

# Chemical Protection



UNIQUE PROTECTION EQUIPMENT



## **Advanced protective equipment for Chemical Protection**

Ever since we developed our first products for Chemical Protection in 1992, we have consulted end users across the world. Today we offer a broad range of protective equipment with technically advanced features, high level of comfort and high quality.





# Ammonia Kit 1

## AMMONIA KIT 1

A complete kit that provides a high level of splash protection for particles, dust and moisture when working in risk environments involving for example ammonia. The kit consists of a protective overall, a chemical escape hood with carrying bag, insulating gloves and protective boots with steel toe caps and steel mid-soles. Everything is packed in a practical case.

(See more facts about the overall below and on page 6. Parts can be bought separately.)

**Size** Overall S–2XL, Boots 36–48 (Size tables on last page.)

**Art. No.** 70K47000



- Escape Hood with carrying bag
- Protective Overall
- Boots
- Insulating Gloves
- Case

**Resistance Table for overall, according to EN 465**

Chemical substance	Concentration (weight %)	Classification
Sulphuric acid (H <sub>2</sub> SO <sub>4</sub> )	30	4
Sodium hydroxide (NaOH)	50	3
n-Heptane (C <sub>7</sub> H <sub>16</sub> )	100	3
Isopropanol (C <sub>3</sub> H <sub>8</sub> O)	100	4
Hydrochloric acid (HCl)	10	4
Ammonia (NH <sub>3</sub> )	25	4
Benzene (C <sub>6</sub> H <sub>6</sub> )	100	4

# Chemical Escape Hoods

## ESCAPE HOOD

The unique design makes the hood comfortable to wear and easy to put on. It is, without any adjustments, ready to put on and use. The hood protects the whole head from gas and particles, not only the face! The half-mask inside is made of silicone. The neck cuff is designed for the closest possible fit and maximum elasticity. Twin exhaust valves ensure low respiratory resistance. The hood is available with three different types of filter (additional filter alternatives are available on request.)

The hood comes with a practical and compact carrying bag with belt which makes it easy to bring. The bag is soft and has a zipper for easy opening.

CE approved according to EN 140.

### One size.

**Art. No.** 7012P10024 (Hood with ammonia filter K2)  
7012P10025 (Hood with combination filter A2B2E2K2)  
Other filter types may be available.  
(See right side for explanation of filter codes.)



## ESCAPE HOOD XTREME

The Xtremehood hood is developed for extra high demands, highly recommended for concentrations above 1000 ppm. The hood's extremely low leakage, combined with the high class filter, gives significantly longer action time or protection for higher concentrations of substances. (0.06% in breathing zone, where 5% is the limit. In ocular zone the figure is 0.6% and the demand is 20%)

The shelflife for the filter is market leading 10 years!

The hood protects the whole head from gas and particles, not only the face! The design makes the hood comfortable to wear and easy to put on, no adjustments needed. The outside is made in a high visibility material and the half-mask inside is made of silicone. The seal around the neck is made of special silicone which gives a very effective seal, yet the hood is comfortable to wear. Twin exhaust valves ensure low respiratory resistance. The hood comes complete with a high level filter type and a practical and compact carrying bag with belt, which makes it easy to bring. The bag is soft and has a zipper for easy opening. Can be re-used after proper maintenance and filter change. CE approved as half mask according to EN 140, with additional requirements from EN403 relevant for use as Escape Hood. .

### One size.

**Art. No.** 7012P50022 Hood with combination filter A2B2E2K2P3



## CARRYING BAG - IMPORTANT FOR SAFETY

The chemical escape hood comes with a soft carrying bag in a water resistant, strong and durable material. The format is very compact. It has a waterproof zipper, for easy opening. In the rear, there is a pocket for filter date, name or a safety card. The bag can be worn on a belt, carried over the shoulder or round the waist. It also has brackets for wall mount. The bag is very important as it makes the hood easy to bring, when working in risk environments.







# Filter information



## HIGHER PROTECTION LEVEL

TST Sweden's escape hoods exceeds the requirements for escape hoods with great margin. We use class 2 filters and give the user a higher level of protection, or longer action time. See the table below for the stipulated break through times for filters, in concentrations as high as 5000 ppm.

