



## Air Cooled Chiller (50Hz)

Air Cooled Scroll

Air Cooled Screw



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# Air Cooled Scroll Chiller

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## Air Cooled Scroll Chiller - Product Lineup

No	Model	Heat exchanger type	Compressor quantity(pcs)		Electrical controller no.	Maximum combinations	Maximum capacity(kW)	Wired controller
			Digital	Fixed				
1	MGB-F25W/RN1	Double pipe	0	2	1	16	400	KJRM-120D/BMK-E
2	MGB-D25W/RN1	Double pipe	1	1	1	16	400	KJRM-120D/BMK-E
3	MGB-F30W/RN1	Double pipe	0	2	1	16	480	KJRM-120D/BMK-E
4	MGB-D30W/RN1	Double pipe	1	1	1	16	480	KJRM-120D/BMK-E
5	MGCSL-F30W/RN1	Double pipe	0	2	1	1	30	KJRM-120D/BMK-E
6	MGCSL-D30W/RN1	Double pipe	1	1	1	1	30	KJRM-120D/BMK-E
7	MGCL-F30W/RN1	Double pipe	0	2	1	16	480	KJRM-120D/BMK-E
8	MGCL-D30W/RN1	Double pipe	1	1	1	16	480	KJRM-120D/BMK-E
9	MGB-F55W/RN1	Shell and tube	0	2	1	16	880	KJRM-120D/BMK-E
10	MGB-F60W/RN1	Shell and tube	0	2	1	16	960	KJRM-120D/BMK-E
11	MGB-F65W/RN1	Shell and tube	0	2	1	16	1040	KJRM-120D/BMK-E
12	MGB-D65W/RN1	Shell and tube	1	2	1	16	1040	KJRM-120D/BMK-E
13	MGBL-F65W/RN1	Shell and tube	0	2	1	16	1040	KJRM-120D/BMK-E
14	MGBL-D65W/RN1	Shell and tube	1	2	1	16	1040	KJRM-120D/BMK-E
15	MGB-F130W/RN1	Shell and tube	0	4	2	8	1040	KJRM-120D/BMK-E
16	MGBL-F130W/RN1	Shell and tube	0	4	2	8	1040	KJRM-120D/BMK-E
17	MGB-F200W/RN1	Shell and tube	0	6	3	5	1040	KJRM-120D/BMK-E
18	MGBL-F200W/RN1	Shell and tube	0	6	3	5	1000	KJRM-120D/BMK-E
19	MGBT-F250W/RN1	Shell and tube	0	8	2	8	2000	KJRM-120D/BMK-E
20	MGBL-F250W/RN1	Shell and tube	0	8	2	8	2000	KJRM-120D/BMK-E

25/30kW module



30kW module (integrated)



55/60/65kW module



130kW module



200kW module



250kW module



# Air Cooled Scroll Chiller - Specifications

Air Cooled Scroll

Model		MGB-F25W/RN1	MGB-D25W/RN1	MGB-F30W/RN1	MGB-D30W/RN1	
Cooling Capacity		kW	28	28	30	30
Heating Capacity		kW	29.5	29.5	32	32
Power input	Cooling	kW	9.3	9.3	10.0	10.0
	Cooling rated current	A	14.6	14.6	16.3	16.3
	Heating	kW	9.2	9.2	9.8	9.8
	Heating rated current	A	14.3	14.3	16.0	16.0
Power supply		V/Ph/Hz	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50
Power supply	Manual switch	A	50	50	50	50
	Fuse	A	36	36	36	36
EER		kW/kW	3.01	3.01	3.00	3.00
COP		kW/kW	3.21	3.21	3.27	3.27
Compressor	Type	Scroll (fixed speed)		Scroll (digital+fixed speed)	Scroll (fixed speed)	Scroll (digital+fixed speed)
	Brand	Copeland		Copeland	Copeland	Copeland
	Model	ZP67KCE-TFD-522		ZPD67KCE-TFD-532/ ZP67KCE-TFD-522	ZP67KCE-TFD-522	ZPD67KCE-TFD-532/ ZP67KCE-TFD-522
	Quantity	Pieces	2	1/1	2	1/1
	Refrigerant oil	ml	1656	1892/1656	1892	1892/1656
Refrigerant	Type	R410A		R410A	R410A	R410A
	Refrigerant control	EXV		EXV	EXV	EXV
	Weight	kg	3.5x2	3.5x2	3.5x2	3.5x2
Condenser (Air side)	Type	Fin-coil		Fin-coil	Fin-coil	Fin-coil
	Number of rows	3		3	3	3
	Fan motor model	YDK400-8-YA		YDK400-8-YA	YDK400-8-YA	YDK400-8-YA
	Quantity of fan motor	Pieces	1	1	1	1
	Air flow	x10 <sup>3</sup> m <sup>3</sup> /h	12	12	12	12
	Fan motor rated current	A	3.1	3.1	3.1	3.1
	Fan motor input	kW	0.67	0.67	0.67	0.67
Evaporator (Water side)	Type	Double-pipe		Double-pipe	Double-pipe	Double-pipe
	Water pressure drop	kPa	60	60	60	60
	Volume	L	10	10	10	10
	Water inlet/outlet pipeline inside normal diameter	mm	DN40	DN40	DN40	DN40
	Water flow volume	m <sup>3</sup> /h	4.4	4.4	5.2	5.2
	Max. design pressure	MPa	1	1	1	1
	Water pipe connection type	Flexible joint		Flexible joint	Flexible joint	Flexible joint
Dimension	Net (WxHxD)	mm	1514x1865x841	1514x1865x841	1514x1865x841	1514x1865x841
	Packing (WxHxD)	mm	1590x2065x995	1590x2065x995	1590x2065x995	1590x2065x995
Weight	Net weight	kg	380	380	380	380
	Operation weight	kg	420	420	420	420
Connection wiring	Power wire	mm <sup>2</sup>	10x4+10x1	10x4+10x1	10x4+10x1	10x4+10x1
	Signal wire	mm <sup>2</sup>	0.75x3-core with shielding	0.75x3-core with shielding	0.75x3-core with shielding	0.75x3-core with shielding
Control type		Wired controller		Wired controller	Wired controller	Wired controller
Noise level		dB(A)	65	65	65	65
Safety protection device		1) Protection for over-high discharge pressure. 7) Protection for compressor overload. 2) Protection for over-low suction pressure. 8) Outlet and inlet water temperature difference protection. 3) Power supply phase sequence protection. 9) Compressor discharge temperature protection. 4) Anti-freezing protection in cooling mode. 10) Water flow cut-off protection. 5) Anti-freezing protection in Winter. 11) Sensor malfunction protection. 6) Protection for compressor over current. 12) Low-temperature protection of shell and tube heat exchanger.				
Operation water temp		°C	Cooling : 5~17 Heating : 45~50			
Ambient temp		°C	Cooling : 10~46 Heating : -10~21			

**Note:** Specifications are based on the following conditions:

- Cooling : chilled water inlet/outlet: 12 °C / 7°C, and outdoor ambient temp. of 35°C DB.
- Heating : warm water inlet/outlet: 40°C / 45°C, and outdoor ambient temp. 7°CDB/6°CWB.
- Water side fouling factor: 0.086m<sup>2</sup>· °C/kW.
- 1m away in open field(sound pressure).

# Air Cooled Scroll Chiller - Specifications

Model		MGCSL-F30W/RN1	MGCSL-D30W/RN1	MGCL-F30W/RN1	MGCL-D30W/RN1
Cooling Capacity		kW	30	30	30
Heating Capacity		kW	32	32	32
Power input	Cooling	kW	10+1.2(Pump)	10+1.2(Pump)	10.0
	Cooling rated current	A	18.3	18.3	16.3
	Heating	kW	9.8+1.2(Pump)	9.8+1.2(Pump)	9.8
	Heating rated current	A	17.8	17.8	16.0
Power supply		V/Ph/Hz	380-415/3/50	380-415/3/50	380-415/3/50
Power supply	Manual switch	A	50	50	50
	Fuse	A	36	36	36
EER		kW/kW	2.68	2.68	3.00
COP		kW/kW	3.20	3.20	3.27
Compressor	Type	Scroll (fixed speed)		Scroll (digital+fixed speed)	Scroll (fixed speed)
	Brand	Copeland		Copeland	Copeland
	Model	ZP67KCE-TFD-522	ZPD67KCE-TFD-532/ ZP67KCE-TFD-522	ZP67KCE-TFD-522	ZPD67KCE-TFD-532/ ZP67KCE-TFD-522
	Quantity	Pieces	2	1/1	2
	Refrigerant oil	ml	1892	1892/1656	1892
Refrigerant	Type	R410A		R410A	R410A
	Refrigerant control	EXV		EXV	EXV
	Weight	kg	3.5x2	3.5x2	3.5x2
Condenser (Air side)	Type	Fin-coil		Fin-coil	Fin-coil
	Number of rows	3		3	3
	Fan motor model	YDK550-6E		YDK550-6E	YDK550-6E
	Quantity of fan motor	Pieces	1	1	1
	Air flow	x10 <sup>3</sup> m <sup>3</sup> /h	12	12	12
	Fan motor rated current	A	4.0	4.0	3.1
Fan motor input	kW	0.865	0.865	4.0	
Evaporator (Water side)	Type	Double-pipe		Double-pipe	Double-pipe
	Water pressure drop	kPa	/	/	60
	Volume	L	10	10	10
	Water inlet/outlet pipeline inside normal diameter	mm	DN40	DN40	DN40
	Water flow volume	m <sup>3</sup> /h	5.2	5.2	5.2
	Max. design pressure	MPa	1	1	1
	Water pipe connection type	Flexible joint		Flexible joint	Flexible joint
Dimension	Net (WxHxD)	mm	1514x1865x841	1514x1865x841	1514x1865x841
	Packing (WxHxD)	mm	1590x2065x995	1590x2065x995	1590x2065x995
Weight	Net weight	kg	430	430	375
	Operation weight	kg	450	450	400
Connection wiring	Power wire	mm <sup>2</sup>	10x4+6x1	10x4+6x1	10x4+6x1
	Signal wire	mm <sup>2</sup>	0.75x3-core with shielding	0.75x3-core with shielding	0.75x3-core with shielding
Control type		Wired controller		Wired controller	Wired controller
Noise level		dB(A)	67	67	65
Safety protection device		1) Protection for over-high discharge pressure. 8) Outlet and inlet water temperature difference protection. 2) Protection for over-low suction pressure. 9) Compressor discharge temperature protection. 3) Power supply phase sequence protection. 10) Water flow cut-off protection. 4) Anti-freezing protection in cooling mode. 11) Sensor malfunction protection. 5) Anti-freezing protection in Winter. 12) Low ambient temperature drive-up protection 6) Protection for compressor over current. 13) Low temperature protection of shell and tube heat exchanger. 7) Protection for compressor overload.			
Operation water temp		°C	Cooling: 0~17(Less than 5°C must add antifreeze) Heating: 22~50		
Ambient temp		°C	Cooling: -10~46 Heating: -10~21		

**Note:** Specifications are based on the following conditions:

- Cooling : chilled water inlet/outlet: 12 °C / 7°C, and outdoor ambient temp. of 35°C DB.
- Heating : warm water inlet/outlet: 40°C / 45°C, and outdoor ambient temp. 7°CDB/6°CWB.
- Water side fouling factor: 0.086m<sup>2</sup>· °C/kW.
- 1m away in open field(sound pressure).

# Air Cooled Scroll Chiller - Specifications

Air Cooled Scroll

Model			MGB-F60W/RN1	MGB-F65W/RN1	MGB-D65W/RN1
Cooling Capacity		kW	55	60	65
Heating Capacity		kW	59	64	69
Power input	Cooling	kW	17.5	19.3	20.4
	Cooling rated current	A	30.5	33.6	36.5
	Heating	kW	18.3	19.8	21.5
	Heating rated current	A	31.5	34.3	37.2
Power supply		V/Ph/Hz	380-415/3/50	380-415/3/50	380-415/3/50
Power supply	Manual switch	A	125	125	125
	Fuse	A	100	100	100
EER		kW/kW	3.14	3.10	3.18
COP		kW/kW	3.22	3.23	3.20
Compressor	Type		Scroll (fixed speed)	Scroll (fixed speed)	Scroll (fixed speed)
	Brand		Danfoss	Danfoss	Danfoss
	Model		SH140A4ALC	SH140A4ALC	SH140A4ALC
	Quantity	Pieces	2	2	2
	Refrigerant oil		ml	3300	3300
Refrigerant	Type		R410A	R410A	R410A
	Refrigerant control		EXV+ capillary	EXV+ capillary	EXV+ capillary
	Weight	kg	7.0x2	7.0x2	7.0x2
Condenser (Air side)	Type		Fin-coil	Fin-coil	Fin-coil
	Number of rows		3	3	3
	Fan motor model		YDK550-6D	YDK550-6D	YDK550-6D
	Quantity of fan motor	Pieces	2	2	2
	Air flow	x10 <sup>3</sup> m <sup>3</sup> /h	24	24	24
	Fan motor rated current	A	4.0x2	4.0x2	4.0x2
	Fan motor input	kW	0.865x2	0.865x2	0.865x2
Evaporator (Water side)	Type		Shell-tube	Shell-tube	Shell-tube
	Water pressure drop	kPa	15	15	15
	Volume	L	42	42	42
	Water inlet/outlet pipeline inside normal diameter	mm	DN100	DN100	DN100
	Water flow volume	m <sup>3</sup> /h	9.4	10.3	11.2
	Max. design pressure	MPa	1	1	1
	Water pipe connection type		Flexible joint	Flexible joint	Flexible joint
Dimension	Net (WxHxD)	mm	2000x1880x900	2000x1880x900	2000x1880x900
	Packing (WxHxD)	mm	2090x2055x985	2090x2055x985	2090x2055x985
Weight	Net weight	kg	580	580	600
	Operation weight	kg	650	650	670
Connection wiring	Power wire	mm <sup>2</sup>	16x4+10x1	16x4+10x1	16x4+10x1
	Signal wire	mm <sup>2</sup>	0.75x3-core with shielding	0.75x3-core with shielding	0.75x3-core with shielding
Control type			Wired controller	Wired controller	Wired controller
Noise level		dB(A)	67	67	67
Safety protection device			1) Protection for over-high discharge pressure. 7) Protection for compressor overload. 2) Protection for over-low suction pressure. 8) Outlet and inlet water temperature difference protection. 3) Power supply phase sequence protection. 9) Compressor discharge temperature protection. 4) Anti-freezing protection in cooling mode. 10) Water flow cut-off protection. 5) Anti-freezing protection in Winter. 11) Sensor malfunction protection. 6) Protection for compressor over current. 12) Low-temperature protection of shell and tube heat exchanger.		
Operation water temp		°C	Cooling : 5~17 Heating : 45~50		Cooling: 0~17(Less than 5°C must add antifreeze) Heating: 22~50
Ambient temp		°C	Cooling : 10~46 Heating : -10~21		

**Note:** Specifications are based on the following conditions:

- Cooling : chilled water inlet/outlet: 12 °C / 7°C, and outdoor ambient temp. of 35°C DB.
- Heating : warm water inlet/outlet: 40°C / 45°C, and outdoor ambient temp. 7°CDB/6°CWB.
- Water side fouling factor: 0.086m<sup>2</sup>·°C/kW.
- 1m away in open field(sound pressure).

