

# FUJITSU Ducted

APRIL 2008



NEW ZEALAND'S FAVOURITE AIR™



INVERTER

# Ducted Technology

The Fujitsu ducted range offers discreet heating and cooling in multiple rooms, with only the outlets visible inside.

Choose Bulkhead type (no duct work required), Low Profile or Hi-Static models to best suit your situation, and enjoy the latest technology with high efficiency DC fan motors and DC twin rotary compressors.

Quiet, efficient, invisible comfort.

Bulkhead type - compact design allows them to be installed into the cavity of your ceiling, at floor level or in a wall.



Quiet mode - just 27dB



ARTA18LALU

Hi-COP 3.61 (W/W)

● 5.20kW / 17,700BTU/h

● 6.00kW / 20,500BTU/h



Simple Controller (optional)



Remote Temperature sensor (optional)

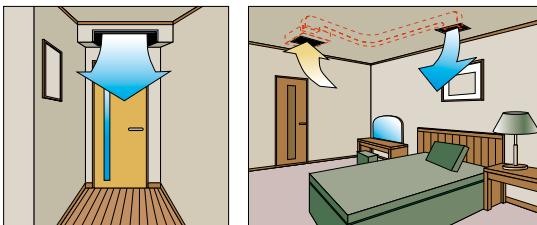


Wired type (with weekly/setback timer)

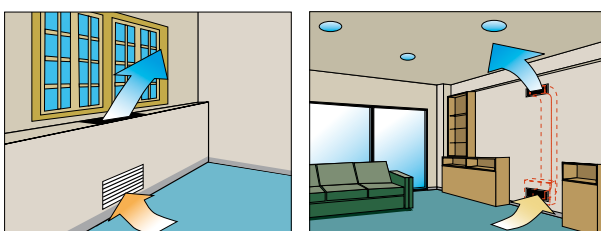
## ■ Universal design indoor unit

The ducted bulkhead unit can be mounted vertically or horizontally. This makes them ideal for architecturally designed spaces.

Ceiling concealed



Floor concealed



## ■ Static pressure mode setting (ARTA18LALU).

As the bulkhead unit is very versatile, the static pressure can be adjusted to suit the application. Four settings are available up to a maximum of 90pa.

## ■ Low ambient outdoor temperature design.

All Fujitsu ducted units are capable of cooling, even when the outdoor temperature is  $-10^{\circ}\text{C}$ . This makes them ideal for those spaces needing cooling all year round – such as gyms, restaurants and sunrooms.

Fujitsu ducted inverter systems also effectively heat even when the outside ambient temperature is at  $-15^{\circ}\text{C}$ .

## ■ 5+ Stars Energy Rating.

The brilliant energy ratings are achieved with DC fan motors throughout, and a multi-speed inverter controlled DC compressor in the outdoor unit.

## ■ Auto restart.

In the event of a power failure all Fujitsu Inverter Ducted models will restart themselves from the last settings of the wall controller.

These low-profile models are ideal for narrow ceiling spaces – delivering high efficiency quickly and effectively.



ARTA24LATU  
Hi-COP 3.61

**C** 7.10kW / 24,200BTU/h  
**H** 8.00kW / 27,300BTU/h

**Quiet mode - just 25dB**

ARTA36LATU  
Hi-COP 3.71

**C** 10.00kW / 34,100BTU/h  
**H** 11.20kW / 38,200BTU/h

**Quiet mode - just 29dB**

ARTA45LATU  
Hi-COP 3.71

**C** 12.50kW / 42,700BTU/h  
**H** 14.00kW / 47,800BTU/h

**Quiet mode - just 29dB**



FOR ARTA24LATU



FOR ARTA 36/45LATU

## Easy installation.

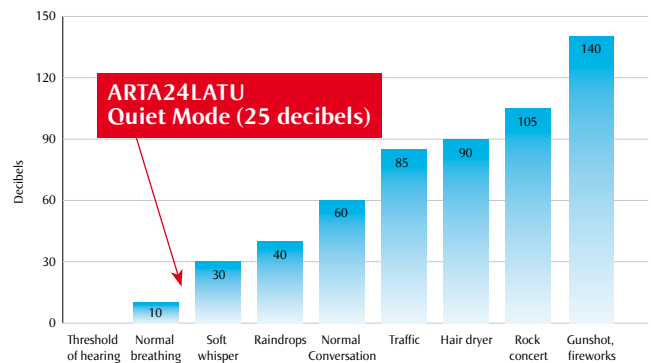
Main work settings can be done easily from the remote controllers at installation, these include:

