



AUTOMATED

PROCESS

L I M I T E D

...innovative know-how

- Dewpoint Measurement
 - Flow Measurement
 - Leak Detection
- Pressure Measurement
- Compressed Air Quality Measurement
 - Recorders
 - Software
 - Power Meters

Compressed Air and Gas Instrumentation

COMPRESSED AIR & GAS INSTRUMENTATION

Measurements & Controls for Compressed Air & Gas Industry

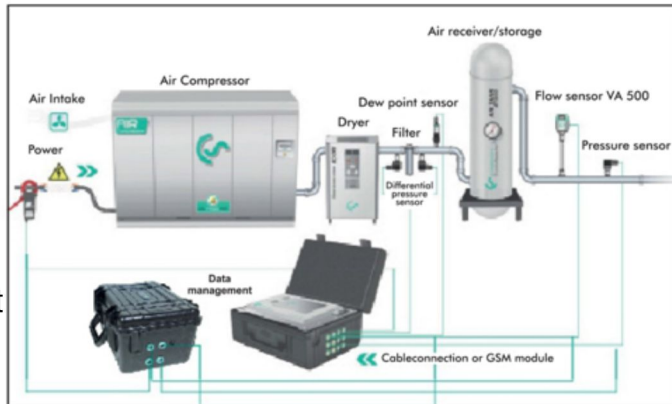


SUITABLE APPLICATIONS:

| air / compressed air | carbon dioxide (CO₂) | crypton | methane (CH₄)
| nitrogen (N₂) | oxygen (O₂) | LPG | propane | natural gas | argon (Ar)
| hydrogen (H₂) | technical gases | mixed gases | laughing gas (N₂O)
| propane (C₃H₈) | helium (He) | vacuum | other gases on demand

PRODUCTS:

- o Dewpoint Measurement
- o Flow Measurement
- o Leak Detection
- o Pressure Measurement
- o Compressed Air Quality Measurement
- o Recorders
- o Software
- o Power Meters



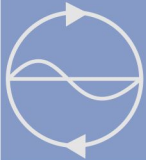
DEWPOINT MEASUREMENT

SUITABLE APPLICATIONS:

| Air / Compressed Air | Carbon Dioxide (CO₂) | Methane (CH₄) | Nitrogen (N₂)
| Oxygen (O₂) | Natural Gas | Argon (Ar) | Hydrogen (H₂) | Other gases on demand

PRODUCTS:

- o Field Mountable Dewpoint Sensors
- o Field Mountable Dewpoint Sensors in Combination with Field Mountable Recorders and Indicators
- o Mobile and Portable Dewpoint Meters



FLOW MEASUREMENT

SUITABLE APPLICATIONS:

| air / compressed air | carbon dioxide (CO₂) | crypton | methane (CH₄)
| nitrogen (N₂) | oxygen (O₂) | LPG | propane | natural gas | argon (Ar)
| hydrogen (H₂) | technical gases | mixed gases | laughing gas (N₂O)
| propane (C₃H₈) | helium (He) | vacuum

PRODUCTS:

- o Compact Inline Flow Meters: Flow sensor with integrated flow straightener, no inlet sections necessary.
- o Insertion Flow Meters
- o Inline Flow Meters: Flowmeter with integrated measuring section.
- o M-Bus - Industrial gas meter
- o Insertion Flow Meters in combination with Recorders
- o Vortex Flow Sensor for mixed gases and corrosive media applications
- o Vortex Ultrasonic Flow Sensor for technical and mixed gases applications



LEAK DETECTION

Typical applications of our measuring instruments in this section are leakage detection in compressed air systems and leak testing of unpressurized systems.

- o **Leak detector with camera LD 500/510:**

indicates leakage rate in l/min and costs in €.

- o **CS Leak Reporter software for leak detector LD 500/510:**

Easy leak reports according ISO 50001

- o **Leak detector LD 400:**

By means of the LD 400 even the smallest leakages in compressed air lines, gas, vapor, vacuum plants or refrigeration plants can be detected even from distances of several meters.



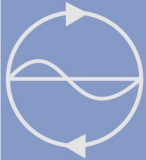
PRESSURE MEASUREMENT

Pressure monitoring in compressed air and gas systems helps to significantly reduce energy consumption,

- o Mechanical Pressure Gauges
- o Standard Pressure Sensors.

