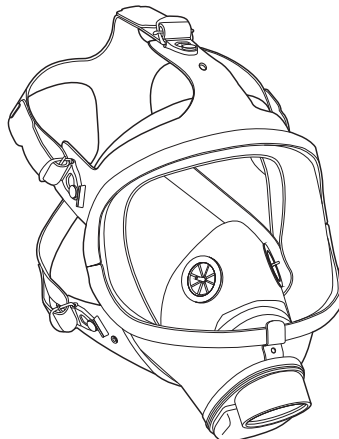


# Instructions for use CDR 4500

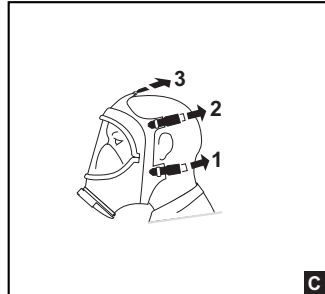
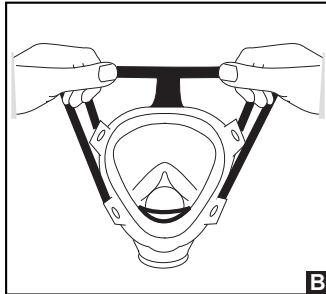
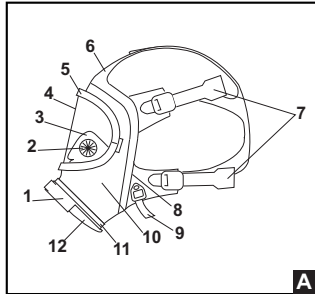
# Dräger



de, en, fr, ro, enUS

Dräger. Technology for Life®

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# 1 Sicherheitsbezogene Informationen


- Vor Gebrauch des Produkts diese Gebrauchsanweisung und die der zugehörigen Produkte aufmerksam lesen.
- Gebrauchsanweisung genau beachten. Der Anwender muss die Anweisungen vollständig verstehen und den Anweisungen genau Folge leisten. Das Produkt darf nur entsprechend dem Verwendungszweck verwendet werden.
- Gebrauchsanweisung nicht entsorgen. Aufbewahrung und ordnungsgemäße Verwendung durch den Anwender sicherstellen.
- Nur geschultes und fachkundiges Personal darf dieses Produkt verwenden.
- Lokale und nationale Richtlinien, die dieses Produkt betreffen, befolgen.
- Nur geschultes und fachkundiges Personal darf das Produkt überprüfen, reparieren und instand halten. Dräger empfiehlt, einen Service-Vertrag mit Dräger abzuschließen und alle Instandhaltungsarbeiten durch Dräger durchführen zu lassen.
- Für Instandhaltungsarbeiten nur Original-Dräger-Teile und -Zubehör verwenden. Sonst könnte die korrekte Funktion des Produkts beeinträchtigt werden.
- Fehlerhafte oder unvollständige Produkte nicht verwenden. Keine Änderungen am Produkt vornehmen.
- Dräger bei Fehlern oder Ausfällen vom Produkt oder von Produktteilen informieren.

## 2 Konventionen in diesem Dokument

### 2.1 Bedeutung der Warnhinweise

Die folgenden Warnhinweise werden in diesem Dokument verwendet, um den Anwender auf mögliche Gefahren hinzuweisen. Die Bedeutungen der Warnhinweise sind wie folgt definiert:

Warnzeichen	Signalwort	Klassifizierung des Warnhinweises
	WARNUNG	Hinweis auf eine potenzielle Gefahrensituation. Wenn diese nicht vermieden wird, können Tod oder schwere Verletzungen eintreten.

Warnzeichen	Signalwort	Klassifizierung des Warnhinweises
	VORSICHT	Hinweis auf eine potenzielle Gefahrensituation. Wenn diese nicht vermieden wird, können Verletzungen eintreten. Kann auch als Warnung vor unsachgemäßem Gebrauch verwendet werden.
	HINWEIS	Zusätzliche Informationen zum Einsatz des Produkts.

## 3 Beschreibung

### 3.1 Produktübersicht

Vollmaske (Ausklappseite Abbildung A)

1	Anschlussstück	2	Steuerventil
3	Innenmaske	4	Sichtscheibe
5	Spannrahmen	6	Stirnbandflasche
7	Bänderung	8	Dichtlinien
9	Trageband	10	Maskenkörper
11	Schelle	12	Ausatemventil-Schutzkappe

### 3.2 Funktionsbeschreibung

Die Vollmasken haben einen Rundgewindeanschluss gemäß EN148-1 für Atemfilter mit Rd40 x1/7-Gewinde. Die Vollmasken können bei Temperaturen von -30 °C bis +60 °C eingesetzt werden.

Für Brillenträger lässt sich eine Maskenbrille einsetzen.

### 3.3 Verwendungszweck

Die Atemanschlüsse schützen Gesicht und Augen vor aggressiven Medien.

### 3.4 Einschränkungen des Verwendungszwecks

#### ⚠ WARNUNG

Bärte und Koteletten im Dichtungsbereich der Vollmaske verursachen Leckagen. Entsprechende Personen sind für das Tragen der Vollmaske ungeeignet. Brillenbügel im Dichtungsbereich verursachen ebenfalls Leckagen.

- ▶ Maskenbrille verwenden.

### 3.5 Zulassungen

Die Vollmasken sind zugelassen nach:

- EN 136:1998 CL. 3
- NIOSH-Richtlinien
- AS/NZS 1716:2012
- (EU) 2016/425
- (EU) 2016/425 as brought into UK law and amended

Konformitätserklärung: siehe [www.draeger.com/product-certificates](http://www.draeger.com/product-certificates)

Die Vollmasken dürfen nur mit zugelassenen Atemfiltern verwendet werden.

### 3.6 Typidentische Kennzeichnung

Die Atemanschlüsse sind unterschiedlich gekennzeichnet:

Anschlussstück	RA
Maskenkörper	EPDM CDR 4500 EN 136:1998 CL.3 CExxxx (Notified Body in Europa)
Sichtscheibe	PC/C (Polycarbonat, beidseitig antikratzbeschichtet) F (Feuerwehr)
Kopfbänderung	EPDM
Spannrahmen	K/sw, S (klein), L (groß)

## 4 Gebrauch

### 4.1 Voraussetzungen für den Gebrauch

- Die Umgebungsverhältnisse (insbesondere Art und Konzentration der Schadstoffe) müssen bekannt sein. Entsprechende Atemfilter verwenden. Wenn der Schadstoff unbekannt ist, nur Pressluftatmer oder Druckluft-Schlauchgeräte verwenden.
- Die Filtergeräte nur verwenden, wenn die Luft keine unmittelbare Gefahr für Gesundheit oder Leben darstellt.
- Es muss gewährleistet sein, dass sich die umgebende Atmosphäre nicht ungünstig verändern kann.
- Filtergeräte bei Verdacht auf Schadstoffe mit geringen Warneigenschaften (geruchsarm, geschmacklos, keine Reizung der Augen und Atemwege) nicht einsetzen. Eine nachlassende Schutzwirkung des Filtergeräts kann in diesem Fall nicht festgestellt werden.
- Unbelüftete Behälter, Gruben, Kanäle usw. dürfen mit Filtergeräten nicht betreten werden.
- Die Filtergeräte nicht in mit Sauerstoff angereicherten Atmosphären verwenden.
- Der Sauerstoffgehalt der Umgebungsluft darf nicht unter folgende Grenzwerte sinken:
  - mindestens 17 Vol% Sauerstoff in allen europäischen Ländern außer den Niederlanden, Belgien und Großbritannien
  - mindestens 19 Vol% Sauerstoff in den Niederlanden, Belgien, Großbritannien, Australien und Neuseeland
  - In anderen Ländern nationale Richtlinien beachten.

