

# LOPER

## LNG OVER-PRESSURE REGULATOR POWERING PRODUCTIVITY THROUGHOUT THE WORLD LNG稳压器

### Key Features

- Ideal for use in on-road and off-road applications
- Stainless steel components for continued operation at cryogenic temperatures:
  - SS diaphragm (bellows) retains full functionality at sub-zero levels
  - SS plunger body and all springs stay working at sub-zero levels
- MAP (Manifold Absolute Pressure) reference fitting is built into the design
- Retains steadier output than competitive models:
  - pressure balanced plunger design maintains outlet pressure vs. flow (droop) performance as inlet pressure varies
- Designed for operation with fuel temperatures of -40°C to 120°C with excursions to -60°C
- Flexibility for a range of applications with outlet pressure setting range from 3.8-9.0 bar<sub>g</sub> (55-130 psi<sub>g</sub>) depending on model
- Robust design validated through rigorous testing

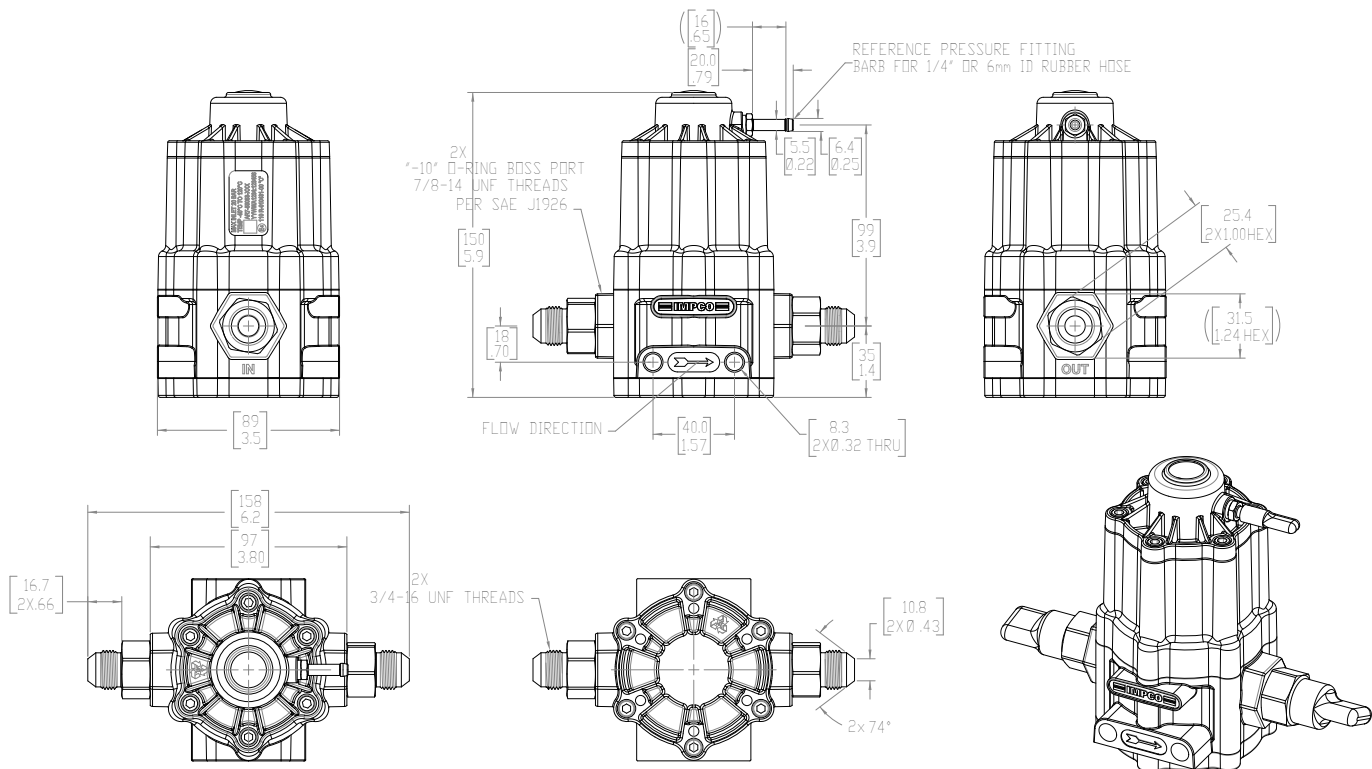
### 主要特性

- 可用于车用及非道路；
- 不锈钢零件可以允许持续工作在极低温度环境：
  - 不锈钢膜片弹簧可以在零下温度下正常工作；
  - 不锈钢柱塞和所有的弹簧工作在零度以下；
- 进气歧管压力补偿功能；
- 入口的压力发生变化时：
  - 在特殊设计的压力平衡系统下；出口的压力和压降也能保持稳定；
- 燃气温度为-40°C to 120°C时持续工作，燃气温度为-60°C短时间工作；
- 出口压力在3.8~9 barg范围内可调；
- 稳健的设计通过了严格的试验测试。



# SPECIFICATIONS 技术参数

LOPER	
<b>GENERAL INFORMATION 基本参数</b>	
MOUNTING 安装位置	Underhood and chassis installations acceptable 发动机机载或车架安装
DESIGN 设计	Single stage stainless steel bellows style regulator 不锈钢膜片式单级调压
BODY MATERIAL 机体材料	Aluminum die casting 铸铝
FUEL TYPE 燃气类型	Natural Gas CH4
