



Svedala Thickeners & Clarifiers



Svedala Thickeners and Clarifiers are designed for continuous 24 hour per day operation in chemical, industrial mineral and ore processing industries. Units are supplied in two basic configurations: bridge or centre pier mounted in diameters from 5 to 75 m.

Drive Head

A new range of drives has been designed utilising computer optimising techniques to ensure the highest possible torque/load characteristics whilst giving maximum performance and reliability even in the most adverse conditions.

Drive Head Design

Svedala's drivehead consists of a rigid housing, enclosing a worm, wheel and a large diameter slewing ring bearing.

The worm shaft is driven by a multistage, epicyclic gear box complete with a squirrel cage induction motor.



Lift Mechanism

For bridge mounted drive heads rake lift is through a torque tower which is bolted to the main wheel and drives the rake shaft through a keyway. The rake shaft is raised and lowered by a motor driven screw jack.

For centre pier mounted drive heads, the drive head is supported by a pier and drives the rakes through a torque cage. The drive head and rake torque cage are raised and lowered by motor driven screw jacks.

Controls

Operating torques are continually monitored.

A motor torque sensing device which accurately measures the motor power, provides preset overload outputs, rake lift, warning, and shutdown.

The lift mechanism is fully automatic and is activated by the torque sensing system.

All controls are located in a weatherproof enclosure mounted on the bridge. Rake torque is locally displayed and automatic - local operation can be selected for drive and lift motors.

The complete range of Svedala drive heads is available as both lift and non-lift designs. Rake height indication and remote indication of rake height and rake torque are available.

Bridges

Svedala thickeners are supplied with variety of bridge structures.

- Up to dia 15 m - Beam Type
- Up to dia 40 m - Truss Type
- Above dia 40 m - Centre Pier.

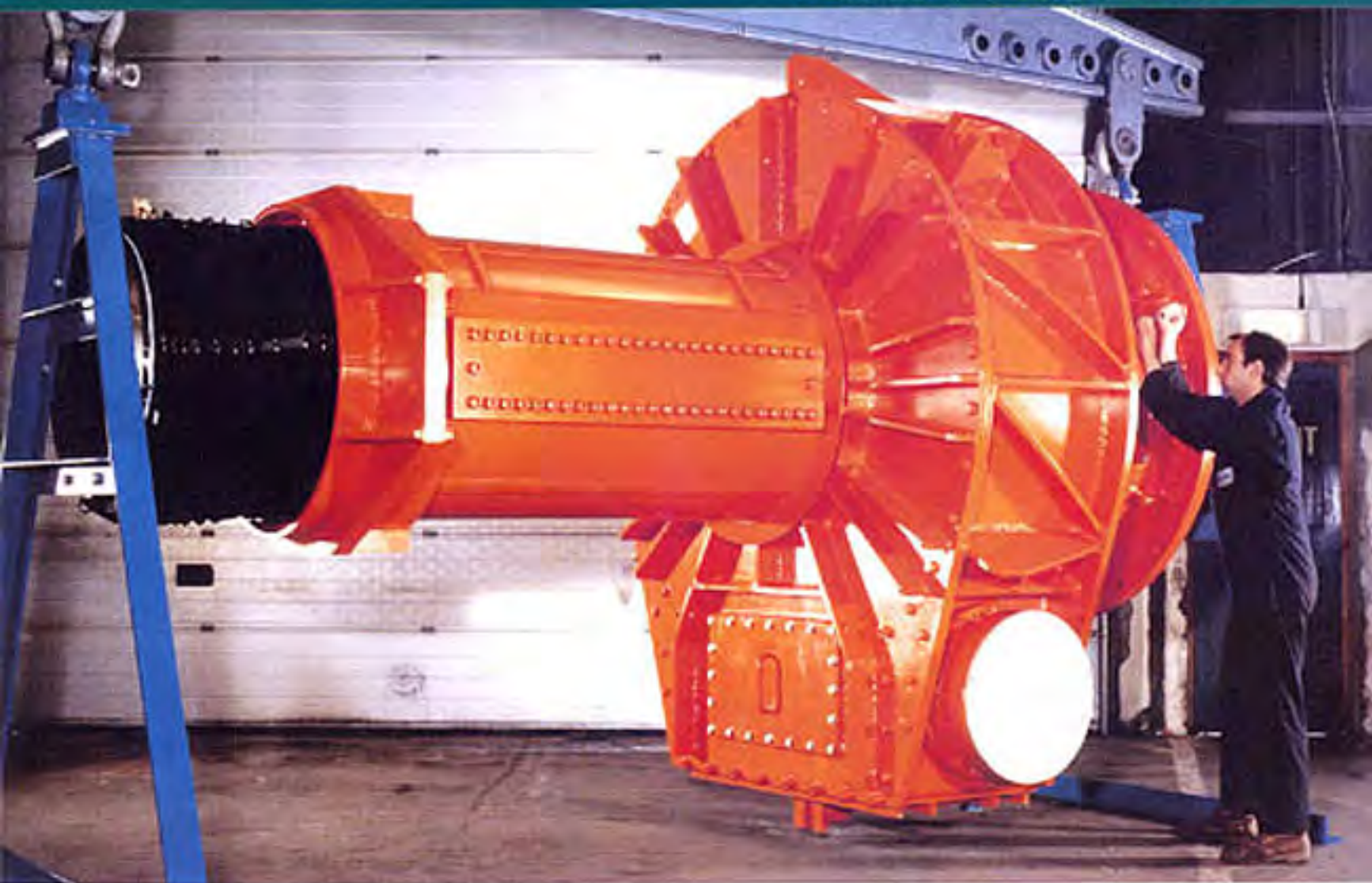
All bridges are provided with grid plate walkways with safety handrails. An enclosure around the drive mechanism is available where weather conditions dictate.

Rakes

The rakes effectively convey settled solids to the centre discharge cone or trench. Rakes are constructed in tubular or structural steel, with rake blades bolted or welded underneath.

At the tank centre, cone or trench scrapers attached to the raking assembly keep the discharge area free of blockages.

Special rake options include spikes for breaking up the bed, pickets above the rake arms to assist in water/solids separation, and skimmers to remove scum or froth from the slurry surface.



Thickener drive head during assembly.

Launders, Feedwells, Weirs and Tanks

Feed launders and feedwells are suspended beneath the bridge.

Plain or notched overflow weirs can be supplied for tank perimeters.

For tanks 20m or less, steel construction can normally be used, with larger ones built in concrete. Tanks can be lined for acidic conditions. Tank covers are available for units where required.

Applications

Svedala thickeners and clarifiers have been installed for a wide variety of duties, typical examples include:

- Coal fines and tailings
- Magnetite fines
- Kaoline storage & thickening
- Copper concentrates and tailings
- Gold/Silver concentrates and tailings

- Phosphate slimes
- Lead/Zinc concentrates and tailings
- Iron ore tailings
- FGD plant slurries

Features and Benefits

Thickening and clarification are massflow processes that need stable and continuous operating conditions.

Svedala provides:

- Bridge or Centre Pier mounted Drive Heads
- Slewing Ring designed High Torque Drive Heads
- Fully automatic Rake Lift
- Remote or Local operation
- Up to 75 m diameter
- Steel or Concrete tanks