

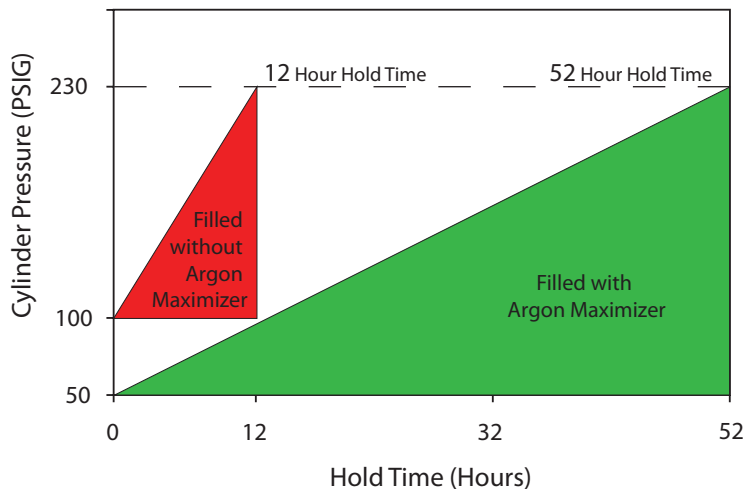
ARGON MAXIMIZER

LIQUID CYLINDER AUTOMATED FILLING SYSTEM

The Argon Maximizer is an efficient cryogenic heat exchanger designed to reduce filling losses in argon liquid cylinders. It operates with a simple heat transfer principle that consumes inexpensive liquid nitrogen to subcool the argon during the liquid cylinder filling process. The results are lower liquid cylinder filling losses, lower fill times and colder liquid for longer holding times – giving you better handling logistics at your fill plant and at your customer’s site. The Argon Maximizer can also be used with Lo-Loss to further optimize the filling process.



DOT Full Liquid Cylinder Pressure Rise Comparison to Relief Valve with Argon



Note: Argon bulk tank saturated at 130 psig, and cylinders filled with the Lo-Loss system.

PRODUCT HIGHLIGHTS

- Reduce argon liquid cylinder filling costs by as much as 75%*
- Increase customer satisfaction with longer hold times (40 hours on average)
- Reduce liquid cylinder fill time labor by 25%*
- Eliminate just-in-time liquid cylinder filling

* See case study #7, P/N 14661205.



Innovation. Experience. Performance.®

ARGON MAXIMIZER

LIQUID CYLINDER AUTOMATED FILLING SYSTEM

Specifications

Dimensions

Diameter	20 in	50.8 cm
Height	69 in	176 cm
Empty Weight	263 lb	120 kg
Full Weight	515 lb	234 kg

Components

ASME Relief Valve Setting	300 psig	20.7 bar
Secondary RV Setting	450 psig	31.0 bar
Nitrogen Connections	3/8" FPT or 1/2" ODT x 45 DFL	
Argon Connections	1/2" FPT or 1/2" ODT x 45 DFL	

Design criteria

Code	ASME*
MAWP	300 psig 20.7 bar
Insulation Type	SI †

Construction

Inner Vessel Material	Stainless Steel
Outer Vessel Material	Stainless Steel
Liquid Level Gauge	Honeywell Differential Pressure Transducer

Capacity

Net Volume (LN ₂) §	32 gal	123 ltr
Coil Storage (Argon)	2 gal	7 ltr

Features

Automatic LN₂ refill from bulk tank

Performance

Evaporation Rate % per Day	2.0
Flow Rate (Argon)	50 ltr/min

System Requirements

- Power: 110 VAC power for Cyl-Tel
- Bulk storage tanks: Nitrogen & Argon
- Piping connection to bulk storage tanks:
 - liquid withdrawal
 - pressure tap

* ASME Boiler and Pressure Vessel Design Section VIII, Div. I
 † Super Insulation
 § Maintained at 25-40 psig

