

Atlas Copco

Atlas Copco

GA18 VSD®

A blue technical drawing overlay is positioned in the bottom-left corner of the image. It features a circular diagram with various lines and text, resembling a mechanical or electrical schematic. The drawing is partially obscured by the text and other elements in the foreground.

# GA VSD<sup>s</sup>

Customer Day

18th January 2024



# The Heritage



# Why name it VSD **S** ?



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## The customer's **wish list**



**S**ustainable



**S**avings



**S**trong performance



**S**mart features



**S**uperior connectivity



**S**mall footprint



**S**ilent



# The Product | Design highlights

- 1 New drive train
- 2 Neos Next inverter
- 3 VSD fan
- 4 Smart Thermostatic Control Valve



- 5 Intelligent no-loss drain
- 6 Elektronikon® Touch controller
- 7 EQ2i
- 8 Inlet filter

# The Compressor, reinvented

1

## NEW DRIVE TRAIN

- All-new element designed in-house for maximum efficiency
- Ferrite-Assisted Synchronous Reluctance motor equals IE5 standards, built without rare earth materials
- Oil-cooled for maximum efficiency
- Oil-lubricated bearings
- No gears or belts means no transmission losses
- Entire drive train is IP66-protected from dust and dirt

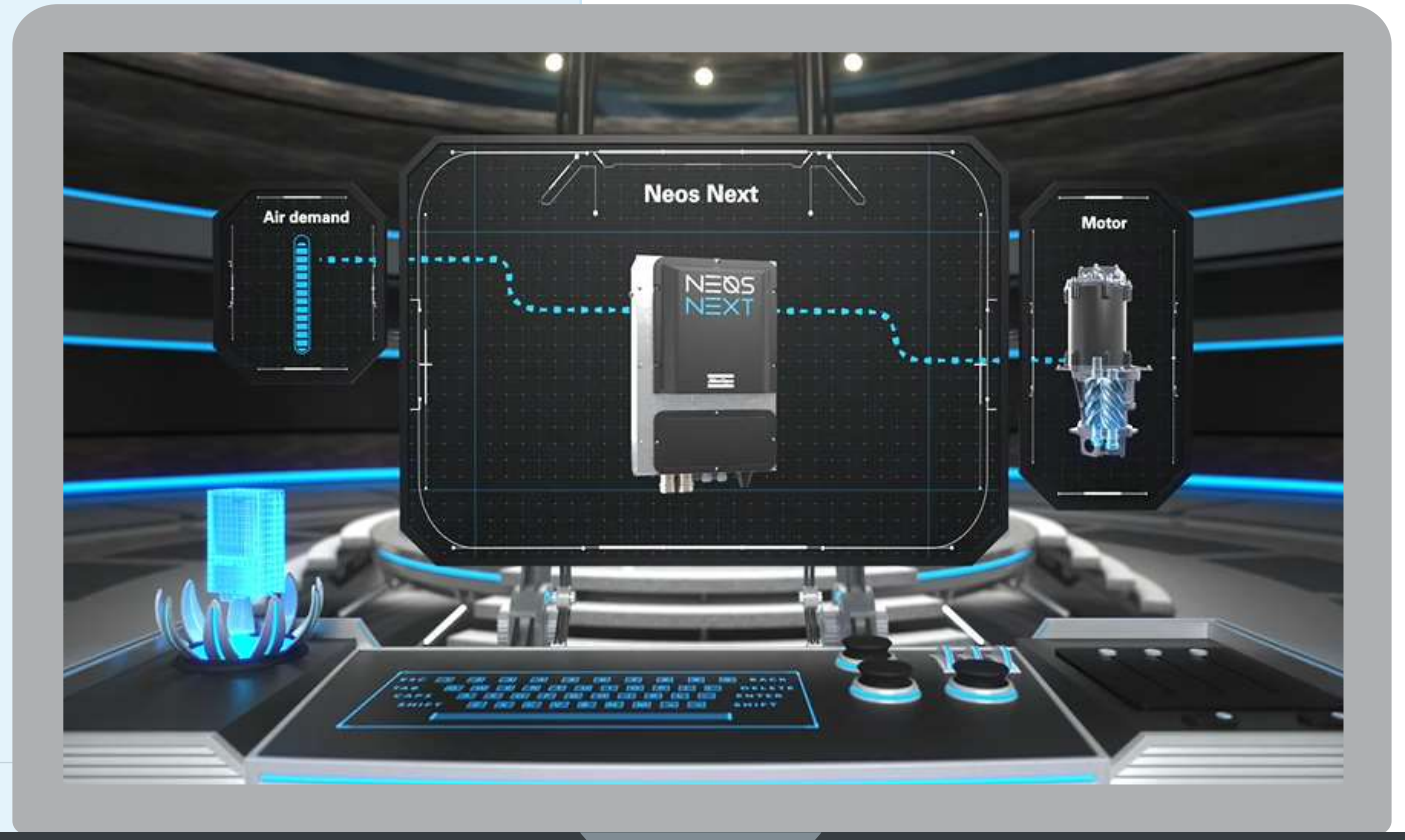


# The Compressor, reinvented

2

## NEOS NEXT INVERTER

- An inverter designed by Atlas Copco, specifically for use in compressors
- I/O integrated in the inverter
- Combines the functionality of an entire electrical cubicle in one compact unit
- IP54-protected from dirt and dust
- Inverter and FASR motor exceed IES2 (EN 50598) requirements for power drive efficiency





# The Compressor, reinvented

3

## VSD FAN

- Variable speed, resulting in lower power consumption, lower noise and optimal oil cooling
- Low vibrations
- Meets ERP2020



# The Compressor, reinvented

4

## SMART THERMOSTATIC CONTROL VALVE

- Valve with active control functionality designed by Atlas Copco
- Maintenance-free
- Controls the oil flow to achieve ideal oil injection temperature



# The Compressor, reinvented

5

## INTELLIGENT NO-LOSS DRAIN

- Ensures the automatic removal of condensate to minimize loss of compressed air
- Tracks drain cycles and maintenance schedule
- Detects and reports potential issues