- Fan mode settings
- Auto restart
- Temperature adjustment when cooling/heating

## Heating efficiency or COP.

COP stands for Coefficient Of Performance. This is the relationship of energy used, versus heat delivered. For example 1kW of energy supplied to the ARTA24LATU will produce 3.61kW of heat. Check COP when purchasing a heat pump – you will find it difficult to beat Fujitsu for efficiency.

## Quiet Mode.

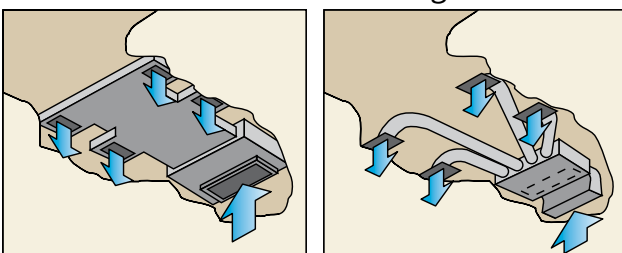


## Static pressure mode setting (ARTA24LATU).

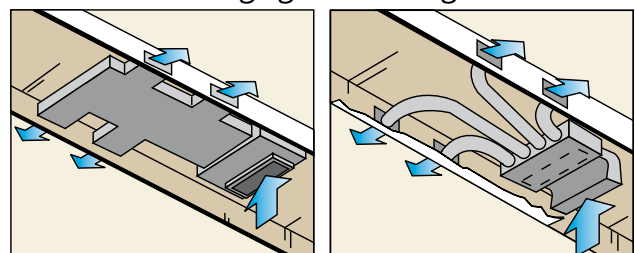
Four settings are available to adjust the static pressure of the indoor unit. This will ensure that the system heats and cools as efficiently and quietly as possible.

## Installation styles.

Embedded in Ceiling



Hanging from Ceiling



Reduced chassis size and lightweight makes these Hi Static models easy to install, without compromising performance.



ARTC30L  
Hi-COP 3.54

**C** 8.80kW / 30,000BTU/h  
**H** 9.20kW / 31,400BTU/h

ARTC36L  
Hi-COP 3.57

**C** 10.00kW / 34,100BTU/h  
**H** 10.00kW / 34,100BTU/h



Wired type  
(with weekly/  
setback timer)



Simple  
Controller  
(optional)



Remote  
Temperature sensor  
(optional)



For ART30L/36L



For ART45L/54L

ARTC45L  
Hi-COP 3.64

**C** 12.50kW / 42,700BTU/h  
**H** 14.00kW / 47,800BTU/h



ARTC54L  
Hi-COP 3.33

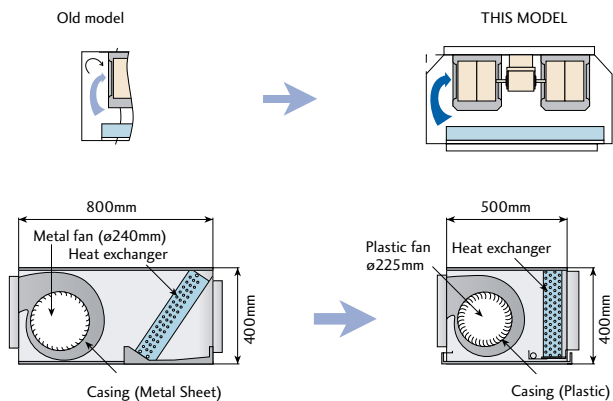
**C** 14.50kW / 49,500BTU/h  
**H** 16.00kW / 54,600BTU/h

## Operational sound (low noise) levels.

Increased airflow with reduced noise level to 45dB(A) achieved by chamfering the chassis to create uniform internal air pressure.

