

AUX R32 Free Match

Inverter Multi-Split Technical Guide

Outdoor units 14K to 42K | One outdoor unit driving two to five indoor units

Wall-mounted, cassette, ducted and console indoor units

AUX UK

Heat pumps and air conditioning - auxuk.com

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Contents

1	About this guide	9	Sound data
2	How a Free Match system works	10	Controls and accessories
3	The range at a glance	11	Commissioning and test running
4	Outdoor unit technical data	12	Fault codes
5	Indoor unit technical data	13	Servicing and user care
6	Permitted unit combinations	14	Refrigerant, F-Gas and UK compliance
7	Pipework and refrigerant charge	15	Part-load performance data
8	Electrical data	16	Warranty and support

1. About this guide

This guide brings together the technical information for the AUX R32 Free Match inverter multi-split range in a single reference document. It is written for customers, specifiers, facilities managers and installers working in the United Kingdom, and it consolidates data drawn from the AUX Free Match specification schedules, the R32 Free Match installation and operation manual, the Free Match inverter series technical service manual (version 27, July 2026) and the 2026 AUX European light commercial catalogue.

All measurements are given in metric units as used in the United Kingdom: millimetres for dimensions, kilograms for weights, kilowatts for capacity and power, cubic metres per hour for air volume, and degrees Celsius for temperature. Cooling and heating capacities are also shown in Btu/h where that is how the model is designated. Pipe sizes are given in millimetres with the equivalent imperial size in brackets, as both are still in everyday use in the British refrigeration trade.

Important. This document is a summary for reference and selection. It does not replace the installation manual supplied with each unit. Installation, commissioning and servicing must be carried out by a suitably qualified and F-Gas certified engineer, working to the manufacturer instructions and to the relevant British Standards and Building Regulations.

2. How a Free Match system works

A Free Match system uses one outdoor condensing unit to serve between two and five indoor units, each of which can be controlled independently. Every indoor unit has its own pair of refrigerant pipes running back to a dedicated set of service valves on the outdoor unit, so there are no branch boxes, refrigerant distributors or brazed joints needed between the indoor and outdoor units. That keeps installation time down and reduces the number of potential leak points on site.

Each indoor unit is regulated by its own electronic expansion valve, which is housed inside the outdoor unit. Placing the valves outdoors keeps throttling noise out of the occupied space and allows the system to bring individual rooms up or down to temperature quickly.

Key features of the range

- **Full DC inverter operation.** DC inverter rotary compressor and DC fan motor with 180-degree sine wave vector drive, for smooth modulation, quieter running and good efficiency at part load - which is where a multi-split spends most of its working life.
- **Efficiency.** Seasonal efficiency up to SEER 7.80 and SCOP 4.72, with energy ratings of A++ in cooling and A+ or A++ in heating depending on model.
- **Wide operating envelope.** Cooling down to -15 °C and up to 52 °C outdoor; heating down to -25 °C outdoor on the 18K, 27K, 28K and 36K units.
- **Chassis heater.** The chassis electric heater operates when the outdoor ambient falls below 1 °C and during defrost, preventing condensate freezing in the base tray.
- **8 °C frost watch heating.** Holds an unoccupied room at approximately 8 °C to protect pipework and equipment. Available on units manufactured from April 2025 onwards, using a compatible remote handset (T021, T121, M101) or

the XK06 wired controller.

- **Automatic restart.** The system returns to its previous operating state after a power interruption, with no need to reset it manually.
- **Independent electronic expansion valve control** for each indoor unit, giving rapid response and stable room temperatures across mixed indoor unit types.

3. The range at a glance

Outdoor units

Capacity class	Model	System format	Cooling (kW)	Heating (kW)	SEER / SCOP	Energy rating
14K	AM2-H14/4DR3C	1 drives 2	4.10	4.50	6.1 / 4.1	A++ / A+
18K	AM2-H18/4DR3D	1 drives 2	5.30	5.60	6.8 / 4.6	A++ / A++
21K	AM3-H21/4DR3C	1 drives 3	6.20	6.60	6.1 / 4.1	A++ / A+
27K	AM3-H27/4DR3D	1 drives 3	7.91	8.21	6.8 / 4.6	A++ / A++
28K	AM4-H28/4DR3D	1 drives 4	8.00	9.40	7.8 / 4.72	A++ / A++
36K	AM4-H36/4DR3B	1 drives 4	10.55	11.00	6.4 / 4.5	A++ / A+
42K	AM5-H42/4DR3	1 drives 5	12.00	13.00	6.2 / 4.0	A++ / A+

Indoor units

Indoor unit type	Series	7K	9K	12K	18K	24K
Wall-mounted	C, M, J, Q, F, H	Yes	Yes	Yes	Yes	Yes
Console	ZG	-	Yes	Yes	Yes	-
Compact cassette	Y	-	Yes	Yes	Yes	-
Cassette	Q	-	-	-	-	Yes
One-way cassette	AMC1	-	Yes	Yes	Yes	Yes
Slim duct	Y	Yes	Yes	-	-	-
Medium duct	M	-	-	Yes	Yes	Yes

Indoor units may be mixed freely within the combinations permitted for each outdoor unit (see section 6). A single system can therefore combine, for example, wall-mounted units in bedrooms with a ducted unit serving a living space.

4. Outdoor unit technical data

Models 14K to 27K

Specification	14K	18K	21K	27K
Model	AM2-H14/4DR3C	AM2-H18/4DR3D	AM3-H21/4DR3C	AM3-H27/4DR3D
Product code	16130021000012	16130021000037	16130021000014	16130021000036
System format	1 drive 2	1 drive 2	1 drive 3	1 drive 3
Cooling capacity (Btu/h)	13989(6142-15388)	18084(6824-19892)	21154(7506-22895)	27000(7848-29650)
Cooling capacity (kW)	4.1(1.8-4.51)	5.3(2.0-5.83)	6.2(2.2-6.71)	7.91(2.3-8.69)
Heating capacity (Btu/h)	15354(6995-18015)	19107(7541-21017)	22519(8155-24771)	28000(8359-30776)
Heating capacity (kW)	4.5(2.05-5.28)	5.6(2.21-6.16)	6.6(2.39-7.26)	8.21(2.45-9.02)
Power supply (V, Hz, phase)	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1
Cooling power input (W)	1240(198-2100)	1560(280-2300)	1920(350-2800)	2390(560-3400)
Heating power input (W)	1150(198-2100)	1440(280-2300)	1780(350-2800)	2160(560-3400)
Rated current, cooling / heating (A)	5.39/5.00	6.92/6.39	8.35/7.74	10.60/9.58
Maximum current (A)	12	13	14	16.5
SEER / SCOP (W/W)	6.1/4.1	6.8/4.6	6.1/4.1	6.8/4.6
Energy rating (cooling / heating)	A++/A+	A++/A++	A++/A+	A++/A++
EER / COP (W/W)	3.31/3.91	3.4/3.9	3.23/3.71	3.3/3.8
Compressor model	KSN98D64UFZA3	KSN140D53SFZM3	KSN140D53UFZM3	KTN150D43UFZD31
Compressor type	Rotary	Rotary	Rotary	Rotary
Compressor frequency range (Hz)	10-120Hz	10-120 Hz	10-120Hz	12-120 Hz
Refrigerant oil (grade / charge)	VG74/300ml	VG75/420ml	VG74/420ml	VG74/500ml
Outdoor fan output (W)	40	40	65	65
Outdoor fan speed (rev/min)	900	900	850	850
Outdoor coil area (m ²)	18.85	18.85	25.51	27.12
Air volume (m ³ /h)	2600	2600	4100	4000
Sound pressure level (dB(A))	53	54	56	57
Sound power level (dB(A))	65	65	66	67
Net dimensions W x D x H (mm)	785x300x555	785x300x555	900x360x700	900x360x700
Packed dimensions W x D x H (mm)	900x380x615	900x380x615	1015x415x755	1015x415x755
Net weight (kg)	30	30.5	41.5	41.5
Gross weight (kg)	32.5	33	45	45
Refrigerant	R32	R32	R32	R32
Factory charge (kg)	1	1.03	1.15	1.3
Additional charge (g/m)	25	15	25	15
Liquid connections (mm)	2x6.35(1/4)	2x6.35(1/4)	3x6.35(1/4)	3x6.35(1/4)
Gas connections (mm)	2x9.52(3/8)	2x9.52(3/8)	3x9.52(3/8)	3x9.52(3/8)
Maximum total pipe run, all rooms (m)	40	40	60	60
Maximum pipe run, one indoor unit (m)	25	25	30	30
Maximum height difference, indoor to outdoor (m)	15	15	15	15
Maximum height difference between indoor units (m)	10	10	10	10
Ambient range, cooling / heating (°C)	-10 to +52 / -15 to +24	-15 to +52 / -25 to +24	-10 to +52 / -15 to +24	-15 to +52 / -25 to +24
Outdoor unit supply cable (mm ²)	3 x 2.5	3 x 2.5	3 x 2.5	3 x 2.5
Indoor to outdoor interconnect (mm ²)	4 x 1.5	4 x 1.5	4 x 1.5	4 x 1.5

