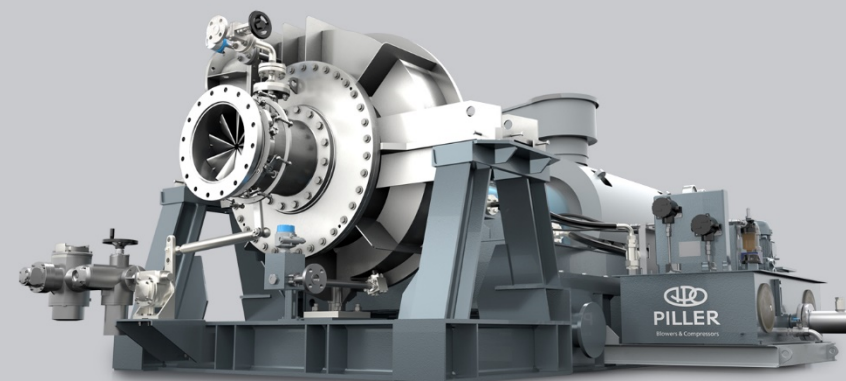
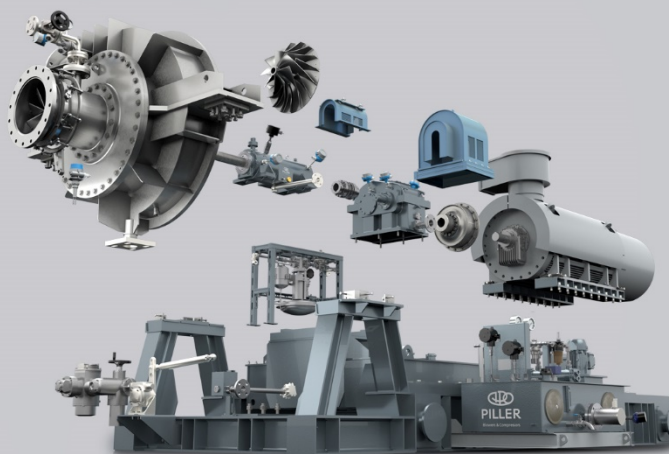
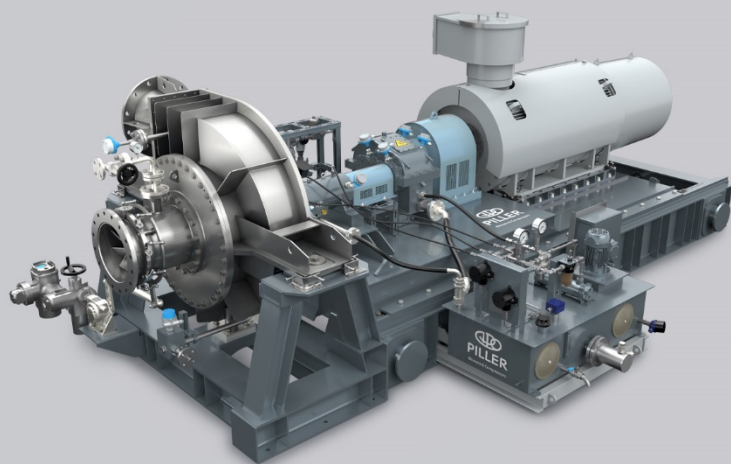




THE PILLER VAPOMAXX

Our smart compressor design
我们的智能压缩机设计





THE PILLER VAPOMAXX



Dr. rer. nat.

Steffen Kuberczyk

Chief Sales Officer

全球销售总监

Piller Blowers & Compressors GmbH

琵乐风机和压缩机公司

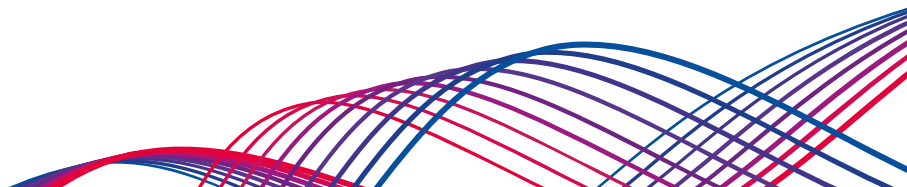
Moringen, Germany

莫林根，德国

OUTLINE

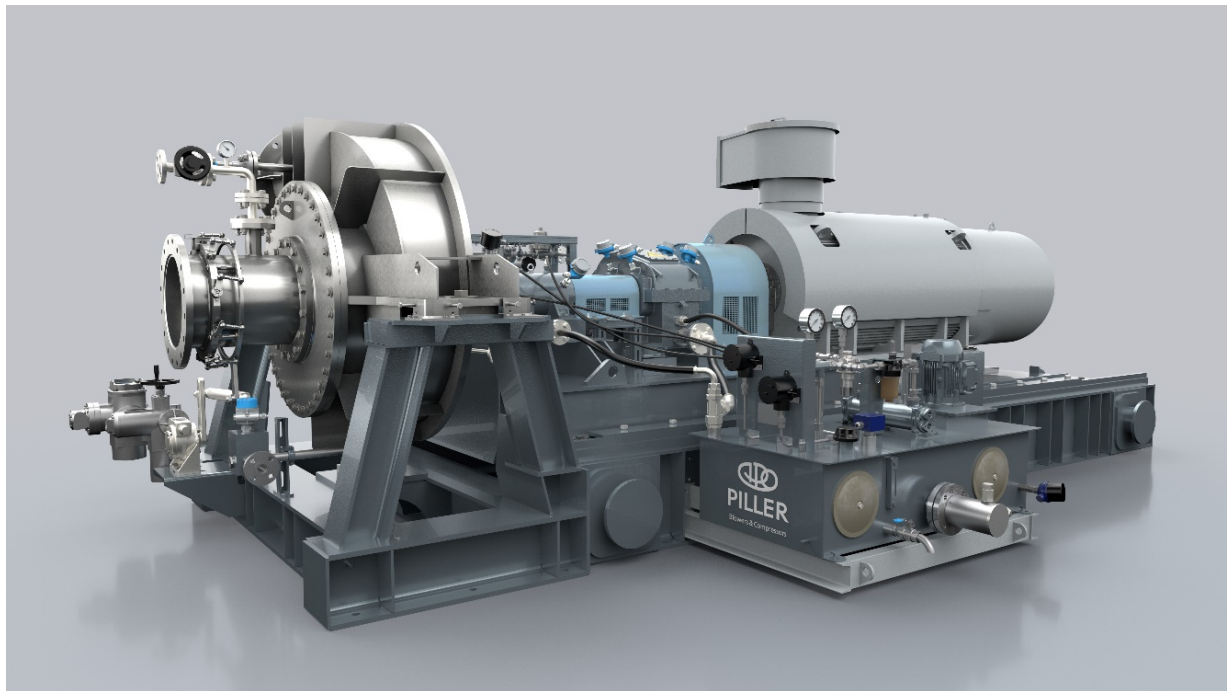
概览

- VapoMaxX at a Glance
VapoMaxX一览
- VapoMaxX Types
VapoMaxX的型号
- Performance Summary
性能概要
- Components and Accessories
部件和附件