<b>PERFORMANCE 性能</b>	
OPERATING TEMPERATURE RANGE 工作温度	-40°C to 120°C (-40°F to 248°F)
INLET PRESSURE 入口压力	Nominal: 11 bar <sub>g</sub> (160 psi <sub>g</sub> ) - Maximum working: 20 bar <sub>g</sub> (290 psi <sub>g</sub> ) 建议11bar, 最大20bar
OUTLET PRESSURE 出口压力	Outlet pressure: 3.8-9 bar <sub>g</sub> (55-130 psi <sub>g</sub> ) depending on model Standard setting: 4.7 bar (69 psi) > MAP at 5 g/s N <sub>2</sub> flow Lockup: <0.7 bar (10 psi) rise above outlet pressure set point Drop: <0.7 bar (10 psi) from 5 g/s to 40 g/s N <sub>2</sub> flow Hysteresis: 0.3 bar (4 psi) typical
DURABILITY 耐久	5 million flow cycle 500万次循环
CORROSION / HUMIDITY 盐雾试验	144 hours salt spray @ 23°C - 96 hours @ 33 to 36°C 144小时盐雾@23°C
VIBRATION 振动	1.5 g sinusoidal 10-500 Hz sweep 1.5g正弦 10-500Hz
INTERNAL LEAKAGE 内部泄漏	Controlled by lock-up pressure specification
EXTERNAL LEAKAGE 外部泄露	<15 cc/hr at specified conditions
FILTRATION 系统滤清要求	100 micron filter required 上游需配备100微米滤清
BOOST REFERENCING 压力补偿	Yes, 1:1 ratio 支持
BURST PRESSURE 爆破压力	>2.5 times max working pressure: 50 bar <sub>g</sub> (725 psi <sub>g</sub> ) @ 23°C (73°F)
PRESSURE RELIEF VALVE 泄压阀	None. External unit required. 无
MASS 重量	1.4 kg (3.2 lbs) without fuel inlet or outlet fittings
EXCESSIVE TORQUE 最大安装扭矩	150% of rated installation torque for 15 minutes 150%额定扭矩持续15分钟
<b>APPROVALS 认证</b>	
CERTIFICATIONS 认证	ISO 15500, ISO 12614, R110



ISO 9001:2008 registered  
ISO 14001:2004 registered

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