

PRO SERIES

BITZER Nordic

March 2025



DAS HERZ DER FRISCHE



ECOLINE PRO

ECOLINE PRO - OVERVIEW



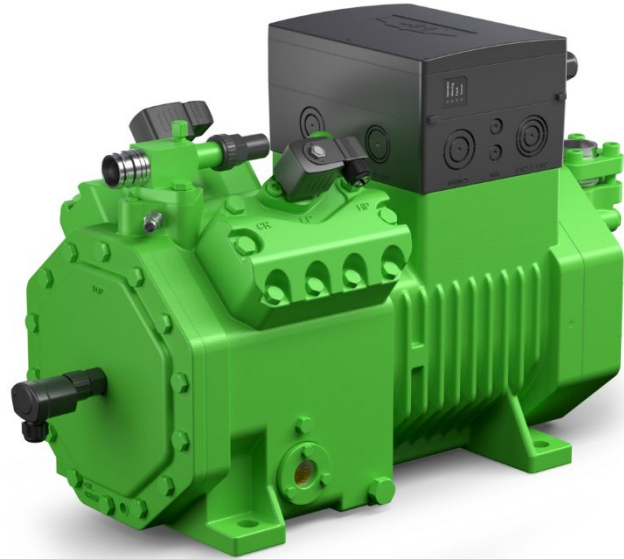
IQ MODUL

RECIPROCATING COMPRESSORS

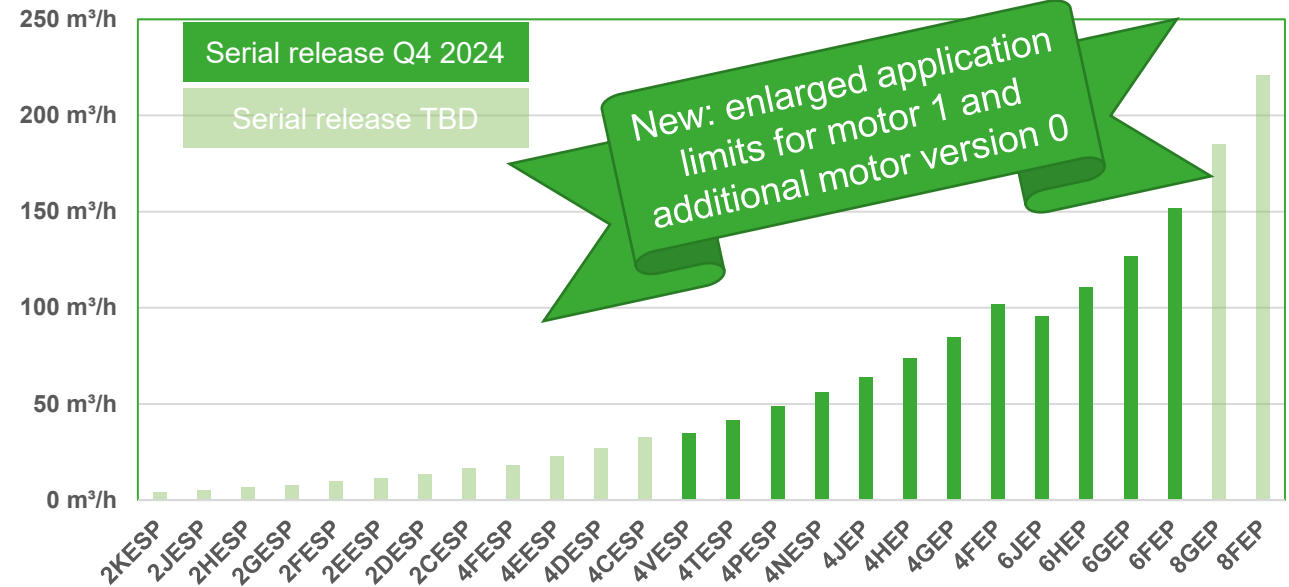
PROPANE

INTELLIGENT PRODUCTS

FREQUENCY INVERTER



ECOLINE PRO



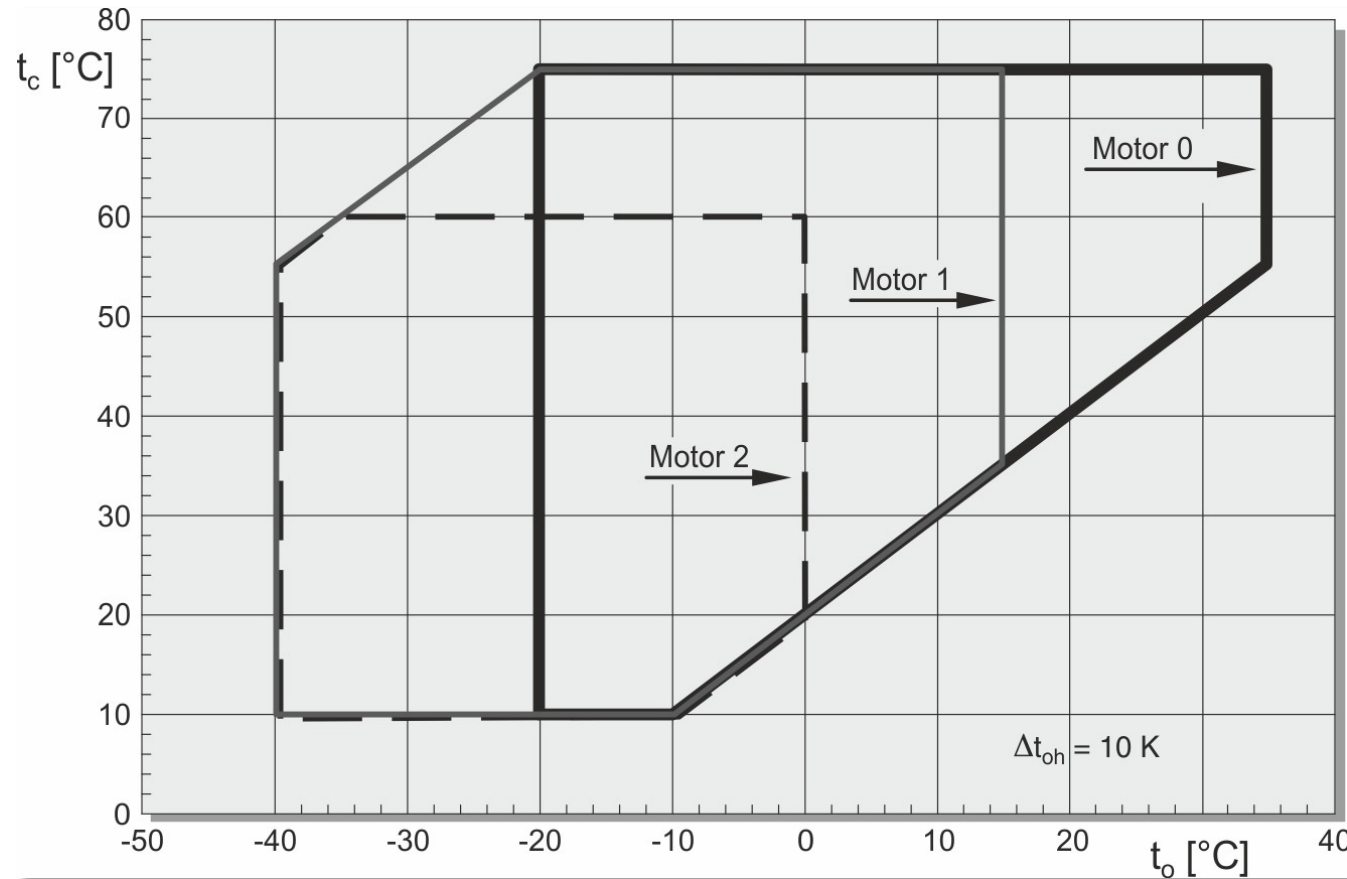
ECOLINE PRO SERIES FOR HYDROCARBON REFRIGERANTS

Displacements: 26
 Design: 2-, 4-, 6-, 8-Cylinders
 7 Housing sizes
 Types: 2KESp .. 8FEP
 Refrigerants: Hydrocarbons
 Motor: 3 Motor Versions

NEWS / Changes

- Enlarged application limits for motor version 1
- Additional motor version 0 for higher heat source temperatures
- PAG lubricant as a standard
- Release for IQ Module operation on-board
- Enhanced tightness design
- Optional VARISTEP
- Various ATEX versions

ECOLINE PRO - APPLICATION LIMITS R290 (4VESP...6FEP)



- // **Motor 0** for t_o up to 35°C, t_c up to 75°C perfectly suited for **water-to-water heat pumps** with **higher heat source temperature**; higher motor reserves for inverter operation
- // **Motor 1**: enlarged limits with t_o up to 15°C and t_c up to 75°C ideal for **air-conditioning and process cooling** and also for heat pump applications
- // **Motor 2** for all **cooling and freezing applications**
- // Note: Limits based on 10 K superheat

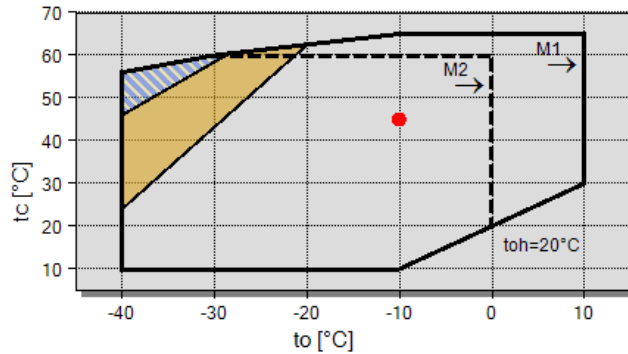
Motor 0 and Motor 1 released with PAG oil **BSG68K**

Motor 2 with PAG oil BSG68K or PAO SHC226E

ECOLINE PRO - APPLICATION LIMITS

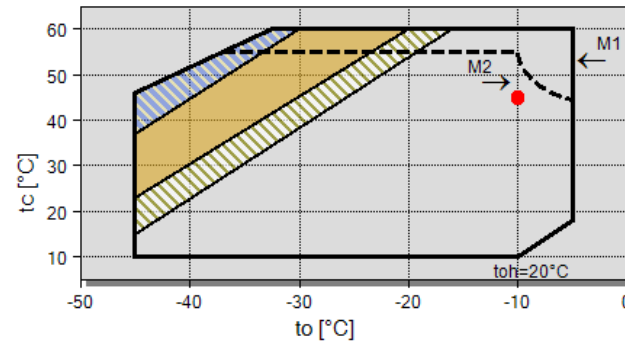


R290
2KESP...8FEP



- additional cooling & suction gas superheat $\le 20K$
- additional cooling or suction gas superheat $\le 20K$
- M1: motor 1
- M2: motor 2

R1270
2KESP...8FEP



- additional cooling & suction gas superheat $\le 20K$
- additional cooling or suction gas superheat $\le 20K$
- suction gas superheat $\le 20K$
- M1: motor 1

Lubricants for R290:

Superheat ≥ 10 K: PAG BSG68K
Superheat ≥ 20 K: PAO SHC226E

Lubricants for R1270:

Superheat ≥ 10 K: PAG BSG68K
Superheat ≥ 20 K: PAO SHC226E

R600a / R600
2KESP...6FEP

- // Preliminary applications limits up with to 110°C condensing temperature
- // On request for field test applications
- // Numerous systems in operations
- // Calculations and performance data on request

Compressor performance calculation

Operating conditions		Performance data*	
Refrigerant	R600a	Compressor model	4FEP-35 [1] [Motor 1]
Evaporating temperature	-10,0 °C	Cooling capacity, evaporator	18,75 kW
Useful Superheat evaporator [5K...20K]	10,0 K 5K minimum superheat for R600a application	Power input	7,15 kW
Condensing temperature	50,0 °C	COP/EER	2,62 -
Subcooling condenser [0K...20K]	20,0 K	Mass flow	225 kg/h
Power supply frequency	50,0 Hz (400V) VSD frequency: 50,0 Hz	Current absorption	20,0 A [58,4A max]
		Recommended VARIPACK frequency inverter	FNY-24-4 or FNU-24-4
		Discharge gas temperature [approx. @ 50Hz]	72,0 °C

* Listed performance data is based on measurements and theoretical calculations that might have higher tolerances than the standard.

