

> EVAPORATOR PARAMETERS (HOT GAS DEFROST)

Hot Gas Defrost * Sanyo Compressor

Medium-Low Temperature

Horsepower	Power supply	Condensing unit		Match evaporator model
		Model	Compressor	
2.5 HP	Single phase 220V/50Hz	RG-SN25EL-R	C-3RV359L4AAL	RG-DD30-302E-R
3 HP	Single phase 220V/50Hz	RG-SN30EL-R	C-3R463L4AA	RG-DD40-302E-R
2.5 HP	3 phase 380V/50Hz	RG-SN25FL-R	C-3RP359L4AAL	RG-SD30-401F-R
3 HP	3 phase 380V/50Hz	RG-SN30FL-R	C-3RP547L4AAL	RG-SD40-401F-R

Note: Please refer to the parameters of Sanyo compressor outdoor condensing units.

Hot Gas Defrost * Panasonic Scroll Compressor

Medium-Low Temperature

Horsepower	Power supply	Condensing unit		Match evaporator model
		Model	Compressor	
4 HP	3 phase 380V/50Hz	RG-SN40FL-R	C-SBN303L8A	RG-DD50-352F-R
5 HP	3 phase 380V/50Hz	RG-SN50FL-R	C-SBN373L8A	RG-DD60-402F-R
6 HP	3 phase 380V/50Hz	RG-SN60FL-R	C-SBN453L8A	RG-DD70-402F-R
8 HP	3 phase 380V/50Hz	RG-SN80FL-R	3CC137SA03	RG-DD100-403F-R
10 HP	3 phase 380V/50Hz	RG-SN100FL-R	3CC171SA03	RG-DD120-453F-R
12.5 HP	3 phase 380V/50Hz	RG-SN125FL-R	3CC216SA03	RG-DD150-503F-R

Note: Please refer to the parameters of Panasonic scroll compressor outdoor condensing units.

Hot Gas Defrost * Emerson Scroll Compressor (ZF Series)

Medium-Low Temperature

Horsepower	Power supply	Condensing unit		Match evaporator model
		Model	Compressor	
3 HP	3 phase 380V/50Hz	RG-GN30FLF-R	ZF09KQE	RG-DD40-302F-R
4 HP	3 phase 380V/50Hz	RG-GN40FLF-R	ZF13KQE	RG-DD50-352F-R
5 HP	3 phase 380V/50Hz	RG-GN50FLF-R	ZF15KQE	RG-DD60-402F-R
6 HP	3 phase 380V/50Hz	RG-GN60FLF-R	ZF18KQE	RG-DD70-402F-R
7 HP	3 phase 380V/50Hz	RG-GN70FLF-R	ZF25KQE	RG-DD80-452F-R
8 HP	3 phase 380V/50Hz	RG-GN80FLF-R	ZF28KQE	RG-DD100-403F-R
10 HP	3 phase 380V/50Hz	RG-GN100FLF-R	ZF34KQE	RG-DD120-453F-R
12 HP	3 phase 380V/50Hz	RG-GN120FLF-R	ZF41KQE	RG-DD150-503F-R
15 HP	3 phase 380V/50Hz	RG-GN150FLF-R	ZF49KQE	RG-DD180-504F-R

Note: Please refer to the parameters of Emerson scroll compressor (ZF series) outdoor condensing units.

Hot Gas Defrost * Emerson Scroll Compressor (ZB Series)

High-Medium Temperature

Horsepower	Power supply	Condensing unit		Match evaporator model
		Model	Compressor	
2 HP	Single phase 220V/50Hz	RG-GN20EM-R	ZB15KQE	RG-DD30-302E-R
3 HP	Single phase 220V/50Hz	RG-GN30EM-R	ZB21KQE	RG-DD40-302E-R
4 HP	3 phase 380V/50Hz	RG-GN40FM-R	ZB29KQE	RG-DD50-352E-R
5 HP	3 phase 380V/50Hz	RG-GN50FM-R	ZB38KQE	RG-DD60-402F-R
6 HP	3 phase 380V/50Hz	RG-GN60FM-R	ZB45KQE	RG-DD70-402F-R
7 HP	3 phase 380V/50Hz	RG-GN70FM-R	ZB48KQE	RG-DD80-452F-R
8 HP	3 phase 380V/50Hz	RG-GN80FM-R	ZB58KQE	RG-DD100-403F-R
10 HP	3 phase 380V/50Hz	RG-GN100FM-R	ZB76KQE	RG-DD120-453F-R
13 HP	3 phase 380V/50Hz	RG-GN130FM-R	ZB95KQE	RG-DD150-503F-R
15 HP	3 phase 380V/50Hz	RG-GN150FM-R	ZB114KQE	RG-DD180-504F-R

Note: Please refer to the parameters of Emerson scroll compressor (ZB series) outdoor condensing units.

