STEAM TRAP SELECTION CRITERIA MATRIX

FUNCTION	Thermostatic	Thermodynamic	Mechanical		Orifice	Free Float
			F & T	IB		
Response to Load Changes	Moderate	Slow	Fast	Moderate	Very Slow	Fast
Air Venting	High	Low	Med/High	Low	Low	High
Thermal Efficiency	High	Medium	Med/High	Medium	High†	Med/High
Applications	Drip Legs Tracing Process Eqpt.	Drip Legs Tracing	Drip Legs Process Eqpt.	Drip Legs Process Eqpt.	Drip Legs	Drip Legs Process Eqpt.
Affected By Ambient Temperatures	No	Yes (unless insulated)	No (susceptible to freezing)		No	No (may freeze)
Relative Cost	Low	Low	Meduim	Med/Low	Low	Meduim
Capacity	Medium	Low	High		Low	High
Pressure Range	to 650 psi	10 to 600 psi	to 650 psi	to 250 psi	to 2500 psi	to 650 psi
Size vs. Capacity	Small	Medium	Large		Small	Large
Life Expectancy	Moderate	Moderate	Moderate	Moderate	Long	Long
Ease of Maintenance	Very Easy	Very Easy	Moderate		Very Easy	Moderate
Orientation Limits	No	No	Yes		No	Yes

† Within narrow load range.

NICHOLSON STEAM TRAP OPTIONS

SLR Orifice

Specify where immediate elimination of condensate and improved sensitivity is desired. This option may also improve performance in applications where condensate must be lifted upstream from the trap. Allows continuous discharge of condensate. Trap will nominally pass 50 lb/hr of condensate at 50 psi within 2°F of saturated temperature.

Skirted Seat Trim

Recommended for higher pressure service, often over 300 psi. Minimizes erosion by dispersing trap discharge.

Sterilizer Trim

Specify where immediate elimination of condensate and improved sensitivity is desired. Shorter seat opens more quickly in presence of condensate. Hotter discharge temperature.

Internal Strainer

Recommended where steam may be contaminated with pipe scale or other particulate matter. Screen reduces deposits on valve and seat.

Blowdown Valve

Specify to clean strainer area and remove debris trapped before strainer. Also used to determine whether steam or water is present before the steam trap.

ISO Filled Actuator

Specify to reduce flash steam, provide highest thermal efficiency and/or air vent operation is desired. This option will subcool condensate by approximately 40°F. For use in applications above 500 psig and/or for superheated steam.

Convoluted Actuator

Specify where rapid response and/or fail closed operation is desired.

Welded Actuator

Specify where long service life and/or fail open operation is desired.

Continuous Bleed Air Vent

Replaces thermostatic air vent with a 1/32 inch orifice.