THE GAUGE
ISSUE 10

The latest industry news and product information in HVAC-R

ACTROL™

Gear up for summer

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Acpac Introducing our new semi VSD range **Page 3**

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INTRODUCING ACPAC SEMI'S WITH VARIABLE SPEED DRIVE

The Variable speed drive (VSD) models of the APS Semi hermetic Acpac range include a fully programmed Vacon VSD to adjust the compressor speed to maintain the desired evaporating pressure.

In extreme ambient temperatures the VSD models will act to ensure the compressor stays inside it's operating envelope, this is called the High Limit Pressure Safety (HLPS) feature and will allow the compressor to provide the maximum amount of cooling capacity at high ambient conditions.

The APS VSD models are quick and easy to install and commission and are suitable for either R134a or R404A refrigerants.

These models are well suited for refrigerated reach-in and walk-in cool rooms and freezers for every product imaginable including butcher shops, fish shops, fruit and vegetable stores, fast food chains, food processors and many more.

ACPAC VSD FAST FACTS:

- **Vacon VSD adjusts compressor speed to match the refrigeration load required.**
- **Comes pre-programmed for trouble free operation and fast commissioning.**
- **Ensures the compressor operates below its maximum operating current.**
- **Contactor and Overload no longer required as power goes direct to VSD.**
- **Electronic Oil Regulator installed to ensure oil return is always maintained.**

MODELS AVAILABLE

Product Code	Model	Compressor			Fan(s)			Liquid Receiver Capacity	Line Size inches		Nett Weight	Sound Power Level
		Model	MOC, Amps	Volts / Phase	No. Diam. mm	MOC, Amps	Volts / Phase	kg @ 80%	Suction	Liquid	kg	dBA ▲
3508002	APS6.0ML2-1VSD	SH4536ZYZ	6.7	DOL	2 x 350	2 x 0.65	240/1	10.0	7/8	1/2	175	67
3508004	APS11.7ML3-1VSD	SH4567ZYZ	12.5	DOL	3 x 350	3 x 0.65	240/1	10.0	1-1/8	1/2	205	70
3508007	APS25.8ML2-1VSD	SH4615ZMZ	22.4	DOL	2 x 500	2 x 3.3	240/1	12.0	1-3/8	5/8	348	75
3508011	APS56.4ML2-1VSD	SH4632ZMZ	49.2	DOL	2 x 710	2 x 1.5	415/3	25.0	2-1/8	1-1/8	660	81

▲ Subtract 17dBA to convert to sound pressure at 3m distance

R134a – WHAT COMES NEXT?

In our last edition of The Gauge, we highlighted the fact that the days of R404A are limited, it's important to realise the days of all HFC refrigerants are dwindling. The GWP of R404A is almost three times that of R134a so you can imagine with the quota system, this will more than likely be one of the first to diminish – but R134a won't be too far behind, so what do we use to replace this single component sky-blue baby?

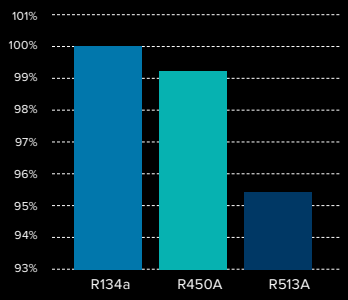
There are already a few lower GWP alternatives available for retrofitting most common refrigerants. These are blends of HFC and HFO refrigerants, with HFO refrigerants having near zero GWP and the HFC component providing similar characteristics to the refrigerant they are replacing. Changing to a low GWP option will prolong the availability of refrigerants that can be used on existing systems. In this article we will highlight some of the better performers in the non-flammable arena, however if you'd like to know more about the HFO options that would require new equipment, simply talk to your local branch manager.

Type	ASHRAE No	Brand name	GWP (AR5)	Glide	Flammable
HFC	R134a	R134a	1300	0.0	No (A1)
HFO/HFC	R450A	Solstice N13	547	0.6	No (A1)
HFO/HFC	R513A	Opteon XP10	573	0.0	No (A1)

What is our recommendation? While very similar in areas, R450A slightly pips R513A in our eyes, let's look a little closer at why.

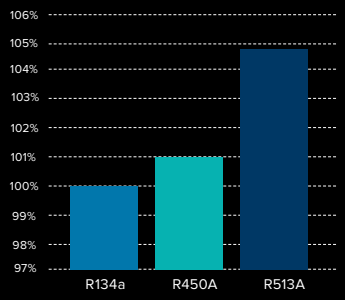
- **R450A COP is nearly identical to R134a, R513A is lower, where higher is more desirable**
- **R450A Compressor power is nearly identical to R134a, R513A is higher, where lower is more desirable**
- **The Mass flow for R450A is more desirable**
- **R450A discharge temperature is below R134a**
- **The GWP for R450A is lower than both R134a and R513A**

COP cool
above 100% is desirable



- Measures the cooling capacity in relation to the power consumed.
- R450A has the best COP of the alternatives.
- Both alternatives fall short of R134a's COP. Minimising this difference is important otherwise equipment will not perform as originally engineered.

