

NEW!

OIL CHECK 500 - The monitoring system for permanent highly precise measurement of the vaporous residual oil content compressed air, nitrogen and gases



"Forced Pressure Variation" for long-term stable measurement results - Auto-calibration

Thanks to the innovative"Forced Pressure Variation" measuring method, the OIL CHECK 500 generates reference gas internally in different mass concentrations. With the help of this process, which is intellectually protected by CS INSTRUMENTS, components in the measurement signal caused by ageing or contamination, in particular long-term drifts, can be compensated. No wearing parts such as activated carbon filters are necessary for the generation of zero air. The result is a low-maintenance and long-term stable measurement

Service friendly, no downtime

The sensor unit can be replaced by the customer on site. This eliminates the need to return the entire unit for recalibration.

Process safety

All functions / components are monitored internally. A complete function test report can be printed out via the service software.

On-site calibration

Calibration can be carried out in the field using test gas cylinders. With the service software, a verification report (as-found data) and a calibration report (as-left data) can be generated.

Ideal for mobile measurement

Compact device, easy sampling and quickly ready for measurement

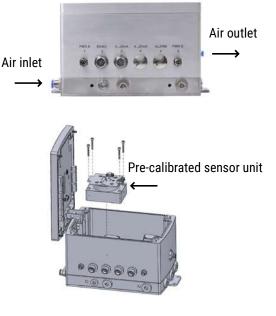


Easy installation

Air inlet / air outlet - sampling via PTFE hose or stainless steel pipe. Digital and analog interfaces as a standard. Connection via M12 plug

Service friendly - no downtime

Loosen four screws - replace sensor unit. A complete function test is carried out at the push of a button. This means that the measurement can be continued almost without interruption.



	TECHNICAL DATA OIL CHECK 500
Measured medium:	Compressed air, nitrogen, (free from aggressive, corrosive, acid, toxic, flammable and oxidising components). Further gases on request
Measuring unit:	Residual oil content in mg oil/norm m ³ referred to 14.5 psi [abs], +68 F, 0% relative humidity, in accordance with ISO 8573-1
Identifiable substances:	Hydrocarbons, functional hydrocarbons, aromatic hydrocarbons
Field of application:	After activated carbon filter, after activated carbon adsorber, after oil-free compressor, always with connected upstream filtration and dryer
Ambient temperature:	+68 F +113 F, rel. humidity <= 75% without con-densation
Compressed air temperature:	+68 F +122 F
Operational overpressure:	43.5 130.5 psi, optional pressure reducer connected upstream for up to 4350 psi
Humidity of measured gas:	<= 40% rel. humidity, pressure dew point max. +50 F, non-condensable humidity
Compressed air connection:	G 1/4" female thread according to ISO 228-1
Measured values:	mg/norm m³, pressure and temperature compensated residual oil vapour content
Measuring range:	0,0015 mg/m³ (higher measuring ranges on request)
Detection limit (residual oil):	0,001 mg/m ³
Flow of measuring gas:	approx. 0.042 CFM, referred to to 14.5 psi [abs] and +68 F, (atmospheric conditions)
Plug-in power supply	100240 VAC / 1 Ph. / PE / 5060 Hz / ± 10%



	TECHNICAL DATA OIL CHECK 500
Outputs	Digital output: RS 485 interface (Modbus RTU), Ethernet via DS 400 / 500 Analog output: 420 mA (electrically isolated) Optional: 2x 420 mA analog output (electrically isolated), 2 alarm relays for external alarm unit, alarm values freely adjustable
Operating hours counter:	integrated
Dimensions (mm):	7.87 x 5.12 x 4.72 inches (W x H x D)
Weight:	approx. 15.4 lbs

Measure compressed air quality according to ISO 8573 Residual oil - particles - residual moisture

Residual oil content measurement - OIL CHECK 500

For permanent and highly precise measurement of the vaporous oil content from 0.001 mg/m³ to 5 mg/m³. Due to the low detection limit of 0.001 mg/m³, the compressed air quality class 1 (ISO 8573) can be monitored.

