

X-Series
WITTIG Rotary Vane – Gas



**Elmo
Rietschle**
A Gardner Denver Product



Rotary vane compressors for gases

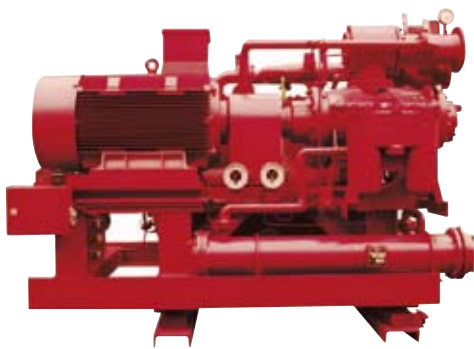


X-L G WITTIG



X-RVA G WITTIG

Once through oil lubricated rotary vane compressors



X-RO G WITTIG

Circular oil lubricated rotary vane compressors

Once through oil lubricated rotary vane compressors

X-L G WITTIG

Our air cooled, once through oil lubricated rotary vane compressors, with flow rates from 120 to 540 m³/h, are based on the proven rotary vane principle. They are supplied as compact units, mounted on a torsion resistant base frame. All sliding parts are continuously supplied with oil by an automatic lubricating system.

X-RVA G WITTIG

X-RVA G WITTIG rotary vane compressors, with flow rates from 505 to 5,262 m³/h, are water cooled and once through oil lubricated. Cooling is achieved either by fresh water or pressurized re-circulation water. They are supplied as compact units, mounted on a torsion resistant base frame.

Advantages at a glance

- 120 to 5,262 m³/h
- Long service life
- Low maintenance
- No foundation needed
- High availability
- ATEX category 2

Circular oil lubricated rotary vane compressors

X-RO G WITTIG

The circular oil lubricated rotary vane compressors with flow rates from 342 to 2,930 m³/h offer high reliability for the compression of gas. They are water cooled and need no separate after-cooling.

Advantages at a glance

- 342 to 2,930 m³/h
- Low vibration
- No foundation needed
- Low maintenance
- Reliable
- ATEX category 2



Product overview

Once through oil lubricated rotary vane compressors

X-L G WITTIG

Flow rates from 120 to 540 m³/h, pressure up to 2.5 bar (g), power from 10 to 40 kW. The rotary vane compressors are single-stage and air cooled. They can be driven by electric motors (explosion-proof if required) via flexible coupling or V-belt.

X-RVA G WITTIG

Flow rates from 505 to 5,262 m³/h, pressure up to 2.5 bar (g), power from 33 to 315 kW. The rotary vane compressors are water cooled and once through oil lubricated. The cooling system is checked by a flow monitor. They can be driven by electric motors (explosion-proof if required) via flexible coupling.

