MINI CHILLERS R410A

Integral Type

21.5kW-42kW

Split Type

7.5kW

10kW-14.2tkW

Integral type

- Flexible installation thanks to slope up discharge structure.
- Water pump.
- Expansion vessel.
- Water flow switch kit.
- LCD thermostat.
- Safety valve, auto water replenishing valve, auto air evacuation valve.
- Modular operation optional, up to 8 units (no matter what capacity) can be integrated, to achieve a maximum capacity of 360kW output (optional).

Split type

- Detached cooler/heater design, which make installation more flexible.
- Compact design, the height of the cooler/heater is only 288mm.
- Wide operation range of heat mode in cold season, thanks for the cooler/heater can be installed in indoor ceiling void to avoid freezing problem.
- Water pump.
- Expansion vessel.
- Water flow switch kit.
- LCD thermostat.
- Safety valve, auto water replenishing valve, auto air evacuation valve

Memory function

Two circuits

Quiet design

ITEM	Water side side				Air side		
	Nominal Operating Condition		Operating Range		Nominal Operating Condition		Operating Range
	Inlet water temp. (oC)	Outlet water temp. (oC)	Outlet water temp. (oC)	Temp. Difference between inlet & outlet (oC)	Outdoor temp. (DBoC)	Outdoor temp. (WBoC)	Outdoor temp. (DBoC)
Cooling	12	7	5 -15	2.5 - 8	35	/	16 - 48
Heating	40	45	40 - 50	2.5 - 8	7	6	-15 - 28

MINI CHILLERS R410A

Split Type						
MODEL	Heat pump		IMCR8WZNa-M	IMCR10WZNa-M	IMCR12.5WZNa-M	IMCR15WZNa-M
Capacity	Cooling (kW)		7.5	10.0	12.5	14.2
	Heating (kW)		9.0	11.0	13.0	16.5
EER (W/W)			2.1	2.2	2.2	2.5
COP (W/W)			2.7	2.7	2.7	3.1
Power supply			380 - 415V - 3Ph - 50Hz			
Power input	Cooling (kW)		3.5	4.4	5.7	5.7
	Heating (kW)		3.3	4.4	4.8	5.3
Compressor quantity (Unit)			1	1	1	1
Refrigerant charge volume (kg)			3.1	3.55	4.5	5.5
Build-in chilled water pump	Water flow volume	m3/h	1.4	1.7	2.1	2.6
		GPM	5.0	6.3	7.79	9.5
	Head of delivery (m)		18	18	18	18
	Power input (W)		550	550	550	550
Build-in expansion tank volume (L)			5	5	5	5
Chilled water outlet/inlet dimension (Inch)			1	1	1	1
Indoor unit	Outline dimension (WxDxH) (mm)		1.100 x 450 x 288	1.100 x 450 x 288	1.100 x 450 x 288	1.100 x 450 x 288
	Packaged dimension (WxDxH) (mm)		1.285 x 682 x 385	1.285 x 682 x 385	1.285 x 682 x 385	1.285 x 682 x 385
	Net weight (kg)		84	84	84	84
	Gross weight (kg)		96	96	96	96
	Sound pressure level (dB(A))		40	40	40	40
Outdoor unit	Outline dimension (WxDxH) (mm)		950 x 412 x 840	950 x 412 x 1.250	950 x 412 x 1.250	950 x 412 x 1.250
	Packaged dimension (WxDxH) (mm)		1.100 x 450 x 985	1.100 x 450 x 1.385	1.100 x 450 x 1.385	1.100 x 450 x 1.385
	Net weight (kg)		90	112	115	123
	Gross weight (kg)		100	123	126	134
	Sound pressure level (dB(A))		60	60	60	60
Connection pipe	Liquid (Inch)		1/2	1/2	1/2	1/2
	Gas (Inch)		3/4	3/4	3/4	3/4

Integral Type						
MODEL	Heat pump		IMCR22SNa-M	IMCR25SNa-M	IMCR35SNa-M	IMCR45SNa-M
Capacity	Cooling (kW)		21.5	22.8	31.0	42
	Heating (kW)		25	25	37.5	49
EER (W/W)			2.52	2.86	2.97	2.52
COP (W/W)			2.91	3.03	3.00	3.01
Power supply			380 - 415V - 3Ph - 50Hz			
Power input	Cooling (kW)		8.6	8.8	11.9	18.3
	Heating (kW)		8.6	8.9	12.5	17.5
Compressor quantity unit			2	2	2	2
Refrigerant charge volume (kg)			3.6 x 2	4.8 x 2	6.5 x 2	7.8 x 2
Build-in chilled water pump	Water flow volume	m3/h	3.3	4.3	5.0	7.9
		GPM	12.1	15.8	18	29
	Head of delivery (m)		22	24	25	27
	Power input (W)		750	750	1500	1500
Build-in expansion tank volume (L)			8	8	8	8
Chilled water outlet/inlet dimension (Inch)			1"	1"	1-1/2"	1-1/2"
Dimension	Outline (WxDxH) (mm)		1.460 x 530 x 1.850	1.460 x 530 x 1.850	1.750 x 800 x 1.760	1.750 x 800 x 1.760
	Packaged (WxDxH) (mm)		1.540 x 610 x 1.960	1.540 x 610 x 1.960	1.830 x 880 x 1.870	1.830 x 880 x 1.870
Net weight (kg)			370	390	680	755
Gross weight (kg)			380	400	690	765
Sound pressure level (dB(A))			66	66	68	68

