

GENERAL INFORMATION

BURKS PARTS

I&O MANUALS

## **10. HIGH TEMPERATURE PUMPS**

### **PUMP TYPES:**

High Temperature Pumps



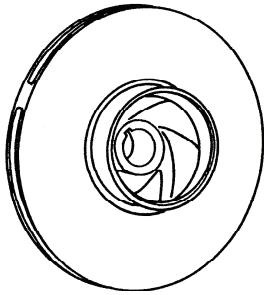
**WARNING:**  
CANCER AND REPRODUCTIVE HARM -  
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**High Temperature Pumps**

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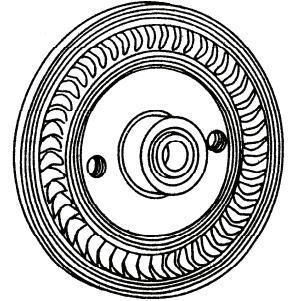
## High Temperature Pumps

BURKS Quality and Performance with a patented, time proven, dependable option for high temperature applications.

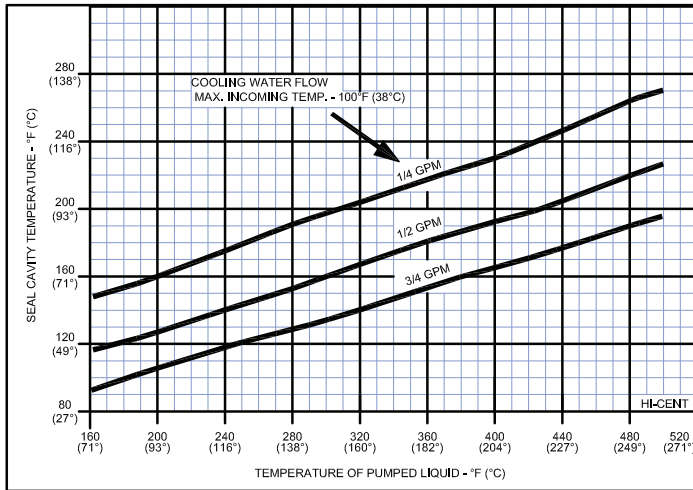


### COOLING CURVES

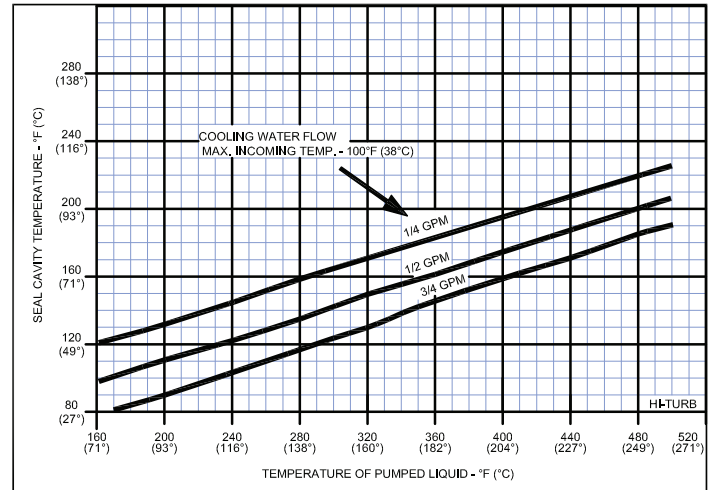
Cooling curves indicated the flow of cooling liquid necessary to obtain desired seal temperatures at any given temperature of fluid to be pumped. (Curves are based on water as cooling media.)



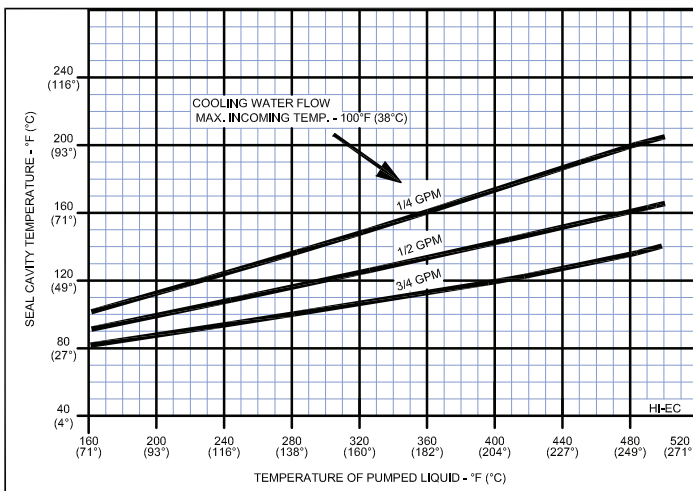
### CENTRIFUGALS



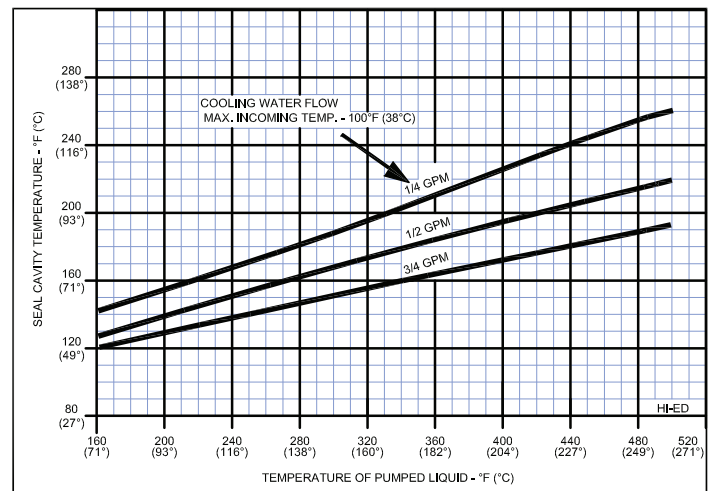
### TURBINES (Except EC & ED Series)



### EC SERIES TURBINES



### ED SERIES TURBINES



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# High Temperature Pumps with "MJ" Jacketed Seal Option

## High Temperature Pumps

The BURKS jacketed seal is a unique, field proven design for handling liquids at temperatures of 200°F (93°C) to 500°F (260°C). It employs a Viton-fitted rotary face-type shaft seal with carbon face and Ni-Resist stationary seal. This simplified design eliminates the need for complicated jacketing arrangements and expensive exotic shaft seals.

