



# ***ATLAS COPCO CLAW PUMPS***

***DZM MULTI-CLAW VACUUM SYSTEM***



# MULTI-CLAW SYSTEMIZATION



*Simple*

# MULTI-CLAW SYSTEMIZATION – 2, 3 & 4 PUMPS

- **DZM 600 V**
  - 112\* to 640\*\* m3/hr
  - 140mbar(a) ultimate
- **DZM 900 V**
  - 112\* to 940\*\* m3/hr
  - 140mbar(a) ultimate
- **DZM 1200 V**
  - 112\* to 1230\*\* m3/hr
  - 140mbar(a) ultimate
- **Control Philosophy**
  - Lead pump 20 to 60Hz VSD driven (1200 to 3600rpm)
  - Base load control of up to 3 pumps



\* Based on atmospheric flow rate @20Hz (1200rpm) for VSD pump and \*\* 60Hz (3600rpm) plus 50Hz operation of base load pumps

# MULTI-CLAW SYSTEMS



Featuring the DZS 300 V mono-claw

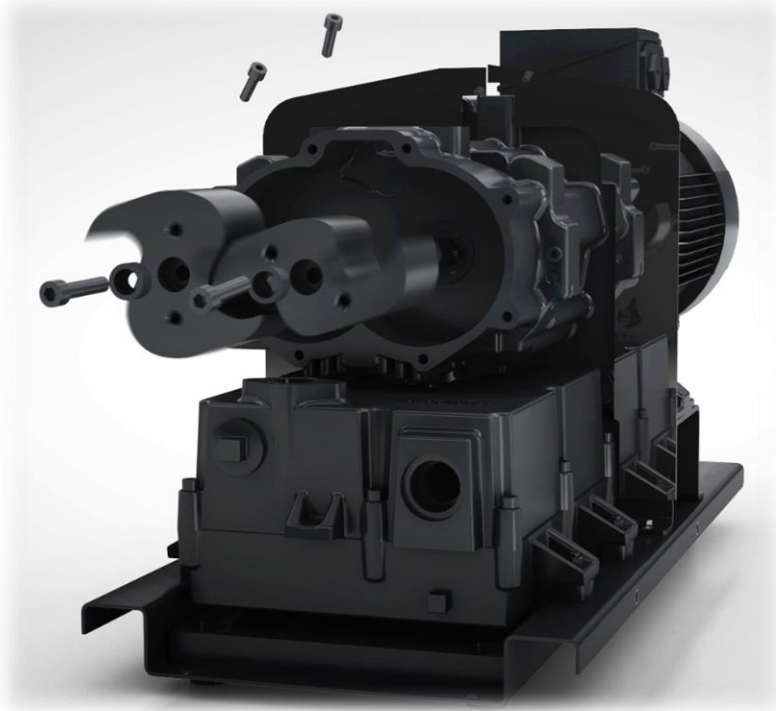
- Developed by Atlas Copco with simplicity, robustness, efficiency and minimal maintenance in mind.
- Simple claw concept based on the tried and trusted claw compressors
- Dry technology designed to be eco-friendly:
  - No pollution – dry, oil free pumping chamber
  - Low noise & heat – comfortable to live with
  - Low power – increased efficiency



# FEATURES & BENEFITS – CLEVER ELEMENT DESIGN

## Feature

- High efficiency dry claw element.
- Easy access to pumping chamber.
- Removable claws & reassembly without re-timing.
- Modular design with effective cooling built-in.
- Built to last.



## Benefit

- Best suited to your process – ‘more bang for your buck’!
- Faster maintenance – less down-time.
- Allows 100% internal cleaning and minimal maintenance.
- Better cooling with longer life for oil, bearings and seals.
- No built-in obsolescence, only longevity.



# FEATURES & BENEFITS – PROCESS COMPATIBILITY

## Feature

- Stainless steel claws.
- Resistive and durable coating to the pumps internals.
- Labyrinth seals to the main shaft and process chamber.
- Coating to the pumps exhaust silencer.