Compressor Power
lower than 100% is desirable



- Measures the power consumption of the compressor. The lower the better.
- R450A is just above R134a and performs much better than R513A.
- Both alternatives are higher than R134a's power consumption. Minimising this difference will save on energy costs.

Mass Flow
above 100% is desirable

- Mass flow tells us how much refrigerant can be moved through the system, generally the more the more the better.
- Note: The higher the difference compared to the refrigant it is replacing, the more adjustments on the system will be required e.g. TX valve.

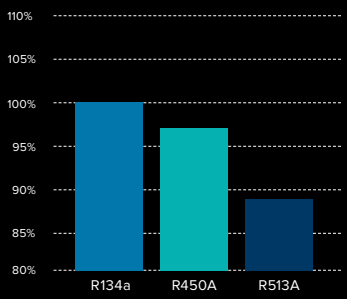
Discharge temperature
lower is better

- A measure of the temperature of the refrigerant leaving the compressor.
- The higher the temperature the more stress on the compressor components.
- A lower discharge temperature is good. R450A is 8% lower than R134a.

Refrigeration Capacity
above 100% is desirable

- This is a measure of the capacity of the refrigerant to cool. The higher the better.
- This is R450A's only weakness which is more than compensated by its other attributes.
- R450A would benefit installing an EXV to compensate capacity shortfall.

Charge Size



- Charge size is a reference to the volume in kilograms of refrigerant needed in a system.
- R450A is 3% lower than R134a.

One area where R513A does trump our recommended alternative is in refrigeration capacity. Although its other attributes more than compensate for this weakness, as R450A overall is the closest match to R134a.

If you would like to see transparent chart of more HFC alternatives, ask your local branch for your very own Prime Refrigerant Comparison Chart. The chart provides a good representation of the abilities of each refrigerant under common conditions to enable a fair comparison. This will enable you to choose the best alternative for you without all the noise!

See the chart on the following page

COMPARISON CHART FOR HFC AND HFO REPLACEMENT REFRIGERANTS

Still unsure? Take a look at the detailed chart below comparing the attributes of new alternatives to help you decide which is the better choice for you. Grab a copy of this comparison chart at your local branch.

Current Refrigerant	Type	ASHRAE No	Brand name	GWP (AR5)*	Glide	Flammable	Oil	Refrigeration Capacity	Charge size	COP cool
R22	HFC	R22	R22	1760	0.0	No (A1)	MO and POE	100.0%	100.0%	100.0%
	HFC	R407C	R407C	1624	7.2	No (A1)	POE	94.8%	93.7%	96.6%
	HFC	R427A	Forane 427A	1828	6.8	No (A1)	POE	90.5%	92.9%	96.0%
	HFC	R438A	MO99	2059	3.6	No (A1)	MO* and POE	86.9%	94.1%	94.6%
	HFC	R422D	Genetron 422D Isceon MO29	2230	2.3	No (A1)	MO* and POE	85.0%	92.7%	89.8%
	HFC	R434A	RS 45	3245	1.3	No (A1)	MO* and POE	90.9%	87.9%	88.0%
	HFO/HFC	?	Solstice N20	891		No (A1)	POE			
	HFO/HFC	R444B	Solstice L20	295	6.9	Low (A2L)	POE	94.3%	84.1%	97.2%
R134a	HFC	R134a	R134a	1300	0.0	No (A1)	POE	100.0%	100.0%	100.0%
	HFO/HFC	R450A	Solstice N13	547	0.6	No (A1)	POE	89.7%	97.0%	99.2%
	HFO/HFC	R513A	Opteon XP10	573	0.0	No (A1)	POE	107.6%	94.2%	95.5%
	HFO	R1234yf	Solstice yf Opteon YF	<1	0.0	Low (A2L)	POE	94.0%	90.0%	94.6%
	HFO	R1234ze	Solstice ze	<1	0.0	Low (A2L)	POE	73.5%	97.2%	99.6%
	HFO/HFC	R516A	Forane 516A	131		Low (A2L)	POE	102.5%	89.9%	99.6%
R404A	HFC	R404A	R404A	3943	0.9	No (A1)	POE	100.0%	100.0%	100.0%
	HFC	R407A	Suva 407A	1923	4.1	No (A1)	POE	94.4%	111.0%	108.2%
	HFC	R407F	Performax LT	1674	4.3	No (A1)	POE	101.5%	108.3%	109.2%
	HFO/HFC	R448A	Solstice N40	1273	3.5	No (A1)	POE	102.6%	106.8%	107.5%
	HFO/HFC	R449A	Opteon XP40	1282	3.3	No (A1)	POE	101.7%	107.4%	107.3%
	HFO/HFC	R449B	Forane 449B	1296	3.4	No (A1)	POE	101.9%	107.4%	107.5%
	HFO/HFC	R452A	Opteon XP44	1945	1.8	No (A1)	POE	103.0%	108.9%	100.4%
	HFO/HFC	R455A	Solstice L40	145	8.2	Low (A2L)	POE	96.9%	94.7%	111.0%
	HFO/HFC	R465A	Forane 465A	137		Low (A2L)	POE	91.0%	100.8%	108.5%
R410A	HFC	R410A	R410A	1924	0.1	No (A1)	POE	100.0%	100.0%	100.0%
	HFO/HFC	R446A	Solstice L41z	715	4.0	Low (A2L)	POE	124.1%	95.3%	94.1%
	HFO/HFC	R447A	Solstice L41	572	3.1	Low (A2L)	POE	128.1%	96.9%	94.3%
	HFO/HFC	R452B	Opteon XL55	675	0.5	Low (A2L)	POE	140.6%	97.5%	93.2%
	HFO/HFC	R459A	Forane 459A	461		Low (A2L)	POE	136.7%	100.2%	94.8%
R123	HCFC	R123	R123	79	0.0	No (A1)	MO	100.0%	100.0%	100.0%
	HFO	R1233zd	Solstice zd	1	0.0	No (A1)	POE	140.0%	100.0%	

