QUANTUM

BY MARSTAIR A2L READY

A2L Ready Condensing Unit

Multi-refrigerant platform for medium-temperature refrigeration applications.

Engineered for contractors, distributors and project engineers planning the transition to lower-GWP refrigerants while retaining practical serviceability.



R454C R455A R448A R407C R134A/R513A

MARSTAIR

REFRIGERATION AND SPECIALIST AIR CONDITIONING

Technical brochure

A practical platform for refrigerant transition

Quantum A2L Ready is positioned as a contractor-friendly condensing unit range for medium-temperature applications where refrigerant strategy, availability and future compliance are becoming key selection factors.



Multi-refrigerant flexibility

- Performance data supplied for common transition refrigerants including R454C, R455A, R448A, R407C and R134A/R513A.
- A single family can support a broader range of project conditions and replacement discussions.

Six model sizes

- MRQ 30, 50, 60, 80, 90 and 100.
- Capacity coverage from approximately 1.08 kW to 15.03 kW across supplied data points.

Service-led specification

- Xecom compressor platform with practical refrigeration components.
- Pipe sizing guidance, electrical data and dimensional information included for engineering review.

Engineers want assumptions, ratings basis and physical constraints stated clearly. This brochure is structured to support fast technical review.

Model range and capacity overview

Capacities below are shown at 27°C ambient / 42°C condensing, with the range taken from SST -10°C to +10°C. Values shown are kW.



Model	HP	Compressor	R454C kW	R455A kW	R448A kW	R407C kW	R134A/R513A kW
MRQ 30	1.2	XR22B-B1-101	1.90–3.98	1.97–3.84	2.15–4.51	1.96–4.05	1.36–3.13
MRQ 50	2.0	XR38B-B1-101	3.19–6.71	3.32–6.47	3.63–7.61	3.31–6.83	2.31–5.29
MRQ 60	2.5	XR45B-B1-101	3.85–8.09	4.00–7.81	4.39–9.19	4.02–8.30	2.74–6.29
MRQ 80	3.0	XR52B-B1-101	4.35–9.14	4.53–8.82	4.96–10.39	4.55–9.39	3.12–7.15
MRQ 90	3.5	XR63B-B1-101	5.18–10.88	5.39–10.51	5.90–12.36	5.41–11.17	3.82–8.77
MRQ 100	4.0	XR72B-B1-101	6.25–13.13	6.50–12.66	7.11–14.89	6.53–13.48	4.47–10.26

Range coverage across supplied data: 1.08 kW to 15.03 kW depending on refrigerant, model, ambient and evaporating temperature.

1.08 kW — **15.03 kW**

Performance snapshot

R454C, R455A, R448/449A and R134A/R513A selection snapshot at 32°C ambient / 47°C condensing.

Data shown for SST -10°C to +10°C. Capacity values are kW.



R454C cap. kW					
	-10°C	-5°C	0°C	5°C	10°C
MRQ 30	1.79	2.18	2.63	3.16	3.77
MRQ 50	3.01	3.66	4.43	5.32	6.35
MRQ 60	3.62	4.42	5.34	6.41	7.65
MRQ 80	4.10	4.99	6.04	7.25	8.65
MRQ 90	4.88	5.94	7.18	8.63	10.30
MRQ 100	5.88	7.17	8.67	10.41	12.42

R455A cap. kW					
	-10°C	-5°C	0°C	5°C	10°C
MRQ 30	1.91	2.32	2.78	3.27	3.77
MRQ 50	3.21	3.91	4.68	5.50	6.34
MRQ 60	3.88	4.72	5.66	6.65	7.66
MRQ 80	4.38	5.34	6.39	7.51	8.65
MRQ 90	5.22	6.36	7.61	8.95	10.30
MRQ 100	6.30	7.66	9.17	10.78	12.42

R448/449A cap. kW					
	-10°C	-5°C	0°C	5°C	10°C
MRQ 30	2.03	2.47	2.98	3.58	4.27
MRQ 50	3.42	4.17	5.04	6.04	7.20
MRQ 60	4.13	5.04	6.08	7.30	8.70
MRQ 80	4.67	5.69	6.88	8.25	9.83
MRQ 90	5.56	6.77	8.18	9.82	11.70
MRQ 100	6.70	8.16	9.86	11.82	14.09

R134A/R513A cap. kW					
	-10°C	-5°C	0°C	5°C	10°C
MRQ 30	1.30	1.62	2.01	2.45	2.98
MRQ 50	2.19	2.74	3.39	4.15	5.04
MRQ 60	2.60	3.26	4.03	4.93	5.99
MRQ 80	2.96	3.71	4.58	5.61	6.81
MRQ 90	3.63	4.54	5.62	6.87	8.34
MRQ 100	4.25	5.32	6.57	8.04	9.77

Electrical data

Single-phase compressor electrical data for the MRQ range.

