

Cooling capacity : 23 to 140 kW



Compact and silent
Numerous setting-up possibilities
Reliability of its new technologies
Integral hydraulic module
and/or desuperheaters (optional)

Use

CIATCOOLER series LJA

These packaged water chillers with air cooled condenser permit solving problems encountered in collective and commercial buildings as well as in industrial premises and processes.

Several fan discharge directions and hydraulic connection positions facilitate the location of those equipments in industrial premises as well as outdoor installations.

Flexible sleeves on the fan intake and discharge, flexible connections as well as anti-vibration mounts, proposed as options, facilitate the location of those units in installations.

A wide stage of available pressures on the air allow the units connection on all kinds of hydraulic network.

The assembly, entirely hooded, permits reaching excellent acoustic performances

CIATCOOLER series LJAH

The CIATCOOLER series LJAH packaged water chillers, equipped with an integral hydraulic module, meet perfectly the criteria of simplicity and rapidity for the installation.

This module integrates the complete hydraulic assembly of a traditional installation (buffer capacity, expansion vessel, circulation pump, ...).

CIATCOOLER series LJAH - LJAHD

These units equipped with brazed plates desuperheaters, allow energy recuperation on a hot water network connected to various utilizations such as heating, hot water pre-heating, etc...

QUICK SELECTION

CIATCOOLER LJA - LJAH

CENTRIFUGAL
CONDENSER

Size	Number of circuits	Number of compressors	R 407c		R 22	
			Cooling capacity kW	Power consumption kW	Cooling capacity kW	Power consumption kW
100 (Z)	1	1	23,7	8,5	25,0	8,5
150 (Z)			35,7	13,0	37,6	13,0
200 (Z)			45,0	18,2	47,4	18,2
250 (Z)	2	2	58,7	23,1	61,8	23,1
300 (Z)			69,8	27,3	73,5	27,3
350 (Z)			79,7	32,0	83,8	32,0
400 (Z)	2	3	93,0	36,0	97,8	36,0
450 (Z)			105	40,3	111	40,3
500 (Z)			114	46,7	120	46,7
600 (Z)			141	54,4	148	54,4

Capacities given for a 7°C chilled water outlet and 35°C air inlet temperature

(Z) Models operating with R407c

DESCRIPTION

CIATCOOLER series LJA - LJAH represents a new generation of packaged water chillers, which benefits from the latest technological improvements.

CIATCOOLER series LJA

■ Structure

- Casing in painted aluminium profiles with RAL 7024 enamelled galvanized metal sheet double skin panels, thermally insulated.

■ Hermetic compressor(s) SCROLL

- Electrical motor cooled by suction gas.
- Motor internal protection by a winding thermostat.
- Mounting on antivibratil mounts

■ Brazed plates evaporator

- End plates and internal plates in AISI 316 stainless steel with high performance optimized profile.
- Integral thermal insulation

■ Air-cooled condenser

- Coil with copper tubes, aluminium fins mechanically crimped
- Centrifugal fan(s) with transmission by pulleys and belts.
- IP 55 sealed motor, class F
- **Vertical** discharge (models 100 to 300).
- **Vertical or horizontal** discharge (models 350 to 600).

■ Control and safety devices

- High and low pressure safety pressostats
- Chilled water sensor and anti-frost sensor
- Mounted evaporator water flow controller.
- Thermostatic expansion valve

■ Electrical Panel

- Conform to NFC 15100 and EN 60 204 norms.
- Main safety switch with external handle
- Control circuit transformer (models 350 to 600).
- Power circuit and remote control protections
- Compressor motor contactors and fan motors contactors.

MRS microprocessor electronic module ensuring the following main functions :

- Chilled water temperature control
- Operating parameters control
- Faults diagnosis
- Automatic equalization of compressors running times
- Remote management and remote control
- Exit Series RS 485 for BUS control

CIATCOOLER series LJAH

The basic composition of the chilled water production units series **LJAH CIATCOOLER** is identical to the series LJA CIATCOOLER.

These derived units include the complete hydraulic assembly of a traditional installation.

- 1 black painted sheet metal buffer tank with thermal insulation.
- 1 stainless steel mono cell centrifugal hydraulic pump (single pump or double pump).
- 1 expansion vessel.
- 1 automatic air vent.
- 1 safety valve.
- 1 filling hole with valve.
- 1 draining hole with valve.
- Contactor(s) and hydraulic pump(s) protection devices.
- . This hydraulic module can be delivered separately (see MHS product)



CIATCOOLER series LJAD - LJAHD

■ The desuperheater option includes the standard composition of **CIATCOOLER LJA - LJAH** units, plus one brazed plate heat exchanger per circuit, allowing a recovery of calories by desuperheating.

■ This energy recuperation is particularly well suited to installations requiring a production of hot water (hotels) and allows significant energy savings.

OPTIONS

CIATCOOLER series LJA - LJAH

■ Anti-vibration equipment

- Anti-vibration mounts kit.
- Flexible kit.
- Flexible connectors on the fan intake.
- Flexible connectors on the fan discharge.

■ HP - LP pressure gauge panel (oil bath)

- 1 HP pressure gauge per circuit.
- 1 LP pressure gauge per circuit.

■ Supply voltage

- 230 V - 3ph - 50 Hz + Earth (Regulated voltage in France).

■ Equipment for glycol water low temperature running (R22)

■ All year round operation

- An operating capacity down to -15°C with condensation pressure regulation ensured by :
 - 1 automatic damper box
 - 1 jack controlled by an actuator.

■ Intake filters

- The kit is delivered with a pull handle for access to the filters (sizes 350 to 600)

■ Remote control kit

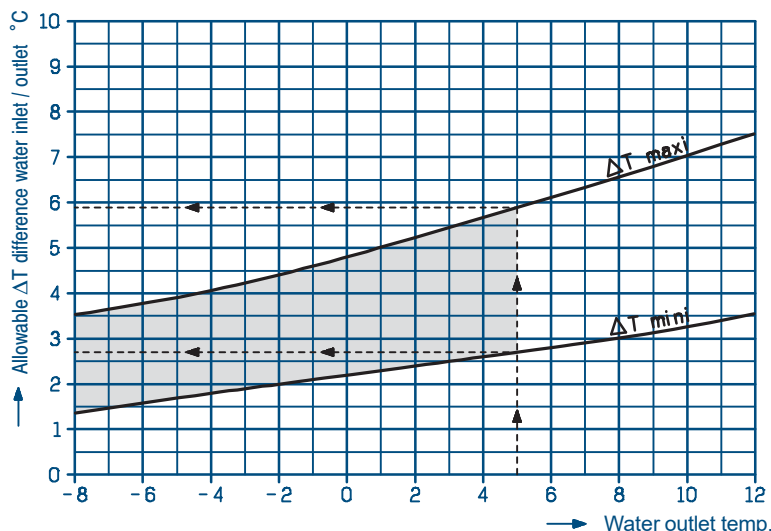
- This box delivered separately, installed up to a distance of 3000 m allows :
 - Regulation of the setting point.
 - Display by leds of the operating status.
 - On / off, heating/cooling, 1 - 2 setting.
 - General fault light.
 - Lamp test.
 - Water temperature display.
 - Setting points control.
- 2 wires connect the remote control card to the electronic module MRS.

