Compressor Technique

Capital Markets Day 2021
Vagner Rego, Business Area President
Agenda

1. Facts in brief
2. The market and business fundamentals
3. Strategy for growth
4. Summary
Facts in brief
Compressor Technique

**Market trends**

- Continued focus on energy efficiency
- CO\textsubscript{2} emission reduction and energy recovery
- Total solution and total life-cycle cost
- Digitalization and automation
- New applications for compressed air
Orders received – local currency Q1 2021

SHARE OF ORDERS:

- 25%
- 42%
- 33%

Growth:

- +15%
- +11%
- +18%
- +7%
- +9%
The market and business fundamentals
The market we operate in

• Compressed air is often referred to as the 4\textsuperscript{th} utility
  – We serve all industry segments

• Largest technology range
  – Application driven solutions
  – Small to big industries

• Providing Total Solutions
  – Quality air treatment
  – Industrial Gasses

• Strong service organization
  – Global market coverage

Orders Received 2020:
47 BSEK

- General manufacturing: 26%
- Process industry: 27%
- Construction: 12%
- Electronics: 3%
- Service: 11%
- Automotive: 2%
- Other: 19%

Orders Received 2020:
47 BSEK
Traditional Industries

Continued investments in traditional industries:

➔ GDP/Capita Growth
➔ Energy & CO₂ reduction

...many more
New Technology Industries

➔ Automatization & Industry 4.0 brings lots of opportunities for pneumatic controls and compressed air

➔ Use of Industrial Gasses

many more
Example: Automotive Industry

Shift to electric driven cars

- Increased demand for battery cell production in the coming years
- Huge investments in new factories to produce electric cars

Compressed air and industrial gases are needed in every part of the process
Example: Automotive Industry

Electrical vehicle battery production process

**COMPRESSED AIR NEEDS**

- **Raw Materials**: Dry, CO₂ free air to protect the raw materials from ageing
- **Cell Production**: Dry process air and instrument air
- **Module Assembly**: Recovered compressor heat used for the process and heating the building

**NITROGEN NEEDS**

- **Raw Materials**: Dry and CO₂ free N₂: creating an inert environment to increase product quality
- **Cell Production**: High need
- **Module Assembly**: Medium need
- **Pack Assembly**: Low need
- **Vehicle Assembly**: Low need
Strategy for growth
Strategy for profitable growth

- Innovation for reduced TCO
- Expanding Applications
- Increased Presence
- Service Offering
- Digitalization

GROWTH

OPERATIONAL EXCELLENCE

- Modular Product Design
- Lean Management
- Local for Local
- Digitalization of processes
Our Product Offering

ATLAS COPCO COMPRESSOR TECHNOLOGY

TECHNOLOGIES
- Screw
- Piston
- Scroll
- Centrifugal
- Lobe
- Tooth

OIL LUBRICATED

PRESSURE
- 0.1 bar
- 400 bar
- LARGEST PRESSURE RANGE

POWER
- 1 kW
- 20 MW
- LARGEST POWER RANGE

AIR QUALITY
- Dryers
- Filters
- Condensate treatment
- Ancillaries
- Nitrogen
- Oxygen

THERMAL MGMT
- Water
- Oil
- Air

INDUSTRIAL COOLING

-20°C +40°C

MONITORING & CONTROL
- Central control
- Energy recovery
- Connectivity

SERVICE
- Global presence
- World class logistics
- Certified technicians
- Service plans
- Diagnostic services

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Compressed air carbon emissions

- Productivity: ECONOMIC GROWTH
- Power Required: IMPROVED ENERGY EFFICIENCY
- CO2: ENERGY RECOVERY
Hydrogen

A huge potential for a decarbonized economy
Hydrogen
A sustainable energy shift

Initiatives to decarbonize the energy sector to meet net carbon zero emissions target by 2050

Hydrogen fuel technology offers a role in global decarbonation

Projected an interesting compressor market for mobility + heat & power applications
Hydrogen Portfolio in Atlas Copco

Atlas Copco Core Technologies

- OIL-FREE PISTON
  - OIL-FREE HYDRAULIC
- AIR TREATMENT
  - Refrigeration
  - Desiccant
  - Drum Type
  - Filtration
- NITROGEN GENERATION
  - PSA
  - Membrane
- ENERGY RECOVERY
  - Internal
  - External
- SYSTEM MONITORING & CONTROL
- COMPRESSION
- TREATMENT
- GENERATION
- SYSTEM OPTIMIZATION

