Planning for R32

Temperature Control

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Agenda

Application & Design

Installation

Maintenance

Temperature Control

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An introduction to

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90 Years

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Our Vision

To reduce the energy use in the built environment without compromising comfort and service.

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Our Mission

To combine the latest technological advancements with traditional values in customer care and quality, through delivery of comfort cooling and heating to all areas where we work, socialise and live. We always strive to deliver the best value in terms of comfort, energy use and satisfaction.

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30 Years

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7 Years

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Application & Design

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EN378

Control of the maximum refrigerant volume in a space

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6.8Kg R32
Minimum area
required is 25m2
(based on 14kW ceiling
mounted units with a 2.4m
ceiling height)

70 m2 – 200w per m2

140 m2 – 100w per m2

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4Kg R32
Minimum area
required is 121m2
(based on 7.1kW floor mounted
units with a 2.4m ceiling height)

70 m2 – 100w per m2

140 m2 – 50w per m2

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Summary

For most applications the use of ceiling or wall mounted systems easily fits within the maximum refrigerant levels.

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Summary

Care is needed when selecting floor mounted systems as the allowable area is reduced due to the dense mixture of refrigerant.

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Summary

For typical applications in offices, retail and commercial properties, **R32 is a viable option.**

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Installations

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R32 operates at similar pressures to R410a so pipework installations and practices remain the same.

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No changes to Installation practices, the changes only occur when the refrigerant is introduced.

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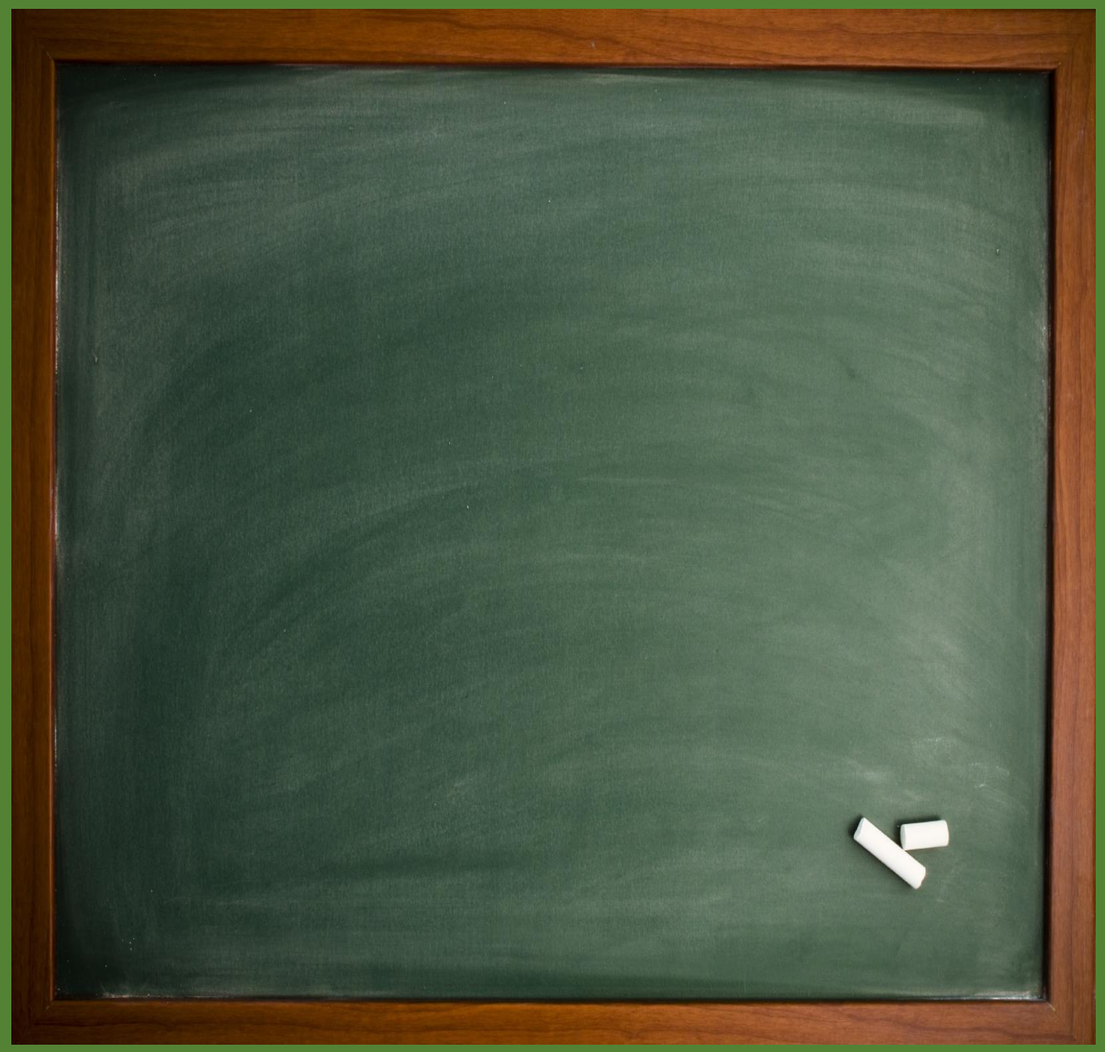

F Gas certified installers can install R32, so no extra training is required.