# Air Cooled Scroll Chiller - Specifications

Model		MGBL-F65W/RN1	MGBL-D65W/RN1	MGB-F130W/RN1	MGBL-F130W/RN1	
Cooling Capacity		kW	65	65	130	130
Heating Capacity		kW	69	69	138	138
Power input	Cooling	kW	20.4	20.4	40.8	40.8
	Cooling rated current	A	36.5	36.5	73	73
	Heating	kW	21.5	21.5	43	43
	Heating rated current	A	37.2	37.2	74.4	74.4
Power supply		V/Ph/Hz	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50
Power supply	Manual switch	A	150	150	250	250
	Fuse	A	100	100	200	200
EER		kW/kW	3.18	3.18	3.18	3.18
COP		kW/kW	3.21	3.21	3.21	3.21
Compressor	Type		Scroll (fixed speed)	Scroll (fixed speed+digital)	Scroll (fixed speed)	Scroll (fixed speed)
	Brand		Danfoss	Copeland	Danfoss	Danfoss
	Model		SH140A4ALC	ZP144KCE-TFD-522 / ZPD72KCE-TFD-433 / ZP67KCE-TFD-420	SH140A4ALC	SH140A4ALC
	Quantity	Pieces	2	3	4	4
	Refrigerant oil	ml	3300	3200/1893/1685	3300	3300
Refrigerant	Type		R410A	R410A	R410A	R410A
	Refrigerant control		EXV+ capillary	EXV+ capillary	EXV+ capillary	EXV+ capillary
	Weight	kg	7.0x2	7.0x2	7.0x4	7.0x4
Condenser (Air side)	Type		Fin-coil	Fin-coil	Fin-coil	Fin-coil
	Number of rows		3	3	3	3
	Fan motor model		YDK550-6E	YDK550-6E	YDK550-6D	YDK550-6E
	Quantity of fan motor	Pieces	2	2	4	4
	Air flow	x10 <sup>3</sup> m <sup>3</sup> /h	24	24	48	48
	Fan motor rated current	A	4.0x2	4.0x2	4.0x4	4.0x4
Fan motor input	kW	0.865x2	0.865x2	0.865x4	0.865x4	
Evaporator (Water side)	Type		Shell-tube	Shell-tube	Shell-tube	Shell-tube
	Water pressure drop	kPa	15	15	25	25
	Volume	L	42	42	64	64
	Water inlet/outlet pipeline inside normal diameter	mm	DN100	DN100	DN65	DN65
	Water flow volume	m <sup>3</sup> /h	11.2	11.2	22.4	22.4
	Max. design pressure	MPa	1	1	1	1
	Water pipe connection type		Flexible joint	Flexible joint	Flexible joint	Flexible joint
Dimension	Net (WxHxD)	mm	2000x1880x900	2000x1880x900	2000x2090x1685	2000x2090x1685
	Packing (WxHxD)	mm	2106x2090x998	2106x2090x998	2090x2240x1755	2090x2240x1755
Weight	Net weight	kg	580	610	1150	1150
	Operation weight	kg	650	680	1270	1270
Connection wiring	Power wire	mm <sup>2</sup>	25x4+16x1	25x4+16x1	35x3+16x2	35x3+16x2
	Signal wire	mm <sup>2</sup>	0.75x3-core with shielding	0.75x3-core with shielding	0.75x3-core with shielding	0.75x3-core with shielding
Control type			Wired controller	Wired controller	Wired controller	Wired controller
Noise level		dB(A)	67	67	70	70
Safety protection device			1) Protection for over-high discharge pressure. 7) Protection for compressor overload. 2) Protection for over-low suction pressure. 8) Outlet and inlet water temperature difference protection. 3) Power supply phase sequence protection. 9) Compressor discharge temperature protection. 4) Anti-freezing protection in cooling mode. 10) Water flow cut-off protection. 5) Anti-freezing protection in Winter. 11) Sensor malfunction protection. 6) Protection for compressor over current. 12) Low-temperature protection of shell and tube heat exchanger.			
Operation water temp		°C	Cooling: 0~17(Less than 5°C must add antifreeze) Heating: 22~50	Cooling: 5~17 Heating: 45~50	Cooling: 0~17(Less than 5°C must add antifreeze) Heating: 22~50	Cooling: 0~17(Less than 5°C must add antifreeze) Heating: 22~50
Ambient temp		°C	Cooling: -10~46 Heating: -10~21	Cooling: 10~46 Heating: -10~21	Cooling: -10~46 Heating: -10~21	Cooling: -10~46 Heating: -10~21

**Note:** Specifications are based on the following conditions:

- Cooling : chilled water inlet/outlet: 12 °C / 7°C, and outdoor ambient temp. of 35°C DB.
- Heating : warm water inlet/outlet: 40°C / 45°C, and outdoor ambient temp. 7°C DB/6°C WB.
- Water side fouling factor: 0.086m<sup>2</sup>. °C/kW.
- 1m away in open field (sound pressure).

# Air Cooled Scroll Chiller - Specifications

Air Cooled Scroll

Model		MGB-F200W/RN1	MGBL-F200W/RN1	MGBT-F250W/RN1	MGBL-F250W/RN1	
Cooling Capacity		kW	185	185	250	250
Heating Capacity		kW	200	200	270	270
Power input	Cooling	kW	63	63	78.3	78.3
	Cooling rated current	A	110	110	141.9	141.9
	Heating	kW	61	61	80	80
	Heating rated current	A	107	107	146	146
Power supply		V/Ph/Hz	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50
Power supply	Manual switch	A	400	400	450	450
	Fuse	A	350	350	350	350
EER		kW/kW	2.93	2.93	3.19	3.19
COP		kW/kW	3.27	3.27	3.38	3.38
Compressor	Type		Scroll (fixed speed)	Scroll (fixed speed)	Scroll (fixed speed)	Scroll (fixed speed)
	Brand		Danfoss	Danfoss	Danfoss	Danfoss
	Model		SH140A4ALC	SH140A4ALC	SH120A4ALC	SH120A4ALC
	Quantity	Pieces	6	6	8	8
	Refrigerant oil	ml	3300	3300	3300	3300
Refrigerant	Type		R410A	R410A	R410A	R410A
	Refrigerant control		EXV+ capillary	EXV+ capillary	EXV+ capillary	EXV+ capillary
	Weight	kg	7.0x6	7.0x6	15x4	15x4
Condenser (Air side)	Type		Fin-coil	Fin-coil	Fin-coil	Fin-coil
	Number of rows		3	3	3	3
	Fan motor model		YDK550-6D	YDK550-6E	YS700-6F-1/YS700-6F-2	YDK550-6E
	Quantity of fan motor	Pieces	6	6	6/2	8
	Air flow	x10 <sup>3</sup> m <sup>3</sup> /h	72	72	96	96
	Fan motor rated current	A	4.0x6	4.0x6	1.8x8	4.0x8
Fan motor input	kW	0.865x6	0.865x6	0.9x8	0.865x8	
Evaporator (Water side)	Type		Shell-tube	Shell-tube	Shell-tube	Shell-tube
	Water pressure drop	kPa	30	30	40	40
	Volume	L	90	90	131	131
	Water inlet/outlet pipeline inside normal diameter	mm	DN80	DN80	DN100	DN100
	Water flow volume	m <sup>3</sup> /h	31.8	31.8	43	43
	Max. design pressure	MPa	1	1	1	1
	Water pipe connection type		Flexible joint	Flexible joint	Flexible joint	Flexible joint
Dimension	Net (WxHxD)	mm	2850x2110x2000	2850x2110x2000	3800x2130x2000	3800x2130x2000
	Packing (WxHxD)	mm	2980x2260x2135	2980x2260x2135	3900x2200x2100	3900x2200x2100
Weight	Net weight	kg	1730	1730	2450	2450
	Operation weight	kg	2000	2000	2600	2600
Connection wiring	Power wire	mm <sup>2</sup>	75x3+35x2	75x3+35x2	185x4+70x1	150x4+70x1
	Signal wire	mm <sup>2</sup>	0.75x3-core with shielding	0.75x3-core with shielding	0.75x3-core with shielding	0.75x3-core with shielding
Control type			Wired controller	Wired controller	Wired controller	Wired controller
Noise level	dB(A)		74	74	74	74
Safety protection device		1) Protection for over-high discharge pressure. 7) Protection for compressor overload. 2) Protection for over-low suction pressure. 8) Outlet and inlet water temperature difference protection. 3) Power supply phase sequence protection. 9) Compressor discharge temperature protection. 4) Anti-freezing protection in cooling mode. 10) Water flow cut-off protection. 5) Anti-freezing protection in Winter. 11) Sensor malfunction protection. 6) Protection for compressor over current. 12) Low-temperature protection of shell and tube heat exchanger.				
Operation water temp	°C	Cooling : 5~17 Heating : 45~50	Cooling: 0~17(Less than 5°C must add antifreeze) Heating: 22~50			
Ambient temp	°C	Cooling : 10~46 Heating : -10~21	Cooling : -10~46 Heating : -10~21	Cooling : 10~52 Heating : -10~21	Cooling : -10~46 Heating : -10~21	

**Note:** Specifications are based on the following conditions:

- Cooling : chilled water inlet/outlet: 12 °C / 7°C, and outdoor ambient temp. of 35°C DB.
- Heating : warm water inlet/outlet: 40°C / 45°C, and outdoor ambient temp. 7°CDB/6°CWB.
- Water side fouling factor: 0.086m<sup>2</sup>·°C/kW.
- 1m away in open field(sound pressure).



# Air Cooled Scroll Chiller - Features

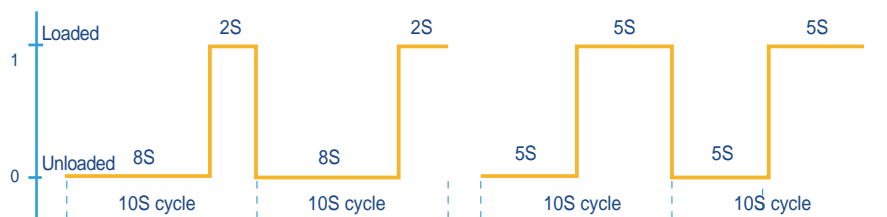
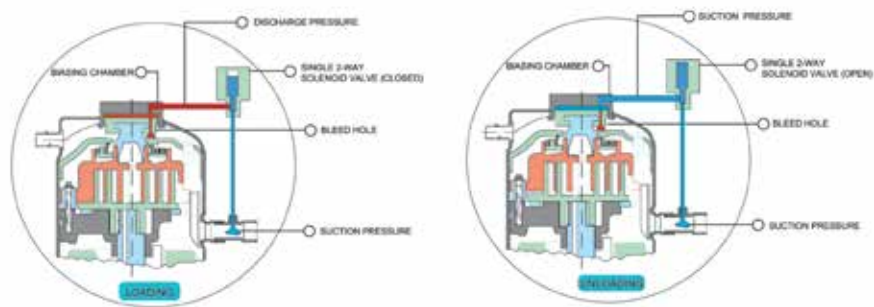
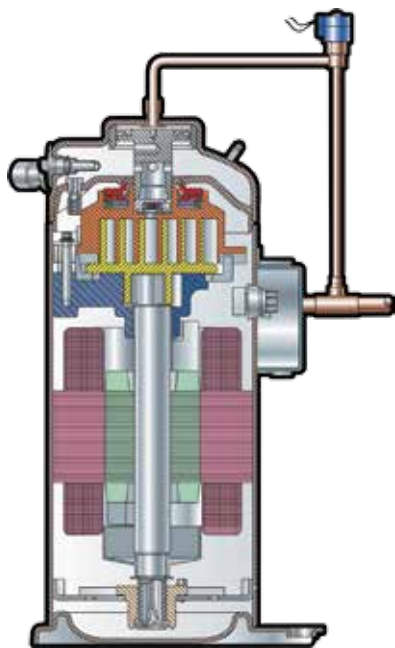
## Modular design

Design flexibility.  
 Back-up function.  
 Master controller oversees operation of all connected modules.  
 Low starting current.



## Digital scroll technology

Digital scroll technology, provides maximum reliability, high efficiency and quiet operation. Advanced digital scroll technology for small modules (25/30/65kW) maximizes reliability, ensures efficient and silent operation, optimizes capacity output, and provides a comfortable room temperature.



20% output

50% output

## Air Cooled Scroll Chiller - Features

### Wide range of ambient temperature

The ambient temperature can go down to -10°C in cooling mode.

The wide ambient temperature range is optional, and can be modified to meet requirements.

Mode		Ambient temp.
Cooling	Normally (S8 address OFF)	10~46°C
	+Low temp. (S8 address ON)	-10~46°C
Heating		-10~21°C



### User friendly remote control

Switch the S7 address on the PCB to ON to enable the following remote control operations:

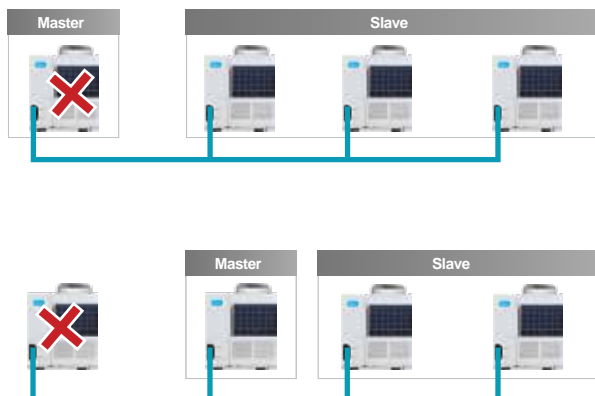
- Remote ON/OFF.
- Remote mode selection: heating or cooling.
- Remote alarm.

**Note:**

When using the remote control function, the wired controller will be invalid.



### Backup functions



When unit fails.

- If master unit fails, all the units will stop.
- If one slave unit fails, this unit will stop but the others will keep running.
- When the master unit fails, any of the slave one can be set as the master unit by manual setting.

When unit is under protection.

- If master unit's protection occurs, this unit will stop but the others will keep running.
  - If slave unit's protection occurs, this unit will stop but the others will keep running.
  - (Except PE, P9 protection happens)
- PE: Low-temperature protection of evaporator.  
P9: Outlet and inlet water temperature difference protection.

# Air Cooled Scroll Chiller - Features

Air Cooled Scroll

## Optimized electrical design

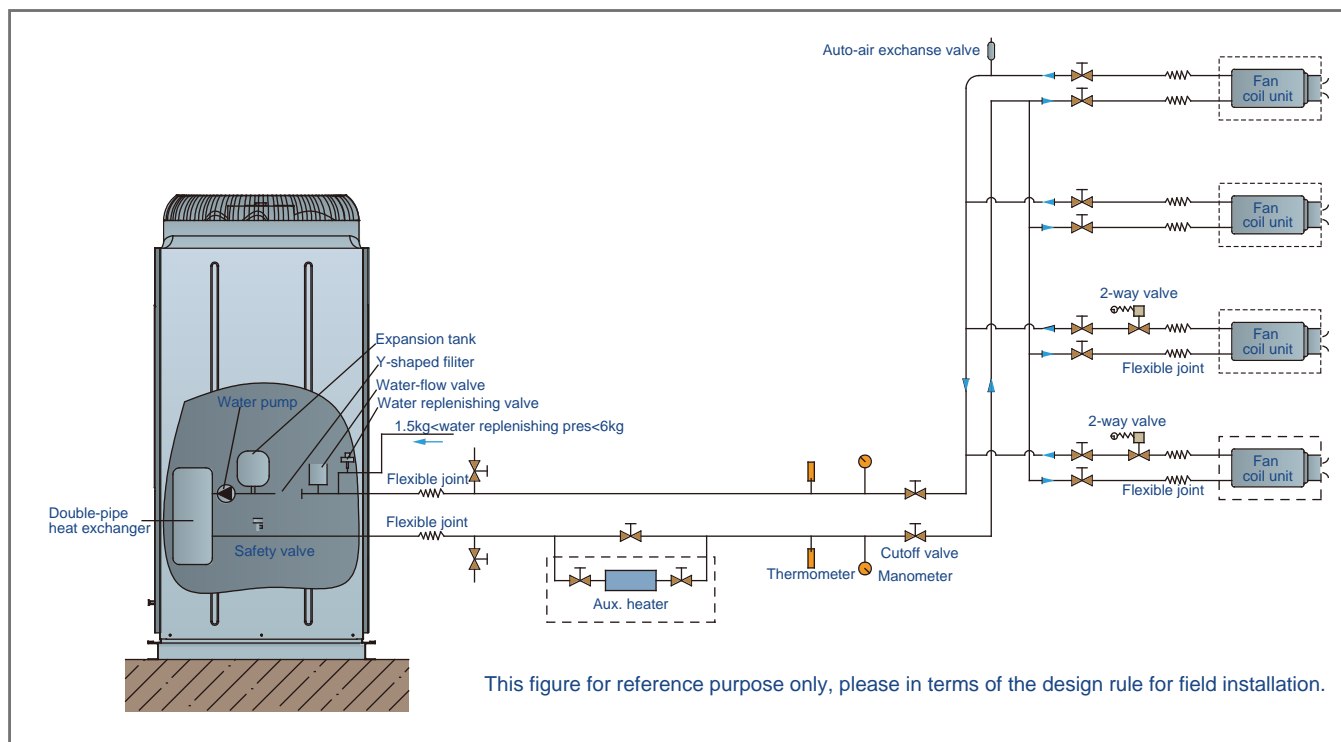
The electrical panels provide a clear visual representation of the wiring scheme completed during assembly.



## Built-in hydraulic module

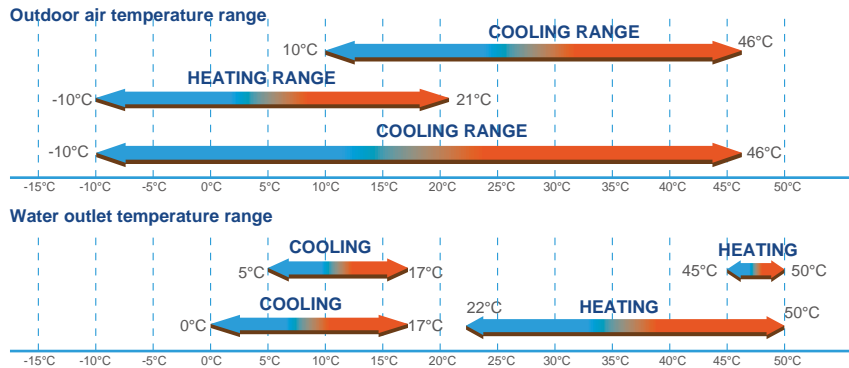
The unit's in-built hydraulic module simplifies installation, saves space, improves aesthetics, and cuts costs.

(Available for MGCSL-F(D)30W/RN1.)



