



Accessories

Standard EN ISO 374

Gloves for protection against chemicals and microorganisms

PREVIOUSLY
> Standard EN 374-1:2003



Protection against chemicals

- Limited protection against chemicals
- Resistance to penetration determined according to EN 374-2:2003



Specific protection against chemicals

- Resistance to penetration determined according to EN 374-2:2003
- Determination of resistance to permeation according to EN 374-3:2003: breakthrough time ≥ 30 min for at least 3 of the 12 test chemicals



Protection against microorganisms (bacteria and fungi)

- Resistance to penetration determined according to EN 374-2:2003
- AQL (acceptable quality limit) at least Level 2

IN FUTURE

> Standard EN ISO 374:1-2016

Chemical protective gloves

Classification is based on 3 test methods:

- Determination of resistance to penetration according to EN 374-2:2014 (air leakage and water leakage test)
- Determination of resistance to permeation according to standard EN 16523-1:2015 (replaces EN 374 3)
- Determination of degradation according to EN 374-4:2013



Standard EN ISO 374

Degradation test according to EN 374-4:2013




Impairment of the glove's physical properties due to contact with a chemical substance. To be able to declare chemical protection against one of the listed substances, both the breakthrough time and the degradation must be determined. The result of the degradation test must be stated in the usage instructions.

Six new chemicals have been added to the list of hazardous compounds.

LIST OF DEFINED TEST CHEMICALS

Code letter	Hazardous material	CAS number	Substance class
A	Methanol	67-56-1	Primary alcohols
B	Acetone	67-64-1	Ketones
C	Acetonitrile	75-05-8	Nitrile compounds
D	Dichloromethane	75-09-2	Chlorinated hydrocarbons
E	Carbon disulphide	75-15-0	Sulphur with organic compounds
F	Toluene	108-88-3	Aromatic hydrocarbons
G	Diethylamine	109-89-7	Amines
H	Tetrahydrofuran	109-99-9	Heterocyclic and ether compounds
I	Acetic acid ethyl ester (ethyl acetate)	141-78-6	Ester
J	n-heptane	142-82-5	Aliphatic hydrocarbons
K	Sodium hydroxide 40 %	1310-73-2	Inorganic alkalis
L	Sulphuric acid 96 %	7664-93-9	Inorganic mineral acids, oxidising
M	Nitric acid 65 %	7697-37-2	Inorganic mineral acid, oxidising
N	Acetic acid 99 %	64-19-7	Organic acids
O	Ammonia 25 %	1336-21-6	Organic alkalis
P	Hydrogen peroxide 30 %	7722-84-1	Peroxides
S	Hydrofluoric acid 40 %	7664-39-3	Inorganic mineral acids
T	Formaldehyde 37 %	50-00-0	Aldehydes

ONE PICTOGRAM – 3 GLOVE TYPES

Glove type	Requirements	Markings
Type A	Protection against penetration according to EN 374-2:2014 Minimum permeation time ≥ 30 min for at least 6 chemicals from the list of specified test chemicals	EN ISO 374-1 Type A  AJKLPR
Type B	Protection against penetration according to EN 374-2:2014 Minimum permeation time ≥ 30 min for at least 3 chemicals from the list of specified test chemicals	EN ISO 374-1 Type B  JKL
Type C	Protection against penetration according to EN 374-2:2014 Minimum permeation time ≥ 10 min for at least 1 chemical from the list of specified test chemicals	EN ISO 374-1 Type C 

> Standard EN ISO 374:5-2016

Protective gloves against microorganisms

For protection against bacteria and fungi, the glove must pass the penetration test according to EN 374-2:2014.

If protection against viruses is also to be verified, a bacteriophage penetration test in accordance with ISO 16604:2004 (procedure B) must also be carried out and passed.

EN ISO 374-5



Gloves for protection from bacteria and fungus

EN ISO 374-5



VIRUS

Gloves for protection from bacteria, fungus and viruses

Standard EN 388:2016

The EN 388 standard applies to protective gloves against mechanical risks.

It specifies requirements, test methods, labelling and manufacturer information against four mechanical hazards: abrasion, cutting, tear propagation and puncture.

A revision of the standard is necessary because the continuous development of cut-resistant yarns has led to a high scatter in the measured values and poor reproducibility in the coup test.

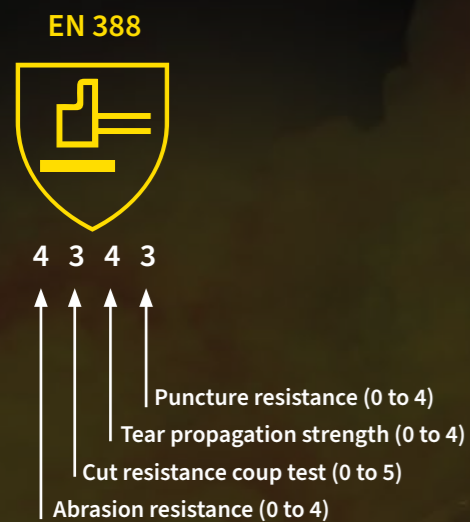
Protection against impact

NEW

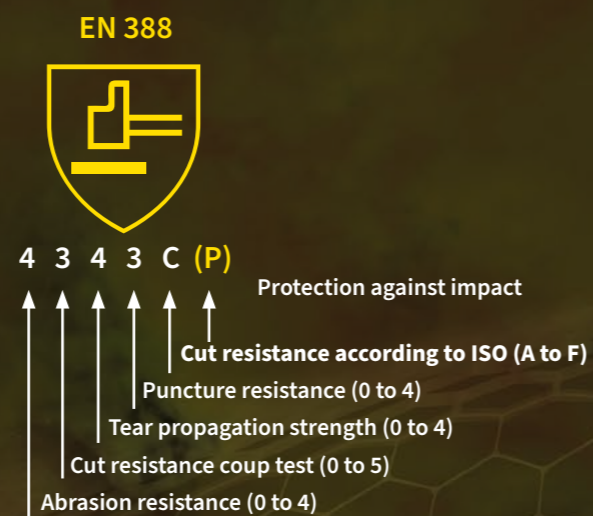
New test procedure according to EN 13594:2015, which can optionally be carried out to show protection against impacts. Pass or fail test, i.e. if the glove passes the test, a "P" for "Pass" is given below the pictogram after the fifth digit. Marked "Passed". In the event of failure or non-performance of the test, there is no marking.

Pictogram

PREVIOUSLY



IN FUTURE



PERFORMANCE RATING*

Testing to EN 388	Level 1	Level 2	Level 3	Level 4	Level 5
Abrasion resistance (cycles)	100	500	2000	8000	-
Cut resistance - coup test (index)	1.2	1.5	5.0	10.0	20.0
Tear propagation strength (Newton)	10	25	50	75	-
Puncture resistance (Newton)	20	60	100	150	-
Testing to ISO 13997	Level A	Level B	Level C	Level D	Level E
	2	5	10	15	22

* Values greater than or equal to

Undergloves

TEGERA 8120 underglove

Textile glove, cotton, Cat. I, for assembly work

PRIMARY AREAS OF USE

Fine assembly work, assembly work, acceptance testing, installation work, electrical installation work, warehouse work

LENGTH: 220-270 mm
COLOUR: white
PAIRS PER MULTIPACK/CARTON: 12/300
CLOSURE: with 180° elasticated wristband

SALIENT FEATURES

- Comfortable
- Lightweight
- Air permeable
- Good grip
- Good tactility
- Supple
- Specially shaped thumb
- Chain stitch

Sizes: 6-11

Order no.: 2507-700



Underglove uvex arc protect g1

Hands are at the greatest risk of burns from short circuit electric arcs when working on electrical equipment. The uvex arc protect g1 protective glove provides safe protection against the thermal discharge of a short circuit electric arc. The modacrylic/cotton knit is flame retardant and protects the wearer from second-degree skin burns. The short circuit electric arc glove can also be combined with the uvex power protect V1000 electrician's glove.

Features

- Anatomical fit
- Excellent flexibility
- Excellent tactility
- Suitable for dry working environments
- Sizes: 7-11
- Standard ISO 21420:2020, EN 388:2016 + A1:2018, EN 407:2004
- Levels according to EN 388: 1 X 2 1 X
- Levels according to EN 407: 4 1 1 1 X X
- Cotton outer
- Version with cuff
- Colours: grey, anthracite

Order no.: 2507-800



CPS STANDARD GLOVES

Overglove: Mech Black

Specific advantages

- Longer service life due to the high material thickness (puncture and abrasion resistance)
- Protection of forearm through long cuff

Application:

- As mechanical protective overglove for all TESIMAX protective suits
- As additional thermal protective overglove, also available in silver colour.
- Approved according to Regulation (EU) 2016/425 and complies with standards EN 388 - 2342 C

* Mechanical hazards (performance levels)

a: Abrasion resistance (0-4)

b: Cut resistance (0-5)

c: Tear resistance (0-4)

d: Puncture resistance (0-4)

e: Cut resistance TDM (A-F)

(P): Protection against impact

Material: para-aramid with silicone coating (black or silver)

Colour: black or silver

Length: approx. 42 cm

Size 12 (one size)

Order no.: 2501-224 MECH BLACK (black colour)



Overglove Mech Blue 351 (protective glove P-L/-S)

Specific advantages

- Excellent comfort and good cold protection through seamless cotton inner knit
- High resistance to oils, greases and hydrocarbons
- Suitable for food contact, except fatty foods
- Good grip due to textured surface

Application:

- POLYRAN protective suits
- As mechanical protective overglove MECH 351 for SYKAN/SILVERFLASH protective suits
- Pharmaceutical industry: maintenance and cleaning work, maintenance work in wet environments
- Mechanical industry: maintenance work in humid environment (water, oils, greases, hydrocarbons)

Approvals: according to Regulation (EU) 2016/425 and complies with standards EN 388:2016 (4.1.2.1.X); EN 374-1, Type A (K.L.M.N.P.T); EN 374-5, EN ISO 374-5:2016 and EN ISO 374-1:2016

Material: PVC

Colour: Blue

Interior finish: Textile lining

Exterior finish: Grained

Length: 30 cm

Material thickness: 1.35 mm

Size: 10 (standard for protective suits – for other sizes see the glove size chart or enquire)

Order no.: 2507-351



CPS STANDARD GLOVES

WIPAN B+ – CBRN protective glove

Specific advantages

- Excellent comfort and tactile feel in combination with additional 5-finger cotton knitted glove (inside, optional)
- Protection against intensive exposure to corrosive solvents, acids, caustic solutions and gasses, combined with sufficient protection against physical strain (according to EN 943).
- Combat gases (CBRN) tested

Application:

- SYKAN protective suits
- Firefighters for unrestricted use according to EN 943
- Pharmaceutical industry and labs: maintenance and cleaning work, maintenance work in wet environments
- Mechanical industry: maintenance work in humid environment (water, oils, greases, hydrocarbons)

Approvals: according to Regulation (EU) 2016/425 and complies with standards EN 420:2003+A1:2009, EN 388:2016, EN ISO 374-1:2016+A1:2018, EN 374-2:2014, EN 374-4:2013 and EN ISO 374-5:2016

Material: HPE elastomer incl. HPP

Colour: Elastomer outer glove black

Interior finish: With integrated, chemical protection barrier glove (HPP)

Exterior finish: Smooth

Length: 30 cm

Material thickness: IIR 1.5 or 0.5/0.3 cm

Size: 10 (standard for protective suits; other sizes: see glove size chart or enquire)

Order no.: 2509-005

(also available as CBRN protective glove:
WIPAN B, without integrated HPPF barrier glove)

Order no.: 2507-630)



WIPAN C – NBC protective glove

Specific advantages

- Excellent comfort and tactile feel
- Good mechanical and cold resistance due to integrated liner
- Protection against intensive exposure to corrosive solvents, acids, caustic solutions and gasses, combined with sufficient protection against physical strain (according to EN 943).

Application:

- SYKAN/SILVERFLASH protective suits
- Firefighters for unrestricted use according to EN 943
- Pharmaceutical industry and labs: maintenance and cleaning work, maintenance work in wet environments
- Mechanical industry: maintenance work in humid environment (water, oils, greases, hydrocarbons)

Approvals: according to Regulation (EU) 2016/425 and complies with standards EN 420:2003+A1:2009, EN 388:2016, EN ISO 374-1:2016+A1:2018, EN 374-2:2014, EN 374-4:2013 and EN ISO 374-5:2016

Material: HPF elastomer

Colour: Outer glove black

Interior finish: With integrated liner

Exterior finish: Smooth

Length: 30 cm

Material thickness: Elastomer and liner approx. 1.5 mm

Size: 10 (standard for protective suits; other sizes: see glove size chart or enquire)

Order no.: 2509-001



CPS STANDARD GLOVES

WIPAN CK – THERMO NBC protective glove

Specific advantages

- Excellent comfort and tactile feel
- Good mechanical and heat and cold resistance due to integrated liner made of 100% para-aramid
- Protection against intensive exposure to corrosive solvents, acids, caustic solutions and gasses, combined with sufficient protection against physical strain (according to EN 943).

Application:

- SYKAN/SILVERFLASH protective suits
- Firefighters for unrestricted use according to EN 943
- Pharmaceutical industry and labs: maintenance and cleaning work, maintenance work in wet environments
- Mechanical industry: maintenance work in humid environment (water, oils, greases, hydrocarbons)

Approvals: according to Regulation (EU) 2016/425 and complies with standards EN 420:2003+A1:2009, EN 388:2016, EN ISO 374-1:2016+A1:2018, EN 374-2:2014, EN 374-4:2013 and EN ISO 374-5:2016

Material: HPF elastomer

Colour:	Outer glove black
Interior finish:	With integrated 100% PARA-ARAMID liner
Exterior finish:	Smooth
Length:	30 cm
Material thickness:	Elastomer and liner approx. 1.5 mm
Size:	10 (standard for protective suits; other sizes: see glove size chart or enquire)

Order no.: 2509-002



CPS STANDARD GLOVES

WIPAN CK+ – THERMO-CHEM CBRN protective glove

Specific advantages

- Excellent comfort and tactile feel
- Good mechanical and heat and cold resistance due to integrated liner made of 100% para-aramid
- Protection against intensive exposure to corrosive solvents, acids, caustic solutions and gasses, combined with sufficient protection against physical strain (according to EN 943).
- Unique HPF elastomer construction with integrated 100% PARA-ARAMID liner and chemical protection barrier (HPP)
- Combat gases (CBRN) tested

Application:

- SYKAN/SILVERFLASH protective suits
- Firefighters for unrestricted use according to EN 943
- Pharmaceutical industry and labs: maintenance and cleaning work, maintenance work in wet environments
- Mechanical industry: maintenance work in humid environment (water, oils, greases, hydrocarbons)

Approvals: according to Regulation (EU) 2016/425 and complies with standards EN 420:2003+A1:2009, EN 388:2016, EN ISO 374-1:2016+A1:2018, EN 374-2:2014, EN 374-4:2013 and EN ISO 374-5:2016

Material:	HPE elastomer incl. HPP
Colour:	Outer glove black
Interior finish:	With integrated 100% para-aramid liner and chemical protection barrier (HPP)
Exterior finish:	Smooth
Length:	30 cm
Material thickness:	Elastomer and liner approx. 1.5 mm
Size:	10 (standard for protective suits; other sizes: see glove size chart or enquire)

Order no.: 2509-003



WIPAN CK PRO protective glove

This protective glove consists of a butyl underlayer of and an approximately 0.2 mm thick Viton® coating. The glove's thickness is about 0.6 mm in total. The Viton® coating is resistant to aliphatic and aromatic hydrocarbons (hexane, benzene, toluene, xylene and others), halogenated hydrocarbons (trichloroethylene, perchloroethylene, methylene chloride and others), organic and inorganic acids (diluted to concentrated) and saturated saline solutions.