### 4.2 Vorbereitungen für den Gebrauch

1. Wenn erforderlich die Maskenbrille einsetzen.
2. Die Bänderung bis zum Anschlag öffnen.
3. Falls vorhanden, das Trageband um den Nacken legen und in der Bereitstellungsposition befestigen.

### 4.3 Vollmaske anlegen

#### ⚠️ WARNUNG

Einsatz nur mit dichter Vollmaske antreten!  
Wenn die Vollmaske undicht ist, besteht Vergiftungsgefahr!

1. Die Vollmaske auf ordnungsgemäßen Zustand überprüfen.
2. Das Trageband aus der Bereitstellungsposition lösen.
3. Die Bänderung ausbreiten, das Kinn in die Kinntasche einlegen und die Bänderung über dem Kopf zentrieren (siehe Ausklappseite Abbildung B).
4. Beide Nackenbänder (1) und dann die Schläfenbänder (2) gleichmäßig zum Hinterkopf hin festziehen, so dass die Mitte der Bänderung in der Kopfmitte bleibt (siehe Ausklappseite Abbildung C).
5. Die Stirnbandlasche (3) nur festziehen, falls erforderlich.
6. Das Ausatemventil prüfen:  
Den Maskenanschluss dichthalten und kräftig ausatmen.  
Die ausgeatmete Luft muss ungehindert entweichen können, sonst die Ausatemventilscheibe austauschen.
7. Den Atemfilter anschließen.

### 4.4 Dichtsitz prüfen

1. Den Maskenanschluss dichthalten und einatmen, bis ein Unterdruck entsteht
2. Die Luft kurzzeitig anhalten. Der Unterdruck soll bestehen bleiben, sonst die Bänderung nachziehen.
3. Die Dichtprüfung zweimal wiederholen.

### 4.5 Während des Gebrauchs

#### 4.5.1 Tiefe Temperaturen

Sichtscheibe innen mit Klarsichtmittel „klar-pilot“ gegen Beschlagen schützen.

### 4.5.2 Hohe Temperaturen/Thermische Wechselbelastung

#### ⚠️ WARNUNG

##### Vergiftungsgefahr!

- ▶ Bei jeglicher Beschädigung, z. B. Bläschen in der Sichtscheibe, sofort den Gefahrenbereich verlassen.

### 4.6 Nach dem Gebrauch

#### ⚠️ WARNUNG

Vollmaske immer außerhalb von Gefahrenbereichen abnehmen!  
Sicherstellen, dass der Geräteträger durch die kontaminierte Maske nicht verletzt wird.  
Direkten Hautkontakt mit und Einatmen von gefährlichen Stoffen vermeiden.

#### ⚠️ VORSICHT

Vollmaske nicht am Anschlussstück greifen und vom Gesicht ziehen, da die Maske beschädigt werden kann.

1. Den Atemfilter lösen.
2. Den Atemfilter entsorgen.
3. Die Vollmaske abnehmen:  
Die Zeigefinger hinter die Laschen der Nackenbänder stecken und mit den Daumen die Klemmschnallen zum Lösen der Kopfbänderung nach vorn drücken.  
Vollmaske vom Gesicht weg nach oben über den Kopf ziehen.

### 4.7 Wartungsarbeiten und Wartungsintervalle

Für Informationen zu Wartungsarbeiten und Wartungsintervallen siehe Technisches Handbuch 9300782 auf [www.draeger.com/ifu](http://www.draeger.com/ifu).

## 5 Transport

Den Atemanschluss in einer Tragedose oder Maskentasche transportieren.

## 6 Lagerung

- Die Kopfbänderung bis zum Anschlag öffnen.
- Sicherstellen, dass der Atemanschluss trocken ist.
- Die Vollmaske in zugehöriger Maskentasche oder Tragedose verpacken.
- Die Vollmaske ohne Verformung trocken und staubfrei lagern.
- Vor direkter Sonnen- und Wärmestrahlung schützen.
- Lagertemperatur: -15 °C bis +25 °C
- ISO 2230 und nationale Richtlinien für Lagerung, Wartung und Reinigung von Gummierzeugnissen beachten.

Dräger Gummiwaren sind mit einem Mittel gegen vorzeitiges Altern geschützt, das in einigen Fällen als grauweißer Belag sichtbar wird. Dieser Belag kann mit Seifenwasser und Bürste abgewaschen werden.

## 7 Entsorgung

Produkt gemäß den geltenden Vorschriften entsorgen.



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## 1 Safety-related information

- Before using this product, carefully read these instructions for use and those of the associated products.
- Strictly follow the instructions for use. The user must fully understand and strictly observe the instructions. Use the product only for the purposes specified in the intended use section of this document.
- Do not dispose of the instructions for use. Ensure that they are stored and used appropriately by the user.
- Only trained and competent users are permitted to use this product.
- Comply with all local and national rules and regulations associated with this product.
- Only trained and competent personnel are permitted to inspect, repair and service the product. Dräger recommend a Dräger service contract for all maintenance activities and that all repairs are carried out by Dräger.
- Use only genuine Dräger spare parts and accessories. Otherwise, the proper functioning of the product may be impaired.
- Do not use a faulty or incomplete product. Do not modify the product.
- Notify Dräger in the event of any component fault or failure.

## 2 Conventions in this document

### 2.1 Meaning of the warning notices

The following warning notices are used in this document to alert the user to potential hazards. The meanings of the warning notices are defined as follows:

Warning sign	Signal word	Classification of the warning notice
	WARNING	Indicates a potentially hazardous situation. If not avoided, it could result in death or serious injury.
	CAUTION	Indicates a potentially hazardous situation. If not avoided, it could result in physical injury. It may also be used to alert against unsafe practices.
	NOTICE	Indicates additional information on how to use the product.

## 3 Description

### 3.1 Product overview

Full face mask (figure A on fold-out page)

1	Connector	2	Control valve
3	Inner mask	4	Visor
5	Visor frame	6	Upper head-harness connector
7	Harness	8	Face seals
9	Carrying strap	10	Mask body
11	Clamping ring	12	Exhalation valve cover

### 3.2 Feature description

The full face masks have a round-thread connector as per EN 148-1 for the respiratory filter with an Rd40 x1/7 thread. The full face masks can be used at temperatures from -30 °C to +60 °C.

Mask spectacles can be inserted for users who wear spectacles.

### 3.3 Intended use

The facepieces protect the face and eyes from aggressive media.

### 3.4 Limitations on use

#### WARNING

Beards and sideburns in the sealing area of the full face mask will cause leakages. Therefore, the full face mask should not be used by anyone with facial hair of this sort. Earpieces in the sealing area also cause leakages.

- ▶ Use special mask spectacles.

### 3.5 Approvals

The full face masks are approved according to:

- EN 136:1998 CL. 3
- NIOSH guidelines
- AS/NZS 1716:2012
- (EU) 2016/425
- (EU) 2016/425 as brought into UK law and amended

Declaration of conformity: see [www.draeger.com/product-certificates](http://www.draeger.com/product-certificates)

The full face masks may only be used with approved respiratory filters.

### 3.6 Type-identical marking

The facepieces are marked differently:

Connector	RA
Mask body	EPDM CDR 4500 EN 136:1998 CL.3 CExxxx (notified body in Europe)
Visor	PC/C (polycarbonate, anti-scratch coating on both sides) F (fire brigade)
Head harness	EPDM
Visor frame	K/sw, S (small), L (large)

## 4 Use

### 4.1 Conditions for use

- The ambient conditions (particularly the types and concentrations of contaminants) must be known. Use corresponding respiratory filters. Only use self-contained open-circuit breathing apparatus or compressed air line breathing apparatus in cases where the contaminant is unknown.
- Only use filtering devices if the air does not directly endanger the health or life of the user.

