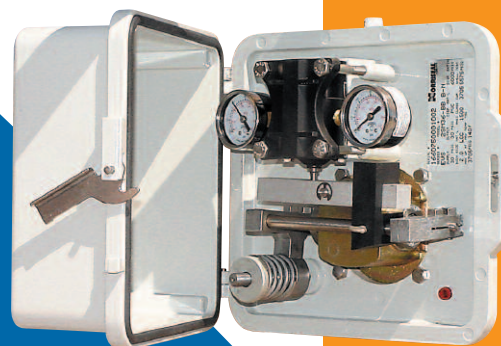


Series EVS Liquid Level Controllers

Zero-Leak Pilot:

Plus easy-to-service design



Series EVS pneumatic controllers are easy-access, back-mounted units that provide liquid level or interface control for gas separator and scrubber applications. EVS controllers feature patented Envirosave™ snap (on/off) pilots, which prevent fugitive emissions and reduce bleeding of valuable gases. The Envirosave™ pilot was rated at zero leakage in a U.S. EPA Natural Gas STAR Program report.*

Series EVS controllers operate using Norriseal's force-balance technology, which delivers proven reliability and long service life. Service-enhanced design makes units simpler to install and easy to access for routine maintenance. EVS controllers accommodate both low- and high-pressure applications, making them ideal for a wide range of uses in natural gas production, compression and gas processing.

Features

Service-Enhanced Design

- Controller body is back-mounted on the case for versatility and ease of installation
- Flush-mounted internals allow easy access
- Removable door
- Field-reversible output for direct or reverse action
- Field-configurable horizontal or vertical displacer

Advanced Operation

- Environmentally friendly Envirosave snap (on/off) pilot stops fugitive emissions and conserves valuable gases
- Field-proven, force-balance technology
- High sensitivity for either Top Level or Interface control

- 0 to 60 psig supply and output gauges are standard
- Rated for extreme low-temperature operation (–50°F or –46°C ambient operating temperature)

Extreme Reliability

- Weather-resistant sealed enclosure
- Polyurethane dry-powder coating complies with ASTM B117-90 (salt spray) and B2247-87 (humidity resistance)
- High-performance HSN seals standard
- Complies with NACE MR0175-2002
- 40-micron SST supply filter resists contamination of the pilot

*Natural Gas STAR Program report: Technical Support Documents; Options for Reducing Methane Emissions from Pneumatic Devices in the Natural Gas Industry; Appendix A: Gas Bleed Rate for Various Pneumatic Devices; August 18th, 2003; http://www.epa.gov/gasstar/documents/ll_pneumatics.pdf

This product is covered by U.S. Patents 4,700,738 and 6,497,246.