Particle counter PC 400

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

Moisture - dew point sensor FA 510

FA 510 measures the pressure dew point down to -112 Ftd. Also in this case the continuous measurement takes care that alert is triggered immediately if the compressed air dryer breaks down.



DS 500 - the intelligent chart recorder of the next generation

The centerpiece of compressed air quality measurement is the chart recorder DS 500. It measures and documents the measured data of the sensors for residual oil content, particles and moisture. The measured values are indicated on a 7" color screen. The curve progressions from the beginning of the measurement can be viewed by an easy slide of the finger. The integrated data logger stores the measured values safely and reliably.

The threshold value can be freely entered for each measured parameter. 4 alarm relays are available for automatic alarm in case of threshold value exceedance.

Optionally DS 500 can be upgraded with up to 12 sensor inputs. For connection to a PLC DS 500 has an Ethernet interface as well as a RS 485 interface.

The communication is done via the Modbus protocol.



		Solid particles	;	Humidity	Oil
ISO 8573-1:2010 Class	Maximum n	umber of part	icles per m³	Pressure dew point °F (C°)	Total share of oil (liquid aerosol and vapor)
	0.1 - 0.5 µm	0.5 - 1 µm	1 - 5 µm		mg/ m³
0	In accordance	e with specifica	ation by the de	vice user, stricter requirements th	nan class 1
1	≤ 20,000	≤ 400	≤ 10	≤ -94°F (-70°)	0.01
2	≤ 400,000	≤ 6,000	≤ 100	≤ -40°F (-40°)	0.10
3		≤ 90,000	≤ 1,000	≤ -4°F (-20°)	1.00
4			≤ 10,000	≤ +37.4°F (3°)	5.00
5			≤ 100,000	≤ +44.6°F (7°)	
6				≤ +50°F (19°)	
7					
8					
9					
Х					

Stationary solution

DESCRIPTION	ORDER NO.
DS 500 – intelligent chart recorder in basic version (4 sensor inputs)	0500 5000
CS Basic - data evaluation in graphic and table form - readout of the measured data via USB or Ethernet. License for 2 working places	0554 8040
Residual oil measurement: OIL CHECK 500 – residual oil measurement of the vaporous oil content from 0,0015 mg/m ³ , 43.5 130.5 psi. High-precision PID-Sensor, innovative "Forced Pressure Variation" measuring method, with integrated display, with 420 mA analog output and digital Modbus RTU interface, incl. calibration certificate	0699 0080
Options: Integrated heating element for the stationary Oil Check 500. Keeps the gas temperature constantly above 68 F. Recommended for installations where the room temperature may fall below 68 F.	Z699 0078
2x 420 mA analog output (electrically isolated)	Z699 0178
Sampling system OIL CHECK 500: Sampling system consisting of ½" ball valve (oil- and grease-free), 3.28 ft stainless steel tube 6x1 mm (oil- and grease-free), clamp screwing (oil- and grease-free)	Z699 0175
Alternative : Portable sampling system consisting of 6.56 ft PTFE hose, quick coupling (oil- and grease-free)	Z699 0174
Options for systems > 130.5 psi : Pressure reducer (oil- and grease-free), input pressure max. 4350 psi, output pressure up to 130.5 psi	Z699 0076
Connection cable for probes 16 ft with open ends	0553 0104
PC 400 particle counter up to 0.1 µm for compressed air and gases, incl. pressure reducer/sampling hose, calibration certificate, Modbus-RTU interface	0699 0040
Connection cable for probes, 16 ft with open ends	0553 0104



DESCRIPTION	ORDER NO.
FA 510 dew point sensor for adsorption dryers -112 68 Ftd incl. factory certificate, 420 mA analog output (3-wire connec-tion) and Modbus-RTU interface	0699 0510
Standard measuring chamber up to 232 psi	0699 3390
Connection cable for VA/FA series, 16 ft with open ends	0553 0104

