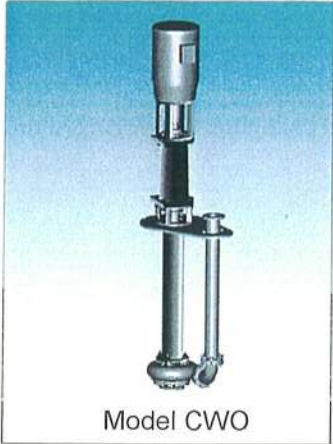
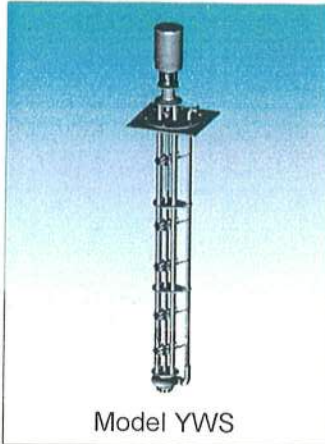


# Molten Salt Pumps



Model CWO

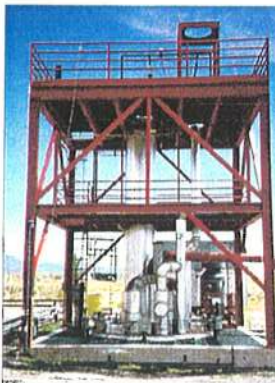


Model YWS

Three Model CWO units handling 400°F mixed nitrate in a heat treatment system for rolling bearing components. Nagle slurry type impeller and casing designs are ideal for resistance to abrasion from scale or other solid contaminants.



Model CWO handling 1550°F sodium carbonate in an organic waste disposal oxidation system. The multi-stage air cooling arrangement just above the pump mounting plate avoids the need for unsafe water cooling. Provisions for labyrinth seals and inert gas purge are also available.



25 foot long Model YWS under test on cycled 1100°F blended nitrate heat transfer salt. Returned to test intact after 5000 hour inspection.

## Applications:

- ◆ Heat transfer circulation (including solar)
- ◆ Heat treatment, tempering, annealing, hardening
- ◆ Process transfer and prilling or flaker feed

## Key Pump Considerations:

- ◆ Safety is the most important aspect!
- ◆ Reliability is critical to avoid interruption and minimize maintenance
- ◆ Experience, guidance and flexible design features and options are mandatory

## Model CWO Features:

- ◆ Preferred vertical cantilever shaft design
- ◆ No seals, submerged bearings or other rubbing parts in contact with the molten salt results in the best possible pump life and reliability
- ◆ Submerged lengths to over 8 feet
- ◆ Temperatures to 1652° F (900° C)

## Model YWS Features:

- ◆ Used when longer pump lengths are required and the molten salt has adequate lubricity
- ◆ Split sleeve bearings mounted in split housings allow easy bearing inspection and maintenance
- ◆ Submerged lengths to over 50 feet
- ◆ Temperatures to 1112° F (600° C)

## Flow and Pressure:

- ◆ Flows to 4000 GPM      Pressures to 125 psi

## Pump Material Options:

- ◆ Carbon Steel
- ◆ 316 Stainless Steel
- ◆ Inconel/Hastelloy
- ◆ Non-metallic materials
- ◆ Any heat or corrosion resistant alloy

## Molten Salts (Partial):

- ◆ Ammonium Nitrate
- ◆ Sodium Nitrate/Nitrite
- ◆ Potassium Nitrate
- ◆ Phthalic Anhydride
- ◆ Mg/Na/K Chlorides
- ◆ Caustic Soda (NaOH)
- ◆ Sodium Carbonate
- ◆ Adipic Acid

See also ammonium nitrate and molten metal bulletins

Nagle Pumps manufactures vertical cantilever, vertical submerged bearing, horizontal and submersible pumps for abrasive, corrosive, elevated temperature and hazardous fluid handling applications. See our Website for the representative in your area or contact Nagle Pumps directly.



## Nagle Pumps, Inc.

1249 Center Avenue, Chicago Heights, IL 60411  
 Phone: 708-754-2940      Fax: 708-754-2944  
 Web: [www.naglepumps.com](http://www.naglepumps.com)      E-mail: [sales@naglepumps.com](mailto:sales@naglepumps.com)