

GR-Z

**MICROCHANNEL COIL REMOTE CONDENSERS
WITH AC & EC FANS FOR CLOSE CONTROL
AIR CONDITIONERS. FROM 9 TO 156 kW**



GR-Z

REMOTE CONDENSERS



**Microchannel coil remote condensers
with AC & EC axial fans.
From 9 to 156 kW**

High efficiency remote condensers to be coupled with indoor close control air conditioners. The condensers feature microchannel coils and AC or EC fans in order to provide best-in-class efficiency and higher corrosion resistance. The units can be either installed vertically or horizontally and are available in standard or ultra low noise versions.

ACOUSTIC VERSIONS

- ▶ **B** Standard version
- ▶ **L** Ultra-low noise version

AVAILABLE POWER SUPPLY

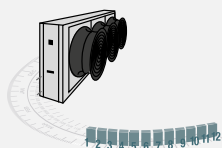
GR-Z Remote condensers with AC fans:

- ▶ 230V/1/50Hz

GR-Z Remote condensers with EC fans:

- ▶ 200-277/1/50-60Hz
- ▶ 380-480V/3/50-60Hz

A WIDE RANGE OF INSTALLATION OPPORTUNITIES



- ▶ 2 Series

- ▶ 12 Models from 1 to 6 fans



- ▶ Vertical installation with horizontal airflow

- ▶ Horizontal installation with vertical airflow and supporting feet

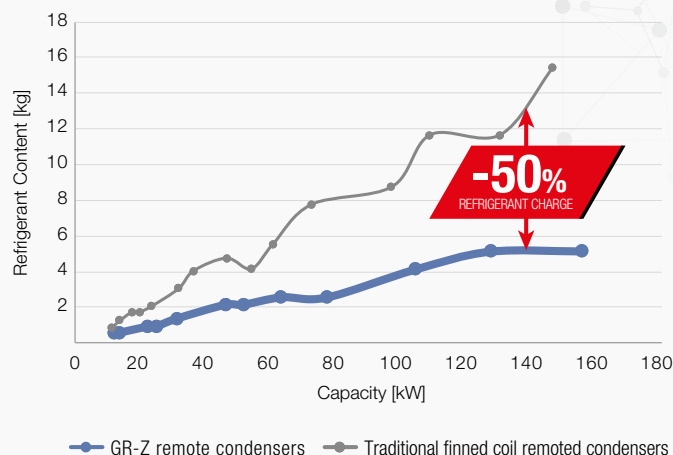
KEY FEATURES

LARGE REFRIGERANT SAVINGS

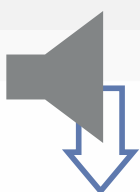


GR-Z remote condensers feature over 50% less refrigerant charge compared to traditional finned coil remote condensers and up to +45% increase in the heat exchange efficiency.

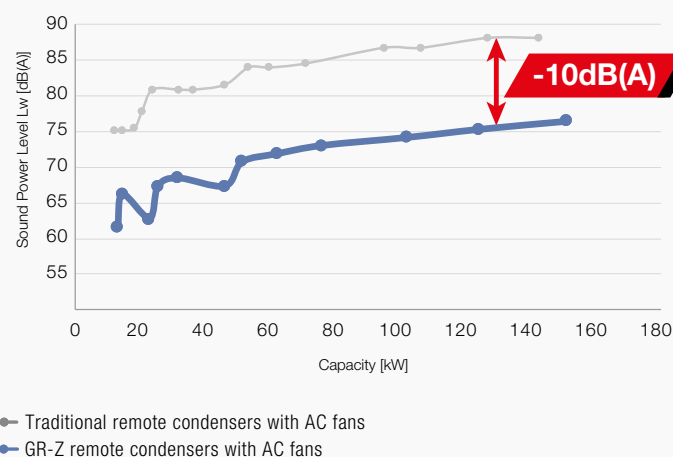
This provides a more environmentally friendly solution and significant savings for your cooling system.



LOW NOISE EMISSIONS



Each single detail of the GR-Z remote condensers has been accurately designed to ensure very low noise levels: from the new generation AC and EC fans (both ErP2020 compliant), to the advanced electronics and the sound-proof insulation of the lateral panelling. Compared to low noise remote condensers with finned coils, GR-Z remote condensers can achieve up to 10 dB(A) less sound emissions.



HIGH CORROSION RESISTANCE AND LONGER LIFE CYCLE



High corrosion resistance both for the aluminium casing and the coils. GR-Z remote condensers are therefore the ideal solution for various harsh climates (C4, C5-M and C5-I very corrosive type environments according to ISO 12944-2014):

- ▶ Industrial areas of high humidity and aggressive atmosphere (C5-I)
- ▶ Production plants, chemical plants and buildings with high pollution (C4, C5-I, C5-M)
- ▶ Coastal areas with high levels of salt in the air

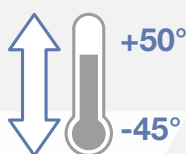
EARTHQUAKE COMPLIANT



GR-Z remote condensers have been certified at the highest level of seismic intensity required by the ICC-ES AC 156 'Acceptance criteria for seismic certification by shake-table testing of nonstructural components - Oct. 2010'.