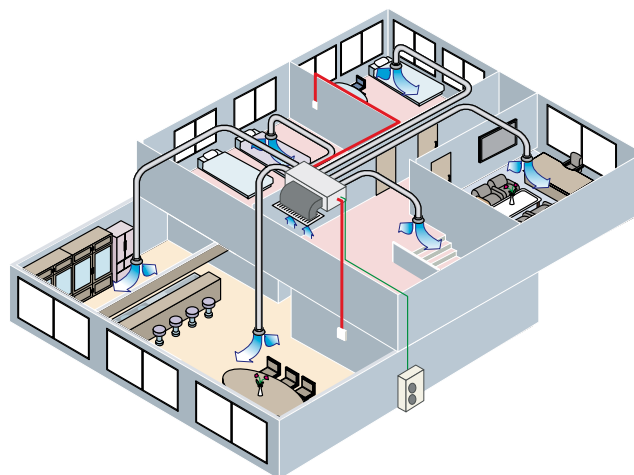
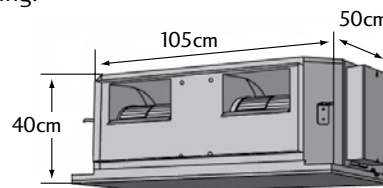
Large airflow volume of 2,500 cubic meters is achieved by design of a larger fan (At 100Pa).

Plus, plastic fan housing, sirocco fan blades and three selectable fan speeds reduction combine to deliver low noise emissions.



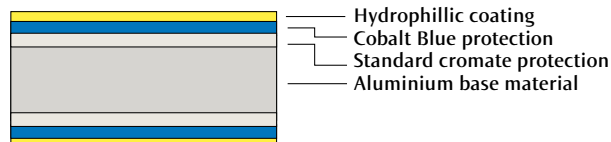
## Easy installation.

The compact design of the indoor unit is designed for easy installation into new and existing spaces. In most cases, the unit will fit through an existing manhole or return air inlet in the ceiling.



## Cobalt blue heat exchanger.

The outdoor unit fins are coated with a blue corrosion resistant material to enhance durability and extend performance life of your heat pump. Available on all Fujitsu Inverter Ducted units except the ARTA18L and the ARTA24L.



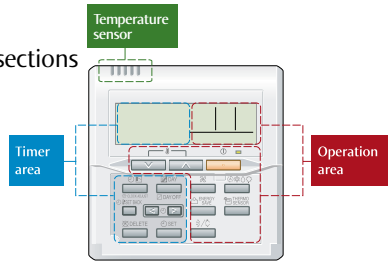


## Controller features.

### ■ Easy-to-understand operation.

#### Variable time control.

The operation / display sections are zoned according to time and operation, enabling variable programming to match application.



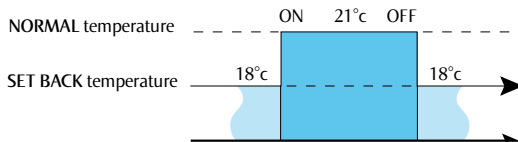
### ■ High performance and compact size.

Three functions are combined in one unit.



### ■ Temperature set back timer.

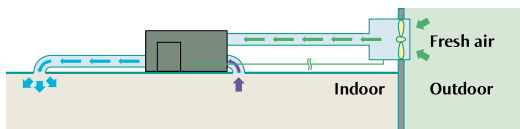
Use this timer function to change the set temperature in the on times set for each day of the week. This can only be set together with other programmed timer settings.



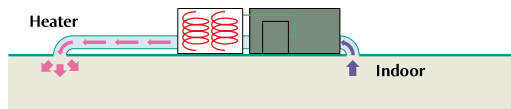
## Control port option features.

### ■ Advanced features. (UTD-ECS5A Required)

1. Fresh air output port. External fresh air fans can be connected to run in conjunction with the fan motor of the indoor unit. Ideal for homes without ventilation system.



2. Electrical heater output port. An External Electrical heater can be set to operate in conjunction with the heating cycle.



3. External input port. Start/stop of the air conditioner can be controlled from external equipment.

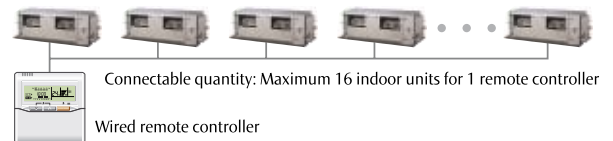
### ■ Room temperature sensor selection.

