



## Презентация продуктов и услуг HAWS Corporation

Аварийные души, фонтаны для глаз и лица, кабины самопомощи

Другая продукция HAWS Corporation



ООО «ТИ-СИСТЕМС» ИНЖИНИРИНГ И ПОСТАВКА ТЕХНОЛОГИЧЕСКОГО ОБОРУДОВАНИЯ

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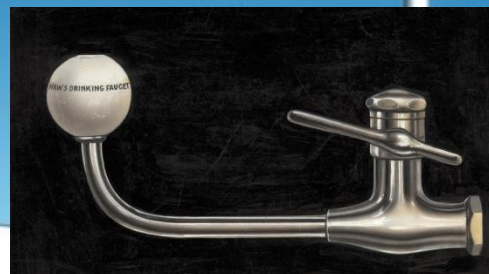


# ABOUT HAWS CORPORATION



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*Integrated*<sup>™</sup>



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1900's

1920's

1950's

2015

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# HAWS HISTORY



- 1906 Invention of the drinking fountain in 1909 by Luther Haws
- 1909 Formation of Haws Sanitary Drinking Faucet Company in Berkeley California
- 1950's Haws introduced emergency drench showers and safety eyewashes into its manufacturing line.
- 1984 Haws AG (Switzerland), EMEA headquarters
- 1996 Establishing headquarters in Sparks, Nevada
- 1999 Haws Manufacturing Pte, Ltd (Singapore)
- 2001 Haws-Avlis (Brazil) in 2001.



# HAWS GLOBAL PRESENCE



Sparks, Nevada, USA



EMEA Headquarter  
Burgdorf, Switzerland



LATAM Headquarter  
Sao Paulo, Brasil



ASIA Headquarter  
Singapore



# HAWS CULTURE

Ingenuity is the *Haws* culture. Every day we work to address your needs and solve your challenges by applying imagination and initiative to make your job easier. *Haws* invents, manufactures and builds drinking fountains and standardized and customized emergency response products. With more than 8,000 distribution locations and 250 employees worldwide, we continually focus on quality, service, reliability and complete solution support.



# FAMILY BUSINESS



Haws Corporation's innovative spirit is driven by third, fourth and fifth generations of the Haws family.





# OUR COMPETENCIES



ООО «ТИ-СИСТЕМС» ИНЖИНИРИНГ И ПОСТАВКА ТЕХНОЛОГИЧЕСКОГО ОБОРУДОВАНИЯ  
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# OUR COMPETENCIES



Basic competencies	Plumbing	Welding	Powder Coating
Engineering	Design	Certification	Dokumentation
Tempered water solutions	Steam Heating	Tankless Heaters	Boiler systems
Water treatment	Water additives	Filtration	UV/Infrared
New technologies	IoT	Telemetry	3-D printing
Consulting	Training	Risk analysis	Project Mgmt



# OUR COMPETENCIES



## Drinking Fountains

DF

Haws manufactures a complete line of high-quality *Drinking Fountains* and electric water coolers for your specific project needs.



## Emergency Equipment

EE

*AXION's* ground-breaking designs continue to change the emergency response landscape by offering the only medically superior response solution in the industry for increased victim comfort.



## Haws Integrated

HI

*Haws* designs, builds, implements and manages custom-engineered industrial safety response systems that provide ANSI compliant tempered water for large-scale decontamination and emergency wash installations.



# EMERGENCY RESPONSE

The Risk Rated Response is provided to help target the appropriate emergency response equipment based on level of risk. Using the information provided, product families can be easily viewed and compared to the level of increasing risk.

All models shown are standard Haws products. Visit [www.hawsco.com](http://www.hawsco.com) for more information on these models or to see the full line of Haws products offered.

**7801** **7402.16** **7401.37** **7420** **8908** **7240B-7270B** **7241-7271** **7777** **7610** **7611** **7454WCC** **9201EFE** **9202E** **TW85.EWE** **TW85.SHE**

**PORTABLE EYEWASHES**

- Potable, plumbed water is not available
- For environments that have airborne particulates, shavings, or eye hazards

**RISK EXAMPLES**

- Airborne particulate
- Blown particulate
- Minor splashes

**INDUSTRY EXAMPLES**

- Wood Shops • Paint Shops
- Welding Shops • Construction

**LABORATORY EYE/FACE WASHES**

- Plumbed water is available
- Minor incidents dealing with chemicals or pathogens

**RISK EXAMPLES**

- Airborne/blown particulate
- Injurious corrosive materials with pH of 2 or less (very acidic) / pH of 11 or greater (very basic or alkaline)\*
- Carcinogenic chemicals
- Blood-born pathogens

**MODEL OPTIONS:**

- Sanitary-Free
- Stainless Steel
- Freeze Resistant

**INDUSTRY EXAMPLES**

- Schools
- Hospitals
- Medical or Research Facilities
- Laboratory Facilities
- Manufacturing facilities

**TEMPERING VALVES**

- ANSI tempered water range: 60-100 degrees F (15.5° - 37.7° C) compliance
- Emergency equipment paired with tempering valves or systems allows compliance with the standard
- Valves are designed for specific applications/uses
- Review the suggested valve to ensure complete compliance

**VALVE OPTIONS FOR MODELS:**  
7430, 8908, 7240B-7270B, 7241-7271, 7610, 7611, 7454WCC, 7777

**VALVE OPTIONS FOR MODELS:**  
8320-8326, 8309WC, 8330, 8354WCC, 8317CT19, 8123

• 9201EFE • TW85.EWE • 9201EW • 9201E • 9201H • 9202E • 9202E • TW85.SHE

INCREASING RISK

**8123** **8100** **8320-8326** **8300FP** **8309WC** **8330** **8354WCC** **8317CT19** **9001** **9325** **8780** **8730** **8710** **8720**

**DRENCH SHOWERS**

- Total body decontamination
- Exposure to the entire body is present, but eye/face rinse is not required

**RISK EXAMPLES**

- Full-body exposure to skin irritants, chemicals/acids

**INDUSTRY EXAMPLES**

- Loading Docks
- Warehouses
- Hospital Decan Units

**COMBINATION EYE/FACE WASH & SHOWER**

- Multi-use products for eye/face and/or body
- Variety of installations: indoor, outdoor, laboratory and wheelchair accessible
- Unit design dependent on installation type

**RISK EXAMPLES**

- Airborne particulate
- Blown particulate
- Carcinogenic chemicals
- Blood-born pathogens
- Caustic chemical/acid burns
- Injurious corrosive materials with pH of 1 or less (highly acidic) / pH of 12 or greater (highly basic or alkaline)\*
- Full-body exposure to skin irritants