■ Free contacts relay card kit

- This card is delivered separately and allows to remotely visualize the faults as well as the operating status of the control stages (exits via potential free contacts).
- Connection between the relay card and the MRS electronic module is done by 2 wires only.

OPERATING LIMITS

Evaporator



The curves below represent the admissible minimum and maximum temperature differences on the chilled or glycol water, depending on the outlet temperature

Glycol water

Example:

For a water outlet temperature + 5°C

- ΔT minimum : $2,7^{\circ}\text{C}$

- Water temp. : $7,7 / 5^{\circ}\text{C}$

- ΔT maximum : 6°C

- Water temp. : $11 / 5^{\circ}\text{C}$

For temperature differences not included in this chart, consult us.

Condenser

Air inlet temperature

- Minimum 12°C (standard) / -15°C (with all year round operation option)
- Maximum $+40^{\circ}\text{C}$

COOLING CAPACITIES

CIATCOOLER LJA - LJA



CENTRIFUGAL CONDENSER

LJA LJA	Chilled water outlet temperature in °C	INLET AIR TEMPERATURE TO THE CONDENSER IN °C														
		28		30		32		34		36		38		40		
		Pf kW	Pa kW	Pf kW	Pa kW	Pf kW	Pa kW	Pf kW	Pa kW	Pf kW	Pa kW	Pf kW	Pa kW	Pf kW	Pa kW	
100Z	Glycol water	-8	13,7	6,4	13,5	6,7	13,1	7,0	12,8	7,3	12,4	7,6	12,3	7,9	11,9	8,3
		-4	16,2	6,6	15,9	6,9	15,5	7,2	15,2	7,5	14,8	7,8	14,4	7,2	14,0	8,6
		2	20,4	6,9	20,0	7,3	19,7	7,6	19,2	7,9	18,7	8,2	18,2	8,6	17,9	8,9
	Pure water	5	23,7	7,1	23,2	7,5	22,8	7,8	22,2	8,2	21,9	8,6	21,5	8,8	20,9	9,2
		7	25,2	7,4	24,8	7,7	24,4	8,0	23,9	8,3	23,5	8,7	22,9	9,0	22,3	9,4
		12	29,7	7,7	29,3	8,1	28,9	8,4	28,3	8,8	27,7	9,1	27,2	9,5	26,6	9,9
150Z	Glycol water	-8	21,1	9,8	20,7	10,1	20,2	10,5	20,0	11,0	19,5	11,4	19,1	11,8	18,7	12,2
		-4	24,7	10,1	24,3	10,5	23,8	11,0	23,4	11,4	23,0	11,8	22,5	12,2	21,9	12,7
		2	31,1	10,7	30,6	11,1	29,8	11,6	29,4	12,0	28,7	12,5	28,2	12,9	27,5	13,5
	Pure water	5	35,7	11,2	35,2	11,6	34,5	12,1	33,7	12,6	32,8	13,1	32,4	13,5	31,9	14,0
		7	38,1	11,5	37,5	11,9	36,7	12,4	36,0	12,8	35,4	13,3	34,7	13,8	34,0	14,3
		12	44,7	12,1	44,0	12,5	43,0	13,0	42,3	13,6	41,1	14,1	40,7	14,8	39,5	15,2
200Z	Glycol water	-8	27,1	13,3	26,4	14,0	25,7	14,6	25,2	15,3	24,3	16,0	23,4	16,8	-	-
		-4	31,5	13,9	31,1	14,5	30,1	15,2	29,5	15,7	28,6	16,5	27,7	17,2	27,3	17,9
		2	39,1	14,8	38,3	15,5	37,6	16,1	36,7	16,9	36,0	17,4	34,9	18,3	34,1	18,8
	Pure water	5	45,1	15,5	44,7	15,7	43,4	16,8	42,5	17,5	41,8	18,0	40,7	19,0	39,8	19,5
		7	48,4	15,8	47,3	16,4	46,5	17,1	45,4	17,9	44,7	18,6	43,7	19,3	42,4	19,9
		12	56,6	16,7	55,9	17,3	54,4	18,1	53,6	18,9	52,2	19,8	51,4	20,4	-	-
250Z	Glycol water	-8	34,8	16,8	34,1	17,5	33,8	18,2	33,0	19,0	32,1	19,7	31,4	20,5	30,4	21,3
		-4	40,6	17,5	39,6	18,2	39,0	19,0	38,5	19,7	37,5	20,4	36,6	21,3	35,9	22,1
		2	50,8	18,8	50,1	19,5	48,8	20,2	47,7	21,1	46,6	21,9	45,6	22,5	44,6	23,3
	Pure water	5	58,9	19,8	58,0	20,5	56,9	21,4	55,6	22,2	54,5	23,0	52,9	23,9	51,9	24,5
		7	62,7	20,2	61,8	21,1	60,6	21,7	59,3	22,7	58,2	23,5	56,7	24,4	55,8	25,1
		12	73,4	21,8	72,3	22,4	70,6	23,4	69,3	24,0	67,9	24,9	67,1	25,5	-	-
300Z	Glycol water	-8	42,4	19,9	41,5	20,7	40,9	21,5	39,9	22,4	39,1	23,3	38,5	24,2	37,6	25,0
		-4	49,5	20,8	48,5	21,7	47,7	22,5	46,8	23,4	45,7	24,2	44,8	25,1	44,1	26,1
		2	61,5	22,4	60,3	23,2	59,3	24,1	58,0	24,9	56,9	25,8	56,0	26,7	54,6	27,7
	Pure water	5	69,9	22,7	69,3	24,0	67,6	25,3	66,4	26,2	62,0	27,1	63,8	27,9	61,7	28,7
		7	74,9	24,0	73,4	25,0	71,8	25,9	70,4	26,7	69,2	28,0	67,5	28,8	66,4	29,7
		12	87,0	25,6	85,9	26,4	83,8	27,6	82,3	28,5	80,6	29,4	78,9	30,5	-	-
350Z	Glycol water	-8	48,0	23,4	46,7	24,5	45,6	25,7	44,8	26,6	43,8	27,7	42,5	28,8	-	-
		-4	55,7	24,4	54,8	25,5	53,6	26,6	52,5	27,6	51,3	28,8	50,1	29,9	48,8	31,0
		2	69,4	26,2	68,0	27,2	66,8	28,2	65,5	29,4	64,3	30,6	62,5	31,8	60,9	33,2
	Pure water	5	79,8	27,4	78,2	28,6	76,4	29,6	75,0	30,8	73,5	32,0	71,9	33,2	70,3	34,5
		7	85,1	28,2	83,9	29,4	82,3	30,3	80,7	31,5	78,7	32,6	76,7	34,1	75,1	35,3
		12	99,8	30,0	97,9	31,2	96,0	32,3	94,0	33,5	91,6	35,1	90,2	36,0	-	-
400Z	Glycol water	-8	55,5	21,8	54,4	27,4	53,6	28,7	52,4	30,0	51,5	30,9	50,3	32,2	-	-
		-4	65,2	27,5	64,2	28,7	62,5	29,8	61,4	31,0	59,9	32,2	58,8	33,6	57,5	34,8
		2	81,1	29,4	79,5	30,6	78,2	31,6	76,6	32,9	75,1	34,1	73,3	35,6	71,5	36,9
	Pure water	5	93,2	30,9	91,3	32,1	89,7	33,3	87,8	34,6	86,1	35,9	84,1	37,3	82,3	38,6
		7	99,8	31,6	96,9	33,0	96,0	34,1	93,9	35,4	92,0	36,7	89,6	38,2	88,1	39,5
		12	116	33,8	114	35,0	112	36,0	109	37,8	107	39,0	106	40,5	-	-
450Z	Glycol water	-8	63,1	29,7	62,1	30,9	61,0	32,1	59,7	33,3	58,9	34,7	57,8	36,0	56,4	37,4
		-4	74,1	31,0	72,5	32,2	71,5	33,4	70,1	34,7	68,5	36,1	67,5	37,4	65,8	38,8
		2	92,1	33,1	90,6	34,3	88,9	35,7	87,2	37,0	85,6	38,4	83,5	39,9	81,8	41,4
	Pure water	5	106	34,5	104	36,2	102	37,3	99,8	38,8	97,9	40,2	96,0	41,5	94,1	43,2
		7	113	35,6	111	37,0	109	38,3	106	39,5	105	41,1	103	42,7	100	44,0
		12	131	37,9	129	39,3	127	40,4	124	42,2	122	43,6	119	45,1	-	-
500Z	Glycol water	-8	68,6	34,2	67,5	35,5	66,2	36,9	64,7	38,5	63,1	39,9	61,4	41,6	-	-
		-4	79,9	35,5	78,4	37,2	77,2	38,4	75,5	39,9	74,2	41,7	72,1	43,2	70,2	44,8
		2	96,0	37,6	94,1	38,9	96,0	41,2	94,1	42,6	91,4	44,5	88,9	46,8	87,2	48,1
	Pure water	5	114	40,0	112	41,4	110	43,2	107	45,0	105	46,5	103	48,5	101	50,1
		7	122	41,2	119	42,7	117	44,3	115	46,0	112	47,4	109	49,5	107	51,3
		12	142	43,9	139	45,4	136	47,2	133	48,9	131	50,6	-	-	-	-
600Z	Glycol water	-8	60,3	36,0	62,9	41,5	61,5	43,1	79,9	44,7	78,2	46,4	76,7	48,3	75,1	50,1
		-4	98,8	41,7	96,9	43,5	95,0	45,1	93,9	46,7	92,2	48,5	89,7	50,3	87,9	52,2
		2	123	44,7	121	46,1	119	48,0	116	49,9	114	51,7	112	53,5	109	55,7
	Pure water	5	141	47,1	138	48,7	136	50,3	133	52,2	130	53,8	127	56,0	124	58,3
		7	150	48,1	147	49,8	144	51,7	142	53,5	140	55,3	136	57,4	133	59,4
		12	174	51,3	171	53,2	168	54,9	165	56,6	161	58,9	158	60,9	-	-