Electrical supply: 220–240V / 1Ph / 50Hz

The electrical data below is based on nominal operating conditions.
Use for electrical design, protective device selection and cable sizing.

Model	Compressor	Compressor power (kW)	Running current (A)	LRA (A)
MRQ 30	XR22B-B1-101	1.458	5.95	56
MRQ 50	XR38B-B1-101	1.939	8.58	74
MRQ 60	XR45B-B1-101	2.277	10.63	90
MRQ 80	XR52B-B1-101	2.580	11.41	90
MRQ 90	XR63B-B1-101	3.360	13.66	102
MRQ 100	XR72B-B1-101	3.738	15.31	102



Fan motor (all models):

40 W / 0.45 A

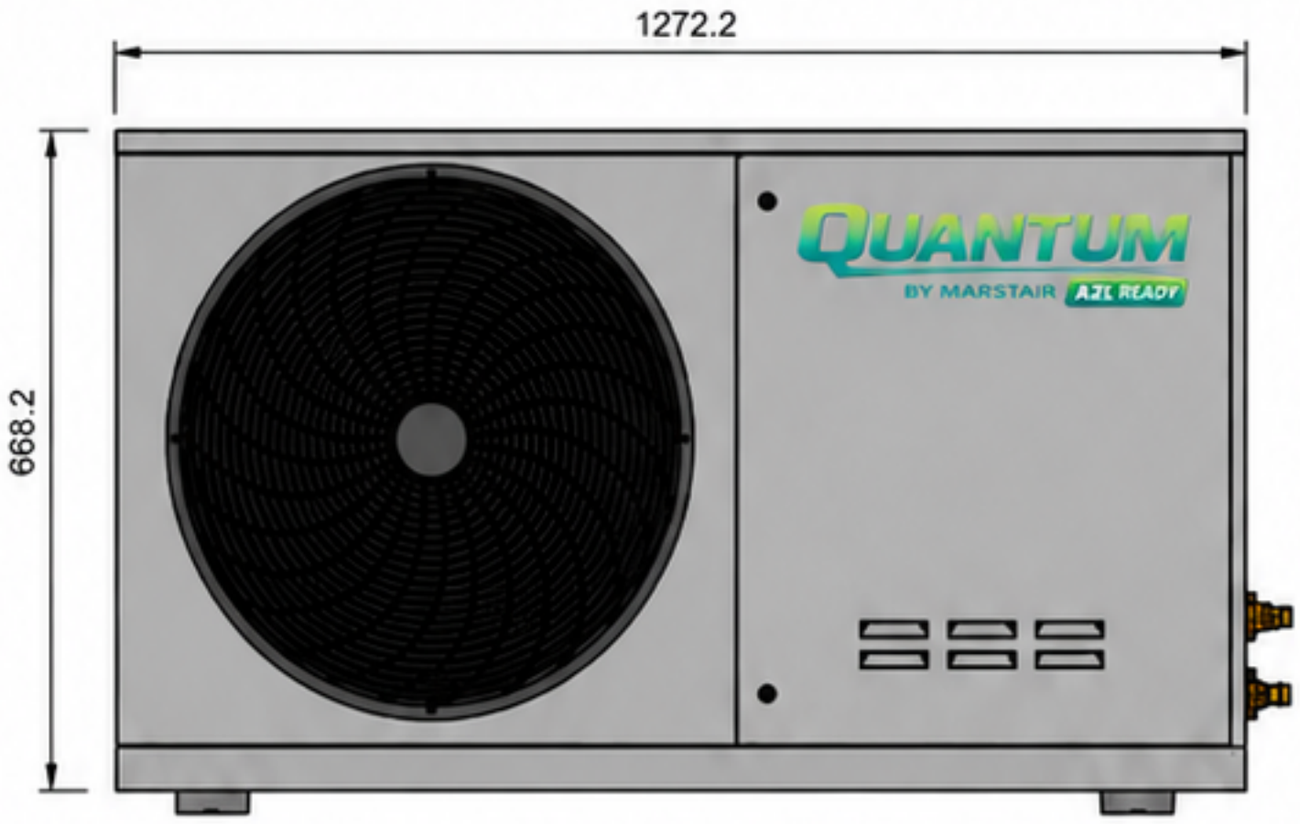
Engineering note

Final protective device selection and cable sizing to be confirmed by the installer to suit the application and local regulations.

