Be smart. **Measure it.**

S520

Portable Dew Point Meter

Opt. A	-100 ... +20 °C Td
Opt. B	-60 ... +50 °C Td

SMART DEVICE
Dew point prediction

TOUCH SCREEN
Intuitive user interface

PRESSURE SENSOR
Enables various humidity units

DATA LOGGER
Integrated mass storage

LOW DEW POINT
Measures down to -100 °C Td

CAMERA INTEGRATED
Pictures for better reports

PORTABLE UNIT
Handheld unit within a rugged case

DEW POINT AUDITS
Indication of class on display

Benefits

- Easy to use portable meter to measure dew point, temperature and pressure on site
- Sensor selection according to your needs (-100 ... +20 °C Td with pressure sensor / -60 ... +50 °C Td version)
- ISO 8573 class measurements with powerful ISO 8573-1 PDF reporting function
- Wireless printer for on-site reporting to easily perform audits
- Unique Measuring chamber with parking function supports fast response times
- Optional smart features: End value prediction, camera and measurement snapshot

1 Dew Point Value Prediction

The S520 offers a unique dew point end value prediction algorithm as a built-in technology.

Based on the dew point measurement curve our algorithm is able to predict the end value before actually reaching the end value.

This feature enables the user to predict the dew point end value in a minimum amount of time. It helps on-site engineers to save time and to perform faster dew point audits.

Smart Features

Dew point end value prediction is a part of the smart features. With the smart features option, users also get a 5 Megapixel camera and the snapshot function for quick measurement logging.

2 Measurement Snapshot

Take a quick measurement snapshot of the current measurement, add the customer information and easily create a printed report.

All can be done on the device via touchscreen input.

3 Measurement Chamber

The unique measuring chamber with integrated parking function enables users time efficient dew point measurements.

When the instrument is not used, the measuring chamber can be set to parking position. In this state, the sensor is exposed to a desiccant, which keeps the sensor well protected and dry.

When starting the next measurement, the sensor is pre-dried and has therefore an ultra-fast response time, perfect for air audits.

4 Unique SUTO Triple-Sensor

S520 is equipped with the SUTO QCM, the Polymer and an integrated Pressure sensor.

Our QCM sensor is the result of years of high-tech research and development. The sensor was especially designed for low dew point applications where other sensor types fail.

The combination of QCM and the well known Polymer sensor makes the S520 measure accurate over the whole range, from -100 °C Td up to +20 °C Td by switching automatically between the two sensor elements as needed. At the same time the line pressure is measured.

Application: Compressed Air Quality Monitoring On Site

The S520 Portable Dew Point Meter enables more accurate and frequent quality monitoring to operators. Throughout any given day, plant personnel can check the dew point throughout their system, using the S520's detailed metrics and portability to gather useful information from even the least accessible corners of their system.

With the S520, operators can make sure that their compressed air treatment system (air dryers, filters, and drains) is functioning at its absolute peak. If the S520 reveals heightened moisture levels at any point during the routine check, personnel can quickly locate and resolve the issue, reducing instances of clogged filters and dryer problems.

Optional Printer

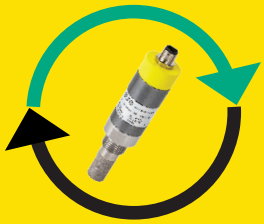
Wireless printer used to print the measurement results on site. Perfect solution for quick audits.

Exchange Service

No Downtime anymore!

The exchange calibration service eliminates down time and enables users to have a seamless record of their dew point measurements.

The user receives in advance a calibrated instrument with calibration certificate and the same instrument settings. The on-site instrument is then switched against the calibrated one and returned to the supplier.



SUTO | Exchange Service

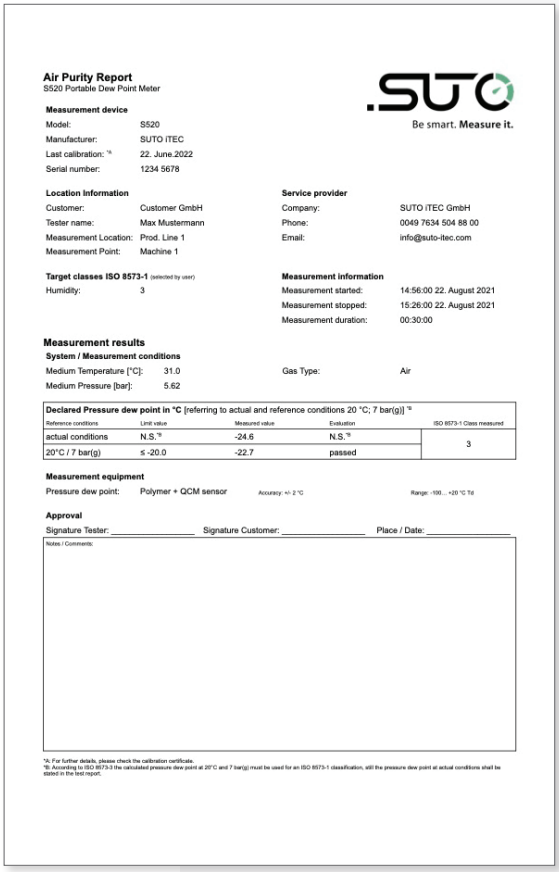
PDF Report Function according to ISO 8573-1

Create powerful PDF Reports on-site according to the ISO 8573-1 standard.

The reports are following the recommendations stated in the ISO 8573-1, additionally customer related data as well as service provider details can be entered on-screen, making it even easier to perform audits and to create meaningful reports.

PDF reports can be created from any recordings on the device and are copied on the fly to a connected USB drive.

