

IT COOLING

CLOSE CONTROL AIR CONDITIONERS

# S-MEXT-G00

FULL INVERTER AIR CONDITIONING SPLIT SYSTEM  
FOR SMALL AND MEDIUM SIZE IT ENVIRONMENTS  
FROM 6 TO 42 kW



INVERTER

EEV

EC FAN

R HFC R410A

R 32

 **MITSUBISHI  
ELECTRIC**  
*Changes for the Better*

**INSERT HERE YOUR  
CONTACT DETAILS**

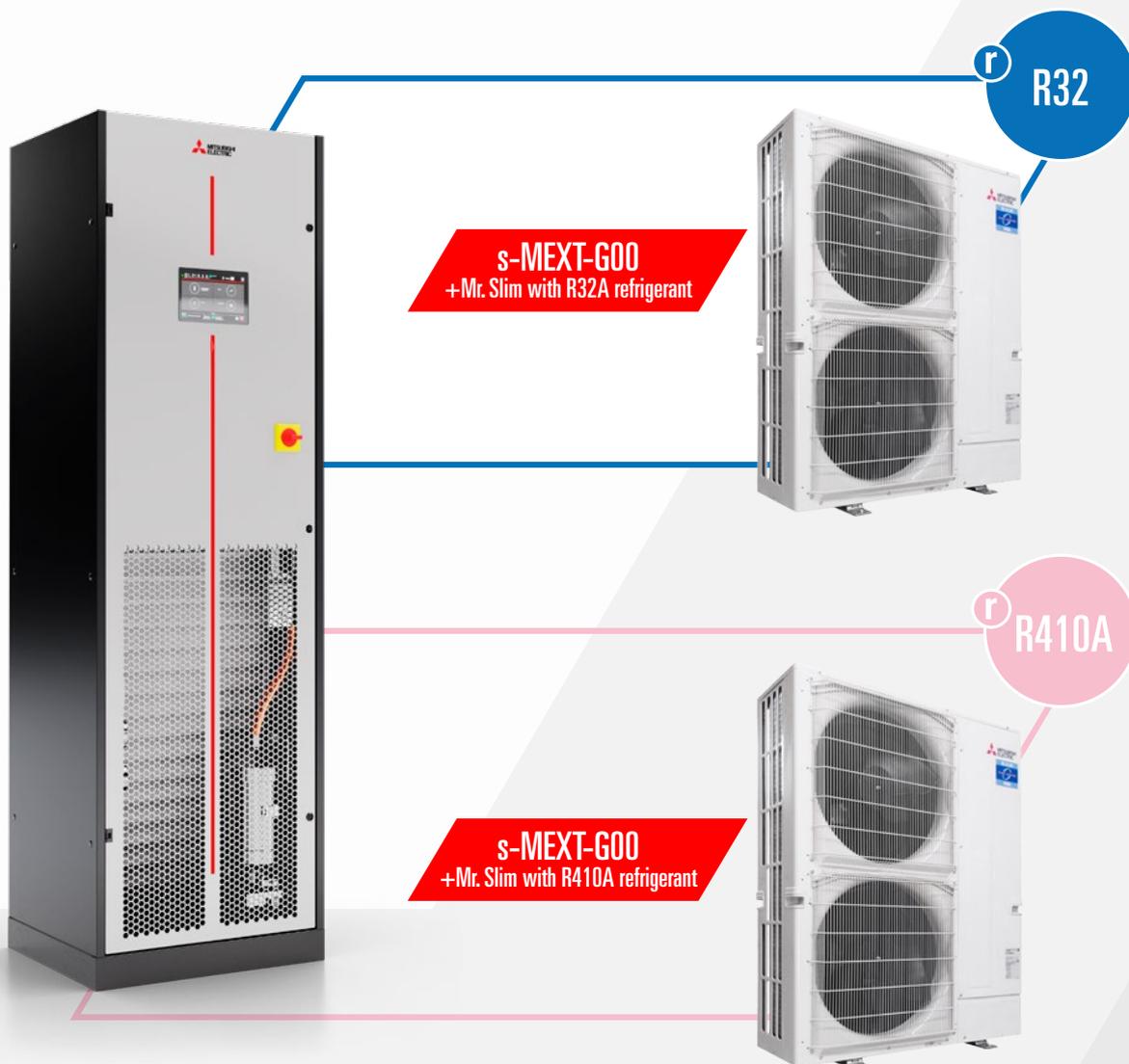
# S-MEXT-G00

**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.

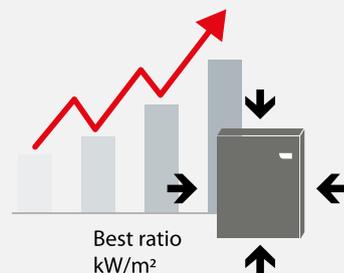
**Engineered with the best kW/m<sup>2</sup> ratio and a green approach, this innovative cooling package gets your data center ready for the future.**



## 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. In addition, the advanced logics help to efficiently control the whole cooling system.

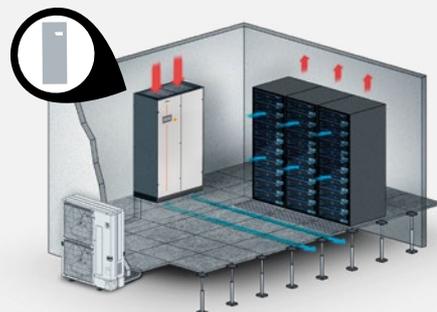
- ▶ INVERTER COMPRESSORS in the Mr. Slim units
- ▶ DC fans for Mr. Slim and EC fans for s-MEXT-G00 units



## BEYOND TRADITIONAL OPERATING LIMITS

Thanks to technological development the IT equipment is able to work under nominal conditions at higher temperatures. This is in accordance with the aim to reduce energy consumption for cooling rooms, in fact the air supply temperatures of air conditioners are rising.

Therefore the S-MEXT-G00 can handle return air temperatures up to 35°C, to bring it in line with current IT technologies working limits. In addition, this unit can work with extreme outside air temperatures up to 52°C.