Models 28K to 42K

Specification	28K	36K	42K
Model	AM4-H28/4DR3D	AM4-H36/4DR3B	AM5-H42/4DR3
Product code	16130021000038	16130021000039	16105022000087
System format	1 drive 4	1 drive 4	1 drive 5
Cooling capacity (Btu/h)	27300(8530-33440)	36000	40944(9451-43332)
Cooling capacity (kW)	8.0(2.5-9.80)	10.55(2.5-11.0)	12(2.77-12.7)
Heating capacity (Btu/h)	32070(9110-34460)	37500	44356(10100-44800)
Heating capacity (kW)	9.4(2.67-10.14)	11.00(2.67-11.2)	13(2.96-13.1)
Power supply (V, Hz, phase)	220-240,50,1	220-240,50,1	220-240,50,1
Cooling power input (W)	2000(270-3300)	3270(680-4930)	3710(750-5450)
Heating power input (W)	2050(340-3100)	2965(530-3850)	3500(600-4350)
Rated current, cooling / heating (A)	8.87/9.13	14.5/13.1	16.46/15.53
Maximum current (A)	19	22.6	24.5
SEER / SCOP (W/W)	7.80/4.72	6.4/4.5	6.2/4.0
Energy rating (cooling / heating)	A++/A++	A++/A+	A++/A+
EER / COP (W/W)	4.01/4.61	3.23/3.71	3.23/3.71
Compressor model	KTM210D15UFZA3	KTM240D43UFPB	KTF310D43UMT
Compressor type	Rotary	Rotary	Rotary
Compressor frequency range (Hz)	12-120Hz	12-120 Hz	12-120 Hz
Refrigerant oil (grade / charge)	VG74/700ml	VG74/900ml	VG74/1000ml
Outdoor fan output (W)	90	90	120
Outdoor fan speed (rev/min)	940	940	940
Outdoor coil area (m ²)	34.35	58.33	58.33
Air volume (m ³ /h)	4200	4000	4200
Sound pressure level (dB(A))	59	60	61
Sound power level (dB(A))	67	70	70
Net dimensions W x D x H (mm)	970x395x803	970x395x803	970x395x803
Packed dimensions W x D x H (mm)	1105x495x885	1105x495x885	1105x495x885
Net weight (kg)	59	63.5	75
Gross weight (kg)	64	67.5	79
Refrigerant	R32	R32	R32
Factory charge (kg)	2	2.3	2.3
Additional charge (g/m)	15	15	25
Liquid connections (mm)	4x6.35(1/4)	4x6.35(1/4)	5x6.35(1/4)
Gas connections (mm)	4x9.52(3/8)	4x9.52(3/8)	5x9.52(3/8)
Maximum total pipe run, all rooms (m)	80	80	80
Maximum pipe run, one indoor unit (m)	35	35	35
Maximum height difference, indoor to outdoor (m)	15	15	15
Maximum height difference between indoor units (m)	10	10	10
Ambient range, cooling / heating (°C)	-15 to +52 / -25 to +24	-15 to +52 / -25 to +24	-10 to +52 / -15 to +24
Outdoor unit supply cable (mm ²)	3 x 2.5	3 x 4	3 x 4
Indoor to outdoor interconnect (mm ²)	4 x 1.5	4 x 1.5	4 x 1.5

Capacity figures are given as the nominal rating with the modulating range in brackets. Nominal cooling is measured at 27 °C dry bulb / 19 °C wet bulb indoors and 35 °C outdoors; nominal heating at 20 °C dry bulb indoors and 7 °C dry bulb / 6 °C wet bulb outdoors. Sound pressure is measured in a semi-anechoic chamber one metre in front of the centre of the air outlet; levels on site will differ with the acoustic character of the location.

5. Indoor unit technical data

Every indoor unit in the range is powered from the outdoor unit through the interconnecting cable, so no separate fused supply is required at the indoor unit. Sound pressure levels are quoted at high, medium and low fan speed where the unit offers three speeds.

5.1 Wall-mounted units

C series

Smooth flat-fronted panel with 3,206 micro-vents in the outlet grille, which diffuses the discharge air and reduces the sensation of draught. I-Feel remote sensing, 4D airflow with two stepper motors, optional Wi-Fi and optional English-language voice control.

Specification	AMWM-H07/4R3A(Cx)	AMWM-H09/4R3A(Cx)	AMWM-H12/4R3A(Cx)	AMWM-H18/4R3A(Cx)	AMWM-H24/4R3A(Cx)
Product code	16129021000075	16129021000072	16129021000074	16129021000076	16129021000073
Cooling capacity (Btu/h)	7000(3855-9220)	9000(4780-11260)	12000(5800-12625)	17980(8530-19790)	23542(9895-24908)
Cooling capacity (kW)	2.05(1.13-2.70)	2.64(1.40-3.30)	3.52(1.70-3.70)	5.27(2.50-5.80)	6.90(2.90-7.30)
Heating capacity (Btu/h)	8000(3340-8530)	10000(4095-10240)	13000(6930-15080)	18350(7680-19790)	24054(7165-27296)
Heating capacity (kW)	2.35(0.98-2.50)	2.93(1.2-3.00)	3.81(2.03-4.42)	5.38(2.25-5.80)	7.05(2.10-8.00)
Power supply (V, Hz, phase)	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1
Power input, cooling (W)	40	40	40	63	63
Power input, heating (W)	40	40	40	63	63
Fan motor output (W)	13	13	13	30	50
Air volume (m ³ /h)	650	650	650	950	1300
Sound pressure, high / medium / low (dB(A))	41/38/35	41/38/35	41/38/35	47/39/36	49/44/40
Sound power level (dB(A))	53	53	53	58	63
Net dimensions W x D x H (mm)	774x298x202	774x298x202	774x298x202	1002x318x223	1145x332x230
Net weight (kg)	7	7	7.5	11	13
Liquid connection (mm)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)
Gas connection (mm)	9.52(3/8)	9.52(3/8)	9.52(3/8)	12.7(1/2)	15.88(5/8)
Drain connection (mm)	16.9	16.9	16.9	16.9	16.9

M series

Micropore outlet grille for a soft, diffused air pattern, PCB accessible without removing the middle frame, window-switch linkage for automatic shutdown, and an optional slimline touch-screen wired controller.

Specification	AMWM-H07/4R3A(Mx)	AMWM-H09/4R3A(Mx)	AMWM-H12/4R3A(Mx)	AMWM-H18/4R3A(Mx)	AMWM-H24/4R3A(Mx)
Product code	16129021000063	16129021000065	16129021000064	16129021000062	16129021000061
Cooling capacity (Btu/h)	7000(3855-9220)	9000(4780-11260)	12000(5800-12625)	17980(8530-19790)	23542(9895-24908)
Cooling capacity (kW)	2.05(1.13-2.70)	2.64(1.40-3.30)	3.52(1.70-3.70)	5.27(2.50-5.80)	6.90(2.90-7.30)
Heating capacity (Btu/h)	8000(3340-8530)	10000(4095-10240)	13000(6930-15080)	18350(7680-19790)	24054(7165-27296)
Heating capacity (kW)	2.35(0.98-2.50)	2.93(1.2-3.00)	3.81(2.03-4.42)	5.38(2.25-5.80)	7.05(2.10-8.00)
Power supply (V, Hz, phase)	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1
Power input, cooling (W)	40	40	40	63	63(16-88)
Power input, heating (W)	40	40	40	63	63(16-88)
Fan motor output (W)	13	13	13	30	50
Air volume (m ³ /h)	650	650	650	950	1300
Sound pressure, high / medium / low (dB(A))	41/38/35	41/38/35	41/38/35	47/39/36	49/44/40
Sound power level (dB(A))	57	57	57	60	60
Net dimensions W x D x H (mm)	768x299x201	768x299x201	768x299x201	1004x320x223	1140x332x230
Net weight (kg)	7	7	7.5	11	13
Liquid connection (mm)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)

Specification	AMWM-H07/4R3A(Mx)	AMWM-H09/4R3A(Mx)	AMWM-H12/4R3A(Mx)	AMWM-H18/4R3A(Mx)	AMWM-H24/4R3A(Mx)
Gas connection (mm)	9.52(3/8)	9.52(3/8)	9.52(3/8)	12.7(1/2)	15.88(5/8)
Drain connection (mm)	16.9	16.9	16.9	16.9	16.9

J series

Integrated appearance with close panel tolerances, removable lower cover that allows one engineer to fit the unit single-handed, switch-type sealing knobs in place of screws, arc-shaped fin guide and wave-form left and right vanes for a longer, more even throw, and a pluggable PCB for quick board changes.

