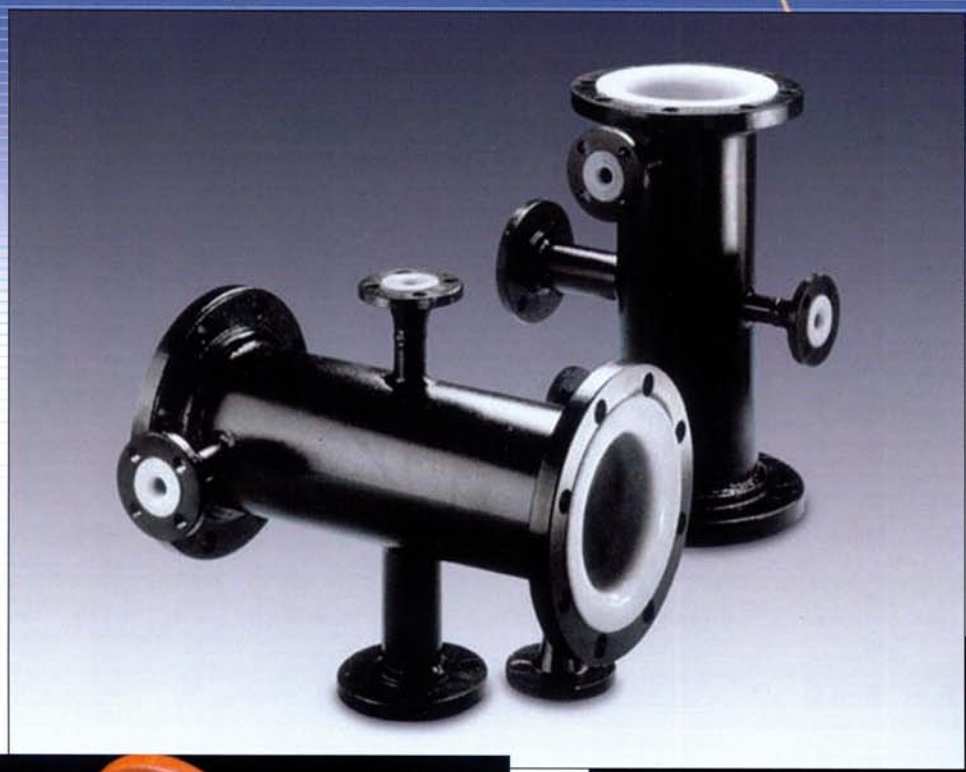
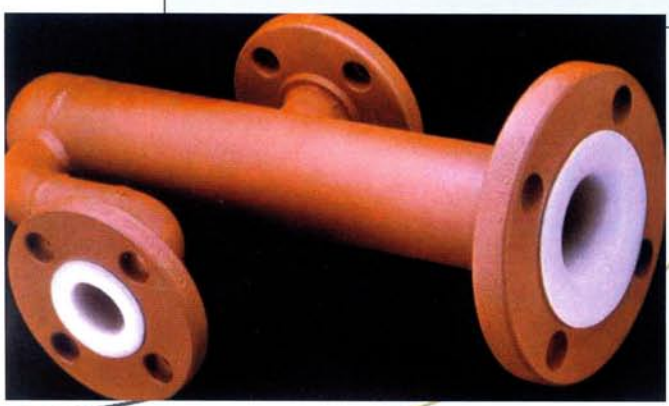
LARGE DIAMETER LINED PIPING SYSTEMS

SPECIALTY LINED FITTINGS

PTFE • PFA • ETFE • PVDF





ETHYLENE

UNSURPASSED HIGH TEMPERATURE CORROSION RESISTANCE.

Ethylene has the capability of lining virtually any fitting, column section or large diameter pipe section with a broad range of heavy-walled fluoropolymers. Our rugged and seamless liners are designed to meet the rigorous ASTM F423 steam-cold water cycling standard.

Our engineers were given the unrestrained challenge of creating the highest integrity fluoropolymer lined non-standard fittings, column sections and large diameter piping systems. Their only requirement was that our lined equipment outperform the competition in every way. More consistent quality, longer service in the most corrosive environments, better looking; simply the highest quality, most flexible lining process worldwide.

We've made significant investments in new processes, new equipment and state-of-the-art quality control equipment. This means you have Ethylene's continuing commitment to meet your toughest and most corrosive requirements.

ETHYLENE's LINING PROCESSES OFFERS THESE BENEFITS

Heavy-walled (.250"min.) fluoropolymers liners
Ethylene liners provide unsurpassed permeability resistance and mechanical strength for longer service life.

High-temperature corrosion resistance
PTFE and PFA, ETFE & PVDF provide near universal corrosion resistance at temperatures to 500°F. (See chart).

Eliminate spray coatings
Ethylene's lined piping systems avoid the "pin-hole" leak problem associated with spray coatings.

High vacuum/temperature service
Ethylene's rotational molding process fuses the heavy-walled liner to the interior of the steel housing for unequalled high temperature vacuum ratings.

Fabricated to your exact dimensions
We can fabricate weldments in-house or line your supplied housing. This assures you of housing integrity in critical service

Rigorous quality control
Each completed component is subjected to a 10,000 volt electrostatic spark test to check liner integrity.

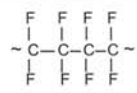
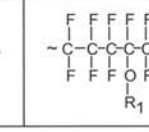
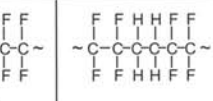
Stress-free Liner
The rotational molding process yields a stress-free/heavy-walled liner with integrally molded flare faces and nozzle branches. This can be especially critical in chlorinated organic service at elevated temperatures where conventional PTFE lined equipment shows a marked failure mode at inherent stress points: typically flare faces and nozzle branches.

LARGE DIAMETER PTFE LINED PIPE

Pipe sections are lined with a heavy-walled isostatically molded PTFE liner with the following minimum PTFE wall thickness.

Nominal Pipe Size (in.)	Liner Thickness (in.)	Maximum Length (in.)
14	.250	120
16	.250	120
18	.275	120
20	.350	120
24	.350	120
30	.365	108
36	.375	108
42	.975	60

Typical Properties of DuPont Fluoroplastics

	PTFE	PFA	ETFE
Melting Point, °F	621	580	520
Upper Service Temp., °F	500	500	300-350
Tensile Strength, at RT psi	2,500-4,000	4,500	6,500
Ultimate Elongation, % at RT	225-450	300	100-300
% at 482°F	350	500	
Flexural Modulus, 10^3 psi at RT	40-90	100	200
10^3 psi at 482°F	4	10	
Coefficient of Friction	.02-.26	.23-.29	.40
Chemical Resistance	Outstanding	Outstanding	Excellent
Cryogenic Service	Outstanding	Outstanding	Outstanding
			

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