Features

- Excellent resistance
- Sizes: 8–11
- Standard EN 420:2003 + A1:2009, EN 388:2016, EN ISO 374-1:2016 + A1:2018
- Test chemicals methanol (A), toluene (F), sodium hydroxide 40 % (K), sulphuric acid 96 % (L), nitric acid, 65 % (M), acetic acid 99 % (N)
- Levels according to EN 388: 2 1 2 0 A
- Outer without lining
- Coating: bromobutyl, Viton®
- Version with beaded cuff
- Colour: black

Order no.: 2509-004



Overgloves

Overglove eureka 13-4HFR Heat

MATERIAL: para-aramid fabric, chloroprene composite
 Coating type: partially coated
 Cuff: Knitted cuff
 Standards: ASTM F2675, EN 388:2016, EN 407
 Protective properties: heat shielding, cut protection, voltage and arc protection

Fabric tested according to arc test method ASTM F2675. ATPV 5.8-23 Cal/cm² – printed surface on back of hand: arc tested according to ASTM F2675. 23 Cal/cm²

- Flame retardant with contact heat up to 100 °C
- SIZES: 7–11
- Pack: 1 pair, pack of 6 pairs, carton of 60 pairs
- STANDARDS: certified according to EN 388:2016 (performance level 3 X 4 3 E), CUT PROTECTION LEVEL XE, EN 407 (performance level 4 1 3 2 4 X), ASTM F2675
- Colour: green-black
- Sizes: 7–11

Order no.: 2507-134



Overgloves

Ultranitril 492 protective glove

Good mechanical resistance and long-lasting chemical protection

- Dexterity and wearing comfort due to the anatomical shape and the quality of the flock-lining
- Longer service life: excellent mechanical resistance (abrasion, puncture resistance)

Applications:

- Treating/degreasing metals with solvents
- Machining parts using cutting oil
- Handling aggressive chemical products
- Handling PVC-based glues
- Preparing coatings and varnishes
- Handling oils, solvents and detergents
- Handling plant treatment products

Properties

Material: Nitrile
 Length: 32 cm
 Thickness: 0.38 mm
 Wrist: Straight cuff edge
 Colour: green
 Inner finish: Flock-lining
 Outer finish: Embossed texture on palm
 Sizes: 6, 7, 8, 9, 10, 11
 Packaging: 1 pair/bag, 10 pairs/bag, 100 pairs/carton

Order no.: 2507-492



Overglove uvex power protect V1000

The body is at the greatest risk of electric shock when working on electrical equipment. The uvex power protect V1000 protective glove offers safe protection against electrical voltages up to 1000 V. The natural latex is highly insulating and protects the wearer from electrical discharges through the body. The glove's flexibility offers pleasant wearer comfort and an excellent tactile feel.

Features

- Anatomical fit
- Good grip feel
- Excellent flexibility
- Suitable for dry working environments
- Sizes: 7–11
- Standard EN 60903:2004-07, IEC 60903:2014
- Outer without lining
- Natural latex coating
- Version with cuff
- Colour: red

Order no.: 2507-1000*



Solo 997 protective glove

Excellent disposable protection glove

- Excellent dexterity thanks to flexibility and reduced material thickness
- Can be worn alone or as an overglove
- Recommended for oily environments in industry
- Previous name: Solo Blue 997

Applications:

- Assembly of small oily parts
- Work with composites (resins)
- Manufacturing of medicines
- Pharmaceutical preparation
- Research, analysis, handling of precision parts

Properties

Material: Nitrile
 Length: 24 cm
 Thickness: 0.1 mm
 Colour: blue
 Inner finish: Chlorinated
 Outer finish: Smooth with pebbled fingertips
 Sizes: 6, 7, 8, 9
 Packaging: 100 gloves/box; 1000 gloves/carton

Order no.: 2507-997



Overgloves

Overglove: TEGERA 139

Heat and cut protection for heavy-duty jobs. Durable split cowhide on palm and breathable cotton on back. KEVLAR liner inside the glove for extra heat and cut protection. Elasticated wrist for better fit. Safety cuff for extra protection. Reflective wrist band for easy detection in low light situations. EN 388:2016, 4X44B EN 407:2004, 41324X

SALIENT FEATURES

- Excellent protection
- Good tactility
- Anatomical fit
- Robust
- Resistant to contact heat up to 100 °C
- Reinforced index finger
- Reflector
- Reinforced fingers and thumb

PREVENTS RISK OF

- Burn injuries, heat injuries, abrasion injuries, blisters, grazes, scratches, lacerations

PRIMARY AREAS OF USE

- Sheet-metal work, plate laying, metalwork, hot work

CHARACTERISTICS

- Protects against cuts and heat to Cat. III
- Palm: split grain cowhide
- Back of hand: cotton
- Lining: Kevlar
- Length: 265-305 mm
- Colour: black/yellow

- Pairs per multipack/carton: 6/60
- Closure: 180° elasticated wristband
- Gauntlet model: with safety cuff
- Cut resistance: Class B (EN ISO 13977)
- Cut resistance TDM: 9.24 N (EN ISO 13977)
- Inner fabric: para-aramid
- Outer fabric: cotton, leather, natural latex

- Sizes: 6-15

Order no.: 2502-300



Barrier tape

Discover our new product development – the highly adhesive and secure SILVERFLASH TAPE chemical barrier tape.

- Protection against inorganic acids, alkalis and solvents
- Permeation data available for a wide range of chemicals
- Tested against 15 reference chemicals according to EN 943 for ET CBRN protective suits
- Highly flexible and elastic
- Protects against radiant heat due to aluminisation
- Can be used in combination with type 3, 4, 5 and 6 protective clothing for an optimum seal of the clothing, especially at the joints of the PPE, e.g. gloves and sleeves.
- Colour: silver aluminised
- Quantity: available individually packaged

Order no.: 0800-078*



Topguard CBRN protective tape

Topguard CBRN Protective Tape is an adhesive tape specifically designed for CBRN protection (against chemical, biological, radiological and nuclear hazards) at transitions and closures between suits and accessories, such as gloves, face mask and boots.

- It offers excellent resistance to industrial chemicals and chemicals and chemical warfare agents (CWA).
- Quantity: available individually packaged

Order no.: 4000-131



POLYRAN-L/-S repair tape

Description:

Article 471F is an adhesive tape in the standard colour yellow. For other colours, please enquire. This adhesive repair tape is very supple, abrasion-resistant and resistant to many solvents except ketones, chlorinated hydrocarbons and esters.

For protective suit fabric repairs:

The tape can be used to quickly and smartly seal small leaks in the fabric of TESIMAX POLYRAN protective suits. However, we recommend the original Tesimax POLYRAN repair kit for professional repairs (see this catalogue or enquire).

For protective suit visor repairs

The tape is suitable for quick, smart sealing of leaks around the inner visors of VS 5 suits. We recommend, however, a professional repair by Tesimax in these cases.

Further applications

For covering and sealing all surfaces and containers, including on round and irregularly shaped surfaces; as hazard markings, floor markings and for protection.

Order no.: 0800-079



SAFETY GOGGLES

GONDOR protective goggles

Applications & usage:

Liquids | coarse dust | molten metal

Features

- Full-view safety goggles for a wide range of applications
- Tight wraparound seal
- Indirect ventilation system prevents lens fogging
- Wide, flexible textile strap ensures a firm fit
- GONDOR CHEM: Version with elastic headband
- GONDOR NV: Particulate version without air inlets
- Available with shatter-proof polycarbonate lenses
- Can be used with a prescription lens insert using the RX-Clip

Properties

Weight: 135 g
Glass material: Polycarbonate/acetate
UV protection: 100%
Coatings: HC = scratch-proof | AF AS = antifog, antistatic, scratch resistant | HC AF AS = scratch-proof, antifog, antistatic

Frame colours: smoke | black and red

Order no.: 4000-035



FLEXOR PLUS OUTDOOR

Features

- Extremely sturdy and flexible
- Soft construction material ensures complete absence of pressure points
- Adjustable nose bridge
- Rubberised temples ensure non-slip fit
- Additional rubber lip protects against ingress of foreign bodies from above
- Ultra-lightweight
- Unrestricted field of vision
- High impact absorption

Properties

• Weight: 24 g
• Material: polycarbonate
• UV protection: 100%

Colour: navy blue (frame) and yellow (lens)
Order no.: 9024 125 AF

Colour: white (frame) and blue (lens)
Order no.: 9025 130 AF



SAFETY GOGGLES

PREVENTOR

Features

- Small and very light full-view safety goggle (with headband)
- Non-slip temple ends
- Tight wraparound seal
- Soft nose bridge
- Indirect ventilation system
- Certified as full view safety goggles in conjunction with headband
- Prescription lenses can be inserted with the RX insert; headband ensures firm fit

Properties

• Weight: 59 g
• Material: polycarbonate
• UV protection: 100%

For spectacle wearers:

- RX insert: Prescription lenses can be easily and quickly inserted with the RX insert

COLOUR: Turquoise

Order no.: 9584-006



DEFENDOR XL

Features

- Full-view goggles for a wide range of applications
- Tight wraparound seal
- Indirect ventilation system prevents lens fogging
- Wide, adjustable textile strap ensures a firm fit
- Particularly well suitable for prominent facial features
- Unrestricted field of vision

Properties

• Weight: 79 g
• Material: polycarbonate
• UV protection: 100%

Large and very soft face pad

The DEFENDOR XL is particularly suitable for wide faces. With its very soft rubber face pad, the DEFENDOR XL offers a tight fit all round. It is particularly suitable for use in handling liquids or in environments with coarse dust.

COLOUR: ORANGE

Order no.: 9596-165



Explosion-protected (EX) lights for TESIMAX protective clothing

ADALIT® L-5 Power / L-5R Power

The robust, reliable and ultra-light L-5 Power can be attached to most firefighter helmets.

Certified ATEX Zone 0 (gas) and 20 (dust), for use in almost all hazardous areas.

- The combination of white and red LEDs makes for one of the brightest lights available. The integrated red LED rear light makes it the safest firefighter helmet light of its kind.

ATEX:

II 1 G Ex ia IIC T4 Ga
II 1 D Ex ia IIIC T85° C Da
GAS ZONE 0 | 1 | 2
DUST ZONE 20 | 21 | 22

Degree of protection: IP67

Weight:

Rechargeable version: 125 g (including battery)
Battery version: 145 g (including AAA batteries)

Dimensions:

15 x 3.8 x 4.4 cm

Battery life:

Rechargeable version: 4 h
Battery version: up to 30 h

Lamp body material:

Antistatic thermoplastic, particularly resistant to mechanical loads, extreme temperatures and chemicals

Luminous flux:

150 lumen

On/off switch:

Ergonomic pushbutton switch for easy operation with protective gloves

Charge indicator:

Flashing signals when switching on (L-5 Power), flashing signals 15 min. before Power Off (L-5R Power)

Accessories:

Holster can be rotated 360° (art. no. B69-7271-A)

L-5 Power, incl. 4 AAA alkaline batteries, B69-7280-A

L-5R Power, incl. rechargeable LiPo battery 3.7 V, B69-7281-A

Order no.: 4000-040



TESIMAX TIP FOR INTEGRATION

- For our totally encapsulated CPS
 - > with ANGEL CONTROL adapter
 - > or external equipment holder
- For our limited-use chemical protection suits
 - > with ANGEL CONTROL adapter
- For our turnout gear
 - > Equipment (head torch) holder for jacket
 - > Equipment holder for trousers

Explosion-protected (EX) lights for TESIMAX protective clothing

Adalit L-90 Power / L-90r Power

- Power LED Engine optics with 3 LEDs, max. light intensity: 300/340 lm
- Spot, flood and strobe function
- Step-lighting system, projects a beam of light directly onto the floor to illuminate the path
- Power booster function for maximum illumination with high and low light intensity settings
- Large, ergonomic pushbutton switch; backlight (red/green) indicates battery capacity
- Lithium-ion battery and LED unit can be replaced by the user
- Large retaining clip and key ring on the back

TWO MODELS AVAILABLE:

- L-90 Power with 3 AA alkaline batteries (included)
- L-90r Power with 3.7 V rechargeable lithium-ion battery (included)

Optional accessories:

- Neodymium magnet (B69-7626-A)
- Fluorescent light ring (B69-7625-A)
- Wall bracket (B69-7049-A)
- Chargers for 1, 2, 3 and 5 hand lamps
- Complies with DIN 14649
- ATEX: II 1G Ex ia IIC T4 Ga, II 2D Ex ib IIIC T135°C Db, I M1 Ex ia I MA
- GAS ZONE 0 | 1 | 2; DUST ZONE 21 | 22; MINING M1; Degree of protection: IP67
- Weight:

- Battery version: approx. 300 g (including AA batteries),
- Rechargeable version: approx. 300 g (including battery)

- Dimensions: 73 x 71 x 158 mm

Lamp body material:

Antistatic thermoplastic, particularly resistant to mechanical loads, extreme temperatures and chemicals

Luminous flux:

- L-90 Power: 300 lm / 90 lm,
- L-90r Power: 340 lm / 90 lm

Battery life:

- L-90 Power: Normal mode: 10 h; economy mode: 20 h
- L-90r Power: Normal mode: 4 h; economy mode: 18 h

Rechargeable battery:

- L-90 Power: 3 AA alkaline batteries
- L-90r Power: Li-ion battery: 3.7 V

Charge indicator:

When the lamp is switched on, the backlit button flashes to indicate the charging status:

- Green:

3x flashing = 100-75 %

2x flashing = 75-50 %

1x flashing = 50-25 %

- Red: <25%

- Low battery warning: main LED and backlit button flash every 15 seconds 15 minutes before the device shuts down (L-90r Power only)

- L-90 Power, B69-7605-A
- L-90r Power, B69-7606-A

Order no.: 4000-041



PROTECTIVE BOOTS

Protective boots HPE-3 (green) DUNLOP® HAZGUARD® Ultra - NFPA

The world's leading hazardous substances protection boot

- Proven chemical resistance according to the applicable global standards (NFPA 1991:2016 and EN 13832)
- Specially developed PVC material for excellent chemicals protection
- Ultragrip® Sipe non-slip outsole
- Steel toe cap & steel midsole
- Meets NFPA 1991 requirements for vapour protection equipment for hazardous substance emergencies
- Protects against liquefied gas and provides limited protection against chemical deflagration
- Protects against electric shock according to ASTM F2413-11 and CSA Z195-14

NFPA 1991:2016
ASTM F2413-11 EH
CSA Z195-14 Ω

Colour: green
Sizes: 39 to 49

Order no.: 0176-004



Top accessories (personal protective equipment) available on request.