- Wired remote controller has a sensor.
- User can select between remote controller sensor and/or return air sensor or remote sensor.



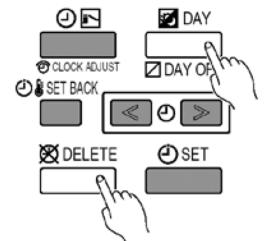
### ■ Group control.

One remote controller can control up to 16 air conditioners. All of the air conditioners will be operated with the same settings.



### ■ Child lock function.

Simply pressing a combination of buttons on the standard wired remote controller, locks and unlocks the keypad, stopping accidental and unauthorised use.



### ■ Memory back up setting.

In the event of a power failure, battery back up of the wall controller. (To be set on the wall controller by the installer).

### ■ Simplified wired remote controller. (Optional)

This controller can be used as an optional slave controller for dual control. It offers easier operation and backlit display.



### ■ Dual remote controllers. (Optional)

An additional controller can be added. Either remote controller can control the air conditioner. However, the timer functions cannot be used at the slave unit.

## EXPLANATION OF FEATURES

- Automatic Air Flow Adjustment**  
The micro-computer automatically adjusts the air flow effectively to follow the changes of room temperature.
- Auto Restart**  
In the event of a temporary power failure, the air conditioner will automatically restart in the same operating mode as before, once the power supply is restored.
- Auto-Changeover**  
The unit automatically switches between heating and cooling modes based on your temperature setting and the room temperature.
- Sleep Timer**  
The micro-computer gradually changes the room temperature automatically to afford a comfortable night's sleep.
- Program Timer**  
This digital timer allows selection of one of four options. ON, OFF, ON → OFF, or OFF → ON.
- ON-OFF Timer**  
ON-OFF timer can be set to operate once.
- Weekly Timer**  
Different on-off times can be set for each day.
- Weekly + Setback Timer**  
Weekly + Setback timer can set temperature for two time spans and for each day of the week.
- Connectable Distributing Duct**  
Conditioned air can be distributed by means of a distribution duct.
- Connectable Fresh Air Duct**  
Duct connection port hole opening. Fresh air can be introduced through this opening.
- Fresh air intake**  
Fresh air can be taken in by a fan which can be connected using UTD-ECS5A (optional parts).
- Control Port**  
External inputs and outputs contained within the product allow on/off control, fresh air interlock connection and heater bank element connection. UTD-ECS5A\* (optional parts)  
\* Selected ducted units only.
- Top Energy Saver Award**  
For the most energy efficient Star Rated Products.
- Cooling**
- Heating**

