

Heating Application Guide

A technology-neutral approach



Let's talk about your heating application

For over 50 years, CSI has been working with clients just like you to solve their heating problems in plants worldwide. Contact us today!

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Don't let your plant struggle with process heating issues and incur unnecessary capital and operational expense. At no cost to you, let CSI help evaluate the RIGHT thermal solution which solves your heating problems while reducing the total heating installed costs and ongoing operational expense.

What is Your Heating Media?



Steam/Vapor
Low & high pressure steam, hot oil vapor - up to 1,000 psig, 70 barg

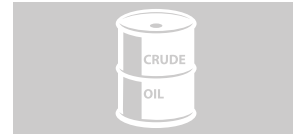


Liquid
Oil, Glycol/water

What is Your Process/Heating Objective?



Polymer/Plastics/Resin
Thermal Objective: maintain bulk process &/or uniform pipe wall temp. (93-399°C, 200-750°F)



Asphalt/Resid/Crude
Thermal Objective: maintain bulk process temp. (135-232°C, 275-450°F)



Molten Sulfur
Thermal Objective: maintain bulk process temp. (132-149°C, 270-300°F)



Urea Solution
Thermal Objective: maintain bulk process temp. (79-154°C, 175-310°F)



Sulfur Vapor (Vent/Tail Gas)
Thermal Objective: maintain pipe wall temp. (127-171°C, 260-340°F)



Winterization
Thermal Objective: freeze-protection (0°C+, 32°F+)



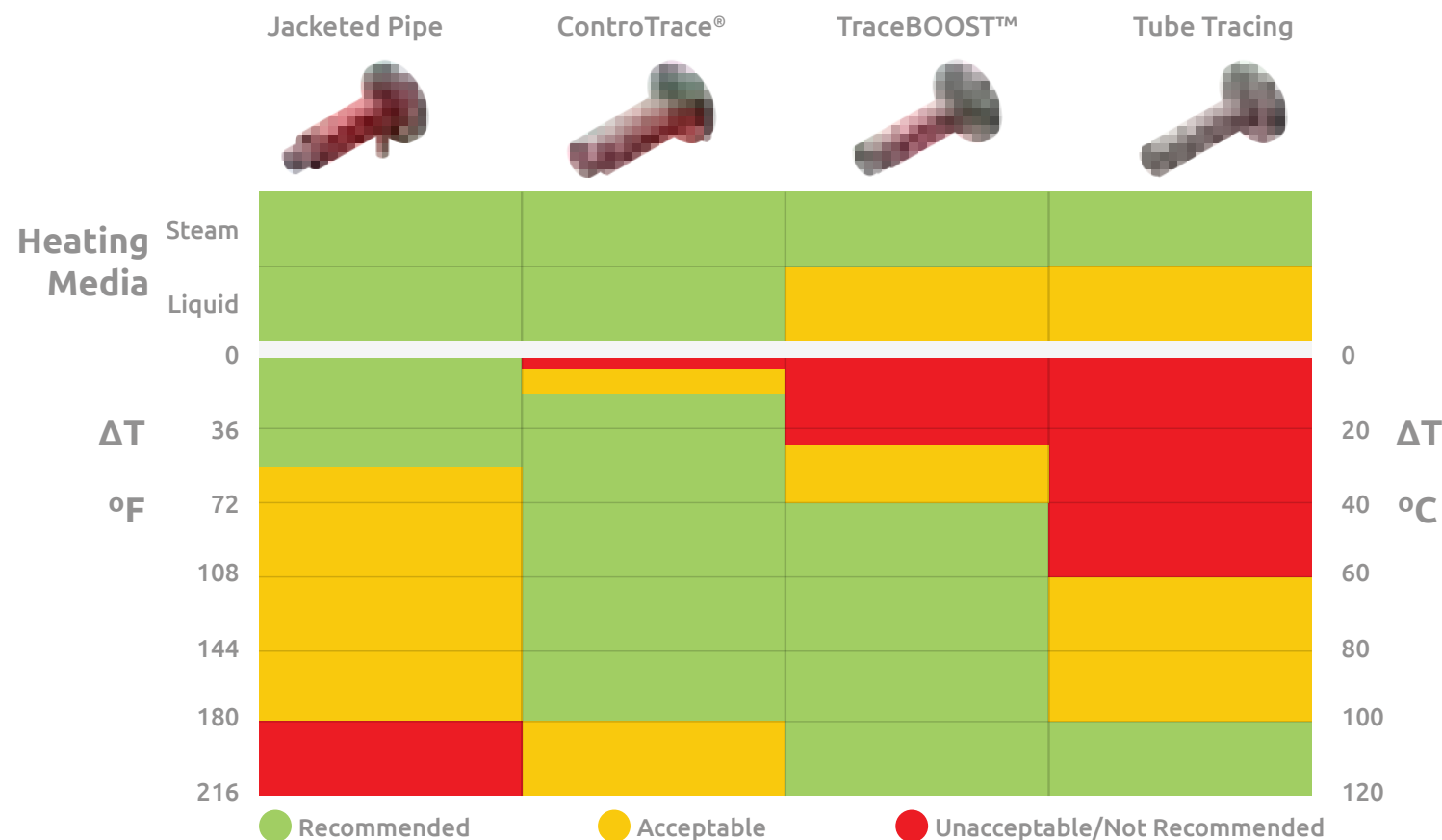
Acid Gas
(Sour Water Acid Gas, Amine Acid Gas)
Thermal Objective: maintain pipe wall temp. (49-85°C, 120-185°F)



Note:
Temperatures listed are typical and vary by user specific applications

Recommended Application

$\Delta T = (\text{heating medium temperature} - \text{process maintenance temperature})$



Application Details

	Jacketed Pipe	ControTrace®	TraceBOOST®	Tube Tracing	
Thermal Objective	Engineered	Engineered	Guided	Guided	Design Approach
	✗	✓	✓	✓	For Freeze Protection
	✓	✓	✓	✓	For Bulk Temp Maintenance
	✓	✓	✓	✗	For Melt Out
	✓	✓	✗	✗	For WallTemp Maintenance
	✓	✓	✗	✗	Use as Heat Exchanger
Product Details	✓	✓	✓	✓	Tanks and Vessels
	✓	✓	✓	✓	Equipment Heating
	✓	✓	✓	✓	Lead Time
	✓	✓	✓	✗	Installation Drawings
	✓	✓	✓	✓	Total Plant Solution
	✓	✓	✓	✓	

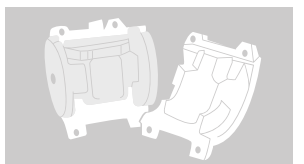
Tank/Vessel Heating

Use ControTrace® heating panels to eliminate internal coil headaches and poor performance of traditional plate coils



Equipment Heating Jackets

Temperature maintenance of valves/pumps/meters is critical to overall system performance. Use ControHeat® jackets



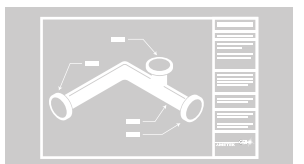
Lead Time

Use TraceBoost™ for non-critical thermal maintenance – stock availability. ControTrace® lead time is 50% ≤ jacketed pipe



Installation Drawings

Detailed install and heating circuitry drawings provided to ensure correct field install in critical heat tracing applications



Total Plant Solution

From choosing the right heating system to designing the supporting infrastructure, CSI can optimize your plant to deliver a TOTAL PLANT SOLUTION which uses the appropriate thermal solution while minimizing costs of both the heating system and infrastructure (manifolds/supply-return tubing/steam traps).