Contents

- 2 Specifications
- 2 Dimensions
- 3 How to Order
- 4 Model Code

NORRIS
PRODUCTION SOLUTIONS
A DOVER COMPANY

NORRISSEAL™
A DOVER COMPANY

**Engineered
Performance**



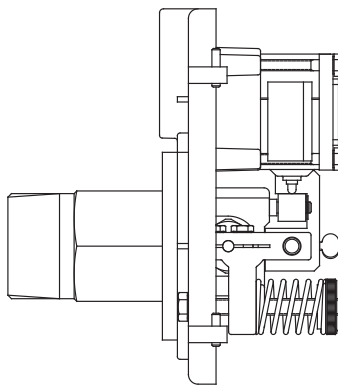
Specifications

PNEUMATIC PILOTS

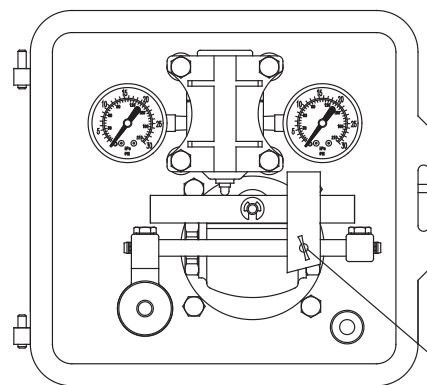
Output	
Envirosave, snap	0–20 psig, 0–30 psig
Optional: Throttle, proportional	3–15 psig, 6–30 psig
Snap, on/off	0–20 psig, 0–30 psig
Supply Pressure Required	
3–15 psig, 0–20 psig	20–30 psig (min.)
6–30 psig, 0–30 psig	35–40 psig (min.)
Ambient Temperature	
	–20° to +180°F (–29° to 82°C)
Pilot Flow Capacity	
Throttle C _v	0.394
Snap C _v	0.282
Envirosave™ C _v	0.282
Proportional Band Adjustment (Recommended adjustment for a full output pressure change over a percent of sensing element)	
Throttle	20–150%
Snap	7–55%
Envirosave™	7–55%
Body	
Throttle	Aluminum w/Aluminum Seat
Snap	Aluminum w/Aluminum Seat
Envirosave™	Aluminum w/Elastomeric Seat
Gasket/diaphragm	
	Nitrile
Internal Valving	
	Nylon
Filter Element	
	40 Micron SST
Screws & Nuts	
	SST

GENERAL

Repeatability	1.0% of output span
Dead Band	5.0% of input span
Linearity	1.75% of output span
Mechanical Disturbance Effects on Setpoint	1.0%
Specific Gravity	
Interface	0.035
Top level	0.35 to 2.00
Process Temperature Limits of Body	
	–50° to +400°F (–46° to +204°C)
Process Pressure Rating	
	1500 ANSI Class
LLC Body Material	
	ASTM A352 LCC –50° to +400°F (–46° to +204°C)
Displacers	
	PVC –20° to +140°F (–29° to +60°C) Acrylic –20° to +200°F (–29° to +93°C) 316 SST –70° to +400°F (–57° to +204°C)
Case and Cover	
	ASTM A380 die cast aluminum. Polyurethane dry-powder coating complies with ASTM B117-90 (salt spray) and B2247-87 (humidity resistance).
Pressure Gauges	
	Dual scale 0–60 psig/ 0–4 bar, bronze bourdon tube
Operational Service Condition	
	NACE MR0175-2002 compliant
Supply, Output and Case Vent/Relay Exhaust Connections	
	1/4" NPT, vent assembly installed. (Discard for piped exhaust.)
Total Weight	
	16 lbs.



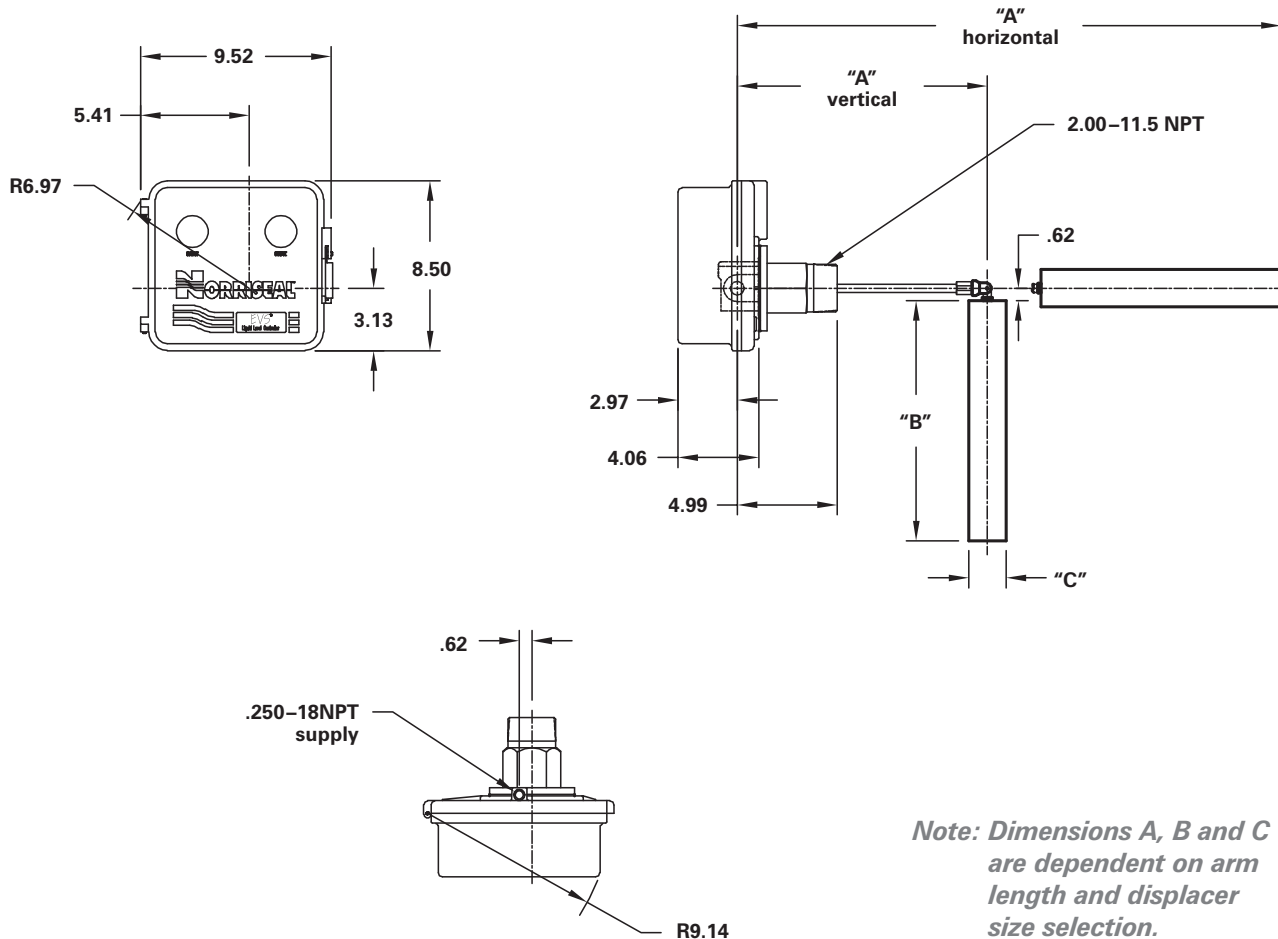
Level Adjustment
(Set Point)



