



**WORKPLACE SAFETY SOLUTIONS**

WORKPLACE SAFETY SOLUTIONS - OVERVIEW



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YOU'RE SAFE WITH US

We're on a mission: To make sure that our customers come home to their family and loved ones, every day. This is our reason for being and what drives us to go to work each morning. We do it by improving people's safety and performance in extremely demanding work environments, like oil platforms, alongside roads, in ports and heavy industries.

It's no coincidence that we're the leading company in protective clothing and equipment. Every single product is born out of necessity, developed in close cooperation with our end users. Over the years, we have developed a culture of continuous

innovation, where methods, concepts, and products are developed and refined on an ongoing basis. We have evolved into an innovative business partner who, through impeccable service and expertise, makes personal protective equipment smarter and the world a little safer. Our motto is "Saving Lives". This is not only our duty, but it also makes us feel good. It would be difficult to find anything more meaningful to spend our time doing.

We are Smooth, Ambitious, Futuristic, Energetic. In short: We are S.A.F.E. So are you.



PROTECTION FOR WORKPLACES

# WORKPLACE SAFETY SOLUTIONS

3 000 BAR / 43 500 PSI



1 400 BAR / 20 300 PSI

Workplace Safety Solutions is developed for when you need to protect sensitive equipment, machinery, or people from water, water jetting, gravel spray, and ricochets. The products are quick and easy to assemble

and disassemble, transport, and store. All to make everything from cleaning heat exchangers to oil rigs smoother, safer, and more environmentally friendly.

# MINIMIZE THE SAFETY AREA

Safety areas around high-pressure water needs to be restrained. WSS products allow you to minimize this area to 1.5 m from the danger, for instance when repairing bridges, cars and people can pass just a few meters away. In marine and shipping environments, where confined spaces are common, WSS enables several operators to work closer together.



# PROTECTION LEVEL

The fabric in the WSS products have been tested to withstand:

- Water jets up to 3 000 bar / 43 500 psi, 43 l/m, distance: 1.5 m
- Water jets up to 1 100 bar / 16 000 psi, 100 l/m, distance: 2.3 m
- Water jets up to 1400 bar/20 300 psi, 40 l/min, distance 75 mm
- Steel bullet 6 mm, 120 m/s
- Stone shot 360 g, 13 m/s

See test tables on page 18.



# MADE IN DURABLE TECHSTEEL™

Our Workplace Safety Solution range is made of an extremely strong fabric called Techsteel™. The fabric is both dirt and water repellent, which makes the products easy to clean. The material is furthermore reinforced with Vectran® (LCP) for maximum strength and durability. The request for these qualities comes originally from the industry of concrete removal and demolition.

Durability: > 500 000 Martindale.



# TIME SAVING AND FLEXIBLE

With the WSS products you can quickly create barriers, especially compared to wooden boards. Several Protective Curtains can easily be linked together to create a circle or form a protective wall of desired length.





SAFETY FUNNEL

- Increases safety when cleaning heat exchangers.
- Prevents flying objects and water from hitting and injuring people and damaging equipment.
- Improves visibility by reducing the amount of steam and water jets around the heat exchanger.
- The waste water flows out through the Safety Funnel's outlet and can be collected in tanks or septic trucks.  
Outlet size: approx. Ø 10 cm
- Minimizes the need for site sanitization, resulting in valuable time and cost savings.
- Quick and easy application directly to the heat exchanger.
- Eliminates the need for built protection with e.g. wooden boards or plates.
- Reduces the noise level.
- Easy to clean thanks to the silicon treated Techsteel™ fabric that dirt particles doesn't stick to.

See test results on p. 18.

| TUBE CLEANING NOZZLE 1 400 BAR / 20300 PSI |           |                      |                  |              |
|--------------------------------------------|-----------|----------------------|------------------|--------------|
| PRODUCT SIZE                               |           | HEAT EXCHANGER SIZE  |                  | ART. NO.     |
| Ø 70 cm                                    | Ø 27.5 in | approx. Ø 40–70 cm   | Ø 15.8–27.5 inch | 5830010 8070 |
| Ø 145 cm                                   | Ø 57 in   | approx. Ø 71–145 cm  | Ø 28–57 inch     | 5830010 8145 |
| Ø 185 cm                                   | Ø 72.8 in | approx. Ø 146–185 cm | Ø 57.5–72.8 inch | 5830010 8185 |



SAFETY PIPE CAP

- Increases safety when cleaning pipes.
- Prevents flying objects and water from hitting and injuring people and damaging equipment.
- Improves visibility by reducing the amount of steam and water jets around the pipes.
- The waste water flows out through the Safety Pipe Cap's outlet and can be collected in tanks or septic trucks.  
Outlet size: approx. Ø 5 cm on the 10 and 30 diameter Pipe Cap, and approx. Ø 10 cm on the 70 and 145 cm Pipe Cap.
- Minimizes the need for site sanitization, resulting in valuable time and cost savings.
- Quick and easy application directly to the pipe. Eliminates the need for built protection with e.g. wooden boards or plates.
- Reduces the noise level.
- Easy to clean thanks to the silicon treated Techsteel™ fabric that dirt particles doesn't stick to.