The unit in anti-seismic version is equipped with a reinforced casing with lateral reinforcements and reinforced supports, completely assembled and tested in factory.

WIDE OPERATING RANGE



Temperature range from -45°C* to +50°C

* -45°C: for AC version only

QUICK & EASY CONNECTION



Pre-wired connection thanks to the onboard main switch. No wiring is necessary.

R32 READY

R32 READY

Suitable for R32 refrigerant

TECHNOLOGICAL CHOICES

Fan section

High efficiency fans (Erp 2020 compliant) with AC or EC motor in optimized full bell mouth with guiding vane and short diffusor.

Sickled-shaped blades made of uncoated aluminium and free nozzle made of high performance composite material.

- ▶ **Stable operation and long life cycle** thanks to the dynamic balancing at two levels
- ▶ **Precise and advanced airflow control** thanks to the integrated controller (for the EC fan versions)
- ▶ **IP54 protection**
- ▶ **Maximum airflow and efficiency thanks to:**
 - The aluminium blades with innovative bionic design
 - Airflow conveyor in composite material
 - Integrated diffuser with dynamic energy recovery system



Main switch

Refrigerant circuits connections

Safe refrigerant connections to be welded on the unit side in order to prevent any fluid leaks.



Casing

Casing made of aluminium with removable panels on the electric board side.

The aluminium alloy offers high mechanical resistance, good surface sturdiness and high corrosion resistance against atmospheric agents (ideal for environments classified from C1 to C5-M according to ISO 12944-2014).



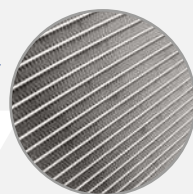
Coils and coatings

GR-Z remote condensers feature microchannel condensing coils consisting of parallel flow aluminium tubes as standard. E-coating treatment is available as an option.

- ▶ Better heat exchange thanks to the lower thermal resistance
- ▶ Over 50% reduced refrigerant charge
- ▶ Higher corrosion resistance
- ▶ Lower weight
- ▶ Full long life alloy in aluminium to avoid corrosion
- ▶ 40% less pressure leakages on the refrigerant sides

Aluminium coil (Standard)

2000 h
SWAAT test*



Aluminium coil with E-coating treatment

4000 h
SWAAT test*

- ✓ Excellent resistance to **UV** rays

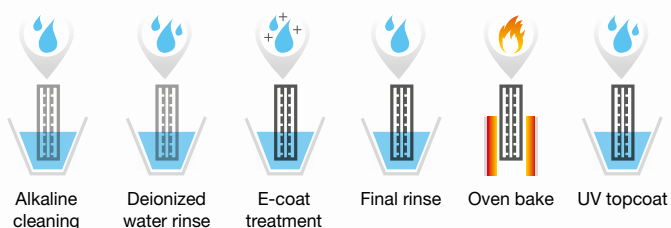
*Tests have been conducted according to the ASTM G85-A3 - Acidified synthetic seawater test - at 49°C.

Electrical connections

ACCESSORIES

- ▶ Supporting feet for vertical airflow
- ▶ Optional coil with e-coating treatment for better corrosion resistance
- ▶ Kit for earthquake protection available

E-coating process





GR-Z

Microchannel coil remote condensers for close control air conditioners with AC & EC axial fans.
From 9 to 156 kW



AC AXIAL

GR-Z Remote condenser

Fans with AC electric motors and STANDARD acoustic version

			013	015	024	027	034	049	55	67	82	110	134	164
POWER SUPPLY	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
CAPACITY	(1) kW		12,9	14,4	23,0	25,7	32,0	47,0	52,5	63,8	77,8	105	128	156
Total engaged power	kW		0,26	0,31	0,51	0,60	0,54	0,87	1,02	0,99	1,55	2,04	1,98	3,1
ACOUSTIC VERSION			B	B	B	B	B	B	B	B	B	B	B	B
Sound power level [Lw] ISO 9614-2	dB(A)		65,0	69,0	66,0	70,0	71,0	70,0	73	74	75	76	77	78
Sound pressure level [Lpm] ISO 3744	(2) dB(A)		34,2	20,2	35,4	38,9	39,9	38,8	42,3	42,5	43,4	45	45,3	46,2
DIMENSIONS														
Length	mm		840	840	1220	1220	1430	2110	2110	2670	2670	2280	2835	2849
Width	mm		718	718	718	718	718	718	718	718	718	2200	2200	2200
Height	mm		900	900	900	900	1100	1100	1100	1100	1100	1168	1168	1168
NET WEIGHT	kg		30	30	45	45	53	86	86	100	120	177	208	248

