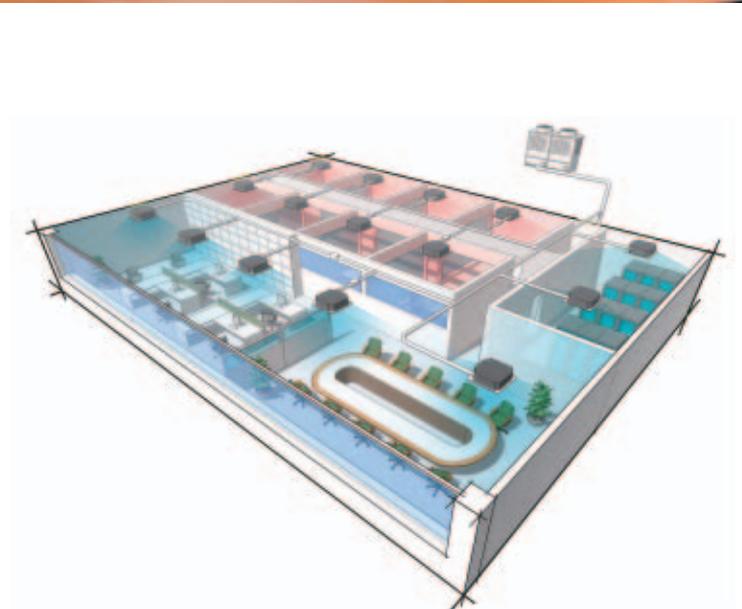




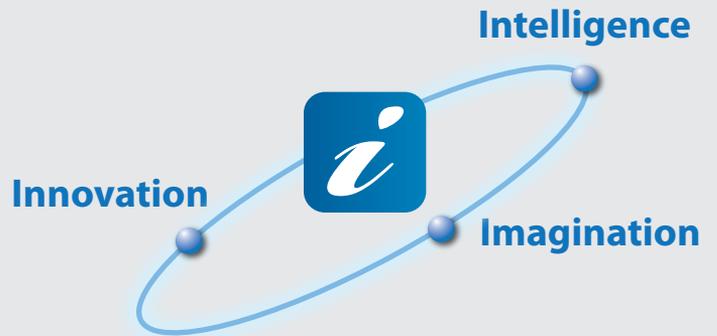
## Simultaneous Heating and Cooling Solution for Large Buildings





# Introducing SHRM-i

Introducing SHRM-i, Super Heat Recovery Multi-i, Toshiba Carrier's all-new super-efficient solution for mixed heating and cooling requirements. Building upon the proven technologies of the SMMS-i, the SHRM-i delivers even greater comfort, energy efficiency and utmost reliability. Advanced 3-pipe technology enables heat recovery between indoor units, for unprecedented economy and performance.



**SMMS-i**  
(High Efficiency & Reliability)

+

**Simultaneous Operation  
with Heat Recovery**



**Expanding possibilities  
with SHRM-i**

**SHRM**   
SUPER HEAT RECOVERY MULTI

**SHRM**  
SUPER HEAT RECOVERY MULTI



The ultimate solution for simultaneous heating and cooling.