**INDUSTRY EXAMPLES**

- Warehouses • Laboratories • Refineries
- Manufacturing Facilities • Chemical Plants

**SAFETY ACCESSORIES**

- Alarms for plumbed product, added level of security

**TEMPERING SYSTEMS**

- Tempered water blending systems supply tepid water to showers and/or eyewashes

**HAWS INTEGRATED™ – Engineered Solutions for Safety**

- Ultimate protection for indoor or outdoor applications
- Customized designs for application needs
- Multiple hazards options

**RISK EXAMPLES**

- Extreme conditions / indoor or outdoor
- Carcinogenic chemicals
- Caustic chemical/acid burns
- Extreme conditions or exclusive situations
- Injurious corrosive materials with pH of 1 or less (highly acidic) / pH of 12 or greater (highly basic or alkaline)\*
- Full-body exposure to skin irritants

**INDUSTRY EXAMPLES**

- Any industry, varied climates, multi-tier hazards

\*pH of a solution = level of acidity or alkalinity

INCREASING RISK



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# WHY ARE THEY NEEDED?



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# WHY ARE EMERGENCY SHOWERS IMPORTANT?

**Accidental chemical exposures can still occur** even with good engineering controls and safety precautions. As a result, it is essential to look beyond the use of goggles, face shields, and procedures for using personal protective equipment. Emergency showers and eyewash stations are a necessary backup to minimize the effects of accident exposure to chemicals.



# WHY ARE EMERGENCY SHOWERS IMPORTANT?



- Chemical burns represent potentially blinding injuries,
- constitute a true ocular emergency requiring immediate assessment and initiation of treatment,
- The majority of victims are young,
- exposure occurs at home, work place and in association with criminal assaults,
- Alkali injuries occur more frequently than acid injuries, Emergency management is the single most important factor in determining visual outcome.



# WHEN ARE THEY NEEDED?

The need for emergency showers or eyewash stations is based on the properties of the chemicals that workers use and the tasks that they do in the workplace. A job **hazard analysis** can provide an evaluation of the potential hazards of the job and the work areas. The selection of protection -- emergency shower, eyewash or both -- should match the hazard.



## WHAT DO THEY PROVIDE?

- Emergency showers and eyewash stations **provide** on-the-spot **decontamination**. They allow workers to flush away hazardous substances that can cause injury.
- Emergency showers can also be used effectively in **extinguishing** clothing fires or for flushing contaminants off clothing.





# WHAT IS THE GOAL?



If you work in a facility like this ...



to reduce your time here

...you need properly working safety showers



# INTERNATIONAL STANDARDS

- ④ **ANSI (American National Standard) Z358.1-2004**
- ④ **DIN 12899-3 Körperduschen**
- ④ **European Standard EN 15154 1-5**
  - ④ EN 15154-1 Plumbed-in body showers for laboratories
  - ④ EN 15154-2 Plumbed-in eye wash units
  - ④ EN 15154-3 Portable body showers (in preparation)
  - ④ EN 15154-4 Portable eye wash units (in preparation)
  - ④ EN 15154-5 Body showers and Tank showers for production and logistic sites (in preparation)



# INTERNATIONAL STANDARDS



- ④ Shower = 76 l/min
- ④ Eyewash = 1.5 l/min\*
- ④ Eye/Face Wash = 11l/min

- ④ Shower = 60 l/min
- ④ Eyewash = 6 l/min
- ④ Eye/Face Wash not described



# WHAT IS THE CORRECT FLOWRATE?



- 30 Litres/Minute (Fraunhofer Institut)?
- 60 Litres/Minute (EN 15154)?
- 76.3 Litres/Minute (20 Gallon /min) ANSI?
- 80 Litres/Minute (Norway)?
- 110 Litres/Minute (Italy)?



# “1-TOUCH” VS. “1-SECOND” ACTIVATION



## ANSI (American National Standard) Z358.1-2004

The shower should be designed that it can be **activated in less than 1 second**, and it remains operational without the operator's hand on the valve (or lever, handle, etc.).

## EN 15154-2:2006: Plumbed-in eye wash units

For manual operation, the valve shall be opened in a single operation by turning or moving a valve actuator to maximum 90° or maximum 200mm stroke.

..., the valve shall be open within 1 s.



# TIME IS CRITICAL!



**The first 10 to 15 seconds** after exposure to a hazardous substance, especially a corrosive substance, **are critical**. Delaying treatment, even for a few seconds, may cause serious injury.



# HOW LONG SHOULD BE RINSED/FLUSHED?



## As long as possible!

For emergency showers and eyewash stations to be effective, the ANSI Standard recommends that the affected body part must be flushed immediately and thoroughly for at least **15 minutes** using a large supply of clean fluid under low pressure. Water does not neutralize contaminants -- it only dilutes and washes them away. This fact is why large amounts of water are needed.

**Note:** The total amount of water in self-contained systems should exceed the volume required to deliver water at the recommended flow rates and flushing times.



# WHERE SHOULD THE SHOWERS BE LOCATED?

To be effective, the equipment has to be accessible.

A person must be able to reach the equipment in no more than **10 seconds**.

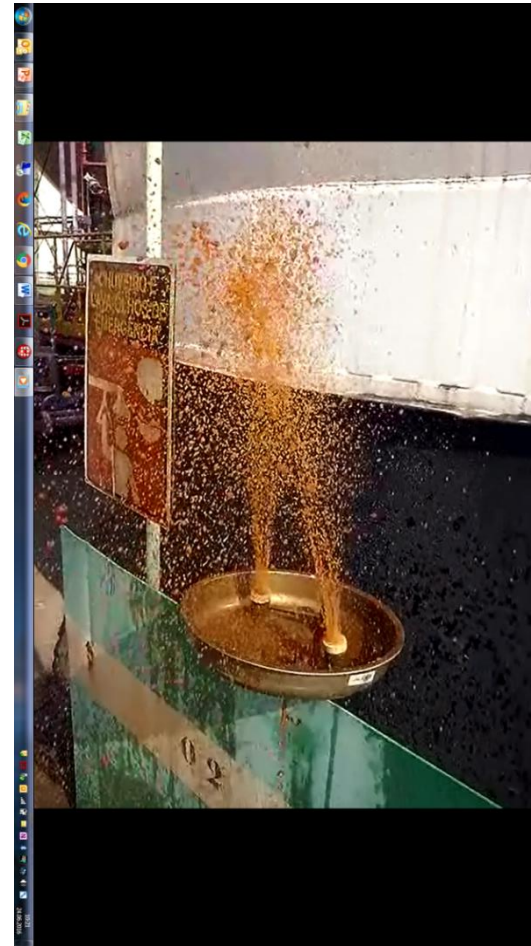
The unit should be installed in such a way that they do not become contaminated from corrosive chemicals used nearby.





