The Thomas “Simplicity” series of Dredge pumps

Best performance and lowest cost
Thomas “Simplicity”

Dredge pumps

The Thomas “Simplicity” dredge pump is engineered for your specific operation.

Years of operation and many design improvements have resulted in a pump which will give you lowest operating cost of any pump in the industry when handling abrasive materials.

The rugged wet-end parts are designed to feature extra heavy metal sections at points of extreme wear – the extra weight pays off in performance and low maintenance cost.

No other dredge pump manufacturer offers the wide range of wear-resistant alloys as provided by Metso. Matching the correct alloy to your specific application will give you the best performance and lowest cost.

“Engineered for your operation” means:

- A choice of abrasion or impact resistant alloys for wear parts
- Minimum repairs and downtime
- Maximum operating profits
- Maximum production
- Impeller sized for the application
- High efficient dredge pump design

Special design features make Thomas “Simplicity” dredge pump superior

Long life

The heavy, rugged wearing parts permits longer profitable operation before any repairs or change of parts become necessary.

Shaft

To meet rugged operating conditions, an oversize, high-strength alloy steel shaft is furnished.

Stuffing box and shaft sleeve

An extra deep stuffing box, prevents air-leaks and gives you adequate take-up on the packing gland. All stuffing boxes are equipped with a lantern ring for proper distribution of seal water.

Bearings

Heavy duty anti-friction roller bearings are housed in separate radial and thrust assemblies for maximum rigidity and alignment.

Wear adjustment

Adjusting screw allows lateral adjustment of impeller, shaft and bearing assembly to compensate for wear, thus maintaining maximum pump efficiency.

Designed with your maintenance man in mind

As its name implies, Metso Minerals’ Thomas “Simplicity” Dredge Pump is easy to disassemble and reassemble with new parts.
**Typical applications:**
- Dredging:
  - Sand and gravel
  - Contract dredging
  - Tailings
- Booster pump
- Sand waste pump
- Material transfer pump

**Thomas Simplicity pump advantages:**
- Choice of several abrasion resistant alloys for wear parts.
- Most efficient volute and impeller designs
- Speed and power to suit your service conditions
- Maximum size and percentage of solids
- Minimal repairs and downtime
- Reduced operating costs
- Easy to assemble and disassemble
- Equipped with Suction Clean-out for easy access to inspect pump
Features and benefits

Thomas Simplicity dredge pumps

Standard features
- Optional rotation – Right or left hand rotation
- Optional discharge positions
- Suction adapter with clean out
- Three and four vane impellers available
- Amor-lok seal on the side liners for metal to metal fit
- Knock out ring for easy impeller removal
- Wide range of alloys for pump wear parts
- Over size bearings and shaft for longer life
- Cantilevered design
- Less shaft deflection
  – Better packing and bearing life
  – 360º crescent support
  – No case feet required

Simplicity design
- Only four wear parts for easy maintenance.
- Extra heavy metal sections for longer wear life and reduced costs.

Stuffing box area
1. Replaceable lantern ring
2. Deep stuffing box for better sealing.
3. Shaft sleeves available in an alloy to meet your application
4. Casing
Pump bearing arrangement

Deck mounted

Radial bearing

- Independent housing for proper lubrication when operating in an unlevel position
- Grease lubricated radial bearing to prevent water entering housing
- Steep angle thrust bearing for high head applications

Thrust bearing

Grease lubricated

Oil lubricated

Underwater

Radial and thrust combination

- Same load capabilities as deck mounted
- One piece housing to prevent water contamination
- Duo-cone seals for sealing shaft
### Performance chart

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<th>Pump size</th>
<th>Impeller Size</th>
<th>12 ft./sec Velocity</th>
<th>17 ft./sec Velocity</th>
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* Gallons per minute  **Tons per hour of coarse sand

### Discharge positions available in all sizes

(Hand of pump facing suction side)

Left-hand bottom discharge

Left-hand top vertical discharge

Left-hand top horizontal discharge

Left-hand rotation

Left-hand rotation

Right-hand rotation

Right-hand bottom discharge

Right-hand top vertical discharge

Right-hand top horizontal discharge

Right-hand rotation

Left-hand rotation

Simplicity dredge pumps
## Available pump models & sizes

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</table>
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