MODULAR AIR COOLED SCROLL CHILLERS R410A

62.1, 71.5kW

125, 143kW

- Flexible main module patent, any unit can be set as main module just by connected with wired controller
- High efficient heat operation even in low temperature and high humidity thanks to real time intelligent defrost mode and gas discharging feed-through structure
- Modular operation optional, up to 16 units (62.5,71.5kW) 8 units (125,143kW) can be integrated
- Easy maintenance thanks to gapless modular design
- Multi compressor paralleling technology to guarantee longer usage life
- Completed safeties
- Quiet mode available
- Easy maintenance, thanks to unique structural design
- Saving installation space by 35% compared to conventional design
- Throttling controlled by electronic expansion valve, more accurate and rapid
- Wide ambient range ensures stable operation in extreme climate

Modular structure

Intelligent defrosting

Diagnosis displaying

Multi circuits

Wired controller

For Heat Pump Units Only

ITEM	Water side				Air side		
	Nominal Operating Condition		Operating Range		Nominal Operating Condition		Operating Range
	Inlet water temp. (°C)	Outlet water temp. (°C)	Outlet water temp. (°C)	Temp. Difference between inlet & outlet (°C)	Outdoor temp. (DB°C)	Outdoor temp. (WB°C)	Outdoor temp. (DB°C)
Cooling	12	7	5 -15	2.5 - 8	35	/	5 - 46
Heating	40	45	40 - 50	2.5 - 8	7	6	-15 - 24

MODULAR AIR COOLED SCROLL CHILLERS R410A

62.1, 71.5kW

125, 143kW

Modular structure

Intelligent defrosting

Diagnosis displaying

Multi circuits

Wired controller

MODEL	Heat pumpVV		IWCQWRF65MG/NaC-M	IWCQWRF80MG/NaC-M	IWCQWRF130MG/NaC-M	IWCQWRF160MG/NaC-M
Capacity	Cooling (kW)		62.5	71.5	125.0	143.0
	Heating (kW)		70.0	80.0	140.0	160.0
EER (W/W)			2.52	2.68	2.52	2.68
COP (W/W)			2.91	3.0	2.91	3.0
Power supply			380 - 415V - 3Ph - 50Hz			
Power input	Cooling (kW)		24.8	26.7	49.6	53.4
	Heating (kW)		24.1	26.7	48.1	53.3
Water side heat exchanger	Type		shell and tube evaporator			
	Water flow volume	m^3/h	10.8	12.24	21.6	24.48
		GPM	47.3	54.1	94.6	108.2
	Pressure drop	kPa	30	35	30	35
		ft.WG	9.8	11.5	9.8	11.5
	Connection pipe (mm)		DN50		DN150	
Air side heat exchanger	Fan type/Number of fans		axial fan/3		axial fan/6	
	Total fan air flow	m^3/h	3.0×10^4	3.2×10^4	6.0×10^4	6.4×10^4
		CFM	1.8×10^4	1.9×10^4	$3.5x\ 10^4$	3.8×10^4
	Total fan motor power (W)		700 x 3	700 x 3	700 x 6	700 x 6
Sound pressure level (dB(A))			67	68	69	70
Dimension	Outline (WxDxH) (mm)		1.100 x 2.265 x 2.214	1.100 x 2.265 x 2.214	2.200 x 2.265 x 2.214	2.200 x 2.265 x 2.214
	Packaged (WxDxH) (mm)		1.180 x 2.345 x 2.214	1.180 x 2.345 x 2.214	2.280 x 2.345 x 2.214	2.280 x 2.345 x 2.214
Net weight (kg)			950	1.050	1.880	2.080

MODULAR AIR COOLED SCREW CHILLERS R134a

230 - 430kW

- Excellent part load performance
- Compact design with small foot print
- Quiet operation
- Cooling capacities from 230-430kW
- Standard under voltage and phase protection

