > Various control schemes, controlling operation via :
 - > External 0 - 10V signal
 - > Suction pressure monitoring
 - > Remote space temperature sensor
 - > Remote digital inputs

Options

- > Modbus, Trend & Carel BMS interface cards ensure full network connectivity
- > Epoxy-coated condenser coils for corrosion protection
- > Discharge line ball valve
- > Discharge line non-return valve
- > Leak detection kit provides an indication of any refrigerant leak in the unit
- > Integral pressure relief valves with indicator gauge
- > Dual pressure relief valve allows maintenance / replacement of pressure relief assembly without the requirement to reclaim the system refrigerant
- > Suction line accumulator for low temperature applications
- > Liquid receivers sized to accept the full refrigerant charge up to 30 metres of interconnecting pipework (>30m available upon request)
- > Phase rotation protection
- > Suction pressure and superheat monitoring via AireTronix controller
- > Filter drier and sight glass
- > Electronic soft start significantly reduces the compressor starting current
- > Power factor correction
- > Coil guards
- > Anti-vibration mounts
- > Discharge air plenum
- > Remote set-point adjustment

Key Feature : Control Management

Airedale's versatile UCCU range can be matched with any manufacturer's new or existing Air Handling Unit (AHU). This integration makes control management pivotal, so Airedale has designed the UCCU with the various applications and combinations in mind, providing four of the most common to select via the microprocessor.

- > **External 0-10V Signal**
The compressor operation is controlled by the microprocessor to respond to an incoming 3rd party control signal
- > **Suction Pressure Monitoring**
Here the compressor operation is controlled by the microprocessor to achieve a set evaporating pressure. This method is ideal if the condensing unit operates as a standalone unit with no communication with the BMS or indoor systems
- > **Remote Space Temperature Sensor**
This controls the operation of the compressor(s) by responding to changes in the return air temperature
- > **Remote Digital Inputs**
This controls the operation of compressor(s), based on a given number of digital signals which corresponds to the number of cooling stages (between 1 & 6)



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Overview

Airedales range of air cooled compact condensing units offer cooling capacities of 30-450kW. The UCCU range is designed to be ultra quiet, extremely energy efficient and easy to install. The UCCU range is at the forefront of market technology and is ideal for split system applications. Modular construction and improved range of options ensure there is a unit for every application. The UCCU range is ideally applicable to a variety of environments, from large retail outlets to high tech environments and from manufacturing to leisure.

All models offer the benefits and reliability of multiple scroll compressor technology, in an efficient dual refrigeration circuit system providing two, four or six stages of cooling for improved energy efficiency during part load conditions (single circuit is optional on UCCU30-80 range). Intelligent AireTronix technology allows remote monitoring and control and can be integrated into a wide range of BMS systems by using interface cards or gateways.

Combine all this with modulating head pressure control and high efficiency heat exchangers, and the UCCU ensures the lowest possible life cycle costs.



Key technical data

- > 30kW to 450kW nominal THR capacities
- > 75 models
- > Standard, Quiet and Super Quiet variants
- > Advanced AireTronix controls technology
- > Multiple scroll-compressors
- > Dual independent refrigeration circuit (single option on UCCU30-80)

Typical Applications



Close Control Applications



Comfort Cooling Applications

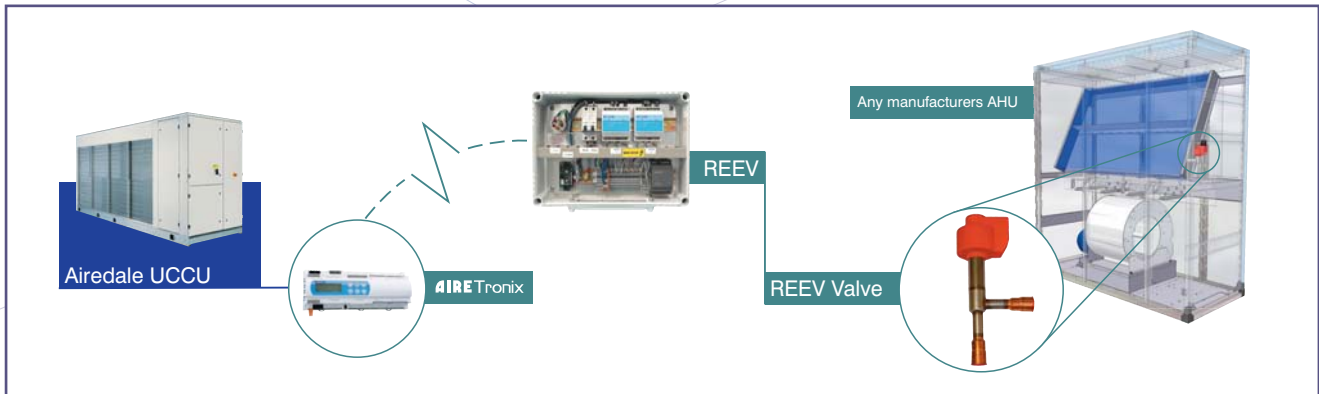
Remote Electronic Expansion Valve (REEV)

Easily applied in commercial, retail or leisure applications, the Remote Electronic Expansion Valve (REEV) brings the efficiency and control of electronic expansion valves to a split system, providing stable and accurate control of the refrigeration system superheat.