Pf : Cooling capacity valid for a ΔT according to operating limits
 Pa : Compressors power input

Zone when glycol water must be used.



AERAUIC CHARACTERISTICS

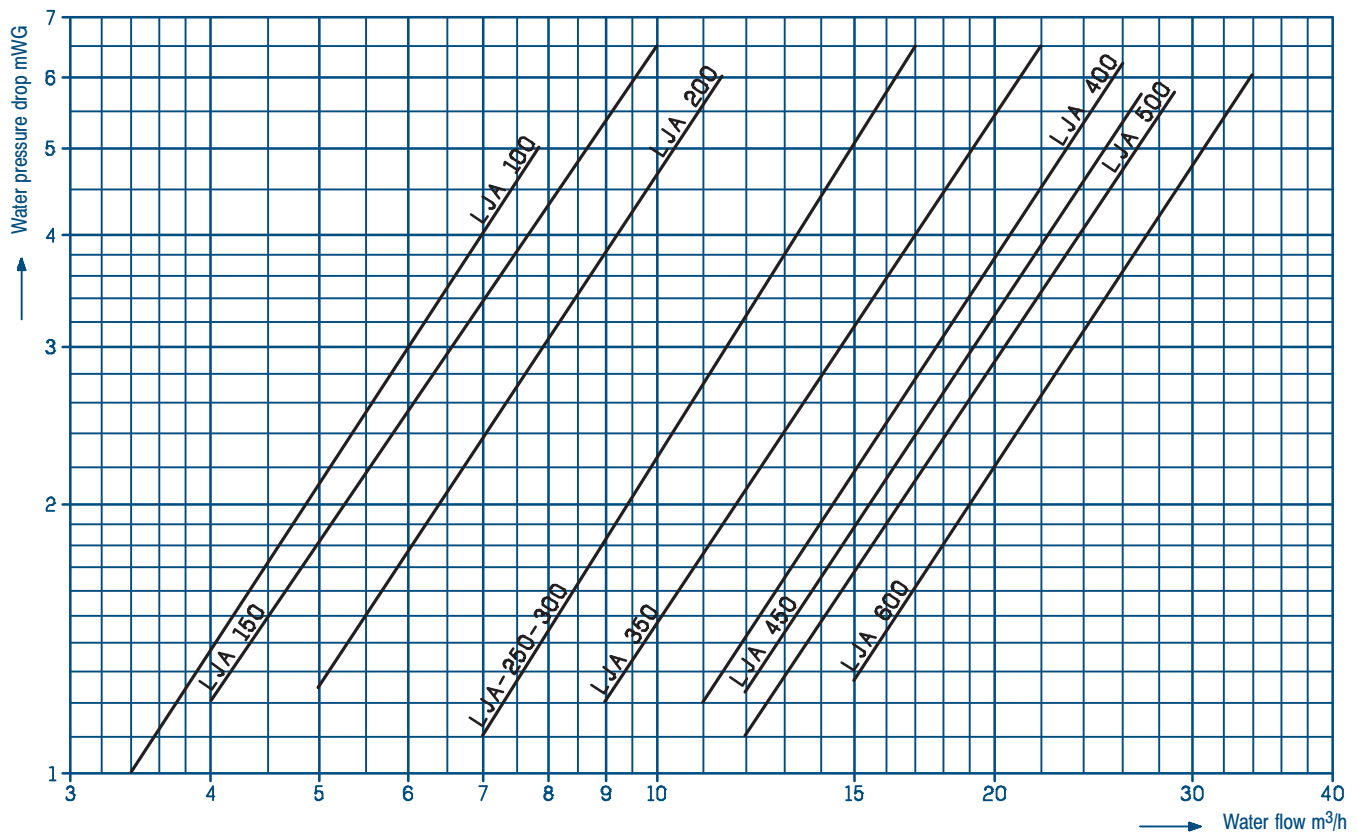
Fan motors selection

LJA - LJA H			100	150	200	250	300	350	400	450	500	600	
Air flow	m ³ /h		8500	12000	14500	16000	18000	22000	24000	27000	31000	35000	
Available pressure for ducts mmWG	0	Motor output	kW	2,2	4	4	5,5	7,5	5,5	5,5	9	5,5	9
		Rotation speed	rpm	398	511	515	568	638	715	798	928	603	766
	5	Motor output	kW	2,2	4	4	5,5	7,5	5,5	5,5	9	5,5	9
		Rotation speed	rpm	449	543	543	602	675	753	817	967	645	777
	10	Motor output	kW	2,2	4	4	5,5	7,5	5,5	7,5	9	7,5	9
		Rotation speed	rpm	515	604	570	641	682	801	855	1015	638	829
	15	Motor output	kW	2,2	4	4	5,5	7,5	5,5	7,5	9	7,5	11
		Rotation speed	rpm	575	673	604	675	722	844	928	1026	737	860
	20	Motor output	kW	2,2	4	4	5,5	7,5	5,5	7,5	11	7,5	11
		Rotation speed	rpm	606	712	636	715	765	894	954	1068	774	903
	25	Motor output	kW	2,2	4	4	5,5	7,5	7,5	7,5	11	7,5	15
		Rotation speed	rpm	679	751	712	750	808	928	1012	1126	811	931
	30	Motor output	kW	2,2	4	4	5,5	7,5	7,5	7,5	11	9	15
		Rotation speed	rpm	715	792	751	801	848	954	1026	1163	870	986
	Pressure drop of filters*	mmWG				5				6		7	

* Pressure drops in the case of filters equipment
This value is to be added when calculating the total available static pressure for the motor.

HYDRAULIC CHARACTERISTICS

Water pressure drop in the evaporator



VERSION WITH HYDRAULIC PACK

CIATCOOLER series LJAH

The all integrated solution

The PLUG & COOL solution offered by the CIATCOOLER LJAH

The hydraulic pack integrates in series all the components of the hydraulic circuit required for a good operation of the installation :

- Buffer tank
- Expansion vessel
- Water flow controller
- Pressure gauges with isolating valve
- Draining circuit
- Automatic and manual purge
- Safety valve
- Filling hole with valves
- Large choice of single or double pumps

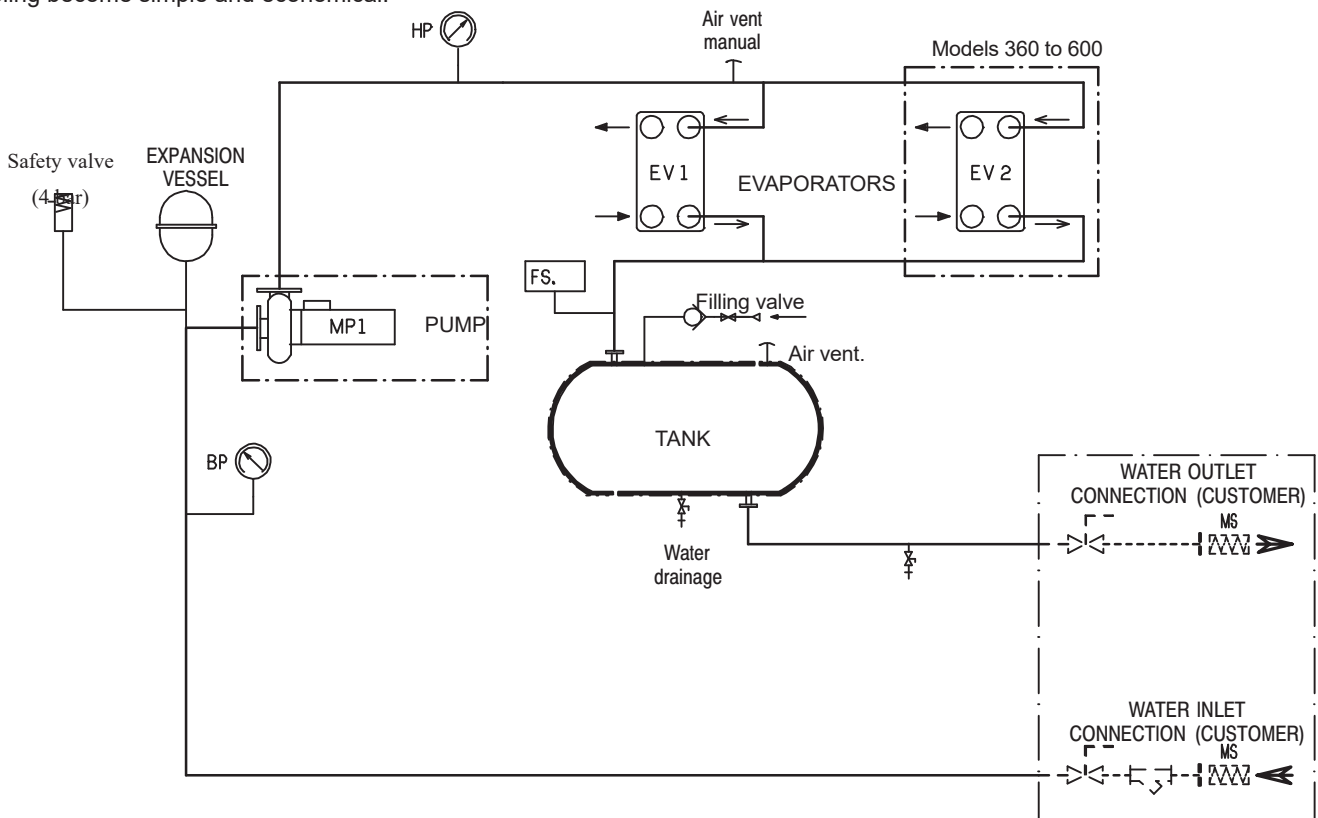
And regulation of the assembly

Equipped with an hydraulic pack whose components are selected in an optimal way, mounted and tested in factory, its installation becomes very easy. The fastidious operations of research for components, suppliers, connections..... are thus avoided.

Delivered all equipped, it is ready to operate.

In short, the CIATCOOLER LJAH hydraulic pack optimizes the preparation time, the labour and the space required. Connecting and cooling become simple and economical.

