

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

**NG-EV**



**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.



### **NG-EV Dual Vessel Natural Gas Dryer – Fully Automatic Regeneration**

PSB type NG-EV 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(s).

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-EV Typical Options:**

- Three (3) valve block and dryer bypass piping arrangement.
- CWP (Cold Weather Package) is available for regeneration in freezing conditions. Includes heat tracing and insulation on condensate sump/drain lines and includes PLC control panel heater.
- PSV Vent Stack Assembly. Includes relief valve exit piping and stack vent to 10 foot elevation. Dryer vessel PSV is included as standard.
- 200 MWP is standard. High pressure dryer options are available-contact factory.

### **NG-EV Dryer General Design Features:**

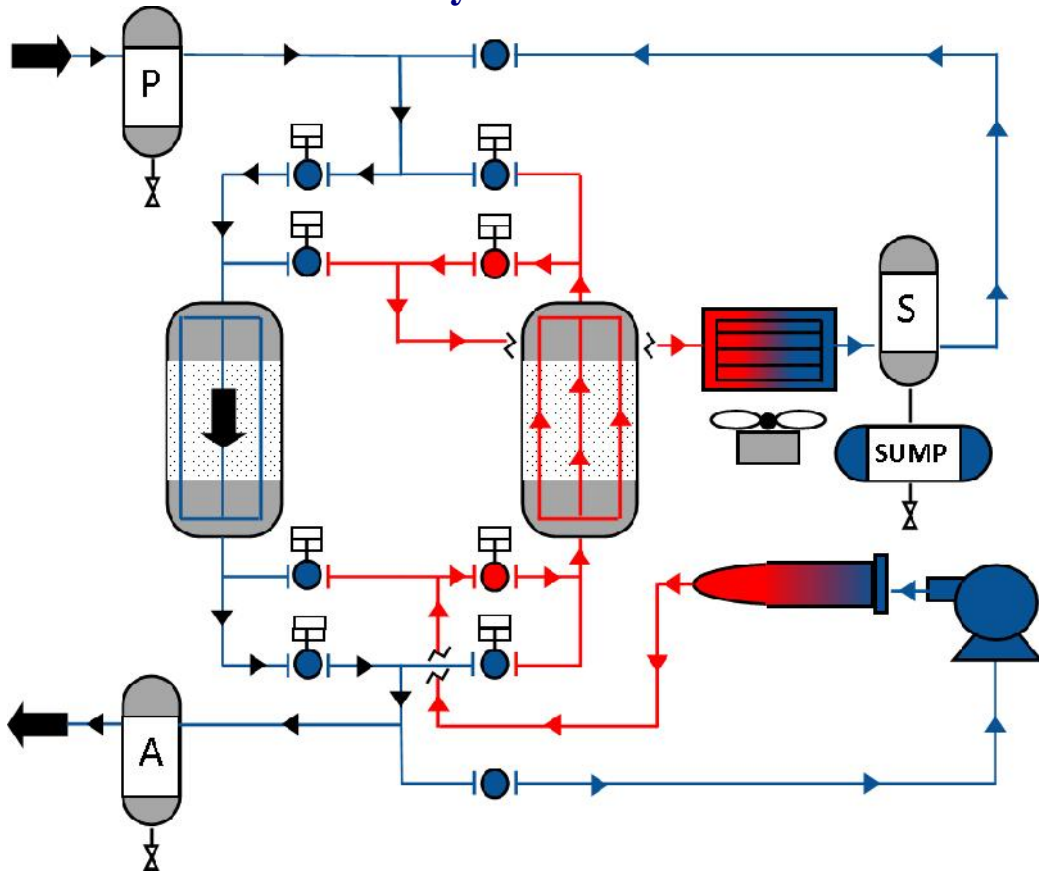
- Dual vessel design manufactured and stamped per ASME code Section VIII. Alternatives available.
- Piping designed per ASME B31.3.
- NEMA / NEC electrical construction standard.
- Closed-loop regeneration of the molecular sieve adsorbent.
- Pre filter and after filter complete with differential pressure 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.
- Air cooled gas cooler with non-sparking fan and TEFC motor.

### **NG-EV 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-EV Dual Vessel Fully Automatic



PSB Model	(1) MMSCF Capacity @ 7 lb. H <sub>2</sub> O/MMSCF	Process Connections Inches	Dimensions Inches			Package Weight lbs.
			L	W	H	
NG-EV33	5.0	2 FLG	120	68	104	5,500
NG-EV45	6.5	2 FLG	138	68	104	6,000
NG-EV70	10	2 / 3 FLG	144	68	104	6,800
NG-EV105	15	3 / 4 FLG	160	72	112	9,000
NG-EV120	17	4 FLG	160	72	120	10,000
NG-EV150	21	4 / 6 FLG	168	88	120	11,900
NG-EV210	30	6 FLG	204	108	124	17,000
NG-EV280	40	6 / 8 FLG	240	120	144	20,000
NG-EV360	51	8 FLG	240	120	144	22,000

Specifications and information subject to change. Contact factory for your specific application.

(1) Contact PSB with specific flow, pressure and moisture content for dryer selection  
Capacity multiplier for moisture contents other than 7 lb. H<sub>2</sub>O/MMSCF

Example: Capacity of model NG-EV70 with inlet natural gas with 10 lb. H<sub>2</sub>O/MMSCF  
10 MMSCF x 0.7 (multiplier) = 7 MMSCF capacity

Actual lb. H <sub>2</sub> O/MMSCF	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

- Smaller to Medium Flows
- Pre and After Filter
- Intermittent Use
- Dew Point Analyzer Option

## ➤ SINGLE VESSEL NG – SR MANUALLY INITIATED REGENERATION

- Wide Range of Flows
- Closed-Loop Regeneration
- Pre and After Filter
- Digital Dew Point Analyzer

## ➤ DUAL VESSEL NG – SRD MANUALLY INITIATED REGENERATION

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



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