CITY MULTI

TURNING UP THE HEAT

MITSUBISHI ELECTRIC HAS TAKEN HEATING TO A WHOLE NEW LEVEL WITH OUR EXCLUSIVE, PATENT-PENDING **HYPER-HEAT INVERTER (H²i™)** TECHNOLOGY. EVEN WHEN OUTDOOR TEMPERATURES DROP TO **-25°C** – A CHALLENGE FOR ANY AIR TO AIR HEAT PUMP SYSTEM – CITY MULTI STAYS ON THE JOB, KEEPING THE INDOORS AT A **COMFORTABLE** AND **CONSISTENT** LEVEL.

RAISING THE BAR IN LOWER TEMPERATURES

EVOLVE

Heat pump systems deliver a very high COP (coefficient of performance). However, when outdoor temperatures drop, traditional heat pump systems just can't perform. As a result, most buildings include a supplemental system to handle heating on days when temperatures drop below 0°C. Of course, this means an additional system, installation and operational costs.

Now imagine a way to save on costs by using only a heat pump system that delivers comfort year-round. That solution is the new City Multi Y-Series, featuring our exclusive H²i technology.

H²i HYPER HEAT INVERTER = HEATING DOWN TO -25°C

The new City Multi H²i Y-Series features expanded heating operation, even when temperatures drop to levels that would give traditional systems a cold chill.

The secret is our new flash injection process that reduces discharge superheat at high-discharge pressure, thus providing a high COP at lower temperatures without compressor overheating. This process also increases the system's refrigerant flow rate to provide excellent heating performance at extreme ambient temperatures that conventional heat pumps just can't handle. All these translate to having expanded heating operation at 100% heating capacity when temperatures drop down to -15°C, and 75% heating capacity even when the mercury falls to -25°C.

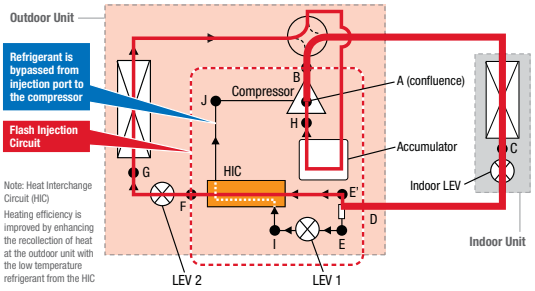
The H²i system delivers high COP in both heating and cooling modes, and that delivers savings benefits all year long.

MITSUBISHI ELECTRIC
Changes for the Better

FLASH INJECTION CIRCUIT

The industry-first Flash Injection Circuit keeps suction pressure up and maintains high-discharge pressure by using a 2-phase injection compressor. As a result, the H²i system is able to provide 100% heating performance in ambient temperatures as low as -15°C (-5°F) at a remarkable COP of 2.0. The H²i also pushes the boundary to provide heating **in ambient temperatures as low as -25°C (-13°F)** while still keeping 75% heating capacity at a COP of 1.7.

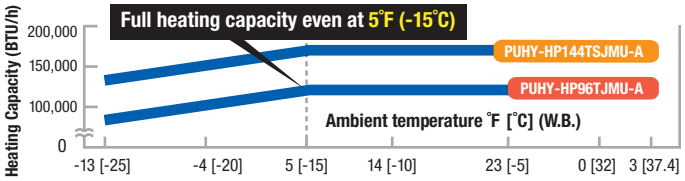
In fact, such low temperatures generally will not occur on a continual basis. The H²i system can provide a COP of up to 3.45 at higher ambient temperatures, thus providing an extremely high Heating Seasonal Performance Factor (HSPF) over the total operation spectrum that saves energy without sacrificing comfort.



MAXIMUM STABLE OPERATION

The newly designed Flash Injection Circuit provides the optimal amount of refrigerant to the compressor through a specially designed injection port, ensuring stable heating operation without defrost cycles for up to 250 minutes.

Plus, the new defrost feature – which prevents automatic defrosting when not required – gives the system a quick start-up time and continuous heating even in low ambient conditions.



SHORTER WARM-UP TIME

With new, improved start-up performance, the H²i system **requires only 20 minutes to achieve full heating capacity** – even when the outdoor temperature is as low as -10°C.

RELIABLE AND LONG PRODUCT LIFE

Backup Function (P144 & P192 models)

The H²i system ensures an exceptionally high level of reliability using a new backup function, which can be easily operated from an indoor unit remote control in the unlikely event of a malfunction.

"Lead-Lag" Rotation Function (P144 & P192 models)

Running outdoor units alternatively using a newly developed Rotation Function ensures optimum product life cycles for both component units.

COMPACT DESIGN & EASY INSTALLATION

With its reduced footprint and lighter weight, the new H²i system offers greater space savings and easier transportation. The single-package design reduces complexity, increases efficiency, and helps control installation costs.

SPECIFICATIONS

Model			PUHY-HP72TJMU-A	PUHY-HP96TJMU-A	PUHY-HP144TSJMU-A*1	PUHY-HP192TSJMU-A*1
Cooling capacity (Nominal)		Btu/h	72,000	96,000	144,000	192,000
		kW	21.1	28.1	42.3	56.3
	Power input	kW	5.60	8.16	11.54*2	16.81*2
	Current input	A	17.2 - 15.6	25.1 - 22.7	35.5 - 32.1*2	51.8 - 46.8*2
Temp. range of cooling	Indoor	W.B.	59 - 79°F (15 - 24°C)		59 - 79°F (15 - 24°C)	
	Outdoor	D.B.	23 - 109°F (-5 - 43°C)		23 - 109°F (-5 - 43°C)	
Heating capacity (Nominal)		Btu/h	80,000	108,000	160,000	216,000
		kW	23.4	31.7	46.9	63.4
	Power input	kW	6.14	8.80	12.65*2	18.13*2
	Current input	A	18.9 - 17.1	27.1 - 24.5	39.0 - 35.2*2	55.9 - 50.5*2
Temp. range of heating	Indoor	W.B.	59 - 81°F (15 - 27°C)		59 - 81°F (15 - 27°C)	
	Outdoor	D.B.	-13 - 60°F (-25 - 15.5°C)		-13 - 60°F (-25 - 15.5°C)	

*1 Twining kit is required for combining two individual outdoor units in the field. *2 Separate electrical connection is required for each individual outdoor unit.

For more information, please refer to the databook.

Mitsubishi Electric Quality · R-410A · VRF TECHNOLOGY · H²i HYPER HEAT INVERTER

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