



# Air conditioning and heat pumps

Global Warming  
Potential of just 3!





# Choose home comfort the planet will thank you for

Air conditioners or heat pumps are becoming more popular with homeowners every year. It's no surprise! Cool in summer, warm in winter... what's not to like?

Like any home appliance, though, every choice we make comes with a cost to the environment.

Pioneer air conditioning has been created to reduce that impact, making it a very cool choice for anyone with the planet at heart.



## A cooler refrigerant

All Pioneer air conditioners and heat pumps use either M50 or M60 hydrocarbon refrigerant. (Refrigerant is what moves heat energy from one part of your system to another.) Hydrocarbons are naturally occurring organic compounds, made up entirely of hydrogen and carbon. Hydrocarbon refrigerants are environmentally friendly, non-toxic and don't deplete the ozone layer – which makes them a great step up from traditional alternatives such as chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs) and hydrofluorocarbons (HFCs).



## An environmentally friendly refrigerant

To get technical for a moment, hydrocarbon refrigerants like those used in Pioneer air conditioners have an extremely low Global Warming Potential (GWP) of 3, which is great for the planet.

# Why Pioneer is a smart choice

Pioneer has been an innovator in home comfort across Australia for over 30 years and now, in partnership with EES, brings that innovation and experience to New Zealand. Here’s why a heating and air conditioning brand that’s trusted across the Tasman is a great choice for your home here in Aotearoa.

- Heat pump and air conditioning specialists – it’s all we do.
- Environmentally friendly choice through efficient design and hydrocarbon refrigerants.
- Massive 7-year warranty on everything we make. Unbeatable peace of mind!
- Trusted EES installation and service teams
- Affordable options available to replace your existing system with Pioneer technology.
- Choice of single-room (Blade Series) or whole home system (Pro Series)



## An environmentally friendly refrigerant

	PIONEER M50	PIONEER M60	R-32	R410A	R-22
Composition	4 components Hydrocarbons	4 components Hydrocarbons	Single component - Hydrofluorocarbon	2 components Hydrofluorocarbon	Single component Hydrochloroflouro- carbon
Chemical formula	75% propane C <sub>3</sub> H <sub>8</sub> 16% propylene C <sub>3</sub> H <sub>6</sub> 8% ethane C <sub>2</sub> H <sub>6</sub> <1% Butane C <sub>4</sub> H <sub>10</sub>	60% propyleneC <sub>3</sub> H <sub>6</sub> 35% propane C <sub>3</sub> H <sub>8</sub> 5% isobutane C <sub>4</sub> H <sub>10</sub> 5% IsoButane	CH <sub>2</sub> F <sub>2</sub>	CH <sub>2</sub> F <sub>2</sub> /CHF <sub>2</sub> CF <sub>3</sub>	CHCLF <sub>2</sub>
Boiling Point (°C)	-50 to -10	-50 to -10	-51.7	-51.5	-40.8
Ozone depletion potential (ODP)	0	0	0	0	0.055
Global Warming Potential (GWP)	3	3	675	2090	1810
Pressure	0.8	0.95	1.6x	1.6x	1x
Refrigerant Oil	Synthetic/Mineral Oil	Synthetic/Mineral Oil	Synthetic Oil (FW50S)	Synthetic Oil (FV50S)	Mineral Oil
Toxicity	None	None	None	None	None
Flammability	A3 Flammable	A3 Flammable	A2L Mildly flammable	A1 Non-flammable	A1 Non-flammable





# Pioneer Blade Series

Heat or cool one room affordably and efficiently



**Sometimes, only one or two rooms in the home need some extra heating or cooling (often a living room, bedroom or home office).**

The Pioneer Blade Series features high-wall heat pumps designed to quickly and efficiently heat or cool one room. Inside, the unit delivers warm or cool air where you need it, as set on the handy remote control unit or smartphone app. Outside, an efficient air conditioning unit takes ambient heat from the air or removes it from your room.



#### **Engineered for Kiwi conditions:**

New Zealand winters are hard on heat pumps due to the outside ambient conditions being cold and damp (high humidity) so Pioneer has developed special heat exchangers for New Zealand with higher refrigerant fluid velocity, higher refrigerant turbulence, higher surface area and large temperature differential – all contributing to more efficient heat transfer and shorter defrost times.



