# Suction Scraper Bridge Model KD 15C

*Suction scraper bridge type KD 15C is available for circular primary and secondary tanks.*

*The suction scraper bridge is designed based on the desire for a long service life as well as making operation and maintenance of the equipment as minimal as possible.*

**Standard material choice**
Parts which are not in contact with the medium are as standard hot galvanized, including bridge structure, centre bearing unit and bogie.

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

Other material choices and surface treatments are possible upon request.

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

*Picture 1*

**Centre bearing (Picture 1)**
The suction scraper bridge is supplied with a centre bearing unit which is adapted to the centre part of the tank. This unit is equipped with a slewing ring as well as a slip-ring unit.

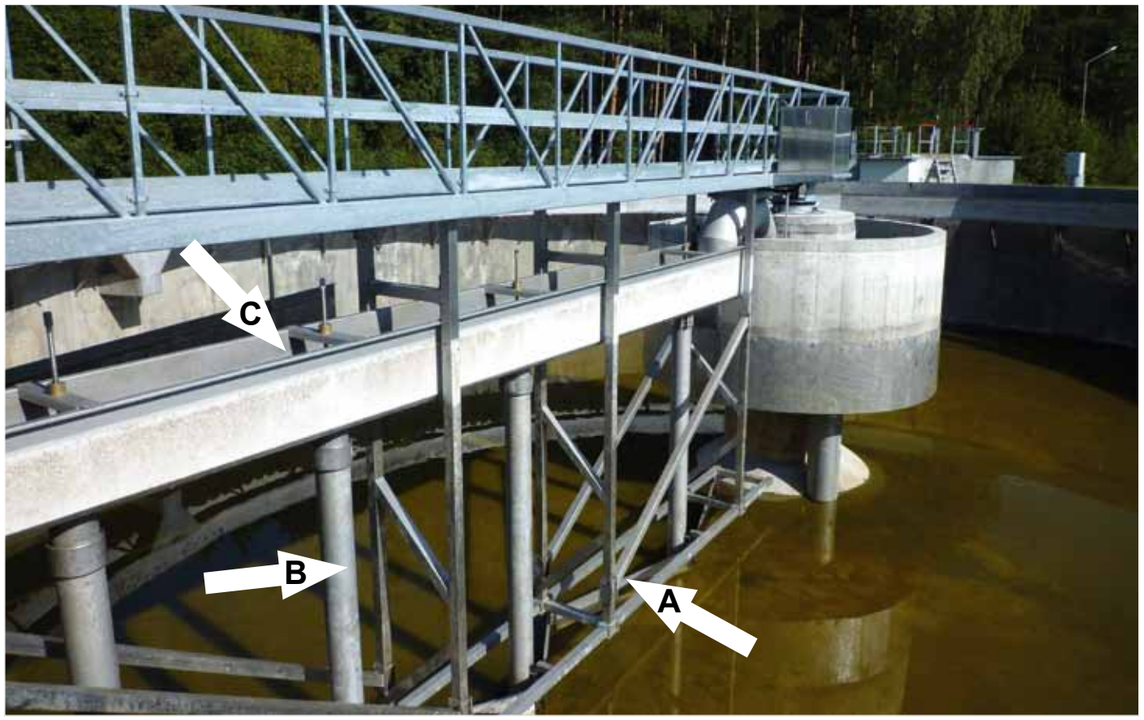
The slewing ring is equipped with grinding tracks and hardened balls which give it a very long service life.

The slewing ring is lubricated automatically with SKF SYSTEM 24.

As standard the slewing ring is equipped with 10 x 16A rings.

**Bogie**
The bogie on which the drive motor is mounted is equipped with adjustable wheels. This means that it can be adapted to any tank diameter.

Wheel bearings are SKF quality bearings. As standard gears are surface treated according to type 3.1/EN 12944 cor. cat. C3.
Wheels are equipped with rotation monitoring.




*Picture 2*

**Control panel**
As standard the suction 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 suction scraper bridge as well as accessories like channel brush type KD 16.11, runway brush type KD 16.19, oxygen meter, etc.

**Sludge scraper (Picture 4)**
KD Standard sludge scraper is mounted under the bridge. A simple structure which makes mounting very easy. No welding during installation.

**Sludge removal unit consists of:**

- V-shaped bottom scraper sections (Picture 2, A)
- Suction pipe (Picture 2, B)
- Collection vats with adjustable overflow pipes (Picture 2,C)
- Siphon pipe (Picture 3, D)
- Vacuum pump unit (Picture 3, E)

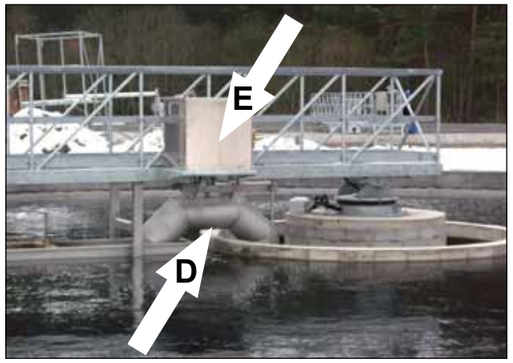
V-shaped bottom scraper sections collect the sludge in the middle of each section.

The sludge is transported through suction pipes from the bottom of the tank to collection vats. The suction flow is equalized by adjusting the overflow pipe. Adjustment is carried out from the walkway.

The sludge is led through the siphon pipe from collection vats to the outlet duct/channel. The suction

effect is started by a vacuum through a vacuum pump. This vacuum meets the physical law of “linked liquids’ equalizing abilities”. Adjustment of flow is carried out from the walkway.

**Bridge construction**
As standard KD recommends the following:
Tank diameter up to 25 meters: bridge and bottom scraper to centre.
Tank diameter from 25-45 meters: bridge as well as bottom scraper with extension (trailing) after centre. This extension normally has a length of 1/3 of the tank radius.
Example: On a 30 meter tank the extension is 15/3=5 meters.
For tank diameters in excess of 45 meters we recommend ”full-spend” bridges which means that




*Picture 3*

the bridge and bottom scraper cover the entire tank diameter while we recommend using two sludge scrapers (for ”full-spend” bridges there are 2 motors to ensure stable operation).

**The advantages of suction scraper bridge KD 15C are as follows:**

- Sludge flow is carried out through a siphon solution (no energy consumption)
- Scraper at bottom are divided into various widths in order to get equal load
- Sludge flow can be visually inspected and regulated which ensures uniform ”suction” of the entire bottom and provides security in case a pipe gets clogged.

**Enquiries**
KD Suction scraper bridge is a standard product which is adapted to the customer’s wishes. So we only need a few parameters like:

- capacity m³/h (sludge removal)
- radius / diameter of the tank
- level for:
  - -centre structure
  - -hammer head
  - -water level
- level differences at the bottom of the tank as well as a few details concerning drain and middle console.

*Picture 4*

Besides standard the suction scraper bridge can also be made from alternative material qualities. The bottom and sludge scrapers 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.

# 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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