

# Technical Bulletin

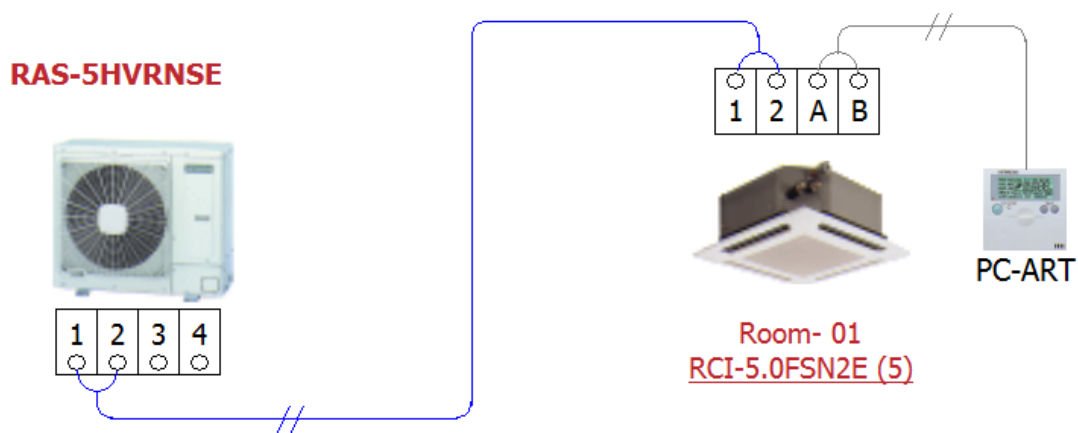
Number	041
Subject	Utopia ES Single Split Models (to 6HP)
Date	08 March 2010

## Wiring

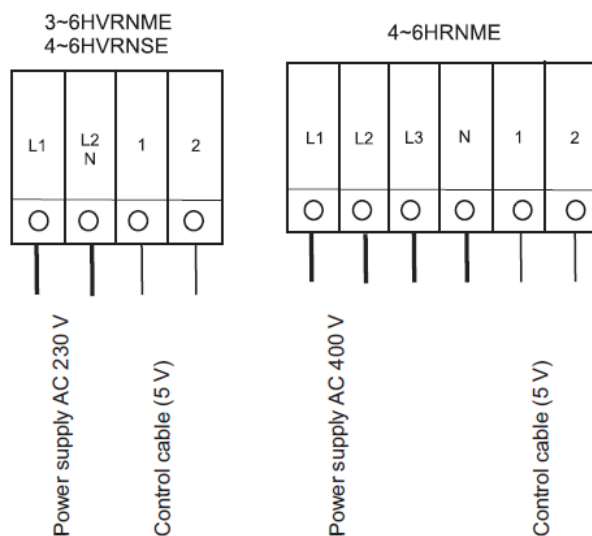
Hitachi Utopia ES Models require a separate power supply to both the indoor and outdoor unit.

All indoor units require a 5 amp fused spur only.

Interconnecting cable is 2 core 0.75mm<sup>2</sup> screened.