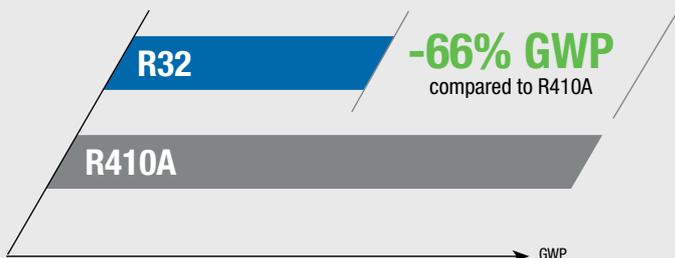
## THE FIRST R32 SYSTEM FOR FUTURE-PROOF DATA CENTERS



## Why R32?

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.



### 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

## HARNESSING THE HIGHEST CAPACITY INTO A SMALL FOOTPRINT

Brilliantly engineered to deliver top-class efficiency values, the indoor unit features premium quality components: EC plug fans, evaporating coil with hydrophilic treatment, electrical panel and PID microprocessor control system.

s-MEXT-G00 controls temperature and relative humidity with pinpoint accuracy, even in case of very strong thermal variations.

s-MEXT-G00 series is equipped with components, safety devices, and control logics making it suitable to be paired with Mr. Slim with R410A and R32 refrigerants.

## 2 System solutions



**s-MEXT-G00** Close control air conditioner to be coupled with Mr. Slim featuring R410A refrigerant

**s-MEXT-G00** Close control air conditioner to be coupled with Mr. Slim featuring R32 refrigerant

## EC fans

High performing EC fans made of polymeric 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)
- ▶ Reduction of the absorbed power by 25%

## 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.

## 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
- ▶ Up to 200 events recorded
- ▶ Non-volatile 'flash' memory for data storage
- ▶ Display with easy-to-read graphic icons
- ▶ Manage Lan Network up to 10 units