Contact TESIMAX for an attractive special offer.

Protective boots HPE-4 (green) DUNLOP® HAZGUARD® full safety ESD – CE

Certified chemical resistance and worker protection

- Certified chemical resistance according to EN 13832-3:2006 J, K, O, P, Q, R
- Additionally certified against sulphuric acid (50 % conc.)
- Certified according to European standard (EN ISO 20345:2011 S5 SRA AN)
- PVC blend with nitrile rubber and polymers for professional chemical protection
- Self-cleaning and SRA++ slip-certified outsole
- Steel toe cap & steel midsole
- Certified protection against electrostatic discharge (ESD) (EN 61340-4-3, Class 2)

EN ISO 20345:2011 S5 SRA AN
EN 13832-3:2006
J, K, O, P, Q, R
and L (50% conc.)
ESD: EN 61340-4-3, cl 2

Colour: green
Sizes: 39 to 49

Order no.: 0176-006



PROTECTIVE BOOTS

Protective boot HPE-1 (black) Fireman SA BF – CE (FPA APPROVED, CBRN TESTED)

The HPE CHEM is our high performance F-NBR elastomer boot for chemical protective suits and is the standard on all of our protective suits (CHEMBA, SYKAN and SILVERFLASH) with replacement system.

- Certified according to EN 15090 TYPE 3 HI3; EN ISO 20345 S5 HRO SRC; EN 13832-3 J, P, Q; EN 13287
- Type 3 boots: Emergencies with hazardous substances, also for fire rescue, firefighting, goods air traffic, buildings, ships and other goods affected by fire.

- Highly chemical resistant
- Contact heat resistance (HRO): 1 minute at 300 °C
- Flame-retardance: 10 seconds according to EN ISO 15025
- Resistant against thermal flux
- Protective toe cap: Protects from impacts up to 200 joule and pressure of up to 15,000 N
- Penetration-resistant sole
- Energy-absorbent heel (20 joules)
- A: Antistatic
- Non-slip sole according to Addendum AI EN ISO 20345:2007

Colour: black
Sizes: 39 to 49

Order no.: 0176-001

Package content: 1 pair of HPF Fireman SA BF in the size and colour of your choice



Top accessories (personal protective equipment) available on request.

Contact TESIMAX for an attractive special offer.

Safety boot HPE-2 JOBGUARD® (black)

- Safety class: EN ISO 20345:2011 S5 AN
- Electrical insulation: Antistatic
- Toe protection: Steel cap
- Sole puncture protection: Steel midsole
- Outer fabric: PVC/nitrile rubber for longer service life
- Additional function: foot and ankle support
- Colour: black
- Lining: antibacterial fabric
- Sole: PVC, conditionally resistant to oil, petrol and acids; antistatic
- Available sizes: EU37 to EU49
- SRA-CERTIFIED ANTI-SLIP OUTSOLE:
- PROTECTIVE CAP AND MIDSOLE:
- Perfect fit and comfortable to wear in everyday use.
- One hundred percent waterproof to keep your feet dry.
- OIL-RESISTANT OUTSOLE:
- SHOCK ABSORPTION: The boots feature shock absorbers in the heel region
- CHEMICALS RESISTANCE: Protection against many different chemicals.

Equipment supplied:
1 pair HPE JOBGUARD in the size and colour of your choice

Order no.: 0176-005



T-FIX securing systems & ergonomics upgrades

CPS T-FIX belay systems for protective suits

- T-FIX: Integrated hip belt with buckle for strain relief for forced ventilation system (can also be connected with T-FIX C4 eyelets, inside)
- T-FIX C1: Vertical (fall) protection with gas-tight feedthrough/connecting carabiner (without harness), $x > 1000$ N
Order no.: 4000-012
- T-FIX C2: Safety harness for CPS, without carabiner
Order no.: 4000-010
- T-FIX C3: Connection loop sling & carabiner (T-FIX C1+ C2)
Order no.: 4000-011
- T-FIX C4: CPS rescue & recovery system as well as holding eyelets in the hip area
Order no.: 4000-013



T-FIX SAFETY FIREFIGHTER HELMET

- EN 443:2008
(Helmets for fire fighting in buildings and other structures)
- EN 16471:2014
(Firefighters helmets - Helmets for wildland fire fighting)
- EN 16473:2014
(Firefighters helmets - Helmets for technical rescue)
- EN 397
(Industrial protective helmets)
- EN 12492
(Helmets for mountaineers)



CPS: Material rescue & recovery system (T-FIX C4), consisting of:

- Horizontal material holders (eyelets), integrated at the hips, usable as recovery/rescue system (outside, 2 eyelets), with strain relief belt inside suit.
- The eyelets are securely integrated in the protective suit fabric and are gas-tight with a tested resistance according to EN 943: $x > 1000$ N pull-out force resistance.

Note:

- Not applicable if a F-AU forced ventilation system with comparable strain-relief belt is also used
- Strain-relief belt and type II braces can be combined (recommended)
Order no.: 4000-013

Additional material loops for CPS (external)

Suitable for head torches and other accessories recommended by TESIMAX.

- Horizontal loop for holding equipment (e.g. gas detectors) chest, right, loop made of suit material (fully decontaminable)
Order no.: 0180-005
- Loop for holding equipment (e.g. gas detectors) arm, right, loop made of suit material (fully decontaminable)
Order no.: 0180-008
- Loop for holding equipment (e.g. gas detector) hip, right
Order no.: 0180-009
- Single loop made of suit material (fully decontaminable), horizontal version on left chest (split, approx. 15 cm long)
Order no. 0180-011



MGBR T-Fix C4 system



Additional inside pockets for CPS

Two-way radio device pocket or second inner pocket for smartphone optionally available: (additional inner pocket for two-way radios and transmitter/smartphone/smart devices (right side of chest))

Order no.: 0180-010

- Radio device pocket inside (left chest)
- Radio device pocket inside (right chest)



- CPS visor (tinted), available with:
optional tear-off visor VS 5/VSF 5 series CPS
optional tear-off visor VS 20/VSF 20 series CPS

Tear-off visor – crystal clear for VS 5/VSF 5 Order no.: 0181-038
Tear-off visor – crystal clear for VS 20/VSF 20 Order no.: 0181-039

- Back pad for SCBA protection
- Knee pads for CPS (reinforced and made of suit material)



CPS BRACES

- Type 1 braces (simple Y-shaped loops, adjustable with velcro)
Order no.: 0180-000
- Braces model 2 (carrying strap, pluggable into CPS if prepared, simplified donning and doffing during decontamination, with harness guide for T-FIX/T-FIX C4)
Order no. 0180-001
- Type 3 braces (with ANGEL EYE/video camera and holder for transmitter with battery)
Order no. 0180-030
- Braces, shoulder inner loop feedthrough

Order no. 0180-017



Braces type 1

- CPS pressure gauge holders, inside on visor, in 2 versions (small loop and large loop)



Pressure gauge holders
Large loop



Pressure gauge holders
Small loop



Braces type 3



Braces type 2

Helmets/hard hats



Helmets/hard hats



An industrial climbing helmet in a class of its own! The INCEPTOR GRX has an ergonomic EPS thorax. A neck strap with continuous width adjustment and magnetic closure ensure outstanding wearing comfort. The gear rack, multiple helmet clips and Euroslots allow accessories to be attached. Available with or without ventilation holes and reflective stickers.

As the INCEPTOR GRX meets all performance requirements of EN 397:2012 and all requirements of the PPE Regulation, it can be CE marked and used without restriction for industrial applications.

This award-winning industrial climbing helmet impresses with its striking contours and superior wearing comfort. Its comfortable fit and ease of use make for a versatile helmet system: accessories such as headlamps, visors, hearing protection and neck guards can be easily attached, and the padding inside can be interchanged. The neck strap allows a continuous width adjustment for head circumferences from 54 to 63 cm.

- Approved safety helmet for wearing inside VS 5, VS 20, VSF 5/20 and VSF 21 series suits (please enquire)
- Tested safety helmet for wearing outside GS 3 and ESK series CPS (please enquire)
 - Alternative integrated, internal head protection for the GS 3 series (please enquire)
- Continuous size adjustment
- Magnetic closure prevents pinching of skin
- EPS thorax and PC/ABS shell for excellent absorption of high impact energies and high wearing comfort
- Interchangeable padding

Order no.: Please enquire

Top accessories (personal protective equipment) available on request.

Contact TESIMAX for an attractive special offer.

CHEST marking (black/thermal/reflective)	Order no.: 0372-003
BACK marking (black/thermal/reflective)	Order no.: 0372-002
SLEEVE marking (black/thermal/reflective)	Order no.: 0372-001
VISOR marking (black/thermal/reflective)	Order no.: 0372-001

- The markings (numbers and letters) are applied at the factory using a thermal printing process. The exact labelling must therefore be available before the start of production.
- The markings are available in 2 sizes (please enquire).
- Standard colour: Black
- Other colours on request: silver reflective or signal yellow
- The markings are washable (see protective suit user manual) and therefore reusable.



Storage

Bag, Universal (turnout gear)

- Storage bag with one main compartment (with boot compartment) and one front compartment
- Convenient transport: ideal for turnout gear
- Separated main, boot and side compartments for hygiene
- Flexible: elastic cord on the lid
- Everything in its place: front pocket as organiser compartment

Specifications

- Dimensions (L x W x B): 420 x 460 x 300 mm
- Outer material: 600D polyester 2xPU coated, black
- Weight: approx. 1,000 g
- Colour: black/yellow

Order no.: 0191-012 (black/yellow)



Solid zips (yellow) with "TESIMAX" logo puller

Transparent Label pocket

CPS bag Basic (medium)

- Storage bag with a main compartment and a flat side pocket
- Convenient transport: ideal for all reusable CPSs
- Large main compartment for complete protective clothing
- Rugged: skids on underside
- Everything in its place: side pocket as organiser compartment

Specifications

- Internal dimensions of main compartment (L x W x H): 700 x 480 x 380 mm
- External dimensions (L x W x H): 720 x 500 x 400 mm
- Outer material: 600D polyester 2xPU coated, black
- Weight: approx. 2,000 g
- Colour: black/yellow

Order no.: 0191-013 (black/yellow)



25 mm fabric tape, yellow ~ HKS 3 & 25 mm reflective stripes

CPS trolley bag (XL)

- Storage bag with a main compartment and a flat side pocket
- Convenient transport: ideal for all reusable CPSs & accessories
- No heavy lifting: trolley casters for easy transport
- Everything fits: large main compartment for complete protective clothing
- Everything in its place: separate organiser compartment for small items

Specifications

- Internal dimensions of main compartment (L x W x H): 700 x 480 x 380 mm
- External dimensions (L x W x H): 900 x 500 x 400 mm
- Outer material: 600D polyester 2xPU coated, black
- Weight: approx. 2,900 g
- Colour: black/yellow

Order no.: 0191-014 (black/yellow)



Padding on the outer surface for stability

FOR OTHER TRANSPORT CONTAINERS PLEASE ENQUIRE:

- Aluminium/plastic boxes
- Splash- or waterproof
- Lightweight or rugged versions

Subject to technical changes without notice; product may deviate from illustrations.



Storage

Bag, Universal (turnout gear)

- Separated main, boot and side compartments for hygiene
- Flexible: elastic cord on the lid
- Everything in its place: front pocket with organiser compartment
- Dimensions (L x W x B): 41 x 42 x 30 cm
- Weight: approx. 1,100 g
- Volume: approx. 50 litres
- Fabric: 600D polyester
- Colour: black/yellow or red/black; please specify when ordering

Order no.: 0191-015



RAGBAG PRO – clothing bag

- Large main compartment for complete protective clothing
- Rugged: skids on underside, elastic cord on lid
- Comfortable: fully padded backpack carrying system
- Dimensions (L x W x B): 70 x 43 x 38 cm
- Weight: approx. 2,600 g
- Volume: approx. 90 litres
- Fabric: 600D polyester
- Colour: black/yellow or red/black; please specify when ordering

Order no.: 0191-016



TROLLEYBAG – clothing bag

- No heavy lifting: trolley casters for easy transport
- Everything fits: large main compartment for complete protective clothing
- Everything in its place: separate organiser compartment for small items
- Dimensions (L x W x B): 79 x 37 x 35 cm
- Weight: approx. 2950 g
- Volume: approx. 80 litres
- Fabric: 600D polyester
- Colour: black/yellow or red/black; please specify when ordering

Order no.: 0191-017



Storage

CPS storage bag (CCPS horizontal STANDARD)

- Made of chemicals resistant, robust POYLRAN-L fabric
- With carrying handles, foldable
- With eyelet on the zip for sealing the bag
- Comfortable donning and doffing of the protective suit directly on the pocket fabric
- Dimensions: 2100 x 600 x 120 mm with all-round zip
- Colour: red

Order no.: 0191-003 (CPS horizontal)

CPS storage bag (CPS horizontal or hanging SMART)

- Design as for article 0191-003
- Plus internal loops to secure the CPS boots in the bag to prevent them slipping when stored hanging.

Order no.: 0192-000 (CPS horizontal)

CPS storage bag (CPS horizontal or hanging PLUS)

- Design as article 0192-000, plus:
- Fabric loop on zip
- Two additional carrying loops on the short sides
- Click fastener for compact carrying of the bags

Order no.: 0192-001 (CPS horizontal)



Subject to technical changes without notice; product may deviate from illustrations.

Storage

GYM BAG

- Fabric: 100 % polyester
- Polyester 600 D
- With chord for wearing over the shoulder
- JAKO logo in main colour
- Size 47 x 38 cm (L x W)
- Colour: black

Order no.: 4000-822



CHALLENGE BACKPACK

- for a change of clothing (CPS coveralls) and disinfectant wipes on site.