ECOLINE PRO - ACCESSORIES AND OPTIONS



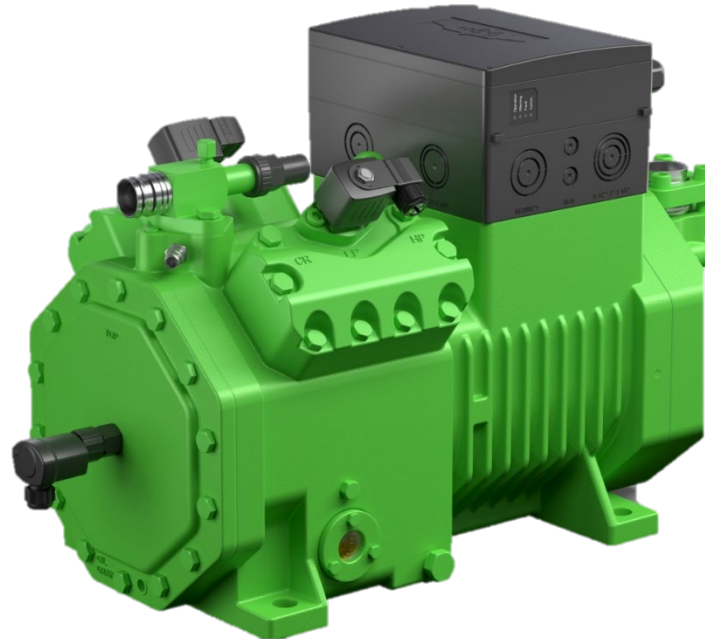
VARISTEP: designed for high switching frequency and 10 .. 100 % capacity control

Field test: CR + Inverter for highest continuous modulation range with highest efficiency

Improved **drive gear** for high reliability

// Pistons

// Main bearings



Optimized **motor sizes** with enlarged application limits for motor 1 and new motor version 0 for HTHP

Optimized lubrication system for hydrocarbon series

// PAG oil as standard lubricant

// OLM-IQ available as retrofit kit

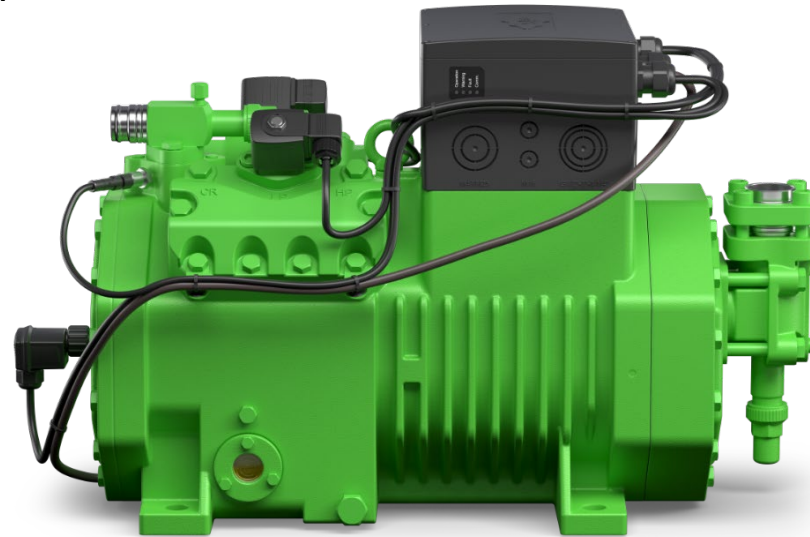
Classification according to EN1127-1

// Enhanced tightness

// Considered technically tight in the long term

STANDARD

- Protection device
 - IQ Module CM-RC-02 for 4FESP... 8FEP
 - SE-B3 for 2KESP .. 2CESP
- PAG oil BSG68K
- Vibration dampers
- Suction and discharge shut-off valves



OPTIONS

- // Protection Device
 - // SE-B3 for 4FESP...8FEP
 - // CM-RC-02 for 2KESP...2CESP
 - // PAO oil: SHC226E
 - // VARISTEP capacity control
 - // 10 ... 100 % for 4 and 6 cylinder
 - // 50 ... 100 % for 8 cylinder
 - // Oil level control OLC-D1 or DP2
 - // Discharge gas temperature sensor
 - // Application limit monitoring LP and HP *
 - // OLM-IQ *
- * as retrofit kit

Please be aware that the cable glands on the module housing have to be checked and purchased externally if additional options are retrofitted.



ECOLINE PRO ATEX VERSIONS



ECOLINE PRO - ATEX VERSIONS



// INFORMATION 37820395

// No ignition sources under normal operation without failures

// The **ECOLINE PRO** series is classified according to EN1127-1 and considered to be technically tight in the long term

– No ATEX zone must be assumed around the product in case of flammable refrigerants inside the compressor

// The IQ MODULE CM-RC-02 can remain on the compressor ex-works

Ignition sources under normal operation

The product and its components are, when installed according to these operating instructions, free from ignition sources during normal operation without failures, that could ignite flammable refrigerants of safety class A2L and A3 of the group IIA according to IEC60079. This evaluation is based on IEC60335-2-40:2022 clause 22.116 for ignition sources with arcs and sparks under normal operation and clause 22.117 for ignition sources with high temperature surfaces.

The product is not completely tested for the use with flammable refrigerants in applications acc. to UL standards or in appliances acc. to EN/IEC60335 standards.

Classification according to EN1127-1

The product has enhanced tightness according to EN1127-1 and is therefore considered to be technically tight in the long term. This classification means, that no ATEX zone has to be assumed around the product in the case of flammable gases inside the product.



Information

English

Scope of application

The statements in this information sheet apply to all BITZER semi-hermetic and hermetic reciprocating, screw and scroll compressors.

The permitted refrigerants are listed for each compressor series in the respective operating instructions in the chapter Application range.

Use of flammable refrigerants of the A2L safety classes and A3 (e. g. R1234yf or R290)

The information in this chapter about the use of refrigerants of the A2L safety class refer to European regulations and directives. In regions outside the EU, observe the local regulations.

This chapter describes the additional residual risks posed by the product when using A3 and A2L safety class refrigerants and provides explanations. This information helps the system manufacturer carry out the required risk assessment of the system; it can in no way replace the risk assessment for the system. For further information on the system design, see Technical Information AT-660.

Design, maintenance and operation of refrigeration systems using flammable refrigerants of the safety class A2L are subject to particular safety regulations.



Information

When using a flammable refrigerant: Affix the warning sign "Warning: flammable materials" (W021 according to ISO7010) well visibly to the compressor.

Ignition sources under normal operation

The product and its components are, when installed according to these operating instructions, free from ignition sources during normal operation without failures, that could ignite flammable refrigerants of safety class A2L and A3 of the group IIA according to IEC60079. This evaluation is based on IEC60335-2-40:2022 clause 22.116 for ignition sources with arcs and sparks under normal operation and clause 22.117 for ignition sources with high temperature surfaces.

The product is not completely tested for the use with flammable refrigerants in applications acc. to UL standards or in appliances acc. to EN/IEC60335 standards.

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Tel +49 7031 932-0 // Fax +49 7031 932-147 // bitzer@bitzer.de // www.bitzer.de

Änderungen vorbehalten // Änderungen vorbehalten // Subject to change // Toutes modifications réservées // 04.2024

2/4 // 37820395

Classification according to EN1127-1

The product has enhanced tightness according to EN1127-1 and is therefore considered to be technically tight in the long term. This classification means, that no ATEX zone has to be assumed around the product in the case of flammable gases inside the product.

Work on systems with A3, A2L and B2L refrigerants

If the refrigerant circuit needs to be opened:

DANGER
Explosion danger!
Do not braze or solder pipes!

- ▶ Loosen pipe fittings or cut to open the pipes.
- ▶ Avoid sparking.

Used oil from systems with A3 or A2L refrigerants

NOTICE
Fire hazard!
The used oil contains a relatively large amount of dissolved refrigerant.
Pack used oil safely. Dispose of in an environmentally friendly manner.

Hydrocarbons, for example propane, R290 or propene, R1270 and low-fluorinated flammable refrigerants, for example R1234yf, dissolve very well in refrigeration compressor oil at room temperature. This also applies to blends containing these substances.

Used oil from such systems may still contain relatively high percentages of dissolved flammable gases even at atmospheric pressure. These components gas out.

Observe during storage and transport:

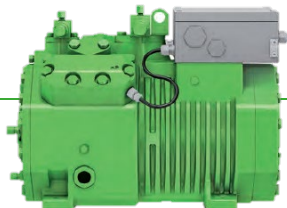
- ▶ Fill used oil into pressure resistant vessels.
- ▶ Fill vessels with nitrogen as a protective gas and close them.
- ▶ Mark them, e. g. with the warning sign "flammable substance" W021 from ISO7010.

ECOLINE PRO - ATEX VERSIONS .EX, .X2 AND .X3



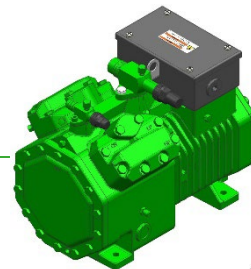
.EX

- // ATEX evaluation of compressor
 - ATEX type label
 - Ex marking
 - **Ex II -/2G Ex h db eb ib mb IIC T3 Gb**
 - now: enhanced tightness qualified
 - ATEX evaluation
 - mechanics
 - electrics
 - static electricity
 - no mechanical, electrical or static ignition sources
 - under normal operation and failures
 - use in systems with R290 or R1270 or other A3 refrigerants
 - in ATEX Zone 1 environment



X2

- // ATEX evaluation of compressor
 - ATEX type label
 - Ex marking
 - **Ex II -3G Ex h e IIA T2 Gc**
 - now: enhanced tightness qualified
 - no ATEX zone caused by flammable refrigerant inside
 - ATEX evaluation
 - mechanics
 - electrics
 - no mechanical or electrical ignition sources under normal operation without failures
 - use in systems with R290 or R1270 or other A3 refrigerants
 - in ATEX Zone 2 environment



X3

- // ATEX evaluation of compressor mechanics
 - ATEX type label
 - Ex marking
 - **Ex II -3G Ex h IIA T2 Gc X**
 - now: enhanced tightness qualified
 - no ATEX zone caused by flammable refrigerant inside
 - ATEX evaluation
 - no mechanical ignition sources under normal operation without failures
 - electric equipment not evaluated
 - user can establish electrics acc. to his requirements
 - use in systems with R290 or R1270 or other A3 refrigerants
 - with ATEX requirements not specified in detail

SUMMARY



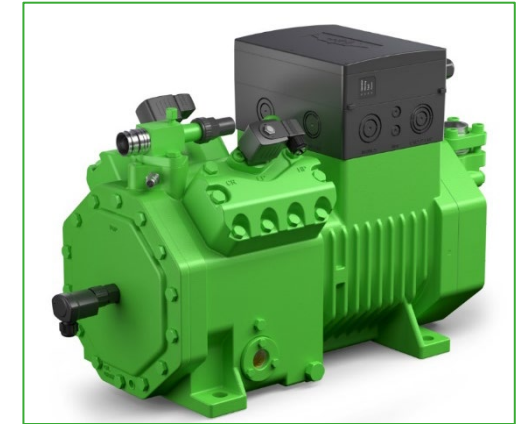
//ECOLINE PRO is the universal and ideal compressor series for hydrocarbon refrigerants in freezing, cooling and heating applications

//Exceptionally high efficiency combined with outstanding reliability for low operating costs

//Precise capacity control by inverter and VARISTEP result in stable and smooth operation

//Optional accessories for the oil management and application limit monitoring

//Hydrocarbon agreement is mandatory



 RECIPROCATING COMPRESSORS

 HEAT PUMPS

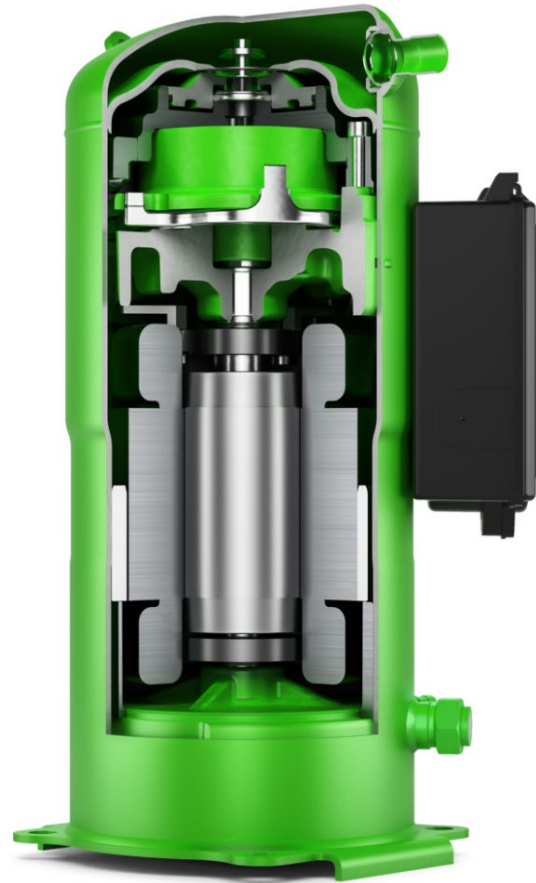
 PROPANE

 AIR CONDITIONING

 INTELLIGENT PRODUCTS

 PROCESS COOLING

 COMMERCIAL REFRIGERATION



ORBIT PRO



DAS HERZ DER FRISCHE

ORBIT PRO → NAMING

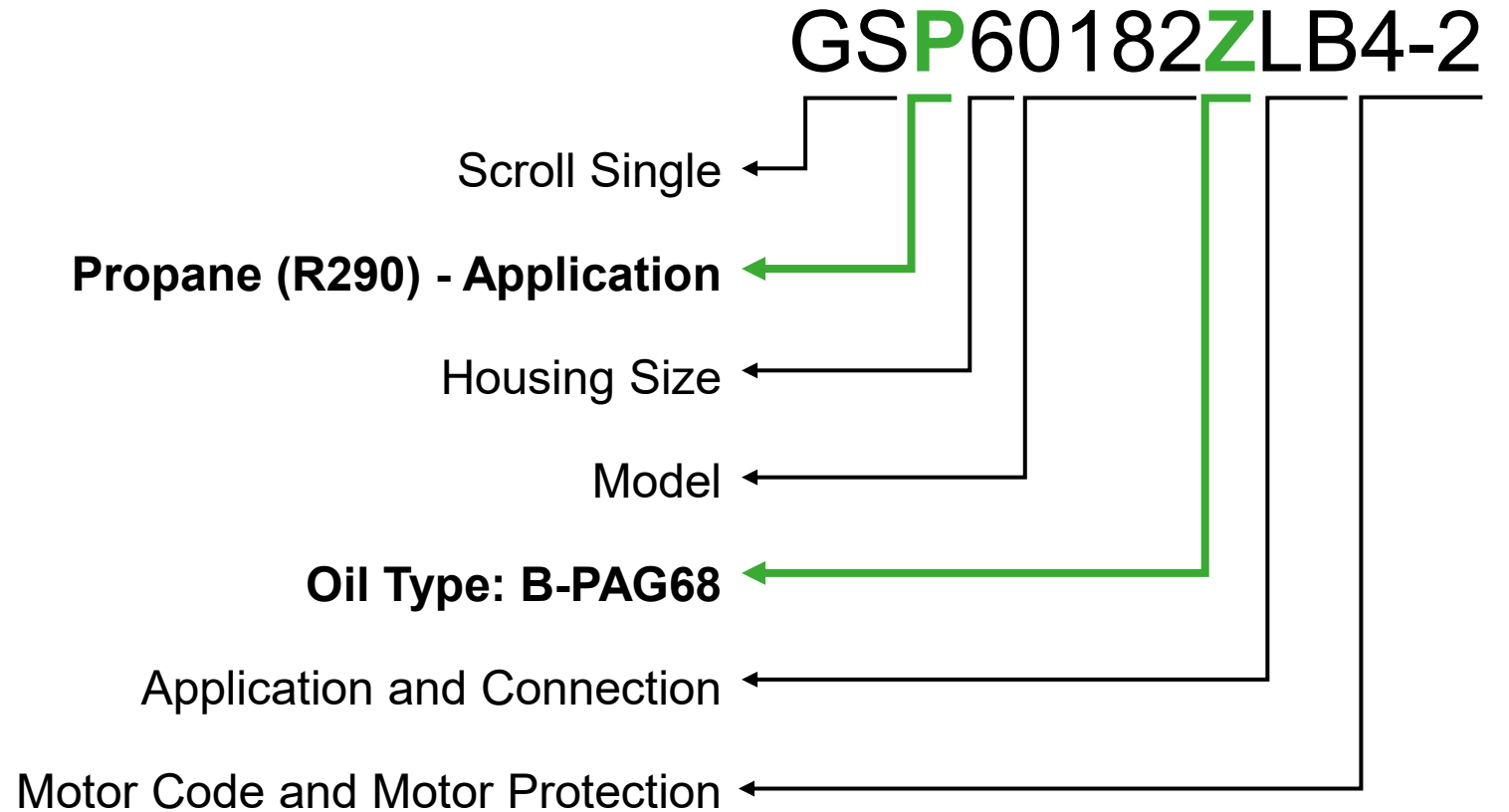


ORBIT PRO



ORBIT (single): 19.8 – 77.2 m³/h

- Chiller, reversible and **heat pumps**
- Suitable for VSD **35 – 75 Hz**
- Optimized for **HFO blends**