OUR VAPOMAXX AT A GLANCE

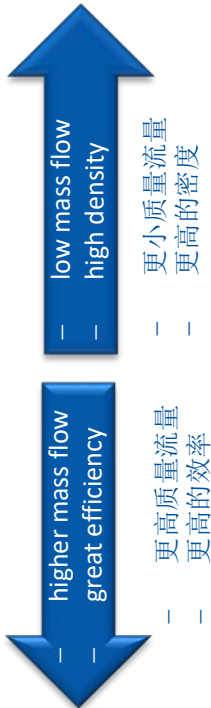
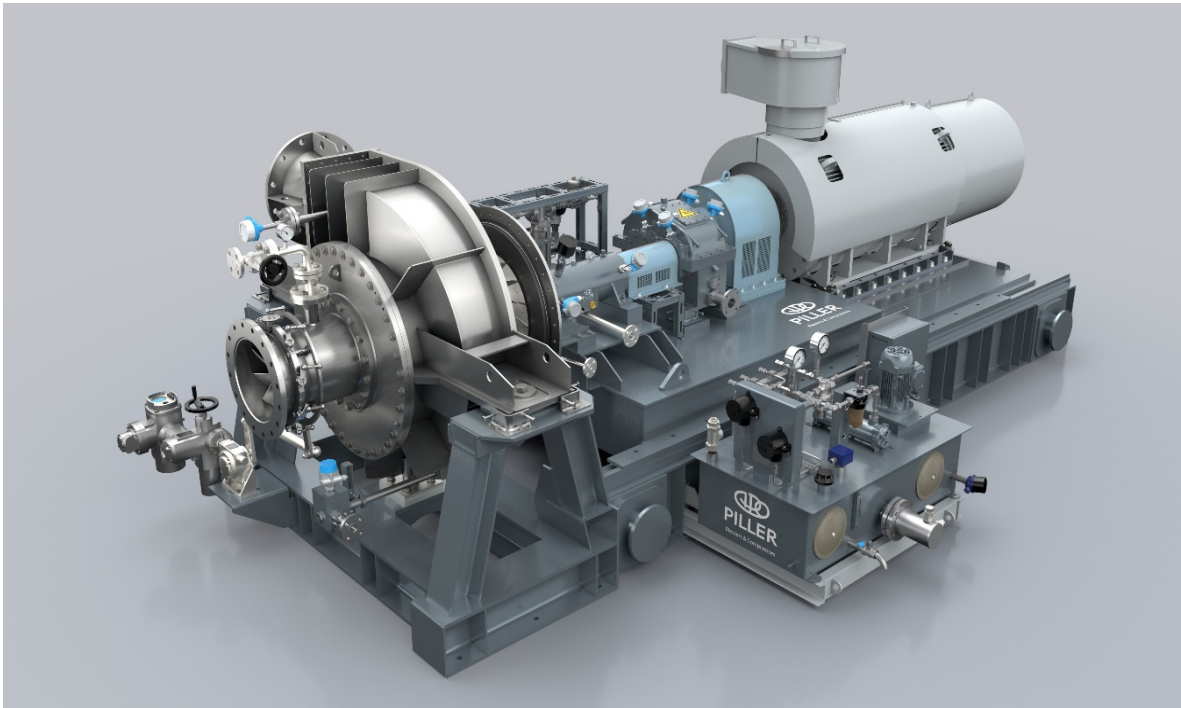
VAPOMAXX一览



BENEFITS

- Efficiency of up to 86.5 percent
效率高达86.5%
- Perfect solution for any steam compression with system pressures up to 20 bar(g)
完美的蒸汽压缩解决方案，系统压力最高可达 20 bar(g)
- Combines the advantages of our high-performance blowers
结合了我们高性能鼓风机的优点
- Main components already engineered
工程化的主要部件
- Pull-out rotor unit for easy maintenance and service
推拉式转子单元便于维护和保养
- For any upgrade for existing plants or processes and for new installations
适用于现有设备或工艺的任何升级，以及新设备的安装

