

KOOPTECH® WD-SR

A COMPLETE SYSTEM

for WASHING, DRYING and TRANSPORTATION
OF EYE PERSONAL PROTECTIVE EQUIPMENT



EYE PROTECTIVE EQUIPMENT

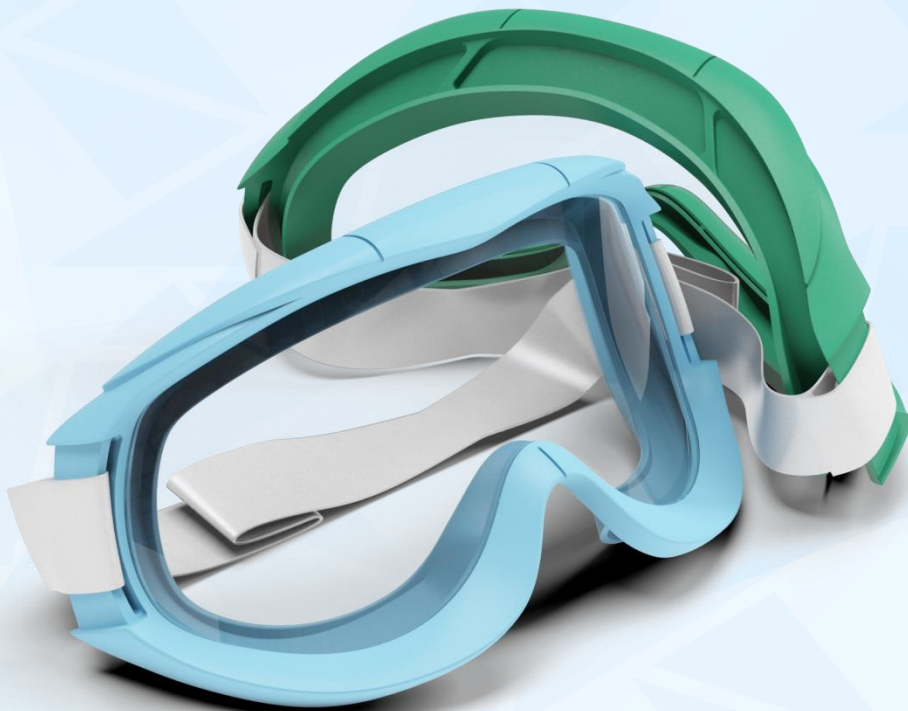
Personal Protective Equipment is presently a necessity, not only because of the current dangerous epidemic situation. Eye protecting goggles are an example of effective and important Personal Protective Equipment.

According to research, eyes are one of the possible routes of infection by viruses, bacteria, fungi, and other pathogens.

Experience proves that goggles effectively protect the user from the above-mentioned threats. For the protection to be effective, it is necessary to keep the goggles at an appropriate level of cleanliness. Therefore, on a regular basis, the goggles must undergo a proper, technically controlled, process of washing.

High cost of goggles (from dozens to hundreds of EUR per piece) and an urgent need for reduction of waste, fully justify the treatment of the goggles as a recyclable equipment that could be used many times.

In response to these challenges, Kooptech® developed and introduced to production a Kooptech® WD-SR – a complete system for washing of goggles. Kooptech® WD-SR is also equipped with a drying function*. Completeness and full control of the process of washing and drying makes the goggles ready for the next use in a short time. The process is safe for goggles and does not damage them.



