

PRODUCTS AND SOLUTIONS

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REFRIGERATION



AC, PROCESS + MARINE



YOUR
GREEN
WORLD

TRANSPORT

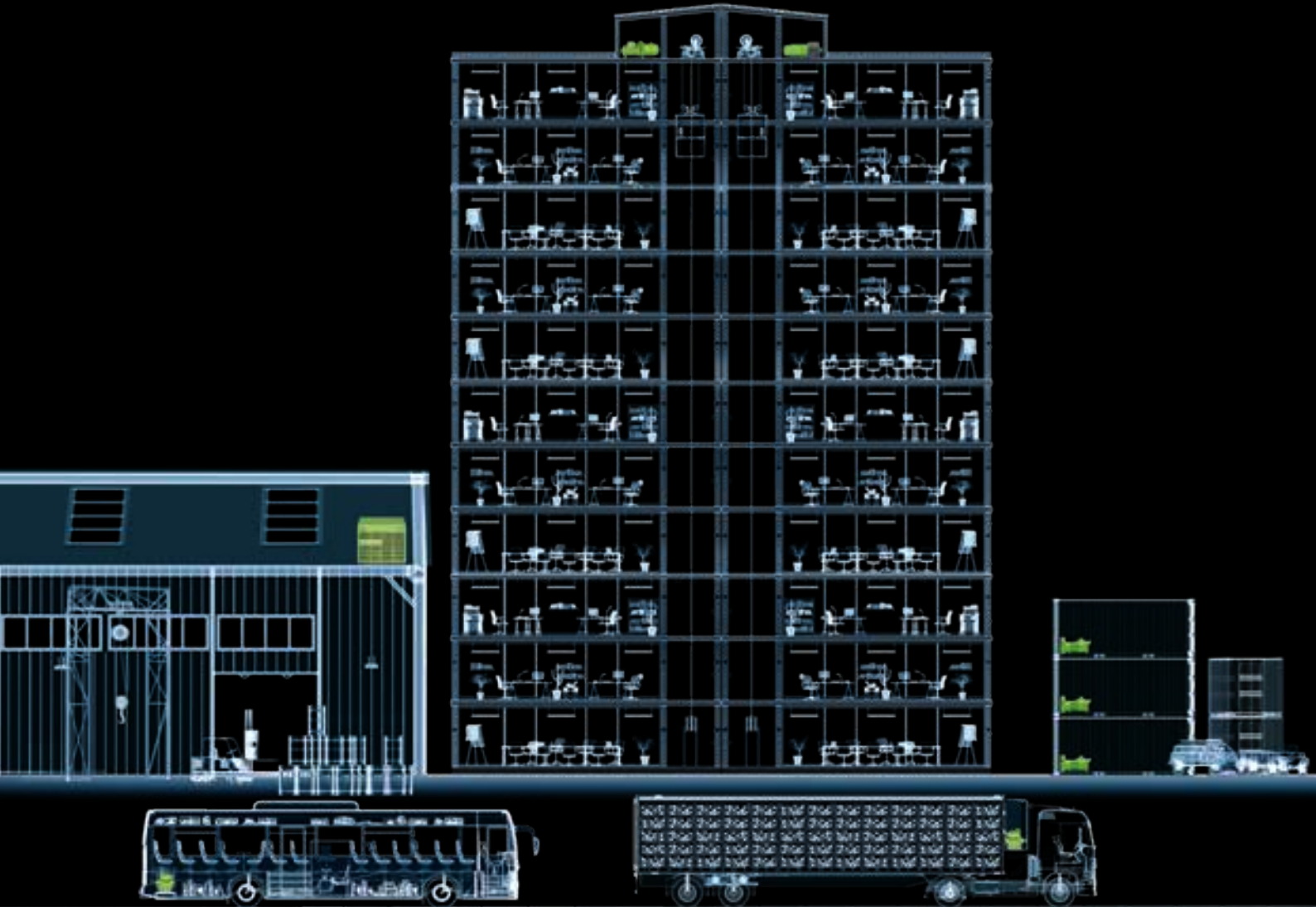


SERVICES



DAS HERZ DER FRISCHE

You can't see our products anywhere. But you can feel them everywhere. That's because BITZER compressors are the central element of countless refrigeration and air conditioning systems worldwide: BITZER compressors beat steadily and reliably at the heart of refrigeration systems – including building air conditioning, supermarket refrigeration or marine applications up to bus and railway air conditioning. As a market leader, we offer our customers a complete range of products MADE IN GERMANY. With state-of-the-art product quality, we drive innovation and sustainability, always making sure of the perfect temperature and optimal climate for any application.





Bitzer

DAS HERZ DER FRISCHE

FITS PERFECTLY! THE RIGHT SOLUTION FOR YOUR APPLICATION.



INTELLIGENT MONITORING. COMPRESSORS WITH EXPERIENCE AND PERSPECTIVE.

BITZER has the perfect answer to rising energy costs and new environmental regulations: INTELLIGENT PRODUCTS enable secure and fast data communication, manage compressor functions and prepare comprehensive log files. Always in focus: with the IQ MODULE, BITZER offers maximum user-friendliness. The BEST SOFTWARE (BITZER Electronics Service Tool) provides our customers with intuitive commissioning, troubleshooting and support for all BITZER IQ PRODUCTS. Combined with innovative, flexible capacity control concepts such as BITZER VARISTEP, it further increases system efficiency.



ADVANCED MOTOR TECHNOLOGY



ELECTRONIC COMPONENTS



FREQUENCY INVERTERS

EXTREMELY EFFICIENT. SOLUTIONS FOR THE CHALLENGES OF TOMORROW.

Energy efficiency is a decisive factor, both ecologically and economically. With BITZER, you can build refrigeration and air conditioning systems today that fulfil the efficiency and environmental standards of tomorrow. The optimal VARISTEP mechanical capacity control and our cutting-edge line-start permanent-magnet (LSPM) motor technology increase overall system efficiency when using ECOLINE+ reciprocating compressors and ORBIT+ scroll compressors. The external VARIPACK frequency inverter and integrated VARISPEED frequency inverter optimise the operating conditions of the refrigeration system, enabling efficient compressor operation and increasing system efficiency. Combined with the BITZER IQ MODULE, they offer maximum flexibility in the use of refrigerants as well as safe operation alongside very smooth running, thus effectively equipping you for the challenges of tomorrow.



HFO READY



NATURAL REFRIGERANTS

WELL PREPARED. THE RIGHT REFRIGERANT FOR YOUR SYSTEM.

BITZER can help you select the refrigerant as well as the most suitable product for your application. BITZER offers an extensive range of products suitable for use with various low-GWP refrigerants. Products with the 'HFO-ready' label are qualified for operation with hydrofluoroolefin (HFO) refrigerants, which can be used as pure substances (for example, R1234ze(E) and R1234yf) or as HFO/HFC blends (for example, R513A, R450A, R449A and R448A). Scroll compressors for use with R32, R454B and R452B are available for air conditioning applications. Our compressors are also ideal for operation with natural refrigerants such as CO₂ (R744) as well as with ammonia (R717) and hydrocarbons (for example, R290 and R1270). You can find further information in the instructions on safety and use in the documentation as well as in the BITZER SOFTWARE.



EUROPEAN STANDARD



US STANDARD



CHINESE STANDARD

INTERNATIONAL EXPERIENCE. BITZER PRODUCTS FOR THE HIGHEST STANDARDS.

BITZER products meet the relevant international standards in the areas of environmental regulations, energy consumption and safety. You can find further information about our international certifications in the BITZER documentation or on our website at www.bitzer.de

