

# BLENDAlRE

LPG/AIR MIXER  
Models: B3 through B7

**Factory Mutual**  
System  
Approved

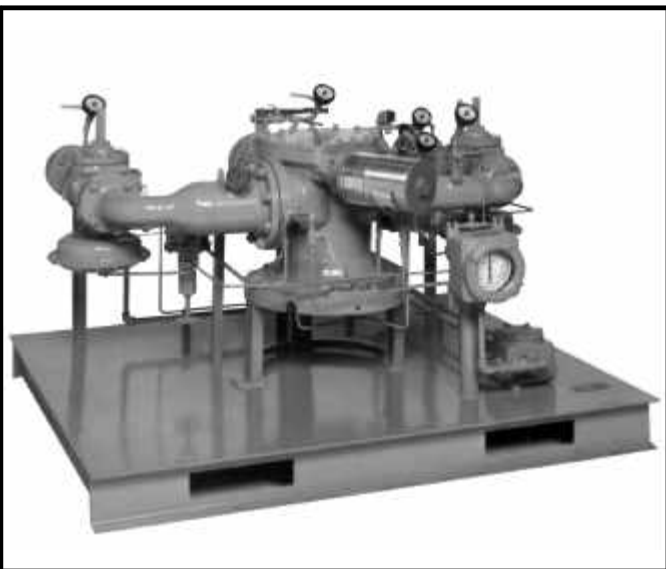
## OPERATION

The **SDI BLENDAlRE**® LPG/Air mixer safely and accurately combines LPG vapor with compressed air to deliver a natural gas compatible mixture at pressures from 10 psig [0.7 kg/cm] to 150 psig [10.3 kg/cm]. The LPG/air mixture created by the **BLENDAlRE**® will burn with the same characteristics and efficiency as natural gas plus it does not require burner adjustments.

The **BLENDAlRE** offers high pressure mixing to feed city utilities or supplement natural gas pipeline distribution. The heart of the **BLENDAlRE** is a piston suspended within a three port mixing valve. Compressed air enters one port. LPG vapor enters another port, and a mixture of LPG/air that is compatible with natural gas discharges from the third port. Horizontal rotation of the piston increases or decreases the volumetric ratio of LPG vapor to air, hence increasing or decreasing the calorific value of the LPG/Air mixture within a tolerance +/-2%. Vertical travel of the piston increases or decreases the volumetric flow of LPG/Air. Since the **BLENDAlRE** is pressure balanced, it responds quickly to load changes. Both the air line and LPG vapor line have check valves to ensure safe mixing. In addition, sufficient air pressure must be available before the gas regulator will open to allow the mixing process to proceed.

## STANDARD FEATURES

- Meets the design requirements of NFPA Pamphlet 58 for gas/air mixers.
- All wiring, controls, electrical components and their installation comply with recognized code standards defined in NFPA Pamphlets 58 and 70.
- Explosion proof configuration, suitable for Class I, Division 1, Group D environments.
- Factory Mutual (FM) Approved.
- Remote mounted **PROCESS CONTROLLER** (Control Panel) with integral first out annunciator.
  - Air pressure display
  - Inlet LPG pressure display
  - Inlet LPG temperature display
  - Differential pressure alarm
  - Vaporizer limits alarm
- Explosion proof junction box with terminal strip for easy field connection to **PROCESS CONTROLLER**.
- Air actuated automatic safety shutoff valve.
- High turndown ratio.
- Smooth and rapid response to flow rate changes.
- Manual ratio adjustment or optional automatic ratio control package.
- Skid mounted and complete with all operating and safety controls.
- Rigorous factory testing under strict ISO9001 conditions.