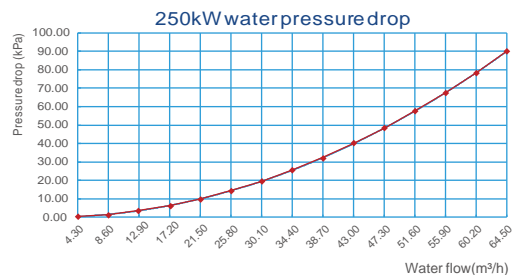
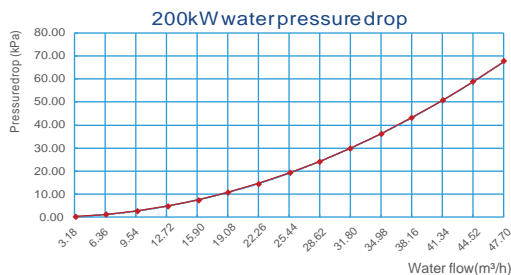
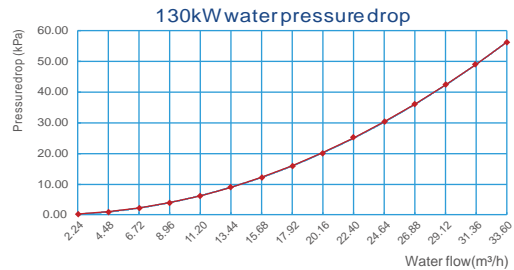
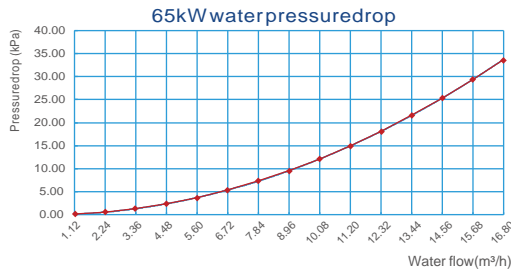
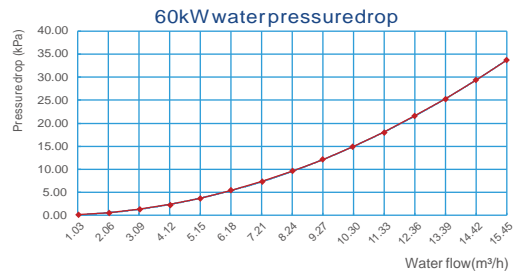
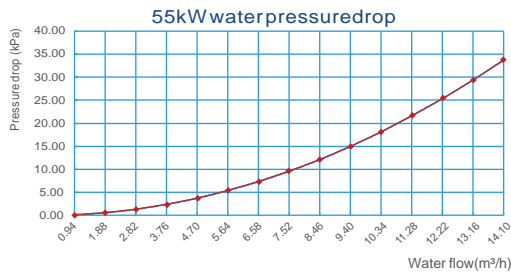
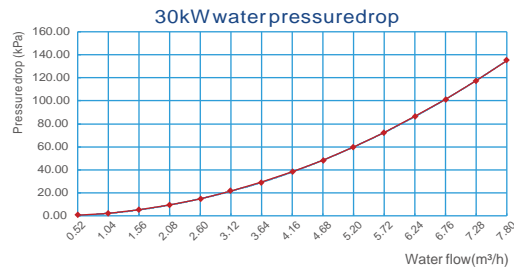
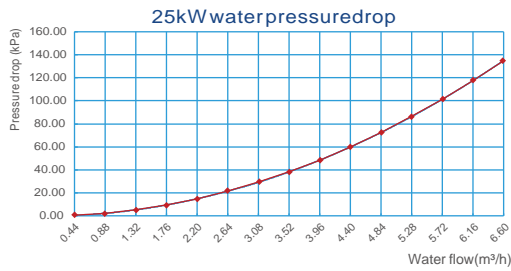
# Air Cooled Scroll Chiller - Application range

## Operation temperature range



Mode	Outdoor ambient temperature range	Water outlet temperature range
Cooling	10°C~46°C	0°C~17°C (7°C is default, less than 5°C must add antifreeze)
	-10°C~46°C	5°C~17°C (7°C is default)
Heating	-10°C~21°C	22°C ~ 50°C (45°C is default)

## Water pressure drop



## Air Cooled Scroll Chiller - Glycol factors

### Ethylene glycol:

Quality of glycol%	Modification coefficient				Freezing point °C
	Cooling capacity modification	Power modification	Water resistance	Water flow modification	
0	1.000	1.000	1.000	1.000	0
10	0.984	0.998	1.118	1.019	-4.000
20	0.973	0.995	1.268	1.051	-9.000
30	0.965	0.992	1.482	1.092	-16.000
40	0.960	0.989	1.791	1.145	-23.000
50	0.950	0.983	2.100	1.200	-37.000

### Propylene glycol:

Quality of glycol%	Modification coefficient				Freezing point °C
	Cooling capacity modification	Power modification	Water resistance	Water flow modification	
0	1.000	1.000	1.000	1.000	0
10	0.976	0.996	1.071	1.000	-3.000
20	0.961	0.992	1.189	1.016	-7.000
30	0.948	0.988	1.380	1.034	-13.000
40	0.938	0.984	1.728	1.078	-22.000
50	0.925	0.975	2.150	1.125	-35.000

## Fouling factor

ALTITUDE (m)	Difference of water inlet and outlet temp (°C)	Fouling Factor							
		0.018m <sup>2</sup> °C /kW		0.044m <sup>2</sup> °C /kW		0.086m <sup>2</sup> °C /kW		0.172m <sup>2</sup> °C /kW	
		C	P	C	P	C	P	C	P
Sea level	3	1.036	1.077	1.019	1.076	0.991	0.975	0.963	0.983
	4	1.039	1.101	1.022	1.080	0.994	0.996	0.971	0.984
	5	1.045	1.105	1.028	1.086	1.000	1.000	0.977	0.989
	6	1.051	1.109	1.034	1.093	1.006	1.004	0.983	0.994
600	3	1.024	1.087	1.008	1.064	0.980	0.984	0.951	0.991
	4	1.027	1.111	1.011	1.068	0.983	1.005	0.959	0.992
	5	1.034	1.115	1.017	1.074	0.989	1.009	0.965	0.997
	6	1.043	1.115	1.026	1.084	0.998	1.009	0.973	0.999
1200	3	1.013	1.117	0.996	1.052	0.969	1.011	0.942	1.002
	4	1.015	1.118	0.998	1.055	0.971	1.012	0.948	1.003
	5	1.023	1.122	1.006	1.063	0.979	1.015	0.955	1.005
	6	1.031	1.125	1.015	1.072	0.987	1.018	0.962	1.007
1800	3	1.002	1.128	0.986	1.042	0.959	1.021	0.935	1.007
	4	1.005	1.129	0.989	1.045	0.962	1.022	0.941	1.010
	5	1.012	1.132	0.995	1.051	0.968	1.024	0.945	1.012
	6	1.018	1.134	1.001	1.058	0.974	1.026	0.949	1.014

C--Cooling capacity P--Power

# Air Cooled Scroll Chiller - Performance data - Cooling

Air Cooled Scroll

Chilled water outlet temp (°C)	Model	Ambient temp (°C)											
		21		25		30		35		40		46	
		Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW
5	25kW	31.35	8.19	29.52	8.44	27.85	8.71	26.32	8.97	24.66	9.42	22.69	9.89
	30kW	33.59	8.81	31.63	9.08	29.84	9.36	28.2	9.65	26.42	10.13	24.31	10.64
	55kW	61.58	15.41	57.98	15.89	54.7	16.38	51.7	16.89	48.44	17.73	44.57	18.62
	60kW	67.17	17	63.25	17.52	59.67	18.07	56.4	18.62	52.85	19.56	48.62	20.53
	65kW	72.77	17.97	68.52	18.52	64.64	19.1	61.1	19.69	57.25	20.67	52.67	21.7
	130kW	145.54	35.93	137.04	37.05	129.29	38.19	122.2	39.37	114.5	41.34	105.34	43.41
	200kW	207.12	55.49	195.03	57.2	183.99	58.97	173.9	60.8	162.94	63.83	149.91	67.03
	250kW	279.89	68.96	263.55	71.09	248.63	73.29	235	75.56	220.2	79.34	202.58	83.3
6	25kW	32.41	8.32	30.49	8.58	28.73	8.84	27.13	9.11	25.45	9.57	23.44	10.05
	30kW	34.72	8.94	32.66	9.22	30.79	9.51	29.07	9.8	27.27	10.29	25.11	10.8
	55kW	63.65	15.65	59.88	16.14	56.44	16.64	53.3	17.15	49.99	18.01	46.04	18.91
	60kW	69.44	17.26	65.33	17.8	61.57	18.35	58.14	18.91	54.54	19.86	50.23	20.85
	65kW	75.23	18.25	70.77	18.81	66.7	19.39	62.99	19.99	59.08	20.99	54.41	22.04
	130kW	150.46	36.49	141.54	37.62	133.4	38.78	125.97	39.98	118.16	41.98	108.83	44.08
	200 kW	214.11	56.35	201.42	58.09	189.84	59.89	179.27	61.74	168.15	64.83	154.87	68.07
	250kW	289.34	70.03	272.19	72.2	256.54	74.43	242.25	76.73	227.23	80.57	209.28	84.6
7	25kW	33.54	8.49	31.52	8.75	29.68	9.02	28	9.3	26.29	9.77	24.24	10.25
	30kW	35.93	9.13	33.77	9.41	31.8	9.7	30	10	28.17	10.5	25.97	11.03
	55kW	65.88	15.97	61.91	16.47	58.3	16.98	55	17.5	51.65	18.38	47.62	19.29
	60kW	71.87	17.61	67.54	18.16	63.6	18.72	60	19.3	56.34	20.27	51.95	21.28
	65kW	77.85	18.62	73.17	19.19	68.9	19.79	65	20.4	61.04	21.42	56.27	22.49
	130kW	155.71	37.24	146.34	38.39	137.8	39.58	130	40.8	122.07	42.84	112.55	44.98
	200kW	221.59	57.5	208.26	59.28	196.1	61.11	185	63	173.72	66.15	160.17	69.46
	250kW	299.44	71.46	281.43	73.67	265	75.95	250	78.3	234.75	82.22	216.44	86.33

**Note:** The inlet/outlet water temperature difference is 5°C.

# Air Cooled Scroll Chiller - Performance data - Cooling

Chilled water outlet temp. Model (°C)		Ambient temp (°C)											
		21		25		30		35		40		46	
		Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW
8	25kW	34.57	8.74	32.46	9.01	30.54	9.29	28.78	9.58	27.06	10.06	24.97	10.56
	30kW	37.04	9.4	34.78	9.69	32.72	9.99	30.84	10.3	28.99	10.82	26.76	11.36
	55kW	67.91	16.45	63.77	16.96	59.99	17.48	56.54	18.03	53.15	18.93	49.06	19.87
	60kW	74.09	18.14	69.57	18.7	65.44	19.28	61.68	19.88	57.98	20.87	53.51	21.92
	65kW	80.26	19.18	75.36	19.77	70.9	20.38	66.82	21.01	62.81	22.06	57.97	23.17
	130kW	160.52	38.35	150.72	39.54	141.79	40.76	133.64	42.02	125.62	44.13	115.95	46.33
	200kW	228.44	59.22	214.49	61.06	201.78	62.94	190.18	64.89	178.77	68.13	165	71.54
	250kW	308.7	73.61	289.86	75.88	272.68	78.23	257	80.65	241.58	84.68	222.98	88.92
9	25kW	35.55	8.83	33.35	9.1	31.34	9.38	29.51	9.67	27.77	10.16	25.66	10.66
	30kW	38.09	9.49	35.73	9.79	33.58	10.09	31.62	10.4	29.75	10.92	27.49	11.47
	55kW	69.83	16.61	65.5	17.12	61.56	17.65	57.97	18.2	54.55	19.11	50.4	20.07
	60kW	76.18	18.32	71.46	18.89	67.16	19.47	63.24	20.07	59.51	21.08	54.99	22.13
	65kW	82.52	19.36	77.41	19.96	72.76	20.58	68.51	21.22	64.47	22.28	59.57	23.39
	130kW	165.05	38.73	154.83	39.92	145.52	41.16	137.02	42.43	128.94	44.55	119.14	46.78
	200kW	234.87	59.8	220.33	61.65	207.08	63.55	194.99	65.52	183.49	68.8	169.54	72.24
	250kW	317.4	74.32	297.75	76.62	279.84	78.99	263.5	81.43	247.95	85.5	229.11	89.78
10	25kW	36.9	8.96	34.58	9.24	32.47	9.52	30.54	9.82	28.77	10.31	26.62	10.82
	30kW	39.53	9.63	37.05	9.93	34.79	10.24	32.73	10.56	30.83	11.08	28.52	11.64
	55kW	72.48	16.86	67.92	17.38	63.78	17.92	60	18.47	56.52	19.4	52.28	20.37
	60kW	79.06	18.59	74.1	19.17	69.58	19.76	65.45	20.37	61.66	21.39	57.03	22.46
	65kW	85.65	19.65	80.27	20.26	75.38	20.89	70.91	21.53	66.8	22.61	61.79	23.74
	130kW	171.31	39.31	160.55	40.52	150.75	41.78	141.82	43.07	133.59	45.22	123.57	47.48
	200kW	237.19	60.7	222.3	62.57	208.73	64.51	196.36	66.5	184.97	69.83	171.1	73.32
	250kW	329.43	75.44	308.75	77.77	289.9	80.17	272.72	82.65	256.9	86.79	237.64	91.13
11	25kW	37.93	9.05	35.51	9.33	33.31	9.62	31.31	9.91	29.52	10.41	27.34	10.93
	30kW	40.63	9.73	38.05	10.03	35.69	10.34	33.54	10.66	31.63	11.19	29.29	11.75
	55kW	74.5	17.03	69.75	17.55	65.43	18.1	61.5	18.66	57.99	19.59	53.7	20.57
	60kW	81.27	18.78	76.09	19.36	71.38	19.96	67.09	20.57	63.27	21.6	58.58	22.68
	65kW	88.04	19.85	82.44	20.46	77.33	21.09	72.68	21.75	68.54	22.83	63.47	23.98
	130kW	176.08	39.69	164.87	40.92	154.66	42.19	145.36	43.49	137.08	45.67	126.93	47.95
	200kW	243.81	61.29	228.28	63.19	214.15	65.14	201.27	67.16	189.8	70.52	175.75	74.04
	250kW	338.62	76.18	317.06	78.53	297.43	80.96	279.54	83.47	263.61	87.64	244.1	92.02
12	25kW	38.79	9.18	36.29	9.46	34.01	9.76	31.93	10.06	30.15	10.56	27.95	11.09
	30kW	41.56	9.87	38.88	10.18	36.44	10.49	34.22	10.82	32.3	11.36	29.94	11.92
	55kW	76.2	17.28	71.28	17.81	66.81	18.36	62.73	18.93	59.22	19.87	54.89	20.87
	60kW	83.13	19.05	77.76	19.64	72.88	20.25	68.43	20.87	64.6	21.92	59.88	23.01
	65kW	90.06	20.14	84.24	20.76	78.95	21.4	74.13	22.06	69.98	23.17	64.87	24.33
	130kW	180.11	40.28	168.49	41.52	157.91	42.81	148.27	44.13	139.97	46.34	129.75	48.65
	200kW	249.38	62.19	233.29	64.11	218.64	66.1	205.29	68.14	193.8	71.55	179.65	75.13
	250kW	346.37	77.29	324.01	79.68	303.66	82.15	285.13	84.69	269.16	88.92	249.52	93.37
13	25kW	39.49	9.25	36.9	9.54	34.55	9.84	32.41	10.14	30.63	10.65	28.43	11.18
	30kW	42.31	9.95	39.54	10.26	37.02	10.58	34.73	10.9	32.82	11.45	30.46	12.02
	55kW	77.56	17.41	72.49	17.95	67.87	18.51	63.67	19.08	60.17	20.03	55.84	21.04
	60kW	84.61	19.2	79.08	19.8	74.04	20.41	69.46	21.04	65.64	22.09	60.91	23.2
	65kW	91.66	20.3	85.67	20.93	80.21	21.57	75.25	22.24	71.11	23.35	65.99	24.52
	130kW	183.33	40.6	171.33	41.85	160.42	43.15	150.49	44.48	142.22	46.71	131.98	49.04
	200kW	253.84	62.69	237.23	64.63	222.13	66.63	208.37	68.69	196.91	72.12	182.74	75.73
	250kW	352.55	77.91	329.49	80.32	308.51	82.81	289.41	85.37	273.49	89.64	253.8	94.12

Note: The inlet/outlet water temperature difference is 5°C.

## Air Cooled Scroll Chiller - Performance data - Cooling

**Air Cooled Scroll**

Chilled water outlet temp. (°C)	Model	Ambient temp (°C)											
		21		25		30		35		40		46	
		Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW
14	25kW	40.47	9.32	37.79	9.61	35.35	9.9	33.13	10.21	31.34	10.72	29.11	11.26
	30kW	43.36	10.02	40.48	10.33	37.87	10.65	35.49	10.98	33.58	11.53	31.19	12.1
	55kW	79.49	17.53	74.22	18.08	69.43	18.64	65.07	19.21	61.56	20.17	57.19	21.18
	60kW	86.72	19.34	80.97	19.94	75.74	20.55	70.99	21.19	67.15	22.25	62.38	23.36
	65kW	93.94	20.44	87.72	21.07	82.05	21.72	76.9	22.4	72.75	23.52	67.58	24.69
	130kW	187.89	40.88	175.43	42.14	164.11	43.45	153.8	44.79	145.5	47.03	135.17	49.38
	200kW	260.15	63.12	242.91	65.08	227.23	67.09	212.96	69.16	201.46	72.62	187.15	76.25
	250kW	361.32	78.45	337.37	80.88	315.59	83.38	295.78	85.96	279.8	90.26	259.94	94.77
15	25kW	40.99	9.36	38.23	9.65	35.73	9.95	33.46	10.26	31.68	10.77	29.47	11.31
	30kW	43.92	10.07	40.97	10.38	38.29	10.7	35.85	11.03	33.95	11.58	31.57	12.16
	55kW	80.5	17.62	75.1	18.17	70.19	18.73	65.72	19.31	62.24	20.27	57.88	21.29
	60kW	87.83	19.43	81.93	20.03	76.57	20.65	71.7	21.29	67.9	22.36	63.14	23.47
	65kW	95.15	20.54	88.76	21.18	82.95	21.83	77.67	22.51	73.55	23.63	68.41	24.81
	130kW	190.3	41.08	177.52	42.35	165.9	43.66	155.34	45.01	147.11	47.26	136.81	49.63
	200kW	263.49	63.43	245.79	65.4	229.71	67.42	215.09	69.5	203.69	72.98	189.43	76.63
	250kW	365.96	78.84	341.38	81.28	319.05	83.79	298.73	86.38	282.9	90.7	263.1	95.24

Note: The inlet/outlet water temperature difference is 5°C.