ORBIT PRO → SIZES



ORBIT PRO



// Available sizes:

- GSP60120ZLB4-2
- GSP60137ZLB4-2
- GSP60154ZLB4-2
- GSP60182ZLB4-2
- GSP60235ZLB4-2
- GSP80295ZLB4-2
- GSP80385ZLB4-2
- GSP80421ZLB4-2
- GSP80485ZLB4-2

ORBIT PRO



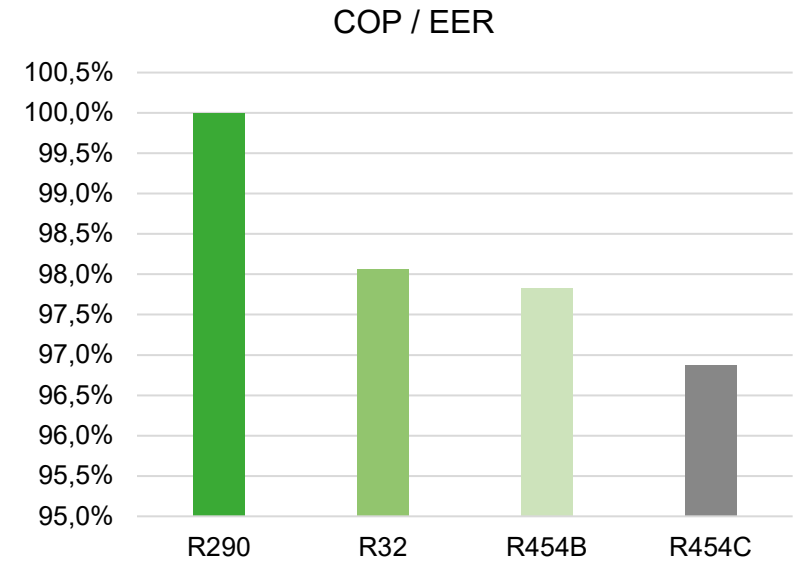
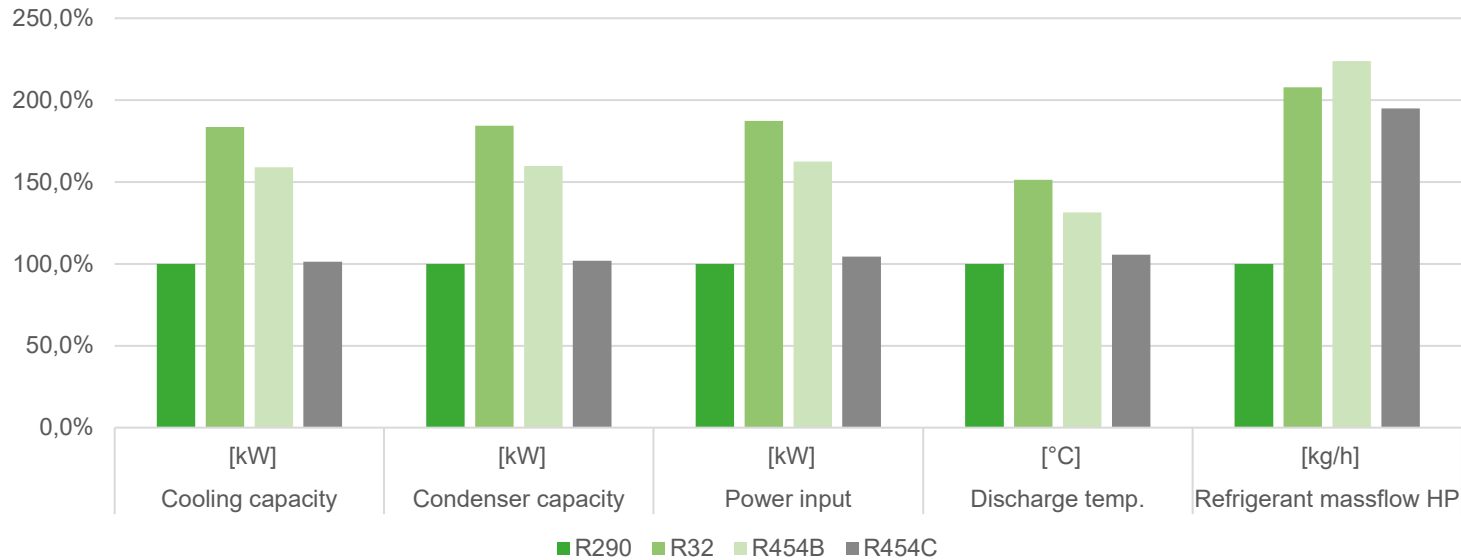
// Technical Information Online:

- [Operating Instructions](#)
- [Use of propane \(R290\) with BITZER compressors \(AT-660\)](#)
- [Oil](#)
- [Additional information](#)

// BITZER Software:

- [Online version available](#)

SCROLL COMPRESSOR ORBIT → REFRIGERANT COMPARISON



GSD60182VL, GSP60182ZL, to=5°C tc=50°C sh=10K sc=0K	Cooling capacity	Condenser capacity	Power input	COP / EER	Discharge temp.	Refrigerant massflow HP	Safety Group	GWP (AR4)
	[kW]	[kW]	[kW]		[°C]	[kg/h]		
R290	24,4	31,3	6,89	3,54	70	336	A3	3
R32	44,8	57,7	12,9	3,47	106	698	A2L	675
R454B	38,8	50	11,2	3,46	92	752	A2L	466
R454C	24,7	31,9	7,2	3,43	74	655	A2L	148

// Calculate Single-

and Multiscroll Systems:

// Free choice of parameters:

// Compressor Models or
Cooling Capacity

// Evaporating / Condensing
Temperatures

// Subcooling and Superheat

BITZER SOFTWARE

Scroll Compressors, Hermetic

Mode: Refrigeration and air conditioning

Refrigerant: R290

Reference temperature: Dew point temp.

Compressor type: Single Compressor

Series: ORBIT PRO

Compressor selection

Cooling capacity: 60 kW

Compressor model

Circuit 1

Number compressors: 2

1.1: GSP80385ZL incl. CR

1.2: GSP80385ZL incl. CR

Circuit 2

Number compressors: 0

Operating point

Calculation mode: 1

to [°C]: 5 tc [°C]: 50

Operating conditions

Subcooling method: Natural

Liq. subc. (in condenser): 0 K

Suct. gas superheat: 10 K

Useful superheat: 100 %

Power supply

Supply frequency: 50Hz

Supply voltage: 400V

Result
Limits
Technical Data
Dimensions
Accessories
Information
Documentation

Overview Detail

>> A

Evaporating SST	5,00 °C
Condensing SDT	50,0 °C

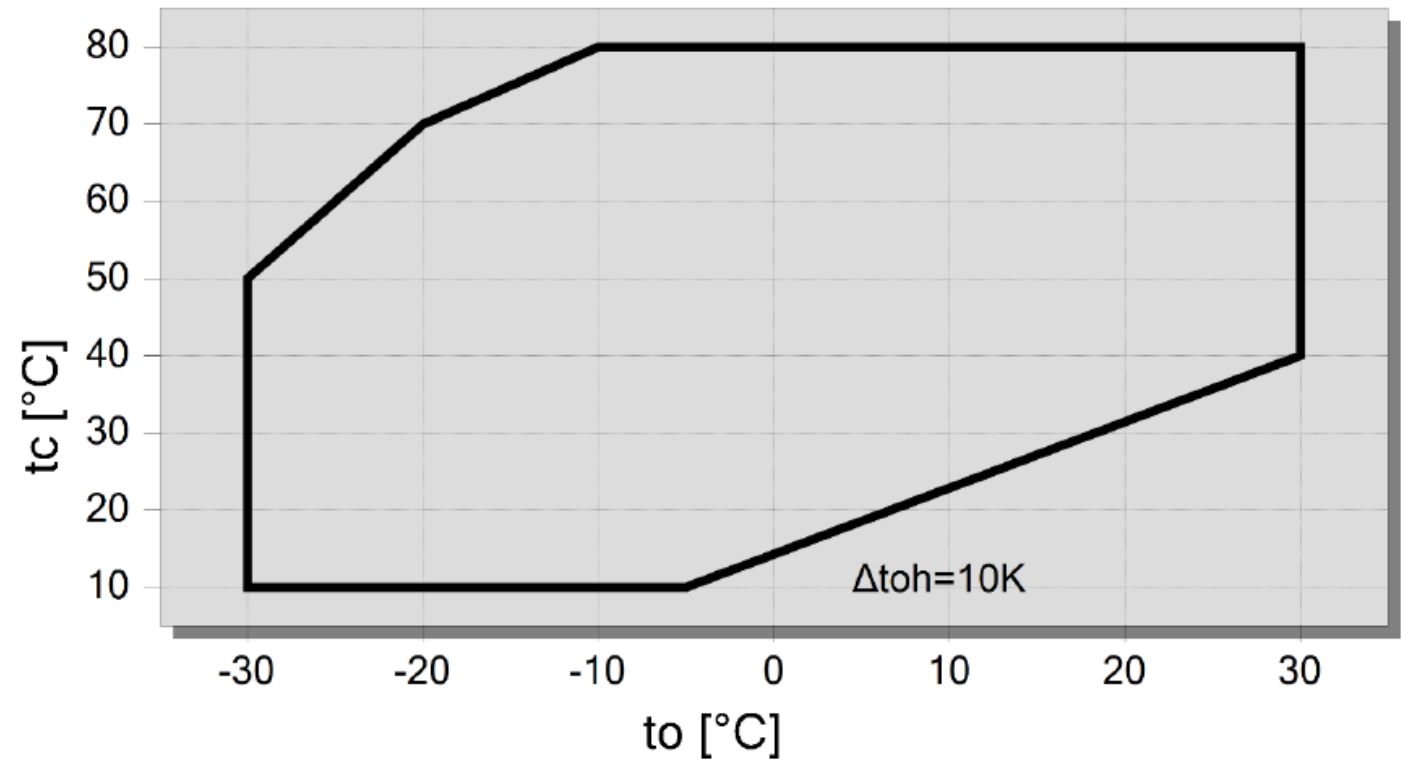
Compressor
Total

Capacity steps	
Cooling capacity	102,6 kW
Cooling capacity *	--
Evaporator capacity	102,6 kW
Ratio	--
Power input	28,7 kW
Current (400V)	54,5 A
Voltage range	--
Condenser capacity	131,3 kW
COP/EER	3,57
COP/EER *	--
Mass flow	1415 kg/h
Discharge gas temp. w/o cooling	70,4 °C