COLD ROOM EVAPORATOR



>KEY FEATURES

01. High-Efficiency Fork-Shaped Design

The evaporator is engineered with a fork-shaped pipeline structure, maximizing heat transfer surface area and utilizing forced-draught airflow for optimal air distribution.

02. Enhanced Coil Performance

Constructed with inner-grooved copper tubes, the evaporator increases internal surface area and reduces oil film resistance—delivering superior cooling efficiency and capacity.

03. Advanced Fin Technology

Equipped with premium-grade aluminum fins featuring a double sine wave pattern and rippled edges, the unit ensures exceptional heat transfer performance.

04. Durable, Corrosion-Resistant Casing

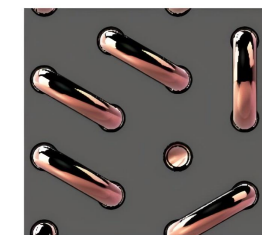
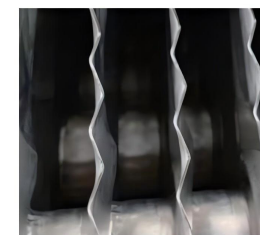
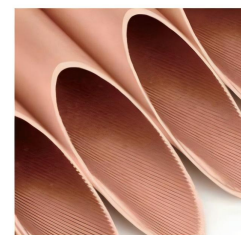
The evaporator housing undergoes a high-quality spraying process, providing excellent corrosion resistance and long-lasting durability.

05. Premium Fan Motors

All models use top-tier EBM and WEIGUANG fan motors, integrated with thermistor protection. These motors guarantee long lifespan, quiet operation, and reliable performance across both low & high temperature applications.

06. Efficient Defrosting System

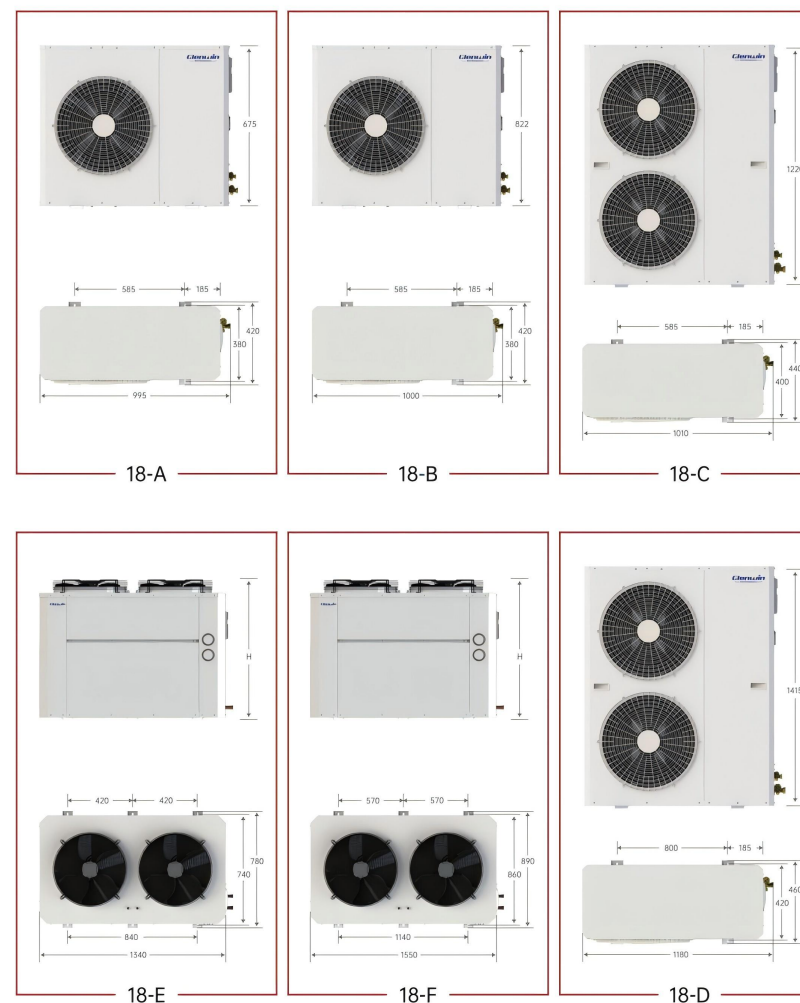
Features stainless steel defrost heating tubes filled with magnesium oxide, designed for both fin and drain pan defrosting. The optimized placement ensures rapid defrost cycles, minimal temperature fluctuation, and enhanced energy efficiency in cold storage rooms.