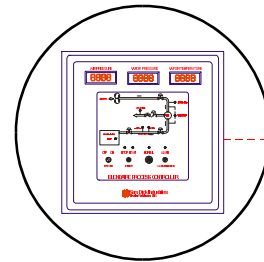
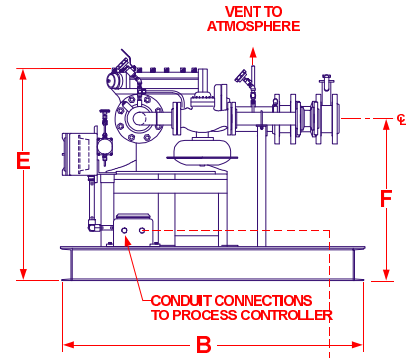
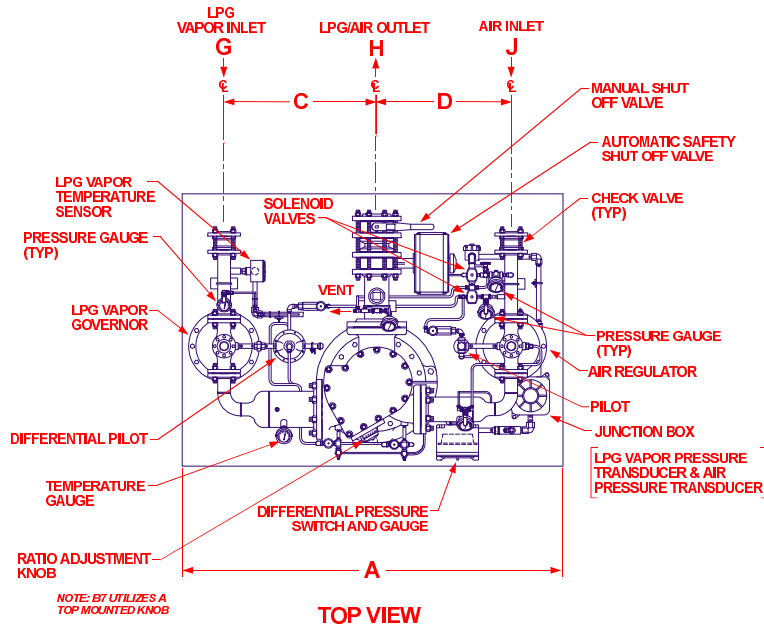


# S P E C I F I C A T I O N S

MODEL		B3		B4		B5		B6		B7	
OUTLET PRESS.		HEAT VALUE CAPACITY IN MILLIONS (000,000)									
PSIG	KG/CM	BTU/H	KCAL/H	BTU/H	KCAL/H	BTU/H	KCAL/H	BTU/H	KCAL/H	BTU/H	KCAL/H
10	0.7	16.0	4.0	32.0	8.1	64.0	16.1	160.0	40.3	336.0	84.5
20	1.4	19.0	4.8	38.0	9.6	76.0	19.2	190.0	47.9	392.0	99.6
30	2.1	21.5	5.4	43.0	10.8	86.0	21.7	215.0	54.2	450.0	113.4
40	2.8	24.0	6.1	48.0	12.1	96.0	24.2	240.0	60.5	504.0	126.8
50	3.5	26.0	6.6	52.0	13.1	104.0	26.2	260.0	65.5	546.0	137.4
60	4.2	28.0	7.1	56.0	14.1	112.0	28.2	280.0	70.6	588.0	148.0
70	4.9	30.0	7.6	60.0	15.1	120.0	30.2	300.0	75.6	624.0	157.0
80	5.6	31.5	7.9	63.0	15.9	126.0	31.8	315.0	79.4	660.0	166.1
90	6.3	33.0	8.3	66.0	16.6	132.0	33.3	330.0	83.2	696.0	175.1
100	7.0	34.5	8.7	69.0	17.4	138.0	34.8	345.0	86.9	726.0	182.6
110	7.7	36.0	9.1	72.0	18.1	144.0	36.3	360.0	90.7	756.0	190.2
120	8.4	37.0	9.3	75.0	18.9	150.0	37.8	375.0	94.5	786.0	197.8
130	9.1	39.0	9.8	78.0	19.6	155.0	39.1	390.0	98.3	816.0	205.3
140	9.8	40.0	10.1	80.0	20.2	160.0	40.3	400.0	100.8	846.0	212.9
150	10.6	41.0	10.3	83.0	20.9	165.0	41.6	415.0	104.6	870.0	218.9

Capacity ratings valid for LPG/Air mixtures from 1,000 BTU/scf. to 1,700 BTU/scf. (8,900 kcal/nm to 15,130 kcal/nm).

