# Ventilation

# **Product Information**

GUG-01/02/03SL-E Lossnay Air Processing DX Unit Making a World of Difference

# Lossnay







The Lossnay GUG-01/02/03SL-E
Air Processing DX Unit works
in conjunction with a Mr Slim
outdoor unit to heat and
cool the supply air from a
Lossnay Mechanical Ventilation
Heat Recovery (MVHR) unit.

The combination of these three products effectively creates an air handling system that can supply temperature controlled clean fresh air in a highly efficient manner.

# **Key Features**

- Provides heat recovery ventilation and air conditioning from the same ventilation system
- Air flow range from 500m<sup>3</sup>/hr. to 2500m<sup>3</sup>/hr
- Single system reduces installation time, costs and space
- Can be operated in supply air or return air control
- Built in drain pump to facilitate easy installation
- Single remote controller provides basic functions. PZ-61DR-E can be added for full functionality
- Available in 3 sizes, 01, 02 & 03



Air Conditioning | Heating Ventilation | Controls



# **GUG-01SL-E**

## Connection to LGH-50RVX-E or LGH-65RVX-E

MODEL	GUG-01SL-E (Connection to LGH-50RXVX-E or LGH-65RVX-E)
Refrigerant	R410A
Electrical power supply	220-240V / 50Hz, 220V / 60Hz (Supplied from outdoor unit)
Input power	Heating / Fan: 2.5W, Cooling: 12.4W
Running current	Less than 0.1A
Weight	21kg *Accessories: Approx. 1kg
Function	Heating / Cooling / Auto / Fan *Auto is only available for RA temperature control
	RA (Return Air) temperature control

RA (Return Air) temperature control		Connectable Lossnay unit LGH-50RVX-E	Connectable Lossnay unit LGH-65RVX-E
Capacity [kW]	Heating / Cooling	6.5 (2.4 + 4.1) / 5.6 (2.0 + 3.6)	7.7 (3.2 + 4.5) / 6.6 (2.6 + 4.0)
SHF		0.66	0.69
Performance index	Heating / Cooling	4.09 / 4.69	4.72 / 5.03
Air flow range at SP3 and	I SP4	350 - 695 m³/h	350 - 900 m³/h
Connectable outdoor unit	t	PUHZ-ZRP35	PUHZ-ZRP35
Ext. piping		Diameter Liquid / Gas: 6.35 / 12.7	Diameter Liquid / Gas: 6.35 / 12.7
		Maximum length: 50m, Maximum height: 30m	Maximum length: 50m, Maximum height: 30m

Ventilation	n Specification	Conn	ectable Lossna	y unit LGH-50F	RVX-E	Connectable Lossnay unit LGH-65RVX-E			
Fan speed		SP4	SP3	SP2	SP1	SP4	SP3	SP2	SP1
Air volume	[m³/h]	500	375	250	125	650	488	325	163
	[L/s	139	104	69	35	181	135	90	45
External static pressure [Pa]		105	59	26	7	95	53	24	6

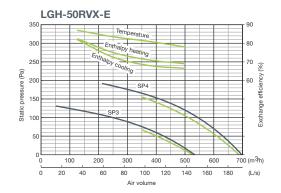
#### Notes:

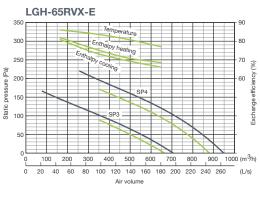
Notes:

1. The running current and input power are based on 230V/50Hz. 2. The cooling and heating capacities are based on the air conditions listed below and the rated airflow of fan speed 4. Cooling Indoor: 27°CDB/19°CWB Outdoor: 36°CDB/24°CWB Heating Indoor: 20°CDB/15°CWB Outdoor: 7°CDB/6°CWB 3. The first figure in () of the capacity specification is the heat recovery energy of the Lossnay unit. The second figure is the capacity specification for the Dx-coil connected to the outdoor unit. 4. "Performance index" is the calculated value at the temperature conditions above and is reference purpose only, Performance index = Total capacity ÷ total power consumption of outdoor unit and Lossnay unit 5. The external static pressure loss of the dx-coil unit when using a 50cm straight duct between the Lossnay and Dx-coil units is longer and/or bent, the pressure loss of the duct work should be included in the pressure loss calculation. 6. The designed airflow of the system (Lossnay, Dx-coil and duct work) at fan speed 3 and 4 should be kept within "Airflow range at SP3 and SP4" listed above. This range is shown as the green line in graphs of the characteristics curve. If the Lossnay airflow is out of this range, the compressor of the outdoor unit may stop for self-protection purposes. 7. Sp installing the Dx-coil unit with a Lossnay unit, the air blow noise level is quieter at fan speed 4 as shown below. LGH-50RVX-E: about 40B quieter, LGH-65RVX-E: about 70B quieter.