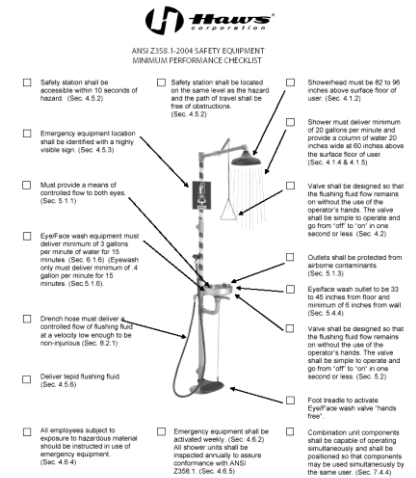
# WHAT IS CONSIDERED TO BE A FLUSHING FLUID'?

The ANSI standard defines "flushing fluid" as any of **potable (drinking) water**, preserved water, preserved buffered saline solution or other medically acceptable solutions. Local laws may apply in some cases.

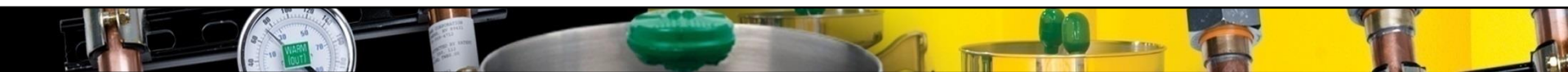


# INSPECTION AND MAINTENANCE

- One person in the work area should be designated responsible for inspecting and operating (activating) the emergency shower, eyewash station, combination units, and drench hoses **weekly**. A weekly check will make sure that there is flushing fluid available as well as clear the supply line of sediments and minimize microbial contamination caused by 'still' or sitting water. This person should keep a signed, dated record. The ANSI standard also recommends a complete inspection on an annual (yearly) basis.
- Preventive maintenance inspections should be done every six months to check for such problems as valve leakage, clogged openings and lines, and adequacy of the fluid volume. A work record of these inspections should be kept. Replacement parts should be kept on hand to prevent the system from becoming non-functional. If the system breaks down for any reason, the workers in the area should be properly warned and protected.
- Personal eyewash equipment should be inspected and maintained according to the manufacturer's instructions and at least annually for overall operation.



