

# Bristol® Series 5453-31G

## Indicating Pneumatic Flow, Differential Pressure and Liquid Level Controllers

### General

The Bristol® Series 5453-31G control unit, is part of the Bristol 624-II family of pneumatic instruments from Emerson Process Management. It is designed for performance and durability under rigorous operating conditions. The body is of rugged, precision die cast aluminum, and all working parts are of stainless steel. Diaphragms are made of Neoprene; feedback bellows are Ni-Span-C.

### Features

Fast response and highly stable control action are key features of the 624-II controller. It is especially suitable for field-mounting and other types of installations where a control record is not required.

- Gain Control: 50-.25 or 100 2.5; easily adjustable
- Integral (Reset) model: Adjustable from less than .01 to 30 repeats per minute
- Derivative control: Action adjustable from 0 to 30 minutes (derivative by – pass standard)
- Easily reversible control action: just turn a cover plate.
- High capacity pilot: Flow is well over 3 scfm at 1 psi drop, both exhaust and delivery
- Push button restriction cleaner (standard)



- No plastic tubing

### Specifications

- Case: Weatherproof, die-cast aluminum case with gasketed aluminum door and gray epoxy finish standard
- Case dimensions: 7 23/32" wide x 7 15/16" high. 2" horizontal and 5" vertical clearance required between adjacent panel mounted units.
- Mounting: Interchangeable flush or surface mounting. Optional brackets and U-clamps available for 2" pipe mounting.
- Scales: Segmental, 3 1/4" calibrated length.

Black numerals on white background.  
Fluorescent pointers for measured variable and setpoint.

- Output: 3-15 psig standard. Other ranges available. Direct or reverse acting.
- Air supply: 20 psig standard for 3-15 output range
  - 30 psig for 3-27 psig output range
  - 35 psig for 6-30 psig output range
- Connections: Supply and output, 1/4" NPT female at bottom of case
- Top case vent with plug, 1/2" NPT standard
- Measuring elements: meter bodies available for differential pressure ranges from 0-10" of water to 0-400" of water, 50 and 100 psi
- Calibrated accuracy:

Differential liquid level:  $\pm 0.5\%$  of span.

Flow:  $\pm 0.5\%$  of full scale value (from 20% to 100% of range)

- Control modes: Gain (proportional), gain + integral (reset), gain + integral + derivative (3-15 psig output)
- Mode adjustments:
  - Gain: 100-2.5 or 50-.25
  - Integral: .01 to 30 repeat per minute
  - Derivative time: 0 to 30 minutes
- Response level: 0.006% of span.
- Frequency response: Response curve flat to 400 cpm with gain control unit, to 300 cpm with gain + integral unit
- Pilot capacity: 3 scfm, exhaust or delivery, for 1 psi change in output pressure
- Air consumption: 0.05 scfm at balance with 20 psig air supply
- Temperature stability:  $\pm 1\%$  of span change in output pressure per 100°F change in ambient temperature