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When working in confined spaces ventilation is now mandatory

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Summary

For typical installations the only changes are at the commissioning stage and **generally the only change in tooling would be the gauges.**

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Service & Maintenance

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The biggest change with R32 is when the refrigerant is added to the system. There are changes to tools and simple practices which will make working with R32 easy

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Therefore the changes effect the servicing and maintenance of the R32 equipment.

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Charging Manifold	Change to gauge dial needed for R32 temperature / pressure. Same hoses.
Charging Scales	Same as R410a
Vacuum pump	Same as R410a
Leak Detector	To be compatible with R32
Recovery Unit	To be compatible with R32 (spark free operation)
Ventilation	Compulsory for working in confined spaces (i.e. plant rooms)
Recovery Cylinder	New cylinder (48bar), red shoulder markings with left hand thread

Charging Manifold	£130.00
Leak Detector	£440.00
Recovery Unit	£1,200.00
Ventilation	£275.00

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£2,050

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Working Safely

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Dispelling the Myths

R407C to R410a

75%

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Dispelling the Myths

R410a = 50% R125 + 50% R32

We already work with R32

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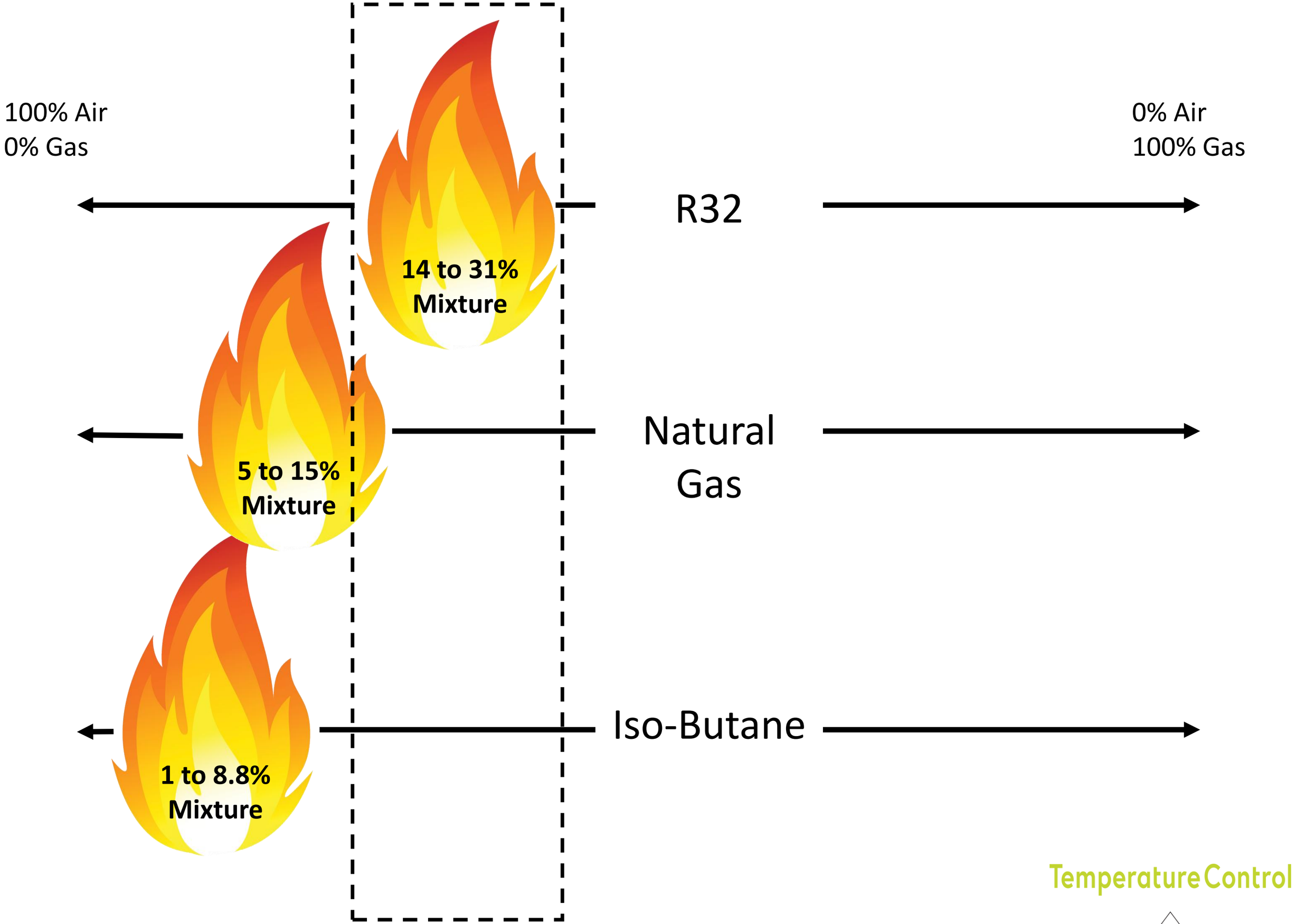

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Dispelling the Myths

Old R22 systems used a standard non flammable refrigerant, with a natural mineral oil.