- It must be ensured that the surrounding atmosphere cannot change unfavourably.
- Do not use filtering devices if there is suspicion of contaminants with low warning properties (low-odour, tasteless, no irritation of eyes and airways). A decreasing protective effect of the filtering device cannot be determined in this case.
- Do not use filtering devices for entering unventilated tanks, mines, canals, etc.
- Do not use filtering devices in oxygen-enriched atmospheres.
- The oxygen content of the ambient air must not fall below the following limit values:
  - at least 17 Vol% oxygen in all European countries except the Netherlands, Belgium and UK
  - at least 19 Vol% oxygen in the Netherlands, Belgium, UK, Australia and New Zealand
  - In other countries, observe the applicable national regulations.

### 4.2 Preparations for use

1. If required, use the mask spectacles.
2. Loosen the harness as far as possible.
3. If available, place the carrying strap around your neck and fasten it in the standby position.

### 4.3 Donning the full face mask

#### WARNING

Make sure that the full face mask is perfectly tight!  
If the full face mask leaks, there is a danger of inhaling toxic substances!

1. Check that the full face mask is in proper working condition.
2. Release the carrying strap from the standby position.
3. Pull the head harness apart, place your chin into the chin cup and centre the harness on your head (see figure B on fold-out page).
4. Tighten both neck straps (1) and then the temple straps (2) by pulling them evenly towards the back of your head so that the centre of the harness remains in the centre of your head (see figure C on fold-out page).

5. If required, tighten the upper head-harness connector (3).
6. Check the exhalation valve:  
seal the mask connector and breathe out forcefully.  
The exhaled air must be able to escape without obstruction. If not, replace the exhalation valve disc.
7. Connect the respiratory filter.

#### 4.4 Checking for tight fit

1. Seal the mask connector and breathe in until a negative pressure is generated.
2. Hold your breath for a moment. The negative pressure should be maintained. If not, retighten the harness.
3. Repeat the leak test twice.

#### 4.5 During use

##### 4.5.1 Low temperatures

Protect the inside of the visor against fogging with "klar-pilot" anti-fog agent.

##### 4.5.2 High temperatures/alternating thermal stress

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#### ⚠ WARNING

##### Danger of poisoning!

- ▶ Leave the danger zone immediately when noticing any signs of damage, e.g. bubbles in the visor.

#### 4.6 After use

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#### ⚠ WARNING

Always remove the full face mask outside danger zones!  
Ensure that the device user is not injured by the contaminated mask.  
Avoid direct skin contact with dangerous substances and the inhalation of such substances.

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#### ⚠ CAUTION

Do not grab full face mask by the connector and pull it off your face, since the mask may become damaged.

1. Remove the respiratory filter.
2. Dispose of the respiratory filter.
3. Remove the full face mask:  
Insert your index fingers underneath the flaps of the neck straps and push the adjusting clamps forward with your thumbs to loosen the head harness. Pull the full face mask away from your face and over your head.

#### 4.7 Maintenance work and maintenance intervals

For information on maintenance work and maintenance intervals, refer to technical manual 9300782 at [www.draeger.com/ifu](http://www.draeger.com/ifu).

### 5 Transport

Transport facepiece in a carrying box or mask bag.

### 6 Storage

- Loosen the head harness as far as possible.
- Make sure that the facepiece is dry.
- Pack the full face mask in its bag or carrying box.
- Store the full face mask in a dry, dust-free place where it cannot become deformed.
- Protect from direct sunlight and thermal radiation.
- Storage temperature: -15 °C to +25 °C
- Observe ISO 2230 and national regulations concerning the storage, maintenance, and cleaning of rubber products.

Dräger rubber products are treated with an agent to protect against premature ageing which in some cases is visible as a grey-white coating. This coating can be washed off with a brush and soapy water.

## **7 Disposal**

Dispose of the product in accordance with the applicable rules and regulations.

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## 1 Informations relatives à la sécurité

- Avant d'utiliser le produit, veuillez lire attentivement la notice d'utilisation et celle des produits associés.
- Veuillez respecter scrupuleusement la notice d'utilisation. L'utilisateur devra comprendre la totalité des instructions et les respecter scrupuleusement. Veuillez utiliser le produit en respectant rigoureusement le domaine d'application.
- Ne pas jeter la notice d'utilisation. Veillez à ce que l'utilisateur conserve et utilise cette notice de manière adéquate.
- Seul un personnel formé et compétent est autorisé à utiliser ce produit.
- Respecter les directives locales et nationales applicables à ce produit.
- Veuillez ne confier les opérations de vérification, de réparation et d'entretien qu'au personnel compétent et muni de la formation adéquate. Dräger recommande de conclure un contrat de service qui pourra se charger de tous les travaux de maintenance.
- Pour la maintenance, veuillez utiliser uniquement des pièces et accessoires Dräger. Sinon, le fonctionnement correct du produit est susceptible d'être compromis.
- Ne pas utiliser des produits défectueux ou incomplets. Ne pas modifier le produit.
- Veuillez informer Dräger en cas de défaut ou de dysfonctionnement sur le produit ou des composants du produit.

## 2 Conventions utilisées dans ce document

### 2.1 Signification des avertissements

Les avertissements suivants sont utilisés dans ce document ; ils signalent à l'utilisateur des dangers potentiels. Les avertissements sont définis comme suit :

Symbole d'avertissement	Mention d'avertissement	Classification de l'avertissement
	AVERTISSEMENT	Signale une situation potentiellement dangereuse qui, si elle n'est pas évitée, peut entraîner la mort ou des blessures graves.
	ATTENTION	Signale une situation potentiellement dangereuse qui, si elle n'est pas évitée, peut entraîner des blessures. Peut également être utilisé pour avvertir d'une utilisation incorrecte.
	REMARQUE	Informations complémentaires sur l'utilisation du produit.

## 3 Description

### 3.1 Aperçu du produit

Masque complet (page dépliant, figure A)

1	Pièce de raccordement	2	Vanne pilote
3	Masque intérieur	4	Oculaire
5	Cadre de serrage	6	Bride frontale
7	Bride	8	Lèvrés
9	Bretelle de transport	10	Jupe de masque
11	Collier	12	Capuchon de protection de la soupape expiratoire

### 3.2 Description du fonctionnement

Les masques complets ont un raccord fileté rond selon la norme EN 148-1 pour le filtre respiratoire avec filet Rd40 x1/7. Les masques complets peuvent être utilisés à des températures comprises entre -30 °C et +60 °C.

Les porteurs de lunettes peuvent utiliser des lunettes de masque.

### 3.3 Utilisation prévue

Les pièces faciales protègent le visage et les yeux contre les médias agressifs.

### 3.4 Restrictions de l'utilisation prévue

#### ⚠ AVERTISSEMENT

Au niveau de la zone d'étanchéité du masque complet, les barbes et les favoris provoquent des fuites. Les personnes concernées ne peuvent pas porter le masque complet. Au niveau de la zone d'étanchéité, les montures de lunettes provoquent également des fuites.

- Utiliser des lunettes de masque.

### 3.5 Homologations

Les masques complets sont homologués selon :

- EN 136:1998 CL. 3
- Directives NIOSH
- AS/NZS 1716:2012
- (UE) 2016/425
- (EU) 2016/425 as brought into UK law and amended

Déclaration de conformité : voir [www.draeger.com/product-certificates](http://www.draeger.com/product-certificates)

Les masques complets doivent être utilisés uniquement avec des filtres respiratoires homologués.