ITEM	Water Side		Air Side	
	Water Flow (m^3/(h.kw))	Outlet Water Temperatrue (°C)	DB Temperatrue (°C)	WB Temperatrue (°C)
Cooling	0.172	7	35	-

ITEM	Operating Range		
	Water Side		Air Side
	Outlet Water Temperature (°C)	Temperature Difference between Inlet&Outlet (°C)	DB Temperatrue (°C)
Cooling	5~15	2.5~8	18~52

Modular structure

Diagnosis displaying

Wired controller

MODEL	Cooling Only		IWCBLGF230MT3/Nb-M	IWCBLGF350MT3/Nb-M	IWCBLGF430MT3/Nb-M
Capacity	Cooling (kW)		230	350	430
EER (W/W)			2.88	2.80	2.83
Power Supply (V-Ph-Hz)				380V 3Ph 50Hz	
Power Input (kW)			80	125	152
Refrigerant Charge Volume (kg)			100	125	150
Cooler Heat Exchanger	Water flow volume	m^3/h	40	60	74
		GPM	176	264	326
	Pressure Drop (kPa)		≤50	≤50	≤50
	Connection Pipe (mm)		DN100	DN100	DN125
Condenser	Fan Motor Power Input (kW)		2X4	2X6	2X8
Dimension	Outline (WXDXH)		2.100x2.300x3.150	2.100x2.300x4.330	2.100x2.300x5.250
Weight	Shipping (kg)		3.110	4.600	5.330
	Operating (kg)		3.310	4.800	5.530

WATER COOLED SCREW CHILLERS R134a

Completed protection


Compact design

- High coefficient of performance, nearly 1/3 more energy saving than ordinary chiller unit. For wide working range, the machine may run within25%-100% energy range.
- Water flow switch kit.
- Reserved interface for water pump and cooling tower.
- Flooded type evaporator.
- Multi compressor paralleling technology for high capacity units.
- Orifice throttle disc integrated with electronic expansion valve technology.
- Automatic stepless or stepped capacity adjustment.
- Compact design.
- Reliable oil return system.
- High efficient oil separator system thanks to mechanical and adsorptive fractionation devices.
- Accurate high-pressure liquid injection oil return technology.
- Low oil level protection technology.
- Completed safeties
- LCD control panel (optional to upgrade to colorful touch screen control panel).
- Long distance monitoring and centralized control (optional).

Operating Condition of Nominal Cooling				Operating Range			
Chilled Water		Cooling Water		Chilled Water		Cooling Water	
Outlet water Temp. (°C)	Water flow volume $m^3/(h.kw)$	Inter water Temp. (°C)	Water flow volume $m^3/(h.kw)$	Outlet water Temp. (°C)	Temp. difference between inlet & outlet (°C)	Inter water Temp. (°C)	Temp. difference between inlet & outlet (°C)
7	0.172	30	0.215	5~15	2.5~8	18~35	3.5~8

MODEL			IWCBLG180H/Nb-M	IWCBLG210H/Nb-M	IWCBLG240H/Nb-M	IWCBLG300H/Nb-M
Cooling capacity (kW/RT)			182 / 52	212 / 61	238 / 68	296 /85
Cooling control			Continuous adjustment			
IPLV (W/W)			5.87	5.71	5.80	5.91
EER (W/W)			5.06	5.05	5.06	5.19
Power input (kW)			36	42	47	57
Power supply (V-Ph-Hz)			380V-3N-50Hz			
Com-pressor	Type		semi-hermetic twin screw compressor			
	Starting mode		Y - Δ or Part Winding			
	Quantity		1	1	1	1
Refrigerant Charge volume (Kg)			80	90	100	110
Refrigerant oil	Category		BSE170			
	Charge volume (L)		15	15	15	22
Evaporator	Type		flooded shell and tube			
	Water flow volume	m^3/h	30.96	36	41.04	51.12
		GPM	136	159	181	225
	Pressure drop	kPa	40	45	50	60
		ft.WG	13.4	15.1	16.7	20.1
	Connection pipe (mm)		DN100	DN100	DN100	DN125
Condenser	Type		shell and tube			
	Water flow volume	m^3/h	38.88	46.08	51.12	64.08
		GPM	172	203	225	282
	Pressure drop	kPa	56	57	65	65
		ft.WG	18.7	19.1	21.8	21.8
	Connection pipe (mm)		DN100	DN100	DN100	DN125
Sound pressure level (dB(A))			76.2	76.6	77.4	80.1
Outline dimension	Width (mm)		3.160	3.160	3.160	3.160
	Depth (mm)		1.150	1.150	1.150	1.400
	Height (mm)		1.587	1.587	1.587	1.680
Weight	Net weight (Kg)		1.800	1.900	2.100	2.800
	Operating weight (Kg)		1.890	1.995	2.205	2.940

