



# ***DEKORON UNITHERM, LLC***

## **Heated Products**



# Applications for Heated Products



- Freeze Protection of Fluid Lines
- Temperature Maintenance of Chemicals
- Viscosity Maintenance of Oils, Adhesives, Chemicals and Additives
- Prevent Condensation or Fouling in Gas Analyzer Lines
- Reduce Steam Generating Costs, Reduce Temperature Losses in Steam Lines



# Why Unitherm Preinsulated Bundles and Hoses?



- Predictable Operational Characteristics
- Consistent Operational Characteristics
- Pre-Engineered Performance
- Preinsulated Construction
- Long Lengths
- Smaller OD's than Field Fab
- Maintenance Free



# Traced Bundles vs Heated Hose



## Traced Bundles

- Fixed Applications
- Cut-to-Length
- Preinsulated, Electric or Steam Traced
- Hazardous Locations
- Tube & Jacket to meet application
- Long Lengths

## Heated Hose

- Portable & Hand Held
- Electrically and Hydraulically Complete
- Series Resistance Heat
- Higher Temperature
- Custom for Job



# Traced Product Types



- Preinsulated Steam Supply      or  
Condensate Return Lines
- Light Steam Traced
- Heavy Steam Traced
- Electric Traced - SR
- Electric Traced - CPD
- Electric Traced - CID1



# Preinsulated Steam Supply/Condensate Return Lines



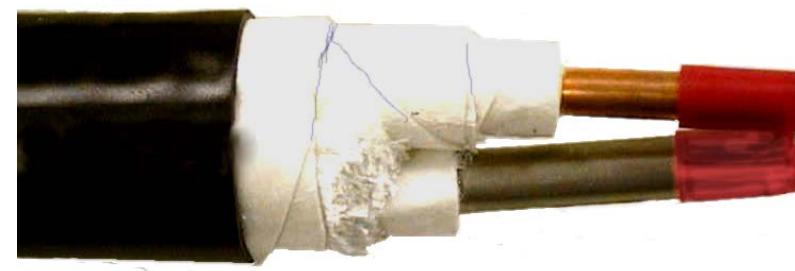
- Single Tube
- Reducing Heat Loss in Steam, Gas, or Liquids
- MTR of 400F with 140F Jacket
- High Temp Designs Available





# Light Steam Traced Lines

- Freeze Protection or Low Temperature Maintenance
- No Boil Off of Process Fluid
- Tubes Insulated from Each Other
- Single or Multiple Process Tubes





# Heavy Steam Traced Lines

- Viscosity or Temperature Maintenance
- Process Tube Temperature 150F above Ambient
- Single or Multiple Process and Tracer Tubes