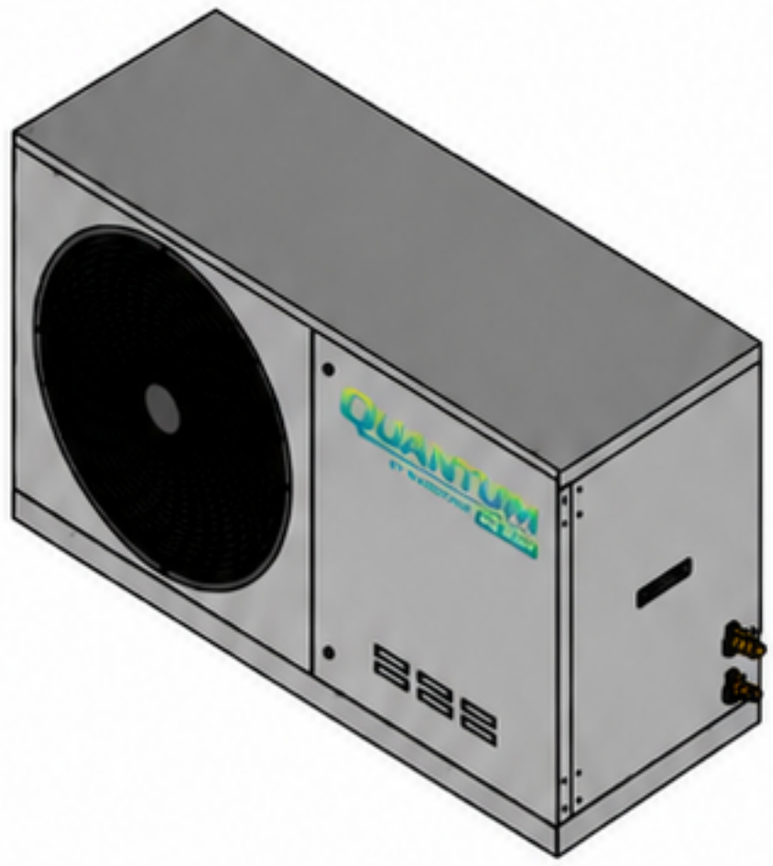
Dimensions and connection layout

Overall dimensions shown below are based on the attached unit drawing.