GR-Z Remote condenser

Fans with AC electric motors and LOW NOISE acoustic version

			010	011	018	021	025	036	043	051	063	086	102	126
POWER SUPPLY	V/ph/Hz		230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
CAPACITY	(1) kW		9,41	11,2	16,7	20	24,5	34,2	40,9	48,6	60	81,8	97,1	120,1
Total engaged power	kW		0,17	0,22	0,33	0,42	0,38	0,56	0,71	0,69	1,1	1,43	1,4	2,17
ACOUSTIC VERSION			L	L	L	L	L	L	L	L	L	L	L	L
Sound power level [Lw] ISO 9614-2	dB(A)		56	60	59	62	63	62	66	66	67	69	69	70
Sound pressure level [Lpm] ISO 3744	(2) dB(A)		25,1	28,7	27,8	31,3	32,3	31,2	34,7	34,9	35,8	37,4	37,7	38,6
DIMENSIONS														
Length	mm		840	840	1220	1220	1430	2110	2110	2670	2670	2280	2835	2849
Width	mm		718	718	718	718	718	718	718	718	718	2200	2200	2200
Height	mm		900	900	900	900	1100	1100	1100	1100	1100	1168	1168	1168
NET WEIGHT	kg		32	32	47	47	56	89	89	103	124	184	215	255

Notes:

1 Referred to condensing temperature at 50°C and ambient air temperature at 35°C (With R410A refrigerant).

2 Sound pressure level at 10m distance, unit in a free field on a reflective surface.



EC AXIAL

GR-Z Remote condenser

Fans with EC electric motors and STANDARD acoustic version

			013	015	024	027	034	049	55	67	82	110	134	164
POWER SUPPLY	V/ph/Hz	230/1/50	230/1/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
CAPACITY (1)	(1) kW	11,4	13,8	23,0	25,7	32,0	47,0	52,5	63,8	77,8	105,0	128,0	156,0	
Total engaged power	kW	0,08	0,18	0,23	0,38	0,34	0,45	0,65	0,65	0,98	1,3	1,3	1,95	
ACOUSTIC VERSION		B	B	B	B	B	B	B	B	B	B	B	B	B
Sound power level [Lw] ISO 9614-2	dB(A)	58,0	64,0	66,0	70,0	71,0	70,0	73,0	74,0	75,0	76,0	77,0	78,0	
Sound pressure level [Lpm] ISO 3744	(2) dB(A)	27,5	33,3	35,4	38,9	39,9	38,8	42,3	42,5	43,4	45,0	45,3	46,2	
DIMENSIONS														
Length	mm	840	840	1220	1220	1430	2110	2110	2670	2670	2280	2835	2849	
Width	mm	718	718	718	718	718	718	718	718	718	2200	2200	2200	
Height	mm	900	900	900	900	1100	1100	1100	1100	1100	1168	1168	1168	
NET WEIGHT	kg	28	28	43	43	50	82	82	96	114	169	200	237	

GR-Z Remote condenser

Fans with EC electric motors and LOW NOISE acoustic version

			010	011	018	021	025	036	043	051	063	086	102	126
POWER SUPPLY	V/ph/Hz	230/1/50	230/1/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
CAPACITY (1)	(1) kW	8,3	10,7	16,7	20,0	24,5	34,2	40,9	48,6	60,0	81,8	97,1	120,0	
Total engaged power	kW	0,02	0,06	0,06	0,13	0,12	0,12	0,22	0,22	0,33	0,45	0,44	0,67	
ACOUSTIC VERSION		L	L	L	L	L	L	L	L	L	L	L	L	L
Sound power level [Lw] ISO 9614-2	dB(A)	51,0	57,0	59,0	62,0	63,0	62,0	66,0	66,0	67,0	69,0	69,0	70,0	
Sound pressure level [Lpm] ISO 3744	(2) dB(A)	19,9	25,7	27,8	31,3	32,3	31,2	34,7	34,9	35,8	37,4	37,7	38,6	
DIMENSIONS														
Length	mm	840	840	1220	1220	1430	2110	2110	2670	2670	2280	2835	2849	
Width	mm	718	718	718	718	718	718	718	718	718	2200	2200	2200	
Height	mm	900	900	900	900	1100	1100	1100	1100	1100	1168	1168	1168	
NET WEIGHT	kg	29	29	45	45	53	85	85	99	118	176	207	244	

Notes:

1 Referred to condensing temperature at 50°C and ambient air temperature at 35°C (With R410A refrigerant).

2 Sound pressure level at 10m distance, unit in a free field on a reflective surface.



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.



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