1 For your safety

1.1 General safety statements

- Before fitting this product, carefully read the Assembly Instructions.
- Strictly follow these Assembly Instructions, the PAS ASV Instructions for Use and the Instructions for Use supplied with the associated breathing apparatus.
- Use the product only for the purpose specified in the PAS ASV Instructions for Use.
- Use only genuine Dräger spare parts and accessories, or the proper functioning of the product may be impaired.
- Do not use a faulty or incomplete product, and do not modify the product.
- Notify Dräger in the event of any component fault or failure.

1.2 Definitions of alert icons

Alert icons are used in this document to provide and highlight text that requires a greater awareness by the user. A definition of the meaning of each icon is as follows:

**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.

**NOTICE** Indicates additional information on how to use the product.

2 Description

2.1 Product overview

The PAS® ASV kit comprises the automatic switch-over valve and the fixing devices to secure it to the breathing apparatus. The automatic switch-over valve is an assembly of the valve and a belt manifold connected by a hose. The kit is either a permanent fit or an occasional fit version:

- **Permanent unit (Fig 1)** – Versions with a bolted clamp on the belt manifold are intended for permanent fitting to the breathing apparatus.
- **Occasional unit (Fig 2)** – Versions with an S-type clip on the belt manifold are intended for rapid fitting or removal, depending on operational needs.

The kit also contains the PAS ASV Instructions for Use, which provides a full description and instructions for using and caring for the PAS ASV once it is fitted. Assembly instructions showing the PAS ASV kit fitted are in Section 5.

2.2 Intended use

The Dräger PAS ASV is an accessory that provides an automatic switching function to allow a Dräger self-contained breathing apparatus (SCBA) to be used with an external air source to provide extended operating time in a contaminated or oxygen deficient work area.

The PAS ASV kit is intended for use with Dräger PSS 3000 or PSS Lite breathing apparatus.

3 Assembly instructions

**WARNING** Fitting the PAS ASV kit to a breathing apparatus may only be carried out by trained personnel (attendance at an appropriate Dräger maintenance course is required). Fitting by untrained personnel could make the breathing apparatus unsafe for use.

1. Fully vent the pneumatic system and remove the air cylinder (see the Instructions for Use supplied with the breathing apparatus).

2. If the breathing apparatus has a removable lung demand valve (LDV) fitted, disconnect it from the medium-pressure hose.

3. Fit a protective cap on to the pressure reducer.

4. Lay the apparatus horizontal to access the front of the set (reducer upward).

5. Refer to the permanent unit (Section 3.1) or the occasional unit (Section 3.2) instructions below.

3.1 Permanent unit

**Tools required:**

Torque screwdriver

T10 TORX key

1. Remove the medium-pressure (lung demand valve) hose from the long channel in the frame and the short channel at the cylinder strap.

2. Remove the screw and staple from the reducer and then remove the medium-pressure hose (Fig 3).

3. Carefully remove the O-ring, O-ring retainer and spring from the medium-pressure hose end and fit them on to the PAS ASV hose (Fig 4).

4. Fit the PAS ASV hose into the medium-pressure outlet of the reducer. Press the hose inward and reinstall the staple. Fit the screw and tighten to 1.2 Nm.

5. Fit the hose clip on to the space frame and press the hose into the clip (Fig 5).

6. Fit the belt manifold to the waist belt (Fig 6 and Fig 7), noting that:
   - a. The screws fit into the chamfered slots and the nuts fit into the hexagonal slots on opposing sides of the bracket.
   - b. The nylon ring of the locknut is on the outside.

7. Fit the hose clip on to the waist belt strap as shown in (Fig 8).

8. Fit the spacer bushes and O-ring (supplied with the kit) on to the medium-pressure hose end, noting that the shorter bush is fitted first and then the O-ring and then the longer bush. Insert the hose into the LDV port of the PAS ASV (Fig 9).

9. Fold back the rubber cover and insert the staple (Fig 10).

10. Fold the rubber cover over the valve body to retain the staple.

11. Firmly press the medium-pressure hose into the short channel at the cylinder strap (Fig 11).

12. Carry out a functional test of the breathing apparatus (see Section 3.3).

3.2 Occasional unit

1. Connect the hose strap on to the waist belt strap (Fig 12).

**CAUTION** Do not connect the belt manifold to waist pad of a PSS 3000 breathing apparatus. The waist pad material is not strong enough to support a pull load, and could be damaged.

2. Connect the belt manifold to the hose strap (Fig 13).

3. Fit the hose clip on to the space frame (Fig 14) and press the hose into the clip.

4. Pass the PAS ASV inside the cylinder strap.

5. Connect the medium-pressure hose to the BA port of the PAS ASV (Fig 15).

6. Fit the hose clip in the position shown (Fig 16).

7. Carry out a functional test of the breathing apparatus (see Section 3.3).

3.3 Functional testing

**WARNING** Failure of the breathing apparatus to meet any of the standards or parameters described in the functional tests indicates a system fault. Report the fault to trained service personnel or contact Dräger. Do not use the breathing apparatus until the fault condition is rectified.

Prepare the breathing apparatus for use and carry out the full functional testing detailed in the preparation for use section of the PAS ASV Instructions for Use supplied with this kit.

4 Using the PAS ASV

All instructions for using and caring for the PAS ASV (use, maintenance, cleaning, storage, etc.) are contained in the PAS ASV Instructions for Use supplied with this kit.
5 Assembly illustrations

The illustrations in this section show the PAS ASV kit assembled to PSS 3000 and PAS Lite breathing apparatus.

Permanent unit on PSS 3000

Permanent unit on PAS Lite

Occasional unit on PSS 3000

Occasional unit on PAS Lite