

**Dual Vessel
Fully Automatic Regeneration
NGV Fuel Gas Dryers**

NG-E



NG series    



MADE IN THE U.S.A.

**PSB INDUSTRIES INC.
ISO 9001:2008 CERTIFIED**



PSB – General Air Division (formerly a division of Zurn Industries) specializes in compressed air, gas, and liquid dehydration/purification technologies and offers a diverse line of product applications. Our packaged systems – from the smallest to the largest applications – remove moisture and contaminants from process streams. PSB’s custom-designed Hydryers® are specially constructed to our customers’ specifications for gas and liquid processes, unlimited in size and capacity, and are designed for maximum efficiency. Meeting this manufacturing challenge, PSB’s own facilities, as well as our key worldwide alliances, are well-equipped to handle our customers’ wide range of requirements.

NG-E Dual Vessel Natural Gas Dryer – Fully Automatic Regeneration

PSB type NG-E is an ideal system for drying medium to large volumes of natural gas for stations with continuous use. Each unit is conservatively sized to remove moisture from gas upstream the natural gas compressor.

Continuous operation is assumed with the dual vessel design. While one vessel is on stream drying, the other vessel is regenerating or in standby mode and ready to be placed back on stream.

“DDP” Digital Dew Point Meter is provided to indicate the effluent dew point, confirming performance.

PSB’s standard package includes factory fit pre filter for removing dirt/aerosols and after filter for removing desiccant dust.

NG-E Dryer General Design Features:

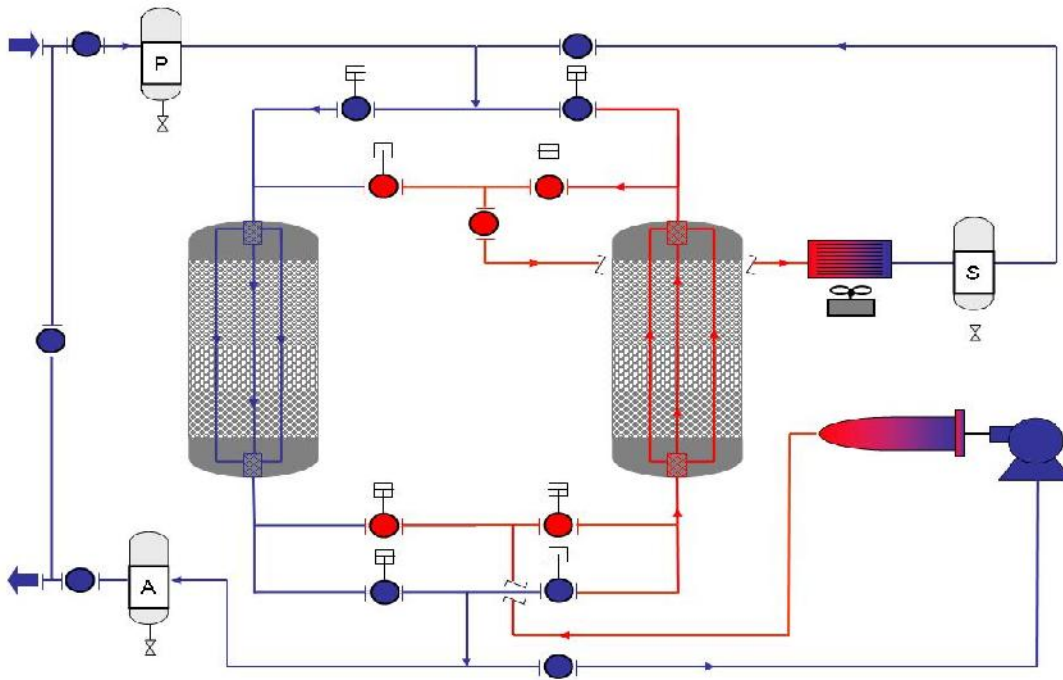
- Dual vessel design manufactured and stamped per ASME code Section VIII. Alternatives available.
- Piping designed per ASME B31.3.
- NEMA / NEC electrical construction standard.
- Closed-loop regeneration of the molecular sieve adsorbent.
- Three valve block and bypass piping arrangement for isolation of the dryer.
- Pre filter and after filter complete with differential pressure indicators.
- Insulated adsorber vessels and electric heater for heat conservation.
- Incoloy sheath low watt density flanged immersion type electric heater.
- Stainless steel desiccant screens and diffusers.
- Desiccant drain and fill ports on each vessel.
- Air cooled gas cooler with non-sparking fan and TEFC motor.

NG-E Dryer Instrument and Control Features:

- Automated process and regeneration valves via pneumatic actuators.
- Electrical enclosures for operation in Class 1, Division 2, Group D areas.
- Fully programmed PLC based dryer control system.
- Panel mounted ESD pushbutton and customer contacts.
- Heater and blower temperature and safety interlocks.
- Requires only a 460/3/60 power input. Optional voltages available.

TYPICAL FLOW DIAGRAM

NG-E Dual Vessel Fully Automatic



PSB Model	(1) MMSCF Capacity @ 7 lb. H ₂ O/MMSCF	Process Connections Inches	Dimensions Inches			Package Weight lbs.
			L	W	H	
NG-E33	5.0	2 NPT	138	96	111	9,500
NG-E45	6.5	2 NPT/ 3 FLG	138	96	111	10,000
NG-E70	10	2 NPT/ 3 FLG	138	96	111	11,000
NG-E105	15	3 FLG	138	96	111	11,800
NG-E150	21	4 FLG	150	102	115	12,500
NG-E210	30	6 FLG	150	102	115	13,800
NG-E280	40	8 FLG	150	102	115	15,000

Specifications and information subject to change

(1) Capacity multiplier for moisture contents other than 7 lb. H₂O/MMSCF

Example: Capacity of model NG-E70 with inlet natural gas with 10 lb. H₂O/MMSCF
 10 MMSCF x 0.7 (multiplier) = 7 MMSCF capacity

Actual lb. H ₂ O/MMSF	2	4	6	7	10	15	20	40	50
Multiplier	2.27	1.49	1.11	1.0	0.7	0.5	0.39	0.21	0.17

PSB Natural Gas Dryers NG-Series

➤ SINGLE VESSEL NG – SV – FM

- Small Flow
- Non-Regenerative
- Intermittent Use

➤ SINGLE VESSEL NG – SV

- Small Flow
- Pre and After Filter
- Intermittent Use
- Dew Point Analyzer Option



➤ SINGLE VESSEL NG – SR MANUALLY INITIATED REGENERATION

- Medium to Small Flows
- Closed-Loop Regeneration
- Pre and After Filter
- Dew Point Analyzer Option



➤ DUAL VESSEL NG – SRD MANUALLY INITIATED REGENERATION

- Continuous Operation
- Medium to Large Flows
- Closed-Loop Regeneration
- Pre and After Filter
- Dew Point Analyzer Option



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