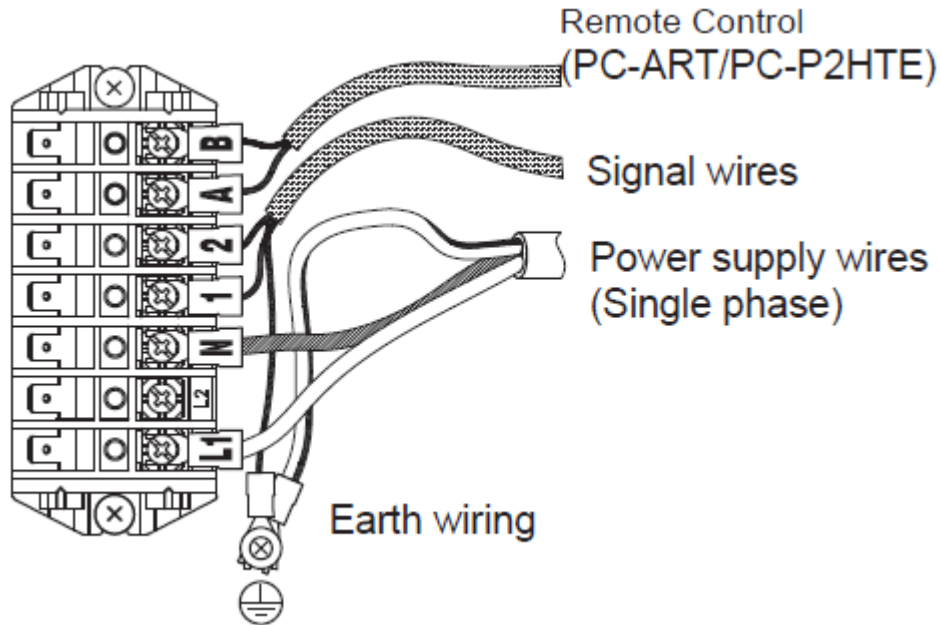
Power to the indoor unit can be taken from the outdoor unit. However, as there is only one terminal block (power in) the cable must be de-rated correctly and a local spur at the indoor unit location must be installed. This must be a separate cable to the 2-core data interconnecting.



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Interconnecting cable between indoor and outdoor is to terminal blocks 1 and 2.

Remote controller cable to the indoor unit/s is to terminal block A and B

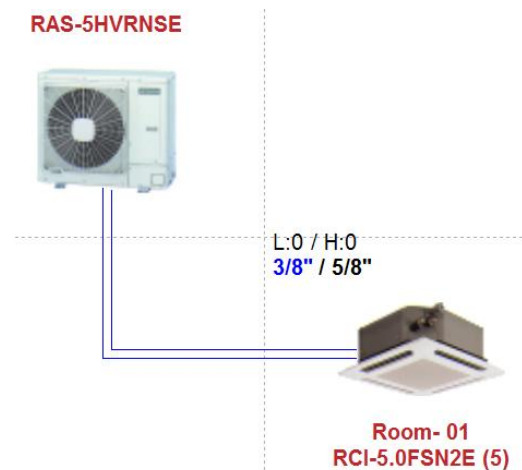


## Piping Specifics

All Hitachi Utopia pipe sizing is as per the outdoor unit. Many indoor units come with a flare reducer. This is because the indoor units are common to R407C Split Outdoors (Europe), R410a Split Outdoors, IVX Systems and Set-Free VRF.

Please check pipe sizes before proceeding.

Logicool can provide schematics for anything from a simple split system to a large VRF.



## Torque Settings

Pipe Size	Tightening Torque (Nm)
Ø 6.35 mm	20
Ø 9.53 mm	40
Ø 12.70 mm	60
Ø 15.88 mm	80

## Optional H-Link Control

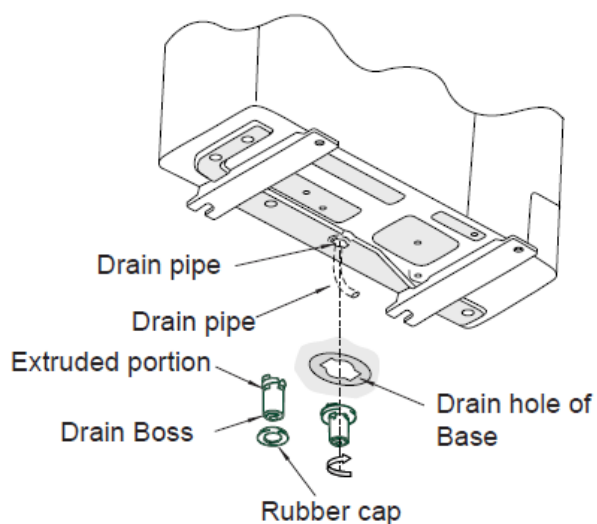
All Hitachi Utopia models communicate via H-Link and as such can interface with Hitachi Set-Free systems.

## Refrigerant Charge

All models are pre-charged to 30 metres. Please check outdoor unit data for maximum piping length on each model.

