INNOVATION

Atlas Copco Capital Markets Day 2014
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Compressor Technique

COMMITTED TO SUSTAINABLE PRODUCTIVITY

We stand by our responsibilities towards our customers, towards the environment and the people around us. We make performance stand the test of time. This is what we call – Sustainable Productivity.
AGENDA

1. Compressor Technique
2. Innovation drivers
3. How do we work with innovation
4. Innovations
5. Summary

COMPRESSOR TECHNIQUE

Global leader providing innovative compressed air, air and gas treatment and vacuum solutions for sustainable productivity

Profitable growth with asset light and agile organization
THE STRATEGIC PILLARS FOR PROFITABLE GROWTH

INNOVATION DRIVERS
Trends

- The energy efficiency and productivity requirements from industry
- Global growth and industry capital investments
- Increased labor cost
- Growth in emerging markets' middle segment
- Environmental awareness
- Quicker communication and availability of information
LIFE CYCLE COST COMPRESSOR / VACUUM INSTALLATION

Energy cost
Maintenance cost
Investment cost

VALUE ADDING INNOVATIONS

Customer needs
Customer value

Evaluation of needs
Superior technology
Choice of compressor
Optimization of air supply

Energy efficiency and heat recovery
Service solution
SETTING NEW ENERGY EFFICIENCY STANDARDS

Variable Speed Drive

This development has led to a significant reduction in energy consumption.

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GA VSD+ – THE COMPRESSOR OF THE FUTURE

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1994 – ATLAS COPCO PIONEERS THE VARIABLE SPEED DRIVE

- VSD = Energy saving of 35% on average
- Revelation in energy savings, total cost of ownership
- 1 in 3 oil-injected screw compressors sold by Atlas Copco is a variable speed drive

GA VSD+

- Unique drive system
- Integrated optimized solution
- Easy service

- Footprint: -55%
- Free air delivery: +13%
- Low noise level: 62 d(B)A
- Specific energy requirement: -50%
**SMALL COMPRESSORS, BIG ACHIEVEMENTS**

What if every oil-injected screw compressor sold in the world would be a VSD+?

- Average annual savings of 6 TWh
- Reduction of 3 million tons of CO₂
- 600 000 passenger cars
**ZH350+ TURBO DIRECT DRIVE**

- **No gears**
  - Atlas Copco designed direct drive high speed synchronous motor with frictionless magnetic bearings

- **No oil**
  - Not a single drop of oil inside

- **No losses**
  - ZH350+ the most energy efficient oil-free air compressor ever

- Computational fluid dynamics to increase energy efficiency by 6% and more

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**GHS VSD+ VACUUM PUMPS**
GHS VSD+ VACUUM PUMPS

- Atlas Copco state of the art oil injected screw elements
  - Breakthrough efficient variable speed driven vacuum pumps
- Superior alternative to the traditional oil injected vane pumps:
  - Reduction in energy consumption – on average 50%
  - Silent technology, best in class noise levels
  - Clean operation: insignificant oil emissions
  - Compact all in one package with advanced controls
- Game changer in the utility vacuum segment
- Patented designs

IXM DRY PUMP
FOR SEMICONDUCTOR MARKET
**IXM DRY PUMP**

- 60% less power consumption than previous generation of dry pumps
- Increased lifespan
- 20% smaller footprint
- 2x lower noise than previous generation
- 30% lower weight than previous generation

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**SMARTLINK**

**COMPRESSOR DATA MONITORING SERVICES**
A COMPLETE LIFECYCLE OFFERING

- Genuine parts
- Customer support plans
- Air optimization
- Monitoring & control

SMARTLINK

- Connectivity as strategic differentiator
  - Monitoring running parameters
  - Investing in data → knowledge
  - Connectivity enables lower total cost of ownership
SMARTLINK

Operational Efficiency
- Service visits planned on actual running hours
- Pro-active service response towards customers

Customer Benefits
- Service on time
- SMS/E-mail warnings
- Energy consumption analysis

Product Development
- Running conditions and machine behavior identifies areas for product improvement

Maximum Productivity
Minimum Operating Cost

SUMMARY

Innovation is the key differentiator for market leading position

The organization is strong and “fit for more”

Innovation not only in products
COMMITTED TO
SUSTAINABLE PRODUCTIVITY.