**Easy on the planet:** M50 refrigerant also means your Pioneer Blade Series heat pump has extremely low global warming potential (GWP) and an ozone depletion potential (ODP) of zero. That makes choosing Pioneer a great way to help take care of our planet!



**Wi-fi control:** coming home to a room that's welcoming and warm (or cool in summer) is easy – your Blade Series heat pump is wi-fi enabled so you can set the desired temperature from your Pioneer smartphone app.



**M50 refrigerant:** Pioneer's revolutionary M50 hydrocarbon refrigerant operates safely, with a low environmental impact.

# By the numbers: Pioneer Blade Series specifications

Specifications are correct at time of printing but are subject to change as we continuously improve the Pioneer range.

MODEL - INDOOR		HPR-09A2I	HPR-12A2I	HPR-18A2	HPR-24A2I
MODEL - OUTDOOR		HPR-09A2O	HPR-12A2O	HPR-18A2O	HPR-24A2O
Cooling	Rated capacity (W)	2,500	3,500	5,000	6,700
	Rated input power (W)	630	930	1540	1950
	AEER / EER <sup>1</sup> (W/W)	3.941 / 3.984	3.664 / 3.690	3.355 / 3.371	3.424 / 3.427
	Energy Star rating (cool/mid/hot)	4.5/4.5/4.5	5/4.5/5	4/4/4	5/4.5/4.5
Heating	Rated capacity (kW)	2,600	3,600	5,100	7,000
	Rated input power (W)	550	880	1350	1800
	ACOP/COP <sub>2</sub> (W/W)	4.747 / 4.807	4.038 / 4.070	3.880 / 3.899	3.874/3.866
	Energy star rating (cool/mid/hot)	3/3.5/4	2/3/4	2/2.5/3.5	1.5/2.5/4
	Power supply (V-ph-Hz)	240-1-50	240-1-50	240-1-50	240-1-50
	Noise indoor (dBA)	39	39	44	47
	Noise outdoor (dBA)	52	53	55	57
	Compressor type	Rotary	Rotary	Rotary	Rotary
	Refrigerant (type/qty)	M50/260g	M50/290g	M50/420g	M50/510g
	Additional charge (g/m)	10g/m	10g/m	10g/m	10g/m
	Refrigerant copper pipe sizes (liq/gas) mm and inches	6.35/9.52 1/4 , 3/8	6.35/9.52 1/4 , 3/8	6.35/12.7 1/4 , 1/2	6.35 / 15.87 1/4 , 5/8
	Pipe extension length min/max (m)	3-20	3-20	3-25	3-25
	Maximum Pipe height (m)	10	10	10	10
Indoor	Dimensions (lxhwxw) (mm)	850x291x203	850x291x203	972x302x224	1081x327x248
	Packaging dimensions (lxhwxw) (mm)	930x368x297	930x368x297	1047x377x314	1158x413x352
	Net/gross weight (kg)	10/12.5	10/12.5	13.5/16.5	16/19
Outdoor	Dimensions (lxhwxw) (mm)	830x540x325	830x540x325	890x598x372	890x598x372
	Packaging dimensions (lxhwxw) (mm)	879x605x366	879x605x366	941x663x412	941x663x412
	Net/gross weight (kg)	27/30	27.5/30.5	35.5/40	37/41.5
Operating Range (Outdoor)	Cooling (°C)	18 to 43	18 to 43	18 to 43	18 to 43
	Heating (°C)	-7 to 43	-7 to 43	-7 to 43	-7 to 43

1. AEER/EER – Annualised Energy Efficiency Ratio / Energy Efficiency Ratio. AEER/EER @ Standard Cooling Capacity Test (T1).  
2. ACOP/COP – Annualised Coefficient of Performance / Coefficient of Performance. ACOP/COP @ Standard Heating Capacity Test (H1).

# Pioneer Pro Series

## Ducted heat pump systems



### A Pioneer Pro Series ducted heat pump system is your ultimate heating and cooling choice.

A quiet, powerful central air conditioning unit is concealed in your roof space, connected to a single outside unit against the wall of your house. All that's visible in each room is the ceiling diffuser delivering warm or cool air as needed, along with a return air grill and a wall-mounted controller to manage your system.

Connecting the two units, moving heat energy out during the summer and inside during the winter, is our revolutionary M60 hydrocarbon refrigerant. Safe, easy on the planet and an energy saving of at least 35% when compared to R410A refrigerant<sup>1</sup>.