**CENTRIFUGAL
CONDENSER**



LEGEND

- Tap
- Pressure gauge
- Safety valve
- Isulation (ARMAFLEX)

OPTIONS

- Antifreeze protection :
 - thermostat (BRA)
 - ambient heating element (RA)
- Piping flexible sleeves (MS)
- Glycol water
- Double pump

TO BE PLANNED ON SITE

- Filter
- Butterfly isolating valve

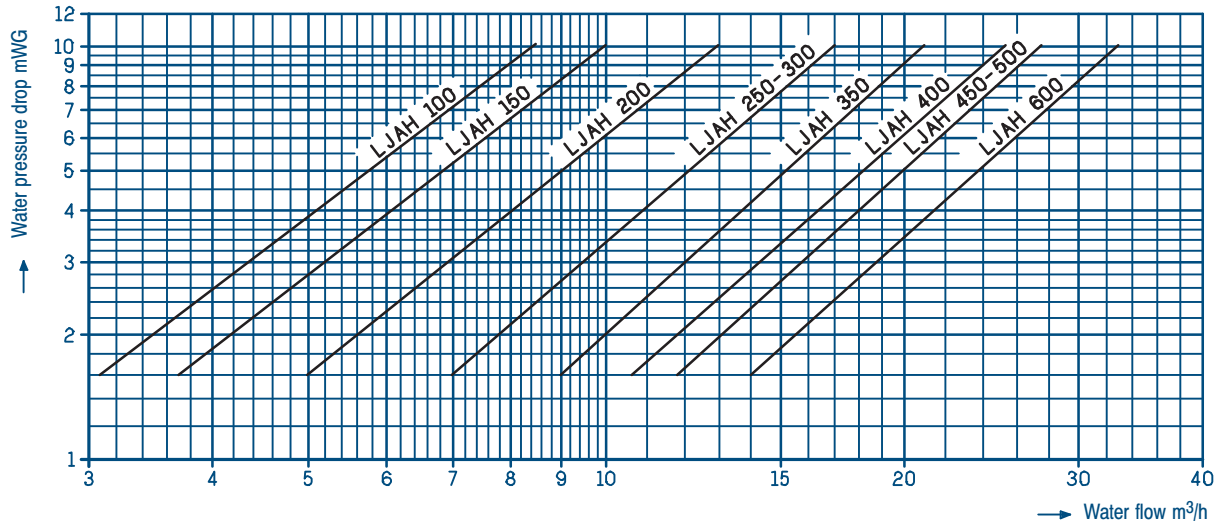
Note : the installer must respect the valid antipollution standards if connecting to a pure water network.



