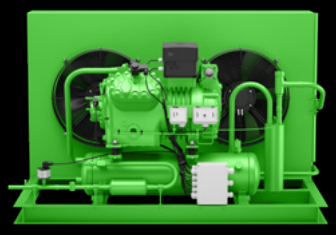
DAS HERZ DER FRISCHE

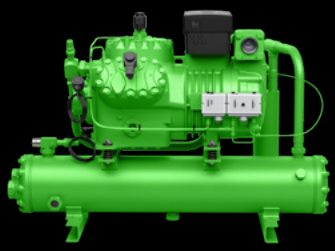
AIR AND WATER COOLED

CONDENSING UNITS

THE RIGHT CHOICE FOR YOUR APPLICATION

KP-263-3 EN





STANDARD RANGE

air and water cooled

ADVANCED RANGE

air cooled

PREMIUM RANGE

air cooled

COMMERCIAL REFRIGERATION

CONDENSING UNITS

RECIPROCATING COMPRESSORS

BITZER
EXPERTISE AND INNOVATION

We are always striving for the highest possible energy efficiency and quality at BITZER. As an independent global leader in refrigeration, air conditioning and heat pump technology for comfort air conditioning, process technology and mobile applications, we use our extensive experience to provide innovative products and intelligent solutions which create additional value for our partners and the environment all over the world.

INNOVATION DRIVER SINCE
1934

EMPLOYEES
› 4,300

SITES
75

COUNTRIES
37

Learn more at bitzer.de

CONTENTS

FOR EVERY CUSTOMER FOR EVERY REQUIREMENT

	APPLI-CATIONS	CAPACITY CONTROL	HOUSING	REF. CLASS	Q_o RANGE
PREMIUM ECOSTAR (air cooled)		✓ VARISPEED or VARIPACK FI 25–87 Hz	✓	A1	LT 1.2 up to 9.3 kW MT 2.6 up to 26.0 kW
ADVANCED ECOLITE (air cooled)		✓ VARISTEP CRII 10%–100% ✓ VARIPACK + CR 30–70 Hz + 50%/100%	✓	A1 + A2L	LT 1.3 up to 8.0 kW MT 3.2 up to 27.0 kW
STANDARD LHF (air cooled) LHE PRO (air cooled)		optional with VARISTEP CRII 10%–100%	optional	A1 + A2L A3	LT 0.4 up to 23.0 kW MT 0.8 up to 60.0 kW LT 0.7 up to 1.8 kW MT 1.7 up to 5.7 kW
STANDARD K SERIES (water cooled)		optional with VARISTEP CRII 10%–100%	–	A1 + A2L	LT 0.3 up to 28.0 kW MT 0.8 up to 89.0 kW

ECOSTAR

THE PREMIUM CHOICE

WHETHER SUPERMARKET OR PROCESS COOLING – THE ECOSTAR SERIES GUARANTEES THE HIGHEST EFFICIENCY WHILE ENSURING SAFE OPERATION AND CONTINUOUS ADAPTATION TO THE COOLING DEMAND.

IQ INTELLIGENT PRODUCTS

HFO BLEND READY

ECODESIGN CONFORM

BEST SOFTWARE

BITZER DIGITAL NETWORK

EXTENSIVE UNIT PACKAGE

// Low and medium temperature applications are fully covered
// ECOSTAR controller via BEST SOFTWARE/ BEST App for easy configuration, diagnosis, analysis and communication
// Highly efficient ECOLINE VARISPEED compressor or ECOLINE with VARIPACK
// Highest fan efficiency due to EC fans controlled by ECOSTAR controller

AHEAD OF MARKET DEMANDS

ECOSTAR units are compliant with low GWP refrigerants of the A1 safety class as well as for common HFC and HFO blend refrigerants. Furthermore, the series fully complies with the EU Ecodesign Product Regulation 2015/1095. The unit is supplied fully tested from the factory, including factory-fitted equipment and extensive software functions.

THE PREMIUM SOLUTION FOR YOUR APPLICATION

The ECOSTAR air cooled condensing unit offers intelligent technology for efficient and safe operation at any time. It is the ideal solution for customers who are looking for a sustainable, robust and easy plug-and-play concept made of proven BITZER components. It is a perfect match for commercial refrigeration with different applications, such as cold storage, hotels and pharmaceutical processes.

RETAIL AND CONVENIENCE STORES

The ECOSTAR is ideal for systems with cold rooms and cabinets, even with multi-evaporators. The series adjusts safely and efficiently to cooling demands.

PHARMA/ LABS

The BITZER controller of the ECOSTAR series enhances close temperature control and safe operation of pharmaceutical processes and vaccine conservation.

SCALABLE PERFORMANCE ACCORDING TO YOUR NEEDS

PROCESS COOLING AND COLD STORAGE

Process cooling and cold storage rooms require different cooling capacities with a wide application range of the evaporating temperature. The ECOLINE VARISPEED compressor or ECOLINE with VARIPACK enables low and medium temperatures with a large frequency band (from 25 [30] up to 87 Hz).

HOTEL/ BISTRO

The ECOSTAR, an IQ product, combines the highest efficiency for low operating costs with individual user profiles – to provide guests with a warm welcome.

THE INTELLIGENT SOLUTION:
ECOSTAR – FOR COMMERCIAL REFRIGERATION

READY TO USE
PLUG-AND-PLAY CONCEPT

FAST RETURN ON INVESTMENT/LOW LIFE CYCLE COSTS
ALWAYS PERFECTLY ADAPTING TO THE SYSTEM DEMAND

INSTALLATION FLEXIBILITY
SUITABLE FOR SYSTEMS WITH LONG PIPES

FAST COMMISSIONING
QUICK START-UP WITH FIVE PARAMETERS ONLY

The premium choice for commercial refrigeration – no matter if single or multi-evaporator installation. The BITZER ECOSTAR with frequency inverter guarantees precise refrigeration capacity adaptation. The fully equipped product allows convenient and easy on-site installation.

The ECOSTAR combines the latest technologies, such as highly efficient EC fans, comprehensive controller functions and optimised mini-channel condensers.

PLUG AND PLAY
The complete equipment permits quick and easy on-site set-up without complex installation of additional components. With easy access to all components, commissioning is also made easy and convenient.

CAPACITY CONTROL
The large band of frequency modulation from 25 (30) up to 87 Hz allows quick and precise adaptation of refrigeration capacity to the demand. This enhances the installation efficiency while ensuring precise temperature control.

PREMIUM BITZER CONTROLLER
The controller makes simple configuration, safe operation, quick analysis and easy communication possible. The unit can thus reach the highest level of efficiency combined with reliability and user-friendliness.

SUSTAINABLE
The ECOSTAR enables low refrigerant charges due to the optimised condenser and receiver design. It is also Ecodesign-compliant thanks to its ECOLINE semi-hermetic compressor with frequency inverter combined with EC fan(s).

ECOSTAR: THE PREMIUM AIR COOLED CONDENSING UNIT

COMPREHENSIVE STANDARD EQUIPMENT

// BITZER inclined liquid receiver
// Robust metal weather protection housing
// Sight glass and filter drier
// HP/LP cartridge pressure switches* and transmitters
// Oil heater
// Suction, discharge and ambient temperature sensors
// Complete piping and wiring
// Oil charge

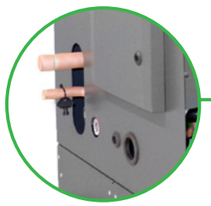
BITZER CONTROLLER WITH DISPLAY AND PREWIRED SWITCHBOARD

// Access to the most important parameters via controller
// Full access to all parameters via Bluetooth and BEST SOFTWARE (via laptop or BEST App)
// Modbus RS485

IQ INTELLIGENT PRODUCTS

BITZER DIGITAL NETWORK

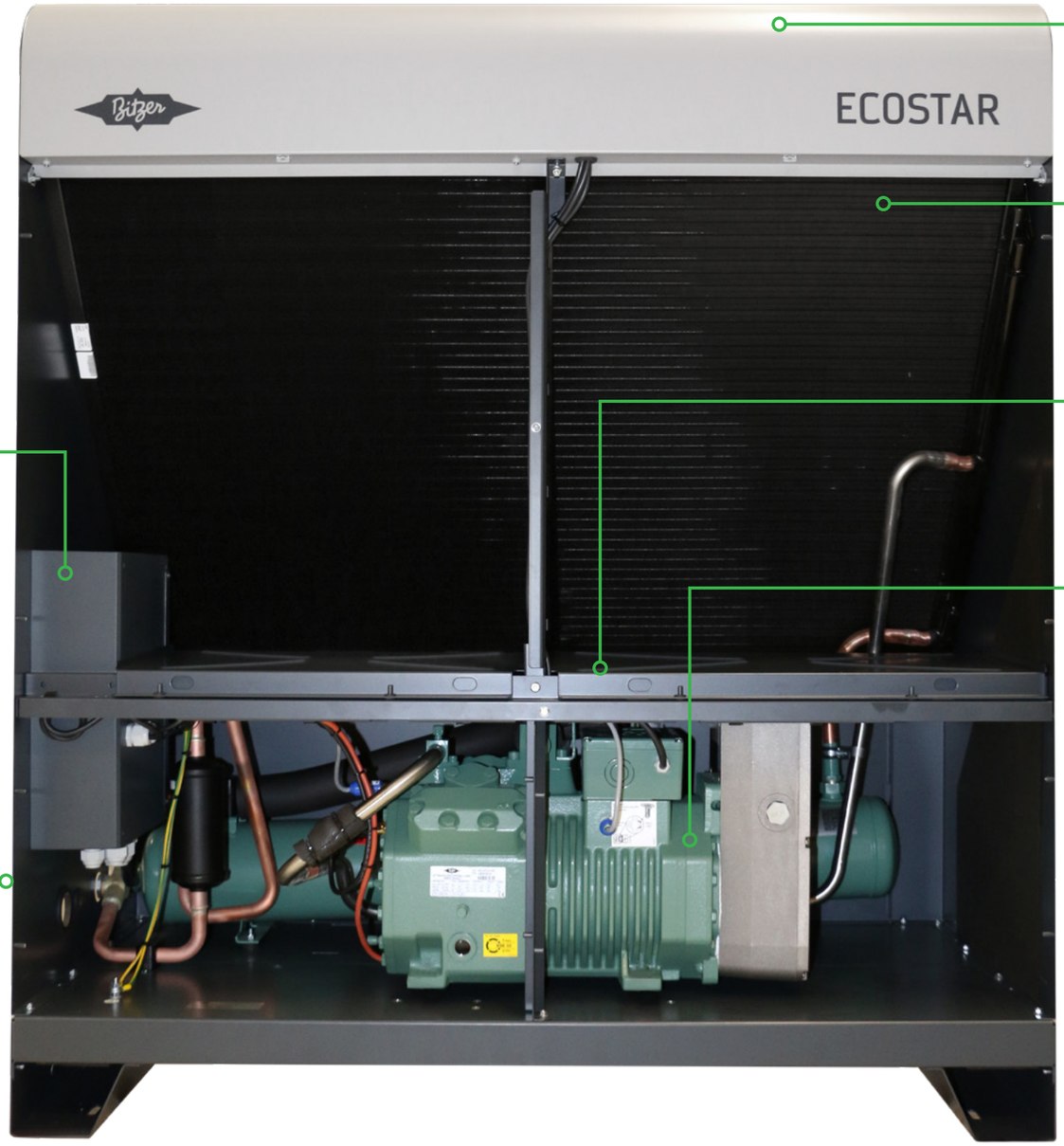
LIQUID LINE WITH FILTER DRIER AND SIGHT GLASS AND SUCTION GAS LINE



HFO BLEND READY

BEST SOFTWARE

ECODESIGN CONFORM



SPEED-CONTROLLED EC FAN(S)

// Low power consumption

SYSTEM-OPTIMISED CONDENSER

// Mini-channel condenser with high heat transfer rate and low refrigerant charge
// Optional: with improved corrosion protection

SOUNDPROOF AND ROBUST DESIGN

// Optional sound insulation of compressor housing (mandatory RI system)
// Reduces sound emissions up to 5 dB(A)

BITZER ECOLINE COMPRESSOR WITH EXTERNAL VARIPACK OR VARISPEED WITH INTEGRATED FREQUENCY INVERTER

// Capacity control from 25 (30)–87 Hz
// Low starting current
// Precise cooling

FREQUENCY INVERTERS

OPTIONAL EQUIPMENT

// RI system for refrigerant injection for low temperature application
// Oil separator with check valve
// Check valve in liquid line
// Cold room temperature sensor
// OLC-K1 or Delta-PII

The product picture shows an almost fully equipped ECOSTAR Unit with ECOLINE VARISPEED compressor.
For the standard extent of delivery and optionally available equipment, please see the following pages.

* Exception LHV7E/4NE-14.FY with adjustable high-pressure switch

BITZER CONTROLLER: **FUNCTIONS**

OPERATION MODES
// Suction pressure control
// Cold room temperature control

PUMP DOWN/OUT MODE AND PI-CONTROL MODE

OUTPUTS
// Status of the Inputs unit
// For example, second set point

COMPRESSOR OPERATION
For example, RI system, oil heater

LIMITER CONTROL AND APPLICATION LIMITS PROTECTION
For example, min. evaporating/ max. condensing temperature

EMERGENCY MODE
// HP/LP or cold room sensor
// Frequency inverter

COMMUNICATION
// Bluetooth via BEST SOFTWARE (via laptop or BEST App)
// Mini USB via BEST SOFTWARE/BEST App
// Modbus RTU (RS485)

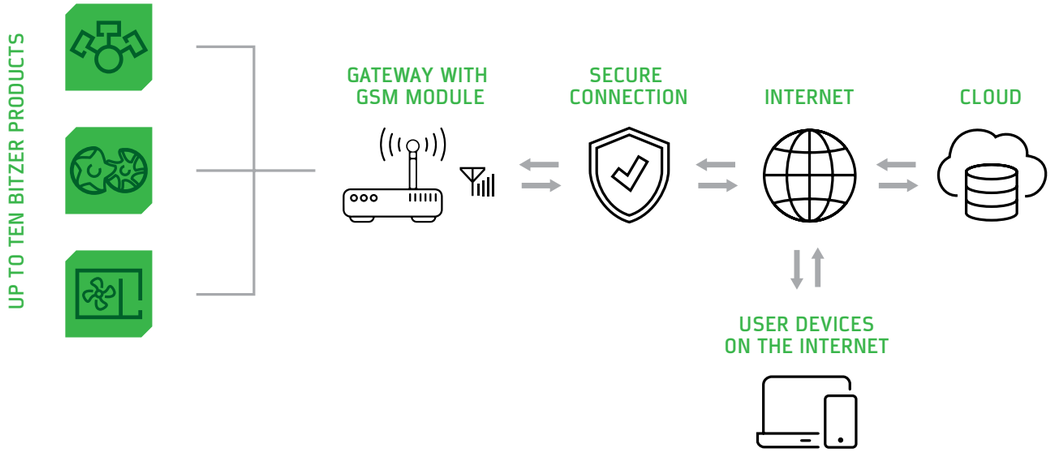
CAPACITY CONTROL
// Frequency inverter
// 25–87 Hz for four cylinders
// 30–87 Hz for two cylinders

ALARM CODE VISUALISATION
// On integrated display with alarm number, failure code and short text
// Via BEST SOFTWARE
// Via status lamps

FUNCTIONS
// Winter start
// EC fan(s) control
// Oil return mode
// Wet operation detection

BITZER DIGITAL NETWORK: **ALL-ROUND VIEW OF THE HEART OF REFRIGERATION AND A/C SYSTEMS**

This provides you with important product- and application-related information on all the BITZER products, including, among others, data analyses and compressor operation reports.



EXTENT OF DELIVERY

ECOSTAR AIR COOLED CONDENSING UNITS WITH ECOLINE VARISPEED COMPRESSORS OR ECOLINE WITH VARIPACK		LHVE	
		LHV5E/..	LHV7E/..
Semi-hermetic reciprocating compressor	ECOLINE VARISPEED with integrated frequency inverter or ECOLINE with VARIPACK*	S	S
Oil heater	200 .. 260 V, PTC	S	S
Air cooled condenser	– mini channel design with 1 fan – EC motor, speed controlled	S	
	– mini channel design with two fans – EC motors, speed controlled		S
Weather protection housing		S	S
Liquid receiver	with shut-off valve	S	S
Connection for pressure relief valve	at receiver / condenser	S	S
Sight glass and filter drier	in liquid line	S	S
High and low pressure switch	– cartridge pressure switch (not adjustable) – LHV7E/4NE-14.FY: adjustable high pressure switch	S	S
Temperature sensor	– for suction gas temperature – for discharge gas temperature – for ambient temperature	S	S
Pressure transmitters	for high and low pressure	S	S
Complete piping	– discharge line – liquid line – suction line (insulated)	S	S
ECOSTAR controller	control of compressor speed and further functions of condensing unit	S	S
Complete wiring	main switch, compressor contactor, etc.	S	S
Oil charge	BSE32 (ester oil) for HFC and HFC/HFO refrigerants tc < 70°C	S	S

S = extent of delivery
(Subject to change without notice)

* With external frequency inverter BITZER VARIPACK

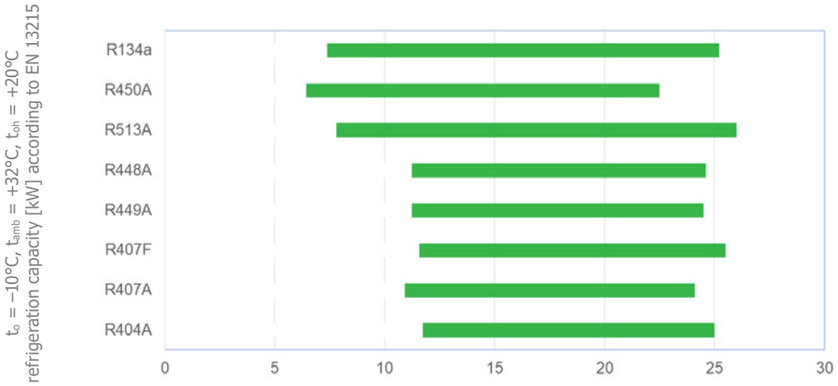
- LHV7E/4DE-7.FY
- LHV7E/4CE-9.FY
- LHV7E/4VE-7.FY
- LHV7E/4TE-9.FY
- LHV7E/4PE-12.FY
- LHV7E/4NE-14.FY

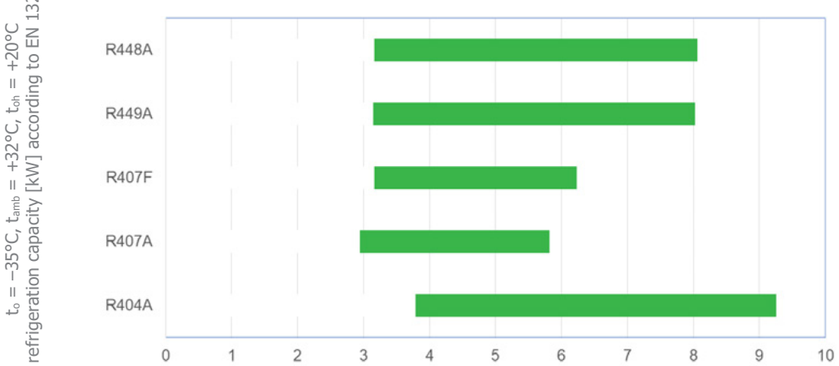
EXTRAORDINARY OPTIONAL EQUIPMENT
TO FULFIL YOUR DEMANDS

ECOSTAR AIR COOLED CONDENSING UNITS WITH ECOLINE VARISPEED COMPRESSORS OR ECOLINE WITH VARIPACK		LHV5E/..	LHV7E/..
Warranty extension up to 5 years	For details, see price list	•	•
Temperature sensor	for cold store temperature	•	•
Check valve*	in liquid line – mounted	•	•
Oil separator*	with check valve in discharge line – mounted	•	•
RI system (refrigerant injection cooling)*	– mounted	•	•
Condenser improved corrosion protection*	plastic-coated fins or copper fins	•	•
Sound insulation for compressor housing*	RI system (refrigerant injection cooling) is mandatory	•	•
Oil charge	BSE55 (ester oil) for HFC and HFC/HFO refrigerants – at high condensing temperatures t_c > 70°C	○	○
	B5.2: 'Y' in compressor designation omitted	○	○
Oil level monitoring OLC-K1 – opto-electronic	230 V-1-50/60 Hz mounted	•[1]	
Differential oil pressure switch Delta-PII	115 .. 230 V-1-50/60 Hz mounted	•	•
BITZER Digital Network		•	•

● = option available, ○ = option without extra charge
* = retrofitting not possible.
[1] = only for LHV5E/2DES-3.F1(Y).
(Subject to change without notice)

APPLICATION RANGE



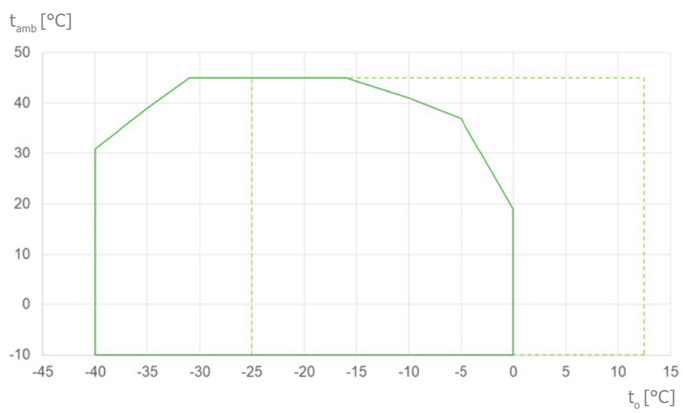


For further details, please refer to BITZER SOFTWARE

BITZER SOFTWARE

Scan for additional information

APPLICATION LIMITS



LHV7E/4FE-5.F1Y, 80Hz, R448A/R449A, t_{oh} = +20°C
LHV7E/4CE-9.FY, 80 Hz, R134a/R513A, t_{oh} = +20°C

t_o Evaporating temperature [°C]
t_{amb} Ambient temperature [°C]
t_{oh} Suction gas temperature [°C]

Tentative data

ASERCOM-CERTIFIED PERFORMANCE DATA

The Association of European Refrigeration Component Manufacturers (ASERCOM) has implemented a procedure of certifying condensing units' performance data.