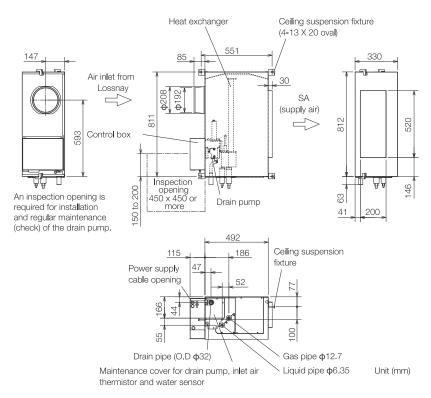
8. Refrigerant fluid with a GWP equal to 1975. This means that if 1kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 1975 times higher than 1kg of CO<sub>2</sub>, over a period of 100 years. Never try to interfere with the refrigerant time that the affection of the atmosphere is quieter.

### **Fan Curve Characteristics**





#### **GUG-01SL-E Schematics**



# **GUG-02SL-E**

## Connection to LGH-80RVX-E or LGH-100RVX-E

MODEL	GUG-02SL-E (Connection to LGH-80RXVX-E or LGH-100RVX-E)
Refrigerant	R410A
Electrical power supply	220-240V / 50Hz, 220V / 60Hz (Supplied from outdoor unit)
Input power	Heating / Fan: 2.5W, Cooling: 12.4W
Running current	Less than 0.1A
Weight	26kg *Accessories: Approx. 1kg
Function	Heating / Cooling / Auto / Fan *Auto is only available for RA temperature control
	RA (Return Air) temperature control / SA (Supply Air) temperature control [Must be set at initial setting and not possible to change from remote controller]

RA (Return Air) temperature control		Connectable Lossnay unit LGH-80RVX-E	Connectable Lossnay unit LGH-100RVX-E			
Capacity [kW]	Heating / Cooling	10.0 (4.0 + 6.0) / 8.3 (3.3 + 5.0)	13.2 (5.1 + 8.1) / 11.3 (4.2 + 7.1)			
SHF		0.69	0.66			
Performance index	Heating / Cooling	4.62 / 4.76	4.42 / 4.98			
Air flow range at SP3 and	I SP4	560 - 1200 m³/h	700 - 1200 m³/h			
Connectable outdoor uni	t	PUHZ-ZRP50	PUHZ-ZRP71			
Ext. piping		Diameter Liquid / Gas: 6.35 / 12.7	Diameter Liquid / Gas: 9.52 / 15.88			
		Maximum length: 50m, Maximum height: 30m	Maximum length: 50m, Maximum height: 30m			
Required optional parts		PAC-SH30RJ-E and PAC-SH50RJ-E	-			

SA (Supply Air) temperature control		Connectable Lossnay unit LGH-80RVX-E	Connectable Lossnay unit LGH-100RVX-E		
Capacity [kW]	Heating / Cooling	10.0 (4.0 + 6.0) / 8.3 (3.3 + 5.0)	11.4 (5.1 + 6.3) / 9.5 (4.2 + 5.3)		
SHF		0.69	0.73		
Performance index	Heating / Cooling	4.62 / 4.76	5.09 / 5.43		
Air flow range at SP3 and	SP4	560 - 1200 m³/h	700 - 1200 m³/h		
Connectable outdoor uni	t	PUHZ-ZRP50	PUHZ-ZRP50		
Ext. piping		Diameter Liquid / Gas: 6.35 / 12.7	Diameter Liquid / Gas: 6.35 / 12.7		
		Maximum length: 50m, Maximum height: 30m	Maximum length: 50m, Maximum height: 30m		
Required optional parts		PAC-SH30RJ-E and PAC-SH50RJ-E	PAC-SH30RJ-E and PAC-SH50RJ-E		

