

**Single Vessel  
Manual Regeneration  
NGV Fuel Gas Dryers**

**NG-SR**



**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-SR Single Vessel Natural Gas Dryer – Manual Regeneration**

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

When the initial charge of desiccant has reached maximum drying capacity, it can be regenerated manually with the operator initiated, external regeneration package. A “DDP” Digital Dew Point Meter is provided to indicate the effluent dew point, confirming performance, and need for regeneration. PSB’s standard package includes factory fit pre filter for removing dirt/aerosols and after filter for removing desiccant dust.

#### **NG-SR Typical Options:**

- 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. Ships separate due to height. Dryer vessel PSV is included as standard.
- 200 MWP is standard. High pressure dryer options are 300, 500, 635, 875, 1100, 1250, and 1525 MWP-PSIG.

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

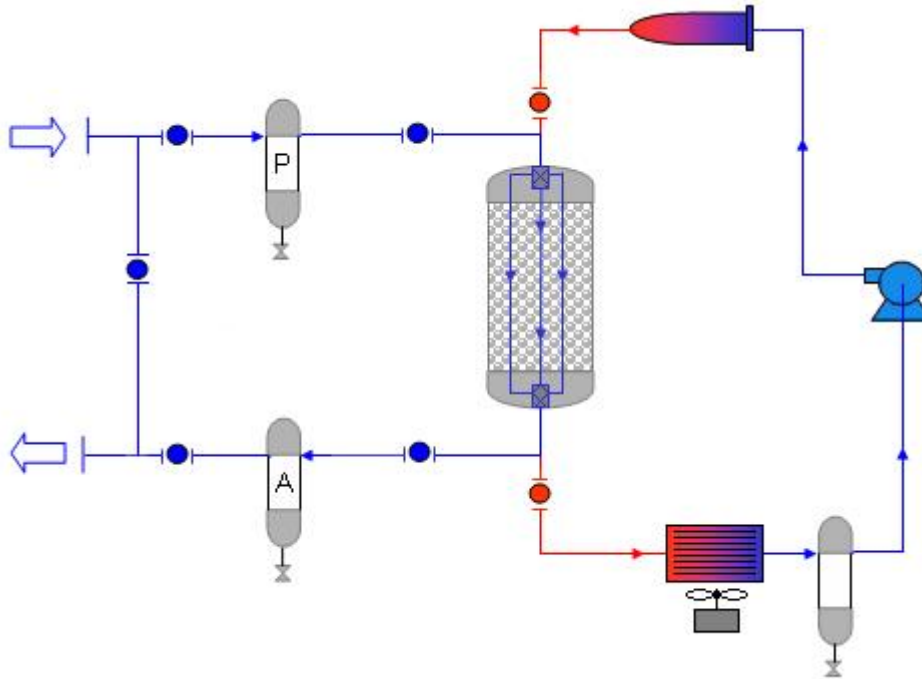
- Adsorber vessel designed, manufactured and stamped per ASME code Section VIII Alternatives available
- Piping designed per ASME B31.3
- NEMA / NEC electrical construction standard
- Closed-loop regeneration of the molecular sieve adsorbent
- Three valve block and bypass piping arrangement for isolation of the dryer
- Pre filter and after filter complete with differential pressure indicators
- Insulated adsorber vessel 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 port on vessel
- Air cooled gas cooler with non-sparking fan and TEFC motor.

#### **NG-SR Dryer Instrument and Control Features:**

- Electrical enclosures for operation in Class 1, Division 2, Group D areas
- Fully programmed PLC based dryer control system
- Panel mounted regen start, regen stop, and alarm reset pushbuttons. Status lights and remote ESD and alarm customer contacts
- Heater element and over-temperature shutdowns and blower/heater interlocks
- Local temperature and pressure gauges for monitoring process and regeneration.
- Requires only a 460/3/60 power input. Optional voltages available