Table shows % comparison of various attributes to refrigerant it is replacing.

Similar → **Better**

Note: % above 100% is generally regarded as a better result for COP, Mass flow, and Refrigeration capacity.

% below 100% is a generally regarded as a better result for Compressor power, Discharge temp, and Charge size.

	Compressor Power [kW]	Mass Flow [m3/h]	Discharge Temperature [°C]	COP heat	Retrofit?	Additional notes
	100.0%	100.0%	100.0%	100.0%		
	103.5%	105.4%	89.2%	97.4%	Suitable for retrofit	Higher glide and must have oil change. System flush required
	104.2%	110.5%	85.4%	96.9%	Suitable for retrofit	Closest match to R22 with low discharge temperatures and lowest GWP. Oil change recommended
	105.7%	115.1%	80.3%	95.8%	Suitable for retrofit	Higher GWP, low discharge temperature but lower capacity. Manufacturer claims no oil change required.
	111.3%	117.7%	74.7%	92.1%	Suitable for retrofit	High GWP with lower COPs and capacity. Manufacturer claims no oil change required.
	113.6%	110.0%	74.9%	90.7%	Suitable for retrofit	Very high GWP and lower COPs and low capacity
					Suitable for retrofit	
	102.9%	106.0%	96.9%	97.8%	New equipment only	
	100.0%	100.0%	100.0%	100.0%		
	100.9%	111.4%	92.4%	99.4%	Suitable for retrofit	Closest match to R134a with low GWP
	104.8%	93.0%	88.7%	96.6%	Suitable for retrofit	
	105.7%	106.4%	81.9%	96.0%	New equipment only	Automotive A/C
	100.5%	136.0%	87.7%	99.7%	New equipment only	A/C and refrigeration
	103.6%	97.6%	88.9%	97.5%	New equipment only	
	100.0%	100.0%	100.0%	100.0%		
	92.4%	106.0%	126.0%	105.2%	Suitable for retrofit	High GWP and high discharge temps
	91.6%	98.5%	138.3%	105.8%	Suitable for retrofit	High GWP and very high discharge temperature.
	93.1%	97.5%	125.0%	104.7%	Suitable for retrofit	Lower GWP. Improved COP but high discharge temperatures
	93.2%	98.3%	123.1%	104.6%	Suitable for retrofit	Lower GWP. Improved COP but high discharge temperatures
	93.0%	98.1%	125.0%	104.7%	Suitable for retrofit	Lower GWP. Improved COP but high discharge temperatures
	99.6%	97.1%	100.4%	100.3%	Suitable for retrofit	Prefered option for low temperature transport refrigeration.
	90.1%	103.2%	117.4%	106.9%	New equipment only	
	92.1%	109.8%	113.5%	105.3%	New equipment only	
	100.0%	100.0%	100.0%	100.0%		
	106.2%	80.6%	105.3%	95.4%	New equipment only	
	106.0%	78.0%	105.6%	95.6%	New equipment only	
	107.3%	71.1%	101.3%	94.7%	New equipment only	
	106.8%	73.2%	102.2%	95.1%	New equipment only	
	100.0%	100.0%	100.0%	100.0%		
					New equipment only	Low pressure chillers

GWP based on AR5. Import of HFCs in Australia is limited by a quota system relative to the GWP of the imported refrigerants. Higher GWP refrigerants reduce total available quota volume so are likely to be higher priced.