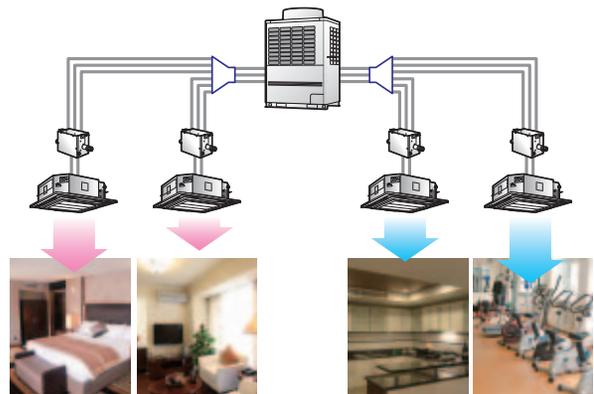


## Simultaneous heating and cooling

### Freely selectable temperature control

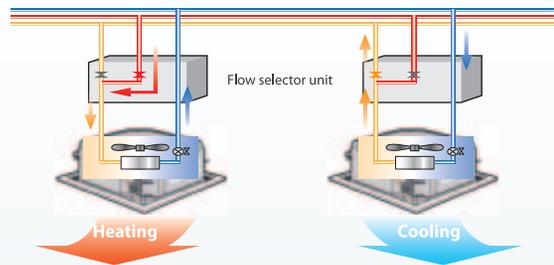
The SHRM-i allows freely selectable heating and cooling from each indoor unit on a single refrigerant piping system. It is ideal for large rooms and spaces that experience temperature differences caused by exposure to heat from the sun.

SHRM-i's single refrigerant system can provide simultaneous heating and cooling operation and meet the dynamic temperature needs of mid-spring and mid-autumn seasonal transitions.



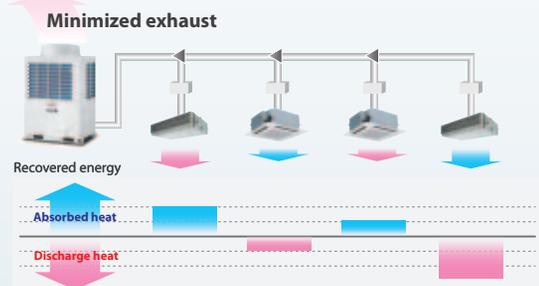
### Flexible refrigerant flow

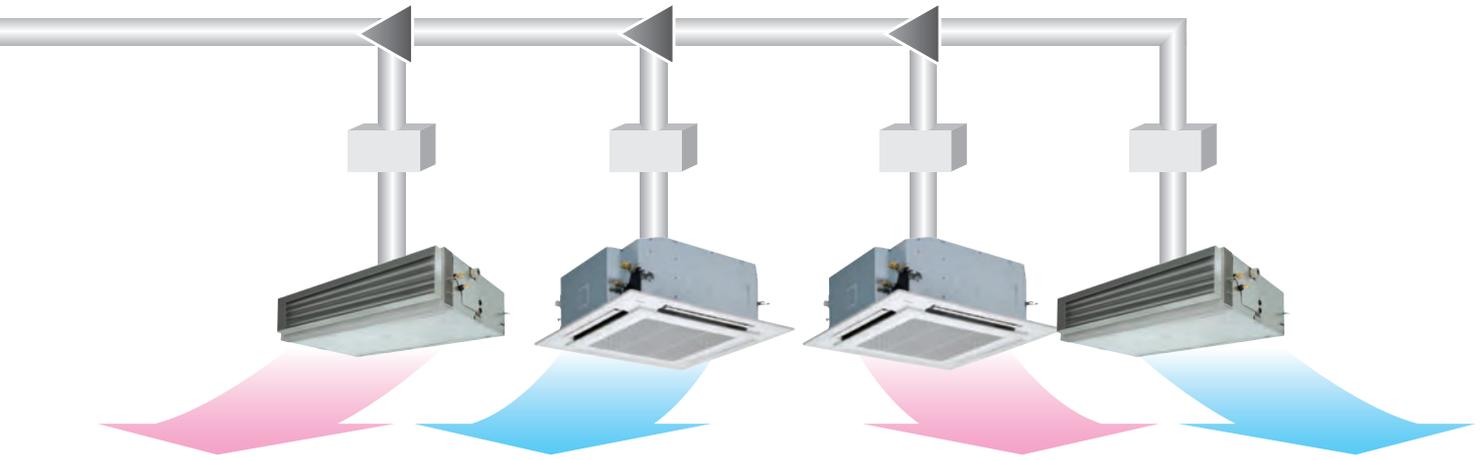
The flow selector unit can automatically shift the flow of refrigerant carried to the indoor unit, thereby switching between heating and cooling modes. Recovered energy from one unit can be used to supply another unit on the same system.



### More efficient heat recovery operation than individual heating and cooling only

SHRM-i achieves the highest energy efficiency when both heating and cooling are provided simultaneously, as recovered energy from one zone is recycled for use in another. Highest efficiencies are achieved when heating and cooling capacities are near equal.