## Air Cooled Scroll Chiller - Performance data - Heating

Hot water outlet temp	Model	Ambient temp (°C)													
		-10		-6		-2		2		7		10		13	
		Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW
40	25kW	18.34	5.76	22.92	6.54	26.97	7.27	29.96	7.9	32.57	8.32	36.47	8.82	41.95	9.52
	30kW	19.89	6.13	24.86	6.97	29.25	7.74	32.5	8.42	35.33	8.86	39.57	9.39	45.5	10.14
	55kW	40.4	11.45	45.84	13.01	53.93	14.46	59.92	15.71	65.13	16.54	72.95	17.53	83.89	18.94
	60kW	39.78	12.39	49.73	14.08	58.5	15.64	65	17	70.65	17.9	79.13	18.97	91	20.49
	65kW	42.89	13.45	53.61	15.29	63.07	16.99	70.08	18.46	76.17	19.43	85.31	20.6	98.11	22.25
	130kW	85.78	26.91	107.22	30.57	126.14	33.97	140.16	36.93	152.34	38.87	170.63	38.33	196.22	41.39
	200kW	124.31	38.17	155.39	43.37	182.81	48.19	203.13	52.38	220.79	55.14	247.28	58.45	284.38	63.12
	250kW	167.82	50.06	209.78	56.88	246.8	63.2	274.22	68.7	298.07	72.31	333.83	76.65	383.91	82.78
41	25kW	17.72	5.87	22.18	6.67	26.12	7.42	29.06	8.06	31.62	8.49	35.35	8.99	40.58	9.71
	30kW	19.22	6.26	24.06	7.11	28.34	7.9	31.52	8.59	34.3	9.04	38.34	9.58	44.02	10.35
	55kW	35.44	11.68	44.36	13.28	52.24	14.75	58.11	16.04	63.24	16.88	70.7	17.89	81.16	19.32
	60kW	38.44	12.64	48.11	14.37	56.67	15.96	63.04	17.3	68.59	18.26	76.69	19.36	88.04	20.91
	65kW	41.45	13.73	51.87	15.6	61.1	17.33	67.96	18.84	73.95	19.83	82.68	21.02	94.92	22.7
	130kW	82.89	27.45	103.75	31.2	122.2	34.66	135.93	37.68	147.91	39.66	165.36	39.11	189.83	42.24
	200kW	120.14	38.95	150.36	44.26	177.1	49.18	197	53.45	214.36	56.26	239.65	59.64	275.12	64.41
	250kW	162.18	51.08	202.98	58.04	239.08	64.49	265.94	70.1	289.38	73.79	323.53	78.22	371.41	84.47
42	25kW	17.21	5.99	21.56	6.81	25.43	7.57	28.32	8.23	30.85	8.66	34.42	9.18	39.45	9.91
	30kW	18.6	6.38	23.39	7.26	27.58	8.06	30.72	8.76	33.46	9.22	37.34	9.78	42.79	10.56
	55kW	34.42	11.92	43.13	13.55	50.86	15.05	56.63	16.36	61.69	17.22	68.85	18.26	78.9	19.72
	60kW	37.33	12.9	46.78	14.66	55.17	16.29	61.43	17.7	66.92	18.64	74.68	19.75	85.59	21.33
	65kW	40.25	14.01	50.44	15.92	59.48	17.69	66.23	19.22	72.15	20.24	80.52	21.45	92.28	23.17
	130kW	80.5	28.01	100.87	31.83	118.96	35.37	132.47	38.45	144.3	40.47	161.04	39.91	184.55	43.1
	200kW	116.66	39.74	146.19	45.16	172.4	50.18	191.98	54.54	209.13	57.41	233.39	60.86	267.46	65.73
	250kW	157.5	52.12	197.36	59.23	232.74	65.81	259.18	71.53	282.33	75.3	315.08	79.81	361.08	86.2

Note: The inlet/outlet water temperature difference is 5°C.



# Air Cooled Scroll Chiller - Performance data - Heating

Hot water outlet temp (°C)	Model	Ambient temp (°C)													
		-10		-6		-2		2		7		10		13	
		Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW	Capacity kW	Power kW
43	25kW	16.79	6.12	21.07	6.95	24.88	7.72	27.73	8.39	30.24	8.84	33.69	9.37	38.54	10.12
	30kW	18.22	6.52	22.86	7.4	26.98	8.23	30.08	8.94	32.8	9.41	36.54	9.98	41.81	10.77
	55kW	33.58	12.17	42.14	13.82	49.75	15.36	55.46	16.7	60.48	17.58	67.38	18.63	77.08	20.12
	60kW	36.43	13.16	45.71	14.96	53.97	16.62	60.16	18.07	65.61	19.02	73.09	20.16	83.61	21.77
	65kW	39.28	14.29	49.28	16.24	58.18	18.05	64.86	19.62	70.74	20.65	78.8	21.89	90.15	23.64
	130kW	78.55	28.59	98.56	32.48	116.37	36.09	129.73	39.23	141.47	41.3	157.6	40.72	180.29	43.98
	200kW	113.85	40.55	142.84	46.08	168.65	51.2	188.01	55.66	205.03	58.58	228.4	62.1	261.29	67.07
	250kW	153.69	53.18	192.84	60.44	227.67	67.15	253.82	72.99	276.79	76.83	308.34	81.44	352.75	87.96
44	25kW	16.47	6.24	20.69	7.09	24.45	7.88	27.29	8.57	29.8	9.02	33.13	9.56	37.84	10.32
	30kW	17.86	6.65	22.44	7.55	26.53	8.39	29.61	9.12	32.32	9.6	35.94	10.18	41.04	10.99
	55kW	32.94	12.41	41.38	14.11	48.91	15.67	54.58	17.04	59.59	17.93	66.26	19.01	75.67	20.53
	60kW	35.73	13.43	44.88	15.26	53.05	16.96	59.21	18.43	64.64	19.4	71.88	20.57	82.09	22.21
	65kW	38.52	14.58	48.39	16.57	57.2	18.42	63.84	20.02	69.69	21.07	77.5	22.33	88.5	24.12
	130kW	77.03	29.17	96.78	33.15	114.39	36.83	127.67	40.03	139.38	42.14	154.99	41.55	177	44.88
	200kW	111.64	41.38	140.26	47.02	165.79	52.25	185.03	56.79	202	59.78	224.62	63.37	256.52	68.44
	250kW	150.72	54.27	189.35	61.67	223.81	68.52	249.79	74.48	272.7	78.4	303.24	83.1	346.3	89.75
45	25kW	16.23	6.37	20.41	7.24	24.16	8.04	26.99	8.74	29.5	9.2	32.75	9.75	37.33	10.53
	30kW	17.6	6.78	22.14	7.71	26.21	8.57	29.28	9.31	32	9.8	35.52	10.39	40.49	11.22
	55kW	32.46	12.67	40.83	14.39	48.32	15.99	53.99	17.39	59	18.3	65.49	19.4	74.66	20.95
	60kW	35.21	13.71	44.29	15.57	52.41	17.31	58.56	18.81	64	19.8	71.04	20.99	80.99	22.67
	65kW	37.96	14.88	47.75	16.91	56.51	18.79	63.14	20.43	69	21.5	76.59	22.79	87.31	24.61
	130kW	75.92	29.76	95.49	33.82	113.01	37.58	126.27	40.85	138	43	153.18	45.58	174.63	49.23
	200kW	110.03	42.22	138.4	47.98	163.79	53.31	183	57.95	200	61	222	64.66	253.08	69.83
	250kW	148.54	55.38	186.84	62.93	221.11	69.92	247.05	76	270	80	299.7	84.8	341.66	91.58
46	25kW	15.91	6.43	20.04	7.31	23.74	8.12	26.56	8.83	29.06	9.29	32.2	9.85	36.64	10.64
	30kW	17.26	6.85	21.74	7.79	25.76	8.65	28.81	9.4	31.52	9.9	34.92	10.49	39.74	11.33
	55kW	31.82	12.79	40.08	14.54	47.49	16.15	53.12	17.56	58.12	18.48	64.39	19.59	73.28	21.16
	60kW	34.52	13.84	43.48	15.73	51.51	17.48	57.62	19	63.04	20	69.85	21.2	79.49	22.89
	65kW	37.22	15.03	46.87	17.08	55.54	18.98	62.12	20.63	67.97	21.72	75.31	23.02	85.7	24.86
	130kW	74.43	30.06	93.74	34.16	111.07	37.96	124.24	41.26	135.93	43.43	150.61	46.04	171.39	49.72
	200kW	107.87	42.65	135.86	48.46	160.97	53.85	180.06	58.53	197	61.61	218.28	65.31	248.4	70.53
	250kW	145.63	55.93	183.41	63.56	217.31	70.62	243.08	76.76	265.95	80.8	294.67	85.65	335.34	92.5
47	25kW	15.44	6.56	19.47	7.46	23.1	8.28	25.87	9	28.33	9.48	31.33	10.05	35.6	10.85
	30kW	16.75	6.99	21.12	7.94	25.06	8.82	28.06	9.59	30.73	10.1	33.99	10.7	38.61	11.56
	55kW	30.88	13.05	38.94	14.83	46.2	16.48	51.73	17.91	56.66	18.85	62.67	19.98	71.19	21.58
	60kW	33.5	14.12	42.24	16.05	50.11	17.83	56.12	19.38	61.46	20.4	67.98	21.62	77.22	23.35
	65kW	36.12	15.33	45.54	17.42	54.03	19.36	60.5	21.04	66.27	22.15	73.29	23.48	83.26	25.36
	130kW	72.23	30.66	91.09	34.85	108.05	38.72	121	42.08	132.53	44.3	146.58	46.96	166.52	50.71
	200kW	104.69	43.5	132.01	49.43	156.6	54.92	175.36	59.7	192.08	61.81	212.43	66.61	241.33	71.94
	250kW	141.33	57.05	178.22	64.83	211.41	72.03	236.74	78.3	259.3	82.42	286.79	87.36	325.79	94.35
48	25kW	14.83	6.76	18.73	7.68	22.24	8.53	24.93	9.72	27.34	9.76	30.18	10.35	34.23	11.18
	30kW	16.09	7.2	20.31	8.18	24.13	9.09	27.05	9.88	29.66	10.4	32.74	11.02	37.13	11.9
	55kW	29.66	13.44	37.45	15.27	44.48	16.97	49.87	18.45	54.68	19.42	60.37	20.58	68.45	22.23
	60kW	32.18	14.54	40.63	16.53	48.25	18.36	54.09	19.96	59.31	21.01	65.48	22.27	74.26	24.05
	65kW	34.69	15.79	43.8	17.95	52.02	19.94	58.32	21.67	63.95	22.81	70.6	24.18	80.06	26.12
	130kW	69.38	31.58	87.6	35.89	104.04	39.88	116.64	43.35	127.89	45.63	141.19	48.37	160.11	52.23
	200kW	100.55	44.8	126.96	50.91	150.78	56.57	169.04	61.49	185.35	63.67	204.63	68.61	232.05	74.1
	250kW	135.75	58.76	171.4	66.77	203.56	74.19	228.21	80.64	250.23	84.89	276.25	89.98	313.27	97.18

Note: The inlet/outlet water temperature difference is 5°C.

## Air Cooled Scroll Chiller - Performance data - Heating

**Air Cooled Scroll**

Hot water outlet temp (°C)	Model	Ambient temp (°C)													
		-10		-6		-2		2		7		10		13	
		Capacity	Power	Capacity	Power	Capacity	Power	Capacity	Power	Capacity	Power	Capacity	Power	Capacity	Power
		kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	
49	25kW	14.02	7.03	17.73	7.99	21.08	8.87	23.66	9.65	25.97	10.15	28.62	10.76	32.4	11.62
	30kW	15.21	7.49	19.23	8.51	22.87	9.45	25.67	10.27	28.17	10.81	31.05	11.46	35.15	12.38
	55kW	28.05	13.98	35.46	15.89	42.16	17.65	47.32	19.19	51.95	20.19	57.24	21.41	64.8	23.12
	60kW	30.43	15.12	38.46	17.19	45.74	19.1	51.33	20.76	56.35	21.85	62.09	23.16	70.29	25.01
	65kW	32.8	16.42	41.47	18.66	49.31	20.74	55.34	22.54	60.75	23.73	66.95	25.15	75.78	27.16
	130kW	65.61	32.85	82.94	37.33	98.62	41.47	110.69	45.08	121.5	47.45	133.89	50.3	151.56	54.32
	200kW	95.08	46.6	120.2	52.95	142.93	58.83	160.41	63.95	176.08	66.21	194.05	71.36	219.66	77.06
250kW	128.36	61.11	162.27	69.44	192.95	77.16	216.56	83.87	237.71	88.28	261.96	93.58	296.54	101.07	
50	25kW	13.12	7.38	16.61	8.39	19.77	9.32	22.22	10.13	24.41	10.66	26.86	11.3	30.35	12.2
	30kW	14.23	7.86	18.02	8.93	21.45	9.92	24.1	10.79	26.48	11.36	29.13	12.04	32.92	13
	55kW	26.24	14.68	33.22	16.68	39.55	18.53	44.43	20.14	48.83	21.2	53.71	22.48	60.69	24.2
	60kW	28.47	15.88	36.03	18.05	42.9	20.05	48.2	21.8	52.97	22.94	58.26	24.32	65.84	26.2
	65kW	30.69	17.24	38.85	19.6	46.25	21.77	51.96	23.67	57.1	24.91	62.81	26.41	70.98	28.5
	130kW	61.38	34.49	77.7	39.19	92.5	43.55	103.93	47.33	114.21	49.83	125.63	52.81	141.96	57.0
	200kW	88.96	48.93	112.61	55.6	134.05	61.78	150.62	67.15	165.52	69.52	182.07	74.92	205.74	80.9
250kW	120.09	64.17	152.02	72.92	180.97	81.02	203.34	88.06	223.45	92.7	245.8	98.26	277.75	106.	

## Air Cooled Scroll Chiller - Electrical data

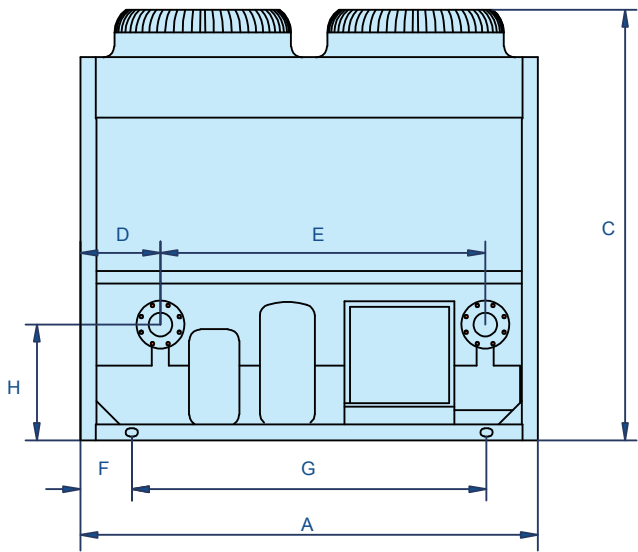
Model	Outdoor Unit				Power Supply		Compressor		OFM	
	Hz	Voltage	Min.	Max.	TOCA	MFA	LRA(each)	RLA(each)	KW	FLA
MGB-F25W/RN1	50	380-415	342	456	24	36	74	11.8	0.67	3.1
MGB-D25W/RN1	50	380-415	342	456	24	36	74	10.6/11.8	0.67	3.1
MGB-F30W/RN1	50	380-415	342	456	24	36	74	11.8	0.67	3.1
MGB-D30W/RN1	50	380-415	342	456	24	36	74	10.6/11.8	0.67	3.1
MGCSL-F30W/RN1	50	380-415	342	456	25.3	36	74	11.8	0.865	4
MGCSL-D30W/RN1	50	380-415	342	456	25.3	36	74	10.6/11.8	0.865	4
MGCL-F30W/RN1	50	380-415	342	456	21.1	36	74	11.8	0.865	4
MGCL-D30W/RN1	50	380-415	342	456	21.1	36	74	10.6/11.8	0.865	4
MGB-F55W/RN1	50	380-415	342	456	49.8	70	147	21.4	0.865 (x2)	4.0(x2)
MGB-F60W/RN1	50	380-415	342	456	51.7	70	147	21.4	0.865 (x2)	4.0(x2)
MGB-F65W/RN1	50	380-415	342	456	54.5	70	147	21.4	0.865 (x2)	4.0(x2)
MGB-D65W/RN1	50	380-415	342	456	54.5	70	144/82.4/74	21.1/12.7/11.8	0.865(x2)	4.0(x2)
MGBL-F65W/RN1	50	380-415	342	456	54.5	70	147	21.4	0.865(x2)	4.0(x2)
MGBL-D65W/RN1	50	380-415	342	456	54.5	70	144/82.4/74	21.1/12.7/11.8	0.865(x2)	4.0(x2)
MGB-F130W/RN1	50	380-415	342	456	109	150	147	21.4	0.865 (x4)	4.0(x4)
MGBL-F130W/RN1	50	380-415	342	456	109	200	147	21.4	0.865 (x4)	4.0(x4)
MGB-F200W/RN1	50	380-415	342	456	150	200	147	21.4	0.865 (x6)	4.0(x6)
MGBL-F200W/RN1	50	380-415	342	456	150	200	147	21.4	0.865 (x6)	4.0(x6)
MGBT-F250W/RN1	50	380-415	342	456	200	300	142	20.7	0.7(x8)	1.8(x8)
MGBL-F250W/RN1	50	380-415	342	456	200	300	142	20.7	0.8(x8)	3.7(x8)

**Remark:** TOCA: Total Over-current Amps. (A)    MFA: Max. Fuse Amps. (A)    LRA: Locked Rotor Amps. (A)  
 RLA: Rated Load Amps. (A)    OFM: Outdoor Fan Motor.  
 KW: Rated Motor Input (kW)    FLA: Full Load Amps.

