HITACHI

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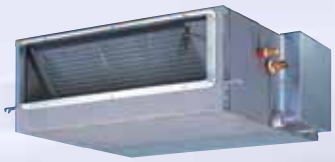


DC inverter UTOPIA

Heat Pump Air Conditioning Systems

Create your own Utopia.

In a climate as diverse as ours air conditioning your premises can make a huge difference to the comfort of your staff, and your customers too. With air conditioning in most cars, and increasingly at home, people are expecting to work, shop and dine in an air conditioned environment.

The Hitachi Inverter Utopia range of heat pump air conditioners is designed to provide effective and economical air conditioning for offices, shops and restaurants where wall-mounted units are unsuitable.

HITACHI UTOPIA INVERTER HEAT PUMP RANGE

The range uses the same outdoor units but there are two distinct types of indoor unit:

RCI Series – Cassette Units

Cassettes, which fit into the ceiling, are usually ideal for air conditioning large open areas such as shops, meeting rooms and restaurants

RPI Series – Concealed Ducted Units

Ducted units, which fit above the ceiling, or under the floor, use ducting and diffusers to distribute conditioned air.

FEATURES

DC INVERTER TECHNOLOGY

Hitachi Inverters are designed to reduce electricity usage as much as possible by self-adjusting their output up and down as conditions vary through the day to ensure only the minimum power, and no more, is used at any particular time to maintain a consistent air temperature.

6 YEAR WARRANTY

The Utopia range is reliable, thoroughly tested and built to last and carries a 6 Year Parts & Labour warranty which is backed by Temperzone Ltd – the NZ distributor of Hitachi heat pumps and the leading air conditioning manufacturer in Australasia.

AUTO-CHANGEOVER CONTROL

Hitachi air conditioners heat and cool and as conditions alter Auto-control changes the unit from heating to cooling automatically, as required, to maintain the temperature without intervention from the user.

QUIET OPERATION

The units are extremely quiet. They have been designed using the latest noise reduction techniques to ensure they are not at all intrusive.

NON-TOXIC REFRIGERANT

The system uses R410A refrigerant which is non-flammable, non-toxic and with zero depletion.

FRESH AIR INPUT

Fresh air from outside is essential, indeed required, in business premises. Both the Cassettes and the Ducted units are designed to be able to draw air from the outside and mix it in with conditioned air to ensure there is always a proportion of fresh air in the air supplied.

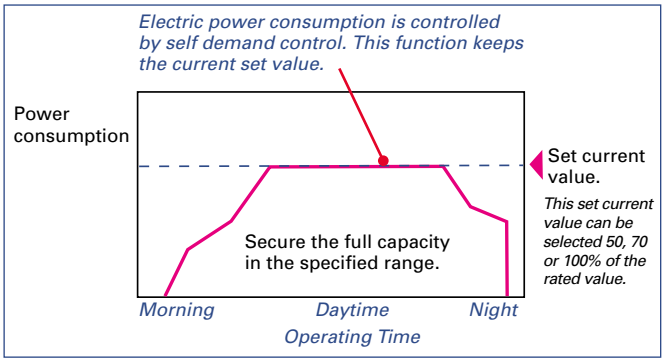
FUNCTIONAL CONTROLLERS

Depending on the controller chosen each unit can be controlled independently or as part of a group of up to 16.

Add-ons are also available to enable the units to be switched on/off by external devices such as time clocks and fire alarms.

SELF DEMAND CONTROL

Units are able to accept inputs from external controls to restrict electrical power consumption at certain times e.g. during a high usage period .



CENTRAL CONTROLS

A fully-programmable centralised 7 day timer is available to switch all units on/off automatically to conserve power at times when there are not people normally working in the area e.g. in the weekend.

Central controls are available for control of up to 128 air conditioning units (refer back page).