Explanation filter coding		
Filter type	Colour code	Protects from
A	Brown 	Organic gases w boilingpoint >65°C/150°F
B	Grey 	Inorganic gases and vapours
E	Yellow 	Sulphuric dioxide (SO <sub>2</sub> )
K	Green 	Ammonia (NH <sub>3</sub> )
P	White	Particles

Stipulated break-through times for filters, acc. to EN 14387:2002			
Filter type	Chemical substance	Concentration (ppm)	Time (minutes)
A2	Cyclohexane (C <sub>6</sub> H <sub>12</sub> )	5000	35
B2	Chlorine (Cl <sub>2</sub> )	5000	20
	Hydrogen sulfide (H <sub>2</sub> S)	5000	40
	Hydrogen cyanide (HCN)	5000	25
E2	Sulfur dioxide (SO <sub>2</sub> )	5000	20
K2	Ammonia (NH <sub>3</sub> )	5000	40



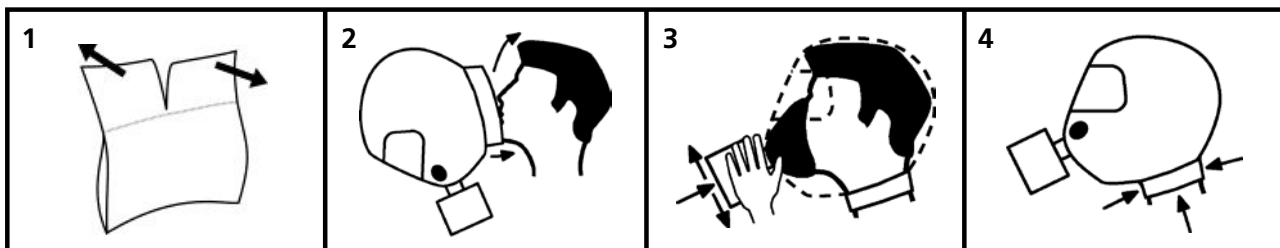
## EXAMPLE

A filter coded A2B2E2K2P3 protects the user from Cyclohexane for 35 min., Chlorine for 20 min., Hydrogen sulfide for 40 min., Hydrogen cyanide for 25 min., Sulphurous dioxide for 20 min. and Ammonia for 40 min. at a concentration of 5000 ppm in the air.

## SHELF LIFE

The filter may be stored for five years - Escape Hood Extreme ten years - in an unopened foil package. The packing date, and the "best before date" are stated on a label outside the foil packaging. When the date has expired, or the foil package has been opened, the hood must be inspected and the filter replaced. Contact an authorized TST Sweden Distributor for help and guidance.

## EASY TO USE



## BOOTS

Protective boots of high quality, equipped with steel toe caps and steel mid-soles. Certified according to EN 345 and EN 347.

**Size** 36–48. (See conversion table on last page.)

**Art. No.** 6050200 6000



## INSULATING GLOVES

The gloves provide excellent insulation when working with condensed gases. Ideal to wear over chemical protection gloves in order to protect from frostbite down to -80°C/-112°F. Made of very soft leather, and have a membrane which makes them waterproof.

**Size** 9, 11.

**Art. No.** 7000400 7000



## PROTECTIVE OVERALL

Durable splash protection overall for wet and dry conditions.

Designed to meet tough industrial demands concerning function and safety. Effective seals and taped seams ensure a high degree of impenetrability against particles, dust and moisture, whilst the material is breathable. Two chest pockets and one leg pocket.

Hood with strings for closing. Braces for increased comfort. The overall is made of polyamide with a polyurethane coating.

Weight approx. 1100 g / 2,4 lb in size XL.

CE approved according to EN 465.

**Size** S–2XL (see size table on last page)

**Art. No.** 7040210 7000





# Smarthose – chemical- and fire fighting

## TST SMARTHOSE

World patented hose which is developed to create water barriers, to be flexible and to minimize the need of personal. One Smarthose of 20 m/65 ft can produce a 12-15 m/40-50 ft high wall of water – that is about 300 m<sup>2</sup>/2500 ft<sup>2</sup> – and it can quickly be placed even in difficult terrain. Excellent for shielding off fires or gas clouds where you can't or don't want to have humans present. The Smarthose is also highly efficient for cooling big objects like buildings, gas tanks and containers. The nozzles that spread the water can easily be exchanged and they come in different versions to accommodate different needs, and availability of water. Smarthose comes with one set of nozzles and without couplings. The base hose is a B-75 Duraflex hose, diameter 75 mm/3 in. On request there are 110 and 150 mm/4.3 and 6 in hoses. Alternative placing of nozzles is possible. Shelf life 25 years if kept in original box and temp. below 35°C/95°F.

