# Hot Oil Systems GHOS 650 Series

Recirculating Temperatures to 650°F. Positive Displacement Pump





#### **APPLICATIONS**

For heating revolving rolls, platens, molds, dies, jacketed tanks, autoclaves, where close even temperatures are required. Many types of Heat Transfer Fluids are available and most are compatible with this system.

## STANDARD FEATURES

- Pre-engineered and proven design package that has been field tested under rugged conditions at temperatures to 650°F.
- Low Watt-density Incoloy 800 sheath heating elements arranged to provide "Even Heat" inside tube bundle.
- Unique "Buffer Tank" factory installed solves oil degradation problems associated with hot oil (over 150°F.) reaching expansion tank.
- Self-venting horizontal design of the heating chamber eliminates both air contamination and the need to manually vent heater chambers.
- Pump may be isolated or removed without draining heating chamber.
- Mechanical seal (standard feature) eliminates constant dripping of conventional "wet seals".
- Positive displacement type pump with bypass designed for heat transfer fluids operating over a wide temperature range.
- Flexible pipe at pump connections absorbs vibration.
- Fully enclosed pump speed-reducer to extend life of pump and improve reliability.
- Industrial quality pressure and suction gauges.



- Expansion tank with rugged inspection ports either mounted on unit or shipped separate for field mounting above process.
- Enclosed with 16 gauge steel panels on three sides, fourth side has piping access.
- Gate valves (inlet and outlet) provide system isolation from process when required.
- Flanged inlet, outlet, and fill connection.
- All welded construction including all piping connections as well as tube bundle assembly.
- Piping insulated with calcium silicate and covered with metal jacket.

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## MORE STANDARD FEATURES

- Fully gasketed electrical control enclosure with door mounted disconnect handle, temperature indicator, pilot lights, and switches.
- Heating element sheath sensing thermocouple for quickest response to overheat conditions.
- SCR Thyristor Power Control assures more accurate temperature control than conventional systems and effectively reduces watt-density during normal operations.
- Electronic over-temperature control with separate safety contactor and illuminated reset button.
- Electronic PID Type indicating temperature control.
- Pump motor circuit, separately fused, with overload protection and interlocks.
- · Installation, Operation, Parts List Manuals.

# Type: GHOS

## **CONSTRUCTION OPTIONS**

- Weatherproof Construction (NEMA IV)
- Explosion Resistant Construction (NEMA VII)
- Separate control package for remote mounting.
- Multiple systems on one skid.
- Back-up pump piped and wired into system with either manual or automatic change-over

#### COOLING OPTIONS

- Water cooling packages with manual, semiautomatic, or fully automatic operation change over from heating to cooling.
- Air cooling packages with fully modulated temperature control - provides somewhat slower cooling rate than water but can be accurately controlled and is virtually maintenance free.

## **CONTROL OPTIONS**

- Chart recorder or data logger.
- Clock timer 7 day with skip-a-day feature.
- Differential type pressure switch.
- Expansion tank level switch.