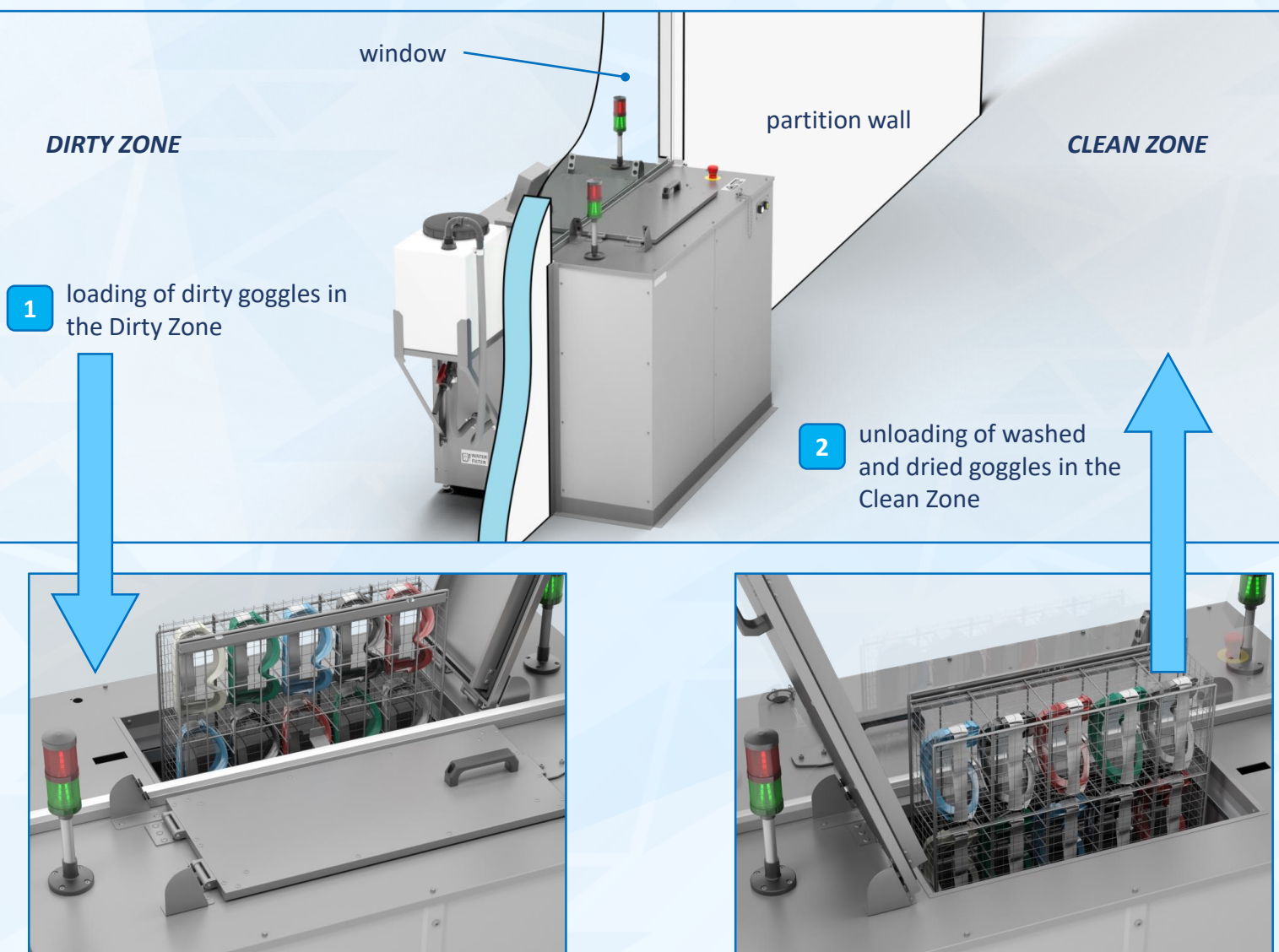
** Drying process is performed by centrifugal removal of water. Water residue may remain in cavities and will evaporate in short time on its own, without leaving marks on the surface of goggles. Rubber band may remain slightly damp after centrifugal drying.*

ELIMINATION of CROSS-CONTAMINATION

According to a good practice, cleaning rooms should be divided into separated areas: a *Dirty Zone*, where the items prepared for cleaning are stored, and a *Clean Zone* for already processed items. Both zones should be separated to eliminate the possibility of cross-contamination. Devices for cleaning should allow such arrangement of the room, that a loading area in the *Dirty zone* is separated from the unloading area in the *Clean zone*.