VAPOMAXX TYPES
VAPOMAXX型号

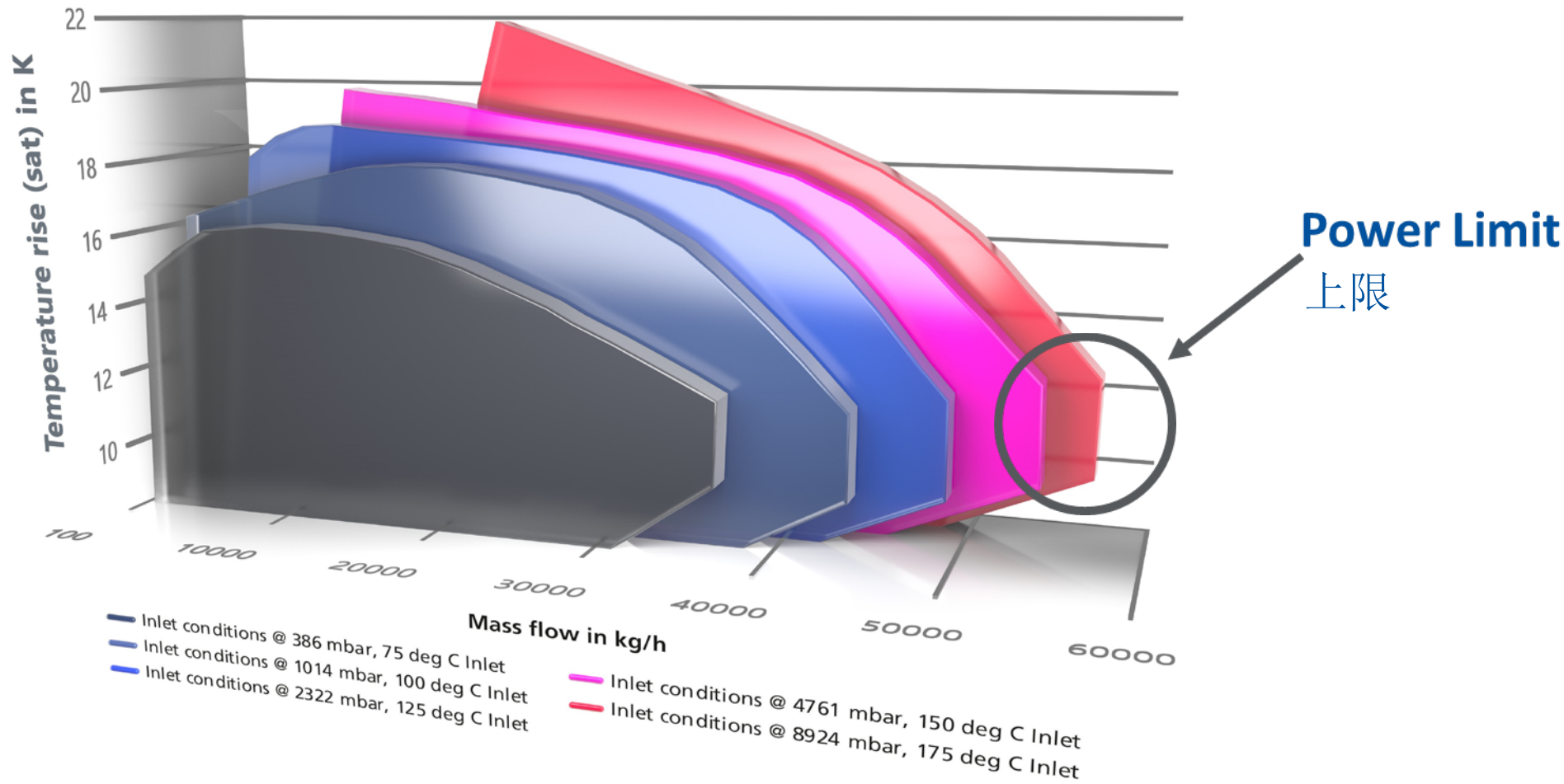


TYPE 型号	NMAX [RPM] 转速	DESIGN PRESSURE [barg] 设计压力	OPERATION MODE 运行模式
2872-160	15000	10 and 20	Operation by frequency converter drive or direct on line with inlet guide vane 变频器驱动或与入口导叶连接
3272-180	15000	10 and 20	
3672-200	15000	10 and 20	
4072-225	15000	10 and 20	
4572-250	15000	10 and 20	
5072-280	15000	10	
5672-315	15000	10	
6372-355	15000	10	
6372-400	13800	6	
6372-450	12600	6	
6372-500	11100	6	



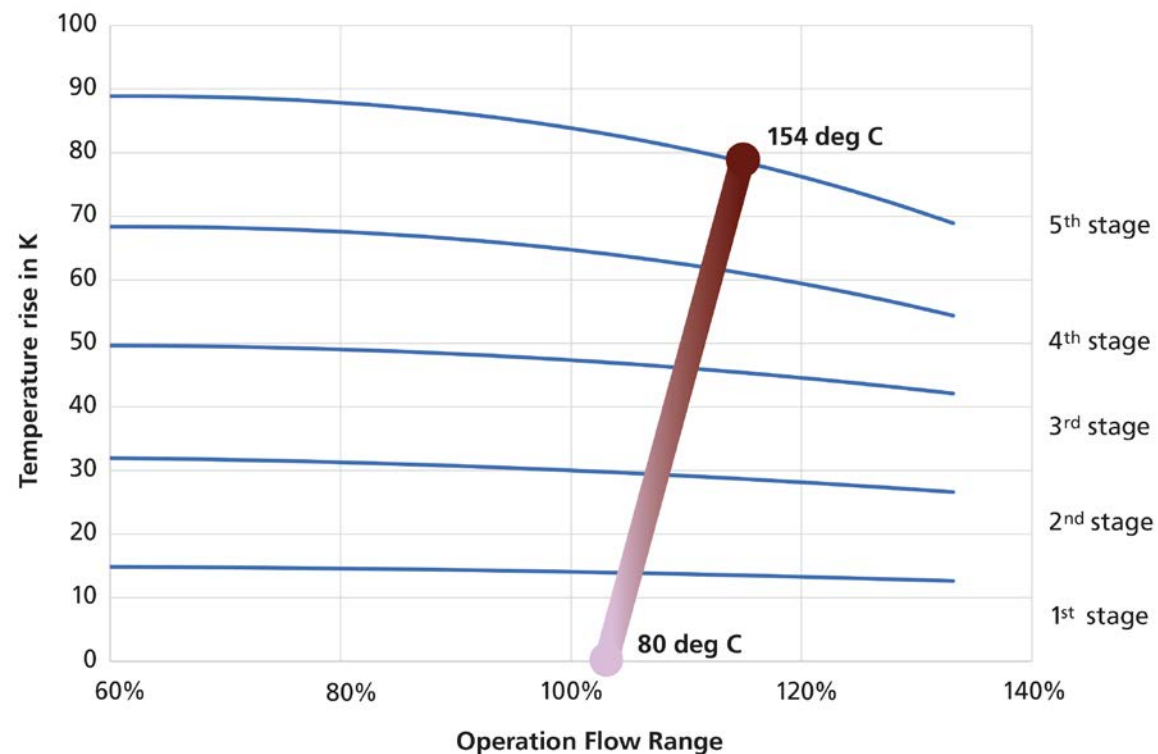
PERFORMANCE SUMMARY

SINGLE STAGE 性能概要 - 单级



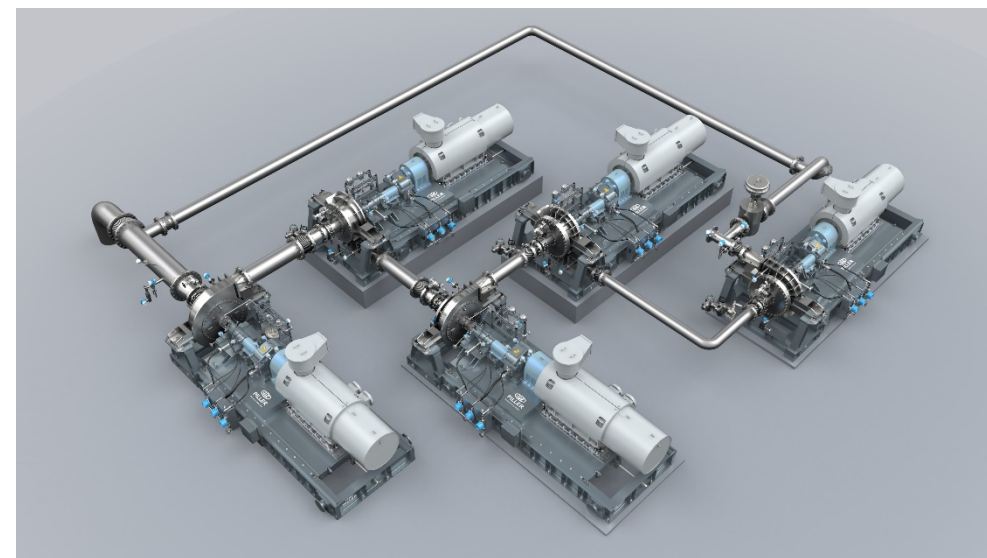
PERFORMANCE SUMMARY

MULTISTAGE 性能概要 – 多级



VAPOR COMPRESSION AT A NEW LEVEL

蒸汽压缩能力达到新水平



STEAM COMPRESSION SYSTEM WITH FIVE VAPOMAXX

配备五台VAPOMAXX的蒸汽压缩系统

A series of overlapping, wavy lines in blue, purple, and red colors, creating a dynamic, flowing pattern across the upper half of the slide.