The declared Pressure dew point in °C is stated as the measured dew point under actual conditions as well as referring to reference conditions at 20 °C/7 bar(g), as it is required by ISO 8573-1 standard. This is only possible, thanks to the integrated pressure sensor on the S520.



Air Purity Report
S520 Portable Dew Point Meter

SUTO Be smart. Measure it.

Measurement device

Model:	S520
Manufacturer:	SUTO iTEC
Last calibration: *A	22. June.2022
Serial number:	1234 5678

Location Information

Customer:	Customer GmbH
Tester name:	Max Mustermann
Measurement Location:	Prod. Line 1
Measurement Point:	Machine 1

Target classes ISO 8573-1 (selected by user)

Humidity:	3

Service provider

Company:	SUTO iTEC GmbH
Phone:	0049 7634 504 88 00
Email:	info@suto-itec.com

Measurement information

Measurement started:	14:56:00 22. August 2021
Measurement stopped:	15:26:00 22. August 2021
Measurement duration:	00:30:00

Measurement results

System / Measurement conditions

Medium Temperature [°C]:	31.0	Gas Type:	Air
Medium Pressure [bar]:	5.62		

Declared Pressure dew point in °C [referring to actual and reference conditions 20 °C; 7 bar(g)] *B

Reference conditions	Limit value	Measured value	Evaluation	ISO 8573-1 Class measured
actual conditions	N.S. *B	-24.6	N.S. *B	3
20°C / 7 bar(g)	≤ -20.0	-22.7	passed	

Measurement equipment

Pressure dew point: Polymer + QCM sensor Accuracy: +/- 2 °C Range: -100... +20 °C Td

Approval

Signature Tester: _____ Signature Customer: _____ Place / Date: _____

Notes / Comments:

*A: For further details, please check the calibration certificate.
*B: According to ISO 8573-3 the calculated pressure dew point at 20°C and 7 bar(g) must be used for an ISO 8573-1 classification, still the pressure dew point at actual conditions shall be stated in the test report.

Technical Data

Measurement

Dew point	
Accuracy	± 1 °C Td (0 ... 20 °C Td) ± 2 °C Td (-70 ... 0 / +20 … +50 °C Td) ± 3 °C Td (-100 ... -70 °C Td)
Selectable units	%rH, °C Td, g/m³, mg/m³, g/m³ atm. , mg/m³ atm. , ppmv, g/kg, °C Td atm.
Measuring range	Sensor A: -100 ... +20 °C Td Sensor B: -60 ... +50 °C Td
Repeatability	0.5 °C
Sensor	Sensor A: QCM + Polymer Sensor B: Polymer
Pressure	
Accuracy	0.5 % FS
Measuring range	0 ... 1.5 MPa (g)
Sensor	Piezo resistive sensor
Temperature	
Accuracy	± 0.3 °C
Measuring range	-30 ... +50 °C
Sensor	PT 100

Interface & Supply

Supply	
Power supply	USB charger: 5 V, 3 A Connector: USB-C
Operating time	8h
Data interface	
Connection	USB

* At least 0.3 MPa(g) is needed for the measuring chamber supplied with the instrument. For low-pressure measurements below 0.3 MPa (g) choose the optional bypass measuring chamber A699 3501.

General data

Display	
Integrated	3.5" color LCD touch screen
Data Logger	
Storage	Integrated mass storage, up to 30 million recorded data sets (4 channels each)
Material	
Housing	PC + ABS
Metal parts	Aluminium
Miscellaneous	
Protection class	IP30
Approvals	CE
Weight	2.8 kg Complete Set in Transport Case 0.8 kg S520 Handheld (incl. Sensor & Measuring Chamber)
Operating conditions	
Medium	Air, N_2, O_2, Argon, CO_2 **Note:** The CO_2 measurements with the A1371 sensor are limited to -40 °C Td.
Medium temperature	-30 ... +50 °C
Medium humidity	0 ... 90 %, no condensation
Operating pressure	-0.1 ... 1.6 MPa (g)*
Ambient temperature	0 ... +40 °C
Ambient humidity	0 ... 80 % rH
Storage temperature	-20 ... +50 °C
Transport temperature	-30 ... 70 °C

Ordering

Please use the following tables to assist in placing your order with our sales staff.

S520 Portable Dew Point Meter

Order No.	Description
P600 0520	S520 Handheld Dew Point Meter with data logger Including: • Measuring chamber with parking function • 1.5 m PTFE hose 6 mm with quick coupling, USB-OTG memory stick • USB charger with USB-C cable • Certificate of calibration • Transport casing
Measuring range (Sensor unit)	
A1370	-100 ... +20 °C Td Standard range sensor unit, with integrated pressure sensor -0.1 ... 1.5 MPa
A1371	-60 ... +50 °C Td Economic range sensor unit, without integrated pressure sensor
Wireless printer	
A1374	Without printer
A1372	With wireless printer for measurement printouts on site
Smart feature	
A1375	Without smart features
A1373	With smart features (Measurement snapshot, Dew point end value prediction, Camera)

S520 Accessories

Order No.	Description
A699 3501	By-pass measuring chamber with parking function, 0 ... 1.0 MPa, 6 mm hose quick connector as in- and outlet
A554 0021	Paper rolls for wireless printer

Ordering Example

Example	S520 Handheld Dew Point Mete with data logger, -100 ... +20 °C Td Sensor, Without printer, With smart features
Order Code	P600 0520.A1370.A1374.A1373

Scope of delivery

S520

Unique measuring/parking chamber for fast sensor response

The included transport case protects the instrument. At the same time it holds all accessories.

Memory stick

PTFE hose with quick connect

USB charger with USB-C cable