

# HYBRID SUPERGAP™

AMBIENT VAPORIZER



Product Datasheet **3.5.1**



## Standard features

- 12 inch fin tube center to center spacing
- 4 inch gap between fins
- Standard models rated up to 300 MSCFH
- Aluminum corrosion resistant construction
- High strength welded base frame
- Withstands 100 mph winds and Zone 4 seismic forces
- 600 psig standard design pressure on all aluminum units
- Severe thermal cycling design
- Enhanced internal Multi fin heat transfer area, highest in industry
- No-crate shipping design for larger models
- Perimeter frame and legs for unrestricted airflow
- ASME B31.3, CRN (all provinces), and PED module D compliant

## Thermax Hybrid Supergap™ Ambient Vaporizers

are an advanced high performance design. Hybrid Supergap™ Vaporizers use natural convection of air to vaporize liquefied gases. Finned aluminum tubes absorb heat from the air and transfer that heat to the product gas. The huge 4 inch gap between fin tips provides room for ice growth.

A combination of Thermax Hi Flux Thermafin and Megafin fin tube profiles are used to maximize performance and minimize approach temperatures for medium duration run times between defrosts. Extended operation requires a system of switching vaporizers designed by Thermax. In addition to our standard aluminum construction, units are available with stainless steel and other alloy liners for high pressure and corrosive applications.

## Options

- Stainless Steel, Monel and other alloy liners
- Design pressures exceeding 15,000 psig
- High wind, Force 12 design for 150 MPH wind loads per ASCE 7-05
- Low inlet pressure and low pressure drop designs
- Flanged, tongue and groove, butt weld end connections
- Tank, wall, or truck mounting
- Continuous operation with switching system
- Electropolished 316LSS internals for ultra-pure applications



Innovation. Experience. Performance.®

# HYBRID SUPERGAP™

## AMBIENT VAPORIZER

### Typical Specification:

- Thermax Ambient Vaporizer, Model SG \_\_\_\_\_ HF
- MOC: Aluminum extrusions and frame
- Construction: Welded base frame, internal and external finned extrusions, designed per ANSI B31.3 and meets UBC, Chapter 23, 100 mph winds and Seismic Zone 4
- End connections: \_\_\_\_\_ inch NPT (standard, flanges and others available)
- Extrusion spacing: 4 inches
- Design Flow Rate (8 hrs): \_\_\_\_\_ SCFH
- Design Pressure Drop: 20 psi at 150-psig inlet (standard)
- Design Pressure: 600 psig
- Design Outlet Temperature: 20°F approach to ambient (standard)



For lined units, substitute HF in model number with:  
 SS-4.0 (stainless, design pressure = 4,000 psig/ 275 barg)  
 SS-6.0 (stainless, design pressure = 6,000 psig/ 414 barg)  
 SS-EP (stainless, electropolish finish)  
 M-3.0 (monel, design pressure = 3,000 psig/ 206 barg)

| Standard Connection Type         | Design Pressure |         |
|----------------------------------|-----------------|---------|
| MNPT (Male pipe threads)         | 600 PSIG        | 41 BARG |
| *ANSI Class 150 >=3" F.F. Flange | 180 PSIG        | 12 BARG |
| ANSI Class 150 <3" F.F. Flange   | 275 PSIG        | 19 BARG |
| ANSI Class 300 F.F. Flange       | 450 PSIG        | 31 BARG |
| Mueller Flange (solder O.D.)     | 450 PSIG        | 31 BARG |