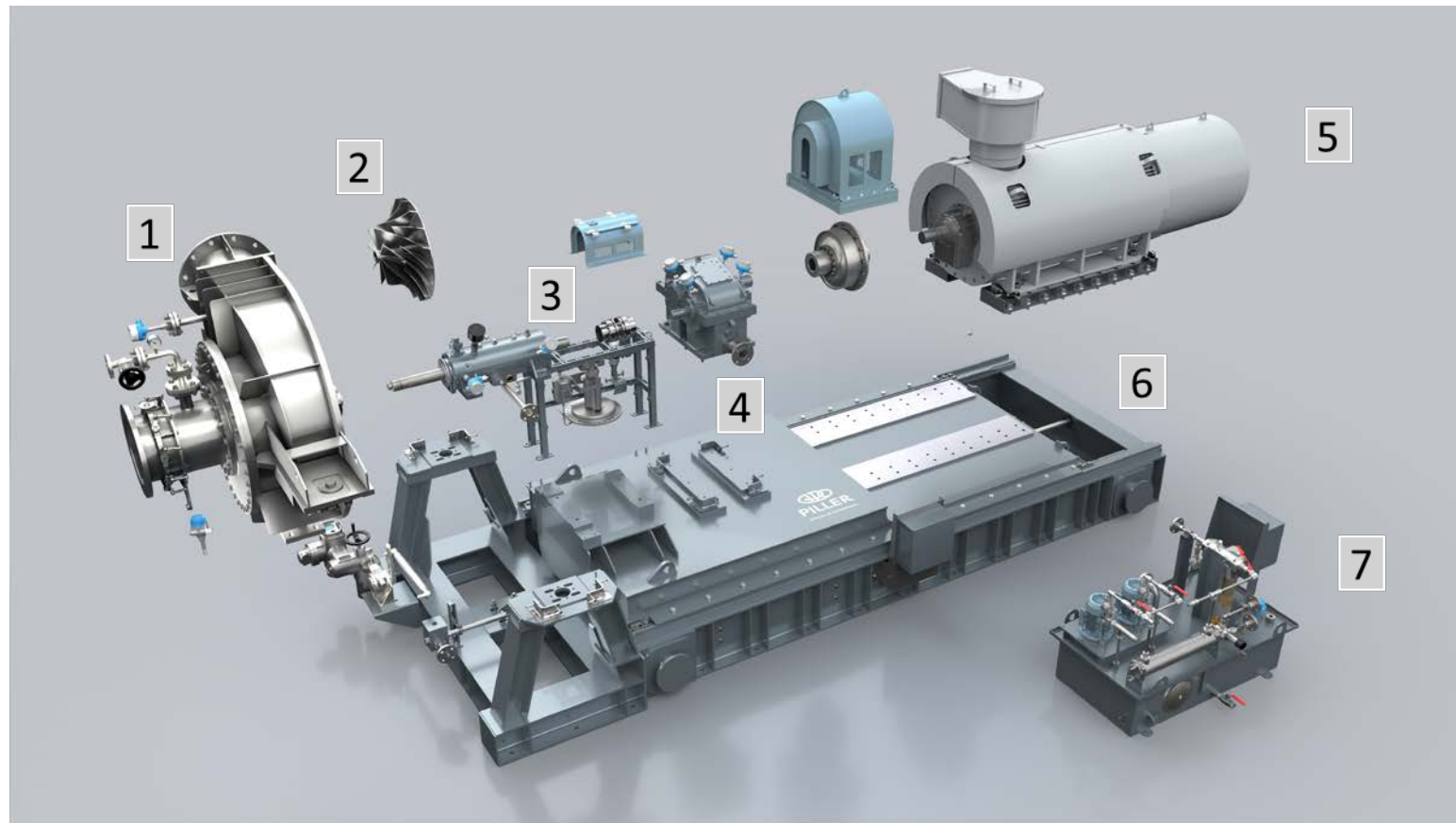
COMPONENTS AND ACCESSORIES

为高效性能服务的部件与附件



VAPOMAXX MAIN COMPONENTS

VAPOMAXX主要部件



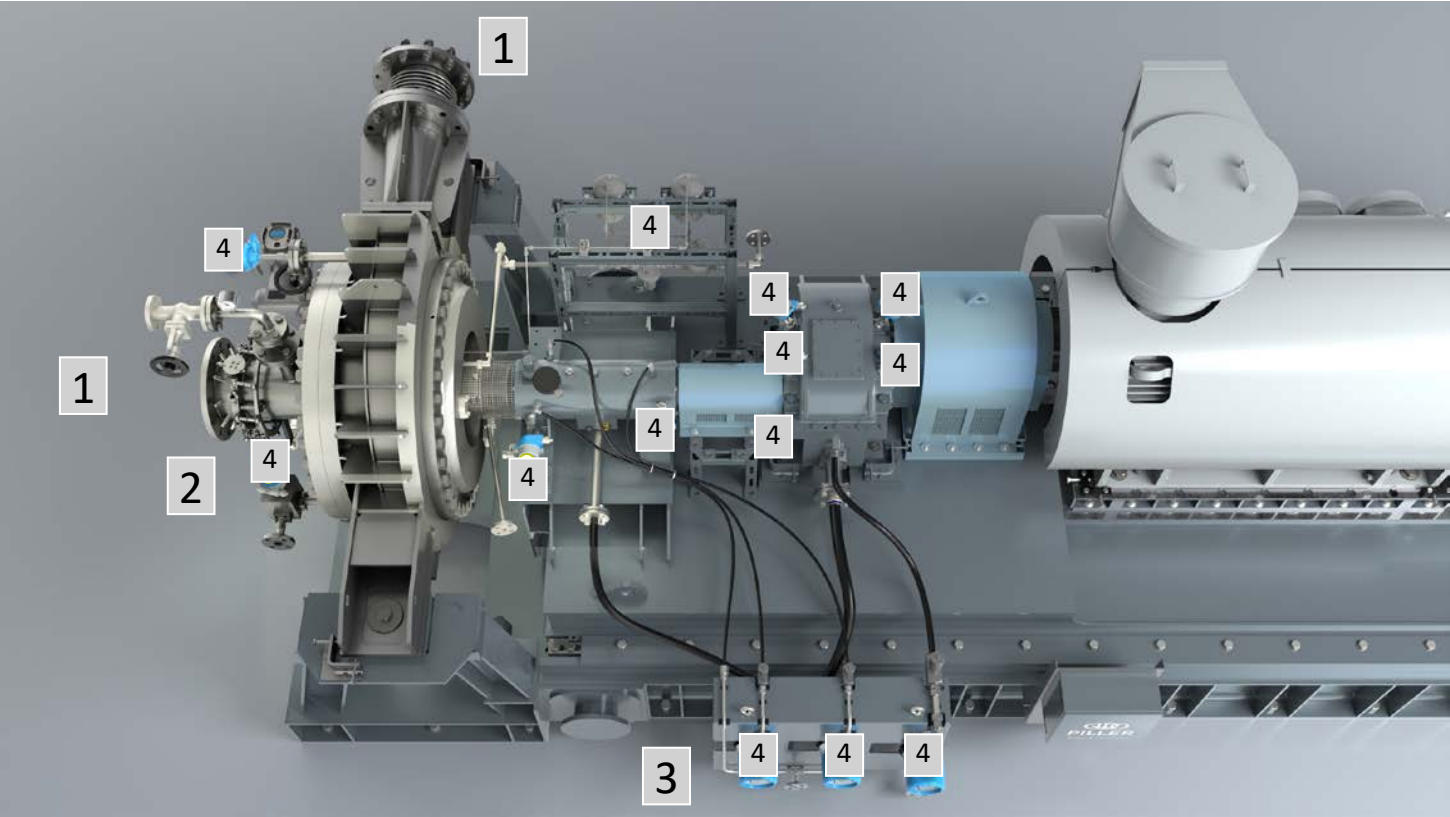
OVERVIEW

概述

- | | |
|---|------------------------|
| 1 | Casing
壳体 |
| 2 | Impeller
叶轮 |
| 3 | Bearing System
轴承系统 |
| 4 | Gearbox
齿轮箱 |
| 5 | Motor
电机 |
| 6 | Base Frame
底座 |
| 7 | Lube Oil Unit
润滑油单元 |

IMPORTANT EQUIPMENT ON THE VAPOMAXX