# TYPICAL FLOW DIAGRAM

## NG-SR Single Vessel



PSB Model	(1) MMSCF Capacity @ 7 lb. H <sub>2</sub> O/MMSCF	Flow Capacity SCFM @ PSIG 20/100	Process Connections Inches	Dimensions Inches			Package Weight lbs.
				L	W	H	
NG-SR-5.0-1.5	5.0	145 / 510	1.5 FLG	104	68	103	3,780
NG-SR-6.5-2	6.5	240 / 765	2 FLG	104	68	100	3,900
NG-SR-10-2	10	240 / 820	2 FLG	104	68	107	4,000
NG-SR-10-3	10	525 / 1,375	3 FLG	104	68	112	4,500
NG-SR-15-3	15	525 / 1,400	3 FLG	104	68	109	5,200
NG-SR-15-4	15	615 / 2,160	4 FLG	104	68	109	7,000
NG-SR-21-3	21	525 / 1,700	3 FLG	132	88	97	6,520
NG-SR-21-4	21	900 / 2,300	4 FLG	132	88	97	7,500
NG-SR-21-6	21	1,900 / 2,500	6 FLG	132	88	104	7,900
NG-SR-30-6	30	2,200 / 4,200	6 FLG	132	88	122	8,810
NG-SR-42-6	42	2,500 / 5,000	6 FLG	162	105	141	14,500
NG-SR-42-8	42	4,000 / 7,800	8 FLG	168	120	146	15,500

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

(1) Capacity multiplier for moisture contents other than 7 lb. H<sub>2</sub>O/MMSCF

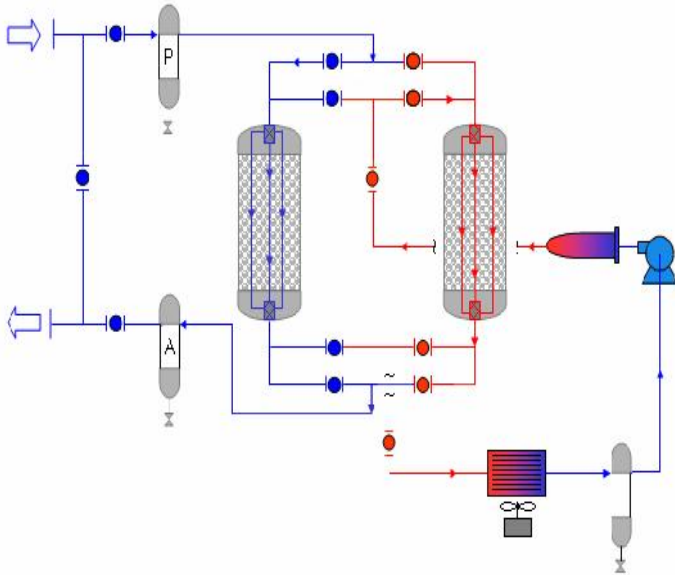
Example: Capacity of model NG-SR-6.5-2 with inlet natural gas with 10 lb. H<sub>2</sub>O/MMSCF  
 6.5 MMSCF x 0.7 (multiplier) = 4.55 MMSCF capacity

Actual lb. H <sub>2</sub> O/MMSCF	2	3	4	5	6	7	10	15	20	30	40	50
Multiplier	2.27	1.82	1.49	1.25	1.11	1.0	0.7	0.5	0.39	0.30	0.21	0.17

# NG-SRD

## Dual Vessel Series

### Flow Diagram



**NG-SRD** is the dual vessel version allowing for continuous drying. While one vessel is drying the other can be manually regenerated without interrupting the drying flow.

PSB Model	(1) MMSCF Capacity @ 7 lb. H <sub>2</sub> O/MMSCF	Flow Capacity SCFM @ PSIG 20/100	Process Connections Inches	Dimensions Inches			Package Weight lbs.
				L	W	H	
NG-SRD-6.5-2	6.5	240 / 765	2 FLG	120	80	102	5,600
NG-SRD-10-3	10	525 / 1,375	3 FLG	153	72	102	5,900
NG-SRD-15-3	15	525 / 1,400	3 FLG	180	88	97	9,300
NG-SRD-15-4	15	615 / 2,160	4 FLG	180	88	97	9,400
NG-SRD-21-4	21	900 / 2,300	4 FLG	192	88	102	11,600
NG-SRD-30-6	30	2,200 / 4,200	6 FLG	192	88	122	15,000
NG-SRD-38-6	38	2,500 / 5,000	6 FLG	218	114	141	19,000
NG-SRD-42-8	42	4,000 / 7,800	8 FLG	238	120	143	21,000
NG-SRD-50-8	50	Contact Factory	8 FLG	238	108	144	22,000
NG-SRD-64-8	64	Contact Factory	8 FLG	254	120	148	26,000
NG-SRD-75-8	75	Contact Factory	8 FLG	254	120	148	30,000

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



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