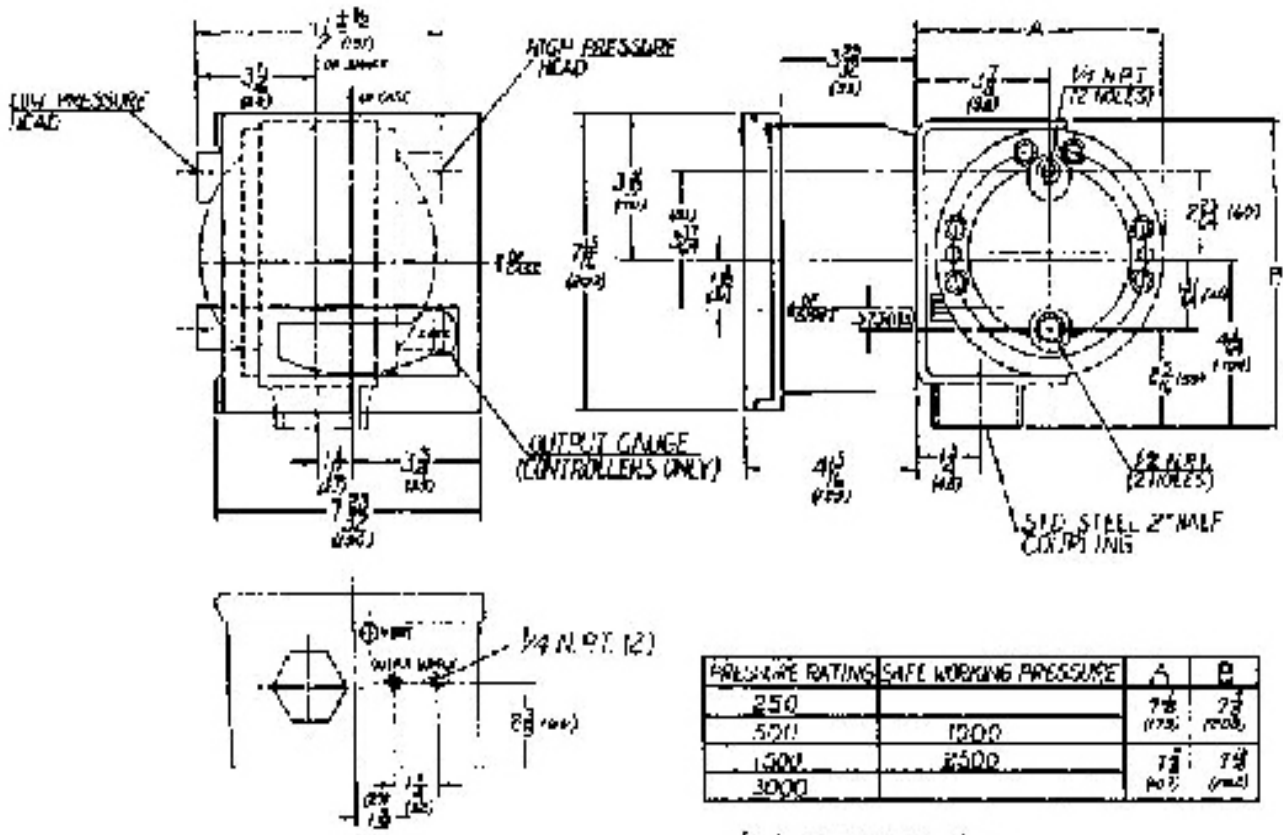
## 624-II Flow or Differential Liquid-Level Controllers Series 5453

Model No. 5453-31G A B - C - D - E - F - G - H - J

5453-31G

SELECT	DESCRIPTION	CODE
	<b>BASIC</b> 545331GBAS	
A, B	<b>PRESSURE RANGE</b>	A B
10	None	00
	10 inch Water	01
	20 inch Water	02
	50 inch Water	03
	75 inch Water	04
	100 inch Water	05
	150 inch Water	06
	200 inch Water	07
	250 inch Water	08
	300 inch Water	09
	350 inch Water	10
	400 inch Water	11
	0 - 50 PSI	12
	0 - 100 PSI	13
C	<b>APPLICATION</b>	
20	Flow or closed tank L.L. w/dry leg	1
	Closed tank L.L. w/wet leg	2
D	<b>CALIBRATION</b>	
30	Direct Standard	1
	Reverse Standard	2
	Direct Full Scale	3
	Reverse Full Scale	4
E	<b>CONTROL</b> X624CONTRL	
40	20 PSI Supply, Gain only	1
	20 PSI Supply, Gain & Integral	2
	20 PSI Supply, 3 mode	3
	30 PSI Supply, Gain & Integral	4
	35 PSI Supply, Gain only	5
	35 PSI Supply, Gain & Intergral	6

	60 PSI Supply, Differential Gap	7
	20 PSI Supply, Transmitter	8
	30 PSI Supply, Transmitter	9
<b>F</b>	<b>EXTERNAL FEEDBACK XEXFEED</b>	
50	Without	0
	With (20 PSI supply)	1
<b>G</b>	<b>PNEUMATIC SET POINT X5453SP</b>	
60	Without	0
	With (3-15 PSI Set Point signal)	1
<b>H</b>	<b>MANUAL-AUTOMATIC STATION XMAN-AUTO</b>	
70	Without	0
	With ( Not for model with Selection E7)	1
<b>J</b>	<b>MOUNTING</b>	
80	Pipe	3
	<b>General Information:</b>	
	(Specify scale in line text.)	



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