### HOW THEY WORK...

Exchange of liquid between the seal cavity and the pump casing is restricted by a throttle bushing "A" on all models except the EC/ED Series turbine pumps. The throttle bushing also serves as a cooling jacket "B". On centrifugal pump models this cooling jacket surrounds the seal cavity "C".

Turbine pump models use the patented "Film Cooling Principle" design. The cooling jacket surrounds the gap between the throttle bushing and shaft spacer sleeve "D", through which a thin film of the pumped fluid passes on its way to the seal cavity.

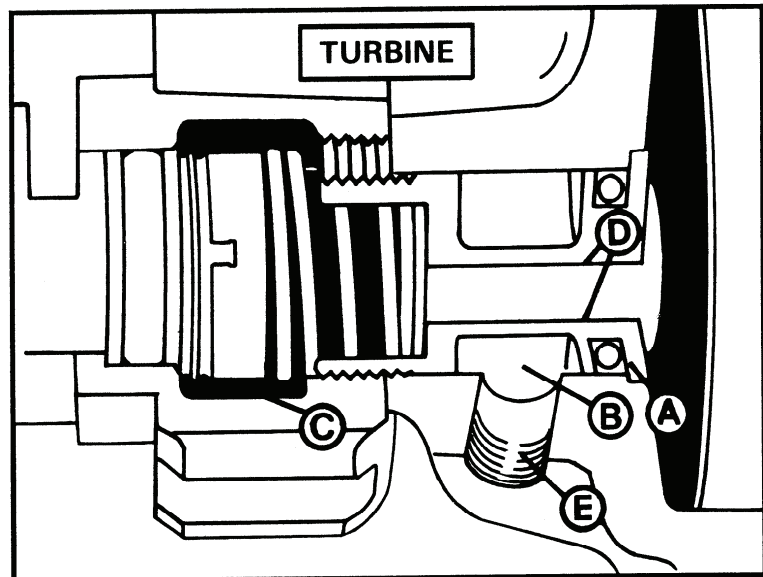
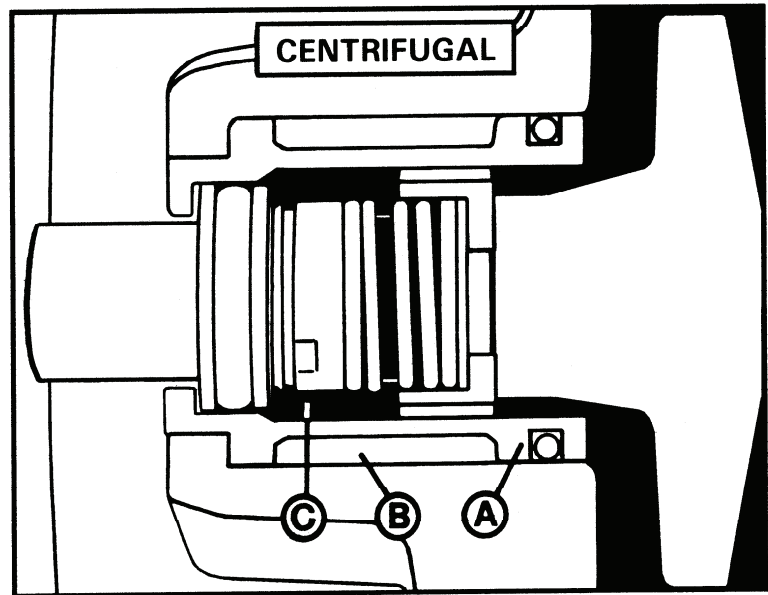
EC/ED Series turbine pumps employ an optional "MJ" Mechanical Seal Housing which contains the seal cavity surrounded by a cooling jacket. A shaft spacer sleeve restricts the exchange of liquid between the pump casing and the seal cavity.

Cooling liquid from an external source is allowed to flow into and out of the cooling jacket through tapped holes "E" provided for that purpose. The flow of cooling liquid through the jacket dissipates heat transmitted through its walls, thereby cooling the liquid in, or on its way to the seal cavity. Less than one gallon per minute flow through the cooling jacket will usually keep liquid in the seal cavity below 225°F (107°C), resulting in greatly extended seal life.

### COOLING LIQUID SUPPLY

Cooling liquid may be piped into either side of the cooling jacket and out of the opposite side. The cooling jacket may be pressurized to a maximum 60 PSIG (414 kpa). Note: External water or oil has to be below 100°F (11.7°C).

### CUTAWAY VIEWS



### BURKS Pumps Available with "MJ" Jacketed Seal Option

All Turbine pumps except CR Series

All G & GN Series centrifugal pumps except sizes 7-2½, 9-1½, 9-2 and 9-2½.



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**CRANE**<sup>®</sup>

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**PUMPS & SYSTEMS**

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