### 3.6 Marquage des types identiques

Les pièces faciales présentent différents marquages :

Pièce de raccordement	RA
Jupe de masque	EPDM CDR 4500 EN 136:1998 CL.3 CExxxx (Notified Body en Europe)
Oculaire	PC/C (polycarbonate, revêtement anti-rayures des deux côtés) F (sapeurs-pompiers)
Bandage de tête	EPDM
Cadre de serrage	K/sw, S (petit), L (grand)

## 4 Utilisation

### 4.1 Conditions d'utilisation

- Les conditions environnementales (en particulier le type et la concentration des substances toxiques) doivent être connues. Utiliser des filtres respiratoires correspondants. Lorsque la substance toxique est inconnue, utiliser uniquement des appareils respiratoires isolants ou des appareils à adduction à air comprimé.
- Utiliser des appareils filtrants uniquement lorsque l'air ne représente pas de danger immédiat pour la santé ou la vie.
- Vérifier que l'atmosphère environnante ne risque pas de changer de manière défavorable.
- Ne pas utiliser les appareils filtrants pour se protéger contre les substances toxiques aux faibles signes avertisseurs (peu d'odeur et de goût, pas d'irritation des yeux et des voies respiratoires). Il n'est en effet pas possible dans ce cas de constater la perte d'efficacité de l'appareil filtrant.
- Ne pas pénétrer dans des réservoirs, fosses, canalisations, etc. non ventilés avec des appareils filtrants.
- Ne pas utiliser les appareils filtrants en atmosphères enrichies en oxygène.
- La concentration en oxygène de l'air ambiant ne doit pas passer au-dessous des valeurs limites suivantes :



- au moins 17 Vol% d'oxygène dans les pays européens sauf aux Pays-Bas, en Belgique et au Royaume-Uni
- au moins 19 Vol% d'oxygène aux Pays-Bas, en Belgique, au Royaume-Uni, en Australie et en Nouvelle-Zélande
- Dans les autres pays, observer les règlements nationaux.

## 4.2 Préparations pour l'utilisation

1. Installer au besoin les lunettes de masque.
2. Ouvrir la bride jusqu'à la butée.
3. Le cas échéant, faire passer la bretelle de transport autour du cou et la fixer en position prêt à l'emploi.

## 4.3 Mise en place du masque complet

### ⚠ AVERTISSEMENT

Commencer l'intervention avec un masque complet étanche uniquement !  
Si le masque complet devait ne pas être étanche, il existe un risque d'intoxication !

1. Vérifier que le masque complet est en bon état.
2. Desserrer la bretelle de transport de la position prêt à l'emploi.
3. Desserrer la bride, placer le menton dans la mentonnière, puis centrer la bride sur la tête (voir la page dépliante, figure B).
4. Tirer de manière égale les deux brides de nuque (1), puis les brides de tempes (2) vers l'arrière de la tête de manière à ce que le milieu de la bride reste au niveau du milieu de la tête (voir la page dépliante, figure C).
5. Ne tirer sur la bride frontale (3) que si nécessaire.
6. Contrôler la soupape expiratoire :  
Obturer le raccord de masque et expirer avec force.  
L'air expiré doit pouvoir s'échapper librement, sinon remplacer le disque de la soupape expiratoire.
7. Raccorder le filtre respiratoire.

## 4.4 Contrôle de l'étanchéité

1. Obturer le raccord du masque et inspirer jusqu'à obtention d'une dépression.

2. Retenir brièvement la respiration. La dépression doit être maintenue, sinon, resserrer la bride.
3. Répéter l'essai d'étanchéité deux fois.

## 4.5 Pendant l'utilisation

### 4.5.1 Températures basses

Protéger l'intérieur de l'oculaire contre la formation de buée en appliquant du gel antibuée "klar-pilot".

### 4.5.2 Températures élevées / charge thermique variable

#### ⚠ AVERTISSEMENT

Risque d'empoisonnement !

- ▶ En cas d'endommagement de l'oculaire, p. ex. formation de bulles, quitter immédiatement la zone de danger.

## 4.6 Après l'utilisation

### ⚠ AVERTISSEMENT

Retirer toujours le masque complet en dehors des zones dangereuses !  
S'assurer que l'utilisateur de l'appareil n'est pas blessé par le masque contaminé.

Éviter tout contact direct avec les substances dangereuses et veiller à ne pas les inspirer.

### ⚠ ATTENTION

Ne pas saisir le masque complet au niveau de la pièce de raccordement pour le retirer du visage, car cela peut endommager le masque.

1. Détacher le filtre respiratoire.
2. Éliminer le filtre respiratoire.
3. Retirer le masque complet :  
Mettre les index derrière les languettes des brides de nuque et pousser les boucles de serrage vers l'avant avec les pouces pour défaire le bandage de tête.  
Retirer le masque complet de votre visage en le faisant passer par-dessus la tête.

## 4.7 Opérations et intervalles de maintenance

Pour de plus amples informations sur les opérations et intervalles de maintenance, voir le manuel technique 9300782 sur [www.draeger.com/ifu](http://www.draeger.com/ifu).

## 5 Transport

Transporter la pièce faciale dans une boîte de transport ou une housse pour masque.

## 6 Stockage

- Ouvrir le bandage de tête jusqu'à la butée.
- Vérifier que la pièce faciale est sèche.
- Emballer le masque complet dans sa housse ou dans sa boîte de transport.
- Ranger le masque complet sans le déformer dans un endroit sec et à l'abri de la poussière.
- Le protéger de la lumière directe et du rayonnement thermique.
- Température de stockage : -15 °C à +25 °C
- Respecter la norme ISO 2230 et les directives nationales applicables au stockage, à la maintenance et au nettoyage des produits en caoutchouc.

Les produits en caoutchouc Dräger sont protégés par une substance agissant contre leur vieillissement prématuré, parfois visible sous la forme d'un dépôt gris-blanc. Ce dépôt peut être nettoyé avec de l'eau savonneuse et une brosse.

## 7 Élimination

Éliminer le produit en respectant les prescriptions en vigueur.

## Cuprins

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## 1 Informații referitoare la siguranță


- Înaintea utilizării produsului, citiți cu atenție prezentele instrucțiuni de utilizare și instrucțiunile de utilizare ale produselor aparținătoare.
- Respectați întocmai instrucțiunile de utilizare. Utilizatorul trebuie să înțeleagă integral instrucțiunile și să le urmeze întocmai. Produsul poate fi utilizat numai în conformitate cu scopul de utilizare.
- Nu aruncați instrucțiunile de utilizare. Asigurați-vă că utilizatorii păstrează și folosesc în mod corespunzător instrucțiunile.
- Acest produs poate fi utilizat numai de către personalul instruit și specializat.
- Respectați reglementările locale și naționale referitoare la acest produs.
- Produsul poate fi verificat, reparat și întreținut numai de către personalul instruit și specializat. Dräger recomandă să încheiați un contract de service cu Dräger și să permiteți efectuarea tuturor lucrărilor de întreținere de către Dräger.
- Pentru lucrările de întreținere și reparații, utilizați numai piese și accesorii originale Dräger. În caz contrar, funcționarea corectă a produsului ar putea fi afectată în mod negativ.
- Nu utilizați produsele defecte sau incomplete. Nu aduceți modificări produsului.
- Informați firma Dräger în cazul unor erori sau defecțiuni ale produsului sau ale pieselor produsului.

## 2 Convenții în acest document

### 2.1 Semnificația indicațiilor de avertizare

În acest document sunt folosite următoarele indicații de avertizare, pentru atenționarea utilizatorului asupra posibilelor pericole. Semnificațiile indicațiilor de avertizare sunt definite după cum urmează:

Simbol de avertizare	Cuvânt semnal	Clasificarea indicațiilor de avertizare
	AVERTISMENT	Indică o situație periculoasă potențială. Dacă aceasta nu este evitată, pot apărea decesul sau răni grave.