Recovered energy generated by the operation of indoor units is efficiently reused to heat and cool other zones.



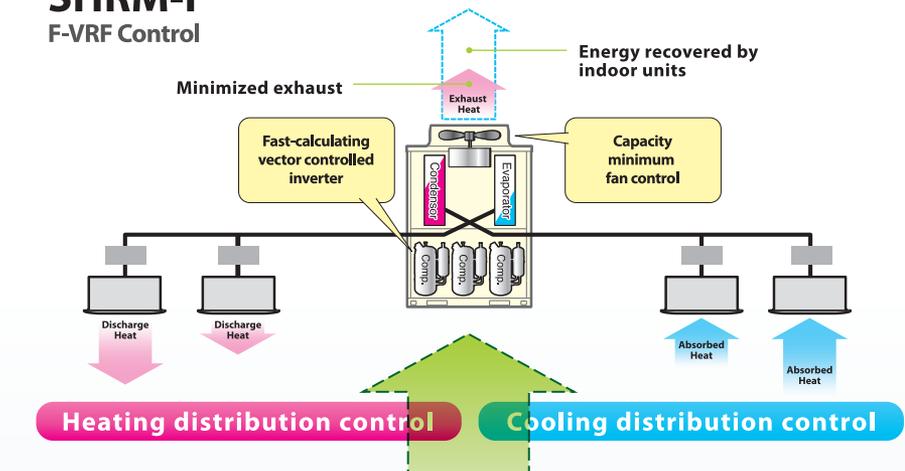
## Ultra-efficient energy management

### Energy-efficient exhaust heat recovery

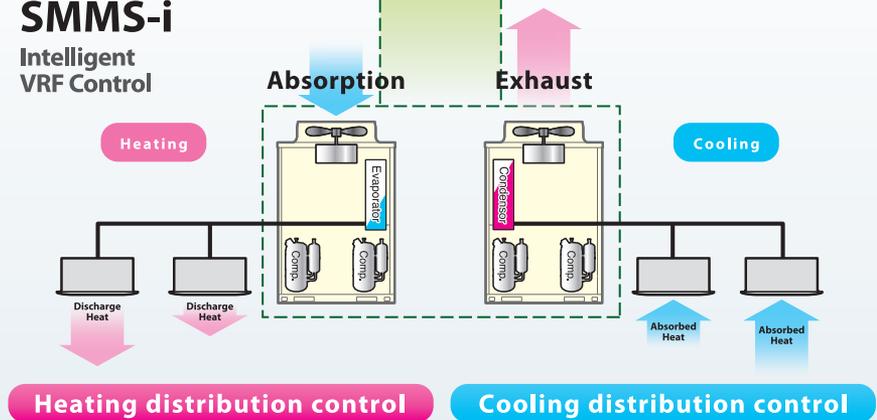
SHRM-i evolves the intelligent VRF control of the SMMS-i, with Flex-Variable Refrigerant Flow (F-VRF) control that extends flow distribution control to the heat exchangers of the outdoor units in addition to the indoor units.

Because F-VRF controls the total combination of both indoor and outdoor units, it can recover surplus energy and minimize the amount of exhaust heat from the outdoor unit.

