



Heating Liquids/In-Tank Models NWH, CTE, XL-32, RJ

There is a definite benefit to being able to heat a liquid in an open tank. Penberthy jet pump in-tank heaters optimize and streamline the operation by completing two jobs at the same time—both heating and circulating the mixture. Installed submerged in the tank, open tank heaters are especially suited for cooking, heating & circulating liquids and they maximize the condensation of steam into operating liquids to provide fluid heating. **Model NWH** is an inexpensive basic heater.

Model CTE is more versatile and produces strong mixing during the heating process. **Model XL-32** provides the highest steam flow for a given pipe size, as well as providing near noiseless operation with as little as 3 psig of steam pressure. The CTE, NWH and XL-32 produce temperature rise of up to 120°F (49°C) with a final tank temperature of 160°F (71°C). **Model RJ (Ring Jet) Heater** operates at steam pressures from 5 to 150 psig (1035 kPag) above the submergence (head pressure), achieving final tank temperatures up to 179°F (82°C).

Because Penberthy jet heaters operate on a simple heat transfer principle, they are efficient and cost-effective. In-tank jet heaters are particularly well-suited for these applications: continuous heating, cooking grain, direct contact heat transfer, cooking mash, cooking starch and homogeneous liquid/temperature distribution throughout a tank. By using imaginative engineering, uses for these units is virtually endless!

Models Available

NWH, CTE, XL-32, RJ



Selection Guide

It is necessary to identify some basic information in order to correctly match the proper in-tank jet heater with your specific application. Simply complete the application form with the required information below, and then contact your Penberthy sales representative to order the in-tank jet heater that is just right for your operation.

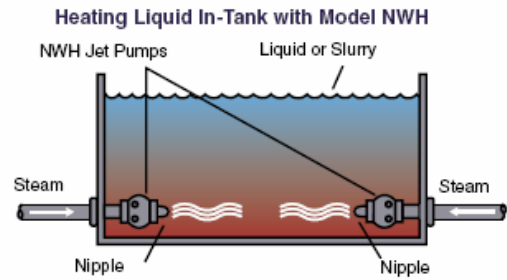
MOTIVE:

- Steam Pressure (Available)
- Flow Rate (Volume available)
- Temperature

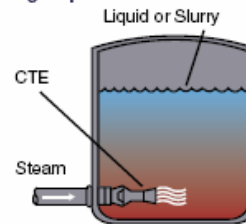
OTHER:

- Tank Liquid (Heat capacity)
- Initial Temperature
- Tank Volume (Capacity)
- Final Temperature
- Heating Time (minutes)

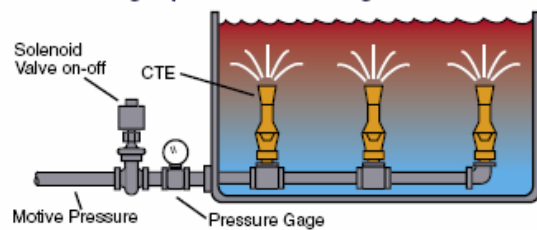
Typical Applications



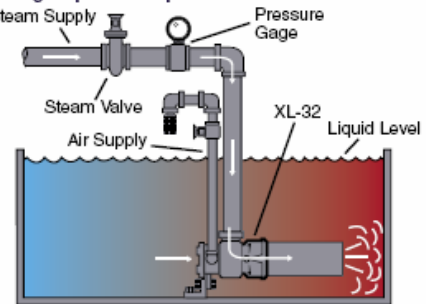
Heating Liquid In-Tank with Model CTE



Heating Liquids with Circulating Tank Eductors



Heating Liquids In Open Tank With XL-32 Heater



Model Construction Data

Model	NWH		CTE		XL-32		RJ	
Sizes Available	1/4"-2"	Standard Materials Cast: Low Lead Bronze, Carbon Steel, 316 STS	3/8"-4" 4" & up	Standard Materials Cast: Low Lead Bronze, Iron, Carbon Steel, 316 STS Fabricated: Carbon Steel, 316 STS	1/2"-2"	Standard Materials Cast: Low Lead Bronze	1"-3"	Standard Materials Cast: Low Lead Bronze, Iron, Carbon Steel, 316 STS

Model Specifications

Model	NWH Water Heater	CTE-Circulating Tank Eductor	XL-32 Heater	RJ Heater
Motive steam pressure	up to 120 psig (830 kPag)	up to 140 psig (966 kPag)	up to 140 psig (966 kPag)	up to 150 psig (1035 kPag)
Max. water temp. rise (ΔT)	up to 120°F (49° C)	up to 120°F (49° C)	up to 120°F (49° C)	up to 120°F (49° C)
Max. final tank temp.	up to 160°F (71° C)	up to 160°F (71° C)	up to 160°F (71° C)	up to 179°F (82° C)