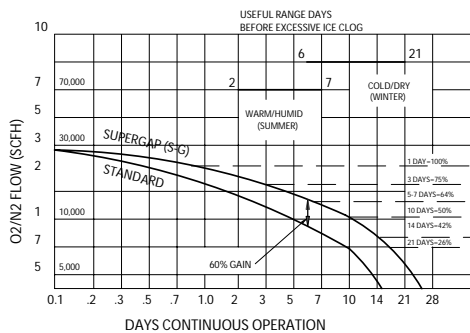


# Ambient Air Vaporizers

## Thermafin Supergap™ Ambient Vaporizers



TF1210 HF-SG Supergap™



TF3612HF Comparative Performance



### Supergap™ Performance

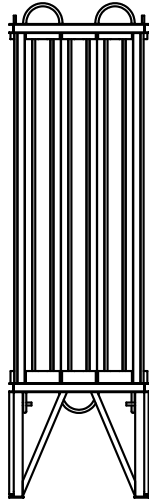
Thermafin Supergap™ Ambient Cryogenic Vaporizers have become the industry standard design. Supergap™ Modules use a big 5” gap between finned elements to resist frost clog longer, extending economic use to the two-week continuous range as stand-alone modules. When the duty cycle extends beyond the two-week range, switching systems and Hybrid Arrays are employed. Modules are available to over 150,000 SCFH in all-aluminum, stainless-steel lined (high pressure) and electropolished stainless steel designs. In addition to the 5” fin gap, Thermafin Supergap™ Modules are fully engineered and tested to withstand the demanding thermal cycling and ice loads generated on Ambient Vaporizers in long-term use.

### Supergap™ Specifications

Thermafin Supergap™ Modules meet the most demanding set of specifications established by the Cryogenic Industrial Gas Industry:

- Severe thermal cycling per ANSI B31.3 -- This type of service is common at most bulk-use customer stations where gas flows vary widely.
- Wind load design to 100 MPH per 1997 UBC -- High wind loads are very common in all USA locations and must be incorporated into the modules’ design.
- Seismic/earthquake design per 1997 UBC -- This requirement is now mandatory in some states and an integral part of most specifications.
- Ice load allowance based on Thermafin’s own “22,000 STD” including eccentric force loadings due to uneven frost buildup.
- Crateless design standard on larger modules -- Not only does this design reduce setup time at the site, but assures the customer of reduced shipping damage and simpler relocation at lower cost.
- Stress-free base designs featuring Thermafin Thermafin Cores on larger modules assures you that standard weld surface cracks due to thermal expansion/ contraction are eliminated in normal use.
- Thermafin high-flow, high-thermal flux internal fin design with more internal fin surface area and generous cross section allows closer approach temperatures in the super-heat zone at very low pressure drops.
- Full penetration weld design in critical pressure joints, for long service at zero leakage

# Ambient Air Vaporizers



Thermafin  
Supergap™

Thermafin Supergap™ Thermafin Ambient Modules are available in all-aluminum, stainless steel or non-ferrous lines units to 15,000 psig (1,024 Bar).

- HF Series: Standard 450 psig (31 Bar) MAWP/500 psig (34 Bar) Test  
 Custom HF: To 600 psig (41 Bar) MAWP/750 psig (52 Bar) Test  
 SS Lined Series: 300 Series SS Lined . . . . . to 15,000 psig (1,024 Bar)  
 SS-LP . . . . . Bulk Service SS to 700 psig (48 Bar)  
 SS 3.5 . . . . . 3500 psig (241 Bar)  
 SS 4.5 . . . . . 4500 psig (310 Bar)  
 SS 6.0 . . . . . 6000 psig (414 Bar)  
 SS-EP . . . . . Electropolished -- Any pressure  
 Monel Lined Series: M30 . . . . . 3000 psig (207 Bar)