# TESTING EQUIPMENT



Shower Test Kit 9010



Eyewash Gauge 9015





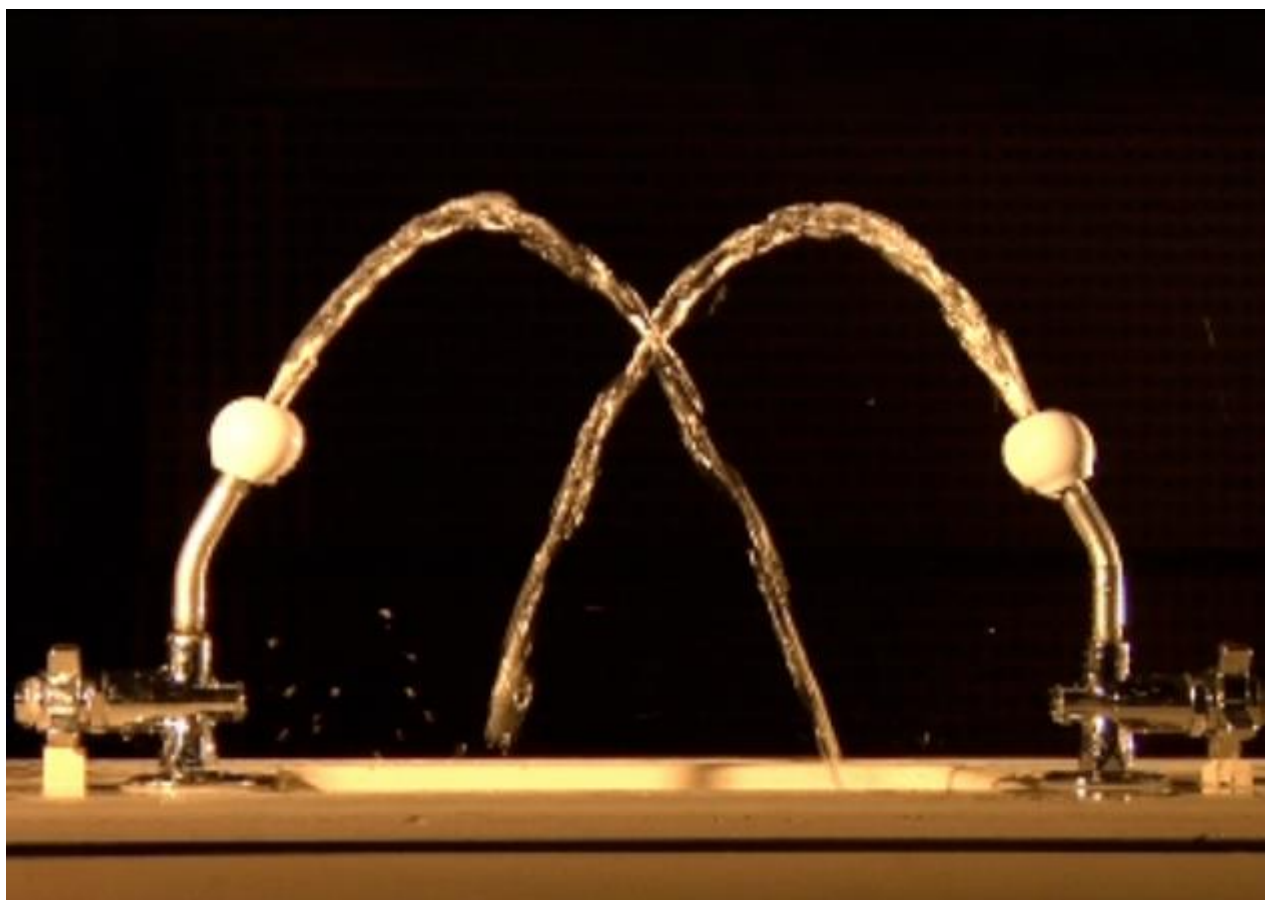
# INNOVATION



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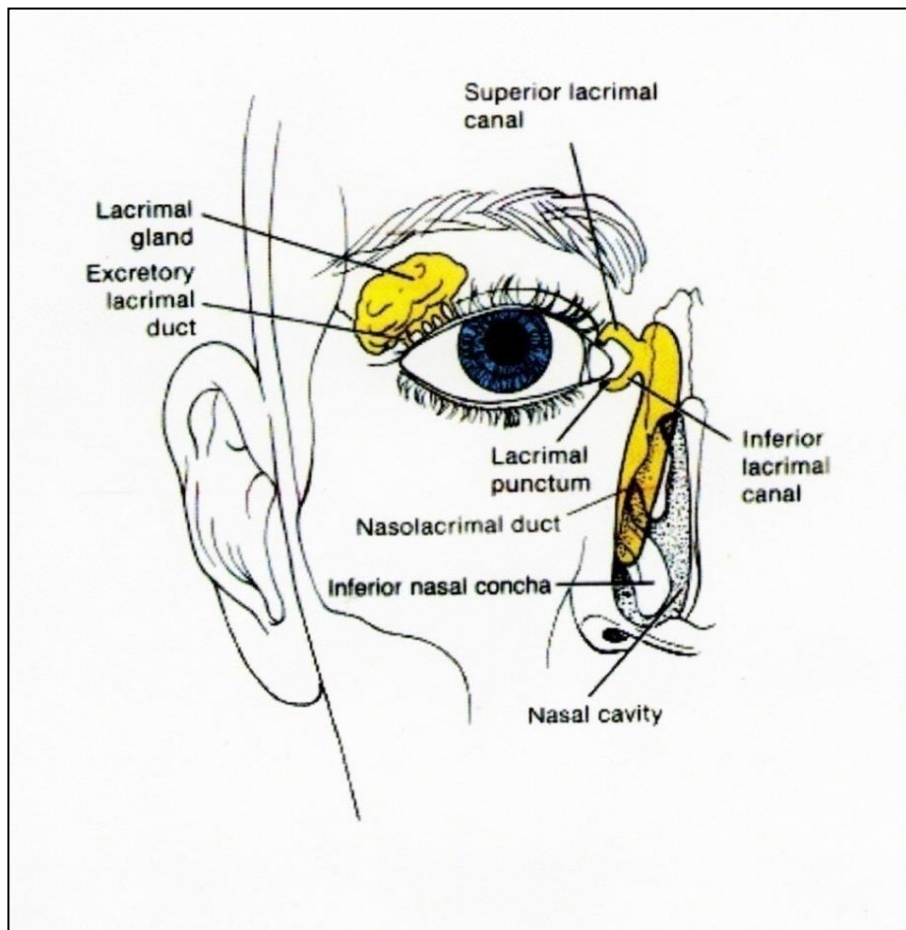
