

# burks®



## High Temperature Centrifugal and Turbine Pumps

**For Temperatures to 500°F**



Series G5-1/4 & G6-1/4



Series CT



Series ES

### Burks High Temperature Pumps with "MJ" Jacketed Seal Option

The Burks jacketed seal is a unique, field proven design for handling heat transfer fluids at temperatures of 200°F to 500°F. It employs a Viton-fitted, rotary face-type, shaft seal with carbon face and Ni-Resist stationary seat. This simplified design eliminates the need for complicated jacketing arrangements and expensive exotic shaft seals.

#### Furnish and Install as Specified:

**Turbine Pump** are furnished with cast iron case and adapter of 30,000 PSI tensile strength; bronze raceway and bronze impeller with monel blades; single inside unbalanced Viton mechanical shaft seal.

**Centrifugal Pump** are furnished with cast iron casing and adapter of 30,000 PSI tensile strength; bronze or cast iron impeller; bronze or steel casing wear ring; single inside unbalanced Viton mechanical shaft seal.

Jacketed Seal configuration to cool mechanical shaft seal while pumping heat transfer fluids up to 500°F.

Other models available with the "MJ" High Temperature option include:  
Series G6-1½ thru G7-2, Series GNA, Series GNB, Series CS, Series EC & ED and Series ET

## How They Work...

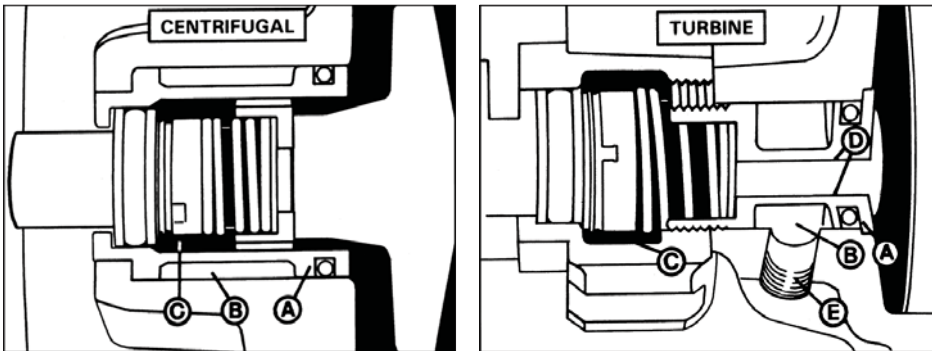
Exchange of liquid between the seal cavity and the pump casing is restricted by a throttle bushing (A) on all models except the EC/ED Series turbine pumps. The throttle bushing also serves as a cooling (B) jacket. On centrifugal pump models this cooling jacket surrounds the seal cavity (C). Turbine pump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

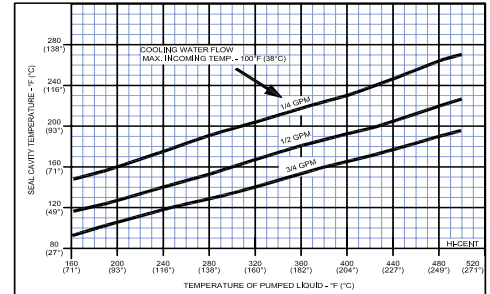


Burks Pumps Available with "MJ" Jacketed Seal Option

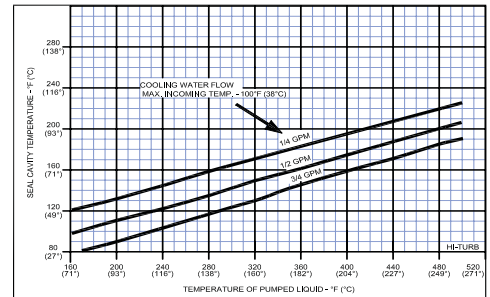
All Turbine pumps except CR Series

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

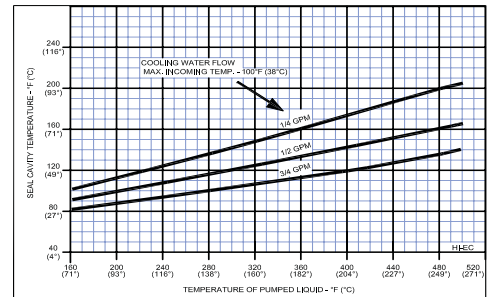
### CENTRIFUGALS



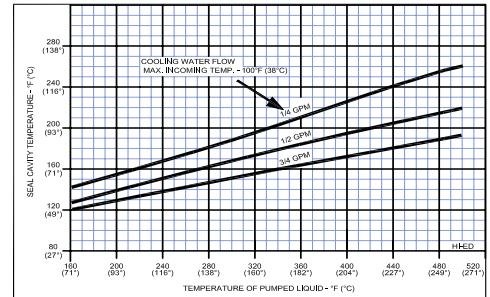
### TURBINES (EXCEPT EC & ED SERIES)



### EC SERIES TURBINES



### ED SERIES TURBINES



COOLING CURVES INDICATE THE FLOW OF COOLING LIQUID NECESSARY TO OBTAIN DESIRED SEAL TEMPERATURES AT ANY GIVEN TEMPERATURE OF THE FLUID TO BE PUMPED.



PUMPS & SYSTEMS

[www.cranepumps.com](http://www.cranepumps.com)

**Crane Pumps & Systems**  
420 Third Street  
Piqua, Ohio 45356  
(937) 778-8947  
Fax (937) 773-7157

**Crane Pumps & Systems Canada**  
83 West Drive  
Brampton, Ont. Canada L6T 2J6  
(905) 457-6223  
Fax (905) 457-2650



© 2010 Crane Pumps & Systems, Inc.  
A Crane Co. Company  
Printed in U.S.A.  
BKHIGHTEMPBRO - Rev. A (10/10)