VAPOMAXX上的重要设备

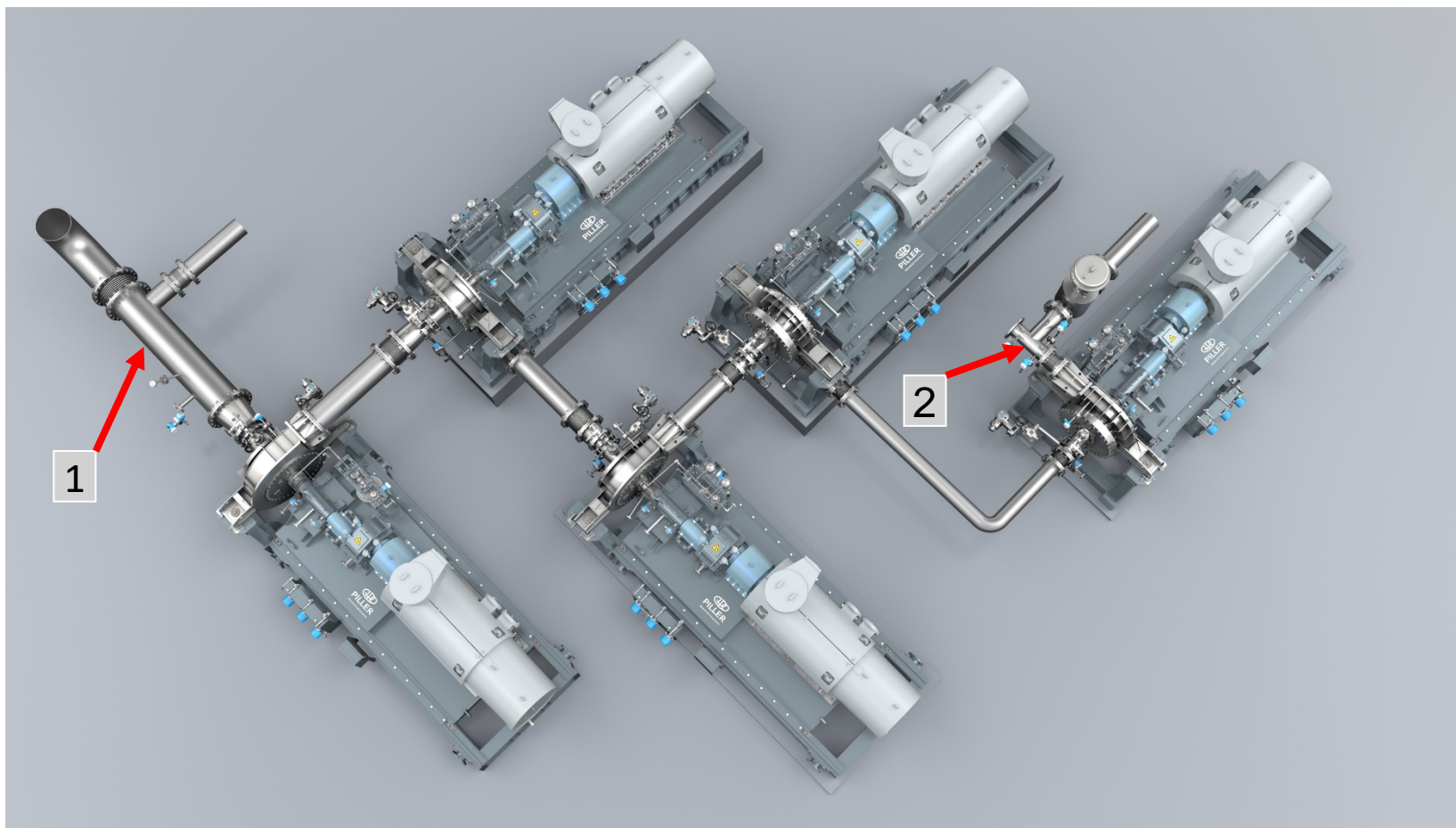


MAIN ACCESSORIES

主要附件

1	Expansion Joints 膨胀节
2	Inlet Guide Vane (D.O.L. operation) 入口导叶（直驱使用）
3	Lube Oil Panel 润滑系统面板
4	Instrumentation for 仪表测量 <ul style="list-style-type: none">- Process Temperature 工艺温度- Bearing Temperatures 轴承温度- Buffer Steam Pressure 缓冲蒸汽压力- Shaft Vibration 轴振动- Speed 转速- Oil Flow and Pressure 油流量和压力- Oil Temperature 油温