Specification	AMWM-H07/4R3C(Jx)	AMWM-H09/4R3C(Jx)	AMWM-H12/4R3C(Jx)	AMWM-H18/4R3C(Jx)	AMWM-H24/4R3A(Jx)
Product code	16129021000044	16129021000046	16129021000047	16129021000055	16129021000023
Cooling capacity (Btu/h)	7000(3855-9220)	9000(4780-11260)	12000(5800-12625)	17980(8530-19790)	23542(9895-24908)
Cooling capacity (kW)	2.05(1.13-2.70)	2.64(1.40-3.30)	3.52(1.70-3.70)	5.27(2.50-5.80)	6.90(2.90-7.30)
Heating capacity (Btu/h)	8000(3340-8530)	10000(4095-10240)	13000(6930-15080)	18350(7680-19790)	24054(7165-27296)
Heating capacity (kW)	2.35(0.98-2.50)	2.93(1.20-3.00)	3.81(2.03-4.42)	5.38(2.25-5.80)	7.05(2.10-8.00)
Power supply (V, Hz, phase)	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1
Power input, cooling (W)	40	40	40	63	63(16-88)
Power input, heating (W)	40	40	40	63	63(16-88)
Fan motor output (W)	13	13	13	30	50
Air volume (m ³ /h)	600	600	600	900	1300
Sound pressure, high / medium / low (dB(A))	40/36/32	40/36/32	41/37/33	46/42/36	46/42/37
Sound power level (dB(A))	57	57	57	60	60
Net dimensions W x D x H (mm)	792x292x201	792x292x201	792x292x201	940x316x224	1132x330x232
Net weight (kg)	8	8	8	10.5	14
Liquid connection (mm)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)
Gas connection (mm)	9.52(3/8)	9.52(3/8)	9.52(3/8)	12.7(1/2)	15.88(5/8)
Drain connection (mm)	16.9	16.9	16.9	16.9	16.5

Q series

Mirror-polished panel with a rounded profile, long air throw, anti-cold-air fan logic that prevents cool air being blown into the room at the start of a heating cycle, and a removable silver-ion antibacterial filter.

Specification	AMWM-H07/4R3B(Qx)	AMWM-H09/4R3B(Qx)	AMWM-H07/4R3A(Qx)	AMWM-H09/4R3A(Qx)	AMWM-H12/4R3A(Qx)	AMWM-H18/4R3A(Qx)	AMWM-H24/4R3A(Qx)
Product code	16129021000042	16129021000043	16129021000039	16129021000040	16129021000038	16129021000036	16129021000037
Cooling capacity (Btu/h)	7000(3855-9220)	9000(4780-11260)	7000(3855-9220)	9000(6030-11260)	12000(5800-12625)	18015(8530-19790)	23542(9895-24908)
Cooling capacity (kW)	2.05(1.13-2.70)	2.60(1.40-3.30)	2.05(1.13-2.70)	2.64(1.40-3.30)	3.52(1.70-3.70)	5.28(2.50-5.80)	6.90(2.90-7.30)
Heating capacity (Btu/h)	7400(3340-8530)	10000(4095-10240)	7400(3340-8530)	10000(5170-10240)	13000(6140-13300)	18085(7680-19790)	24054(7165-27296)
Heating capacity (kW)	2.15(0.98-2.50)	2.93(1.2-3.00)	2.15(0.98-2.50)	2.93(1.2-3.00)	3.8(1.80-3.90)	5.37(2.25-5.80)	7.05(2.10-8.00)
Power supply (V, Hz, phase)	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1
Power input, cooling (W)	20	20	40(12-68)	40(12-68)	40(12-68)	58(16-88)	63(16-88)
Power input, heating (W)	20	20	40(12-68)	40(12-68)	40(12-68)	58(16-88)	63(16-88)
Fan motor output (W)	13	13	13	13	18	30	50
Air volume (m ³ /h)	550	550	600	600	600	950	1300
Sound pressure, high / medium / low (dB(A))	40	40	40/36/32	40/36/32	40/36/32	46/42/37	48/45/40
Sound power level (dB(A))	57	57	57	57	57	60	60
Net dimensions W x D x H (mm)	708x282x193	708x282x193	762x295x200	762x295x200	762x295x200	960x316x222	1089x328x227
Net weight (kg)	7	7	8	8	8	11	12.5
Liquid connection (mm)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)
Gas connection (mm)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)	12.7(1/2)	15.88(5/8)
Drain connection (mm)	16.9	16.9	16.9	16.9	16.9	16.9	16.9

F series

4D airflow, self-cleaning evaporator cycle to discourage bacterial growth, silver flanged trim and a high-gloss ABS panel with a low-glare LED display.

Specification	AMWM-H07/4R 3C(Fx)	AMWM-H09/4R 3B(Fx)	AMWM-H09/4R 3D(Fx)	AMWM-H12/4R 3D(Fx)	AMWM-H18/4R 3C(Fx)	AMWM-H24/4R 3A(Fx)
Product code	16129021000048	16129021000041	16129021000105	16129021000106	16129021000050	16129021000032
Cooling capacity (Btu/h)	7000(3855-9220)	9000(4780-11260)	9000(4780-11260)	12000(5800-12625)	17980(8530-19790)	23542(9895-24908)
Cooling capacity (kW)	2.05(1.13-2.70)	2.60(1.40-3.30)	2.64(1.40-3.30)	3.52(1.70-3.70)	5.27(2.50-5.80)	6.90(2.90-7.30)
Heating capacity (Btu/h)	8000(3340-8530)	10000(4095-10240)	10000(4095-10240)	13000(6930-15080)	18350(7680-19790)	24054(7165-27296)
Heating capacity (kW)	2.35(0.98-2.50)	2.93(1.2-3.00)	2.93(1.20-3.00)	3.81(2.03-4.42)	5.38(2.25-5.80)	7.05(2.10-8.00)
Power supply (V, Hz, phase)	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1
Power input, cooling (W)	40	20	40	40	63	63(16-88)
Power input, heating (W)	40	20	40	40	63	63(16-88)
Fan motor output (W)	13	13	13	13	30	50
Air volume (m ³ /h)	600	550	cooling:530/480/ 420 heating:550 /490/420	cooling:530/480/ 420 heating:550 /490/420	900	1300
Sound pressure, high / medium / low (dB(A))	40/36/32	40	40/36/32	41/37/33	46/40/35	46/42/37
Sound power level (dB(A))	57	57	54	54	60	60
Net dimensions W x D x H (mm)	750x285x200	690x283x199	750x285x200	750x285x200	900x310x225	1082x330x233
Net weight (kg)	7.5	7	7.5	7.5	9.5	15
Liquid connection (mm)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)
Gas connection (mm)	9.52(3/8)	9.52(3/8)	9.52(3/8)	9.52(3/8)	12.7(1/2)	15.88(5/8)
Drain connection (mm)	16.9	16.5	16.9	16.9	16.9	16.5

H series

Specification	AMWM-H07/4R3C(Hx)	AMWM-H09/4R3C(Hx)	AMWM-H12/4R3C(Hx)	AMWM-H18/4R3C(Hx)	AMWM-H24/4R3A(Hx)
Product code	16129021000051	16129021000052	16129021000053	16129021000054	16129021000027
Cooling capacity (Btu/h)	7000(3855-9220)	9000(4780-11260)	12000(5800-12625)	17980(8530-19790)	23542(9895-24908)
Cooling capacity (kW)	2.05(1.13-2.70)	2.64(1.40-3.30)	3.52(1.70-3.70)	5.27(2.50-5.80)	6.90(2.90-7.30)
Heating capacity (Btu/h)	8000(3340-8530)	10000(4095-10240)	13000(6930-15080)	18350(7680-19790)	24054(7165-27296)
Heating capacity (kW)	2.35(0.98-2.50)	2.93(1.20-3.00)	3.81(2.03-4.42)	5.38(2.25-5.80)	7.05(2.10-8.00)
Power supply (V, Hz, phase)	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1
Power input, cooling (W)	40	40	40	63	63(16-88)
Power input, heating (W)	40	40	40	63	63(16-88)
Fan motor output (W)	13	13	13	30	50
Air volume (m ³ /h)	600	600	600	900	1300
Sound pressure, high / medium / low (dB(A))	40/38/34	40/38/34	41/39/35	46/42/36	46/42/37
Sound power level (dB(A))	57	57	57	60	60
Net dimensions W x D x H (mm)	788x292x198	788x292x198	788x292x198	936x316x221	1121x329x231
Net weight (kg)	8	8	8	10.5	15
Liquid connection (mm)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)	6.35(1/4)
Gas connection (mm)	9.52(3/8)	9.52(3/8)	9.52(3/8)	12.7(1/2)	15.88(5/8)
Drain connection (mm)	16.9	16.9	16.9	16.9	16.9

5.2 Cassette units

Compact cassette Y and cassette Q

The compact cassette Y has an external control box so the unit does not have to be dropped out of the ceiling for maintenance, and the fan blades can be withdrawn once the air guide ring is removed. Fresh air intake is provided as standard. The 24K cassette Q is only 245 mm deep, offers individual control of each of the four louvres and a digital display board reading temperature, operating status and fault codes through the XK10 wired controller, plus a high-temperature self-cleaning cycle on the evaporator.

