

Project
Pumps & Waste Water Equipment

HAIGH Macerators

For Consistent Reliable Sewage Solid Disintegration

HAIGH



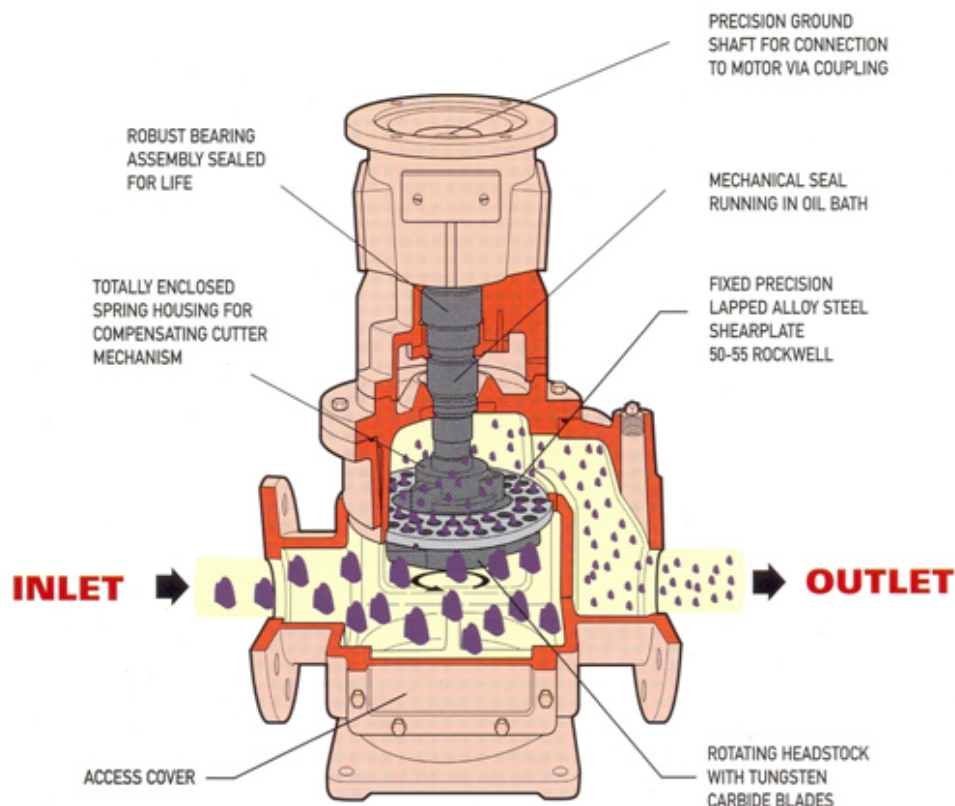
A Haigh macerator is a disintegrator designed to provide a cost effective way to protect pump reliability by creating a pre-conditioned medium.

The new standard in *Wastewater Conditioning*

HAIGH Macerators

The Haigh Macerator is a disintegrating device for raw sewage and sludge. It is a simple yet effective waste water conditioner and is widely acknowledged for the quality and reliability of its cutting action in reducing solids to small particles.

Screening and fibrous materials have always caused problems for waste water treatment plants. The Haigh macerator provides excellent solutions to the disruptive, time consuming and costly problems of ragging and inconsistent particle size frequently associated with handling solids in waste water treatment processes.



Headstock & Shearplate from a Haigh Macerator

How does it work?

The cutter consists of a steel headstock with tungsten carbide wear blades rotating against a stationary alloy steel shear plate with a hardness of 50 to 55 rockwell. The shear plate contains holes that allow fluid to pass through. Anything that goes through the Haigh macerator must go through these holes.

Before string and other debris pass through these holes, the rotating cutting edge of the headstock severs them. Large pieces of wood or plastic are pushed against these holes and are gradually cut to a size small enough to pass through. Heavy items such as stones and metal fall out of suspension and can be removed via the inspection ports.

The size of the holes in the shearplates can be specified to suit the application

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Features and Benefits:

▪ **Wear compensating cutter mechanism:**

The special headstock hub assembly, which requires no adjustment is spring loaded to maintain a constant force against the shear plate.

▪ **Shear plate acts as a screen:**

The Haigh Macerator shearplate rejects potentially damaging items such as stones, plastics, large pieces of wood and metal. Other grinders shred tin cans and wood into pieces which can still damage pumps and valves. The Haigh macerator offers maximum downstream protection from these potentially damaging materials.

▪ **Back pullout design leaves pipework undisturbed:**

Quick on site cutter replacement requires no plumbing disconnect. The cutters can be replaced without disturbing the mechanical seal, The mechanical seal rotates in an oil bath to ensure adequate cooling and lubrication. Other grinders have a relative complex series of cutters which have to be exactly aligned. This is a time consuming process usually has to be undertaken at the manufacturer's facilities.