## Drain

Drain elbow is **optional** on all models.



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## Controls



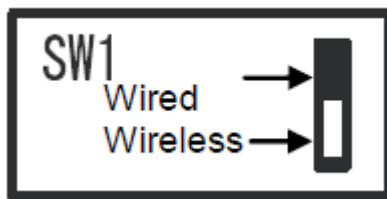
Hitachi Utopia systems do not come with a controller as standard. All controllers are optional and a variety of controls for all models can be selected including the following

- PC-ART - Standard Controller with 7-Day Timer
- PC-ARH - Simplified Controller
- PC-AL\*\* - Wireless Remote Controller

All systems can also interface with Hitachi Central and Web-Based controllers.

All Hitachi Indoor Units with the exception of RPK Wall Mounted are set up for Hard Wired Control.

In the case of RPK Wall units a dipswitch (DSW1) needs to be set to allow hard wired interface.



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## Model Specification – Models 2 – 3 (ES)

### Outdoor Unit Technical Data

	<b>RAS-2HVRNE1</b>	<b>RAS-2.5HVRNE1</b>	<b>RAS-3HVRNS</b>
Model			
Height (mm)	600	600	600
Width (mm)	792	792	792
Depth (mm)	300	300	300
Weight (kG)	42	42	44
Airflow (m <sup>3</sup> /min)	35	35	41
Sound Pressure Cooling (dBA)	46	46	48
Sound Pressure - Set Back (dBA)	44	44	46
Liquid (mm(inches))	6.35 (1/4)	6.35 (1/4)	9.52 (3/8)
Gas (mm(inches))	12.7 (1/2)	12.7 (1/2)	15.88 (5/8)
Max Pipe Run (m)	50	50	30
Max Pipe Lift (m)	30	30	30 (20)
Pre-charged to (m)	30	30	20
Standing Charge (kG)	1.6	1.6	1.9
Refrigerant	R410a	R410a	R410a
Phase	Single	Single	Single
Power Supply to	Outdoor *	Outdoor *	Outdoor *
Start/Run Current (A)	5.8/5.6	8.5/8.2	--/--/10.3
Fuse Rating (A)	16	20	25
Interconnecting	2C Screen 0.75mm <sup>2</sup>	2C Screen 0.75mm <sup>2</sup>	2C Screen 0.75mm <sup>2</sup>
System Power Input (Cool/Heat) - watts	1.66/1.74	2.10/2.27	2.52/2.53

## Model Specification – Models 4 – 6 (ES)

### Outdoor Unit Technical Data

	<b>RAS-4HVRNSE</b>	<b>RAS-5HVRNSE</b>	<b>RAS-6HVRNSE</b>
Model			
Height (mm)	800	800	800
Width (mm)	950	950	950
Depth (mm)	370	370	370
Weight (kG)	85	89	89
Airflow (m <sup>3</sup> /min)	62	80	80
Sound Pressure Cooling (dBA)	44	46	48
Sound Pressure - Set Back (dBA)	40	42	45
Liquid (mm(inches))	9.52 (3/8)	9.52 (3/8)	9.52 (3/8)
Gas (mm(inches))	15.88 (5/8)	15.88 (5/8)	15.88 (5/8)
Max Pipe Run (m)	50	50	50
Max Pipe Lift (m)	30 (20)	30 (20)	30 (20)
Pre-charged to (m)	30	30	30
Standing Charge (kG)	2.8	3.3	3.3
Refrigerant	R410a	R410a	R410a
Phase	Single	Single	Single
Power Supply to	Outdoor *	Outdoor *	Outdoor *
Start/Run Current (A)	--/--/14.2	--/--/16.6	--/--/21.3
Fuse Rating (A)	32	32	32
Interconnecting	2C Screen 0.75mm <sup>2</sup>	2C Screen 0.75mm <sup>2</sup>	2C Screen 0.75mm <sup>2</sup>
System Power Input (Cool/Heat) - watts	3.61/3.52	4.22/4.47	5.34/5.25