See test results on p. 18.

| TUBE CLEANING NOZZLE 1 400 BAR / 20300 PSI |           |                     |                  |              |
|--------------------------------------------|-----------|---------------------|------------------|--------------|
| PRODUCT SIZE                               |           | PIPE SIZE           |                  | ART. NO.     |
| Ø 10 cm                                    | Ø 3.9 in  | approx. Ø 5–10 cm   | Ø 2–4 inch       | 5830020 8010 |
| Ø 30 cm                                    | Ø 11.8 in | approx. Ø 11–30 cm  | Ø 4.3–11.8 inch  | 5830020 8030 |
| Ø 70 cm                                    | Ø 27.5 in | approx. Ø 40–70 cm  | Ø 15.8–27.5 inch | 5830020 8070 |
| Ø 145 cm                                   | Ø 57 in   | approx. Ø 71–145 cm | Ø 28–57 inch     | 5830020 8145 |



SAFETY BOOTH

- Provides a safe and comfortable working environment for the operator, with shelter from water, wind, sun, rain, hail, and snow. Add your own fan or heater for additional comfort.
- Made of extremely durable Techsteel® fabric.
- Measurements:  
Height: approx. 215 cm, length and width: 101 x 101 cm.
- Four straps for anchoring on each of the two sides of the booth.
- Foldable and easy to assemble and disassemble.
- Easy to clean thanks to the silicon treated Techsteel™ fabric that dirt particles doesn't stick to.
- Possible to connect to the Safety Curtain.

See test results on p. 18.

 SINGLE 3 000 BAR / 43 500 PSI

| SIZE              |                   | WEIGHT  | ART. NO.     |
|-------------------|-------------------|---------|--------------|
| 215 x 101 x 101cm | 85 x 40 x 40 inch | 20.4 kg | 5850012 5000 |



SAFETY CURTAIN

- Can be put together to form a protective wall of desired length. Each section is approx. 152 x 250 cm/5x8.2 ft and when put together they build 147 cm/4.8 ft per curtain.
- Straps on top for easy mounting and holes at the bottom for further securing.
- The sections are easy to connect with strong, easily handled locks.

See test results on p. 18.



 SINGLE 3 000 BAR / 43 500 PSI

| SIZE         |            | WEIGHT | ART. NO.     |
|--------------|------------|--------|--------------|
| 152 x 250 cm | 5 x 8.2 ft | 2.2 kg | 5800010 5885 |



ROBOT GUARD

- Protects the hydrodemolition robot's hood from gravel spray and debris from concrete.
- Available in two versions: for Aquajet's hydrodemolition robots Aqua Cutter 410 and Aqua Cutter 750.
- Quick and easy application to the hood with strong magnets.
- An access flap at the rear can be opened for easy access to the control panel.
- Easy to clean thanks to the silicon treated Techsteel™ fabric that dirt particles don't stick to.

| MODEL                   | ART. NO.     |
|-------------------------|--------------|
| Aquajet Aqua Cutter 410 | 5860010 4410 |
| Aquajet Aqua Cutter 750 | 5860010 4750 |



SCUFF GUARD

- Protects valuable hoses from wear and tear.
- Made in extremely durable Techsteel™ fabric.
- Available in two sizes:  
70 cm length, Ø 12 cm  
500 cm length, Ø 5,5 cm
- The 70 cm version is easy to mount as it is closed with hooks & loops. The 5 m version is like a tube.
- Eyelets for fastening at the ends. Several Scuff Guards can be linked together.
- Can be pushed together so that a 5 m Scuff Guard fits a e.g. 4 m hose.
- **No protection against hose burst nor pinhole leaks.**

| LENGTH |         | Ø                 | ART. NO. | MOD. NO. |
|--------|---------|-------------------|----------|----------|
| 70 cm  | 2.3 ft  | 12 cm / 4.7 inch  | 5880060  | 5918     |
| 500 cm | 16.4 ft | 5,5 cm / 2.2 inch | 5880050  | 5978     |

# END TO END HOSE PROTECTION

Working with high water pressure entails a constant risk of accidents. While protective clothing helps keep the operator safe, achieving full protection for both personnel and nearby equipment requires addressing a common

source of accidents: the hose. At TST Sweden we offer complete hose protection all the way from one end to another, ensuring maximal safety for all.