# D I M E N S I O N A L   D R A W I N G



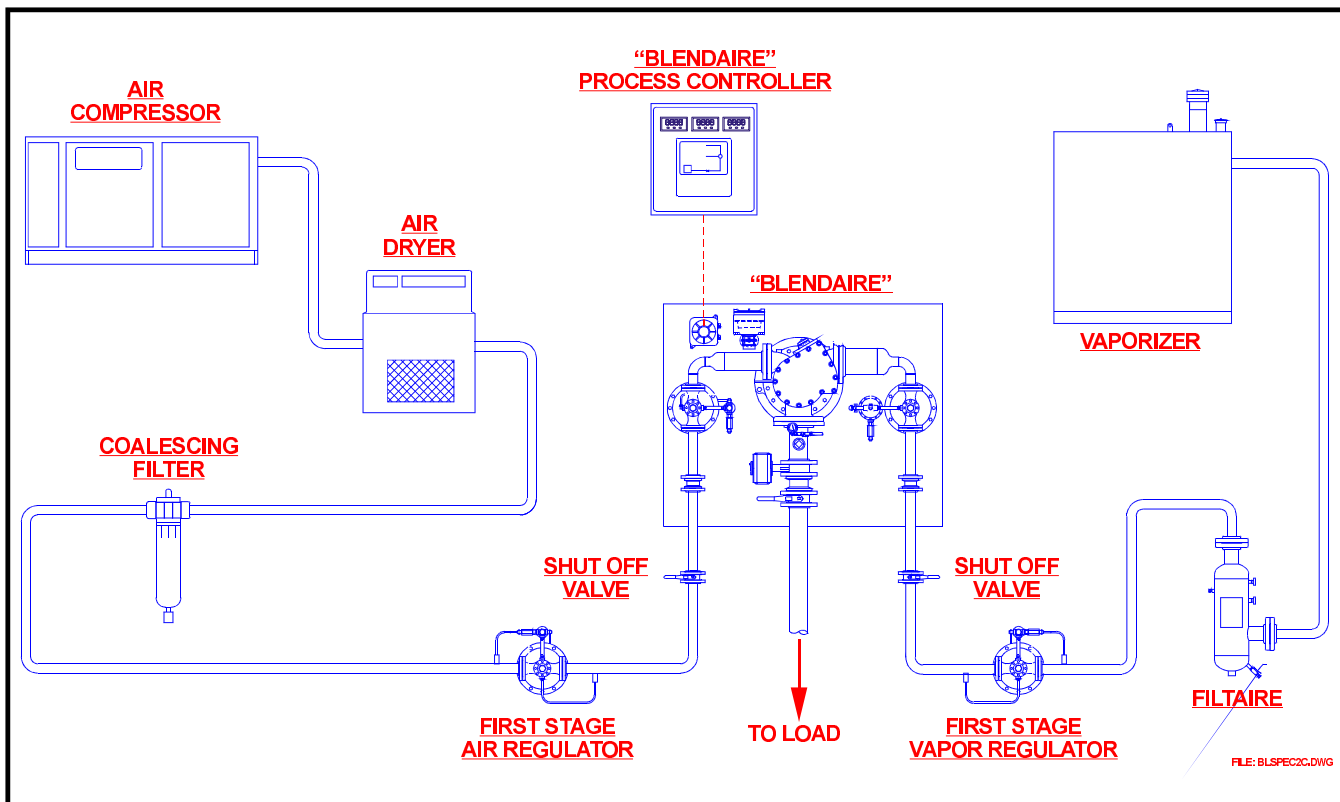
WIRING BY OPTO TO PROCESS CONTROLLER

FILE: BLSPEC1C.DWG

MODEL	A	B	C	D	E	F	G*	H*	J*
<b>B3</b>	58" 1473 mm	46" 1168 mm	21-3/4" 552 mm	20-3/8" 517 mm	26-1/8" 664 mm	21-3/8" 542 mm	2" FLG	2" FLG	2" FLG
<b>B4</b>	58" 1473 mm	46" 1168 mm	23-1/2" 596 mm	21" 533 mm	29-5/8" 752 mm	23-7/8" 606 mm	2" FLG	2" FLG	2" FLG
<b>B5</b>	64" 1625 mm	45" 1143 mm	24-3/8" 619 mm	22-7/8" 581 mm	31-1/2" 800 mm	24-1/4" 615 mm	2" FLG	3" FLG	2" FLG
<b>B6</b>	70" 1778 mm	50" 1270 mm	28-1/2" 725 mm	24-7/8" 632 mm	39" 990 mm	29-3/4" 756 mm	3" FLG	4" FLG	3" FLG
<b>B7</b>	88" 2236 mm	70" 1778 mm	38-1/2" 978 mm	36-1/2" 927 mm	45-1/4" 1150 mm	33-1/4" 844 mm	4" FLG	6" FLG	4" FLG

\*150# ANSI RF50 mating flanges are provided for air inlet, LPG vapor inlet and mixed gas outlet.

NOTE: Dimensions shown are standardized for reference only; dimensions and arrangement may vary according to specific flow sizing requirements.



## WARRANTY

**Sam Dick Industries, Inc.** warrants that the equipment is free of defects in materials and workmanship under normal use and service and agrees to repair or replace, at **Sam Dick Industries'** option, without charge, f.o.b. factory, any part which shall prove defective to the satisfaction of **Sam Dick Industries** within one (1) year from the date of original installation or eighteen (18) months from the date of shipment, whichever is the earlier. Equipment, which in the opinion of **Sam Dick Industries**, has been damaged by improper installation or operation, or has been abused or tampered with in any way, will not be accepted for return under warranty. **Sam Dick Industries** will not accept back charges for work performed by others upon or in conjunction with **Sam**

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