IT COOLING

CLOSE CONTROL AIR CONDITIONERS

S-MEXT-G00 M2

FULL INVERTER AIR CONDITIONING SPLIT SYSTEM FOR SMALL AND MEDIUM SIZE IT ENVIRONMENTS FROM 8 TO 19 kW

INVERTER

EEV

EC FAN

R 32

MITSUBISHI ELECTRIC

Changes for the Better

s-MEXT-G00 M2

Highest energy efficiency, reduced footprint and unchallenged quality for small and medium data centers.

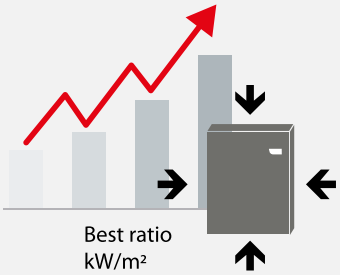
Building on the strong legacy of the RC brand in IT Cooling, Mitsubishi Electric presents s-MEXT-G00:
The new split cooling system that joins together the best of RC experience and technology with the highest quality and reliability standards of Mitsubishi Electric.

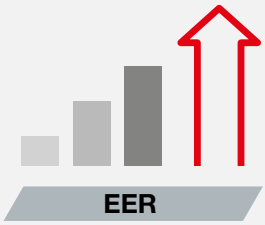
Engineered with the best kW/m² ratio and a green approach, this innovative cooling package gets your data center ready for the future.

HIGHEST CAPACITY PER FOOTPRINT

Thanks to the split design, the indoor s-MEXT-G00 air conditioner matches the highest efficiency levels with the industry's most compact footprint.

Its small size design means they can be easily integrated in small IT rooms or existing environments, all without sacrificing any kW per square meter.





EXCEEDING YOUR EFFICIENCY TARGETS

Air conditioning and cooling systems account for about 40% of total electricity usage in data centers. An optimal cooling approach can lead your organization towards the path of energy efficiency, with great benefits in terms of cost savings.

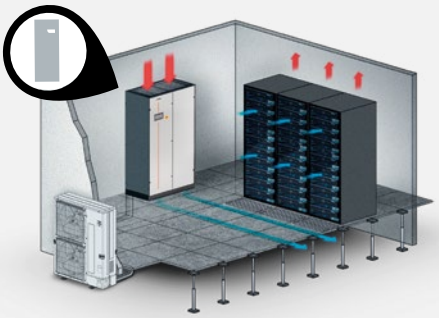
Both the s-MEXT-G00 and Mr. Slim units feature best-in-class components aimed at reducing power consumption and advanced logics to efficiently control the whole cooling system.

- INVERTER COMPRESSORS in the Mr. Slim units, for the continuous modulation of the refrigeration power
- DC fans for Mr. Slim and EC fans for s-MEXT-G00 units that ensure a perfect airflow modulation

BEYOND TRADITIONAL OPERATING LIMITS

Increased power densities in IT environments have led to growing temperatures (up to 23°C) of intake airflows directed to the IT equipment (ASHRAE 'Thermal Guidelines for Data Processing Environments').

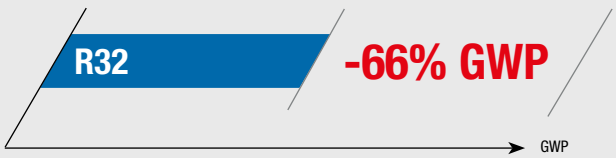
The s-MEXT-G00 and Mr Slim cooling package has been designed to manage return air temperatures up to 35°C, matching the requirements of the most critical data centers (up to 52 °C outdoor air temperature).



THE FIRST R32 SYSTEM
FOR FUTURE-PROOF DATA CENTERS

s-MEXT-G00 can be paired with the R32 Mr. Slim units.

Brilliantly engineered with special components, safety devices, and control logics, the new close control unit is the first IT Cooling system designed for sustainable data centers.



R32 Why R32?

REDUCED ENVIRONMENTAL IMPACT

- **0 ODP** - Ozone Depletion Potential
- **One-third GWP** than R410A
- F-Gas phasedown compliant

