

## The 'Clever Art of Cooling: BOCK F-Series

New F76 and optimized F88 series

**BOCK** 

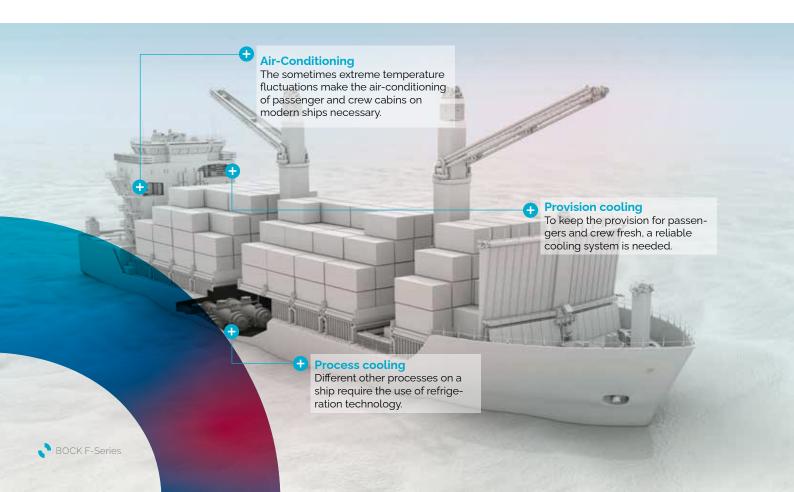
colour the world of tomorrow

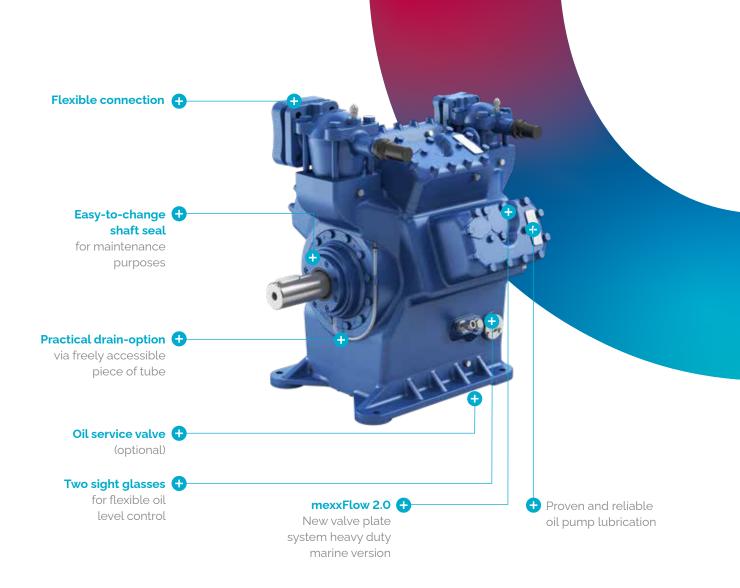
# **\*Clever solved – compressor solutions for maritime** and stationary applications

#### **BOCK F-series for marine and stationary refrigeration**

Compressors of the Bock F-series are ideally suited for the high demands of shipping: for air-conditioning cabins and cooling supplies on passenger ships, containers, or fishing boats. In the stationary refrigeration sector, the reciprocating compressors offer extremely easy handling. And this even under challenging conditions such as unreliable or varying voltage supply.

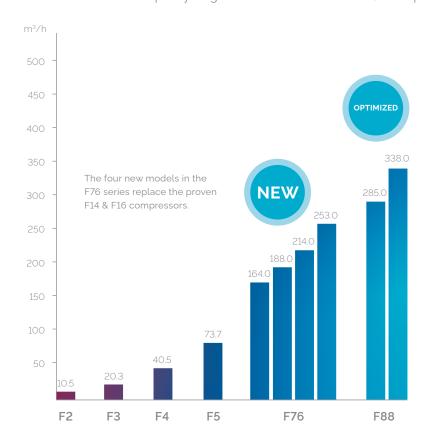






#### The current program

6 model sizes with 10 capacity stages from 12.6 to 337.6  $\mathrm{m}^3/\mathrm{h}$  (1.740 rpm)



### Comparison of the new F76 series with former models

#### **New F76 - Replacement for former types**

F76 v		rs. F14/16	
Types:	Displacement at 1,740 rpm:	Former types:	Displacement at 1,740 rpm:
-	-	F14/1166	121.7 m³/h
F76/1570	164.0 m <sup>3</sup> /h	F14/1366	142.8 m³/h
F76/1800	188.0 m³/h	F16/1751	182.6 m <sup>3</sup> /h
F76/2050	214.0 m <sup>3</sup> /h	F16/2051	214.1 m³/h
F76/2425	253.0 m <sup>3</sup> /h	-	-

