



Cement
Chemicals
Fibre, paper & tissue
Food & beverage
Logistics and Hoisting
Metals
Mining & minerals
Oil & gas
Panelboard
Power generation
Rubber
Sugar
Water & wastewater

CAPITAL DIVISION Tailor-made gear units

Innovative power transmission solutions
for the next generation of industries

CAPITAL Team to support new investments

David Brown Santasalo's CAPITAL team works with our customers, from OEMs, EPCs, Key Accounts and Users worldwide, to support all aspects of a new gearbox investment, including:

- Greenfield projects (New plant)
- Brownfield, expansion or production upgrade
- New projects
- Spare gear units

We have a team of dedicated experienced engineers to provide the best tailored solutions for your industrial applications. Our engineers provide optimised designs using state of the art software, equipment and processes.



Gear design

- David Brown Santasalo designs specific gearboxes as per the worldwide gear industry norms like to AGMA, JIS, DIN or ISO standards
- Various certification like ATEX, GOST, FEM, Lloyd's, DNV, etc. are available on our gear units

Housings, couplings and shafts

- Designed for thermal efficiency
- Engineered using the latest software design tools for FEA analysis and 3D modelling
- Gear of flexible coupling can be supplied

Gear manufacturing

All CAPITAL Gearboxes will be manufactured in our center of excellence based in Finland and in China with the same quality level.

- State of the art gear cutting and grinding machine tools
- Gears and gearboxes manufactured to any rating or gear grade
- High accuracy gears up to AGMA 14 after heat treatment

What sets David Brown Santasalo apart?

- Quick turnaround time from receiving the specification through to delivering a product offering
- Capability to discuss our customers' applications in detail with a dedicated team
- Joint development with our customers on new concepts and product development
- Flexibility to offer a standard or tailor made transmission from two locations
- Full in-house service centre network across our global footprint supporting all Aftermarket requirements



Assembly and load testing

All gearboxes follow strict quality control guidelines and reviews before being shipped to our customers worldwide. David Brown Santasalo offers no-load spin testing and full scale load testing of standalone gear units, or complete drive assemblies.

Quality control

Every gearbox we make is subject to strict monitoring standards. Components are meticulously inspected for material quality and dimensional accuracy using cutting-edge gear inspection and measurement technology.

The result

Highly reliable gear units built to meet the intense demands of industrial processes.

Our Fundamental Values

We use our unique customer process and application knowledge to drive success in our core industries.

The information below highlights the three core principles that guide our global CAPITAL sales.



Customer intimacy

- Build relationships and loyalty
- Understand our customers' problems and provide solutions
- OEM/EPC/End User connectivity



Product excellence

- Mechanical power transmission solutions
- Industrial gear systems
- Innovation and quality driven



Market access

- Develop our product offering and support our customers in their markets
- Proximity and responsiveness
- Our combined brand strength provides us with credibility and experience across major critical industries



The CAPITAL team serves critical industries globally with our extensive product portfolio

David Brown Santasalo has an extensive range of modular, standardised and tailor-made gearbox solutions to suit any requirement. This includes planetary, helical and bevel-helical gear units.

Our custom gearbox capabilities allows us to provide effective solutions for the most arduous and safety-critical applications, across a wide range of industries where failure is not an option.

David Brown Santasalo provides customers worldwide with reliable solutions that have been proven time and time again.

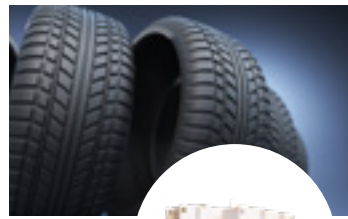
Consumer



Fibre & Paper



Sugar, Food and Beverage



Rubber



Water & Waste Water

Industrial



Power Generation



Metals Processing



Cement Industry

Commodities



Mining & Minerals



Oil & Gas



Logistics and Hoisting

GearWatch condition monitoring system

Our GearWatch condition monitoring system is a smart and compact tool for predictive remote process equipment monitoring. GearWatch measures, records and analyses data, reporting any changes in measured parameters in real time, 24/7 via the internet.

Oil particle content monitoring enables early detection of potential gear unit failures months, or even a year in advance. This allows you to plan maintenance activities around your operational requirements and reduce downtime.