RPI Series: Concealed Ducted Type

Provided there is sufficient space to install the unit ducted units are often the air conditioning unit of first choice because of their versatility;

a) Conditioned air can be supplied exactly where it is needed in a space
b) It is capable of air conditioning more than one room
c) It does not use up valuable wall space and diffusers can be positioned to fit around lighting and other services to suit your interior design
e) It is the quietest available type of heat pump
f) For convenience of servicing It does not necessarily have to be located above the air conditioned area

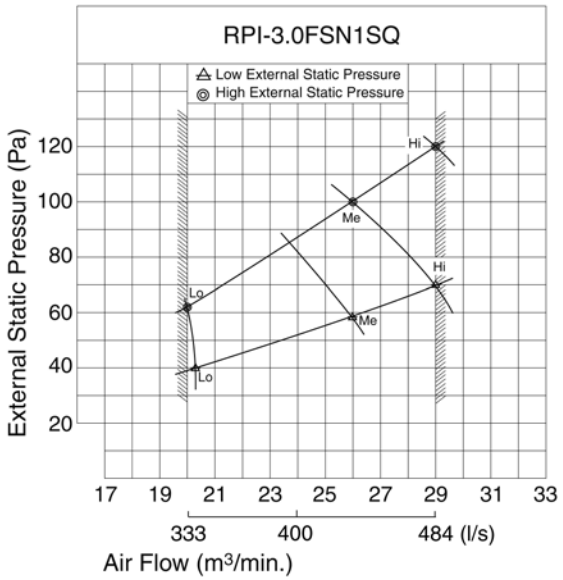
The Utopia RPI Ducted range;

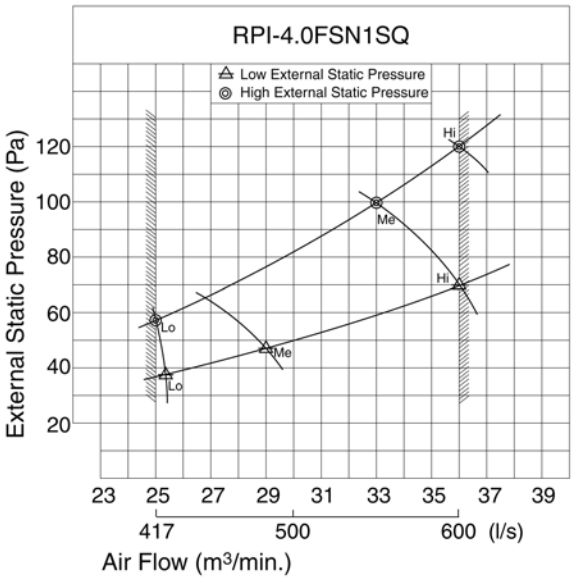
a) Has the most up-to-date Inverter technology
b) Comes in 5 sizes ranging from 7 to 18kW cooling and 8 to 18.6kw heating.
c) Supplies heating down to -15°C ambient
d) Has between 120 to 140 Pa external static pressure available.

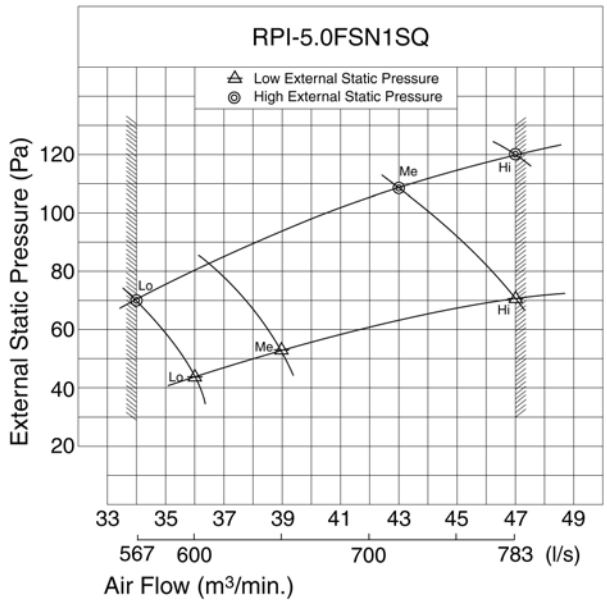
e) Has up to 77 m outdoor/ indoor pipe length and 30 m elevation
f) Self-diagnostic function for easy servicing
g) Has a separable indoor unit for ease of installation.

