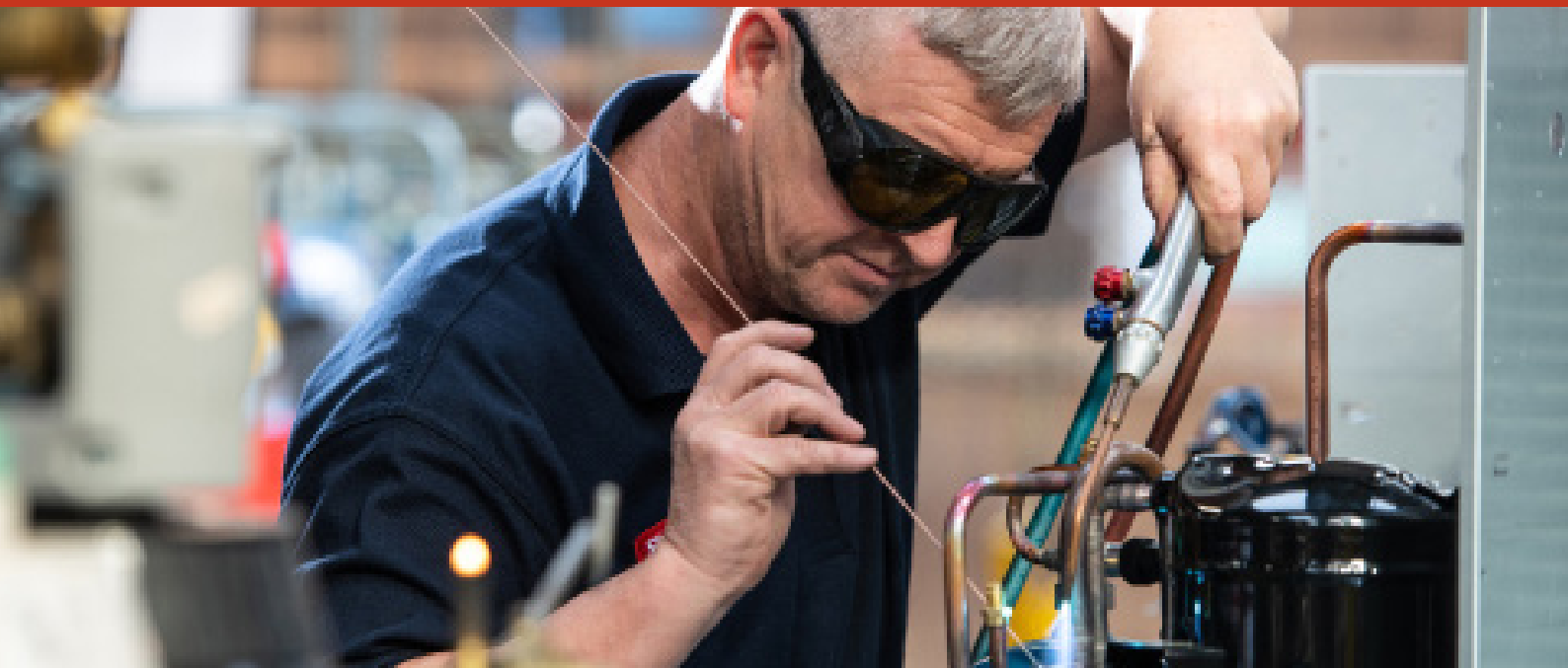


# MARSTAIR

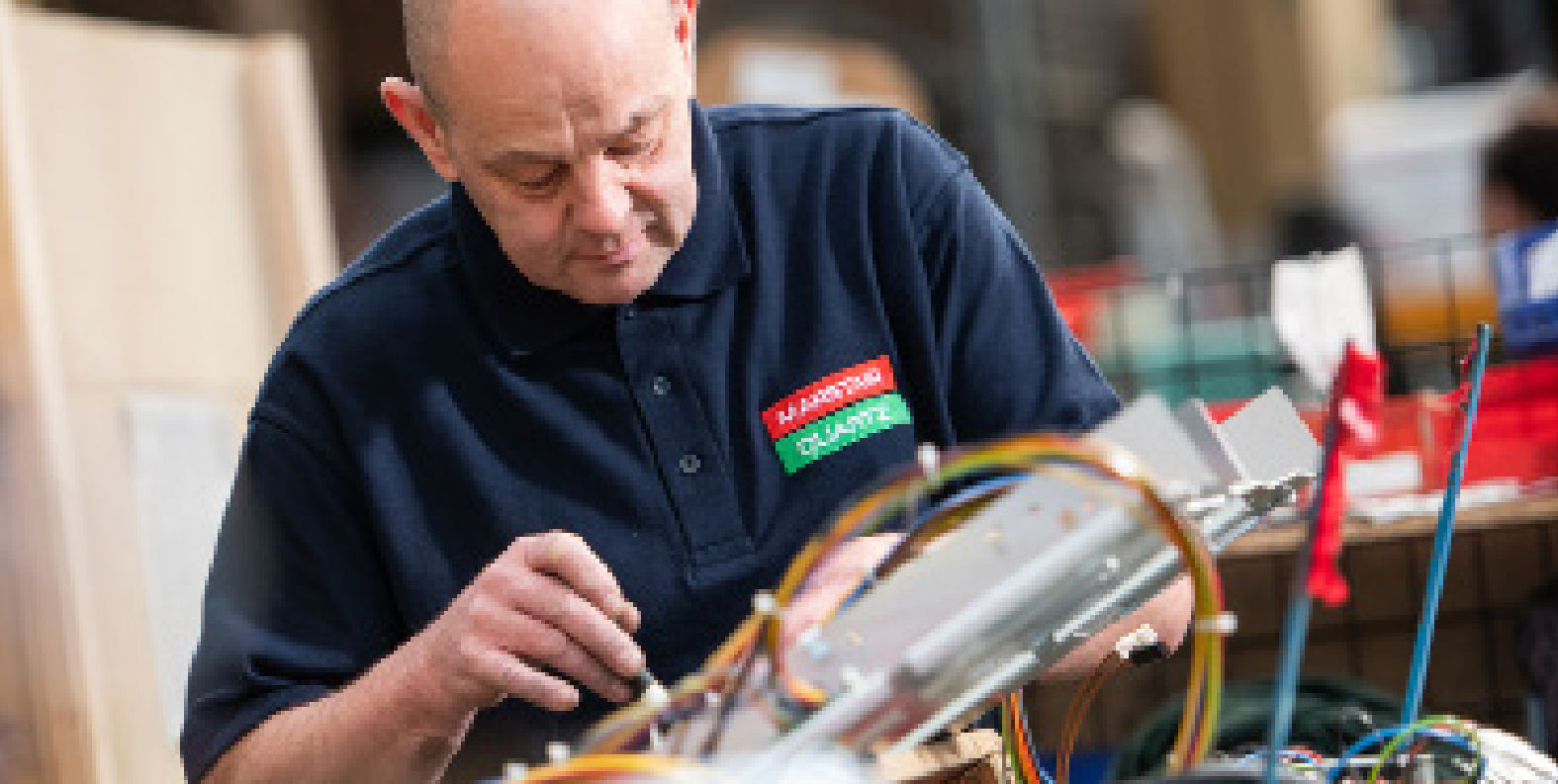
REFRIGERATION AND SPECIALIST AIR CONDITIONING



# Upgrade to **A2L**CELLAR**MATCH** for the UK's First A2L Cellar Cooler

[WWW.MARSTAIR.COM](http://WWW.MARSTAIR.COM)





We are your **trusted partner** for HVAC-R **product solutions**, with a proven ability to deliver bespoke designs for all project applications. Ensuring market leading **customer satisfaction** in our chosen HVAC-R sectors.

