

## Dräger Pac® 8500 Single-Gas Detector

The Dräger Pac® 8500 single-gas detection device is a reliable and precise instrument even under the toughest of conditions. Measured data can easily be transmitted into the Dräger Gas Detection Connect system via Bluetooth®. The device can be equipped with a hydrogen-compensated CO sensor or a Dräger dual sensor. This gives you the option of measuring two gases at once: H<sub>2</sub>S with CO, H<sub>2</sub>S with O<sub>2</sub> or O<sub>2</sub> with CO.



## Benefits

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### Single-gas detector

- for personal air monitoring
  - Detection of two gases at once with a dual sensor for O<sub>2</sub> / CO, H<sub>2</sub>S / O<sub>2</sub> or H<sub>2</sub>S / CO
  - Use with a hydrogen-compensated CO sensor possible
  - non-disposable
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### Strong performance for maximum safety

You can count on the Dräger Pac® 8500 to give you reliable, precise readings at any time even under extreme conditions. Our powerful sensors with a low t-90 response time ensure quick reactions. In addition to the standard alarms, you can define extra alarm thresholds for TLV®/TWA\* and STEL\*.

The Pac 8500 also provides a data and event logger for logging concentrations and events along with the date and time. The data can be loaded on a PC via an interface and processed further there. With the new Gas Detection Connect system – and thus the integrated X-dock stations – you can view and download the logs from a central cloud-based asset management system. Available anytime from anywhere.

\*TLV®/TWA = Threshold Limit Values / Time Weighted Average, STEL = Short Term Exposure Limit

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### Convert to two-gas detection device using a dual sensor

Your single-gas detection device can become a two-gas device when a dual sensor is used. The Dräger Pac 8500 series offers the following sensor combinations: hydrogen sulphide with carbon monoxide or oxygen with carbon monoxide. Dual sensors enable detection of even low concentrations – and all in one and the same handy device. Measuring two gases at the same time reduces downtime as well. You can take vol.% measurements of oxygen and ppm measurements of carbon monoxide simultaneously using just one sensor.

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### Measurement of carbon monoxide with significantly reduced cross sensitivity

In industries where carbon monoxide needs to be measured with hydrogen as a background gas, the measured value for carbon monoxide may be falsified by cross sensitivity. Thanks to the special hydrogen-compensated CO sensor from Dräger, this cross sensitivity to hydrogen is significantly reduced in the display of carbon monoxide.

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### Robust design – even for the toughest conditions

The Pac 8500 can easily handle even extreme conditions. The sensors can tolerate air pressures between 700 and 1,300 mbar. A membrane filter protects the sensor from foreign matter such as dust and liquids. The shock-proof, chemical-resistant housing meets the requirements specified in the IP68 standard rating.

## Benefits

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### Easy handling thanks to clear user guidance

The D-Light indicates whether functionality of the device has been tested and if it is ready to use. The housing is also designed with your safety in mind: each sensor variant of the Dräger Pac 8500 features clearly visible colour coding, thereby minimising the chance of mistakes.

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### User-friendly display with all important information

The large display is word-free and clearly indicates the respective gas concentration. Other important information, such as the unit of concentration and battery capacity, is also displayed. The bright backlighting ensures that all values are clearly legible in the dark.

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### 360° alarm with various functions

If the Dräger Pac 8500 measures hazardous gas concentrations, it sets off an audible, visual and perceptible vibrating alarm. Two bright, flashing LEDs on the top and bottom of the device ensure that the alarm is easily visible from all sides. The acoustic signal reaches a volume of 90 dB. The display can show the peak concentration measured at any given moment. Earlier alarms registered can also be retrieved at a later time even if they have been acknowledged.

The Pac 8500 with oxygen sensor has two additional alarm thresholds in addition to the standard alarm threshold settings.

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### Data logger and event logger for analyses and reports

The Dräger Pac 6500 logs concentrations and events along with date and time. The data can easily be transferred to a computer for further processing. With the new Gas Detection Connect system – and thus the integrated X-dock stations – you can view and download the logs from a central cloud-based asset management system. Available anytime from anywhere.

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### Bluetooth® communication

With the new Bluetooth® enabled Pac you can wirelessly transmit live measurement values into the Dräger Gas Detection Connect system. You can easily track the location of the worker and their Pac by connecting the device to the Gas Detection Connect gateway app. Dräger Pac devices can be integrated into third party applications via OpenGATT protocol.

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### Economical operating costs

All of the versions of the Dräger Pac 8500 are equipped with extremely durable DrägerSensors® and a powerful battery. The Pac 8500 is protected against water, dust and other foreign bodies by a special membrane filter. When the filter becomes heavily soiled in use, you can quickly and easily replace it yourself. The device is then

## Benefits

ready to use again right away. Thanks to the powerful battery, the Pac does not require charging on a daily basis and is easy to handle.