## WHIP STOP

The coupling on the gun connection can break. If that happens the Whip Stop catches the hose and prevents it from whipping and thus harming the operator.

## HOSE PROTECTION

The hose can break close to parts of the operator's body that are difficult to protect with clothing, such as the abdomen, armpit and neck. In case of hose breakage and pinhole leaks, the Hose Protection protects the operator from harm.

## OPERATOR

## PUMP

## CONNECTIONS

## WHIP STOP + HOSE CONNECTION COVER

Couplings sometimes breaks, e.g. by hose connections, pumps or dump valves. If so, the Whip Stop secures the hose and keeps it from whipping and hitting people passing by. In case of a hose break, the Hose Connection Cover protects.

## DUMP VALVE

## SHARP EDGE

## SCUFF GUARD

Expensive hoses can be worn out and tear when rubbed on sharp edges and other rough surfaces. The Scuff Guard protects hoses and increases their longevity.



## HOSE PROTECTION

The greatest risk areas of a hose break are near or on the water jet gun; areas often very close to the operator and near sensitive areas of the body, such as the abdomen, the arm pit or the neck. These are difficult areas to properly protect.

The Hose Protection, placed on the hose at the connection to the lance, protects the operator if a coupling or a hose breaks or if a pinhole leak occurs. In many countries, the use of hose protection is mandatory. And in some countries a whip stop is also required. Check the rules and regulations in your region.

We recommend at least 1 400 mm/4.6 ft length. With this length, the operator has the best possible protection of the body. Also, the Hose Protection lies on the ground which means the operator doesn't have to carry the weight.

## SWIVEL

Hose Protection with swivel makes work easier and more ergonomic. Operators experience less strain on the body, as the swivel rotates freely around the Hose Protection's steel collar and follows the operator's movement.

We highly recommend using our Hose Protection with swivel!



SWIVEL

## SOLID STEEL COLLAR

Closest to the lance, where the hose is most likely to break, there is a 250 mm / 9.8 in. solid steel collar on the Hose Protection 3000 bar range, which effectively protects the operator in the event of an accident.



## HOSE PROTECTION 3000 BAR

- Provides effective protection for the operator. Tested for 3 000 bar / 43 500 psi. *See test results on p. 18.*
- An adjustable strap holds the Hose Protection to the lance.
- Metal ring at the bottom, a wear and tear protection for when the hose is on the ground.

| HOSE PROTECTION Ø 36 MM                      |         |          |          |
|----------------------------------------------|---------|----------|----------|
| LENGTH                                       |         | ART. NO. | MOD. NO. |
| 750 mm                                       | 2.5 ft. | 5060040  | 5920     |
| 1400 mm                                      | 4.6 ft. | 5060040  | 5940     |
| 1800 mm                                      | 5.9 ft. | 5060040  | 5960     |
| HOSE PROTECTION Ø 38 MM PIPE EXTENSION 260MM |         |          |          |
| 1400 mm                                      | 4.6 ft. | 5060043  | 5940     |
| HOSE PROTECTION Ø 47 MM SWIVEL               |         |          |          |
| 1400 mm                                      | 4.6 ft. | 5060050  | 5942     |
| HOSE PROTECTION Ø 47 MM TUBE EXTENSION       |         |          |          |
| 750 mm                                       | 2.5 ft. | 5060051  | 5920     |
| HOSE PROTECTION Ø 59 MM                      |         |          |          |
| 750 mm                                       | 2.5 ft. | 5060060  | 5920     |
| 1400 mm                                      | 4.6 ft. | 5060060  | 5940     |
| 1800 mm                                      | 5.9 ft. | 5060060  | 5960     |

## HOSE PROTECTION 500 BAR

- Provides effective protection for the operator. Tested for 500 bar/7 500 psi. *See test results on p. 18.*
- An adjustable strap holds the Hose Protection securely in place.
- Very smooth and flexible.

| HOSE PROTECTION Ø 41 MM/1.6 IN. |         |              |
|---------------------------------|---------|--------------|
| LENGTH                          |         | ART. NO.     |
| 750 mm                          | 2.5 ft. | 5660045 5920 |
| 1 400 mm                        | 4.6 ft. | 5660045 5940 |

| HOSE PROTECTION Ø 65 MM/2.6 IN. |         |              |
|---------------------------------|---------|--------------|
| LENGTH                          |         | ART. NO.     |
| 750 mm                          | 2.5 ft. | 5660063 5920 |



HOSE CONNECTION COVER

The Hose Connection Cover protects people working near, or passing by, foot pedals and pumps. Is to be used where hoses have couplings and connections. Does not replace a Hose Protection near the body, when using a water jet gun.