**Stainless**



**steel**

## Benefit

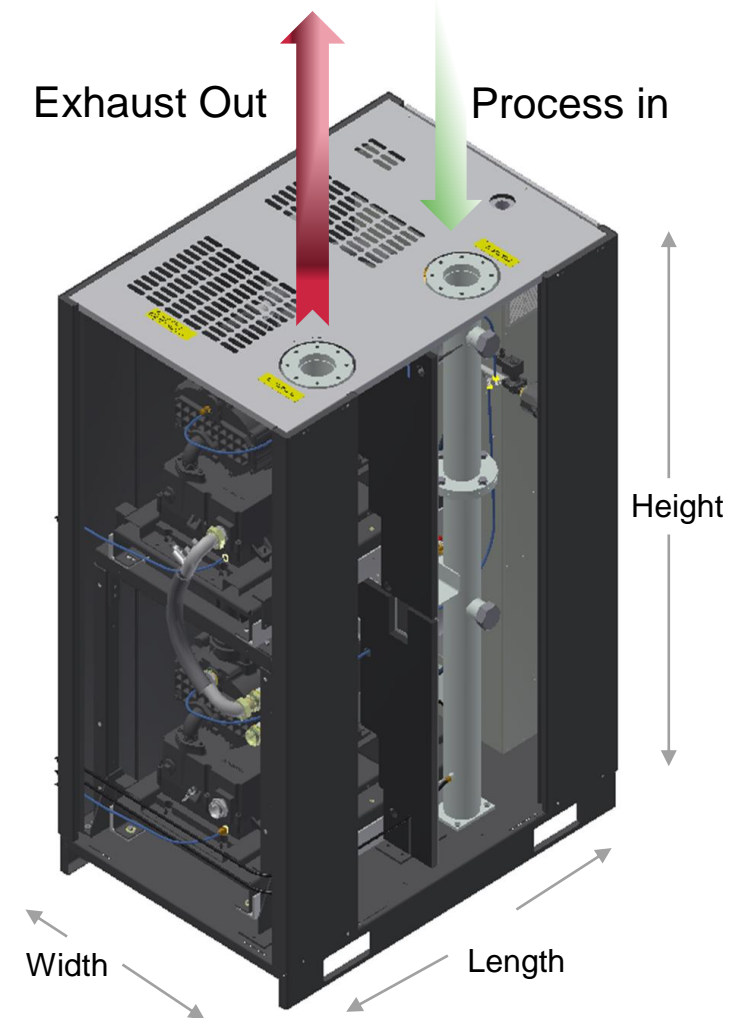
- Process resistance and long life materials of construction.
- Hard wearing 'tried & trusted' coating for that extra protection.
- Simple but effective sealing arrangement for long life and durability.
- Protection for the whole pump – designed to last.



# MULTI-CLAW SYSTEMIZATION – TECHNICAL SUMMARY

## ▪ DZM 600 V

- 112 to 640 m<sup>3</sup>/hr (67 to 383cfm)
- Uses up to 2 x DZS 300 V pumps
- 140mbar(a) (25.7”Hg V) ultimate vacuum
- Motor Installed power: 13.6kW (18Hp) @ 50Hz
- Dimensions:   Length =1420mm (56”)  
                          Width = 905mm (36”)  
                          Height =1980mm (78”)
- Weight: approx. 800kg



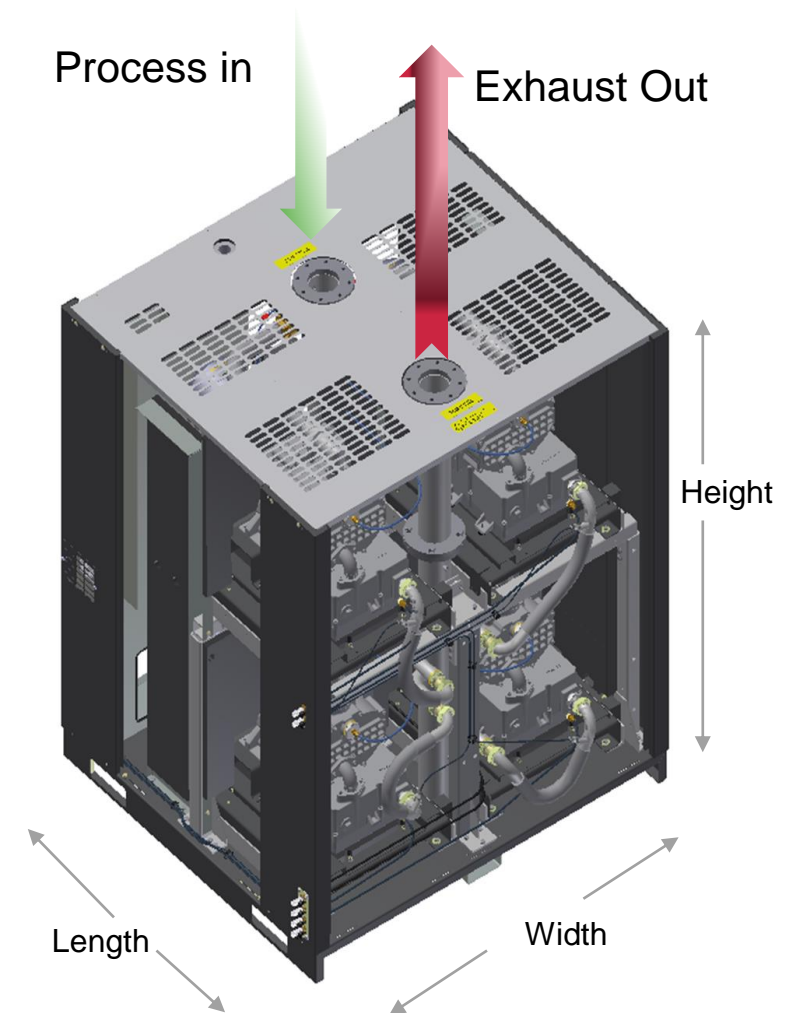
# MULTI-CLAW SYSTEMIZATION – TECHNICAL SUMMARY

## ■ DZM 900 V

- 112 to 940 m<sup>3</sup>/hr (67 to 562cfm)
- Uses up to 3 x DZS 300V pumps
- 140mbar(a) (25.7”Hg V) ultimate vacuum
- Motor Power: 20kW (26Hp) @ 50Hz
- Dimensions: Length =1420mm (56”)  
Width = 1589mm (63”)  
Height =1980mm (78”)
- Weight: approx. 1400kg

