

SEMIFLEX® engineering data

SEMIFLEX® is a bendable system which allows for any length of vacuum insulated pipe, outdoor and indoor.

Tees, crosses, bayonets, end traps, vents and phase separators allow any system configuration and guarantee that SEMIFLEX® is easily adjustable to any modification.

Size	A-5	A-5S	A-10	A-10S	A-15	A-20
Material	OFHC Copper	304 St Stl	OFHC Copper	304 St Stl	OFHC Copper	OFHC Copper
Inside Diameter	0.62	0.62	1.25	1.00	1.73	2.21
Inches	16	16	32	25.4	44	56
Millimeters						
Outside Diameter						
Inches	1.58	1.63	2.39	2.79	2.99	3.54
Millimeters	40	41	61	71	76	90
End Connections						
Male NPT						
Inches	1/2	1/2	1	1	1-1/2	2
Steady State Heat Loss						
BTU per foot	0.9	1.4	1.8	2	2	2.4
Watt per meter	0.9	1.4	1.7	2.3	1.9	2.3
Cool Down Heat Loss						
BTU per foot	8	8	15	16.5	21	28
Watt hours per meter	8	8	14	16	20	27
Bayonet Heat Loss						
BTU per hour	5	5	11	11	10	17
Watts	1.5	1.5	3.2	3.2	2.9	5
Design Pressure						
PSI	175	175	175	150	125	85
Bars	12	12	12	10.3	8.6	5.9
Weight						
lbs. per foot	1.2	1.2	1.5	2.0	1.9	2.4
kg per meter	1.8	1.8	2.2	3.0	2.8	3.6
Minimum Bend Radius						
Inches	20	5.5	32	10	40	48
cm	51	41	81	25	102	122
Flow Rate	Consult Factory					



Vacuum Barrier Systems

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MICROtorr 11 VACUUM PUMP

The Vacuum Barrier MICROtorr 11 dynamic vacuum pump was developed to evacuate and hold the insulating vacuum for SEMIFLEX® systems at levels of 1 x 10⁻⁴ torr or better, a range in which liquid nitrogen can be piped with minimum loss and least cost. It is a clean, quiet, and vibration-free pump station consisting of a two-stage mechanical pump and an air-cooled oil diffusion pump with cooling fan.



Designed for reliable and continuous 24-hours-a-day operation, MICROtorr 11 pump stations have been proven since 1967 in use with SEMIFLEX® systems and offer a number of exclusive advantages. Vacuum gauging can be used to measure the vacuum and indicate performance continuously. Maintenance is extremely simple, requiring only routine oil level checks. The pump station includes an integral valve which closes in the event of power interruption and keeps your SEMIFLEX® system operable.

PART NUMBER	32110	32220
Ultimate Vacuum	10-6 torr range	10-6 torr range
Diffusion Pump Speed	11 liters/sec	11 liters/sec
Mechanical Pump Speed	3.1 CFM	5.4 M3/hr
Electrical	115 VAC. 60 Hz 6amps	220 VAC. 50 Hz 3amps
Dimensions:		
Length	19.5 in	495mm
Width	8.4in	215mm
Height	18.0 in	460mm
Weight	59 lbs	26.8 kg