### Fast function test saves time and money

Function tests and calibrations can be carried out especially efficient in the Dräger X-dock® calibration station. The automatic bump tests in the X-dock are a cost-efficient and convenient solution thanks to the short test duration and the extremely low consumption of test gas. The Pac 8500 is simply placed in the bump test station and automatically selects the correct setting.

## Dräger Pac® product range at a glance

	 Dräger Pac® 6000	 Dräger Pac® 6500	 Dräger Pac® 8000	 Dräger Pac® 8500
Limited operating time (2 years) <sup>1</sup>	•			
Unlimited operating time		•	•	•
Service life indicator	•	(•) <sup>2</sup>	(•) <sup>2</sup>	(•) <sup>2</sup>
Temperature to -40°C	• <sup>3</sup>	• <sup>3</sup>	• <sup>3</sup>	• <sup>3</sup>
Battery capacity indicator	•	•	•	•
Replaceable sensor grid	•	•	•	•
Peak	•	•	• <sup>4</sup>	•
TLV®/TWA <sup>5</sup>		•	•	•
STEL <sup>6</sup>		•	•	•
Event logger	•	•	•	•
Data logger	•	•	•	•
Bluetooth® / Open GATT option		•	•	•
Standard gases	•	•		
Special gases			•	
Dual sensor				•

<sup>1</sup>Lifetime extension available   <sup>2</sup>Configurable   <sup>3</sup>Briefly down to -40 °C for 1 hr, depending on sensor   <sup>4</sup>Does not apply to ozone or phosgene  
<sup>5</sup>TLV® = Threshold Limit Values / TWA = Time Weighted Average   <sup>6</sup>STEL = Short Term Exposure Limit

## System Components



D-12191-2010

### DrägerSensor XXS

Dräger has developed miniature electrochemical sensors specially for the Dräger Pac®, X-am® 1/2/5 and X-am® 8000 generation. The sensors detect many different gases and vapours. They are also very reliable and stable over the long-term, thereby reducing your operating costs.



D-47907-2012

### Dräger X-dock® 5300/6300/6600

The Dräger X-dock® series provides you with full control of your portable Dräger gas detection instruments. Automatic bump tests and calibrations with reduced test gas consumption and short testing times save time and money. Comprehensive documentation and evaluations provide you with a clear overview.



ST-740-2006

### Dräger Bump Test Station

Easy to use, stand-alone and portable. With the Bump Test Station, functionality tests of gas detection and warning devices can be carried out easily and quickly.

## Accessories



D-30746-2015

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### Dräger Configuration and Evaluation Software

Save measurement results, professionally configure gas detection instruments and viewing performance data – all that is possible with the tailor-made Dräger software.



D-0494-2018

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### Calibration gas and accessories

Calibration of equipment will ensure safe operation and functionality of equipment and will also meet with the applicable regulations and codes of practice. Various calibration options are easily available.



ST-5018-2005

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### Communication module

The communication module (including USB cable) is used to connect the equipment to the configuration and evaluation software. The module is also used for the manual bump test or manual calibration. The test gas is introduced to the Pac device through the gas inlet or outlet.

## Services



D-2330-2016

### Rental Service

From bridging a temporary shortage of equipment to procuring special equipment for applications involving specific requirements: If you only need to cover a temporary higher demand, then Dräger Rental Service with over 65,000 pieces of rental equipment is an economical alternative to purchasing. Fast, straightforward and with a wide range of additional services available upon request.



D-2334-2016

### Finance Service

Quality for every budget: State-of-the-art instruments and equipment are a key competitive factor. We help you implement investments in a financially effective manner: with attractive procurement options that increase your financial leeway, relieve the pressure on budgets and give you greater flexibility. Dräger Finance Service offers various options for different requirements. Whether rent-to-buy or leasing – we will work with you to find the right solution.



D-2329-2016

### Shutdown Safety Service

In need of a comprehensive safety solution? Is there a long list of legal requirements you have to meet, and are you pressed for time? Balancing maximum efficiency with optimal security can pose major challenges. We can help you achieve that balance. Our Shutdown Safety Service is a solution that takes into account all the necessities of downtime and especially your individual requirements.



D-2332-2016

### On-site Safety Service

Whether through a rental shop, personnel services or comprehensive safety management, our On-Site Safety Services provide support in all projects where there are particular safety risks – not to mention normal day-to-day business.

