

**Ribble Enviro**  
*...everything gas detection*

# Data Sheet

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## Dräger Pac<sup>®</sup> 8000 Single-Gas Detector

With the robust Dräger Pac<sup>®</sup> 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<sup>®</sup>.



## Benefits

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### Single-gas detector

- for personal air monitoring
  - detection of 29 different gases - including special gases such as nitrogen dioxide, ozone or phosgene
  - non-disposable
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### Strong performance for maximum safety

You can count on the Dräger Pac 8000 to give you reliable, precise readings at any time even in 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\*.

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

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### Sensors for special gases

The Pac 8000 can be fitted with sensors for carbon dioxide (CO<sub>2</sub>), chlorine gas (Cl<sub>2</sub>), hydrogen cyanide (HCN), ammonia (NH<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), phosphine (PH<sub>3</sub>) and organic vapours (OV or OV-A).

The Dräger Pac 8000 performs especially well when detecting different special gases: it can detect ozone (O<sub>3</sub>) from concentrations as low as 0.02 ppm and phosgene (COCL<sub>2</sub>) from 0.01 ppm. The Pac 8000 detects nitrogen dioxide (NO<sub>2</sub>) from concentrations as low as 0.04 ppm.

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### Robust design – even for the toughest conditions

The Pac 8000 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.

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### Easy handling thanks to clear user guidance

The D-Light indicates whether functionality of the device has been tested and that it is ready to use. The housing is also designed with your safety in mind: each sensor variant of the Dräger Pac 8000 features clear, well visible colour coding, thereby minimising the chance of mistakes.

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### User-friendly display with all important information

The large display is non-verbal 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 can be clearly read off in the dark.

## Benefits

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### **360° alarm with various functions**

If the Dräger Pac 8000 measures hazardous gas concentrations, it sets off an audible, visual and noticeable 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 acknowledged.

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

The Pac 8000 logs concentrations and events along with date and time. The data can be downloaded to 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.

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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 operational costs**

All of the versions of the Dräger Pac 8000 are equipped with extremely durable Dräger sensors® and a powerful battery.

The Pac 8000 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 ready to use again in no time.

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### **Fast function test saves time and money**

Function tests and calibrations can be carried out especially efficiently in the Dräger X-dock® calibration station. The automatic bump tests in the X-dock are a cost-efficient and convenient solution thanks to short test duration and the extremely low test gas consumption. The Pac 8000 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.

## System Components



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

### 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.

## Accessories



D-0494-2018

### 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

### 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 DrägerRental 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.

## Services

D-2334-2016

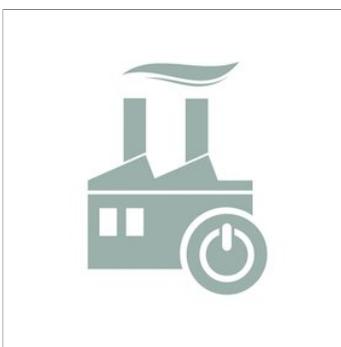


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### Finance Service

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

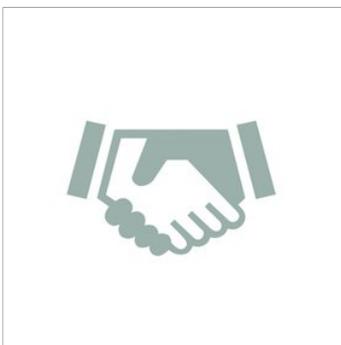


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### Shutdown Safety Service

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



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### 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-48500-2021

### 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-48510-2021

### Dräger Pac® 8500

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.

## Technical Data

### Dräger Pac® 8000

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	
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® 8000

Description	Measuring range	Alarm thresholds A1 / A2	Order number
Dräger Pac® 8000 NO	0 – 200 ppm	25 / 50 ppm	83 26 350
Dräger Pac® 8000 CO <sub>2</sub>	0 – 5 Vol. %	0.5 / 1 Vol. %	83 26 351
Dräger Pac® 8000 Cl <sub>2</sub>	0 – 20 ppm	0.5 / 1 ppm	83 26 352
Dräger Pac® 8000 HCN	0 – 50 ppm	1.9 / 3.8 ppm	83 26 353
Dräger Pac® 8000 NH <sub>3</sub>	0 – 300 ppm	20 / 40 ppm	83 26 354
Dräger Pac® 8000 PH <sub>3</sub>	0 – 20 ppm	0.1 / 0.2 ppm	83 26 355
Dräger Pac® 8000 OV	0 – 200 ppm	10 / 20 ppm	83 26 356
Dräger Pac® 8000 OV-A	0 – 200 ppm	10 / 20 ppm	83 26 357
Dräger Pac® 8000 NO <sub>2</sub>	0 – 50 ppm	5 / 10 ppm	83 26 358
Dräger Pac® 8000 Ozone	0 – 10 ppm	0.1 / 0.2 ppm	83 26 359
Dräger Pac® 8000 Phosgene	0 – 10 ppm	0.1 / 0.2 ppm	83 26 360
Dräger Pac® 8000	See above	As per customer request	83 26 342
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®,		83 18 586	

## Ordering Information

including one test gas cylinder (gas and concentration selectable)

### Communication accessories

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

Communication module, including USB cable	83 18 587
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### Replacement parts

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