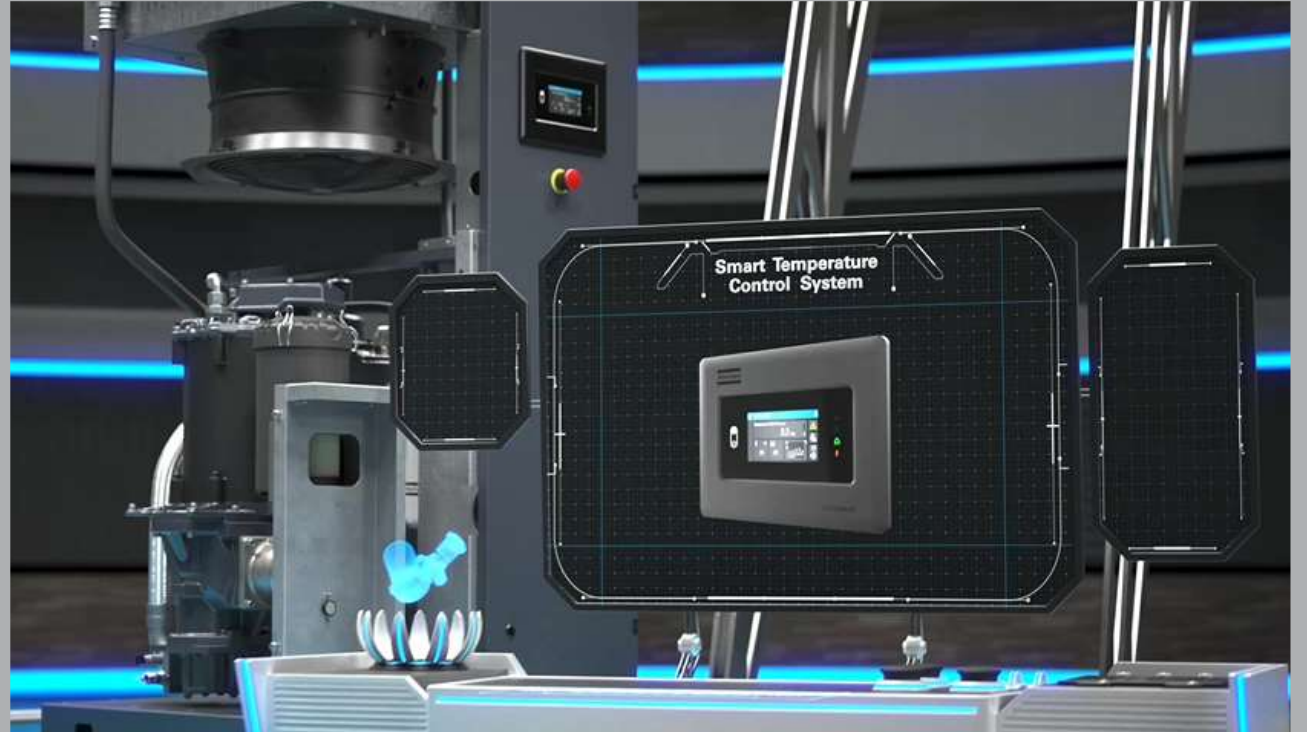


# The Compressor, reinvented

6

## ELEKTRONIKON® TOUCH CONTROLLER

- High-tech touch controller with warning indications, compressor shutdown and maintenance scheduling
- Easy to use and designed to perform in the toughest conditions
- EQ2i integrated as standard



# The Compressor, reinvented

7

## SMARTLINK

- Standard SMARTLINK remote monitoring to maximize air system performance and energy savings
- Dedicated mobile APP
- Smart notifications, anywhere anytime

