

LG HVAC SOLUTION

LG AIR COOLED SCREW CHILLER



COP 3.2

Cooling Capacity
71-489RT



Why LG Air Cooled Screw Chiller?

LG Electronics developed air-cooled screw chiller through advanced technologies and manufacturing / installation / operation experience over several decades. LG air-cooled screw chiller is high efficient and reliable by adapting falling film type evaporator, Goldfin™, and multi circuit.

High Performance Screw Compressor

- High efficiency rotor profile
- Premium grade low-loss core steel

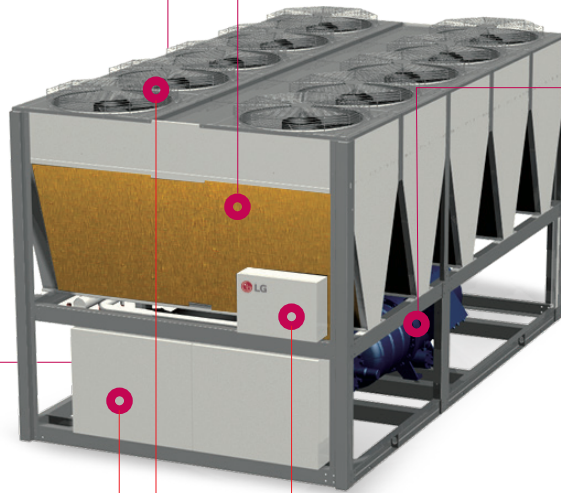
Optimized Refrigerant Flow Control

- Active flow control with electric expansion valve



Multi Circuit

- Back up operation

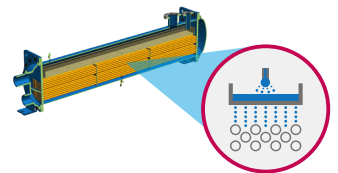


Corrosion Resistance Goldfin™

- Patented chloride-induced corrosion resistant

Falling Film Type Evaporator

- High thermal efficiency
- Low refrigerant charge



User Friendly Controller

- 7 inch LCD display
- Operation status, scheduling etc.



Low Noise Fan Module

- Sound attenuation design



High Efficiency Model COP 3.2 Standard Efficiency Model COP 2.8

| AHRI condition, 140 RT |



High energy efficiency

- Screw compressor with 5:6 patented rotors & semi-hermetic motor
- Falling film type evaporator
- V-shape structure & Wide louver gold fin increase heat transfer area

Reliability & Stability

- Corrosion resistance Goldfin™(standard) and Cu fin, PoluAL pre-coated fin (Options)
- Multi circuit for back up operation
- Safety control system
- R-134a refrigerant, ODP=0

Convenience

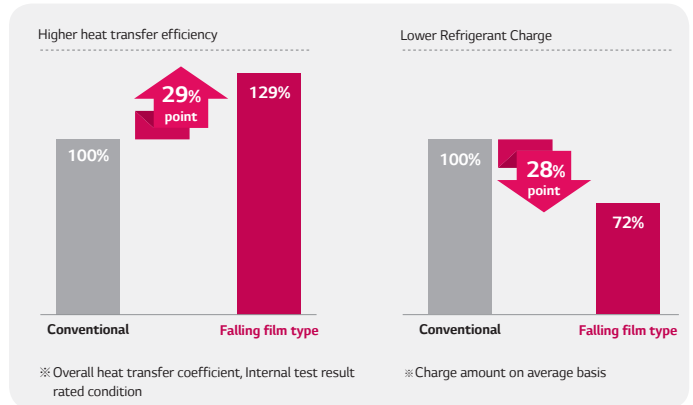
- Low noise fan module
- User friendly controller with various functions
- Modular configuration (4 cycles to 1 controller)
- Easy BMS interface (Modbus, BACnet, TCP/IP)



High Energy Efficiency

Falling Film Type Evaporator

- Gravity dropping distribution
 - Prevent sludge
 - Stable operation
- Using eliminator, separate gas and liquid refrigerant for better distribution
- Optimized vapor lane design improves heat transfer efficiency



Corrosion Resistance Goldfin™

Adapt to patented Goldfin™, corrosion resistance increased.