Specification	AUCA-H09/4DR3H YAA	AUCA-H12/4DR3H A2	AUCA-H18/4DR3H A2	AUCA-H24/4DR3H B2
Product code	16129024000004	16129024000011	16129024000012	16129024000013
Cooling capacity (Btu/h)	9560(5120-12115)	12000(5800-12625)	18000(8530-19107)	24000(7400-28000)
Cooling capacity (kW)	2.80(1.50-3.55)	3.52(1.70-3.70)	5.28(2.50-5.6)	7.03(2.16-8.20)
Heating capacity (Btu/h)	10240(5460-13000)	13000(6930-15080)	19100(10340-24000)	27000(6800-31700)
Heating capacity (kW)	3.00(1.60-3.81)	3.81(2.03-4.42)	5.60(3.03-7.03)	7.91(1.98-9.30)
Power supply (V, Hz, phase)	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1
Power input, cooling (W)	40	50	53	58
Power input, heating (W)	40	50	53	58
Fan motor output (W)	30x1	30x1	30x1	80x1
Air volume (m ³ /h)	700/620/530	720/660/600/530	800/740/680/600	1500/1350/1200/1050
Sound pressure (dB(A))	42/36/32	41/38/35	44/41/37	42/38/35
Sound power level (dB(A))	52	55	58	58
Body dimensions W x D x H (mm)	570x570x260	570x570x260	570x570x260	840x840x245
Panel dimensions W x D x H (mm)	650x650x55	650x650x55	650x650x55	950x950x55
Net weight, body (kg)	14.5	14.5	15	21
Net weight, panel (kg)	2.2	2.2	2.2	5.3
Liquid connection (mm)	6.35(1/4)	6.35(1/4)	6.35(1/4)	9.52(3/8)
Gas connection (mm)	12.7(1/2)	9.52(3/8)	12.7(1/2)	15.88(5/8)
Drain connection	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)

One-way cassette

Specification	AMC1-H09/4R3DSA	AMC1-H12/4R3DSA	AMC1-H18/4R3DSA	AMC1-H24/4R3DSA
Panel	MB15	MB15	MB16	MB16
Product code	16129024000020	16129024000017	16129024000018	16129024000019
Cooling capacity (Btu/h)	9000(4435-11260)	12000(5800-12625)	18000(7400-25000)	24000(7400-25000)
Cooling capacity (kW)	2.6(1.30-4.00)	3.50(1.70-3.70)	5.20(2.16-7.33)	7.10(2.16-7.33)
Heating capacity (Btu/h)	9900(4777-12000)	13300(6930-15080)	18000(8530-28000)	24000(8530-28000)
Heating capacity (kW)	2.9(1.40-4.10)	3.9(2.03-4.42)	5.20(2.50-8.20)	7.10(2.50-8.20)
Power supply (V, Hz, phase)	220-240,50,1	220-240,50,1	220-240,50,1	220-240,50,1
Power input, cooling (W)	27	28	55	55
Power input, heating (W)	27	28	55	55
Fan motor output (W)	15	19	51	51
Air volume, turbo / high / medium / low (m ³ /h)	450/390/330/300/280	490/410/350/320/300	961/730/680/620/600	961/730/680/620/600
Sound pressure (dB(A))	36/35/34	37/36/35	46/44/42	46/44/42
Sound power level (dB(A))	56	57	65	65
Body dimensions W x D x H (mm)	860x450x130	860x450x130	1180x450x130	1180x450x130
Panel dimensions W x D x H (mm)	1100x500x32	1100x500x32	1420x500x32	1420x500x32
Net weight, body (kg)	13	13	16	16
Net weight, panel (kg)	3.5	3.5	5	5
Liquid connection (mm)	6.35(1/4)	6.35(1/4)	6.35(1/4)	9.52(3/8)
Gas connection (mm)	9.52(3/8)	9.52(3/8)	12.7(1/2)	15.88(5/8)
Drain connection	R1in(DN25)	R1in(DN25)	R1in(DN25)	R1in(DN25)

5.3 Ducted units

Medium duct M series

Fresh air spigot, rear or bottom return air, drainage available from either the left or the right hand side, and a removable control box held by two screws. An optional volt-free contact shuts the unit down on a window-open or fire alarm signal.

Specification	AUMD-H12/4DR3HB2	AUMD-H18/4DR3HB2	AUMD-H24/4DR3HB2
Product code	16129023000013	16129023000014	16129023000015
Cooling capacity (Btu/h)	12000(4600-15000)	18000(5200-19100)	24000(7370-28000)
Cooling capacity (kW)	3.52(1.35-4.40)	5.28(1.53-5.60)	7.03(2.16-8.20)
Heating capacity (Btu/h)	13000(4200-18100)	19100(4700-21100)	27000(6755-31700)
Heating capacity (kW)	3.81(1.24-5.30)	5.60(1.40-6.20)	7.91(1.98-9.30)
Power supply (V, Hz, phase)	220-240,50,1	220-240,50,1	220-240,50,1
Power input, cooling (W)	68	83	135
Power input, heating (W)	68	83	135
Fan motor output (W)	120x1	120x1	200x1
Air volume (m ³ /h)	720/660/580/500	900/800/700/600	1400/1250/1080/900
Sound pressure (dB(A))	37/33/31	40/37/35	42/39/36
Sound power level (dB(A))	52	54	56
External static pressure (Pa)	25(0-160)	25(0-160)	25(0-160)
Net dimensions W x D x H (mm)	700x700x245	700x700x245	1000x700x245
Net weight (kg)	20.5	21.5	28
Liquid connection (mm)	6.35(1/4)	6.35(1/4)	9.52(3/8)
Gas connection (mm)	9.52(3/8)	12.7(1/2)	15.88(5/8)
Drain connection	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)

Slim duct Y series

Only 200 mm deep, with rear or bottom return air and twin drain outlets on the left and right of the condensate tray. Default external static pressure is 10 Pa, with a 30 Pa setting selectable through the control parameters.

Specification	AMSD-H07/4R3AA	AMSD-H09/4R3AA
Product code	16129023000002	16129023000003
Cooling capacity (Btu/h)	7506(3855-9220)	8872(5120-12115)
Cooling capacity (kW)	2.20(1.13-2.70)	2.60(1.50-3.55)
Heating capacity (Btu/h)	8530(4575-10820)	9895(5800-12450)
Heating capacity (kW)	2.50(1.34-3.17)	2.90(1.70-3.65)
Power supply (V, Hz, phase)	220-240,50,1	220-240,50,1
Power input, cooling (W)	55	55
Power input, heating (W)	55	55
Fan motor output (W)	40	40
Air volume (m ³ /h)	600/450/380	600/450/380
Sound pressure (dB(A))	53	53
Sound power level (dB(A))	10/30	10/30
External static pressure (Pa)	700x470x200	700x470x200
Net dimensions W x D x H (mm)	1005x580x275	1005x580x275
Net weight (kg)	22	22
Liquid connection (mm)	9.52(3/8)	9.52(3/8)
Gas connection (mm)	16.5	16.5
Drain connection	176/368/414	176/368/414

5.4 Console units

Full DC inverter console with a choice of bottom or top air discharge. Bottom discharge gives an effect close to underfloor heating; top discharge warms the room more quickly. A long-life purification filter is fitted inside the unit.

