

# LIQUID TUBE TRAILER®

## HP<sup>2</sup>-2500



Now up to  
1000 psig!

Patent No. 6,799,429

### Be prepared with the Liquid Tube Trailer® HP<sup>2</sup>-2500

The Liquid Tube Trailer HP<sup>2</sup>-2500 is an innovative mobile gas supply system. It's a versatile solution for a wide range of temporary applications typically supported by gaseous high pressure tube trailers in nitrogen or argon service. With its patented on-board high pressure, high performance pressure builder and vaporizer design, the Liquid Tube Trailer precisely manages the heat for optimum gas flow while keeping the liquid cold for maximum hold time during intermittent use and reduced filling losses. Applications can now be serviced with one dedicated asset ready to be refilled on site with an Orca or cryogenic transport without taking the application off line.\* This unique mobile gas supply system can be configured to a wide range of pressures and flows to supply many applications with gas or liquid and can easily be switched from service to service as needed. The Liquid Tube Trailer is also ideal for customer start ups, bulk supply trials, as a backup for servicing permanent cryogenic equipment, or as an Orca backup. Be prepared with the Liquid Tube Trailer when these profitable applications call:

#### APPLICATIONS

##### *Nitrogen*

- ✓ Tank & pipeline purging
- ✓ Pipeline pressure testing
- ✓ Pipeline cleaning (pig service)
- ✓ Blanketing & Inerting
- ✓ Laser assist gas
- ✓ Food packaging (MAP)
- ✓ Food freezing (LN<sub>2</sub>)
- ✓ Pipeline & soil freezing (LN<sub>2</sub>)
- ✓ Concrete cooling (LN<sub>2</sub>)

##### *Argon*

- ✓ Construction welding
- ✓ Thermal arc spraying
- ✓ General purging/blanketing

#### PRODUCT HIGHLIGHTS VS. GAS TUBE TRAILER

- Only one unit per application required
- Lower gas distribution costs
- Higher customer gas utilization
- Zero to low gas losses (pressure dependent)
- Refill without taking application off line\*
- 45% greater storage capacity than super jumbos
- No hidden costs from DOT requalification testing
- Less wear and asset tie-up on HP pump
- 16 ft. shorter trailer length (28 ft vs. 44 ft)
- Transportable under full product load
- Easy service change
- No external power required
- Works in liquid nitrogen freezing applications
- Orca emergency delivery backup
- DataOnline® Wireless Telemetry & GPS available

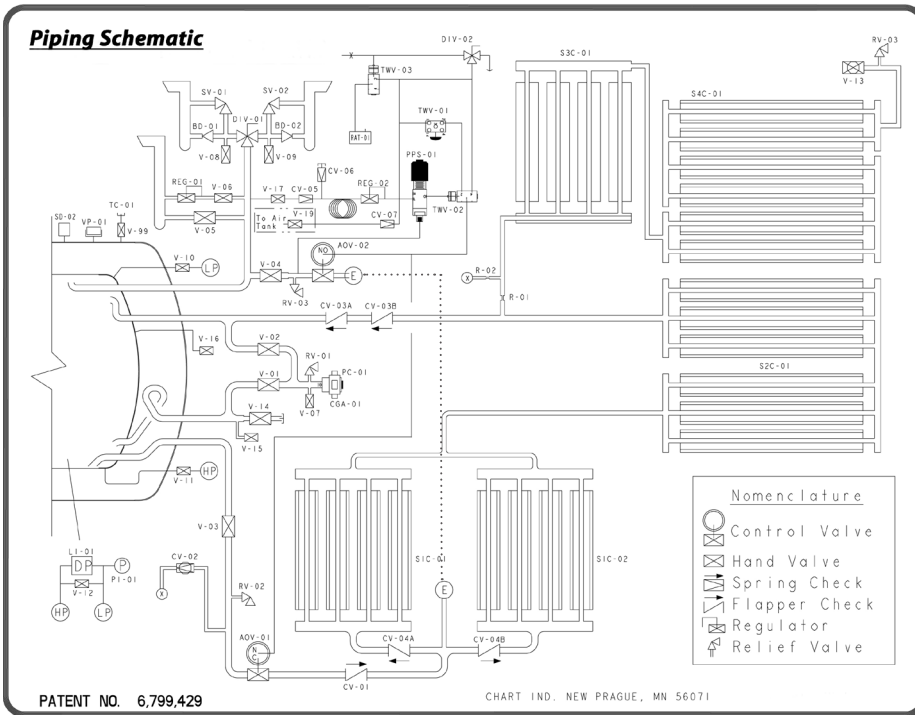
\* Low pressure applications only



Innovation. Experience. Performance.®

# LIQUID TUBE TRAILER®

## HP<sup>2</sup>-2500



### STANDARD FEATURES

- Pneumatic rattler valve for vertical rear coils keeps frost build-up down
- Analog DP Liquid Level gauge
- Inert Service
- Felling brand quality trailer