ORBIT PRO → APPLICATION



ORBIT PRO 6

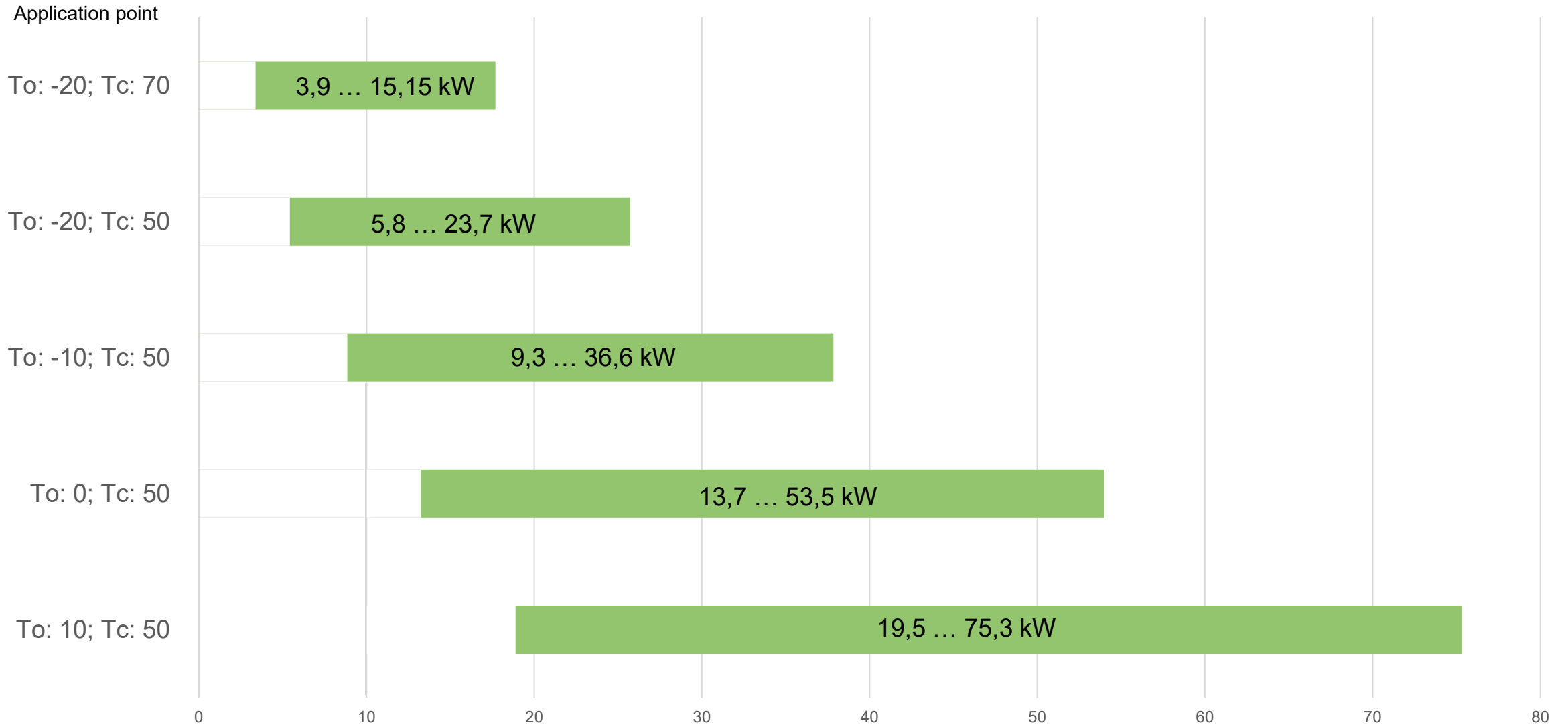


Tentative Data

ORBIT PRO → CAPACITIES



Cooling capacity in kW @ 50 Hz **single operation**

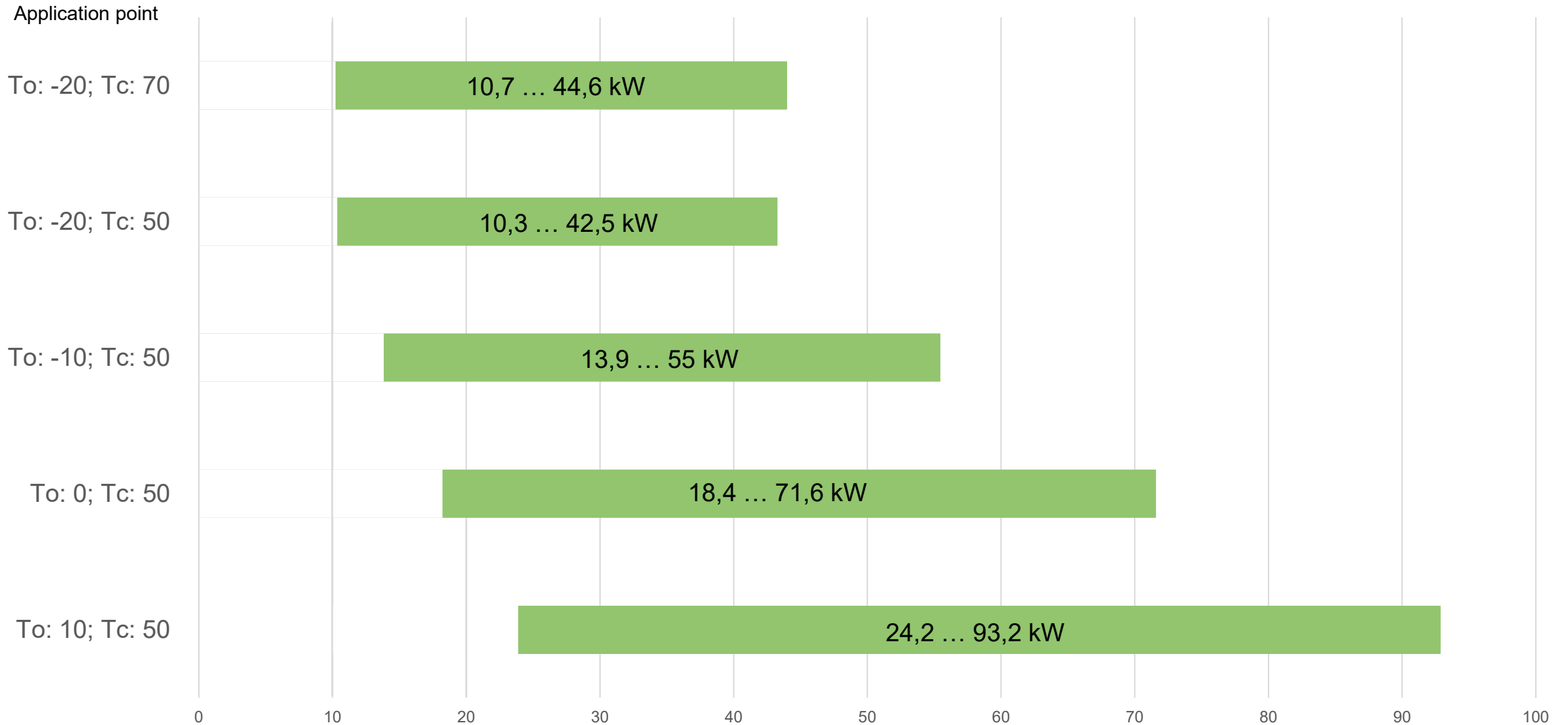


Tentative Data

ORBIT PRO → CAPACITIES



Heating capacity in kW @ 50 Hz **single operation**





TANDEM AND TRIO COMBINATIONS

BITZER Advanced Header Technology BAHT

ORBIT PRO → COMBINATIONS



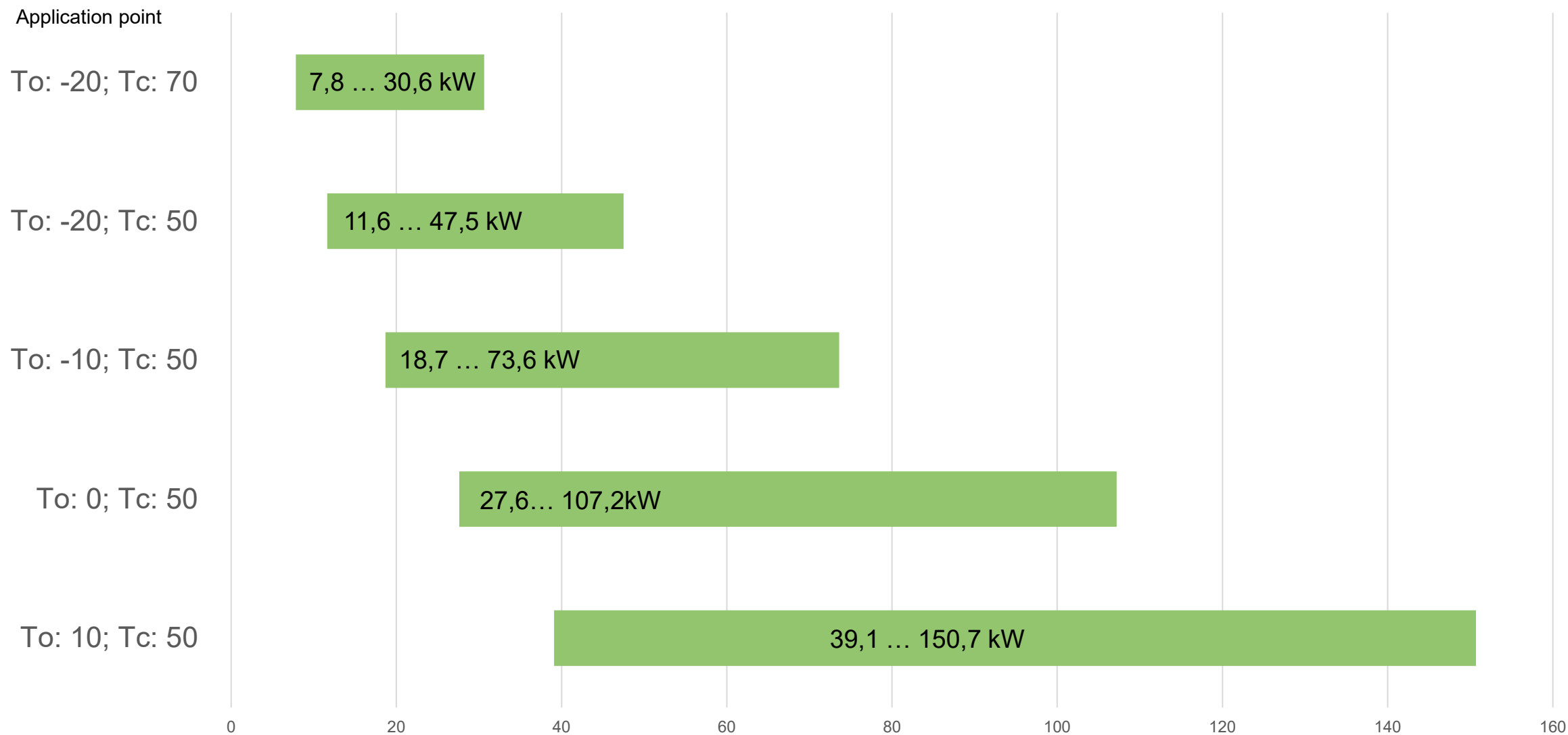
ORBIT PRO



// Available sizes:

- GSP60120ZLB4-2
- GSP60137ZLB4-2
- GSP60154ZLB4-2
- GSP60182ZLB4-2
- GSP60235ZLB4-2
- GSP80295ZLB4-2
- GSP80385ZLB4-2
- GSP80421ZLB4-2
- GSP80485ZLB4-2