Mobile solution with DS 500, OIL CHECK 500, PC 400, FA 510

DESCRIPTION	ORDER NO.
DS 500 – intelligent chart recorder in basic version (4 sensor inputs)	0500 5000
CS Basic - data evaluation in graphic and table form - readout of the measured data via USB or Ethernet. License for 2 working places	0554 8040
Residual oil measurement: OIL CHECK 500 – residual oil measurement of the vaporous oil content from 0,0015 mg/m ³ , 43.5 130.5 psi. High-precision PID-Sensor, innovative "Forced Pressure Variation" measuring method, with integrated display, with 420 mA analog output and digital Modbus RTU interface, incl. calibration certificate	0699 0080
Mobile transport trolley including roles (outer dimensions: $26.77x$ 41.73x 16.14 inch) (W x H x D) with firmly mounted components of OIL Check 400, PC 400, FA 510	0554 6017
Options: Integrated heating element for the stationary Oil Check 500. Keeps the gas temperature constantly above 68 F. Recommended for installations where the room temperature may fall below 68 F.	Z699 0078
Mobile sampling system consisting of 6.56 ft PTFE hose, quick coupling (oil- and grease-free)	Z699 7774
Connection cable for probes, 16 ft with open ends	0553 0104
PC 400 particle counter up to 0.1 μm for compressed air and gases, incl. pressure reducer/ sampling hose, calibration certificate, Modbus-RTU interface	0699 0040
Connection cable for probes, 16 ft with open ends	0553 0104
FA 510 Dew point sensor, -112 +68 Ftd	0699 0510
Standard measuring chamber	0699 3390
Connection cable for VA/FA series, 16 ft with open ends	0553 0104



OIL CHECK 500 - Stationary solution

DESCRIPTION	ORDER NO.
Residual oil measurement:	0699 0080
OIL CHECK 500 – residual oil measurement of the vaporous oil content from 0,0015 mg/m ³ , 43.5 130.5 psi. High-precision PID-Sensor, innovative "Forced Pressure Variation" measuring method, with integrated display, with 420 mA analog output and digital Modbus RTU interface, incl. calibration certificate	
Options:	Z699 0078
Integrated heating element for the stationary Oil Check 500. Keeps the gas temperature constantly above +68 F. Recommended for installations where the room temperature may fall below +68 F	
2x 420 mA analog output (electrically isolated)	Z699 0178
External alarm unit, wired ready to plug in, for direct connection to the OIL CHECK 500 with 16 ft cable (buzzer and continuous red light)	Z699 0077
Sampling system OIL-Check 500:	Z699 0175
Sampling system consisting of $\frac{1}{2}$ " ball valve (oil- and grease-free), 3.28 ft stainless steel tube 6x1 mm (oil- and grease-free), clamp screwing (oil- and grease-free)	
Portable sampling system consisting of 6.56 ft PTFE hose, quick coupling (oil- and grease-free)	Z699 0174
For systems > 130.5 psi: Pressure reducer (oil- and grease- free), input pressure max. 4350 psi, output pressure up to 130.5 psi	Z699 0076
DS 500 – intelligent chart recorder in basic version (4 sensor inputs)	0500 5000
Connection cable for probes, 16 ft with open ends	0553 0104
CS Basic - data evaluation in graphic and table form - readout of the measured data via USB or Ethernet. License for 2 working places	0554 8040







OIL CHECK 500 - Portable solution

DESCRIPTION	ORDER NO.
OIL CHECK 500 portable - Residual oil measurement of the vaporous oil content from 0.0015 mg/m ³ , 43.5 130.5 psi. High-precision PID sensor, innovative "Forced Pressure Variation" measuring method, with integrated display, with 420 mA analog output and digital Modbus RTU interface, incl. calibration certificate, in a robust flight case. Connection cable ODU/ODU 16 ft	0699 0081
Portable sampling system consisting of 6.56 ft PTFE hose, quick coupling (oil- and grease-free)	Z699 0174
DS 500 mobile - intelligent chart recorder with 4 sensor inputs	0500 5012
CS Basic - data evaluation in graphic and table form - readout of the measured data via USB or Ethernet. License for 2 working places	0554 8040



Flight case

DESCRIPTION	ORDER NO.
Replacement OIL CHECK 500 for the period of re-calibration	0699 3930
Pre-calibrated sensor unit for the OIL CHECK 500, incl. certificate	0699 8080
Re-calibration OIL CHECK 500 incl. certificate	0699 3405
As-Found-Data OIL CHECK 500 with certificate	9999 3501

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