The high standard of this certification is assured by
// plausibility checks of the data performed by experts
// regular random tests at independent institutes

These efforts result in the fact that only a limited number of condensing units can be submitted. Due to this, not all BITZER products are certified yet.
Performance data of condensing units that meet the strict requirements carry the label 'ASERCOM-certified performance'.
All certified condensing units and further information are listed on the ASERCOM website (www.ASERCOM.org).

In the BITZER SOFTWARE, the appropriate condensing units are marked with this label.

PERFORMANCE DATA

REFRIGERATION CAPACITY Q_o @ t_{amb} +32°C

	MT. –10°C. midpoint					LT. –35°C. midpoint	
	R404A	R448A R449A	R513A	R450A	R134a	R404A	R448A R449A
LHV5E/2DES-3.F1Y	11.74	10.77	7.81	6.44	7.38	3.76	2.96
LHV5E/4FE-5.F1Y	14.89	14.14	9.81	8.13	9.28	5.27	4.17
LHV5E/4EE-6.F1Y	17.34	16.65	12.42	10.5	11.89	6.34	5.09
LHV7E/4FE-5.F1Y	16.13	15.01	10.09	8.31	9.51	5.38	4.26
LHV7E/4EE-6.F1Y	19.13	18.01	13.03	10.84	12.38	6.51	5.23
LHV7E/4DE-5.F1Y			14.81	12.37	14.09		
LHV7E/4CE-6.F1Y			17.68	14.94	16.92		
LHV7E/4DE-7.FY	21.5	19.92	14.81	12.36	14.08	7.71	5.85
LHV7E/4CE-9.FY	25	23.9	17.68	14.94	16.92	9.21	7.62
LHV7E/4VE-7.FY			18.25	15.44	17.44		
LHV7E/4TE-9.FY			21.2	18.12	20.4		
LHV7E/4PE-12.FY			23	19.75	22.1		
LHV7E/4NE-14.FY			26	22.5	25.2		

SEPR

SEPR	MT. –10°C. midpoint					LT. –35°C. midpoint	
	R404A	R448A R449A	R513A	R450A	R134a	R404A	R448A R449A
LHV5E/2DES-3.F1Y	3.64	3.44	3.92	3.82	3.91	2.04	1.91
LHV5E/4FE-5.F1Y	3.4	3.27	3.56	3.52	3.54	1.84	1.77
LHV5E/4EE-6.F1Y	3.3	3.2	3.5	3.44	3.48	1.84	1.77
LHV7E/4FE-5.F1Y	3.58	3.29	3.81	3.68	3.77	1.91	1.82
LHV7E/4EE-6.F1Y	3.39	3.25	3.76	3.74	3.78	1.95	1.85
LHV7E/4DE-5.F1Y			3.64	3.66	3.65		
LHV7E/4CE-6.F1Y			3.44	3.47	3.45		
LHV7E/4DE-7.FY	3.32	3.23	3.6	3.59	3.61	1.95	1.83
LHV7E/4CE-9.FY	3.2	3.13	3.44	3.47	3.45	1.94	1.79
LHV7E/4VE-7.FY			3.41	3.36	3.41		
LHV7E/4TE-9.FY			3.37	3.29	3.35		
LHV7E/4PE-12.FY			3.39	3.29	3.36		
LHV7E/4NE-14.FY			3.32	3.27	3.3		

Tentative data

BITZER CONDENSING UNITS
COMPLYING WITH THE EU ECODESIGN REGULATION 2015/1095

According to MEPS Tier-2, for more details please see BITZER brochure A-530-1	COP	SEPR
MT (t_o–10°C) – refrigeration capacity	0.2 .. ≤5 kW	5 .. 50 kW
LT (t_o–35°C) – refrigeration capacity	0.1 .. ≤2 kW	2 .. 20 kW

EXPLANATION OF TYPE DESIGNATION

LHV7E / 4CE-9.F1 Y

- LHV7E: condenser type — 5 = small housing, 7 = large housing
- 4CE-9: compressor type
- F1: frequency inverter size — F = VARIPACK, F1 = VARISPEED
- Y: oil charge — Y = ester oil

TECHNICAL DATA

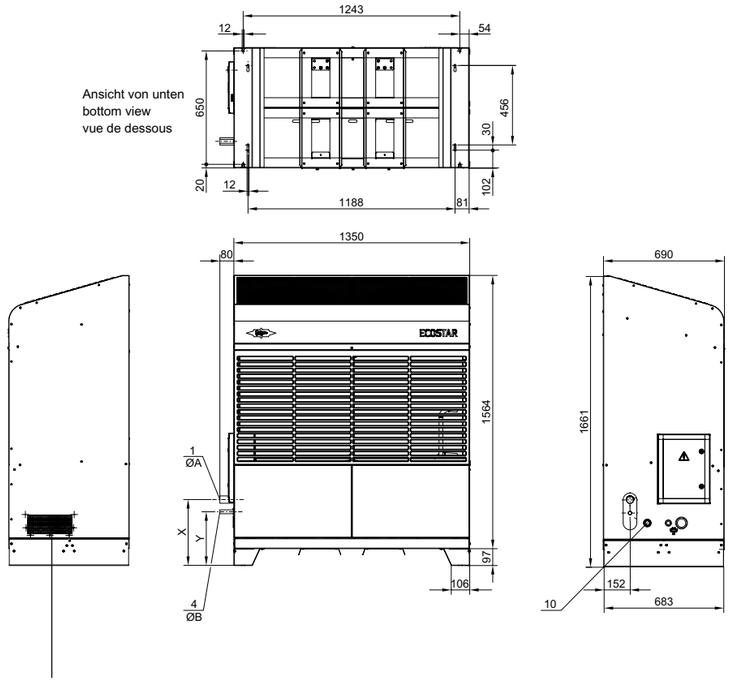
Type	Weight in kg (standard extent of delivery)	Max. fan power in W	Max. condenser air flow in m³/h	Receiver volume in dm³	Max. operating current in A	Sound pressure level*
LHV5E/2DES-3.F1Y	295	1×350	5200	21	16	41.5
LHV5E/4FE-5.F1Y	312	1×350	5200	21	21	42.5
LHV5E/4EE-6.F1Y	312	1×350	5200	21	23	43
LHV7E/4FE-5.F1Y	330	2×350	10400	21	22	43
LHV7E/4EE-6.F1Y	330	2×350	10400	21	24	43.5
LHV7E/4DE-5.F1Y	330	2×350	10400	21	24	47
LHV7E/4CE-6.F1Y	330	2×350	10400	21	24	47.5
LHV7E/4DE-7.FY	330	2×350	10400	21	30	47
LHV7E/4CE-9.FY	330	2×350	10400	21	36	47.5
LHV7E/4VE-7.FY	390	2×350	10400	21	25	47.5
LHV7E/4TE-9.FY	390	2×350	10400	21	28	48
LHV7E/4PE-12.FY	390	2×350	10400	21	32	48.5
LHV7E/4NE-14.FY	390	2×350	10400	21	36	49.5

* in dB(A) at t_o –10°C/t_{amb} +32°C 80 Hz at 10 m distance
(Subject to change without notice)

Tentative data

DIMENSIONS

LHV5E/LHV7E



* Ventilation for VARIPACK frequency inverter

Connection positions
1 = Suction gas line
4 = Refrigerant outlet
10 = Sight glass

Type	Ø A		Ø B		X	Y
	mm	in.	mm	in.	mm	mm
LHV5E/2DES-3.F1Y	22	7/8	16	5/8	372	310
LHV5E/4FE-5.F1Y	28	1 1/8	16	5/8	375	310
LHV5E/4EE-6.F1Y	28	1 1/8	16	5/8	375	310
LHV7E/4FE-5.F1Y	28	1 1/8	16	5/8	375	310
LHV7E/4EE-6.F1Y	28	1 1/8	16	5/8	375	310
LHV7E/4DE-5.F1Y	35	1 3/8	22	7/8	383	308
LHV7E/4CE-6F.1Y	35	1 3/8	22	7/8	383	308
LHV7E/4DE-7.FY*	35	1 3/8	22	7/8	383	308
LHV7E/4CE-9.FY*	35	1 3/8	22	7/8	383	308
LHV7E/4VE-7.FY*	42	1 5/8	22	7/8	383	308
LHV7E/4TE-9.FY*	42	1 5/8	22	7/8	383	308
LHV7E/4PE-12.FY*	42	1 5/8	22	7/8	383	308
LHV7E/4NE-14.FY*	42	1 5/8	22	7/8	383	308

Tentative data

ACCESSORIES

OIL SEPARATOR WITH CHECK VALVE
KEEPS THE COMPRESSOR LUBRICATED

The right oil supply to the compressor at any time with the optional oil separator with check valve in the discharge line.

// Optional accessory (no retrofit possible)
// Available for whole ECOSTAR series

CONDENSER WITH PLASTIC-COATED/COPPER FINS
FOR IMPROVED CORROSION PROTECTION

For safe installation worldwide even in a challenging environments.

// Optional accessory

RI SYSTEM
FOR LOW TEMPERATURE APPLICATIONS

// Optional accessory
// Refrigerant injection with solenoid valve
// Required for optional sound insulation

OIL LEVEL MONITORING/ DIFFERENTIAL OIL PRESSURE SWITCH
FOR SAFE ECOSTAR OPERATION

// Optional accessory
// OLC-K1 for LHV5E/2DES-3.F1(Y)
// Delta-PII for LHV5E/LHV7E

Images are for illustration purposes only

ECOLITE

ALWAYS THE RIGHT CHOICE

WHETHER FOR PETROL STATIONS OR CORNER SHOPS – THE BITZER ECOLITE GUARANTEES EASY HANDLING AND TIME-SAVING INSTALLATION.

HFO | ECODESIGN CONFORM | BEST SOFTWARE | CONDENSING UNITS

VERSATILE APPLICATION POSSIBILITIES

// Low and medium temperature applications are fully covered
// Perfect adaptability to the system demand with VARISTEP as standard
// For even larger refrigeration capacity, a combination of VARIPACK and CR as standard is the solution
// Use in urban areas is easily possible thanks to the low sound level
// Designed for all climate zones even in rural areas: even at high ambient temperatures up to 55°C, the cooling temperature remains constant
// Heat recovery can be used to achieve the highest system efficiency

FLEXIBILITY

The extensive standard equipment and the multitude of functions leave nothing to be desired. The units are ready for all common HFC refrigerants, including HFO blends and HFOs, meaning they are future-proof. They come with CE marking according to PED 2014/68/EU (Pressure Equipment Directive) and they fully comply with the EU Ecodesign Product Regulation 2015/1095.

THE RIGHT SOLUTION FOR YOUR APPLICATION

The advanced ECOLITE air cooled condensing unit for commercial refrigeration fits perfectly with the well-proven standard and premium series from BITZER. It is the ideal solution for demanding customers who are looking for a sustainable, future-proof and easy-to-install plug-and-play concept product made of approved BITZER components. It is a perfect match for different applications, such as petrol stations, corner shops, service stations, fast food restaurants and many more.

PETROL STATION

A perfect match: ECOLITE and petrol stations worldwide. Always connected with your unit and up to date thanks to the BITZER Digital Network.

PHARMA/ LABS

With ECOLITE, certain temperature levels can be maintained precisely and constantly. In industry, this reliability, quality and precision is a must-have.

HORECA

The ECOLITE is the right choice for long pipe runs and varying cooling loads thanks to the oil return mode and integrated VARISTEP capacity regulation.

SCALABLE PERFORMANCE ACCORDING TO YOUR NEEDS

CONVENIENCE STORE

Sustainability is our demand. With the integrated floating condensing pressure and possible heat recovery, we reach an outstanding level of efficiency and a low carbon footprint.

COLD STORAGE

Even challenging applications are no problem for the ECOLITE. We combine LT and MT within one unit to reach the highest flexibility for your demands.

ALL-IN-ONE PACKAGE: PROVEN BITZER COMPONENTS

REDUCED LIFE CYCLE COSTS
HIGHEST EFFICIENCY IN CLASS

CONVENIENT COMMISSIONING, OPERATION AND MONITORING
READY TO USE

HIGHEST FLEXIBILITY
MULTIPLE REFRIGERANTS APPROVED FOR LT AND MT APPLICATIONS

SUITABLE FOR ALL AREAS
LOW SOUND

Highly efficient BITZER ECOLINE compressors with VARISTEP mechanical capacity control or with VARIPACK external frequency inverter combined with system-optimised condensers and speed-controlled fans make all eleven types suitable for low and medium temperature applications as standard.

Due to its versatility and future-proof design, this new series is a state-of-the-art and affordable line of condensing units featuring the latest BITZER technology.

EASY-TO-USE CONCEPT
Comprehensive standard equipment, easy access to all components and the plug-and-play concept offer convenient commissioning and integration into the system. The smart and user-friendly BITZER controller allows you to constantly monitor the parameters and change settings. Thanks to the BEST SOFTWARE and/or BITZER Digital Network, everything is under control – everywhere and any time.

RELIABLE BITZER COMPONENTS
The proven semi-hermetic ECOLINE reciprocating compressor is the heart of our ECOLITE. The solid and robust design combined with proven BITZER components and versatile software functions offer a high degree of reliability.

SUSTAINABLE
Thanks to the large maintenance door, all components are accessible and maintenance is made easy. In addition, the semi-hermetic design of the ECOLINE compressor makes repair possible, which increases the sustainability of the ECOLITE condensing unit by prolonging the operating lifetime. The option of heat recovery connections is an additional plus for a small carbon footprint.

ADAPTABILITY – CAPACITY CONTROL
The standard mechanical capacity control also in combination with a frequency inverter enables you to match the provided refrigeration capacity to the actual cooling demand. It prevents high switching frequency of the compressor, thereby ensuring more efficient operation of the system, which results in lower operation costs. The ECOLITE adapts automatically to system demands 365 days a year.

ECOLITE: THE ADVANCED AIR COOLED CONDENSING UNIT

SOUNDPROOF DESIGN

// The robust housing and compressor compartment including sound insulation is developed for maximum sound protection

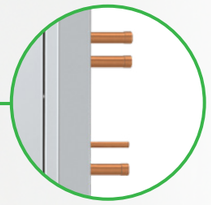
CONTROLLER WITH DISPLAY AND PREWIRED SWITCHBOARD

// Controller including dedicated software developed by BITZER
// BEST SOFTWARE connectivity
// Approved for A2L refrigerants
// Modbus RTU (RS485)

COMPREHENSIVE STANDARD EQUIPMENT

// BITZER liquid receiver with PRV connection
// Sight glass + filter dryer + ball valve
// HP/LP cartridge pressure switches and transmitters
// Oil heater
// Suction, discharge and ambient temperature sensors
// Sound insulation

HEAT RECOVERY CONNECTIONS



// Ready-to-use connections with shut-off valve to manually close and open (LHL5E and LHL7E/LHL7EF)

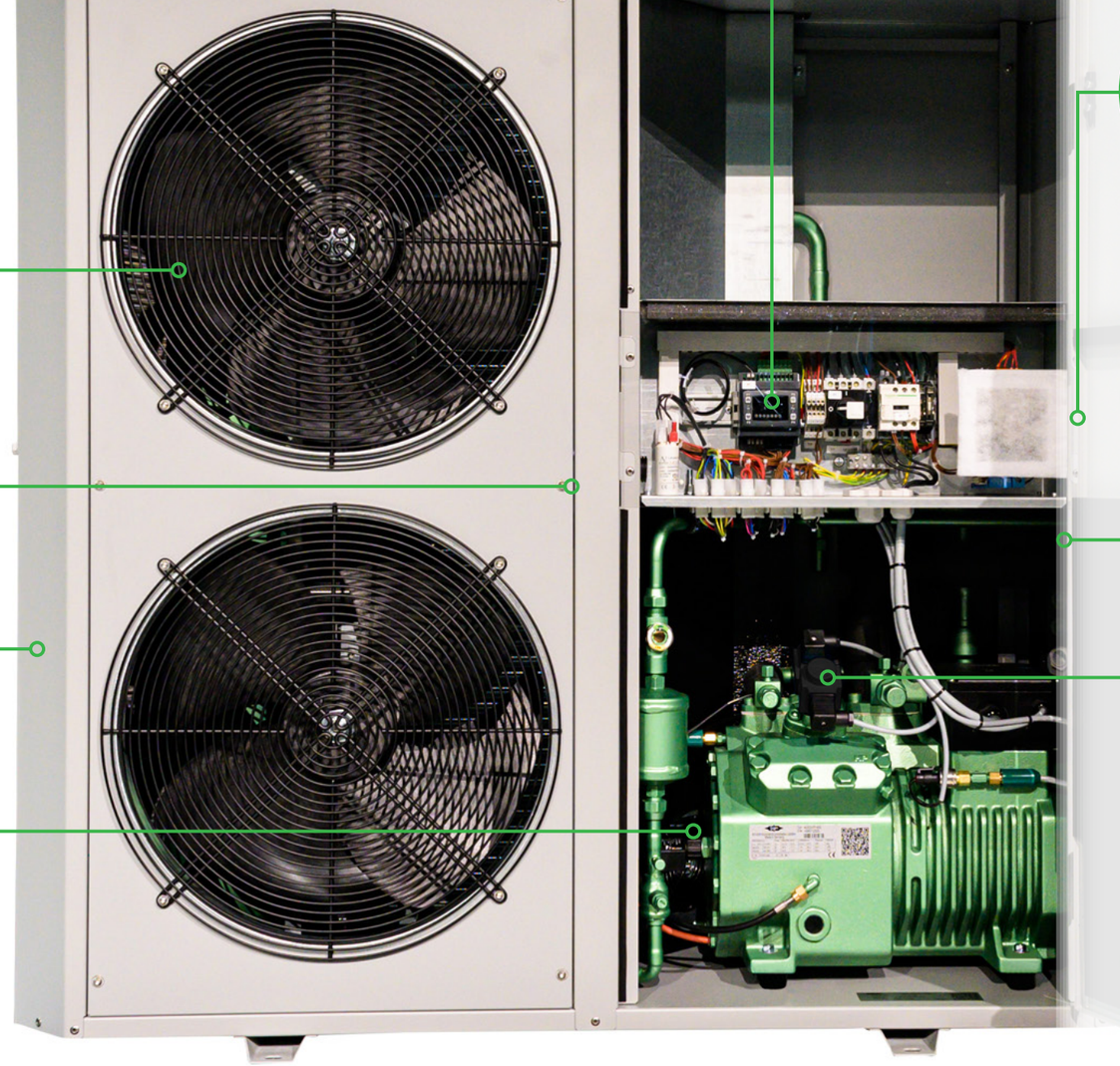
LIQUID AND SUCTION LINE

// Easily accessible, with all pipes on one side

SPEED-CONTROLLED AC FANS

// Floating condensing pressure for the highest efficiency
// LHL3E: one fan, LHL5E: two fans, LHL7E/LHL7EF: four fans

ADDITIONAL SERVICE ACCESS POINT FOR LHL7E(F)



ADJUSTABLE HP/LP SWITCH

// Optional accessory for LHL3E/LHL5E/LHL7E/LHL7EF
// Retrofit kit available
// Standard cartridge pressure switches omitted

SYSTEM-OPTIMISED CONDENSER

// Mini-channel condenser with high heat transfer rate and low refrigerant charge

BITZER ECOLINE COMPRESSOR WITH VARISTEP // WITH VARIPACK AND CR COMBINED

// Highly efficient BITZER ECOLINE compressor with VARISTEP capacity control from (10%) 50% to 100%

MECHATRONIC CAPACITY CONTROL

ADDITIONAL EC FAN(S) FOR COOLING OF COMPRESSOR COMPARTMENT

// For reliable operation in demanding conditions

// In combination with BITZER VARIPACK capacity control range 30 Hz up to 70 Hz

FREQUENCY INVERTER

RECIPROCATING COMPRESSORS

HFO

BEST SOFTWARE

The product picture shows a fully equipped ECOLITE LHL5E with VARISTEP unit.
For further units, standard extent of delivery and optionally available equipment, please see the following pages.