Sensitivity Adjustment
(Dump Span)

Dimensions

All dimensions are in inches.



Note: Dimensions A, B and C are dependent on arm length and displacer size selection.

How to order

Determine the model number

The model number specifies the series, size connection, type of pilot, pilot action, seals and service condition.

Required application information

- Fluid media
- Process temperature (minimum and maximum)
- Process pressure
- Vessel size and diameter (distance of connection from bottom of vessel, any obstructions that may hinder performance)
- Displacer position (vertical or horizontal)
- Pilot action
- Top level or interface
- Arm length

Model Code

SIZE END CONNECTION			
Description	Code		
2.00	2		

BODY TYPE END CONNECTION			
Description	Code		
NPT (Screwed Male)	SM		

RATING BODY END CONNECTION			
ANSI	Rating*	Code	
1500	3705	36	

*Body pressure rating subject to selection of displacer (reference displacer chart below).

MATERIAL: BODY/SHAFT/BLOCK			
Body	Shaft	Bearing Block	Code
LCC Carbon Steel	316	316	—

PNEUMATIC PILOT MODE		
Description	Seat Material*	Code
Envirosave, Snap	Metal/Elastomer	B
Throttle, Proportional	Metal	T
Snap, on/off	Metal	S

*Same as seal material

DISPLACER CHART DISPLACER TEMPERATURE/PRESSURE RATING		
Material	Temp °F (°C)	Max Pressure
PVC	-20 to 140 (-29 to 60)	3705
Acrylic	-20 to 200 (-29 to 93)	3705
SST-2	-70 to 400 (-57 to 204)	2000*

Higher pressure SST displacers are available

MOUNTING CASE	
Type Mounting	Code
Back Mount	B

SERVICE CONDITION	
Description	Code
NACE MR0175-2002	N

PRESSURE GAUGES	
Description	Code
Bronze 0–60 psi (0–4 bar)	—

WETTED/SEAL MATERIAL		
O-Ring	Temp °F (°C)**	Code
HSN	–25 to 300 (–32 to 149)	B
Buna TH-70	–50 to 250 (–46 to 121)	Q
AFLAS	–25 to 400 (–32 to 204)	S

**Seal temperature rating subject to selection of displacer.

PILOT ACTION	
Pilot Action	Code
Direct Acting	D
Reverse Acting	R

2SM36-BBDB-N

Please contact your Norriseal representative for more details and assistance in specifying the optimal solution for your application.



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