Kooptech® WD-SR System meets all of these requirements, enabling loading of dirty goggles in the *Dirty Zone* and unloading them in the *Clean Zone* after the process of washing and drying is completed. Additionally:

- System does not allow for simultaneous opening of doors on both sides of the machine;
- System does not allow for opening of the clean side door without completing a full washing and drying cycle;
- in case of any alarm which would result in stopping of the washing process, it is not possible to open the door on the clean side;



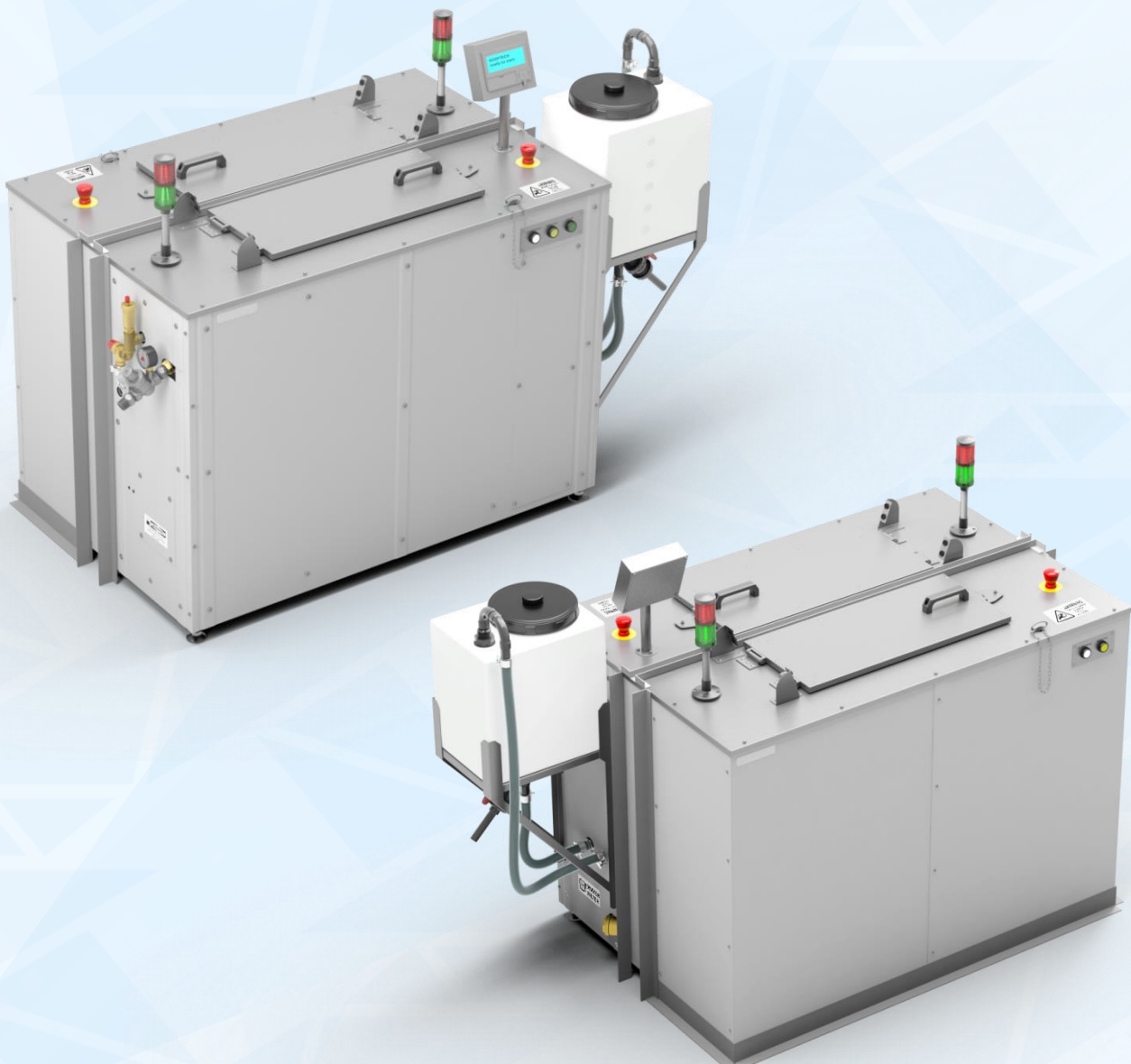
ELIMINATION of CROSS-CONTAMINATION exemplary layout



