



DYNAMIC VACUUM INSULATED LIQUID NITROGEN PIPE

ES SEMIFLEX - Dynamic

ES SEMIFLEX is vacuum-jacketed, flexible liquid nitrogen piping manufactured by Vacuum Barrier. Available as a dynamic vacuum with a protective layer, it provides an efficient and easy-to-install solution for mainline piping. With its superior thermal performance and large available diameters, frost and moisture problems common in uninsulated or foam-insulated lines are eliminated, even for applications requiring large flow. Combine with stainless SEMIFLEX or CobraFlex hoses for a full system solution.

Quality and Craftsmanship

- Our cryogenic craftsmen have years of high-end welding experience and a demonstrated track record of quality.
- Manufacturing quality is validated during cold-shock tests and helium leak detection.

Engineering Data: Stainless ES SEMIFLEX – Dynamic

Size	ES-5	ES-10	ES-15	ES-25	SR-20
Material: Austenitic Stainless Steel with Protective Layer					
Inside Diameter					
Inches	0.76	1.40	1.60	2.54	2.25
Millimeters	19	36	41	64	57
Outside Diameter					
Inches	1.94	2.51	3.90	5.25	4.5
Millimeters	49	64	99	123	114
Steady State Heat Loss					
BTU per hour per foot	0.9	1.8	2.2	2.4	0.9
Watts per meter	0.9	1.7	2.1	2.3	0.9
Cool Down Heat Loss					
BTU per foot	4	9	16	24	53
Watt hours per meter	4	9	15	23	51
Bayonet Heat Loss					
BTU per hour	5	6	17	17	17
Watts	1.5	1.8	5	5	5
Design Pressure					
PSI	175	175	105	175	175
Bar	12	12	7.2	12	12
Weight					
Lbs per foot	0.8	1.3	3.9	4.8	5.6
Kg per meter	1.2	1.9	5.8	7.2	8.3
Minimum Bend Radius					
Inches	12	18	48	40	rigid
Centimeters	30	46	122	102	rigid
Flow Rate: Consult factory					

End Connections ES-5

- Bayonets

End Connections ES-10, ES-15, ES-25

- Bayonets
- Terminations

End Connections SR-20

- Bayonets
- Terminations