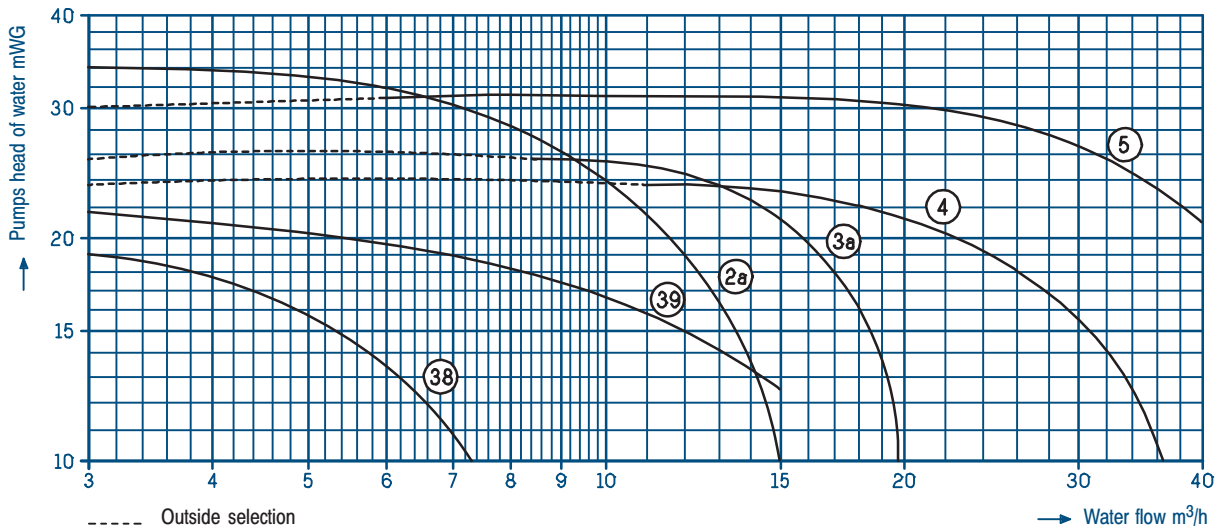
WATER PRESSURE DROP

CIATCOOLER LJAH

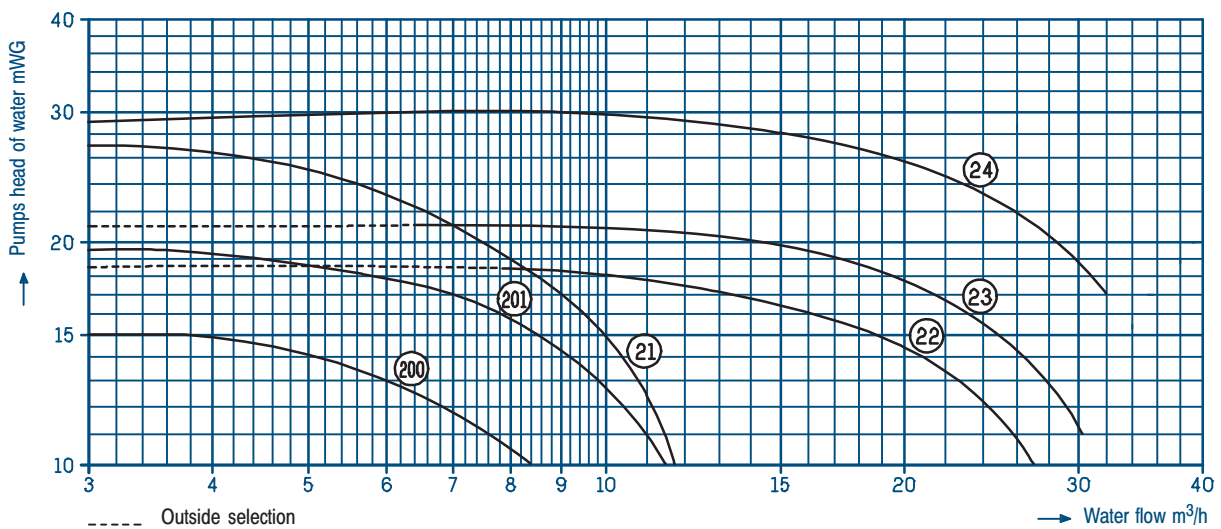
■ Evaporator + hydraulic module



■ Single pump selection



■ Double pump selection



TECHNICAL CHARACTERISTICS

LJA - LJAH		100	150	200	250	300	350	400	450	500	600	
Compressor	Type	Height										
	Number	1		2			3			4		
	Rotation speed rpm	2900										
	Refrigerant fluid	R 22 or R 407c										
	Load kg	R 407 C	4,3	6,5	8,4	10,2	12	6 + 8	14 + 5	13 + 6,5	13 + 8,5	12 + 12
	R 22	4,3	6,5	7,8	9,5	12	6,5 + 7,8	12 + 4	12 + 6,5	12 + 7,8	12 + 12	
Capacity control		1 stage		2 stages			3 stages			4 stages		
Evaporator	Type	Brazed plates										
	Number	1					2					
	Water contents l	1,9	2,85	3,39	5,65	5,65	7,5	7,95	9,2	9,7	11,4	
Air cooled condenser	Forced air position	Vertical - forward horizontal - reverse horizontal										
	Type of fan(s)	Centrifugal - pulleys and belts drive										
	Air flow m ³ /h	8 500	12 000	14 500	16 000	18 000	22 000	24 000	27 000	31 000	35 000	
Hydraulic module*	Buffer capacity l	350										
	Expansion vessel Capacity l	35										
	Pré-inflating pressure bar	1,5										
	Standard single pump N°	38	39	39	39	3a						
Max. contents of the installation in litres (1)	T° maxi Pure water	36 °C (2)		2470								
		46 °C (2)		1370								
	T° maxi Glycol water (30 %)	36 °C (2)		1440								
		46 °C (2)		810								
Dimensions LJA	Length mm	1630	1630	2180	2180	2180	2830	2830	2830	3460	3460	
	Width mm	900	900	900	900	900	900	900	900	900	900	
	Height mm	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990	
Mass in service	kg	591	620	785	846	873	1179	1234	1275	1476	1531	
Dimensions LJAH	Length mm	2630	2630	3180	3180	3180	3830	3830	3830	4460	4460	
	Width mm	900	900	900	900	900	900	900	900	900	900	
	Height mm	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990	
Mass in service	kg	1254	1283	1482	1513	1540	1854	1924	1981	2159	2214	

(1) Installation contents as a function of the expansion vessel mounted on the unit. The buffer tank is already taken into account.

