

# KSR step screen

for separating solid matter from liquids

## KUHN KSR step screen

The continuously progressive development in modern waste water treatment plants demands the highest degree of innovation. Even with regard to process and technical solutions, high demands are made.

In this respect the **KUHN** KSR step screens represent a new generation of fine sieve rakes, which lie at the forefront of technology, both in production and in the results of on-site operation.

Trouble-free operation, long service lives, low maintenance requirements and simple integration in existing plants are just some of the advantages we can guarantee for this device.

### Application

The **KUHN** KSR step screens are predominantly used in the mechanical purification stage of municipal and industrial sewage treatment plants.

Further areas of application can be found for example in the pretreatment of processing liquids (slaughter houses, tanneries, fish processing facilities among others) as well as in treatment plants of the paper industry.

### Principles of operation

The fine rake stainless steel construction consists mainly of the screen frame, the separation screen with step-like fixed and moveable lamellas, and the drive unit with limit switch. The moveable lamellas perform a self-cleaning rotational movement over the entire screen surface using the countercurrent principle. As a consequence no brushes, scrapers or additional rinsing equipment are required.

The solid matter is trapped by the step-shaped separation screen. In intermediate operating mode a screenings mat forms and this is responsible for the main filtration. This also causes a considerable amount of smaller solid matter to become trapped, according to the chosen gap width for the lamellas.

Due to the moveable lamellas, the screenings mat is transported step by step up the fixed lamellas.

In the vicinity of the bottom step there is an directing plate. The machine is therefore resistant to grit and other deposits.

Above the water level thick synthetic lamella 1\*) are used, and these minimize the gap width and prevent the screenings from falling through.

## Design (Technical features)

The superior design of our **KUHN** KSR step screens ensures an optimal operation, both in an ecological and economical sense, and guarantees a long-term return on your investment, owing in part to the following advantages:

- Gap width 1-6 mm
- Self-cleaning screen surface
- High throughput and separation capacity, lowest height loss
- Low space requirement
- Substantial frame assembly
- Three-phase AC motor as drive unit contained in separate housing (protection against abrasive and moist sewage water vapours)
- Chain transmission with automatic chain tensioner
- Drive unit and deposits are located above the water line
- Removable hygiene protection cover above the flume
- No attachments necessary at the channel floor
- Machine can be pivoted out of the flume
- Simple retrofitting in existing plants
- Simple maintenance
- Quiet running characteristics

## Options

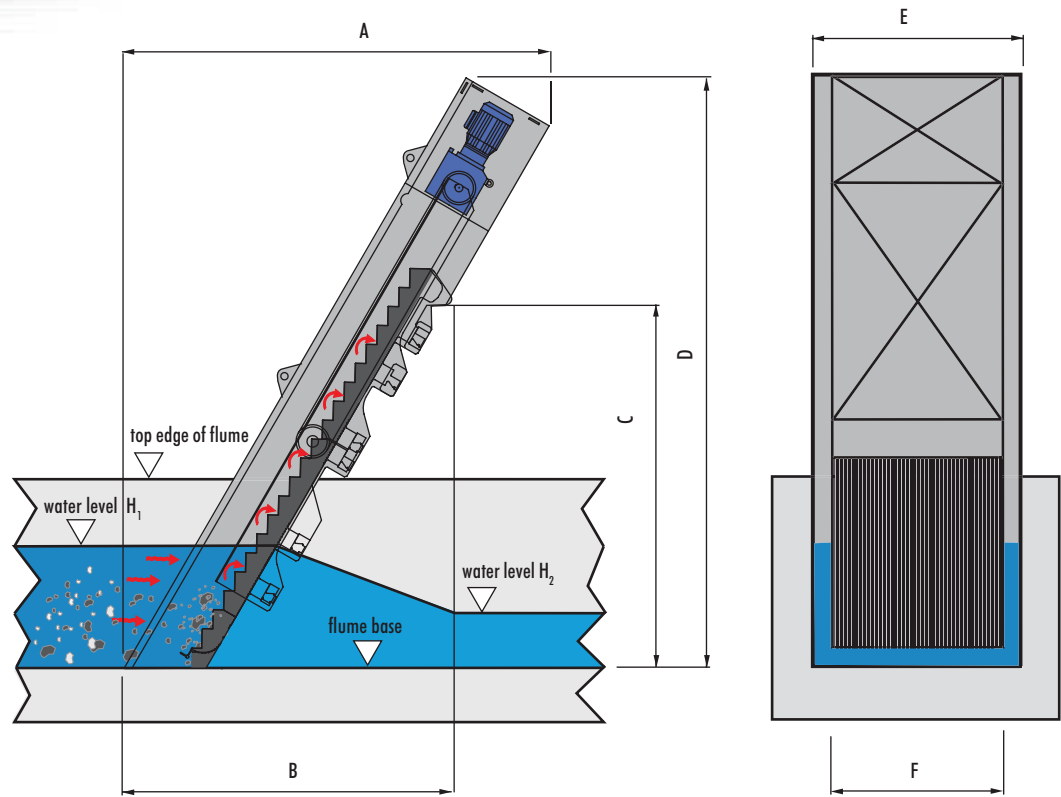
For extended transport and treatment of the screenings further products are available. Please note the following:

- **KUHN** KSF spiral conveyor
- **KUHN** KSF-P spiral compactor
- **KUHN** KSP screw press or
- **KUHN** KWP wash press

1\*) except for KSR 13 and 17

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Dimensions in mm.  
We reserve the right to make technical alterations.

Type	A	B	C	D	E	F	Driving Power [kW]
KSR 13	2060	1370	1075	2480	460 - 1580	280 - 1400	1.0 (1.1)
KSR 17	2310	1620	1450	2860	460 - 1580	280 - 1400	1.0 (1.1)
KSR 23	2630	1940	1940	3360	570 - 2220	350 - 2000	2.0 (2.2)
KSR 28	3120	2350	2570	4100	570 - 2220	350 - 2000	2.0 - 2.5 (2.2 - 3.0)
KSR 34	3460	2690	3095	4630	620 - 2220	400 - 2000	2.5 - 3.6 (3.0 - 4.0)
KSR 42	4160	3230	3940	5730	770 - 1820	450 - 1500	3.6 - 5.0 (4.0 - 5.5)

Values in ( ) for motors without explosion protection

## Standard material

Screen zone lamellas      AISI 304 stainless steel  
 Transport zone lamellas    AISI 304 stainless steel (KSR 13 & 17)  
    synthetic (KSR 23 - 50)  
 Frame parts, covers        AISI 304 stainless steel

## Optional material

Screen zone lamellas        AISI 316 Ti stainless steel  
 Transport zone lamellas    AISI 316 Ti stainless steel (KSR 13 & 17)  
    synthetic (KSR 23 - 50)  
 Frame parts, covers        AISI 316 Ti stainless steel

## Drive

Index of protection        IP55 (explosion protection possible)  
 Motor                         Bevel gear motor