

Process Fundamentals

Selecting the most effective and efficient piping material for cooling systems can be daunting due to the numerous variables. This easy reference chart compares three commonly used piping types for process and utility cooling systems.

Cooling System Piping Material Comparison Chart	4-Inch Stainless Steel Tube Insulated with Polyurethane and Clad with Stainless Steel or Aluminum	4-Inch Georg Fisher COOL-FIT ABS Pre-insulated and Pre-Clad	4-Inch Sched 80 PVC Insulated with Polyurethane No Cladding*
Material Cost	Medium	High	Low
Installation Time	Slow	Fast	Fast
Total Cost of Ownership Over Life of Product	Comparable to GF COOL-FIT ABS	Comparable to Stainless Steel Tube (insulated)	Low entry price is eclipsed by maintenance costs
Application	Cold, Warm & Hot	Cold & Warm	Cold & Warm
Operating Temperature Range	-60F to +300F	-58F to +140F	+32F to +140F
Energy Efficiency	Better	Best	Good
Flexibility of Pump and Valve Integration	No special fittings required	Needs special fittings for using Stainless Steel valves & pumps	Low quality, low flow components are standard. High rate of failure
High Impact Resistance	Best	Good	Poor
Moisture Resistance	Yes	Yes	Yes
UV Resistant	Yes	Yes	No
Vapor Tight	Yes	Yes	Unlikely
Durability	High	High	Low to Medium
Piping Weight per Linear FT	3.5	3.5	2.75
Material Sourcing	Easy through Industrial Supplier	Easy through Authorized GF Distributor	Easy through Home Improvement Center
Ease of Modifications After Install	Easy	Not so easy	Easy
Long-term Maintenance Requirements	Low	Very Low	High

* This comparison assumes that the PVC insulation is not clad as cladding would be unusual for PVC installations.