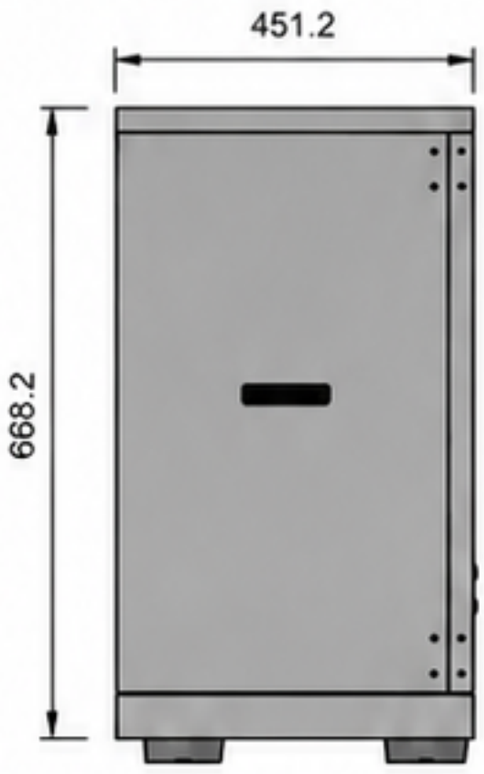
Front view

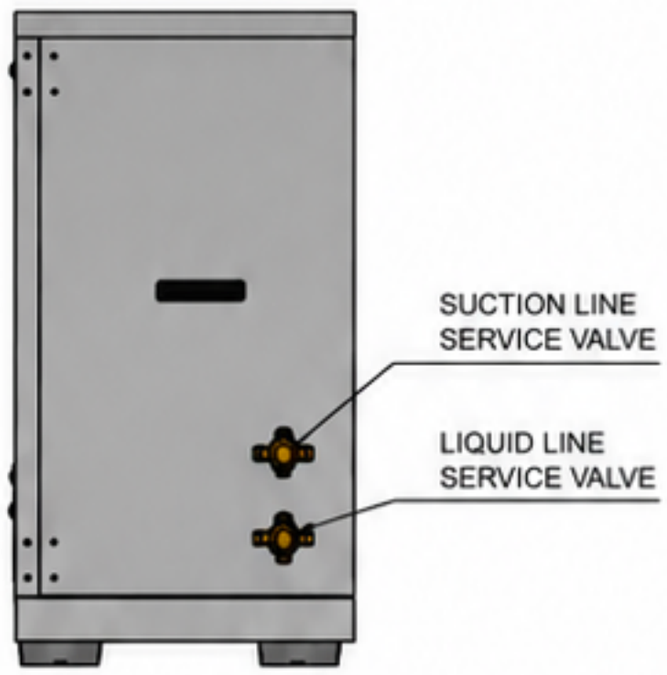


Isometric view



Side views





Pipe sizing guidance

Models	Liquid	Suction
1.2HP / 2HP / 2.5HP	3/8"	7/8"
3HP / 3.5HP / 4HP	1/2"	7/8"

Guidance only: confirm velocity, pressure drop, oil return and vertical risers against project conditions.

↔	**Length**	1272.2 mm
⤢	**Depth**	451.2 mm
↕	**Height**	668.2 mm

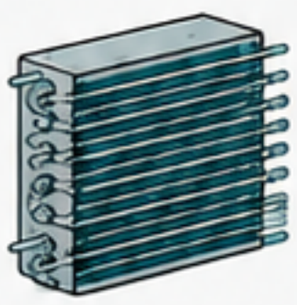
Note All dimensions in mm. Do not scale from brochure.

Service-led component story

The unit is designed to be straightforward to install, commission and maintain. Keep claims factual and tie each feature to a service benefit.

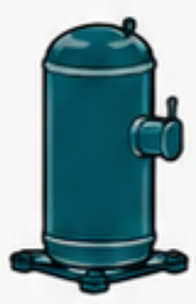


Microchannel condenser



Compact heat rejection platform for efficient packaged performance.

Xecom compressor platform



Common compressor family across the model range.

AC fan motor with speed controller



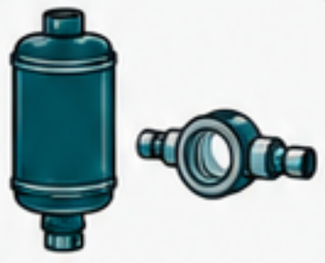
Helps maintain stable condensing control across ambient conditions.

Receiver with rotolock valve



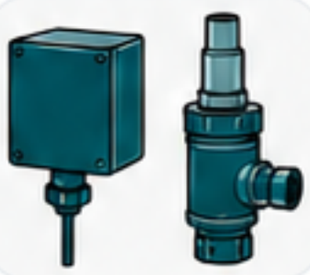
Useful for service access and refrigerant management.

Filter drier and sight glass



Core refrigeration service components included in the package.

Dual pressure switch and safety valve



Protection elements integrated within the unit package.

Electrical control box



Contactor, overload protection and time delay control included.

Crankcase heater



Supports refrigerant migration control during off-cycle periods.

Commissioning essentials

- Confirm selected refrigerant and charge limitation before installation.
- Confirm electrical supply and protective device suitability.
- Pressure test, evacuate, dehydrate and commission using correct refrigerant handling procedures.
- Record suction/discharge pressure, superheat, subcooling, ambient and running current.

QUANTUM
BY MARSTAIR A2L READY

Ready to specify Quantum?

For an accurate selection, provide the duty, refrigerant, evaporating temperature, ambient, pipe run, electrical supply and site constraints.

Selection information required

- Cooling duty and room/application
- Refrigerant and safety class requirement
- SST / room condition / ambient
- Evaporator and expansion device
- Pipe route, risers and total equivalent length
- Electrical supply and protective device requirements



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Install and commission in accordance with current regulations, relevant safety standards and manufacturer instructions.