Experts in superior product quality, efficiency and innovation we deliver British designed and built manufacturing to the very highest standard with 50-years of proven expertise & excellence. We are your preferred partner for bespoke design and project applications. Using only quality & reliable A-grade components gives us the confidence to offer our 5 year warranty for total piece of mind.



## Introducing **A2L** CELLARMATCH

A2LcellarMatch challenges current thinking, providing a **cutting edge solution** for cellar cooling.



### Key Features & Benefits

- ✓ Designed and developed to BS EN 378: 2016 Standard
- ✓ Delivering a 93% reduction in refrigerant GWP with huge environmental benefits
- ✓ 11% more efficient with CXE / SMC than CXE / CKC
- ✓ Pre-calculated refrigerant charge for all interconnecting pipe lengths, allows easy identification of the EN378 charge limits relative to beer cellar size
- ✓ Simple skill level uplift required to install
- ✓ Suitable for all cellar cooling applications
- ✓ Up to 80m pipe runs available
- ✓ Simple system selection and easy installation
- ✓ Full compliance within the box
- ✓ No requirement for extra safety measures ie. emergency ventilation
- ✓ 5 year Parts Warranty as Standard

UK 1st  
A2L  
Cellar Cooling  
Solution

# Development & Testing

A2L CELLAR MATCH

Following recent investment in newly built R&D testing facilities at Marstair's UK manufacturing plant, eight months of comprehensive testing have been completed, ensuring A2LcellarMatch has been developed fully in accordance to BS EN 378: 2016 standards.

## Testing different components to reduce the refrigerant charge

This is to ensure the refrigerant charge levels are low enough for the Marstair A2LcellarMatch to be suitable for reasonable pipe runs within the **stringent requirements** of the regulations.

## Extensive testing with multiple condensing units

Ensuring the published refrigerant charge level information is **accurate** for every Marstair A2LcellarMatch.

## Testing different components for improved efficiency

These new Marstair A2LcellarMatch **solutions** are even better with more efficient condensers

## Developed for use with R454C refrigerant

R454C is sub 150 GWP refrigerant, ensuring that the system is **F-gas regulation compliant** for the long term