**Smarthose 20 m/65 ft, Ø 75 mm/3 in, complete with nozzles.**

- Art. no.** 7590P17930 – with 3 mm/.12 in nozzles  
 7590P17960 – with 6 mm/.24 in nozzles  
 7590P17902 – with 2-holes nozzles  
 7590P17905 – with 5-holes nozzles  
 7590P27905 – with 3 mm, 6 mm, 2- and 5-holes nozzles

Water consumption l (max working press. 15 bar)				
Nozzle	4 bar	6 bar	8 bar	10 bar
1x3 mm	210	250	300	330
1x6 mm	1050	1130	1230	1300
2-holes	940	960	980	1110
5-holes	970	1000	1020	1150

Water consumption gal (max working press. 220 psi)				
Nozzle	58 psi	87 psi	116 psi	145 psi
1x.12 in	55	66	79	87
1x.24 in	277	300	325	343
2-holes	248	254	259	293
5-holes	256	264	269	304

## NOZZLE-SET

Complete set with 25 nozzles in one of the dimensions 3 mm/.12 in, 6 mm/.24 in, 2-holes or 5-holes.

3- and 6 mm nozzles are best suited for shielding off, cooling off and fighting fires. 2- and 5-holes nozzles are best suited for shielding off condensing gases and for cooling heat sensitive objects.

- Art. no.** 7590090 7930 – 3 mm/.12 in nozzles  
 7590090 7960 – 6 mm/.24 in nozzles  
 7590090 7902 – 2-holes nozzles  
 7590090 7905 – 5-holes nozzles



## World patented



5-holes nozzle



3 mm/.12 in nozzle

# Leakage and Collection – Acids and Bases



## FUNNEL WITH MAGNETS

A superior solution for when you want to catch a leak quickly, but are not equipped for exposure to the chemical. The handle allows you to bring the funnel up to the leak and position it against the leaking area. Super magnets mean that the funnel's sealing surface attaches to the base. The funnel is fitted with a connection which makes it possible to attach a fire hose or collection cushion to collect the leakage. Connections available: TA63 and Storz. The funnel comes packed in a case, making it easy to store, for example in a rescue vehicle.

**Art. No.** 7084000 7852 with TA63  
7084000 7854 with Storz



## COLLECTION CUSHION – 100 LITRES

Practical collection cushion that is easily attached to the funnel. Connections available: TA63 and Storz. Holds 100 l/26 gal.

**Art. No.** 7080600 7852 with TA63  
7080600 7854 with Storz

## CHEMICAL PROTECTION SUIT DRÄGER CPS 7900

Tailor-made for use under extreme conditions. The gas-tight CPS 7900 suit 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 at temperatures down to -80°C / -112°F.

The 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 standards are the EN 943 part 2 (ET) and the SOLAS convention.

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

Comes with Dräger or Interspiro connections.

**Size** S–2XL (see size table on last page)

**Art. No.** 70460007000



Dräger or Interspiro connections.





### ONE-USE OVERALL DRÄGER SPC 3800

This chemical protective category III suit protects the wearer against organic and inorganic fluids, radioactive contamination and against viruses and bacteria.

Made of Tychem® F. Gloves (butyl) and socks are integrated. The zip fastener is located horizontally on the back of the suit and is covered with a double covering flap. The inside of the suit is antistatic and protects against electrostatic

The suit complies with EN 1073-2:2002, EN 1149-1:1995, EN 14 126:2003 Type 3B EN 14 605:2005 Type 3 and 4, EN ISO 13 982-1:2005 Type 6, EN 13 034:2005 Type 6 and the requirements of the SOLAS convention. Weight approx 590 g. Sold in packs of 4.

**Size** S–3XL (see size table on last page)

**Art. No.** 7040841 7000



### RE-CONDENSING SET

Complete equipment for treating discharges of condensed gases such as ammonia, chlorine and sulphur dioxide. These chemicals are transported in large quantities, and a leak would present serious problems for both people and the environment. This equipment makes it possible to cover over or catch a leak – either in liquid or gas form – highly effectively. The re-condensing set includes two tarpaulins (3x3 m/10x10 ft and 5x5 m/16x16 ft), a re-condensing funnel, a basin (700 l/185 gal) and a submersible pump with a 5 m/16 ft hose.

Everything is practically packed in a steady plywood trunk with handles on the sides.

(LxWxH) 1,2x0,5x0,6 m / 4x1,6x2 ft. Weight 75 kg/165 lb.