#### **Dimension Comparison**





#### F76 vs. F16 elevated baseplate version

- No height difference crank shaft + pipe connections
- Footprint identical of both versions F76 and F16
- o cylindrical crankshaft end (F16: conical)

#### F76 vs. F16 low baseplate version

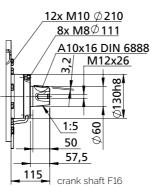
- Height difference crank shaft + pipe connections: 50 mm
- Footprint identical of both versions F76 and F16
- o cylindrical crankshaft end (F16: conical)

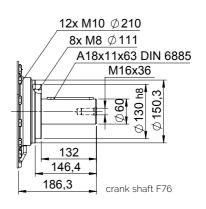
#### F76 vs. F14 mit erhöhter Bodenplatte

- o 6 instead of 4 cylinders
- Height difference crank shaft: 19 mm
- Different position of the shut-off valves
- Footprint identical of both versions F76 and F14
- o cylindrical crankshaft end (F14: conical)

#### **Comparison crank shafts**







## Your advantages with **Bock F compressors**

Real alternative for industrial applications with higher efficiency, for the toughest requirements

#### The real alternative

Bock only has solutions for commercial applications? Far from it! With our "largest" we have a real alternative for industrial applications. The F88 series is more compact and cost-effective with even higher efficiency compared to industrial compressors in this capacity range. And you reduce your maintenance intervals. With the F88 compressor you get as well reliable as a moneysaving solution for your industrial requirements.

#### Highly efficient valve plate system

The new mexxFlow 2.0 valve system, already tested and proven in our large semi-hermetic compressors, is now also integrated in our F76 and F88 series. The second generation shows even greater resistance with a consistently high efficiency. This makes it suitable for even the toughest requirements in various applications.

#### Reliable and safe oil supply

All F compressors are equipped with an oil pump lubrication independent of the direction of rotation. Minimized oil carry-over, a service-friendly oil strainer, large-volume oil sump and connection options for oil pressure monitoring and oil level regulator (standard) ensure the reliability and long service life of the compressors that we promise.

#### **Elevated base plate**

Do you want to use more oil in the compressor for your application in harsh conditions? No problem - choose our F compressors with elevated base plate and additional oil volume (F76: 2.7 l; F88: 4.6 l). Elevated base plate - low base plate: Decide according to your requirements!

#### **Step protection**

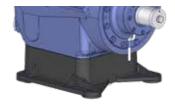
Limited space and harsh outdoor conditions require robust, durable and resistant components. Bock protects sensitive compressor elements with a step protection (accessory). This means that you do not need to worry even under challenging conditions and in narrow machine rooms.



mexxFlow 2.0









# **BOCK service** and support

Up-to-date information, training and tools about BOCK CO<sub>2</sub> compressors, compressors for hydrocarbons and solutions for other refrigerants. Use our expertise for your daily practice – online and free of charge



### \*Clever+Cool Experts live

BOCK Shop | **N**BOCK CO₂Tool | **N**BOCK VAP | **N** 

From experts for experts – our new online formats can be used from any computer, regardless of location: Office, workshop or even at home.

To ensure that you can make the best possible use of the advantages of BOCK compressors, we support you online and personal with four service and support modules. There you will find valuable information: from plant planning and design to implementation and operation to retrofitting or upgrading existing systems.

#### **BOCK** training courses

Together with Danfoss, BOCK offers special (online) user training courses. For this purpose, a complete transcritical supermarket refrigeration system with the latest  $CO_2$  technology is in operation at the BOCK training center – with heat recovery + air conditioning + parallel compression + ejector – in order to make the seminars more practical.

#### **BOCK**shop

The online catalog in the **BOCK**shop is the best choice to find spare parts for your BOCK compressor easily and quickly around the clock. Including all Ex-drawings as well as further information such as parts lists – also for printing.

» bockshop.bock.de

#### **BOCK**CO<sub>2</sub>Tool

The strengths of the **BOCK**CO<sub>2</sub>Tool based on Excel: Support for the selection of CO<sub>2</sub> compressors, e.g. by displaying the system schematic as RI flow diagram and refrigeration circuit in log-p-h-diagram, as well as selecting compressors in rack systems and for special CO<sub>2</sub> systems such as booster systems.

» Usage on request: vap@bock.de

#### **BOCK**VAP

The BOCK compressor selection program (VAP) is the perfect tool, to find suitable compressors or condensing units for your stationary or mobile application: Simply enter cooling capacity and operating conditions and the suitable components will be displayed immediately. In addition, the tool provides you with further information, e.g. application limits, performance data, dimensions and connections, scope of delivery, accessories,

3 D compressor models and much more.

Another advantage: **BOCK**VAP is available to you free of charge as an online and offline version for PC installation.

» vap.bock.de



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 GmbH**

Benzstraße 7 72636 Frickenhausen Germany Tel +49 7022 9454-0

Fax +49 7022 9454-137 bock.de