

Simpler compliance with API 618



Overview

Reciprocating compressors incorporate pistons and piston rings, and during service life, there is a risk that those seals may allow some leakage. Fugitive gas may become potentially explosive when mixed with air in the crankcase, and modern environmental concerns prohibit simple venting to atmosphere. Buffer systems pressurized with inert gas (typically nitrogen) can be used to minimise that gas leakage, and to drive any such gases to a common flare or vent stack.

The Expo Nitrogen Buffer System makes compliance with API 618 easy through the use of a pre-packaged design to suit the number of compartments in the compressor. Our active pressure control stabilizes injection rates and minimises gas consumption, whatever the flare line pressure.

System Components

The system type NB2 is designed to suit 2 compartment systems for up to 10 cylinders with differential pressure control in outboard compartments, and constant pressure control for inboard compartments. Each distance piece line receives a filtered and pressure-regulated supply per port.

Dedicated flow indicators and check valves (optional) are provided per compartment, and pressure gauges show system pressure and the output pressures.

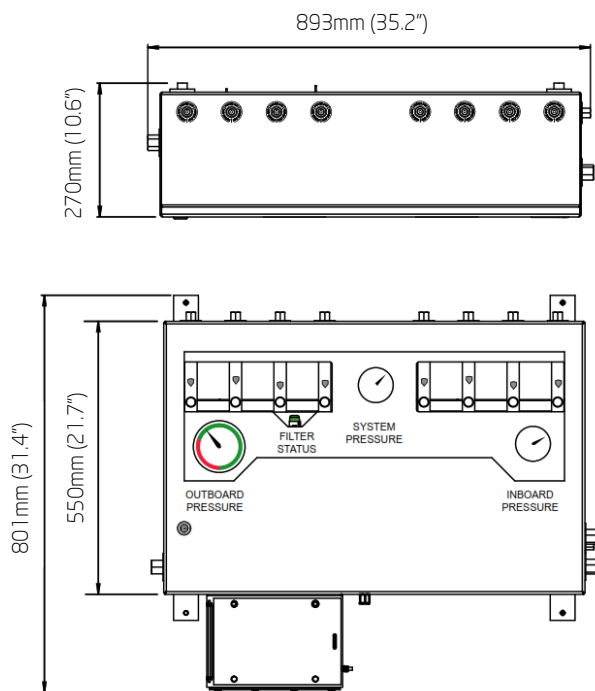
Features

- **Dynamic Pressure Control relative to flare:** Minimises N₂ consumption
- **Compact package and easy specification:** Dual compartments, 1 to 10 cylinders
- **Designed for compliance with API 618:** Flow & pressure indicators included
- **System optimization and options include:**
 - Remote alarms
 - Pressure transmitters
 - H₂S filter on flare sense line
 - Hazardous area approvals
- **316L Stainless Steel enclosure & fittings :** Excellent resistance to corrosion for harsh environments.

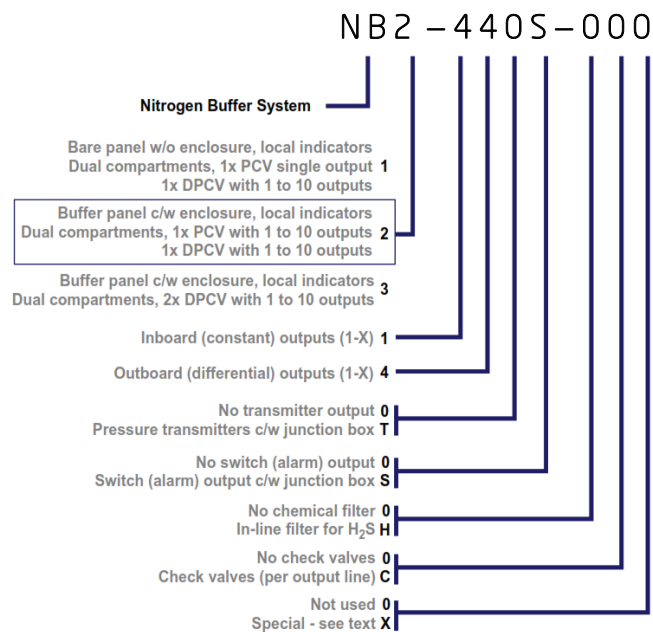
Specifications

Pressurisation medium	Inert Gas (typically Nitrogen). Clean, dry, free from corrosive gases
Temperature range	-20°C to +55°C (-4°F to +131°F)
Supply pressure	4-10 barg (58-145 psi)
Gas connections	Inlet: 1/2" NPT(F). Outlets: 1/4 NPT(F) bulkhead
Total capacity	Up to 500 NI/min (18 SCFM)
Nominal flow rate per compartment	1–25 NI/min (0.04–0.88 SCFM)
Pressure gauges	Main system; Outboard (differential); Inboard (constant)
Filter status indicator	Green/Red
Options	Transmitter port (1/2" NPT) Remote alarm (SPNO contact) H ₂ S filter cartridge 4-20mA transmitters Check valve per output line Hazardous area approval

Dimensions NB2 (mm)



Ordering code NB2



Control System per Cylinder (Typical)