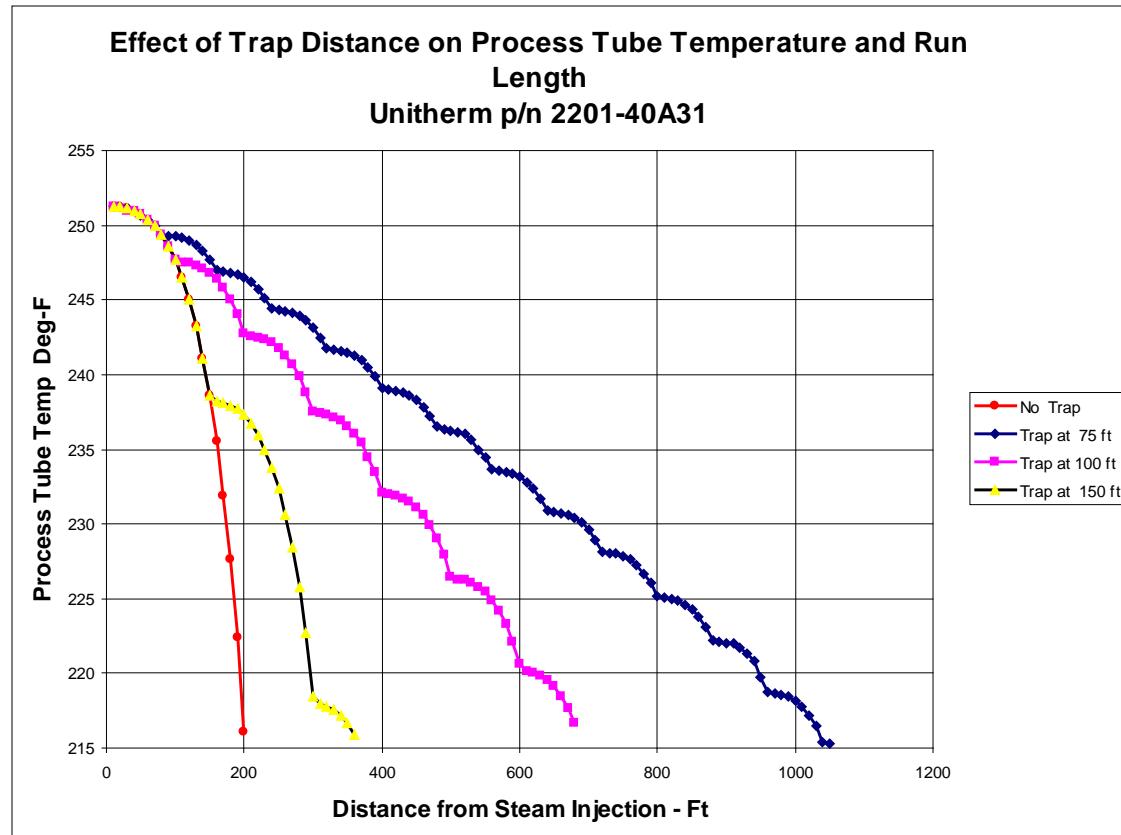
# Steam Trace Tips



- Steam trace is not good for close temperature control
- Length of run determined by steam pressure and type of bundle.
- No vertical runs greater than 3 Meters.
- Need slope for drainage 18mm for singles, 54mm for multi tube bundles.

