VAPOMAXX –
THE PILLER VAPOR COMPRESSOR

Piller Blowers & Compressors is the global technology leader for centrifugal blowers and compressors in the field of mechanical vapor (re-)compression (MVR/MVC).

The PILLER VapoMaxX is a high pressure and high temperature compressor for vapor and steam applications. The machine combines the advantages of our high-performance blowers and the advanced performance of compressor technologies. With the VapoMaxX, PILLER meets the demand for increased temperature rises and higher pressures.

DESIGN PARAMETERS FOR VAPOR APPLICATIONS
– Performance up to 20 K temperature rise in single stage application
– Pressure up to 20 bar (g)
– Temperature up to 215 degC
– Mass flow range up to 57 000 kg/h

Design Features
– All wetted parts out of material stainless steel
– Pull-out rotor unit
– Shaft sealing system with water or vapor buffering
– Suitable for hazardous areas
– Anti-Surge Control and adaptive Surge Protection for safe operation
– On-skid terminal box for central signal collection

The Drive Concept
– PILLER’s patented squeeze oil damper bearing: Supercritical antifriction bearing system for highest resistance against unbalancing
– Gearbox designed with double helical gears
– VFD (Variable Frequency Drive) or D.O.L (Direct On Line) with inlet guide vane operation

EASY MAINTENANCE
Pull-out rotor unit for easy maintenance and service: all rotating components are assembled on a movable base with mechanical crank. Vapor pipes can stay in place for shortest downtimes.
**Pushing the technical limits**
The VapoMaxX compressor is specifically developed to operate in mechanical vapor recompression and steam regeneration processes.

It’s unique geometries and sizes allow single-stage as well as multi-stage installations to maximize compression ratios, respectively to reach highest temperature lifts.

**VAPO AND STEAM COMPRESSION: MULTI-STAGE SYSTEMS ACHIEVE MAXIMUM COMPRESSION RATIOS**

PILLER’s multi-stage systems provide you with

- Flexible arrangement of individual stages and static weight distribution
- Each stage with best efficiency
- Simple installation and easy accessibility
- Reduction of starting current by single start up of each stage
- Lube Oil System per stage or centralized
- Best performance due to perfect interaction/harmonization of the machines

**Steam (re-)generation with PILLER VapoMaxX: A sample project**

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<thead>
<tr>
<th>Compression Train 1</th>
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<tr>
<td>Inlet Temperature</td>
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<th>Compression Train 2</th>
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<td>Inlet Temperature</td>
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In this steam generation project 42 tons of steam are supplied per hour, reducing the final energy costs by 8 Million € and the CO₂ emissions by 10 650 ton per year.