

# Watt-Flex<sup>®</sup> Split-Sheath Cartridge Heaters

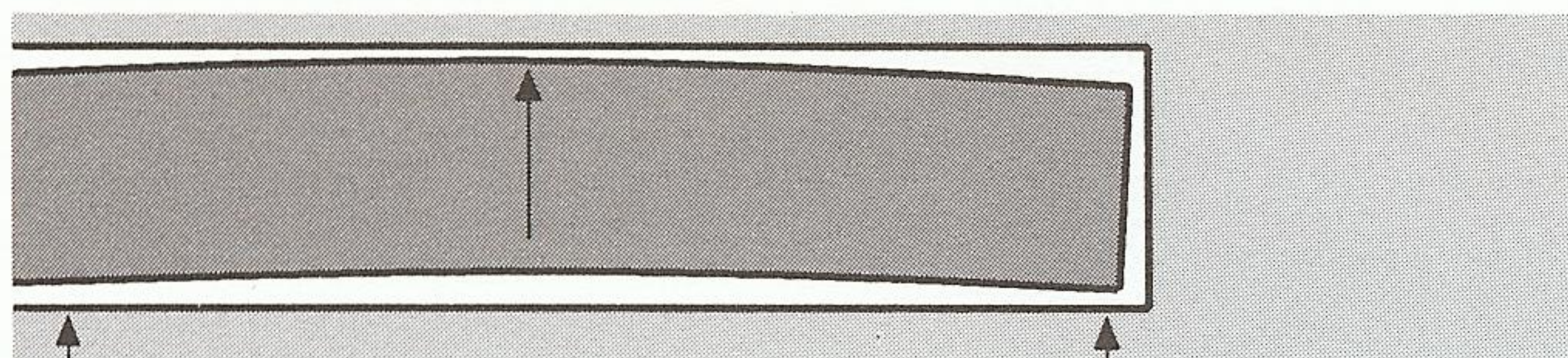
T E C H N I C A L   B R I E F

## STUCK WITH BORE SEIZURE?

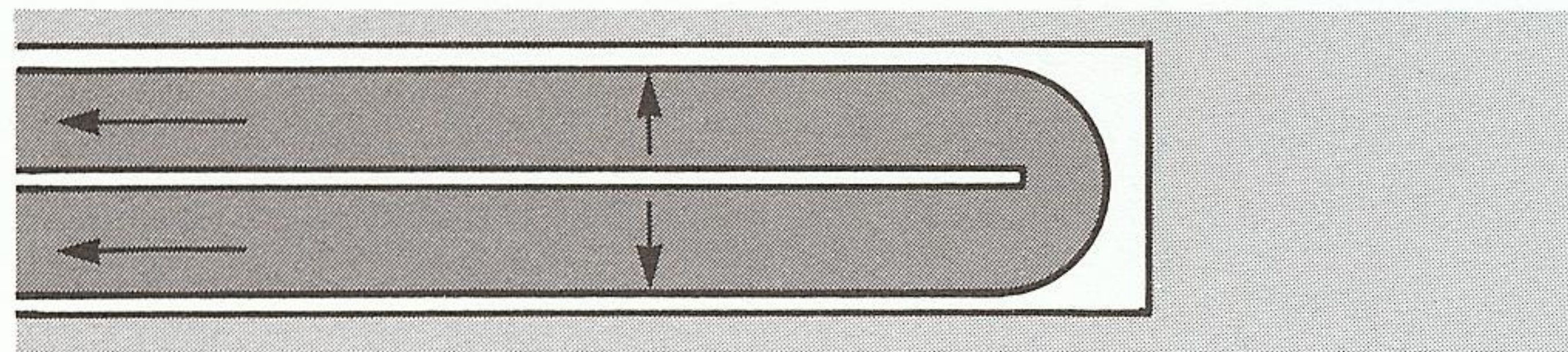
*The seizure of a cartridge heater in a bore can mean many hours of maintenance labor to extract the heater, machine downtime, and lost productivity. Even if the heater is successfully removed, the bore will be scored or enlarged from the drillout procedure.*

Wall-to-wall contact ensures efficient heat transfer from a cartridge heater to the bore. Conventional cartridge heaters depend on tight fit to affect maximum heat transfer, but bore and heater diameter tolerances make perfect fit unattainable. The looser fit required for such heaters leads to inefficient heat transfer, which shortens the life of the heater.

In addition, if the heater transfers heat from contact points on the bore and builds up heat on its sheath at noncontact points, it will warp, bind, or seize in the bore.