In case where the capacity of the installation is larger, another expansion vessel must be added on.

(2) The water temperatures mentioned are those which can be reached when unit is stopped

* LJAH only.

ELECTRICAL CHARACTERISTICS

LJA - LJAH		100	150	200	250	300	350	400	450	500	600
Compressors											
Nominal current in A	* 230 V	34,5	50,5	69	85	101	119,5	135,5	151,5	170	202
	400 V	20,1	29,4	40,2	49,5	58,8	69,6	78,9	88,2	99	117,6
Starting current in A	* 230 V	205	310	250	355	378	400	423	446	468	514
	400 V	120	175	145	200	210	225	235	245	260	280

* 230 V - 3 ph : Standard voltage in France

FAN MOTORS (1)		kW	2,2	3	4	5,5	7,5	9	11	15
Maximum nominal current in A	* 230 V	8,9	12,3	15,9	20,7	27,7	32,2	38,1	50,8	
	400 V	5,2	7,1	9,2	12	16	18,6	22	29,3	

(1) Motor selection as per total static pressure

SINGLE PUMP		N°	38	39	2a	3a	4	5
Power	kW		0,55	0,95	1,1	2,2	3	4
Maximum nominal current in A	* 230 V		2,8	4,7	4,5	8,5	11	14,7
	400 V		1,6	2,7	2,6	4,9	6,25	8,45

(2) In the standard versions, the models 100 to 300 are equipped with the pumps mentioned in the table above (technical characteristics, hydraulic module).

DOUBLE PUMP		N°	200	201	21	22	23	24
Power	kW		0,75	1,1	1,1	1,5	2,2	3
Maximum nominal current in A	* 230 V		3,3	4,6	4,6	6	8,5	11,5
	400 V		1,91	2,7	2,7	3,5	4,9	6,5

* 230 V - 3 ph : Standard voltage in France

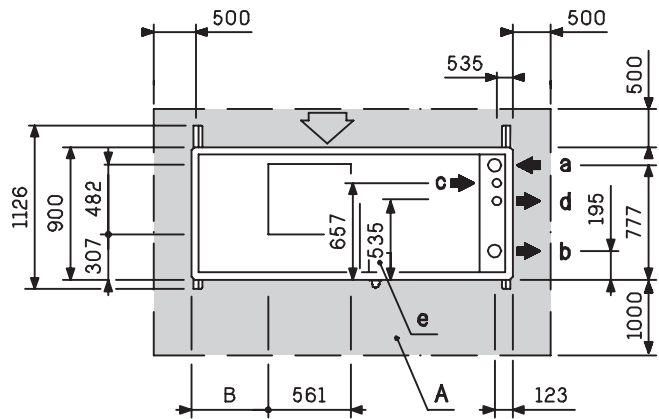
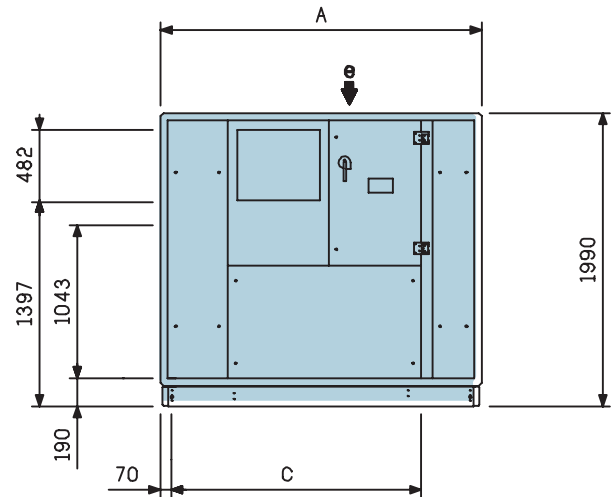
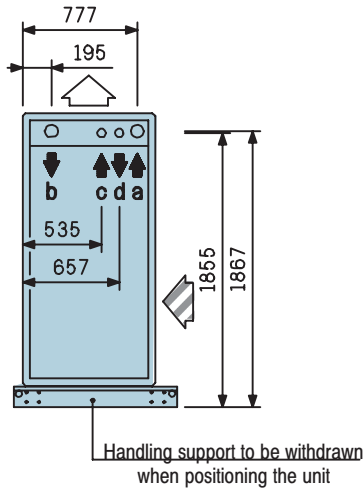
Total intensity of unit : total of max. nominal intensities mentioned in the above tables.



DIMENSIONS

CIATCOOLER LJA - LJAD

■ 1 and 2 compressors, 1 refrigerant circuit



CENTRIFUGAL CONDENSER

◀ Condenser coil intake

◀ Vertical discharge

A : servicing area

a : Chilled water inlet
 b : Chilled water outlet
 c : Hot water inlet (LJAD only)
 d : Hot water outlet (LJAD only)
 e : electrical supply hatch

LJA LJAD	A	B	C	Male connections				Mass kg	
				a	b	c	d	empty	in service
100	1630	305,5	1153	G1" 1/4	G1" 1/4	G1" 1/4	G1" 1/4	581	591
150								610	620
200	2180	518	1703	G2"	G2"	G1" 1/4	G1" 1/4	771	785
250								832	846
300								859	873