# THE CONVENTIONAL WAY



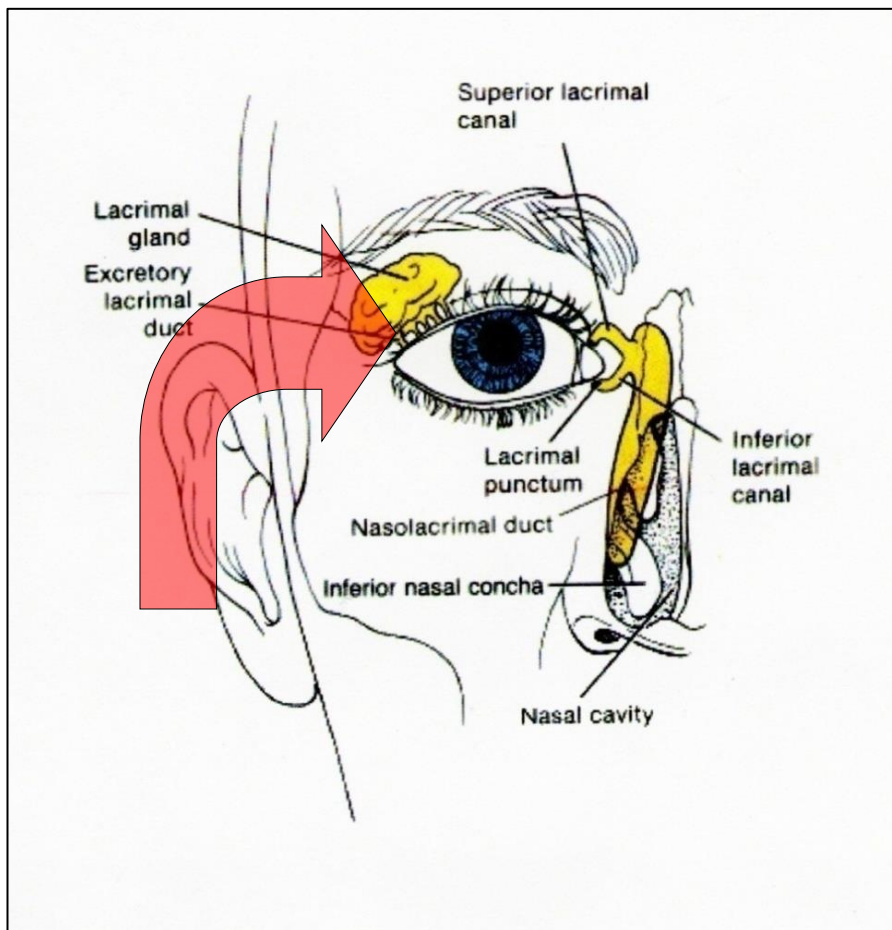
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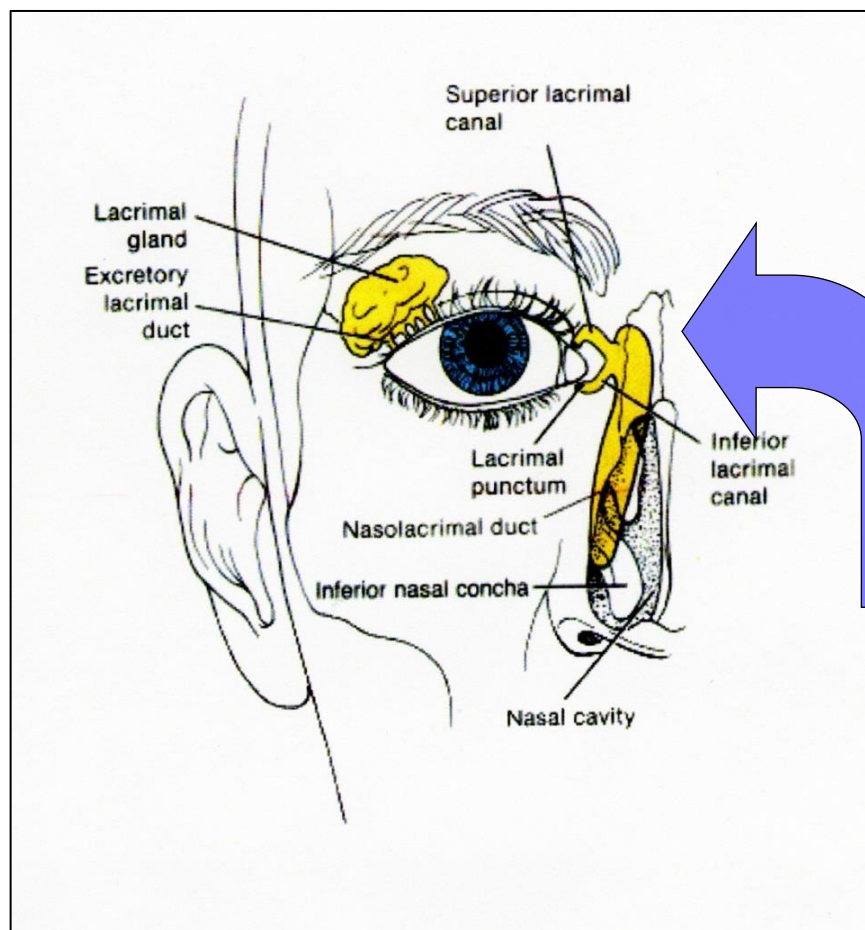
# THE HUMAN EYE



