



Chain & Flight scrapers for aerated grit traps.

Chain & flight scrapers in aerated grit traps were introduced to the market and included in the VA Teknik product portfolio in the early 1990s



VA Teknik Sweden

Towards a cleaner world

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Chain & Flight scrapers for aerated grit traps.

VA Teknik's grit trap scrapers are based on the same principal as our well-known plastic chain & flight scrapers, which have been on the market for over 40 years.

We have successfully installed chain & flight scrapers in aerated grit traps using our plastic chain and stainless steel scraper flights. Besides excellent corrosion resistance, the plastic chain provides a very light-weight and high capacity grit removal unit.

Advantages

- Higher sludge/grit removal rate than traditional travelling bridge scrapers which saves a huge amount of pipe and pump retrofits and in the end cost.
- Low maintenance
- Low energy consumption
- Easy to cover tanks for odour control and for increased access to the area
- No hydraulic oil leakage, non-grease bearings, no oil leakage

Use

At aerated grit traps after the inlet screens at municipal and industrial waste water treatment plants.

Function

Drive Unit

The motored gear is assembled on a vertically adjustable motor plate for tensioning of the power transmission chain. The transmission chain is made of acetal resin and is lubricated by the tank water. All moving parts are covered and protected by a light weight easy access aluminum hood.

Drive Shaft

The shaft is designed as a stainless steel tube with welded flanges. Plastic split sprockets are bolted to the flanges. The split sprockets enable maintenance without disassembly of the driveshaft. The drive shaft's bearings are spherical long life heavy duty plastic bearings. The bearings are lubricated by the tank water. No additional greasing is needed.

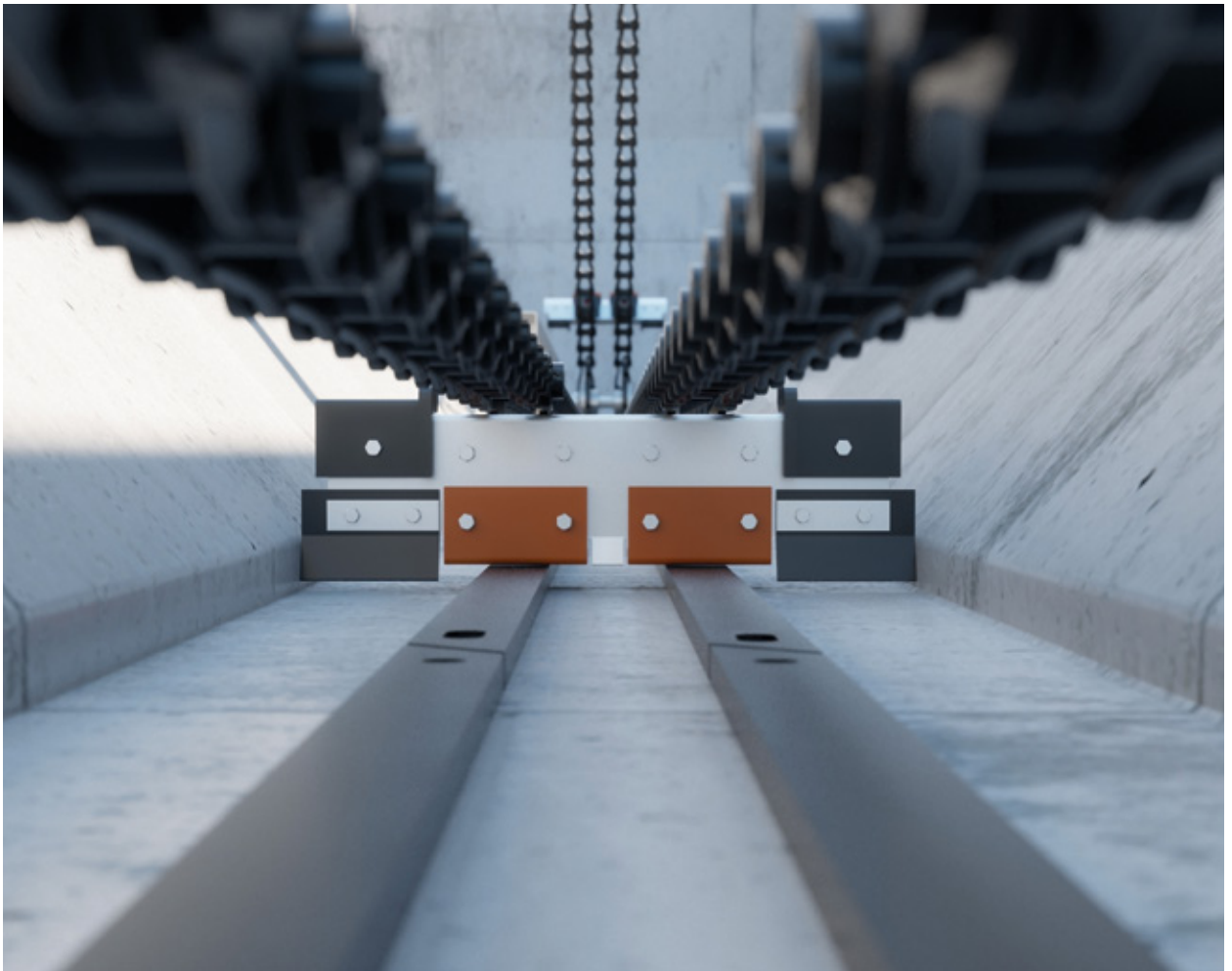
Idler wheels

Plastic hubs with sprockets are fixed with collars on stationary solid stub end shafts or tube shaft similar to the drive shaft for wide grit trap tanks. The shafts are secured in brackets that are welded to anchor bolted wall plates. Collector chain tensioning is available as an option.

Scraper flights

The flights are made of stainless steel to be able to handle the higher wear and tear that occurs when scraping grit. It's excellent corrosion resistance, strong and heavy duty design resist high sludge loads without compromising the safe operation.

We define the suitable scraper profile based on tank dimensions and sludge load, and supply scrapers to various tank configurations. We have a vast experience of specially designed configurations.



The scrapers are equipped with skids and filler blocks for the strongest possible fixation of the chain's attachment link. A number of scrapers are equipped with rubber strips to sweep the entire tank floor.

Bottom strips and wall rails

Plastic skid strips on the tank floor and stainless steel wall rails guides keep the scrapers in position. Our design makes the use of additional nylon wear strips on the wall rails unnecessary which reduces maintenance cost.

Scraper collector chains

The plastic collector chain type NCS 720S is made of an acetal resin which is a highly suitable plastic when it comes to chemical-, corrosion- and wear resistance and yet does not compromise on the strength or durability of the chain.

The chain pitch is 6" or ~152 mm and the maximum break load is over 3100 kg. The chain is locked with simple snap-in pins.

Removal/installation is kept very simple with our special tool.

Specifications	
Power output range	0.12-1,5 kW
Motored gear	SEW, Nord or by client demand
Steel parts below water	Stainless steel configurations: AISI304, AISI316L, EN1.4547 (Super duplex)
Plastic parts	Polyethene, high density HD. Urethane
Collector and Drive Chain	NCS720 S - Acetal resin plastic
Tensile force	Breaking load >3100kg Average work load ~1400 kg
Size configuration	Project specific
Types	VAT SF – Sand/Grit trap scrapers can be combined with VAT DAF – Surface scrapers for fat removal
Overload protection	Electronic Torque Guard

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