REEV enables Airedale's versatile Ultima Compact Condensing Unit (UCCU) range to be matched with any manufacturer's new or existing Air Handling Unit (AHU) in a 1-1 circuit match, regardless of size.

Benefits include:

- > Improved efficiency up to 30%
- > Optimisation
- > Versatility for a greater selection tolerance
- > Remote intelligent configuration, providing ultra stable system operation
- > Reduced cost of installation



Performance Data

UCCU Standard							
Model No.	Nom. Cooling Capacity* (kW)	Nominal Input Power* (kW)	EER**	Global Sound Pressure @ 10m dB(A)	Dimensions (H x W x D)mm	Operating Weight (kg)	Rec Mains Fuse (A) *
UCCU30-80	Only available in Quiet and Super Quiet Models						
UCCU75D-2/1	81.9	22.1	3.70	49	2000 x 1300 x 2800	940	63
UCCU100D-2/1	104.7	30.7	3.41	49	2000 x 1300 x 2800	970	80
UCCU110D-4/2	112.0	27.2	4.11	56	2100 x 1850 x 2415	1320	100
UCCU125D-3/1	133.7	37.6	3.56	52	2000 x 1300 x 3650	1210	125
UCCU130D-4/2	135.8	36.6	3.71	56	2100 x 1850 x 2415	1370	125
UCCU150D-3/1	157.7	46.9	3.37	52	2000 x 1300 x 3650	1250	125
UCCU160D-4/2	158.2	46.6	3.39	56	2100 x 1850 x 2415	1410	125
UCCU180D-6/2	195.2	51.6	3.79	58	2100 x 1850 x 3220	1810	160
UCCU200D-6/2	215.9	59.8	3.61	58	2100 x 1850 x 3220	1810	160
UCCU225D-6/2	243.8	69.1	3.53	58	2100 x 1850 x 3220	1930	200
UCCU250D-6/2	264.0	78.0	3.39	58	2100 x 1850 x 3220	1930	200
UCCU275D-8/2	298.4	93.4	3.19	57	2180 x 2200 x 4700	2410	200
UCCU300D-8/2	324.8	104.8	3.10	57	2180 x 2200 x 4700	2530	250
UCCU330D-10/2	365.7	104.9	3.48	58	2180 x 2200 x 5550	2820	250
UCCU360D-10/2	396.3	118.0	3.36	58	2180 x 2200 x 5550	2880	315
UCCU400D-12/2	448.8	130.5	3.44	59	2180 x 2200 x 6400	3240	315
UCCU450D-12/2	490.0	149.3	3.28	59	2180 x 2200 x 6400	3340	355