KOOPTECH® WD-SR - features

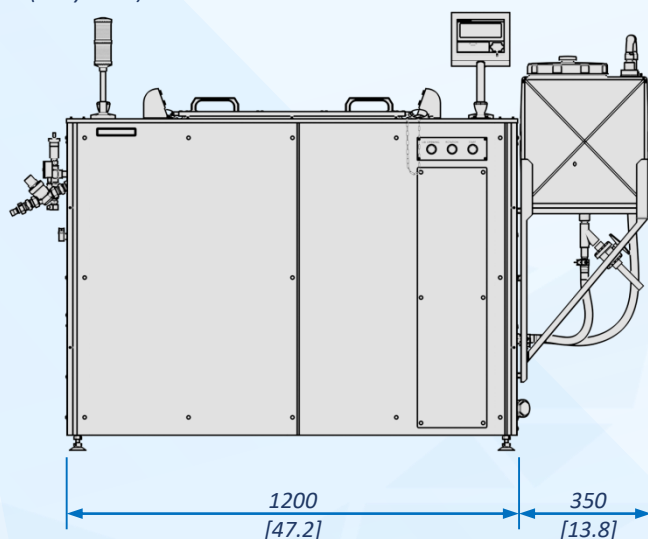
The main component of the **Kooptech® System** is a **WD-SR Washer-Drier**. Machine features:

- **washing, rinsing and drying of goggles in a fast, approx. 6 min cycle time;**
- safety of operation and signaling of states of the machine;
- installation with a partition wall between *Dirty Zone* and *Clean Zone* (separation of loading area from unloading area);
- **full control of washing process:**
 - Detergent and Rinse Aid levels in the tanks are controlled;
 - Detergent and Rinse Aid doses are controlled;
 - control of water level and temperature;
 - process of washing is controlled ensuring that pump and nozzles work properly, filter is not clogged and rotor is spinning;
 - deviation from the correct process are signalled by appropriate alarms;

