

HV-TURBO® compressor range

# BaseLINE turbo compressor



Our company was initially founded in 1882 as 'Helsingør Shipyard', and since 1973 we developed and established the HV-TURBO compressor brand. Since 2012 the manufacturing of compressors has taken place in our modern production facilities in Frankenthal/Germany, while the HV-TURBO competence centre remains located in the historical buildings of the former shipyard in Helsingør, Denmark.



# Our single-stage turbo compressor is now available in a dedicated wastewater solution

The BaseLINE turbo compressor is built with the same well-known, high-efficiency, reliable technology as the rest of our portfolio, but tailored towards the 1.000–16.000 m<sup>3</sup>/h installations, particularly well-suited for waste water treatment plants. The design and high efficiency makes BaseLINE the most cost effective solution available in the industry.

## Introducing the BaseLINE series

We now introduce the new BaseLINE series. In this portfolio, the compressor performance is uniquely designed to meet your particular plant specifications; however, the package is standardised to fit most wastewater treatment plant applications.

BaseLINE is the most cost effective solution on the market – minimising the initial cost, ensuring low operating and maintenance cost – giving you the market's lowest total cost of ownership.

## European quality

The BaseLINE series are made in accordance with the highest European Engineering and Quality standards.

Similar to our fully customised turbo compressors, the BaseLINE series are manufactured and assembled in our modern production facility in Germany.

Before delivery, each compressor is thoroughly tested to ensure performance and quality. With each unit, you will receive a certificate proving the performance and efficiency of that particular unit as each unit is fully traceable through the unique serial numbers.

Each compressor will be packaged on a baseframe with e.g. oil system, motor and control system by one of our configuration centres located around the world. Currently, we have configuration centres in Germany, Italy, USA and China, allowing us to be close to our customers while ensuring short delivery times and adaption to local standards. This makes us the most well-represented supplier of single-stage turbo compressors world wide.

## Compressor design

The BaseLINE compressor is an integrally geared single-stage turbo compressor with oil lubricated ceramic ball bearings.

The compressor features the 4th generation of impeller design with backward leaning blades, angled according to the desired regulation, and milled from a solid, forged piece of high grade aluminium alloy with an optimal weight/strength ratio.

The oil lubricated bearing concept has, over the past 40 years, proven to be the most reliable and cost effective solution for this industry. Several thousands of our machines are still in operation after more than 25 years of service.

## The following main components are included in our standard solution:

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BaseLINE turbo compressor.

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High quality brand – low voltage motor.

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Base frame.

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Flexible disk coupling.

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Oil system.

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Cone diffuser.

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Inlet silencer with filter box.

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Local control panel (PLC S7-1200).

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Other bearing technologies used in direct drive applications, have shown significant shortcomings, causing expensive breakdowns and repairs. Experience has shown, that these technologies are particularly sensitive to many starts/stops, high ambient temperatures, or a dusty or dirty environment.

**Why is BaseLINE the market's most efficient solution?**

The technology behind the BaseLINE series – making them the most efficient and reliable in the industry – is straight forward.

The BaseLINE impeller and gear-ratio will be fully customised to meet the specification of each individual plant, thereby eliminating the risk of over-design.

The BaseLINE compressor unit features the unique Dual Point Control with inlet guide vanes and outlet diffuser vanes, ensuring a high-efficiency operation from 100% to 40% turndown. Compared to compressors with single point speed control (VFD) with limited turndown, the Dual Point Control allows you to regulate and operate your compressor within its maximum efficiency areas and with minimum power consumption over a wide dynamic range.

With the PLC S7-1200, the Local Control Panel becomes an intelligent solution for controlling our BaseLINE compressor. Furthermore, combined with the Dual Point Control and the instrumentation on the compressor, the Local Control Panel provides a superior automation concept that keeps efficiency and quality at a constant, high level.

**Each BaseLINE standard unit can be configured with various upgrades to suit specific requirements:**

**Sound-Reduction Package** – an acoustic enclosure covering the complete compressor unit. In addition a silenced cone diffuser is included. The package ensures sound level less than 80 dB(A) at 1 meter distance.

**Master Control Panel** – automatic control of the air supply from a group of compressors to ensure maximum efficiency, lower energy consumption and accurate control, even under fluctuating conditions.

**Monitoring Package** – an accelerometer to monitor vibration levels and PT-100 sensors in the bearing to monitor bearing temperatures.