CONTENTS

// PRODUCT RANGES

Reciprocating compressors // Page 06



Screw compressors // Page 07



Scroll compressors // Page 07



Heat exchangers and pressure vessels // Page 08



Condensing units and compressor packs // Page 09



// REFRIGERATION

Commercial refrigeration // Pages 11–17



Industrial refrigeration // Pages 18–19



// AIR CONDITIONING, PROCESS COOLING AND MARINE

Air conditioning // Pages 21–24



Process cooling // Pages 25–29



Heat pumps // Pages 30–34



Marine and offshore // Pages 35–37



// TRANSPORT

Bus air conditioning // Page 39



Railway air conditioning // Pages 40–41



Truck and trailer // Pages 42–43



// SERVICES

On-site service // Pages 45–46



Digital service // Page 47



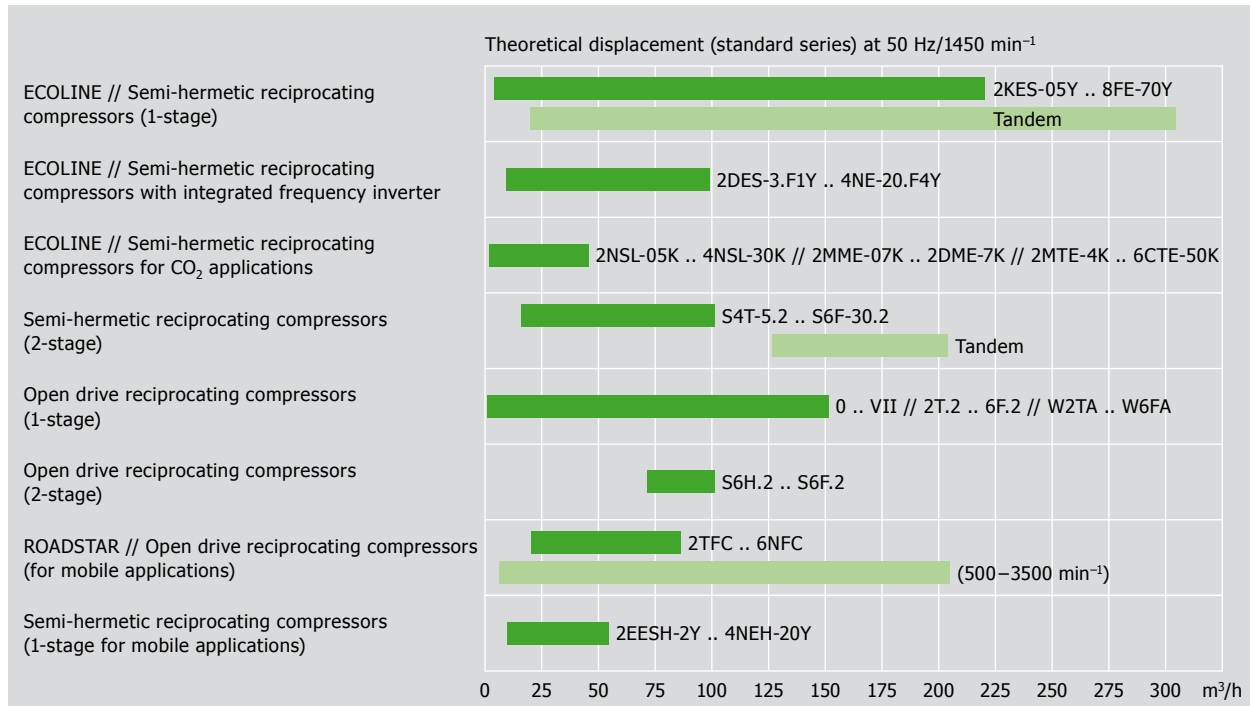
Training and seminars // Page 47



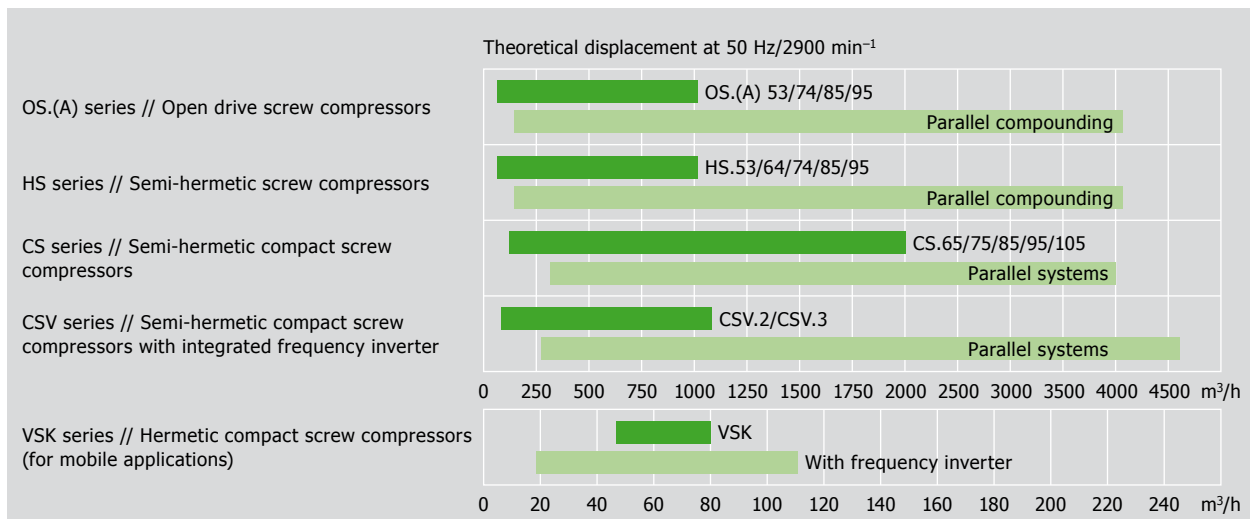
Documentation // Page 47



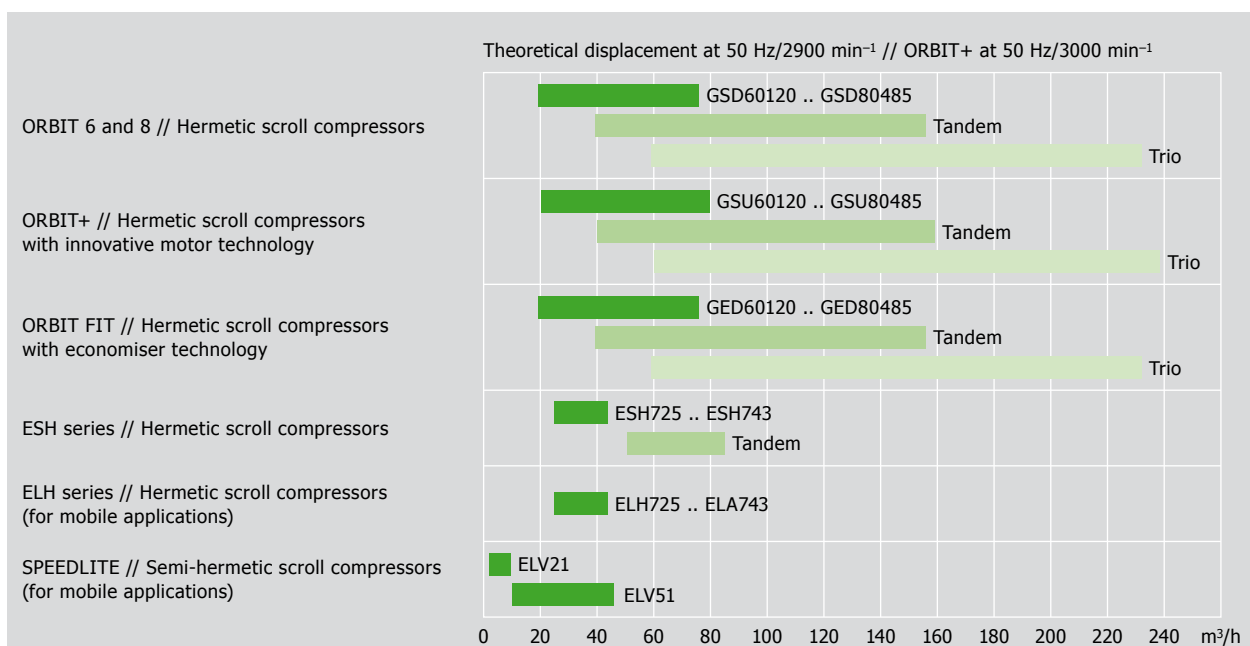
RECIPROCATING COMPRESSORS



SCREW COMPRESSORS



SCROLL COMPRESSORS

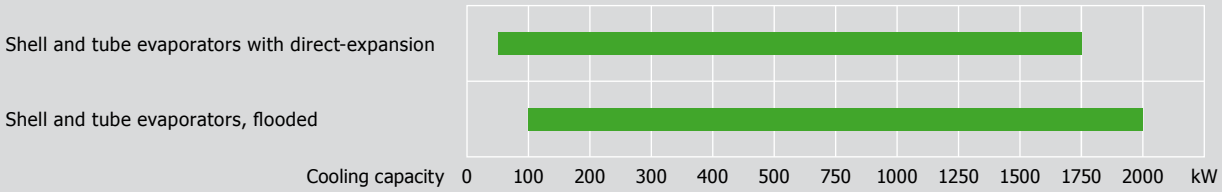


HEAT EXCHANGERS AND PRESSURE VESSELS

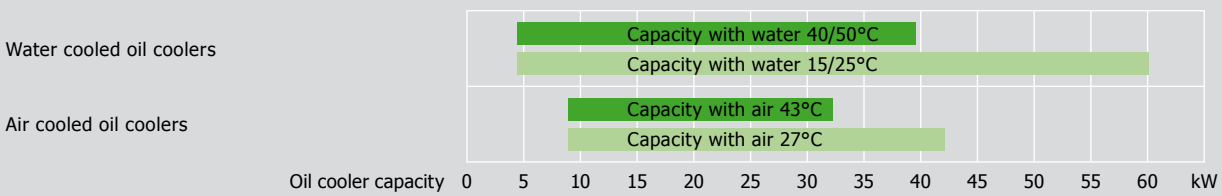
WATER COOLED CONDENSERS



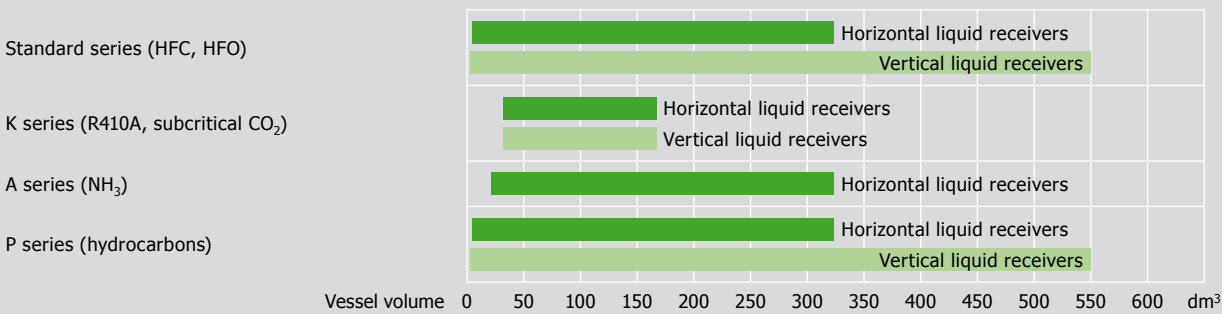
EVAPORATORS



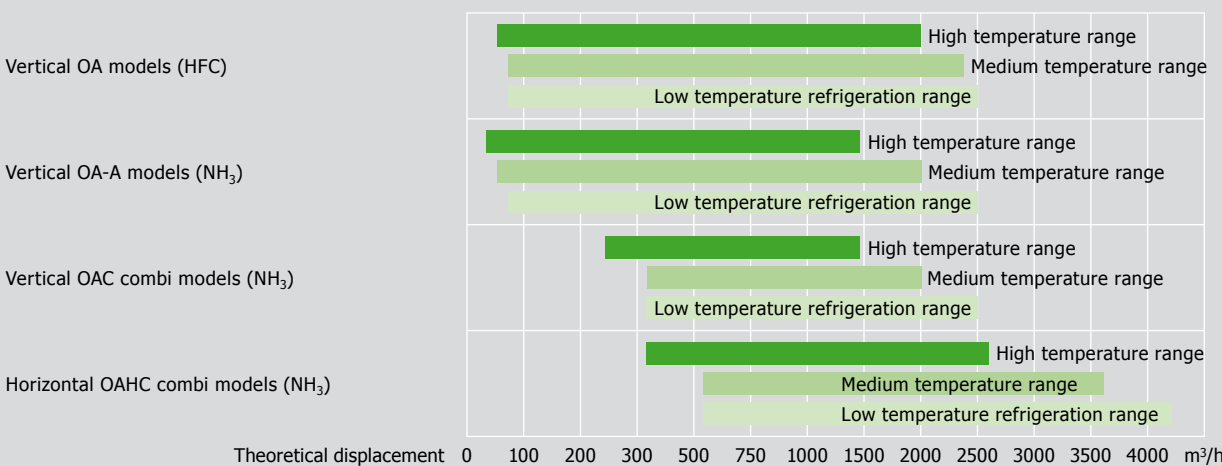
OIL COOLERS



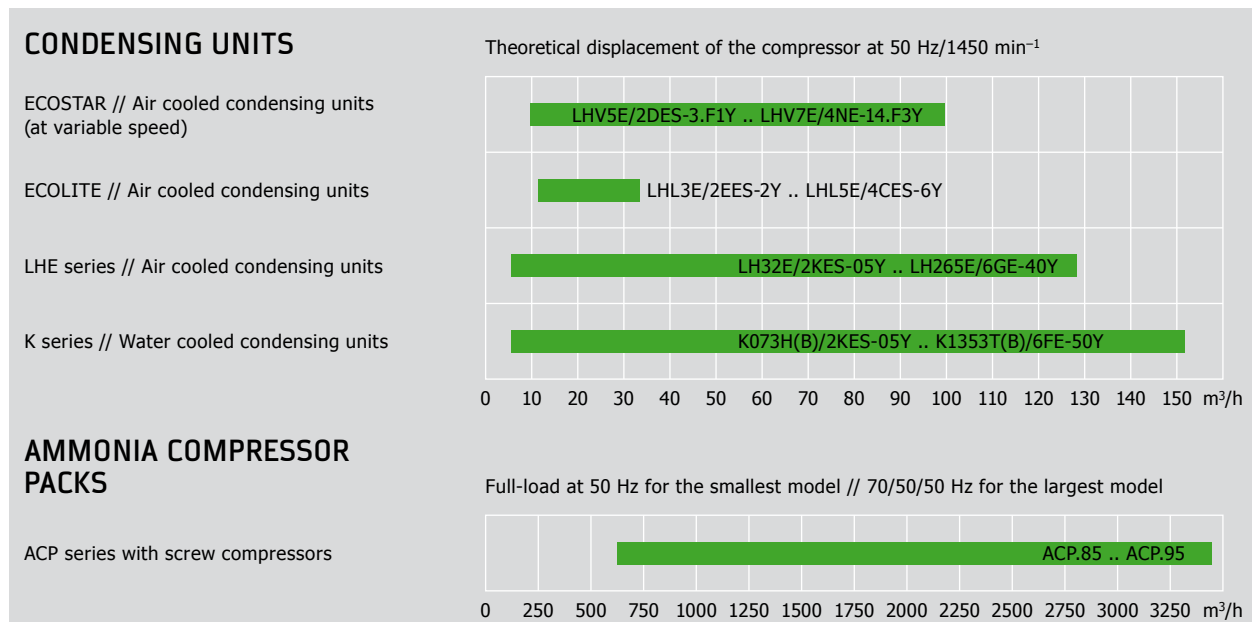
LIQUID RECEIVERS



OIL SEPARATORS



CONDENSING UNITS AND COMPRESSOR PACKS





REALLY COLD! THE HEART OF YOUR COOLING CHAIN.

BITZER compressors are the best choice for diverse refrigeration requirements: they really come into their own when it's important to maintain the right temperature regardless of outdoor conditions. In commercial refrigeration, for example, where it is essential to guarantee specific product temperatures within a limited range all-year round without a single interruption. This ensures the highest level of product quality over a long period of time. They are also ideal for the industrial application of low temperature storage at chain stores or when it comes to blast-freezing foods or freeze-drying medicines.

Industrial Refrigeration: Products mainly for the use of NH_3 . Products for other refrigerants in the subchapter Commercial Refrigeration.



COMMERCIAL
REFRIGERATION



INDUSTRIAL
REFRIGERATION



OPTIONAL
IQ MODULE



ECOLINE
RECIPROCATING COMPRESSORS
SEMI-HERMETIC DESIGN

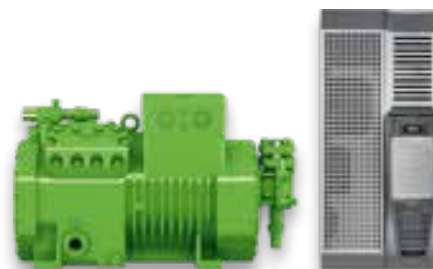
Universal and environmentally friendly: ECOLINE reciprocating compressors offer high cooling capacity with minimal energy requirements and are optimised for HFC, HFO and low-GWP refrigerants. The optional VARISTEP mechanical capacity control offers high part-load efficiency in medium and low temperature application.

Applications

- // Medium temperature application
- // Low temperature application



4.1 .. 221 m³/h at 50 Hz



VARIPACK
FREQUENCY INVERTERS
EXTERNAL FOR SEMI-HERMETIC
RECIPROCATING COMPRESSORS

VARIPACK frequency inverters are specially developed for operation with BITZER compressors. Energy can be saved by flexibly adapting a system's cooling demand and the optimale match of compressor and frequency inverter. The frequency inverter speaks the language of cooling.