# SPECIFICATIONS

SPECIFICATIONS			Bulkhead	Low Profile	Low Profile	Low Profile	Ducted	Ducted	Ducted	Ducted	
Type			Lo Static	Lo Static	Lo Static	Lo Static	Hi Static	Hi Static	Hi Static	Hi Static	
MODEL No.	Indoor Unit	Outdoor Unit	ARTA18LALU	ARTA24LATU	ARTA36LATU	ARTA45LATU	ARTC30LUAK	ARTC36LATU	ARTC45LUAK	ARTC54LATU	
			AOTA18LACL	AOTA24LACL	AOTA36LATL	AOTA45LATL	AOT30LMBDL	AOT36LMADL	AOT45LJBYL	AOT54LJBYL	
Reverse Cycle			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Cooling Capacities	Watts		5,200	7,100	10,000	12,500	8,800	10,000	12,500	14,500	
	BTU/Hr		17,700	24,200	34,100	42,700	30,000	34,100	42,700	49,500	
Cooling Range	Watts		900 - 5,900	900 - 8,000	3,800 - 11,200	4,000 - 14,000	2,700 - 9,800	2,700 - 10,500	3,600 - 14,000	3,600 - 15,500	
	BTU/Hr		3,100 - 20,100	3,100 - 27,300	13,000 - 38,200	13,700 - 47,800	9,200 - 33,500	9,200 - 36,000	12,300 - 47,800	12,300 - 52,900	
Heating Capacities	Watts		6,000	8,000	11,200	14,000	9,200	10,000	14,000	16,000	
	BTU/Hr		20,490	27,300	38,200	47,800	31,400	34,100	47,800	54,600	
Heating Range	Watts		900 - 7,500	900 - 9,100	4,000 - 14,000	4,200 - 16,200	3,000 - 11,000	3,000 - 12,100	4,700 - 16,000	4,700 - 18,000	
	BTU/Hr		3,100 - 25,600	3,100 - 31,000	13,700 - 47,800	14,300 - 55,300	10,200 - 37,600	10,200 - 41,300	47,800 - 54,600	16,000 - 61,500	
Energy Star Rating	Cool		5	4.5	5	5	3	2.5	3.5	3	
	Heat		5	5	5.5	5.5	5	5	5	4	
E.E.R Cool	W/W		3.21	3.11	3.21	3.21	2.67	2.5	2.87	2.69	
C.O.P Heat	W/W		3.61	3.61	3.71	3.66	3.54	3.57	3.64	3.33	
Running Current	Cool	Amps	6.8	9.3 (11.5 Max)	13 (19 Max)	16.3 (20 Max)	13.8 (15.5 Max)	16.7 (17.6 Max)	18.1 (21.7 Max)	23.5 (25.3 Max)	
	Heat	Amps	7	9.3 (12.2 Max)	12.7 (19 Max)	16.1 (20 Max)	10.7 (15.9 Max)	11.7 (17.6 Max)	16 (20.1 Max)	19.8 (25.3 Max)	
Input Power	Cool	Watts	1,620	2,280 (2,740 Max)	3,110 (4,540 Max)	3,890 (4,780 Max)	3,300 (1,080 - 4,150)	4,000 (1,080 - 4,200)	4,350 (1,700 - 5,200)	5,570 (1,700 - 6,060)	
	Heat	Watts	1,660	2,210 (2,910 Max)	3,020 (4,540 Max)	3,830 (4,780 Max)	2,550 (1,000 - 4,150)	2,800 (1,000 - 4,200)	3,800 (1,500 - 4,800)	4,700 (1,500 - 6,060)	
Moisture Removal	L/Hr		2	2.5	3	3.5	3	3	2	3	
Fan Speeds			4	4	4	4	3	3	3	3	
Air Circulation		l/s	227	305	560	625	700	700	980	980	
Indoor Sound Level	Quiet	DbA at 1m	27	25	29	29	N/A	N/A	N/A	N/A	
	Low	DbA at 1m	29	27	32	33	36	36	42	42	
	Med	DbA at 1m	31	29	37	38	39	39	45	45	
	High	DbA at 1m	33	31	42	44	45	45	49	49	
Outdoor Sound Level		DbA at 1m	50	53	55	56	54	54	53	53	
Outdoor Sound Power Level		DbA	65	68	69	70	65	65	65	69	
Dimensions and Weights	I.U	Height	mm	217	270	270	270	400	400	400	400
		Width	mm	953	1135	1135	1135	1050	1050	1050	1050
		Depth	mm	595	700	700	700	500	500	500	500
	O.U	Net Weight	kg	23	38	41	41	45	45	50	50
		Height	mm	578	578	1290	1290	900	900	1290	1290
		Width	mm	790	790	900	900	900	900	900	900
Depth	mm	300	315	330	330	350	350	330	330		
Net Weight	kg	40	44	98	98	70	70	105	105		
Compressor Type			DC Twin Rotary	DC Twin Rotary	DC Twin Rotary	DC Twin Rotary	DC Twin Rotary	DC Twin Rotary	DC Scroll	DC Scroll	
Ductwork Plenum size	Supply	mm	600 X 150	4 X 205 dia	4 X 205 dia	4 X 205 dia	850 X 295	850 X 295	850 X 295	850 X 295	
	Return	mm	811 X 177	1015 X240	1015 X 240	1015 X 240	865 X 325	865 X 325	865 X 325	865 X 325	
Ex Static Pressure			Pa	0 to 90	30 to 150	30 to 150	200	200	100 - 250	100 - 250	
Interconnect cables - size	Qty - mm2		4 - 1.5	4 - 1.5	4 - 1.5	4 - 1.5	4 - 1.5	4 - 1.5	4 - 1.5	4 - 1.5	
Recommended Min. Power Cable	mm2		4	4	6	6	4	6	6	6	
Phase - Frequency	Ph - Hz		1 - 50	1 - 50	1 - 50	1 - 50	1 - 50	1 - 50	1 - 50	1 - 50	
Power Supply Attachment			Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	Outdoor	
Power Supply	Volts		230	230	230	230	230	230	230	230	
Refrigerant Type			R410a	R410a	R410a	R410a	R410a	R410a	R410a	R410a	
Connection Pipe Sizes	Gas	mm	12.7	15.88	15.88	15.88	15.88	15.88	15.88	15.88	
	Liquid	mm	6.35	6.35	9.52	9.52	9.52	9.52	9.52	9.52	
Minimum Pipe Length	Metre		5	5	5	5	5	5	5	5	
Maximum Pipe Length	Metre		25	30	50	50	30	30	70	70	
Maximum Pipe Height	Metre		15	20	30	30	20	20	30	30	
Pre Charged Length	Meter		15	15	20	20	10	10	20	20	
Pipe Connection Method			Flare	Flare	Flare	Flare	Flare	Flare	Flare	Flare	
Outdoor Operating Temperature	Cool	Degree C	-10 to 46	-10 to 46	-15 to 46	-15 to 46	0 to 43	0 to 43	-15 to 43	-15 to 43	
	Heat	Degree C	-15 to 24	-15 to 24	-15 to 24	-15 to 24	-10 to 21	-10 to 21	-15 to 24	-15 to 24	