A proactive and customisable remote monitoring service for industrial gears, GearWatch is available in three packages:

DBS GearWatch Standard

- Detection of gear unit wear process through oil particle counting
- Compact & cost-efficient condition monitoring solution
- Measurement results are simple to analyse

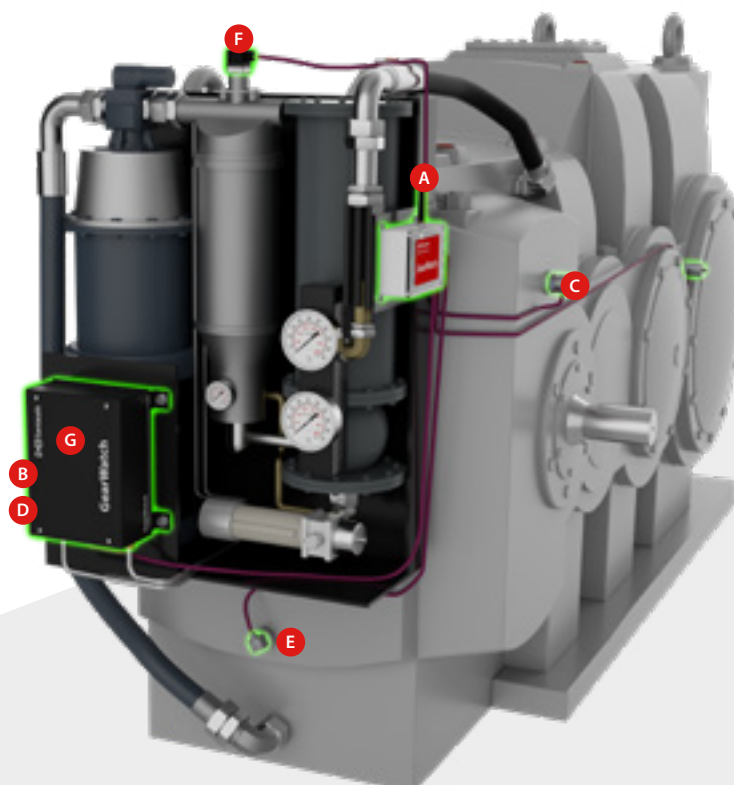
DBS GearWatch Oil Monitoring

- Oil analysing unit detects early stages of the wear process
- Proactive approach to operation with oil quality measurements

DBS GearWatch Pro

Tailored monitoring systems for gear units and drive trains with selected parameters:

- Oil particle counter
- Vibration
- Rotational speed
- Temperature
- Oil quality
- Oil pressure
- Load



A
Smart
Terminal



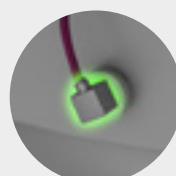
B
Oil Particle
Counter



C
Vibration
Sensors



D
Oil Analysing
Unit



E
Oil temperature
Sensor



F
Oil Pressure
Sensor



F
Oil Quality
Sensor

Industrial Gear Unit Compatibility with ATEX 2014/34/EU

Safety of equipment in explosive atmospheres is regulated by the ATEX directive in Europe and IECEx standards globally. The protection methods control ignition sources of electrical and mechanical equipment. ATEX classifies explosion hazard zones in three categories zone 0, zone 1, zone 2, where zone 0 is most severe.

DBS offers our customers a wide range of gearboxes suitable for applications with EX requirements to serve our customers with any requirements they have.

In addition, DBS can offer our customers expert services and guidance in helping to select the right product to meet EX protection needs.

DBSantasalo gear units are compatible with ATEX Zones 2 and 1 on request.

Explosive Gas Atmosphere

Zone 1: II 2 G Ex h IIC T3 Gb

Zone 2: II 3 G Ex h IIC T3 Gc

Explosive Dust Atmosphere

Zone 1: II 2 D Ex h IIIC T200oC Db

Zone 2: II 3 D Ex h IIIC T200oC Dc

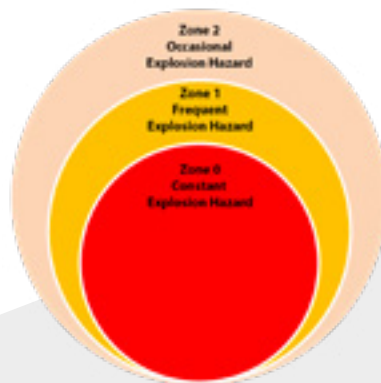


Figure 1: ATEX Explosion Hazard Zones



Corporate environmental impact

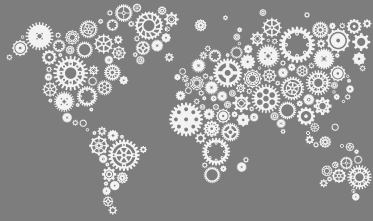
David Brown Santasalo continually work to improve our corporate environmental impact and ensure compliance with Environmental Standards worldwide.

Our dedicated Environment, Health & Safety team ensure the efficient use of resources; primarily energy, water and waste reduction. Measuring, tracking and reporting on an on-going basis.

Our world-wide businesses strive to attain ISO accreditations and are proud to hold the following standards:

- **ISO 14001:2015** in Effective Environmental Management Systems
- **ISO 9001:2015** in Quality Management Systems
- **BS OHSAS 18001** in Occupational Health & Safety Management
- **ISO 45001:2018** in Occupational Health & Safety Management Systems





Contact us

To discuss your bespoke requirements for:

- Sales to greenfield projects (new plants,mines etc.)
- Sales to brownfield / expansion / paper machine or production speed change projects etc
- Projects, where new driven equipment and new gear units are installed
- Spare gear units

Please contact our dedicated CAPITAL team

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