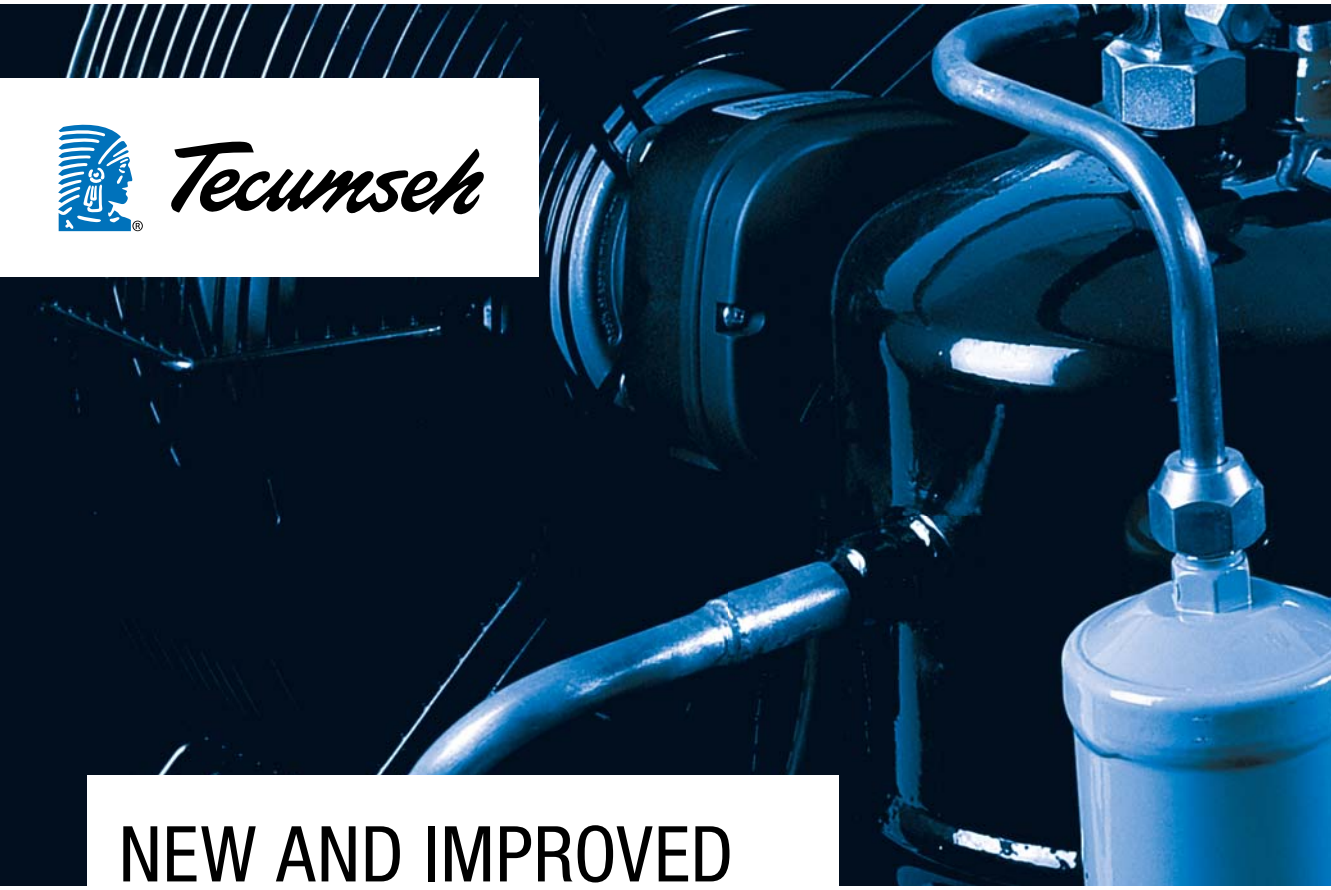
*Mineral oil is only suitable for some applications. Oil changes are sometime quoted as “not required” but well maintained systems are likely to perform better and with longer life if POE is used. If mineral oil is used and the oil level is falling, top up with POE.

The data in these charts was derived using CYCLE_D (NIST) software.

Parameters used:

R134A	SST=-5, SCT=45, SC=3
R404A	SST=-25, SCT=40, SC=3
R22	SST=7, SCT=50, SC=3
R410A	SST=7, SCT=50, SC=3

The power/capacity figures don’t take into account any changes in heat exchanger performance for retrofit options.