| Model    | kW  | Watt Density W/Sq. In. | Pump<br>GPM | Pump Type             | Pump<br>HP | Connection Size<br>Inch (300#) | System Volume<br>Gallons | Length<br>Inches | Width<br>Inches | Height<br>Inches | Weight<br>Lbs. |
|----------|-----|------------------------|-------------|-----------------------|------------|--------------------------------|--------------------------|------------------|-----------------|------------------|----------------|
| GHOS-10  | 10  | 15                     | 20          | Positive Displacement | 2          | 1.5                            | 7                        | 72               | 36              | 72               | 1200           |
| GHOS-15  | 15  | 15                     | 20          | Positive Displacement | 2          | 1.5                            | 8                        | 84               | 36              | 72               | 1300           |
| GHOS-20  | 20  | 15                     | 20          | Positive Displacement | 2          | 1.5                            | 13                       | 72               | 36              | 72               | 1300           |
| GHOS-30  | 30  | 15                     | 20          | Positive Displacement | 2          | 1.5                            | 16                       | 84               | 36              | 72               | 1400           |
| GHOS-40  | 40  | 15                     | 50          | Positive Displacement | 5          | 2                              | 23                       | 76               | 36              | 80               | 1400           |
| GHOS-50  | 50  | 15                     | 50          | Positive Displacement | 5          | 2                              | 25                       | 84               | 36              | 80               | 1450           |
| GHOS-60  | 60  | 15                     | 50          | Positive Displacement | 5          | 2                              | 27                       | 90               | 36              | 80               | 1500           |
| GLOS-80  | 80  | 15                     | 90          | Centrifugal           | 7.5        | 2                              | 46                       | 90               | 48              | 84               | 1800           |
| GLOS-100 | 100 | 15                     | 90          | Centrifugal           | 7.5        | 2                              | 48                       | 96               | 48              | 84               | 1900           |
| GLOS-120 | 120 | 15                     | 90          | Centrifugal           | 7.5        | 2                              | 50                       | 96               | 48              | 84               | 2000           |
| GLOS-150 | 150 | 15                     | 150         | Centrifugal           | 10         | 3                              | 80                       | 102              | 52              | 90               | 2200           |
| GLOS-180 | 180 | 15                     | 150         | Centrifugal           | 10         | 3                              | 83                       | 102              | 52              | 90               | 2300           |
| GLOS-200 | 200 | 15                     | 150         | Centrifugal           | 10         | 3                              | 84                       | 102              | 52              | 90               | 2400           |
| GLOS-225 | 225 | 12                     | 150         | Centrifugal           | 10         | 3                              | 125                      | 132              | 52              | 90               | 2700           |
| GLOS-250 | 250 | 12                     | 250         | Centrifugal           | 15         | 4                              | 144                      | 150              | 52              | 90               | 3000           |
| GLOS-300 | 300 | 12                     | 250         | Centrifugal           | 15         | 4                              | 157                      | 133              | 77              | 126              | 3300           |

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|           |      | ,                      |             |             |            | (                           |                          |                  |                 |                  |                |
| GLOS-360  | 360  | 12                     | 250         | Centrifugal | 15         | 4                           | 160                      | 133              | 77              | 126              | 3500           |
| GLOS-400  | 400  | 12                     | 350         | Centrifugal | 20         | 4                           | 198                      | 120              | 77              | 126              | 3700           |
| GLOS-450  | 450  | 12                     | 350         | Centrifugal | 20         | 4                           | 243                      | 132              | 77              | 126              | 3900           |
| GLOS-500  | 500  | 12                     | 350         | Centrifugal | 20         | 4                           | 282                      | 150              | 77              | 126              | 4200           |
| GLOS-600  | 600  | 12                     | 500         | Centrifugal | 30         | 6                           | 310                      | 108              | 77              | 126              | 4600           |
| GLOS-670  | 670  | 12                     | 500         | Centrifugal | 30         | 6                           | 341                      | 128              | 77              | 126              | 5000           |
| GLOS-720  | 720  | 12                     | 500         | Centrifugal | 30         | 6                           | 375                      | 140              | 77              | 126              | 5400           |
| GLOS-840  | 840  | 12                     | 500         | Centrifugal | 30         | 6                           | 413                      | 158              | 77              | 126              | 5800           |
| GLOS-900  | 900  | 12                     | 600         | Centrifugal | 40         | 6                           | 454                      | 164              | 84              | 126              | 6300           |
| GLOS-1050 | 1050 | 12                     | 600         | Centrifugal | 40         | 6                           | 500                      | 184              | 84              | 126              | 6800           |
| GLOS-1200 | 1200 | 12                     | 600         | Centrifugal | 40         | 6                           | 550                      | 204              | 84              | 126              | 7400           |



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