

Contamination is defined as the pollution and contagion of materials, objects, people, area or structure by undesirable microorganisms, harmful industrial chemicals and / or warfare agents in combat situations, chemical-biological terrorist attacks and industrial chemical exposures.

Decontamination is the process of chemical cleansing, sterilization, cleaning and / or removing with antiseptics in the first intervention, in case of possible vital risks involved in these kind of events which are in the scope of civil defense and occupational safety.

*Within the scope of the **DISASTER RESPONSE PLAN**, duties and responsibilities of related institutions and organizations and the equipment to be used are defined. In such cases, the distance to the hazardous area, the number of people exposed, transportation and intervention opportunities are the basis for choosing decontamination systems type.*

Apart from industrial pollution, in cases of chemical attacks during war and terror, zones are classified as hot, warm and cold according to the distance to the place of attack.

Decontamination systems to be used by military and civil defense, who have the authority and responsibility for the hot zone, are generally portable and have limited capacity. The first intervention here is; damage detection, rescue, classification, initial medical intervention, decontamination, evacuation and referral to medical units (warm and cold regions).

Decontamination systems used in hot areas are usually:

Can be carried on back, pressurized and up to 50 lt devices.

Portable, inflatable tent, clean and wastewater storage systems.

Trailer, with fixed steel installations on trolley, clean and waste water storage systems.

Decontamination systems used in warm and cold regions are generally:

Portable inflatable tent, clean and waste water storage systems.

Clean and waste water storage systems with portable steel installation.

Fixed steel installation decontamination units installed at CBRN reference hospitals.

*As **IST** Company, with the knowledge we have gained from our past, with our manufacturing capacity and with our references that we have supplied decontamination systems without problems, we manufacture decontamination systems fixed on trolley and/ or container, with clean water and waste water storage, portable metal clean and waste water storage systems, fixed steel installation decontamination systems suitable for CBRN reference hospitals.*

Portable steel and stationary systems are generally designed based on a tunnel type washing system that can be configured in a modular structure.

The system can be shaped foreseeing the possible needs according to the capacity and abilities listed below.

- *Mains waterline connected or systems with water tank according to water supply possibilities.*
- *Systems with hydrophore and water heating according to water pressure,*
- *Appropriate measures for outpatient and / or inpatient,*
- *Mixing pump with dosing control for chemical washing,*
- *The strip curtain system, which provides patient privacy and isolation during entrance and exit,*
- *Triggered brush for inpatient and delicate washing,*
- *The appropriate number of sprayers for water capacity and directional nozzles,*
- *The perforated grating and collecting tray to collect the waste water,*
- *Waste water pump and pillow type tank (500 - 2500 Lt volumes),*
- *Rinse shower head,*
- *Stretcher entrance and exit ramp in systems for inpatient,*
- *Lighting fixture,*
- *Stainless Steel, sheet steel, GRP, PU fabric options for outer coating,*
- *Adjustable hydraulic legs in container systems,*
- *Connecting, fixing, warning lamps, brake safety in trailer systems,*
- *Equipment storage sections in trailer and container systems,*
- *Air flow fan and filtration systems in trailer and container systems,*

Advantages of IST Decontamination Systems;

- *Stainless steel 304 - 316 is durable and hygienic.*
- *The snap-on connection type allows easy and quick installation and disassembly.*
- *Systems are modular and can be designed according to intended purpose.*
- *Provides economical use of water and power.*
- *Outpatient and inpatient decontamination can be done with a single system.*



- *Closed systems that protect the privacy of the injured patients.*

- *According to seasonal conditions "optional" thermomixer valve allows decontamination with hot, warm, cold water.*

- *If required, provides chemical washing with dosing controlled mixing pump. Cleaning chemicals can be used at the discretion of the employee without any brand or content enforcement.*

- *Provides convenient storage and transportation in line with environment and water conservation policies with waste water storage*

system with grating, pump and PU cushion type waste water tank that collects hazardous chemicals that may mix into tap water during decontamination.