Specification	AUCO-H09/4DR3HA	AUCO-H12/4DR3HA	AUCO-H18/4DR3HA
Product code	16129025000004	16129025000005	16129025000006
Cooling capacity (Btu/h)	8872(5120-12115)	12285(5800-12625)	16036(8530-16378)
Cooling capacity (kW)	2.60(1.50-3.55)	3.50(1.70-3.70)	4.70(2.50-4.80)
Heating capacity (Btu/h)	9560(5120-12115)	12625(5120-12625)	17060(8530-19107)
Heating capacity (kW)	2.80(1.50-3.55)	3.50(1.50-3.70)	5.0(2.50-5.6)
Power supply (V, Hz, phase)	220-240,50,1	220-240,50,1	220-240,50,1
Power input, cooling (W)	40(20-65)	40(20-65)	55(20-80)
Power input, heating (W)	40(20-65)	40(20-65)	55(20-80)
Fan motor output (W)	35	35	35
Air volume (m ³ /h)	600/530/430	600/530/430	650/550/450
Sound pressure (dB(A))	42/39/36	42/39/36	44/40/37
Sound power level (dB(A))	52	52	54
Net dimensions W x D x H (mm)	700x225x600	700x225x600	700x225x600
Net weight (kg)	15	15	15
Liquid connection (mm)	6.35(1/4)	6.35(1/4)	6.35(1/4)
Gas connection (mm)	9.52(3/8)	9.52(3/8)	9.52(3/8)
Drain connection (mm)	20	20	20

Default and optional external static pressure - ducted units

Model	Default ESP	Parameter	Optional ESP	Parameter
AMSD-H07/4R3AA (slim duct 7K)	10 Pa	0602	30 Pa	0606
AMSD-H09/4R3AA (slim duct 9K)	10 Pa	0603	30 Pa	0607
AUMD-H12/4DR3HB2 (medium duct 12K)	25 Pa	-	0 to 160 Pa	Selectable
AUMD-H18/4DR3HB2 (medium duct 18K)	25 Pa	-	0 to 160 Pa	Selectable
AUMD-H24/4DR3HB2 (medium duct 24K)	25 Pa	-	0 to 160 Pa	Selectable

6. Permitted unit combinations

The tables below list the indoor unit combinations approved for each outdoor unit. Figures are the nominal capacity class of each indoor unit in thousands of Btu/h, so "7+9+12" means a 7K, a 9K and a 12K indoor unit on the same outdoor unit. Indoor unit types may be mixed within any listed combination.

The total connected indoor capacity may exceed the nominal outdoor capacity, because the units are rarely all at full demand at the same time. Systems must nevertheless be installed strictly in accordance with these tables; combinations outside them are not supported and will affect both performance and warranty.

14K outdoor unit (AM2-H14/4DR3C)

Indoor units	Approved combinations (capacity class, thousands of Btu/h)
2 units	7+7, 7+9, 7+12, 9+9, 9+12

18K outdoor unit (AM2-H18/4DR3D)

Indoor units	Approved combinations (capacity class, thousands of Btu/h)
2 units	7+7, 7+9, 7+12, 7+18, 9+9, 9+12, 9+18, 12+12

21K outdoor unit (AM3-H21/4DR3C)

Indoor units	Approved combinations (capacity class, thousands of Btu/h)
2 units	7+7, 7+9, 7+12, 7+18, 9+9, 9+12, 9+18, 12+12, 12+18
3 units	7+7+7, 7+7+9, 7+7+12, 7+9+9, 7+9+12, 7+12+12, 9+9+9, 9+9+12

27K outdoor unit (AM3-H27/4DR3D)

Indoor units	Approved combinations (capacity class, thousands of Btu/h)
2 units	7+7, 7+9, 7+12, 7+18, 9+9, 9+12, 9+18, 12+12, 12+18, 18+18
3 units	7+7+7, 7+7+9, 7+7+12, 7+7+18, 7+9+9, 7+9+12, 7+9+18, 7+12+12, 7+12+18, 9+9+9, 9+9+12, 9+9+18, 9+12+12, 9+12+18, 12+12+12

28K outdoor unit (AM4-H28/4DR3D)

Indoor units	Approved combinations (capacity class, thousands of Btu/h)
2 units	7+7, 7+9, 7+12, 7+18, 7+24, 9+9, 9+12, 9+18, 9+24, 12+12, 12+18, 12+24, 18+18
3 units	7+7+7, 7+7+9, 7+7+12, 7+7+18, 7+9+9, 7+9+12, 7+9+18, 7+12+12, 7+12+18, 9+9+9, 9+9+12, 9+9+18, 9+12+12, 9+12+18, 12+12+12, 12+12+18
4 units	7+7+7+7, 7+7+7+9, 7+7+7+12, 7+7+7+18, 7+7+9+9, 7+7+9+12, 7+7+9+18, 7+7+12+12, 7+9+9+9, 7+9+9+12, 7+9+12+12, 9+9+9+9, 9+9+9+12, 9+9+12+12

36K outdoor unit (AM4-H36/4DR3B)

Indoor units	Approved combinations (capacity class, thousands of Btu/h)
2 units	7+7, 7+9, 7+12, 7+18, 7+24, 9+9, 9+12, 9+18, 9+24, 12+12, 12+18, 12+24, 18+18, 18+24, 24+24
3 units	7+7+7, 7+7+9, 7+7+12, 7+7+18, 7+7+24, 7+9+9, 7+9+12, 7+9+18, 7+9+24, 7+12+12, 7+12+18, 7+12+24, 7+18+18, 7+18+24, 9+9+9, 9+9+12, 9+9+18, 9+9+24, 9+12+12, 9+12+18, 9+12+24, 9+18+18, 9+18+24, 12+12+12, 12+12+18, 12+12+24, 12+18+18, 12+18+24, 18+18+18
4 units	7+7+7+7, 7+7+7+9, 7+7+7+12, 7+7+7+18, 7+7+7+24, 7+7+9+9, 7+7+9+12, 7+7+9+18, 7+7+9+24, 7+7+12+12, 7+7+12+18, 7+7+12+24, 7+7+18+18, 7+9+9+9, 7+9+9+12, 7+9+9+18, 7+9+9+24, 7+9+12+12, 7+9+12+18, 7+9+12+24, 7+9+18+18, 7+12+12+12, 7+12+12+18, 9+9+9+9, 9+9+9+12, 9+9+9+18, 9+9+9+24, 9+9+12+12, 9+9+12+18, 9+9+12+24, 9+9+18+18, 9+12+12+12, 9+12+12+18, 12+12+12+12, 12+12+12+18

42K outdoor unit (AM5-H42/4DR3)

Indoor units	Approved combinations (capacity class, thousands of Btu/h)
2 units	7+7, 7+9, 7+12, 7+18, 7+24, 9+9, 9+12, 9+18, 9+24, 12+12, 12+18, 12+24, 18+18, 18+24, 24+24
3 units	7+7+7, 7+7+9, 7+7+12, 7+7+18, 7+7+24, 7+9+9, 7+9+12, 7+9+18, 7+9+24, 7+12+12, 7+12+18, 7+12+24, 7+18+18, 7+18+24, 7+24+24, 9+9+9, 9+9+12, 9+9+18, 9+9+24, 9+12+12, 9+12+18, 9+12+24, 9+18+18, 9+18+24, 9+24+24, 12+12+12, 12+12+18, 12+12+24, 12+18+18, 12+18+24, 12+24+24, 18+18+18, 18+18+24
4 units	7+7+7+7, 7+7+7+9, 7+7+7+12, 7+7+7+18, 7+7+7+24, 7+7+9+9, 7+7+9+12, 7+7+9+18, 7+7+9+24, 7+7+12+12, 7+7+12+18, 7+7+12+24, 7+7+18+18, 7+7+18+24, 7+7+24+24, 7+9+9+9, 7+9+9+12, 7+9+9+18, 7+9+9+24, 7+9+12+12, 7+9+12+18, 7+9+12+24, 7+9+18+18, 7+9+18+24, 7+9+24+24, 9+9+9+9, 9+9+9+12, 9+9+9+18, 9+9+9+24, 9+9+12+12, 9+9+12+18, 9+9+12+24, 9+9+18+18, 9+9+18+24, 9+12+12+12, 9+12+12+18, 9+12+12+24, 9+12+18+18, 9+12+18+24, 9+18+18+18, 12+12+12+12, 12+12+12+18, 12+12+12+24, 12+12+18+18
5 units	7+7+7+7+7, 7+7+7+7+9, 7+7+7+7+12, 7+7+7+7+18, 7+7+7+7+24, 7+7+7+9+9, 7+7+7+9+12, 7+7+7+9+18, 7+7+7+9+24, 7+7+7+12+12, 7+7+7+12+18, 7+7+7+12+24, 7+7+7+18+18, 7+7+7+18+24, 7+7+9+9+9, 7+7+9+9+12, 7+7+9+9+18, 7+7+9+9+24, 7+7+9+12+12, 7+7+9+12+18, 7+7+9+12+24, 7+7+9+18+18, 7+7+9+18+24, 7+7+9+24+24, 7+9+9+9+9, 7+9+9+9+12, 7+9+9+9+18, 7+9+9+9+24, 7+9+9+12+12, 7+9+9+12+18, 7+9+9+12+24, 7+9+9+18+18, 7+9+9+18+24, 7+9+12+12+12, 7+9+12+12+18, 7+9+12+12+24, 7+9+12+18+18, 7+9+12+18+24, 7+9+18+18+18, 9+9+9+9+9, 9+9+9+9+12, 9+9+9+9+18, 9+9+9+9+24, 9+9+9+12+12, 9+9+9+12+18, 9+9+9+12+24, 9+9+9+18+18, 9+9+12+12+12, 9+9+12+12+18, 9+9+12+12+24, 9+12+12+12+12, 9+12+12+12+18, 12+12+12+12+12

Where fewer indoor units are connected than the outdoor unit has service valves, the refrigerant charge must be adjusted - see section 7.