BITZER CONDENSING UNIT: **CONTROLLER FUNCTIONS**

OPERATION MODES
// Evaporating temp. control
// Room temp. control

PUMP DOWN/OUT MODE
Standard = enabled

OUTPUTS
For example, fault alarm

INPUTS
For example, set point adjustment

MODBUS

BEST SOFTWARE

VARISTEP CONTROL
// One VARISTEP
→ 50%–100% capacity modulation
// Two VARISTEP
→ 10%–100% capacity modulation

ALARM CODE VISUALISATION
Alarm memory for 20 alarms with timestamp

EMERGENCY MODES
Transducers/sensors

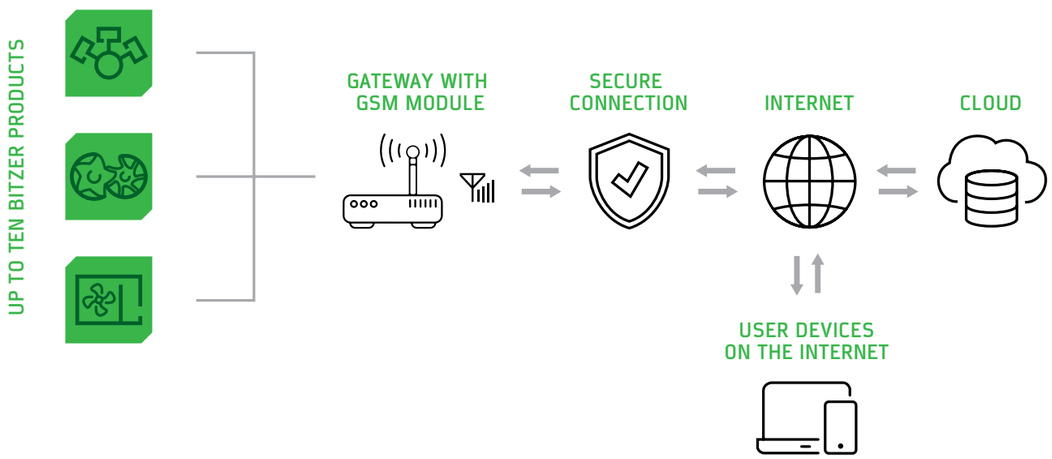
WINTER START

OIL RETURN MODE

FAN(S) SPEED CONTROLLED
AC condenser fan(s) and EC fan for compressor compartment

BITZER DIGITAL NETWORK: **ALL-ROUND VIEW OF THE HEART OF REFRIGERATION AND A/C SYSTEMS**

This provides you with important product- and application-related information on all the BITZER products, including, among others, data analyses and compressor operation reports.



EXTENT OF DELIVERY

COMING SOON

ECOLITE AIR COOLED CONDENSING UNITS WITH ECOLINE COMPRESSORS		LHL3E/..	LHL5E/..	LHL7E/..	LHL7EF/..
Semi-hermetic reciprocating compressor	with capacity regulator CRII (1×)	S			
	with capacity regulator CRII (1×) and CRII prepared (1×)		S	S	
	ECOLINE with capacity regulator CR (1×) and frequency inverter VARIPACK				S
Oil heater	200 .. 260 V, PTC	S	S	S	S
Air cooled condenser with fans	– with one fan – AC motor, speed controlled	S			
	– with two fans – AC motors, speed controlled		S		
	– with four fans – AC motors, speed controlled			S	S
Fan(s) for compressor compartment cooling*	EC motor	S	S	S	S
Liquid receiver	– with shut-off valve – with connection for pressure relief valve – with three sight glasses (LHL7EF only)	S	S	S	S
Sight glass, filter drier and ball valve	in liquid line, LHL3E/LHL5E: screwed filter drier, LHL7E/LHL7EF: brazed filter drier	S	S	S	S
High and low pressure switch	cartridge pressure switch not adjustable	S	S	S	S
Temperature sensor	– for suction gas temperature – for discharge gas temperature – for ambient temperature	S	S	S	S
Pressure transmitters	for high and low pressure	S	S	S	S
Discharge line		S	S	S	S
ECOLITE controller	control of capacity regulator and further functions of condensing unit	S	S	S	S
Complete piping and wiring		S	S	S	S
Oil charge	BSE32 (ester oil) for HFC and HFC/HFO refrigerants t_c < +70°C	S	S	S	S
Weather protection housing	with sound insulation for compressor compartment	S	S	S	S
Approval for A2L application	– release certification for A2L – access code to unlock released refrigerations in the controller (R1234ze(E)/yf, R454C, R455A)	S	S	S	S
CE according to PED (Pressure Equipment Directive)		S	S	S	S
Protection device	SE-B3	S	S	S	
	IQ MODULE				S

S = extent of delivery

* Large application limits – even for low temperature application no refrigerant injection needed (Subject to change without notice)

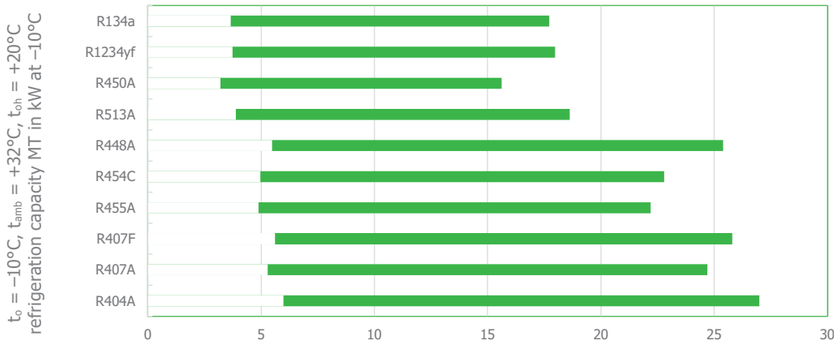
EXTRAORDINARY OPTIONAL EQUIPMENT
TO FULFIL YOUR DEMANDS

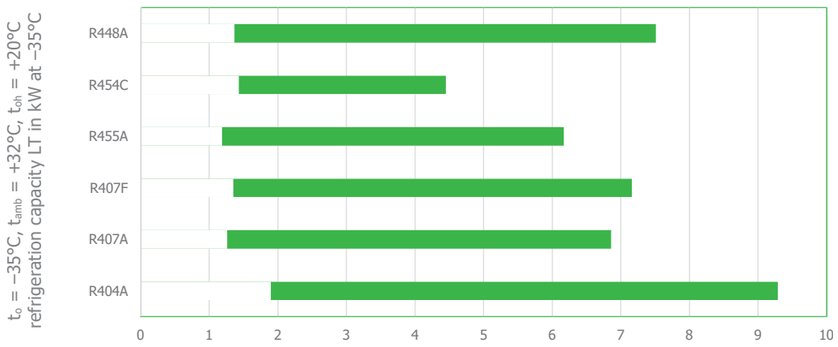
COMING SOON

ECOLITE AIR COOLED CONDENSING UNITS WITH ECOLINE COMPRESSORS		LHL3E/..	LHL5E/..	LHL7E/..	LHL7EF/..
Warranty extension up to five years	for details see price list	•	•	•	•
Temperature sensor	for cold room	•	•	•	•
Oil separator with check valve*	mounted	•	•	•	•
Check valve*	in liquid line – mounted	•	•	•	•
Sight glass for liquid receiver	– sight glasses (2×) (LHL3E / LHL5E)* – sight glasses (3×) (LHL7E)*	•	•	•	S
Condenser improved corrosion protection*	plastic-coated or copper fins	•	•	•	•
Heat recovery connections*	piping connections prepared with shut-off valve (manual) in combination with oil separator and check valve		•	•	•
BEST interface converter (BITZER Electronic Service Tool)	interface converter device with cable kit	•	•	•	•
Oil charge	BSE55 (ester oil) for HFC and HFC/HFO refrigerants – at high condensing temperatures t_c > +70°C – for R1234ze(E) t_c < 70°C/t_o < 15°C[1]	○	○	○	○
	B5.2: 'Y' in compressor designation omitted	○	○	○	○
Oil level monitoring OLC-K1 – opto-electronic – mounted ex-factory	retrofitting possible with kit part no. 34733491	•	•		
Oil differential pressure switch Delta-PII	– 115 .. 230 V-1-50/60 Hz – retrofitting possible with kit part no. 34733492			•	
Oil differential pressure switch DP-3 – mounted	24 V – for compressor module – retrofitting possible				•
Second capacity regulator CRII – mounted ex-factory	retrofitting possible with kit part no. 30235550		•	•	
BITZER Digital Network		•	•	•	•
High pressure and low pressure switch – mounted ex-factory	adjustable, recommended for pressure relief valve – replaces standard cartridge pressure switch – retrofitting possible with kit part no. 34732505 (LHL3E/LHL5E) with kit part no. 34732512 (LHL7E/LHL7EF)	•	•	•	•

• = option available, ○ = option without extra charge
* retrofitting not possible.
[1] for R1234ze(E), t_c > +70°C/t_o > +15°C, on request.
(Subject to change without notice)

APPLICATION RANGE*





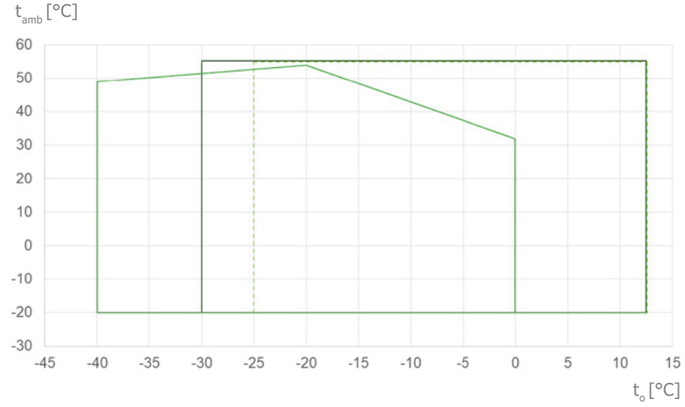
For further details, please refer to BITZER SOFTWARE

BITZER SOFTWARE

Scan for additional information

* Maximum refrigeration capacity [kW] for biggest model LHL7E/4NE-14Y (tentative data)

APPLICATION LIMITS



Tentative data

LHL5E/4DES-5Y, 50 Hz, R134a/450A, t_{oh} = +20°C
LHL7E/4NE-14Y, 50 Hz, R513A/R1234yf, t_{oh} = +20°C
LHL5E/4FES-3Y, 50 Hz, R448A/449A/454C, t_{oh} = +20°C

t_o Evaporating temperature [°C]
t_{amb} Ambient temperature [°C]
t_{oh} Suction gas temperature [°C]

ASERCOM-CERTIFIED PERFORMANCE DATA

The Association of European Refrigeration Component Manufacturers (ASERCOM) has implemented a procedure of certifying condensing units' performance data.

The high standard of this certification is assured by
// plausibility checks of the data performed by experts
// regular random tests at independent institutes

These efforts result in the fact that only a limited number of condensing units can be submitted. Due to this, not all BITZER products are certified yet.
Performance data of condensing units that meet the strict requirements carry the label 'ASERCOM-certified performance'.
All certified condensing units and further information are listed on the ASERCOM website (www.ASERCOM.org).

In the BITZER SOFTWARE, the appropriate condensing units are marked with this label.

PERFORMANCE DATA

REFRIGERATION CAPACITY Q_o @ t_{amb} +32°C

	MT. –10°C. midpoint										LT. –35°C. midpoint					
	R134a	R450A	R513A	R1234yf	R404A	R407A	R407F	R448A	R454C	R455A	R404A	R407A	R407F	R448A	R454C	R455A
LHL3E/ 2EES-2Y	4.32	3.79	4.56	4.28	6.74	6.01	5.49	6.22	5.65	5.54	2.22	1.49	1.60	1.37	1.21	1.19
LHL3E/ 2DES-2Y	5.22	4.59	5.49	5.29	8.12	7.34	6.22	7.58	6.91	6.77	2.83	1.95	2.08	1.62	1.45	1.41
LHL3E/ 2CES-3Y	5.76	5.04	6.11	5.90	9.79	8.91	7.58	9.09	8.22	8.11	3.26	2.33	2.39	2.10	1.92	1.85
LHL5E/ 4FES-3Y	7.44	6.53	7.83	7.53	11.89	10.64	9.09	11.00	9.98	9.81	4.05	2.74	2.93	2.42	2.13	2.13
LHL5E/ 4EES-4Y	8.47	7.44	8.93	8.39	13.34	11.85	11.00	12.24	11.14	10.92	4.63	3.06	3.27	2.96	2.65	2.60
LHL5E/ 4DES-5Y	10.23	9.01	10.74	10.35	15.74	14.43	12.24	14.87	13.57	13.30	5.52	3.98	4.24	3.31	3.00	2.91
LHL5E/ 4CES-6Y	11.47	10.06	12.14	11.72	18.34	16.33	14.87	16.92	14.98	14.72	5.72	4.09	4.40	4.28	3.92	3.79
LHL7E/ 4VE-7Y	13.68	12.02	14.43	13.92	21.50	19.48	16.92	19.99	17.74	17.43	7.07	5.31	5.49	4.49	3.70	3.71
LHL7E/ 4TE-9Y	15.24	13.41	16.08	15.54	23.70	21.50	19.99	22.10	19.72	19.23	7.62	5.56	5.79	5.67	4.71	4.68
LHL7E/ 4PE-12Y	17.71	15.62	18.62	17.98	27.00	24.70	22.10	25.40	22.80	22.20	9.29	6.86	7.16	6.01	5.09	4.96
LHL7E/ 4NE-14Y	17.7	15.76	18.62	17.97	27.12	26.25	25.40	26.99	24.66	24.73	9.37	7.7	8.08	7.51	6.41	6.17
LHL7EF/ 4VE-7Y																
LHL7EF/ 4TE-9Y																
LHL7EF/ 4PE-12Y																
LHL7EF/ 4NE-14Y																

COMING SOON

Tentative data

SEPR // COP

COP	MT. –10°C. midpoint										LT. –35°C. midpoint					
	R134a	R450A	R513A	R1234yf	R404A	R407A	R407F	R448A	R454C	R455A	R404A	R407A	R407F	R448A	R454C	R455A
LHL3E/ 2EES-2Y	2.59	2.53	2.59	2.55	3.40	3.30	3.26	3.30	2.35	2.11	1.40	1.21	1.23	1.24	1.20	1.14
LHL3E/ 2DES-2Y	2.53	2.50	2.53	2.49	3.20	3.14	3.09	3.13	3.23	2.83	1.92	1.22	1.23	1.24	1.22	1.14
LHL3E/ 2CES-3Y	3.50	2.47	3.49	3.49	2.96	2.95	2.89	2.93	3.05	2.68	1.91	1.23	1.69	1.72	1.26	1.15
LHL5E/ 4FES-3Y	3.56	3.45	3.61	3.6	3.46	3.32	3.29	3.33	3.35	3.00	1.86	1.61	1.62	1.66	1.56	1.54
LHL5E/ 4EES-4Y	3.73	3.65	3.76	3.73	3.21	3.19	3.14	3.17	3.25	2.88	1.92	1.67	1.69	1.73	1.65	1.58
LHL5E/ 4DES-5Y	3.61	3.57	3.61	3.62	3.05	3.07	3.02	3.06	3.17	2.78	1.91	1.68	1.70	1.74	1.71	1.57
LHL5E/ 4CES-6Y	3.49	3.49	3.47	3.47	2.80	2.86	2.81	2.84	2.96	2.61	1.89	1.69	1.70	1.74	1.73	1.58
LHL7E/ 4VE-7Y	3.62	3.45	3.7	3.71	3.33	3.35	3.33	3.39	3.31	2.95	1.93	1.72	1.76	1.76	1.63	1.60
LHL7E/ 4TE-9Y	3.66	3.54	3.67	3.67	3.16	3.20	3.17	3.23	3.21	2.85	1.95	1.76	1.80	1.80	1.70	1.64
LHL7E/ 4PE-12Y	3.64	3.58	3.64	3.63	3.08	3.13	3.10	3.14	3.18	2.82	1.97	1.76	1.81	1.80	1.73	1.65
LHL7E/ 4NE-14Y	3.56	3.57	3.54	3.53	2.85	2.92	2.89	2.93	3.01	2.65	1.95	1.78	1.82	1.83	1.77	1.65
LHL7EF/ 4VE-7Y																
LHL7EF/ 4TE-9Y																
LHL7EF/ 4PE-12Y																
LHL7EF/ 4NE-14Y																

COMING SOON

Tentative data

BITZER CONDENSING UNITS
COMPLYING WITH THE EU ECODESIGN REGULATION 2015/1095

According to MEPS Tier-2. for more details please see BITZER brochure A-530-1	COP	SEPR
MT (t_o = –10°C) – refrigeration capacity	0.2 .. ≤5 kW	5 .. 50 kW
LT (t_o = –35°C) – refrigeration capacity	0.1 .. ≤2 kW	2 .. 20 kW

EXPLANATION OF TYPE DESIGNATION

LHL3E / 2DES–2Y

- LHL3E: condenser type
  - 3 = small housing
  - 5 = medium housing
  - 7 = large housing
- F = frequency inverter
- 2DES–2Y: compressor type
- –2Y: oil charge, Y = ester oil

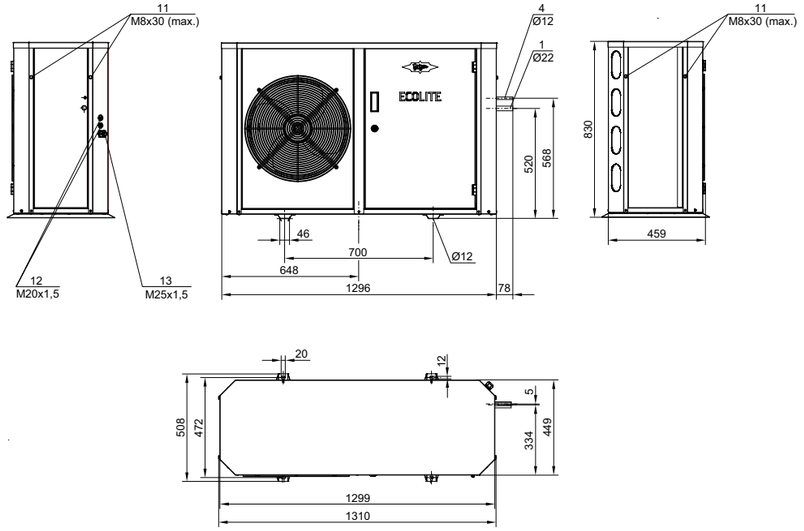
Type	Weight in kg (standard extent of delivery)	Max. fan power consumption in kW	Air flow condenser in m³/h	Receiver volume in dm³	Max. operating current in A	Sound pressure level*
LHL3E/2EES-2Y	157	0.12	3000	7.8	6.6	36.0
LHL3E/2DES-2Y	157	0.12	3000	7.8	8.0	36.0
LHL3E/2CES-3Y	159	0.12	3000	7.8	9.7	36.5
LHL5E/4FES-3Y	210	0.24	6000	15	10.0	37.0
LHL5E/4EES-4Y	214	0.24	6000	15	12.8	38.0
LHL5E/4DES-5Y	216	0.24	6000	15	15.1	38.5
LHL5E/4CES-6Y	218	0.24	6000	15	18.3	39.0
LHL7E/4VE-7Y	347	0.48	12000	25	17.6	41.0
LHL7E/4TE-9Y	349	0.48	12000	25	20.9	42.0
LHL7E/4PE-12Y	352	0.48	12000	25	23.7	43.0
LHL7E/4NE-14Y	360	0.48	12000	25	27.6	44.0
LHL7EF/4VE-7Y	360	0.48	12000	30	16.0	41.0
LHL7EF/4TE-9Y	360	0.48	12000	30	19.5	42.0
LHL7EF/4PE-12Y	360	0.48	12000	30	21.5	43.0
LHL7EF/4NE-14Y	360	0.48	12000	30	26.3	44.0

* In dB(A) at –10/32°C 50 Hz at 10 m distance for R513A
(Subject to change without notice)