- Fabric: 100 % polyester
- Polyester 600 D
- 2-way zip
- Large main compartment
- Small inner pocket with zip
- Padded carrying straps
- Separate, 10 cm high bottom compartment
- JAKO logo in contrast colour
- Size: approx. 30 litres
- Colours: Black or marine

Order no.: 4000-820



SPORTS BAG WITH SIDE WET ITEM POCKET

- Fabric: 100 % polyester
- Polyester 600 D
- Spacious main compartment with all-round 2-way zip
- Zipped compartment on the left side
- Deep wet items pocket with zip on the right side
- Small inner pocket with zip in the main compartment
- Size-adjustable, detachable shoulder strap
- JAKO logo in main colour
- Size: approx. 60 litres
- Colour: black

Order no.: 4000-821



Subject to technical changes without notice; product may deviate from illustrations.

SPECIAL
ACCESSORIES

ANGEL
SENSOR SYSTEMS

ANGEL SENSOR SYSTEMS



SAFETY & TECHNOLOGY

ANGEL SENSOR SYSTEMS ORDERING DATA OVERVIEW

ANGEL LIGHT (LED sensor light system – complete for VS 5, VSF 5, VS 20, VSF 20 and VSF 21) **Order no.: 0181-022**

ANGEL SIGNAL (LED WARNING SIGNAL with F-AU 1 SYSTEM for VS 20, VSF 20) **Order no.: 0181-033**

ANGEL CONTROL/SIGNAL: TESIMAX sensor housing in CPS (pressure/temperature) with Bluetooth for VS 5, VSF 5, VS 20, VSF 20 and VSF 21 **Order no.: 0181-050**

ANGEL CONTROL/SIGNAL: TESIMAX holder cuff **Order no.: 0181-051**

ANGEL CONTROL/SIGNAL: TESIMAX control and visualisation system holder of your choice **Order no.: 0181-053**

ANGEL CONTROL/SIGNAL: TESIMAX app (for connecting sensor unit with control and visualisation system holder) **Order no.: 0181-052**

ANGEL CONTROL/SIGNAL: TESIMAX COMPLETE STARTER KIT for VS 5, VSF 5, VS 20, VSF 20 and VSF 21 protective suits **Order no.: 0181-055**

ANGEL EYE (holder for camera adapter only for VS 20 protective suits) **Order no.: 0181-042**

ANGEL EYE (alternative CPS camera systems with/without transmitter/receiver) **Please enquire**

ANGEL SENSOR CENTRAL BATTERY **Order no.: 0181-031**

- The battery pack can be used for all versions.

- Required cables and plugs are (exclusively) integrated into the protective suit ex works.

CPS CAM ADAPTER: TYPE VS 20

Adapter mount for optional camera system only for VS 20 protective suits. This optional mount allows you to integrate a camera system into the protective suit. The camera system has its own power supply, LTE-5G. The mount and camera system can be fitted in the suit and removed again very quickly. The system as a whole is explosion protected and is gas- and liquid-tight. Recommended use: unrestricted (when safety instructions are observed). Only electronic devices recommended by TESIMAX can be used in conjunction with the protective suit. The system is patented.

Order no.: 0181-042

CPS CAM ADAPTER: ANGEL CONTROL cuff

The adapter of the Angel Control cuff is chemicals resistant and gas-tight. The cuff is connected over the sleeve of the TESIMAX protective suit (outside). The reusable cuff can also be removed quickly. The cuff has a unique docking feature for holding an electronic device.

TESIMAX holder cuff

Order no.: 0181-051

Choice of TESIMAX control and visualisation system holders

Order no.: 0181-053

TESIMAX APP: with BT connection to the sensor unit and the external control and visualisation system

Order no.: 0181-052

ACCESSORIES: An explosion-proof hand torch is optionally available.

Order no.: Please enquire

Recommended use: limited (in compliance with the safety instructions). Only electronic devices recommended by TESIMAX can be used in conjunction with the protective suit. The system is patented.

UNI cam: for all protective suits

The optional UNI helmet camera system is available in two versions:

- UNI M1: Helmet camera version
- UNI M2: Visor camera version (only in conjunction with cam adapter VS 20 UNI M2)

ACCESSORIES

- Both versions are available for recording to SD card.
- Both versions are available with radio transmission (transmitter/receiver).
- A UNI camera with LTE connection is available on request. Recommended use: limited (in compliance with the safety instructions). Only electronic devices recommended by TESIMAX can be used in conjunction with the protective suit. The system is patented.

Order no.: 0181-042

Safety note

TESIMAX adapter (cuff and cam holder)

The compatibility of the adapters for holding electronic devices is tested in accordance with EN 943 Parts 1 and 2 (ET) and is monitored annually in accordance with PPE Regulation 2016/425.

Optionally available electronic devices

For optionally available non-TESIMAX electronic devices, observe the manufacturer's instructions.

TESIMAX accepts no liability for the devices of third-party manufacturers; selection and use is at the user's own risk.

Before using electronic devices in operations, always carry out an appropriate risk assessment (DGUV). The electrical equipment used during operations and training must be selected such as to prevent electrical hazards for firefighters under the expected conditions.

Note the following:

- We recommend direct use in the environment (outside a totally encapsulated suit) only with approved explosion protected, chemicals resistant, gas-tight devices that also fulfil the specified minimum requirements regarding the respective thermal and mechanical risks. Contact TESIMAX for further information.
- We recommend indirect use in the environment (within a totally encapsulated suit) only with tested TESIMAX PPE combinations that comply with EN 943 in conjunction with Module C2 in accordance with PPE Regulation 2016/425.
- Only devices recommended by TESIMAX can be used in conjunction with the protective suit.
- Observe the usage instructions for the TESIMAX protective suit.



ANGEL LIGHT® SYSTEM (VS 20, VSF 20 series)

The ANGEL LIGHT® SENSOR SYSTEM allows safe working even at night or in dark rooms, tunnels, underground, etc. and ensures that you have your hands free for your task. It is the world's only sensor-controlled LED suit system and is patented by TESIMAX.

- ANGEL LIGHT LED lighting system Order no.: 0181-022
- Full set
- ANGEL LIGHT LED battery pack (not charged) Order no.: 0181-031
- ANGEL LIGHT Battery charger Order no.: 0181-032
- As of 2021, ANGEL LIGHT, CONTROL and SIGNAL have a central rechargeable battery)





SAFETY & TECHNOLOGY

ANGEL CONTROL SENSOR SYSTEM (T.AC) for VS 5, VSF 5, VS 20, VSF 20 and VSF 21 series

System components 1–4:

- No. 1: Protective suit SENSOR HOUSING UNIT (BT) – internal
- No. 2: Mobile holder for electronic control and visualisation system (T.AC) app
- No. 3: Electronic control and visualisation system
- No. 4: TESIMAX ANGEL CONTROL app

In general, the system is optimised for TESIMAX VS 20 and VSF 20 suits but can also be used in a light version for VS 5, VSF 5 and VSF 21 (please enquire).

No. 1: CPS SENSOR HOUSING UNIT (BT)

The newly developed ANGEL CONTROL SENSOR SYSTEM is an internal, splash-proof CPS sensor system in a housing with BT connectivity to the T.AC app. It supports the wearer's perception in action through various sensors inside and on the outside of the suit.

- The sensor measures the pressure and temperature inside the suit
 - with thermal sensors (internal temperature)
 - with pressure sensors (envelope leaktightness and exhalation valve function test)
 - For further sensors please enquire (the system is modular and expandable)
- The data is automatically transmitted to the T.AC app of the electronic control and visualisation system via Bluetooth
- Suits are numbered
- Countdown to deployment: If the sensor readings fall outside the tolerance levels, an LED warns the suit wearer.
- The system can be easily integrated in VS 20/VSF 20 suits and is easy to remove.

- **The system has the following properties:** chemical resistant, gas-, liquid-, particle- and aerosol-tight, washable, decontaminable, suitable for use in hazardous areas.

T.AC SENSOR HOUSING UNIT (BT): Order no.: 0181-050

No. 2: Mobile phone holder

The removable (chemical resistant and decontaminable) protective suit holder is optimised for the tested, modular electronic T.AC control and visualisation system. The mobile phone holder is a basic requirement for the ANGEL CONTROL system in conjunction with the T.AC sensor unit and the T.AC app.

Note: The mobile phone holder can also be used for other suitable (hazardous area protected) electronic devices. Please enquire.

T.AC MOBILE HOLDER: Order no.: 0181-051

No. 3: Electronic control and visualisation system

There are different T.AC control and visualisation systems, each selected, tested and optimised for mobile phone holder (No. 1): Mobile systems (smartphones)

- Rugged, waterproof system (standard smartphone)
- Rugged, waterproof system with extended functions (industrial smartphone with sensor technology)
- Rugged, waterproof system for hazardous areas (industrial smartphone with hazardous area protection)

Note: Android version 5.0 or later (iOS is not supported)

Note: Only systems tested by TESIMAX and compatible with the ANGEL CONTROL cuff allow optimum usage.

Mobile systems (thermal imaging cameras)

- Various thermal imaging cameras optionally available – please enquire

Note: Only systems tested by TESIMAX and compatible with the ANGEL CONTROL cuff allow optimum usage.

Mobile systems (gas detection)

- Various detection systems optionally available – please enquire

Note: Only systems tested by TESIMAX and compatible with the ANGEL CONTROL cuff allow optimum usage.

T.AC SMARTPHONE: Order no.: 0181-053 + suffix (see above)

No. 4: TESIMAX ANGEL CONTROL app

- Software platform for camera and sensor data wireless transmission (BT/WiFi).
- This app starts the setup for the camera and sensor unit.

T. AC App: Order no.: 0181-051

• ANGEL SENSOR SYSTEMS BATTERY PACK

The central, internal battery pack supplies all TESIMAX SENSOR systems:

- ANGEL LIGHT, ANGEL SIGNAL (only in combination with F-AU 1–3), ANGEL HEART

Order no.: 0181-031

SPECIAL
ACCESSORIES

RESPIRATORY
PROTECTION-
SYSTEMS

COMPRESSED

AIR



CPS forced ventilation system F-AU

F-AU 1-10 safety standards (EN 943)

Air supply source:

- Must deliver > 300 l/min at 5.5 bars
- Recommended: Constant 800 l/min at 9 bars to operate up to four TESIMAX suits with F-AU 1-8 (may differ according to choice of F-AU).

Air pressure:

- Max. pressure inside CPS: $x < 400$ Pa (4 mbar)
- CPS exhalation valves open at: $x > 200$ Pa (2 mbar)

Air supply:

- Recommended: To EN 270:1994/to CPS manufacturer's guidelines

Air quality:

- Recommended: To EN 12021 ("breathing air")

Air supply:

- Pull-out strength of unit > 1000 N
- Pull-out strength of unit and hose > 250 N

No impairment through internal cooling

Warning and measuring device must be fitted

- Measurement of minimum air volume flow rate according to manufacturer's instructions
- Audible/visual (e.g. ANGEL SIGNAL[®])

Coupling on suit (interface) must be able to rotate and be self-locking

- F-AU 1/3 with flat-face technology; F-AU 2/4 with simple lock, F-AU 1-4: 360°

- Harness for stabilizing suit on body

Tested breathing air hoses

- Kink-resistant hose unions (steel spiral)

Cleaning and disinfection

- Connections must be easily and safely disconnectable

Compressed air – TESIMAX tip:

1. There are systems that are independent of ambient air (e.g. filters of the VSF 21 series, powered filters and head sections) and compressed air systems that are independent of ambient air (e.g. closed-circuit air lines, SCBA and cylinders in combination with our mobile cylinder carts and compressors and CPS to EN 943 Parts 1 and 2 (ET), types 1a, 1b, 1c.

2. Always observe the required air pressure (intake and outlet) according to manufacturers' guidelines (verified safety)

F-AU 1/2/4: Recommended guaranteed pressure $x > 6$ bar

F-AU 3: Recommended guaranteed pressure $2 < x < 3$ bar

3. How long are operations likely to take?

See also the applicable technical regulations, such as BGR GUVR 190 (in Germany) and manufacturer's guidelines

Fresh air during operations



The TESIMAX F-AU series for CPS ...

- provides breathing air that is much cleaner than environmental air
- enhances your wellbeing with efficient respiratory protection systems
- boosts your performance through effective breathing apparatus
- protects your health at all times to allow you to breathe easy

and therefore ...

- guarantees compliance with the strictest European standards
- provides the perfect respiratory protection for use with our PPE
- is ideal for environments in which a sufficient oxygen content in the air cannot be guaranteed

The products ...

- offer maximum mobility
- are used by many fire services and in industry
- have a proven track record