Applications

- // Medium temperature application
- // Low temperature application



2.5 .. 309 m³/h at var. speed
0.78 .. 65.7 m³/h at var. speed (CO₂)

COMMERCIAL REFRIGERATION



OPTIONAL
IQ MODULE



ECOLINE RECIPROCATING COMPRESSORS SEMI-HERMETIC DESIGN FOR CO₂ APPLICATIONS

The ECOLINE CO₂ reciprocating compressors are energy-efficient, reliable, environmentally friendly and future-proof, with three series available: for subcritical applications in the low temperature stage of cascade and booster systems, for subcritical applications with high standstill pressure up to 100 bar and for transcritical applications.

Applications

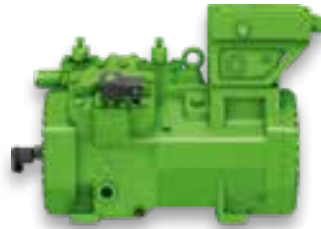
- // Medium temperature application
- // Low temperature application
- // Air conditioning



3.3 .. 38.1 m³/h at 50 Hz transcritical
1.3 .. 46.9 m³/h at 50 Hz subcritical



OPTIONAL
IQ MODULE



ECOLINE+ RECIPROCATING COMPRESSORS SEMI-HERMETIC DESIGN FOR CO₂ APPLICATIONS

The ECOLINE+ series is a further-developed version of the proven reciprocating compressors. By using the refrigerant CO₂, innovative line-start permanent-magnet motors and optional intelligent electronics, the series achieves the highest energy efficiency values possible.

Applications

- // Medium temperature application
- // Low temperature application
- // Air conditioning



4.5 .. 39.5 m³/h at 50 Hz



VARISPEED
 RECIPROCATING COMPRESSORS
 SEMI-HERMETIC DESIGN WITH
 FREQUENCY INVERTER

The two VARISPEED series are designed for use with ECOLINE and ECOLINE CO₂ compressors. Stepless capacity adjustment with frequency inverters guarantees high part-load efficiency. The internal frequency inverter makes the VARISPEED compressor one of the most compact and easily installed frequency inverter solutions.

Applications

- // Medium temperature application
- // Low temperature application



8.1 .. 99.2 m³/h at variable speed



**RECIPROCATING
 COMPRESSORS**
 OPEN DRIVE DESIGN

Open drive reciprocating compressors are available in two model series: for (H)CFC/ HFC refrigerants and ammonia. Due to the open drive design, standard motors can be attached to the compressor via coupling housing or belt drive. Reliability and easy maintenance have made them popular options for years.

Applications

- // Medium temperature application
- // Low temperature application



0.96 .. 151 m³/h at 1450 min⁻¹



**RECIPROCATING
 COMPRESSORS**
 SEMI-HERMETIC, 2-STAGE
 DESIGN

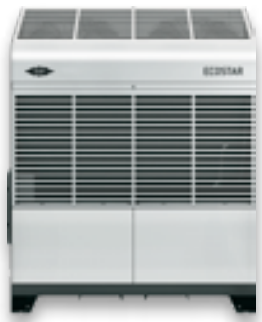
The 2-stage reciprocating compressors are designed for an extensive application range and boast an optimised drive gear and efficient motor. The highly reliable semi-hermetic series is designed to be robust and suitable for a variety of refrigerants.

Applications

- // Low temperature application



19.7 .. 101 m³/h at 50 Hz



ECOSTAR
 CONDENSING UNITS
 AIR COOLED WITH ECOLINE
 VARISPEED

The condensing unit series for maximum efficiency in full and part-load operation. Highly efficient components, unique controller functions, plug-and-play concept, BEST SOFTWARE, web server, Ecodesign conformity and the use of low-GWP refrigerants leave nothing to be desired.

