



# JOHNSON SCREENS® Combined Unit TOP

## TASK

The complete mechanical pre-treatment of wastewater in a municipal or industrial wastewater treatment plant, in the form of a single complete package inlet works in tank design.

## SOLUTION

The JOHNSON SCREENS® Combined Unit TOP replaces the conventional inlet sewage in the wastewater treatment plant. The Combined Unit TOP range of combined treatment systems integrates screenings and grit separation with the option of fat, oil and grease (FOG) removal, all within a single package unit. JOHNSON SCREENS® Combined Unit TOP are available with a wide range of screens and sieves, aerated or non-aerated design.

## FUNCTION

Pumped or by gravity the wastewater enters in the screen section where coarse solids are removed from the effluent, washed, compacted and dewatered prior to being discharged into a container. The screened effluent then discharges into a wider tank section for grit and sand sedimentation. The grit is conveyed to a grit classifier and can be further washed prior to disposal into a container.

The TOP range includes two variants: TOP 2 and TOP 3. TOP 2 integrates two treatment sections: a screening and a grit/sand separation section. The TOP 3 range incorporates the TOP 2 sections plus a further treatment section for FOG removal. Both variants may be fitted with air diffusers for improved separation of attached organic content from the grit and sand particles. With the TOP 3, this will effect flotation of FOG which can then be removed and disposed of into a separate container.

## DESIGN SIZES

- From 15 lt/sec up to 300 lt/sec
- Gap width: 1 – 10 mm

## MATERIALS

Tanks, covers, supports:  
Spirals:

stainless steel AISI 304 L or AISI 316 L  
special Micro Alloy Steel St52 (carbon steel in accordance with JOHNSON SCREENS® standard), alternatively AISI 304 L or AISI 316 L

## BENEFITS

- Mechanical pre-treatment within a low footprint
- Low requirements for civil engineering
- Complete hygienic stainless steel encapsulation
- No bearing in contact with the effluent
- Quick and easy installation
- High quality and reliability at low cost:
  - grease removal operates independently from the water level
- Residues separated into screenings, settling solids and floating solids

## OPTIONS

- Customised unit to treat up to 350 lt/sec
- Wide range of screening systems:
  - Screen Screw Compactor MID
  - Double-Motor Rotating Drum Screen VERSA
  - Rotating Drum Screen EMD
  - Multi Rake Bar Screen DEFENDER MNT
  - Multi Rake Bar Screen DEFENDER DUO
- Washing system to reduce the organic matter
- By-pass chamber with manual rake
- Continuous bagging system type longopac
- Control panel type PLC
- Grease pump
- Air blower
- Sand washer type MN/FW directly connected to the combined unit

## APPLICATIONS AND FIELDS OF OPERATION

- Compact pre-treatment for municipal/industrial wastewater treatment
- Replaces the entire headworks of a wastewater treatment plant
- Optimal mechanical wastewater pre-treatment for membrane plants
- Can be employed everywhere where complete mechanical cleaning and a simultaneous high capture rate of settling solids are required
- Sludge and septic sludge treatment

## UNIQUE FEATURES

The JOHNSON SCREENS® Combined Unit TOP can be integrated with "Perrot" inlet connection and motorised valve (TOP/M) to be used as a sludge and septic sludge treatment.



*Prison wastewater treatment plant*



*Municipal wastewater treatment plant*

## Water Technologies

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*Municipal wastewater treatment plant*