AVAILABLE CAPACITIES R290 – TANDEM OPERATION - COOLING

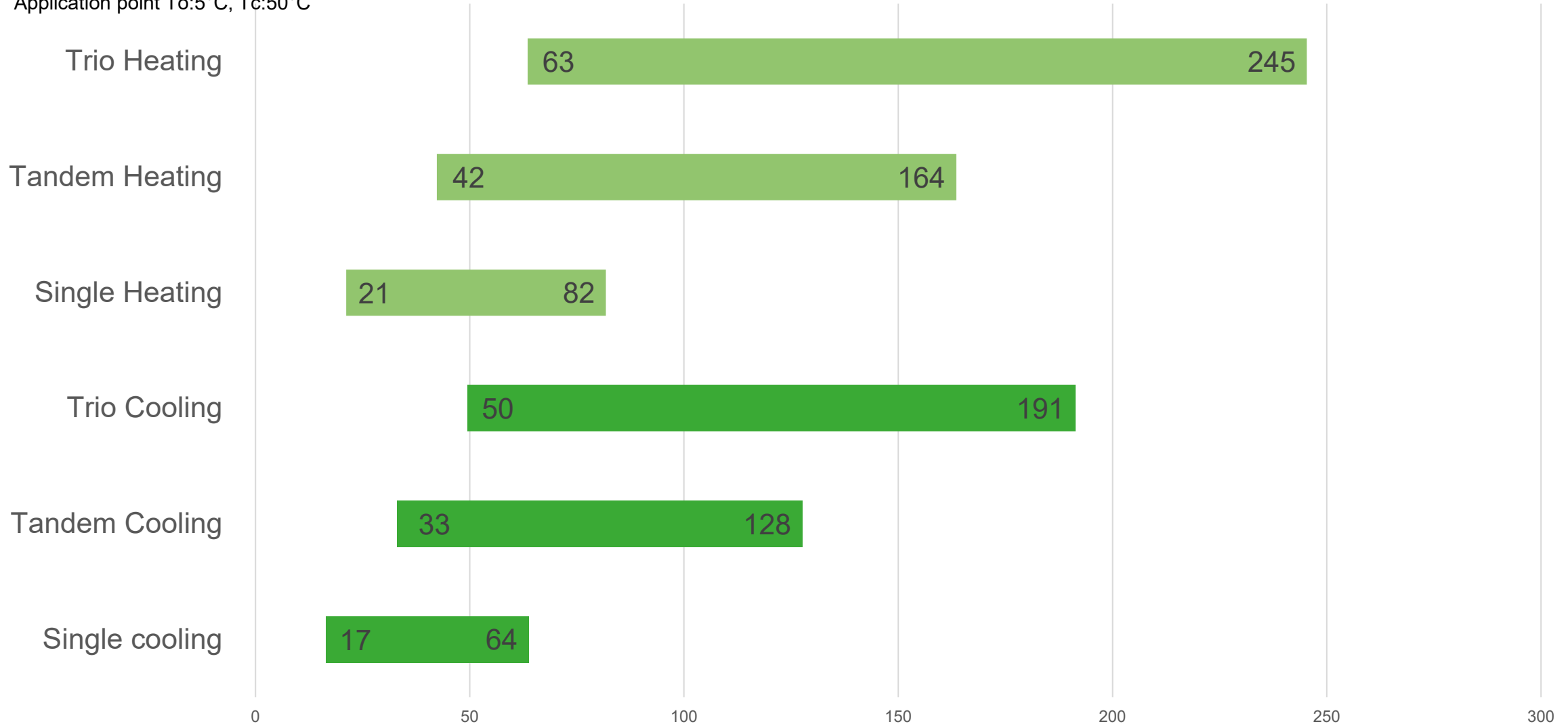


Tentative Data

RANGE FOR COOLING AND HEATING



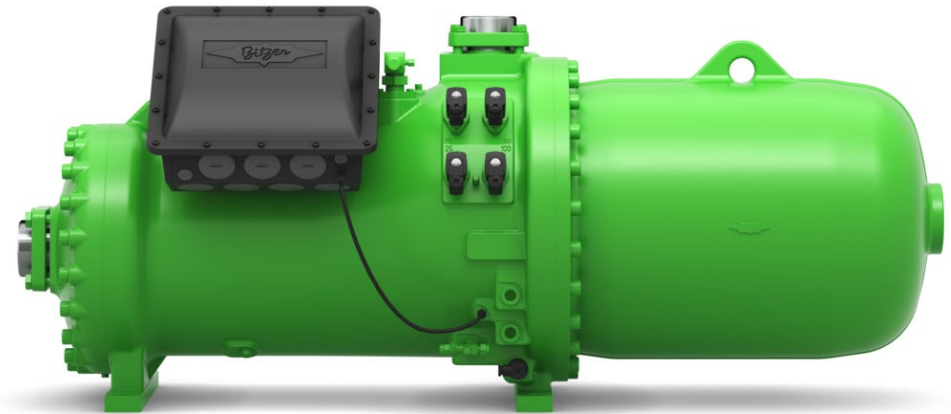
Application point To:5°C, Tc:50°C



Tentative Data



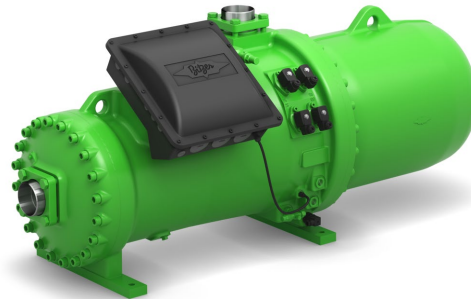
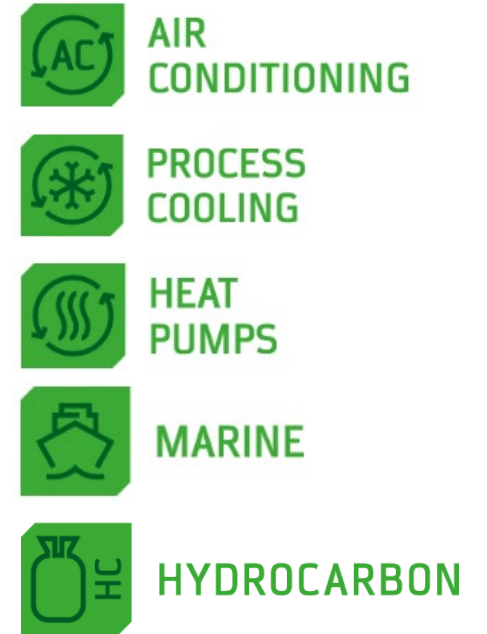
COMPACT SCREW PRO SERIES



COMPACT SCREW PRO SERIES



- Designed for operation with Hydrocarbon refrigerants:
 - Propane R290
 - Isobutane R600a
 - Propene R1270 – special application on request
- Changes of CSHP vs Standard CSH series:
 - Electrical equipment, safety devices, oil filling and the internal lubrication system.
- Typical Applications
 - R290: Air conditioning, Comfort heating, Process cooling & heating, Data center
 - R600a: Comfort & Process heat pumps, District heating
 - R1270: LT & MT liquid chillers



CSHP series is only available for OEM system manufacturers who have experience in handling flammable refrigerants and signed Hydrocarbon Agreement

COMPACT SCREW PRO SERIES



CSHP 8573 - 140 Z - 40P

Semi-hermetic compact screw compressor

CSHP 8573 - 140 Z - 40P

Application range

CSHP 8573 - 140 Z - 40P

Series property

P = design for operation with hydrocarbons

2T = design for high temperature applicatio

CSHP 8573 - 140 Z - 40P

Housing size

CSHP 8573 - 140 Z - 40P

Compressor execution

CSHP 8573 - 140 Z - 40P

Displacement

CSHP 8573 - 140 Z - 40P

Compressor execution

CSHP 8573 - 140 Z - 40P

Motor size

CSHP 8573 - 140 Z - 40P

Oil charge:

Y = polyolester oil

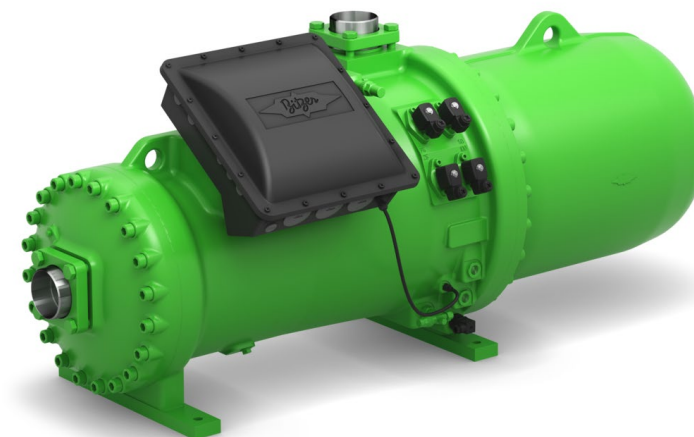
P = poly-alpha-olefin

Z = polyalkylene glycol oil

without final letter: B320SH

CSHP 8573 - 140 Z - 40P

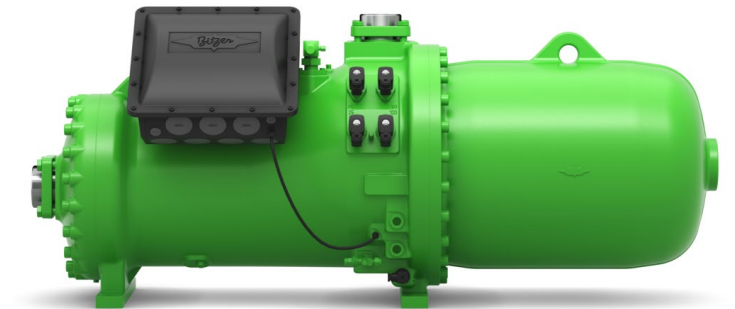
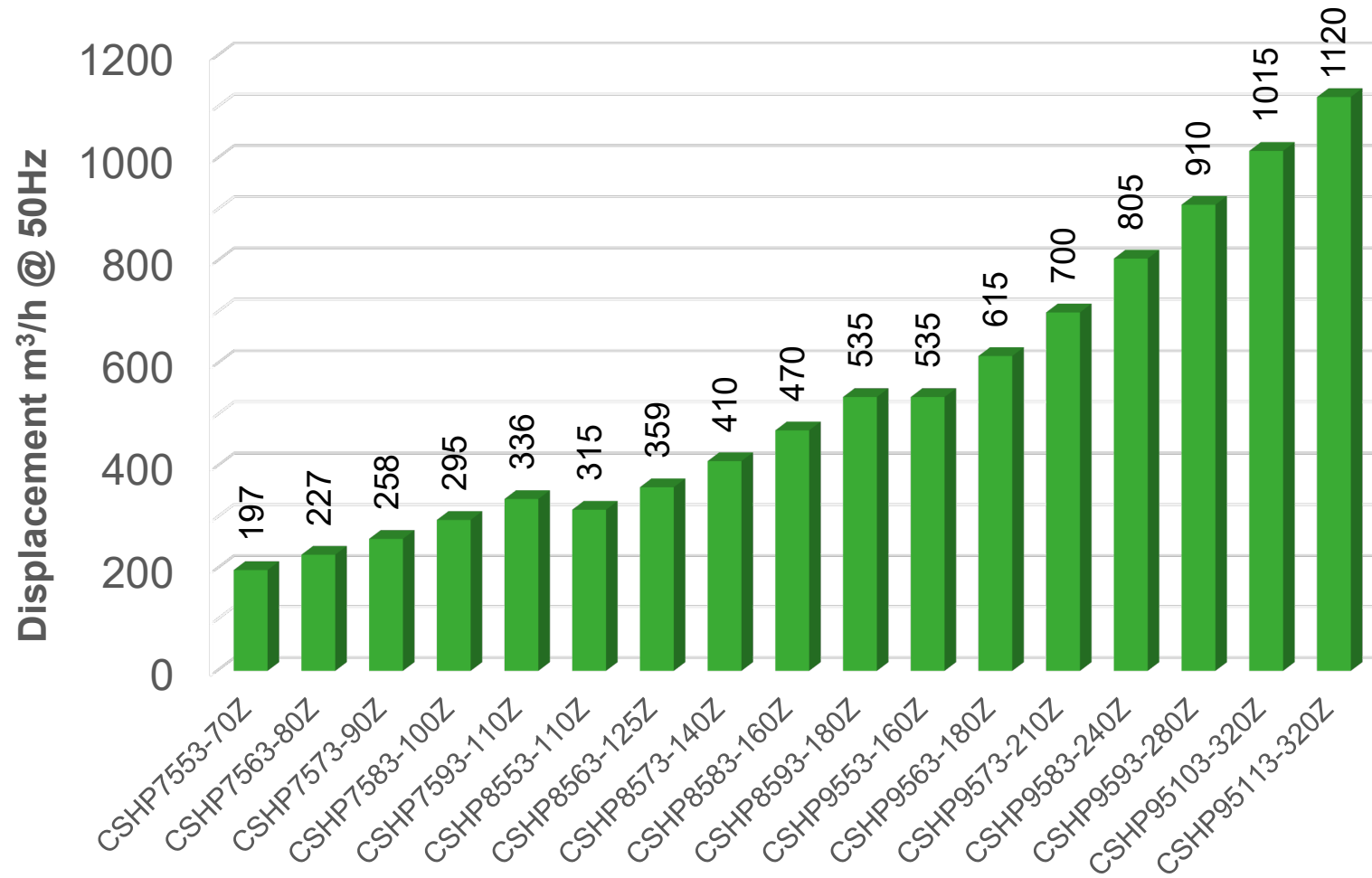
Motor code



DISPLACEMENTS



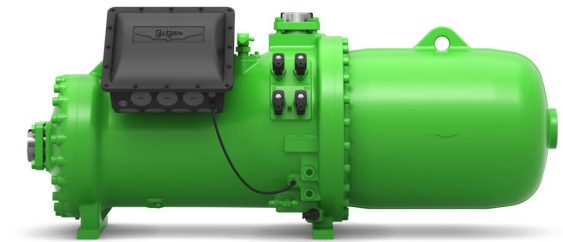
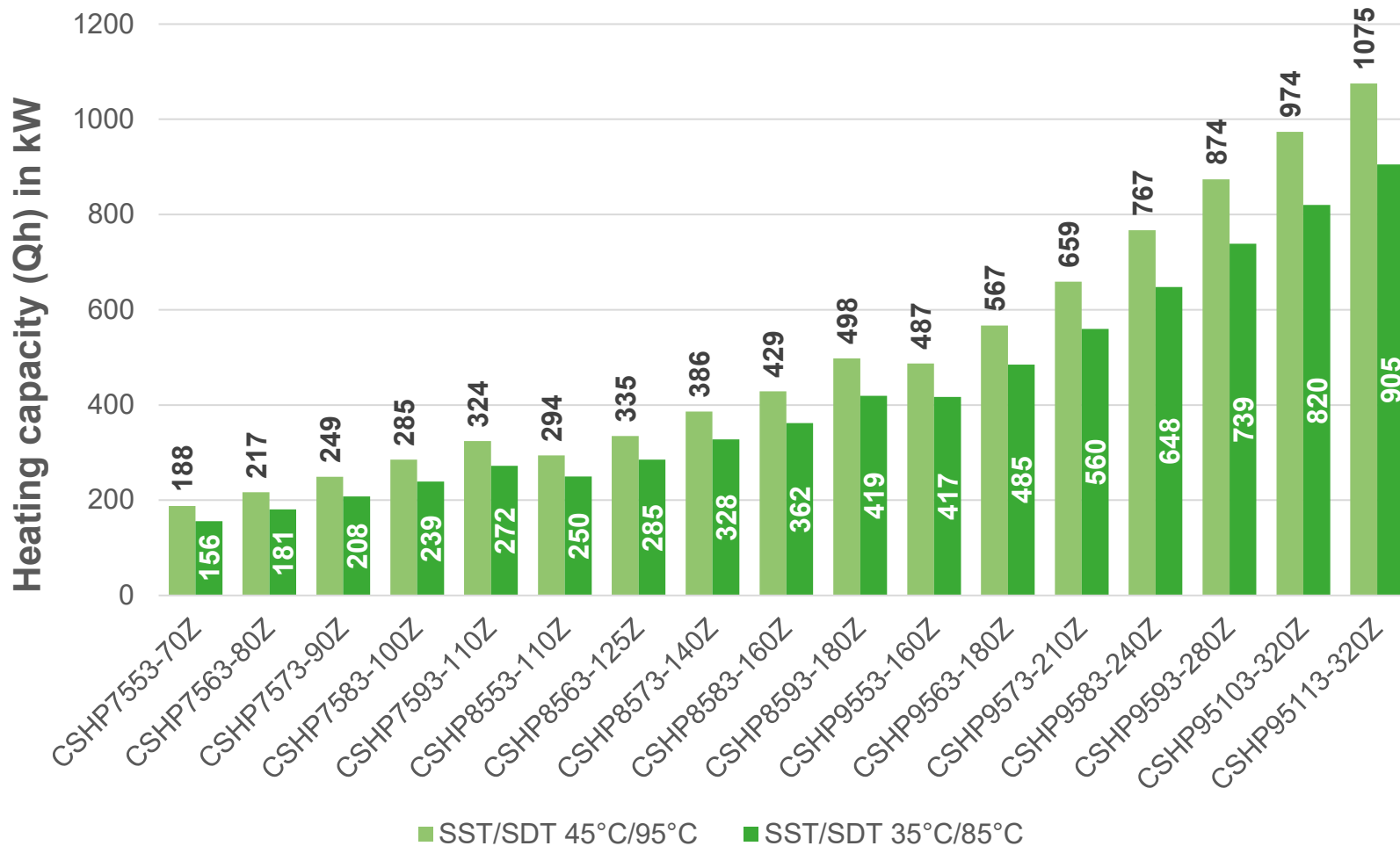
// CSHP75..95 Motor 2 R600a