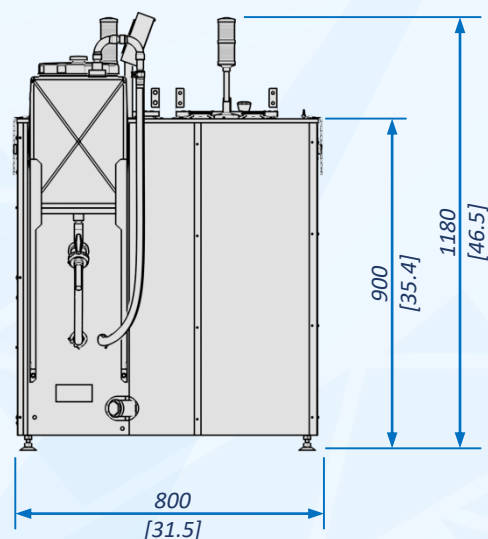


KOOPTECH® WD-SR – technical specification

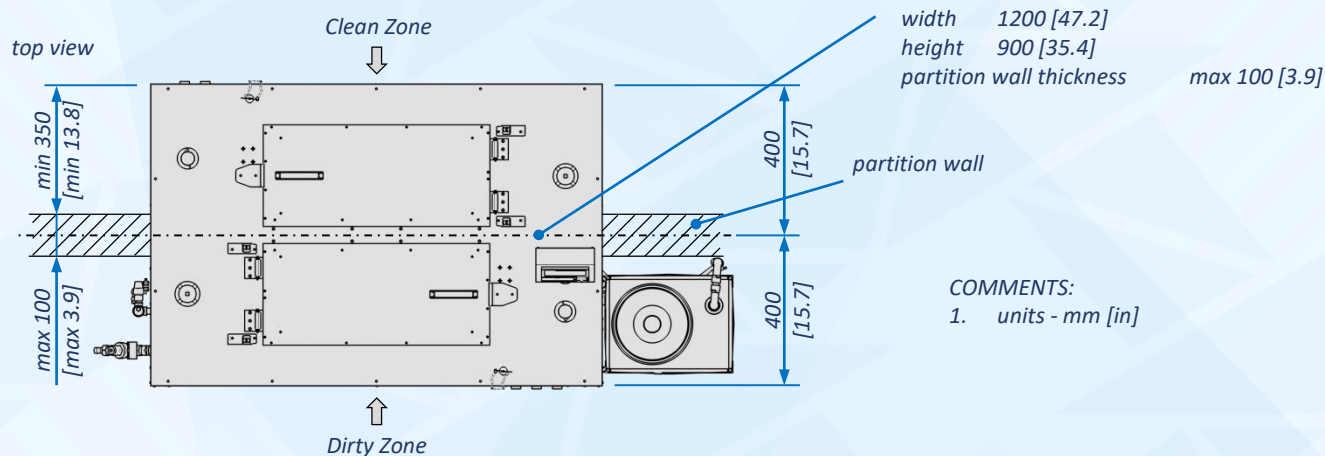
front view (Dirty Zone)



side view



top view



COMMENTS:
1. units - mm [in]

parameter	Kooptech® WD-SR	
weight	250 kg	[551 lbs.]
width	1200 mm	[47.2"]
depth	800 mm	[31.5"]
height	1180 mm	[46.5"]
nominal supply voltage*	3x 400 VAC (±10%), 50-60 Hz	
connection power	8.9 kW	
electric connection	3-phase with ground, installation fitted with a class K5 fuse (30A) or equivalent	
power connection cable	2 m [6.6 ft], no plug**	
inlet water temperature	cold fresh water, max 25°C [59°F]	
inlet water hardness	< 5° dH	
water source efficiency	min. 2500 l/h [660.4 gal./h]	
water source pressure	min. 2.5 bar [43.5 psig]	

*Other supply voltage versions are available upon request

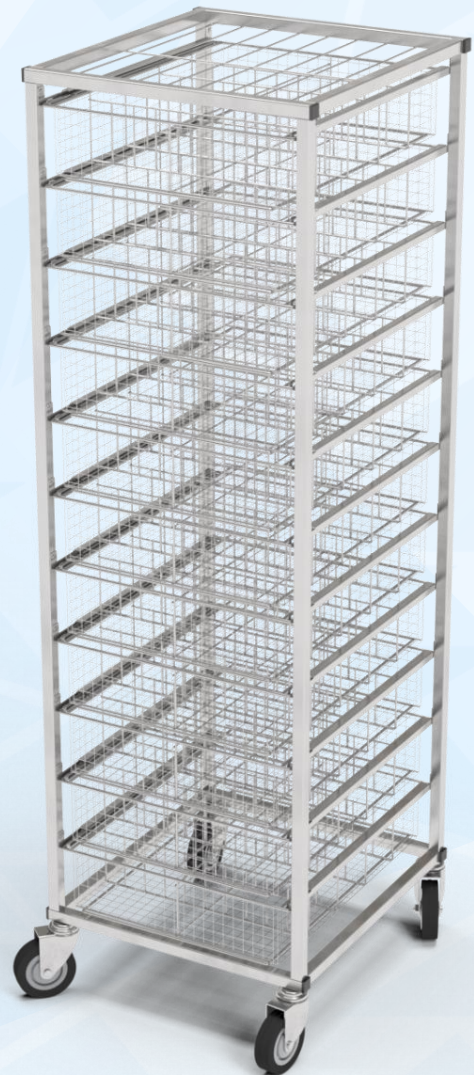
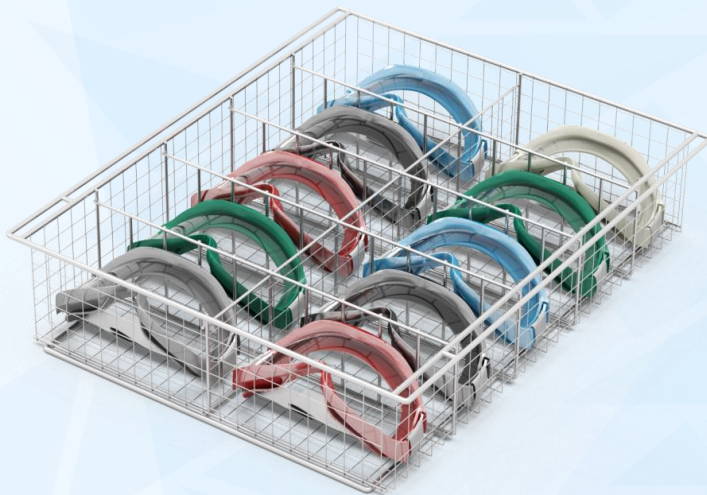
**Appropriate plug suitable for unit's voltage and power rating to be supplied by Customer