## Standard Supergap™ Modules / Rating Table and Dimensions

450 psig (31 Bar) Design		Rating O <sub>2</sub> / N <sub>2</sub> / Ar											Total Draw		Standard Connection		Shipping <sup>(3)</sup>						Design				
Part Number		SCFH / Nm <sup>3</sup> h											(Thousands)		Mueller Flange & Nipples <sup>(1)</sup>		inches / mm			Weight			Pressure				
Chart	Thermax	8-24 hrs <sup>(2)</sup>		3 days	5-7 days	10 days	2 weeks	18-21 days	MSCF	Nm <sup>3</sup>	inches	mm	Length	Width	Height	lbs	kg	psig	Bar								
11544791	TF0410HF-SG	2150	61	1600	45	1350	38	1100	31	900	25	675	19	200	6	1	25	21	533	21	533	134	3404	250	113	450	31
11544804	TF0610HF-SG	3185	90	2400	68	2000	57	1600	45	1350	38	1000	28	288	8	1	25	21	533	33	838	147	3734	250	113	450	31
11544812	TF0810HF-SG	4250	120	3200	91	2670	76	2140	61	1765	50	1350	38	384	11	1	25	21	533	46	1143	147	3734	300	136	450	31
11544821	TF1210HF-SG	6500	184	4900	139	4000	113	3200	91	2650	75	2000	57	575	16	1	25	34	864	45	1143	147	3734	400	181	450	31
11544839	TF1610HF-SG	8500	241	6400	181	5500	156	4400	125	3650	103	2800	79	790	22	1	25	46	1168	46	1168	147	3734	475	215	450	31
11544847	TF1615HF-SG	12750	361	9550	270	8250	234	6600	187	5440	154	4180	118	1150	33	1	25	46	1168	46	1168	205	5207	700	318	450	31
11544855	TF3010HF-SG	15500	439	11600	328	10000	283	8000	227	6690	189	5000	142	1450	41	1 1/2	38	59	1499	71	1803	153	3886	900	408	450	31
11544863	TF3612HF-SG	23000	651	17250	488	14500	411	11600	328	9570	271	7250	205	2000	57	1 1/2	38	71	1803	71	1803	188	4775	1600	726	450	31
11544871	TF3618HF-SG	33500	949	25100	711	21500	609	17200	487	14200	402	10800	306	3100	88	1 1/2	38	72	1829	72	1829	262	6655	2100	953	450	31
11544880	TF6420HF-SG	65600	1858	49200	1393	42800	1212	34220	969	28220	799	21400	606	6120	173	2	51	97	2464	97	2464	283	7188	3500	1588	450	31
600 psig (41 Bar) Design		Rating O <sub>2</sub> / N <sub>2</sub> / Ar											Total Draw		Standard Connection		Shipping <sup>(3)</sup>						Design				
Part Number		SCFH / Nm <sup>3</sup> h											(Thousands)		MPT		inches / mm			Weight			Pressure				
Chart	Thermax	8-24 hrs <sup>(2)</sup>		3 days	5-7 days	10 days	2 weeks	18-21 days	MSCF	Nm <sup>3</sup>	inches	mm	Length	Width	Height	lbs	kg	psig	Bar								
11544759	TF014AHF-SG	250	7	190	5	160	5	130	4	100	3	80	2	23	1	3/4	19	8	203	12	305	62	1,575	19	9	600	41
11544767	TF024AHF-SG	500	14	380	11	320	9	260	7	200	6	160	5	46	1	3/4	19	8	203	21	533	62	1,575	37	17	600	41
11544775	TF028AHF-SG	850	24	760	22	640	18	520	15	400	11	320	9	92	3	3/4	19	8	203	21	533	110	2,794	58	26	600	41
11544783	TF048AHF-SG	1700	48	1520	43	1280	36	1040	29	800	23	640	18	184	5	3/4	19	23	584	23	584	110	2,794	125	57	600	41
11551756	TF0410HF-SG	2150	61	1600	45	1350	38	1100	31	900	25	675	19	200	6	3/4	19	21	533	21	533	134	3,404	250	113	600	41
11551764	TF1210HF-SG	6500	184	4900	139	4000	113	3200	91	2650	75	2000	57	575	16	3/4	19	34	864	45	1,143	147	3,734	400	181	600	41

<sup>(1)</sup> 1" Mueller Flange = 1 1/8" I.D.; 1 1/2" Mueller Flange = 1 7/8" I.D.;  
 2" Mueller Flange = 2 1/8" I.D.

<sup>(2)</sup> 8-24 hour rating is based on the Industrial Gas Industry Standard Rating of approximately 11 SCFH / ft<sup>2</sup> (0.3 Nm<sup>3</sup>/m<sup>2</sup>) of external finned surface and a 10<sup>0</sup>/20<sup>0</sup> F (-12<sup>0</sup> / -7<sup>0</sup> C) approach temperature of 70<sup>0</sup>F (21<sup>0</sup>C) / 70% RH in HF series Aluminum Modules.

<sup>(3)</sup> Shipping weight & dimensions are approximate.

All tables shown are intended as guides reflecting our experience on these models. Actual performance may vary. This product and/or data was designed and/or developed by Thermax Inc. and shall not be used in any way injurious to the interests of Thermax Inc. Thermafin Supergap™ is a Thermax Inc. trademark.



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 VAPORIZERS, HEAT EXCHANGERS,  
 THERMAL SYSTEMS, CRYOGENIC EQUIPMENT

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