NEW AND IMPROVED HTA CONDENSING UNIT

Factory fitted HP/LP

- Pre fitted for added value
- Reduces labour during installation

New AJ² Compressor

- Easy quick connect electrical connection
- Smaller than legacy model AJ compressors
- Quieter redesigned housing
- New valve plate design for higher efficiency

Reworked discharge tube

- New design reduces vibration
- Reduces risk of damage during transit
- Will stop people using it as a lifting point

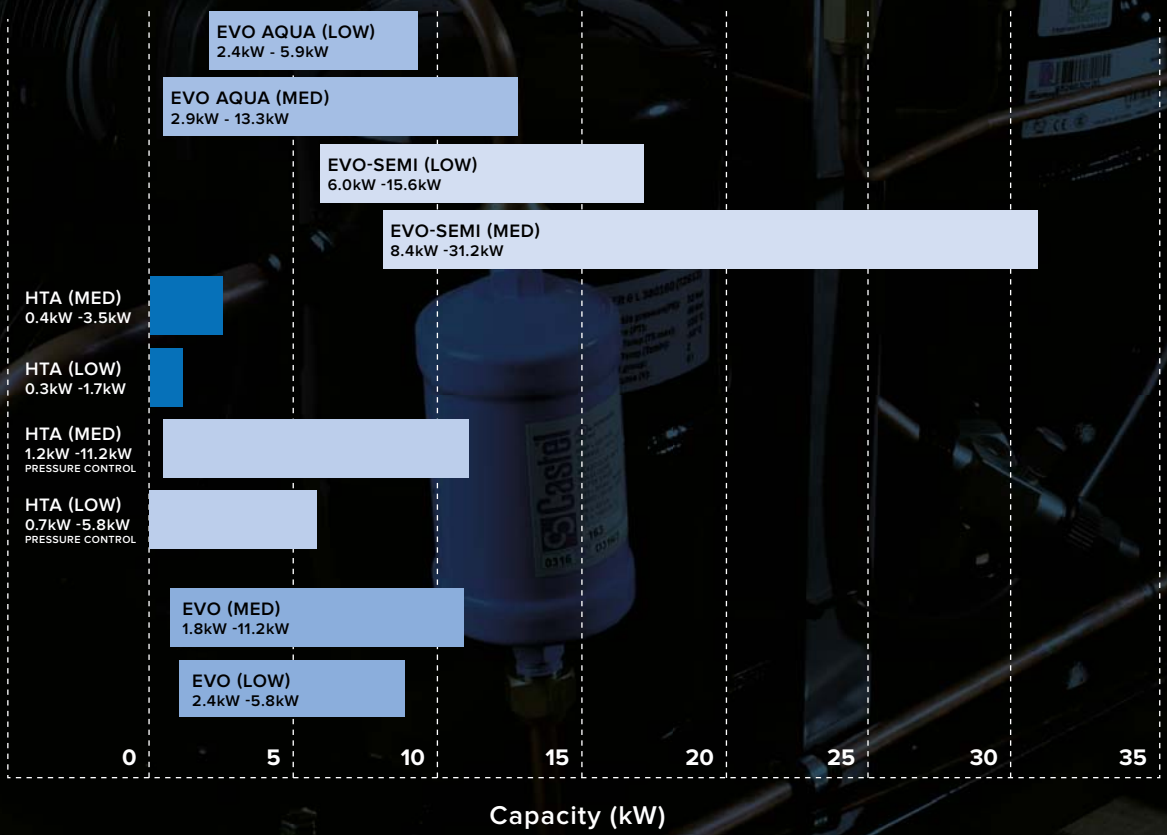
Flexible pressure lines

- Extended tails to distribute heat and increase reliability
- 4mm lines for durability

INDOOR VERSUS OUTDOOR
ROUND ONE INDOOR CONDENSING UNITS

Bing bing, let's get ready to rumble. While both have their place within the industry it's important you consider which is best for your next job. To make the right choice, you need the right info. So introducing in our first competitor – our indoor units.

Capacity range - Indoor condensing Units



COMPARING THE TECUMSEH RANGE

TECUMSEH HTA HERMETIC REFRIGERATION CONDENSING UNIT

Medium Temperature Application
Range: 0.4kW --- 3.5kW
Low Temperature Application
Range: 0.3kW --- 1.7kW

Tecumseh High Temperature Ambient (HTA) condensing units are fitted with the AE2 and CAJ range of Tecumseh compressors, giving you the most flexibility to connect the components that suit your customers specific needs.