- An adjustable strap holds the Connection Cover securely in place.
- Loops to further fasten and assemble several covers.
- Tested for hose bursts at 3 000 bar/43 500 psi, but not for pinhole leaks.

See test results on p. 18.

| Ø 61 MM / 2.4 IN. |             |        |          |          |         |
|-------------------|-------------|--------|----------|----------|---------|
| LENGTH            |             | WEIGHT |          | ART. NO. | MOD. NO |
| 40 cm             | 1 ft 4 in.  | 0.4 kg | 0.9 lbs. | 5071000  | 5910    |
| 500 cm            | 16 ft 5 in. | 3.8 kg | 8.4 lbs. | 5071000  | 5978    |



WHIP STOP

For securing hose ends at foot pedals, pumps or connections. Catches the broken hose and prevents it from whipping. Mounted by slipping it over the hose ends, stretching it and finally tightening the ends, securing with the rubber lock rings.

- Made in strong polyester. Easy to carry, easy to clean.
- Tensile strength 30 kN/3 tons.
- Width approx 25 mm/1 in.
- Sold in packs of 50 pcs.
- Produced and tested in accordance with EN 12195-2.

| TENSILE STRENGTH | LENGTH           |                   | ART. NO.     |
|------------------|------------------|-------------------|--------------|
| 30 000 N         | Approx.<br>75 cm | Approx.<br>2.5 ft | 5072000 5000 |



# TEST RESULTS

## WORKPLACE SAFETY SOLUTIONS: HIGH-PRESSURE WATER JET TEST

| Test is relevant for | Pressure |        | Flow         |               | Nozzle      | Newton | Distance |        | Result         |
|----------------------|----------|--------|--------------|---------------|-------------|--------|----------|--------|----------------|
|                      | Bar      | Psi    | Litre/minute | Gallon/minute |             |        |          |        |                |
| Safety Curtain       | 1 100    | 16 000 | 100          | 26.4          | Single      | 740    | 2.3 m    | 7.5 ft | No penetration |
| Safety Curtain       | 3 000    | 43 500 | 43           | 11.4          | Single      | 550    | 1.5 m    | 5 ft   | No penetration |
| Safety Funnel        | 1 400    | 20 300 | 40           | 10.5          | Tube nozzle | 350    | 75 mm    | 3 in.  | No penetration |
| Safety Pipe Cap      | 1 400    | 20 300 | 40           | 10.5          | Tube nozzle | 350    | 75 mm    | 3 in.  | No penetration |
| Safety Booth         | 3 000    | 43 500 | 43           | 11.4          | Single      | 550    | 1.5 m    | 5 ft   | No penetration |

## WORKPLACE SAFETY SOLUTIONS: PROJECTILE TEST

| Projectile         | Linear speed |        | Number of textile layers | Result         | Test method |
|--------------------|--------------|--------|--------------------------|----------------|-------------|
|                    | m/s          | ft/sec |                          |                |             |
| Steel bullet, 6 mm | 120          | 393.7  | 1                        | No penetration | EN 168      |
| Stone shot, 360 g  | 13           | 42.7   | 1                        | No penetration | EN 1794-1   |

## HOSE PROTECTION

| Product                  | Burst test |       |        |                | Pinhole leak test |                |
|--------------------------|------------|-------|--------|----------------|-------------------|----------------|
|                          | Tested     | bar   | psi    | Result         | Tested            | Result         |
| Hose Protection 3000 bar | Yes        | 3 000 | 43 500 | No penetration | Yes               | No penetration |
| Hose Connection Cover    | Yes        | 3 000 | 43 500 | No penetration | No                | -              |
| Hose Protection 500 bar  | Yes        | 1 800 | 26 100 | No penetration | No                | -              |
| Scuff Guard              | No         | -     | -      | -              | No                | -              |
| Whip Stop                | -          | -     | -      | 30 kN          | -                 | -              |

# TECHNICAL DESCRIPTION

## WORKPLACE SAFETY SOLUTIONS

**Material:** DWR (Durable Water Repellent) treated Techsteel™.

## MARTINDALE ABRASION TEST

The Martindale abrasion test simulates natural wear of a textile, in which the textile sample is rubbed against a standard abrasive surface with a specified force. Domestic cotton fabrics often have a rating of 20 000 rubs and polyester fabrics have 30 000.

The Techsteel™ fabric used in the Workplace Safety Solutions products has over 500 000, making it extremely durable.

The method for Martindale test is EN ISO 12947-1:1998.

EXPLORE OUR PROTECTIVE CLOTHING FOR WATER JETTING ON  
**TST-SWEDEN.COM**



SAVING LIVES

**TST Sweden AB**

Segloravägen 22, 504 64 Borås, Sweden  
info@tst-sweden.se | tst-sweden.com