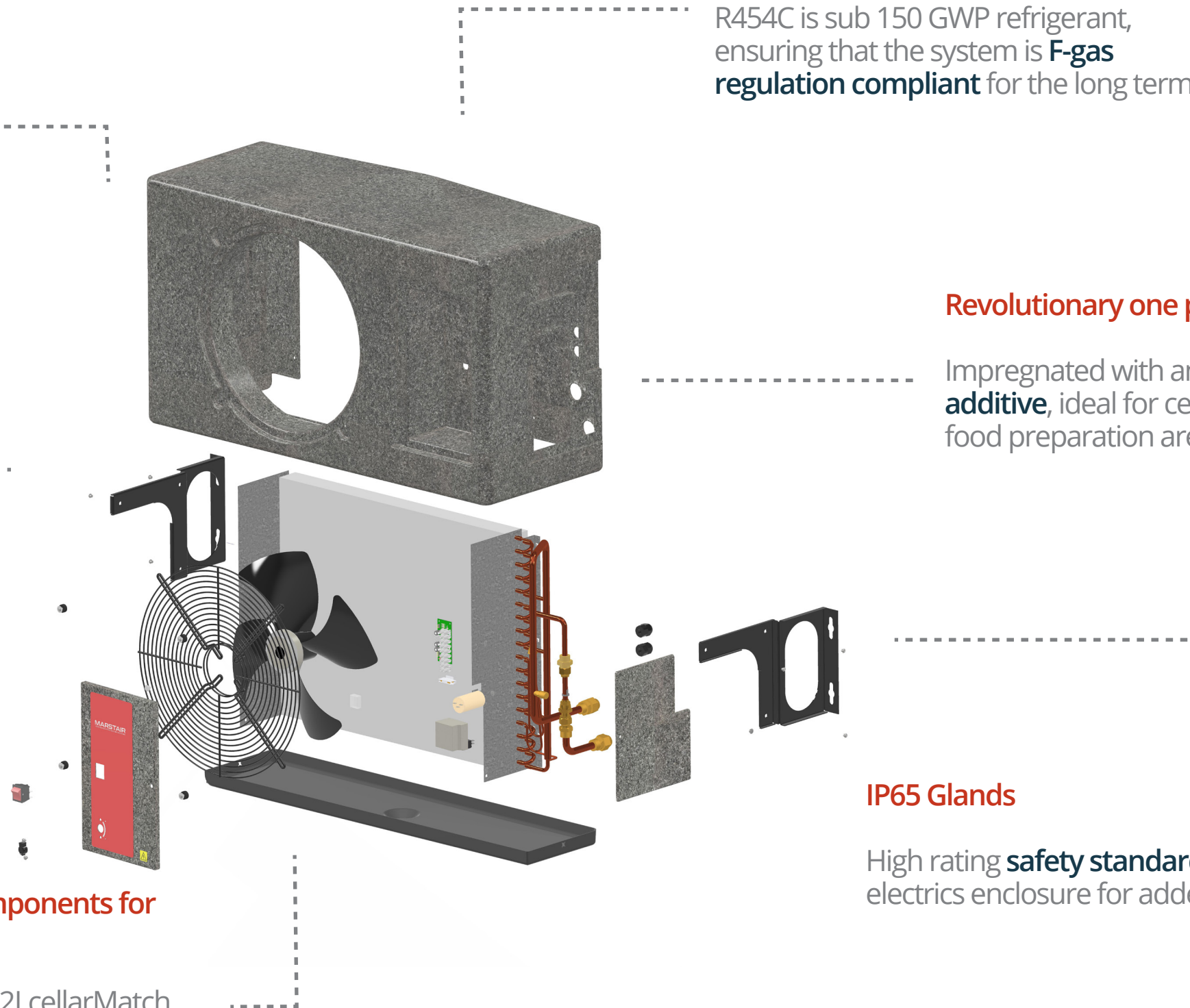
Duties  
from 2.4-  
7.4kW

## Revolutionary one piece molded body

Impregnated with an **anti-bacterial additive**, ideal for cellar cooling and food preparation areas.

## IP65 Glands

High rating **safety standard** on the electrics enclosure for added protection



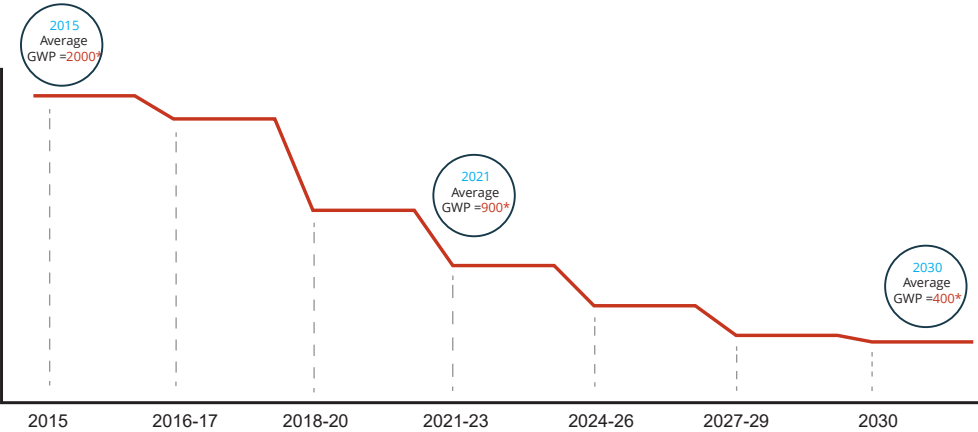




## Environmental ‘Step-Change’

Marstair’s A2LcellarMatch provides the solution to accelerate the step-change needed in the cellar cooling sector allowing a major shift in refrigerant GWP reduction. Critically this will also give end user clients seeking greener future-proof alternatives, confidence for better total cost of ownership during this challenging economic time.