# TRADITIONAL EYEWASH OPERATION



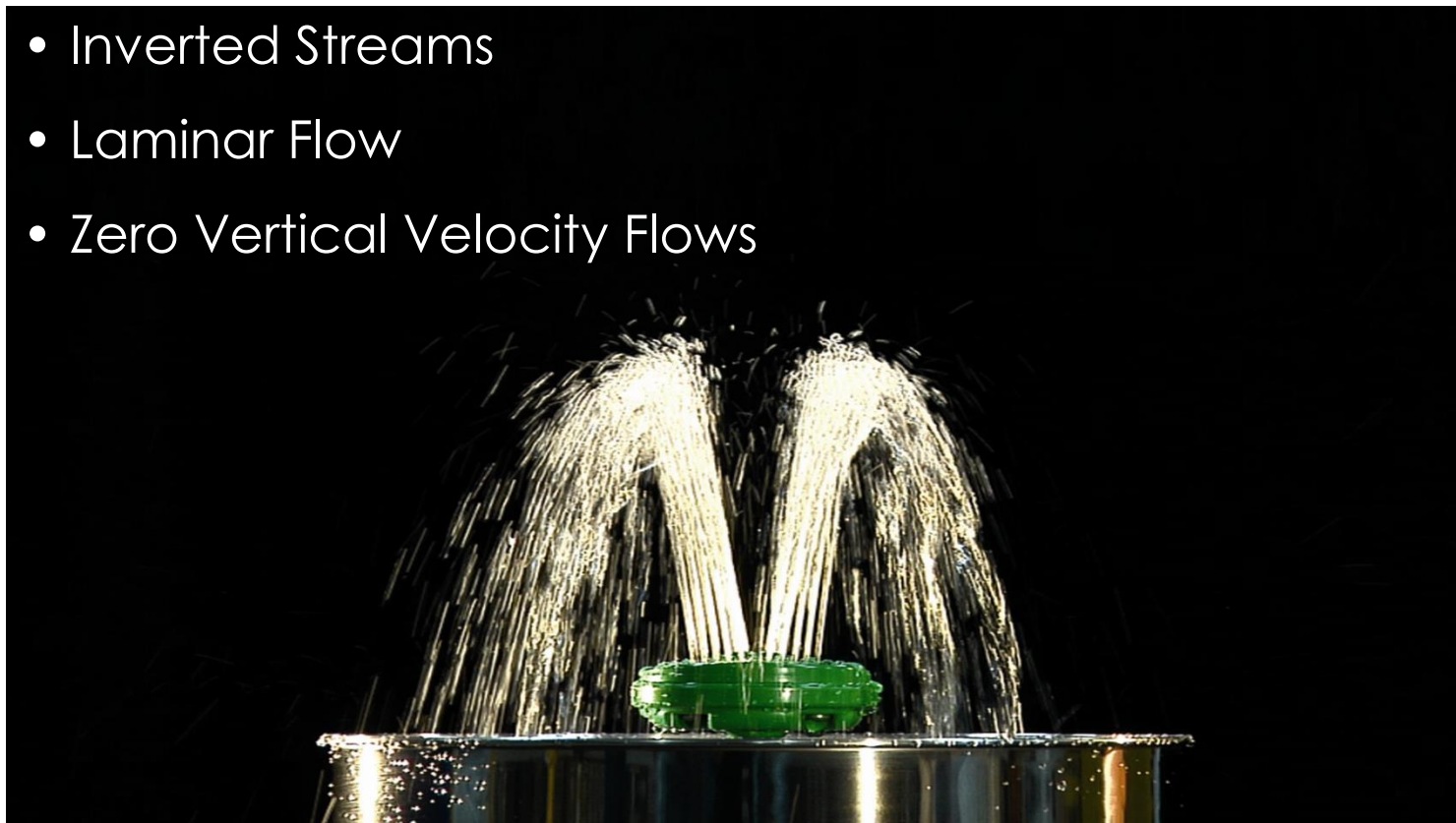
# MEDICALLY SUPERIOR RESPONSE



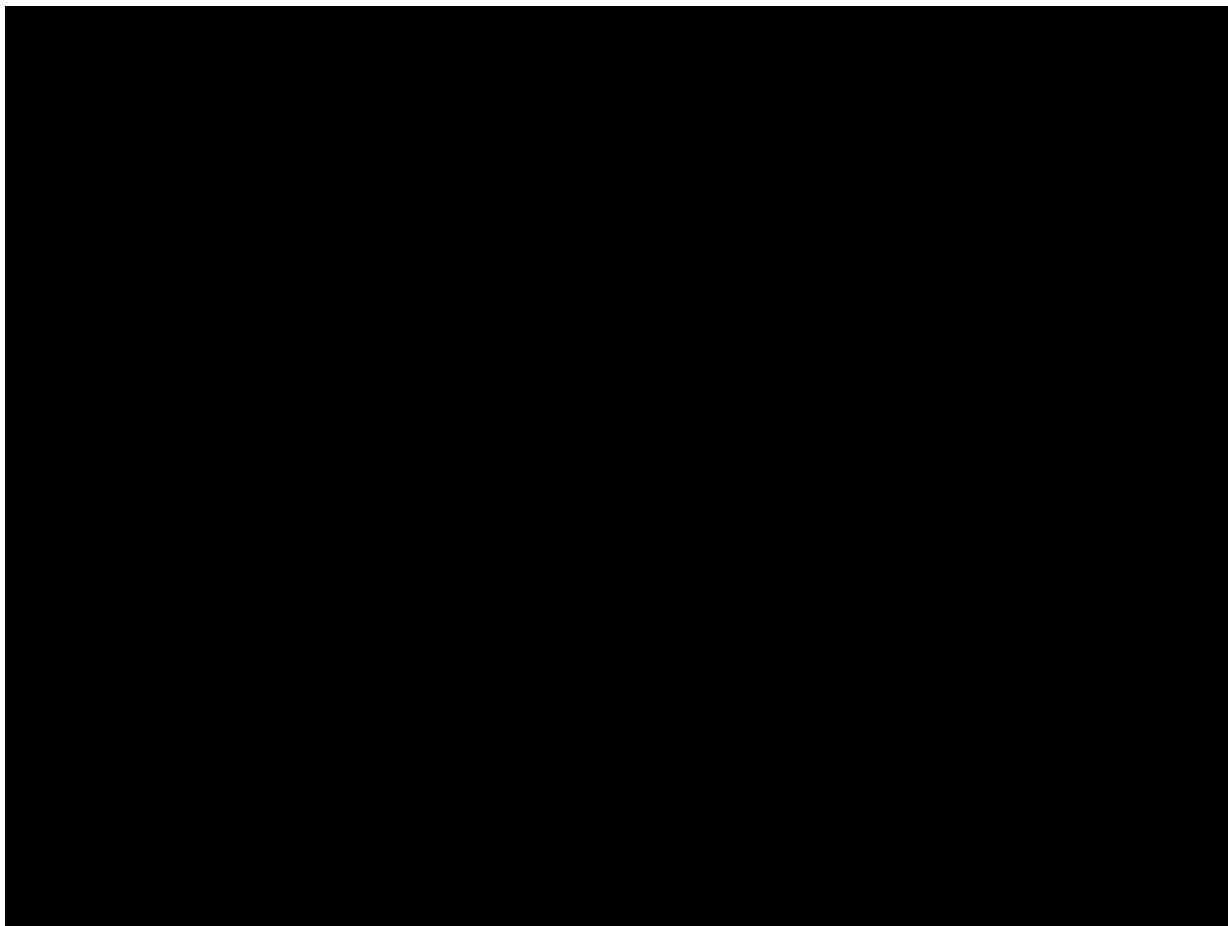


# HAWS AXION MSR

- Inverted Streams
- Laminar Flow
- Zero Vertical Velocity Flows



# HAWS AXION MSR



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# OVERHEAD TANK SHOWER OTS 4000



Standalone low water pressure  
gravity fed tank shower for indoor  
and outdoor use



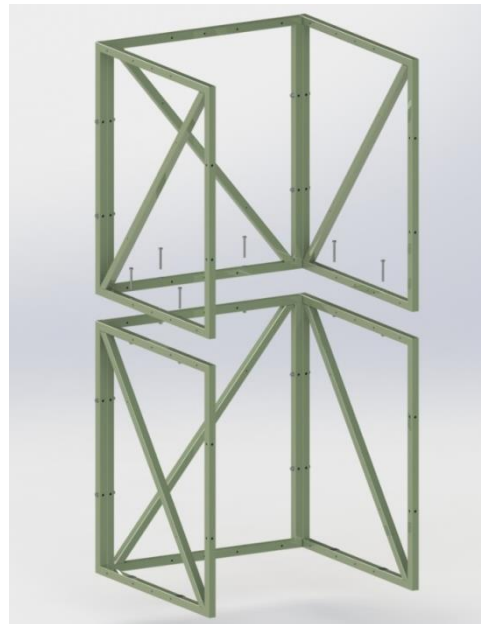
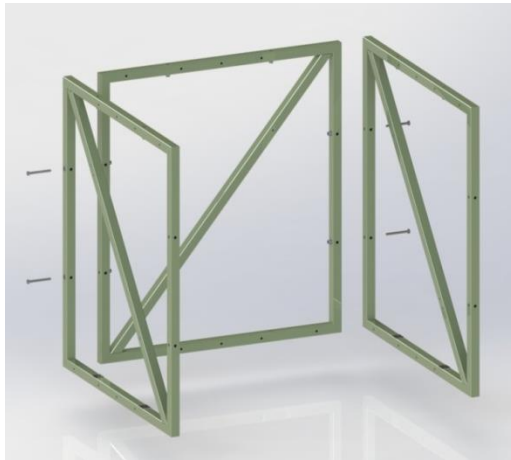
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# OVERHEAD TANK SHOWER OTS 4000



MODULAR FRAME DESIGN...



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# OVERHEAD TANK SHOWER OTS 4000



... LOW VOLUME



Dimensions: 170 x 150 x 170cm; Weight: 588kg



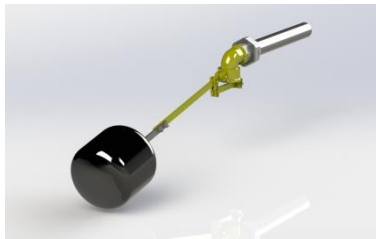
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# OVERHEAD TANK SHOWER OTS 4000