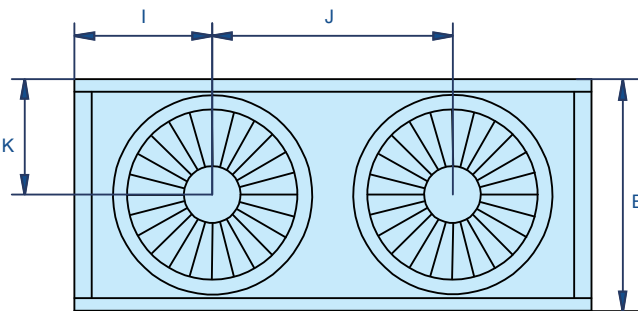
# Air Cooled Scroll Chiller - Dimensions

## 55/60/65kW module

Air Cooled Scroll

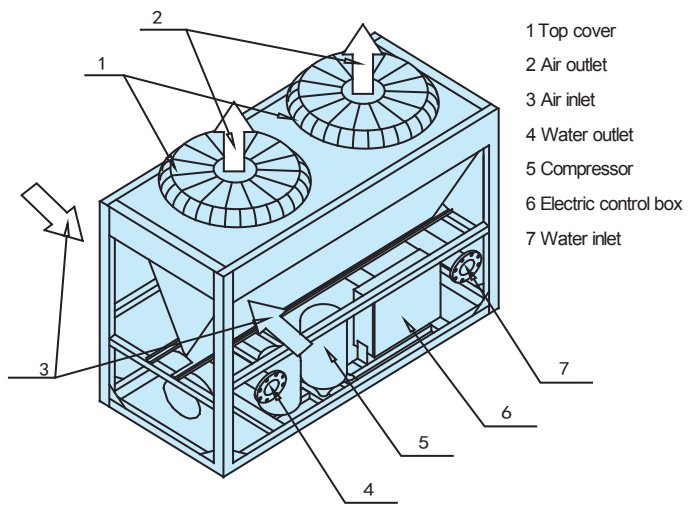


Front view

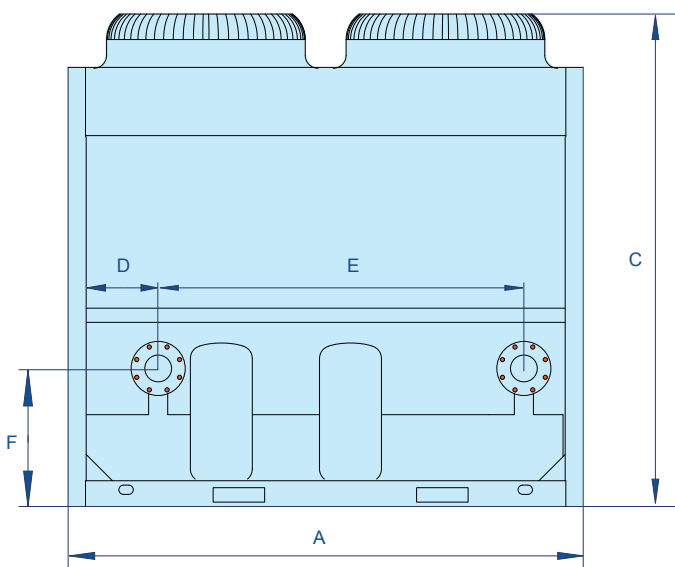


Top view

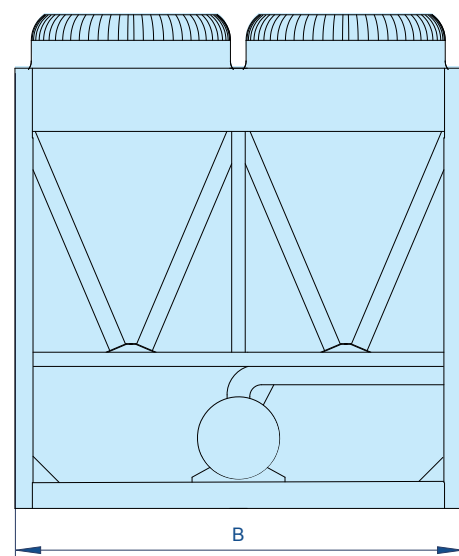
Model	Unit	A	B	C	D	E	F	G	H	I	J	K
MGB-F55W/RN1	mm	2000	900	1880	350	1420	225	1500	506	530	930	450
MGB-F60W/RN1												
MGB-F65W/RN1												
MGB-D65W/RN1	inch	78.74	35.4	74	13.78	55.91	8.86	59.06	19.92	20.87	36.61	17.72
MGBL-F65W/RN1												
MGBL-D65W/RN1												



## 130kW module



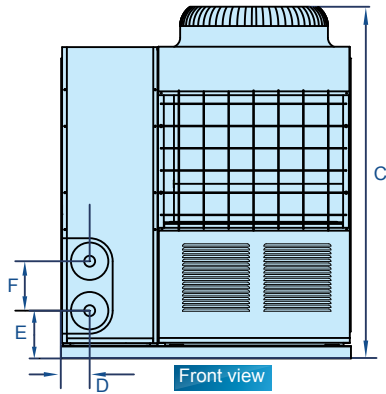
Front view



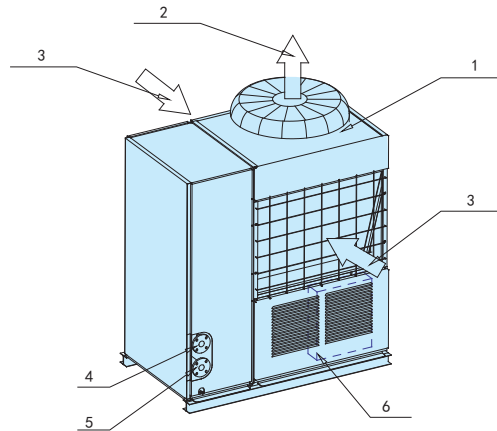
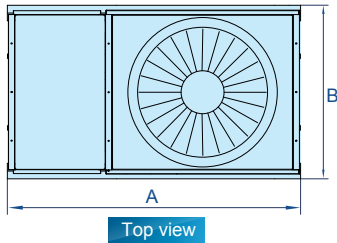
Side view

## Air Cooled Scroll Chiller - Dimensions

### 25/30kW module



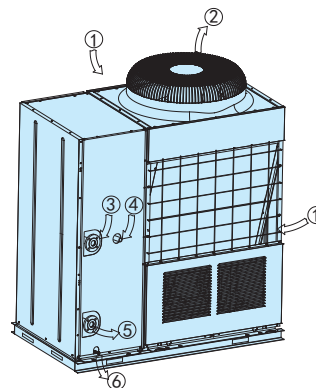
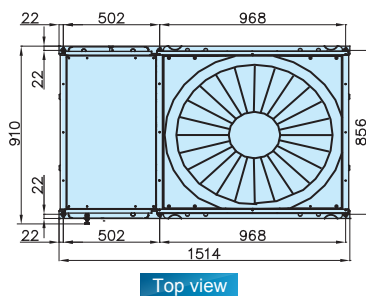
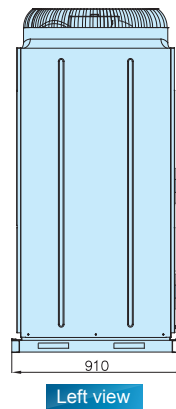
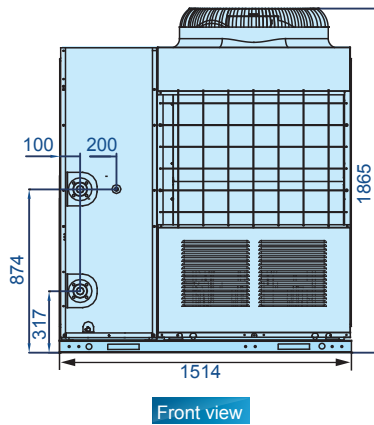
Model	Unit	A	B	C	D	E	F
MGB-F(D)25W/RN1	mm	1514	841	1865	115	315	172
MGB-F(D)30W/RN1	inch	59.6	33.11	73.43	4.53	12.4	6.77



- 1 Top cover
- 2 Air outlet
- 3 Air inlet
- 4 Water outlet
- 5 Water inlet
- 6 Electric control box

### 30kW module (Integrated)

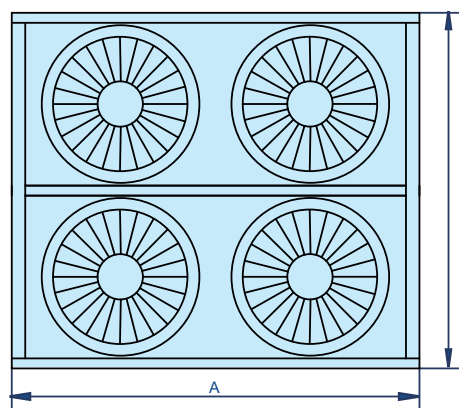
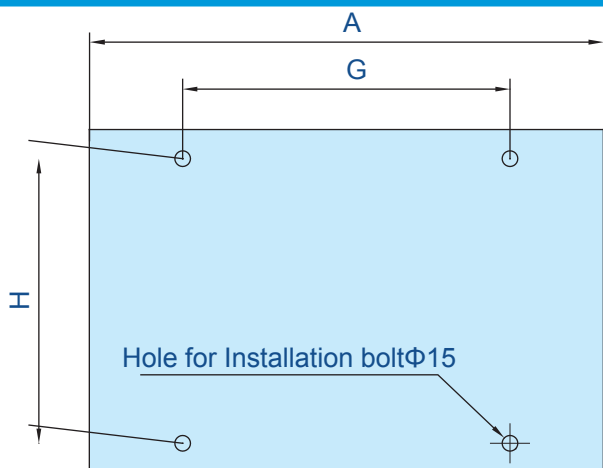
(Available for MGCSL-F30W/RN1 and MGCSL-D30W/RN1)



- 1 Air inlet
- 2 Air outlet
- 3 Water inlet
- 4 Make up water inlet
- 5 Water outlet
- 6 Drain

# Air Cooled Scroll Chiller - Dimensions

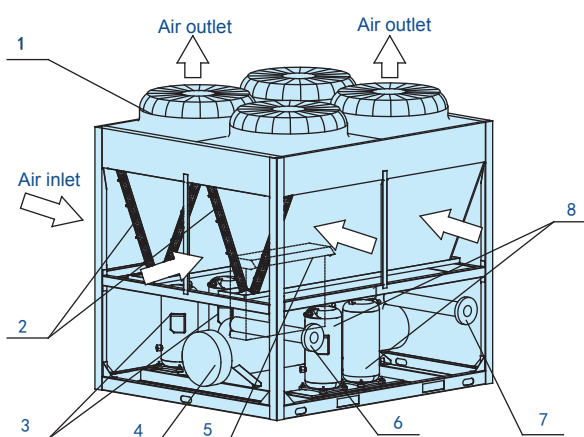
Air Cooled Scroll



Top view

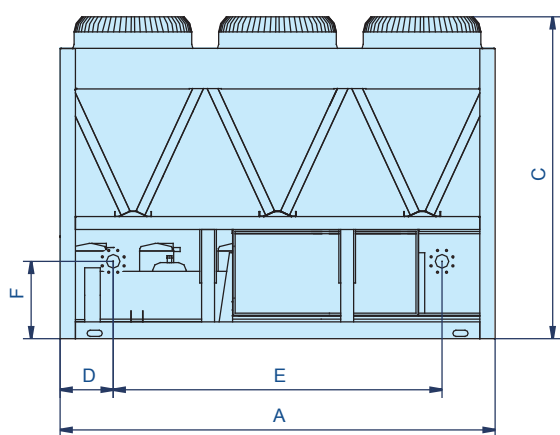
Installation hole

- 1 Top cover
- 2 Condenser
- 3 Compressor
- 4 Evaporator
- 5 Electric control box Air inlet
- 6 Water outlet
- 7 Water inlet
- 8 Compressor

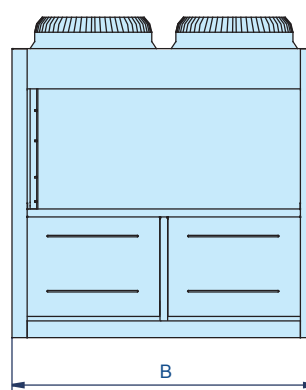


Model	Unit	A	B	C	D	E	F	G	H
MGB-F130W/RN1	mm	2000	1685	2080	350	1420	506	1550	1586
MGBL-F130W/RN1	inch	78.74	66.34	81.89	13.78	55.91	19.92	61.02	62.44

## 200kW module



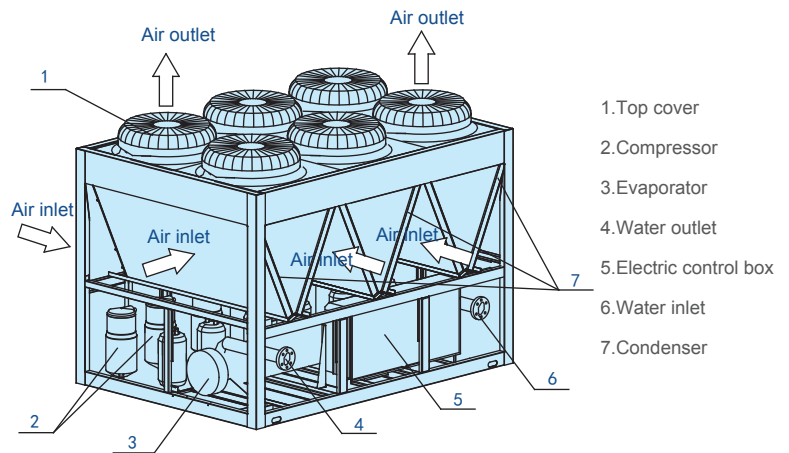
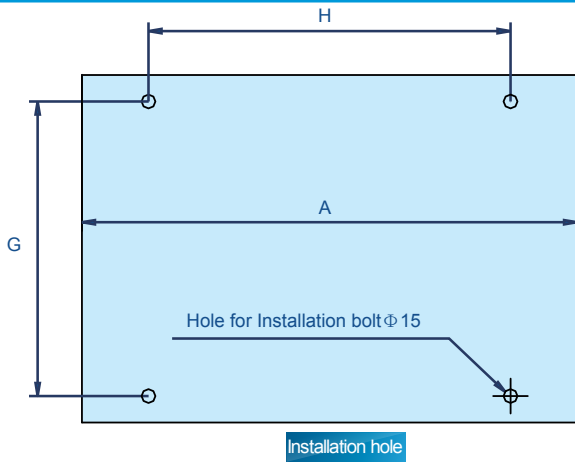
Front view



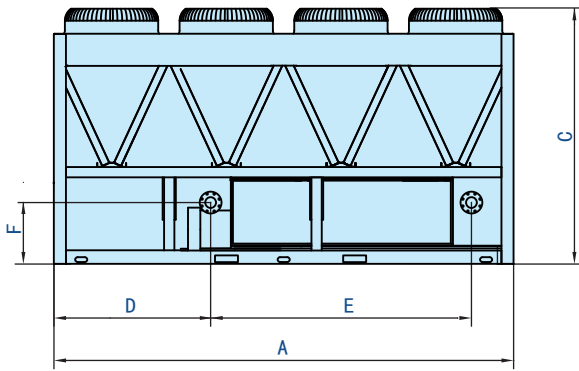
Left view

Model	Unit	A	B	C	D	E	F	G	H
MGB-F200W/RN1	Mm	2850	2000	2110	3470	2156	506	1888	2388
MGBL-F200W/RN1	inch	112.2	78.74	83.07	136.61	84.88	19.92	74.33	94.02