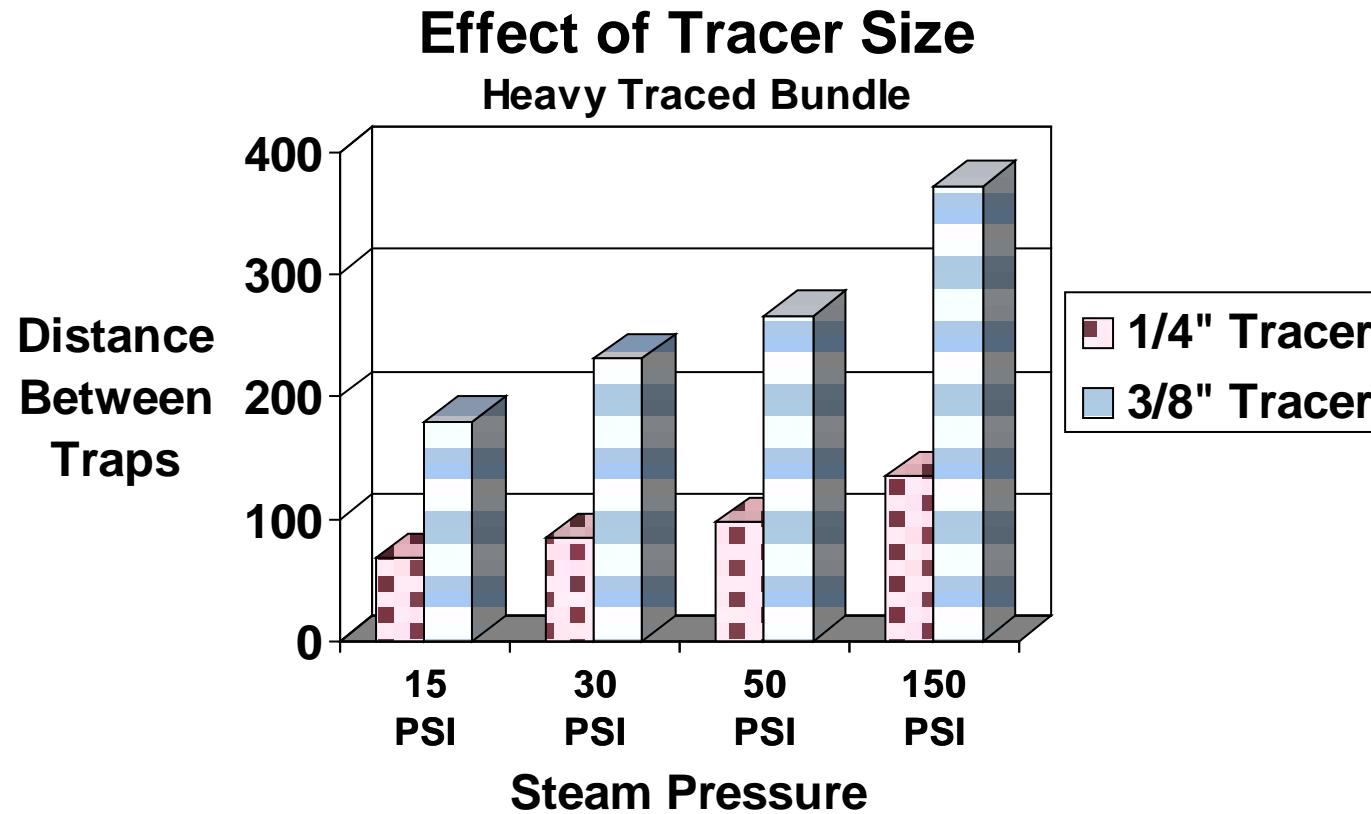
# Steam Tracing Tips

## Effect of Trap Distance



# Steam Tracing Tips

## Effect of Tracer Size





# Electric Traced Products

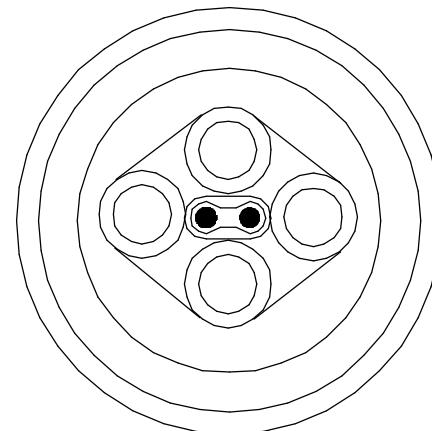


- Constant Power Density or Self Regulating Heating Elements
- Cut-to-Length Designs
- Hazardous Area Approvals
- Freeze Protection or Temperature Maintenance
- Many Voltages Available



# Self-Regulating Electric Traced

- Freeze Protection or
- Low to Moderate Temperature Maintenance
- Dekoron Heaters
- 85C or 185C MTR
- FM Class 1 Div 2
- No Control Required

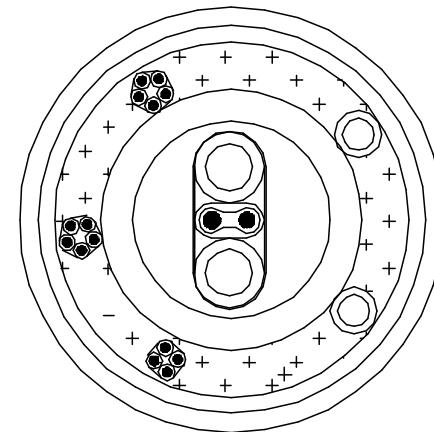




# CPD Electric Traced



- Freeze Protection to 185C Temperature Maintenance
- Cut-to-Length Design
- 200C MTR
- 120-277 VAC
- FM Class 1 Div 2
- Controller Required





# CID1 Electric Traced Bundles



- Two Styles - 2255/2265 with Conduit  
2257/2267 with Hi Temp SR
- Hazardous Vapor Approval Only
- FM (USA) and CSA (Canada) Approvals
- Special Design Specifications Required
- Maintenance Temperature is Limited



# Heated Hose Products



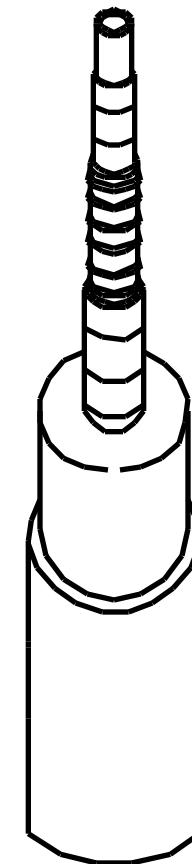
- Flexible Bundles for Ease of Handling and for Portable Applications
- Electrically and Hydraulically Complete
- Series Resistance Heating Wire
- Control Required
- Some Hazardous Location Designs
- Bundle Cannot Be Cut in Field
- Lengths under 30 Meters Cost Effective



# 110 Series Heated Hose



- Single Metal Tube
- 330C Operation
- 110 to 480 VAC
- Used for Engine Emission, High Temp Process Lines and High Pressure Applications

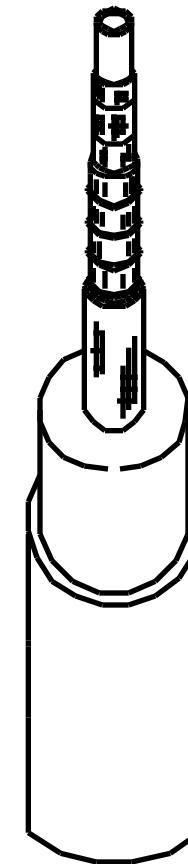




# 210 Series Heated Hose



- PFA,FEP, or TFE Tube
- Low Pressure Applications
- 230C Operation
- Used for Analyzer Lines
- Indoor and Outdoor Models

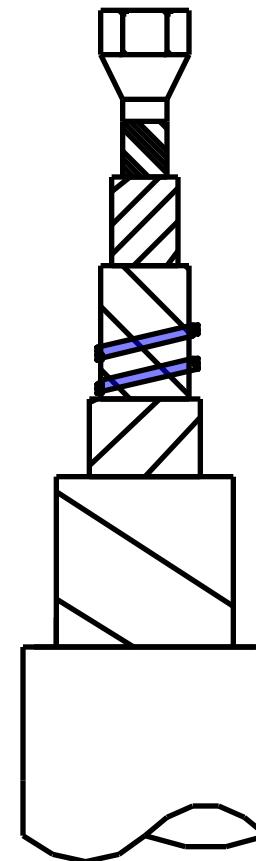




# 220 Series Heated Hose



- Braided TFE Hose
- Pressure Rating to 200 Bar at 200C
- 200C Operation
- Used for Adhesive Application, Chemical Transfer, Oils & Waxes
- Indoor and Outdoor