parameter	Kooptech® WD-SR
hydraulic connection	braided hose, female thread G3/4", length 100 cm [3.3 ft]
main drain	ø24 mm [0.95"], elastic hose, length 150 cm [4.9 ft]
emergency drain	ø24 mm [0.95"], elastic hose, length 150 cm (4.9 ft)
energy use	7.85 kWh
water use	19.5 l/cycle [5.2 gal./cycle]
Detergent use	15 ml/cycle [0.51 oz./cycle]
Rinse Aid use	7.5 ml/cycle [0.25 oz./cycle]
ambient temperature	min. 15°C [59°F] – max. 30°C [86°F]
relative humidity	max. 90%, no condensation
sound emission	L _{EQ} < 70 dB (A)

STORAGE and TRANSPORTATION

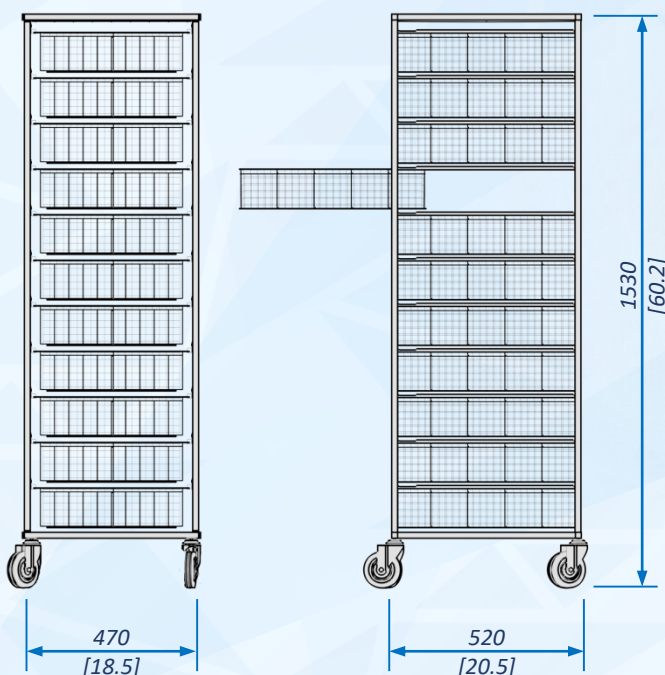
An integral part of **Kooptech® System** are **Baskets for Goggles** which secure the goggles while they are being transported and, together with **Cover**, keep goggles positioned and secured during washing-drying cycle in **Kooptech® WD-SR**. Baskets with goggles can be safely stored in **Kooptech® Trolley**, which enables easy transportation and keeping goggles in order.