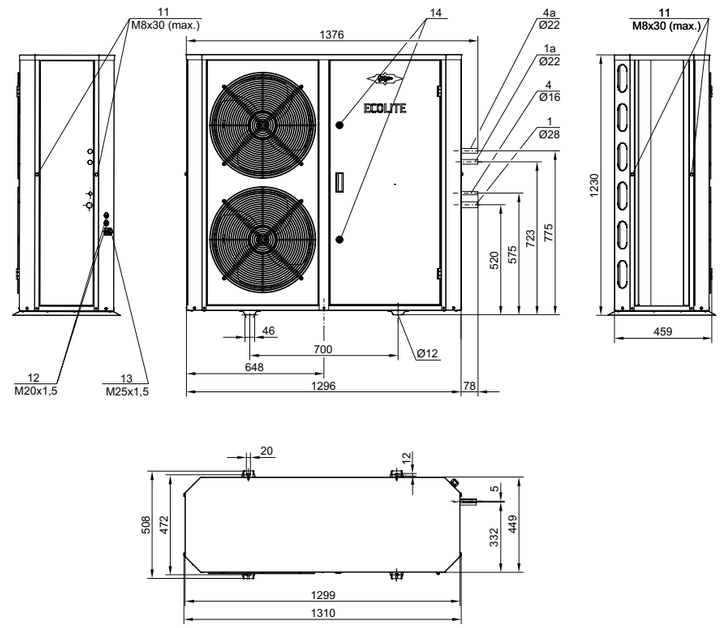
Tentative data

DIMENSIONS

LHL3E



LHL5E

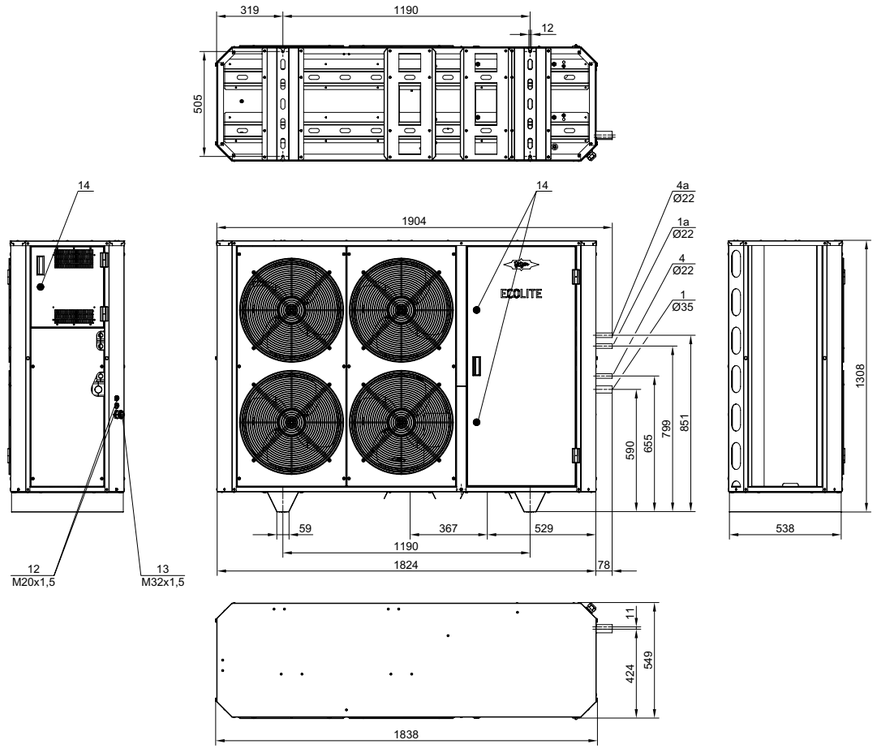


Connections

1	Refrigerant inlet (suction gas line), SL	11	Load suspension points
1a	Heat recovery inlet (optional)	12	Plug for srewed cable gland
4	Refrigerant outlet, DL	13	Cable bushing (for cables 9–17 mm)
4a	Heat recovery outlet (optional)	14	Door lock

DIMENSIONS

LHL7E
LHL7EF



Connections

1	Refrigerant inlet (suction gas line), SL	11	Load suspension points
1a	Heat recovery inlet (optional)	12	Plug for srewed cable gland
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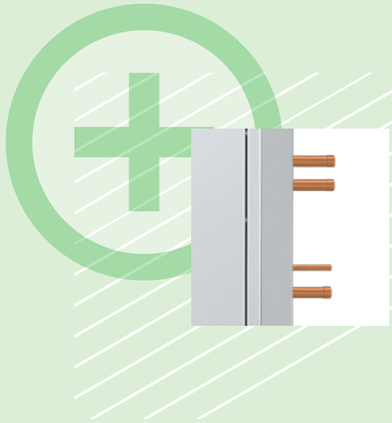
4a	Heat recovery outlet (optional)	14	Door lock

Tentative data

ACCESSORIES



HEAT RECOVERY CONNECTION
COMBINATION OF HEATING AND COOLING

Heat recovery: an easy next step towards energy saving and sustainability. It increases system efficiency, while operating costs are minimised. The digital output for the heat recovery mode is integrated into the ECOLITE controller and is user-friendly due to the prepared piping. Flexible use of heat recovery according to system demands is ensured.

// Optional accessory for LHL5E and LHL7E / LHL7EF
// Shut-off valve inside the unit for manually closing and opening the heat recovery piping

OIL SEPARATOR WITH CHECK VALVE
DEMANDING APPLICATIONS ARE NO PROBLEM

No matter if there is a long pipe run or multiple evaporators, the right oil supply is provided to the compressor at all times.

// Optional accessory for LHL3E, LHL5E and LHL7E/LHL7EF (no retrofit possible)

OIL LEVEL MONITORING/OIL DIFFERENTIAL SWITCH
FOR ADDITIONAL COMPRESSOR PROTECTION, ESPECIALLY IN APPLICATIONS WITH MANY CONSUMERS OR LONG-DISTANCE SYSTEMS

// Optional accessory for LHL3E, LHL5E and LHL7E/LHL7EF
// Retrofit kit available

ADJUSTABLE HP/LP SWITCH

The standard cartridge pressure switches can be replaced with adjustable HP/LP switches.

// Optional accessory for LHL3E, LHL5E and LHL7E/LHL7EF
// Retrofit kit available

Images are for illustration purposes only

LHF

RELIABLE, EFFICIENT, MODULAR!

WHETHER FOR LOW OR MEDIUM TEMPERATURE APPLICATIONS OR HIGH AMBIENT TEMPERATURES – THE BITZER LHF SERIES WITH ITS MODULAR SYSTEM GUARANTEES HIGH FLEXIBILITY. THIS SERIES IS SPECIALLY DESIGNED AND MANUFACTURED BY BITZER ONLY FOR SOME MARKETS OUTSIDE THE EU.

HFO HFO | HC HYDROCARBON | COMMERCIAL REFRIGERATION | CONDENSING UNITS

VERSATILE APPLICATION POSSIBILITIES

// Modular construction in several extension levels
// Fully customisable to meet customer demands
// Wide variety of refrigerants – including low GWP refrigerants
// LHE PRO is the natural solution, with refrigerants of the A3 safety class with a refrigeration capacity range up to 1.8 kW for low temperature and 5.8 kW for medium temperature

MADE BY BITZER

The modular system of the LHF series manufactured by BITZER guarantees the highest level of quality and a clear warranty cover of the whole unit. The easy selection by the BITZER Software ensures the best product selection according to system requirements.

THE RIGHT CHOICE FOR YOUR APPLICATION

The LHF air-cooled condensing unit is the perfect choice for markets outside the EU, where a fully customised unit is required. The series convinces with its reliable ECOLINE semi-hermetic compressor technology and the highly efficient, well-known and proven BITZER components. It's the ideal solution for customers who are looking for a flexible, reliable and easy-to-install product made by BITZER.

SCALABLE PERFORMANCE ACCORDING TO YOUR NEEDS

FOOD PROCESSING

Fresh food like fish, meat or vegetables are delicious: the perfect storage temperature is easily ensured with the LHF series. With the flexible use of refrigerants like low GWP refrigerants, an even more healthy and sustainable lifestyle is easily maintained.

PROCESS COOLING

The well-proven and robust LHF series offers reliability. Downtimes are reduced to a minimum. These are important factors for a safe and stable process.

COLD CHAIN

You can rely on BITZER products throughout the whole cold chain.

RETAIL

The LHF series is ideal for systems with cold rooms and cabinets, even with multi-evaporators. The wide range of types allows perfect adaptation to system needs.

HOSPITALITY

The LHF is the perfect fit for this segment with a wide variaty of installation and system demands due to its high flexibility and adaptability.

MADE BY BITZER
APPROVED
WORDLWIDE

EASY HANDLING

THANKS TO A HUGE OFFER OF
FACTORY-FITTED OPTIONAL EQUIPMENT

SOLID AND ROBUST PLATFORM

PROVEN AND WELL KNOWN
IN THE MARKET

FLEXIBLE SOLUTIONS

CONFIGURATION ACCORDING
TO SYSTEM NEEDS

HIGHLY RELIABLE WITH LOW OPERATING COSTS

SEMI-HERMETIC ECOLINE
COMPRESSOR OFFERS THE HIGHEST
EFFICIENCY AND RELIABILITY

Designed and made by BITZER only in specific BITZER factories, the LHF combines a classic, robust and proven design with the latest BITZER technologies and the flexibility to add a full spectrum of accessories including the control panel. This makes the LHF the perfect plug-and-play solution for specific markets and contractor needs.

Due to its versatility combined with a durable and proved design and the latest BITZER technology, this line of condensing units is future-proof and affordable.

RELIABLE BITZER COMPONENTS

The combination of the proven semi-hermetic ECOLINE compressor, BITZER liquid receiver and further high quality parts offers a high degree of reliability and performance. The IQ MODULE, standard for all LHF condensing units with an ECOLINE compressor CE3 housing size and larger, ensures the compressor's constant safety and protection.

SUSTAINABLE

The semi-hermetic design of the ECOLINE compressor enables maintenance and repairs, which increases the sustainability of the LHF condensing unit and the circular economy. Furthermore, all components are easily accessible for convenient commissioning and quick maintenance.

FULLY CUSTOMISABLE

The LHF condensing unit platform can be fully individualised by the customer. This also includes all the latest energy-efficient technologies from BITZER, which makes the LHF one of the most flexible solutions on the market. All components are factory-fitted and fully tested in the factory.

LHF: THE AIR-COOLED CONDENSING UNIT

BITZER ECOLINE COMPRESSOR
// Semi-hermetic reciprocating compressor
// Highly efficient
// Well proven and reliable
// Crankcase heater
// Discharge gas temperature sensor
// Oil (pressure/level) control
// OLC-K1 / MP54

IQ MODULE
// Compressor family CE3 .. BE6
// Protection mode

ALL UNITS
// With protection charge
// Mounted on base plate
// Compressor mounted
// Condenser + fan mounted

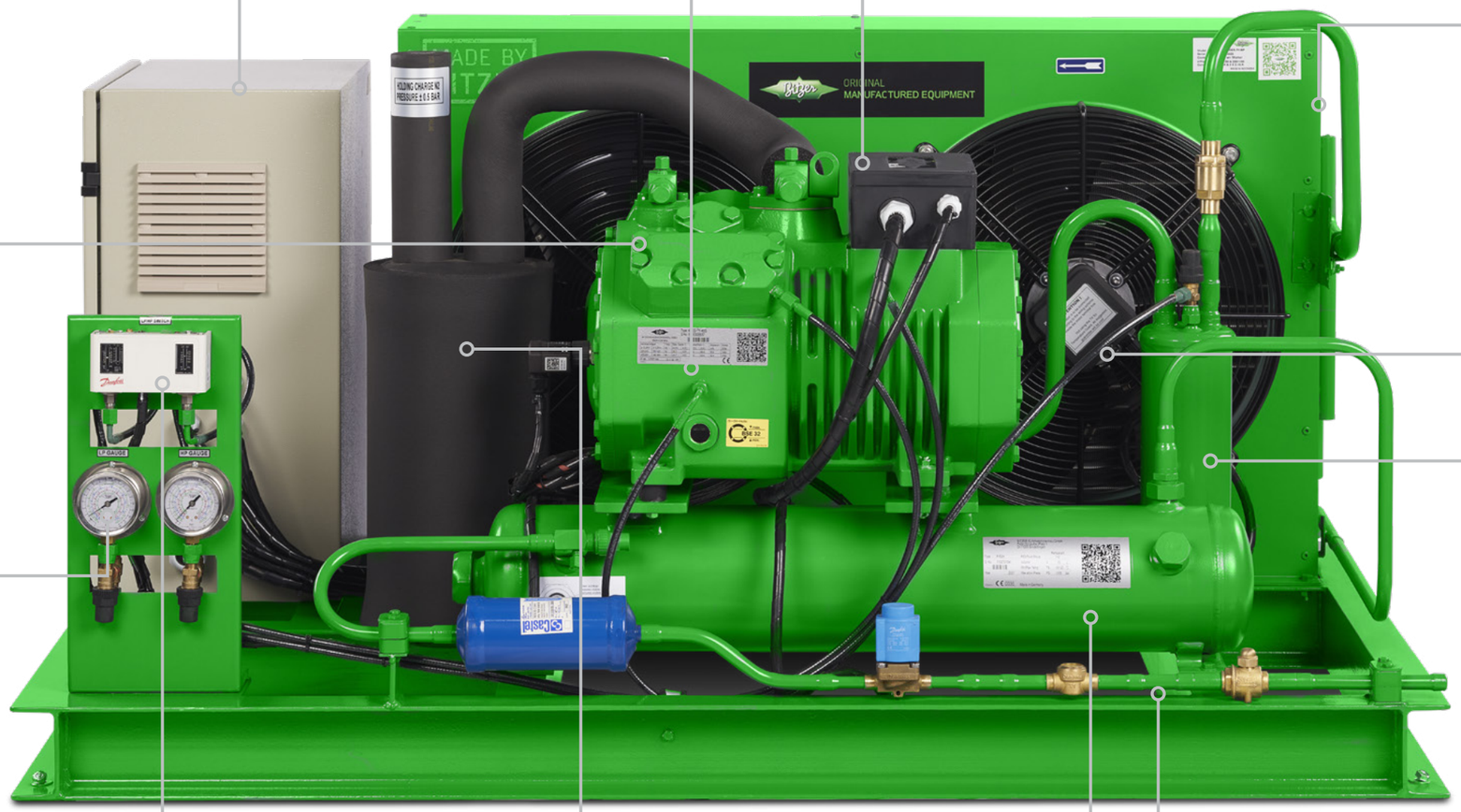
FOR 2-STAGE UNITS
// Liquid subcooler
// Mounted complete with TXV and solenoid valve

JUNCTION BOX
(not shown)
// Wiring of all electrical components (exception: main power to compressor)
// IP65
// Mounted

CONTROL PANEL – PROVISION FOR ELECTRIAL COMPONENTS
// Mounted
// Including all necessary electrical components and electrical control

CAPACITY REGULATION
// Highly efficient BITZER ECOLINE compressor
// VARISTEP: CRII capacity control (10% only with CM-RC-02) 50%-100% (details on request)
// BITZER VARIPACK frequency inverter

GAUGES – HIGH + LOW PRESSURE
// Mounted with shut off valves



CONDENSER
// Approved design: copper tubes Ø 10mm* and aluminium fins
// Best heat exchange
// Optional: special coated condenser or special condenser fins and tubes
// Best quality fans for highest reliability

AC FAN(S)
// With protection guard

OIL SEPARATOR
// With check valve in discharge line (mounted)
// With oil return line
// With oil filter and shut off valve

COMPLETE PIPING
// Discharge line
// Liquid line
// Suction line (isolated)

RECIPROCATING COMPRESSORS
HFO
HYDROCARBON
MECHATRONIC CAPACITY CONTROL

ADJUSTABLE HIGH AND LOW PRESSURE SWITCH
// Mounted

SUCTION ACCUMULATOR
// Mounted ex-factory

VIBRATION ELIMINATOR
// Integrated in discharge line

OIL FILTER AND RETURN SIGHT GLASS
// Integrated in oil return line

BITZER LIQUID RECEIVER
// Optional: larger volume
// PRV connection
// Sight glass and shut-off valve

OPTIONAL VALVES
// Shut-off valve mounted in liquid line
// Solenoid valve mounted in liquid line

LIQUID LINE
With filter, sight glass and moisture indicator

The product picture shows a fully equipped LHF unit. For the standard extent of delivery and optionally available equipment, please see the following pages.

* Except LH265F – Ø 7mm copper tubes

BITZER LHF CONDENSING UNIT: **HIGH AMBIENT TEMPERATURE**

RELIABLE OPERATION
// At high ambient temperatures

HIGH REFRIGERATION CAPACITY
// 39 types with up to 126.8 m³/h
// LH33F .. LH265F

HIGHLY EFFICIENT ECOLINE COMPRESSORS
// Well-known and proven BITZER technology

SYSTEM-OPTIMISED CONDENSER
// For best heat exchange

ROBUST DESIGN AND COMPACT DIMENSIONS
// Small installation dimension at place of use

EASY HANDLING AND COMMISSIONING
// Easy service thanks to directly accessible system components

LHF WITH 2-STAGE COMPRESSORS: **FOR LOW TEMPERATURE APPLICATIONS**

The air-cooled condensing units with 2-stage compressors from BITZER are convincing thanks to a compressor design layout, made especially for low temperature applications. They are well combined with components like efficient condensers and fans. Furthermore, low GWP refrigerants are approved for increased sustainability.

Eight types with displacement LP/HP up to 19.70 / 12.60 m³/h ... 101.10 / 50.50 m³/h 50 Hz

Type	Q_0 @ t_0 -45°C/ t_{amb} +32 °C 50 Hz in kW
	R404A
LH104F/S4T-5.2Y	4.04
LH104F/S4N-8.2Y	5.71
LH124F/S4G-12.2Y	9.26
LH135F/S6J-16.2Y	13.24
LH135F/S6H-20.2Y	15.23
LH135F/S6G-25.2Y	17.33
LH265F/S6G-25.2Y	17.55
LH265F/S6F-30.2Y	20.8

LHE PRO FOR HYDROCARBONS: THE NATURAL SOLUTION

NATURAL
// For A3 refrigerants (R290 / R1270)

RELIABLE
// Highly efficient ECOLINE PRO compressor
// Enhanced tightness

UNIT SIZES: LH32E .. LH53E
// Eleven models
// 4.06 m³/h .. 13.42 m³/h

AIR COOLED CONDENSER WITH EC FAN

BITZER LIQUID RECEIVER

PROTECTION DEVICE
// SE-B3 (standard)
// IQ MODULE (optional)

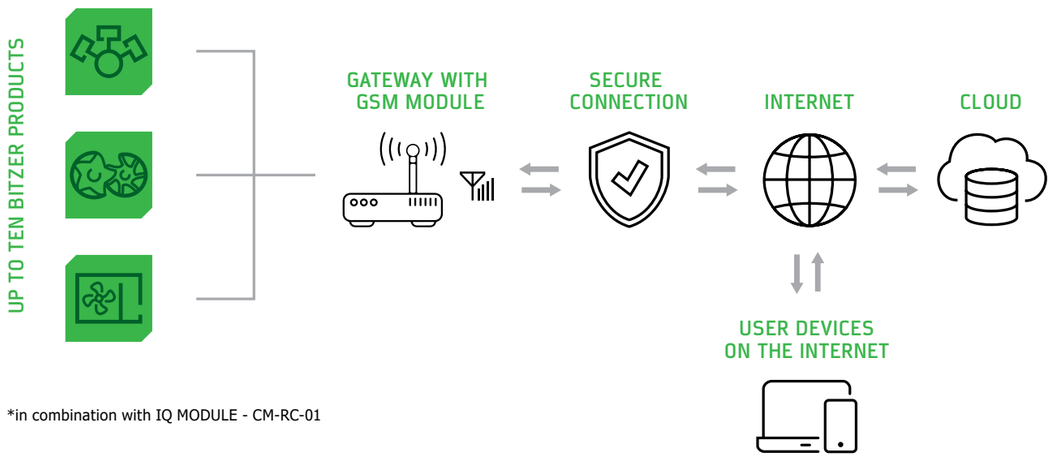
ADAPTABLE
// Motor 1 or Motor 2
// Various optional equipment available

Type	Q_0 @ t_o –10°C/ t_{amb} +32°C/SH 20°C/ t_{cu} 1K, 50 Hz, in kW	Q_0 @ t_o –35°C/ t_{amb} +32°C/SH 20°C/ t_{cu} 1K, 50 Hz, in kW
	R290	R290
LH32E/2KESP-05P	1.74	0.46
LH32E/2JESP-07P	2.26	0.69
LH33E/2HESP-1P	2.76	0.90
LH33E/2HESP-2P	2.80	0.92
LH33E/2GESP-2P	3.17	1.07
LH44E/2GESP-2P	3.28	1.08
LH53E/2GESP-2P	3.40	1.09
LH44E/2FESP-2P	3.94	1.37
LH44E/2FESP-3P	3.94	1.38
LH44E/2EESP-2P	4.70	1.47
LH53E/2DESP-2P	5.71	1.78