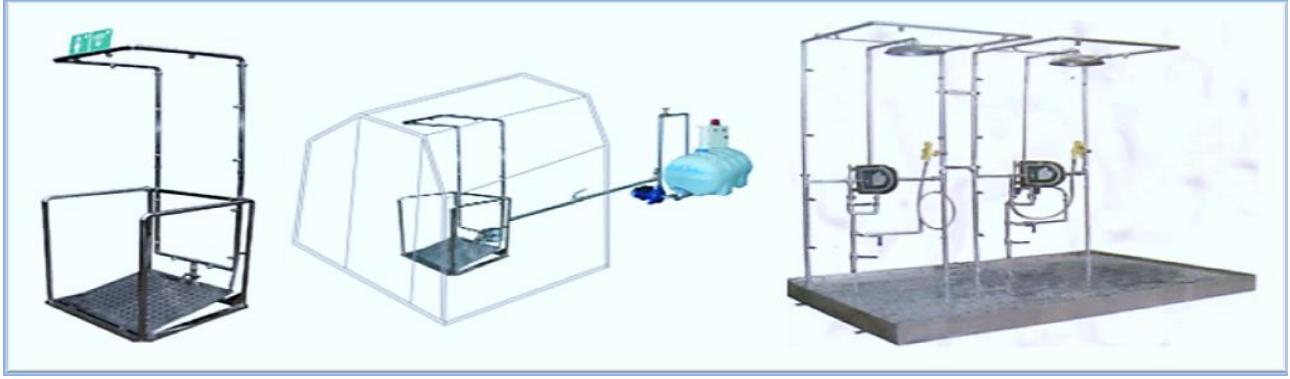
- *Triggered brush provides precise and deep cleaning.*
- *Adjustable nozzle system eliminates the directional dislocation problem that may be caused by fixed nozzles, and setting problems that may occur due to the connections. Nozzles can be totally disassembled and cleaned in case of calcification which may be caused by hot water usage.*
- *Provides the opportunity to use the shower, the nozzle and the brush in the system at the same time or separately.*





COLD ZONE FIXED DECONTAMINATION SYSTEMS

- Fixed decontamination systems are installed in areas determined by first aid facilities which has waterline infrastructure, to decontaminate people who are exposed to chemical contaminants and / or war gases.
- Optional clean water tank works as an independent system combined with heater, hydrophore, waste water tank and generator.
- The decontamination system works by connecting to a water line which provides a flow rate of at least 50 Lt / min and contains clean water. An industrial water heater burner with water softener can be added to the system on customer's request.
- In places where there is no fixed water line or water pressure is not sufficient, a polyethylene tank with a water capacity of at least 1500 Lt and a backup emergency storage tank can be added to the system on request.
- The decontamination system is manufactured from 304 quality stainless steel as standard.
- The decontamination system has an easy-open valve system and distributes the water in the system at the same pressure and at the same time to each and every spray nozzle.
- Provides water spraying to all parts of the body with 24 spray nozzles in the system. Quick, easy and effective washing is provided by rotary spraying of water.
- Also includes 2 triggered hand shower.
- Hazardous waste water that is formed during decontamination, is collected in 304 stainless steel collection tray placed under the shower system and stored in the portable pillow bag with the help of waste water pump which includes level switch.
- There is a built-in mixer pump that mixes the chemicals used in the decontamination shower system to clean the chemical or war gases and mixes them with water.
- Mixer pump is integrated into the system in a way that enables deactivating when necessary, to rinse with clean water only.
- The decontamination system is designed so that the privacy rights of the victims / patients are not compromised and two sides are designed as closed panels and there is shower curtain at the entrance. It allows rapid purification in multiple interventions.
- The decontamination system is equipped with all necessary warning plates and labels.
- Standard model dimensions are 150 x 300 x 240 cm.



INDUSTRIAL DECONTAMINATION SYSTEMS

It is a system that protects all body parts of people who are exposed to chemical and biological agents or, when necessary extinguishes flaming clothes in the event of fire, by spraying the washing liquid.

The system automatically runs when stepped on the platform.

With 14 spray nozzles, water is sprayed to every part of the body.

Rapid and easy washing is provided by spraying the water with rotation.

Practical cabin can be build by closing 3 sides.