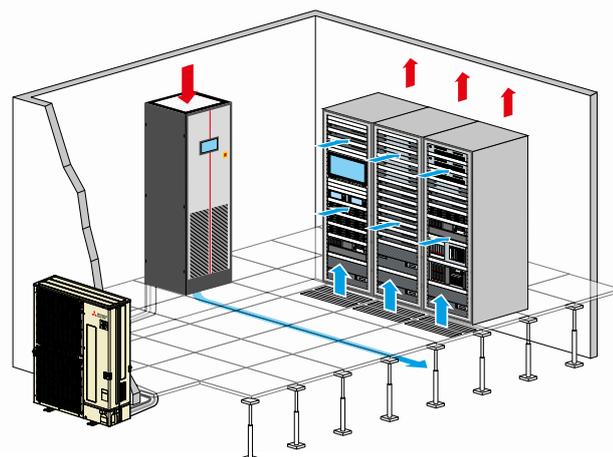
## EXTREME AIRFLOW FLEXIBILITY

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.**



# 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.

## Versions

- ▶ **PUHZ-ZRP**, with R410A refrigerant
- ▶ **PUZ-ZM**, with R32 refrigerant



## Inverter compressor



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%
- ▶ Utmost reliability thanks to the continuous operation without on/off cycles

## 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

## Linear Expansion Valve

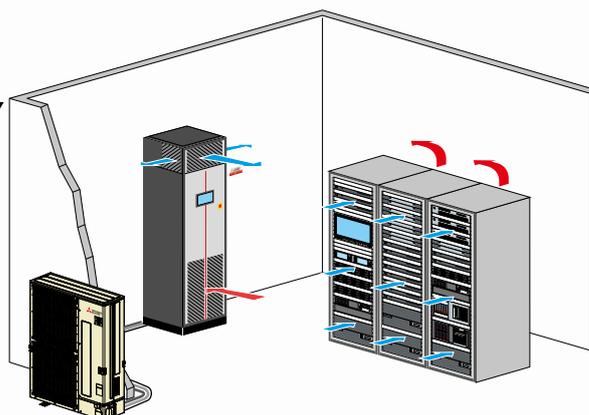
The linear expansion valve of Mr. Slim ensures a wide modulation of the power cooling, thus optimising the compressor performance according to its operating field variation.

- ▶ Rapid achievement of the system stability
- ▶ Accurate adaptation to load fluctuations

## OVER

**WITH TOP AIR SUPPLY  
AND FRONTAL AIR RETURN.**

**IDEAL FOR ROOMS  
WITH STANDARD FLOOR.**



# S-MEXT-G00



s-MEXT-G00			006	009	013	022	028	038	044
Power supply		V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	400/3+N/50	400/3+N/50	400/3+N/50
<b>PERFORMANCE WITH R32</b>									
Total cooling capacity gross	(1)	kW	6,82	10,1	11,9	22,6	28,0	39,0	42,5
Sensible cooling capacity gross	(1)	kW	6,18	8,91	10,2	19,3	26,2	33,6	35,3
Total power input (Comp.+fans)	(1)	kW	1,46	2,35	3,41	7,11	10,31	10,89	14,78
SHR	(2)		0,91	0,88	0,86	0,85	0,94	0,86	0,83
<b>PERFORMANCE WITH R410A</b>									
Total cooling capacity gross	(1)	kW	6,79	10,1	11,9	22,5	27,0	38,8	42,4
Sensible cooling capacity gross	(1)	kW	6,28	9,00	10,3	19,5	25,9	34,0	37,5
Total power input (Comp.+fans)	(1)	kW	1,73	2,52	3,96	7,81	11,61	12,31	16,18
SHR	(2)		0,92	0,89	0,87	0,87	0,96	0,88	0,88
<b>FANS</b>									
Fans type			EC FAN	EC FAN	EC FAN				
Quantity		N°	1	1	1	2	1	1	1
Air flow	(3)	m³/h	2000	2500	2800	5000	7600	8800	10000
<b>NOISE LEVEL</b>									
Sound Power		dB(A)	69	73	77	76	76	79	83
Sound Pressure	(4)	dB(A)	53	57	61	60	60	63	67
<b>SIZE AND WEIGHT</b>									
A	(3)	mm	600	600	600	1000	1000	1000	1000
B	(3)	mm	500	500	500	500	890	890	890
H	(3)	mm	1980	1980	1980	1980	1980	1980	1980
Weight	(3)	kg	103	106	110	165	237	237	237