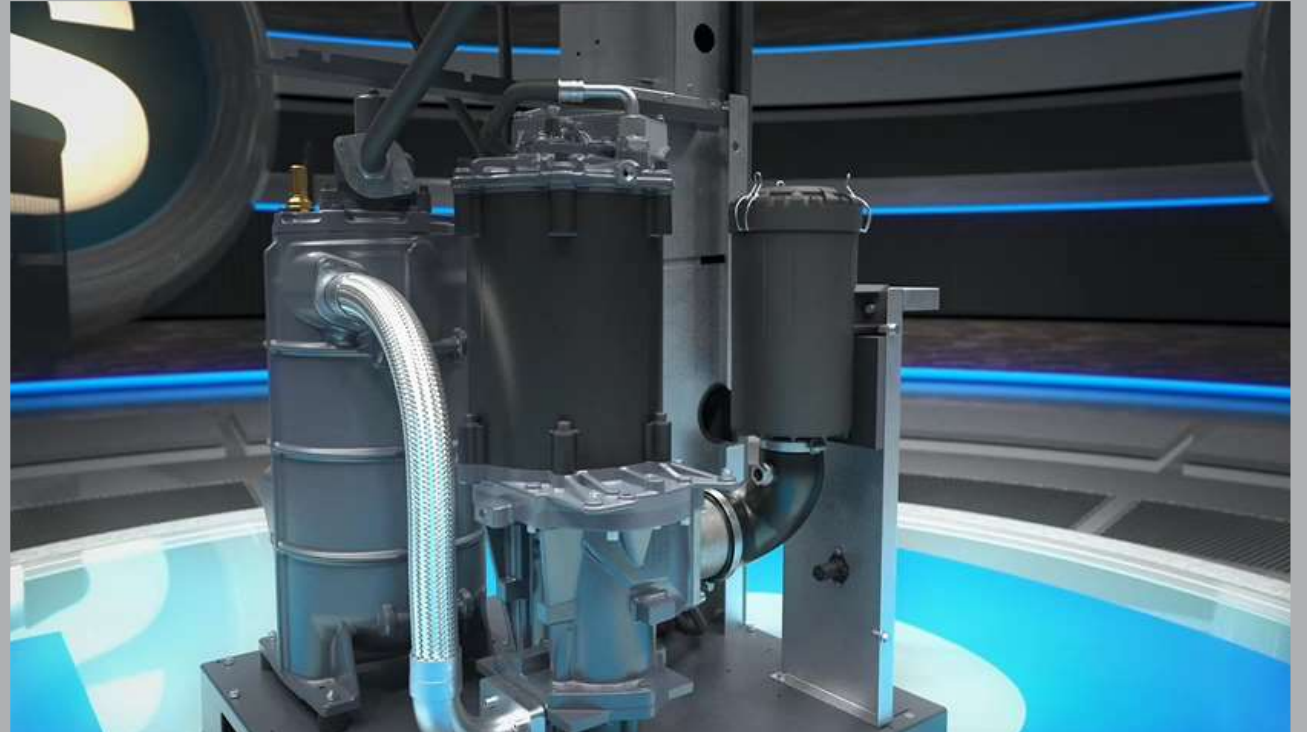


# The Compressor, reinvented

7

## INLET FILTER

- Developed especially for VSD<sup>S</sup>
- Enhanced filtration efficiency
- Ensures lower pressure drop



# Exclusive features that make the difference



## Smart Temperature Control System

Thanks to its Smart Temperature Control System, the GA VSD<sup>S</sup> is the first compressor to offer full oil injection control to eliminate the