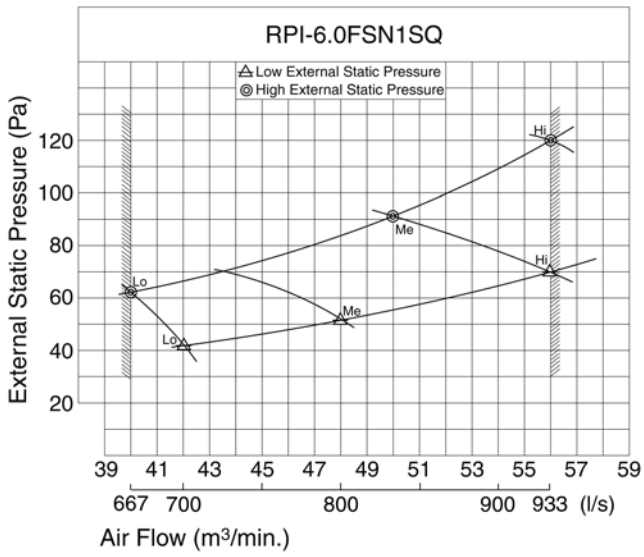
RPI SERIES: FAN PERFORMANCE

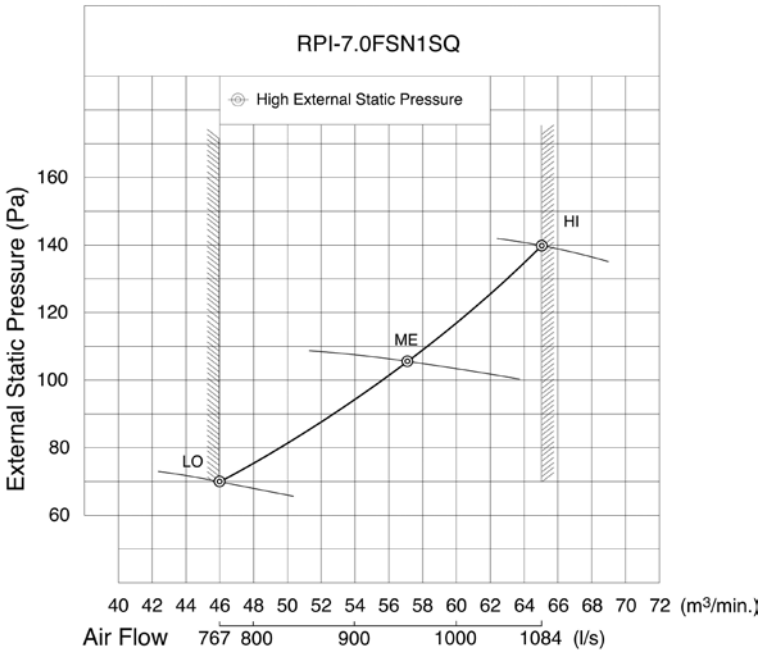
Note: Airflow (m3/min) x 16.66 = Airflow (l/s)