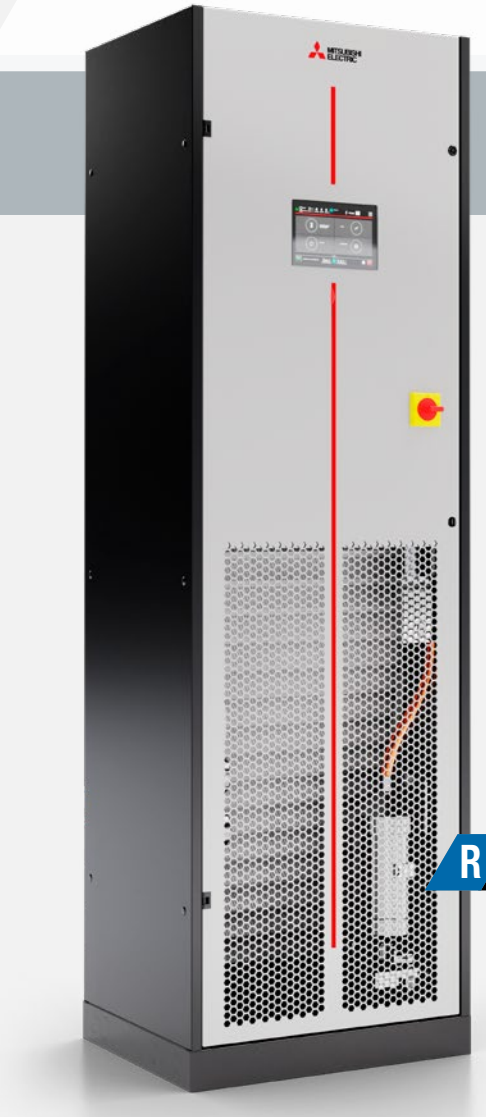
PERFORMANCE & ENVELOPE

- Ideal for the next generation of equipment
- Requires **less refrigerant volume per kW**
- **High refrigeration capacity** and thermal conductivity
- **Low pressure drop**
- **Affordable** and readily available

RELIABILITY

- **Easy to handle**, reuse and recycle
- **Low toxicity**, low flammability
- A single component refrigerant.

s-MEXT-G00 M2



HARNESSING THE HIGHEST CAPACITY INTO A SMALL FOOTPRINT

s-MEXT-G00 controls temperature and relative humidity with pinpoint accurancy, even in case of very strong thermal variations. Brilliantly engineered to deliver top-class efficiency values, the indoor unit features premium quality components: EC plug fans, evaporating coil with hydrofilic treatment, electrical panel and PID microprocessor control system. A wide range of accessories are also available to match also the most critical installation requirements.

s-MEXT-G00 series is equipped with components, safety devices, and control logics making it suitable to be paired with Mr. Slim with R32 refrigerants.

Fast installation and easy maintenance

The constructive features and the internal layout guarantee faster installation and the frontal access to the main components make routine inspections easier.

New generation Inverter EC fans

High performing EC fans made of polimeric ultralight material in order to ensure perfect airflow modulation at partial loads. The fans deliver great advantages in terms of:

- Reduction of noise levels by 4-5 dB(A) compared to traditional solutions
- Reduction of the absorbed power by 25% compared to traditional solutions

EVOLUTION+ Advanced Unit Control

The electronic heart of the unit is the EVOLUTION+ controller. Designed internally to perfectly manage all the unit's variables, it features evolved characteristics in order to make the unit totally configurable:

- Automatic reactivation after black-out
- Serial cards for BMS interfacing
- BLACK BOX for preventive analyses
- Up to 100 events recorded
- Non-volatile ‘flash’ memory for data storage
- Display with easy-to-read graphic icons

Mr. SLIM

Remote condensing unit for outdoor installation featuring EC inverter compressor and axial fans with DC motor and stepless speed control.

By using a special power receiver to sub-cool the refrigerant, together with two individually controlled expansion valves, the units work within the optimum range in any operating state.
The inverters are perfectly combined with the indoor s-MEXT-G00 units through a PAC-IF013 board.

Versions

R HFC R32

- **PUZ** with R32 refrigerant.

Main Features

Developed for high-performance operation, the Power Inverters offer a host of special functions:

- Redundancy functions with automatic switchover in the event of a fault and delay correction
- Easy Maintenance function and automatic refrigerant level monitoring

DC Inverter compressor

INVERTER

The full inverter compressor allows for the modulation of the refrigeration power based on the real needs, thus increasing the efficiency at partial loads.

- No in-rush current
- Energy savings up to 50% compared to traditional on/off units
- Utmost reliability thanks to the continuos operation without on/off cycles

Linear Expansion Valve (LEV)

The linear expansion valve of Mr. Slim ensures a wide modulation of the power cooling, thus optimising the compressor performance according to its operating field variation.

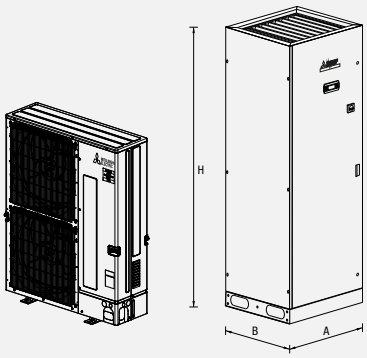
- Rapid achievement of the sytem stability
- Accurate adaptation to load fluctuations

s-MEXT-G00 M2

INVERTER · HFC R32 · EEV · EC FAN

s-MEXT-G00-M2			S 009	S 013	S 018
			HFC R32	HFC R32	HFC R32
SIZE			**F1**	**F1**	**F2**
VERSION	(1)		**U / 0**	**U / 0**	**U / 0**
INDOOR UNIT					
COOLING CAPACITY	(2)				
Total		kW	8.61	11.8	16.7
Sensible		kW	7.92	9.92	16.1
SHR	(3)		0.92	0.84	0.97
System EER (nominal)			3.57	3.42	2.93
"EC" SUPPLY FAN		No.	1	1	2
Air flow		m³/h	2150	2610	4200
SOUND LEVEL ISO 3744	(4)				
Pressure level		dB(A)	57	61	60
Power level		dB(A)	73	77	76
REFRIGERANT CIRCUITS		No.	1	1	1
POWER SUPPLY		V/Ph/Hz	240/1/50	240/1/50	240/1/50
DIMENSIONS					
Length (A)		mm	600	600	1000
Depth (B)		mm	500	500	500
Height (H)		mm	1980	1980	1980
NET WEIGHT		kg	106	110	165