## Related Products



D-4877-2017

### Dräger Pac® 6000

The disposable personal single-gas detection device, Dräger Pac® 6000, measures CO, H<sub>2</sub>S, SO<sub>2</sub> or O<sub>2</sub> reliably and precisely, even in the toughest conditions. The robust design, quick sensor response times, and a powerful battery ensure maximum safety for up to two years with virtually no maintenance required.



D-46500-2021

### Dräger Pac® 6500

The robust Dräger Pac® 6500 is your reliable companion under tough conditions. The personal single-gas detection device measures CO, H<sub>2</sub>S, SO<sub>2</sub> or O<sub>2</sub> quickly and precisely. Measured data can easily be transmitted into the Dräger Gas Detection Connect system via Bluetooth®. Quick sensor response times and a powerful battery also ensure safety.



D-46502-2021

### Dräger Pac® 8000

With the robust Dräger Pac® 8000, you'll be well equipped for tough conditions: this non-disposable, personal single-gas detection device is a reliable and precise instrument, which detects hazardous concentrations of 29 different gases, including special gases like NO<sub>2</sub>, O<sub>3</sub> or COCl<sub>2</sub>. Measured data can easily be transmitted into the Dräger Gas Detection Connect system via Bluetooth®.

## Technical Data

### Dräger Pac® 8500

Dimensions (without clip) W x H x D	64 x 84 x 20 mm	
Weight	Ca. 106 g (113 g mit Clip)	
Battery service life	2 years (dual sensors without O <sub>2</sub> : 12 months, with O <sub>2</sub> : 10 months)	
Degree of protection	IP68	
Air pressure	700 to 1,300 hPa	
Air humidity	10 to 90 % relative humidity, non-condensing	
Temperature	-30 °C to +55 °C (briefly down to -40 °C for 1 hr, depending on sensor)	
Approvals	ATEX	I M1 Ex ia I Ma II 1G Ex ia IIC T4 Ga
	IECEX	Ex ia I Ma Ex ia IIC T4 Ga
	CSA (Canada & USA)	Class I, Zone 0, AEx ia IIC T4 Ga Class II, Division 1, Groups E, F, G
	EAC	PO Ex ia I Ma X 0Ex ia IIC T4 Ga X

## Ordering Information

### Dräger Pac® 8500

Description	Measuring range	Alarm thresholds	Order number
		A1/A2	
Dräger Pac® 8500 H <sub>2</sub> S/CO	0 – 100 ppm H <sub>2</sub> S 0 – 2,000 ppm CO	5 / 10 ppm H <sub>2</sub> S 30 / 60 ppm CO	83 26 365
Dräger Pac® 8500 O <sub>2</sub> /CO	0 – 25 Vol.-% O <sub>2</sub> 0 – 2,000 ppm CO	19 / 23 Vol.-% O <sub>2</sub> 30 / 60 ppm CO	83 26 366
Dräger Pac® 8500 CO-H <sub>2</sub> CP	0 – 2,000 ppm	30 / 60 ppm	83 26 367
Dräger Pac® 8500 H <sub>2</sub> S/O <sub>2</sub>	0 – 100 ppm H <sub>2</sub> S 0 – 25 Vol.-% O <sub>2</sub>	5 / 10 ppm H <sub>2</sub> S 19 / 23 Vol.-% O <sub>2</sub>	37 02 251
Dräger Pac® 8500 CO/HCN	0 – 2000 ppm CO 0 – 50 ppm HCN	30 / 60 ppm CO 1.9 / 3.8 ppm HCN	37 02 252
Dräger Pac® 8500	See above	As per customer request	83 26 343
Bluetooth® communication protocol (GATT licence) for subsequent activation			
Dräger Pac® Open GATT licence (1 pc.)		37 21 647	
Dräger Pac® Open GATT licence (10 pc.)		37 21 648	
Dräger Pac® Open GATT licence (50 pc.)		37 21 649	
<b>Calibration accessories</b>			
Calibration adapter		83 18 588	
Dräger X-dock® 5300 Pac		83 21 881	
Dräger Bump Test Station for Dräger Pac®, without gas cylinder		83 17 410	
Dräger Bump Test Station for Dräger Pac®, including one test gas cylinder (selectable gas and concentration)		83 18 586	

## Ordering Information

### Communication accessories

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Dräger CC-Vision Basic, available free of charge at [www.draeger.com](http://www.draeger.com)

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Communication module, including USB cable	83 18 587
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## Ordering Information

**Spare parts**

Battery	83 26 856
Sensor grid (silver)	83 26 852
Crocodile clip set	83 19 186

TLV® is a registered trademark of ACGIH®.

## Notes

Not all products, features, or services are for sale in all countries.  
Mentioned Trademarks are only registered in certain countries and not necessarily in the country in which this material is released. Go to [www.draeger.com/trademarks](http://www.draeger.com/trademarks) to find the current status.

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