## OPTIONS



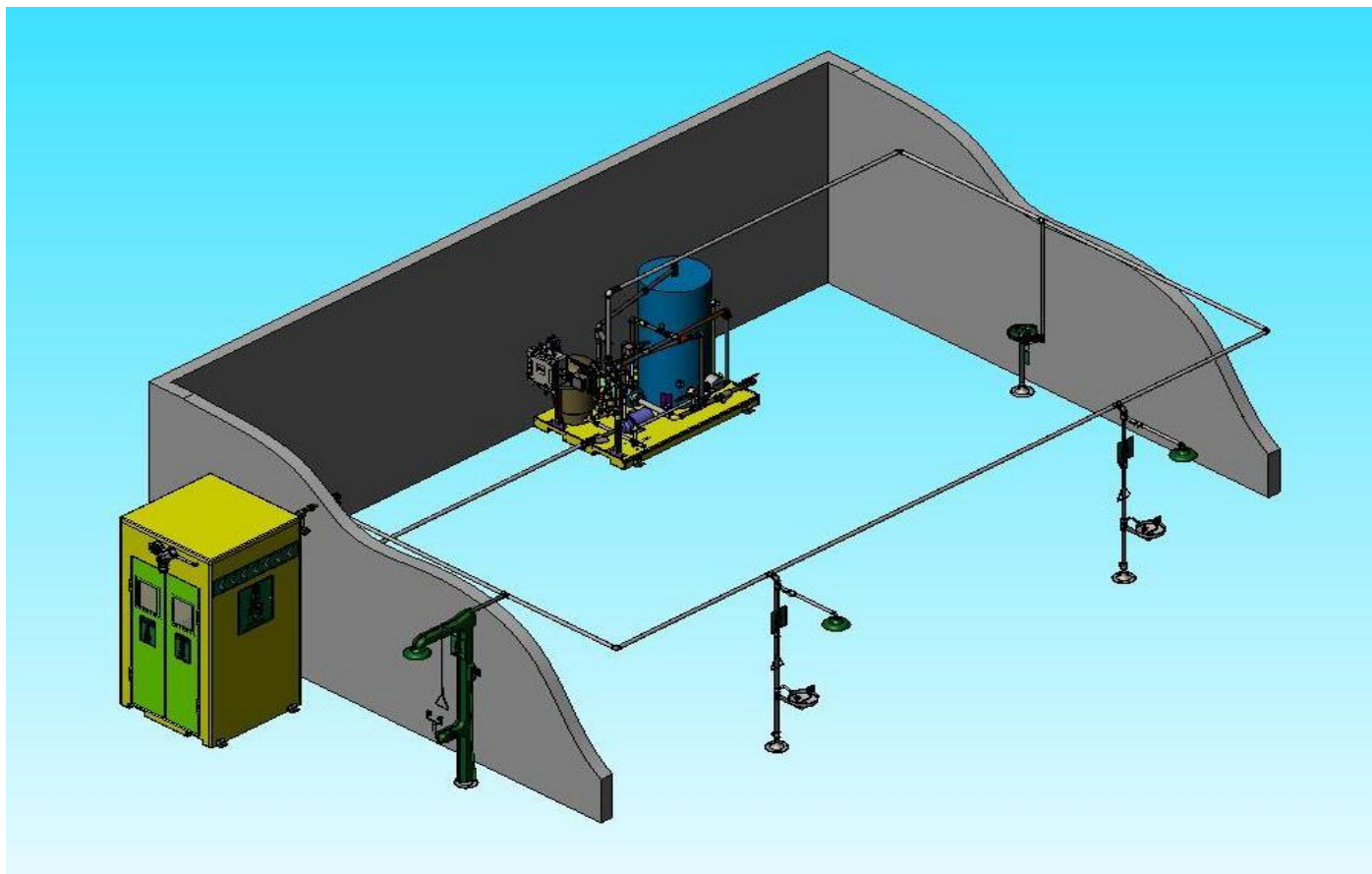
# ENGINEERED SOLUTIONS: EXPANDED VALUE



Dedicated to entire project and system lifecycle



# UNDERSTANDING CUSTOMERS NEED



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# HAWS REFERENCE PROJECT 13648

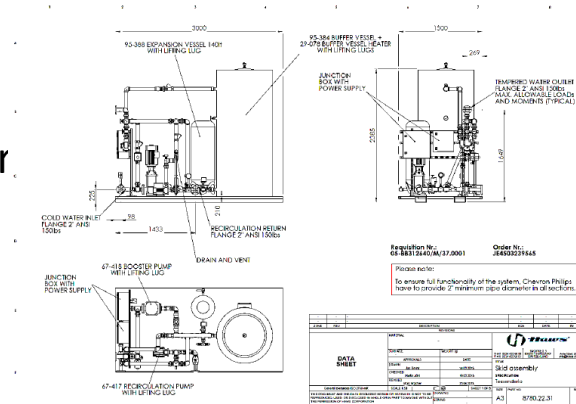


## General Project Description:

Chevron Phillips in Tessenenderlo is upgrading the safety shower system with tempered water system with loop and 6 special combination showers.

## Description of the HAWS Products:

Model 8780 is a skid mounted tempering system that can supply a number of drench systems or eyewash stations. Hot water is generated via a 24 kW immersion water heater. This hot water is stored in a 1000 liter storage tank. Hot and cold water are mixed with an engineered blending system to provide warm water for two combination units each running at a maximum of 30 GPM (114 l/min). All piping within the tempering booth is galvanized piping with brass and stainless steel valves. The combination showers 8317CTFPEX are specially designed to become an integral part of the loop system to avoid dead legs.



# TEMPERED WATER BECAUSE...



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# HOW DO WE COOL THE WATER?



- Chiller
- Air conditioning
- Bury the pipes
- Ignore the issue



# IGNORE THE ISSUE?



## SOLAR RADIATION



- A bare pipe exposed to the sun for 8 hours could reach 71°C on its surface when the ambient is 45°C.
- The solar radiation could heat the water up to 50°C
- What happens with insulation?

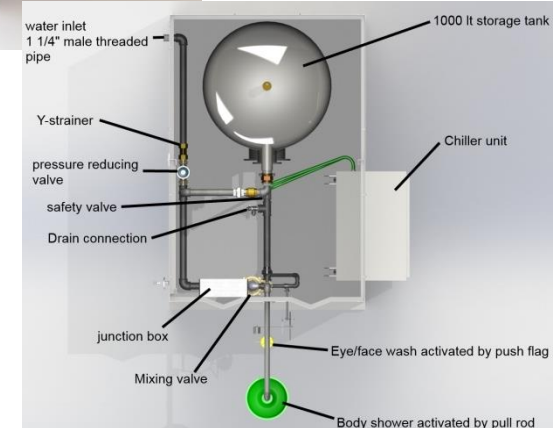
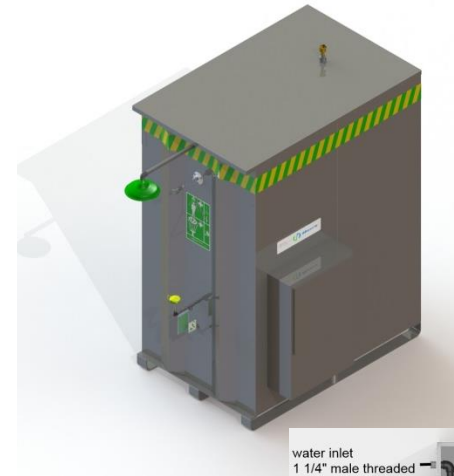