risk of condensation and maximize compression efficiency. An advanced algorithm in the Elektronikon controller combines multiple operational parameters to calculate the optimal oil temperature, which the Neos Next implements by regulating the VSD fan and the STC valve.

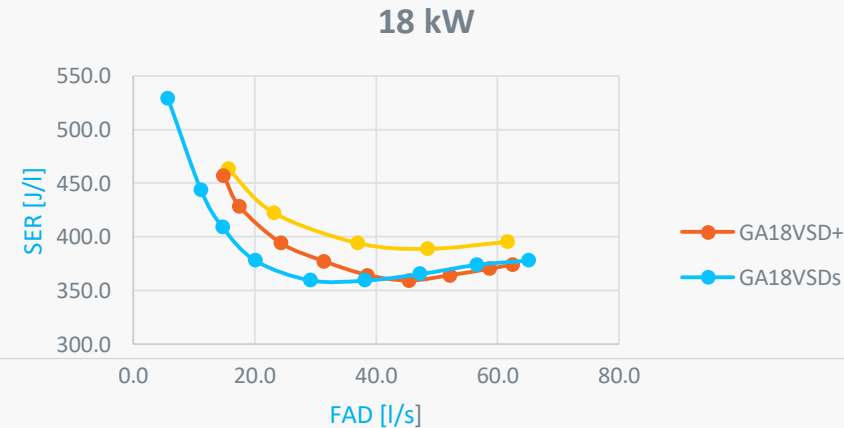
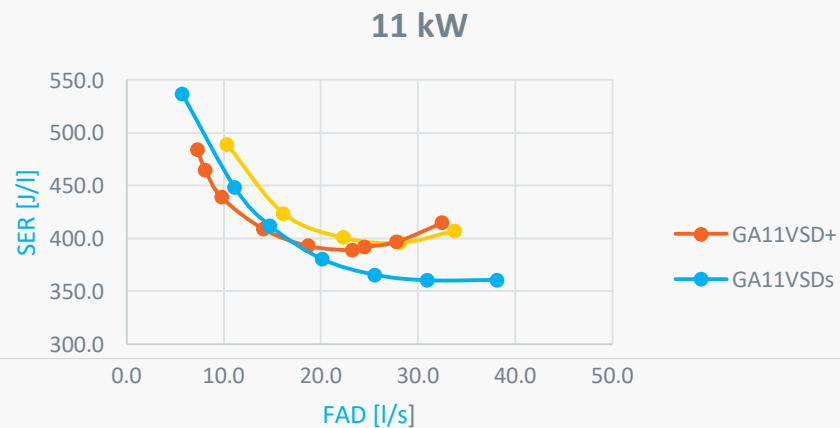
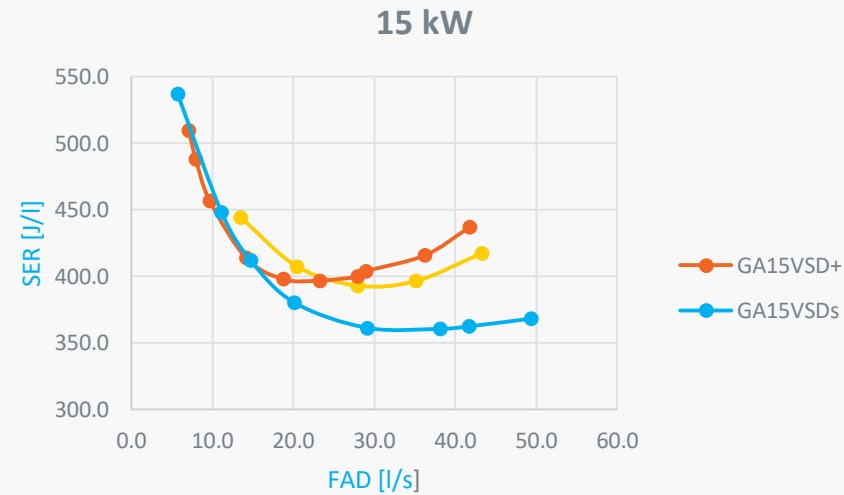
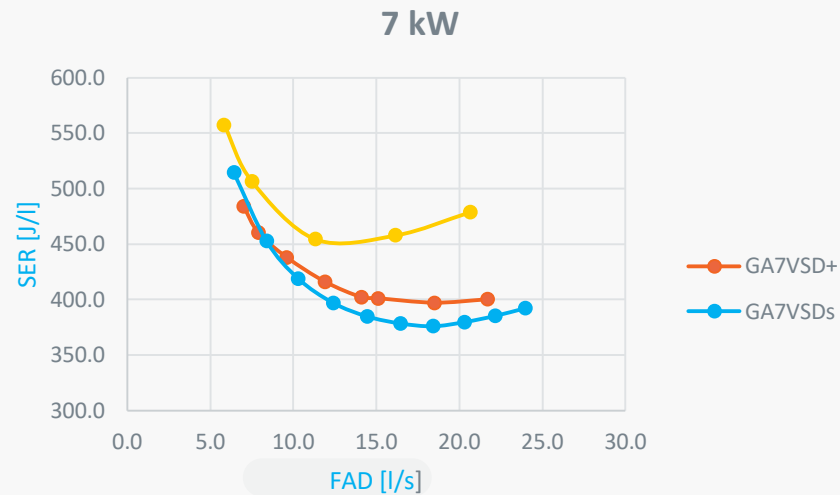