7. Pipework and refrigerant charge

7.1 Pipe sizes and permitted lengths

Outdoor unit	14K	18K	21K	27K	28K	36K	42K
Liquid connections (mm)	Ø6.35 x 2	Ø6.35 x 2	Ø6.35 x 3	Ø6.35 x 3	Ø6.35 x 4	Ø6.35 x 4	Ø6.35 x 5
Gas connections (mm)	Ø9.52 x 2	Ø9.52 x 2	Ø9.52 x 3	Ø9.52 x 3	Ø9.52 x 4	Ø9.52 x 4	Ø9.52 x 5
Maximum total pipe run, all rooms (m)	40	40	60	60	80	80	80
Maximum pipe run to one indoor unit (m)	25	25	30	30	35	35	35
Maximum height difference, indoor to outdoor (m)	15	15	15	15	15	15	15
Maximum height difference between indoor units (m)	10	10	10	10	10	10	10
Additional charge per metre (g/m)	25	15	25	15	15	15	25

Pipe wall thickness must be 0.6 to 1.0 mm, rated for a working pressure of 4.2 MPa. Long pipe runs and a high number of bends increase system resistance, reduce cooling and heating output and can shorten compressor life, so the shortest practical route should always be used. Where there is a significant height difference between indoor and outdoor units, an S-shaped oil trap must be fitted every 3 m of vertical rise.

Equivalent pipe length

Equivalent length converts bends and oil traps into an equivalent straight run so that pressure loss can be assessed:

Equivalent length L = actual pipe length + (number of bends x equivalent bend length) + (number of oil traps x equivalent oil trap length)

Pipe outside diameter (mm)	Ø6.35	Ø9.52	Ø12.70	Ø15.88	Ø19.05	Ø22.02
Equivalent length per bend (m)	0.10	0.18	0.20	0.25	0.35	0.40
Equivalent length per oil trap (m)	0.7	1.3	1.5	2.0	2.4	3.0

7.2 Flare nut tightening torques

Pipe size	Ø6.35 mm (1/4 in)	Ø9.52 mm (3/8 in)	Ø12.7 mm (1/2 in)	Ø15.88 mm (5/8 in)
Torque (N·m)	18	42	55	75

Start each flare nut by hand, then tighten with a torque wrench while holding the body of the fitting with a spanner. Check every joint for damage before assembly. Flares must not be reused unless the pipe is re-flared.

7.3 Additional refrigerant charge

Each outdoor unit leaves the factory with a charge sufficient for an average liquid line length of 7.5 m per connected indoor unit. Where the average liquid line length is between 5 m and 7.5 m, no adjustment is needed. Outside that band, or where fewer indoor units are connected than the outdoor unit has liquid service valves, the charge must be corrected on site.

Factory charge by model	14K	18K	21K	27K	28K	36K	42K
R32 charge (kg)	1.00	1.03	1.15	1.30	2.00	2.30	2.30
Adjustment rate (g/m)	25	15	25	15	15	15	25

Charge correction calculation

- **A - unused service valve allowance (refrigerant to be removed).** Where the number of indoor units connected is fewer than the number of liquid service valves on the outdoor unit: if any connected indoor unit is an 18K or 24K, A = 150 g x T; if no connected indoor unit is an 18K or 24K, A = 350 g x T. T is the number of liquid service valves left unconnected.
- **B - pipe length allowance.** B = (total liquid pipe length - N x 7.5 m) x the adjustment rate for that model, where N is the number of indoor units connected.
- **Z - net adjustment.** Z = B - A. A positive result is refrigerant to be added; a negative result is refrigerant to be recovered.

Where refrigerant has to be recovered because the average liquid line is shorter than 5 m, or because service valves are left unconnected, contact the AUX technical team before commissioning so the figure can be confirmed for the specific system.

8. Electrical data

All outdoor units in the range run on a single-phase 220 to 240 V, 50 Hz supply, with a permissible voltage range of 187 to 253 V. The supply is taken to the outdoor unit only; each indoor unit is fed from the outdoor unit through the interconnecting cable.

Model	Supply	Voltage range (V)	Running current, cooling (A)	Running current, heating (A)	Maximum current (A)	Maximum power (kW)
AM2-H14/4DR3C	220-240 V, 50 Hz, 1 ph	187-253	5.39	5.00	12.0	2.76
AM2-H18/4DR3D	220-240 V, 50 Hz, 1 ph	187-253	6.92	6.39	13.0	3.00
AM3-H21/4DR3C	220-240 V, 50 Hz, 1 ph	187-253	8.35	7.74	14.0	3.00
AM3-H27/4DR3D	220-240 V, 50 Hz, 1 ph	187-253	10.60	9.58	16.5	3.30
AM4-H28/4DR3D	220-240 V, 50 Hz, 1 ph	187-253	8.87	9.13	19.0	4.30
AM4-H36/4DR3B	220-240 V, 50 Hz, 1 ph	187-253	14.50	13.10	22.6	5.10
AM5-H42/4DR3	220-240 V, 50 Hz, 1 ph	187-253	16.46	15.53	24.5	5.60

Cabling

Outdoor unit	Outdoor unit supply cable (mm ²)	Indoor to outdoor interconnecting cable (mm ²)
14K, 18K, 21K, 27K, 28K	3 x 2.5	4 x 1.5
36K, 42K	3 x 4	4 x 1.5

Cable sizes shown are the manufacturer minimum. Final cable size, protective device rating and method of isolation must be determined by the installing electrician in accordance with BS 7671 for the actual route length, installation method and grouping. A dedicated circuit with a means of isolation adjacent to the outdoor unit is required, and the unit must be reliably earthed.

Operating envelope

Mode	Indoor temperature	Outdoor temperature (14K, 21K, 42K)	Outdoor temperature (18K, 27K, 28K, 36K)
Cooling	17 °C to 32 °C	-10 °C to +52 °C	-15 °C to +52 °C
Heating	0 °C to 30 °C	-15 °C to +24 °C	-25 °C to +24 °C

Operating outside these ranges will bring the protection functions into play and will reduce cooling or heating output.

9. Sound data

Sound pressure levels are measured under laboratory conditions: outdoor units one metre in front of the centre of the air outlet; wall-mounted units one metre in front of and 0.8 m below the outlet; cassettes, one-way cassettes and ducted units 1.4 m below the centre of the unit; consoles one metre in front of the centre of the upper and lower outlets. Levels experienced on site will depend on room acoustics, mounting and the surrounding surfaces.

Outdoor units

Model	14K	18K	21K	27K	28K	36K	42K
Sound pressure (dB(A))	53	54	56	57	59	60	61
Sound power (dB(A))	65	65	66	67	67	70	70

For planning purposes in the United Kingdom, the sound power level is the figure normally used when assessing an outdoor unit against a neighbouring property, together with the distance, any screening and the background sound level at the assessment position. Where permitted development rights are being relied upon, the installation must meet the conditions that apply in the relevant part of the UK; your installer will confirm this as part of the survey.

Indoor units - sound pressure at high fan speed (dB(A))

Indoor unit type	7K	9K	12K	18K	24K
Wall-mounted C series	41	41	41	47	49
Wall-mounted M series	41	41	41	47	49
Wall-mounted J series	40	40	41	46	46
Wall-mounted Q series	40	40	40	46	48
Wall-mounted F series	40	40	41	46	46
Wall-mounted H series	40	40	41	46	46
Compact cassette Y / cassette Q	-	42	41	44	42
One-way cassette	-	36	37	46	46
Slim duct Y	37	37	-	-	-
Medium duct M	-	-	37	40	42
Console	-	42	42	44	-

10. Controls and accessories

10.1 Controllers

Indoor unit type	Standard controller	Optional controllers
Wall-mounted	YK-H infrared handset	YK-T, YK-L, YK-M, YK-K handsets; XK-06 wired controller
Cassette and one-way cassette	YK-H infrared handset	YK-T, YK-L, YK-M, YK-K handsets; XK-05, XK-06, XK-10 wired controllers
Console	YK-L infrared handset	YK-T, YK-K handsets; XK-05, XK-06 wired controllers
Ducted	XK05-DY wired controller	YK-T, YK-K, YK-H, YK-L handsets; XK-05, XK-06 wired controllers

10.2 Wi-Fi modules

Part code	Compatible units
11222062000047	Slim duct, medium duct, cassette and console
11222062000046	F series wall-mounted
11222062000044	C, M, J, H and Q series wall-mounted

The Wi-Fi module allows the system to be operated from a smartphone or tablet, giving remote on and off, mode and setpoint changes, and scheduling. On some wall-mounted models the wired controller and the Wi-Fi module cannot both be used at the same time: this restriction applies to the 7K, 9K and 12K C and M series. The 18K and 24K C and M series will accept both together.