Simbol de avertizare	Cuvânt semnal	Clasificarea indicațiilor de avertizare
	ATENȚIE	Indică o situație periculoasă potențială. Dacă aceasta nu sunt evitate, pot apărea răni grave. Poate fi utilizată și ca avertisment împotriva utilizării incorecte.
	NOTĂ	Informații suplimentare referitoare la utilizarea produsului.

## 3 Descriere

### 3.1 Privire de ansamblu asupra produsului

Mască completă (partea rabată deschis Figura A)

1	Piesă de racord	2	Ventil de comandă
3	Mască interioară	4	Vizor
5	Cadru de întindere	6	Eclisă pentru cureaua de frunte
7	Harnașament	8	Linii de etanșare
9	Curea de transport	10	Corpul măștii
11	Bridă de fixare	12	Capșon de protecție al supapei de expirare

### 3.2 Descrierea funcțiilor

Masca completă dispune de un racord cu filet rotund Rd40 x1/7 pentru filtrul de respirație conform EN148-1. Măștile complete se pot utiliza la temperaturi între -30 °C și +60 °C.

Pentru purtătorii de ochelari există posibilitatea purtării de ochelari pentru mască.

### 3.3 Scopul utilizării

Racordurile de respirație protejează fața și ochii de mediile agresive.

### 3.4 Restricțiile scopului de utilizare

#### ▲ AVERTISMENT

Bărbile și favoriții în zona de etanșare ale măștii complete pot cauza neetanșeități. Persoanele respective nu sunt apte pentru purtarea măștii complete. Brațele de ochelari în zona de etanșare cauzează de asemenea neetanșeități.

► Folosiți ochelari pentru mască.

### 3.5 Omologări

Măștile complete sunt omologate conform:

- EN 136:1998 CL. 3
- Directivele NIOSH
- AS/NZS 1716:2012
- (EU) 2016/425
- (EU) 2016/425 as brought into UK law and amended

Declarație de conformitate: vezi [www.draeger.com/product-certificates](http://www.draeger.com/product-certificates)

Măștile complete pot fi utilizate numai cu filtre de respirație omologate.

### 3.6 Marcajul de identificare a tipului

Racordurile de respirație sunt marcate diferit:

Piesă de racord	RA
Corpul măștii	EPDM CDR 4500 EN 136:1998 CL.3 CExxxx (Organism notificat în Europa)
Vizor	PC/C (polycarbonat, acoperire rezistentă la zgâriere pe ambele fețe) F (Feuerwehr (pompieri))
Bandă de susținere pe cap	EPDM
Cadru de întindere	K/sw, S (mic), L (mare)

## 4 Utilizarea

### 4.1 Condiții preliminare pentru utilizare

- Trebuie cunoscute condițiile ambiante (mai ales tipul și concentrația substanțelor nocive). Utilizați filtre de respirație corespunzătoare. Atunci când substanța nocivă este necunoscută, se va utiliza numai aparat autonom de respirat sau aparat cu furtun cu aer comprimat.
- Aparatele filtrante se utilizează doar când aerul nu reprezintă un pericol nemijlocit pentru sănătate sau viață.
- Trebuie asigurate condițiile ca atmosfera înconjurătoare să nu se poată modifica în mod defavorabil.
- Nu utilizați aparate filtrante dacă suspectați prezența unor substanțe nocive cu caracteristici de avertizare scăzute (fără miros, fără gust, fără iritare a ochilor și a căilor respiratorii). În acest caz nu se poate stabili o diminuare a efectului de protecție a aparatului filtrant.
- Este interzisă pătrunderea cu aparate filtrante în recipiente fără aerisire, gropi, canale etc.
- Nu utilizați aparatele filtrante în atmosfere îmbogățite cu oxigen.
- Conținutul de oxigen din aerul ambiant nu are voie să scadă sub următoarele valori limită:
  - cel puțin 17 Vol% oxigen în toate țările europene în excepția Olandei, Belgiei și Marii Britanii
  - cel puțin 19 Vol% oxigen în Olanda, Belgia, Marea Britanie, Australia și Noua Zeelandă
  - În alte țări se vor respecta directivele naționale.

### 4.2 Pregătirea pentru utilizare

1. Dacă este necesar, folosiți ochelarii pentru mască.
2. Deschideți harnașamentul până la opritor.
3. Așezați în jurul gâtului cureaua de transport, dacă este disponibilă, și fixați-o în poziția de pregătire.

## 4.3 Aplicarea măștii complete

### ⚠ AVERTISMENT

Utilizați numai cu mască completă etanșă!

Dacă masca completă nu este etanșă, se creează pericolul de otrăvire!

1. Verificați dacă masca completă este în stare corespunzătoare.
2. Desfaceți cureaua de transport din poziția de pregătire.
3. Extindeți harnașamentul, puneți bărbia în buzunarul pentru bărbie și centrați harnașamentul peste cap (vezi partea rabatată deschis Figura B).
4. Strângeți ambele benzi pentru ceafă (1) și apoi benzile pentru tâmplă (2) uniform pe partea din spate a capului, astfel încât partea de mijloc a harnașamentului să rămână pe mijlocul capului (vezi partea rabatată deschis Figura C).
5. Strângeți eclisa pentru cureaua de frunte (3) doar dacă este necesar.
6. Verificarea supapei de expirare:  
Țineți etanș racordul măștii și expirați puternic.  
Aerul expirat trebuie să fie eliberat fără rezistență; în caz contrar înlocuiți discul supapei de expirare.
7. Racordați filtrul de respirație.

## 4.4 Verificarea așezării etanșe

1. Țineți etanș racordul măștii și inspirați până se creează subpresiune
2. Rețineți aerul pentru o perioadă scurtă. Subpresiunea trebuie să persiste, în caz contrar strângeți harnașamentul.
3. Repetați de două ori verificarea etanșeității.

## 4.5 În timpul utilizării

### 4.5.1 Temperaturi joase

Vizorul se unge din interior cu agent de vizibilitate în formă de gel "klar-pilot" împotriva aburirii.

## 4.5.2 Temperaturi ridicate/Solicitări termice alternante

### ⚠ AVERTISMENT

**Pericol de otrăvire!**

► La orice deteriorare, de ex. bule în vizor, părăsiți imediat zona periculoasă.

## 4.6 După utilizare

### ⚠ AVERTISMENT

Scoateți întotdeauna masca completă atunci când vă aflați în afara zonelor periculoase!

Asigurați-vă că purtătorul aparatului nu este rănit de masca contaminată. Evitați contactul direct cu pielea și inhalarea substanțelor periculoase.

### ⚠ ATENȚIE

Nu apucați masca completă de piesa de racord să o trageți de pe față, deoarece se poate deteriora masca.

1. Desfaceți filtrul de respirație.
2. Aruncați filtrul de respirație.
3. Scoaterea măștii complete:  
Introduceți degetul arătător în spatele ecliselor benzilor pentru ceafă și cu degetul mare împingeți în față cataramele cu clemă pentru a desface banda de susținere pe cap.  
Scoateți masca completă de pe față, ridicând-o în sus, pe deasupra capului.

## 4.7 Lucrări de întreținere și intervale de întreținere

Pentru informații despre lucrările de întreținere și intervalele de întreținere, vezi Manualul tehnic 9300782 pe [www.draeger.com/ifu](http://www.draeger.com/ifu).

## 5 Transport

Transportați racordul de respirație într-o cutie de transport sau o geantă de mască.