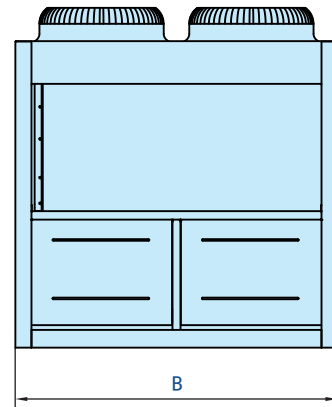
## Air Cooled Scroll Chiller - Dimensions



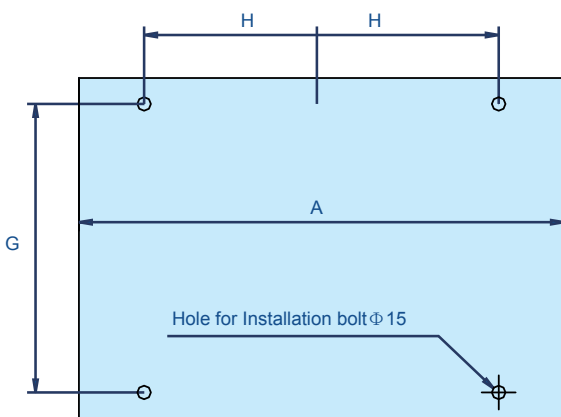
### 250kW module



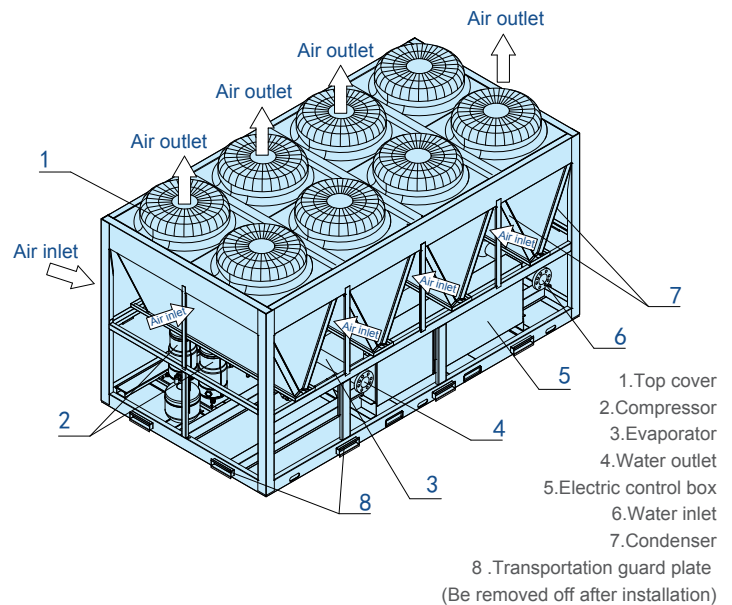
Front view



Left view



Installation hole



8. Transportation guard plate  
(Be removed off after installation)

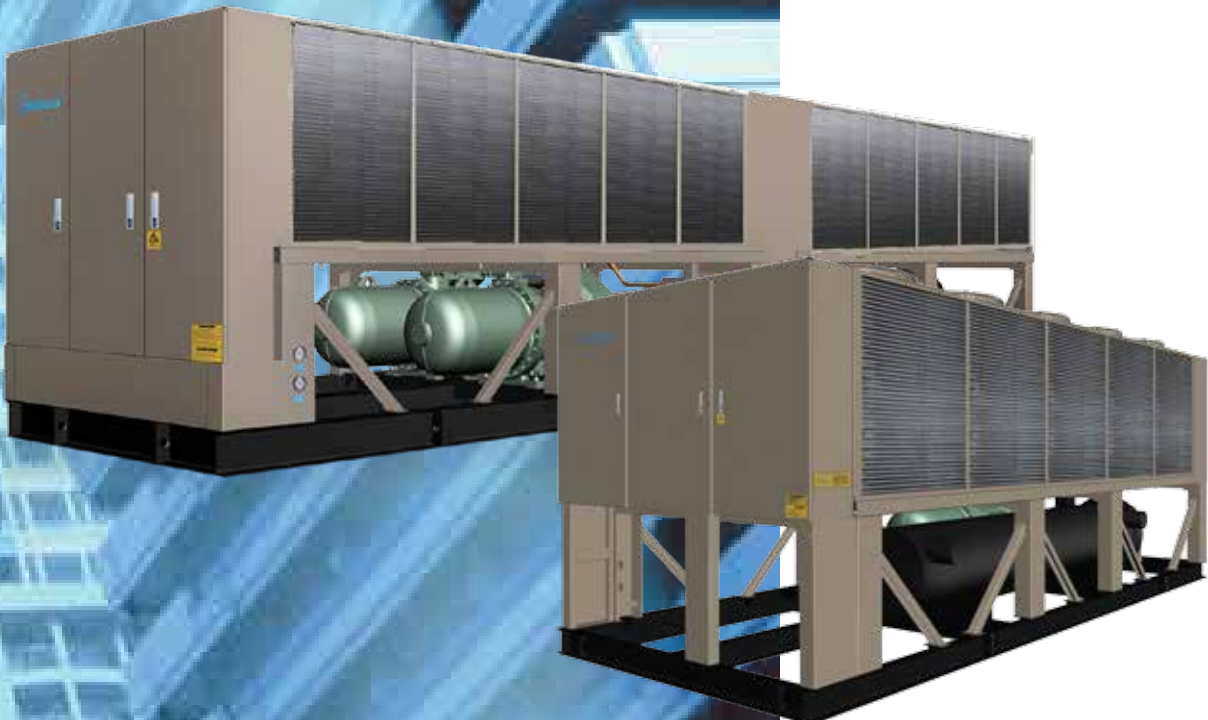
Model	Unit	A	B	C	D	E	F	G	H
MGBT-F250W/RN1	Mm	3800	2000	2130	1235	2156	573	1888	1551
MGBL-F250W/RN1	inch	149.6	78.74	83.86	48.62	84.88	22.56	74.33	61.06



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# Air Cooled Screw Chiller

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# Air Cooled Screw Chiller - Product line

Air Cooled Screw

LSBLGW380C



LSBLGW500C



LSBLGW600C



LSBLGW720C



LSBLGW900C



LSBLGW1000C



LSBLGW1200C



LSBLGW1420C





# Air Cooled Screw Chiller - Features and benefits

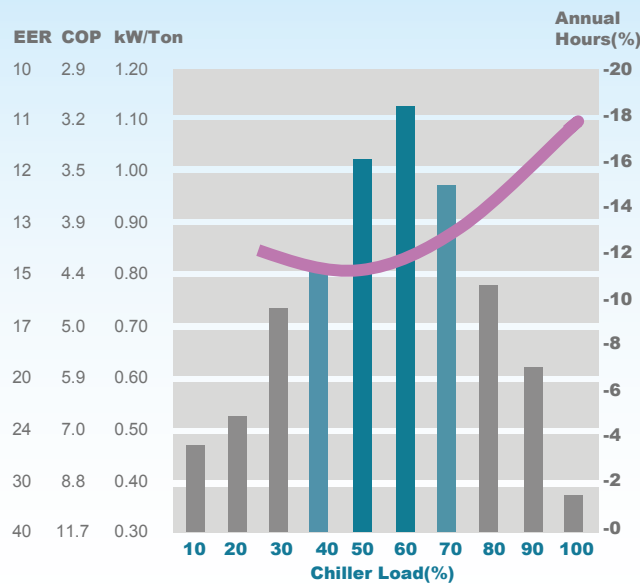
## Environmental responsibility

- A more efficient chiller means less electricity generation, which reduces greenhouse gas (CO<sup>2</sup>) emissions.
- R134a friendly refrigerant has no ozone-depletion potential.
- Helps You Achieve LEED® Certification.
- Less refrigerant charge.
- High efficiency.



## Operating cost savings

- Better IPLV:
- Follows AHRI 550/590 calculation that notes the 99% of operating hours are not at full load.
- The COP was designed to be the best on the 50% ~ 75% part load conditions.
- Larger ΔT of cooler reducing HVAC system running cost.



## Lowest total cost of ownership

- Reliability low risk of downtime.
- Recognized component partner: Bitzer Comp. & Danfoss EXV, Shneider electric.



- World-class testing facilities  
Each unit was extensively tested to verify that their operation is robust and that a smooth start-up is ensured.
- Low maintenance costs.

Air Cooled Screw

## Air Cooled Screw Chiller - Specifications

Air Cooled Screw

LSBLGWXXX/C		380	500	600	720	900	1000	1200	1420
Cooling capacity	kW	376	496	594	720	902	996	1203	1419
Power input	kW	124	159	187	234	285	318	381	466
COP	kW/kW	3.03	3.12	3.17	3.07	3.16	3.13	3.15	3.04
Semi-hermetic screw compressor									
Circuit A	Quantity	1	1	1	1	1	1	1	1
Circuit B	Quantity	--	--	--	--	1	1	1	1
Oil recharge	Type	BSE170	BSE170	BSE170	BSE170	BSE170	BSE170	BSE170	BSE17
Circuit A	L	30	30	30	32	30	30	30	32
Circuit B	L	--	--	--	--	30	30	30	32
Refrigerant	Type	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
Circuit A	kg	76	90	105	140	76	90	105	140
Circuit B	kg	--	--	--	--	90	90	105	140
Control type		EXV	EXV	EXV	EXV	EXV	EXV	EXV	EXV
Evaporator	Type	Shell and tube heat exchanger(DX)							
Water content	L	222	308	340	520	620	600	770	910
Water flow	m <sup>3</sup> /h	65.4	86	103.2	123.8	154.8	172	206.4	244.2
Pressure drop	kPa	39	54	56	58	74	75	71	69
Max. design pressure	MPa	1	1	1	1	1	1	1	1
Pipe connection type		Victaulic coupling							
Water inlet/outlet pipe dim.	mm	125	125	125	150	150	150	200	200
Condenser	Type	Fin-coil	Fin-coil	Fin-coil	Fin-coil	Fin-coil	Fin-coil	Fin-coil	Fin-co
Fan	Quantity	6	8	10	10	14	16	16	20
Total air flow	m <sup>3</sup> /h	23000*6	23000*8	23000*10	23000*10	23000*14	23000*16	23000*16	23000*2
Fan speed	rpm	940	940	940	940	940	940	940	940
Unit length	mm	3810	4680	5800	5800	8800	9640	9640	11700
Unit width	mm	2280	2280	2280	2280	2280	2280	2280	2280
Unit height	mm	2370	2370	2370	2370	2430	2430	2430	2430
Shipping weight	kg	3320	4330	5000	5500	7750	8900	9100	11100
Running weight	kg	3540	4640	5340	6020	8370	9500	9870	12010
Safety protection device		The following safety devices are equipped as standard: High pressure protection Low pressure protection Compressor overload protection Fans overload protection High discharge temp. protection Power failure protection Contractor protection Water flow protection Motor protection Low oil level protection Differential pressure protection							

**Notes:**

- Nominal cooling capacities are based on the following conditions:
- Chilled water inlet/outlet temp: 12°C/7°C; Outdoor temp (DB/WB): 35°C/24°C
  - Evaporator fouling factor = 0.086 m<sup>2</sup> °C/kW
  - The applicable ambient temperature range of R134a air-cooled screw units is 15°C-43°C



**Noise Preventer**  
While running, the operator should wear the noise preventer

# Air Cooled Screw Chiller - Performance Data

Model	Outlet Temp. /°C	Ambient Temperature/°C														
		15		20		25		30		35		40		43		
		Cooling Capacity /kW	Power Input /kW	Cooling Capacity /kW	Power Input /kW	Cooling Capacity /kW	Power Input /kW	Cooling Capacity /kW	Power Input /kW	Cooling Capacity /kW	Power Input /kW	Cooling Capacity /kW	Power Input /kW	Cooling Capacity /kW	Power Input /kW	
LSBLGW380/C	5	418.0	93.0	397.3	101.4	380.6	108.1	382.3	115.7	348.8	120.8	324.3	130.8	310.1	137.1	
	6	436.0	94.5	414.3	103.0	396.6	109.7	376.9	117.3	362.5	122.4	332.6	132.6	322.0	138.8	
	7	453.9	96.0	431.3	104.5	412.6	111.3	392.0	119.0	376.0	124.0	350.6	134.3	334.5	140.6	
	8	471.9	97.5	448.3	106.1	428.6	112.9	407.0	120.6	390.7	125.8	363.8	136.1	347.1	142.4	
	9	489.8	99.0	465.3	107.6	444.7	114.5	422.1	122.3	404.8	127.5	376.9	137.8	359.7	144.2	
	10	507.8	100.4	482.3	109.2	460.7	116.1	437.2	123.9	417.2	129.0	390.1	139.6	370.7	145.7	
	11	525.8	101.9	499.3	110.7	476.7	117.7	452.2	125.6	433.1	131.0	403.2	141.4	384.9	147.7	
	12	543.7	103.4	516.3	112.2	492.8	119.3	467.3	127.2	447.2	132.7	416.3	143.1	397.5	149.5	
	13	561.7	104.9	533.3	113.8	508.8	120.9	482.3	128.9	461.3	134.4	429.5	144.9	410.0	151.3	
	14	579.6	106.4	550.3	115.3	524.8	122.5	497.4	130.6	475.4	136.1	442.6	146.7	422.6	153.1	
	15	597.6	107.9	567.3	116.9	540.8	124.1	512.5	132.2	490.5	138.0	455.8	148.4	436.0	155.0	
	LSBLGW500/C	5	527.4	120.7	504.5	131.3	489.1	138.4	470.0	148.9	461.8	154.7	431.7	167.6	413.1	175.3
		6	552.2	122.1	527.8	132.8	510.5	141.2	489.6	150.7	478.4	156.8	447.9	169.8	428.7	177.8
		7	576.9	123.4	551.1	134.3	532.3	143.0	509.9	152.7	496.0	161.0	465.3	172.3	445.4	180.3
		8	601.6	124.7	574.5	135.8	554.0	144.7	530.3	154.7	515.6	161.5	482.7	174.7	462.2	182.8
9		626.3	126.0	597.8	137.3	575.8	146.5	550.6	156.7	534.3	163.8	500.1	177.2	478.9	185.3	
10		651.0	127.3	621.2	138.8	597.6	148.3	570.9	158.7	550.5	165.8	517.5	179.6	483.2	187.5	
11		675.7	128.7	644.5	140.3	619.4	150.0	591.2	160.7	571.5	168.5	535.0	182.1	512.4	190.4	
12		700.4	130.0	667.8	141.8	641.2	151.8	611.6	162.7	590.2	170.8	552.4	184.5	529.2	192.9	
13		725.0	131.3	691.2	143.3	663.0	153.6	631.9	164.7	608.8	173.2	569.8	187.0	545.9	195.4	
14		749.7	132.6	714.5	144.8	684.7	155.3	652.2	166.7	627.4	175.5	587.2	189.4	562.6	197.9	
15		774.3	133.9	737.9	146.4	706.9	157.1	673.3	168.8	647.5	178.0	605.9	192.1	580.6	200.6	
LSBLGW600/C		5	634.0	133.6	609.2	147.7	591.0	159.7	569.4	172.7	557.4	182.6	526.4	198.7	507.2	208.6
		6	663.3	135.9	627.9	150.1	609.5	162.0	587.5	175.1	575.2	184.8	543.7	201.2	524.0	211.1
		7	674.0	138.5	647.9	152.8	629.3	164.6	606.9	177.6	594.0	187.0	562.2	203.7	541.8	213.8
		8	694.6	141.2	667.9	155.5	649.1	167.2	626.3	180.2	614.5	189.5	580.7	206.3	559.7	216.5
	9	715.3	143.8	687.9	158.2	668.9	169.8	645.7	182.8	634.1	191.9	599.3	208.8	577.5	219.2	
	10	735.9	146.4	705.4	160.2	688.7	172.4	665.1	185.4	651.3	194.0	617.8	211.4	593.2	221.6	
	11	756.6	149.1	727.9	163.5	708.5	175.0	684.4	188.0	673.4	196.6	636.3	213.9	613.2	224.5	
	12	777.2	151.7	747.9	166.2	728.3	177.6	703.8	190.6	693.1	199.0	654.9	216.5	631.1	227.2	
	13	797.9	154.3	767.9	168.9	748.1	180.2	723.2	193.1	712.8	201.3	673.4	219.0	648.9	229.9	
	14	818.5	157.0	787.9	171.6	767.9	182.8	742.6	195.7	732.4	203.7	691.9	221.6	666.8	232.6	
	15	840.6	159.9	809.2	174.6	789.0	185.4	763.2	198.5	753.5	206.2	711.7	224.3	685.7	235.4	
	LSBLGW720/C	5	787.1	177.6	744.1	189.9	717.3	204.2	690.5	218.7	676.9	227.9	636.8	247.1	611.2	259.2
		6	790.8	180.9	767.3	193.6	739.5	207.8	711.8	222.1	697.9	230.8	657.0	250.3	630.8	262.6
		7	815.4	184.8	791.4	197.4	763.2	211.5	735.1	225.6	720.0	234.0	678.5	253.9	650.9	266.3
		8	840.0	188.6	815.5	201.1	787.0	215.1	758.4	229.1	744.1	237.6	699.9	257.5	671.1	269.9
9		864.6	192.4	839.6	204.9	810.7	218.7	781.8	232.6	767.3	241.0	721.3	261.2	691.2	273.5	
10		887.3	195.2	863.7	208.6	834.4	222.3	805.1	236.1	787.8	243.7	742.8	264.8	709.9	276.7	
11		913.7	200.1	887.8	212.4	858.1	226.0	828.5	239.6	813.5	247.8	764.2	268.4	731.4	280.8	
12		938.3	203.9	911.9	216.1	881.8	229.6	851.8	243.1	836.6	251.3	785.7	272.1	751.5	284.5	
13		962.9	207.7	936.0	219.9	905.6	233.2	875.1	246.6	859.7	254.7	807.1	275.7	771.6	288.1	
14		987.5	211.6	960.1	223.6	929.3	236.8	898.5	250.1	882.8	258.1	828.5	279.4	791.8	291.8	
15		1013.0	215.9	985.2	227.3	954.5	240.5	923.8	253.7	907.4	261.9	851.2	283.4	811.9	295.4	

Note: The inlet/outlet water temperature difference is 5°C.