SPECIFICATIONS - DUCTED INVERTER SYSTEMS

Model: Indoor Unit Model: Outdoor Unit	RPI-3.0FSN1SQ RAS-3HVRNS	RPI-4.0FSN1SQ RAS-4HVRNS	RPI-5.0FSN1SQ RAS-5HVRNS	RPI-6.0FSN1SQ RAS-6HVRN	RPI-7.0FSN1SQ RAS-7HVRN
CAPACITY					
Cooling Capacity (kW)	7.1	9.9	12.5	15.7	18.0
Range (kW)	3.9 ~ 8.0	4.9 ~ 11.2	5.7 ~ 14.0	6.7 ~ 16.0	8.1 ~ 20.0
Heating Capacity (kW)	7.6	10.8	13.6	15.2	18.6
Range (kW)	4.0 ~ 9.0	5.0 ~ 12.5	6.0 ~ 16.0	6.7 ~ 16.0	8.1 ~ 20.0
ELECTRICAL					
Power Supply	240V ac 1 phase 50 Hz				
Power Attachment	IU via OU or IU and OU separately				
Interconnecting Wires	0.75 m^2 x 2 shielded twisted pair				
Running Current RUN / max.	10.8 / 18	14.7 / 22	18.5 / 31	23.2 / 29	26.0 / 31
Recommended External Protection (A)	25	32	40	40	40
EFFICIENCY					
Power Input - Cooling (kW)	2.4	3.5	4.4	5.4	5.9
Power Input - Heating (kW)	2.4	3.1	3.8	4.0	5.4
EER Cooling	2.96	2.85	2.84	2.91	3.05
COP Heating	3.17	3.43	3.58	3.80	3.44
AIRFLOW					
Fan Speeds	3				
External Static Range (Pa)	70 - 120	70 - 120	70 - 120	70 - 120	140
Air Flow (l/s) Hi / Med / Low	484 / 433 / 333	600 / 550 / 417	783 / 717 / 567	933 / 833 / 667	1084 / 950 / 767
Compressor Type	Scroll				
DIMENSIONS & WEIGHTS					
Dimensions IU (H x W x D mm)	350 / 1076 / 800	350 / 1076 / 800	350 / 1300 / 800	350 / 1300 / 800	440 / 1430 / 550
Weight IU (kg)	52	57	61	63	75
Dimensions OU (H x W x D mm)	600 x 792 (+95) x 300	800 x 950 x 370	800 x 950 x 370	1240 x 950 x 315	1650 x 1100 x 390
Weight OU (kg)	44	85	89	97	167
DUCT CONNECTIONS					
Supply Air Connection (mm)	980 x 220	980 x 220	1205 x 220	1205 x 220	830 x 300
Return Air Connection (mm)	813 x 306	813 x 306	813 x 306	935 x 306	1288 x 402
NOISE LEVELS					
Sound Pressure Level IU (dB(A)) Hi / Med / Low	45 / 43 / 39	47 / 44 / 40	48 / 45 / 42	52 / 48 / 44	51 / 47 / 42
Sound Press. Level OU (dB(A)) Cool (Night) Heat	48 (46) 50	50 (48) 52	52 (50) 54	48 (44) 50	53 (50) 54
INSTALLATION					
Refrigerant Type	R410A				
Pipe Connection Sizes: Suction (mm)	16 (5/8")	16 (5/8")	16 (5/8")	16 (5/8")	19 (3/4")
Pipe Connection Sizes: Liquid (mm)	10 (3/8")	10 (3/8")	10 (3/8")	10 (3/8")	10 (3/8")
Refrigerant Pipe Charge Length (m)	20	20	30	30	30
Max. Pipe Length (m)	30	50	50	77	50
Max. Pipe Lift (m) OU Higher / OU Lower	30 / 20				
Pipe Connection Method	flare				
WORKING RANGE					
Outdoor Operating Temp. (Cooling) °C db	-5 to +46			-5 to +43	0 to +46
Outdoor Operating Temp. (Heating) °C wb	-10 to +15			-15 to +15	-8 to +15

NOTES: 1.The nominal cooling capacity is based on the JIS standard B8616:
Cooling Operation Conditions
Indoor Air Inlet Temperature : 27˚C DB, 19.0˚C WB
Outdoor Air Inlet Temperature : 35˚C DB
Heating Operation Conditions
Indoor Air Inlet Temperature : 20˚C DB
Outdoor Air Inlet Temperature : 7˚C DB, 6˚C WB
Published capacities based on Piping Length: 7.5 m.

2 . The sound pressure level is based on following conditions.
Indoor Units: 1.5 m beneath the unit with discharge duct (2.0m) and return duct (1.0m) in an anaechoic chamber.
Outdoor Units: 1 m from the unit service cover surface, and 1.5 m from floor level.

Control Systems	Models
Wired Control	PC-AR*1
Wired Control incl. 7 day timer	PC-ART*1
Central 7-Day Timer	PSC-A1T
Central Controller (up to 160 units)	PSC-A64S
Plug Kit for remote input/output	PCC-1A

Note: *1: Does not include a remote control cable.