Product	Art. No.
Re-condensing set (complete kit)	70K824000
Tarpaulin 3x3 m / 10x10 ft	7084200 7802
Tarpaulin 5x5 m / 16x16 ft	7084200 7806
Re-condensing funnel 10 m / 33 ft	7082400 7000
Self-erecting basin 700 l / 185 gal	7080200 7832
Submersible pump	7090400 7000
Hose for pump 5 m / 16 ft	7090405 7720
Trunk made of plywood	7090490 7000

# Basins – Acids and Bases (also available for petro chemicals)



## 1 COLLECTING BASIN WITH STAND, 1000 LITRES

A robust basin made of acid-resistant material and special compound PVC which can withstand acids and bases and temperatures down to -80°C/-112°F. The basin is foldable for easy storing and transportation. Can easily be managed by one person, even in the dark. The fabric is replaceable. 1000 l/264 gal. Size raised 1x2x0,5 m, folded 1x2x0,12 m.

**Art. No.** 7080P7836

## 2 SELF-ERECTING BASIN 400 LITRES

This basin has low, soft edges. It is easy to position where a leak occurs, also in small spaces. It is ideal for use as a collecting basin during decontamination of e.g. chemical divers. The basin can be folded or rolled for easy transportation and storing. 400 l/106 gal. Size filled 1,2x1,2x0,35 m, empty 1,2x1,2x0,1 m.

**Art. No.** 7080200 7830

## 3 SELF-ERECTING BASIN 700, 2000, 3000, 5000 L

An easy-to-use practical basin made of chemical-resistant material. On filling, the basin self-erects using four floatation devices around the opening of the basin. It has a capacity of 700 l/185 gal, 2000 l/530 gal, 3000 l/790 gal or 5000 l/1100 gal and can be folded or rolled to a small size for storage. Other volumes on offer. Also available with hose connection.

**Art. No.** 700 l – 7080200 7832  
 2000 l – 7080200 7842  
 3000 l – 7080200 7844  
 5000 l – 7080200 7847



## 4 BASIN BAG

The bag is an accessory for the 400 l/106 gal or 700 l/185 gal self-erecting basins.

**Size** 400 l/106 gal.

**Art. No.** 7090210 7830

**Size** 700 l/185 gal

**Art. No.** 7090210 7832

**Size** 2000 l/530 gal

**Art. No.** 7090210 7842

**Size** 3000 l/790 gal

**Art. No.** 7090210 7844

**Size** 5000 l/1185 gal

**Art. No.** 7090210 7847



# Spring-lid Seals

In the event of a leak, it is extremely important that the leaking chemical does not get into the sewage system. These two products are developed to seal gratings effectively.

## 1 SPRING-LID SEAL, CUSHION

This product is ideally stored filled, enabling it to be placed extremely quickly over a grating or similar as a seal. It weighs 45 kg/100 lb when filled with water. Fitted with carrying handles on both sides for easy handling.

**Art. No.** 7080400 7822

## 2 SPRING-LID SEAL, BASIN

Place the basin over the grating and fill it with water, sand or something similar. It has a capacity of 90 l/24 gal and can also be used as a collecting basin. Takes up very little space when empty.

**Art. No.** 7080400 7824





Size table for TST overalls (men's)		
Size	Height cm (ft. in.)	Chest cm (in.)
S	<175 (<5'9")	92 (36")
M	176-180 (5'9"-5'11")	100 (39")
L	181-186 (5'11"-6'1")	108 (43")
XL	187-192 (6'2"-6'4")	116 (46")
2XL	193-200 (6'4"-6'7")	124 (49")
3XL	201-206 (6'7"-6'9")	132 (52")

Size table for Dräger CPS 7900		
Size	Height cm (ft. in.)	Boots EUR
S	150-165 (4'11"-5'5")	43
M	160-175 (5'3"-5'9")	43
L	170-185 (5'7"-6'1")	44
XL	180-200 (5'11"-6'7")	45
2XL	195-210 (6'5"-6'11")	46

Conversion table for shoe sizes (men's)		
EUR	US	UK
36	4 1/2	4
37	5	4 1/2
38	6	5 1/2
39	6 1/2	6
40	7 1/2	6 1/2
41	8	7 1/2
42	9	8
43	9 1/2	9
44	10 1/2	10
45	11 1/2	11
46	12	11 1/2
47	13	12 1/2
48	13 1/2	13 1/2

Size table for Dräger SPC 3800	
Size	Height cm (ft. in.)
S	162-170 (5'4"-5'7")
M	168-176 (5'5"-5'9")
L	174-182 (5'8"-6')
XL	180-188 (5'11"-6'2")
2XL	188-194 (6'2"-6'5")
3XL	192-200 (6'4"-6'7")



Certified according to ISO 9001:2008 and ISO 14001:2004



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