Tentative data

BITZER DIGITAL NETWORK: **ALL ROUND VIEW OF THE HEART OF REFRIGERATION AND A/C SYSTEMS.**

This provides you with important product and application-related information on all the BITZER products, including, among others, data analyses and compressor operation reports.*



*in combination with IQ MODULE - CM-RC-01

EXTENT OF DELIVERY

LHF – AIR COOLED CONDENSING UNIT (INCLUDING HIGH AMBIENT TEMPERATURE TYPES)		LH32E/..P - LH53E/..P	LH33F/.. - LH84F/..	LH104F/.. - LH124F/..	LH135F/..	LH265F/..
Semi-hermetic reciprocating compressor	- ECOLINE compressors - 2-stage compressors		S	S	S	S
	- ECOLINE PRO compressors	S				
Air cooled condenser	with 1 AC Fan (1 Phase Supply)		S			
	with 2 AC Fans (1 Phase Supply)			S		
	with 2 AC Fans (3 Phase Supply)				S	
						S
	mini channel design with one fan EC motor, capable of speed control enhanced tightness	S				
Crankcase heater			S	S	S	S
Receiver with outlet isolation	with shut-off valve	S*	S	S	S	S
Condensing coil			S	S	S	S
Fan assembly with protection guard			S	S	S	S
Compressor mount			S	S	S	S
Discharge line		S	S	S	S	S
Liquid and suction line			S	S	S	S
Mounted on base plate			S	S	S	S
Provision for electrial components			S	S	S	S
Protection charge		S	S	S	S	S
IQ MODULE CM-RC-02			S	S	S	S

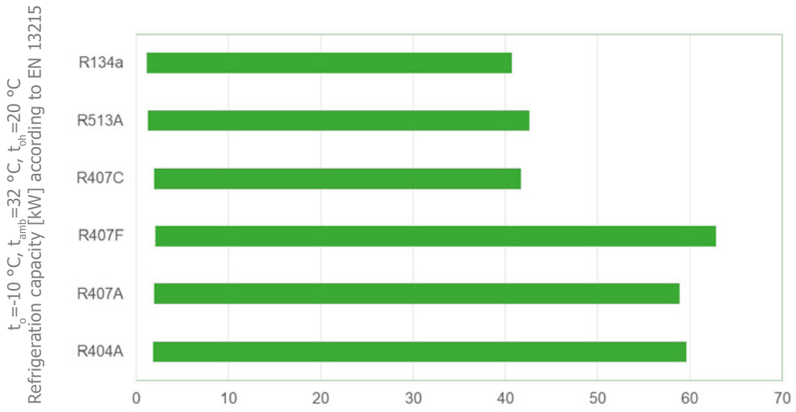
• = option available, S= extent of delivery (Subject to change without notice)
* without outlet isolation

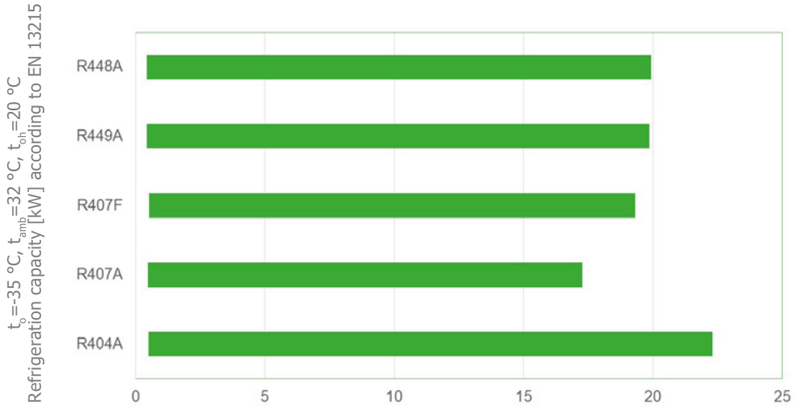
EXTRAORDINARY OPTIONAL EQUIPMENT

LHF – AIR COOLED CONDENSING UNIT (INCLUDING HIGH AMBIENT TEMPERATURE TYPES)		2KESP .. 2DESP	2KES .. 2FES	2EES .. 2CES	4FES .. 4CES	4TES .. 4NES	4JE .. 4GE	6JE .. 6HE	S4T .. S4N	S4G	S6J .. S6G
		LH32E/.. - LH53E/..	LH32F/.. - LH44F/..	LH44F/.. - LH84F/..	LH64F/.. - LH114F/..	LH104F/.. - LH135F/..	LH135F/.. LH265F/..	LH135F/.. LH265F/..	LH104F/..	LH124F/..	LH135F/.. LH265F/..
Capacity regulator kit	with coil				•	•	•	•			
Oil level monitoring OLC-K1 · opto-electronic	mounted				•	•					
Differential oil pressure switch MP54	mounted						•	•	•	•	•
Oil separator	mounted		•	•	•	•	•	•	•	•	•
Check valve	integrated in discharge line		•	•	•	•	•	•	•	•	•
Oil filter and return sight glass	integrated in oil return line		•	•	•	•	•	•	•	•	•
Vibration eliminator	integrated in discharge line		•	•	•	•	•	•	•	•	•
Suction accumulator	mounted		•	•	•	•	•	•	•	•	•
Gauges - High & Low Pressure, adjustable	mounted with shut offs		•	•	•	•	•	•	•	•	•
High and low pressure switch	mounted		•	•	•	•	•	•	•	•	•
Liquid line filter (demountable on request), sight glass, moisture indicator	mounted		•	•	•	•	•	•	•	•	•
Solenoid valve	mounted on liquid line		•	•	•	•	•	•	•	•	•
Shut off valve additional, after liquid filter	mounted on liquid line		•	•	•	•	•	•	•	•	•
Terminal junction box	IP65		•	•	•	•	•	•	•	•	•
Control panel	mounted inclusive all necessary electrical components and electrical control		•	•	•	•	•	•	•	•	•
VARIPACK frequency inverter		Available upon request									
CM-RC-02	integration with CRII (VARISTEP)	•[2]			Available upon request*						
Liquid subcooler	mounted complete with TXV and solenoid valve								•	•	•
Weather protection housing	mounting kit	•									
Oil heater		•									
Additional connections at receiver [1]	sight glass connection for pressure relief valve if available for receiver	•									
Capacity regulator CRII VARISTEP	cylinder head CRII and solenoid valve (1x) for LHE PRO with CEP2S only	•									

●= option available, S= extent of delivery, *except types with CE1 .. CE2 compressor, [1] retrofitting not possible, [2] for LHE PRO without VARISTEP
(Subject to change without notice)

APPLICATION RANGE



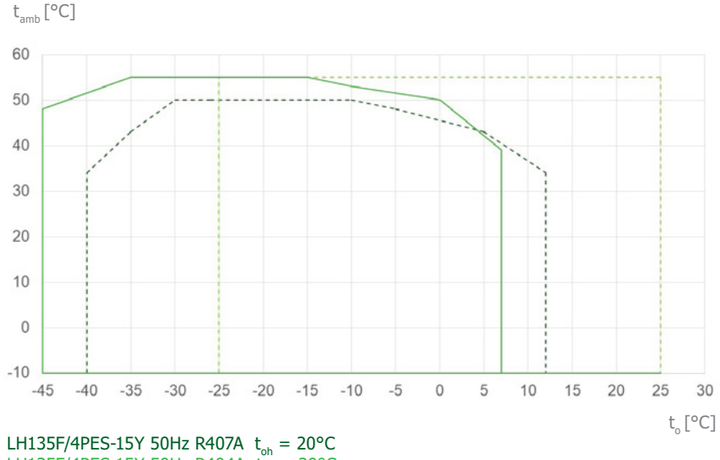


For further details please refer to BITZER Software

BITZER SOFTWARE

Scan for additional information

APPLICATION LIMITS



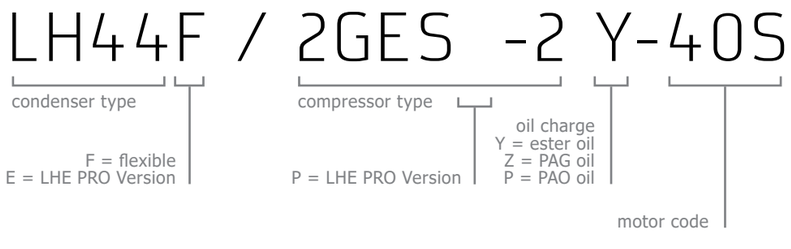
LH135F/4PES-15Y 50Hz R407A t_{oh} = 20°C
LH135F/4PES-15Y 50Hz R404A t_{oh} = 20°C
LH84F/FES-5Y 50Hz R134a/R513A t_{oh} = 20°C

t_o Evaporating temperature [°C]
t_{amb} Ambient temperature [°C]
t_{oh} Suction gas temperature [°C]

PERFORMANCE DATA

Type (standard)	Refrigeration capacity Qo MT t_o -10/t_{amb} 32 °C R513A	Refrigeration capacity Qo LT t_o -35/t_{amb} 32 °C mid point R448A
LH32F/2KES-05Y	1.13	0.51
LH32F/2JES-07Y	1.39	0.73
LH33F/2HES-1Y	1.98	0.98
LH33F/2HES-2Y	1.98	1
LH33F/2GES-2Y	2.3	1.18
LH44F/2GES-2Y	2.39	1.23
LH44F/2FES-2Y	2.83	1.47
LH44F/2FES-3Y	2.91	1.46
LH44F/2EES-2Y	3.49	1.86
LH53F/2DES-2Y	4.21	2.22
LH64F/2EES-3Y	3.8	2.02
LH64F/2DES-3Y	4.49	2.36
LH64F/2CES-3Y	5.45	3.03
LH64F/4FES-3Y	5.62	3.24
LH64F/4EES-4Y	7.18	3.99
LH84F/2CES-4Y	5.61	3.12
LH84F/4FES-5Y	5.81	3.34
LH84F/4EES-6Y	7.5	4.03
LH84F/4DES-5Y	8.52	4.73
LH84F/4CES-6Y	10.26	5.62
LH104F/4DES-7Y	8.75	4.85
LH104F/4TES-9Y	13.05	6.82
LH114F/4CES-9Y	10.76	5.88
LH114F/4TES-12Y	13.05	6.93
LH114F/4PES-12Y	14.75	7.44
LH124F/4NES-14Y	17.75	9.37
LH135F/4PES-15Y	15.64	7.9
LH135F/4NES-20Y	18.5	9.83
LH135F/4JE-15Y	21.3	11.61
LH135F/4JE-22Y	20.8	10.92
LH135F/4HE-18Y	24.7	13.68
LH135F/4HE-25Y	24.3	13.15
LH135F/4GE-23Y	27.3	15.97
LH135F/6JE-25Y	29.4	16.44
LH135F/6HE-28Y	34	19.16
LH265F/4JE-15Y	23.3	10.41
LH265F/4JE-22Y	22.9	8.89
LH265F/4HE-18Y	27.2	12.63
LH265F/4GE-23Y	30.2	15.1
LH265F/4GE-30Y	30.7	14.11
LH265F/4FE-28Y	36.1	17.77
LH265F/4FE-35Y	35.3	17.37
LH265F/6JE-25Y	32.8	15.5
LH265F/6HE-28Y	37.9	18.16
LH265F/6HE-35Y	37.3	17.29
LH265F/6GE-34Y	42.7	22.3

EXPLANATION OF TYPE DESIGNATION



Tentative data

TECHNICAL DATA

STANDARD TYPES FOR MEDIUM AMBIENT TEMPERATURE						
Type	Weight in kg (standard extent of delivery)	Max. fan power in W at 50/60 Hz	Max. condenser air flow in m³/h at 50/60 Hz	Receiver volume in dm³	Max. operating current in A	Sound pressure level at -10/32 °C 50 Hz at 1 m in dB(A)
LH32F/2KES-05Y	70	120/158	1710/1835	3	3.4	65.5
LH32F/2JES-07Y	70	120/158	1710/1835	3	4.3	65.5
LH33F/2HES-1Y	71	120/158	1710/1835	3	4.4	65
LH33F/2HES-2Y	73	120/158	1710/1835	3	5.1	65
LH33F/2GES-2Y	73	120/158	1710/1835	3	5.6	65
LH44F/2GES-2Y	81	125/175	1840/2070	5.6	5.6	65.5
LH44F/2FES-2Y	80	125/175	1840/2070	5.6	5.9	65.5
LH44F/2FES-3Y	81	125/175	1840/2070	5.6	6.7	65.5
LH44F/2EES-2Y	98	125/175	1840/2070	5.6	6.6	66
LH53F/2DES-2Y	114	194/303	2528/2880	5.6	8.4	68.5
LH64F/2EES-3Y	130	301/451	3884/4401	7.8	9	71.5
LH64F/2DES-3Y	130	301/451	3884/4401	7.8	10.1	71.5
LH64F/2CES-3Y	129	301/451	3884/4401	7.8	10.6	71.5
LH64F/4FES-3Y	140	301/451	3884/4401	7.8	11	71.5
LH64F/4EES-4Y	142	301/451	3884/4401	7.8	13.7	71.5
LH84F/2CES-4Y	136	485/603	9100/10494	13	13.1	73
LH84F/4FES-5Y	152	485/603	9100/10494	13	13.9	73
LH84F/4EES-6Y	151	485/603	9100/10494	13	16.7	73
LH84F/4DES-5Y	153	485/603	9100/10494	13	17.6	73.5
LH84F/4CES-6Y	177	485/603	9100/10494	13	20.8	73.5
LH104F/4DES-7Y	200	2 x 316/469	7248/8212	15	18	74
LH104F/4TES-9Y	248	2 x 316/469	7248/8212	15	21.4	74.5
LH114F/4CES-9Y	217	2 x 301/445	7804/8904	15	21.7	73.4
LH114F/4TES-12Y	270	2 x 301/445	7804/8904	15	26.6	74
LH114F/4PES-12Y	268	2 x 301/445	7804/8904	15	24.2	74.5
LH124F/4NES-14Y	307	2 x 483/593	9100/10494	30	29.7	76.5
LH135F/4PES-15Y	331	2 x 750/1050	12650/13900	30	31.5	81
LH135F/4NES-20Y	334	2 x 750/1050	12650/13900	30	36.5	81
LH135F/4JE-15Y	360	2 x 750/1050	12650/13900	30	34.1	81
LH135F/4JE-22Y	371	2 x 750/1050	12650/13900	30	40.5	81
LH135F/4HE-18Y	364	2 x 750/1050	12650/13900	30	40	81
LH135F/4HE-25Y	384	2 x 750/1050	12650/13900	30	47.3	81
LH135F/4GE-23Y	373	2 x 750/1050	12650/13900	30	47.2	81.5
LH135F/6JE-25Y	394	2 x 750/1050	12650/13900	30	49.7	81.5
LH135F/6HE-28Y	405	2 x 750/1050	12650/13900	30	56.5	81.5

STANDARD TYPES						
Type	Weight in kg (standard extent of delivery)	Max. fan power in W	Max. condenser air flow in m³/h	Receiver volume in dm³	Max. operating current in A	Sound pressure level at –10/32°C 50 Hz at 10 m in dB(A)
LHE PRO						
LHE32E/2KESP-05P	71	135	1650	3	4.2	45.4
LHE32E/2JESP-07P	71	135	1650	3	5.1	45.5
LHE33E/2HESP-1P	70	135	1650	3	5.2	45.6
LHE33E/2HESP-2P	72	135	1650	3	5.9	45.6
LHE33E/2GESP-2P	72	135	1650	3	6.4	42.4
LHE44E/2GESP-2P	78	155	2000	5.6	6.4	42.4
LHE53E/2GESP-2P	92	155	2600	5.6	6.4	44.0
LHE44E/2FESP-2P	77	155	2000	5.6	6.7	43.0
LHE44E/2FESP-3P	78	155	2000	5.6	7.5	43.0
LHE44E/2EESP-2P	96	155	2000	5.6	7.4	43.1
LHE53E/2DESP-2P	109	155	2600	5.6	9.0	44.0

Tentative data

TECHNICAL DATA

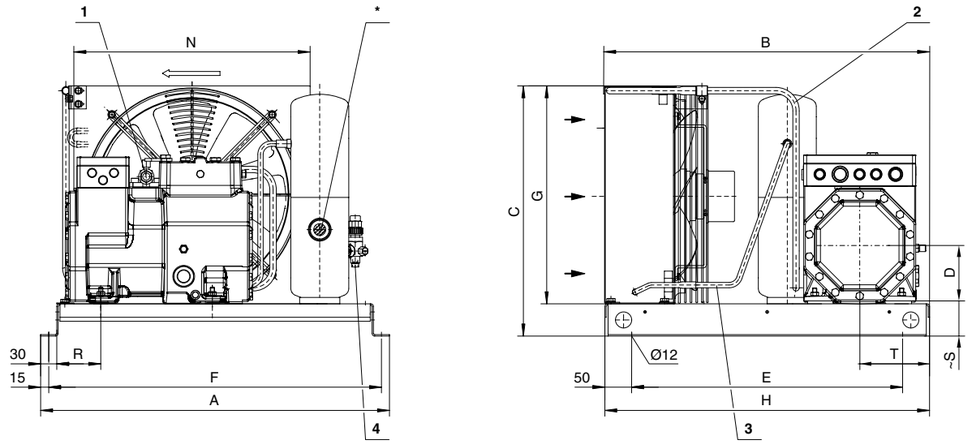
HIGH AMBIENT TEMPERATURE						
Technical data	Weight in kg (standard extent of delivery)	Max. fan power in W at 50/60 Hz	Max. condenser air flow in m³/h at 50/60 Hz	Receiver volume in dm³	Max. operating current in A	Sound pressure level at -10/32°C 50 Hz at 1 m in dB(A)
LH33F/2KES-05Y	71	120/158	1710/1835	3	3.4	65
LH33F/2JES-07Y	71	120/158	1710/1835	3	4.3	65
LH44F/2HES-1Y	80	125/175	1840/2070	5.6	4.4	65.5
LH44F/2HES-2Y	81	125/175	1840/2070	5.6	5.1	65.5
LH53F/2GES-2Y	92	194/303	2528/2880	5.6	5.8	68.5
LH64F/2FES-2Y	104	301/451	3884/4401	7.8	7.1	71.5
LH64F/2EES-2Y	127	301/451	3884/4401	7.8	7.8	71.5
LH64F/2DES-2Y	127	301/451	3884/4401	7.8	9.3	71.5
LH84F/2CES-3Y	136	485/603	9100/10494	13	12.4	73
LH84F/4FES-3Y	148	485/603	9100/10494	13	12.8	73
LH104F/2DES-3Y	182.5	2 x 316/469	7248/8212	15	10.4	73.5
LH104F/2CES-4Y	182	2 x 316/469	7248/8212	15	11.8	73.5
LH104F/4EES-4Y	196	2 x 316/469	7248/8212	15	14	74
LH104F/4EES-6Y	198	2 x 316/469	7248/8212	15	15.4	74
LH114F/4FES-5Y	212	2 x 301/445	7804/8904	15	12.6	73.5
LH114F/4DES-5Y	212	2 x 301/445	7804/8904	15	16.3	74
LH114F/4DES-7Y	215	2 x 301/445	7804/8904	15	18.3	74
LH124F/4CES-6Y	254	2 x 483/593	9100/10494	30	21.1	75.5
LH124F/4CES-9Y	254	2 x 483/593	9100/10494	30	23.6	75.5
LH124F/4TES-9Y	300	2 x 483/593	9100/10494	30	23.3	75.5
LH124F/4TES-12Y	307	2 x 483/593	9100/10494	30	28.5	75.5
LH135F/4PES-12Y	323	2 x 750/1050	12650/13900	30	26.4	81
LH135F/4NES-14Y	325	2 x 750/1050	12650/13900	30	30.3	81
LH265F/4JE-15Y	551	2 x 760	26000	39	33	on request
LH265F/4JE-22Y	582	2 x 760	26000	39	39.5	on request
LH265F/4HE-18Y	555	2 x 760	26000	39	39	on request
LH265F/4HE-25Y	575	2 x 760	26000	39	46.2	on request
LH265F/4GE-23Y	564	2 x 760	26000	39	46.2	on request
LH265F/4GE-30Y	578	2 x 760	26000	39	53.5	on request
LH265F/4FE-28Y	579	2 x 760	26000	39	55	on request
LH265F/4FE-35Y	579	2 x 760	26000	39	64.4	on request
LH265F/6JE-25Y	585	2 x 760	26000	39	48.7	on request
LH265F/6JE-33Y	603	2 x 760	26000	39	55.5	on request
LH265F/6HE-28Y	596	2 x 760	26000	39	55.5	on request
LH265F/6HE-35Y	607	2 x 760	26000	39	66.7	on request
LH265F/6GE-34Y	600	2 x 760	26000	39	67.8	on request
LH265F/6GE-40Y	610	2 x 760	26000	39	76.2	on request
LH265F/S6G-25.2Y	605	2 x 760	26000	39	43	on request
LH265F/S6F-30.2Y	606	2 x 760	26000	39	51	on request

Tentative data

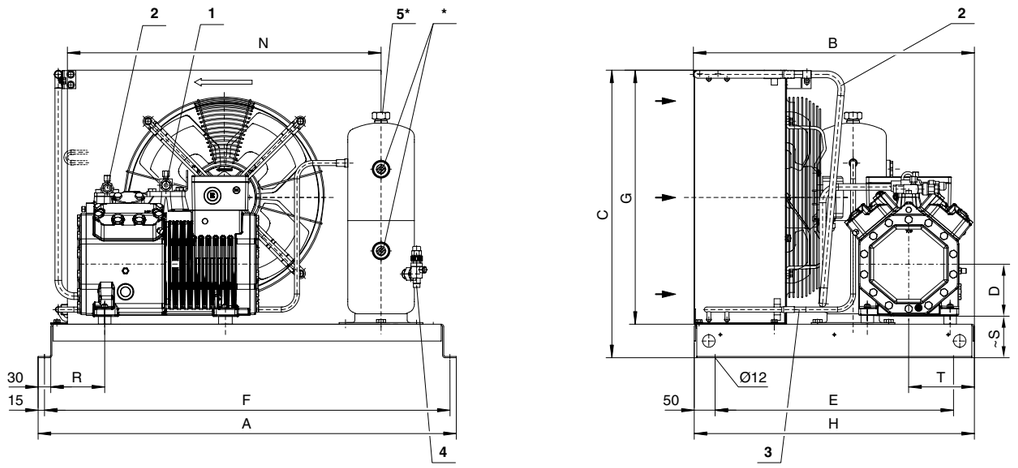
DIMENSIONS

The dimensions shown relate to the basic versions. Customised versions differ according to the chosen options.
Please contact your local representative for details. Weather protection housing on request.