Ranges: 10 bar, 16 bar, 40 bar, 1,6 bar absolute, 100 bar, 250 bar and 400 bar.

- o Differential Pressure Sensor to test filter performance.





COMPRESSED AIR QUALITY MEASUREMENT

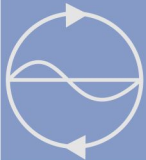


**AUTOMATED
PROCESS
LIMITED**
...innovative know-how

Residual Oil Content Measurement OIL CHECK according to ISO 8573.

The residual oil content sensor OIL check measures the vaporous residual oil content in the compressed air.

o **Stationary Solution in combination with the DS 400 (Recorder).**



COMPRESSED AIR QUALITY MEASUREMENT

Particle Counter PC 400 according to ISO 8573.

The highly precise optical particle counter PC 400 measures particles from a size of 0.1 μm and is therefore suitable for monitoring of the compressed air quality class 1 (ISO 8573).

Particle Counter PC 400 Stationary Solution in combination with DS 400 (Recorder) is suitable for:

- o air/compressed air
- o argon (Ar)
- o nitrogen (N₂)
- o oxygen (O₂)



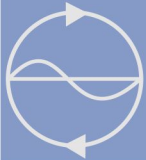
COMPRESSED AIR QUALITY MEASUREMENT

o Particle Counter PC 400

Mobile Solution in combination with DS 500 Mobile (Recorder)

is suitable for:

- air/compressed air
- argon (Ar)
- nitrogen (N₂)
- oxygen (O₂)



COMPRESSED AIR QUALITY MEASUREMENT

Residual Oil Content Measurement

OILCHECK in combination with Particle Counter

PC 400 according to ISO 8573.

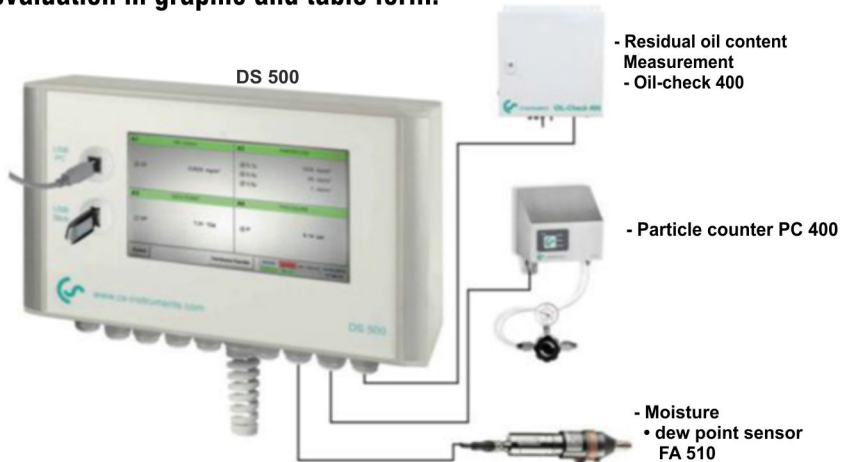
- o Mobile Solution - Residual Oil Content Measurement OILCHECK in combination with PC 400 Particle Counter + DS 500 Mobile + FA 510 Dew Point Sensor + CS Basic - data evaluation in graphic and table form.



COMPRESSED AIR QUALITY MEASUREMENT

Residual Oil Content Measurement OILCHECK in combination with Particle Counter PC 400 according to ISO 8573 Stationary Solution

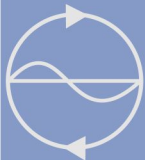
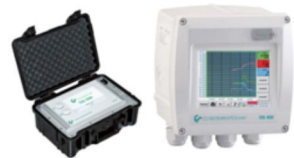
- Residual Oil Content Measurement OILCHECK in combination with PC 400 Particle Counter + DS 500 + FA 510 Dew Point Sensor + CS Basic - data evaluation in graphic and table form.



RECORDERS

For all related compressed air and gas measurements and controls.