COMPRESSOR MONITORING 压缩机监控 喘振监控和保护



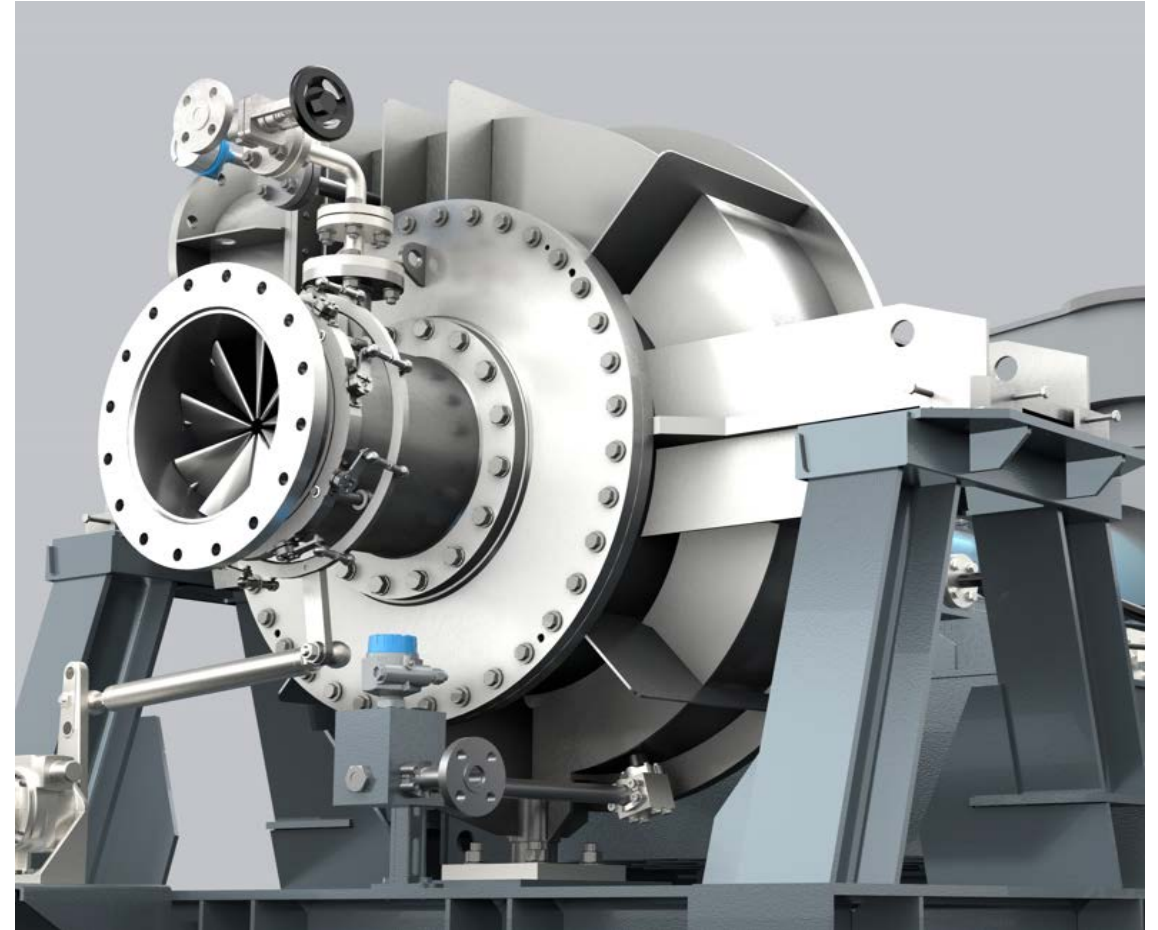
SAFETY ACCESSORIES 安全附件

- | | |
|---|--|
| 1 | Suction side measuring tube with instrumentation
入口仪表测量 |
| 2 | Discharge side measuring tube with instrumentation
出口仪表测量 |