---

## 6 Depozitare

- Deschideți banda de susținere pe cap până la opritor.
- Asigurați-vă că racordul de respirație este uscat.
- Ambalați masca completă în geanta de transport aferentă sau în cutia de transport.
- Măștile complete se depozitează fără deformare, într-un loc uscat și fără praf.
- Protejați de radiațiile luminoase și termice directe.
- Temperatura de depozitare: -15 °C până la +25 °C
- Respectați prevederile ISO 2230 și directivele naționale referitoare la depozitarea, întreținerea și curățarea produselor din cauciuc.

Articolele din cauciuc Dräger sunt protejate cu un agent contra îmbătrânirii premature, care în unele cazuri este vizibil ca o acoperire alb-gri. Aceste strat de acoperire poate fi spălat cu apă cu săpun și o perie.

## 7 Casarea

Produsul trebuie eliminat ca deșeu conform prevederilor în vigoare.

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# 1 Safety-related information


- Before using this product, carefully read these instructions for use and those of the associated products.
- Strictly follow the instructions for use. The user must fully understand and strictly observe the instructions. Use the product only for the purposes specified in the intended use section of this document.
- Do not dispose of the instructions for use. Ensure that they are stored and used appropriately by the user.
- Only trained and competent users are permitted to use this product.
- Comply with all local and national rules and regulations associated with this product.
- Only trained and competent personnel are permitted to inspect, repair and service the product. Dräger recommends a Dräger service contract for all maintenance activities and that all repairs are carried out by Dräger.
- Use only genuine Dräger spare parts and accessories. Otherwise, the proper functioning of the product may be impaired.
- Do not use a faulty or incomplete product. Do not modify the product.
- Notify Dräger in the event of any component fault or failure.

# 2 Conventions in this document

## 2.1 Definitions of alert icons

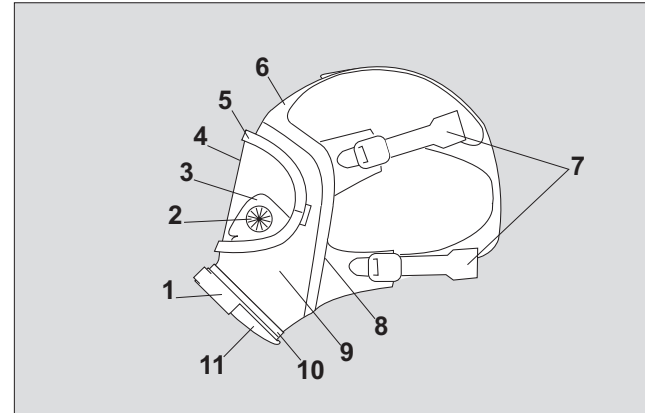
The following alert icons are used in this document to provide and highlight areas of the associated text that require a greater awareness by the user. A definition of the meaning of each icon is as follows:

Warning icon	Signal word	Classification of the warning icon
	WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
	CAUTION	Indicates a potentially hazardous situation which, if not avoided, could result in physical injury, or damage to the product or environment. It may also be used to alert against unsafe practices.

Warning icon	Signal word	Classification of the warning icon
	NOTICE	Indicates additional information on how to use the device.

# 3 Description

## 3.1 Product overview



1	Front port
2	Nose cup valves
3	Nose cup
4	Visor
5	Visor frame
6	Front strap
7	Head straps

## Use

8	Face seal
9	Facepiece body
10	Connector clamp
11	Exhalation valve cover

### 3.2 Feature description

The CDR 4500 facepiece is part of a NIOSH-CBRN (Chemical/Biological/Radiological/Nuclear) approved respirator.

The facepiece can be used at operating temperatures from -22 °F to +140 °F (-30 °C to +60 °C). Lower or higher temperatures are permitted with shorter exposure times.

Special facepiece spectacles are available for users who wear spectacles.

#### **⚠ WARNING**

Exposure of the user to very high or low temperatures could cause serious injury and should be avoided.

### 3.3 Intended use

This air purifying respirator is to be used during entry into chemical, biological, radiological, and nuclear (CBRN) atmospheres not immediately dangerous to life or health. The facepiece protects the face and the eyes against NIOSH-listed CBRN agents.

### 3.4 Approvals

The facepiece in combination with a CBRN cap 1 canister has been certified by NIOSH in compliance with title 42, Code of Federal Regulations, Part 84. Only use with canisters specified in the Approval Label (see Page 33).

Furthermore, the facepiece is approved according to

- EN 136:1998 CL.3. It is marked with the CE mark of conformity
- AS/NZS 1716:2012

### 3.5 Explanation of type-identifying markings and symbols

The Dräger CDR 4500 has different markings:

Equipment connector	RA
Facepiece body	EPDM CDR 4500 EN 136 Cl. 3 CExxxx (Notified Body in Europe)
Visor	PC/C (polycarbonate, coated with scratch-resistant material on both sides) F (fire brigade)
Head harness	EPDM
Visor frame	K/sw, S (small) or L (large)

## 4 Use

### 4.1 Prerequisites

#### 4.1.1 General

Before occupational use of this respirator, a written respiratory protection program must be implemented meeting all the local government requirements. In the United States, employers must comply with OSHA 29 CFR 1910.134 which includes medical evaluation, training, and fit testing.

#### 4.1.2 Performing a quantitative fit test

In order to make sure that the correct facepiece size is used, perform a quantitative fit test. The fit test is to be conducted in accordance with the requirements outlined in the OSHA Respiratory Protection Standard 29 Code of Federal Regulations, Part 1910.134.

A fit factor of 2000 or greater is required. If the fit factor of 2000 is not achieved, other appropriate respiratory protection must be used.

### 4.1.3 Size selection

The user can select between three facepiece sizes. Only use a respirator which fits to your facial dimensions!

To ensure that the correct respirator size is selected, a Quantitative Fit Test must be performed (regardless of facial dimensions and respirator sizing charts).

## 4.2 Preparation for use

### ⚠ CAUTION

Never use a facepiece that leaks!

In case of a leak, there is danger of poisoning.

If a leak is detected, the facepiece must be readjusted or removed and refitted and the entire fit check must be repeated.

If an air leak is still present following two failures of the face seal check, the wearer is not permitted to wear the respirator and enter a CBRN atmosphere.

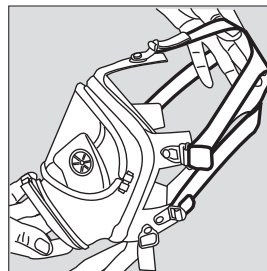
1. Inspect the facepiece (see "Visual inspections", page 30).
2. Install the facepiece spectacles if necessary.
3. Lay the carrying strap around the neck and fasten the facepiece in the standby position using the carrying strap.
4. Screw in the canister (see "Screwing in the canister", page 27).
5. Don the facepiece (see "Donning the facepiece", page 27).
6. Perform a fit check (see "Performing a negative or positive fit check", page 28).

### 4.2.1 Screwing in the canister

1. Take the canister out of the packaging or storage container.
2. Entirely remove the protective plugs and sealing strips from the canister.
3. Firmly screw the canister into the front port.

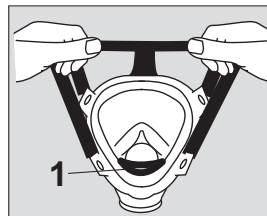
### 4.2.2 Donning the facepiece

1. Undo the carrying strap.
2. Fully extend the straps of the head harness.



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3. Spread the harness, place the chin into the facepiece (1), center the harness over the head, ensuring that the harness is lying flat and not twisted. Ensure there is no hair or harness straps interfering with the faceseal and that the entire faceseal is touching and following the contours of the face.

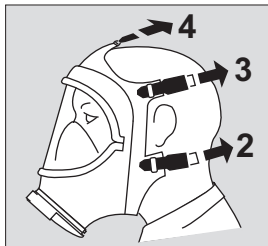


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4. Moderately tighten the harness straps.
5. Adjust the facepiece until it fits properly.