Ventilation	Specification	Connectable Lossnay unit LGH-80RVX-E Connectable Lossnay unit LGH-100R\						RVX-E	
Fan speed		SP4	SP3	SP2	SP1	SP4	SP3	SP2	SP1
Air volume	[m³/h]	800	600	400	200	1,000	750	500	250
	[L/s	222	167	111	56	278	208	139	69
External static pressure [Pa]		130	73	33	8	130	73	33	8

#### Notes:

1. The running current and input power are based on 230V/50Hz. 2. The cooling and heating capacities are based on the air conditions listed below and the rated airflow of fan speed 4. Cooling Indoor: 27°CDB/19°CWB Outdoor: 36°CDB/24°CWB Peating Indoor: 20°CDB/15°CWB Outdoor: 7°CDB/6°CWB 3. The first figure in () of the capacity specification is the heat recovery energy of the Lossnay unit. The second figure is the capacity specification for bed to connected to the outdoor unit. 4. "Performance index" is the calculated value at the temperature conditions above and is reference purpose only. Performance index = Total capacity ÷ total power consumption of outdoor unit and Lossnay unit 5. The external static pressure listed above includes the static pressure loss of the Dx-coil unit when using a 50cm straight duct between the Lossnay and Dx-coil units. When the duct work between the Lossnay and Dx-coil units is longer and/or bent, the pressure loss of the duct work should be included in the pressure loss calculation. 6. The designed airflow of the system (Lossnay, Dx-coil and duct work) at fan speed 3 and 4 should be kept within "Airflow range at SP3 and SP4" listed above. This range is shown as the green line in graphs of the characteristics curve. If the Lossnay airflow is out of this range, the compressor of the outdoor unit may stop for self-protection purposes. 7. By installing the Dx-coil unit with a Lossnay unit, the air blow noise level is quieter at fan speed 4 as shown below. LGH-80RVX-E: about 6dB quieter, LGH-100RVX-E: about 7dB quieter. 8. Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atmosphere. This appliance contains a refrigerant fluid with a GWP equal to 1975. This means that if 1kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 1975 times higher than 1kg of CO<sub>2</sub>, over a period of 100 years. Neve

thermistor and water sensor

**Schematics** 

#### LGH-80RVX-E Temperature 30 @ 20 15 10 (m<sup>3</sup>/h) 200 400 600 800 1000 1200 50 100 150 200 250 300 350 (L/s)

**Fan Curve Characteristics** 



#### Heat exchanger Ceiling suspension fixture (4-13 X 20 oval) 551 394 Air inlet from 30 Lossnay SA $\Rightarrow$ (supply air) 1034 750 009 Control box Inspection 132 150 to 200 opening 450 x 450 or 33 An inspection opening is required Drain pump An inspection opening is required for installation and regular maintenance (check) of the drain pump. When SA temp, control is selected, another inspection opening may be required in front of the unit for SA thermistor replacement only when an error occured on the SA thermistor. more Ceiling suspension 115 186 Power supply cable opening 26 86 55 Drain pipe (O.D $\phi$ 32) Maintenance cover for SA thermistor Maintenance cover for drain pump, inlet air Gas pipe φ15.88

Liquid pipe φ9.52

Unit (mm)

GUG-02SL-E

# **GUG-03SL-E**

## Connection to LGH-150RVX-E or LGH-200RVX-E

MODEL	GUG-03SL-E (Connection to LGH-150RXVX-E or LGH-200RVX-E)				
Refrigerant	R410A				
Electrical power supply	220-240V / 50Hz, 220V / 60Hz (Supplied from outdoor unit)				
Input power	Heating / Fan: 2.5W, Cooling: 12.4W				
Running current	Less than 0.1A				
Weight	28kg *Accessories: Approx. 1kg				
Function	Heating / Cooling / Auto / Fan *Auto is only available for RA temperature control				
	RA (Return Air) temperature control / SA (Supply Air) temperature control [Must be set at initial setting and not possible to change from remote controller]				

RA (Return Air) temperature control		Connectable Lossnay unit LGH-150RVX-E	Connectable Lossnay unit LGH-200RVX-E		
Capacity [kW]	Heating / Cooling	20.7 (7.7 + 13.0) / 15.8 (6.3 + 9.5)	23.8 (10.3 + 13.5) / 18.4 (8.4 + 10.0)		
SHF		0.68	0.76		
Performance index Heating / Cooling		4.24 / 5.27	5.02 / 5.86		
Air flow range at SP3 and	I SP4	1050 - 2250 m³/h	1050 - 2600 m³/h		
Connectable outdoor uni	t	PUHZ-ZRP100	PUHZ-ZRP100		
Ext. piping		Diameter Liquid / Gas: 9.52 / 15.88	Diameter Liquid / Gas: 9.52 / 15.88		
		Maximum length: 75m, Maximum height: 30m	Maximum length: 75m, Maximum height: 30m		

