

# JOHNSON SCREENS® Grit Classifier MN



## TASK

The separation of sand or other settleable solids from liquids for the recovery of recyclable matter or for the avoidance of silting and downstream operational problems.

## SOLUTION

The Bilfinger Water Technologies JOHNSON SCREENS® Grit Classifier MN offers a simple, cost-effective solution to remove grit and sand from process flows or wastewater discharges. Our classifier has been successfully employed in municipal and industrial wastewater treatment plants in processes involving the solid/liquid separation of sand/water mixtures. It can be applied to industrial processing like paper mills, abattoirs, food processing, refineries, etc, for either recovery or removal purposes, or to wastewater flows for providing protection to downstream mechanical equipment in addition to improving the performance and reliability of the sewer system.

## FUNCTION

The JOHNSON SCREENS® Grit Classifier MN consists of a shaftless spiral conveyor and a sedimentation hopper. The reject/water mixture, which has to be separated, flows into the settling hopper where the grit and sand settles. The inlet area is designed to minimise turbulences which negatively affect the separation process. Due to the inclination of the walls of the settling hopper, the sinking solids are directed into the spiral conveyor prior to being discharged into a container or conveyed for eventual disposal.

## PERFORMANCE

Grit Classifier Type	MN 30	MN 80	MN 100	MN 130
max. flow rate (m³/h)	30	80	100	130
max. sand separation capacity (m³/h)	1.00	1.00	1.00	1.00

## BENEFITS

- Easy operation and maintenance:
  - main parts of the machine are in bolted section to grant good access for inspection and maintenance
- High capture rate of solids
- Low maintenance due to simple and robust stainless steel construction
- High operational reliability – no pigtailing or clogging due to the shaftless spiral
- Low operating costs due to direct drive with low power consumption
- Low wear and tear due to low rotational speed



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## MATERIALS

Tanks, covers, supports and wearing liners:

AISI 304L or AISI 316L

Spirals:

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

## OPTIONS

- Integrated aerator plug for improved separation of light floating matter
- Wearing liners made of HARDOX material
- Heating and insulation for outdoor installation/winter operations
- Washing system type FILWASH to reduce organic content
- Continuous bagging system

## APPLICATIONS AND FIELDS OF OPERATION

- Separation and dewatering
  - of grit trap settlings from municipal and industrial wastewater treatment plants
  - of cleaner rejects from the paper and pulp industry
  - of sediments from production and processing wastewater
- As a grit trap in small wastewater treatment plants
- Bunker installations for sewer grit receiving stations



*Municipal wastewater treatment plant*



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## Water Technologies

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