Standard Supergap™ Model/ Rating Table and Dimensions

| Model Number | Flow Rate*<br>8 Hours, Nitrogen |                     |          |                     | Standard Inlet/Outlet Connection Size |     | Approximate Overall Dimensions<br>W x D x H |              | Approximate Dry Weight |       |
|--------------|---------------------------------|---------------------|----------|---------------------|---------------------------------------|-----|---|--------------|------------------------|-------|
|              | Aluminum                        |                     | SS Lined |                     | inches                                | cm  | inches                                      | cm           | Lbs                    | Kg    |
|              | SCFH                            | Nm <sup>3</sup> /Hr | SCFH     | Nm <sup>3</sup> /Hr |                                       |     |   |              |                        |       |
| HBSG28HF     | 2,832                           | 75                  | 2,124    | 56                  | 3/4                                   | 19  | 22X22X152                                   | 56x56x386    | 248                    | 112   |
| HBSG35HF     | 3,540                           | 93                  | 2,655    | 70                  | 3/4                                   | 19  | 32X22X152                                   | 81x56x386    | 344                    | 157   |
| HBSG50HF     | 5,310                           | 140                 | 3,983    | 105                 | 3/4                                   | 19  | 44X22X152                                   | 112x56x386   | 440                    | 200   |
| HBSG70HF     | 7,080                           | 186                 | 5,310    | 140                 | 3/4                                   | 19  | 48X36X152                                   | 122x91x386   | 648                    | 293   |
| HBSG100HF    | 10,620                          | 279                 | 7,965    | 209                 | 3/4                                   | 19  | 48X48X152                                   | 122x122x386  | 824                    | 374   |
| HBSG140HF    | 14,160                          | 373                 | 10,620   | 280                 | 3/4                                   | 19  | 48X48x153                                   | 122x91x541   | 928                    | 421   |
| HBSG150HF    | 15,930                          | 419                 | 11,948   | 314                 | 3/4                                   | 19  | 48X36x213                                   | 122x122x541  | 1,216                  | 552   |
| HBSG200HF    | 21,240                          | 559                 | 15,930   | 419                 | 3/4                                   | 19  | 48X60X213                                   | 122x152x541  | 1,496                  | 678   |
| HBSG260HF    | 26,550                          | 699                 | 19,913   | 524                 | 1-1/2                                 | 38  | 72X48X224                                   | 182x122x569  | 1,856                  | 842   |
| HBSG310HF    | 31,860                          | 839                 | 23,895   | 629                 | 1-1/2                                 | 38  | 60X72X224                                   | 152x182x569  | 2,280                  | 1,034 |
| HBSG400HF    | 39,825                          | 1,048               | 29,869   | 786                 | 1-1/2                                 | 38  | 73X73X224                                   | 185x185x224  | 2,704                  | 1,227 |
| HBSG470HF    | 47,790                          | 1,258               | 35,843   | 944                 | 1-1/2                                 | 38  | 75X62X284                                   | 191x157x721  | 3,024                  | 1,371 |
| HBSG530HF    | 53,100                          | 1,397               | 39,825   | 1,048               | 1-1/2                                 | 38  | 75X72X284                                   | 191x182x721  | 3,592                  | 1,629 |
| HBSG630HF    | 63,720                          | 1,677               | 47,790   | 1,258               | 1-1/2                                 | 38  | 75X93X284                                   | 191x236x721  | 4,144                  | 1,880 |
| HBSG740HF    | 74,340                          | 1,956               | 55,755   | 1,467               | 2                                     | 51  | 75X98X284                                   | 191x249x721  | 4,720                  | 2,141 |
| HBSG840HF    | 84,960                          | 2,236               | 63,720   | 1,677               | 2                                     | 51  | 98X86X284                                   | 249x218x721  | 5,456                  | 2,475 |
| HBSG990HF    | 99,120                          | 2,608               | 74,340   | 1,956               | 2                                     | 51  | 98X98X284                                   | 249x249x721  | 6,200                  | 2,813 |
| HBSG1000HF   | 113,280                         | 2,981               | 84,960   | 2,236               | 2                                     | 51  | 98X110X284                                  | 249x279x721  | 6,944                  | 3,147 |
| *HBSG1200HF  | 127,440                         | 3,354               | 95,580   | 2,516               | 3                                     | 76  | 101X101X414                                 | 256x256x1051 | 9,848                  | 4,467 |
| *HBSG1600HF  | 169,120                         | 4,472               | 126,840  | 3,354               | 3                                     | 76  | 101X114X414                                 | 256x290x1052 | 10,992                 | 4,986 |
| *HBSG1900HF  | 191,160                         | 5,031               | 143,370  | 3,773               | 4                                     | 102 | 101X101X534                                 | 256x256x1356 | 12,952                 | 5,875 |
| *HBSG2200HF  | 226,560                         | 5,962               | 169,920  | 4,472               | 4                                     | 102 | 101X114X534                                 | 256x290x1356 | 14,512                 | 6,582 |
| *HBSG2400HF  | 254,880                         | 6,707               | 191,160  | 5,030               | 4                                     | 102 | 101X114X534                                 | 256x290x1478 | 9,785                  | 4,438 |
| *HBSGE3000HF | 315,000                         | 8,300               | 236,250  | 6,225               | 4                                     | 102 | 98X115X534                                  | 249x292x1478 | 11,300                 | 5,126 |

For nominal flow rate O<sub>2</sub> - multiply by 0.92, Ar - multiply by 1.14

Shaded models are designated QUICK SHIP MODELS, 1 to 4 weeks lead time.

\* Nominal flow rate is based on 8 hours continuous service between defrosts, an ambient temperature of 50°F, relative humidity of 50%, and a 20°F Approach temperature. Please consult your Thermax Inc. sales person for ratings for other conditions.

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