## Maintenance

6. Tighten both neck straps (2), then the temple straps (3) evenly towards the back of the head.



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### 4.2.3 Performing a negative or positive fit check

#### ⚠ WARNING

If it is not possible for the wearer to achieve a satisfactory face seal, the wearer is not permitted to wear and/or use CBRN approved facepieces for CBRN applications. Otherwise there is danger of death or serious injury.

#### Negative Fit Check

1. Seal the canister with the palm of your hand and inhale until negative pressure is generated.
2. Hold your breath for a moment.  
The negative pressure should be maintained.  
If not, retighten the straps.
3. Repeat this fit check twice.

#### Positive Fit Check

4. Seal the exhalation valve cover with the palm of your hand and exhale gently. The facepiece should inflate slightly.
5. If the facepiece does not maintain a slight positive pressure, readjust the facepiece and headstraps until a successful fit check is met.
6. Repeat this fit check twice.

## 4.3 During use

### 4.3.1 Low temperatures

Use "klar-pilot" anti-fog agent to prevent fogging of the visor.

### 4.3.2 High temperatures

#### ⚠ WARNING

Leave the danger zone immediately if there are any signs of damage, e.g., bubbles in the visor.

## 4.4 After use

#### ⚠ WARNING

Do not doff the facepiece unless you are decontaminated and in a safe environment. Make sure that the wearer is not harmed by the surface-contaminated facepiece. Avoid direct contact to skin and inhalation of hazardous substances.

1. Insert index finger behind the tabs on the neck straps.
2. Press the clamping buckles forwards with thumbs while pulling the facepiece off your face and back over your head.
3. Unscrew and dispose of the canister.

## 5 Maintenance

Testing and maintenance is to be performed by an authorized Dräger service center or Dräger certified Level II technician.

### 5.1 Maintenance table

The following details are manufacturer recommendations. Observe national guidelines, too.

Work required	Before use	After use	Every 6 months	Every 2 years	Every 6 years
Visually check the facepiece (see "Visual inspections", page 7)	X				
Clean and disinfect the facepiece (see "Cleaning and disinfecting", page 6)		X		X <sup>1)</sup>	
Check correct function and leaktightness (see "Leak tests", page 8)		X	X <sup>2)</sup>		
Replace exhalation valve disc (see "Replacing the exhalation valve disc", page 8)					X
Replace speech diaphragm and O-ring (see "Replacing the speech diaphragm or O-ring", page 8)					X

1) valid for airtight packed facepieces, otherwise every 6 months

2) for airtight packed facepieces every 2 years

## 5.2 Cleaning and disinfecting

The facepiece must be cleaned after every use so that it is clean before it is used by a different individual or, if individually assigned, as often as necessary to keep in a sanitary condition. Facepieces that are issued to more than one user must be cleaned before being worn by different individuals.

The facepiece must be disinfected after every use to keep it in a sanitary condition. It is fully in the user's responsibility to make sure that the facepiece is totally free of contaminants after this treatment. Never use a facepiece again, that has not been properly disinfected. In case of doubts dispose of the facepiece in accordance with the local regulations and use a new one.

For exposure to CBRN agents Dräger does not provide recommendations for decontamination.

### ⚠ WARNING

The facepiece body must be cleaned thoroughly so that no residues from skin care products remain on it. Otherwise the elasticity in the sealing area can be lost and the facepiece will no longer fit correctly.

If this warning is not heeded, poisoning or death can result.

### ⚠ CAUTION

Do not use any solvents (e.g. acetone, alcohol) or cleaning agents containing abrasive particles for cleaning and disinfecting. Only use the methods and the approved cleaning and disinfecting agents described in this section. Other methods or agents can cause damage to the product. Undiluted agents that come into direct contact with eyes or skin are hazardous to health. Always wear suitable protective equipment when working with the cleaning and disinfecting agents described in this section.

### NOTICE

Since the use of certain cleaning and disinfecting agents is not allowed among all countries, Dräger tested and recommends several cleaning and disinfecting agents. However, Dräger makes no representations that such agents comply with or are approved for use in your specific country's regulations. Make sure to follow the procedure that is suitable for your country. For further information please contact Dräger or your local dealer.

## 5.2.1 Cleaning and disinfecting procedure

1. Remove any accessories from the facepiece and clean them separately.
2. Prepare a cleaning solution consisting of water and a cleaning agent.
3. Clean all parts using a soft cloth with cleaning solution.
4. Thoroughly rinse all parts under running water
5. Prepare a disinfecting solution consisting of water and a disinfecting agent.
6. Place the parts to be disinfected into the disinfectant bath.
7. Thoroughly rinse all parts under running water.
8. Dry all parts in the air or in a drying cabinet (max. temperature: 140 °F/60 °C). Do not expose to direct sunlight. Do not shake the facepiece in order to remove water.
9. Mount the accessories if necessary.

### 5.2.2 Alternative cleaning and disinfecting procedure

1. Remove any accessories from the facepiece and clean them separately.
2. Prepare a solution containing water and a combined cleaning and disinfecting agent.
3. Immerse the facepiece in the solution. Make sure that all parts are wetted.
4. Thoroughly rinse all parts under running water.
5. Dry all parts in the air or in a drying cabinet (max. temperature: 140 °F/60 °C). Do not expose to direct sunlight. Do not shake the facepiece in order to remove water.
6. Mount the accessories if necessary.

### 5.3 Maintenance work

Leak tests must be repeated after any maintenance work and/or after replacing components.

#### 5.3.1 Visual inspections

- The speech diaphragm must not show any damages, e.g. deformations, holes, oxidations. Otherwise it must be replaced (see "Replacing the speech diaphragm or O-ring", page 31)
- To check the exhalation valve, remove the exhalation valve cover from the front port, and carefully inspect the valve disc. Valve disc and seat must be clean and undamaged. Clean or replace if necessary (see "Replacing the exhalation valve disc", page 31)
- Check all parts for deformation and damage and replace them if necessary.

#### 5.3.2 Replacing the visor

1. Loosen the two clamping screws.
2. Pry the visor frame apart with a screwdriver at the connecting points.
3. Pull off the top and bottom parts.
4. Remove the gusset if necessary.
5. Detach the old visor from its rubber frame.
6. Insert the new visor first in the upper and then in the lower part of the rubber frame. The center marks on the visor should be aligned with the seam on the facepiece.

7. Pull the rubber frame over the edge of the visor on the right and left.
8. Moisten the outside of the rubber frame and the inside of the visor with soap solution.
9. Fit the upper, then the lower visor frame.
10. Fit the gusset if necessary.
11. Tighten the clamping screws.

#### 5.3.3 Replacing the front port

1. Pull the nose cup out of the groove in the screw ring.
2. Pry open the connector clamp using a screwdriver.
3. Remove connector clamp, sliding ring and gusset.
4. Pull the front port out of the facepiece body.
5. Insert speech diaphragm, exhalation valve, and inhalation valve into the new front port, and fit the connector so that the center marks of the front port and facepiece body match.
6. Mount slide ring and new connector clamp. Attach the hook to ensure the tightest possible fit of the connector clamp.
7. Push support between connector clamp and slide ring, then attach it to the lower visor frame and align it.
8. Compress the nose on the connector clamp with pliers until the front port is securely located in the facepiece body.
9. Press the edge of the nose cup into the groove in the screw ring and ensure that it engages all around. The edge of the nose cup must fit all around the full circumference of the screw ring. The center marks on the front port and on the nose cup must match.

#### 5.3.4 Replacing a nose cup valve disk

1. Pull out the old valve disc towards the inside.
2. Insert the stud of the new disc into the hole from inside, and pull it towards the visor until the undercut of the stud is visible. The valve disc should make even contact with the inside surface.