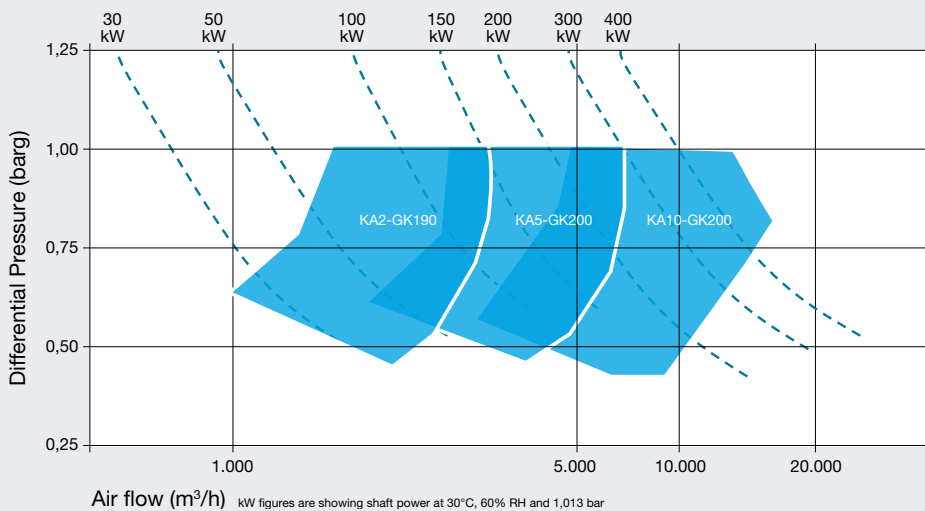
**Upgrade of the core unit to suit environments with elevated H<sub>2</sub>S levels in the air** – utilisation of stainless steel vanes and anodisation of the impeller.

**BaseLINE benefits**

- Lowest total cost of owner ship.
- Highest efficiency.
- Short delivery time.
- Long service life +20 years.
- More than 7000 units in operation world wide.



**BaseLINE turbo compressor series**



**BaseLINE Series 3 compressor sizes:**

- KA2-GK190
- KA5-GK200
- KA10-GK200

Flow range between 1.000 m³/h to 16.000 m³/h, with a differential pressure up to 1 bar(g).



#### For further information contact

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## BaseLINE turbo compressor – advantages in brief

### Our history

Our company was initially founded in 1882 as 'Helsingør Shipyard', and since 1973 we developed and established the HV-TURBO compressor brand. Since 2012 the manufacturing of compressors has taken place in our modern production facilities in Frankenthal/Germany, while the HV-TURBO competence centre remains located in the historical buildings of the former shipyard in Helsingør, Denmark.

### Customised turbo compressor

We also offer a comprehensive portfolio of fully customised, integrally geared single-stage turbo compressors, combined with application-related, special solutions. Our product portfolio covers the full range of 1.500 – 120.000 Nm<sup>3</sup>/hr air flow, with differential pressure from 0.4 up to 2.5 bar(g). Our specialists will help select the best suitable technology, based on total cost of ownership, and your project and plant specific requirements.

### Product design and development

Our expert design and engineering teams are critical to our customers' success. With our unique skills and services, our dedicated R&D team members are specialists in developing high performance compressors, and creating solutions to complement our customers' design team. Our design and engineering expertise includes soft- and hardware engineering as well as mechanical engineering.

### Thoroughly tested

The advanced test rig, incl. mechanical and functional testing and performance simulation, provides verification that all technical requirements have been met before the compressor leaves the factory.

### Service

Our world-wide Service setup secures delivery of a wide range of service and maintenance options from a location near you.

Our highly qualified experts offer supervision of the installation, start up of your compressors, and they can provide on-site training for your staff. In addition, we offer regular service and maintenance of your compressors, either as per defined in your service contract, or on a case to case basis.

### Certified supplier

Our BaseLINE turbo compressors have been developed in accordance with all relevant international standards including::

ISO 5389 2005-12-15 (Compressor)

DIN EN ISO 5167-1,-2:2003 (Flow measurement)

IEC 60034-1 & 2 (Electric)

DIN EN ISO 9614:2009 (Sound measurement)

ISO 10816 -1: 1995 (Vibration)

ISO 9001:2008 (Quality management System)

ISO 14001:2004 (Environmental management system)

OHSAS 18001:2007, DIN EN 1012-3:2014 (Health & safety management system)

Complies with the regulations set by the International Association of Classification Societies (IACS) dedicated to safe ships and clean seas.