Optional Parts

Indoor Units	Models
Drain Kit – 500mm lift*2	DUPI-162S
Outdoor Units	
Drain Kit	DBS-26

NOTES: *2. For models up to RPI-6.

Note: Specifications are subject to change with product improvement and without notification. Specification details provided in this brochure are indicative only. Please refer to the Hitachi Design and Installation manuals for all technical information.

RCI Series: Cassette Type

Four-way airflow Cassettes, which fit right into the ceiling, are an economical and effective way of air conditioning open areas with high occupancy or traffic, such as shops, walkways, and restaurants

a) They are usually located centrally within the conditioned area

b) They do not use valuable wall space

c) Suit ceiling heights up to 4.2 m

d) Provide excellent general air conditioning

The Utopia RCI Cassette range...

a) Has the most up-to-date inverter technology

b) Comes in 3 sizes ranging from 7 to 12.5 kW cooling and 8 to 14 kW heating

c) Supplies heating down to -10°C ambient

d) Has an attractive fascia with a wide louvre to prevent smudging on the ceiling

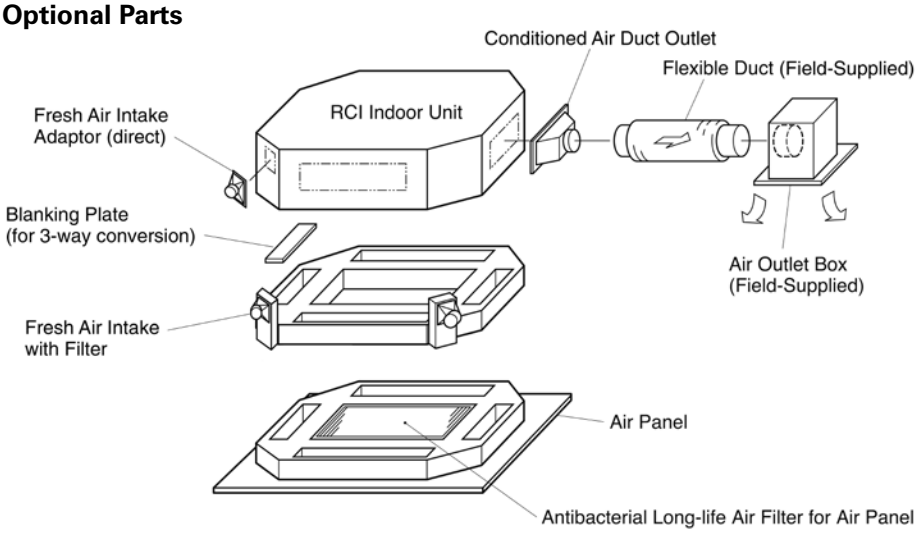
e) Is 4-way airflow as standard but can be modified to 2 or 3-way.

f) Has a one-touch panel which can be swung open 90° with just one push so the filter can be removed for cleaning

g) The unit is equipped with an internal drain pump (850 mm lift) to remove accumulated condensation water from the drain pan even while it is operating. An electronic sensor monitors the water level and automatically activates the pump as necessary.

h) Has the option of fitting a ducted air outlet.