- each Basket safely stores 10 pcs. of goggles;
- 2 Baskets are placed inside **Kooptech® WD-SR** machine (20 pcs. of goggles cleaned in each cycle);
- Trolley has a capacity for 11 Baskets (up to 110 pcs. of goggles);
- stainless steel design ensures durability and corrosion-free operation;



front view

side view



COMMENTS:

1. units mm [in]
2. Trolley's weight without baskets, approx. 14 kg [31 lbs.]
3. Trolley's weight with baskets (no goggles), approx. 35 kg [77 lbs.]

CLEANING AGENTS

A necessary components of a proper washing process are appropriate cleaning agents – **Detergent** and **Rinse Aid**. Both **Detergent** and **Rinse Aid** provided by Kooptech® are fully compatible with **Kooptech® WD-SR Washer-Drier** and are safe for materials from which the goggles and the **Washer-Drier** are made of.

- **Washing Detergent** is used to ensure efficient, low-temperature cleaning of the goggles
- **Rinse Aid** is used to enable effective removal of water during drying process



Washing Detergent

capacity	10 l (2.64 gal.)
use/cycle	15 ml (0.51 oz.)
cycles/container	approx. 670 cycles

Rinse Aid

5 l (1.32 gal.)
7.5 ml (0.25 oz./cycle)
approx. 670 cycles

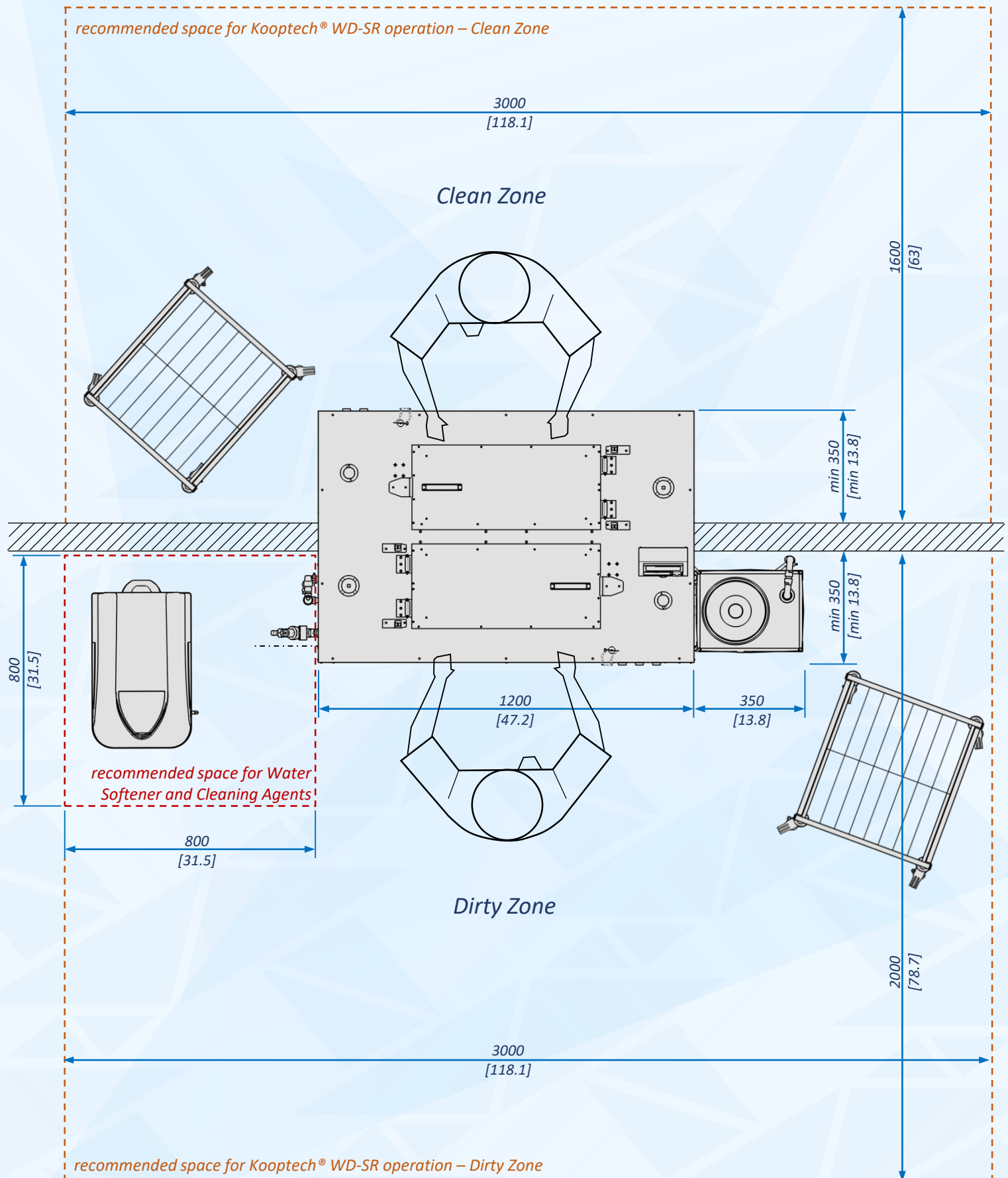
WATER SOFTENER