### SHRM-i F-VRF Control



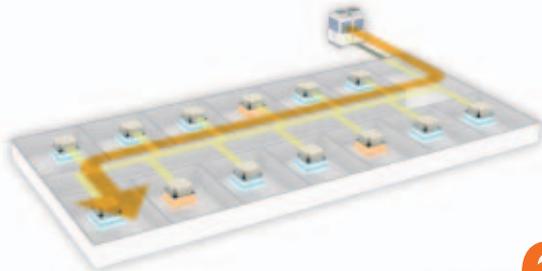
### SMMS-i Intelligent VRF Control



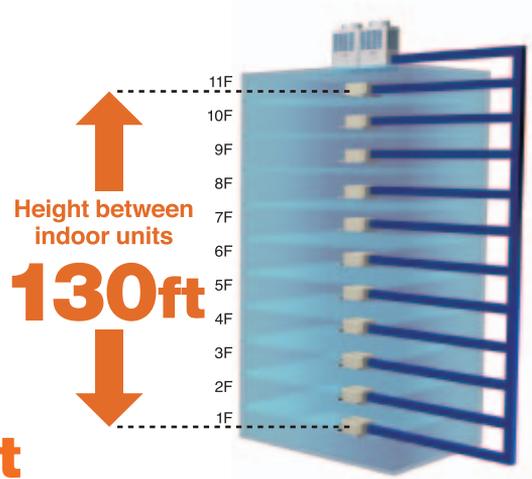


# Flexible piping configurations mean ease of installation and flexible design

A key advantage of the SHRM-i system is its installation flexibility. Flexible piping configurations allow unsurpassed installation ease. With only a small footprint outdoors, indoor air conditioning units can be placed at a farthest equivalent distance of 640ft.



Farthest equivalent length **640ft**



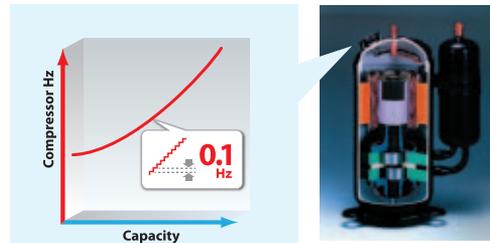
\*Calculated at 11.5 ft per floor



# Smart innovations enable ultra-efficient operation

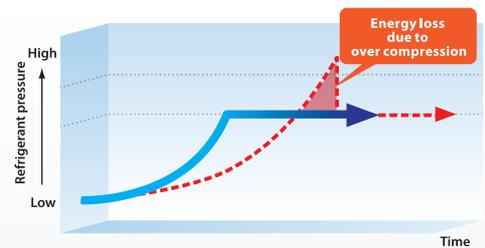
## Variable control

Ultra-precise inverter controls the compressor rotation speed in 0.1Hz increments, allowing for fine control over operational loads.



## Rotary compressor

Unlike scroll compressors that have to initially exceed capacity in order to achieve target partial load, the rotary compressors can efficiently achieve the same target load with little energy loss.

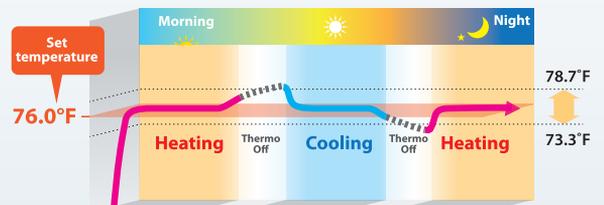


Superior partial load efficiency with rotary compressor

— Rotary compressor  
- - - Scroll compressor

## Precision comfort

What truly makes the SHRM-i one of the most flexible solutions available is its ability to provide simultaneous heating and cooling. Temperatures can be controlled and maintained precisely throughout the day. Room temperature is monitored and the air conditioning mode is switched to maintain the set temperature. As a result, temperature fluctuations are maintained within  $\pm 2.7^\circ\text{F}$ .



## Outdoor Units

Appearance									
Nominal tons		6	8	10	12	14	16	18	20
Model name (MMY-)	208V/230V	MAP0724FT9UL	MAP0964FT9UL	MAP1204FT9UL	AP1444FT9UL	AP1684FT9UL	AP1924FT9UL	AP2164FT9UL	AP2404FT9UL
	460V	MAP0724FT6UL	MAP0964FT6UL	MAP1204FT6UL	AP1444FT6UL	AP1684FT6UL	AP1924FT6UL	AP2164FT6UL	AP2404FT6UL
Nominal cooling capacity (kBtu/h)		72	96	120	144	168	192	216	240
Nominal heating capacity (kBtu/h)		81	108	135	162	189	216	243	270

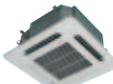
\* Power: 3-phase 60 Hz

\* The source voltage must not fluctuate more than  $\pm 10\%$ .