Ordering data and spare-ordering list

Designation	Order number
UPGRADE FOR EXTERNAL AIR SUPPLY, BREATHING AIR & VENTILATION (VS 5, type 1a) - F-AU 1: External air supply with visual warning indicator, outside (flat-face) Alternative: Also available with Euro sealing nipple (not flat-face)	Order no.: 0250-021 A Order no.: 0250-021 B
UPGRADE FOR EXTERNAL AIR SUPPLY, BREATHING AIR & VENTILATION (VS 20, type 1a) - F-AU 1: Complete system: External air supply F-AU 1 with ANGEL SIGNAL® (flat-face) Alternative: Also available with Euro sealing nipple (not flat-face)	Order no.: 0250-020 A Order no.: 0250-020 B
UPGRADE FOR EXTERNAL AIR SUPPLY, BREATHING AIR (VS 5, VS 20, type 1a) - F-AU 2: DFT (TESIMAX feedthrough) with forced ventilation option, without internal ventilation (with flat-face) - F-AU 2 alternative: DFT (TESIMAX feedthrough) with forced ventilation option, without internal ventilation (no flat-face) - F-AU 2 alternative: Complete system – DFT with internal/forced ventilation LIGHT (with flat-face) - F-AU 2 alternative: Complete system – DFT with internal ventilation, also available with Euro sealing nipple (not flat-face) Order no.: 0250-012 D	Order no.: 0250-012 A Order no.: 0250-012 B Order no.: 0250-012 C
UPGRADE FOR EXTERNAL AIR SUPPLY, BREATHING AIR & VENTILATION (VSF 20: Type 1c) - F-AU 3: Complete system – external air supply with ANGEL SIGNAL® - F-AU 3: Complete system – external air supply with visual warning indicator, external	Order no.: 0250-013 Order no.: 0250-017
UPGRADE FOR PURE VENTILATION (VS 5, VS 20: Type 1a, GS 3/GS 3M: Type 1b) - F-AU 4 A: Complete system – forced air supply for ventilation with control valve, stepless (external Euro sealing nipple long CLOSE UP) No flat-face technology, no flat-face adapter necessary - F-AU 4 B with additional short, external Euro coupling (external breathing air source), - F-AU 4 -A: Complete system – forced air supply for ventilation with setting 0/2/30/100 l/min. The supply should be ensured via an external breathing air source (external sealing nipple, long CLOSE UP Euro nipple) No flat-face technology, no flat-face adapter necessary - F-AU 4 D: with additional CLOSE UP Euro nipple inside (second connection SCBA/only VS 5/VS 20 series), No flat-face technology, no flat-face adapter necessary - F-AU 4 E: Positive pressure airline apparatus type A with pressure gauge, flat-face nipple (outside) and 30 cm hose with flat-face nipple inside - F-AU 4 F: Positive pressure airline apparatus type A with pressure gauge, Euro sealing nipple (outside) and 30 cm hose with Euro nipple inside - F-AU 4 G – Internal ventilation 0-5-30-100 l/min with control valve, 1x Euro sealing nipple (outside): and 1x integrated breathing air hose (approx. 85 cm), Euro coupling (inside): f. VS 5, VS 20	Order no.: 0250-022 A Order no.: 0250-022 B Order no.: 0250-018 C Order no.: 0250-018 D Order no. 0250-019 E Order no. 0250-019 F Order no.: 0250-018 G
ACCESSORIES for the F-AU series - F-AU: Accessory – extension hoses with short Euro coupling and Euro nipple (95 series) incl. colour marking. Various lengths: - 30 cm extension hose - 50 cm extension hose - 70 cm extension hose	Order no.: 0250-034 Order no.: 0250-035 Order no.: 0250-036
Splash guard covers for the F-AU series (optional): - F-AU Outer protective cover, made fully of suit fabric - F-AU sealing nipple for F-AU outside, black plastic - F-AU sealing nipple for F-AU outside, stainless steel	Order no.: 0250-033 Order no.: 0250-100 Order no.: 0250-101
Adapters - Adapter – various connections - Double plug-in nipple (Euro safety nipple) - One nipple is colour-coded (nipple with check valve) - T-connector air distribution with 2 Euro sealing nipples and 1 Euro coupling	Order no.: 0250-024 order no.: 0250-025
UPGRADE FOR COMPRESSED AIR - F-AU 5: Compressed air control system with cooling (clip-on adapter for F-AU 1-4 – VORTEX) - F-AU 6: Compressed air control system with heating (clip-on adapter for F-AU 1-4 – VORTEX) - F-AU 10: TESIMAX Automatic changeover, e.g. for internal ventilation/forced ventilation (changeover) for VS 5 CHEMBA/cylinder cart - F-AU 11: As alternative to F-AU 10: Positive pressure airline apparatus from various manufacturers with warning device	Order no.: 0250-038 Order no.: 0250-039 Order no. 0250-040 Order no.: 0250-041

CPS forced ventilation system F-AU

Forced air supply with automatic changeover model F-AU 1 external/SCBA

Note:

Only for wearers of TESIMAX totally encapsulated suits, for example to EN 943-1: Type 1a and EN 943-2: Type 1a-ET

Description:

The forced air supply apparatus with automatic changeover valve is typically used wherever the wearer has a long way to and from the incident location.

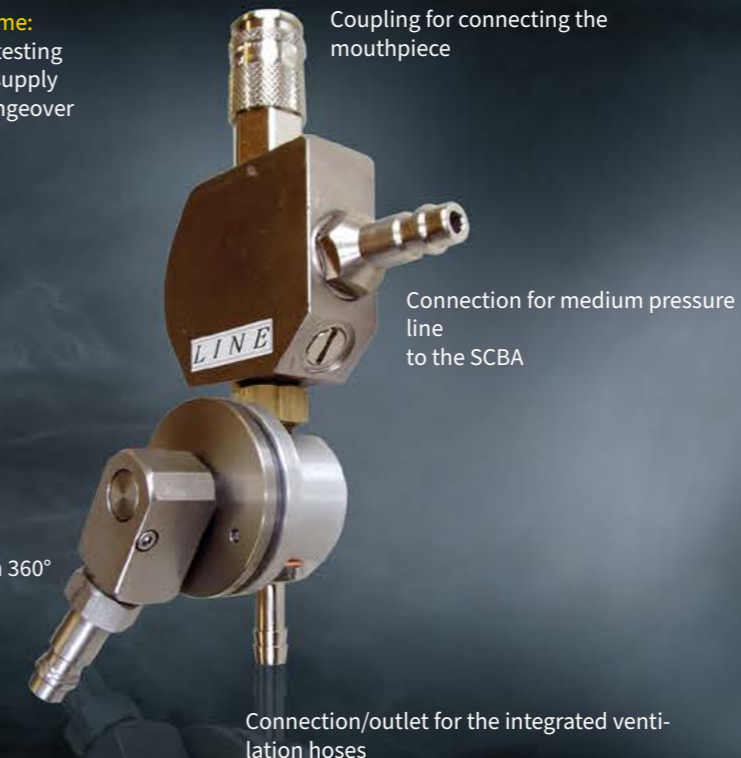
The use of a forced air supply (at a pressure of 6 to 8 bars) ensures that the SCBA cylinder air remains at its maximum volume until the firefighter reaches the incident location. When the external air supply hose is disconnected, the changeover valve automatically switches over to cylinder air from the wearer's SCBA. This leaves the firefighter fully mobile and unhindered by the external air hose.

On completion of the operation, the external hose is reconnected for the return journey. Should the SCBA's cylinder air be fully depleted, the external supply provides enough time for a preliminary decontamination before the protective suit is unzipped. During forced air operation, the suit is flushed with about 60 to 80 litres of air per minute. Heat and moisture escape through four pressure relief valves to ensure a comfortable climate within the suit.



Example illustration

TESIMAX scheme:
Function and testing
Breathing air supply
with auto changeover



Pressure Flow Master

The CleanAIR® Pressure/Pressure Flow Master systems create a constant airflow in hoods and masks and are therefore suitable for long-term work in the harshest industrial environments. The regulator on the belt unit can adjust the amount of air coming from the central compressed air distribution system or a compressor and keeps it at a constant level regardless of changes in inlet pressure.

FUNCTIONS AND BENEFITS

- Low weight
- Energy-saving operation
- High airflow
- Low pressure warning (Pressure Flow Master)
- Optional air filtration with CleanAIR® Conditioner
- Compatible with a wide range of CleanAIR® head sections

APPLICATIONS

The system is suitable for heavy-duty industrial environments, laboratories and the chemical industry.

Certification

- EN 14594 Class 3 B
- EN 14594 Class 2 A

TECHNICAL DATA

- Air flow 160–250 l/min
- Weight: 280 g
- Inlet connection compatible with RECTUS 25, 26 and CEJN 320
- Outlet connector CA40x1/7"

PRODUCT VARIANTS

Product description	Order no.
CleanAIR® Pressure with accessories	63 00 00
CleanAIR® Flow Master with accessories	67 00 00
CleanAIR® Pressure Conditioner with mount	61 00 50



SELECTION OF SUITABLE RESPIRATORY PROTECTION

(based on determined nominal protection factor)

1. Determine the concentration of the hazardous substance at the workplace.
 2. Determine the assigned workplace protection factor (workplace exposure limits, WEL). For the list of common contaminants and relevant concentration limits, see our Filter Guide (Source: EH40/2005 Workplace Exposure Limits) or contact local authorities. Workplace exposure limits are occupation-specific averages (concentrations) of a pollutant in the air over a reference period without significant adverse health effects on personnel exposed to the substance. The limits can be set for two reference periods: as a time-weighted average (TWA) over eight hours, or as a short-term exposure limit (STEL) within a 15 minute timespan. Time-weighted average (TWA) – 8 hours (long term)
- The TWA limits are specified to prevent effects on health from long-term or cumulative exposures. STEL (short-term exposure limit) – 15 minutes (short term) The STEL are designed to prevent effects on health from short-term exposures (e.g. eye irritation that occurs after a few minutes). If a substance is not on the workplace exposure limit (WEL) list, it does not mean that it is safe. Exposure to these substances must be limited to a level to which workers can be exposed on a daily basis without adverse health effects.
3. Determine the minimum required protection factor of the respiratory protective equipment.

Example: Filter breathing apparatus with a class TH3 hood according to EN 12941 has a maximum inward leakage of 0.2 %. Its NPF is therefore $100\% / 0.2\% = 500$.

NOMINAL PROTECTION FACTOR (NPF)

The nominal protection factor is a guideline value for respiratory protective equipment calculated on the basis of laboratory measurements. It represents the calculated maximum required respiratory protection. It is calculated by dividing 100 by the maximum total inward leakage as specified in the applicable standard.

MAXIMUM HAZARDOUS SUBSTANCE CONCENTRATION FOR A SPECIFIC BREATHING APPARATUS?

The highest permissible concentration can be determined by multiplying the nominal protection factor (as given in the NPF table) and the occupational exposure limit.

CAUTION!

If the hazardous substance is present in the form of both particles and gas, a nominal protection factor must be established for both the particles and the gas and the higher protection factor must be applied.



**SPECIAL
ACCESSORIES**

**RESPIRATORY
PROTECTION
SYSTEMS**

**POWERED
SYSTEMS**



UNIMASK® PROTECTIVE HOODS

Enhance your protection by simply clipping the protective hood over your UniMask®.

Made of lightweight, microporous polypropylene or washable antistatic fabric. Available in two lengths.

Product description	Order no.
UniMask® hood, short	72 03 60
UniMask® hood, long	72 03 61
UniMask® hood, long, washable	72 03 62

COMPATIBLE WITH SAFETY HELMETS

UniMask can be used with a wide range of industrial safety helmets to provide handy combined head, face and respiratory protection.



FACE SEAL MATERIAL AND COLOUR OPTIONS

UniMask® is available with two types of face seal:

- Comfortable 3D textile
- Easy-care neoprene

Product description	Order no.
UniMask® face seal, grey	72 03 50.01
UniMask® face seal, blue	72 03 50.02
UniMask® face seal, orange	72 03 50.03
UniMask® face seal, red	72 03 50.04
UniMask® face seal, neoprene	72 03 50.08

Chemical 2F

Compact and lightweight yet powerful

The most versatile and durable breathing apparatus on the market. The compact, lightweight Chemical 2F powered air-purifying respirator is exceptionally robust, chemical resistant and meets the requirements of a high protection class. Its clever design with a smooth surface makes it easy to decontaminate by showering or submersion. The unique closing system prevents accidental contamination when the filters are changed. The intelligent airflow control ensures a constant airflow even if the filters are clogged or the battery level is low. Audible and visual alarms warn when the battery needs recharging or a filter needs replacing. Thanks to the optional high-performance battery, the air flow can be adjusted between 120 and 235 l/ min throughout the shift.

FUNCTIONS AND BENEFITS

- Compact design and low weight
- Compatible with a hood, mask or ventilated protective suit
- High mechanical and chemical resistance
- Increased ingress protection allows decontamination by shower or even full immersion (IP64/IP65/IP68)
- The full-colour display clearly shows all the relevant information – filter clogging, battery charge, airflow
- The Flow Control system maintains constant airflow regardless of the level of filter clogging or battery charge.
- Operation time up to 16 hours with Heavy Duty battery, or up to 10 hours with standard battery
- Short battery recharging time < 3 hours (standard battery)
- Audiovisual alarm
- Multilingual user interface
- Back harness available for increased comfort

APPLICATIONS

- Highly polluted industrial environments including chemical and pharmaceutical industry
- Remediation operations, laboratories
- First responders and emergency teams
- Biological protection

PRODUCT VARIANTS

Product description	Order no.
CleanAIR® Chemical 2F, incl. compression belt, lithium-ion battery, charger	51 00 00FCA

CleanAIR® Chemical 2F, incl. decontaminable belt, lithium ion battery, charger	51 00 00FDA
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The unique closing system prevents accidental contamination when the filters are changed.



HARNESS FOR MORE BACK SUPPORT AND HIGHER COMFORT

Product description	Order no.
Decontaminable belt, PVC – 2F/3F	51 00 51
Decontaminable harness, PVC – 2F/3F	51 00 52

CA-1

Ultralight hood with superior breathing protection

This short light hood is an optimal solution for respiratory protection and face protection in dusty and light chemical environments where no further mechanical protection is required. In combination with PAPR or airline systems CleanAIR® it reaches the highest level of respiratory protection. It provides a perfect fit for various head types due to adjustable headgear and comfortable elastic rubber band. The distance of the visor can be set individually, as well as the perimeter of the headgear. The light nylon fabric and spacey cut makes it pleasant to wear even for long time work. The wide panoramic visor with antifog coating ensures undisturbed view and provides basic mechanical protection of the eyes.

TECHNICAL DATA

Weight: 180 g
Material: Hood – nylon
Visor – cellulose propionate
Protection factor (NPF): 500
Hose connection: QuickLOCK™
Certification: EN 12941 TH3 to EN 14594 3A, EN 166 1 S F

FEATURES AND BENEFITS

- Superior breathing protection
- Wide visor with antifog coating
- Individual headgear settings – adjustable perimeter and distance from the visor
- Pleasant to wear due to the spacy cut and light weight durable material
- Basic mechanical eye protection to EN 166
- Practical reflective tab on the top

APPLICATIONS

This hood is suitable for use in dusty and lightly chemically contaminated environments in the pharmaceutical and chemical industry.

Short hood CA-1, orange Order no.: 0270-511 CA-1 orange
Short hood CA-1, blue Order no.: 0270-511 CA-1 blue



CA-2

Ultralight long hood with superior breathing protection

This long light hood ensures respiratory protection and protection of the head, neck and shoulders in dusty environments where no further mechanical protection is required. In combination with PAPR or airline systems CleanAIR® it reaches the highest level of respiratory protection. It provides a perfect fit for various head types due to adjustable headgear and comfortable elastic rubber band. The distance of the visor can be set individually, as well as the perimeter of the headgear. The light nylon fabric and spacey cut makes it pleasant to wear even for long time work. The wide panoramic visor with antifog coating ensures undisturbed view and provides basic mechanical protection of the eyes.

TECHNICAL DATA

Weight: 240 g
Material: Hood – nylon
Visor – cellulose propionate
Protection factor (NPF): 500
Hose connection: QuickLOCK™
Certification: EN 12941 TH3 to EN 14594 3A, EN 166 1 S F

FEATURES AND BENEFITS

- Superior breathing protection
- Wide visor with antifog coating
- Individual headgear settings – adjustable perimeter and distance from the visor
- Pleasant to wear due to the spacy cut and light weight durable material
- Basic mechanical eye protection to EN 166
- Practical reflective tab on the top
- Head, neck and shoulder protection

APPLICATIONS

This hood can be used in dusty or light chemical environments. It is suitable for spraying and painting work as well as for use in laboratories and the pharmaceutical industry.