SA (Supply Air) temperature control		Connectable Lossnay unit LGH-150RVX-E	Connectable Lossnay unit LGH-200RVX-E		
Capacity [kW]	Heating / Cooling	16.6 (7.7 + 8.9 ) / 13.4 (6.3 + 7.1 )	19.5 (10.3 + 9.2) / 15.9 (8.5 + 7.4)		
SHF		0.85	0.90		
Performance index	Heating / Cooling	5.46 / 5.32	6.30 / 5.85		
Air flow range at SP3 and	I SP4	1050 - 2250 m³/h	1050 - 2600 m³/h		
Connectable outdoor unit	t	PUHZ-ZRP71	PUHZ-ZRP71		
Ext. piping		Diameter Liquid / Gas: 9.52 / 15.88	Diameter Liquid / Gas: 9.52 / 15.88		
		Maximum length: 50m, Maximum height: 30m	Maximum length: 50m, Maximum height: 30m		

Ventilation	Specification	Connectable Lossnay unit LGH-150RVX-E Connectable Lossnay unit LGH-200RV						RVX-E	
Fan speed		SP4	SP3	SP2	SP1	SP4	SP3	SP2	SP1
Air volume	[m³/h]	1,500	1,125	750	375	2,000	1,500	1,000	500
	[L/s	417	313	208	104	556	417	278	139
External static pressure [Pa]		150	84	38	9	105	59	26	7

### Notes:

1. The running current and input power are based on 230V/50Hz. 2. The cooling and heating capacities are based on the air conditions listed below and the rated airflow of fan speed 4. Cooling Indoor: 27°CDB/19°CWB Outdoor: 35°CDB/24°CWB Heating Indoor: 20°CDB/15°CWB Outdoor: 7°CDB/6°CWB 3. The first figure in () of the capacity specification is the heat recovery energy of the Lossnay unit. The second figure is the capacity specification for the Dx-coil connected to the outdoor unit. 4. "Performance index" is the calculated value at the temperature conditions above and is reference purpose only. Performance index = Total capacity ÷ total power consumption of outdoor unit and Lossnay unit 5. The external static pressure listed above includes the static pressure loss of the Dx-coil unit when using a 50cm straight duct between the Lossnay and Dx-coil units is longer and/or bent, the pressure loss of the duct work should be included in the pressure loss calculation. 6. The designed airflow of the system (Lossnay, Dx-coil and duct work) at fan speed 3 and 4 should be kept within "Airflow range at SP3 and SP4" listed above. This range is shown as the green line in graphs of the characteristics curve. If the Lossnay airflow is out of this range, the compressor of the outdoor unit may stop for self-protection purposes. 7. By installing the Dx-coil unit with a Lossnay unit, the air blow noise level is quieter at fan speed 4 as shown below. LGH-150,200FtVX-E: about 3dB quieter. 8. Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atmosphere. This appliance contains a refrigerant fluid with a GWP equal to 1975. This means that if 1kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 1975 times higher than 1kg of CO<sub>2</sub>, over a period of 100 years. Never try to interfere with the refrigerant for disassemble the product yourself and

#### GUG-03SL-E **Fan Curve Characteristics Schematics** LGH-150RVX-E Heat exchanger Temperature Ceiling suspension fixture (4-13 X 20 oval) 300 404 250 (Pa) 49 Air inlet from SA Lossnay (supply air) 200 $\Rightarrow$ 750 156 130 Control box 3000 (m<sup>3</sup>/h) 500 1000 1500 2000 2500 329 290 100 200 300 400 500 600 700 800 (L/s) <u>uyű</u> 200 518## LGH-200RVX-E 150 to 2 An inspection opening is required for installation and regular maintenance (check) of the drain pump. When SA temp. control is Temperature Enthalpy heating Drain pump 300 80 When SA temp, control is selected, another inspection opening may be required in front of the unit for SA thermistor replacement only when an error occurred on the SA thermistor. 250 340 Ceiling suspension fixture Power supply cable opening 52 Maintenance cover for SA thermistor Drain pipe (O.D φ32) 3000 (m<sup>3</sup>/h) Gas pipe φ15.88 500 1000 1500 2000 2500 100 200 400 500 600 700 800 (L/s) Liquid pipe $\phi 9.52$ Maintenance cover for drain pump, inlet air thermistor and water sensor Unit (mm) With GUG-03SLE-E Without GUG-03SLE-E