F-gas phase-down & average GWP



93%  
Reduction  
in GWP

11%  
More  
Efficient

These new systems are 11% more efficient based on a comparison as an example CXE 80 / SMC 80 to the Marstair CXE 70 / CKC 80 using R407C .

## Selection made easy

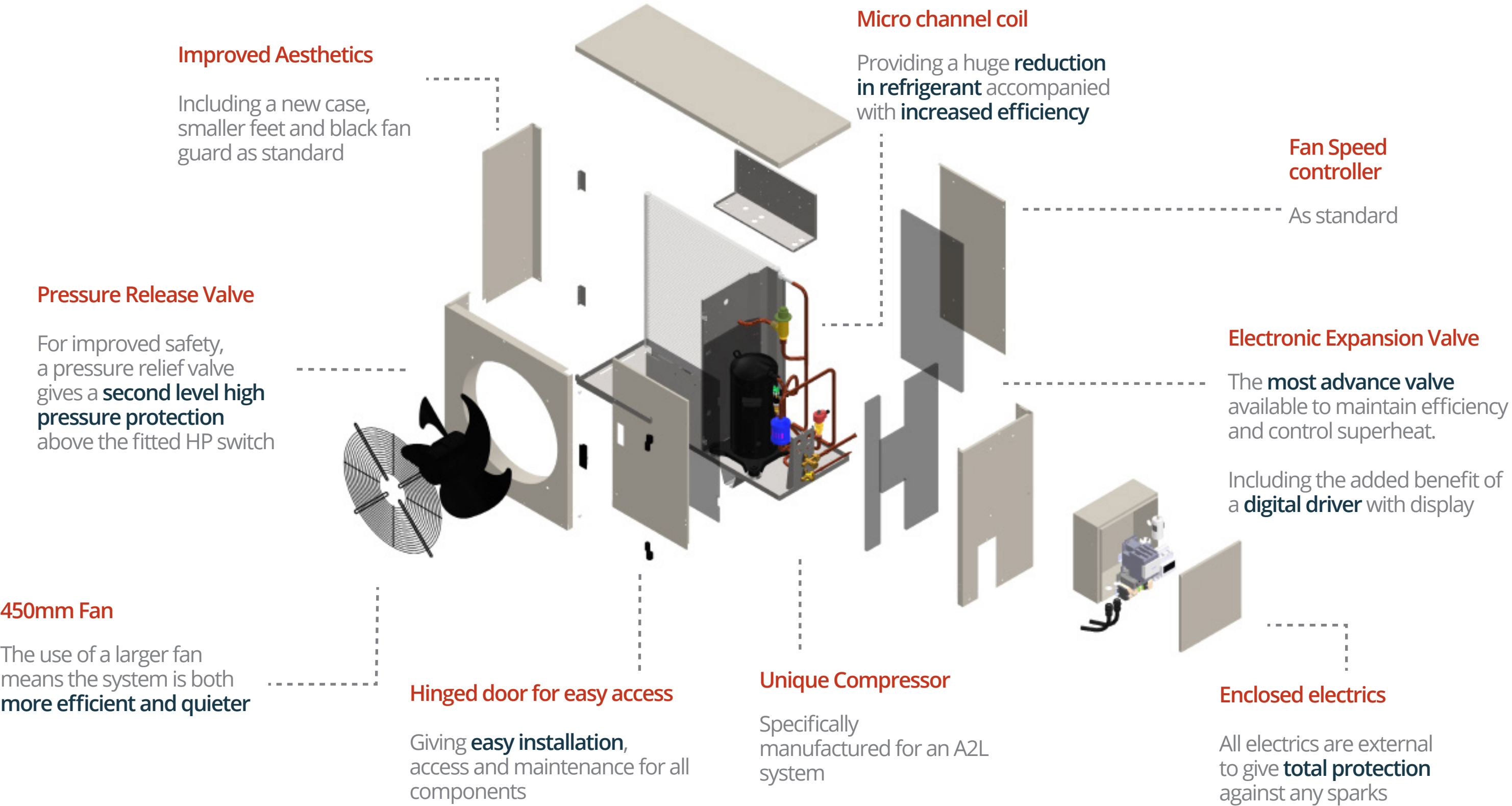
A2LcellarMatch is the only solution which provides a complete solution on A2L refrigerant for cellar cooling. Installed using standard controllers, it is also suitable for applications with up to 80m pipe runs, and which requires no extra safety measures.