SOLUTION FOR VAPOR COMPRESSION HEAT PUMP TECHNOLOGY
蒸汽压缩热泵技术解决方案

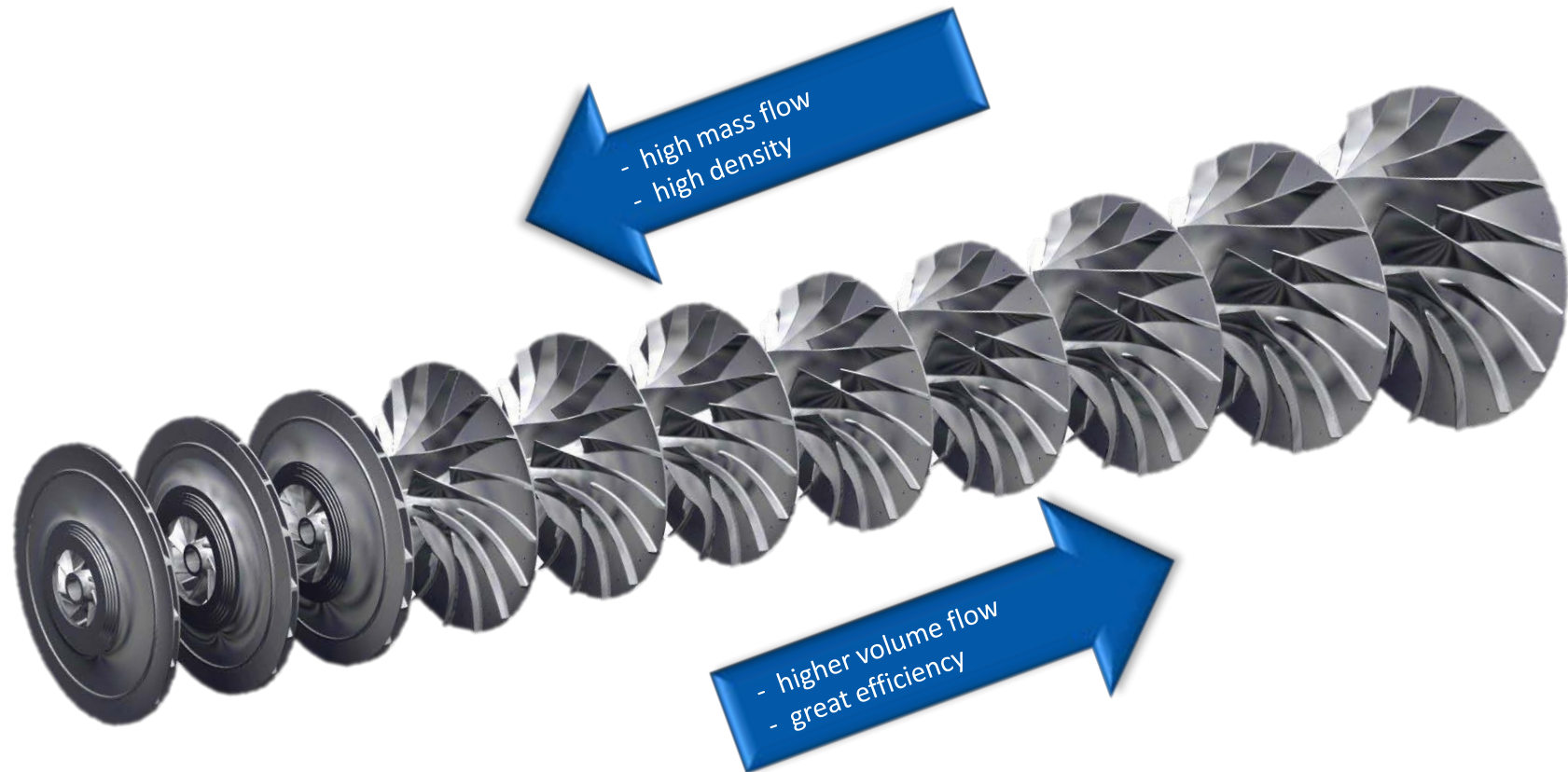
CASING 壳体

- Available pressure designs in 6, 10 and 21 bar (a)
可提供 6、10 和 21 bar (a) 的压力设计
- Mechanical design temp. up to 230 °C
机械设计温度最高可达 230 ° C
- Casing directions 90°, 270° and 360°
壳体旋向满足 90° 、 270° 和 360°
- Welded gastight design
焊接气密设计
- Material stainless steel 1.4404 / 1.4571
材料使用不锈钢 1.4404 / 1.4571



IMPELLER 叶轮

- 11 different types with 4 diameters
11 种不同类型，4 种直径
- Mechanical design temp. up to 230 °C
机械设计温度最高可达 230 ° C
- Tip speed up to 440 m/s
外缘转速高达 440 米/秒
- Optimal chamber geometry
最佳腔室几何形状
- High efficiency up to 86.5 %
效率可达 86.5%
- Wide operating range
运行范围广
- Material 17-4 PH (1.4578)
材料17-4 PH (1.4578)
- Rotating direction clockwise
顺时针旋转



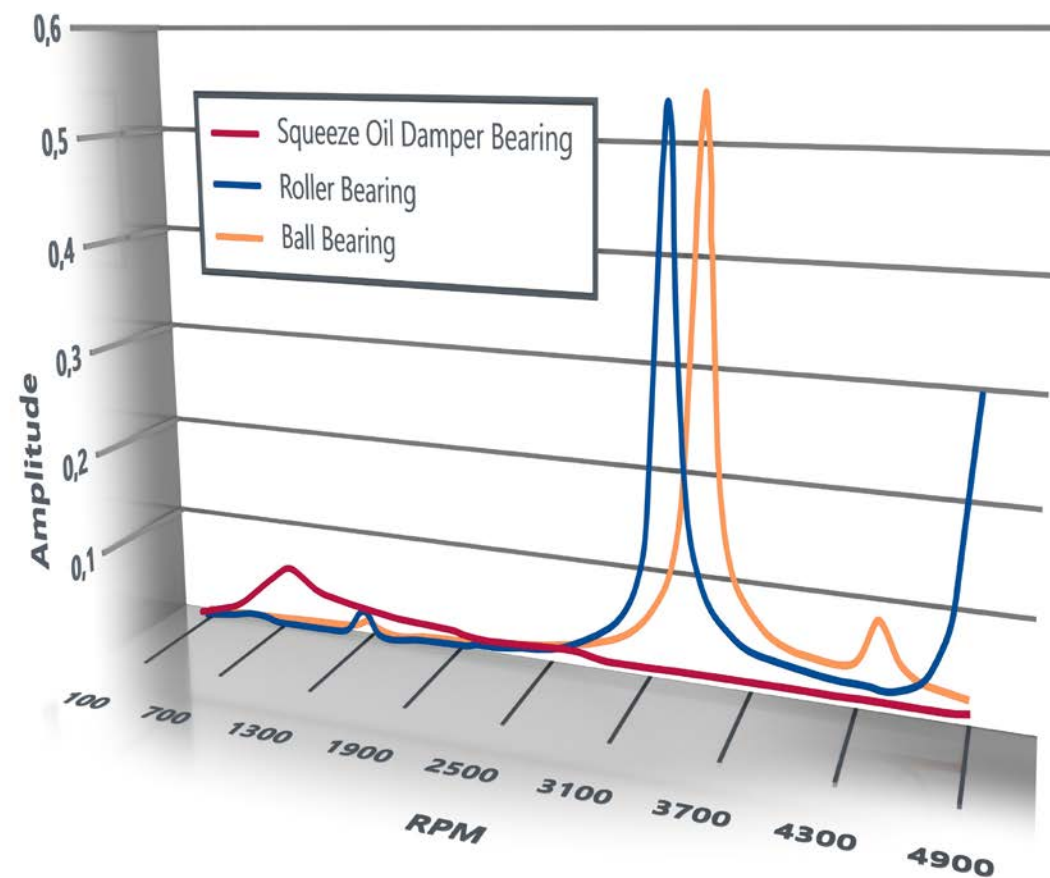
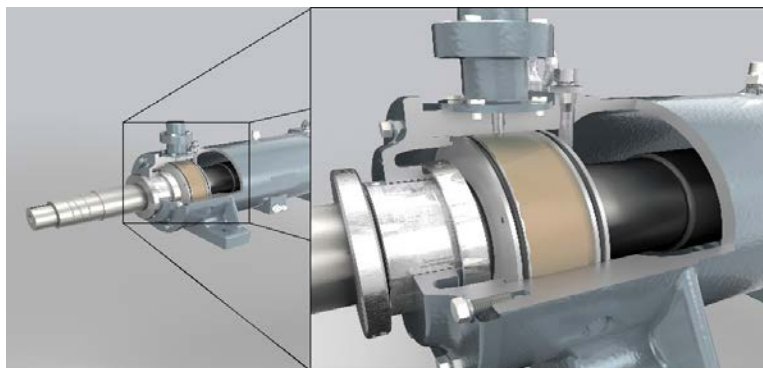