This mineral oil, although is not classed as flammable, has a flash point temperature of >150 deg C.

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Dispelling the Myths

R32 is introduced into an air conditioning system as a mildly flammable refrigerant.

This same system contains a compatible synthetic oil, man made to improve performance and has a flash point of
>240 deg C .

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Dispelling the Myths

When the two mixtures are compared, there is potential higher risk with the R22/Mineral oil mixture than R32/Synthetic oil when exposed to heat.

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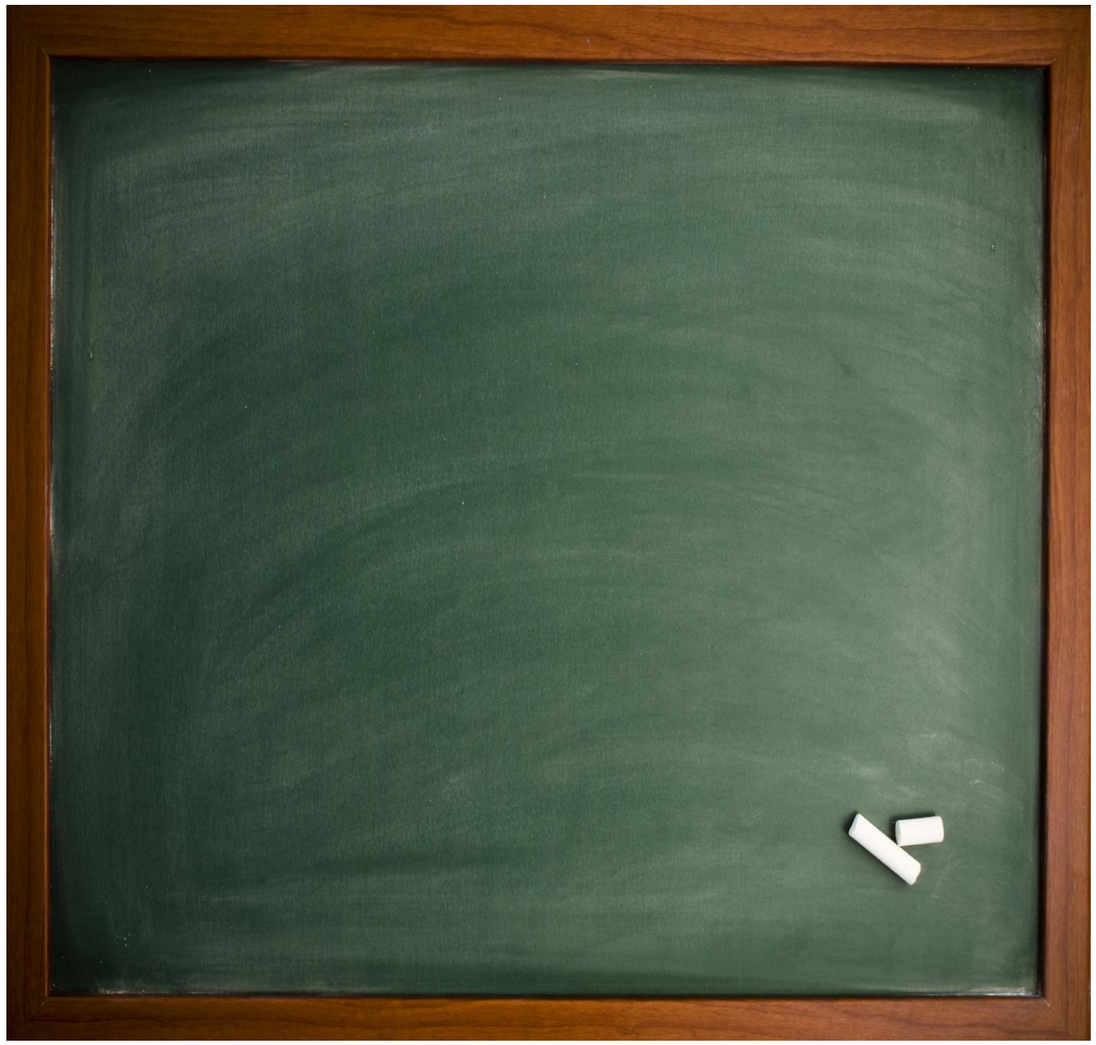
Dispelling the Myths



Is special training needed to install the R32 systems?

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Final Summary

Application & Design

Installation

Maintenance

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