STANDARD UNIT (high ambient units on request)
LH32F/2KES-05(Y) .. LH84F/2CES-4(Y)



STANDARD UNIT (high ambient units on request)
LH64F/4FES-3(Y) .. LH84F/4DES-5(Y) / LH84F/4CES-6(Y)



Connection positions:
1 Suction valve
2 Discharge line
3 Condensate line
4 Refrigerant outlet
5 Connection for pressure relief valve
internal thread: 3/8-18 NPTF
external thread: 1 1/4-12 UNF
* Option set

Tentative data

DIMENSIONS

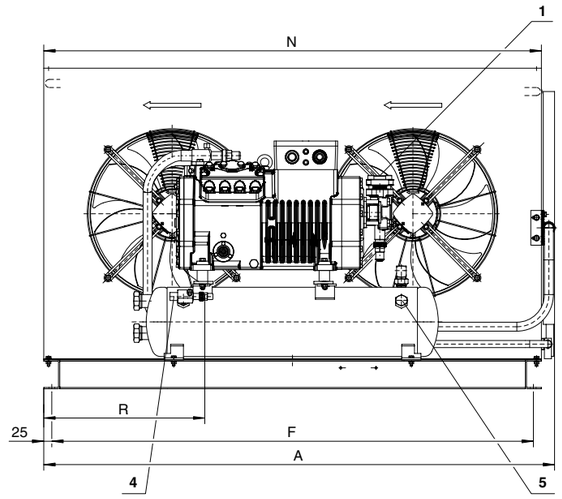
Type	Dimensions in mm													Connections			
														Suction valve		Refrigerant outlet	
	A	B	C	D	E	F	G	H	L	N	R	S	T	mm	inch	mm	inch
L32F/2KES-05(Y)	650	607	466	102	505	620	406	605	62	440	82	66	133	12	1/2	10	3/8
LH32F/2JES-07(Y)	650	607	466	102	505	620	406	605	62	440	82	66	133	12	1/2	10	3/8
LH33F/2HES-1(Y)	650	607	466	102	505	620	406	605	62	440	82	66	133	16	5/8	10	3/8
LH33F/2HES-2(Y)	650	607	466	102	505	620	406	605	62	440	82	66	133	16	5/8	10	3/8
LH33F/2GES-2(Y)	650	607	466	102	505	620	406	605	62	440	82	66	133	16	5/8	10	3/8
LH44F/2GES-2(Y)	650	607	516	102	505	620	456	605	62	490	82	66	133	16	5/8	10	3/8
LH44F/2FES-2(Y)	650	607	516	102	505	620	456	605	62	490	82	66	133	16	5/8	10	3/8
LH44F/2FES-3(Y)	650	607	516	102	505	620	456	605	62	490	82	66	133	16	5/8	10	3/8
LH44F/2EES-2(Y)	650	702	516	121	600	620	456	700	62	490	146	82	174	22	7/8	10	3/8
LH64F/2EES-3(Y)	1000	672	687	121	570	970	607	670	72	750	160	102	157	22	7/8	12	1/2
LH53F/2DES-2(Y)	1000	671	536	121	570	970	456	670	72	750	160	102	157	22	7/8	10	3/8
LH64F/2DES-3(Y)	1000	672	687	121	570	970	607	670	72	750	160	102	157	22	7/8	12	1/2
LH64F/2CES-3(Y)	1000	672	687	121	570	970	607	670	72	750	160	102	157	22	7/8	12	1/2
LH84F/2CES-4(Y)	1000	672	837	121	570	970	757	670	72	850	160	102	157	22	7/8	12	1/2
LH64F/4FES-3(Y)	1000	672	687	125	570	970	607	670	72	750	129	99	157	22	7/8	12	1/2
LH84F/4FES-5(Y)	1000	672	837	125	570	970	757	670	72	850	129	99	157	22	7/8	12	1/2
LH64F/4EES-4(Y)	1000	672	687	125	570	970	607	670	72	750	129	99	157	28	1 1/8	12	1/2
LH84F/4EES-6(Y)	1000	672	837	125	570	970	757	670	72	850	129	99	157	28	1 1/8	12	1/2
LH84F/4DES-5(Y)	1000	672	837	125	570	970	757	670	72	850	129	99	157	28	1 1/8	12	1/2
LH84F/4CES-6(Y)	1000	672	837	125	570	970	757	670	72	850	129	99	157	28	1 1/8	12	1/2

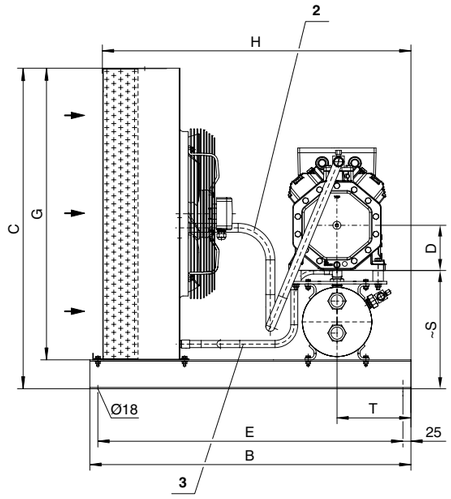
Type	Dimensions in mm															Connections			
																Suction valve		Re-frigerant outlet	
	A	A_1	B	B_1	C	C_1	D	E	F	G	H	L	N	R	S	T	mm	in.	mm	in.
LH32E/ 2KESP-05(Y)	650	630	607	645	466	574	102	505	620	406	605	62	440	82	66	133	12	1/2	10	3/8
LH32E/ 2JESP-07(Y)	650	630	607	645	466	574	102	505	620	406	605	62	440	82	66	133	12	1/2	10	3/8
LH33E/ 2HESP-1(Y)	650	630	607	645	466	574	102	505	620	406	605	62	440	82	66	133	16	5/8	10	3/8
LH33E/ 2HESP-2(Y)	650	630	607	645	466	574	102	505	620	406	605	62	440	82	66	133	16	5/8	10	3/8
LH33E/ 2GESP-2(Y)	650	630	607	645	466	574	102	505	620	406	605	62	440	82	66	133	16	5/8	10	3/8
LH44E/ 2GESP-2(Y)	650	630	607	645	516	574	102	505	620	456	605	62	490	82	66	133	16	5/8	10	3/8
LH44E/ 2FESP-2(Y)	650	630	607	645	516	574	102	505	620	456	605	62	490	82	66	133	16	5/8	10	3/8
LH44E/ 2FESP-3(Y)	650	630	607	645	516	574	102	505	620	456	605	62	490	82	66	133	16	5/8	10	3/8
LH44E/ 2EESP-2(Y)	650	630	702	740	516	574	121	600	620	456	700	62	490	146	82	174	22	7/8	10	3/8
LH53E/ 2GESP-2(Y)	1000	982	671	693	536	915	102	570	970	456	670	72	750	160	102	139	16	5/8	10	3/8
LH53E/ 2DESP-2(Y)	1000	982	671	693	536	915	121	570	970	456	670	72	750	160	102	157	22	7/8	10	3/8

Tentative data

STANDARD UNIT (high ambient units on request)

LH104F/4DES-7(Y) .. LH135F/6HE-28(Y)





Connection positions

1 Suction valve
2 Discharge line
3 Condensate line
4 Refrigerant outlet
5 Connection for pressure relief valve
internal thread: 3/8-18 NPTF
external thread: 1 1/4-12 UNF
* Option set

Type	Dimensions in mm												Connections			
													Suction valve		Refrigerant outlet	
	A	B	C	D	E	F	G	H	N	R	S	T	mm	inch	mm	inch
LH104F/4DES-7(Y)	1140	920	723	125	870	1060	658	886	1100	326	282	215	28	1 1/8	16	5/8
LH114F/4CES-9(Y)	1356	920	773	125	870	1270	708	886	1310	431	282	215	28	1 1/8	16	5/8
LH104F/4TES-9(Y)	1140	920	773	142	870	1060	658	886	1100	289	297	215	35	1 3/8	16	5/8
LH114F/4TES-12(Y)	1356	920	773	142	870	1270	708	886	1310	394	297	215	35	1 3/8	16	5/8
LH114F/4PES-12(Y)	1356	920	773	142	870	1270	708	886	1310	394	297	215	35	1 3/8	16	5/8
LH135F/4PES-15(Y)	1591	1000	998	142	950	1500	908	961	1550	502	368	230	42	1 5/8	22	7/8
LH124F/4NES-14(Y)	1591	1000	848	142	950	1500	758	961	1550	502	368	230	35	1 3/8	22	7/8
LH135F/4NES-20(Y)	1591	1000	998	142	950	1500	908	961	1550	502	368	230	42	1 5/8	22	7/8
LH135F/4JE-15(Y)	1591	1000	998	158	950	1500	908	961	1550	495	373	230	42	1 5/8	22	7/8
LH135F/4JE-22(Y)	1591	1000	998	158	950	1500	908	961	1550	495	373	230	42	1 5/8	22	7/8
LH135F/4HE-18(Y)	1591	1000	998	158	950	1500	908	961	1550	495	373	230	42	1 5/8	22	7/8
LH135F/4HE-25(Y)	1591	1000	998	158	950	1500	908	961	1550	495	373	230	54	2 1/8	22	7/8
LH135F/4GE-23(Y)	1591	1000	998	158	950	1500	908	961	1550	495	373	230	54	2 1/8	22	7/8
LH135F/6JE-25(Y)	1591	1000	998	158	950	1500	908	961	1550	495	373	230	54	2 1/8	22	7/8
LH135F/6HE-28(Y)	1591	1000	998	158	950	1500	908	961	1550	495	373	230	54	2 1/8	22	7/8

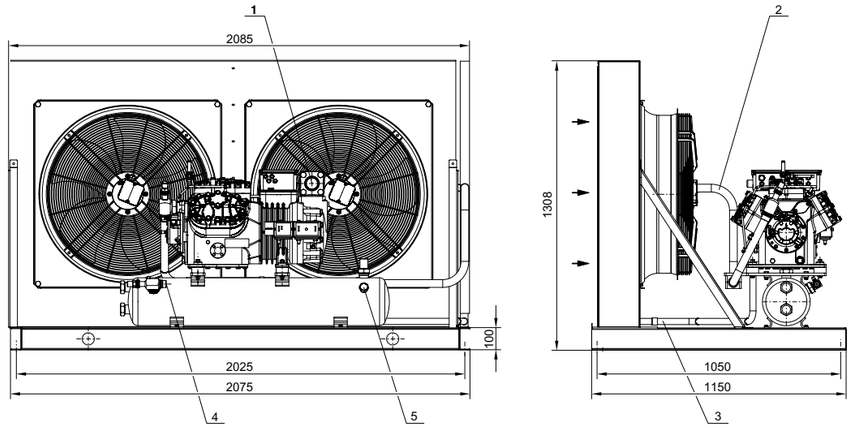
Tentative data

DIMENSIONS

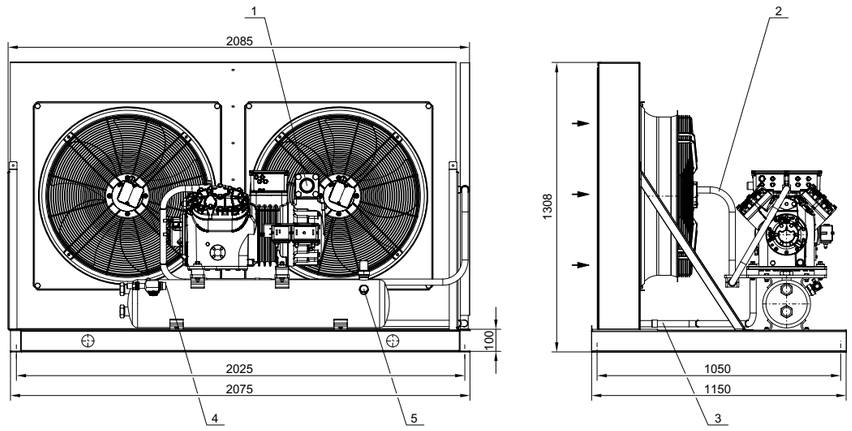
Connection positions
1 Suction valve
2 Discharge line
3 Condensate line
4 Refrigerant outlet
5 Connection for pressure relief valve
internal thread: 3/8-18 NPTF
external thread: 1 1/4-12 UNF
7 Refrigerant inlet at liquid subcooler
8 Refrigerant outlet at liquid subcooler

* Option set

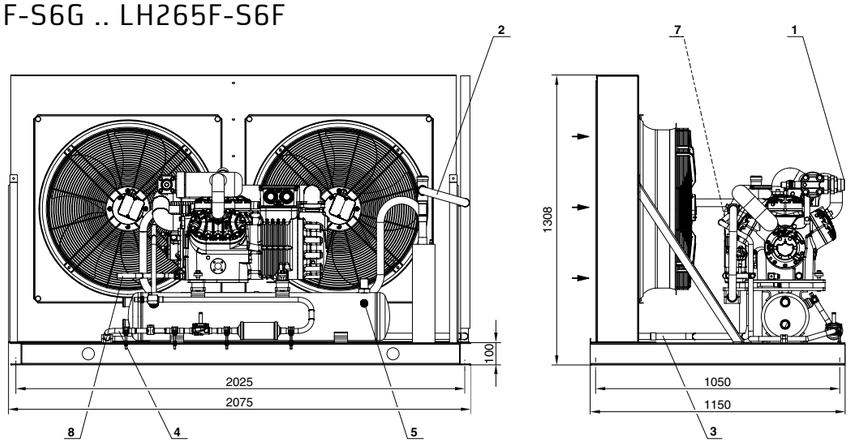
LH265F-6JE .. LH265F-6GE



LH265F-4JE .. LH265F-4FE



LH265F-S6G .. LH265F-S6F



Tentative data

ACCESSORIES

CONTROL PANEL
FULLY TESTED AND PREWIRED FROM THE FACTORY

Complete switch cabinet, including compressor and condenser fan contactors with overload safety switch, phase failure relay, line lights, delay timer and thermostat.

Further information available on request.

VARISTEP – MECHANICAL CAPACITY CONTROL
ADAPTION ACCORDING TO SYSTEM REQUIRMENTS.

With the mechanical capacity control VARISTEP, changing cooling demands are no problem. It prevents high switching frequencies of the compressor and ensures efficient operation of the compressor. It is based on the principle of blocked suction.

// Refrigeration capacity range from 10%-100% (details see KT-101) or with CM-RC-02

OIL SEPARATOR WITH CHECK VALVE
KEEPS THE COMPRESSOR LUBRICATED – NO MATTER THE APPLICATION

The right oil supply to the compressor at any time is no problem with the optional oil separator with check valve in the discharge line.

// Available for the whole LHF series

HP/LP PRESSURE SWITCHES AND PRESSURE GAUGES

With HP safety pressure cut-out.

// With LP setpoint cut-out
// Adjustable

Images are for illustration purposes only

K SERIES

WATER COOLED SOLUTION AT ITS BEST

FOR ALL COMMERCIAL REFRIGERATION APPLICATIONS, FROM 0.3 KW UP TO 89.0 KW, EITHER LOW TEMPERATURE OR MEDIUM TEMPERATURE APPLICATIONS, THE K SERIES GUARANTEES THE BEST EFFICIENCY WHILE ENSURING HIGH RELIABILITY AND SAFE SYSTEM OPERATION.

COMMERCIAL REFRIGERATION · ECODESIGN CONFORM · HFO · EUROPEAN STANDARD

MEETING MARKET DEMANDS

// The K series water cooled condensing units can be operated with water from a tower, the city or the sea
// Optimised for applications with limited space
// Perfect combination of highly efficient BITZER ECOLINE compressor and BITZER water cooled condenser for proven reliability in all conditions
// Approved for common refrigerants as well as HFO and HFC/HFO blends
// Condenser: approval according to the EU Pressure Equipment Directive 2014/68/EU
// IQ MODULE CM-RC-02 is standard for all condensing units with an ECOLINE compressor family starting from CE3 up to BE6

LARGE APPLICATION POSSIBILITIES

The modular system of the K series, with its several accessory extension levels, guarantees the highest flexibility. The main parts such as the semi-hermetic reciprocating compressor and shell-and-tube condenser are manufactured by BITZER and therefore meet the highest level of quality. Matching the ECOLINE compressor and K series condenser is easy thanks to the BITZER SOFTWARE.

AN OPTIMUM MATCHING UNIT PROGRAMME

Commercial refrigeration and A/C applications, such as low and medium temperatures, are feasible. It's a perfect fit for cold storage rooms, city grocery stores and convenience stores. The K series water cooled condensing unit is the perfect answer to system needs and combines efficiency and durability.

GROCERY STORE AND SUPERMARKET

The K series is ideal for systems with cold rooms and cabinets, even multi-evaporators and areas with limited space.

PHARMA/ LABS

In processes where reliability, quality and precision are indispensable the K series is the right choice. Additionally you can rely on the global BITZER network.

SCALABLE PERFORMANCE ACCORDING TO YOUR NEEDS

HORECA

Worldwide use is possible due to the flexibility with regard to the choice of cooling medium. Furthermore, varying cooling loads are no problem thanks to the optional VARISTEP mechanical capacity control.

WARE-HOUSE/COLD STORAGE

Even demanding applications are no problem for the K series. We combine low and medium temperature applications in one condensing unit with a wide range of refrigerants.