## Boost Flow Mode

With other compressors, exceeding the maximum flow capacity means loss of pressure and equipment operation, and possibly a production shutdown. The GA VSD<sup>S</sup> comes with Boost Flow Mode, allowing you to temporarily stretch the limit of your compressor without negative operational or reliability consequences. The extra boost delivers 5% more flow for a total period of 100 hrs.

# The Performance

## Raising the bar, again



FAD 10%



SER 6%

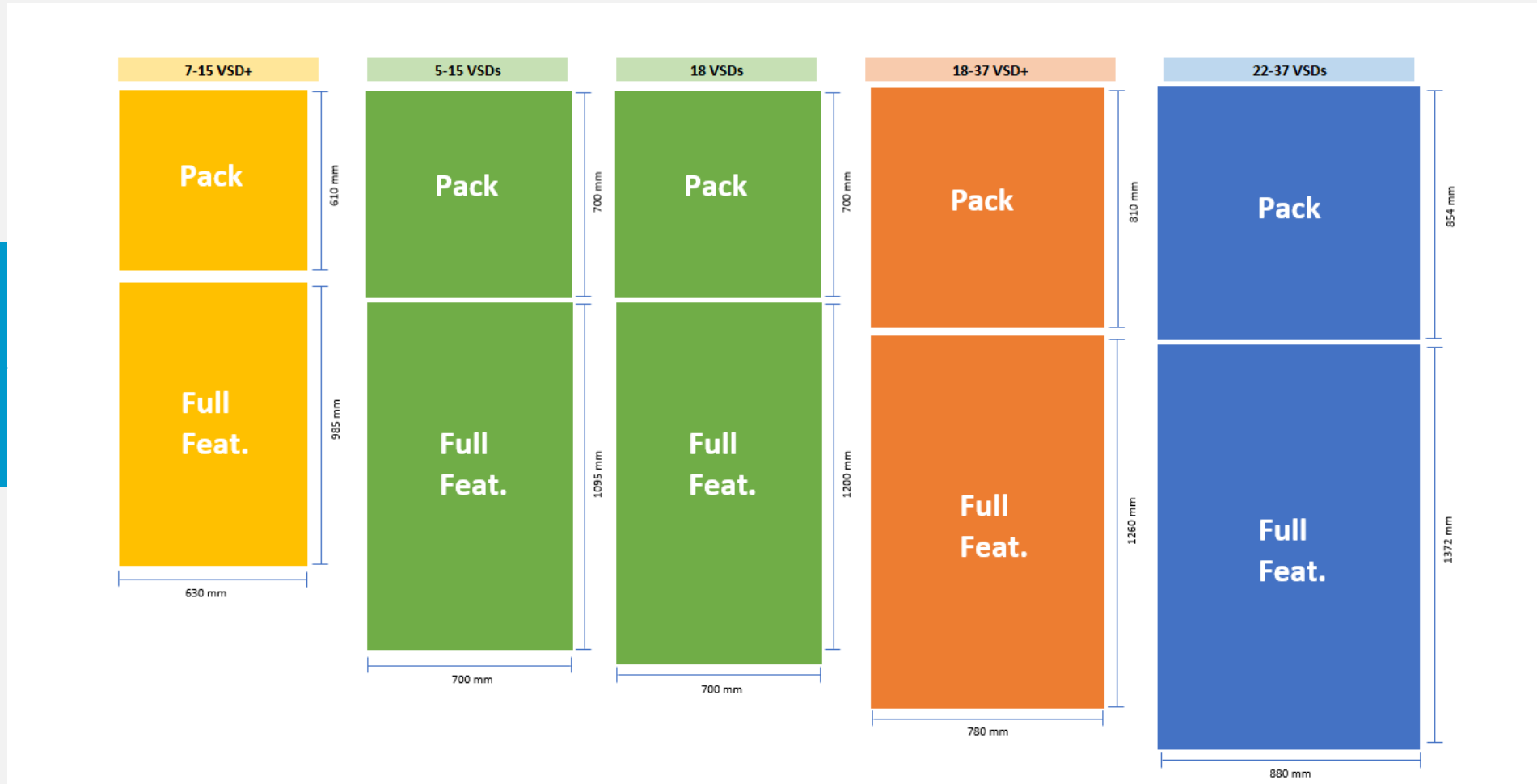


Compared to the market-leading VSD+ range

Performance @ 7 bar



# Footprints

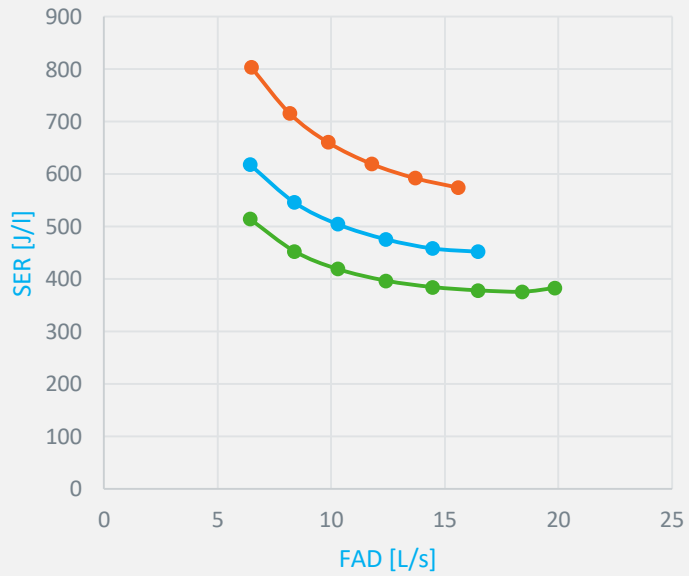


# What is new in the range?

5 kW value proposition

Air receiver optional for 5-11 kW

5 kW



- GA5VSDs Pack 13 bar
- GA5VSDs Pack 10 bar
- GA5VSDs Pack 7 bar



# Product overview.

## Product overview

kW	10Bar	13Bar	Pack	FF	FM	TM
5 kW	-	*	*	*	*	*
7 kW	-	*	*	*	*	*
11 kW	*	*	*	*	*	*
15 kW	*	*	*	*	*	-
18 kW	-	*	*	*	*	-