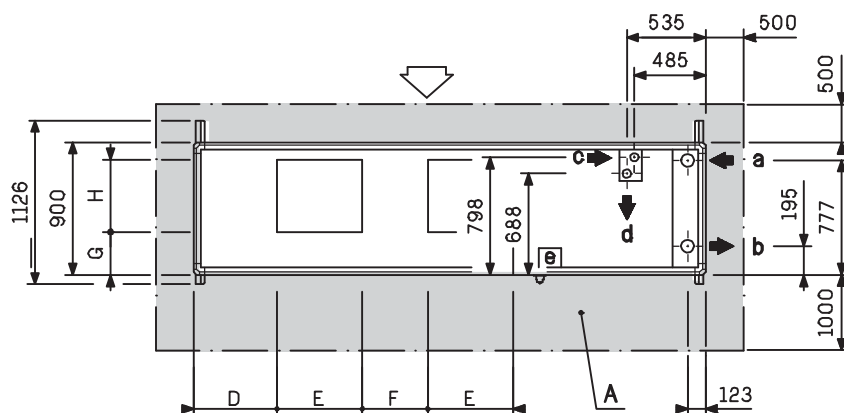
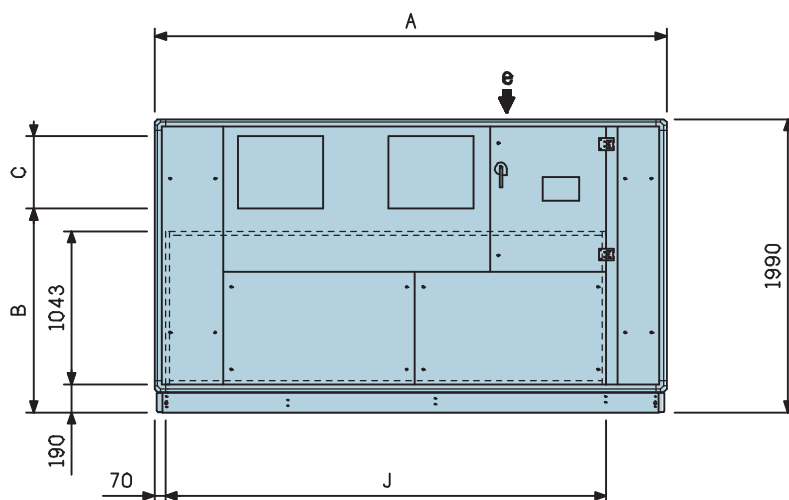
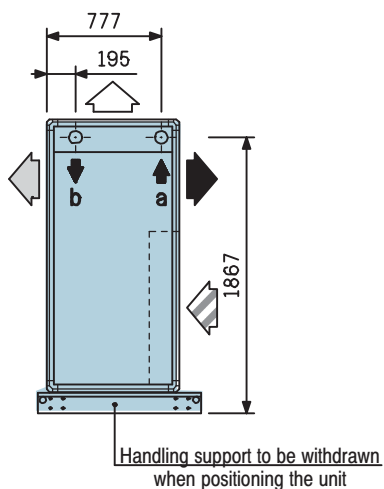


DIMENSIONS

CIATCOOLER LJA - LJAD

■ 3 and 4 compressors, 2 refrigerant circuits

CENTRIFUGAL CONDENSER



Condenser coil intake

Vertical discharge

Rear discharge

Front discharge

A : servicing area

a : chilled water inlet
 b : chilled water outlet
 c : hot water inlet (LJAD only)
 d : hot water outlet (LJAD only)
 e : electrical supply hatch

LJA LJAD	A	B	C	D	E	F	G	H	J	Male connections				Mass kg	
										a	b	c	d	empty	in service
350														1165	1179
400	2830	1333	408	352,5	475	380	243	408	2353	G2" 1/2	G2" 1/2	G2"	G2"	1220	1234
450														1261	1275
500														1462	1476
600	3460	1390	482	570	561	454	300	482	2983	G2" 1/2	G2" 1/2	G2"	G2"	1517	1531

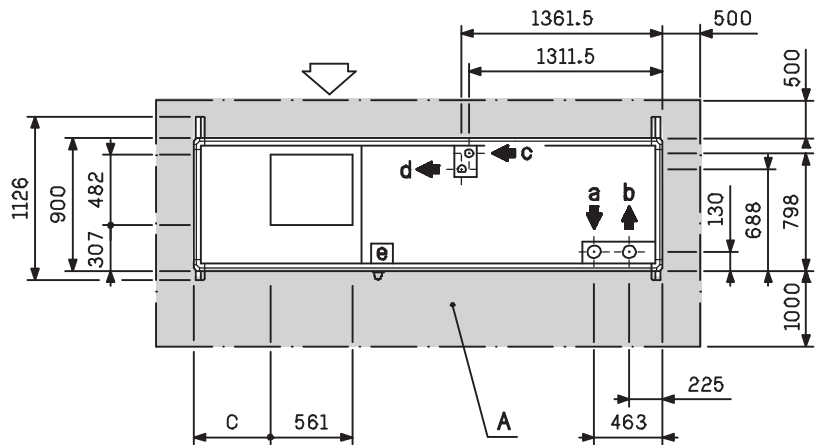
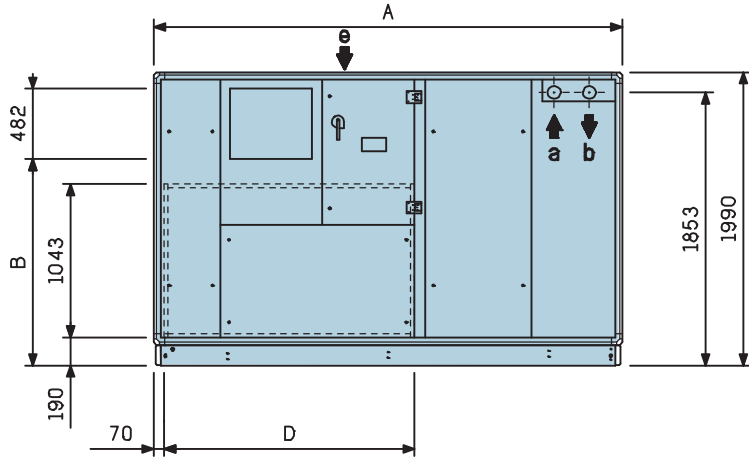
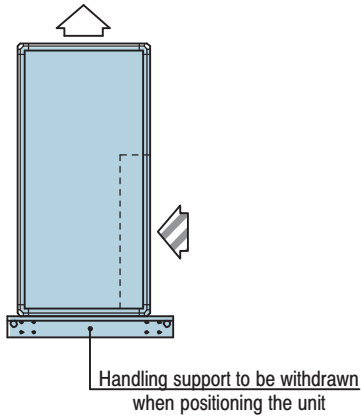


DIMENSIONS

CIATCOOLER LJAH - LJAHD

■ 1 and 2 compressors, 1 refrigerant circuit

CENTRIFUGAL
CONDENSER



- ◀ Condenser coil intake
- ◀ Vertical discharge

A : servicing area

- a : Chilled water inlet
- b : Chilled water outlet
- c : Hot water inlet (LJAHD only)
- d : Hot water outlet (LJAHD only)
- e : electrical supply hatch

LJAH LJAHD	A	B	C	D	Male connections				Mass kg	
					a	b	c	d	empty	in service
100	2630	1397	300,5	1153	G1" 1/4	G1" 1/4	G1" 1/4	G1" 1/4	896	1254
150									925	1283
200	3180	1397	518,5	1703	G2"	G2"	G1" 1/4	G1" 1/4	1122	1482
250									1153	1513
300									1180	1540

