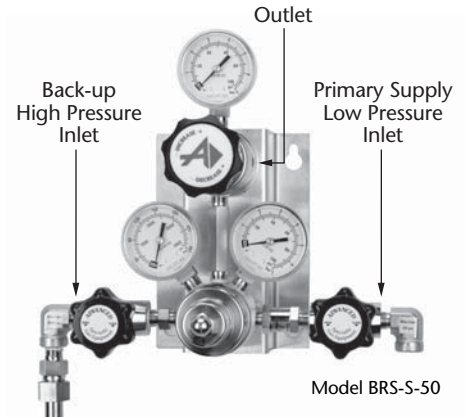


BRS Series

High Purity, Back-Up Regulator Systems

The BRS Series System is designed to provide back-up gas supply where gas generators, compressors or house line gases are the primary source of process gas. The BRS Series allows supply systems to be turned off for service or maintenance without disturbing the gas flow or pressure to high purity applications. Unlike changeover systems, the Advanced BRS System automatically provides back-up gas on an as needed basis, buffering deficiencies in supply pressure. The system activates (backs-up) when the supply pressure drops below the BRS preset pressure and deactivates when the supply pressure rises above the preset pressure allowing for the primary source of gas to flow. Monitoring or operator adjustments are not required during the back-up activation or deactivation.

The BRS System design incorporates a two-stage regulator, line regulator and in-line check valves. Diaphragm seal valves allow for either supply pressure isolation or cylinder isolation when a change of cylinders is required. Available in either brass or stainless steel construction, they are supplied entirely installed on a stainless steel panel providing for convenient, wall-mounted installation. The overall compact design allows for installation in areas where space is at a premium.



Standard Features

- Allows main gas supply to be turned off for service without disturbing gas flow to application.
- High Purity Diffusion-Resistant Regulators minimize the diffusion of air into the system, maintaining the purity of the gas.
- Diaphragm Seal Isolation Valves allow for complete isolation of the gas source when making a changeout.
- Check Valves prevent backflow of gas from regulator and pigtail.

Specifications

Maximum Inlet Pressure:
 High Pressure Back-up: 3000 psig
 Low Pressure Primary Supply:
 See Table I

Flow Capacity:
 BRS-X-50: 30 slpm N₂
 BRS-X-100: 60 slpm N₂
 BRSH-X-100: 250 slpm N₂

Inlet Pressure Gauges (dual scale):
 High Pressure Back-up:
 0–4000 psig/ 0–275 bar
 Low Pressure Primary Supply:
 See Table I

Minimum Inlet Pressure: 50 psig
 Delivery Pressure Range: See Table I
 Delivery Pressure Gauge: See Table I
 Gauge Size: 2" Dial

Flow Coefficient:
 Two-stage Back-up Regulator:
 Cv = 0.06
 Line Regulator:
 BRS: Cv = 0.15
 BRSH: Cv = 1.8

Operating Temperature Range:
 -40°F to 140°F

Inlet Connections:

High Pressure Back-up:
 3 ft. Stn. Stl. Flex. Hose with
 Inlet CGA connection as specified
 Low Pressure Primary Supply:
 ¼" NPT female

Outlet Connection: ¼" NPT female
 Approximate Weight: 10 lbs.

Materials of Construction

Regulator Bodies:
 Brass Systems: Brass Bar Stock
 Stainless Steel Systems:
 Type 316 SS Bar Stock
 Diaphragms: Type 316 Stainless Steel
 Gauges:
 Brass Systems: Brass
 Stainless Steel Systems: Type 316 SS

Bonnets:
 Brass Systems: Brass
 Stainless Steel Systems: 300 Series SS

Other Metal Parts Exposed to Gas:
 Brass Systems: Brass and Stainless Steel
 Stainless Steel Systems: Type 316 SS

Seats and Seals: Teflon®

Check Valve Seats:
 L.P. Inlet: Viton®
 CGA Nipple:
 EPDM with Brass Systems
 Viton® with Stainless Steel Systems

Isolation and Vent Valves:
 Body:
 Brass Systems: Brass Bar Stock
 Stainless Steel Systems:
 Type 316 SS Bar Stock
 Diaphragms: Type 316 Stainless Steel
 Seats: PCTFE



Model BRS Installed as Back-up for Gas Generator
 (Generator tubing sold separately)

Table I

Part Number	BRS Preset Back-up Pressure Setting (psig)	Inlet – Low Pressure Primary Supply (right side)			Delivery Pressure		
		Maximum (psig)	Gauge (dual scale) (psig)	Gauge (dual scale) (bar)	Range (psig)	Adjustable Gauge (dual scale) (psig)	Adjustable Gauge (dual scale) (bar)
Brass Systems							
BRS-B-50-(CGA)	50	180	0–200	0–14	4–45	0–100	0–7
BRS-B-50D-(CGA)	50	380	0–400	0–28	4–45	0–100	0–7
BRS-B-100-(CGA)	100	180	0–200	0–14	5–90	0–200	0–14
BRS-B-100D-(CGA)	100	380	0–400	0–28	5–90	0–200	0–14
BRSH-B-100-(CGA)	100	180	0–200	0–14	5–90	0–200	0–14
BRSH-B-100D-(CGA)	100	380	0–400	0–28	5–90	0–200	0–14
Stainless Steel Systems							
BRS-S-50-(CGA)	50	180	0–200	0–14	4–45	0–100	0–7
BRS-S-50D-(CGA)	50	380	0–400	0–28	4–45	0–100	0–7
BRS-S-100-(CGA)	100	180	0–200	0–14	5–90	0–200	0–14
BRS-S-100D-(CGA)	100	380	0–400	0–28	5–90	0–200	0–14
BRSH-S-100-(CGA)	100	180	0–200	0–14	5–90	0–200	0–14
BRSH-S-100D-(CGA)	100	380	0–400	0–28	5–90	0–200	0–14

* Contact your Advanced distributor if custom factory settings are required. Advanced also offers custom systems for high flow and high pressure back-up applications. Where “(CGA)” is indicated above, insert appropriate Compressed Gas Association connection number to complete the part number. Example: BRS-B-50-590. Order by complete part number.



Model BRS Installed as Back-up for Cryogenic Container (Cryogenic container pigtail sold separately)

Optional Equipment

Equipment	Part No.
Annunciators	See page 103
Pressure Switches	See page 100
Purge/Vent Valves (set of 2 installed prior to isolation valves)	
Brass Systems	SG6680
Stainless Steel Systems	SG6681
Replacement pigtails, flexible 3' length, high pressure side	
Brass Systems	SG6629-CGA
Stainless Steel Systems	SG6627-CGA
Compression Fittings (male connectors)	
Brass Systems	
1/4" NPT male x 1/8" compression	SG6703
1/4" NPT male x 1/4" compression	SG6704
Stainless Steel Systems	
1/4" NPT male x 1/8" compression	SG6713
1/4" NPT male x 1/4" compression	SG6714

Note: Pigtails for the primary low pressure inlet connection are available. See pages 108, 109 or contact your Advanced Representative for more information.