Kooptech® Water Softener is an integral component of the **Kooptech® System** and enables processing and preparation of water at parameters required for effective washing cycle.

Efficiency and parameters of the **Water Softener** fit the requirements of **Kooptech® WD-SR Washer-Drier**.



KOOPTECH® SYSTEM – layout specification



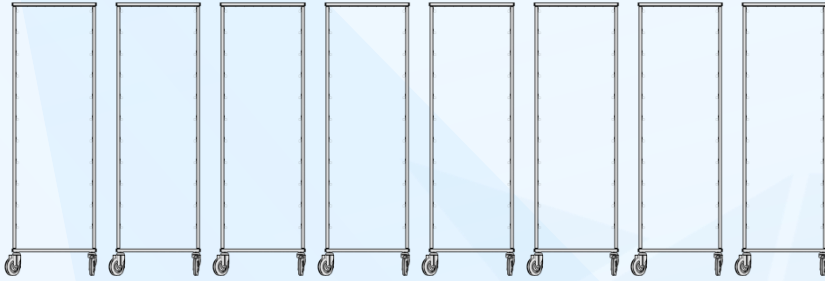
COMMENTS:

1. units mm [in]

KOOPTECH® SYSTEM – recommended workflow

Empty Trolleys (awaiting for cleaned goggles in Baskets)

8x Trolley



3

After cycle time, both Baskets and Covers are unloaded in Clean Zone

- Baskets are placed in Trolleys
- Covers are put aside

EVERY 4 HOURS: exchange of Trolleys and transfer of Covers

Trolleys with dirty goggles to be transferred to Dirty Zone for cleaning

Empty Trolleys (all Baskets cleaned) to be transferred to Clean Zone

Covers to be transferred to Dirty Zone after the whole batch of Baskets is cleaned

Covers are put aside (eventually all Covers will be transferred back to Dirty Zone)

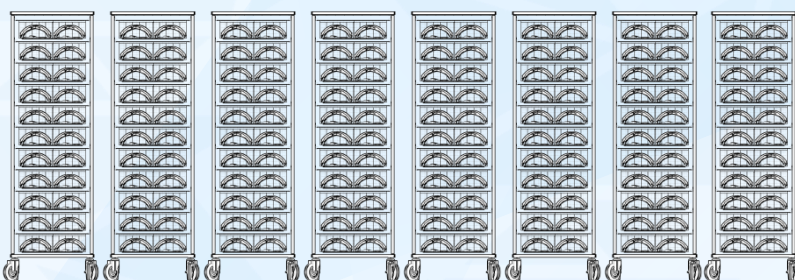
Storage of Covers
88x Cover

2

Washing & drying

1

2 Baskets and 2 Covers are loaded into Kooptech® WD-SR



Trolleys with Baskets, with dirty goggles

8x Trolley, 88x Basket, 880x goggles

MANUFACTURER

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