## Explanation of Terms

**COP:** Stands for coefficient of performance or ( more simply!), the relationship between energy used and heat delivered. For example with a heating

COP of 4.11 – you will get 4.11kW of heat for every 1kW of energy used.

**Energy Star rating:** your quick guide to energy efficiency – more stars means more efficient.

**Indoor sound** – measured in decibels, this is the sound level of your indoor unit at selected fan speeds. For example 20-30 decibels is less than the sound of a human whisper.

**Heating range** – with our Kiwi winter, your heat pump needs to be able to supply heat indoors, even when its -15°C outside!

Products depicted in this brochure contain high operating pressure R410a refrigerant. It is illegal to vent that refrigerant to the atmosphere.

Only persons qualified and experienced in the installation, service and repair of these products are authorised to undertake such work.

Fujitsu General Accredited Installers have shown they have the necessary equipment and have accepted responsibility for their installations and the requirements of any statutes or laws.

Due to ongoing Research and Development specifications and designs are subject to improvement without notice therefore relevant manuals must be consulted before any action is taken to install or service these products.

Heating/Cooling capacities and run current tests are based on the requirements of AS/NZS3283, that standard tests at the temperature below.

**COOLING:** Indoor Temp: 27°C DB / 19°C WB  
Outdoor Temp: 35°C DB

**HEATING:** Indoor Temp: 20°C DB  
Outdoor Temp: 7°C DB / 6°C WB

As actual temperature ranges in New Zealand vary considerably only competent people should provide advice as to size and placement of units.

Recommended cable sizes are based in AS/NZS3000 and AS/NZS3008.

Fujitsu General New Zealand Ltd warrants the equipment against any defects in materials and factory workmanship for a period of five years from the date of installation, or for 6 years if installed by an Accredited Installer.

This warranty does not cover defects or failures which are attributable to; incorrect or improper installation; environmental damage; airflow restriction; inadequate electrical supply; getting access to the product.



NEW ZEALAND'S FAVOURITE AIR™

Fujitsu General New Zealand Limited  
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QAS is Accredited by the Joint Accreditation System of Australia and New Zealand. Acc No. S125098AS



ISO 9002 Certified number: JQA-2005



ISO 14001 Certified number: EC98J1137

Hamamatsu Fujitsu General Ltd.



All products specified in this brochure comply with the Australian Communications Authority's (ACA) requirements for Electromagnetic Compatibility (EMC).



THE GLOBAL MARK OF ENERGY EFFICIENCY



FUJITSU ACCREDITED INSTALLER  
COMFORT WARRANTY

5 Year full parts and labour warranty. 6 years (an extra full year's warranty) when you use a Fujitsu Accredited installer.