Optional Parts



SPECIFICATIONS - CASSETTE INVERTER SYSTEMS

Model: Indoor Unit Model: Outdoor Unit	RCI-3.0FSN2 RAS-3HVRNS	RCI-4.0FSN2 RAS-4HVRNS	RCI-5.0FSN2 RAS-5HVRNS
CAPACITY			
Cooling Capacity (kW)	7.1	10.0	12.5
Range (kW)	3.9 ~ 8.0	4.9 ~ 11.2	5.7 ~ 14.0
Heating Capacity (kW)	8.0	11.2	14.0
Range (kW)	4.0 ~ 9.0	5.0 ~ 12.5	6.0 ~ 16.0
ELECTRICAL			
Power Supply)	240V ac 1ph. 50 Hz		
Power Attachment	IU via OU or IU and OU separately		
Interconnecting Wires	.75 m^2 x 2 Shielded twisted pair		
Running Current (Cooling) RUN / max.	10.3 / 18	14.7 / 22	18.5 / 31
Recommended External Protection (A)	25	32	50
EFFICIENCY			
Power Input - Cooling (kW)	2.3	3.3	4.2
Power Input - Heating (kW)	2.4	3.2	4.1
EER Cooling	3.06	3.01	3.00
COP Heating	3.29	3.48	3.45
AIRFLOW			
Fan Speeds	3		
Air Flow (l/s) Hi / Med / Low	350 / 300 / 250	533 / 467 / 400	567 / 483 / 417
Compressor Type	Scroll		
DIMENSIONS & WEIGHTS			
Dimensions IU (H x W x D mm)	298 / 840 / 840	298 / 840 / 840	298 / 840 / 840
Weight IU (kg)	26	29	29
Dimensions OU (H x W x D mm)	600 x 792 (+95) x 300	800 x 950 x 370	800 x 950 x 370
Weight OU (kg)	44	85	89
NOISE LEVELS			
Sound Pressure Level IU (dB(A)) Hi / Med / Low	32 / 30 / 28	38 / 35 / 33	39 / 37 / 35
Sound Press. Level OU (dB(A)) Cool (Night) Heat	48 (46) 50	50 (48) 52	52 (50) 54
INSTALLATION			
Refrigerant Type	R410A		
Pipe Connection Sizes: Suction (mm)	16 (5/8")	16 (5/8")	16 (5/8")
Pipe Connection Sizes: Liquid (mm)	10 (3/8")	10 (3/8")	10 (3/8")
Refrigerant Pipe Charge Length (m)	20	20	30
Max. Pipe Length (m)	30	50	50
Max. Pipe Lift (m) OU Higher / OU Lower	30 / 20		
Pipe Connection Method	flare		
WORKING RANGE			
Outdoor Operating Temp. (Cooling) °C db	-5 to +46		
Outdoor Operating Temp. (Heating) °C wb	-10 to +15		

NOTES: 1. The nominal cooling capacity is based on the JIS standard B8616:
Cooling Operation Conditions
Indoor Air Inlet Temperature : 27˚C DB, 19.0˚C WB
Outdoor Air Inlet Temperature : 35˚C DB
Heating Operation Conditions
Indoor Air Inlet Temperature : 20˚C DB
Outdoor Air Inlet Temperature : 7˚C DB 6˚C WB
Published capacities based on Piping Length: 7.5 m.

2 . The sound pressure level is based on following conditions:
Indoor Units: 1.5 m beneath the unit in an anaechoic chamber (JIS 8616)
Outdoor Units: 1 m from the unit service cover surface, and 1.5 m from floor level.
Voltage of the power source for the indoor fan motor is 220V.

Control Systems	Models
Wired Control	PC-AR*1
Wired Control incl. 7 day timer	PC-ART*1
Central 7-Day Timer	PSC-A1T
Central Controller (up to 160 units)	PSC-A64S
Plug Kit for remote input/output	PCC-1A
Wireless Control	PC-LH3A
Wireless Receiver kit	PC-ALH

Note: *1: Does not include a remote control cable.

Optional Parts

Indoor Units	Models
Fresh Air Intake with filter kit	OACI-232
Fresh Air Intake direct to unit*2	PD-75 (Ø75)
Conditioned Air Duct Outlet	PDF-46C3
Blanking Plate*3	PI-23LS5
Outdoor Units	
Drain Kit	DBS-26

NOTES: *2. Does not include a filter.
*3. For converting to 2 or 3 way outlet.

DC Inverter systems are designed for efficiency in compliance with MEPS II standards. Efficiency ratings in this table are based on physical test data. Specifications are subject to change with product improvement and without notification. Specification details provided in this brochure are indicative only. Please refer to the Hitachi Design and Installation manuals for all technical information.

Remote Controls, H-Link

INTELLIGENT CONTROLS

Hitachi style flows through to the sleek, LCD wall-mounted controls which reflect the sophistication of the Utopia DC Inverter systems.