Ergonomic Plumbing Layout

### OPTIONS

- DataOnline® wireless telemetry
- Flowcom 3000 for liquid metering
- Rear Step (12" x 96")
- Fill Connection (1½" or 2½" CGA)
- Orca emergency delivery backup hose and storage box
- Final line gas manifold
  - Pressure indicator
  - Temperature indicator
  - Flow indicator
  - Optimized high flow, high pressure regulator
- Multi-Valve flow control
- Hose Reel & 50' Gas Hose
- Booster pump for 1000 psig outlet. (4250 max. SCFH) Gas driven @ 78% efficiency

### Specifications

| MODEL  | HP <sup>2</sup> -2500-600-15        |
|--|-------------------------------------|
| Gas Services   | LIN, LAR                            |
| Design Code  | ASME Section VIII Div. 1, CGA-341   |
| Pressure Builder/Vaporizer Type  | Patented HP <sup>2</sup> technology |
| <b>SPECIFICATIONS</b>  |                                     |
| Gross Capacity (gal/ltrs)  | 2,472/9,344                         |
| LIN, LAR Capacity per CGA-341 (gal/ltrs) <sup>a</sup>                                    | 2,348/8,875                         |
| Nitrogen Capacity per CGA-341 (SCF/Nm <sup>3</sup> )                                     | 218,620/6,187                       |
| Argon Capacity per CGA-341 (SCF/Nm <sup>3</sup> )  | 264,150/7,475                       |
| Tank MAWP (psig/barg)  | 600/41.4                            |
| Tank Overall Length (in/cm)  | 336/853                             |
| Tank Overall Height (in/cm)  | 78/198                              |
| Tank Diameter/Width (in/cm)  | 72/1,830                            |
| Tank Tare Weight (lbs/kg)  | 20,210/9,186                        |
| Trailer Tare Weight (lbs/kg)   | 7,900/3,591                         |
| Tank & Trailer Full Weight w/ LN <sub>2</sub> (lbs/kg)                                   | 43,950/19,977                       |
| Tank & Trailer Full Weight w/ Ar (lbs/kg)  | 55,424/25,193                       |
| <b>PERFORMANCE<sup>b</sup></b>   |                                     |
| MAOP (psig/barg) <sup>c</sup>  | 535/37                              |
| MADP (psig/barg) <sup>d</sup>  | 1,000/69                            |
| Pressure Build Rate (min) <sup>e</sup>   | 15                                  |
| Flow Capacity @ MAOP (SCFH/m <sup>3</sup> /hr) <sup>f</sup>                              | 15,000/395                          |
| External Vaporizer LN <sub>2</sub> Flow (gpm/lpm)-(SCFH/m <sup>3</sup> /hr) <sup>g</sup> | 10/38 - 55,000/1,580                |
| Delivery LN <sub>2</sub> Flow (gpm/lpm) <sup>h</sup>                                     | 40/151                              |
| Normal Evaporation Rate - NER (%/day in LIN)   | 0.88                                |

a For transport with liquid, maximum fill levels depend on tank and trailer specifications and local road laws.

b At 70°F and 50% relative humidity ambient conditions

c MAOP = Maximum Allowable Operating Pressure (Pressure Builder Set)

d MADP = Maximum Allowable Delivery Pressure

e From 20 psig to MAOP full capacity with LN<sub>2</sub>

f Flow capacity rating from 100% to 10% contents level with a maximum tank operating pressure fall off of 15 psi (1 bar) @ 100% duty cycle

g Maximum rate to maintain MAOP (ground vaporizer feed)

h Based on a pressure differential between tanks of 50 psig (3.4 barg) with Orca hose

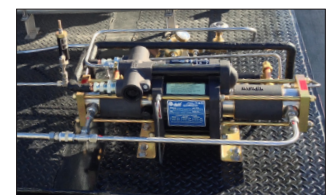
Specifications subject to change without notice.



Multi-Valve Gas Control Manifold



Hose Reel & 50' Gas Hose



Booster Pump

Chart Inc.

U.S.: 1-800-400-4683

Worldwide: 1-952-758-4484



Innovation. Experience. Performance.®

© 2013 Chart Inc.

PN 14364868

www.chartindustries.com