Long hood CA-2, orange Order no.: 0270-511 CA-2 orange
Long hood CA-2, blue Order no.: 0270-511 CA-2 blue



CA-10

Superior breathing protection with high chemical resistance

This chemical resistant hood ensures respiratory protection and protection of the head, neck and shoulders in the most demanding chemical environments. In combination with PAPR or airline systems CleanAIR® it reaches the highest level of respiratory protection.

The hood has an extended service life and can be decontaminated because of the light laminated fabric with taped seams. It is still very light and comfortable thanks to the inner antiseptic fabric which absorbs sweat and provides an additional seal. It provides a perfect fit for various head types due to adjustable headgear and comfortable elastic rubber band. The distance of the visor can be set individually, as well as the perimeter of the headgear. The distance of the panoramic antifog visor and the headgear perimeter can be individually set.

TECHNICAL DATA

Weight: 220 g
Material: Hood – nylon
Visor – cellulose propionate
Protection factor (NPF): 500
Hose connection: QuickLOCK™
Certification: EN 12941 TH3 to EN 14594 3A, EN 166 1 S F

FEATURES AND BENEFITS

- Superior breathing protection
- Long life span, decontaminable
- Antiseptic inner fabric that absorbs sweat and provides extra sealing
- Wide visor with antifog coating
- Individual headgear settings – adjustable perimeter and distance from the visor
- Pleasant to wear due to the spacy cut and light weight durable material
- Basic mechanical eye protection to EN 166
- Practical reflective tab on the top

APPLICATIONS

The hood can be used in all environments demanding high durability and chemical resistance. It is suitable for spraying and painting operations as well as for use in laboratories and pharmaceutical or chemical industries.

Long hood CA-10, chemical resistant
Order no.: 0270-511 CA 10



UniMask

Light universal face shield providing the highest comfort and safety

This universal, light-weight face and respiratory mask offers the highest level of breathing protection with enhanced inner airflow regulation and a visor with excellent optical and mechanical features make this universal light face shield a true leader of its class. UniMask is light (just 380 g) and offers excellent user comfort. The inner airflow regulation allows the user to set direction and intensity of the air to be delivered to the face or directly into the breathing zone. Two variants – with soft textile and with a neoprene face seal – are available. The visor provides clear and undisturbed view of the highest quality (class 1 according to EN 166), high mechanical resistance and antifog coating. UniMask is easy to use and all spare parts are quickly and easily removable which enables fast and simple maintenance.

TECHNICAL DATA

Weight: 380 g
Material: Frame – polyamide
Face seal – neoprene or 3D polyamide knit
Visor – polycarbonate
Protection factor (NPF): 500
Hose connection: QuickLOCK™
Certification: EN 12941 TH3 to EN 14594 3B, EN 166 1 FT B K N

FEATURES AND BENEFITS

- The highest class of breathing protection TH3
- Enhanced inner airflow regulation
- Light weight – only 380 g
- Excellent optical quality – EN 166 class 1
- High mechanical resistance of the visor
- Antifog coating
- Safety helmet compatible
- Neoprene or textile face seal option
- Easy to use and adjust
- Fast and simple maintenance

APPLICATIONS

The UniMask is suitable for spraying and painting in environments with low chemical resistance requirements, such as the chemical and pharmaceutical industries and laboratories.

Face shield UniMask, grey	Order no.: 0270-510 grey
Face shield UniMask, blue	Order no.: 0270-510 blue
Face shield UniMask, orange	Order no.: 0270-510 orange
Face shield UniMask, red	Order no.: 0270-510 red
Face shield UniMask, neoprene	Order no.: 0270-510 neoprene



A new system with 5-point head harness is available from 2024, for better wearing comfort.



INNER AIRFLOW REGULATION

QUICKLY EXCHANGEABLE FACE SEAL WITH EASY MAINTENANCE

The face seal ensures secure and comfortable fit for the wearer. Thanks to a fast click-in system the face seal can be easily and quickly removed and re-attached. The face seals are machine washable and can be dried in a tumble drier.

QUICK AND EASY VISOR REPLACEMENT

Should the visor have to be replaced or separately cleaned, it can be easily removed and refitted to the hood using two simple locking knobs.

TORIC VISOR WITH AN EXCELLENT OPTICAL QUALITY

UniMask is the only universal faceshield of its class on the market with a toric visor, which offers the best class of optical quality (EN 166 class 1). The visor offers an outstanding field of vision. Its antifog, anti-scratch coating increases the mechanical durability and extends the life time of the visors significantly. It provides protection against high-speed particles with medium energy.

SAFETY HELMET COMPATIBLE

UniMask can be used with a wide range of industrial safety helmets to provide handy combined head, face and respiratory protection.



PRESSURE HOSES

Standard compressed air hose for CA Pressure – 10 m
Order no.: 61 00 30

Standard compressed air hose for CA Pressure – 25 m
61 00 38

Standard compressed air hose for CA Pressure – 50 m
61 00 39

Antistatic compressed air hose for CA Pressure – 10 m
61 00 31

Antistatic compressed air hose for CA Pressure – 25 m
61 00 33

Antistatic compressed air hose for CA Pressure – 50 m
61 00 34

Spiral compressed air hose for CA Pressure – 10 m
61 00 4



HOSES

Lightweight flexible hoses with QuickLOCK™ connection system for secure connection of the complete CleanAIR® head sections except for the masks.

Lightweight flexible hose (QuickLOCK™ – CA40x1/7")
71 00 60

Lightweight flexible hose (QuickLOCK™ – CA40x1/7" long)
71 00 60L

Rubber hose (QuickLOCK™ – CA40x1/7")
71 00 86

Rubber hose (QuickLOCK™ – Ca40x1/7" long)
71 00 86L

Hoses only compatible with masks:
Lightweight flexible hose CA40x1/7"
70 00 60

Rubber hose CA40x1/7"
70 00 86CA

Rubber hose Ca40x1/7" long
70 00 86L

Rubber hose Ca40x1/7" 90°
70 00 86R

Rubber hose Ca40x1/7" 90° long
70 00 86RL



Filters



Product code: 50 01 57/3
Type A2P3



Product code: 50 03 57/3
Type A1P3



Product code: 50 01 67/3
Type A2B2P3



Product code: 50 01 66/3
Type A2B2E2K2HgP3

Accessories

Comfort belt Super (Basic, 2F)
71 00 92

Comfort belt Standard (Basic/Pressure)
71 00 93

Comfort belt CA AerGO®
30 00 92

Komfortgürtel3F
52 00 43.1

Leather comfort belt Super (Basic, 2F)
72 00 92

Leather comfort belt CA Basic
72 00 93

Leather belt CA AerGO®
32 00 92

Padded comfort harness 2F/3F
52 00 44.1

Belt extender – extend your belt by up to 30 cm
71 00 99*



Teamwear & functional wear

- Tested and recommended for TESIMAX chemical protective suits
- Also as corporate and sports wear



Teamwear overview

Firefighter sports and functional wear

Quality, availability and sustainability:

- First-class, robust workmanship -> each garment available in firefighter teamwear or workwear quality (tested by the Hohenstein Institute).
- Sporty cut. Superior wearing comfort.
- Best availability through logistics centre stocking at least 95% of articles with over 15,000 pallet bays, in cooperation with one of Europe's largest high-bay warehouses -> optimal supply of goods guaranteed.
- Long article product life.
- Sustainability through the use of organic cotton and natural fibres.

Optionally:

- Organic Line:
 - Organic cotton (sustainable)
 - Pre-shrunk, dimensionally stable, colourfast
 - Very long durability due to reinforced seams and combed, ring-spun cotton fibres
- Industry Line:
 - Functional cotton combined with functional polyester
 - Available in 8 colours
 - Washable at 60 °C, suitable for industrial laundering according to EN 15797.

All firefighter functional wear is available as standard with "FEUERWEHR" in silver lettering.

Other possible styles and finishes:

https://team.jako.de/de/team/feuerwehr_tesimax

Individual finishes can be implemented directly by TESIMAX on request.

Interested?

Contact TESIMAX for your individual offer.

Top accessories (personal protective equipment) available on request.

Contact TESIMAX for an attractive special offer.



Teamwear overview

Firefighter sports and functional wear

Quality, availability and sustainability:

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Interested?

Contact TESIMAX for your individual offer.



FUNCTIONAL WEAR for protective suits

Phase-change undersuit

The phase-change thermal undersuit (with Outlast® technology) has been developed specially as insulating underclothing for the TESIMAX chemical protective suits.

Not too hot, not too cold: just right

Temperature-regulating Outlast® materials provide proactive climate management for increased comfort.

The sleeves are seamed and the trouser legs have elasticated foot loops. With its front zip, the suit is easy to put on and take off. Banded collar in neck area and shoulder, elbow and knee protection.

Tested in outer space – now here on earth

Outlast® is the only phase-change material (PCM) that has been awarded the Certified Space Technology™ seal. This technology was originally developed for NASA and is continually tested for safety and efficiency in a wide range of applications in renowned brands.

Colour: black
Size: M, L and XL available
(specify size when ordering)

Order no.: 0650-229



THERMO-FLEECE undersuit

The TESIMAX thermo undersuit has been developed mainly as insulating underwear for the SILVERFLASH® protective suit with para-aramid.

Made from a flame retardant fleece fabric with a high LOI (limited oxygen index) this overall is highly flame-retardant and features additional fabric reinforcement in the knee, elbow and shoulder areas.

The fleece material ensures wearing comfort and provides maximum thermal insulation. The sleeves are seamed and the trouser legs have elasticated foot loops. With its front zip, the suit is easy to put on and take off.

Tested to EN ISO 11612:2008.

Colour: navy blue
Size: M, L and XL available
(specify size when ordering)

Order no.: 0650-228

FUNCTIONAL WEAR for protective suits

FLAME-RETARDANT MAX FR UNDERSUIT

VERSION

- Pocket fasteners/flaps without exposed press studs or metal parts
- High collar with velcro fastener
- Sewn on hood with drawstring
- Concealed press stud placket (no zip)
- OEKO-TEX Standard 100 Class II for direct skin contact
- Approval: Type 6 – Chemical protection according to EN 13034 as well as EN 11612/EN 13688

EQUIPMENT

Flame retardant undersuit as opaque workwear and for sweat wicking under the chemical protective suit.

Properties

- CE approval
- Inherently flame retardant according to EN 11612
- Antistatic and dissipative according to EN 1149
- Arc protection according to IEC 61482-2 APC1
- Abrasion resistance to EN ISO 12947-2, 12 kPa >70,000 tours
- Tear propagation strength to EN ISO 13937-2, warp and weft >60 N
- Tear resistance to EN ISO 13934-1, warp and weft >1200 N
- Weight: approx. 260 g/m²

ORDERING DATA

Sizes: S to XXL
Colour: navy blue

Please refer to the washing and care information on the product label.

Order no.: 0650-240



Attached hood with drawstring (with storage compartment for hood).

MAX BW HYGIENE FUNCTIONAL UNDERSUIT

The MAX BW undersuit is used as an operational hygiene undersuit. Area of application: Industry, fire brigades, rescue services, police and military units.

The undersuit is comfortable to wear thanks to its sustainable natural fibres and has optimum moisture management. The fabric has odour-inhibiting and antibacterial properties and exhibits extremely good colour stability even after many washes.

Material:

- 100% natural fibre top cotton (fabric weight: approx. 175 g/m²)
- Optimised for a comfortable feel
- The fabric fulfils the OEKO-TEX Standard 100

Fabric properties:

- The material is 100% recyclable, making for sustainable PPE.
- Washable at up to 60 °C
- Suitable for tumble drying
- Elastic natural fibre for an optimised fit

Features:

- Integrated double zip fastener
- Two breast pockets
- Integrated thumb loops
- Foot strap: Elasticated band
- Sizes: S to XXL
- Colour: black

Warranty: 2 years

Service life: 10 years if stored under optimum conditions according to usage instructions.

Please refer to the washing and care information on the product label.

Packaging: Recyclable packaging

SPECIAL EQUIPMENT OPTIONS for orders of 1000 items or more

TECHNICAL UPGRADES

Together with our supplier HeiQ, we can implement technical upgrades of undersuits for orders of 1000 items or more. For prices please enquire. <https://www.heiq.ch/produkte/textiltechnologien>

LOGISTICS AND ID UPGRADES

With our partner Thermo-Tex, we offer complete process optimisation for textile logistics and identification. We can equip our textile products with RFID technology, labels or barcodes. Link: <https://www.thermo-tex.de>

VISUAL UPGRADES

Embroidered, transfer and screen printed applications are available for all TESIAMX textile products.

Interested? Get in touch with us!

Storage, maintenance and shelf life

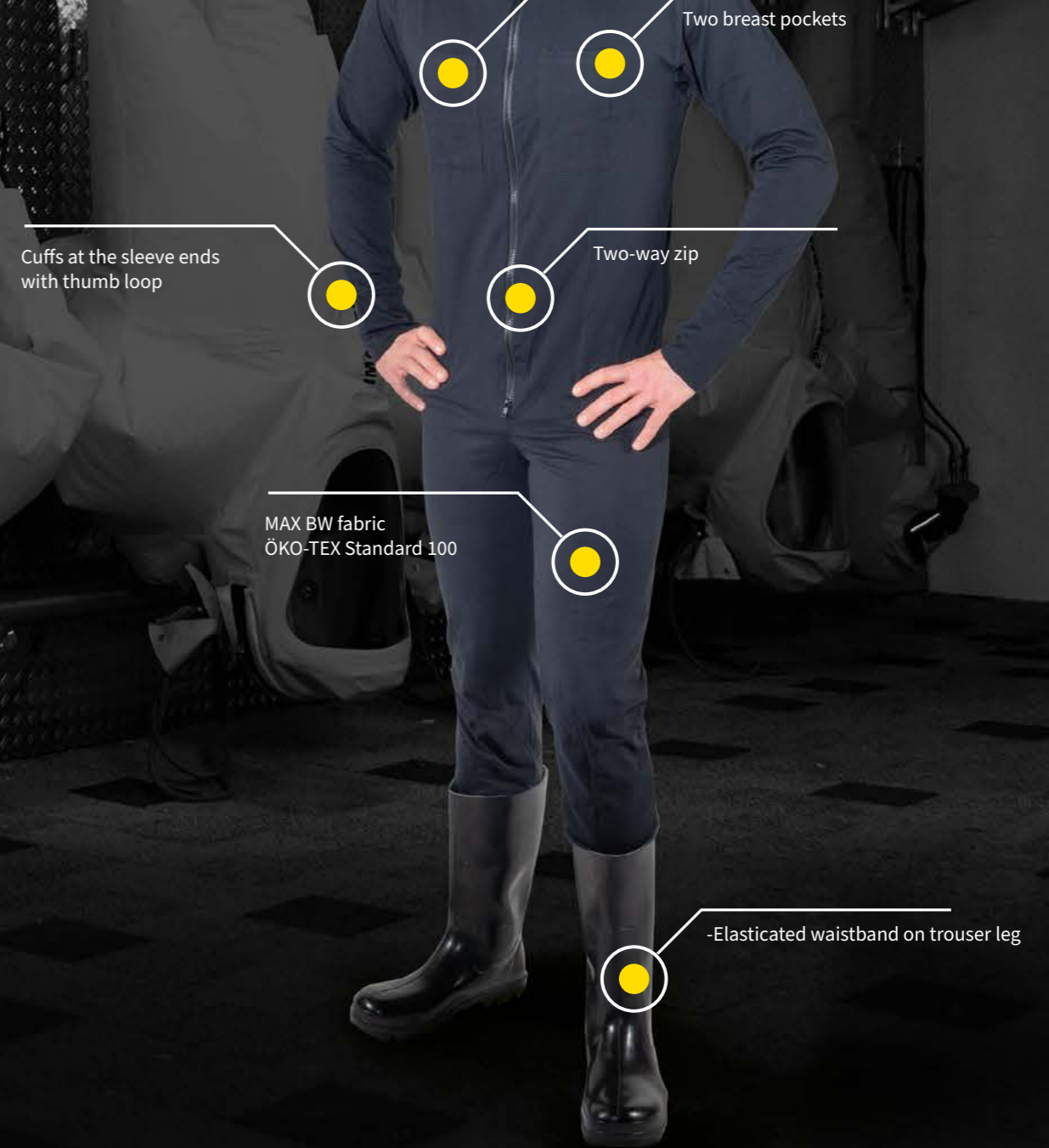
We recommend storing garments that are not in use in a well-ventilated, dry place out of direct sunlight. If possible, transport the product in its original packaging to protect it from moisture and extreme temperatures. With intensive use, the service life may be shorter than the warranty period.