PC-AR Wall Controller
- *Large LCD display.*
- *Controls all indoor unit functions (mode, temp., fan speed, etc.)*
- *Operates 1 to 16 indoor units (same settings).*
- *Master & slave controllers possible.*
- *On/Off/Sleep countdown timers*
- *Programmable automatic off time*
- *Numerous parameters and locks programmable*
- *Setting of remote input & output functions*
- *Error code diagnosis in real time*
- *On board thermistor*

PC-ART Wall Controller with 7 Day Timer
- *Includes all the features of the PC-AR plus...*
- *7 day, 24 hour timer*
- *4 intervals programmable per day*
- *Night setback of up to 5°C possible*
- *Power failure backup remembers settings for 2 weeks*

PC-ARH Half Sized Wall Controller
- *Small size for discreet applications*
- *Simplified functions include temp., mode and fan speed.*
- *Operates 1 to 16 indoor units (same settings)*
- *Error code diagnosis*

PC-LH3A Wireless Controller
- *Standard infrared controller*
- *Controls temp., mode, fan speed, etc.*
- *On/Off countdown timers*
- *Multiple units can be operated with one controller*
- *Requires receiver to be added to indoor unit*
- *Not applicable to all models*

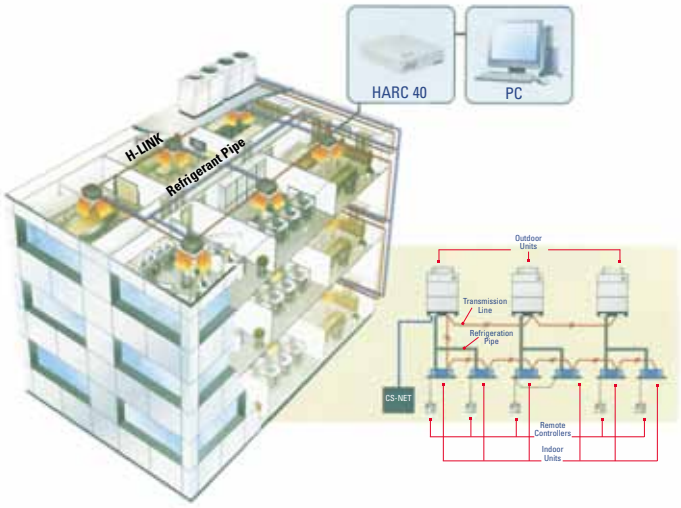
PSC-A1T Central 7 Day Timer
- *Controls up to 64 groups of units (max. 160 indoors).*
- *3 intervals programmable per day for each group*
- *Separate winter and summer schedules can be pre-set*
- *Power failure backup remembers settings for 2 weeks*

PSC-A64S Central Controller
- *Provides individual control (mode, temp., fan speed, etc.) of multiple indoor units.*
- *Controls up to 64 groups of units (max. 160 indoors).*
- *External inputs/outputs for: central stop/run input, emergency stop input, demand control (DRED) input, central operation output and central alarm output.*

H-LINK

H-Link II is a communication system available to building owners and occupiers to control multiple outdoor and indoor units from one control point. Its use assists installers and service engineers during commissioning and service maintenance. A Hitachi Central Controller (eg PSC-A646), a standard PC or building management system such as BACnet® or LonWorks® can provide central control via the H-Link II network.

Hitachi VRF, Split Systems, Chillers and even Wall Mounts (via an interface card) can be connected to H-Link II.



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*6 years parts and labour. 3 years on high usage applications, e.g. computer server rooms.

Terms and conditions apply to all warranties. Hitachi Inverter systems are designed for efficiency and are compliant to MEPS II standards. Specifications are subject to change with product improvement and without notification. Specification details provided in this brochure are indicative only. Please refer to the Hitachi Design and Installation manuals for all technical information.

Your local Hitachi dealer:

PEACE OF MIND

Temperzone Ltd distributes Hitachi heat pumps throughout New Zealand.

Hitachi heat pumps from temperzone have a 6 year warranty* on parts and labour.

HITACHI HEAT PUMPS 6 YEAR WARRANTY
INCREASING YOUR COMFORT

It's a comfort to know that this warranty is backed by Temperzone Ltd, the largest air conditioning manufacturer and exporter in Australasia: founded, owned and operated by New Zealanders since 1956.