▪ **Eliminates costly control gear:**

The Haigh Macerator is designed to prevent costly jamming and therefore does not require expensive, anti jamming controls panels.

▪ **Effective conditioning produces a constant fine particle size:**

Other grinders shred debris into relative large pieces that become tangled and create potential problems for equipment downstream.

▪ **Haigh keeps it simple:**

Only 1 mechanical seal and only 1 cutter assembly.

Maintenance:

- The macerator's simple yet efficient design requires very little maintenance.
- With just a few standard tools, the cutter can be easily removed and repaired and back in operation in less than an hour.
- All work can be carried out on site.
- Bearings do not require periodic lubrication.
- A single mechanical seal is protected by oil on one side, and is recessed into the casting, shielding it from grit on the other side.



Applications

- Raw Sewage
- Primary Sludge
- Digested Sludge
- Thickened Sludge
- Screenings
- Waste Activated Sludge
- Sludge Conditioning
- Digested Recirculation
- Scum



Technical Specifications and Dimensions

Haigh Macerators

| Macerator - Side Entry | | | 152 | 202 | 302 | 401 |
|------------------------|--|-----|-----------------|-----------------|-----------------|------------------------|
| Flow | Raw Sewage m3/hr | | 20 | 40 | 100 | 400 |
| | Primary Sludge m3/hr | | | 20 | 50 | 200 |
| | Digested Sludge m3/hr | | | 20 | 50 | 200 |
| Shearplate Holes | Dia | | Multi Std 10 | Multi Std 10 | Multi Std 10 | Multi Std 4-6-10 mm |
| Drive Power | Min | Kw | 1.5 | 1.5 2.2 | 3.0 5.5 | 5.5 11.0 |
| | Max | Kw | | | | |
| Drive Speed | Min | Rpm | 960 1440 | 960 1440 | 300 960 | 300 960 |
| | Max | Rpm | | | | |
| Operating Pressure | Min | Bar | -0.1 4.0 | -0.1 4.0 | -0.1 4.0 | -0.1 4.0 |
| | Max | Bar | | | | |
| Weight | Without Drive Kg | | 52 | 65 | 140 | 290 |
| | With Drive Kg | | 77 | 90 | 180 | 373 |
| Inlet/Outlet Dia. | mm | | 100 | 100 | 150 | 200 |
| Height | Without Motor mm | | 515 | 515 | 740 | 799 |
| | With Motor | | 840 | 840 | 1455 | 1575 |
| Length | mm | | 295 | 385 | 500 | 640 |
| Gearbox Flange | mm | | 200 | 200 | 250 | 300 |
| Motor Specification | Standard | | D90 | D90 | D112 | D132 |
| Flange Drilling | Std Drilling to BS4504 16/11 (Din 2532 NP16) (Other Standards Available) | | | | | |

| Macerator - Bottom Entry | | | 152 | 202 | 201HARE | 301HARE |
|--------------------------|--|-----|-----------------|-----------------|-----------------|------------------------|
| Flow | Raw Sewage m3/hr | | 20 | 40 | 45 | 80 |
| | Primary Sludge m3/hr | | | 20 | 20 | 60 |
| | Digested Sludge m3/hr | | | 20 | 15 | 60 |
| Shearplate Holes | Dia | | Multi Std 10 | Multi Std 10 | Multi Std 10 | Multi Std 4-6-10 mm |
| Drive Power | Min | Kw | 1.5 | 1.5 2.2 | 1.5 2.2 | 3 |
| | Max | Kw | | | | |
| Drive Speed | Min | Rpm | 960 1440 | 960 1440 | 960 | 400 960 |
| | Max | Rpm | | | | |
| Operating Pressure | Min | Bar | -0.1 4.0 | -0.1 4.0 | -0.1 4.0 | -0.1 4.0 |
| | Max | Bar | | | | |
| Weight | Without Drive Kg | | 77 | 90 | 120 | 155 |
| | With Drive Kg | | 52 | 65 | 160 | 215 |
| Inlet Dia. | mm | | 80 | 80 | 150 | 150 |
| Outlet Dia. | mm | | 100 | 100 | 80 | 80 |
| Height | Without Motor mm | | 515 | 515 | 655 | 830 |
| | With Motor | | 840 | 840 | 995 | 1225 |
| Length | mm | | 295 | 385 | 323 | 405 |
| Gearbox Flange mm | mm | | 200 | 200 | 250 | 250 |
| Motor Specification | Standard | | D90 | D90 | D112 | D132 |
| Flange Drilling | Std Drilling to BS4504 16/11 (Din 2532 NP16) (Other Standards Available) | | | | | |