The product does not contain substances in concentrations known or suspected to affect the hygiene or health of the user. However, skin irritation cannot be ruled out in sensitive persons, in which case these garments should no longer be worn.

There are no accessories or spare parts for these garments. The service life depends on the level of usage and the amount of wear resulting from the usage conditions. Improper storage conditions, incorrect maintenance and care also reduce the service life.



REAL-REUSABLE



FUNCTIONAL WEAR for protective suits

Protective coverall MAX ANTI-PAK ^{CBRN}

The ANTI-MAX coverall was developed by TESIMAX to provide effective protection against gases and harmful substances.

CBRN protection Effective and comfortable

The ANTI-MAX protective coverall is used by defence and security forces throughout the world and provides a light-weight layer of protection against CBRN agents in combination with our protective clothing:

- TESIMAX chemical protective suits (particle- and liquid-tight types 3–6)
- TESIMAX turnout gear according to EN 469 and THL protective clothing).

How the ANTI MAX CBRN works

The fabric captures CBRN agents electrostatically. It attracts CBRN gas, vapour and liquid and entraps the molecules on its surface.

- Air permeability increases effectiveness and comfort
- Comfortable to wear due to low stress and low weight
- The MAX Frontline fabric is elastic and comfortable to wear thanks to an environment-friendly natural fibre and has optimum moisture management. A 100 % activated carbon fabric layer is integrated. Protects effectively against pollutants such as PAHs and CBRN warfare agents).

Applications:

Industry, fire brigades, rescue services, police and military units

Features:

- Integrated double zip fastener
- Two breast pockets
- Integrated thumb loops
- Foot strap made of elasticated band
- Sizes: S to XXL
- Colour: black
- Warranty: 2 years
- Service life: 10 years if stored under optimum conditions according to usage instructions. Please refer to the washing and care information on the product label.
- Packaging: Recyclable.

Order no.: 0650-234

Storage, maintenance and shelf life

We recommend storing garments that are not in use in a well-ventilated, dry place out of direct sunlight. If possible, transport the product in its original packaging to protect it from moisture and extreme temperatures. With intensive use, the service life may be shorter than the warranty period.

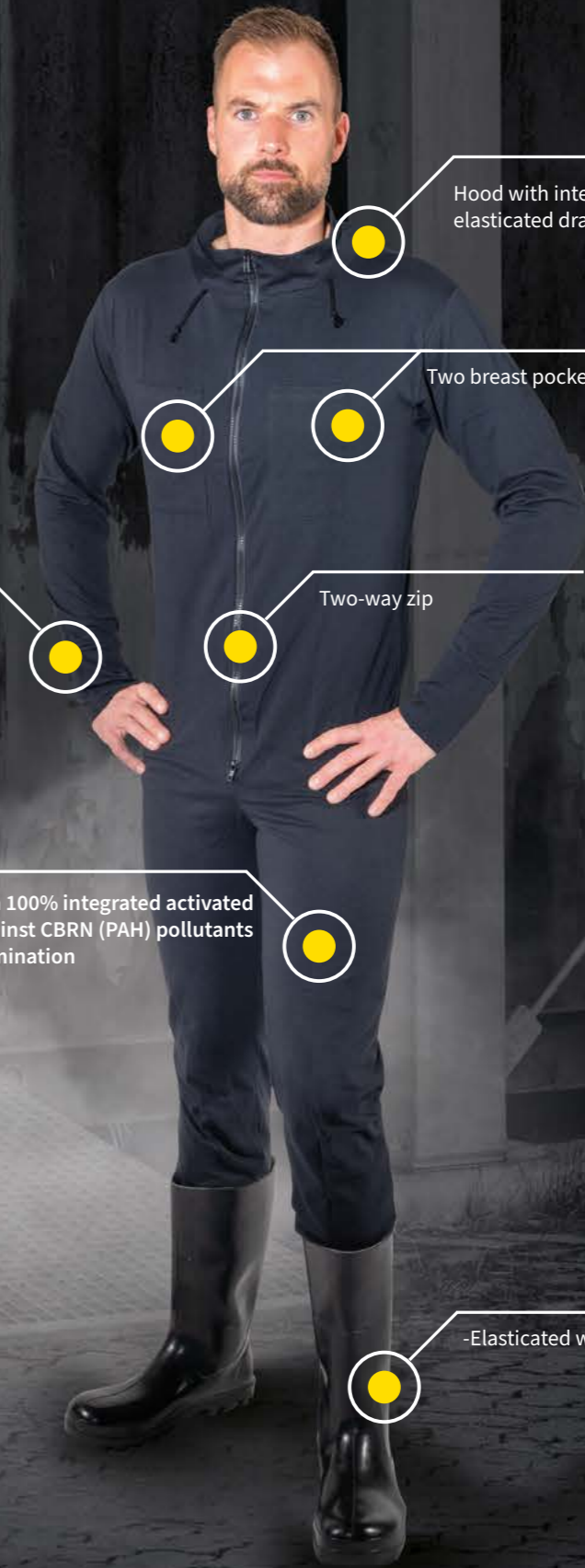
The product does not contain substances in concentrations known or suspected to affect the hygiene or health of the user. However, skin irritation cannot be ruled out in sensitive persons, in which case these garments should no longer be worn.

There are no accessories or spare parts for these garments. The service life depends on the level of usage and the amount of wear resulting from the usage conditions. Improper storage conditions, incorrect maintenance and care also reduce the service life.



REAL-REUSABLE

FUNCTIONAL WEAR for protective suits



Hood with integrated elasticated drawstring

Two breast pockets

Two-way zip

Cuffs at the sleeve ends with thumb loop

Fabric with 100% integrated activated carbon against CBRN (PAH) pollutants and contamination

-Elasticated waistband on trouser leg



Cooling vest

Cooling vest description

THE IMPORTANCE OF REGENERATION

The issue of regeneration is of great importance in firefighting operations. Under the sometimes extreme working conditions, such as when using CPS, it is important to regenerate quickly and completely. This is all the more important as the recommended regeneration times are often not possible due to staff shortages.

A PCS cooling suit offers a simple, fast and effective means of regeneration that can be used any time, anywhere without complex logistics.

INSPIRED BY NATURE

The product reacts similarly to the human body, which regulates its temperature through the cooling effect of sweat evaporating on the skin. The high-tech fleece can be quickly charged with water which it stores and releases through evaporation to keep you cool.

You also remain dry and save energy, as the products "sweat" for you. This enhances wellbeing and leaves you with more energy and therefore greater effectiveness in your task. For better performance. It also protects your health under hot working conditions, optimises your energy household and allows you to be more efficient.

EASY HANDLING

- Charging with approx. 0.7 to 1 litre of cold water (from tap, washbasin or shower) takes just 5 to 10 seconds.
- Squeeze gently and roll in a towel
- Cooling can begin
- The cooling effect lasts up to 20 hours

Order no.: 0650-230

Ask us about further products.



PERSONAL COOLING SYSTEM

- Better performance through less heat
- Fewer health risks
- Optimal regeneration during breaks and after work



Flame retardant underwear

Devold® Safe FLAME RETARDANT WOOL – LENZING BLEND

Flame retardant wool blend underwear – versatile wool underwear that offers protection from heat and flame. Safe is made of LENZING FR® and merino wool and is reinforced with polyamide. Safe is the lightest flame retardant underwear from the Devold® Protection collection.

Because it is knitted in a ribbed structure, the underwear is highly elastic and follows your body movements. Safe contains a high percentage of merino wool to keep your body dry and comfortable even during strenuous work. The Balaclava 817 model is EN 13911 certified.

NOTE:

- Please enquire for the complete range.
- Shirts, long sleeves and flame-retardant hoods
- ALL WITH INTEGRATED PARTICLE PROTECTION! Without membrane!

- Further X-WEAR and Devold products available from TESIMAX.
- The antistatic Devold Shield line is particularly suitable for TESIMAX chemical protective suits due to its special fabric properties.



Devold® BASE LAYER

The **base layer** should be flame retardant to limit burns. It should also absorb and transport moisture to provide better comfort. Moisture wicking is also important to prevent scalding from radiant heat, arcing or other situations where this may occur. To provide better comfort, the underwear should dry on your body.

Devold® MIDLAYER

The **midlayer** should be flame retardant, have good insulating properties and good moisture transport properties. The insulating properties are important to reduce the risk of heat penetration in firefighting operations. The midlayer should also have a looser fit than the base layer to allow more air circulation and therefore better moisture wicking.

TESIMAX OUTERWEAR

This layer should be flame retardant and provide total protection in combination with the other layers. The outer layer should also be weather and wind resistant and have sufficient ventilation and water-repellent properties to keep moisture out.

Top accessories (personal protective equipment) available on request.

Contact TESIMAX for an attractive special offer.



CERTIFIED					
PRODUCT STANDARDS	EN ISO 13688 2013	Flame retardant EN ISO 14116: 2008	Flame retardant EN ISO 14116: 2015	Flame retardant EN ISO 11612: 2008	Flame retardant EN ISO 11612: 2015
Safe	x				
Safe mod. 144,146, 210, 216	x		x		A1 + A2 B1 C1
Safe mod. 817	x				
Safe bra	x		Index 3		A1 + A2 B1 C1
Total	x				A1 + A2 B1 C1
Total mod. 145, 210	x		Index 3		A1 + A2 B1 C1
Total mod. 817					
Spirit	x				A1 + A2 B1 C1
Spirit mod. 144, 146, 216, 219	x		Index 3		A1 + A2 B1 C1
Spirit mod. 817					A1 + A2 B1 C1
Spirit mod. 821					A1 B1 C1
PIQUE	x		Index 3		
POWER					A1 + A2 B1 C1
SPACER	x				A1 + A2 B2 C2
METAL	x				A1 + A2 B1 C1
SHIELD					A1 B1 C2
THERMAL COLLAR					
THERMAL	x				A1 + A2 B2 C2
THERMAL W. ANTISTAT	x				A1 B1 C1

CERTIFIED						
Arc EN 61482-1/-2: 2007	Arc EN 61482-1/-2: 2009	Antistatic EN 1149: 2008	Antistatic EN 1149: 2018	EN 13911: 2004	EN 13911: 2017	OEKO-TEX®:
Class 1			x x x x		x	x
	Class 1					
	Class 1					
	Class 1					x
	Class 1					x
	Class 1					x
	Class 1					x
	Class 1					
	Class 1					
	Class 1	x				x
	Class 1					
	Class 1					
	Class 1					
	Class 1	x				
	Class 1	x				
	Class 1	x				

EN APPROVALS



CE MARKING

These garments comply with the requirements of Regulation (EU) 2016/425.

EN ISO 13688:2013 (prev. EN 340:2004)

Protective clothing - General requirements.



EN ISO 14116:2015 Protection against flame.

Index 1 of limited flame propagation:
Index 1 (flame spread, flaming debris and after-glow properties)
Index 2 (as Index 1 plus hole formation properties)
Index 3 (as index 2 plus after-flame properties)



EN ISO 11612:2008/2015 A, B, C, D (E & F)

Clothing to protect against heat and flame.

A = Limited flame propagation.

A1: Surface ignition. A2: Edge ignition.

B = Material fulfils protection requirement against contact with flame.

Level B1: 4–10 s, B2: 10–20 s

C = Material fulfils protection requirement against radiant heat.

Level C1: 7–20 s, C2: 20–50 s, C3: 50–95 s, C4: >95 seconds.

D = Material fulfils required resistance to liquid aluminium.

Level D1: 100–200 grams, D2: 200–350 grams, D3: >350 grams.



EN 1149-5:2008/2018

Protective clothing - Electrostatic properties -

Part 5: Material performance and design requirements

EN APPROVALS



IEC 61482-2:2009

Live working - Protective clothing against the thermal hazards of an electric arc. Part 1-2: Test methods - Method 2: Determination of arc protection class of material and clothing using a constrained and directed arc (box test). Test method: EN 61482-1-1:2009. This method tests the Arc Thermal Performance Value (ATPV) – the energy applied to a material or multi-layered material assemblage that results in a 50 percent probability of sufficient heat transfer through the test specimen to cause a second-degree skin burn based on the Stoll curve without causing the fabric to break open.

Energy breakopen threshold – EBT50

- Incident energy on a fabric or material that results in a 50 percent probability of a heat transfer through the specimen that causes it to break open.

Test method: EN 61482-1-2:2007 “box test”

Class 1 (4 kA)

Class 2 (7 kA)

Arc duration: 500 ms

Frequency: 50 Hz



EN 13911:2004/2017

Protective clothing for firefighters - fire hoods. Against heat and flames as well as thermal effects of an electric arc.

CE MARKING



Devold protective equipment is manufactured and tested in accordance with standards based on European Directive 89/686/EEC and is approved in accordance with CE marking regulations.

The CE marking refers to a safety level of the product. European Directive 89/686/EEC is legally binding and applies to personal protective equipment (PPE) in the European member states. This Directive stipulates as a basic requirement for design and manufacture that PPE must be used to ensure safe working conditions.

