Scraper Bridge 16

Scraper Bridges KD 16 are available for primary and secondary tanks.

The scraper bridge is designed based on a wish for long life and that operation and maintenance of the bridge will be as minimal as possible.

Standard material choice
Parts that are not in contact with medium are as standard hot-dip galvanised including the bridge structure, centre bearing unit and bogie.

Parts in contact with medium are as standard made from stainless steel 1.4301 which has been pickled after processing including the sludge scraper and bottom scraper.

Other material choices and surface treatments are available upon request.

Bridge structure
The bridge itself is a self-sustaining trussed structure made from square profiled tubes.

Picture 1

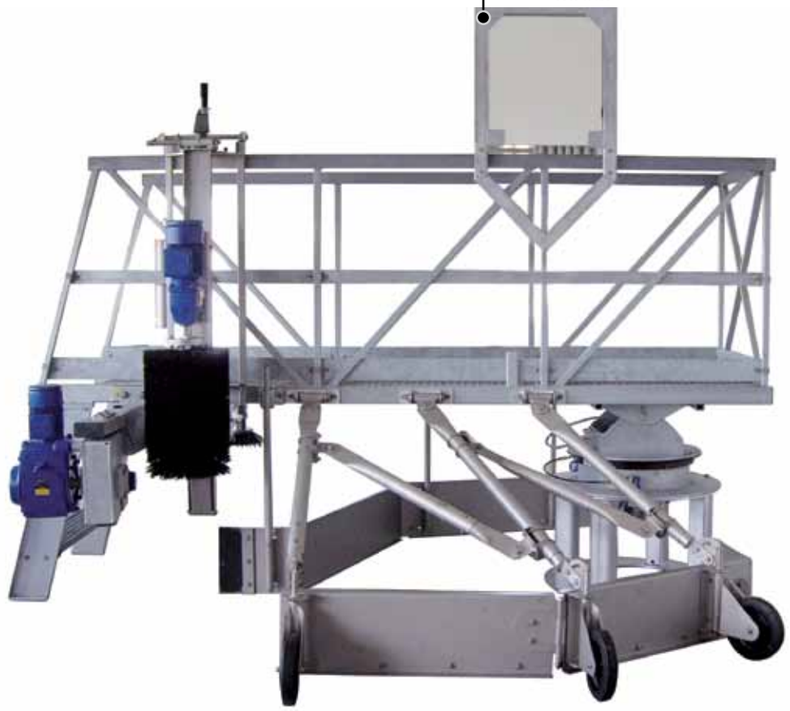
Centre bearing (Picture 1)
The scraper bridge is supplied with a centre bearing unit that is adapted to the tank's centre part. This unit is equipped with a slewing ring and a slip-ring column.

The slewing ring is equipped with grinding tracks and hardened balls. That gives the bearing a very long life.

Lubrication of the slewing ring is done automatically with SKF SYSTEM 24.

The slip ring column is as standard equipped with 10 x 16A rings.

Bogie (Picture 2)
The bogie upon which the drive motor is placed is equipped with adjustable wheels. That means that it can be adapted to any tank size.



Picture 2

The wheel bearings are SKF quality bearings with bearing housings made from composite material. Gears are surface treated as standard according to type 3.1/EN 12944 cor. Cat. C3.
Bogie is equipped with a rotation monitoring.

Control panel
As standard the scraper bridge is supplied with a local control panel made from fibreglass reinforced polyester.

From the local control panel it is possible to operate the scraper bridge itself as well as additional equipment such as channel brush type KD 16.11, runway brush type KD 16.19, oxygen meter, etc.

Depending on the length of the runway and the choice of transport the bridge may be delivered pre-wired.

Sludge scraper (Picture 3)
KD Standard sludge scraper is fitted under the bridge. Simple structure which makes fitting very easy. No welding during installation.

Bottom scraper (Picture 4)
KD Standard bottom scraper is divided into sections which are available in 3 standard lengths: 2000, 2500 and 3000mm. The sections are assembled with adjustable connection fittings so they make up a total unit, but the pivot joints enable the bottom scraper to follow the bottom of the tank's unevenness during operation. The sections are equipped with controllable wheels ø250mm, and connecting rods and stabilisation rods. Simple structure which makes fitting very easy. No welding during installation.

Bridge construction
As standard KD recommends the following layout:
Tank diameter up to 25 metres: bridge and bottom scraper to centre.
Tank diameter from 25-45 metres: bridge and bottom scraper with extension (trailing) after centre. This extension normally has a length of 1/3 of the tank radius.
Example: tank of 30 metres the extension is 15/3=5 metres.

Picture 3

For tank diameters larger than 45 metres we recommend "full-spend" bridges, i.e. the bridge and bottom scraper covers the entire tank diameter, it is also recommended to use two sludge scrapers (for "full-spend" bridges there are 2 motors to ensure stable operation).

Enquiries
KD Scraper bridge is a standard product which is adapted to the customer's wishes. So we only need a few parameters like:

- tank radius / diameter
- level for:
  - centre structure
  - hammerhead
  - water level
- level differences on tank bottom and a few details concerning gully and centre console.

Picture 4

The scraper bridge can be made from alternative materials besides the standard. So the bottom and sludge scraper are available in acid-resistant steel. Bridge, centre bearing and bogie are available in stainless steel and aluminium, and the walking area is available in acid-resistant steel or composite material.

Recommended periphery speed:
Primary tanks (pre-clarification): 3.6 m/min
Secondary (final clarification): 1.8 m/min

Extra equipment

KD 16.11 Channel brush.

KD 16.08 Scum outlet, fitted directly to KD 16.18 stainless steel channel, where the side facing the centre part acts as scum board.
Can also be fitted to KD 16.17 scum board.

KD 16.10 Snow scraper.

KD 16.08 Scum outlet, fitted directly to KD 16.18 stainless steel channel, where the side facing the centre part acts as scum board.
Can also be fitted to KD 16.17 scum board.

KD 16.19 Runway brush.

KD 16.18 stainless steel channel with outlet.

Concrete channel with:
KD 16.17 Scum board
KD 16.14 V-notch weir

KD 16.18 stainless steel channel with V-notch weir on both sides, as well as KD 16.17 scum board.

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