SQUEEZE OIL DAMPER AND LUBE OIL UNIT

挤压油膜减震轴承和润滑油单元

SQUEEZE OIL DAMPER BEARING

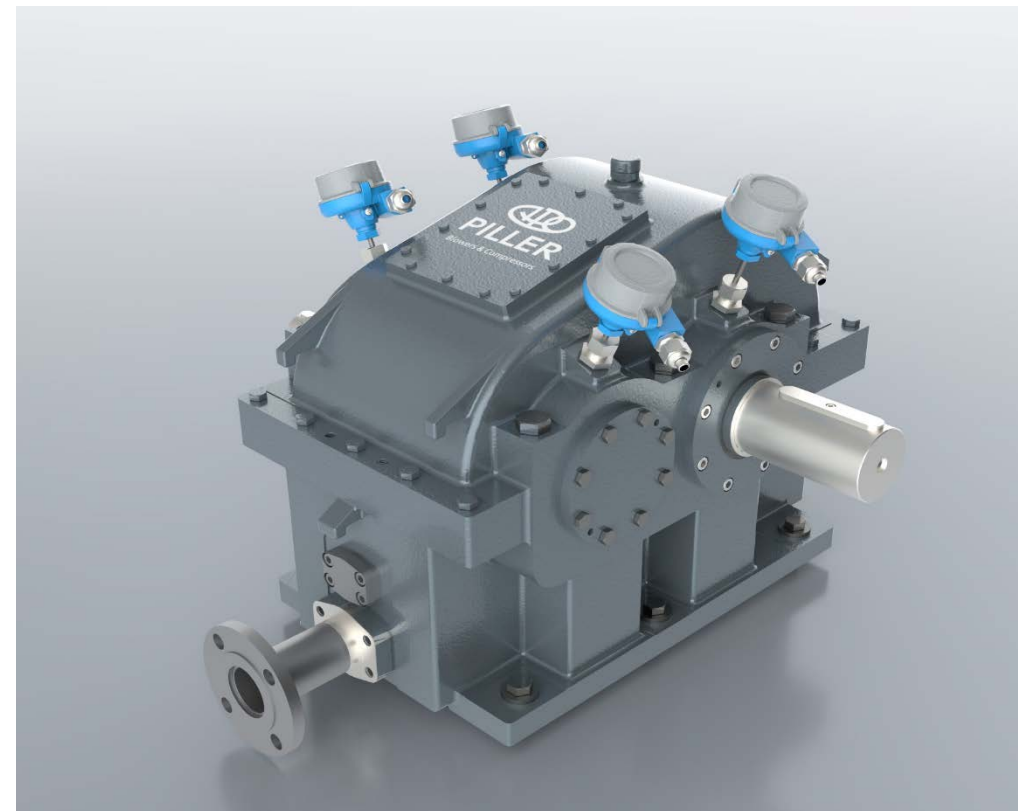
挤压油膜减震轴承



GEARBOX

齿轮箱

- Double helical gear design
双螺旋齿轮设计
- 61 different gear ratios for best performance
61种不同齿轮比，实现最佳性能
- Oil supply with Piller standard lube oil system
采用Piller标准润滑油系统供油
- Less power losses than fluid film bearings
与普通滑动轴承相比功率损失更小
- Bearing temperature and vibration monitoring
轴承温度和振动监控
- Oil inlet and oil return connections on both sides for flexible pipe arrangement
两侧均有进油和回油接口，管道布置灵活



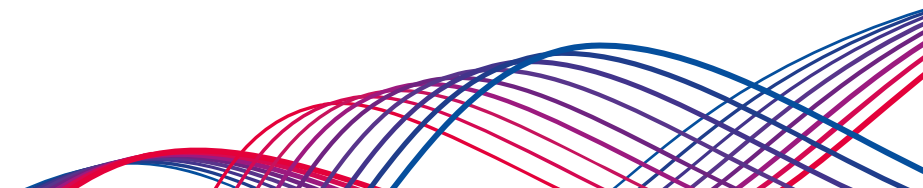
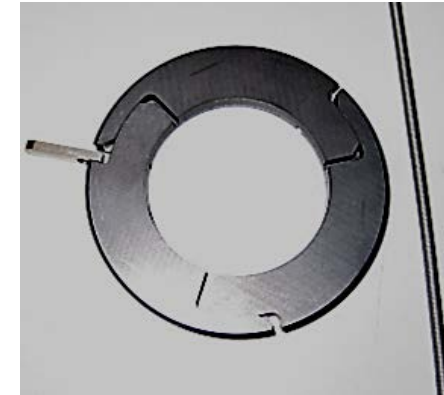
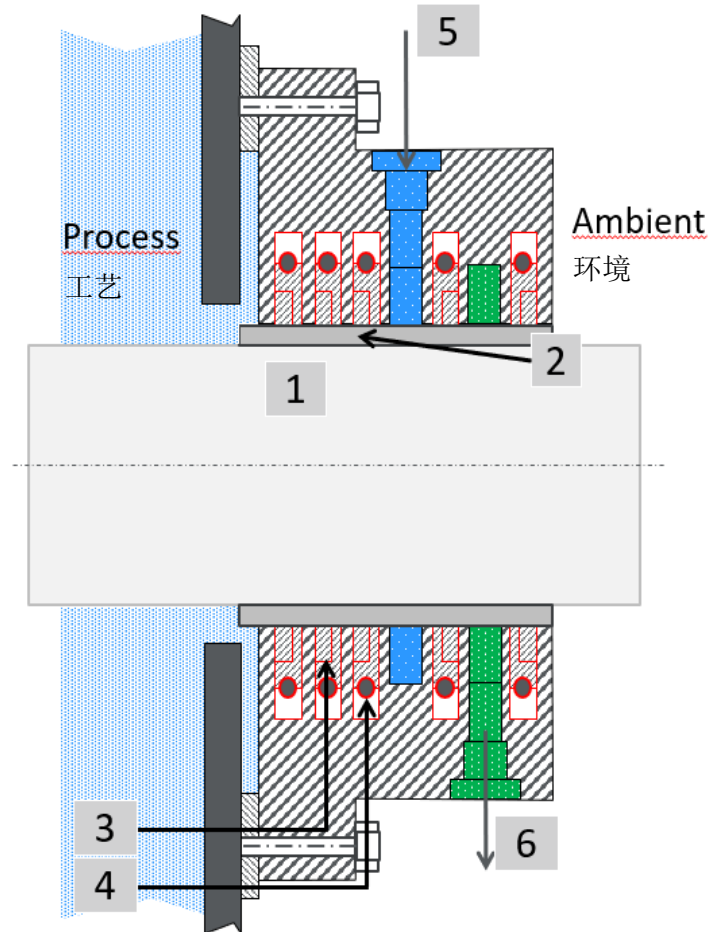
SHAFT SEALING SYSTEM

轴封系统

SHAFT SEAL COMPONENTS

轴封部件

- | | |
|---|---------------------------|
| 1 | Shaft
轴 |
| 2 | Shaft Sleeve
轴套 |
| 3 | Seal Ring
密封环 |
| 4 | Spring
弹簧 |
| 5 | Buffer Connection
缓冲介质 |
| 6 | Condensate Drain
冷凝水排放 |



REFERENCES IN DIFFERENT INDUSTRIES

不同行业中的案例业绩

35+ INDUSTRIAL HEAT PUMP INSTALLATIONS DURING THE LAST 15 YEARS

在过去15年中安装了35+台工业热泵

- | | |
|----------------------|------------|
| ■ EPDM | 三元乙丙橡胶 |
| ■ SSBR | 溶聚丁苯橡胶 |
| ■ Caprolactam | 己内酰胺 |
| ■ Sugar | 糖 |
| ■ Ethanol | 乙醇 |
| ■ Beverage Alcohol | 酒精饮料 |
| ■ French Fries | 薯条 |
| ■ Potato Snacks | 土豆类食品 |
| <i>and many more</i> | <i>及其他</i> |



THANK YOU FOR YOUR ATTENTION
感谢您的聆听和关注！

