

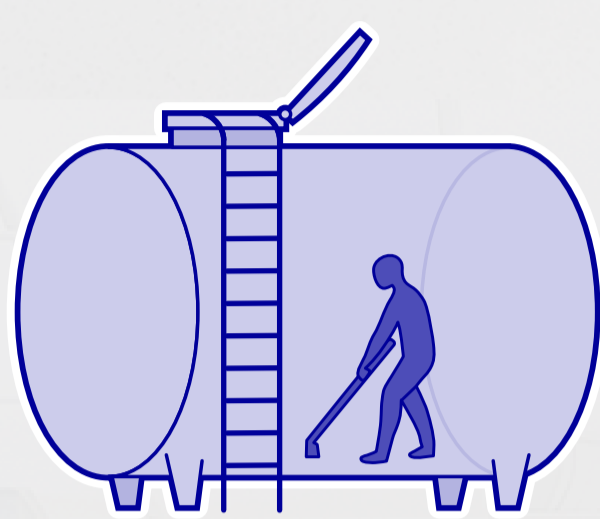
# WORKING SAFELY AND EFFICIENTLY

Choosing the occupational safety system of the future



## TASK: CONFINED SPACE ENTRY FOR MAINTENANCE AND INSPECTION

### Confined space With risk of oxygen deficiency



**Risk of oxygen deficiency**

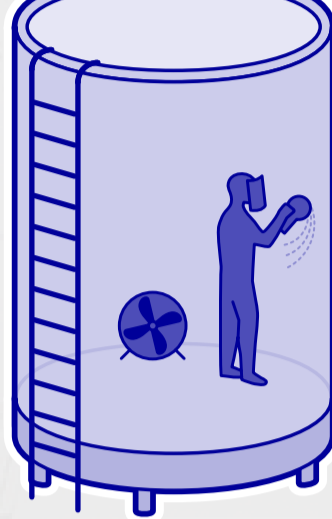


**Explosion hazard**  
(must be monitored)



**Self-contained breathing protection**

### Confined space With sufficient ventilation



**Explosion hazard**  
(must be monitored)



**Use breathing protection**

## APPLICATION CONDITIONS



**Workload**  
Low to average



**Duration and frequency**  
~ 1-2 h for maintenance; up to a whole shift for repairs



**Substance contamination**  
Toxic gases above permissible limits, possible particles or splashes



**Required personal protective equipment (PPE)**  
Head protection, breathing protection, body protection



**Contributing physical factors**  
Such as health status or head shape



**Environmental factors**  
e.g. temperature

### Challenges

- High time and cost pressure
- Decreasing limit values for many hazardous substances
- Physical fitness and resilience of the workforce
- Flexible use of workforce

### Requirements for PPE

- Reliable protection for high-risk work
- Reduce load for the equipment user
- Simplified device usability
- Use in potentially explosive atmospheres

## SUITABLE BREATHING PROTECTION

### If there is a risk of lack of oxygen: self-contained breathing protection

#### Greater protection

→ Increased safety

### With sufficient ventilation: air-dependent breathing protection

#### Lower strain

→ Fewer medical examinations required



#### Belt unit Dräger X-plore 9300/9500

- Safer with Safe Flow: constant reliable airflow without fluctuations

#### Dräger X-plore 9500 with Panorama Nova full face mask

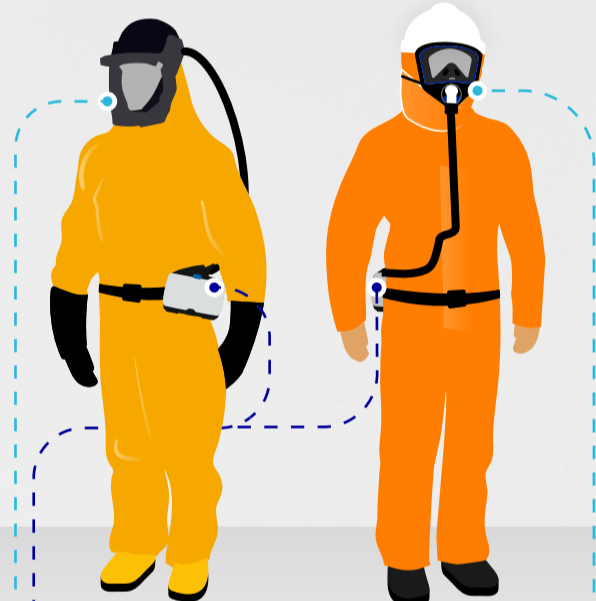
- High protection factor due to full face mask (Cl. 4A, NPF 2000)

#### Dräger X-plore 9300 with X-plore 8000 helmet

- Protection factor (Cl. 2A, NPF 50)
- High wearing comfort and acceptance due to low strain

#### Optional: MAV 1000/1200

- Mobile air supply offers air filtering and additional protection through reserves



#### PAPR Dräger X-plore 8700 EX + X-plore 8000 filter ABEK Hg P

- High mobility in working situations
- High system reliability even in potentially explosive atmospheres

#### Dräger X-plore 8700 with X-plore 8000 helmet

- Protection factor TH2 (NPF 50)
- High wearing comfort and acceptance due to low strain
- Less strain on employees, which means there is no limit on wearing time

#### Dräger X-plore 8700 with X-plore 6300 full face mask

- The highest possible protection factor by a blower unit with full face mask

## SUITABLE BODY PROTECTION

### Comfortable protection with the lowest possible strain

- Splash protection suit type 3
- Easy handling when putting on and sealing
- Comfortable protection with the lowest possible strain
- Use in potentially explosive atmospheres

### In combination with full face mask as breathing protection



#### Dräger SPC 4800

- Optimal sealing between full face mask and suit
- Very high chemical resistance (CLF material)
- Limited reusability (e.g. within a shift)

### In combination with a helmet as breathing protection



#### Dräger SPC 4400

- Easy to combine with helmet breathing protection
- Splash protection for single use: CPM material variant
- Limited reusability (e.g. during one shift) and very high chemical resistance: CLF material variant

## ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT



Safety helmet



Alternative: standard overall if no splash protection is required



Personal protective equipment against falls

These recommendations are a selection of product solutions and do not replace individual risk assessment and advice. Please note that when choosing respiratory protection, the hazardous substance concentrations must be known. When using air-dependent respiratory protection, the oxygen concentration must be monitored and the application limits of filters and head piece must be known and taken into account.

## NO COMPROMISE ON SAFETY

The right PPE system for every task and application.

Do you have any questions? Our specialists are happy to help. Contact us at [www.draeger.com](http://www.draeger.com)