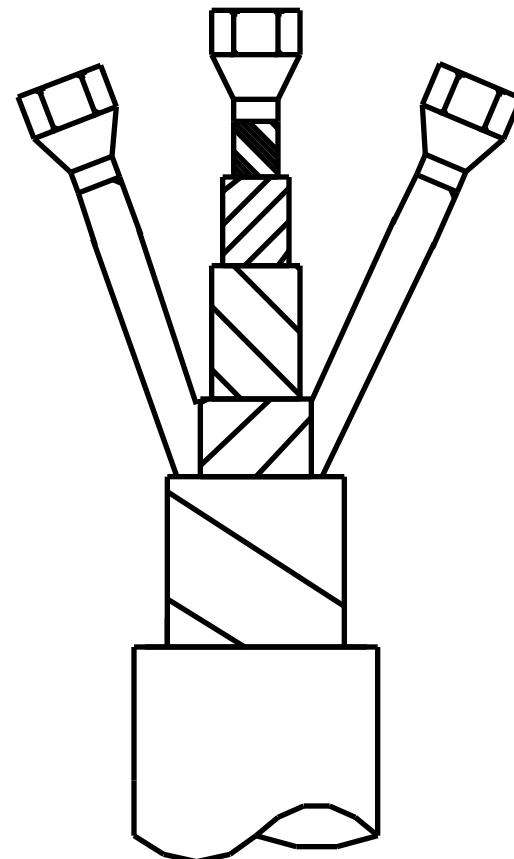




# 220S Steam/Fluid Heated Hose



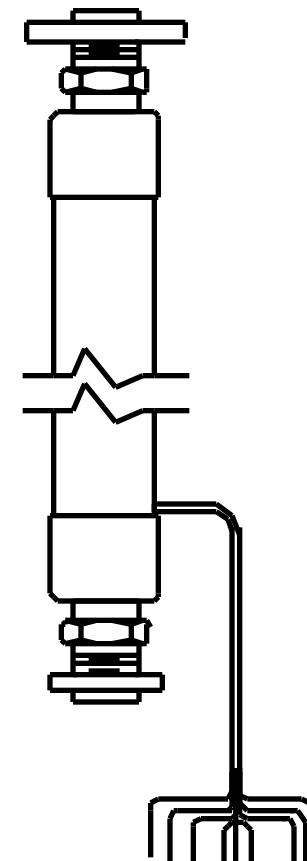
- Smooth Bore Braided TFE Hose to -16
- Pressure Rating to 3000 psig at 200°C
- Steam, Hot Oil or Hot Water Heating
- Transport Viscous Fluids





# 400 Series Heated Hose

- Convoluted Teflon or Stainless Steel Hose
- Hose Size up to 4"ID
- 200C Operation for Teflon Hose
- 330C Operation for Stainless Steel Hose
- For High Volume Transfer Lines

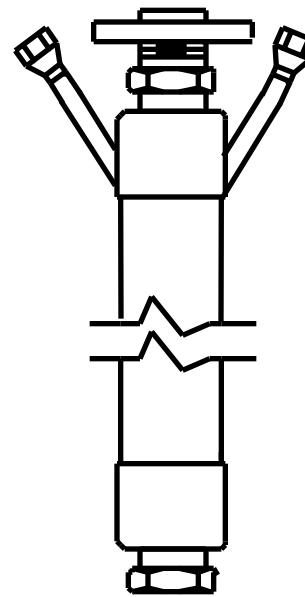




# 400S Steam/Fluid Heated Hose



- Convoluted Teflon or Stainless Steel Hose
- Hose Size up to -64
- 200°C Operation
- For High Volume Transfer Lines





# Tubing Materials



## Standard Materials

- Teflon PFA
- Teflon FEP
- Welded or Seamless Type 316 SS
- Welded or Seamless Type 304 SS
- #122DHP Copper

## Optional Materials

- Teflon TFE
- Monel 400
- Nickel 200
- Hastelloy C-22,C-276
- Inconell
- Most Polymer Tubes
- Most Reactive Metals



# Jacket Materials



- **105C Rated, Black PVC**
- **Low Temperature, 105C Rated Black PVC**
- **65C Rated, Black FR-Polyethylene**
- **105C Rated, Black FR-TPE**
- **Flexible, Black FR-Polyurethane**
- **Optional Colored Jackets Available**