BAND SCREENS REMGUARD RG

Vertical Band Screens with screening steps

MACHINE DESCRIPTION

The machine that is described here, belongs to a wide range of vertical band screens; this unit is a type of screen with special construction characteristics. This model of screen, studied for installations in wastewater deep channels for almost vertical position, has a high capture efficiency, removing a remarkable amount of screenings which need to be compacted and unloaded through the screening conveyor. It is necessary to have a sewage inlet channel with a rectangular cross-section open at the top.

The equipment is installed directly in the channel in contact with the bottom and with the side walls. Its peculiarity is represented by perforated steps that, besides conveying the solid particles in the wastewaters, lets the wastewater flows while capturing all the screenings. The band screens mod. **REMGUARD** are used in the following applications:

- SEWAGE.
- INDUSTRIAL WASTEWATER (AGRICULTURAL, FOOD INDUSTRY, ETC.).
- INSTALLATIONS IN CHANNELS OR WASTEWATER PITS.
- WATERS IN RAISING STATIONS TO PROTECT SUBMERSIBLE PUMPS.

The structure of **REMGUARD** makes it easy to install even in confined spaces according to need; they need no particular systems for fastening to the ground or to the sides of the zone of installation. Their operating position is on an angle of 70°. The simple construction shape allows it to be supplied completely assembled avoiding pointless assembly costs.

The panels of the screen, made of stainless steel, capture all the materials of dimensions greater than the gap of the passageway. The movement of the screen panels conveys the screened material toward the unloading chute upwards.
The panels are cleaned by an indipendently operated rotating brush. Maintenance work is limited too; the machine is completely self-cleaning.
The panels are called "**screens**" as they are, in fact, perforated sieves of a special shape to ensure a high extraction potential in screening solids of small, medium and large sizes. The flow rates of treatable wastewaters are variable, up to **15.000 m³/h**.

The dimension ranges of the holes are **from 2 to 6 mm in diameter**. Made in this way, the panels ensure a larger screening zone than the usual screen models with a screening surface of as much as 26% greater than the front surface.

WORKING LOGIC FOR BAND SCREEN REMGUARD RG

The band screens mod. **REMGUARD** are positioned in the wastewater collection channel; at the top the drive moves the cogged wheel that conveys a chain to which the screening panels are secured by means of nuts and bolts.
With a clockwise movement, the panels collect the solid parts to extract, whether they are small, medium or large in size; at the end an indipendently operated rotating brush has the function of cleaning the screening parts.
The **REMGUARD** screen is a machine based on the so-called **PLUGGING working principle**, that means that a filtering element is fitted on the unit. The filter captures the suspended particles in the effluent inducing a progressive reduction of the open area for the effluent flow.

Whenever the open area is reduced by such amount that the head loss induced reaches a preset value, the cleaning procedure is activated lifting the panels until a set of clear panels are screening the wastewater. Alternatively the screen may be simply controlled by a timer based on a duty/stand-by cycle.
The set-up of the timer depends on the working conditions and flow. The panels plugged with screenings are left set before discharging to dewater the screenings before arriving to the discharge point where the brush helps to remove all the captured screenings.
The material is thus transported to the top of the machine to be discharged into special containers for waste. This way, the machine assures high-potential extraction of screenings ensuring a minimum head loss.

No mechanical part (e.g., bearings) is submersed; in addition, the energy consumption is the lowest possible for this working capacity. Under optimal conditions of installation, it ensures a flow rate up to **15.000 m3/h**.

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MAIN FEATURES FOR BAND SCREEN REMGUARD RG

RG band screens have the following characteristics:

1. **Standard execution in st. st. AISI 304/AISI 316.**
2. **No mechanical parts in direct contact to conveyed products.**
3. **Low speed - No blocking or clogging even when extracting fibrous material.**
4. **Completely sealed unit outside of the channel for leackage and odour-free environments.**
5. **Possibility to discharge in dumpsters or other equipment.**
6. **Extremely easy to transport materials even of difficult composition.**
7. **Maximum versatility, high processing outputs.**
8. **Chain entirely made of stainless steel.**

STANDARD DIMENSION DATA FOR BAND SCREEN REMGUARD RG

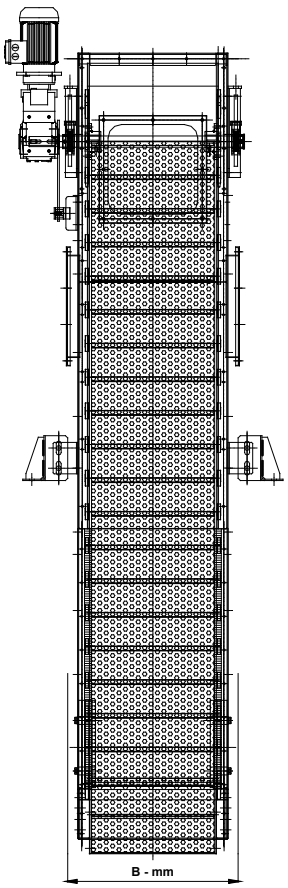
The data in the chart below are to be considered approximate; since the machine is able to process materials of different types and therefore of different organic compositions, take these values as illustrative references that must be clarified and requested from our Engineering - Sales department.

REMGUARD MODELS	RG500	RG600	RG800	RG1000	RG1200	RG1500	RG1800	RG2000
A - mm	2500	2500	2500	2500	2500	2500	2500	2500
B - mm	500	600	800	1000	1200	1500	1800	2000
CAPACITY AT 6 MM PERFORATION - m^3/h	500	600	900	1100	1400	1800	2500	3000
WATER DEPTH - mm	500	600	800	1000	1200	1500	1800	2000

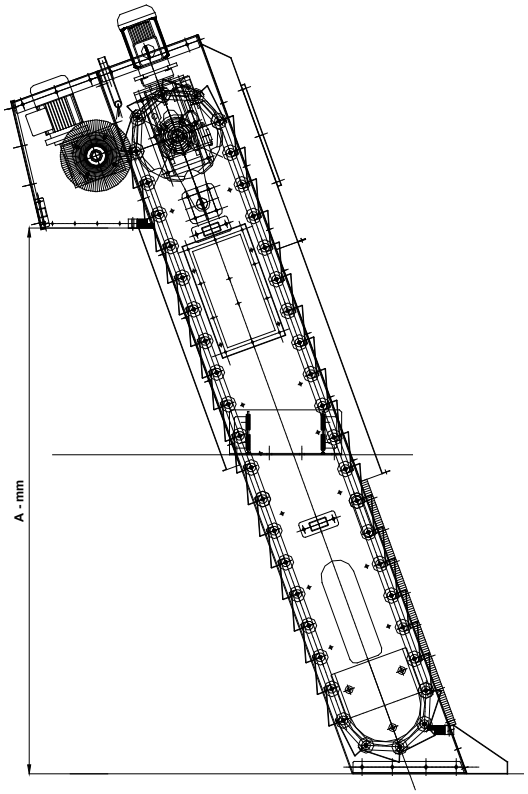
MATERIAL: SCREENINGS

Fabricated parts material:
*Stainless Steel AISI304
*Stainless Steel AISI316

Panels material:
*Stainless Steel AISI304
*Stainless Steel AISI316



ATTENTION THE MACHINE CAN BE USED IN THE INCLINATED POSITION UP TO A MAX. OF 75°



n.b.: the manufacturer may modify some dimensions or sizes without prior information

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