**Engineered for Kiwi conditions:** Like the Blade Series, the Pioneer Pro Series has been developed with heat exchangers specially suited to New Zealand's climate, delivering more efficient heat transfer and shorter defrost times.



**Total control:** The touch control is a wall mounted controller that is centrally located for you to set your desired temperature and automatically set it to turn on and off at a time that's convenient for you.



**M60 refrigerant:** Pioneer's revolutionary M60 hydrocarbon refrigerant operates safely, with a low environmental impact.



#### Safe for you and the environment:

Pioneer ducted air conditioning systems have a global patented hydrocarbon refrigerant gas safety detection system. A refrigerant gas detector is located inside the indoor unit (located in the roof cavity). If a leak is detected the system will immediately go into a safety pump down, pumping all the refrigerant into the outdoor unit and then shutting the whole system down.



**Easy on the planet:** that M60 refrigerant also means your Pioneer Pro Series heat pump system has extremely low global warming potential (GWP) and an ozone depletion potential (ODP) of zero.

# By the numbers: Pioneer Pro Series specifications

Specifications are correct at time of printing but are subject to change as we continuously improve the Pioneer range.

MODEL - INDOOR		VPE-36A1	VPE-48A1
	Power supply (V-ph-Hz)	240-1-50	240-1-50
	Air flow (m³/h) (hi/med/low)	1600/1200/1000	2250/1700/1450
	Supply air spigot size (mm)	1118 x 191	1118 x 191
	Return air spigot size (mm)	1100 x 235	1100 x 235
	Drain size (mm)	25	25
Indoor	Dimensions (lxdxh) (mm)	1390x715x280	1390x715x280
	Packaging (lxdxh) (mm)	1593x848x350	1593x848x350
	Net/gross weight (kg)	41/47	42/48

MODEL - OUTDOOR		VPC-36A1	VPC-48A1
Cooling	Power supply (V-ph-Hz)	240-1-50	240-1-50
	Rated capacity (kW)	10	14
	Rated Current (A)	20.1	30.1
	Capacity range (kW)	3.5 - 11.5	4.9 - 15.0
	Rated input (W)	2800	3600
	EER W/W	3.55	3.86
Heating	Rated capacity (kW)	10	14
	Capacity range (kW)	3.8-12.5	5.2-15.5
	Rated input (W)	2630	3550
	COP (W/W)	3.71	3.88
	Compressor type	Rotary	Scroll
	Refrigerant type/qty (kg)	M60/1.9	M60/2.15
Pipe Extension	Refrigerant pipe size (liq/gas) mm and inches	9.52/15.88 3/8, 5/8	9.52/15.88 3/8, 5/8
	Pipe Extension (maximum pipe height (m)	15	30
	Maximum Pipe length (m)	30	30
	Additional Charge	36g/m	36g/m
Sound Pressure	Sound pressure (dBA)	55	60
Outdoor	Dimensions (lxdxh) (mm)	990x426x790	1020x396x1350
	Packaging (lxdxh) (mm)	1054x479x832	1101x448x1500
	Net/gross weight (kg)	64/69	99/109
Operating Range (Outdoor)	Cooling (°C)	18 to 43	18 to 43
	Heating (°C)	-7 to 43	-7 to 43

1. [https://reg.energyrating.gov.au/comparator/product\\_types/64/search/?expired\\_products=on](https://reg.energyrating.gov.au/comparator/product_types/64/search/?expired_products=on)



# Professional installation, reliable service: the EES difference

To operate at its best and keep working well for many years to come, your Pioneer Blade or Pro Series heat pump needs to be professionally installed and serviced annually. That's why we've partnered with EES.

- 👉 The EES sales team has a deep understanding of the Pioneer product range. You will be taken through a pre-sales consultation so you get the system that's right for you.
- 👉 EES installers trained in the handling of hydrocarbon refrigerants, so you can rest assured your system will be installed safely and professionally.
- 👉 EES provides a comprehensive after-sales service, so your system retains performance and efficiency.



## Find out more

To see which Pioneer model is right for your home, get in touch with your local EES expert today. They'll talk you through your options and recommend a solution to suit you and your family.

Scan the QR code to find out more.



0800 337 123  
ees.co.nz

**Cristal Air International Ltd T/A EES**  
45 O'Rorke Road, Penrose,  
Auckland 1061  
PO Box 12722, Penrose, Auckland 1642