Features:

- Fitted with Tecumseh Hermetic compressors. A world renowned compressor manufacturer
- Large HTA condenser to suit the Australia's extreme climate
- Copper tails on all Rotalock valves making installation quicker and easier

TECUMSEH HTA WITH PRESSURE CONTROL

Medium Temperature Application
Range: 1.2kW --- 11.2kW
Low Temperature Application
Range: 0.7kW --- 5.8kW

Tecumseh High Temperature Ambient (HTA) condensing units are fitted with the CAJ, FH, TFH and TAG range of Tecumseh compressors. They come fitted with a dual pressure control and flexible pressure line for added safety and easy installation.

Features:

- All the features of the Tecumseh HTA
- Reworked discharge tube to reduce vibration
- Flexible pressure lines with extended tails to distribute heat and increase reliability
- HP/LP pre fitted to reduce labour during installation

Tecumseh

TECUMSEH EVO-AQUA WATER-COOLED REFRIGERATION CONDENSING UNIT

Medium Temperature Application
Range: 2.9kW --- 13.3kW
Low Temperature Application
Range: 2.4kW --- 5.9kW

Tecumseh's line of water cooled condensing units are the perfect alternative when air cooled units are impractical due to excessively high ambient temperatures or excessive fan noise.

All water-cooled models utilise performance proven reciprocating compressors and high-quality brazed plate condensers. The high efficiency, low operating pressures primary advantages of the water-cooled design ensuring optimum performance.

Features:

- Tecumseh Hermetic compressor
- Brazed plate condenser
- Noise advantage compared to air-cooled condensing units
- Consistent operation conditions provided by constant condensing water temperatures
- Suction accumulator on low temperature models
- Complete factory wiring: Compressor contactor Thermal overload, HP/LP control, circuit breakers

TECUMSEH EVO HERMETIC REFRIGERATION CONDENSING UNIT

Medium Temperature Application
Range: 1.8kW --- 11.2kW
Low Temperature Application
Range: 2.4kW --- 5.8kW

The Tecumseh Evo condensing unit range is fully factory fitted allowing an exceptionally quick installation. Every Evo unit includes all the required vessels and is fully wired to a factory fitted electrical enclosure with contactor, overload, circuit breakers and HP/LP control.

Features:

- Fitted with Tecumseh Hermetic compressors. A world renowned compressor manufacturer
- Large HTA condenser to suit the Australia's extreme climate
- Complete factory wiring: compressor contactor/overload, HP/LP and control circuit breakers
- Oil Separator fitted to all models, Suction accumulator fitted to low temperature models.
- Liquid line assembly including drier and sight glass fitted for quick installation

TECUMSEH EVO-SEMI HERMETIC REFRIGERATION CONDENSING UNIT

Medium Temperature Application
Range: 8.4kW --- 31.2kW
Low Temperature Application
Range: 6.0kW --- 15.6kW

This range of semi-hermetic condensing units are fully fitted and wired to make installation fast and efficient. EVO Semi has been designed to operate efficiently in both the hot and cold extremes of the Australian environment. The range is designed for R134a, R404A, R407F and R507 and can be applied in both low and medium temperature applications.

Features:

- High ambient temperature capability designed for Australia's extreme climate
- Oil Separator, Suction accumulator and liquid line assembly fitted to all models to make the installation process quick and easy
- Carel fan speed controller fitted to EBM fans for complete condensing pressure control
- Fully Wired including circuit breakers, contactor, electronic overload and spare DIN rail in an enclosure
- Fitted with Tecumseh Semi-Hermetic compressors. A world-renowned compressor manufacturer

Now we've introduced you to our indoor condensing unit range, lets find out which evaporator combo is going to suit your needs best. Using the simple selection table below you can now take some of the guess work out of sizing up your next cool room or freezer.

INDOOR STANDARD COMBO KITS

MEDIUM TEMPERATURE R404A

				To suit room dimensions (External)			
Kit code	Nominal Capacity (Watts)	Condensing unit	Evaporator	Width (m)	Length (m)	Height (m)	Room Volume (m3)
3535007	1406	CAJT9480ZMHR	CH4B1/30-1*	1.0	2.0	2.4	4.8
3535008	1760	CAJT9510ZMHR	CH4C1/30-1	2.0	2.0	2.4	9.6
3535009	2263	CAJT9513ZMHR	CH4B1/35-1	2.0	3.0	2.4	14.4
3535010	2480	CAJT4517ZHR	CH4C1/35-1	3.0	3.0	2.4	21.6
3535011	3297	CAJT4519ZHR	CH4D1/35-1	3.0	4.0	2.4	28.8
3535012	3887	FHT4524ZHR	CH4C2/30-1	4.0	4.0	2.4	38.4
3535013	5292	FHT4531ZHR	CH4C2/35-1	5.0	5.0	2.4	60.0
3535014	6344	FHT4540ZHR	CH4D2/35-1	6.0	6.0	2.4	86.4