Applications

- // Medium temperature application
- // Low temperature application



8.1 .. 99.2 m³/h at variable speed



ECOLITE
 CONDENSING UNITS
 AIR COOLED WITH ECOLINE AND
 VARISTEP

Capacity-controlled, exceptionally adaptable condensing units as standard for medium and low temperature applications. Designed to be user-friendly with plug-and-play concept, BITZER control software, BEST SOFTWARE and Ecodesign conformity, they also enable operation with low-GWP refrigerants.

Applications

- // Medium temperature application
- // Low temperature application



11.3 .. 32.5 m³/h at 1450 min⁻¹



LHE SERIES
CONDENSING UNITS
AIR COOLED WITH ECOLINE
OR 2-STAGE

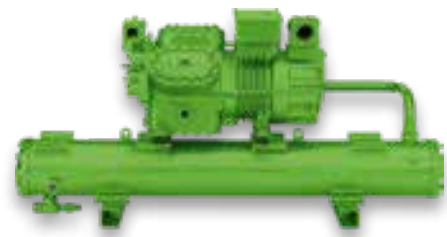
The compact and robust structural shape of the condensing units and the use of efficient, optimally coordinated components enable an extensive range of both applications and capacities. They're Ecodesign-conform and enable use of low-GWP refrigerants.

Applications

- // Medium temperature application
- // Low temperature application



4.1 .. 127 m³/h at 1450 min⁻¹



K SERIES
CONDENSING UNITS
WATER COOLED WITH ECOLINE
OR 2-STAGE

The efficient, well-coordinated components of the water cooled condensing units such as the ECOLINE compressor guarantee a comprehensive range of applications despite the compact design. Additional strengths: a variety of options and the use of low-GWP refrigerants.

Applications

- // Medium temperature application
- // Low temperature application



4.1 .. 151.6 m³/h at 1450 min⁻¹



IQ MODULE



HS SERIES
SEMI-HERMETIC SCREW
COMPRESSORS

Efficient, robust, durable: thanks to the HSK/N version, HS semi-hermetic screw compressors are suitable for many application ranges and refrigerants. The internal capacity control is multistep and, from HS.85, stepless as an optional feature. All HS compressors are suitable for speed-controlled operation. From HS.95 with IQ MODULE.

Applications

- // Medium and low temperature storage
- // Blast chiller
- // Blast freezer
- // Ice production
- // Heat recovery



84 .. 1015 m³/h at 50 Hz



**OIL SEPARATORS AND
OIL COOLERS**

Primary, secondary and combined separator models are used in NH₃, HFC and HFO applications. To reach the most appropriate separation efficiency, centrifugal, gravity and filtration stages can be combined. Water cooled and air cooled oil coolers ensure additional cooling.

Applications

- // Positive, medium and low temperature refrigeration applications
- // Supermarket



Suction flow 40 .. 4300 m³/h
Oil cooling capacity 10 .. 60 kW



LIQUID RECEIVERS

110 models offer the complete range of solutions for liquid refrigerant storage. There are several versions available, featuring both vertical and horizontal configurations. A comprehensive series of accessories, as well as CE, EAC, SELO, BV, GL, RS and LR approvals, are all available.

Applications

- // Positive, medium and low temperature refrigeration applications
- // Supermarket



Receiver volume 3 .. 550 dm³



WATER COOLED CONDENSERS

BITZER offers five series of water cooled condensers which are highly efficient and operate in standard capacities of up to 1680 kW. They can be combined with HFC, HFO, HFC/HFO blends, hydrocarbons and NH₃. Low-fouling tubes and aggression-resistant components offer outstanding reliability.

Applications

- // Refrigeration applications using normal or technical water as coolant
- // Seawater version



Condensing capacity 8 .. 1680 kW



SHELL AND TUBE EVAPORATORS

BITZER's range of shell and tube evaporators includes four different series of dry-expansion heat exchangers, each optimised for a specific application. A selection of materials and a wide approval choice are available. BITZER FEV HP flooded evaporators are the most efficient ones in the industry.

Applications

- // Dry-expansion solutions for low, medium and positive temperature applications
- // Flooded evaporators



Cooling capacity 50 .. 2000 kW

INDUSTRIAL REFRIGERATION



IQ MODULE



IQ MODULE



OS.(A) SERIES OPEN DRIVE SCREW COMPRESSORS

The OS series separates the flanged motor and refrigerant circuit. Thanks to the OSK/N version, these compressors are suitable for many application ranges and refrigerants, with a separate series for operation with ammonia. The internal capacity control is multistep and, from OS.85, stepless as an optional feature. All OS compressors are suitable for speed-controlled operation. From OS.95 with IQ MODULE.

Applications

- // Medium and low temperature storage
- // Blast chiller
- // Blast freezer
- // Ice production
- // Ice rinks



84 .. 1015 m³/h at 2900 min⁻¹



ACP SERIES AMMONIA COMPRESSOR PACKS

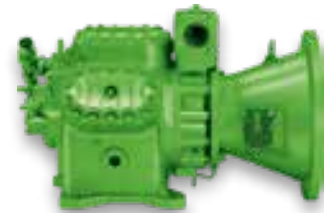
The compact ACP packs with screw compressors for industrial refrigeration are easy to use and offer high operating reliability. They boast high efficiency particularly in the part-load range, which can be further increased with a frequency inverter. The modular construction and a shared-parts strategy keep maintenance and service costs low.

Applications

- // Industrial application
- // High, medium and low temperature application
- // Booster
- // Food industry
- // Ice rinks



630 m³/h .. 3450 m³/h
(full-load at 50 Hz for the smallest model
70/50/50 Hz for the largest model)



RECIPROCATING COMPRESSORS OPEN DRIVE DESIGN

Open drive reciprocating compressors are available in two model series: for (H)CFC/HFC refrigerants and ammonia. Due to the open drive design, standard motors can be attached to the compressor via coupling housing or belt drive. Reliability and easy maintenance have made them popular options for years.

Applications

- // Medium temperature application
- // Low temperature application



0.96 .. 151 m³/h at 1450 min⁻¹



WATER COOLED CONDENSERS

BITZER offers series of water cooled condensers which are highly efficient and operate in standard capacities of up to 1680 kW. They can be combined with hydrocarbons and NH₃. Low-fouling tubes and aggression-resistant components offer outstanding reliability.

Applications

- // Refrigeration applications using normal or technical water as coolant
- // Seawater version



Condensing capacity 8 .. 1680 kW



LIQUID RECEIVERS

110 models offer the complete range of solutions for liquid refrigerant storage. There are several versions available, featuring both vertical and horizontal configurations. A comprehensive series of accessories, as well as CE, EAC, SELO, BV, GL, RS and LR approvals, are all available.

Applications

- // Positive, medium and low temperature industrial refrigeration applications



Receiver volume 3 .. 550 dm³



OIL SEPARATORS AND OIL COOLERS

Primary, secondary and combined separator models are used in NH₃, HFC and HFO applications. To reach the most appropriate separation efficiency, centrifugal, gravity and filtration stages can be combined. Water cooled and air cooled oil coolers ensure additional cooling.

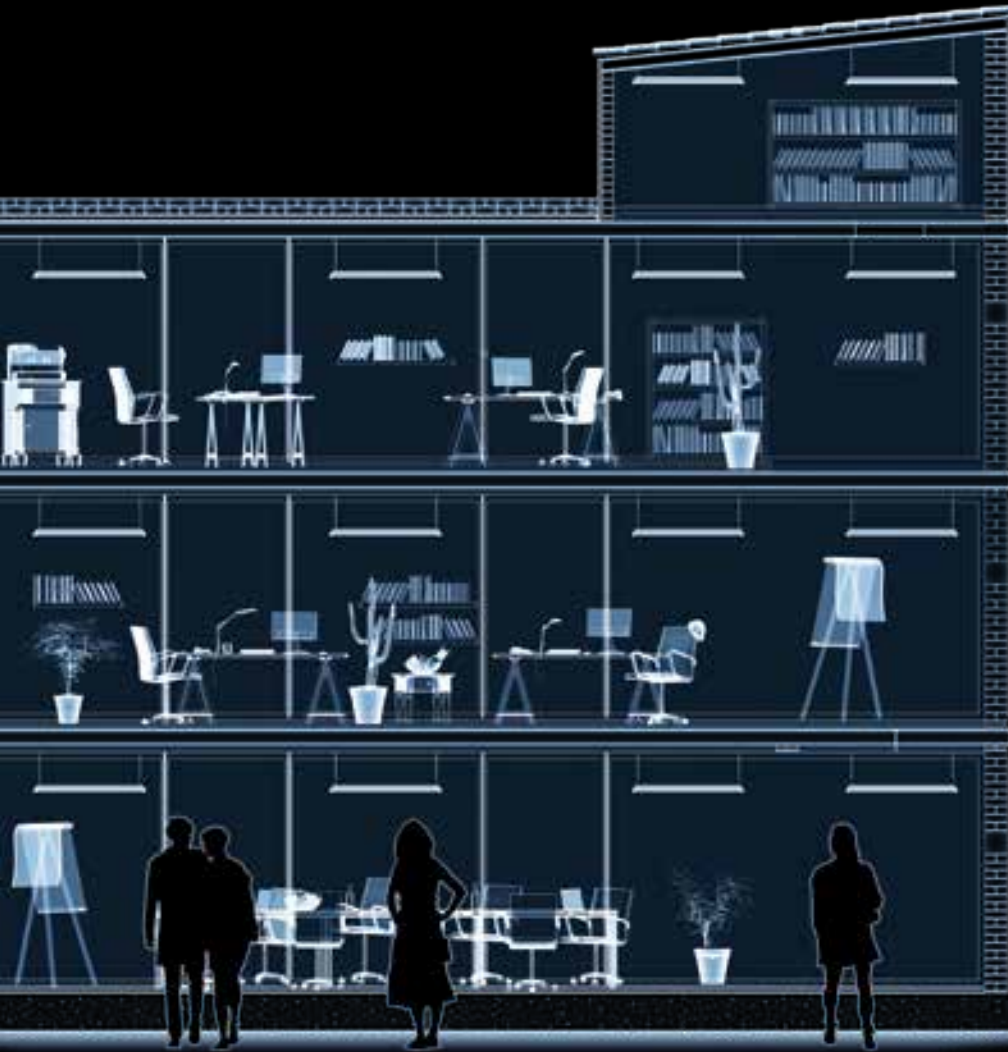
Applications

- // Positive, medium and low temperature industrial refrigeration applications







Suction flow 40 .. 4300 m³/h
Oil cooling capacity 10 .. 60 kW

// AIR CONDITIONING, PROCESS COOLING AND MARINE



COMFORTABLE AND EFFICIENT. **WE CARE FOR A GOOD CLIMATE AROUND THE WORLD.**

In air conditioning and process cooling, BITZER products ensure reliable, efficient processes and allow people to breathe deeply. Heat pumps with BITZER compressors offer outstanding efficiency for commercial applications such as hotels, hospitals and swimming pools. High efficiency compressors and seawater resistant BITZER shell and tube condensers also ensure a consistent, optimal climate on the high seas – for the crew and passengers in marine and offshore applications and for the transportation of perishable goods in constant freshness and quality.

