

## Dräger CPS 7900 Chemical Protective Suit

Tailor-made for use under extreme conditions: The gas-tight Dräger CPS 7900 provides excellent protection against industrial chemicals, biological agents, and other toxic substances. Its innovative material qualifies the CPS 7900 equally well for work in explosive areas and for handling cryogenic substances.



### PROTECTION IN A CLASS OF ITS OWN

The Dräger CPS 7900 was developed to protect its wearer when handling toxic or hazardous materials and to provide much needed support for a variety of dangerous tasks. The suit material D-mex offers unique resistance to various substances as well excellent protection against mechanical effects, liquefied gases, and flash fires. The Dräger CPS 7900 meets and exceeds the requirements of international standards of fire departments, search and rescue organizations, and industry for reusable protection suits. Among these are the EN 943 part 2 (ET) and the SOLAS convention. Furthermore, the suit was designed and developed in close cooperation with corresponding personnel and officers-in-charge the world over and fitted to their needs and requirements. Its properties and accessory options offer the highest degree of safety and a level of wearing comfort that is in a class of its own.

### D-MEX: 5-FOLD SAFETY

The suit's innovative and unique material called D-mex™ consists of five layers. A tear-proof textile makes up the middle layer. An especially sturdy elastomer layer as

well as a barrier layer resistant to chemicals is on the inside as well as the outside. This allows the suit to retain its full protective capacity even when the material on the outside becomes damaged. Its electrostatic properties makes it possible to use the suit in all explosive areas. If a spark occurs in spite of this remarkable fabric, the flame-retardant and self-extinguishing material protects its wearer from serious burns. The flexibility of D-mex™ even makes it possible to handle liquefied gases such as ammonia at a contact temperature of -80°C.

### OUTSTANDING WEARING COMFORT

The CPS 7900 reduces the stress during the already difficult work in hazard zones and danger areas. With its new, ergonomic cut and five available sizes, the suit offers its wearers with a body height of 1.50 m to 2.10 m the highest degree of mobility during a wide variety of activities and tasks. The suit is designed to be used in conjunction with other Dräger protective gear such as the current Dräger PSS 7000 or HPS 6200 as well as older products. (Working with the BG-4 CCBA is not a problem either) Moreover, the clearly lighter weight and better drape of the suit



D-4809-2010

Dräger CPS 7900, orange



D-4596-2010

Dräger CPS 7900, blue



material adjusts to the wearer's movements and offers the full range of flexibility.

#### READY AT ANY TIME

Innovative materials and new service concepts made it possible to significantly reduce time and expenses for regular testing and expenses) In addition, (the suit can be easily cleaned and disinfected. This means the time and expense spent over the 15 years of service life of the suit is much less. The service technician is able to carry out any repairs or maintenance required. Of course, Dräger Service also gladly assumes these tasks.

#### SMART DETAILS FROM HEAD TO TOE

The CPS 7900 is characterized by functional details. The newly designed visor combined with the FPS 7000 offers an almost natural field of vision.

Two different glove combinations can be fastened to the suit quickly and without using tools.

- Previous EN combination: Viton gloves optionally with Tricotril or K-mex overgloves.
- New EN combination: More sensitivity due to thin Silvershield gloves highly resistant to chemicals and permanently attached cut and prick resistant gloves.

The changeable boot connection and the comfortable safety boots are barely felt by the wearer. As an alternative, it is also possible

to attach to the suit gas-tight socks made from D-mex to ensure everybody steps safely into any situation. With these socks the wearer does not have to use one-size-fits-all.

Boots in different sizes are then worn over these socks. An integrated mobile device pocket and a holder for push-to-talk buttons facilitate communication.

#### READY FOR THE EXTRAORDINARY

Accessories are available to customize the CPS 7900 to meet your specific needs and requirements, thereby expanding your range of application options.

- The pressure gauge holder on the visor makes it possible for the wearer to keep an eye on his or her air pressure without having to pull the arm out of its sleeve, losing valuable time on the job. Additionally, the pressure can be determined from the outside in case of emergency. (Currently not available for the US Market)
- The anti-fog visor prevents the visor from fogging up without prior treatments and saves time when getting a team ready for a run.
- Not all first responders or search and rescue personnel have the same height. The height adjustment is used to fit the suit to various body heights. This is simply snapped into the hip belt of the breathing apparatus.



Previous EN combination



New EN combination



- The D-connect is used to fasten measuring instruments, flashlights, various tools, or guide lines to the left or right hip to have both hands free for other tasks. The suit can also be equipped with two D-connects. These two fixed anchoring points can then also be used as grips for crash rescues.

#### NEVER AGAIN GASPING FOR A BREATH

Breathing air is a scarce commodity when it comes to runs involving toxic materials or hazardous atmospheres. The route to the deployment location and the decontamination location must be bridged. The actual tasks must be completed. This is followed by a careful decontamination so that suits can be removed. The amount of air available in a compressed air breathing apparatus often is insufficient to cover both activities. The air-connect and the regulation valve PT 120 L are designed for just such cases.