- HP
  - OIL FREE TOOTH
  - OIL FREE SCREW
  - OIL FREE TURBO
  - OIL INJECTED SCREW
- MP
  - OIL FREE LOBE
  - OIL FREE SCREW
  - OIL FREE CENTRIFUGAL
- LP
  - Oil Free Piston
  - Oil Free Hydraulic

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## Low Pressure

### Lobe
- **2018**: ZL 1-2
- **2019**: ZL 3-4
- **2020**: ZL new

### Screw
- **2018**: ZE 6 VSD
- **2019**: ZS 4 VSD
- **2020**: ZS 4 VSD+ ZS 5 VSD

### Centrifugal
- **2018**: ZB 5-6 VSD+
- **2019**: ZHL 7
- **2020**: ZM 4-6 ZHL 8

### Revenue Development

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Industrial Cooling

**Watercooling**

Product range of chillers and coolers with optional adiabatic pre-cooling and freecooling. Optimized performance and energy savings for industrial process cooling.

- **Temp ABOVE ambient**
  - Cooler
    - 60-900 kW

- **Temp BELOW ambient**
  - Chiller
    - 5 kW
    - 1250 kW

**Airchiller**

Air flow rate 1000-20,000 m³/h

- 10-200 kW

**Temp control unit**

Fluid temp range 90-300°C

- 5-150 kW

**Thermal Management**

Precise temperature control of water, air and oil. Increased customer productivity and production quality
Innovation

New products

2020 >55
2019 >40
2018 >35
2017 >30
2016 >25
Cerades™
A revolution in dessicant dryer technology
A revolution in desiccant dryer technology by Atlas Copco
Service

Connecting you to an easier life
Compressor Technique – Service

* Figures for the years 2010-2016 are best estimated numbers, as the restatements for IFRS15 are not fully reconciled.

Average yearly growth:
Service: 7%
Equipment: 5%
Customer Requirements

- **INCREASED PRODUCTIVITY**
  - Maximum Uptime
  - Performance increase

- **ELIMINATE RISKS**
  - Guaranteed Air Quality
  - Service Agreements

- **REDUCED OPERATING COST**
  - Energy Savings
  - Eliminate Breakdown Cost

- **PROTECT ENVIRONMENT**
  - Energy Savings
  - Environmental footprint

- **TRANSPARENCY**
Strategy for profitable growth – Service

Our Service Offering

**LIFE CYCLE COST**

- **100% Serviced**
  - Genuine Parts
  - Customer Support Plans
  - Monitoring & Control

- **100% Connected**
  - Monitoring & Control
  - Performance Guaranteed
  - Energy & CO₂ reduction
  - Operational transparency

- **100% Optimized**
  - Optimizing Room
  - Managing the compressor room

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Optimization

Leak Detection
Energy Audit
Air Quality

Comprehensive report identifying potential energy savings

Central Controllers
Product Upgrades
Energy Recovery

Monitor the savings
On-line recommendations
Connectivity

SMARTLINK

<30kW compressors & competitors

SMARTCLAMP

>30kW compressors

SMARTBOX
ELEKTRONIKON

Compressor Room

EQUALIZER 4.0
OPTIMIZER 4.0

>200,000 CONNECTIONS
Connectivity

Benefits

CUSTOMER

Transparency on compressor operation

Recommendations (efficiency improvements)

➔ Data enabled service offering (Performance Guaranteed)
➔ Remote Diagnostics
➔ Improved machine design and reliability

ATLAS COPCO

Operational Efficiency

Sales Leads

Increased number of Service Contracts
Operational Efficiency

Smart Factories – Industry Connect
People Development

**Talent & Acquisition pipeline**
- Diversity & Inclusion network
  target: 30% women by 2030
- Master in Marketing & Sales

**Learning Organization**
- Digital learning to reduce time to competence
- Never Stop Learning

**Leadership**
- Talent pipeline for future Presidents and Managers
- Coaching for performance

**Employee Engagement**
- Performance enablement
- Employee well-being is priority
- Safety comes first
Summary – Compressor Technique

- Diversified market place
- Growing number of applications
- Broad product portfolio
- Focus on innovation
- Complete solution provider
- People are key
Forward-looking statements

“Some statements herein are forward-looking and the actual outcome could be materially different. In addition to the factors explicitly commented upon other factors could have a material effect on the actual outcome. Such factors include, but are not limited to, general business conditions, fluctuations in exchange rates and interest rates, political developments, the impact of competing products and their pricing, product development, commercialization and technological difficulties, interruptions in supply, and major customer credit losses.”