Air Cooled Screw

# Air Cooled Screw Chiller - Performance Data

## Air Cooled Screw

Model	Outlet Temp. / °C	Ambient Temperature/°C														
		15		20		25		30		35		40		43		
		Cooling Capacity /kW	Power Input /kW	Cooling Capacity /kW	Power Input /kW	Cooling Capacity /kW	Power Input /kW	Cooling Capacity /kW	Power Input /kW	Cooling Capacity /kW	Power Input /kW	Cooling Capacity /kW	Power Input /kW	Cooling Capacity /kW	Power Input /kW	Cooling Capacity /kW
LSBLGW600/C	5	900.8	222.9	886.6	235.5	864.6	249.9	842.4	267.1	820.0	277.7	778.6	300.7	743.9	314.9	
	6	936.7	225.7	921.0	236.9	900.8	252.9	878.5	270.2	854.0	281.2	808.0	304.7	771.9	318.8	
	7	976.6	227.8	959.6	239.5	938.2	256.0	914.6	273.6	890.2	285.0	837.3	308.8	800.0	323.0	
	8	1016.5	229.8	998.2	242.2	975.6	259.1	950.6	277.0	921.9	289.1	866.7	313.0	828.1	327.2	
	9	1056.4	231.9	1036.8	244.8	1013.1	262.2	986.7	280.5	955.8	293.1	896.0	317.1	866.1	331.4	
	10	1096.3	234.6	1075.4	247.5	1050.5	265.2	1022.8	283.9	998.8	297.1	925.4	321.2	884.2	335.6	
	11	1136.2	237.2	1114.0	250.2	1087.9	268.3	1058.9	287.3	1023.8	301.0	954.8	325.3	912.3	339.8	
	12	1176.1	239.5	1152.6	252.8	1125.4	271.4	1095.0	290.7	1057.7	305.0	984.1	329.4	940.3	344.0	
	13	1216.0	241.7	1191.2	255.5	1162.8	274.4	1131.0	294.1	1091.7	308.9	1013.5	333.6	968.4	348.2	
	14	1255.9	243.6	1229.8	258.1	1200.2	277.5	1167.1	297.6	1125.6	312.9	1042.8	337.7	996.5	352.4	
	15	1295.8	246.2	1268.4	262.1	1237.7	280.6	1203.2	301.3	1159.6	317.2	1072.2	341.9	1024.6	357.0	
	LSBLGW1000/C	5	1047.0	244.0	1002.7	264.9	975.8	280.5	940.2	298.8	929.6	309.6	869.0	335.4	831.3	351.3
		6	1107.1	246.2	1059.0	267.4	1024.5	283.6	983.2	302.4	961.8	313.7	900.6	339.9	861.2	355.8
		7	1156.0	248.3	1104.1	269.9	1067.2	286.8	1022.8	306.1	996.0	318.0	934.0	344.6	883.4	360.7
		8	1204.9	250.3	1150.3	272.4	1110.0	290.0	1062.5	309.8	1033.4	322.8	967.5	349.4	925.5	365.5
9		1253.8	252.4	1196.4	274.9	1152.7	293.1	1102.1	313.5	1069.2	327.3	1001.0	354.2	957.7	370.4	
10		1302.8	254.5	1242.5	277.5	1195.5	296.3	1141.8	317.2	1105.0	331.9	1034.4	358.9	985.3	374.5	
11		1351.7	256.6	1288.6	280.0	1238.2	299.5	1181.4	320.9	1140.9	336.4	1067.9	363.7	1022.0	380.2	
12		1400.6	258.7	1334.8	282.5	1280.9	302.6	1221.1	324.6	1176.7	341.0	1101.4	368.4	1054.1	385.0	
13		1449.6	260.8	1380.9	285.0	1323.7	305.8	1260.7	328.3	1212.5	345.5	1134.8	373.2	1086.3	389.9	
14		1498.5	262.9	1427.0	287.5	1366.4	308.9	1300.4	331.9	1248.3	350.1	1168.3	378.0	1118.4	394.8	
15		1536.3	264.9	1464.0	290.1	1403.2	312.1	1336.7	335.8	1286.7	355.0	1203.6	383.0	1152.8	400.1	
LSBLGW1200/C		5	1316.6	271.8	1260.9	299.9	1216.0	323.3	1165.7	350.3	1131.1	370.7	1085.1	402.6	1024.8	422.0
		6	1367.3	274.4	1308.5	303.0	1259.8	327.2	1206.0	354.6	1166.1	375.7	1098.5	408.1	1056.8	427.7
		7	1417.8	276.9	1356.1	306.1	1304.3	331.0	1247.5	359.1	1203.0	381.0	1134.0	413.9	1090.7	433.7
		8	1468.3	279.4	1403.7	309.2	1348.8	334.9	1289.0	363.6	1242.7	386.8	1169.5	419.7	1124.5	439.7
	9	1518.8	282.0	1451.3	312.3	1393.3	338.7	1330.5	368.1	1281.0	392.3	1205.0	425.6	1158.4	445.8	
	10	1569.3	284.5	1498.9	315.4	1437.8	342.6	1372.0	372.7	1315.1	397.1	1240.5	431.4	1188.5	451.1	
	11	1619.8	287.0	1546.5	318.4	1482.3	346.5	1413.5	377.2	1357.6	403.3	1276.0	437.3	1226.2	457.8	
	12	1670.3	289.6	1594.1	321.5	1526.8	350.3	1455.0	381.7	1395.8	408.9	1311.5	443.1	1260.0	463.8	
	13	1720.8	292.1	1641.7	324.6	1571.3	354.2	1496.5	386.2	1434.1	414.4	1347.0	448.0	1293.9	469.9	
	14	1771.3	294.7	1689.3	327.7	1615.8	358.0	1538.0	390.8	1472.4	419.9	1382.5	454.8	1327.8	475.9	
	15	1821.6	297.1	1736.9	330.8	1661.0	361.9	1580.7	395.5	1513.1	425.8	1420.0	461.0	1363.6	482.3	
	LSBLGW1420/C	5	1516.8	353.6	1469.6	378.0	1416.0	406.7	1362.3	435.6	1331.3	463.7	1255.0	492.3	1206.7	516.6
		6	1562.0	360.0	1515.5	385.4	1460.4	413.8	1405.3	442.3	1375.8	459.7	1296.5	498.7	1245.4	523.4
		7	1610.9	367.5	1563.1	392.7	1507.4	421.0	1451.6	449.2	1419.0	466.0	1339.2	505.9	1285.2	530.6
		8	1659.2	375.0	1610.7	400.1	1554.3	428.1	1497.9	456.1	1468.8	473.3	1381.8	513.1	1325.0	537.8
9		1707.6	382.5	1658.3	407.5	1601.3	435.3	1544.2	463.0	1515.3	480.2	1424.4	520.3	1364.7	545.0	
10		1755.9	390.0	1705.9	414.9	1648.2	442.4	1590.5	469.9	1561.8	487.0	1467.1	527.5	1404.5	552.1	
11		1804.2	397.5	1753.5	422.2	1695.2	449.6	1636.7	476.9	1608.3	493.8	1509.7	534.7	1444.2	559.3	
12		1852.6	405.0	1801.1	429.6	1742.1	456.7	1683.0	483.8	1654.8	500.7	1552.3	541.9	1484.0	566.5	
13		1900.9	412.5	1848.7	437.0	1789.1	463.8	1729.3	490.7	1701.3	507.5	1595.0	549.1	1523.8	573.7	
14		1949.2	420.0	1896.3	444.3	1836.0	471.0	1775.6	497.6	1747.8	514.3	1637.6	556.3	1563.5	580.9	
15		2000.1	428.5	1945.7	451.7	1885.5	478.1	1825.3	504.8	1794.5	521.6	1681.4	564.3	1603.3	588.0	

Note: The inlet/outlet water temperature difference is 5°C

## Air Cooled Screw Chiller - Electrical data

LSBLGWXXX/C	Unit	380	500	600	720	900	1000	1200	1420
Standard voltage	V	380V 3Ph 50Hz							
Voltage range	V	340~420							
Max. running current	A	287	368	412	523	655	368	824	1046
Rated power	kW	124	159	187	234	285	318	381	466
Rated current	A	212	271	319	398	483	542	650	796
<b>Compressor A</b>									
Locked rotor Amps.	A	586	805	805	917	586	805	805	917
Max. allowed current	A	370	450	450	480	370	450	450	480
Rated current	A	187	239	278	358	187	239	292	358
Rated power	kW	109.6	139.8	163	210	109.6	139.8	171.3	210
<b>Compressor B</b>									
Locked rotor Amps.	A	--	--	--	--	805	805	805	917
Max. allowed current	A	--	--	--	--	450	450	450	480
Rated current	A	--	--	--	--	239	239	292	358
Rated power	kW	--	--	--	--	139.8	139.8	171.3	210
<b>Fan</b>									
Full load Amps.(each)	A	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
Power input(each)	kW	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Total input	kW	14.4	19.2	24	24	33.6	38.4	38.4	48
<b>Crankcase heater</b>									
Voltage	V	220	220	220	220	220	220	220	220
Total input	kW	0.3	0.3	0.3	0.3	0.6	0.6	0.6	0.6
Total Amps.	A	1.36	1.36	1.36	1.36	1.36	2.72	2.72	2.72

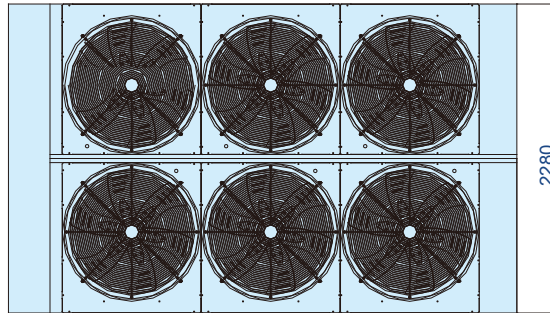
**NOTE:**

- Customer to specify the exact nominal power supply available at site so that electrical components are selected accurately.
- Main power must be supplied from a single field supplied and mounted fused circuit breaker.
- The compressor crankcase heaters must be energized for hours before the unit is initially started or after a prolonged power disconnection.
- All field wiring must be in accordance with local standards.
- Neutral line required on 380V-3Ph-50Hz (5 wires) power supply.
- Rated load Amps values are on nominal conditions.
- The ±10% voltage variation from the nominal is allowed for a short time only, not permanent.

# Air Cooled Screw Chiller - Dimensions

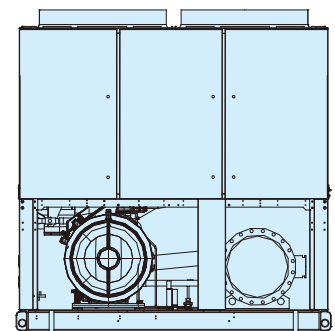
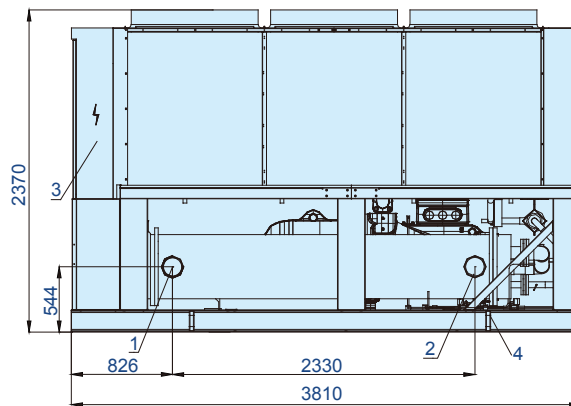
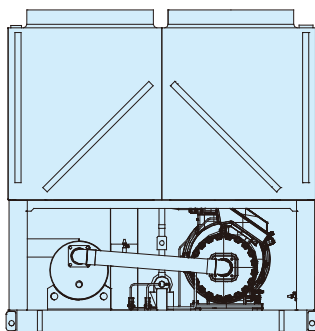
## LSBLGW380/C

- ① CHILLED WATER OUTLET
- ② CHILLED WATER INLET
- ③ ELECTRICAL CONTROL BOX
- ④ LIFTING POINTS



Air Discharge  
↑ ↑

Air Discharge  
↑ ↑



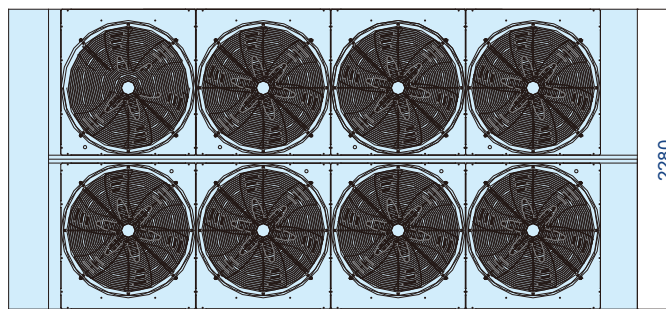
LEFT VIEW

FRONT VIEW

RIGHT VIEW

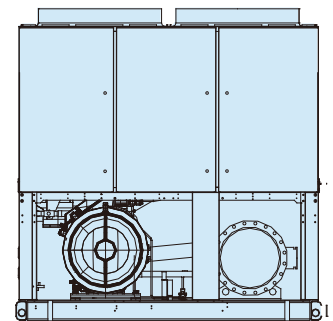
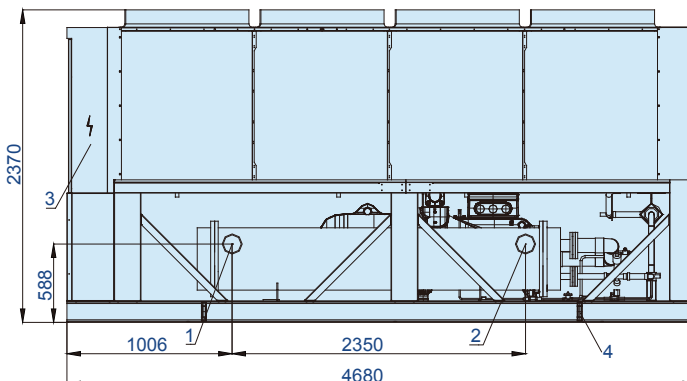
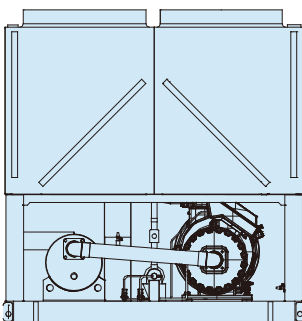
## LSBLGW500/C

- ① CHILLED WATER OUTLET
- ② CHILLED WATER INLET
- ③ ELECTRICAL CONTROL BOX
- ④ LIFTING POINTS



Air Discharge  
↑ ↑

Air Discharge  
↑ ↑



LEFT VIEW

FRONT VIEW

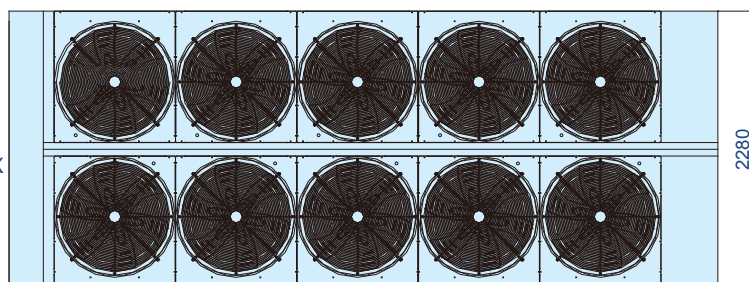
RIGHT VIEW

Air Cooled Screw

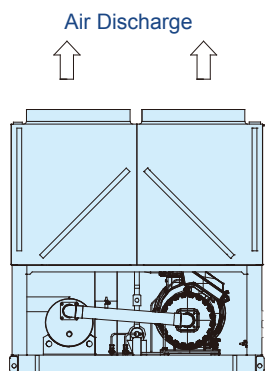
# Air Cooled Screw Chiller - Dimensions

## LSBLGW600/C

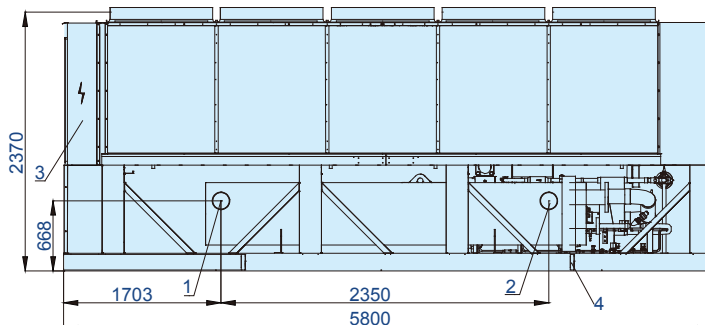
- ① CHILLED WATER OUTLET
- ② CHILLED WATER INLET
- ③ ELECTRICAL CONTROL BOX
- ④ LIFTING POINTS