# Options

## Customize your VSD<sup>s</sup>

### Batch 1: February 2023

- › Energy recovery
- › RsXD /FoodGrade oil
- › UD+/DD filter
- › Neos connector
- › EQ4i, EQ6i
- › IT network
- › Heavy duty inlet filter
- › Dryer bypass
- › Pre-filter
- › Test certificate

### Batch 2: Q3 2023

- › Rem monitoring & pot. Free contacts
- › High ambient version
- › OPC UA gateway

### Batch 3: Q4 2023

- › Main switch
- › Freeze protection
- › Power duct fan



Power Duct Fan



Energy Recovery



Dryer Bypass



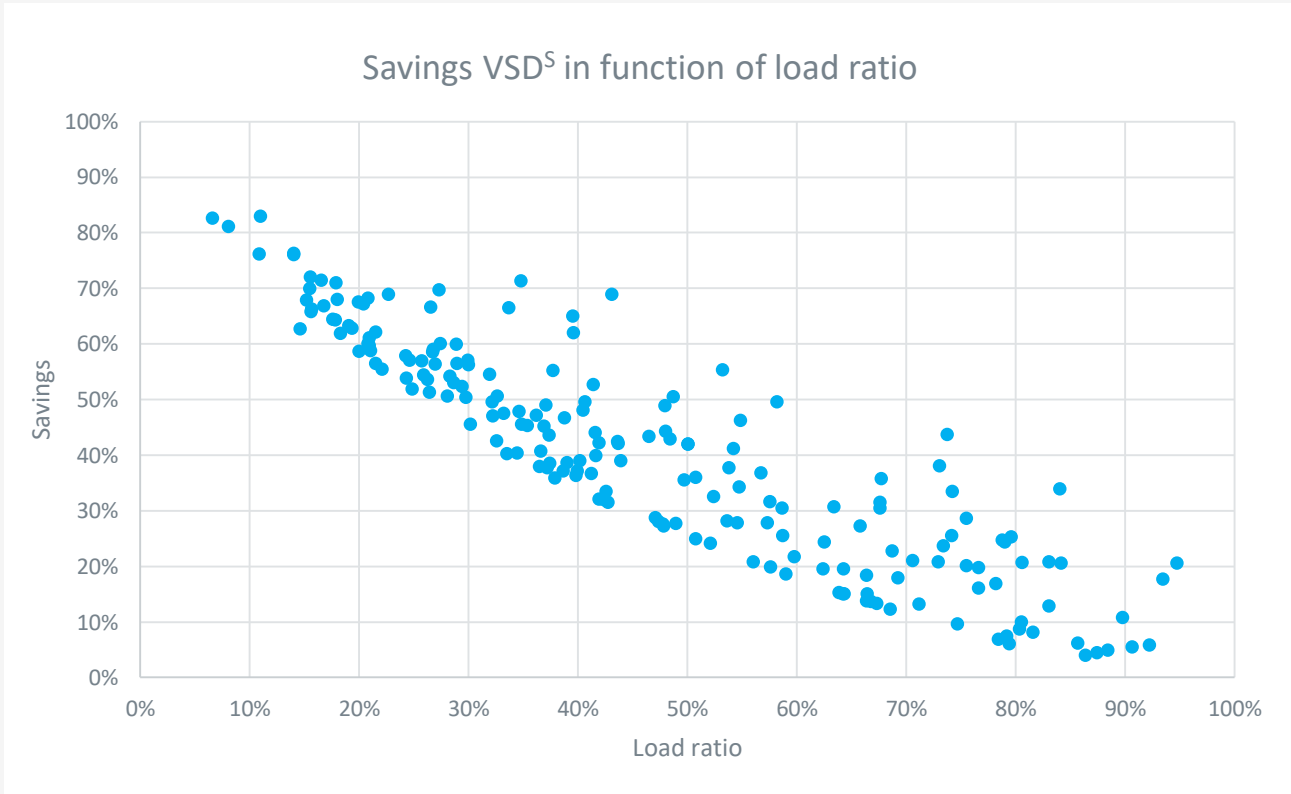
DD/UD+ Filters



Roto Synthetic Xtend oil

# Savings

## Savings versus fixed speed compressors – SMARTlink analysis



\* 15 kW, 7 bar example

“

**75%** of the customers using a fixed speed compressor are able to achieve an energy saving of at least **20%**


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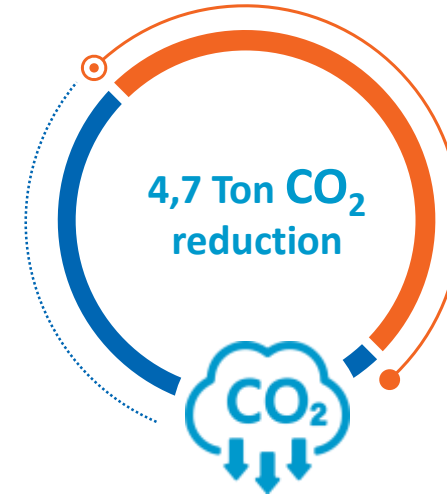
# A Real-life Example

Reflecting the measurable value that it brings to our customers

Flow profile	GA15VSD+	GA15VSD <sup>s</sup>	GA15
Loaded Time	168 h	168 h	118 h
Unloaded Time	n/a	n/a	50 h
Stopped Time	0 h	0 h	0 h
Energy Loaded	2214 kWh	2028 kWh	2061 kWh
Energy Unloaded	0 kWh	0 kWh	710 kWh
Total Energy Consumed	2214 kWh	2028 kWh	2772 kWh
Number of Weeks	48	48	48
Energy Savings Projection	n/a	8,4%	-25,2 %
Yearly Energy Cost [€]		-2.686	+8010
Yearly CO2 savings [ton]		4,72	-14,1



VSD<sup>+</sup> ..... TO ..... VSD<sup>s</sup> 



  
equals planting a forest the size of  
**4 soccer fields**

\* Assumptions 0,3€/kWh & 0,527kg CO2/kWh