-  AIR CONDITIONING
-  PROCESS COOLING
-  HEAT PUMPS
-  MARINE



ORBIT 6 // ORBIT 8
HERMETIC SCROLL
COMPRESSORS

The compressors of the ORBIT series offer high efficiency in full and part-load. They're suitable for use with A1 and low-GWP refrigerants of the A2L category (R454B, R452B, R32) and enable operation at a fixed speed or with frequency inverter. Thanks to the BITZER Advanced Header Technology (BAHT), they can be connected in parallel configuration as Tandem and Trio assemblies.

Applications

- // Chiller
- // Rooftops



19.8 .. 77.2 m³/h at 50 Hz
(single compressors)



ORBIT BOREAL
HERMETIC SCROLL
COMPRESSORS

ORBIT BOREAL scroll compressors are specially developed for highly efficient applications at low condensing temperatures, as is the case with water cooled chillers and low ambient temperatures. They can be operated at a fixed speed or with frequency inverter.

Applications

- // Chiller
- // Rooftops



38.6 .. 77.2 m³/h at 50 Hz

AIR CONDITIONING



ORBIT+ HERMETIC SCROLL COMPRESSORS

The cutting-edge line-start permanent-magnet motor (LSPM) makes the new ORBIT+ models the most efficient scroll compressors in their class. The series can be operated at a fixed speed or with frequency inverter and, thanks to the BITZER Advanced Header Technology (BAHT), they can be connected in parallel configuration as Tandem or Trio assemblies.

Applications

- // Chiller
- // Rooftops



20.5 .. 79.9 m³/h at 50 Hz



ORBIT FIT HERMETIC SCROLL COMPRESSORS

Thanks to economiser operation, the new scroll compressors of the ORBIT FIT (Flexible Injection Technology) series achieve new capacity and efficiency levels. The series can be operated at a fixed speed or with frequency inverter and, thanks to the BITZER Advanced Header Technology (BAHT), also accommodates parallel connection in tandems and trios.

Applications

- // Chiller
- // Rooftops



19.8 .. 77.2 m³/h at 50 Hz



ESH7 SERIES HERMETIC SCROLL COMPRESSORS

The innovative ESH7 scroll compressors boast exceptional cooling capacity and high energy efficiency in air conditioning. The hermetic compressors can be operated individually or as tandems and use the refrigerants R134a, R407C, R404A and R22.

Applications

- // Chiller
- // Rooftops



25 .. 43 m³/h at 50 Hz



IQ MODULE



CS // CSV SERIES
SEMI-HERMETIC COMPACT
SCREW COMPRESSORS

The CS series is suitable for a large application range and optimised for maximum efficiency in liquid chillers and heat pumps. The finely graduated product portfolio and the mechanical capacity control enable simple system integration. From CS.105 with IQ MODULE. The CSV series features an internal frequency inverter.

Anwendungen

- // Air conditioning liquid chillers
- // Process liquid chillers for medium, low and high temperature applications
- // Combined heating and cooling systems
- // Heat pumps for space heating
- // Process heat pumps



110 .. 2000 m³/h at 50 Hz



**WATER COOLED CONDENSERS
AND OIL COOLERS**

Five condenser series guarantee maximum performance and flexibility. They can be used in HFC and HFO systems. Notably low approach performances can be reached with standard capacities of up to 1680 kW. A complete range of water cooled and air cooled oil coolers ensures additional cooling.

Applications

- // Air conditioning applications using normal or technical water as coolant
- // Seawater version



Condensing capacity 8 .. 1680 kW
Oil cooling capacity 10 .. 60 kW



OIL SEPARATORS AND LIQUID RECEIVERS

Oil separators in vertical and horizontal configuration are approved for operation with HFC, HFO and NH₃. Due to centrifugal, gravity and filtration separation options, the highest degree of efficiency is guaranteed. The liquid receiver range includes models for HFC, HFO, subcritical CO₂ and NH₃.

Applications

- // Dry-expansion chillers
- // Flooded chillers



Suction flow 40 .. 4300 m³/h
Receiver volume 3 .. 550 dm³



SHELL AND TUBE EVAPORATORS

The range of shell and tube evaporators includes four series of dry-expansion heat exchangers, each optimised for a specific application with HFC, HFO or HFC/HFO blends. BITZER FEV HP flooded evaporators offer the highest efficiency in the industry, meeting all efficiency regulations.

Applications

- // Dry-expansion chillers
- // Flooded chillers



Cooling capacity 50 .. 2000 kW



IQ MODULE



IQ MODULE



OS.(A) SERIES
OPEN DRIVE SCREW
COMPRESSORS

The OS series separates the flanged motor and refrigerant circuit. Thanks to the OSK/N version, these compressors are suitable for many application ranges and refrigerants, with a separate series for operation with ammonia. The internal capacity control is multistep and, from OS.85, stepless as an optional feature. All OS compressors are suitable for speed-controlled operation. From OS.95 with IQ MODULE.

Applications

- // Air conditioning
- // Liquid chillers with chilled water
- // Liquid chillers with liquid coolant
- // Process liquid chillers
- // Combined cooling and heating systems



84 .. 1015 m³/h at 2900 min⁻¹



HS SERIES
SEMI-HERMETIC SCREW
COMPRESSORS

Efficient, robust, durable: thanks to the HSK/N version, HS semi-hermetic screw compressors are suitable for many application ranges and refrigerants. The internal capacity control is multistep and, from HS.85, stepless as an optional feature. All HS compressors are suitable for speed-controlled operation. From HS.95 with IQ MODULE.

Applications

- // Air conditioning
- // Liquid chillers with chilled water
- // Liquid chillers with liquid coolant
- // Process liquid chillers
- // Combined cooling and heating systems



84 .. 1015 m³/h at 50 Hz



IQ MODULE



CS // CSV SERIES
SEMI-HERMETIC COMPACT
SCREW COMPRESSORS

The CS series is suitable for a large application range and optimised for maximum efficiency in liquid chillers and heat pumps. The finely graduated product portfolio and the mechanical capacity control enable simple system integration. From CS.105 with IQ MODULE. The CSV series features an internal frequency inverter.

Applications

- // Air conditioning liquid chillers
- // Process liquid chillers for medium, low and high temperature applications
- // Combined heating and cooling systems
- // Heat pumps for space heating
- // Process heat pumps



110 .. 2000 m³/h at 50 Hz



ORBIT 6 // ORBIT 8
HERMETIC SCROLL
COMPRESSORS

The compressors of the ORBIT series offer high efficiency in full and part-load. They're suitable for use with A1 and low-GWP refrigerants of the A2L category (R454B, R452B, R32) and enable operation at a fixed speed or with frequency inverter. Thanks to the BITZER Advanced Header Technology (BAHT), they can be connected in parallel configuration as Tandem and Trio assemblies.

Applications

- // Process cooling



19.8 .. 77.2 m³/h at 50 Hz
(single compressors)



ORBIT BOREAL
HERMETIC SCROLL
COMPRESSORS

ORBIT BOREAL scroll compressors are specially developed for highly efficient applications at low condensing temperatures, as is the case with water cooled chillers and low ambient temperatures. They can be operated at a fixed speed or with frequency inverter.

Applications
// Process cooling



38.6 .. 77.2 m³/h at 50 Hz



ORBIT+
HERMETIC SCROLL
COMPRESSORS

The cutting-edge line-start permanent-magnet motor (LSPM) makes the new ORBIT+ models the most efficient scroll compressors in their class. The series can be operated at a fixed speed or with frequency inverter and, thanks to the BITZER Advanced Header Technology (BAHT), they can be connected in parallel configuration as Tandem or Trio assemblies.

Applications
// Process cooling



20.5 .. 79.9 m³/h at 50 Hz



ORBIT FIT HERMETIC SCROLL COMPRESSORS

Thanks to economiser operation, the new scroll compressors of the ORBIT FIT (Flexible Injection Technology) series achieve new capacity and efficiency levels. The series can be operated at a fixed speed or with frequency inverter and, thanks to the BITZER Advanced Header Technology (BAHT), also accommodates parallel connection in tandems and trios.

Applications

// Process cooling



19.8 .. 77.2 m³/h at 50 Hz



WATER COOLED CONDENSERS AND OIL COOLERS

Five condenser series guarantee maximum performance and flexibility. They can be used in HFC and HFO systems. Notably low approach performances can be reached with standard capacities of up to 1680 kW. A complete range of water cooled and air cooled oil coolers ensures additional cooling.

Applications

// Process cooling applications using
normal or technical water as coolant

// Seawater version



Condensing capacity 8 .. 1680 kW

Oil cooling capacity 10 .. 60 kW



OIL SEPARATORS AND LIQUID RECEIVERS

Oil separators in vertical and horizontal configuration are approved for operation with HFC, HFO and NH₃. Due to centrifugal, gravity and filtration separation options, the highest degree of efficiency is guaranteed. The liquid receiver range includes models for HFC, HFO, subcritical CO₂ and NH₃.