## ■ DZM 1200 V

- 112 to 1230 m<sup>3</sup>/hr (67 to 736cfm)
- Uses up to 4 x DZS 300 V pumps
- 140mbar(a) (25.7”Hg V) ultimate vacuum
- Motor Power: 26kW (35Hp) @ 50Hz
- Dimensions: Length =1420mm (56”)  
Width =1589mm (63”)  
Height =1980mm (78”)
- Weight: approx. 1800kg





# FEATURES & BENEFITS – PLUG & PLAY

## Feature

- Combined pumping package.
- Simple ‘compressor’ design.
- Pre-piped and wired.
- Minimal connections.



- Inlet connection: DN100 flange
  - Exhaust Connection: DN100 flange
- Adapters available for imperial connections 4" ANSI to 4"NPT

## Benefit

- Simple plug & play design.
- Reduced physical installation.
- Reduced installation cost.
- Reduced installation time



# FEATURES & BENEFITS – EASE OF INSTALLATION

## Feature

- Physically manageable.
- Compact & space saving
- Transportable
- ‘Solution in a box’.



The multi-pump system is designed for simplicity. It can be easily transported and conveniently located in a restricted space



## Benefit

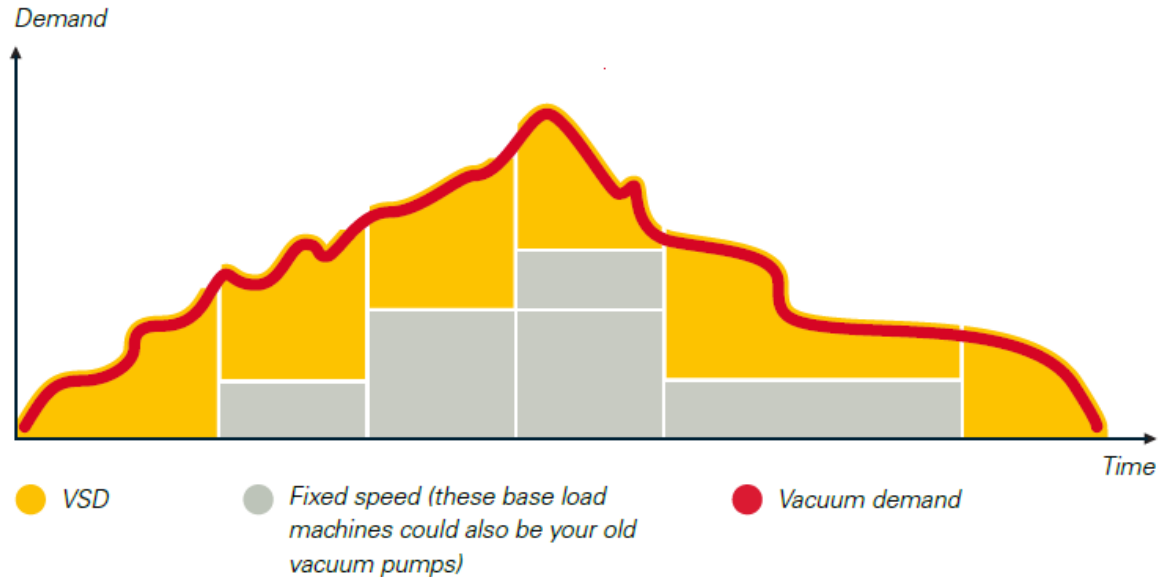
- Simple installation.
- Ease of handling.
- Compact, space efficient design smaller and neater than our competitors offerings.
- Cost efficient installation since it is fully piped internally and the control is pre-installed and configured.
- Real ‘Plug n Play’ concept.



# FEATURES & BENEFITS – CONTROLLABILITY

## Feature

- Variable speed motor.
- Elektronikon Mk5 Graphic & PLC technology.
- Integral pressure transducer



## Benefit

- In excess of 50% energy savings.
- Minimize absorbed energy and optimize the pump to the process.
- Accurate set-point control with a wide turn-down ratio to match your duty perfectly.
- Monitor and measure performance.



## ***TO SUMMARIZE THE DZM MULTI-CLAW***

- Combine a maximum of four 300m<sup>3</sup>/h claw pumps in one package
- Plug-and-play based on existing compressor technology
- One control system, remote management possible
- One claw pump will be VSD controlled for energy saving & the other step / cascade controlled for accurate duty point control
- Better acoustic level control
- Compact, simple design
- More cost effective than traditional systems
- More efficient cooling and temperature control



***COMMITTED TO  
SUSTAINABLE PRODUCTIVITY.***



*Atlas Copco*