HEATING CAPACITY



// CSHP75..95 Motor 2 R600a

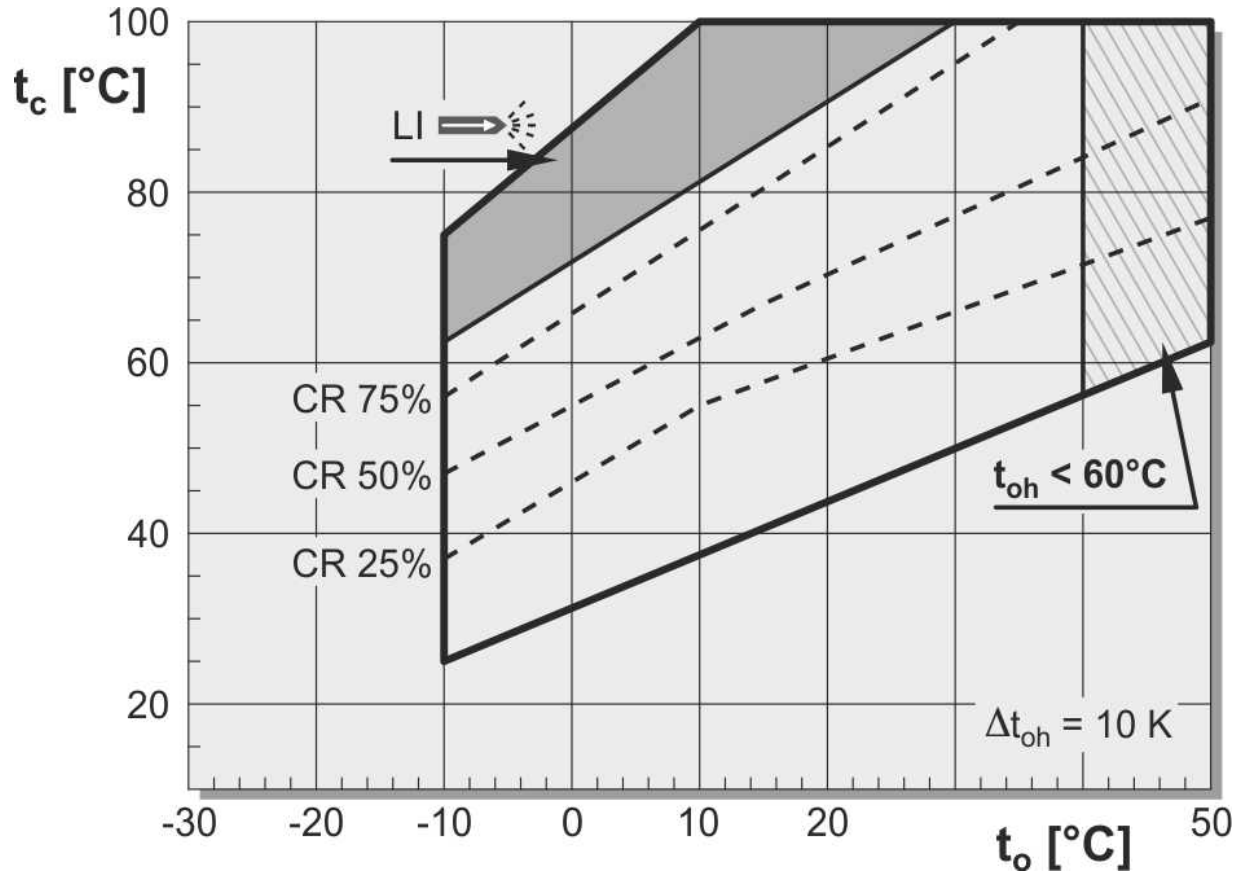


- // Conditions:
- 50Hz (2900 rpm)
 - Δt_{oh} : 20K
 - Δt_u : 0K

// Note:
 Heating capacity (Q_h) calculated without heat transmission by natural convection ($Q_h = Q_o + P_e$)

CSHP motor 2 application envelope R600a

– Calculations on request or minitool



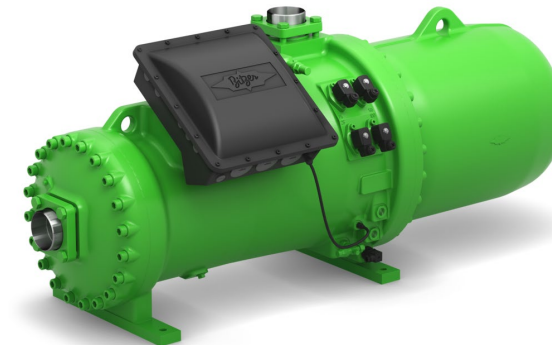
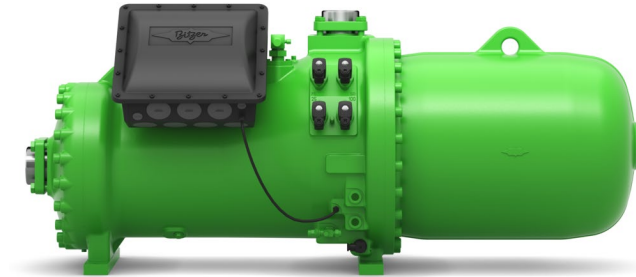
PROCESS & DISTRICT HEATING optimized

- // $SDT_{max} + 100^\circ\text{C}$
- // up to $t_{fluid} \sim +95^\circ\text{C}$



// CSHP75..95 Motor 2 R600a

- **Compressor Protection Module (CPD)**
 - STD: **SE-i1** (FSK = Full Sensor Kit) – Prewired ex-factory
- **Temperature limits**
 - DGTmax +120°C
 - max. suction gas temp. SGT tv1 < 65°C (*consider part-load*)
 - min. discharge gas superheat Δt_{DG} **20K**
 - *Internal Heat Exchanger IHX recommended*
- **Mechanical Capacity Regulation CR**
 - CR100..CR50
 - CR25 for Start Unloading only (SU)
- **ext. VSD operation**
 - VSD range: **30..60Hz**
 - In case DGT exceeds 110°C:
use Liquid Injection (LI) or external Oil Cooler (OC)



TECHNICAL EXECUTION



// SE-i1 (FSK = Full Sensor Kit)

- Mounted in terminal box – Prewired
- 115 V .. 230 V-1-50/60 Hz
- OLC-D1-S Minimum
- LP transmitter – prewired
- HP transmitter – mount with T-piece to external dashboard
- Oil temperature – Screw in NTC
- Motor voltage 200..690 V
- suitable for VSD operation
- Allowable ambient temperature -30..+60°C

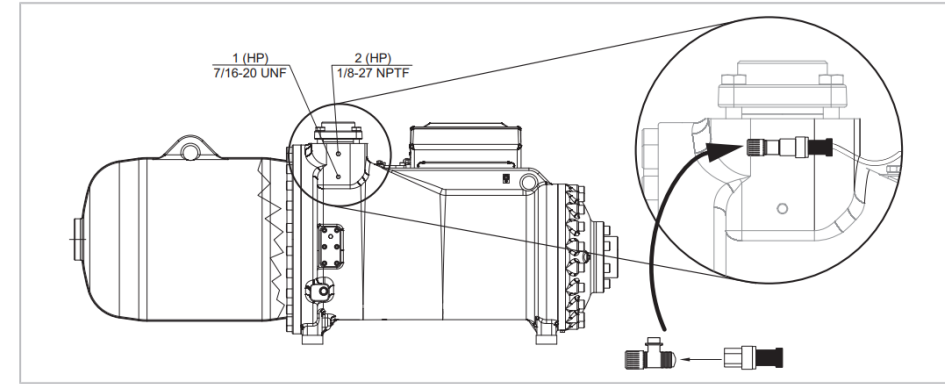


Fig. 3: CS.95 compressor: Mounting of the high pressure transmitter

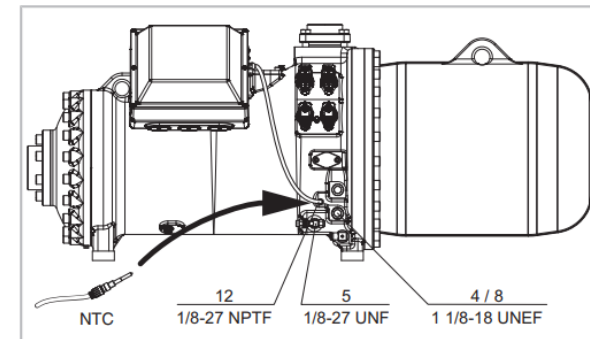


Fig. 5: CS. compressor: Replacing the PTC sensor with the NTC sensor

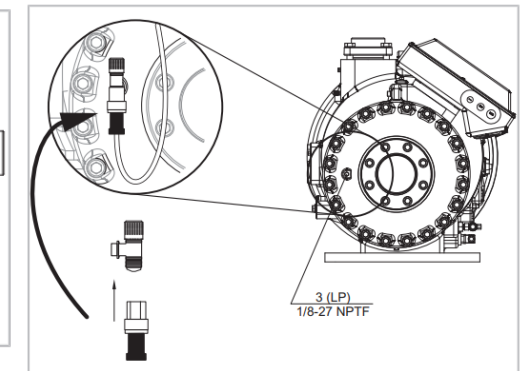


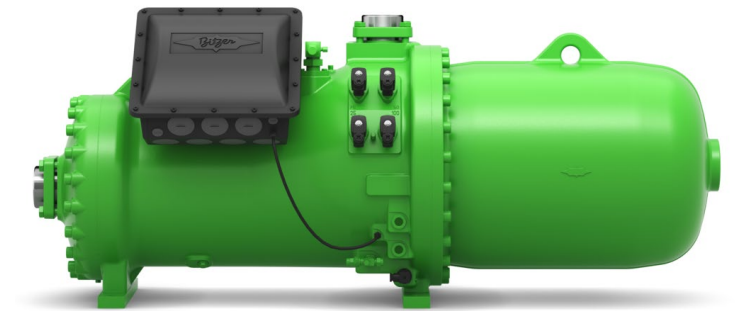
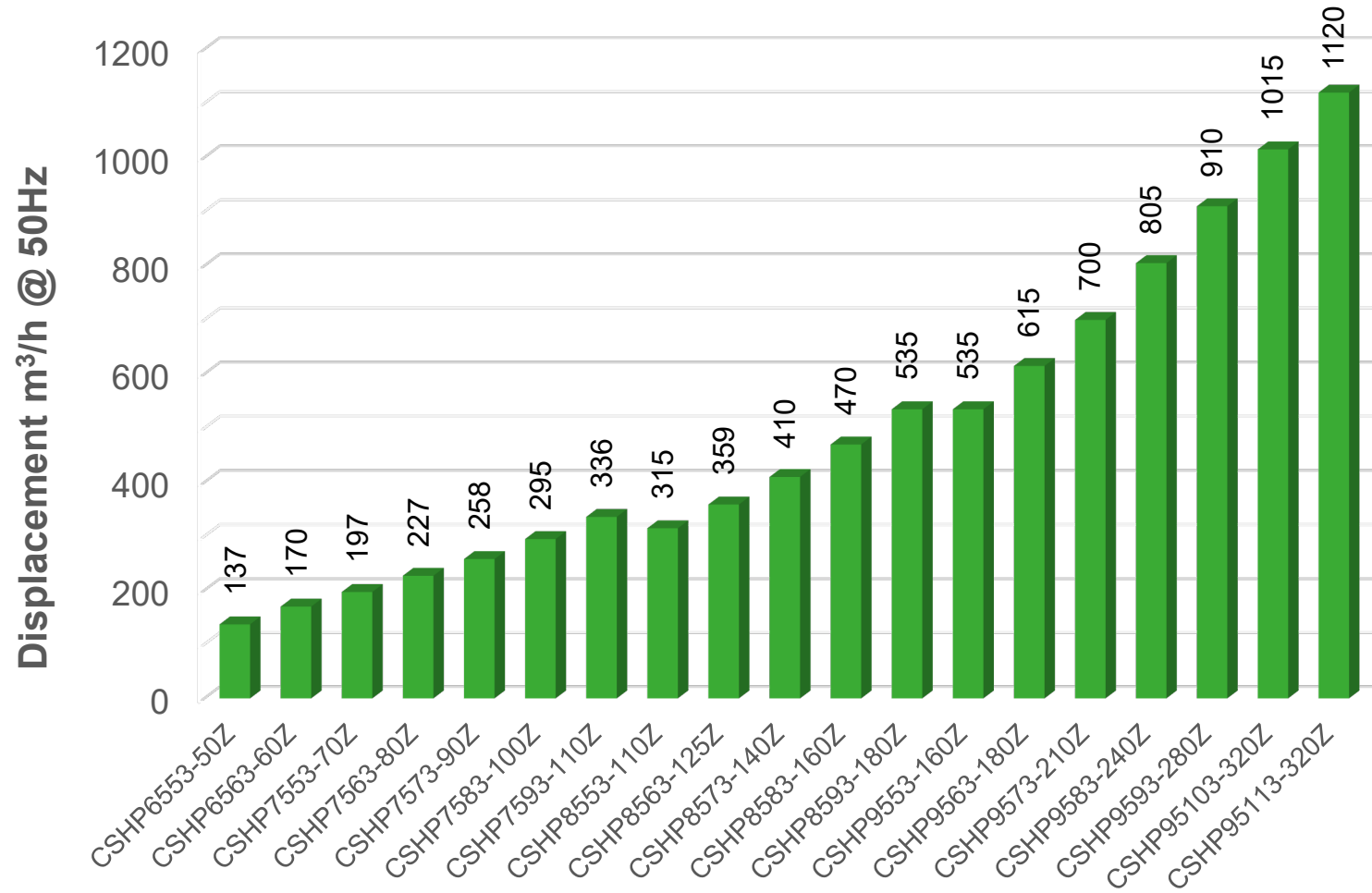
Fig. 4: CS.95 compressor: Mounting of the low pressure transmitter