Applications

- // Precision cooling chillers
- // Process cooling systems in positive and medium temperature



Suction flow 40 .. 4300 m³/h
Receiver volume 3 .. 550 dm³



SHELL AND TUBE EVAPORATORS

The range of shell and tube evaporators includes four series of dry-expansion heat exchangers, each optimised for a specific application with HFC, HFO or HFC/HFO blends. BITZER FEV HP flooded evaporators offer the highest efficiency in the industry, meeting all efficiency regulations.

Applications

- // Precision cooling chillers
- // Process cooling systems in positive and medium temperature



Cooling capacity 50 .. 2000 kW

HEAT PUMPS



ORBIT 6 // ORBIT 8 HERMETIC SCROLL COMPRESSORS

The compressors of the ORBIT series offer high efficiency in full and part-load. They're suitable for use with A1 and low-GWP refrigerants of the A2L category (R454B, R452B, R32) and enable operation at a fixed speed or with frequency inverter. Thanks to the BITZER Advanced Header Technology (BAHT), they can be connected in parallel configuration as Tandem and Trio assemblies.

Applications

- // Heat pumps/reversible heat pumps
- // Four pipe units



19.8 .. 77.2 m³/h at 50 Hz
(single compressors)



ORBIT+ HERMETIC SCROLL COMPRESSORS

The cutting-edge line-start permanent-magnet motor (LSPM) makes the new ORBIT+ models the most efficient scroll compressors in their class. The series can be operated at a fixed speed or with frequency inverter and, thanks to the BITZER Advanced Header Technology (BAHT), they can be connected in parallel configuration as Tandem or Trio assemblies.

Applications

- // Heat pumps/reversible heat pumps
- // Four pipe units



20.5 .. 79.9 m³/h at 50 Hz



ORBIT FIT
HERMETIC SCROLL
COMPRESSORS

The economiser operation of the ORBIT FIT (Flexible Injection Technology) series significantly increases efficiency and capacity particularly in heat pump applications. The scroll compressors can be operated at a fixed speed or with frequency inverter and, thanks to the BITZER Advanced Header Technology (BAHT), they can be connected in parallel configuration as Tandem and Trio assemblies.

Applications

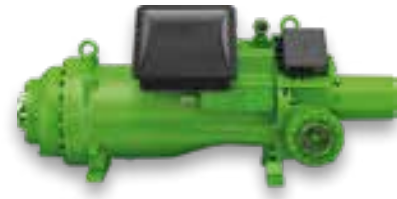
- // Heat pumps/reversible heat pumps
- // Four pipe units



19.8 .. 77.2 m³/h at 50 Hz



IQ MODULE



HS SERIES
SEMI-HERMETIC SCREW
COMPRESSORS

Efficient, robust, durable: thanks to the HSK/N version, HS semi-hermetic screw compressors are suitable for many application ranges and refrigerants. The internal capacity control is multistep and, from HS.85, stepless as an optional feature. All HS compressors are suitable for speed-controlled operation. From HS.95 with IQ MODULE.

Applications

- // Process heat pumps
- // High-temperature heat pumps
- // Combined cooling and heating systems



84 .. 1015 m³/h at 50 Hz

HEAT PUMPS



IQ MODULE



**OPTIONAL
IQ MODULE**



CS // CSV SERIES SEMI-HERMETIC COMPACT SCREW COMPRESSORS

The CS series is suitable for a large application range and optimised for maximum efficiency in liquid chillers and heat pumps. The finely graduated product portfolio and the mechanical capacity control enable simple system integration. From CS.105 with IQ MODULE. The CSV series features an internal frequency inverter.

Applications

- // Heat pumps for space heating
- // Process heat pumps
- // Combined heating and cooling systems



110 .. 2000 m³/h at 50 Hz



ECOLINE RECIPROCATING COMPRESSORS SEMI-HERMETIC DESIGN

ECOLINE reciprocating compressors are versatile and universal in heat pump applications. Two options – VARISTEP mechanical capacity control and VARIPACK frequency inverter – ensure high part-load efficiency. The compressors are optimised for R134a, HFO and low-GWP refrigerants, and HFO blends.

Applications

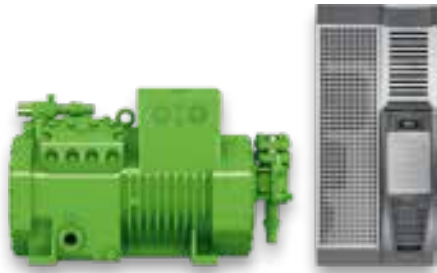
- // Heat pump
- // High-temperature heat pump



4.1 .. 221 m³/h at 50 Hz



OPTIONAL
IQ MODULE



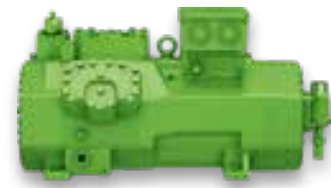
VARIPACK
FREQUENCY INVERTERS
EXTERNAL FOR SEMI-HERMETIC
RECIPROCATING COMPRESSORS

VARIPACK frequency inverters are specially developed for operation with BITZER compressors. Energy can be saved by flexibly adapting a system's cooling demand and the optimale match of compressor and frequency inverter. The frequency inverter speaks the language of cooling.

Applications
// Heat pump



2.5 .. 309 m³/h at var. speed
0.78 .. 65.7 m³/h at var. speed (CO₂)



ECOLINE
RECIPROCATING COMPRESSORS
SEMI-HERMETIC DESIGN FOR
CO₂ APPLICATIONS

The ECOLINE compressors for transcritical CO₂ applications are efficient, environmentally friendly and reliable. The series is designed for a large application range, conventional applications and water heating up to 90°C. The optional IQ module offers maximum reliability.

Applications
// Heat pump



3.3 .. 38.1 m³/h at 50 Hz

HEAT PUMPS



WATER COOLED CONDENSERS AND OIL COOLERS

BITZER shell and tube condensers operate both warm and hot temperature water heat pump systems as well as HFC and HFO systems. The special low fouling design prevents the formation of deposits. Water cooled and air cooled oil coolers ensure additional cooling.

Applications

- // Heating applications using normal or technical water as coolant
- // Seawater version



Condensing capacity 8 .. 1680 kW
Oil cooling capacity 10 .. 60 kW



LIQUID RECEIVERS AND OIL SEPARATORS

The liquid receiver range includes models for HFC, HFO, subcritical CO₂, and NH₃. Vertical and horizontal receivers can be easily integrated. For large heat pump systems, oil separators in vertical and horizontal configuration are approved for operation with HFC, HFO and NH₃.

Applications

- // All refrigerant versions available



Receiver volume 3 .. 550 dm³
Suction flow 40 .. 4300 m³/h



IQ MODULE



IQ MODULE



IQ MODULE



OS.(A) SERIES
OPEN DRIVE SCREW
COMPRESSORS

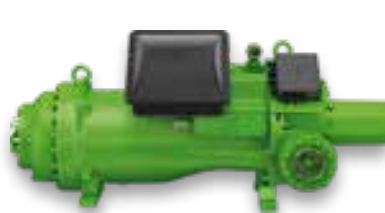
The OS series separates the flanged motor and refrigerant circuit. Thanks to the OSK/N version, these compressors are suitable for many application ranges and refrigerants, with a separate series for operation with ammonia. The internal capacity control is multistep and, from OS.85, stepless as an optional feature. All OS compressors are suitable for speed-controlled operation. From OS.95 with IQ MODULE.

Applications

- // Medium and low temperature storage
- // Blast chiller
- // Blast freezer
- // Ice production
- // Heat recovery



84 .. 1015 m³/h at 2900 min⁻¹



HS SERIES
SEMI-HERMETIC SCREW
COMPRESSORS

Efficient, robust, durable: thanks to the HSK/N version, HS semi-hermetic screw compressors are suitable for many application ranges and refrigerants. The internal capacity control is multistep and, from HS.85, stepless as an optional feature. All HS compressors are suitable for speed-controlled operation. From HS.95 with IQ MODULE.

Applications

- // Medium and low temperature storage
- // Blast chiller
- // Blast freezer
- // Ice production
- // Heat recovery



84 .. 1015 m³/h at 50 Hz



CS // CSV SERIES
SEMI-HERMETIC COMPACT
SCREW COMPRESSORS

The CS series is suitable for a large application range and optimised for maximum efficiency in liquid chillers and heat pumps. The finely graduated product portfolio and the mechanical capacity control enable simple system integration. From CS.105 with IQ MODULE. The CSV series features an internal frequency inverter.

Applications

- // Air conditioning liquid chillers
- // Process liquid chillers for medium, low and high temperature applications
- // Combined heating and cooling systems
- // Heat pumps for space heating
- // Process heat pumps



110 .. 2000 m³/h at 50 Hz



OPTIONAL
IQ MODULE



ECOLINE
RECIPROCATING COMPRESSORS
SEMI-HERMETIC DESIGN

Universal and environmentally friendly: ECOLINE reciprocating compressors offer high cooling capacity with minimal energy requirements and are optimised for HFC, HFO and low-GWP refrigerants. The optional VARISTEP mechanical capacity control offers high part-load efficiency in medium and low temperature application.

Applications

// Marine



4.1 .. 221 m³/h at 50 Hz



RECIPROCATING
COMPRESSORS
FOR CONTAINER COOLING,
ALUMINIUM DESIGN

Star Cool container cooling is the result of an intensive collaboration between Maersk Container Industry and BITZER. The heart of the system is an especially compact, lightweight and low-vibration 2-stage aluminium compressor, equipped with an internal frequency inverter for outstanding efficiency and operational reliability.