## Coupling s-MEXT-G00 and Mr. Slim

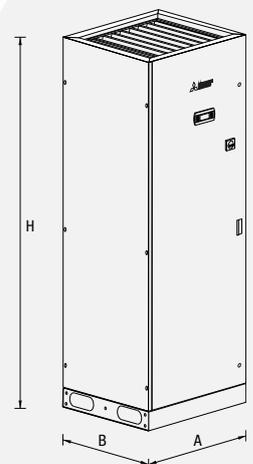
s-MEXT-G00

Mr. Slim

R HFC R32

R HFC R410A

006	1 x PUZ-ZM 60 VHA	1 x PUHZ-ZRP 60 VHA2
009	1 x PUZ-ZM 100 VKA	1 x PUHZ-ZRP 100 VHA3
013	1 x PUZ-ZM 125 VKA 1 x PUZ-ZM 125 YKA	1 x PUHZ-ZRP 125 VKA3 1 x PUHZ-ZRP 125 YKA3
022	1 x PUZ-ZM 250 YKA	1 x PUHZ-ZRP 250 YKA3
028	1 x PUZ-ZM 250 YKA	1 x PUHZ-ZRP 250 YKA3
038	2 x PUZ-ZM 200 YKA	2 x PUHZ-ZRP 200 YKA3
044	2 x PUZ-ZM 250 YKA	2 x PUHZ-ZRP 250 YKA3

**Notes:**

- Indoor conditions (in) 27°C - R.H. 47%; Outdoor air temperature 35°C; ESP= 20Pa.
- SHR = Sensible cooling capacity gross / Total cooling capacity gross.
- Unit in standard configuration/execution, without optional accessories.
- 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 level measured in accordance with ISO 3744.

# S-MEXT-GOO



## R HFC R32

### Mr. Slim with R32 refrigerant

	V/ph/Hz	PUZ-ZM 60	PUZ-ZM 100	PUZ-ZM 125	PUZ-ZM 250	PUZ-ZM 200	PUZ-ZM 250
Power supply		230/1/50	230/1/50	400/3+N/50 230/1/50	400/3+N/50	400/3+N/50	400/3+N/50

#### R32 REFRIGERANT CIRCUIT

Compressors nr.	N°	1	1	1	1	1	1
Compressors power absorption	kW	1,19	1,88	2,82	6,01	4,33	6,01
Refrigerant charge	kg	2,80	4,00	4,00	7,70	7,10	7,70

#### FANS

Quantity	N°	1	2	2	2	2	2
Air flow for fan	m³/h	3300	6600	7200	8400	8400	8400
Fans power input	W	60,0	60,0	60,0	200	200	200

#### SIZE AND WEIGHT

A	mm	950	1050	1050	1050	1050	1050
B	mm	355	370	370	370	370	370
H	mm	943	1338	1338	1338	1338	1338
Weight	kg	70	116	125	135	135	135

## R HFC R410A

### Mr. Slim with R410A refrigerant

	V/ph/Hz	PUZH-ZRP P60	PUZH-ZRP 100	PUZH-ZRP 125	PUZH-ZRP 250	PUZH-ZRP 200	PUZH-ZRP 250
Power supply		230/1/50	230/1/50	400/3+N/50 230/1/50	400/3+N/50	400/3+N/50	400/3+N/50

#### R410A REFRIGERANT CIRCUIT

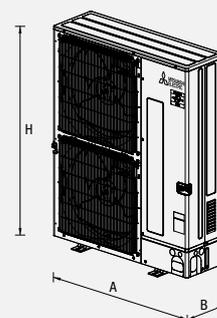
Compressors nr.	N°	1	1	1	1	1	1
Compressors power absorption	kW	1,47	2,05	3,37	6,71	5,04	6,71
Refrigerant charge	kg	3,50	5,00	5,00	7,70	7,10	7,70

#### FANS

Quantity	N°	1	2	2	2	2	2
Air flow for fan	m³/h	3300	6600	7200	8400	8400	8400
Fans power input	W	60,0	60,0	60,0	200	200	200

#### SIZE AND WEIGHT

A	mm	950	1050	1050	1050	1050	1050
B	mm	360	370	370	370	370	370
H	mm	943	1338	1338	1338	1338	1338
Weight	kg	67	116	125	135	135	135



#### Notes:

- Indoor conditions (in) 27°C - R.H. 47%; Outdoor air temperature 35°C; ESP= 20Pa.
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