COLD ROOM CONDENSING UNIT

Product series	Model	Capacity	Fan motor parameter				Heater parameter		Air blowing distance
		DT=7K KW	Air flow m³/h	Voltage V	Diameter Φmm	QTY PCS	Voltage V	Input power W	
S series (single fan)	RG-DD15-301E	2.3KW	1200	220V	300	1	220V	1700	6
	RG-SD30-401F	4KW	3500	380V	400	1	220V	1700	10
	RG-SD40-401F	5KW	3500	380V	400	1	220V	2620	10
	RG-SD60-451F	8KW	6000	380V	400	1	220V	4000	12
D series (multi-fan)	RG-DD30-302E	3.5KW	2400	220V	300	2	220V	2460	7
	RG-DJ30-302E	2.4KW		220V	300	2	220V	2460	
	RG-DD40-302E	4.5KW	2400	220V	300	2	220V	2940	7
	RG-DJ40-302E	2.7KW		220V	300	2	220V	2940	
	RG-DD50-352E/F	6KW	4200	220V/380V	350	2	220V	4500	9
	RG-DJ50-352E/F	4.2KW		220V/380V	350	2	220V	4500	
	RG-DD60-402F	8KW	6000	380V	400	2	220V	5300	12
	RG-DJ60-402F	6KW		380V	400	2	220V	5300	
	RG-DD70-402F	8.5KW	6000	380V	400	2	220V	6600	12
	RG-DJ70-402F	6.5KW		380V	400	2	220V	6600	
	RG-DD80-452F	10KW	10800	380V	450	2	220V	6600	14
	RG-DJ80-452F	7KW		380V	450	3	220V	6600	
	RG-DD100-403F	12.5KW	11800	380V	400	3	220V	7900	14
	RG-DJ100-403F	8.5KW		380V	400	3	220V	7900	
	RG-DD120-453F	15.5KW	16200	380V	450	3	220V	9700	15
	RG-DJ120-453F	11.5KW		380V	450	3	220V	9700	
	RG-DD150-503F	17.5KW	18000	380V	500	3	220V	9700	17
	RG-DJ150-503F	13KW		380V	500	3	220V	9700	
	RG-DD180-504F	22.5KW	24000	380V	500	4	220V	11500	18
	RG-DJ180-504F	16KW		380V	500	4	220V	11500	
	RG-DD200-504	27.5KW	32000	380V	500	4	220V	11500	19
	RG-DJ200-504F	17.8KW		380V	500	4	220V	11500	
D series with long air throw	RG-DD150-503FT	17.5KW	18000	380V	500	3	220V	9700	20
	RG-DJ150-503FT	13KW		380V	500	3	220V	9700	
	RG-DD180-504FT	22.5KW	24000	380V	500	4	220V	11500	22
	RG-DJ180-504FT	16KW		380V	500	4	220V	11500	

TECHNICAL DRAWING



HOT GAS DEFROST SYSTEM

The Advanced Hot Gas Defrost System

RIGID's Hot Gas Defrost System offers fast, reliable, and energy-efficient defrosting, enhancing productivity and preserving perishables. Available in two versions - cooling only and heating & cooling - RIGID's hot gas defrost systems are engineered for simplicity and high performance across various applications, including:

01. Cold storage warehouses
02. Agricultural processing
03. Fruit ripening chambers
04. Mushroom cultivation rooms
05. Temperature-controlled environments for produce during winter

> SMART REFRIGERATION STARTS WITH SMARTER DEFROSTING.

Hot gas defrost is an energy-saving alternative to traditional electric defrost systems. It works by redirecting hot discharge gas from the compressor through the evaporator coil. This rapidly melts accumulated frost without activating coil heaters. The gas then condenses back into liquid and returns to the system. This approach leads to faster defrost cycles, less temperature fluctuation, and lower energy consumption.

Choose RIGID's Hot Gas Defrost System for maximum efficiency, stable performance, and long-term savings.

> HOT GAS DEFROST VS. ELECTRIC DEFROST

ELECTRIC DEFROST vs. HOT GAS DEFROST		
Number of defrost	4@40 minutes/day	4@10 minutes/day
Steaming	Steaming is produced by excessive heat generated by coil heaters	Limited steaming is created because of the efficient use of hot gas as well as shorter defrost times
Overall investment	Lower initial investment Higher monthly energy bills Higher labor cost	Slightly higher initial investment Lower monthly energy bills Lower labor cost
Run time	18 hours	22 hours
Average box temperature rise	15-20°F	2-3°F

> HOT GAS DEFROST BENEFITS

DEPENDABLE PERFORMANCE

Fast and efficient defrosting, reduce downtime and improve system reliability, it is ideal for demanding commercial and industrial applications.

ENHANCED PRODUCT INTEGRITY

Shorter defrost cycles mean more stable box temperatures, preserving the freshness and quality of your perishable goods.

SIGNIFICANT ENERGY SAVINGS

Compared to electric defrost systems, hot gas defrost offers substantial reductions in power usage, saving thousands of dollars annually with intelligent defrost management.

HOT GAS DEFROST REFRIGERATION SYSTEM (COOLING ONLY)



HOT GAS DEFROST REFRIGERATION SYSTEM (HEATING AND COOLING)



> APPLICATIONS