- // Sensors and pressure transmitters are pre-wired ex-factory
 - Exception high pressure transmitter
- // For further information please see SB-170 / CT-110 / CT-120

DISPLACEMENTS



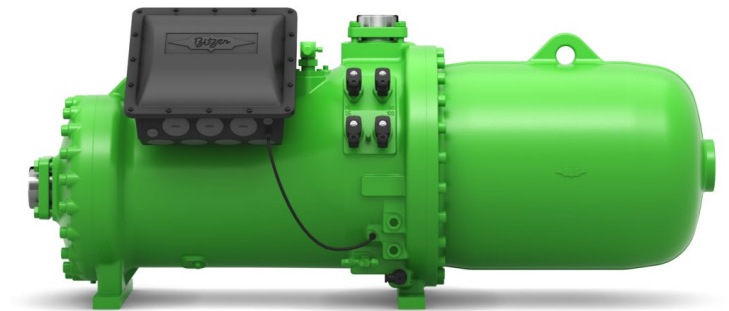
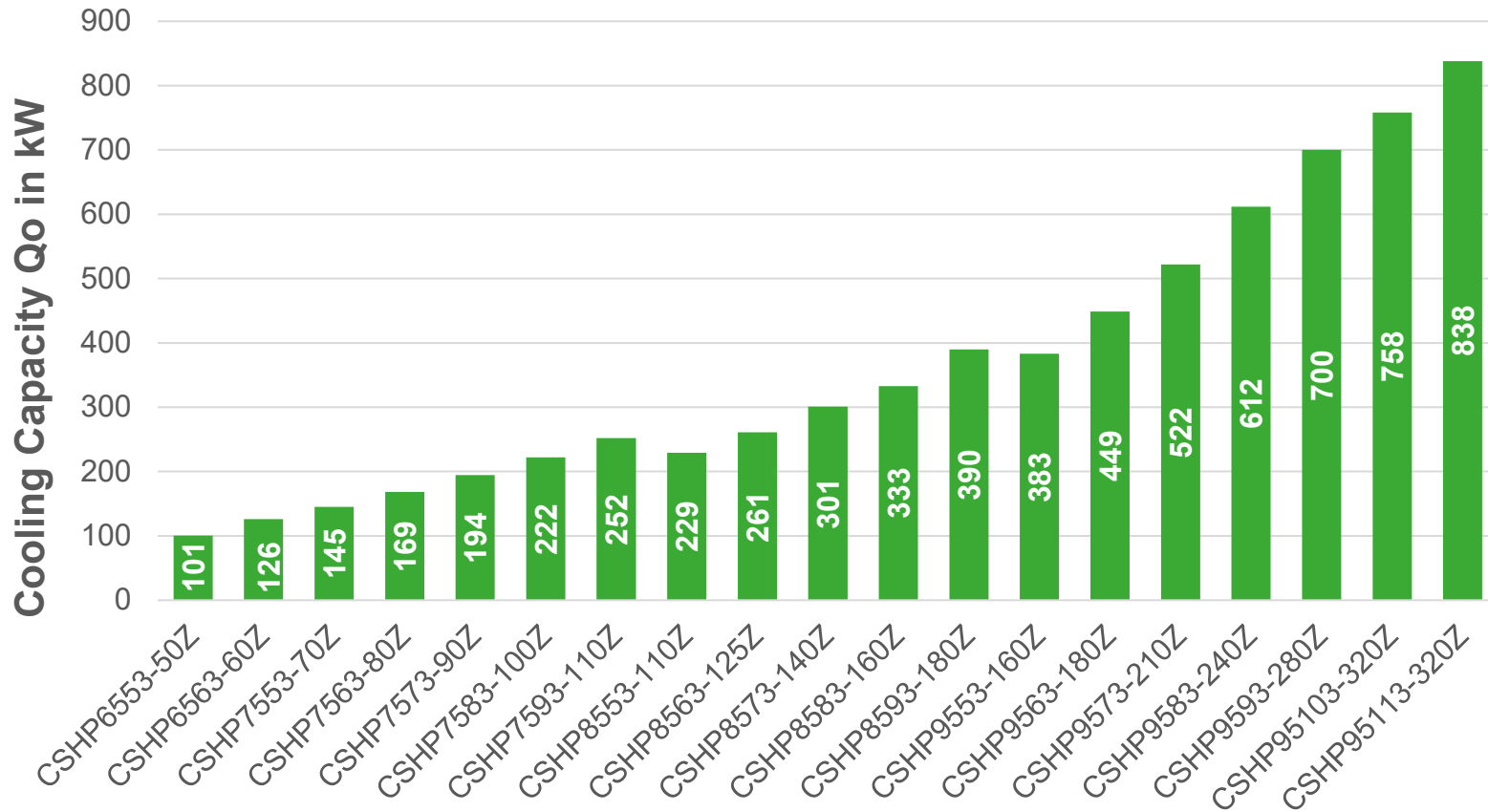
// CSHP65..95 Motor 2 R290



COOLING CAPACITY



// CSHP65..95 Motor 2 R290



- // Conditions:**
- to / tc: 5°C/50°C
 - 50Hz (2900 rpm)
 - Δt_{oh} : 10K
 - Δt_u : 0K

// Source: Data from SP-170-9 ■ Cooling Capacity Qo @ 50Hz



LHE PRO SERIES



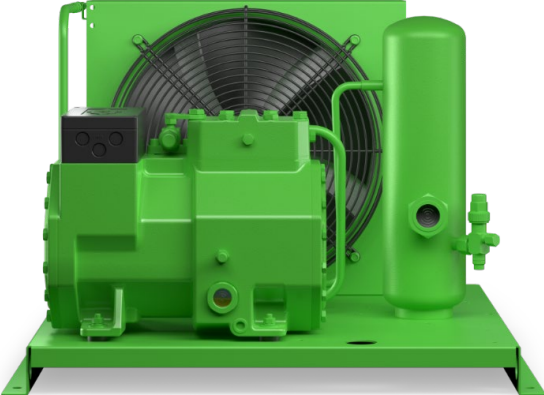
LHE PRO SERIES FOR HYDROCARBONS



HYDROCARBON

// LHE PRO Series for A3 refrigerants

- R290 and R1270
- ECOLINE PRO
- Standard BITZER liquid receiver
- PAG oil: BSG68K
- Protection device: SE-B3 (CEP1S/CEP2S)
- CE marking



LHE PRO SERIES WITH HYDROCARBON REFRIGERANT



Displacement range:

// 4,06 m³/h ... 13,42 m³/h @ 1450 rpm / 50 Hz

Refrigeration capacity:

// Medium temperature 1,7 kW ... 5,7 kW*

// Low temperature 0,7 kW ... 1,8 kW*

Models:

// Motor version 1 and 2

// **Hydrocarbons Agreement mandatory**

Optional accessories:

// IQ MODULE CM-RC-02 (for CEP1S/CEP2S) (Protection mode only)

// PAO oil: SHC226E

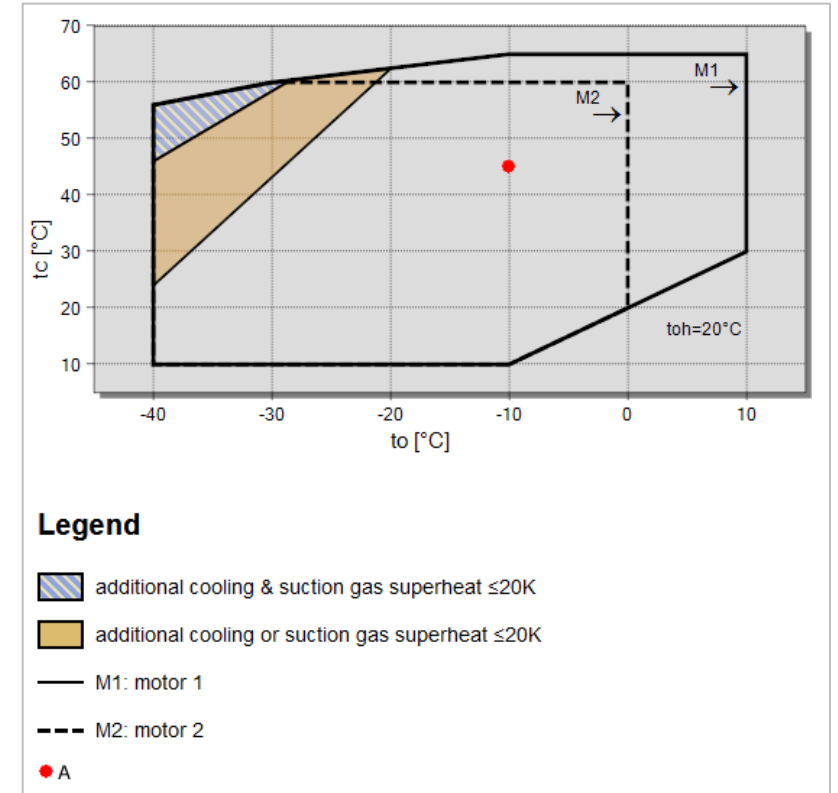
// VARISTEP (starting from CEP2S)

// Oil heater

// Weather protection housing

// PRV connection for liquid receiver (if available)

LH32E/2KESP-05P
LH32E/2JESP-07P
LH33E/2HESP-1P
LH33E/2HESP-2P
LH33E/2GESP-2P
LH44E/2GESP-2P
LH44E/2FESP-2P
LH44E/2FESP-3P
LH44E/2EESP-2P
LH53E/2GESP-2P
LH53E/2DESP-2P



*Preliminary data: R290, $t_{amb} = 32$ °C; $t_o = -10$ °C (MT); $t_o = -35$ °C (LT); 50 Hz; @ SH = 20°C / 1K subcooling

LHE PRO SERIES – AIR-COOLED CONDENSING UNIT



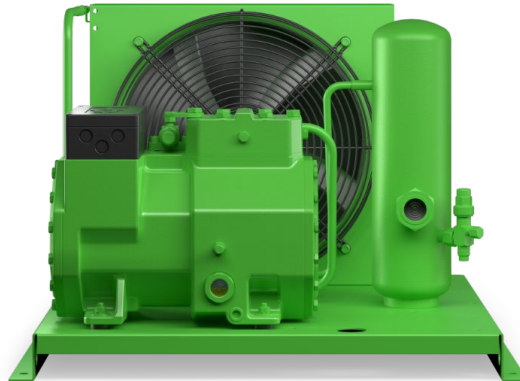
RECIPROCATING
COMPRESSORS



HYDROCARBON



ECODESIGN
CONFORM



APPLICATIONS LHE PRO



COMMERCIAL
REFRIGERATION



PROCESS
COOLING

AVAILABILITY

- // Serial release: done
- // Models: 11 Units with ECOLINE PRO
- // Unit sizes: LH32E ... LH53E

HARD FACTS

- // Refrigerants: R290 / R1270 (A3)
- // Refrigerating Capacity:
 - Medium temperature: 1,7 kW .. 5,7 kW*
 - Low temperature: 0,7 kW .. 1,8 kW*
- // ECOLINE PRO
 - Motor version 1 & 2
- // EC-fans for safety class A3
- // Standard BITZER receiver
- // Oil type BSG68K (PAG)

- // Available options
 - Oil heater (loose shipped)
 - Weather protection housing
 - BITZER Liquid receiver with PRV connection (if available)
 - SHC226E (PAO)
 - VARISTEP (starting from CEP2S)
- // Hydrocarbons Agreement mandatory
- // Technically tight in the long term
 - Enhanced tightness acc. EN1127-1

*Preliminary data: R290, $t_{amb} = 32^{\circ}\text{C}$;
 $t_0 = -10^{\circ}\text{C}$ (MT); $t_0 = -35^{\circ}\text{C}$ (LT); 50
Hz; @ SH = 20°C / 1K subcooling



OUTLOOK PRE-ANNOUNCEMENT

Extension of the LHE PRO and K Series PRO

Availability: Beginning Q2/2025 (tentative data)

// LHE PRO up to LH135E

// K series PRO up to K1353T(B)

// New models LHE PRO

LH64E/2EESP-3Z	LH135E/4PESP-15Z
LH64E/2DESP-3Z	LH135E/4NESP-20Z
LH64E/2CESP-3Z	LH135E/4JEP-15Z
LH64E/4FESP-3Z	LH135E/4JEP-22Z
LH64E/4EESP-4Z	LH135E/4HEP-18Z
LH84E/2CESP-4Z	LH135E/4HEP-25Z
LH84E/4FESP-5Z	LH135E/4GEP-23Z
LH84E/4EESP-6Z	LH135E/6JEP-25Z
LH84E/4DESP-5Z	LH135E/6HEP-28Z
LH84E/4CESP-6Z	
LH104E/4DESP-7Z	
LH104E/4TESP-9Z	
LH114E/4CESP-9Z	
LH114E/4TESP-12Z	
LH114E/4PESP-12Z	
LH124E/4CESP-6Z	
LH124E/4NESP-14Z	