# **GUG-03SL-E**

# Connection to LGH-150RVXT-E, LGH-200RVXT-E or LGH-250RVXT-E

MODEL	GUG-03SL-E (Connection to LGH-150RVXT-E, LGH-200RVXT-E or LGH-250RVXT-E)
Refrigerant	R410A
Electrical power supply	220-240V / 50Hz, 220V / 60Hz (Supplied from outdoor unit)
Input power	Heating / Fan: 2.5W, Cooling: 12.4W
Running current	Less than 0.1A
Weight	28kg *Accessories: Approx. 1kg
Function	Heating / Cooling / Auto / Fan *Auto is only available for RA temperature control
	RA (Return Air) temperature control / SA (Supply Air) temperature control [Must be set at initial setting and not possible to change from remote controller]

RA (Return Air) ten	nperature control	Connectable Lossnay unit LGH-150RVXT-E	Connectable Lossnay unit LGH-200RVXT-E	Connectable Lossnay unit LGH-250RVXT-E		
Capacity [kW]	Heating / Cooling	20.4 (7.4 + 13.0) / 15.7 (6.2 + 9.5)	23.8 ( 10.3 + 13.5 ) / 18.4 ( 8.4 + 10.0 )	26.1 (12.1 + 14.0) / 22.3 (9.8 + 12.5)		
SHF		0.68	0.76	0.87		
Performance index	Heating / Cooling	4.07 / 5.03	4.86 / 5.59	4.75 / 4.59		
Air flow range at SP3 and SP4		1050 - 2250 m³/h	1050 - 2600 m³/h	1750 - 2880 m³/h		
Connectable outdoor unit		PUHZ-ZRP100	PUHZ-ZRP100	PUHZ-ZRP125		
Ext. piping		Diameter Liquid / Gas: 9.52 / 15.88	Diameter Liquid / Gas: 9.52 / 15.88	Diameter Liquid / Gas: 9.52 / 15.88		
		Maximum length: 75m. Maximum height: 30m	Maximum length: 75m, Maximum height: 30m	Maximum length: 75m, Maximum height: 30m		

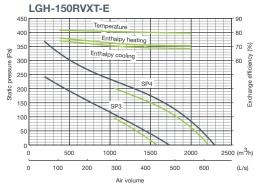
SA (Supply Air) temperature control		Connectable Lossnay unit LGH-150RVXT-E	Connectable Lossnay unit LGH-200RVXT-E	Connectable Lossnay unit LGH-250RVXT-E		
Capacity [kW]	Heating / Cooling	16.3 (7.4 + 8.9) / 13.3 (6.2 + 7.1)	19.5 (10.3 + 9.2) / 15.9 (8.5 + 7.4)	21.6 (12.1 + 9.5) / 17.6 (9.8 + 7.8)		
SHF		0.86	0.90	0.95		
Performance index	Heating / Cooling	5.16 / 5.03	6.01 / 5.54	5.97 / 5.31		
Air flow range at SP3 and SP4		1050 - 2250 m³/h	1050 - 2600 m³/h	1000 - 2600 m³/h		
Connectable outdoor unit		PUHZ-ZRP71	PUHZ-ZRP71	PUHZ-ZRP71		
Ext. piping		Diameter Liquid / Gas: 9.52 / 15.88	Diameter Liquid / Gas: 9.52 / 15.88	Diameter Liquid / Gas: 9.52 / 15.88		
		Maximum length: 50m, Maximum height: 30m	Maximum length: 50m, Maximum height: 30m	Maximum length: 50m, Maximum height: 30m		

