

IT COOLING

CLOSE CONTROL AIR CONDITIONERS

S-MEXT GOO

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

Mitsubishi Electric Europe B.V.

Mitsubishi-Electric-Platz 1
40882 Ratingen
Deutschland

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.

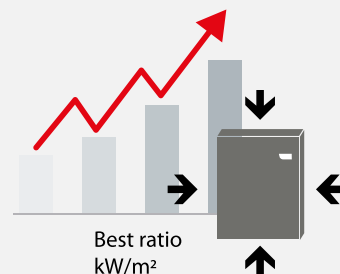
Engineered with the best kW/m² ratio and a green approach, this innovative cooling package gets your data center ready for the future.



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.

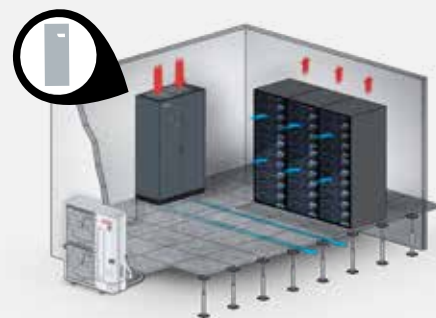
Both the s-MEXT G00 and Mr. Slim units feature best-in-class components aimed at reducing power consumption and advanced logics to efficiently control the whole cooling system.

- ▶ 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).



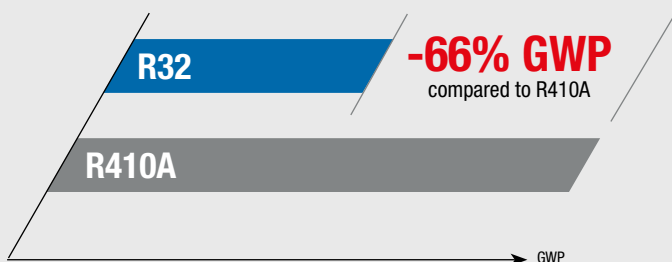
THE FIRST R32 SYSTEM FOR FUTURE-PROOF DATA CENTERS

R32

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

s-MEXT G00 controls temperature and relative humidity with pinpoint accuracy, 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 hydrophilic 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 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

New generation Inverter 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) compared to traditional solutions
- ▶ Reduction of the absorbed power by 25% compared to traditional solutions

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
- ▶ 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

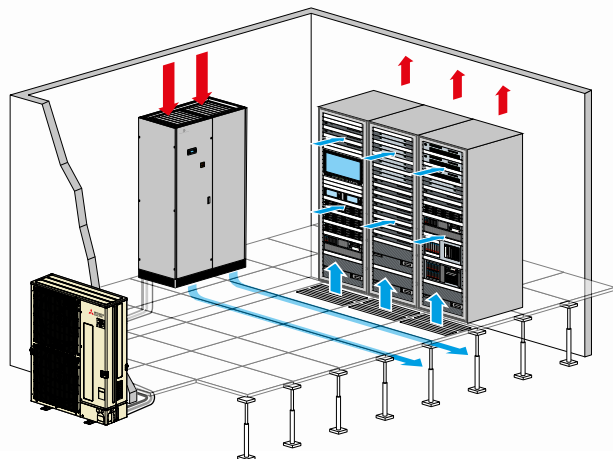
EXTREME AIRFLOW FLEXIBILITY

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.

The inverters are perfectly combined with the indoor s-MEXT G00 units through a PAC-IF013 board.

Versions

- ▶ **PUHZ**, with R410A refrigerant
- ▶ **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

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 continuous operation without on/off cycles

Linear Expansion Valve (LEV)

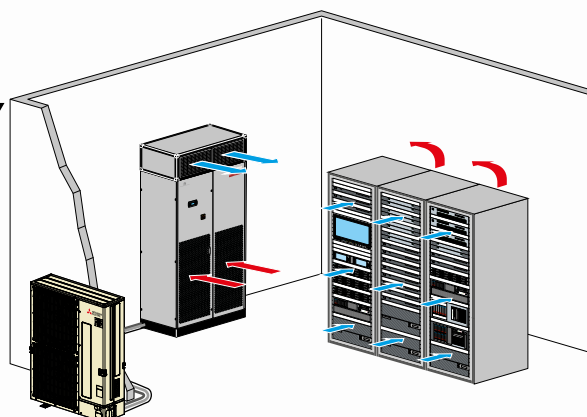
The linear expansion valve of Mr. Slim ensures a wide modulation of the power cooling, thus optimising the compressor performance according to its operating field variation.

