

# BOCK LG compressor range

The °Clever Art of Cooling:  
The solution for low-GWP HFO refrigerants

# BOCK

colour the world  
of tomorrow

# LG compressors for low and medium temperature, air-conditioning, heat pumps

Always one step ahead! With this claim BOCK develops for almost 90 years innovative compressor solutions for refrigeration and air-conditioning technology that set standards. Current example: The new range of semi-hermetic LG compressors – specially designed for use with low-GWP HFO refrigerants.

With the new LG range (LG = Low-GWP) BOCK now offers a compressor portfolio with suitable compressor technology for all synthetic refrigerants. This includes the common HFC fluids as well as the new HFO low-GWP fluids with a GWP value <150, enabling planners and operators to create individually configurable, economical system solutions for sustainable refrigerants that meet the requirements for the global phase down of F-Gases in a safe and sustainable way (F-Gas Regulation, Kigali Amendment etc.).

## Long-term tests show: HFO refrigerants need special compressor technology

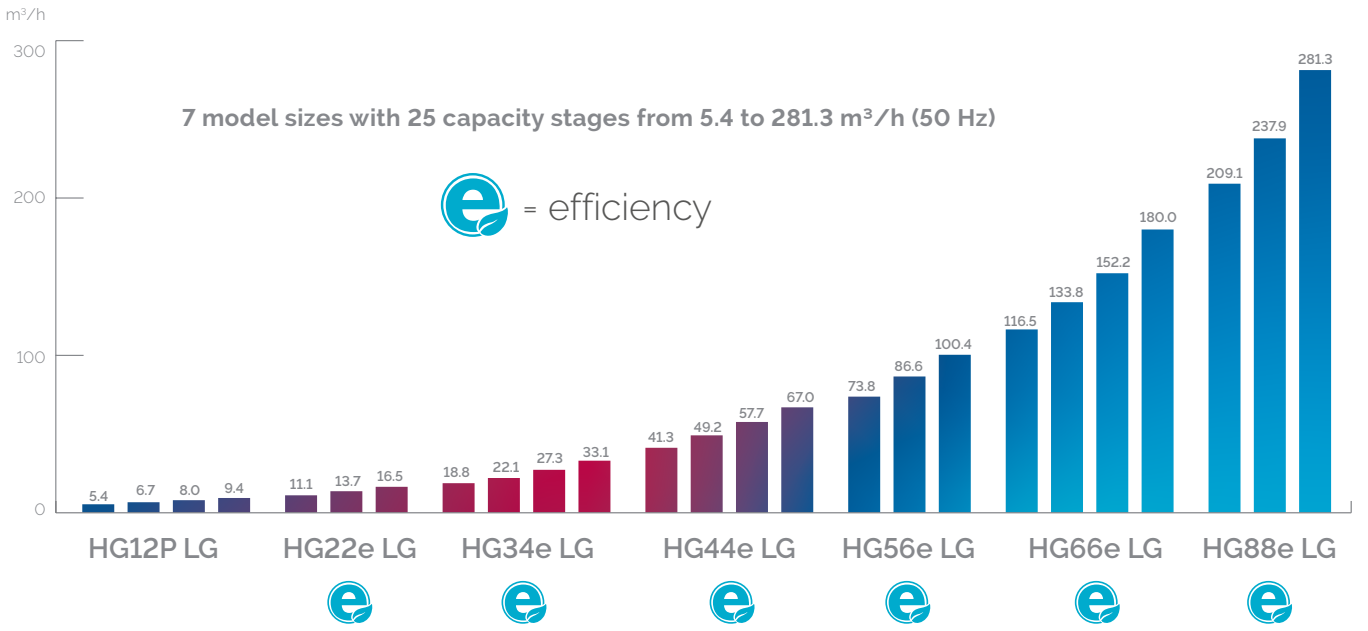
The development of pioneering BOCK products such as the new LG compressor range is the result of continuous research including internal and external long-term tests in various applications. Here it became apparent that conventional compressors are not suitable for safe and reliable operation with HFO refrigerants. In particular, the driving gear and seals usually lost their functional reliability in the long run due to the higher requirements of these refrigerants.

Once again, the decades of experience of the BOCK experts were confirmed: Different refrigerants require compressors with special technical design – for maximum robustness, reliability and durability over the entire life cycle of a system.

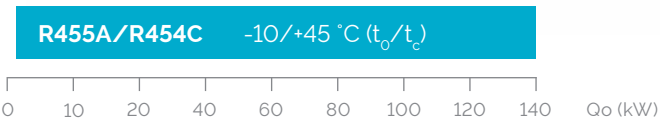
## New series with complete product range

Within the semi-hermetic BOCK standard HG compressor range, the new LG compressors are an independent series with a complete product range: seven model sizes with 25 capacity stages exceed all features and advantages of the standard series, which BOCK customers worldwide appreciate.

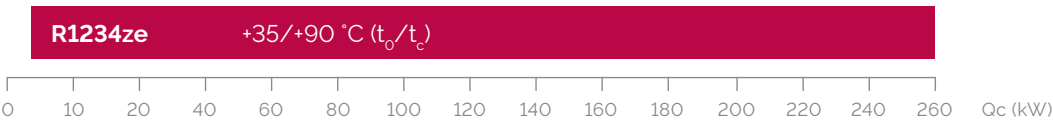
### Single-stage LG compressors



### Cooling capacity R455A/R454C



### Heating capacity R1234ze



### Type key – adapted to worldwide requirements

HGX88e/3235 **S** **95** **LG**  
 HGX88e/3235 **ML** **80** **LG**

- LG – Low-GWP
- HP code for motor size
- Motor application
- S – strong motor e.g. AC
- ML – motor for MT and LT

# HFO specialists thanks to optimized BOCK driving gear design



Low GWP

HFO refrigerants such as R455A or R1234ze place significantly higher demands on the compressors than standard HFC refrigerants such as R404A and R134a – especially with regard to the driving gear, keyword emergency running properties. The reason: HFO refrigerants have a much higher solubility in oil, which leads to a sharp reduction in oil viscosity and thus increases the susceptibility to compressor damage.