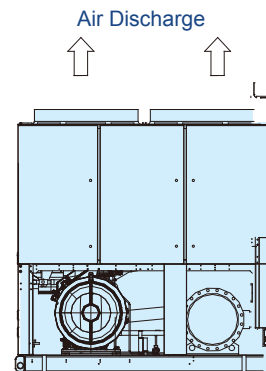
**TOP VIEW**



**LEFT VIEW**



**FRONT VIEW**

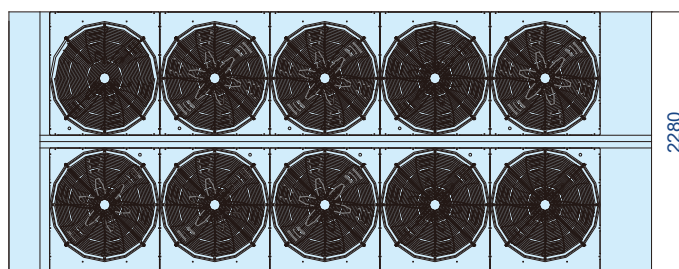


**RIGHT VIEW**

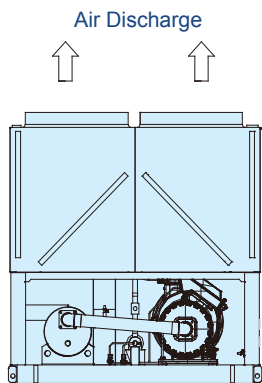
Air Cooled Screw

## LSBLGW720/C

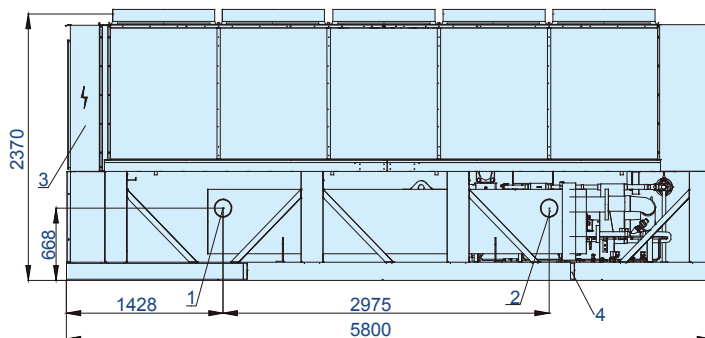
- ① CHILLED WATER OUTLET
- ② CHILLED WATER INLET
- ③ ELECTRICAL CONTROL BOX
- ④ LIFTING POINTS



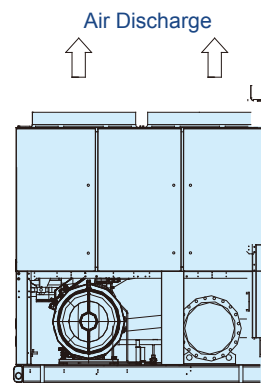
**TOP VIEW**



**LEFT VIEW**



**FRONT VIEW**



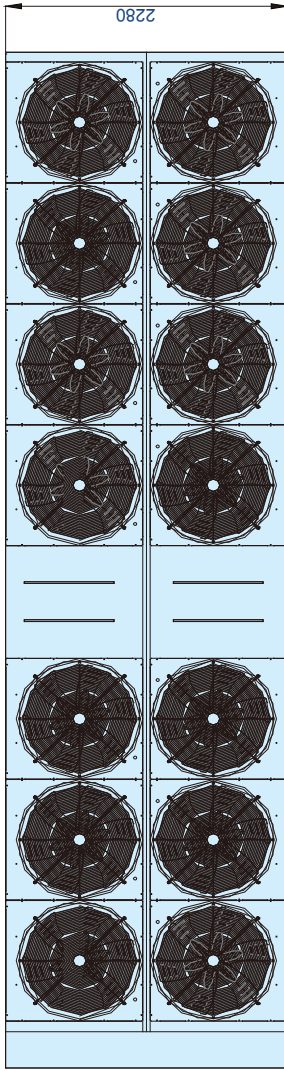
**RIGHT VIEW**

# Air Cooled Screw Chiller - Dimensions

Air Cooled Screw

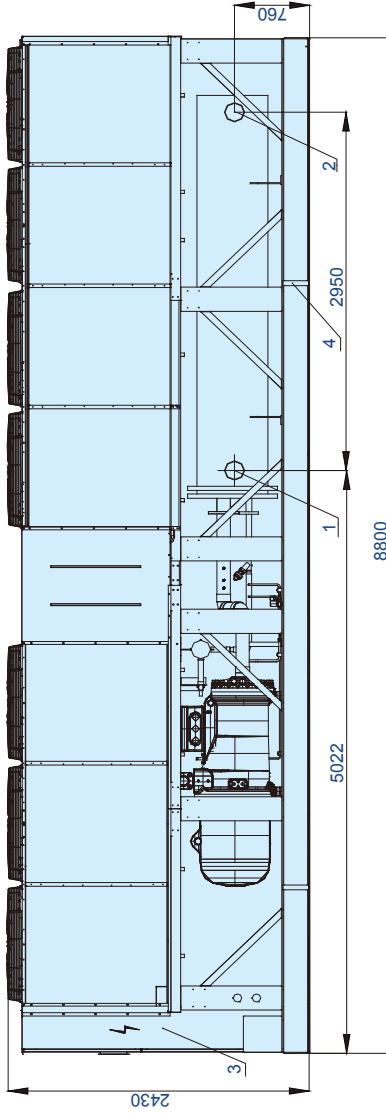
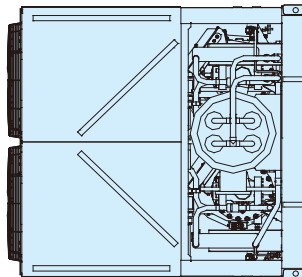
**LSBLGW900/C**

- ① CHILLED WATER INLET
- ② CHILLED WATER OUTLET
- ③ ELECTRICAL CONTROL BOX
- ④ LIFTING POINTS



Air Discharge

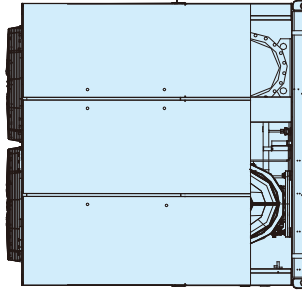
Air Discharge



**LEFT VIEW**

**FRONT VIEW**

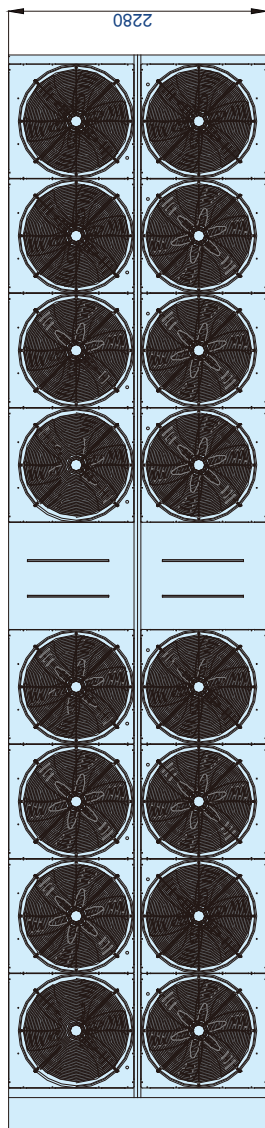
**RIGHT VIEW**





# Air Cooled Screw Chiller - Dimensions

**LSBLGW1000/C**



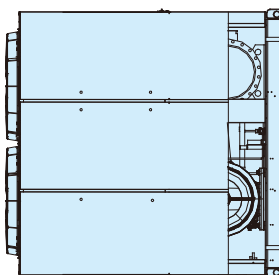
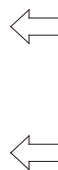
- ① CHILLED WATER INLET
- ② CHILLED WATER OUTLET
- ③ ELECTRICAL CONTROL BOX
- ④ LIFTING POINTS

**TOP VIEW**

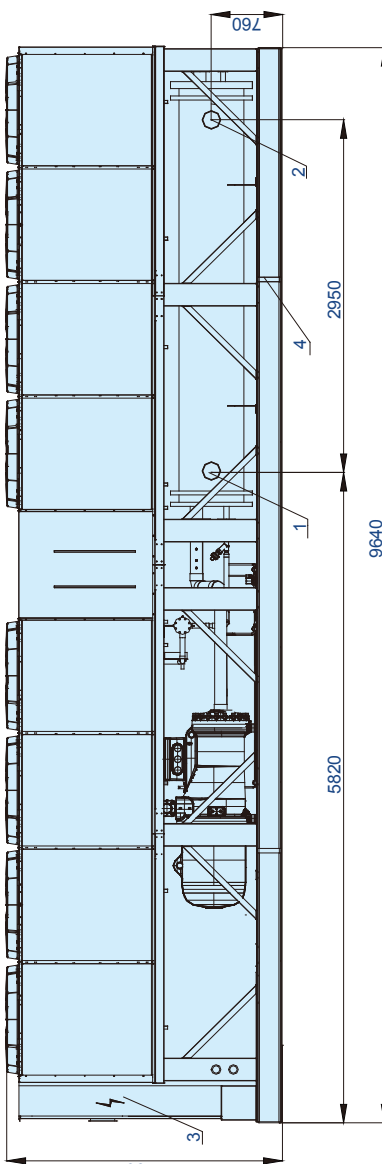
Air Discharge



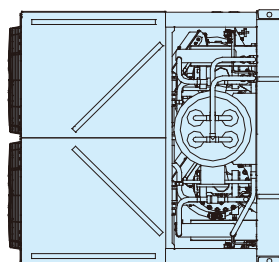
Air Discharge



**RIGHT VIEW**



**FRONT VIEW**



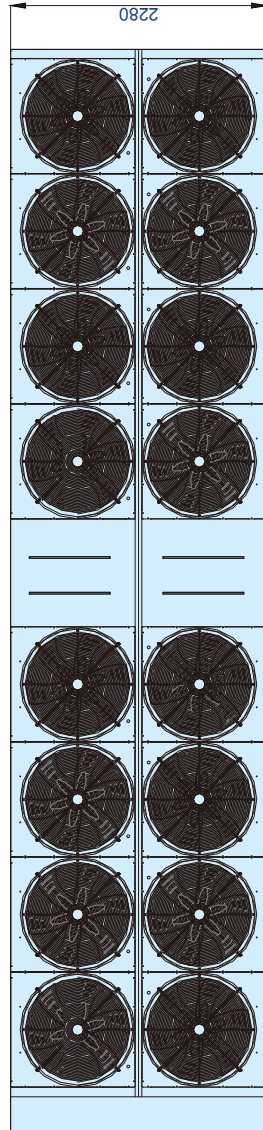
**LEFT VIEW**

Air Cooled Screw

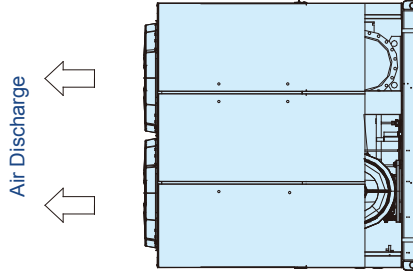
# Air Cooled Screw Chiller - Dimensions

Air Cooled Screw

**LSBLGW1200/C**

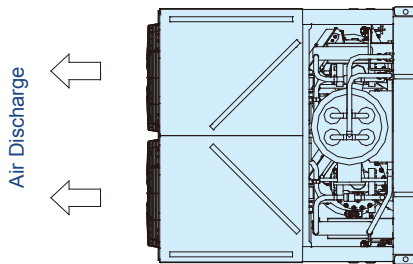


- ① CHILLED WATER INLET
- ② CHILLED WATER OUTLET
- ③ ELECTRICAL CONTROL BOX
- ④ LIFTING POINTS

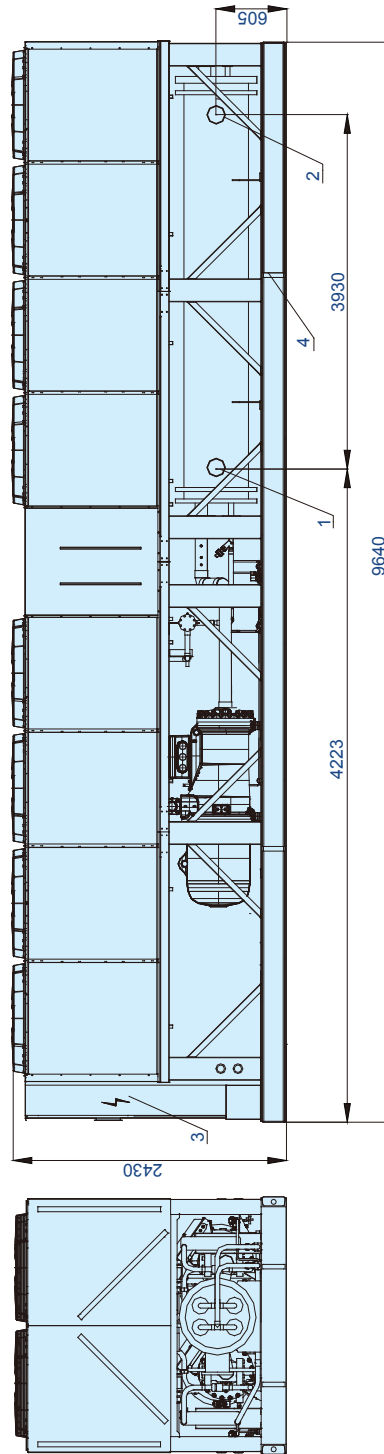


**RIGHT VIEW**

**TOP VIEW**



**LEFT VIEW**

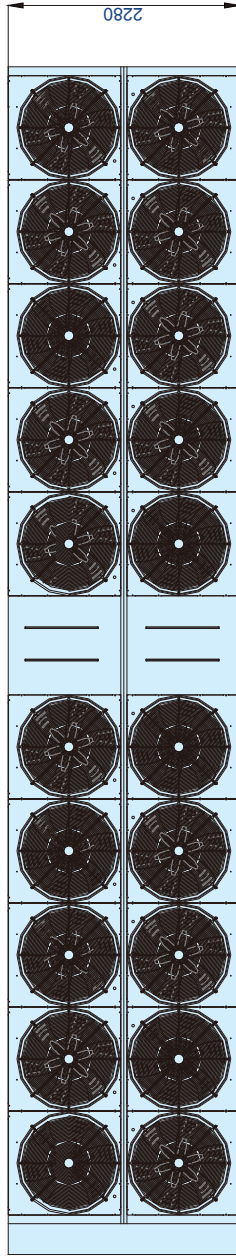


**FRONT VIEW**

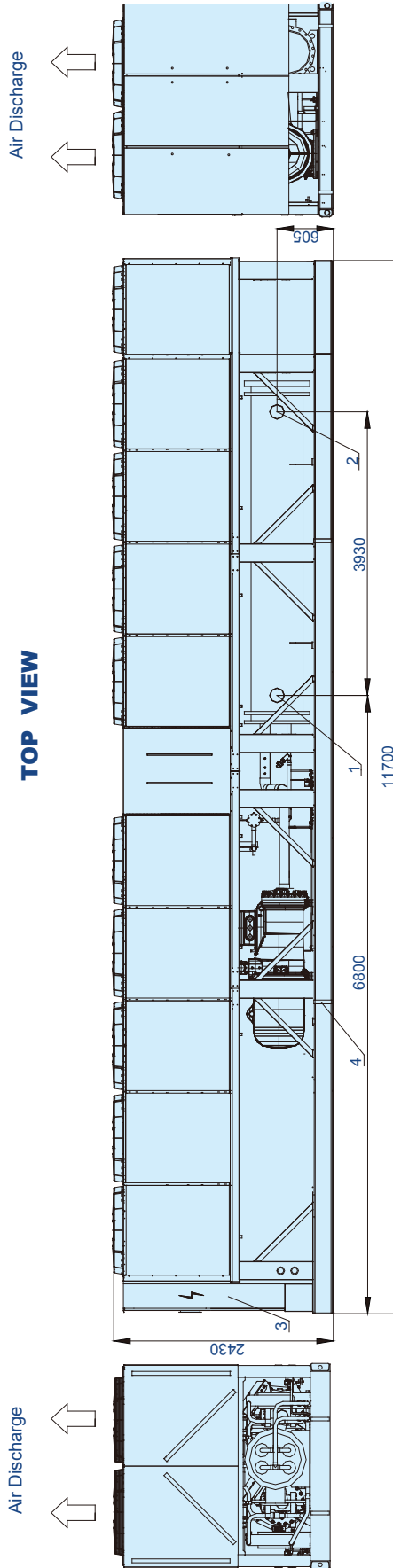
# Air Cooled Screw Chiller - Dimensions

**LSBLGW1420/C**

- ① CHILLED WATER INLET
- ② CHILLED WATER OUTLET
- ③ ELECTRICAL CONTROL BOX
- ④ LIFTING POINTS



**TOP VIEW**



**LEFT VIEW**

**FRONT VIEW**

**RIGHT VIEW**



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