MEDIUM TEMPERATURE R134a

				To suit room dimensions (External)			
Kit code	Nominal Capacity (Watts)	Condensing unit	Evaporator	Width (m)	Length (m)	Height (m)	Room Volume (m3)
3535015	1161	CAJT4476YHR	CH4B1/30-1*	1.0	2.0	2.4	4.8
3535016	1509	CAJT4492YHR	CH4C1/30-1	2.0	2.0	2.4	9.6
3535017	1944	CAJT4511YHR	CH4B1/35-1	2.0	3.0	2.4	14.4
3535018	2991	FHT4518YHR	CH4D1/35-1	3.0	3.0	2.4	21.6
3535019	3915	FHT4525YHR	CH4B2/35-1	4.0	4.0	2.4	38.4

LOW TEMPERATURE R404A

				To suit room dimensions (External)			
Kit code	Nominal Capacity (Watts)	Condensing unit	Evaporator	Width (m)	Length (m)	Height (m)	Room Volume (m3)
3535020	625	CAJT2428ZBR	PCL60*	1.0	1.0	2.4	2.4
3535021	762	CAJT2432ZBR	PCL80*	1.0	1.2	2.4	2.9
3535022	1110	CAJT2446ZBR	PCL120	1.0	1.6	2.4	3.8
3535023	1501	CAJT2464ZBR	CH4C1/30E-1	1.0	2.0	2.4	4.8
3535024	2166	FHT2480ZBR	CH4C1/35E-1	2.0	2.0	2.4	9.6
3535025	2931	FHT2511ZBR	CH4E1/35E-1	2.0	3.0	2.4	14.4

***internally equalised expansion value required.**

INDOOR FITTED COMBO KITS

MEDIUM TEMPERATURE R404A

				To suit room dimensions (External)			
Kit code	Nominal Capacity (Watts)	Condensing unit	Evaporator	Width (m)	Length (m)	Height (m)	Room Volume (m3)
3535026	1760	EPCH9510Z-1PH	CH4C1/30-1 W/Evd Ice	2.0	2.0	2.4	9.6
3535027	2263	EPCH9513Z-1PH	CH4B1/35-1 W/Evd Ice	2.0	3.0	2.4	14.4
3535028	2480	EPCH4517Z-1PH	CH4C1/35-1 W/Evd Ice	3.0	3.0	2.4	21.6
3535029	3297	EPCH4519Z-1PH	CH4D1/35-1 W/Evd Ice	3.0	4.0	2.4	28.8
3535030	3887	EPCH4524Z-1PH	CH4C2/30-1 W/Evd Ice	4.0	4.0	2.4	38.4
3535031	5292	EPCH4531Z-1PH	CH4C2/35-1 W/Evd Ice	5.0	5.0	2.4	60.0
3535032	6344	EPCH4540Z-3PH	CH4D2/35-1 W/Evd Ice	6.0	6.0	2.4	86.4

MEDIUM TEMPERATURE R134a

				To suit room dimensions (External)			
Kit code	Nominal Capacity (Watts)	Condensing unit	Evaporator	Width (m)	Length (m)	Height (m)	Room Volume (m3)
3535033	2991	EPCH4518Y-1PH	CH4D1/35-1 W/Evd Ice	3.0	3.0	2.4	21.6
3535034	3915	EPCH4525Y-1PH	CH4B2/35-1 W/Evd Ice	4.0	4.0	2.4	38.4

LOW TEMPERATURE R404A

				To suit room dimensions (External)			
Kit code	Nominal Capacity (Watts)	Condensing unit	Evaporator	Width (m)	Length (m)	Height (m)	Room Volume (m3)
3535035	2166	EPCL2480Z-1PH	CH4C1/35E-1 W/Evd Ice	2.0	2.0	2.4	9.6

Keep your eyes on the next edition of The Gauge to meet our outdoor refrigeration condensing units – or if you simply can't wait – Ask your local Actrol branch to show you the range and combo kits available.

Disclaimer.
*Internally equalised expansion valve required

Nominal compressor capacity based on:
Cool Room @ -4°C SST, 38°C Ambient Freezer Room @ -24°C SST, 38°C Ambient

Cool Room heat load based on:
Product load of 350kg, entering per day at 12'C, heavy usage, product specific heat: 3.4 kj/kg K, 75mm cool room panel, 16hr run time, 24 hour pull down time.

Freezer Room heat load based on:
Product load of 350kg, entering per day at -10'C, heavy usage, product specific heat below freezing: 1.5 kj/kg K, 150mm cool room panel, 18hr run time, 24 hour pull down time.

We recommend that the above the information be used as a guide only, and that each particular application be referred to Actrol for selection advice.

WHAT'S HAPPENING WITH DC-3 SMART REFRIGERATION?