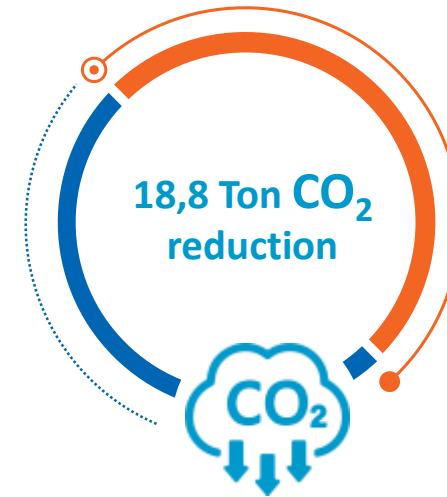
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Yearly Energy Cost [€]		-2.686	+8010
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Fixed Speed ..... TO ..... VSD<sup>s</sup> 



  
equals planting a forest the size of  
**14 soccer fields**

\* Assumptions 0,3€/kWh & 0,527kg CO<sub>2</sub>/kWh

# Key Take Aways

## Highlights

- VSD **performance** is in line with the previous VSD<sup>+</sup>
- The **VSD<sup>s</sup> range** is extended downwards and now **covers the 5 – 37 kW range**
- 5-18 kW range gets the **same value proposition** as the 22-37 kW range
- **Air receiver** available as option now for the 5 – 11 kW range
- VSD<sup>s</sup> delivers on average **11% more FAD** compared to VSD (@7bar)
- The average **SER** of VSD<sup>s</sup> is **10% lower** compared to the VSD (@7bar)
- **Noise levels** for VSD<sup>s</sup> best in class, competitive for VSD
- **Smart features** like smart temperature control system and boostflow mode are exclusive for VSD<sup>s</sup>
- **Connectivity features** like SMARTLINK (incl. mobile APP) are common, EQ2i as standard and OPC-UA as an option are exclusive for VSD<sup>s</sup>





WANT TO KNOW MORE?  
SCAN HERE!



The logo consists of the brand name 'Atlas Copco' in a white, elegant script font, centered between two thick, horizontal white bars. The background is a solid blue color with a faint technical drawing of a mechanical assembly in the bottom right corner.

*Atlas Copco*