The refrigerant charge for any system match with a known pipe run can easily be calculated, meaning A2LcellarMatch can easily be selected giving clients complete confidence their selection can be applied both safely and in compliance with regulations.

| R454C (12.7°C return Air / 32°C External) |                 |         |                  |               |                                |               |                                |               |                                |               |                                |
|---|-----------------|---------|------------------|---------------|--------------------------------|---------------|--------------------------------|---------------|--------------------------------|---------------|--------------------------------|
| Cooling kW                                | Condensing unit | CXE A2L | System charge 0m | 5m Pipe Run   |                                | 10m Pipe Run  |                                | 15m Pipe Run  |                                | 20m Pipe Run  |                                |
|   |                 |         |                  | System charge | BS EN 378 Minimum Room Size m³ | System charge | BS EN 378 Minimum Room Size m³ | System charge | BS EN 378 Minimum Room Size m³ | System charge | BS EN 378 Minimum Room Size m³ |
| 2.4                                       | SMC+20          | 30      | 0.295            | 0.375         | 6.4                            | 0.455         | 7.8                            | 0.535         | 9.1                            | 0.615         | 10.5                           |
| 2.7                                       | SMC+30          | 30      | 0.320            | 0.400         | 6.8                            | 0.480         | 8.2                            | 0.560         | 9.6                            | 0.640         | 10.9                           |
| 4.4                                       | SMC+45          | 50      | 0.655            | 0.735         | 12.5                           | 0.815         | 13.9                           | 1.105         | 18.9                           | 1.255         | 21.4                           |
| 6.2                                       | SMC+50          | 70      | 0.760            | 0.840         | 14.3                           | 1.060         | 18.1                           | 1.210         | 20.7                           | 1.360         | 23.2                           |
| 7.4                                       | SMC+80          | 70      | 0.970            | 1.050         | 17.9                           | 1.270         | 21.7                           | 1.420         | 24.2                           | 1.570         | 26.8                           |

# Engineered Quality & Reliability

This new A2LcellarMatch provides peace of mind for the safety, efficiency and ease of installation needed to ensure a positive switch to much lower GWP cellar cooling solution.







# Cellar Size Guide

Approximate Guide to Cellar Sizing in m³ at 32°C Ambient

| System            | Duty |       | Above     |       | Below     |       |
|-------------------|------|-------|-----------|-------|-----------|-------|
|                   |      |       | Cellar m³ |       | Cellar m³ |       |
|                   | 8°C  | 12.7° | 8°C       | 12.7° | 8°C       | 12.7° |
| CXE30 A2L + SMC20 | 1.9  | 2.4   | 17        | 24    | 28        | 40    |
| CXE30 A2L + SMC30 | 2.2  | 2.7   | 21        | 30    | 35        | 50    |
| CXE50 A2L + SMC45 | 3.6  | 4.4   | 40        | 57    | 65        | 93    |
| CXE70 A2L + SMC50 | 5.0  | 6.2   | 62        | 89    | 99        | 141   |
| CXE70 A2L + SMC80 | 6.0  | 7.4   | 78        | 111   | 122       | 175   |