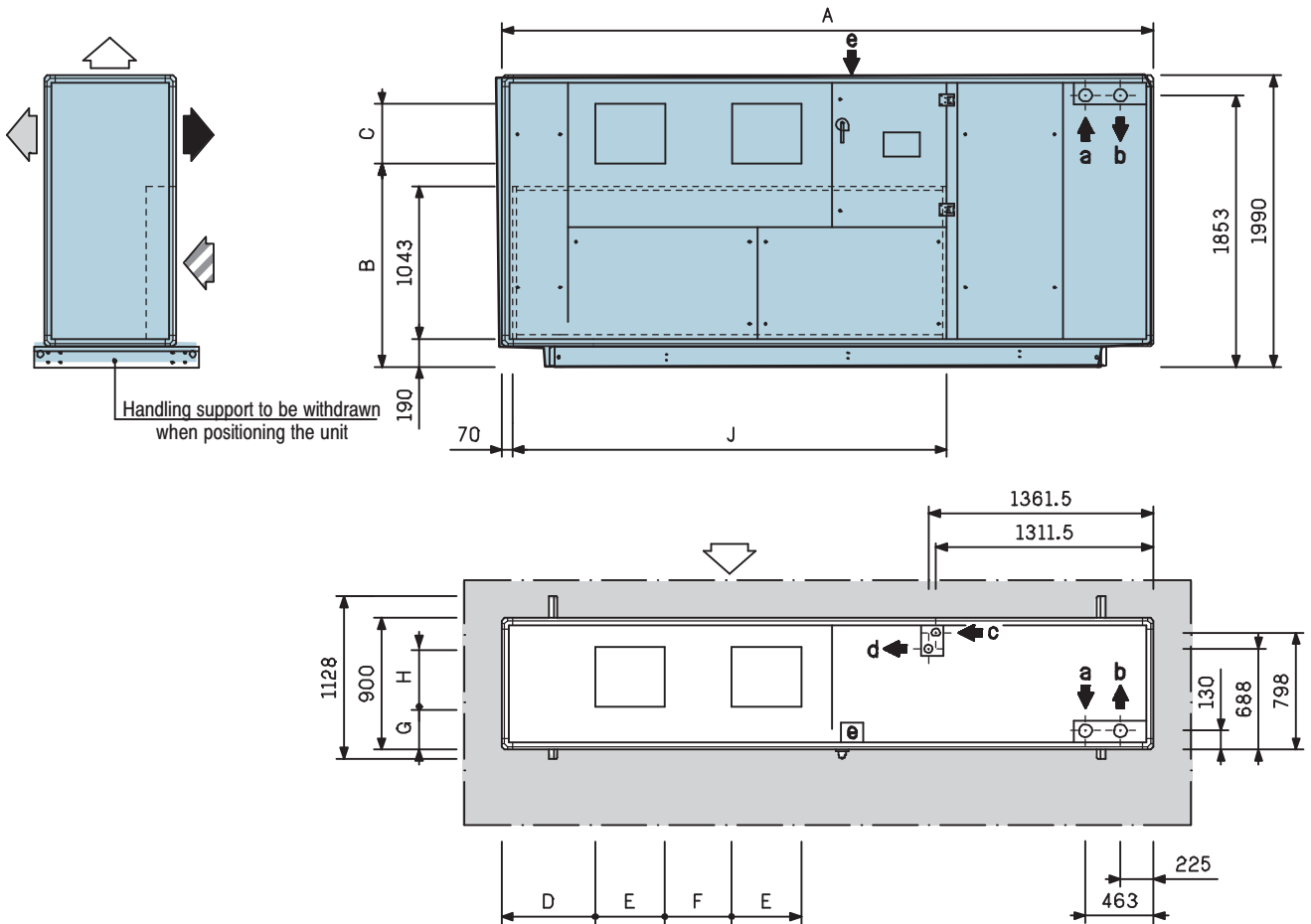


DIMENSIONS

CIATCOOLER LJAH - LJAHD

■ 3 and 4 compressors, 2 refrigerant circuit

CENTRIFUGAL
CONDENSER



- Condenser coil intake
- Vertical discharge
- Rear discharge
- Front discharge

- a : chilled water inlet
- b : chilled water outlet
- c : hot water inlet (LJAHD only)
- d : hot water outlet (LJAHD only)
- e : electrical supply hatch

A : servicing area

LJAH	A	B	C	D	E	F	G	H	J	Male connections				Mass kg	
										a	b	c	d	empty	in service
350														1490	1854
400	3830	1333	408	352,5	475	380	243	408	2353	G2" 1/2	G2" 1/2	G2"	G2"	1560	1924
450														1617	1981
500														1785	2159
600	4460	1390	482	570	561	454	300	482	2983	G2" 1/2	G2" 1/2	G2"	G2"	1850	2214

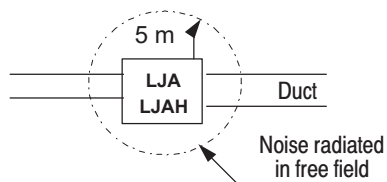


SOUND LEVEL

CIATCOOLER series LJA - LJA H

■ Sound pressure level : ref ref 2×10^{-5} Pa \pm 3 dB - Radiated noise

- at 5meters form the unit
- at 1.50 meters from the ground
- in free field
- directivity 2
- the air handling centrifugal fan holes are connected to a duct network
- the fan operating point is under nominal conditions (see fan capacity level table)



CJA	SOUND LEVEL SPECTRUM dB							Global sound level Lp dB (A)
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	
100	51	53	51	44	38	35	33	47
150	58	56	52	40	41	41	40	49
200	56	57	51	42	42	40	36	49
250	60	58	49	43	43	43	41	50
300	62	61	51	45	46	45	44	53
350	62	60	52	43	44	43	42	51
400	63	61	53	44	46	45	44	53
450	66	63	55	47	48	47	47	55
500	65	64	55	49	47	47	45	55
600	69	68	59	53	51	50	49	59

■ Fan capacity level

Values to be taken into account for the silencers calculation

+/- 3 dB at the non connected discharge hole and under nominal conditions (1)

CJA	Nominal conditions (1)			CAPACITY LEVEL SPECTRUM dB							Global sound level Lw dB (A)
	Air flow m3/h	Rotation speed rpm	Available pressure mmWG	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	
100	8500	502	10	83	87	82	84	83	82	77	88
150	12000	606	10	87	91	86	88	87	86	81	92
200	14500	568	10	88	92	87	89	88	87	82	93
250	16000	638	10	90	94	89	91	90	89	84	95
300	18000	715	10	93	97	92	94	93	92	87	98
350	22000	801	10	90	89	86	88	87	85	81	92
400	24000	855	10	91	90	87	89	88	86	82	93
450	27000	1007	10	94	93	90	92	91	89	85	96
500	31000	690	10	91	93	90	92	90	89	84	95
600	35000	829	10	95	97	94	96	94	93	88	99