It's time for an update! As well as strenuous testing in our national lab situated in Melbourne, we have installed two field trails which are screaming with rave reviews!

While we are still testing these units, we are starting to see some enormous benefits when installing a DC-3 system over a standard refrigeration system, and we think some of this might grab your attention:

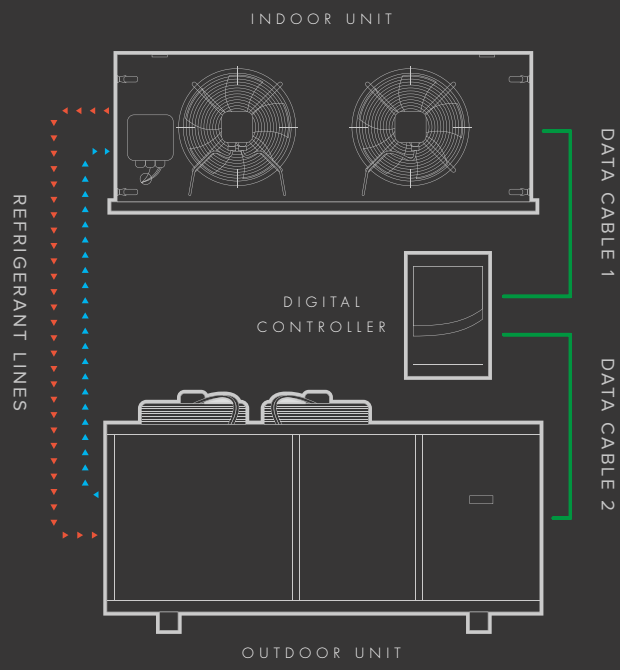
- **Simple to select** - with only four models, the range of these units means more flexibility
- **Decreased install time** - plug and play technology means trouble free installation and commissioning.
- **Energy efficient** - the return on investment means an easy sell to your customers
- **World leading brands** - with the reliability of SCI, Carel, Tecumseh and Cabero you know these are built to last
- **Innovative Technology** - this is the first of it's kind in the commercial refrigeration space, this is your chance to be an innovator and lead the pack.

KEEP YOUR EYES PEELED THIS SPRING.
DC-3 is coming!

DC-3
SMART REFRIGERATION

A revolutionary system that will redefine the refrigeration industry.

- Plug and Play
- Fully Programmed
- Highly Energy Efficient



FIELD TRIAL – CAIRNS, SEAFOOD STOREROOM

FIELD TRIAL – BANGALOW, BOTTLE SHOP

the reece grant

Create Brighter Futures

The Reece Grant is committed to supporting initiatives in local and international communities, and helping apprentices and the youth of Australia gain important vocational skills to benefit their futures.

ABROAD

Aiding communities worldwide

A great opportunity to transform the health and wellbeing of entire communities across the world.

LOCAL

Supporting Australian projects

Every day we see trades making a difference. Here's your chance to help improve the lives of those less fortunate.

NEXT GEN

Elevating the next generation

By supporting our apprentices, we can arm the youth of today with the skills to make a difference tomorrow.

Learn how you can support healthier, brighter futures for the next generation, here and abroad.

reecegrant.com.au

maX™

Book keeping just got easier

maX now integrates with Xero and MYOB

xero myob

actrol.com.au/integrations

NEWS

THANK YOU FOR MAKING A DIFFERENCE!

Purchased a drink in one of our branches lately? If yes, then you have helped raise over **$100,000 dollars** already for the Reece Grant! With 100% of profits from our drinks sales in our network funding the Reece Grant, we'd like to say thank you for your contribution!

If you, or someone you know is doing good for their local community, making a difference overseas or you know a student who could use a hand with tools or tuition find out more information or apply at reecegrant.com.au

the reece grant

BRANCH UPDATES

Talk about a big few months, we continue to invest in our branches and are proud to show off three new stores in our network which have recently relocated.

If you're close by, make sure you pop down and check out these new locations and ask how we can help benefit your business.

ACTROL MILDURA

Introducing our first multisite in Victoria with Ian Ditchburn and the Actrol Mildura team joining a previous Reece Plumbing site.

13-17 Seventh Street East, Mildura, VIC, 3500.
(03) 5055 2340

ACTROL WAGGA WAGGA

Previously on the other side of town, Michael Rosetta and his team made the big move across the railway.

57 Dobney Avenue, Wagga Wagga, NSW, 2650.
(02) 5942 6070

ACTROL HOBART

Make sure you pop down and say hi to Simon Boucher and the team in the nearby suburb of Moonah.

6 Effingham Street, Moonah, TAS, 7009.
(03) 6277 1310

ACTROL MILDURA

ACTROL WAGGA WAGGA

ACTROL HOBART

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