Conventional fin

Salt Spray Test 15 Days later

Starting to corrode

Low Efficiency / Starting to corrode

Goldfin™

Salt Spray Test 15 Days later

Patented chloride-induced corrosion resistant

Hydrophilic layer

Aluminum fin

Anti corrosion layer

Cu Fin (Option)

Copper material fin with copper tube, To reduce corrosion without reduction of its performance

Copper tube

Copper fin

PoluAl pre-Coated Fin (Option)

Pre-coated heat exchanger that is sprayed coating material called *PoluAL. This coating provides corrosion protection to heat exchangers without reduction of its performance.

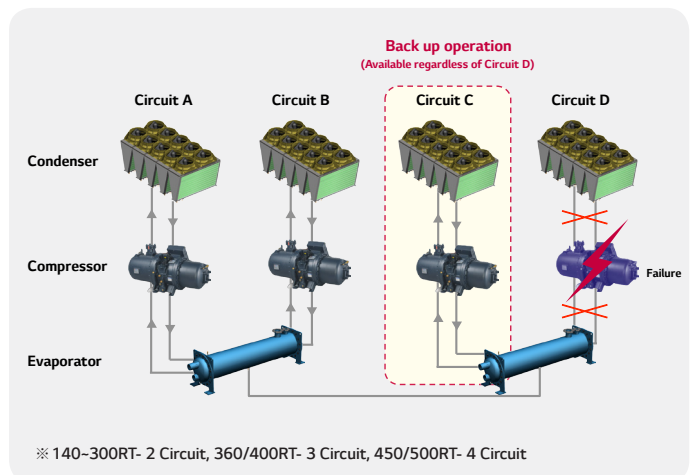
Copper tube

Corrosion resistance coated fin

* Metallic impregnated polyurethane coating


Back Up Operation

Multi circuit for back up operation enables one circuit to operate continuously, whether another circuit has a trouble or be repaired.



Line-up

(Unit : usRT)

Model			100	200	300	400	500
	High efficiency	50Hz	74		311		
		60Hz	71		297		
	Standard efficiency	50Hz	76				494
		60Hz	74				485

* Above capacity range is base on the AHRI condition.

Specification

MCAW series (50/60Hz), AHRI condition

High Efficiency Type, 50/60Hz			Units	008AA11	010AA11	012AA11	014AA11	016AA11	020AA21	024AA21	028AA21	032AA21
50 Hz	Capacity	Cooling	usRT	74	92	112	134	156	185	223	268	311
	Compressors	Quantity	EA	1	1	1	1	1	2	2	2	2
		Number	EA	8	10	12	14	16	10 / 10	12 / 12	14 / 14	16 / 16
	Fans	Fan Motor	kW	10.4	13	15.6	18.2	20.8	13 / 13	15.6 / 15.6	18.2 / 18.2	20.8 / 20.8
		Weight	Shipping/Operating	kg	3,420/3,496	3,830/3,920	4,400/4,501	4,900/5,019	5,220/5,345	7,660/7,839	8,800/9,002	9,800/10,038
60 Hz	Capacity	Cooling	usRT	71	89	111	134	149	178	222	268	297
	Compressors	Quantity	EA	1	1	1	1	1	2	2	2	2
		Number	EA	8	10	12	14	16	10 / 10	12 / 12	14 / 14	16 / 16
	Fans	Fan Motor	kW	10.8	13.5	16.2	18.9	21.6	13.5 / 13.5	16.2 / 16.2	18.9 / 18.9	21.6 / 21.6
		Weight	Shipping/Operating	kg	3,250/3,326	3,800/3,890	4,150/4,251	4,790/4,909	5,160/5,285	7,600/7,779	8,300/8,502	9,580/9,818
Dimension	L / W / H	mm	3,454/2,154 / 2,270	4,217/2,154 / 2,270	4,980/2,154 / 2,270	5,743/2,154 / 2,270	6,506/2,154 / 2,270	8,092/2,154 / 2,270	9,618/2,154 / 2,270	11,144/2,154 / 2,270	12,670/2,154 / 2,270	