MODEL			IWCBLG340H/Nb-M	IWCBLG380H/Nb-M	IWCBLG450H/Nb-M	IWCBLG500H/Nb-M	IWCBLG580H/Nb-M	IWCBLG640H/Nb-M
Cooling capacity (kW/RT)			340/97	383/109	445/127	508/145	582/166	637/182
Cooling control			Continuous adjustment					
IPLV (W/W)			6.02	5.94	6.09	6.08	5.87	5.85
EER (W/W)			5.23	5.18	5.30	5.35	5.20	5.22
Power input (kW)			65	74	84	95	112	122
Power supply (V-Ph-Hz)			380V-3N-50Hz					
Com-pressor	Type		semi-hermetic twin screw compressor					
	Starting mode		Y - Δ or Part Winding					
	Quantity		1	1	1	1	1	1
Refrigerant Charge volume (Kg)			120	130	140	160	180	200
Refrigerant oil	Category		BSE170					
	Charge volume (L)		19	19	35	35	35	35
Evaporator	Type		flooded shell and tube					
	Water flow volume	m³/h	57.96	65.88	77.04	87.12	100.08	110.16
		GPM	255	291	339	383	440	484
	Pressure drop	kPa	60	62	64	66	68	74
		ft.WG	20.1	20.7	21.4	22.1	22.8	24.8
	Connection pipe (mm)		DN125	DN125	DN150	DN150	DN150	DN150
Condenser	Type		shell and tube					
	Water flow volume	m³/h	73.08	82.08	96.12	109.08	124.92	137.16
		GPM	321	361	423	480	550	603
	Pressure drop	kPa	66	67	69	71	72	73
		ft.WG	22.1	22.4	23.1	23.8	24.1	24.4
	Connection pipe (mm)		DN125	DN125	DN150	DN150	DN150	DN150
Sound pressure level (dB(A))			81.2	83.3	83.9	84.1	84.3	85.4
Outline dimension	Width (mm)		3.160	3.160	3.160	3.160	3.160	3160
	Depth (mm)		1.400	1.400	1.520	1.520	1.520	1520
	Height (mm)		1.680	1.720	2.130	2.130	2.130	2130
Weight	Net weight (Kg)		2.900	3.100	3.850	4.100	4.400	4600
	Operating weight (Kg)		3.045	3.255	4.042.5	4.305	4.620	4830

MODEL			IWCBLG680H/Nb-M	IWCBLG760H/Nb-M	IWCBLG880H/Nb-M	IWCBLG1000H/Nb-M	IWCBLG1160H/Nb-M	IWCBLG1280H/Nb-M
Cooling capacity (kW/RT)			680/194	767/219	880/251	1006/287	1155/330	1275/364
Cooling control			Continuous adjustment					
IPLV (W/W)			6.01	6.02	5.94	5.97	5.82	5.98
EER (W/W)			5.23	5.18	5.24	5.29	5.16	5.23
Power input (kW)			130	148	168	190	224	244
Power supply (V-Ph-Hz)			380V-3N-50Hz					
Com-pressor	Type		semi-hermetic twin screw compressor					
	Starting mode		Y - Δ or Part Winding					
	Quantity		2	2	2	2	2	2
Refrigerant Charge volume (Kg)			250	260	270	270	280	300
Refrigerant oil	Category		BSE170					
	Charge volume (L)		19*2	19*2	35*2	35*2	35*2	35*2
Evaporator	Type		flooded shell and tube					
	Water flow volume	m³/h	117	132.12	150.84	173.16	199.08	218.88
		GPM	515	581	665	762	876	964
	Pressure drop	kPa	76	76	76	77	78	78
		ft.WG	25.4	25.4	25.4	25.8	26.1	26.1
	Connection pipe (mm)		DN200	DN200	DN200	DN200	DN200	DN200
Condenser	Type		shell and tube					
	Water flow volume	m³/h	146.16	164.16	189	216	248.04	273.96
		GPM	643	726	832	951	1092	1206
	Pressure drop	kPa	76	77	82	83	84	85
		ft.WG	25.4	25.8	27.4	27.8	28.1	28.4
	Connection pipe (mm)		DN200	DN200	DN250	DN250	DN250	DN250
Sound pressure level (dB(A))			82.5	84.6	85.2	85.4	85.6	86.8
Outline dimension	Width (mm)		3.400	3.400	3.900	3.900	3.900	3.900
	Depth (mm)		1.700	1.700	1.900	1.900	1.900	1.900
	Height (mm)		2.030	2.030	2.230	2.230	2.230	2.230
Weight	Net weight (Kg)		5.100	5.500	6.200	6.500	6.800	7.000
	Operating weight (Kg)		5.355	5.775	6.510	6.825	7.140	7.350