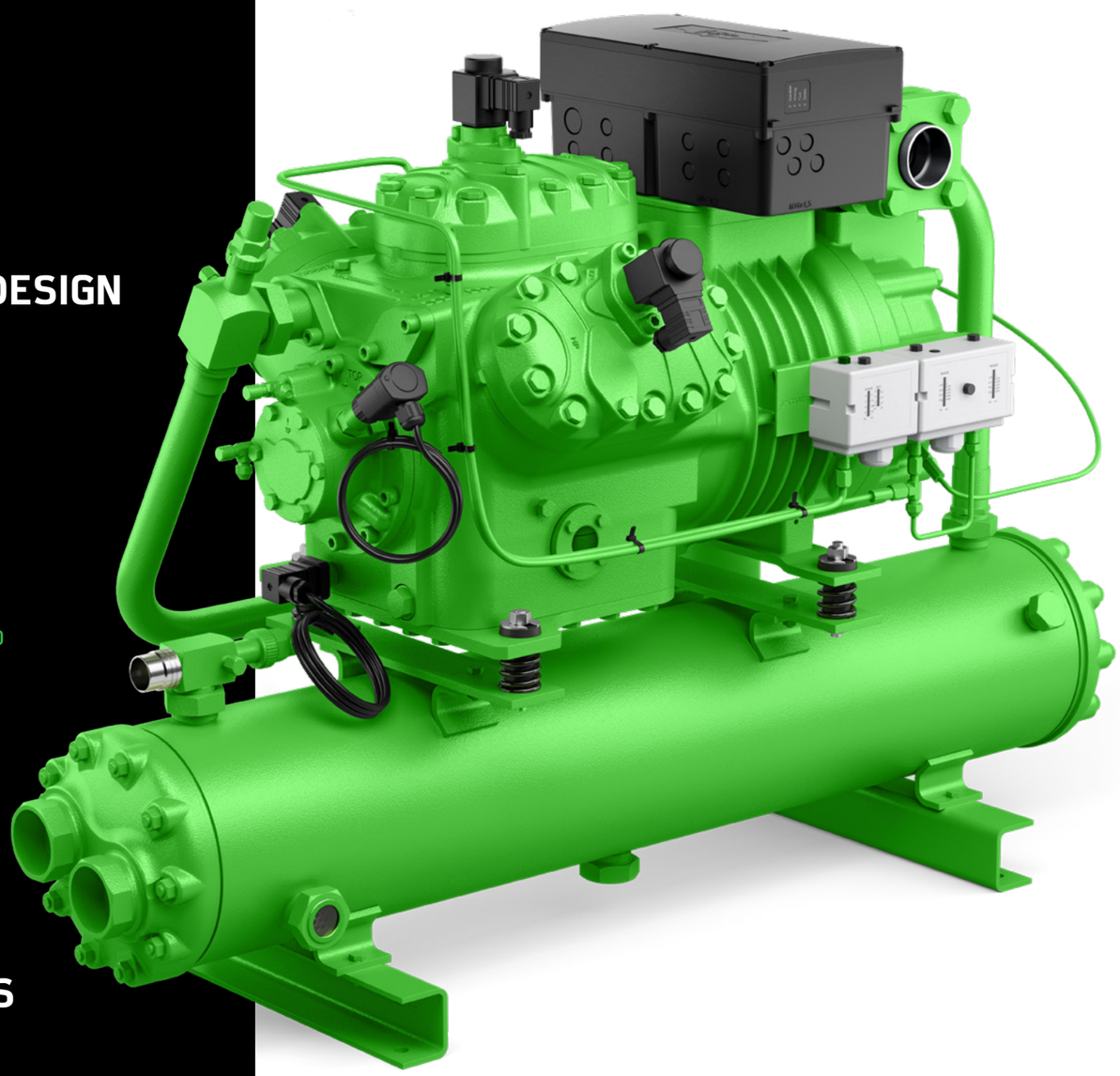
K SERIES
THE COMPACT SOLUTION

COMPACT UNIT DESIGN
SMALL SPACE REQUIREMENTS
ALLOW EASY AND FLEXIBLE
PLACEMENT OF THE UNIT

WIDE RANGE OF REFRIGERATION CAPACITY
EASY SELECTION DUE TO
EXTENSIVE PRODUCT PORTFOLIO

ROBUST AND SOLID DESIGN
LONG-STANDING EXPERIENCE
IN COMPRESSOR AND
CONDENSER TECHNOLOGY

VARIETY OF COOLING AGENTS
RANGING FROM SEAWATER TO
FRESH WATER AND MANY MORE



The water cooled condensing unit is equipped with the BITZER ECOLINE semi-hermetic compressor and combined with the proven shell and tube K condensers from BITZER, thereby ensuring the best performance, efficiency, robustness and reliability.

Perfectly designed for indoor or even outdoor commercial refrigeration installations, K series condensing units are the answer for your system requirements and possible space restrictions.

PERFORMANCE
With a large range of cooling capacities from 0.3 kW up to 28.0 kW for low temperatures and from 0.8 kW up to 89.0 kW for medium temperatures, the ECOLINE compressor ensures the best efficiency over the entire operating envelope. Starting from the CE3 compressor family housing size, the CM-RC-02 IQ MODULE is standard for constant safety and protection of the compressor. The optional VARISTEP mechanical capacity modulation offers additional flexibility.

COMPACT DESIGN
Horizontal shell and tube condenser, equipped with compressor and several unit options, enables a very compact design with limited footprint for easy integration into any machine room or basement location.

SUSTAINABLE AND ROBUST DESIGN
The K series is approved for the most common and new HFO and HFC/HFO blends and is therefore future-proof. The semi-hermetic design of the ECOLINE compressor enables easy maintenance onsite or through BITZER Green Point service centres, which not only increases the lifetime but also sustainability.

K SERIES: THE STANDARD WATER COOLED CONDENSING UNIT

BITZER ECOLINE COMPRESSOR

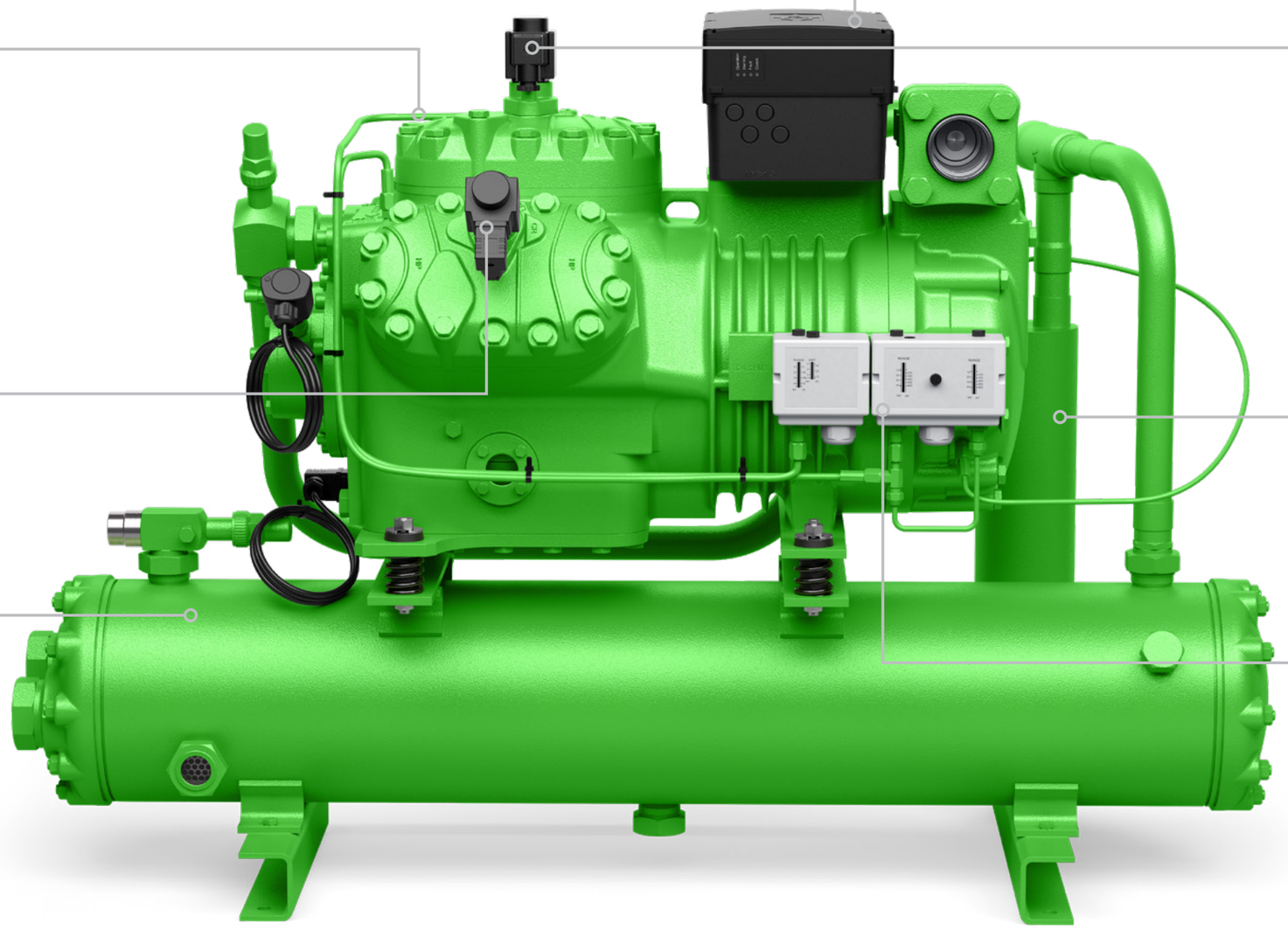
// Semi-hermetic reciprocating compressor
// Highly efficient
// Well proven and reliable
// Crankcase heater
// Discharge gas temperature sensor
// Oil (pressure/level) monitoring
– Oil level monitoring OLC-D1
– Differential oil pressure switch MP54
– Differential oil pressure switch DP-2

VARISTEP – MECHANICAL CAPACITY CONTROL

// Highly efficient BITZER ECOLINE compressor with VARISTEP capacity control from 10%–100% (details on request)

BITZER SHELL AND TUBE CONDENSER

// With connection for pressure relief valve
// With various cooling agents
// Maximum allowable pressure:
– Refrigerant side 33 bar
– Coolant side 10 bar
// Seawater condenser version



IQ MODULE CM-RC-02

// Compressor family CE3 .. BE6
// Protection mode

START UNLOADER

// Compressor family CE4 .. BE6
// Cylinder head with PTC sensor (mounted)
// Control valve, enclosed

OIL SEPARATOR

// With check valve in discharge line

HP/LP SWITCH (ADJUSTABLE)

// Mounted
// With HP safety pressure cut-out, mounted (from compressor type 4NES-14(Y))

RECIPROCATING COMPRESSORS

HFO

MECHATRONIC CAPACITY CONTROL

The product picture shows a fully equipped K series.
For the standard extent of delivery and optionally available equipment, please see the following pages.

KP-263-3 EN

BITZER KB SERIES:
SEAWATER-RESISTANT

RELIABLE OPERATION
// Even with seawater

HIGH REFRIGERATION CAPACITY
// 41 types with up to 151.6 m³/h 50 Hz
// K073HB .. K1353TB

HIGHLY EFFICIENT ECOLINE COMPRESSORS
// Well-known and proven BITZER technology

SYSTEM-OPTIMISED WATER COOLED CONDENSER
// For best heat exchange and low refrigerant charge

ROBUST DESIGN AND COMPACT DIMENSIONS
// Small installation dimension at place of use

EASY HANDLING AND COMMISSIONING
// Easy service thanks to directly accessible system components

K(B)-SERIES WITH 2-STAGE COMPRESSOR:
FOR LOW TEMPERATURES

The water cooled condensing units with 2-stage compressors from BITZER are convincing thanks to a compressor design layout, made especially for low temperature applications. They are well combined with the K condenser. Furthermore, low GWP refrigerants are approved for increased sustainability.

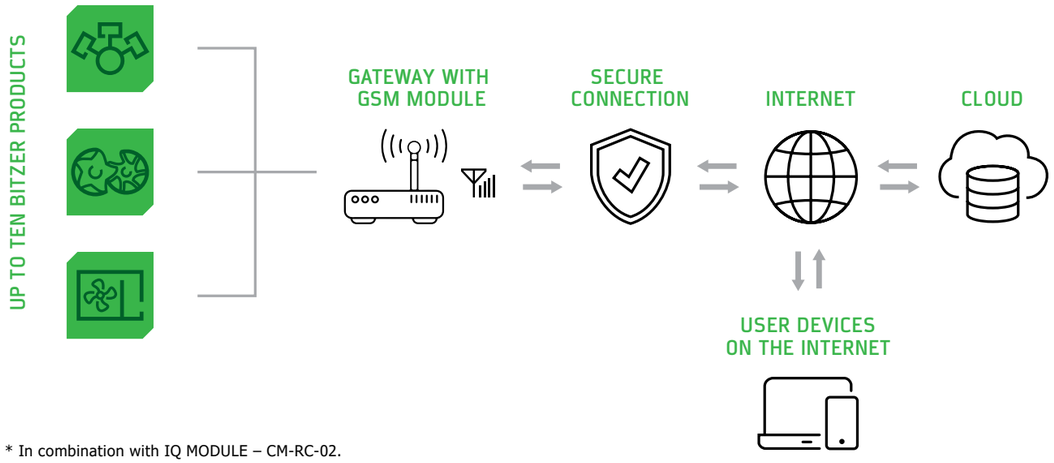
Seven types with displacement LP/HP from 19.70/12.60 m³/h .. 101.10/50.50 m³/h @ 1450 RPM 50 Hz.

Type	Q_0 @ t_o = –35°C/t_c = +40°C, 50 Hz, in kW
	R448A, midpoint
K373H(B)/S4T-5.2(Y)	5.27
K373H(B)/S4N-8.2(Y)	7.49
K573H(B)/S4G-12.2(Y)	11.31
K573H(B)/S6J-16.2(Y)	16.98
K573H(B)/S6H-20.2(Y)	19.68
K813H(B)/S6G-25.2(Y)	22.60
K813H(B)/S6F-30.2(Y)	27.00

Tentative data

BITZER DIGITAL NETWORK:
ALL-ROUND VIEW OF THE HEART OF REFRIGERATION AND A/C SYSTEMS

This provides you with important product- and application-related information on all the BITZER products, including, among others, data analyses and compressor operation reports.*



* In combination with IQ MODULE – CM-RC-02.

EXTENT OF DELIVERY

K(B) SERIES WATER COOLED UNIT WITH – ECOLINE COMPRESSOR – 2-STAGE COMPRESSOR		KE	
		K../..	K..B*/..
Semi-hermetic reciprocating compressor	– ECOLINE compressors – 2-stage compressors	S	S
Shell and tube condenser		S	S
Connection for pressure relief valve	Condenser	S	S
Discharge line	–	S	S
Oil charge	BSE32 (ester oil) for HFC and HFC/HFO refrigerants t_c < 70°C	S	S
IQ MODULE CM-RC-02	Compressor module in module housing – default setting protection mode (SE-B) – starting from CE3 compressor	S	S
Protection device	SE-B3	S	S

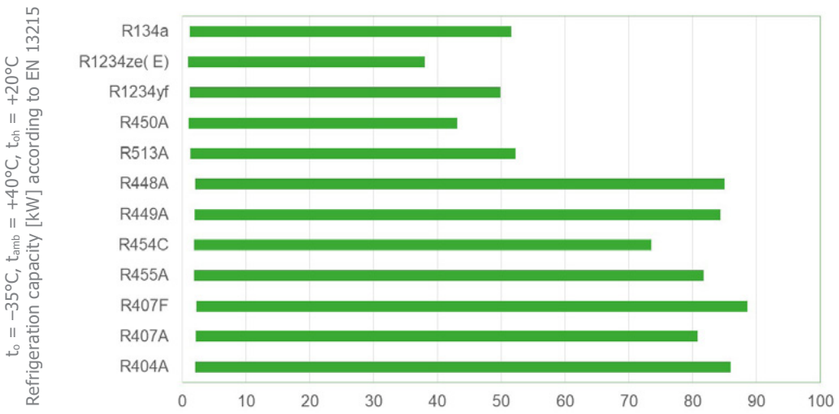
S = extent of delivery
* sea-water resistant
(Subject to change without notice)

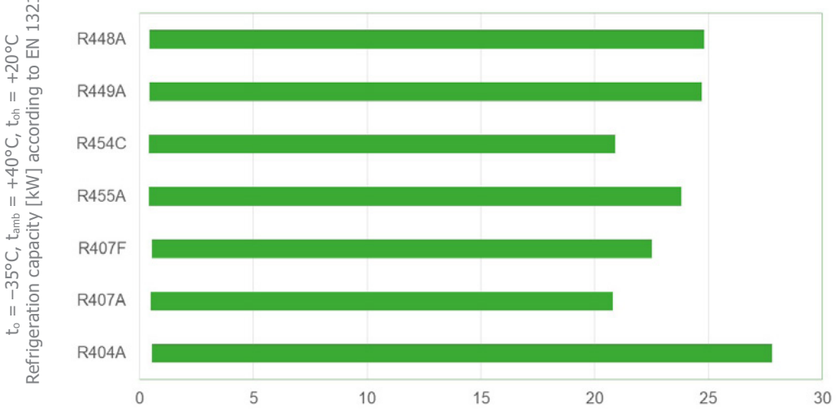
EXTRAORDINARY OPTIONAL EQUIPMENT
TO FULFIL YOUR DEMANDS

WATER COOLED UNIT WITH ECOLINE SEAWATER COOLED UNIT WITH ECOLINE WATER COOLED UNIT WITH 2-STAGE COMPRESSOR		KE K../.. // K..B/..								
		ECOLINE						2-STAGE		
		2KES .. 2FES	2EES .. 2CES	4FES .. 4CES	4TES .. 4NES	4JE .. 4GE	6JE .. 6FE	S4T .. S4N	S4G	S6J .. S6F
Warranty extension up to 5 years	for details see price list	•	•	•	•	•	•	•	•	•
Check valve*	in discharge line				•	•	•			
Oil separator*	with check valve in discharge line – mounted	•	•	•	•	•	•	•	•	•
High and low pressure switch (adjustable)	mounted	•	•	•	•			•		
	with HP safety pressure cut-out, mounted				•[1]	•	•		•	•
Motor for special voltage*	for available motors, see technical information KT-410	•	•	•	•	•	•	•	•	•
Oil charge	BSE55 (ester oil) for HFC and HFC/HFO refrigerants – at high condensing temperatures t_c > 70°C – for R1234ze(E) t_c < 70°C/t_o < 15°C[1]	○	○	○	○	○	○	○**		
	B5.2: 'Y' in compressor designation omitted	○	○	○	○	○	○	○	○	○
Oil level monitoring OLC-D1 – opto-electronic	mounted			•	•					
Differential oil pressure switch MP54	mounted					•	•	•	•	•
Differential oil pressure switch DP-2	mounted					•	•	•	•	•
Oil heater	for details, see price list	•	•	•	•	•		•	•	•
Discharge gas temperature sensor	PTC 140 (included in SU) PT1000 with IQ MODULE			•	•	•		•	•	•
Start unloader (SU)	cylinder head with PTC sensor, mounted control valve, enclosed check valve required				•	•	•			
Capacity regulator CRII (1×)	cylinder head, mounted control valve, possible enclosed equipment see KT-101		•	•	•	•	•			
Oil service valve					•	•	•	•	•	•
Additional fan		•	•	•	•					
Liquid subcooler – mounted	– liquid injection valve sized for operation with subcooler – complete with piping – components assembled and insulated							•	•	•
IQ MODULE CM-RC-02 Compressor Module add-on	for details, see price list			•	•	•	•			
BITZER Digital Network	only with IQ MODULE			•	•	•	•			

● = option available, ○ = option without extra charge
* retrofitting not possible.
** Exception: K1053H(B)/6FE-44(Y), K1353T(B)/6FE-50(Y) on request for A2L refrigerants.
[1] for R1234ze(E), t_c > +70°C/t_o > +15°C, on request.
(Subject to change without notice)

APPLICATION RANGE





PERFORMANCE DATA

SINGLE-STAGE COMPRESSORS

All performance data are based on the European Standard EN 13215: suction gas temperature 20°C with no liquid subcooling.

2-STAGE COMPRESSORS

All performance data are based on 20°C suction gas temperature according to EN 12900 at 50 Hz, including system inherently liquid subcooling based on optional liquid subcooler.

CONDENSING UNITS

The standard performance data for water cooled condensing units according to EN 13215 are determined at 40°C condensing temperature. With the BITZER SOFTWARE, the data are easily calculated for many refrigerants as compressor data at the same condensing temperature using the above-mentioned values for suction gas temperature and liquid subcooling.

For performance data for individual operating conditions and 60 Hz operation see BITZER SOFTWARE.