* At 5°C dew point evaporating temperature, 30°C ambient

** EER = Cooling duty ÷ compressor input power

Notations used apply to standard, quiet and super quiet variants

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UCCU Quiet

Model No.	Nom. Cooling Capacity* (kW)	Nominal Input Power* (kW)	EER**	Global Sound Pressure @ 10m dB(A)	Dimensions (H x W x D)mm	Operating Weight (kg)	Rec Mains Fuse (A) *
UCCU30(S/D)Q-1/1	33.9	10.7	3.17	46	1450 x 1310 x 1650	470	32
UCCU40(S/D)Q-1/1	39.1	12.1	3.24	46	1450 x 1310 x 1650	550	40
UCCU50(S/D)Q-2/1	52.1	15.6	3.33	48	1450 x 1310 x 2500	690	50
UCCU60(S/D)Q-2/1	61.1	17.9	3.41	48	1450 x 1310 x 2500	740	50
UCCU70(S/D)Q-2/1	69.2	20.6	3.36	48	1450 x 1310 x 2500	760	63
UCCU75DQ-2/1	79.9	23.1	3.46	45	2000 x 1300 x 2800	940	63
UCCU80(S/D)Q-2/1	76.8	24.6	3.12	48	1450 x 1310 x 2500	830	80
UCCU100DQ-2/1	103.1	31.4	3.28	45	2000 x 1300 x 2800	1010	80
UCCU110DQ-4/2	109.4	28.4	3.85	51	2100 x 1850 x 2415	1280	100
UCCU125DQ-3/1	130.1	39.3	3.31	48	2000 x 1300 x 3650	1210	125
UCCU130DQ-4/2	132.0	38.4	3.44	51	2100 x 1850 x 2415	1320	125
UCCU150DQ-4/1	159.8	45.8	3.49	49	2000 x 1300 x 4500	1510	125
UCCU160DQ-6/2	164.9	43.4	3.80	53	2100 x 1850 x 3220	1630	125
UCCU180DQ-6/2	190.1	53.9	3.53	53	2100 x 1850 x 3220	1740	160
UCCU200DQ-6/2	212.9	61.3	3.47	54	2100 x 1850 x 3220	1740	160
UCCU225DQ-8/2	246.0	68.0	3.62	55	2100 x 1850 x 4025	2120	200
UCCU250DQ-8/2	266.5	76.6	3.48	55	2100 x 1850 x 4025	2120	200
UCCU275DQ-10/2	299.7	93.1	3.22	54	2180 x 2200 x 5550	2700	200
UCCU300DQ-10/2	326.4	104.4	3.13	54	2180 x 2200 x 5550	2820	250
UCCU330DQ-12/2	364.5	105.5	3.45	54	2180 x 2200 x 6400	3130	250
UCCU360DQ-12/2	395.1	118.6	3.33	55	2180 x 2200 x 6400	3190	315
UCCU400DQ-14/2	449.8	130.0	3.46	54	2180 x 2200 x 7250	3530	315
UCCU450DQ-14/2	491.0	148.8	3.30	54	2180 x 2200 x 7250	3640	355

UCCU Super Quiet

Model No.	Nom. Cooling Capacity* (kW)	Nominal Input Power* (kW)	EER**	Global Sound Pressure @ 10m dB(A)	Dimensions (H x W x D)mm	Operating Weight (kg)	Rec Mains Fuse (A) *
UCCU30(S/D)SQ-1/1	34.0	10.7	3.18	41	1450 x 1310 x 1650	480	32
UCCU40(S/D)SQ-1/1	39.2	12.0	3.25	41	1450 x 1310 x 1650	570	40
UCCU50(S/D)SQ-2/1	53.0	15.2	3.50	42	1450 x 1310 x 2500	700	50
UCCU60(S/D)SQ-2/1	60.1	18.4	3.27	42	1450 x 1310 x 2500	750	50
UCCU70(S/D)SQ-2/1	69.4	20.5	3.38	42	1450 x 1310 x 2500	770	63
UCCU75DSQ-3/1	81.9	22.2	3.70	42	2000 x 1300 x 3650	1150	63
UCCU80(S/D)SQ-2/1	78.3	23.9	3.27	43	1450 x 1310 x 2500	870	80
UCCU100DSQ-3/1	104.6	30.7	3.40	43	2000 x 1300 x 3650	1180	80
UCCU110DSQ-4/2	106.0	30.0	3.53	45	2100 x 1850 x 2415	1300	100
UCCU125DSQ-4/1	130.9	38.9	3.37	45	2000 x 1300 x 4500	1480	125
UCCU130DSQ-6/2	137.1	35.9	3.82	47	2100 x 1850 x 3220	1600	125
UCCU150DSQ-4/1	154.1	48.6	3.17	46	2000 x 1300 x 4500	1620	125
UCCU160DSQ-6/2	159.9	45.8	3.49	47	2100 x 1850 x 3220	1650	125
UCCU180DSQ-6/2	186.3	55.7	3.35	48	2100 x 1850 x 3220	1760	160
UCCU200DSQ-8/2	213.9	60.8	3.52	49	2100 x 1850 x 4025	2030	160
UCCU225DSQ-8/2	241.5	70.3	3.44	50	2100 x 1850 x 4025	2140	250
UCCU250DSQ-8/2	261.3	79.4	3.29	50	2100 x 1850 x 4025	2140	200
UCCU275DSQ-12/2	299.9	93.1	3.22	51	2180 x 2200 x 6400	3010	200
UCCU300DSQ-12/2	326.7	104.3	3.13	51	2180 x 2200 x 6400	3120	250
UCCU330DSQ-14/2	363.1	106.2	3.42	51	2180 x 2200 x 7250	3430	250
UCCU360DSQ-14/2	393.5	119.5	3.29	51	2180 x 2200 x 7250	3480	315
UCCU400DSQ-16/2	442.0	133.8	3.30	52	2180 x 2200 x 8100	4030	315
UCCU450DSQ-16/2	481.0	153.4	3.14	52	2180 x 2200 x 8100	4130	355

* At 5°C dew point evaporating temperature, 30°C ambient

** EER = Cooling duty ÷ compressor input power

Notations used apply to Standard, Quiet and Super Quiet variants

For the latest information on our Condenser products please visit : www.airedale.com
Please refer to the technical manuals for more detailed information

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