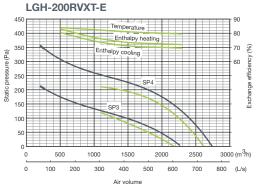
Ventilation Specification		Connectable Lossnay unit LGH-150RVXT-E			Connectable Lossnay unit LGH-200RVXT-E			Connectable Lossnay unit LGH-250RVXT-E					
Fan speed		SP4	SP3	SP2	SP1	SP4	SP3	SP2	SP1	SP4	SP3	SP2	SP1
Air volume	[m³/h]	1,500	1,125	750	375	2,000	1,500	1,000	500	2,500	1,875	1,250	625
	[L/s	417	313	208	104	556	417	278	139	694	521	347	174
External static pressure [Pa]		150	84	38	9	145	82	36	9	140	79	35	9

### Notes:

1. The running current and input power are based on 230V/50Hz. 2. The cooling and heating capacities are based on the air conditions listed below and the rated airflow of fan speed 4. Cooling Indoor: 27°CDB/19°CWB Outdoor: 35°CDB/24°CWB Heating Indoor: 20°CDB/15°CWB Outdoor: 7°CDB/6°CWB 3. The first figure in () of the capacity specification is the heat recovery energy of the Lossnay unit. The second figure is the capacity specification for the Dx-coil connected to the outdoor unit. 4. "Performance index" is the calculated value at the temperature conditions above and is reference purpose only. Performance index = Total capacity + total power consumption of outdoor unit and Lossnay unit 5. The external static pressure listed above includes the static pressure loss of the Dx-coil unit when using a 50cm straight duct between the Lossnay and Dx-coil units. When the duct work should be included in the pressure loss calculation. 6. The designed airflow of the system (Lossnay, Dx-coil and two tow) at fan speed 3 and 4 should be kept within "Airflow range at SP3 and SP4" listed above. This range is shown as the green line in graphs of the characteristics curve. If the Lossnay airflow is out of this range, the compressor of the outdoor unit may stop for self-protection purposes. **7.** By installing the Dx-coil unit with a Lossnay unit, the air blow noise level is quieter at fan speed 4 as shown below. LGH-150,200RVXT-E: about 3dB quieter, LGH-250RVXT-E: about 3dB quieter, LGH-250RVXT-E over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional

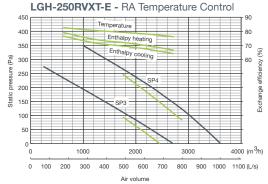
# **Fan Curve Characteristics**

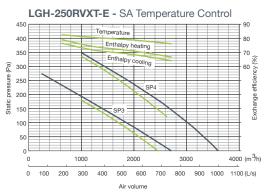




Without GUG-03SLE-E

With GUG-03SLE-E

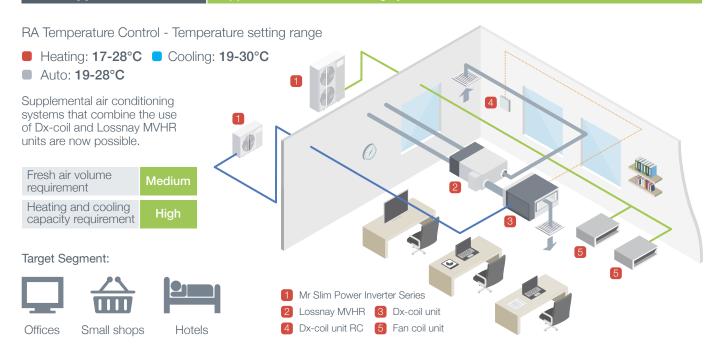




# Ideal for commercial applications including offices and schools:

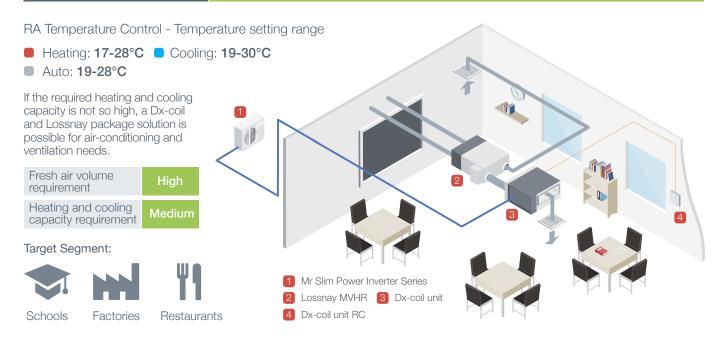
### Office application

### Supplemented air conditioning system



### School application

### Main air conditioning system





Changes for the Better

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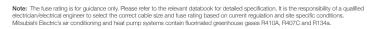
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Mitsubishi Electric UK's commitment to the environment









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