Applications

// Medium temperature application

// Low temperature application



9.5 .. 41.8 m³/h at variable speed



WATER COOLED CONDENSERS AND OIL COOLERS

BITZER offers five condenser series that can be used in HFC and HFO systems. Notably low approach performances can be reached with standard capacities of up to 1680 kW. Water cooled and air cooled oil coolers ensure additional cooling, with low pressure drop values and reduced energy consumption.

Applications

- // Technical water version
- // Seawater version



Condensing capacity 8 .. 1680 kW
Oil cooling capacity 10 .. 60 kW



LIQUID RECEIVERS AND OIL SEPARATORS

The liquid receiver range includes models for HFC, HFO, subcritical CO₂, and NH₃. Vertical and horizontal receivers can be easily integrated. For large heat pump systems, oil separators in vertical and horizontal configuration are approved for operation with HFC, HFO and NH₃.

Applications

- // All refrigerant versions available



Receiver volume 3 .. 550 dm³
Suction flow 40 .. 4300 m³/h



SHELL AND TUBE EVAPORATORS

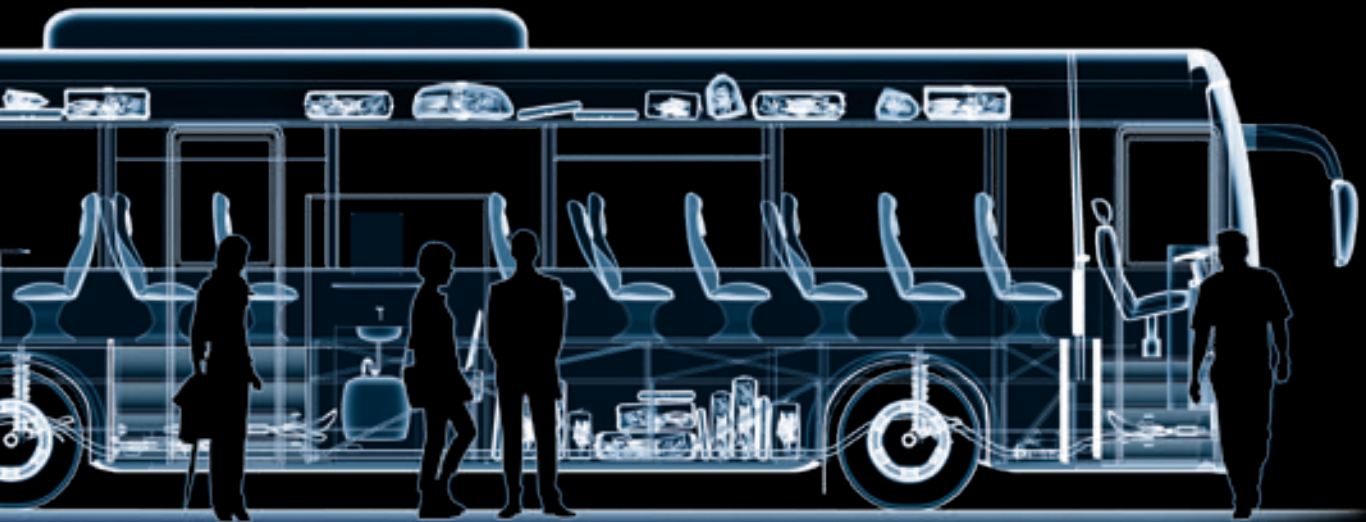
BITZER's range of shell and tube evaporators includes four different series of dry-expansion heat exchangers, each optimised for a specific application. A selection of materials and a wide approval choice are available. BITZER FEV HP flooded evaporators are the most efficient ones in the industry.

Applications

- // Dry-expansion solutions for low, medium and positive temperature applications
- // Flooded evaporators



Cooling capacity 50 .. 2000 kW



GET THERE FRESH. NO MATTER HOW LONG THE JOURNEY.

Whether it's on the go or at work, people have come to expect comfortable temperatures. In buses and trains, versatile BITZER compressors ensure that travellers reach their destination in comfort and feeling relaxed. In the cabs of commercial vehicles and lorries, they also help enhance the driver's concentration and level of productivity while working. With its reliable products, BITZER creates a consistent climate when transporting goods as well as comfortable temperatures for passengers.



BUS



RAILWAY



TRUCK AND TRAILER



ROADSTAR
OPEN DRIVE ALUMINIUM
RECIPROCATING COMPRESSORS

The exceptionally reliable BITZER compressors of the ROADSTAR series are specially optimised for use in bus air conditioning. The optional capacity control also promotes high energy efficiency. The BITZER ROADSTAR series is available in a 2, 4 or 6-cylinder design.

Applications
// Air conditioning



20.7 .. 84.4 m³/h at 1450 min⁻¹



ECOLINE H SERIES
SEMI-HERMETIC
RECIPROCATING COMPRESSORS

The H series is a further development of the ECOLINE compressor series. The drive gear has been adapted to ensure reliability even in demanding operating conditions and thus fulfils the requirements of mobile applications.

Applications
// Air conditioning/heat pumps



11.4 .. 56.3 m³/h at 50 Hz



SPEEDLITE ELV21 // ELV51
SEMI-HERMETIC ALUMINIUM
SCROLL COMPRESSORS

The SPEEDLITE scroll compressor are specially developed for mobile use, and are extremely lightweight and compact. Thanks to the high speed range, the SPEEDLITE compressors can be adapted to all operating conditions and thus achieve optimal full and part-load efficiency values.

Applications
// Air conditioning



ELV21: 2.7 .. 8.6 m³/h (2500-8000 rpm)
ELV51: 11.9 .. 43 m³/h (2500-9000 rpm)



ECOLINE H SERIES SEMI-HERMETIC RECIPROCATING COMPRESSORS

The H series is a further development of the ECOLINE compressor series. The drive gear has been adapted to ensure reliability even in demanding operating conditions and thus fulfils the requirements of mobile applications.

Applications

// Air conditioning/heat pumps



11.4 .. 56.3 m³/h at 50 Hz



ELH // ELA SERIES HORIZONTAL HERMETIC SCROLL COMPRESSORS

Thanks to their space-saving and horizontal design, ELH and ELA scroll compressors are suitable for compact air conditioning systems in particular and offer high displacements. They boast low noise and vibration levels as well as high efficiency and smooth running. The compressors are optimised for R134a and can easily be adjusted for low-GWP refrigerants.

Applications

// Air conditioning



25 .. 43 m³/h at 50 Hz



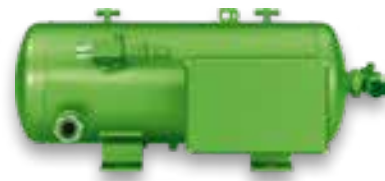
SPEEDLITE ELV21 // ELV51
SEMI-HERMETIC ALUMINIUM
SCROLL COMPRESSORS

The SPEEDLITE scroll compressor are specially developed for mobile use, and are extremely lightweight and compact. Thanks to the high speed range, the SPEEDLITE compressors can be adapted to all operating conditions and thus achieve optimal full and part-load efficiency values.

Applications
// Air conditioning



ELV21: 2.7 .. 8.6 m³/h (2500-8000 rpm)
ELV51: 11.9 .. 43 m³/h (2500-9000 rpm)



VSK SERIES
HERMETIC SCREW
COMPRESSORS

Based on decades of experience, these series are designed for the specific needs of railway air conditioning systems. Thanks to generously sized roller bearings, the compressors are exceptionally reliable with a long service life. Their large frequency range provides optimal full and part-load efficiency.

Applications
// Air conditioning



46 .. 80 m³/h at 50 Hz



ROADSTAR OPEN DRIVE ALUMINIUM RECIPROCATING COMPRESSORS

The exceptionally reliable BITZER compressors of the ROADSTAR series are specially optimised for use in bus air conditioning. The optional capacity control also promotes high energy efficiency. The BITZER ROADSTAR series is available in a 2, 4 or 6-cylinder design.

Applications

- // Medium temperature application
- // Low temperature application



20.7 .. 84.4 m³/h at 1450 min⁻¹



ECOLINE H SERIES SEMI-HERMETIC RECIPROCATING COMPRESSORS

The H series is a further development of the ECOLINE compressor series. The drive gear has been adapted to ensure reliability even in demanding operating conditions and thus fulfils the requirements of mobile applications.