Mr. Slim			PUZ-ZM 100	PUZ-ZM 125	PUZ-ZM 200
Quantity		No.	1	1	1
Model		PUZ	ZM 100 V**	ZM 125 Y**	ZM 200 Y**
Power input	(5)	kW	2.00	2.92	5.05
Power Supply		V/Ph/Hz	240/1/50	415/3+N/50	415/3+N/50
Power supply wiring cable	(6)	No. x mm2	3G4	5G1.5	5G6



Notes:
1 Indoor conditions (in) 27°C - R.H. 47%; Outdoor air temperature 35°C; ESP= 20Pa.
2 SHR = Sensible cooling capacity gross / Total cooling capacity gross.
3 Unit in standard configuration/execution, without optional accessories.
4 Average sound pressure level, at a distance of 1m, for units in a free field on a reflecting surface.
The average sound pressure level is calculated based on the sound power leve measured in accordance with ISO 3744.
5 Gross value. Characteristics referred to entering air at 27°C-47% RH; Ambient temperature 35°C; ESP=20Pa.
6 Minimum section of the power cable for units without accessories.

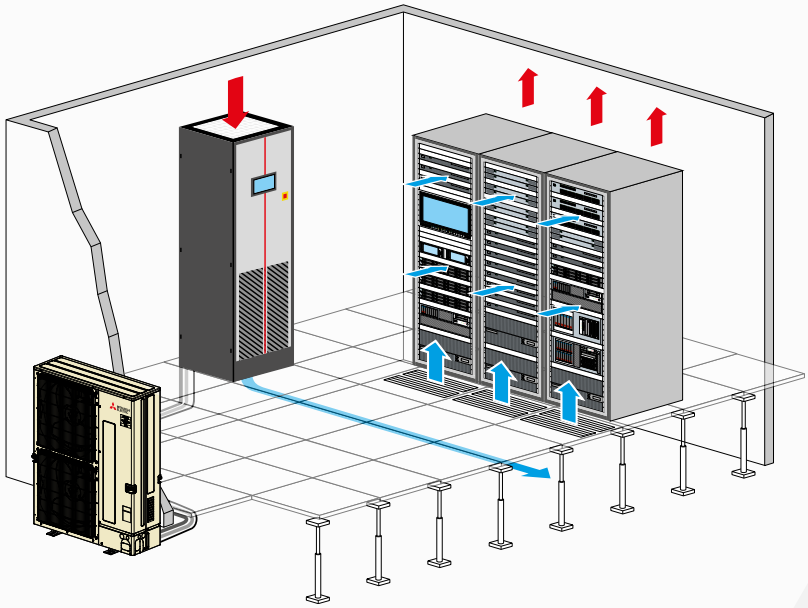
INSTALLATION OPPORTUNITIES

Extreme installation flexibility of the unit, which is available with two types of air supply.

UNDER

WITH BOTTOM AIR SUPPLY, AND TOP AIR RETURN.

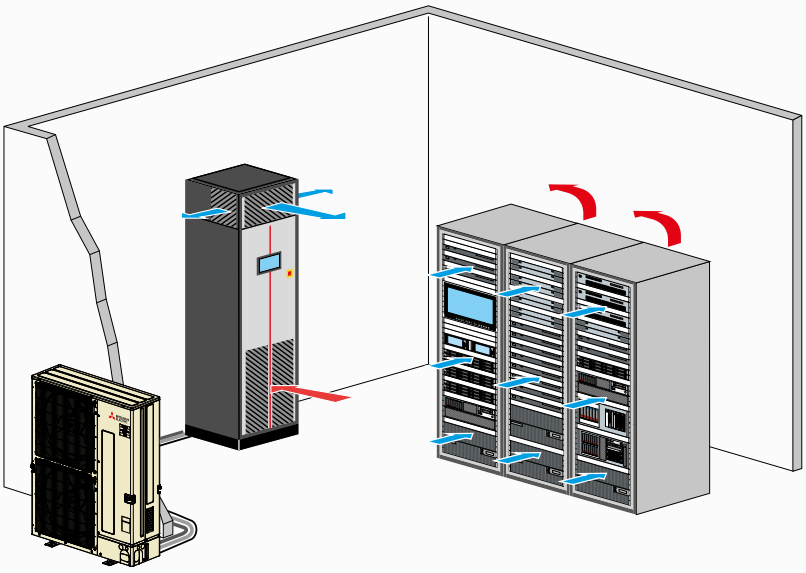
IDEAL FOR ROOMS WITH RAISED FLOOR.



OVER

WITH TOP AIR SUPPLY AND FRONTAL AIR RETURN.

IDEAL FOR ROOMS WITH STANDARD FLOOR.



MITSUBISHI
ELECTRIC
Changes for the Better