OPTIONS

- *Ex-proof or Non Ex-proof Audible and Visual Alarm*
- *Ex-proof or Non Ex-proof Lighting*
- *GRP platform*
- *316 Stainless steel material*
- *Water pressure regulator*
- *Flanged water inlet*
- *Side and rear panels or tent*
- *Water tank*

Features of Decontamination Unit with 300 LT Water Tank and Tent:

The pump, which works in conjunction with the valve handle, is automatically switched on by the flow when the valve is opened. When the pump circuit is on, it gives a warning signal with the red light on the panel, the water flow starts and when the valve is closed the water flow stops. Water tank is set as 300 lt (Can be produced in different volumes on customer request).

The water tank material is polyethylene plastic.

- *Different sterile liquids can be added in water tank for washing the body*
- *Automatic control from the valve can be applied to all shower models*
- *Can be produced from stainless steel or galvanized painted steel*



WARM REGION PORTABLE METAL SYSTEMS

- A line system can be designed to use as a modular structure with units of 1-2-3. Unit dimensions are 900 x 900 x 2250 mm.
- The 1st unit is platform controlled, 2nd and / or 3rd unit is hand operated under the supervision of control personnel.
- Storage and transport package for the product (box, chest, PU bag) is optional according to storage possibilities.
- Triggered hand brush for chemical washing
- Mixer pump for chemical washing
- Transparent strip curtain at unit entrance and exit
- GRP platform
- 316 Stainless steel material
- Water pressure regulator, flanged water inlet
- Stainless steel, galvanized steel or GRP side and back panels or PU canvas
- Water tank and hydrophore for environments where the water pressure is not enough or there is no water line
- Sewage pump and storage
- Thermomixing valve to provide tepid water if hot and cold water inlets are available.

PERSONAL PROTECTIVE EQUIPMENTS FOR USING IN DECONTAMINATION AND OTHER HAZARDOUS CHEMICAL WORKS

- A-B (Gas tight) C (Liquid tight), D (Particulate and Spray liquid tight) coveralls.
- According to EN 943-2 Standard **Level A** gas-tight coveralls (Reusable, Limited life, and Disposable) are used with self contained breathing apparatus worn inside coveralls.
- Integrated boots to coverall, integrated gloves or gloves and socks types are available.
- Generally used in hot zone CBRN and in closed industrial operations where there is a constant harmful gas risk.
- **Level B** is the EN 943-1 Type 1-B model. It is used with self contained breathing apparatus that are worn from outside of the garment, it is together with hood.
- **Level C** requires EN 14605 Type 3 -4 standard. Level C coveralls are protective against liquid splashes, models are available with socks, without socks, with or without gloves. Together with hood. It is used with full face mask, filter and power assisted filtering devices.
- **Level D** is in accordance with EN 13928-1 Type 5, EN ISO 13034 Type 6 and EN 1149-1 Antistatic standards. Provides particle and spray liquid protection. This type of coveralls should be used together with a suitable hand and foot protection.
- Full face gas masks are classified as Class 1 "gas protection", Class 2 "industrial type protection", Class 3 "gas flame and heat protection" in EN 136 Standard.
- Full face gas mask can have EN 148-1 threaded filter connection or bayonet type special connection.



➤ Gas filters are in EN 14387 standard. Special permits are required for import of CBRN approved filter, mask, coverall. For this reason, there is a requirement to obtain permission from the official authorities of the country of import by giving end user information.

➤ Chemical protective boots and boot covers are in EN 13832 Standard. Depending on the conditions of use ESD electrostatic discharge, EN 15090 "flame and heat" protection, EN 1149-1 "antistatic" protection features can be added.

➤ Chemical protective gloves are in accordance with EN 374-1,3 and EN 388 Standards. Nitrile, Butyl, Neoprene and PVC types are available.

➤ High pressured respiratory protection systems are in EN 137 Standard.

➤ Steel and Composite cylinder options are available. They are used with positive pressure full face mask.

➤ Power-assisted filtering devices are in accordance with EN 12941 and EN 12942. Used with different headers, masks and suitable filter options according to usage conditions.

➤ **İST İşçi Sağlığı Teçhizatı LTD ŞTİ**, is Turkey distributor of **SCOTT SAFETY, RESPIREX INTERNATIONAL, INDUTEX SPA, REX ERISTA.**