10.3 Central control and building interfaces

- A centralised controller can operate up to 64 indoor units over an RS485 two-wire connection through the central control adaptor, with weekly time scheduling and zone or group setting.
- A room card interface is available so that the system goes to standby when the key card is removed - useful in hotel and serviced accommodation applications.
- A volt-free contact input is available on the ducted and ceiling-floor units, which shuts the unit down automatically on a window-open signal or a fire alarm signal.

10.4 Items supplied with each unit

Supplied with outdoor unit	14K	18K	21K	27K	28K	36K	42K
Installer manual	1	1	1	1	1	1	1
Drain connector	1	1	1	1	1	1	1
Copper flare nuts	8	8	12	12	16	16	20

Supplied with indoor unit	Wall-mounted	Ducted	Cassette	One-way cassette	Console
User manual	1	1	1	1	1
Remote control handset	1	-	1	1	1
Batteries for handset	2	-	2	2	2
Touch screen wired controller	-	1	-	-	-
Panel screws	-	-	4	7	-
Drain hose	-	1	1	1	1
Pipe adaptor	-	1	1	1	-
Insulation sleeve	-	2	2	2	2

11. Commissioning and test running

11.1 Before switching on

- Confirm that all refrigerant pipework and electrical connections are complete and correctly terminated, and that the earth connection is sound.
- Confirm that both the liquid side and gas side service valves are fully open on every port in use.
- Confirm that the filter is correctly fitted and that the air inlet and outlet are clear.
- Check the outdoor unit mounting bracket or plinth for damage and confirm the unit is securely fixed so it cannot move in high wind. On coastal or exposed sites the unit should be positioned against a wall with a baffle plate so the fan can work normally.
- Check condensate drainage at each indoor unit by pouring a cup of water into the drain tray and confirming it discharges freely through the drain outlet.
- Pressure test, evacuate and leak check the system in accordance with the installation manual before releasing the charge.

11.2 Test run

- Run the system in cooling for at least 30 minutes.
- Measure the air on and air off temperatures at the indoor unit. The difference between inlet and outlet air temperature should be greater than 10 °C.
- Check operation of each indoor unit individually and then together, confirming that each responds to its own controller.
- Record the final refrigerant charge, any charge adjustment made, pipe lengths and test results, and hand the documentation to the customer with the F-Gas record.

11.3 Installation clearances - outdoor unit bolt centres

Outdoor unit size W x D x H (mm)	Bolt centres A (mm)	Bolt centres B (mm)
785 x 300 x 555	546	316
800 x 315 x 545	545	315
825 x 335 x 655	540	335
900 x 360 x 700	630	350
970 x 395 x 803	675	409
940 x 373 x 1320	625	364

The outdoor unit must be mounted on a concrete base or a proprietary bracket of adequate strength. Where the mounting surface is lightweight, reinforcement, additional support or anti-vibration mounts must be used.

12. Fault codes

The fault code shown depends on the type of indoor unit. Cassette, ceiling-floor, ducted and console units display one set of codes; wall-mounted units display another. In the tables below, "N#" refers to the number of the indoor unit reporting the fault. These codes are provided so that a fault can be described accurately when reporting it - diagnosis and repair should be carried out by a qualified engineer.

12.1 Temperature sensor faults

Cassette / ceiling-floor / ducted / console	Wall-mounted	Description	Likely causes
A1	E1	Room temperature sensor fault on indoor unit N#	Sensor damaged; poor connection at the sensor or the PCB
A2	E3	Mid-coil temperature sensor fault on indoor unit N# evaporator	Sensor damaged; poor connection at the sensor or the PCB
A3	H3	Liquid pipe temperature sensor fault on indoor unit N#	Sensor damaged; poor connection at the sensor or the PCB
A4	H4	Gas pipe temperature sensor fault on indoor unit N#	Sensor damaged; poor connection at the sensor or the PCB
C1	F6	Outdoor ambient temperature sensor fault	Sensor damaged; poor connection at the sensor or the PCB
C3	F4	Discharge temperature sensor fault	Sensor damaged; poor connection at the sensor or the PCB
C6	FA	Suction temperature sensor fault	Sensor damaged; poor connection at the sensor or the PCB
C8	E2	Mid-coil temperature sensor fault on outdoor condenser	Sensor damaged; poor connection at the sensor or the PCB
C2	E2	Defrost temperature sensor fault on outdoor unit	Sensor damaged; poor connection at the sensor or the PCB

12.2 Communication faults

Cassette / ceiling-floor / ducted / console	Wall-mounted	Description	Likely causes
A9	5E / E5	Communication error between outdoor unit and indoor unit N#	Indoor or outdoor main PCB damaged; interconnecting wiring fault
AA	E8 / H2	Communication error between wired controller and indoor unit N# main PCB	Poor wiring; wired controller damaged; indoor main PCB damaged
D3 (J3)	F8	Communication error between outdoor driver PCB and outdoor main PCB	Driver PCB or main PCB damaged

12.3 Indoor unit faults

Cassette / ceiling-floor / ducted / console	Wall-mounted	Description	Likely causes
A5	H1	Drainage fault on indoor unit N#	Float switch disconnected or poorly wired; model parameter set incorrectly; blocked condensate drain
A6	E4	Indoor unit N# fan motor fault	Low voltage; poor wiring; indoor main PCB or fan motor damaged
AD	P7	Indoor anti-freeze protection	Dirty or blocked evaporator; indoor fan not running correctly

12.4 Refrigerant circuit faults

Cassette / ceiling-floor / ducted / console	Wall-mounted	Description	Likely causes
E3	P5	High discharge temperature protection	Low refrigerant charge; service valve not opened; outdoor main PCB damaged
E8	P4 / P6	Cooling: outdoor high temperature protection. Heating: indoor high temperature protection	Cooling: poor condenser heat transfer. Heating: poor evaporator heat transfer
F6 / H4	H7	Low pressure protection	Low refrigerant charge; fouled heat exchanger
FH	H5	Low discharge temperature protection	Temperature sensor displaced; outdoor main PCB damaged
(B5) H5	P3	Low refrigerant charge	Low refrigerant charge; service valve not opened

12.5 Outdoor component faults

Cassette / ceiling-floor / ducted / console	Wall-mounted	Description	Likely causes
(B1) H1	P2	High pressure switch protection	System blockage; high pressure switch damaged
H4	H6	Low pressure switch protection	Low refrigerant charge; service valve not opened; low pressure switch damaged
E1	H8	Four-way valve fault	Four-way valve or its coil damaged
34 / 3E	F3 / LA / L2 / L3	Compressor failed to start	Compressor power lead not connected; phase sequence incorrect at the compressor
3B (3H)	F0 / LD / LE / LF	Outdoor fan motor fault	Motor damaged
3C	LF	Outdoor DC fan out-of-step and overcurrent protection	DC motor failure; fan speed too high; system blockage

12.6 Outdoor electrical control faults

Cassette / ceiling-floor / ducted / console	Wall-mounted	Description	Likely causes
31	F1 / L1 / L4 / L7 / L8	IPM module protection	Compressor damaged; IPM module damaged; system blockage
32 / D7 (J7)	F9	Compressor drive hardware protection; outdoor EEPROM fault	Chip damaged
35	P8 / J8	Compressor drive overcurrent protection	Running current too high; sudden voltage drop during operation
36	F7 / L0	Compressor drive over-voltage protection	Input voltage too high or too low
37	HE / HF	IPM or PFC module temperature sensor abnormal	Driver board IPM or PFC device damaged
39	L9	Compressor drive module over-temperature protection	IPM sensor damaged; poor contact between the IPM module and its heat sink
3J	LD	Outdoor DC fan current detection abnormal	Fan driver module component fault
3F	F2 / L5 / L6 / LC	Compressor drive PFC protection	PFC circuit component or reactor damaged
41	LH	IPM protection on outdoor DC fan drive module	DC motor IPM device faulty

13. Servicing and user care

13.1 What the user can do

- Clean the filters regularly. Blocked filters are the most common cause of poor output and increased running cost.
- Keep the air inlet and outlet of both indoor and outdoor units clear of furniture, curtains, planting and stored items.
- Aim the handset at the receiver on the indoor unit, within 8 m and with nothing in the way. Use two size AAA batteries; do not use rechargeable cells. Remove the batteries if the unit is to be left unused for a long period.
- If the handset is lost or its batteries are flat, the unit can be started and stopped using the manual "Auto" button behind the front panel.
- Set the left and right vanes by hand only before the unit starts, and never put fingers into the air inlet or outlet while it is running. The up and down vane must be set with the handset, not by hand, or the mechanism may be damaged.

13.2 What requires a qualified engineer

R32 is a mildly flammable (A2L) refrigerant. Any work involving the refrigerant circuit requires additional training beyond standard refrigeration practice, and the engineer must hold a recognised qualification in handling flammable refrigerants. Before any such work, the site must be checked for adequate ventilation, the work area cordoned off, flammable materials controlled and the atmosphere tested with a refrigerant detector suitable for R32 - that is, non-sparking, adequately sealed or intrinsically safe. Work in confined spaces should be avoided.