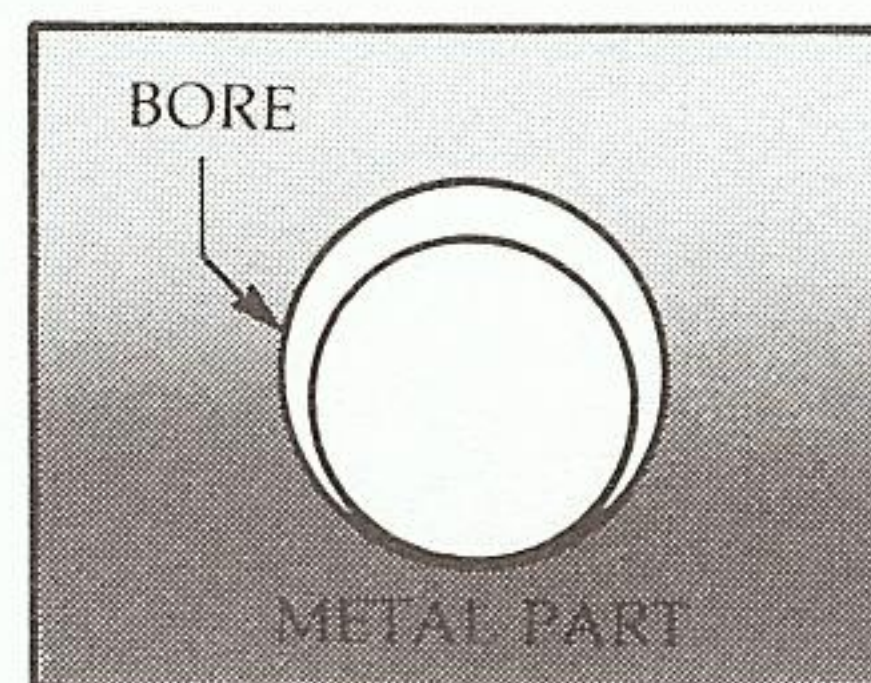


CONVENTIONAL HEATERS WARP

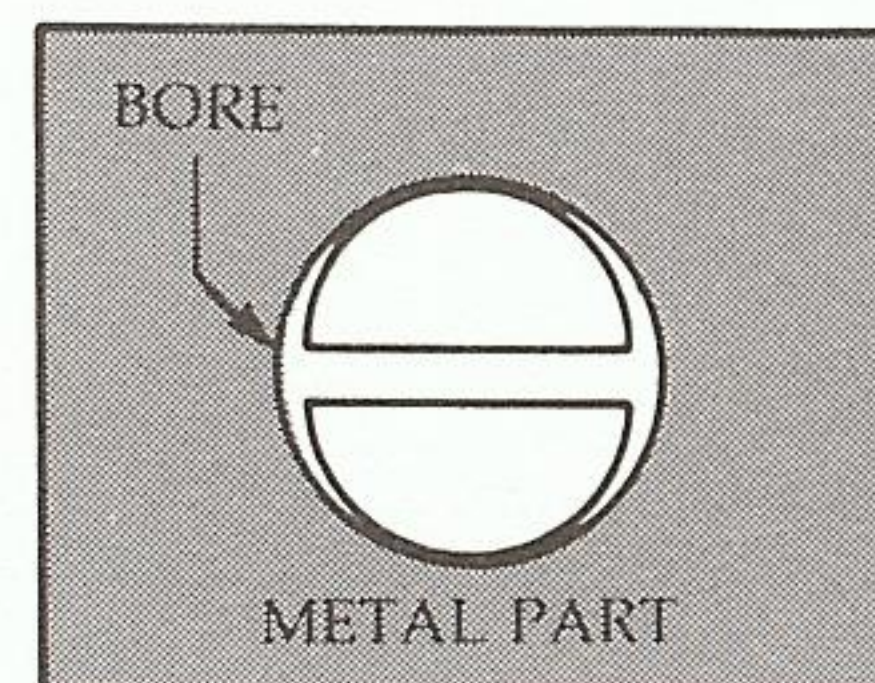


WATT-FLEX HEATER HALVES EXPAND INDEPENDENTLY

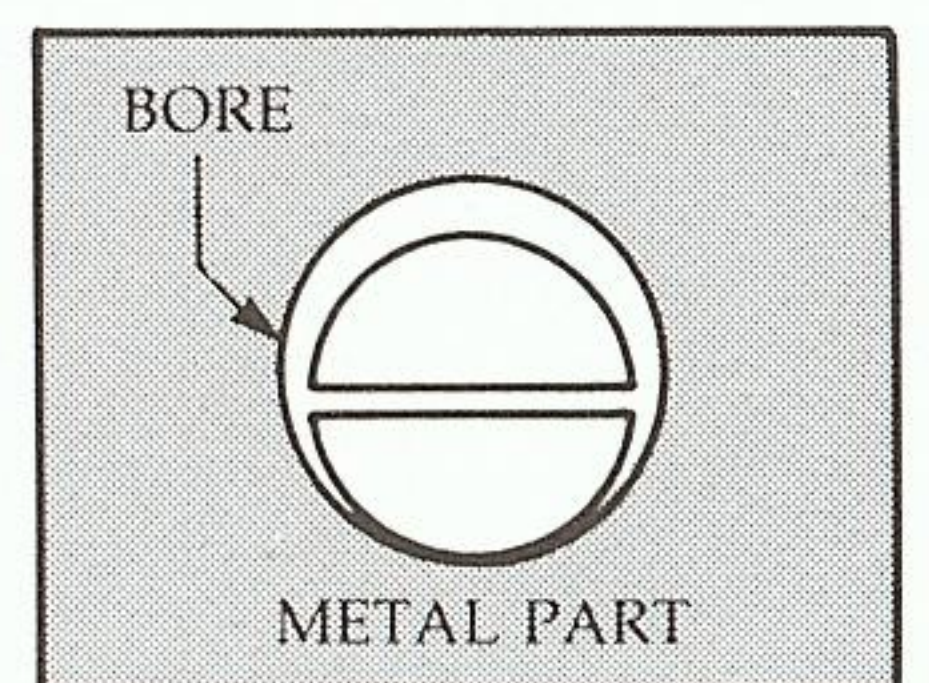
The Watt-Flex Split-Sheath Cartridge Heater is manufactured with two semicircular legs that expand bilaterally when the heater is energized. These legs make intimate contact with the walls of the bore, maximizing heat transfer and significantly extending the life of the heater.



**ENERGIZED CONVENTIONAL CARTRIDGE HEATER**  
Conventional cartridge heaters, limited to ordinary thermal expansion, cannot compensate for oversized bores.



**ENERGIZED WATT-FLEX HEATER**  
The unique bilateral expansion of an energized Watt-Flex heater produces superior metal-to-metal contact with the surrounding bore, thereby maximizing heat transfer.

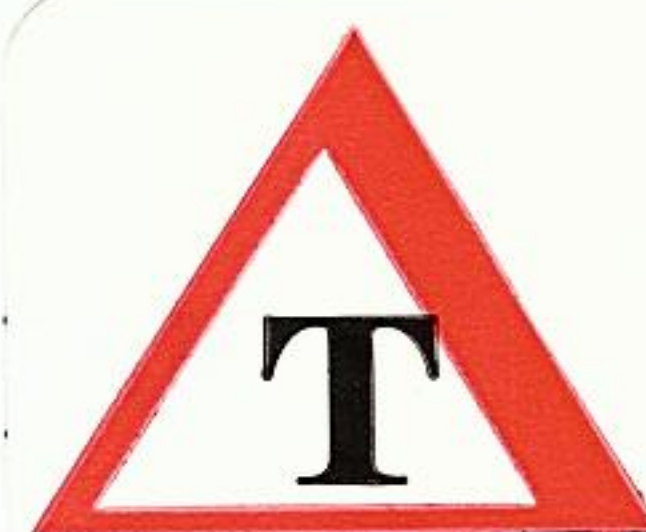


**DE-ENERGIZED WATT-FLEX HEATER**  
De-energized Watt-Flex heater contracts for easy insertion and slide-out removal from bore.

When the Watt-Flex heater is de-energized, the legs retract to nearly their original diameter, allowing easy removal of the heater from the bore. This feature makes the Watt-Flex Cartridge Heater the logical choice of machine manufacturers for use in small, long sealing bars and large, long platens which are nearly impossible to drill out.

Watt-Flex Cartridge Heaters reduce the cost of process heating. While the purchase price of a Watt-Flex heater may be slightly more than that of conventional heaters, the premium is more than offset by savings in routine maintenance costs; longer heater life; and dramatically reduced heater changeout costs including replacement labor, machine downtime, lost production, and damage to the bore. ●

**Dalton** ELECTRIC HEATING CO.,



**DELTA T** "The Heat Is On!"

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