Circular oil lubricated rotary vane compressors

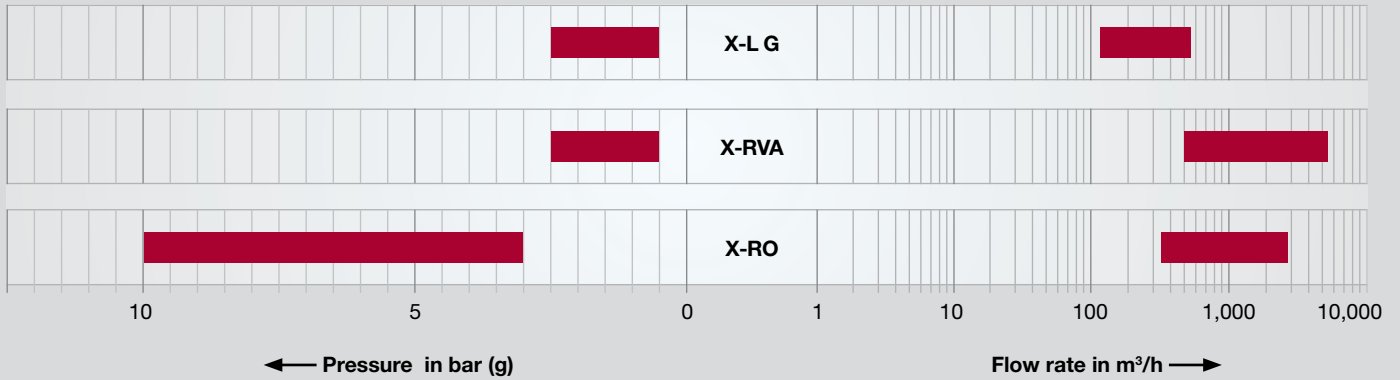
X-RO G WITTIG

Flow rates from 342 to 2,930 m³/h, pressure up to 10 bar (g), power from 45 to 355 kW. The rotary vane compressors are single-stage and air or water cooled. They have a low sound pressure level and can be delivered with an acoustic hood, if required. The X-RO G WITTIG can be driven by electric motors (explosion-proof if required).



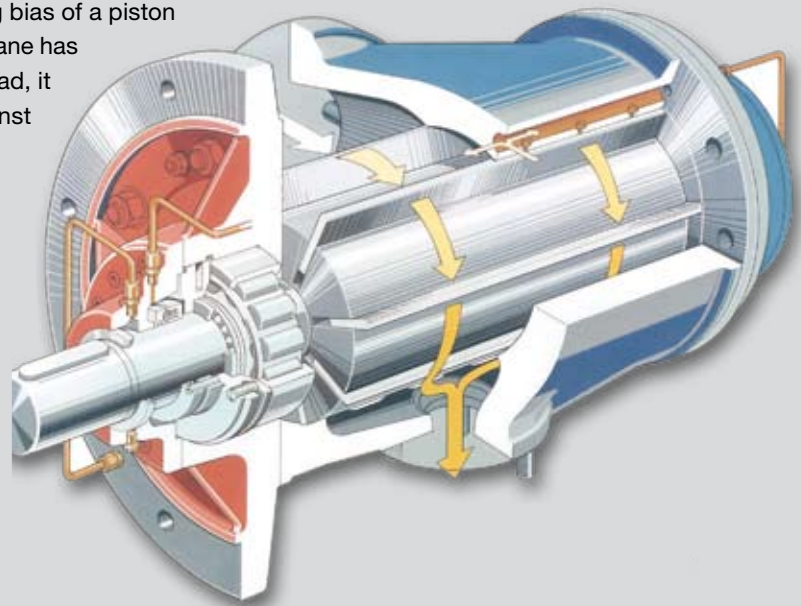
Technical specifications

Performance



Operating principle

Vanes, separating the crescent-shaped working space into cells of varying volume, are pressed outwards against the wall of the compression space by the gas being handled and centrifugal forces. The gas is drawn in, compressed and discharged. At the same time, the rotating vanes have a sealing function: While they are pressed towards the wall by mass and centrifugal forces, the pressure – from the rotor slot under the vane – provides a constant efficient seal. This is called active sealing, similar to the spring bias of a piston ring. The essential feature of this principle is that the vane has no direct contact with the compressor housing. Instead, it moves on a hydrodynamic film. The oil is thrown against the compressor housing and forms a cushion of oil in front of the vane. This creates a dynamic lubricating film which prevents contact between the housing and the vanes (aquaplaning effect). As a result no wear occurs.





Applications

Compression of flare gas in refineries

Compression of natural gas

Compression of process gas or gas mixtures

Digester gas mixing in sewage and bio-waste treatment plants

Digester gas storage in sewage treatment plants

Gas boosting in combined heat and power plants

Gas pressure boosting for gas engines and industrial furnaces

Gas storage

Landfill gas boosting

Low pressure boosting of coke oven gas, furnace gas and natural gas

Mine gas boosting



Technologies for all vacuum and pressure applications



F-Series Radial



G-Series Side Channel



L-Series Liquid Ring



V-Series Rotary Vane



R-Series Rotary Lobe



C-Series Claw



S-Series Screw



X-Series Systems

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