Applications

- // Medium to low temperature applications
- // Air conditioning/heat pumps



11.4 .. 56.3 m³/h at 50 Hz



SPEEDLITE ELV21
SEMI-HERMETIC ALUMINIUM
SCROLL COMPRESSORS

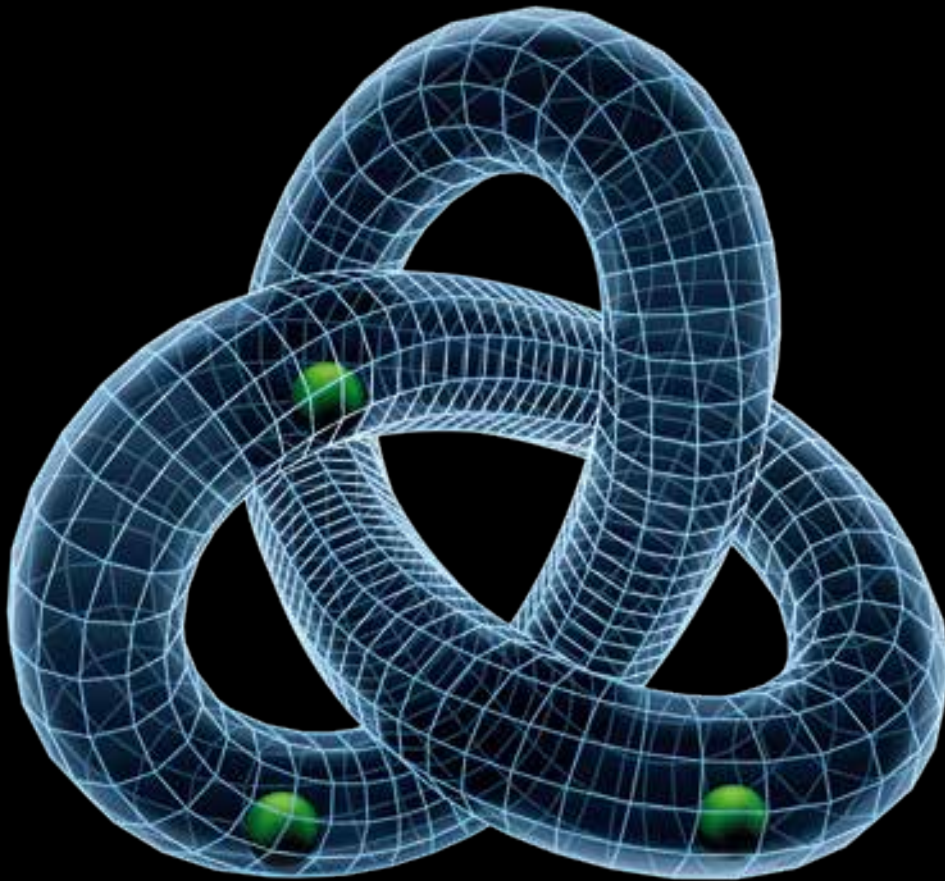
The SPEEDLITE scroll compressor are specially developed for mobile use, and are extremely lightweight and compact. Thanks to the high speed range, the SPEEDLITE compressors can be adapted to all operating conditions and thus achieve optimal full and part-load efficiency values.

Applications

// Air conditioning



2.7 .. 8.6 m³/h (2500-8000 rpm)



ONGOING SERVICES. **OUTSTANDING PERFORMANCE.**

Did you know? BITZER SERVICES have been developed by real experts – by the manufacturers themselves. In addition to minimising system downtime, our ongoing services help to reduce overall operating costs, and thus the total cost of ownership. Software products like BITZER SOFTWARE and BEST SOFTWARE support, optimise and document your processes. Benefit additionally from our broad range of training courses on the handling of components and products for cooling and refrigeration. Our service portfolio has clear objectives: flexibility, affordability and an extensive service network for our customers.

-  ON-SITE SERVICES
-  DIGITAL SERVICES
-  TRAINING AND SEMINARS
-  DOCUMENTATION



B-SAFE

**FOR UP TO FIVE YEARS:
WARRANTY EXTENSION**

Available for practically the entire product range, the BITZER warranty extension pack simply and affordably extends warranty coverage. For a fraction of the product’s price, customers can extend their warranty by up to five years and individually adapt the duration. Online registration initiates the extension, giving your customers peace of mind for years to come.

- // Flexible duration of up to five years
- // Self-explanatory online registration

**FREE ONE-YEAR WARRANTY EXTENSION:
FOR ALL INTELLIGENT PRODUCTS**

INTELLIGENT PRODUCTS (IQ) ensure efficient compressor operation as well as availability within the operating range. This new concept is rounded out by our complimentary one-year warranty extension. All BITZER IQ PRODUCTS benefit from free storage of commissioning reports and data logs provided by IQ MODULE and BEST SOFTWARE (BITZER Electronics Service Tool).

- // One-year extension at no cost
- // Free storage of reports and data logs
- // Efficient operation and reliable availability

**FOR EXCELLENT RESULTS:
COMMISSIONING ASSISTANCE**

The BITZER commissioning assistance service ensures you get the most out of your investment. BITZER contractors and field technicians benefit from a range of services in the start-up phase. The commissioning assistance service is available for all condensing units such as LHE, ECOLITE and ECOSTAR, as well as for systems built by BITZER.

- // System optimisation
- // On-site basic training for technicians
- // Monitoring and maintenance tips
- // Commissioning report with certification data
- // Commissioning assistance for contractors and field technicians
- // Available for all condensing units



Scan for additional information



B-READY

**COMPRESSOR AND CONDENSING UNIT:
ASSESSMENT SERVICES**

BITZER experts monitor and review all operating parameters both after initial start-up and on a regular basis to extend service life and minimise downtime. Our certified engineers monitor the operation results, which are assessed in a detailed report including recommendations on troubleshooting, fine-tuning, maintenance and system optimisation.

- // Increased service life
- // Expert monitoring and assessment of operating parameters
- // Detailed report
- // Minimised downtime
- // Recommendations on troubleshooting, maintenance and system optimisation

**FOR SECURE INVESTMENTS:
RETROFITTING SOLUTIONS**

Due to international regulations and market availability, systems based on high-GWP (global warming potential) refrigerants need to be adapted. BITZER provides comprehensive support regarding efficiency and compliance. Our future-proof solutions safeguard investments, including system component compatibility and replacement, capacity control solutions, and more.

- // Future-proof solutions and investment protection
- // Analysis of the customer’s specific landscape
- // Solutions for various low-GWP refrigerants
- // The extensive expertise of a market leader

**REFRIGERANT COMPLIANCE AND
STRATEGY CONSULTING**

Low-GWP refrigerants are the key to the future of refrigeration and air conditioning. ‘Can I still use my existing equipment?’ ‘How and when do I have to replace my HVAC or refrigeration systems?’ ‘Which is the right investment for the future?’ If you can answer these questions, your investments are safe – our experts provide analyses and support.

- // Investment and asset security requires planning
- // Expert analysis of existing systems
- // Customised solution in terms of costs, efficiency, safety and durability
- // Final report for an informed decision
- // Low-GWP and natural refrigerants are gaining ground



Scan for additional information

ON-SITE SERVICES

SPARE PARTS AND OIL

Our spare parts specialists ensure prompt availability of BITZER ORIGINAL SPARE PARTS. Selected service partners are available worldwide to help you select suitable spare parts and refrigeration oil. BITZER provides a broad range of measures and tools to make selection of spare parts easy and to protect them from product piracy.



- // Worldwide registration of industrial property rights: patents, utility models, registered designs, brands and copyrights
- // QR code on spare parts packages and an online BITZER Product Authenticator for easy authenticity check of each BITZER spare part
- // With free BITZER ePARTS SOFTWARE, selection of the right component has never been so easy
- // The free BITZER SPOT APP facilitates the simple, mobile authenticity check of each BITZER product



Scan for additional information

Green Point[®] A SERVICE BY BITZER GROUP

GREEN POINT is the BITZER service organisation with over 50 locations and offers a complete service cycle including the repair and inspection of compressors, extensive site services as well as original BITZER refrigerant compressor oils and parts.

- // Start-up service
- // Audit service
- // Logistic service
- // Repair service
- // Replacement service



Scan for additional information



More than 70 Authorised Service Centres (ASC) around the globe ensure that BITZER is always within reach. Be it personal contacts or offering training, repair or commissioning solutions: BITZER SERVICES, like BITZER products, meet highest standards, ensuring availability and reducing operational costs of your process. The worldwide BITZER service centres offer:

- // Repair of BITZER reciprocating and screw compressors
- // Availability of original spare parts and refrigerant compressor oil
- // ASC partners with up-to-date know-how of the latest service requirements and processes
- // Extensive knowledge of local markets and applications



Scan for additional information



At BITZER, everything revolves around the customer. With myBITZER, customers have direct, personalised access to the complete range of BITZER software tools and services. To further optimise the customer experience, we have created a new user surface. Discover and enjoy the whole BITZER world which is continually being extended for your benefit.



Available online and as a downloadable version, BITZER SOFTWARE will help you select the appropriate BITZER product from our extensive, flexible product range. The tool supports the selection process when looking for compressors, condensing units, heat exchangers, VARIPACK, IQ MODULE and the relevant software solutions.

- // Find the right product that meets your individual requirements
- // Select appropriate IQ PRODUCTS and capacity regulation solutions
- // Select suitable products like receiver, oil separator and condenser
- // Access documentation and application limits



ePARTS, the free online spare parts software by BITZER, provides a fast and simple solution for finding the right spare parts for our products.



Via PC and APP, you can operate all BITZER IQ PRODUCTS with only one software tool. The intuitive BEST SOFTWARE (BITZER Electronics Service Tool) user interface enables easy and secure BITZER IQ configuration as well as a rapid set-up. Get an instant, comprehensive operating status. The BEST log file records all application parameters, providing help with fine-tuning and troubleshooting.

- // One software for all IQ PRODUCTS
- // Easy commissioning
- // Supports maintenance and troubleshooting



BITZER in a nutshell: with the free-of-charge BITZER SPOT APP, customers can control the authenticity of each BITZER product anytime and anywhere by scanning the QR code. The APP protects against product counterfeiting and provides offline information including a directory of BITZER, GREEN POINT offices and certified dealers.

- // Authenticity check of BITZER products
- // Complete documentation
- // Easy to locate: BITZER, GREEN POINT and distributor locations always close to you



TRAINING AND SEMINARS // DOCUMENTATION



The SCHAUFLEER Academy, our international training centre provides seminars and trainings for the realisation of sustainable and efficient solutions in refrigeration and air conditioning. Everyone benefits – from service technicians and installers up to project/technical engineers and planners. Courses are offered in German and English on CO₂, Ammonia, Hydrocarbons, Electronic components and retrofitting systems. You can book customised trainings as well. Further information on new additions to our course programme, our worldwide trainings or courses nearest to you on the BITZER website.



Scan for additional information



BITZER provides a wide range of product brochures, certifications and special publications like 'Refrigerant Report' and 'Competence in Capacity Control'. Product-related documentation is available in the BITZER SOFTWARE in the tab 'Documentation' and via the QR code on the product. By scanning the QR code below, you are directly linked to the BITZER website, where you can find all documentation available for download. Printed versions can be ordered in your responsible BITZER subsidiary.



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CLOSER TO YOU. BITZER WORLDWIDE SALES
AND SERVICE EXCELLENCE.



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