Standard Efficiency Type, 50/60Hz			Units	008CA1A	010CA1A	012CA1A	014CA2A	016CA2A	018CA2A	020CA2A	022CA2A
50 Hz	Capacity	Cooling	usRT	76	92	115	133	149	180	194	212
	Compressors	Quantity	EA	1	1	1	2	2	2	2	2
		Number	EA	8	8	10	6 / 6	6 / 8	8 / 8	8 / 8	8 / 10
	Fans	Fan Motor	kW	8.0	8.0	10.0	6.0 / 6.0	6.0 / 8.0	8.0 / 8.0	8.0 / 8.0	8.0 / 10.0
		Weight	Shipping/Operating	kg	3,039/3,176	3,189/3,358	3,905/4,112	5,086/5,330	5,566/5,845	5,986/6,300	6,206/6,569
60 Hz	Capacity	Cooling	usRT	74	90	113	128	156	179	190	220
	Compressors	Quantity	EA	1	1	1	2	2	2	2	2
		Number	EA	8	8	10	6 / 6	6 / 8	8 / 8	8 / 8	8 / 10
	Fans	Fan Motor	kW	10.8	10.8	13.5	8.1 / 8.1	8.1 / 10.8	10.8 / 10.8	10.8 / 10.8	10.8 / 13.5
		Weight	Shipping/Operating	kg	2,869/3,004	3,159/3,326	3,646/3,845	4,846/5,086	5,436/5,707	5,926/6,232	6,006/6,354
Dimension	L / W / H	mm	3,132/2,154 / 2,131	3,132/2,154 / 2,131	3,895/2,154 / 2,131	4,658/2,154 / 2,131	5,421/2,154 / 2,131	6,184/2,154 / 2,350	6,184/2,154 / 2,350	6,947/2,154 / 2,350	

Standard Efficiency Type, 50/60Hz			Units	024CA2A	026CA2A	028CA2A	030CA2A	036CA3A	040CA3A	045CA4A	050CA4A
50 Hz	Capacity	Cooling	usRT	237	256	279	298	338	371	449	494
	Compressors	Quantity	EA	2	2	2	3	3	3	4	4
		Number	EA	10 / 10	10 / 12	10 / 12	8 / 10 / 10	10 / 10 / 10	10 / 10 / 10	8 / 8 / 10 / 10	10 / 10 / 10 / 10
	Fans	Fan Motor	kW	100 / 100	100 / 120	100 / 120	80 / 100 / 100	100 / 100 / 100	100 / 100 / 100	80 / 80 / 100 / 100	100 / 100 / 100 / 100
		Weight	Shipping/Operating	kg	7,565/7,988	7,925/8,363	8,076/8,529	9,326/9,856	9,783/10,413	10,150/10,840	12,012/12,779
60 Hz	Capacity	Cooling	usRT	234	253	278	297	368	389	440	485
	Compressors	Quantity	EA	2	2	2	2	3	3	4	4
		Number	EA	10 / 10	10 / 12	10 / 12	12 / 14	10 / 10 / 10	10 / 10 / 10	8 / 8 / 10 / 10	10 / 10 / 10 / 10
	Fans	Fan Motor	kW	135 / 135	135 / 162	135 / 162	162 / 189	135 / 135 / 135	135 / 135 / 135	108 / 108 / 135 / 135	135 / 135 / 135 / 135
		Weight	Shipping/Operating	kg	7,036/7,455	7,509/7,947	7,935/8,388	8,496/8,999	9,365/9,995	9,907/10,597	10,956/11,723
Dimension	L / W / H	mm	7,710/2,154 / 2,350	8,473/2,154 / 2,350	8,473/2,154 / 2,350	10,762/2,154 / 2,350	11,525/2,154 / 2,350	11,525/2,154 / 2,350	15,420/2,154 / 2,350	15,420/2,154 / 2,350	

Note:

- 1 usRT = 3,024 kcal/hr = 3.517kW
2. Cooling conditions : Ambient temperature is 35°C (95°F), Chilled water temperature outlet is 6.7°C (44°F). Temperature difference is 5.5°C (10°F)
3. Fouling factor of water in evaporator is 0.018 m²·°C/kW (0.0001 ft²·h²·°F/Btu)
4. Due to our policy of innovation some specifications may be changed without prior notification.

LG Electronics, Home appliance & Air solution company

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For continual product development, LG reserves the right to change specifications or designs without notice.

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