

# Technical Bulletin

Number	008
Subject	Using ES and IVX condensing units with existing pipe-work
Date	June 2008

This document has been prepared by Logicool Air Conditioning Distribution Limited and is based on existing Hitachi recommendations for using pipe sizes different to those advertised, and standard industry guidelines for retrofits.

New ES and IVX Utopia condensing units launched Summer 2008 can be used with different pipe sizes to those advertised.

If utilising existing pipe-work, the following recommendations should be observed.

The existing pipe-work needs to be clean, devoid of any contaminants and have traces of mineral oil lower than 3% of previous system capacity. It is advised that this is achieved by pressure testing to manufacturers recommendations and triple vacuuming the system.

## New IVX Models

Model	Liquid	1/4"			3/8"			1/2"	
	Gas	1/2"	<b>5/8"</b>	3/4"	1/2"	<b>5/8"</b>	3/4"	<b>5/8"</b>	3/4"
RAS 3 HVRNME		30	30		30	<b>50</b>			
RAS 4 H(V)RNME			25	25	40	<b>70</b>	50	30	30
RAS 5 H(V)RNME			25	25	40	<b>75</b>	50	30	30
RAS 6 H(V)RNME			25	25	40	<b>75</b>	50	30	30

(area in bold in advertised pipe sizing)

## New ES Models

Model	Liquid	1/4"			3/8"			1/2"	
	Gas	1/2"	<b>5/8"</b>	3/4"	1/2"	<b>5/8"</b>	3/4"	<b>5/8"</b>	3/4"
RAS 3 HVRNS		20	20		30	<b>30</b>			
RAS 4 HVRNSE			25	25	40	<b>50</b>	50	30	30
RAS 5 HVRNSE			25	25	40	<b>50</b>	50	30	30
RAS 6 HVRNSE			25	25	40	<b>50</b>	50	30	30

(area in bold in advertised pipe sizing)

## Notes

- If the gas pipe is downsized the cooling performance will decrease and the operation range will be narrowed due to pressure losses.
- If the liquid pipe is downsized the operation range will be narrowed due to the affected capacity of the indoor unit expansion valve
- If the liquid pipe is increased, additional refrigerant will need to be added.
- If the gas piping is increased to 3/4" JP6 on the outdoor unit PCB will need to be removed.