### 5.3.5 Replacing the speech diaphragm or O-ring

1. Pull the nose cup out of the groove in the screw ring.
2. Unscrew the screw ring with a spanner.
3. Turn the spanner over and carefully insert it in the holes of the grille, taking care not to damage the foil on the diaphragm.
4. Turn the speech diaphragm to release it and remove it.
5. Remove the O-ring from the connector with the sealing ring lifter.
6. Check speech diaphragm and O-ring and replace if necessary.
7. Press the edge of the nose cup into the groove in the screw ring and ensure that it engages all around. The edge of the nose cup must fit all around the full circumference of the screw ring. The center marks on the front port and on the nose cup must match.

### 5.3.6 Replacing the exhalation valve disc

1. Remove the exhalation valve cover.
2. Grip under the edge of the valve disc and pull the holding stud out of the hole.
3. Clean the valve seat.
4. Moisten the new valve disc with water and press it into the hole until it engages. The valve disc must make even contact all around.
5. Refit the exhalation valve cover so that it clicks into place.

### 5.3.7 Replacing the inhalation valve disc

1. Pull the inhalation valve out by its tab.
2. Remove the old valve disc and fit new disc.
3. Press the inhalation valve into the mask connector until it makes even contact all-round. The valve disc must not be pinched. The disc must face inwards, and the stems face outwards.

## 5.4 Leak tests

The leak test should be performed with an appropriate test device (e.g. the Testor or Quaestor series).

### (1) Checking leak tightness

1. Moisten the face seal and exhalation valve with water.
2. Mount the facepiece on the test head.
3. Make sure that the face seal fits tightly onto all parts of the test head. Inflate the test head if necessary.
4. Seal the connector with the test adapter and produce a negative pressure of 10 cm H<sub>2</sub>O (10 mbar).

The facepiece is considered leak-tight if the pressure drop is less than 1 cm H<sub>2</sub>O (1 mbar) per minute. If the facepiece leaks, continue with (2).

### (2) Test with sealed exhalation valve

1. Remove the exhalation valve.
2. Plug in the exhalation valve plug.
3. Generate a negative pressure of 10 cm H<sub>2</sub>O (10 mbar).
4. If the pressure drop is less than 1 cm H<sub>2</sub>O (1 mbar) per minute, remove the exhalation valve plug and insert a new valve disc.
5. Repeat the leak test (1). If the facepiece is leaky, continue with (3).

### (3) Leak test under water

1. Immerse the test head including the facepiece with exhalation valve plug in the water.
2. Produce a positive pressure of approx. 10 cm H<sub>2</sub>O (10 mbar).
3. Slowly turn the test head under the water surface. Emerging bubbles indicate leaks.
4. Take the test head with the facepiece out of the water, repair the facepiece, or replace leaking components.
5. Remove the exhalation valve plug.
6. Install the exhalation valve.
7. Repeat leak test (1).

### After testing

1. Unscrew the test adapter.
2. Remove the facepiece from the test head and dry if necessary.
3. Fit the exhalation valve cover. It must click into place.

## 6 Transport

Transport the full facepiece in a carrying box or mask bag.

## 7 Storage

- Loosen the straps of the head harness as far as possible.
- Wipe the visor with an antistatic cloth. Do not wipe coated visors.
- Make sure that the facepiece is dry.
- Store the facepiece in its bag or storage box.
- Store the facepiece in a dry, dust-free place where it will not be deformed.
- Keep the facepiece out of direct sunlight and heat.
- Storage temperature: 5 °F to 77 °F (-15 °C to +25 °C).
- Observe ISO 2230 and national guidelines for storage, maintenance and cleaning of rubber products.



Dräger rubber products are treated with an agent to protect against premature aging which in some cases is visible as a gray-white coating. This coating can be washed off with a brush and soapy water.

## 8 Disposal

Dispose of the product in accordance with the applicable regulations.



# Approval Label

	Draeger Safety AG & Co KGaA D - 23560 Luebeck Phone : 011 49 451 882-0 US Phone: 1-800-437-2437														
<b>CDR 4500 AIR-PURIFYING GAS MASK RESPIRATOR</b>															
<b>THIS RESPIRATOR IS APPROVED ONLY IN THE FOLLOWING CONFIGURATIONS</b>															
Respirator Components															
TC-	Protection <sup>1</sup>	Alternate Facepiece						Canister	Accessories	Cautions and Limitations <sup>2/3</sup>					
		CDR 4500 EPDM/PC-C-RA-K/sw Plastic black	CDR 4500 EPDM/PC-C-RA-blank steel blank	CDR 4500 EPDM-PC/C-RA-sw steel black	CDR 4500 EPDM/PC/C-RA-S-sw steel black	CDR 4500 EPDM-PC/C-RA-S-blank steel blank	CDR 4500 EPDM-P/C/C-RA-L-sw steel black	CDR 4500 EPDM-PC/C-RA-L-blank steel blank	CBRN Cap 1	CBRN Cap 1	Spectacle kit	Spectacle kit			
		R55440	R55705	R55710	R55575	R55715	R55580	R55720	6738146	3703226	R51548	4056406			
14G-0286	CBRN Cap 1	X	X	X	X	X	X	X	X	X	X	X	A J L M O R T V W X Y Z CC HH QQ UU		
<b>1. Protection</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">CBRN Cap 1 - Capacity meets minimum 15 min. test time</td> <td style="width: 70%;">CBRN - Chemical, Biological, Radiological and Nuclear</td> </tr> </table>														CBRN Cap 1 - Capacity meets minimum 15 min. test time	CBRN - Chemical, Biological, Radiological and Nuclear
CBRN Cap 1 - Capacity meets minimum 15 min. test time	CBRN - Chemical, Biological, Radiological and Nuclear														
<b>2. Cautions and Limitations</b> A - Not for use in atmospheres containing less than 19.5% oxygen. J - Failure to properly use and maintain this product could result in injury or death. L - Follow the manufacturer's User's Instructions for changing cartridges and/or filters. M - All approved respirators shall be selected, fitted, used and maintained in accordance with MSHA, OSHA, and other applicable regulations. O - Refer to User's Instructions, and/or maintenance manuals for information on use and maintenance of these respirators.															
<b>3. CBRN Cautions and Limitations</b> R - Some CBRN agents may not present immediate effects from exposure, but can result in delayed impairment, illness, or death. T - Direct contact with CBRN agents requires proper handling of the respirator after each use and between multiple entries during the same use. Decontamination and disposal procedures must be followed. If contaminated with liquid chemical warfare agents, dispose of the respirator after decontamination. V - Not for use in atmospheres immediately dangerous to life and health or where hazards have not been fully characterized. W - Use replacement parts in the configuration as specified by the applicable regulations and guidance. X - Consult manufacturer's User's Instructions for information on the use, storage, and maintenance of these respirators at various temperatures. Y - This respirator provides respiratory protection against inhalation of radiological and nuclear dust particles. Procedures for monitoring radiation exposure and full radiation protection must be followed. Z - If during use an unexpected hazard is encountered such as a secondary CBRN device, pockets of entrapped hazard or any unforeseen hazard, immediately leave the area for clean air. CC - For entry, do not exceed maximum use concentrations established by regulatory standards. HH - When used at defined occupational exposure limits, the rated service time cannot be exceeded. Follow established canister change schedules or observe End of Service Life Indicators to ensure that canisters are replaced before breakthrough occurs. QQ - Use in conjunction with personal protective ensembles that provide appropriate levels of protection against dermal hazard. Failure to do so may result in personal injury even when the respirator is properly fitted, used, and maintained. UU - The respirator should not be used beyond eight (8) hours after initial exposure to chemical warfare agents to avoid possibility of agent permeation. If liquid exposure is encountered, the respirator should not be used for more than two (2) hours.															









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