Approximate refrigeration charge based on pipe run

| System          | System charge 0m | 5m Pipe Run   |                                | 10m Pipe Run  |                                | 15m Pipe Run  |                                | 20m Pipe Run  |                                |
|-----------------|------------------|---------------|--------------------------------|---------------|--------------------------------|---------------|--------------------------------|---------------|--------------------------------|
|                 |                  | System charge | BS EN 378 Minimum Room Size m³ | System charge | BS EN 378 Minimum Room Size m³ | System charge | BS EN 378 Minimum Room Size m³ | System charge | BS EN 378 Minimum Room Size m³ |
| CXE30 A2L SMC20 | 0.295            | 0.375         | 6.4                            | 0.455         | 7.8                            | 0.535         | 9.1                            | 0.615         | 10.5                           |
| CXE30 A2L SMC30 | 0.320            | 0.400         | 6.8                            | 0.480         | 8.2                            | 0.560         | 9.6                            | 0.640         | 10.9                           |
| CXE50 A2L SMC45 | 0.655            | 0.735         | 12.5                           | 0.815         | 13.9                           | 1.105         | 18.9                           | 1.255         | 21.4                           |
| CXE70 A2L SMC50 | 0.760            | 0.840         | 14.3                           | 1.060         | 18.1                           | 1.210         | 20.7                           | 1.360         | 23.2                           |
| CXE70 A2L SMC80 | 0.970            | 1.050         | 17.9                           | 1.270         | 21.7                           | 1.420         | 24.2                           | 1.570         | 26.8                           |

For all specific selection or projects please contact the sales team

## Step by Step Cellar Match System Selection

### Inputs

- 1

Establish Duty requirement
- 2

Confirm Internal Room Temperature
- 3

Estimate External Ambient
- 4

Confirm Evaporating temperature
- 5

Measure Pipe run length
- 6

Confirm Room Volume
- 7

Choose Refrigerant type

### Outputs

- 1

Evaporator Selection
- 2

Condensing unit selection
- 3

Suction Pipe Size
- 4

Expansion Pipe size
- 5

Refrigerant charge
- 6

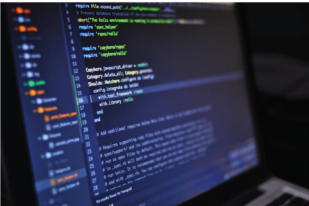
Minimum room size BS EN 378

## Our Project Support



### ENQUIRY

DEFINE REQUIREMENTS  
PROJECT SCOPE  
ACCURATE RESPONSE



### SELECTION ADVICE

EXPERT ADVICE  
BESPOKE DESIGN  
COMPLIANT SOLUTION



### QUOTATION PROPOSAL

DISTRIBUTOR NETWORK  
PRICE & LEAD TIME  
LEAD TIME SCHEDULING



### ORDERING PROCESS

ORDER PLACED  
TECHNICAL SUBMISSION  
UNRIVALLED SUPPORT



### FOLLOW UP

PROJECT QUERIES  
SITESUPPORT  
PEACE OF MIND



### MANUFACTURING

BRITISH DESIGNED & BUILT  
EXCELLENCE IN TESTING  
QUALITY ACCREDITATION



### PRODUCT DELIVERY

NATIONWIDE DISTRIBUTORS  
STOCK AVAILABILITY  
ON TIME IN FULL



### COMPLETION MEETING

PROJECT CLOSE OUT  
ENCOURAGE FEEDBACK  
CONTINUOUS IMPROVEMENT



### AFTERSALES SUPPORT

GENERAL QUERIES  
TECHNICAL BACKUP  
ENGINEER SUPPORT

Contact Us Today  
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**E:** sales@marstair.com



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