The air-connect is used to connect the suit from the outside with an external source of breathing air such as the Dräger RPS 3500 or Dräger PAS AirPack. Inside of the suit, the compressed air breathing apparatus is then connected to the air-connect via an automatic switchover valve or Y-adaptor. Once the external source of air is connected and the pressure is sufficient, the breathing air is then supplied from this source. If the connection is severed or

malfunctioning, breathing air is supplied from the compressed air breathing apparatus.

The control valve PT 120L offers the additional option of cooling the suit and reducing the humidity inside of the suit. An airflow of 0, 5, 30, or 120 l/min provides cool compressed air to the leg, arm, and chest area of the suit. Warm, humid air is extracted and vented to the outside with the valves of the suit. The airflow also makes it possible for body perspiration to evaporate, which cools the body naturally.

This makes activities carried out in especially warm temperatures, e.g. traffic accidents on the interstate in the middle of summer, significantly less stressful for the cardiovascular system of the wearer. In addition, the system can also be used to have a fully equipped rescue team on stand-by without losing breathing air and with minimized thermal stresses.



Dräger CPS 7900, blue with Dräger PAS AirPack I



Connection of the air line with the SCBA inside of the suit



D-4645-2010

Pressure gauge holder to mount manometer or bodyguard within wearer's field of vision.



D-4714-2010

The height adjustment is used to fit the suit to various body heights.



D-5097-2010



D-4646-2010

With the Dräger glove attachment, gloves can be exchanged easily and without tools.



D-4910-2010

The D-Connect can be used for rescue operations and to attach measuring instruments, tools, etc.



D-4651-2010

Integrated safety boots facilitate putting the suit on.



D-4995-2010

Gas-tight socks offer flexibility when selecting boots.



D-4802-2010

The RV PT 120 L is a connection to an external source of breathing air and features controllable suit cooling.



D-4663-2010

The air-connect is a connection to an external source of breathing air.

## APPROVALS

EN 943-1:2002	EU requirements for gas-tight protective suits for industrial applications
EN 943-2:2002 (ET)	EU requirements for gas-tight protective suits for use by firefighters
BS 8467	British requirements for CBRN protective suits
EN 1073-2	Protection against contamination from radioactive particles
EN 14126	Protection against contamination from infectious agents
SOLAS (pending)	Requirements for maritime use
EX-PROTECTION	Suitable for operations in all explosive areas

## CHEMICAL TESTS

Chemical	Breakdown time in min*	Chemical	Breakdown time in min*	Chemical	Breakdown time in min*
Acetone	>540	Ethyl acetate	>540	Sarin (GB)**	>1440
Acetonitrile	>540	Ethylene oxide	>540	Sodium hydroxide 40%	>540
Ammonia	>540	Hydrogen chloride	>540	Soman (GD)**	>1440
1,3-Butadiene	>540	Lewisite (L)**	>180	Sulfuric acid 96%	>240
Carbon disulfide	>540	Methanol	>540	Tetrachlorethylene	>540
Chlorine	>540	Methyl chloride	>540	Tetrahydrofuran	>540
Dichloromethane	>540	Mustard gas (HD)**	>1440	Toluene	>540
Diethylamine	>540	n-Heptane	>540	VX**	>1440

A continuously updated database is available to stay informed about chemical resistances and decontamination processes.

\* breakthrough time according to EN 943 Part 2.

\*\* breath through time according to FINABEL 0.7.C

## MECHANICAL TESTS

Test acc. to EN 943:	Class***
Abrasion resistance	6
Flex cracking resistance	6
Flex cracking resistance at -30°C	6
Resistance to tear propagation	3
Bursting resistance	6
Piercing resistance	3

\*\*\* classes acc. to EN 943 Part 2 – from 1 (lowest) to 6 (highest).

## ORDER INFORMATION

		Order No.
CPS 7900		R 29 500
Colors	Blue or orange	Basic components
Sizes	Size S for body heights of 1.50 m to 1.65 m Size M for body heights of 1.60 m to 1.75 m Size L for body heights of 1.70 m to 1.85 m Size XL for body heights of 1.80 m to 2.00 m Size XXL for body heights of 1.95 m to 2.10 m	Basic components
Zipper	Closes at top or bottom Cover flap with Velcro fastener or snaps	Basic components
Integrated boots or socks	Safety boots in size 43 to 50 (German sizing system) Gas-tight socks in 3 sizes from 40 to 50 (German sizing system)	Basic components
Gloves	Previous EN combination in size 9 to 11 New EN combination in size 10 to 11	Basic components
Gloves accessories	Cotton gloves Gas-tight arm sleeve/wristband Cut-resistant overgloves Tricotril or K-mex Gigant	Accessories
Clear view	Anti-fog visor	Accessories
External air supply	Regulation Valve PT 120 L Air-connect	Accessories
Fastening option	D-connect at right and/or left hip	Accessories
Easier pressure monitoring	Pressure gauge holder	Accessories
Individually adjustable	Height adjustment	Accessories
Storage and transport	Electronic warehouse management transponder Storage and transport bag Storage box	Accessories
Customized marking:	In different colors on back, chest, and sleeves	Accessories



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