// New models K series PRO

K073H(B)/2FESP-2Z	K283H(B)/4DESP-7Z	K1053H(B)/6HEP-35Z
K073H(B)/2JES-07Z	K283H(B)/4TESP-9Z	K1053H(B)/6FEP-44Z
K073H(B)/2HESP-1Z	K373H(B)/4CESP-9Z	K1353T(B)/6GEP-40Z
K073H(B)/2HESP-2Z	K373H(B)/4TESP-12Z	K1353T(B)/6FEP-50Z
K073H(B)/2GESP-2Z	K373H(B)/4PESP-12Z	
K073H(B)/2FESP-2Z	K373H(B)/4NESP-14Z	
K123H(B)/2FESP-3Z	K573H(B)/4PESP-15Z	
K123H(B)/2EESP-2Z	K573H(B)/4NESP-20Z	
K123H(B)/2EESP-3Z	K573H(B)/4JEP-15Z	
K123H(B)/2DESP-2Z	K573H(B)/4JEP-22Z	
K123H(B)/2DESP-3Z	K573H(B)/4HEP-18Z	
K123H(B)/2CESP-3Z	K573H(B)/4GEP-23Z	
K203H(B)/2CESP-4Z	K573H(B)/6JEP-25Z	
K203H(B)/4FESP-3Z	K813H(B)/4HEP-25Z	
K203H(B)/4FESP-5Z	K813H(B)/4GEP-30Z	
K203H(B)/4EESP-4Z	K813H(B)/6JEP-33Z	
K203H(B)/4EESP-6Z	K813H(B)/6HEP-28Z	
K203H(B)/4DESP-5Z	K813H(B)/6GEP-34Z	
K203H(B)/4CESP-6Z		



HSNP74 – HSNP85

HSNP74 – HSNP85 SERIES SEMI-HERMETIC SCREW COMPRESSOR WITH BUILT-IN MOTOR

For use in large commercial refrigeration and process cooling

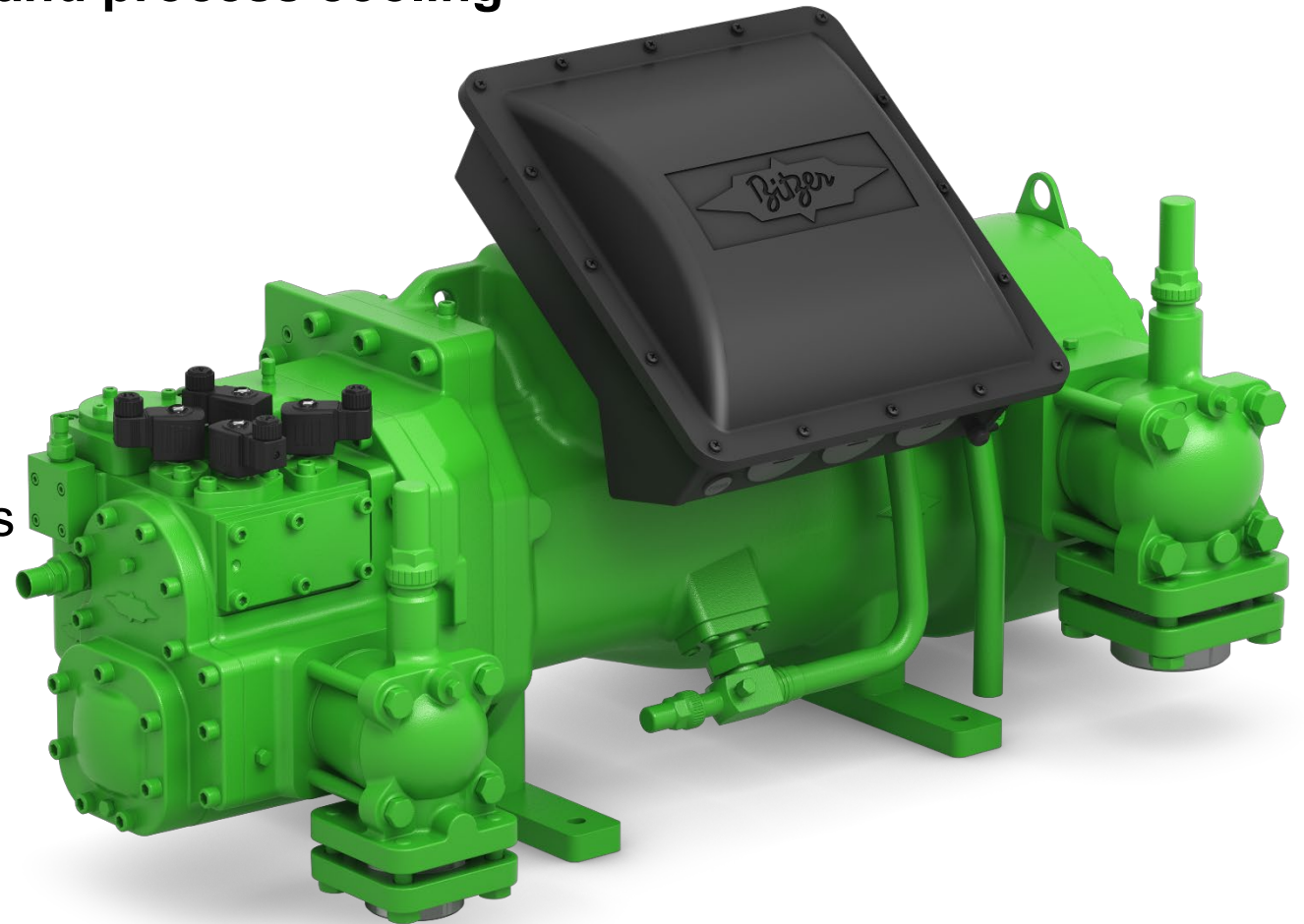
- // Refrigerated MT and LT storage
- // Blast chillers/freezers
- // MT and LT process chillers
- // Heat recovery

Refrigerants

- // Natural, low-GWP hydrocarbon refrigerants
- // R290, R1270, flammable A3

Product range

- // 2 families: HSNP74 and HSNP85
- // 6 models: 192 to 535 m³/h @ 50 Hz



HSNP74 – HSNP85 SERIES

HIGHLIGHTS

- // Industry-leading energy efficiency in full and part load operation
- // Easy parallel compounding for increased system capacity
- // Suction gas cooled built-in motor for high robustness and wide application range
- // Mechanical capacity regulation
 - // Easy control using flanged solenoid valves
 - // HSNP74: multistage capacity control (control pistons)
 - // HSNP85: dual capacity control (single slider) for stepwise or alternatively infinite capacity control and V_i -compensation
 - // Suitable for VSD operation: Frequency range 20..70Hz

HSNP74 – HSNP85 SERIES ACCESSORIES

Compressor-related accessories

- // Wide range of suction and discharge bushings and shut-off valves
- // Adapter and shut-off valve for Economiser connection
- // SE-i1 motor-protection device for advanced compressor protection, monitoring and data logging

System-related accessories

- // Oil separators: OA.A series
- // Water cooled oil coolers: OW series
- // Water-cooled condensers: P series , K.(B)P series, CXP(M) series, CRF series
- // Dry-expansion evaporators: DH series, SQD series?
- // Horizontal liquid receivers: F.P series
- // Vertical liquid receivers: FS.P series



WATER-COOLED CONDENSERS

WATER-COOLED CONDENSERS FROM THE P SERIES



// 14 models of water-cooled shell and tube condensers

// hydrocarbon refrigerant: e.g. propane and propylene

// Discharge gas desuperheaters.

// Approval

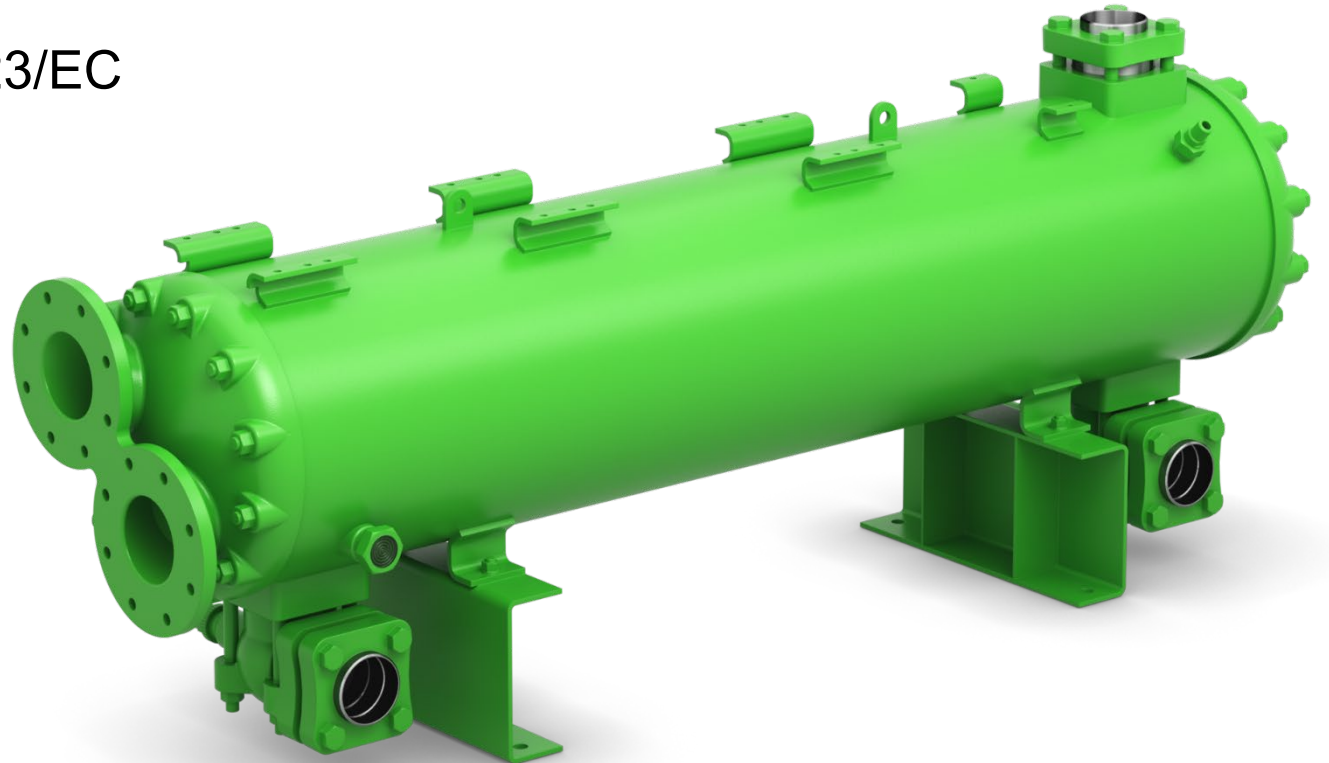
// EC Pressure Equipment directive 97/23/EC

Removable end cover

// Interchangeable sides

// Refrigerant outlet from K573HP

// Venting plug from K3803TP





LIQUID RECEIVER

LIQUID RECEIVER P SERIES

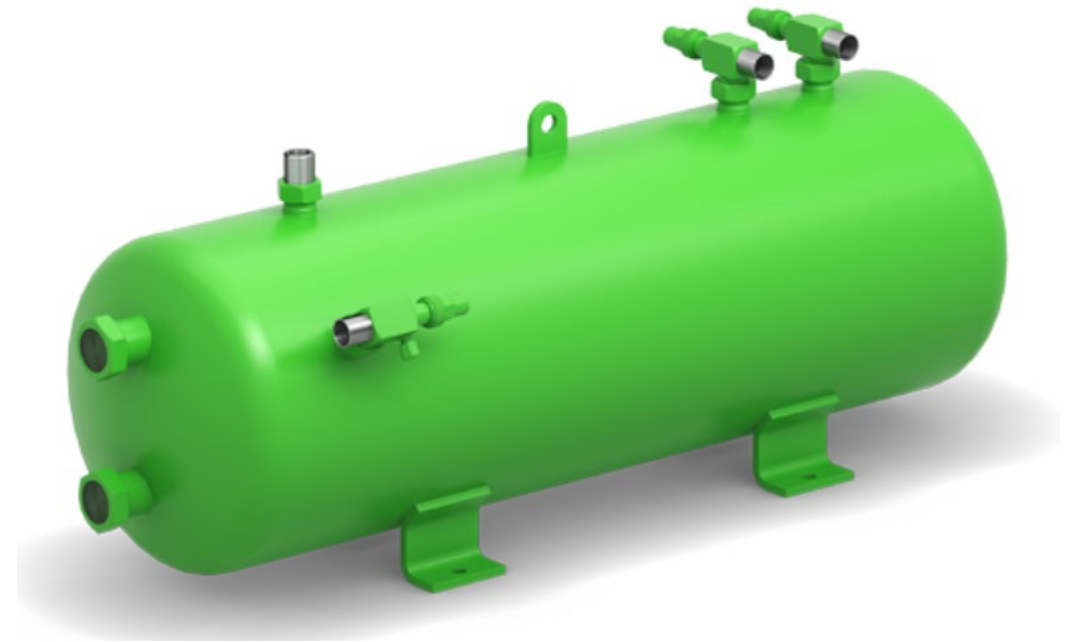


Specially developed for hydrocarbons, e.g propane and propylene

- // Refrigerant in safety group A3 under EN378
- // Group 1 fluids under the EC pressure Equipment Directive
- // Maximum allowable pressure 33 bar
- // Maximum admissible temperature: 120°C

Available pressure vessel approvals

- // EU Pressure Equipment directive 2014/68/EU
- // EAC for Eurasian Economic Union member countries
- // SELO-CML for People's Republic of China





B-SAFE

B-SAFE

WARRANTY EXTENSION FOR UP TO FIVE YEARS

Free one-year warranty extension for all intelligent products

- // Efficient operation and availability
- // One-year extension at no cost
- // Free storage of reports and data logs
- Commissioning assistance
 - // Commissioning assistance for contractors and field technicians
 - // System optimisation
 - // On-site basic training for technicians
 - // Monitoring and maintenance tips
 - // A commissioning report with certification data
 - // Availability for all condensing units



INTELLIGENT PRODUCTS



B-SAFE

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