Efficiency

For this reason, BOCK engineers – based on their many years of experience in dealing with the technically demanding refrigerants CO<sub>2</sub> and hydrocarbons – have developed a special driving gear design for the new LG range that makes the compressors „less sensitive“ to falling oil viscosity.



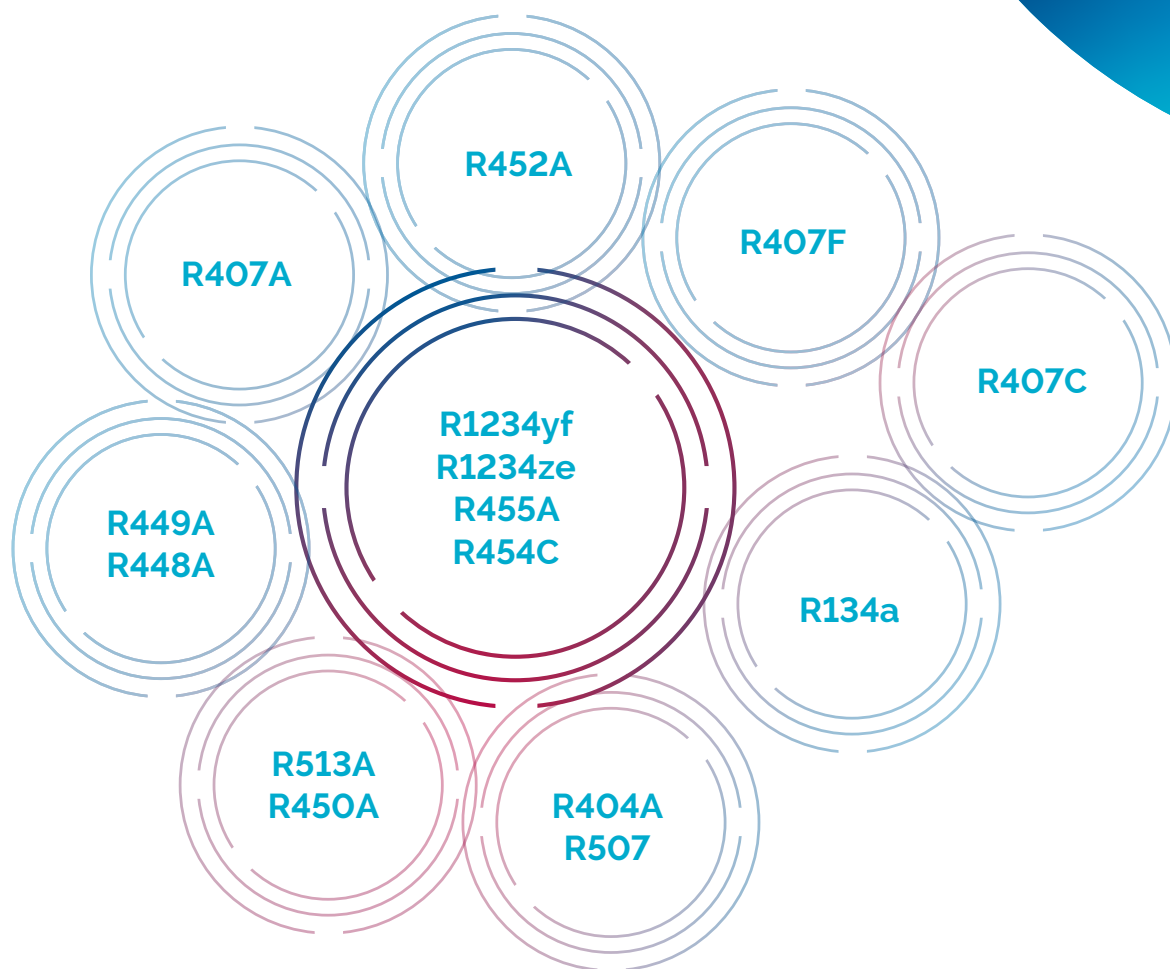
Reliability

Special sealing materials +

Optimized driving gear +



## One compressor version for all common refrigerants



+ Motor protection device as accessory pack

+ Special oil filling for heat pump application

### **BOCK VAP**

#### **COMPRESSOR SELECTION PROGRAM**



Current information on technical data, performance data, operating limits and much more can be done online via the BOCK compressor selection program (VAP): [gea.com/vap](https://gea.com/vap)

**BOCK is one of the world's technology and innovation leaders in the development of environmentally friendly, economical solutions in the field of refrigeration and air-conditioning technology, including heat pumps and heat recovery – with one of the world's largest portfolios of compressors for natural refrigerants such as CO<sub>2</sub> (R744), hydrocarbons and other low-GWP refrigerants.**

# BOCK

## **GEA Bock GmbH**

Benzstraße 7  
72636 Frickenhausen  
Germany  
Tel +49 7022 9454-0  
Fax +49 7022 9454-137  
[gea.com/lg](http://gea.com/lg)