# DESERT CONDITIONS

## Skid mounted cooling system with integrated AXION combination shower

### Specification:

- water supply to the Unit (40...42°C)
- Tempered water to shower (27°C)
- Flow rate of 113 l/min to the Body shower
- Flow rate of 36 l/min to the eye/face wash
- Water inlet pressure 2...10bar.
- 415V 3Ph 50Hz
- ATEX rated
- For outdoor use (design temperature 50°C)



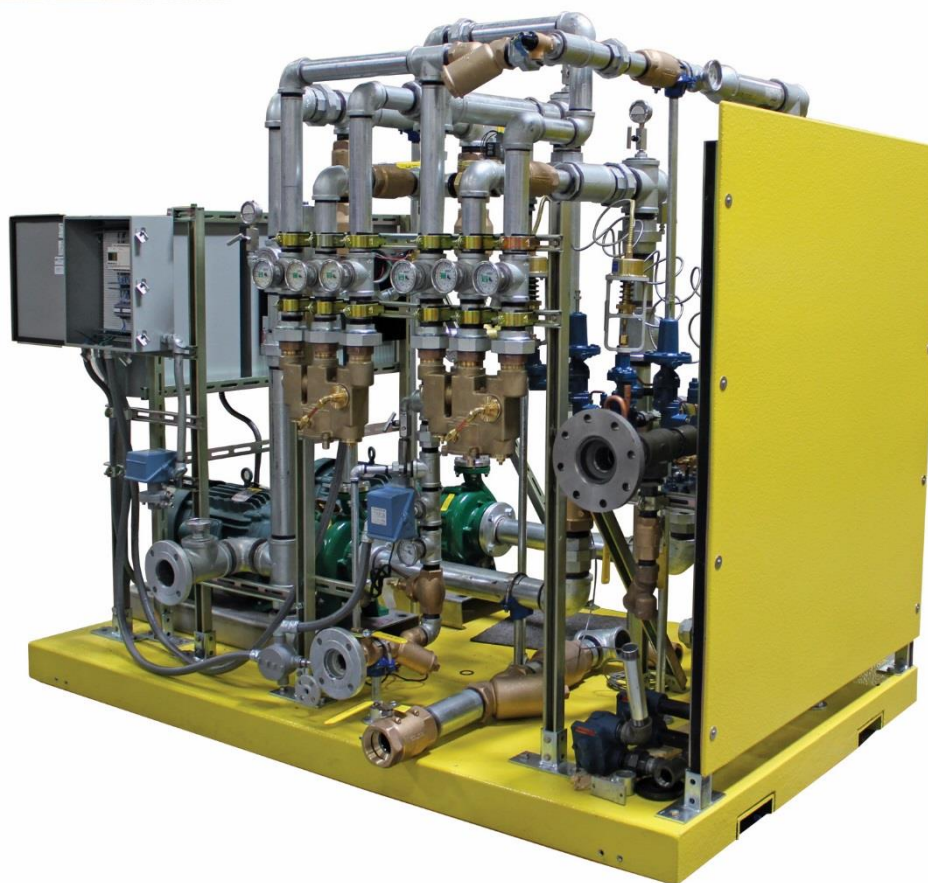
# INDOOR / OUTDOOR



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# STEAM HEATED



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# POINT OF USE STEAM

- Uses existing plant steam and water supply
- Provides tepid water to safety shower and/or eyewash
- Easy to install on existing shower or eyewash/shower combination
- Compact, lightweight design easily supported by pipe connections or factory mounting kit



# SOME OFFSHORE SOLUTIONS



Hebron (Worley Parsons)



Hibernia (Wood Group)



Terra Nova (Wood Group)



# SOME GLOBAL REFERENCES



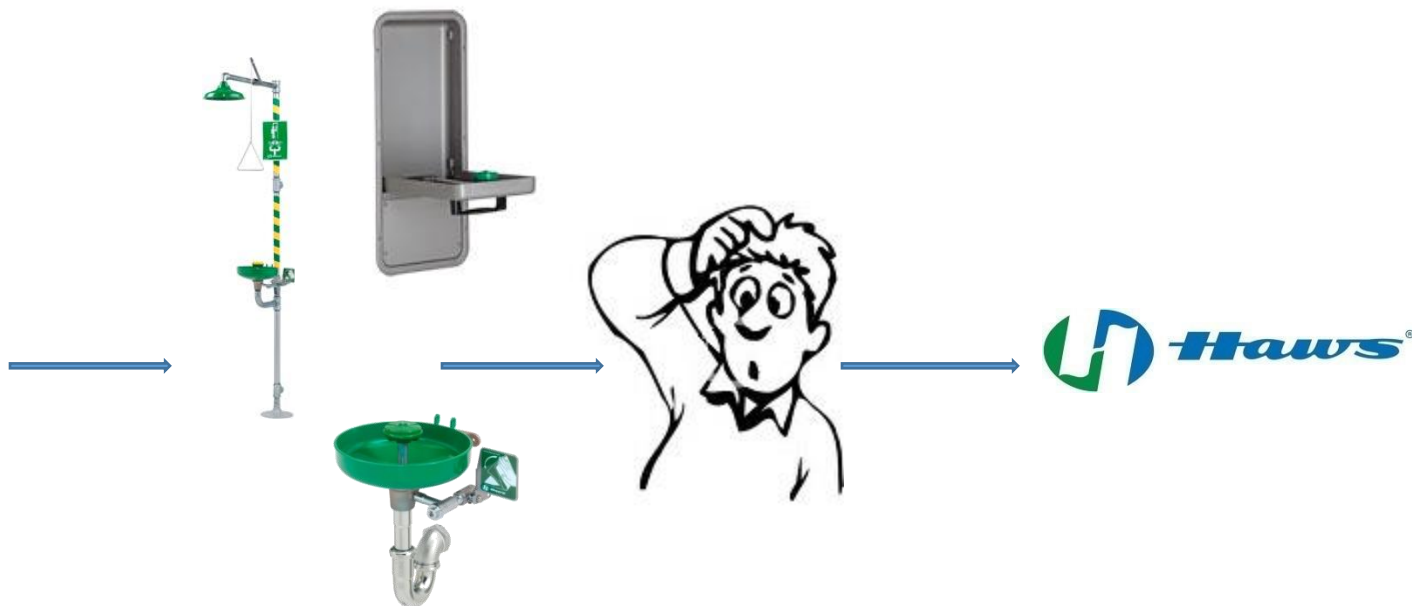
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NOT SURE?



ANSI Z358.1 2014  
EU 15154-1 to 4  
Company guidelines



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# THANK YOU VERY MUCH



## QUESTIONS ??



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