Devold protective clothing is designed to prevent accidents and injuries on exposure to cold, heat, flame, the thermal hazard of electric arcs and electrostatic hazards. These garments comply with the requirements of Directive 89/686/EEC for reference standards. Refer to the CE label inside the garment to confirm which of the applicable standards the garment is certified to.

The CE label also lists washing instructions, fabric content, size and model number. We draw your attention to the mandatory user information that must accompany all certified garments. You can also find this information in the product descriptions in this catalogue and at www.devold.com.

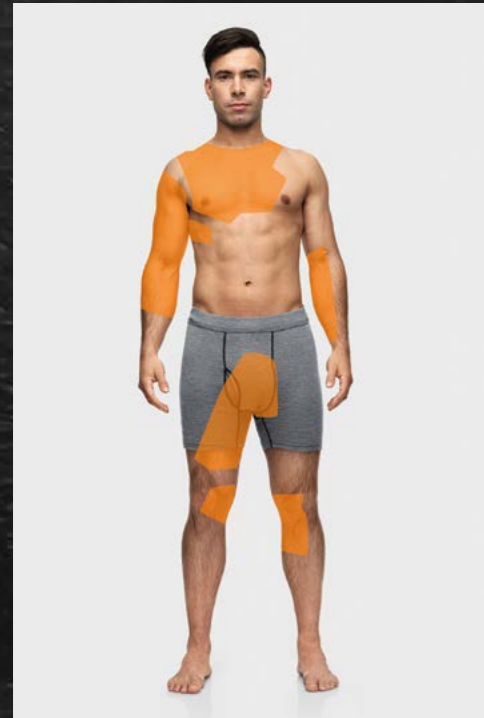
DEVOLD®
NORWAY 1853

THE PYROMAN TEST

WITH NORMAL COTTON UNDERWEAR

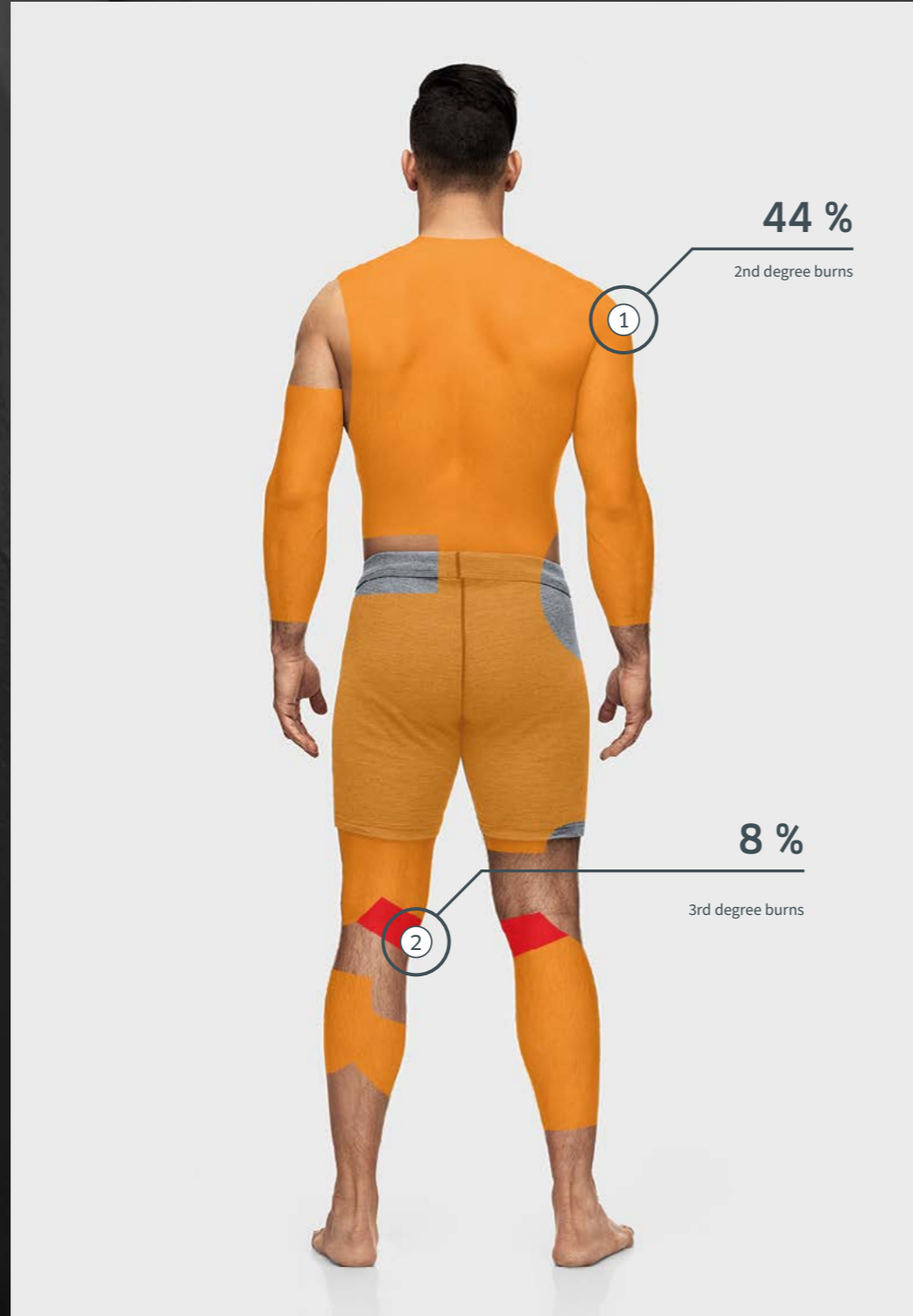


COTTON UNDERWEAR



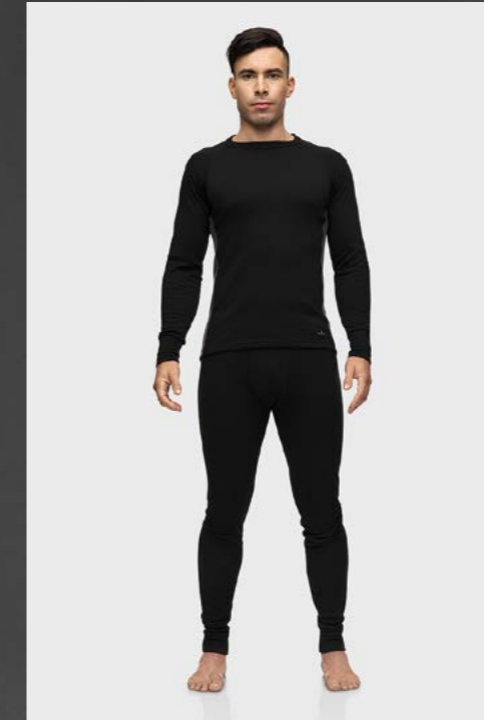
52 %

TOTAL BURNS

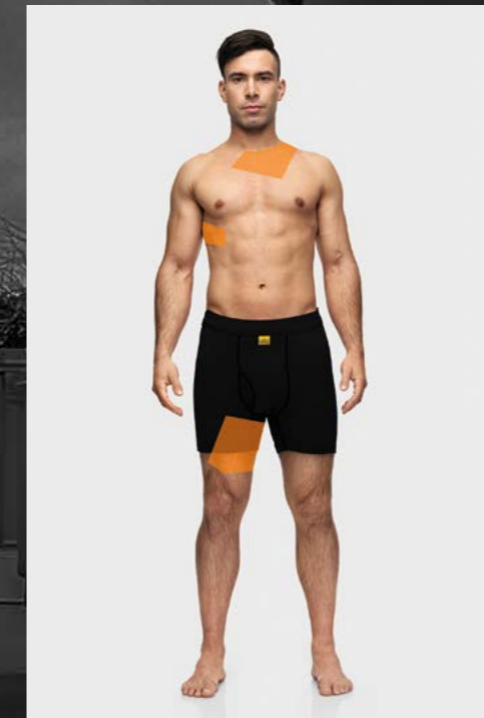


THE PYROMAN TEST

WITH Devold® FLAME RETARDANT WOOL UNDERWEAR

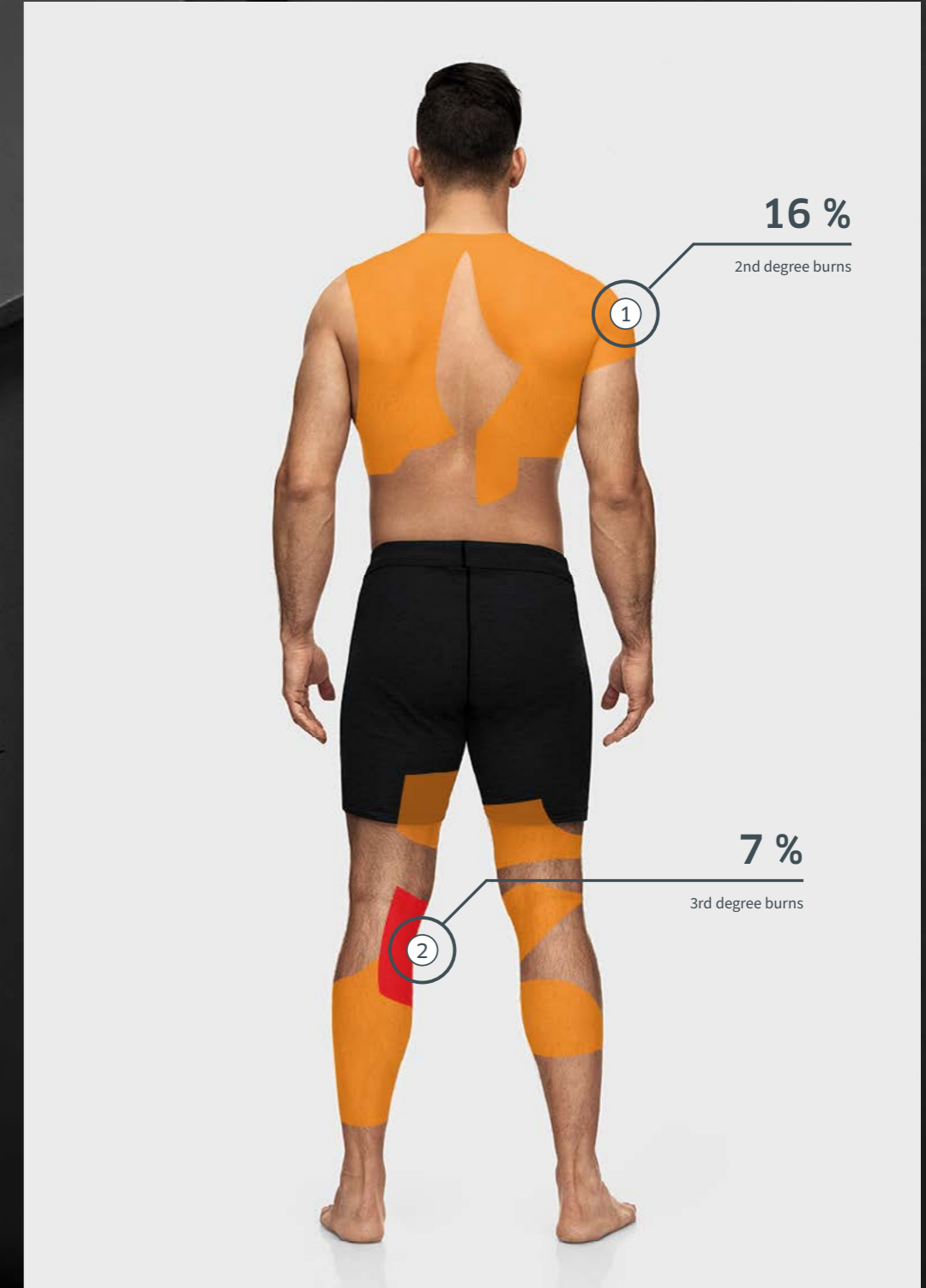


FLAME RETARDANT UNDERWEAR



23 %

TOTAL BURNS



This test is conducted by an independent laboratory at North Carolina State University and tests the degree of burn injury in a flashover. The result of this test indicates the overall level of injury (2nd or 3rd degree burn). We performed the Pyroman test with both flame retardant underwear and normal cotton underwear under a flame retardant suit.

MEASURAND RESULT

THE TEST IS PERFORMED WITH THE SAME OUTERWEAR

- 1 2nd degree burns 44% ●
- 2 3rd degree burns 8% ●
- 3 Total burns 53%

In addition to the above burns, scalds can occur due to moisture. The body's own sweat often causes burns. If the sweat remains on the skin, it can overheat and begin to boil. It is therefore vital to use underwear with good moisture wicking properties. Garments containing synthetic fibres melt and cause severe skin injuries.

MEASURAND RESULT

THE TEST IS PERFORMED WITH THE SAME OUTERWEAR

- 1 2nd degree burns 16% ●
- 2 3rd degree burns 7% ●
- 3 Total burns 23%

DEVOLD® SHIELD

FLAME RETARDANT WOOL/
LENZING BLEND



IEC 61482-2
ARC

EN ISO 11612
FLAME RETARDANT

EN 1149-5
ELECTROSTATIC

STRUCTURE
TERRY

WEIGHT
280 g/m²



SHIELD sweater

Colour: black
Sizes: S-4XL
Order no.: 4000-400



SHIELD zip neck

Colour: black
Sizes: S-4XL
Order no.: 4000-400



SHIELD sweater

Colour: black
Sizes: S-4XL
Order no.: 4000-145



SHIELD trousers

Colour: black
Sizes: S-3XL
Order no.: 4000-146

MATERIAL

49% Lenzing FR®, 39% wool (merino) 10% polyamide, 2% Nega-stat® terry
280 g/m² ±10%

Limited flame propagation: ISO 15025-A1
Convective heat: ISO 9151
Radiant heat: ISO 6942

Devold® Shield flame retardant wool blend clothing – an underwear and mid-layer collection suitable for the working with electricity, gas, heat and flame. Shield is knitted from Lenzing FR® and merino wool and reinforced with polyamide. It also features Nega-Stat®, which is a special fabric that provides garments with ideal antistatic protection. Shield also protects against arcing and electric flashovers. The garments are made of terry knit, which provides a layer of air between body and garment that insulates against cold and heat.

Devold® Safe

FLAME-RETARDANT WOOL - LENZING BLEND



Safe zip neck

Colour: black
Sizes: S-5XL
Order no.: 4000-141



Safe T-shirt

Colour: black
Sizes: S-5XL
Order no.: 4000-132



Safe T-shirt

Colour: black
Sizes: S-3XL
Order no.: 4000-136



Safe long johns

Colour: black
Sizes: S-5XL
Order no.: 4000-133



Safe boxer shorts

Colour: black
Sizes: S-3XL
Order no.: 4000-133



Safe cap

Colour: black
Sizes: 0/S
Order no.: 4000-300