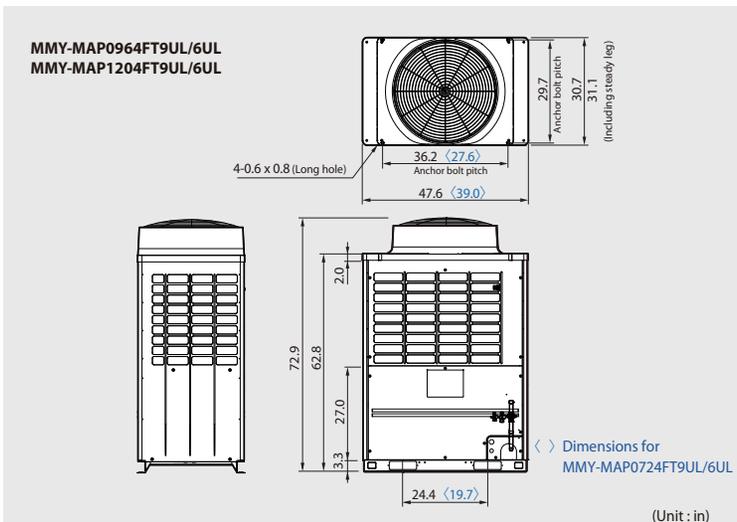
\* Rated conditions: Cooling: Indoor 80 °F Dry Bulb / 67 °F Wet Bulb, Outdoor 95 °F Dry Bulb.

Heating: Indoor 70 °F Dry Bulb, Outdoor 47 °F Dry Bulb / 43 °F Wet Bulb.

## Indoor Units

	4-way Cassette	Compact 4-way Cassette	Ceiling Unit	High-Wall Unit	Concealed Duct	Concealed Duct High Static Pressure	Slim Duct
Nominal cooling capacity							
	MMU-	MMU-	MMC-	MMK-	MMD-	MMD-	MMD-
7,500Btu/h (0.6ton)		AP0071MH2UL		AP0073H2UL	AP0074BH2UL		AP0074SPH2UL
9,500Btu/h (0.8ton)		AP0091MH2UL		AP0093H2UL	AP0094BH2UL		AP0094SPH2UL
12,000Btu/h (1ton)		AP0121MH2UL		AP0123H2UL	AP0124BH2UL		AP0124SPH2UL
15,400Btu/h (1.25ton)	AP0152H2UL	AP0151MH2UL		AP0153H2UL	AP0154BH2UL		AP0154SPH2UL
18,000Btu/h (1.5ton)	AP0182H2UL	AP0181MH2UL	AP0181H2UL	AP0183H2UL	AP0184BH2UL		AP0184SPH2UL
21,000Btu/h (1.75ton)	AP0212H2UL				AP0214BH2UL		
24,000Btu/h (2ton)	AP0242H2UL		AP0241H2UL	AP0243H2UL	AP0244BH2UL		
30,000Btu/h (2.5ton)	AP0302H2UL				AP0304BH2UL	AP0304H2UL	
36,000Btu/h (3ton)	AP0362H2UL		AP0361H2UL		AP0364BH2UL	AP0364H2UL	
42,000Btu/h (3.5ton)	AP0422H2UL		AP0421H2UL		AP0424BH2UL		
48,000Btu/h (4ton)					AP0484BH2UL	AP0484H2UL	

## Dimensions



## Flow Selector Units

Appearance			
Model name (RBM-)	Y0363FUL	Y0613FUL	Y0963FUL
Connectable indoor unit capacity (kBtu/h)	Up to 36	36 to 61	61 to 96

## Accessories

Branching joints (RBM-)	Y-shape	BY55FUL, BY105FUL, BY205FUL
	Header	HY1043FUL, HY1083FUL, HY2043FUL, HY2083FUL
T-joint for outdoor unit (RBM-)	BT14FUL	
Connection cable kit (RBC-)	CBK15FUL	



Notice: Toshiba Carrier is committed to continuously improving its products to ensure the highest quality and reliability standards, and to meet local regulations and market requirements. All features and specifications are subject to change without prior notice.