- o Stationery Recorders
 - DS 400 - Chart Recorder
- o Stationery Recorders
 - DS 500 - Intelligent Chart Recorder
- o Portable and Mobile Recorders
 - Pi 500
- o Portable and Mobile Recorders
 - DS 400 mobile
- o Portable and Mobile Recorders
 - DS 500 Mobile - Intelligent Mobile Chart Recorder
- o Portable and Mobile Recorders
 - DS 500 PM Mobile - efficiency measurement for compressors



SOFTWARE - CS Basic

o CS Basic - 0554 8040

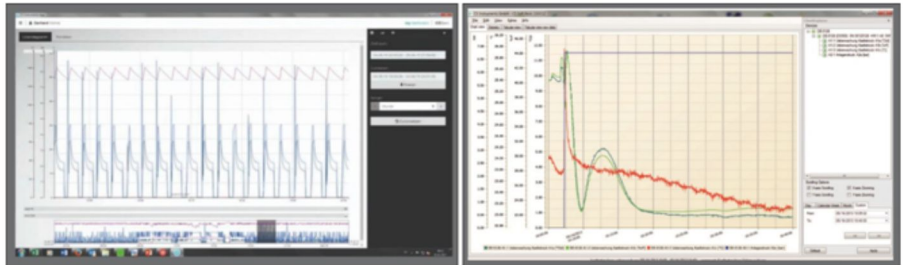
Data evaluation in graphic and table form

- reading out of the measured data via USB stick or Ethernet. License for two working stations.

o CS Soft Basic - 0554 7040

Data evaluation in 5 languages by means of CS Soft Basic. Everything at a glance: Table, graphic, statistics

- at the touch of a button the user gets all necessary information,.



SOFTWARE

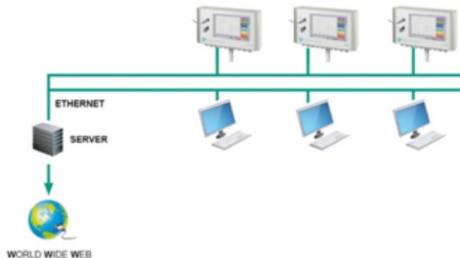
- CS Soft Network & Energy Analyzer

o CS Soft Network

By means of the CS Soft Network an optional number of DS 500 or DS 400 instruments can be evaluated via Ethernet. The software stores the measured data of all instruments cyclically in a SQL database on the server.

o CS Soft Energy Analyzer

Serves for compressor analysis, system analysis or leakage calculation. Evaluation at the PC with graphics and statistics. Graphic evaluation with day view and week view. Compressed air costs in €/€\$.



SOFTWARE - CS Service Software

o **CS Service Software - VA 5xx**

The service Software for our flow sensors enables the user e.g. to scale the 4...20 mA analogue output range or to change other parameters of the device.

- o **CS Service Software - FA 5xx** Very useful for connecting the humidity sensors to the PC and the following adjustments can be carried out, for e.g.: Scaling of the 4...20 mA analogue output, alarm limits, single-point calibration.



POWER METERS

- o **Mobile active/reactive power meter CS PM 600**
with 3 external current transformers for big machines and plants.
Measures kW, kWh, cos, phi, kVar, kVA.
- o **CS PM 5110 Current/effective power meter**
for panel mounting.
Current transformer up to 2000 A connectable.
- o **Clamp-on ammeter Miniflex**
Measuring ranges of the clamp-on ammeter:
0 - 400 A. For the analysis of compressors.



OUR INDUSTRIAL SOLUTIONS AND SERVICES OFFERING



1. Liquid/gas storage/buffer tank level measurement and control
2. Liquid/solid dosing/filling/batching systems
3. Utility liquid/gas metering and inventory systems
4. Fluid loading and unloading systems
5. Industrial safety systems
6. Energy monitoring and management systems
7. Condition monitoring and control systems
8. Instrument maintenance and calibration services
9. Process plants/machines instrumentation and control
10. Compressed air quality solution according to ISO8573
11. Compressed air/gas leak detection and control
12. Control valves system design, assembly and services
13. Industrial wireless and IoT systems
14. Motors, pumps and fans monitoring and controls
15. Electrical panel building components, accessories and services

INDUSTRY

- Food and Beverage
- Pharmaceuticals
- Cement and Chemicals
- Plastics, Printing and Packaging
- Marine, Oil & Gas
- Power and Energy



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