For further details, please refer to BITZER SOFTWARE

BITZER SOFTWARE

Scan for additional information

PERFORMANCE DATA

Type	Capacity at MT t_o –10°C/t_c +40°C R134a in kW	Capacity at LT t_o –35°C/t_c +40°C R448A midpoint in kW
K073H(B)/2KES-05(Y)	1.14	0.36
K073H(B)/2JES-07(Y)	1.46	0.55
K073H(B)/2HES-1(Y)	2.06	0.74
K073H(B)/2HES-2(Y)	2.06	0.74
K073H(B)/2GES-2(Y)	2.43	0.9
K073H(B)/2FES-2(Y)	3.06	1.15
K123H(B)/2FES-3(Y)	3.04	1.15
K123H(B)/2EES-2(Y)	3.75	1.5
K123H(B)/2EES-3(Y)	3.75	1.5
K123H(B)/2DES-2(Y)	4.5	1.8
K123H(B)/2DES-3(Y)	4.5	1.8
K123H(B)/2CES-3(Y)	5.57	2.4
K203H(B)/2CES-4(Y)	5.57	2.4
K203H(B)/4FES-3(Y)	5.78	2.58
K203H(B)/4FES-5(Y)	5.77	2.58
K203H(B)/4EES-4(Y)	7.65	3.2
K203H(B)/4EES-6(Y)	7.65	3.2
K203H(B)/4DES-5(Y)	8.85	3.62
K203H(B)/4CES-6(Y)	10.97	4.82
K283H(B)/4DES-7(Y)	8.85	3.62
K283H(B)/4TES-9(Y)	14.04	5.68
K373H(B)/4CES-9(Y)	10.97	4.82
K373H(B)/4TES-12(Y)	13.68	5.67
K373H(B)/4PES-12(Y)	15.87	6.01
K373H(B)/4NES-14(Y)	18.89	7.72
K573H(B)/4PES-15(Y)	15.49	5.93
K573H(B)/4NES-20(Y)	18.67	7.81
K573H(B)/4JE-15(Y)	21.8	9.39
K573H(B)/4JE-22(Y)	21.3	8.58
K573H(B)/4HE-18(Y)	25.9	11.46
K573H(B)/4GE-23(Y)	29.2	13.86
K573H(B)/6JE-25(Y)	32	14.08
K813H(B)/4HE-25(Y)	25.4	10.84
K813H(B)/4GE-30(Y)	29.6	12.78
K813H(B)/6JE-33(Y)	32.2	12.63
K813H(B)/6HE-28(Y)	38	16.91
K813H(B)/6GE-34(Y)	43.7	21.3
K1053H(B)/6HE-35(Y)	37.2	15.97
K1053H(B)/6FE-44(Y)	52.9	24.8
K1353H(B)/6GE-40(Y)	43.5	18.85
K1353H(B)/6FE-50(Y)	51.6	23.1

EXPLANATION OF TYPE DESIGNATION

Tentative data

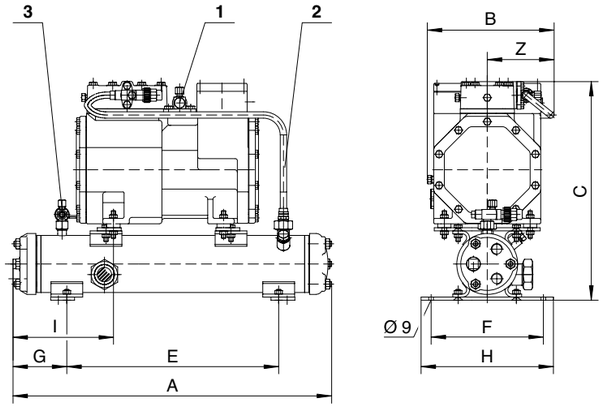
TECHNICAL DATA

Type	Condenser volume in dm³	Weight in kg (standard extent of delivery)	Max. operating current in A
K073H(B)/2KES-05(Y)	3.4	54	2.8
K073H(B)/2JES-07(Y)	3.4	54	3.7
K073H(B)/2HES-1(Y)	3.4	55	3.8
K073H(B)/2HES-2(Y)	3.4	56	4.5
K073H(B)/2GES-2(Y)	3.4	56	5
K073H(B)/2FES-2(Y)	3.4	56	5.3
K123H(B)/2FES-3(Y)	5.1	61	6.1
K123H(B)/2EES-2(Y)	5.1	82	6
K123H(B)/2EES-3(Y)	5.1	85	7.5
K123H(B)/2DES-2(Y)	5.1	82	7.5
K123H(B)/2DES-3(Y)	5.1	85	8.6
K123H(B)/2CES-3(Y)	5.1	84	9.1
K203H(B)/2CES-4(Y)	11.8	95	10
K203H(B)/4FES-3(Y)	11.8	107	9.5
K203H(B)/4FES-5(Y)	11.8	111	10.8
K203H(B)/4EES-4(Y)	11.8	109	12.2
K203H(B)/4EES-6(Y)	11.8	111	13.6
K203H(B)/4DES-5(Y)	11.8	111	14.5
K203H(B)/4CES-6(Y)	11.8	116	17.7
K283H(B)/4DES-7(Y)	11.3	116	16.5
K283H(B)/4TES-9(Y)	11.3	161	19.9
K373H(B)/4CES-9(Y)	14.5	126	20.2
K373H(B)/4TES-12(Y)	14.5	176	25.1
K373H(B)/4PES-12(Y)	14.5	174	22.7
K373H(B)/4NES-14(Y)	14.5	176	26.6
K573H(B)/4PES-15(Y)	29.4	206	28.2
K573H(B)/4NES-20(Y)	29.4	209	33.2
K573H(B)/4JE-15(Y)	29.4	249	30.8
K573H(B)/4JE-22(Y)	29.4	249	37.2
K573H(B)/4HE-18(Y)	29.4	249	36.7
K573H(B)/4GE-23(Y)	29.4	251	43.9
K573H(B)/6JE-25(Y)	29.4	287	46.4
K813H(B)/4HE-25(Y)	27.7	256	44
K813H(B)/4GE-30(Y)	27.7	268	51.2
K813H(B)/6JE-33(Y)	27.7	293	53.2
K813H(B)/6HE-28(Y)	27.7	290	53.2
K813H(B)/6GE-34(Y)	27.7	290	65.5
K1053H(B)/6HE-35(Y)	40	320	64.4
K1053H(B)/6FE-44(Y)	40	326	83.2
K1353H(B)/6GE-40(Y)	37	333	73.9
K1353H(B)/6FE-50(Y)	37	336	96.2
2-STAGE			
K373H(B)/S4T-5.2(Y)	14.5	171	14
K373H(B)/S4N-8.2(Y)	14.5	176	17
K573H(B)/S4G-12.2(Y)	29.4	239	24
K573H(B)/S6J-16.2(Y)	29.4	268	31
K573H(B)/S6H-20.2(Y)	29.4	279	37
K813H(B)/S6G-25.2(Y)	27.7	295	43
K813H(B)/S6F-30.2(Y)	27.7	296	51

Tentative data

DIMENSIONS

K073H/2KES-05(Y) .. K203H/2CES-4(Y)



For further details, please refer to BITZER SOFTWARE

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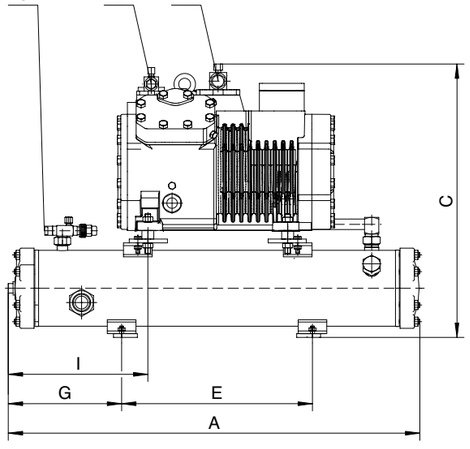
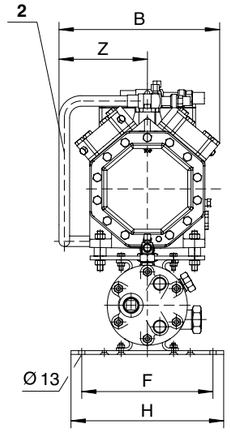
K203H/4FES-3(Y) .. K813H/4GE-30(Y)





For further details, please refer to BITZER SOFTWARE

BITZER SOFTWARE

Scan for additional information

Connection positions
1 Suction valve
2 Discharge line
3 Refrigerant outlet (Liquid line)

Tentative data

DIMENSIONS

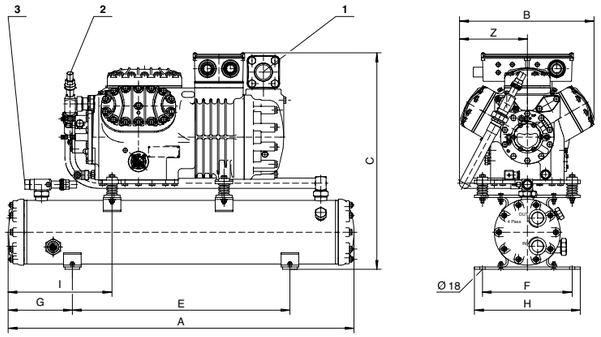
Type	Dimensions in mm									
	A	B	C	E	F	Ø	G	H	I	Z
K073H/2KES-05(Y)	602	251	413	400	212	9	102	250	190	126
K073H/2JES-07(Y)	602	251	413	400	212	9	102	250	190	126
K073H/2HES-1(Y)	602	251	413	400	212	9	102	250	190	126
K073H/2HES-2(Y)	602	251	413	400	212	9	102	250	190	126
K073H/2GES-2(Y)	602	251	413	400	212	9	102	250	190	126
K073H/2FES-2(Y)	602	251	413	400	212	9	102	250	190	126
K123H/2FES-3(Y)	852	251	435	400	275	13	227	320	348	112
K123H/2EES-2(Y)	852	323	463	400	275	13	227	320	341	163
K123H/2EES-3(Y)	852	323	463	400	275	13	227	320	341	163
K123H/2DES-2(Y)	852	323	463	400	275	13	227	320	341	163
K123H/2DES-3(Y)	852	323	463	400	275	13	227	320	341	163
K123H/2CES-3(Y)	852	323	463	400	275	13	227	320	341	163
K203H/2CES-4(Y)	863	323	528	400	275	13	238	320	308	163
K203H/4FES-3(Y)	863	345	573	400	275	13	238	320	293	185
K203H/4FES-5(Y)	863	345	573	400	275	13	238	320	293	185
K203H/4EES-4(Y)	863	345	573	400	275	13	238	320	293	185
K203H/4EES-6(Y)	863	345	573	400	275	13	238	320	293	185
K203H/4DES-5(Y)	863	345	573	400	275	13	238	320	293	185
K283H/4DES-7(Y)	863	345	573	400	275	13	238	320	293	185
K203H/4CES-6(Y)	863	345	573	400	275	13	238	320	293	185
K373H/4CES-9(Y)	1113	345	573	740	275	13	193	320	382	185
K283H/4TES-9(Y)	863	363	626	400	275	13	238	320	256	204
K373H/4TES-12(Y)	1113	363	626	740	275	13	193	320	382	204
K373H/4PES-12(Y)	1113	363	626	740	275	13	193	320	382	204
K573H/4PES-15(Y)	1176	363	672	740	305	18	218	360	360	204
K373H/4NES-14(Y)	1113	363	626	740	275	13	193	320	382	204
K573H/4NES-20(Y)	1176	363	672	740	305	18	218	360	360	204
K573H/4JE-15(Y)	1176	439	743	740	305	18	218	360	353	230
K573H/4JE-22(Y)	1176	439	743	740	305	18	218	360	353	230
K573H/4HE-18(Y)	1176	439	743	740	305	18	218	360	353	230
K813H/4HE-25(Y)	1176	439	743	740	305	18	218	360	353	230
K573H/4GE-23(Y)	1176	439	743	740	305	18	218	360	353	230
K813H/4GE-30(Y)	1176	439	743	740	305	18	218	360	353	230

See DP-200 for dimensions and seawater-resistant condenser design as well as for information on fixing plates and fixing rails

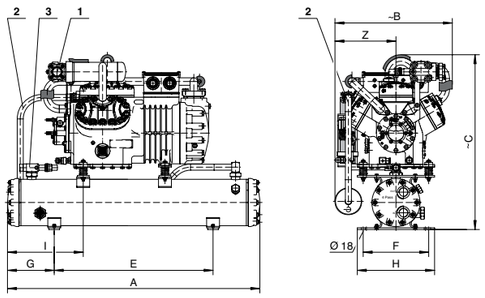
Tentative data

DIMENSIONS

K573H/6JE-25(Y) .. K1353T*/6FE-50(Y)



K373H/S4T-5.2(Y) .. K813H/S6F-30.2(Y)



For further details, please refer to BITZER SOFTWARE

BITZER SOFTWARE

Scan for additional information

Connection positions
1 Suction valve
2 Discharge line
3 Refrigerant outlet (Liquid line)

* With K1353T refrigerant outlet below

Type	Dimensions in mm									
	A	B	C	E	F	Ø	G	H	I	Z
K573H/6JE-25(Y)	1176	458	736	740	305	18	218	360	353	231
K813H/6JE-33(Y)	1176	458	736	740	305	18	218	360	353	231
K813H/6HE-28(Y)	1176	458	736	740	305	18	218	360	353	231
K1053H/6HE-35(Y)	1634	517	735	900	305	18	367	360	551	291
K813H/6GE-34(Y)	1176	458	736	740	305	18	218	360	353	291
K1353T/6GE-40(Y)	1634	517	797	900	305	18	367	360	551	291
K1053H/6FE-44(Y)	1634	517	735	900	305	18	367	360	551	291
K1353T/6FE-50(Y)	1634	517	797	900	305	18	367	360	551	291
Water cooled condensing units with 2-stage compressors										
K373H/S4T-5.2(Y)	1113	490	~ 698	740	275	13	193	320	398	260
K373H/S4N-8.2(Y)	1113	490	~ 698	740	275	13	193	320	398	260
K573H/S4G-12.2(Y)	1176	491	~ 783	740	305	18	218	360	353	282
K573H/S6J-16.2(Y)	1176	~ 547	~ 814	740	305	18	218	360	353	284
K573H/S6H-20.2(Y)	1176	~ 547	~ 814	740	305	18	218	360	353	284
K813H/S6G-25.2(Y)	1176	~ 547	~ 814	740	305	18	218	360	353	284
K813H/S6F-30.2(Y)	1176	~ 547	~ 814	740	305	18	218	360	353	284

Tentative data

See DP-200 for dimensions and seawater-resistant condenser design as well as for information on fixing plates and fixing rails

ACCESSORIES

OIL SEPARATOR WITH CHECK VALVE
KEEPS THE COMPRESSOR LUBRICATED – NO MATTER THE APPLICATION

The right oil supply to the compressor at any time is no problem with the optional oil separator with check valve in the discharge line.

// Available for the whole K series

HP/LP PRESSURE SWITCHES

The adjustable HP/LP switches are fully factory-fitted.

// Optional accessory for the whole K series

VARISTEP – MECHANICAL CAPACITY CONTROL
ADAPTATION ACCORDING TO SYSTEM REQUIREMENTS

With the VARISTEP mechanical capacity control, changing cooling demands are no problem. It prevents high switching frequencies of the compressor and ensures efficient operation of the compressor. It is based on the principle of blocked suction.

// Refrigeration capacity range from 10%–100% (details see KT-101) or with the IQ MODULE CM-RC-02

Images are for illustration purposes only

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BITZER Digital Network (BDN) offers you easy access to valuable digital services relating to BITZER products for refrigeration and air conditioning. This provides you with important product- and application-related information on all the BITZER products you're using, including, among others, data analyses and compressor operation reports. And with it, usable findings with which you can optimise the most important aspects of the cooling systems.

BITZER DIGITAL NETWORK

// 360° product information
// Tracking of service activities
// Operation report
// Real-time data
// Notification
// Flexible access rights

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WE OFFER SOLUTIONS BEYOND THE ORDINARY

B-SAFE

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// Commissioning assistance for excellent results

B-READY

// Assessment services for extented lifetimes
// Retrofitting solutions for secure investments
// Refrigerant compliance and strategy consulting

Green Point®
A SERVICE BY BITZER GROUP

ALWAYS THERE FOR YOU

The global service network comprises more than 50 locations. Everywhere, our specialists maintain, overhaul and repair BITZER compressors, replace wear and safety-relevant parts and stock BITZER ORIGINAL SPARE PARTS AND OIL. Highly committed engineers ensure that the service cycle is always precisely and perfectly executed.

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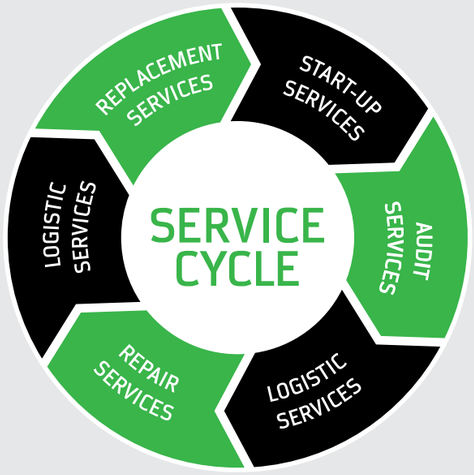

THE SCHAUFLER ACADEMY

PRACTICAL SOLUTIONS FOR A CHALLENGING INDUSTRY

At the SCHAUFLER Academy, the international seminar and training centre of BITZER, you will find German and English seminars and training courses regarding the handling of refrigeration and air conditioning components and alternative refrigerants. Not only service and installation specialists can rely on our training courses, but also project engineers, planners and technical engineers.

The SCHAUFLER Academy offers you training courses in small groups with theoretical contents and practical exercises on real training systems. Motivated and experienced teaching staff are available to answer questions and respond to your needs. Together with the pleasant and professional environment, this leads to fast learning success. We are looking forward to your visit.

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Standing for education and knowledge transfer, we consider it as our responsibility to provide information about our products, applications, tools and basics. In cases where in-person training is not possible, we can still provide you with some content to learn from home or in the office with our e-learning seminars.

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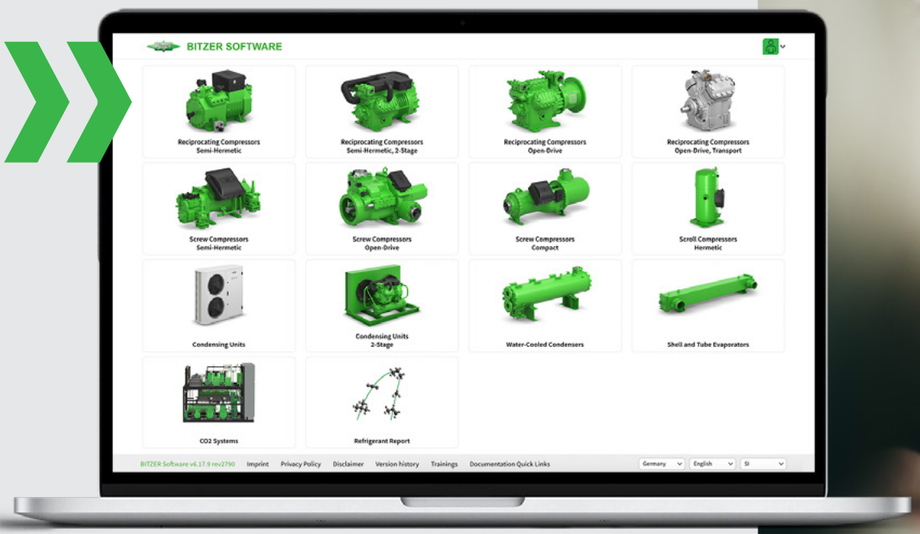
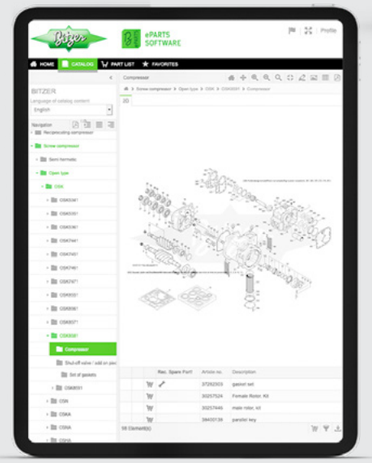
A PLUS FOR YOU

BITZER SOFTWARE

CHOOSE THE RIGHT PRODUCTS AND FIND MORE DETAILED TECHNICAL DATA.

Wherever you are and no matter what device you are using, BITZER SOFTWARE will help you select the appropriate product from our extensive and flexible range of products and accessories. Here you can find technical data and have the possibility to quickly calculate the performance data of compressors and components.

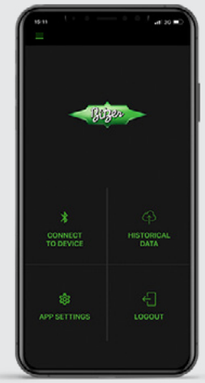




ePARTS SOFTWARE

FIND SUITABLE SPARE PARTS EASILY.

Our free-of-charge tool makes finding the appropriate spare parts for our products fast and easy. The parts are listed according to the type range and appear as a simple zoomable exploded-view drawing.



BEST APP AND BEST SOFTWARE

OPERATE YOUR BITZER IQ PRODUCTS WITH ONLY ONE SOFTWARE TOOL

BEST provides comprehensive access to all operating data and parameters. The intuitive user interface provides a complete overview of the operating status and a data log for easy maintenance and service.

FIND YOUR PLUS:

- BEST APP
- BEST SOFTWARE
- BITZER SPOT APP
- BITZER SOFTWARE
- REFRIGERANT RULER APP
- ePARTS SOFTWARE

BITZER SOFTWARE

BITZER Apps

LOCALLY ANCHORED – GLOBALLY PRESENT

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BITZER is represented in more than 40 countries with 75 locations and over 4,300 employees. You can find your personal contact representative and nearest location by scanning the QR code on the right, clicking on the map on our website or using the search function there. You can also get in touch with the global contact representative at all times.

CLOSER TO YOU.
BITZER WORLDWIDE.

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Subject to change // 09.2024