Annual servicing by a competent engineer is recommended, covering filter and coil condition, condensate drainage, electrical connections, refrigerant leak checking where required, and a performance check.

13.3 Disposal

The crossed-out wheeled bin symbol means the appliance must not be put out as unsorted municipal waste. Under the WEEE Regulations the retailer is obliged to take back the old appliance free of charge when it is replaced. Refrigerant must be recovered by a qualified engineer before disposal, and waste batteries from the handset must be disposed of separately.

14. Refrigerant, F-Gas and UK compliance

Refrigerant	R32 (difluoromethane)
Safety classification	A2L - lower toxicity, mildly flammable
Global warming potential (GWP)	675
System charge	1.00 kg to 2.30 kg depending on outdoor unit, plus any site adjustment
Design pressure of pipework	4.2 MPa

- **F-Gas.** Installation, servicing, leak checking, decommissioning and refrigerant recovery must be carried out by an F-Gas certified engineer working for an F-Gas certified company. Records of the charge, any top-up and any recovery must be kept for the life of the system.
- **Leak checking.** The frequency of mandatory leak checking depends on the CO₂ equivalent charge of the system. Your installer will confirm whether a given system falls above or below the threshold and will set the inspection interval accordingly.
- **Room size.** Because R32 is an A2L refrigerant, the charge in the system has to be checked against the floor area of the smallest room served, following the method in BS EN 378 and the installation manual. This is confirmed at survey stage before equipment is selected.
- **Electrical work.** All electrical installation work must comply with BS 7671 and be notified where required under the Building Regulations.
- **Planning.** Outdoor units in England, Scotland, Wales and Northern Ireland may be covered by permitted development rights subject to conditions on size, siting and noise. Listed buildings, conservation areas and flats are treated differently. Your installer will advise whether an application is needed.
- **Standards.** Equipment in this range carries the UKCA and CE markings and complies with the applicable RoHS requirements.

This section is a general summary of the obligations that commonly apply in the United Kingdom at the date of issue. It is not legal advice and regulations change. Confirm current requirements with your installer or the relevant authority before proceeding.

15. Part-load performance data

The tables below show measured capacity and power input for a 12,000 Btu/h (12K) class indoor unit across a range of indoor and outdoor conditions. They are included to illustrate how output and absorbed power shift with ambient temperature, which is useful when sizing for a British climate - particularly the heating figures at low outdoor temperature. Figures for other capacity classes are available on request.

TC is total cooling capacity, SC is sensible cooling capacity, PI is power input. DB is dry bulb and WB is wet bulb temperature.

Cooling - capacity and power input (kW)

Indoor DB (°C)	Indoor WB (°C)	19 °C	25 °C	27 °C	30 °C	35 °C	40 °C	43 °C	48 °C
		TC / PI	TC / PI	TC / PI	TC / PI	TC / PI	TC / PI	TC / PI	TC / PI
21	16	3.70 / 0.87	3.62 / 0.90	3.55 / 0.94	3.48 / 0.97	3.41 / 1.01	3.34 / 1.05	3.28 / 1.10	3.21 / 1.14
	19	3.77 / 0.90	3.70 / 0.94	3.62 / 0.97	3.55 / 1.01	3.48 / 1.05	3.41 / 1.10	3.34 / 1.14	3.28 / 1.18
24	16	3.72 / 0.87	3.65 / 0.90	3.57 / 0.94	3.50 / 0.97	3.43 / 1.01	3.36 / 1.05	3.30 / 1.10	3.23 / 1.14
	19	3.79 / 0.90	3.72 / 0.94	3.64 / 0.97	3.57 / 1.01	3.50 / 1.05	3.43 / 1.10	3.36 / 1.14	3.29 / 1.18
	22	3.87 / 0.94	3.79 / 0.97	3.72 / 1.01	3.64 / 1.05	3.57 / 1.10	3.50 / 1.14	3.43 / 1.18	3.36 / 1.23
27	16	3.74 / 0.87	3.67 / 0.90	3.59 / 0.94	3.52 / 0.97	3.45 / 1.01	3.38 / 1.05	3.31 / 1.10	3.25 / 1.14
	19	3.82 / 0.90	3.74 / 0.94	3.67 / 0.97	3.59 / 1.01	3.52 / 1.05	3.45 / 1.10	3.38 / 1.14	3.31 / 1.18
	22	3.89 / 0.94	3.81 / 0.97	3.74 / 1.01	3.66 / 1.05	3.59 / 1.10	3.52 / 1.14	3.45 / 1.18	3.38 / 1.23
	27	3.97 / 0.97	3.89 / 1.01	3.81 / 1.05	3.74 / 1.10	3.66 / 1.14	3.59 / 1.18	3.52 / 1.23	3.45 / 1.28
30	16	3.76 / 0.87	3.69 / 0.90	3.61 / 0.94	3.54 / 0.97	3.47 / 1.01	3.40 / 1.05	3.33 / 1.10	3.27 / 1.14
	19	3.84 / 0.90	3.76 / 0.94	3.69 / 0.97	3.61 / 1.01	3.54 / 1.05	3.47 / 1.10	3.40 / 1.14	3.33 / 1.18
	22	3.91 / 0.94	3.84 / 0.97	3.76 / 1.01	3.68 / 1.05	3.61 / 1.10	3.54 / 1.14	3.47 / 1.18	3.40 / 1.23
	27	3.99 / 0.97	3.91 / 1.01	3.83 / 1.05	3.76 / 1.10	3.68 / 1.14	3.61 / 1.18	3.54 / 1.23	3.47 / 1.28
33	16	3.78 / 0.87	3.71 / 0.90	3.63 / 0.94	3.56 / 0.97	3.49 / 1.01	3.42 / 1.05	3.35 / 1.10	3.29 / 1.14
	19	3.86 / 0.90	3.78 / 0.94	3.71 / 0.97	3.63 / 1.01	3.56 / 1.05	3.49 / 1.10	3.42 / 1.14	3.35 / 1.18
	22	3.94 / 0.94	3.86 / 0.97	3.78 / 1.01	3.70 / 1.05	3.63 / 1.10	3.56 / 1.14	3.49 / 1.18	3.42 / 1.23
	27	4.01 / 0.97	3.93 / 1.01	3.85 / 1.05	3.78 / 1.10	3.70 / 1.14	3.63 / 1.18	3.56 / 1.23	3.48 / 1.28

Outdoor dry bulb temperature across the top of the table.

Heating - capacity and power input (kW)

Indoor DB (°C)	-15 °C	-10 °C	-5 °C	0 °C	6 °C	10 °C	15 °C	20 °C
	TC / PI	TC / PI	TC / PI	TC / PI	TC / PI	TC / PI	TC / PI	TC / PI
15	1.97 / 0.75	2.42 / 0.78	2.93 / 0.87	3.45 / 0.92	3.96 / 1.00	4.32 / 0.96	4.56 / 1.09	4.95 / 1.12
21	1.89 / 0.78	2.32 / 0.81	2.82 / 0.90	3.31 / 0.96	3.81 / 1.04	4.15 / 1.00	4.38 / 1.13	4.76 / 1.16
26	1.82 / 0.81	2.23 / 0.84	2.71 / 0.94	3.19 / 1.00	3.66 / 1.08	3.99 / 1.04	4.21 / 1.18	4.58 / 1.21

Outdoor wet bulb temperature across the top of the table. Note that heating output falls and absorbed power rises as the outdoor temperature drops, which is why heat pump systems are sized against the design outdoor temperature for the location rather than the nominal rating.

16. Warranty and support

AUX UK supplies the AUX heat pump and air conditioning range in the United Kingdom. ALP Heating Ltd, based in Camberley, Surrey, is an MCS-certified installer and carries out installation and commissioning.

Getting support

- Have the model number and product code of both the indoor and outdoor unit to hand - these are on the rating plate of each unit and are also listed in sections 4 and 5 of this guide.
- If the system is showing a fault code, note it exactly as displayed, along with which indoor unit is reporting it. Section 12 explains what each code means.
- Note the date of installation and the name of the installing company.

Protecting your warranty

- Have the system installed and commissioned by a suitably qualified, F-Gas certified engineer.
- Keep the commissioning documentation, the F-Gas record and the invoice together in a safe place.

- Have the system serviced annually and keep the service records.
- Clean the filters as described in section 13, and keep the area around the outdoor unit clear.

Sources. This guide was compiled from the AUX R32 Free Match specification schedules; the R32 Free Match part-load performance tables; the R32 Free Match installation and operation manual; the R32 Technical Service Manual, Free Match Inverter Series, version 27 (July 2026); and the 2026 AUX European Multi and Light Commercial catalogue (version 20250928). Test data originates from the AUX laboratory and may vary with test conditions. All specifications are subject to change by the manufacturer without prior notice.