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

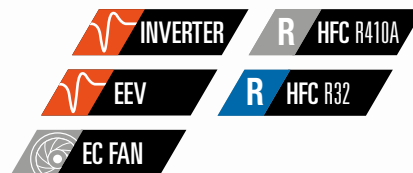
OVER

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

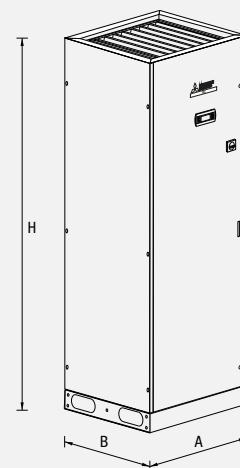
**IDEAL FOR ROOMS
WITH STANDARD FLOOR.**



S-MEXT G00



s-MEXT G00			S 006	S 009	S 013	S 022	D 038	D 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
PERFORMANCE WITH R32								
Total cooling capacity gross	(1)	kW	6,82	10,1	11,9	22,6	39,0	42,5
Sensible cooling capacity gross	(1)	kW	6,18	8,91	10,2	19,3	33,6	35,3
Total power input (Comp.+fans)	(1)	kW	1,46	2,35	3,41	7,11	6,16	8,37
SHR	(2)		0,91	0,88	0,86	0,85	0,86	0,83
PERFORMANCE WITH R410A								
Total cooling capacity gross	(1)	kW	6,79	10,1	11,9	22,5	38,8	42,4
Sensible cooling capacity gross	(1)	kW	6,28	9,00	10,3	19,5	34,0	37,5
Total power input (Comp.+fans)	(1)	kW	1,73	2,52	3,96	7,81	6,88	9,07
SHR	(2)		0,92	0,89	0,87	0,87	0,88	0,88
FANS								
Fans type			EC FAN	EC FAN	EC FAN	EC FAN	EC FAN	EC FAN
Quantity		N°	1	1	1	2	1	1
Air flow	(3)	m ³ /h	2000	2500	2800	5000	8800	10000
NOISE LEVEL								
Sound Power		dB(A)	69	73	77	76	79	83
Sound Pressure	(4)	dB(A)	53	57	61	60	63	67
SIZE AND WEIGHT								
A	(3)	mm	600	600	600	1000	1000	1000
B	(3)	mm	500	500	500	500	890	890
H	(3)	mm	1980	1980	1980	1980	1980	1980
Weight	(3)	kg	103	106	110	165	237	237

**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.

Mr. SLIM

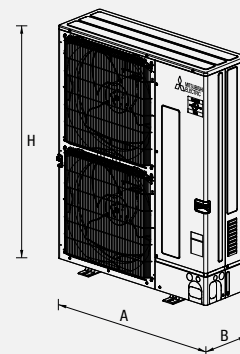


R HFC R32

Mr. Slim with R32 refrigerant		PUZ-ZM 60	PUZ-ZM 100	PUZ-ZM 125	PUZ-ZM 250	PUZ-ZM 200	PUZ-ZM 250
Power supply	V/ph/Hz	230/1/50	230/1/50	400/3+N/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	m ³ /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		PUZH-ZRP P60	PUZH-ZRP 100	PUZH-ZRP 125	PUZH-ZRP 250	PUZH-ZRP 200	PUZH-ZRP 250
Power supply	V/ph/Hz	230/1/50	230/1/50	400/3+N/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	m ³ /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.
- 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.



Neue Möglichkeiten entdecken

Greifen Sie in Zukunft immer und überall auf die passende Information zu – online, offline und interaktiv. Aktuelle Inhalte von Mitsubishi Electric finden Sie jetzt auch digital bei myDocs.

Verwenden Sie myDocs mit Smartphone und Tablet oder im Büro am Computer.



Jetzt diese Produktinformation auf myDocs abrufen:
www.mitsubishi-les.com/apps



Mitsubishi Electric Europe B.V.

Mitsubishi-Electric-Platz 1
40882 Ratingen
Deutschland

Telefon: 02102 486 8710
mitsubishi-les.com



for a greener tomorrow

Eco Changes is the Mitsubishi Electric Group's environmental statement, and expresses the Group's stance on environmental management. Through a wide range of businesses, we are helping contribute to the realization of a sustainable society.

