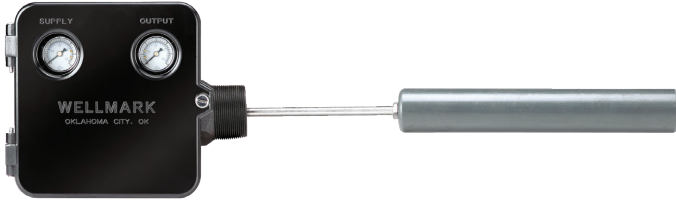


Wellmark Series 2001NB/2001E

Pneumatic & Electric Liquid Level Control - High Pressure Low-Bleed



(Right hand mount as shown)

Application

The Series 2001NB liquid level control, designed with a Die Cast Aluminum control box and cover, provides a rugged and versatile unit that is ideal for use on compressor scrubbers, separators and any production or process units that require liquid level control. Its proportional band and spring balanced displacement element allows for a wide range of adjustability for a variety of liquid level control requirements.

Features

- Low-bleeding pilot designs
- Sealed and vented case
- Snap, throttle
- Field reversible: left hand or right hand, direct or reverse acting
- Adjustable level and span
- Stainless steel dual bearings: standard for improved repeatability and sensitivity
- Horizontal or vertical displacer
- Interface control
- Carbon steel body
- All 316 stainless steel wetted internal parts
- Nace process, standard

Specifications

Connections

Process	2-in. NPT std. (other available)
Pilot	1/4-in. NPT female
Case exhaust	1/8-in. NPT female

Output

Throttle (proportional)	3-15 psig or 6-30 psig
Snap	0 to full supply

General

Repeatability	1.0% of full scale
Dead band	5.0% of input scale
Linearity	2.0% of full scale
Ambient temp. effect	1.0% @ -40° F 3.0% @ 180° F
Specific gravity	0.4 minimum
Temp. limits	-20° F to 200° F (displacer limiting factor)
Pressure rating	6,000 psi
Pilot operating pressure	Normal: 20-35 psi Overpressure protection: gauges are the limiting factor.
Maximum pressure without gauges	100 psig

WARNING

If supply gas is flammable or noxious, this product **MUST** be located in a well ventilated non-hazardous area or sealed and vented to a non-hazardous area.

Model code

Determining the model number

Example given: Standard model 2AS-S R D-A-VF

2AS-S R D-A-VF

A
B
C
D
E

A	CONNECTION	
2AS		2-in. screwed
4AF		4-in. flanged*
4ASU		4-in. union w/ S.G.
4ASUA		4-in Union AMCE w/S.G.

Note: Flanged connections available: 150#, 300#, and 600# ANSI

B	PILOT	
S		Snap
T		Throttle

D	CONTROL ACTION	
D		Direct
R		Reverse

C	MOUNTING	
R		Right hand
L		Left hand

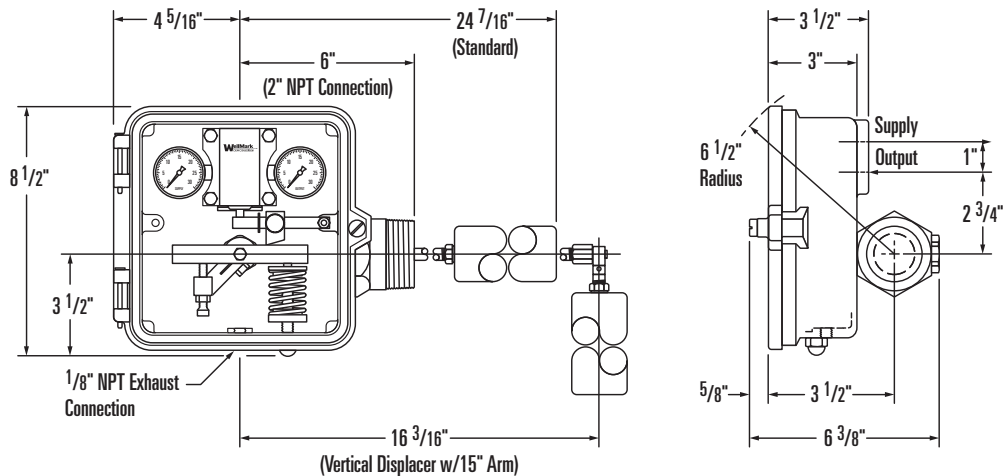
E	OPTIONS	
VF		Vertical Displacer*
C		Chain
M		Stainless Steel Displacer

Additional information required

- Body connection type: size and rating
- Fluid media
- Fluid temperatures: maximum and minimum
- Displacer sizes and materials:
 - 1.88" x 12" PVC (standard)
 - 1.88" x 12" Acrylic (optional)
 - 1.66" x 12" 316SS (optional)

*Displacer Arm Length: Arm length is figured from center line of control box. 15-in. Standard on vertical displacer, 12 1/2-in. Standard on horizontal displacer. (Other lengths available upon application)

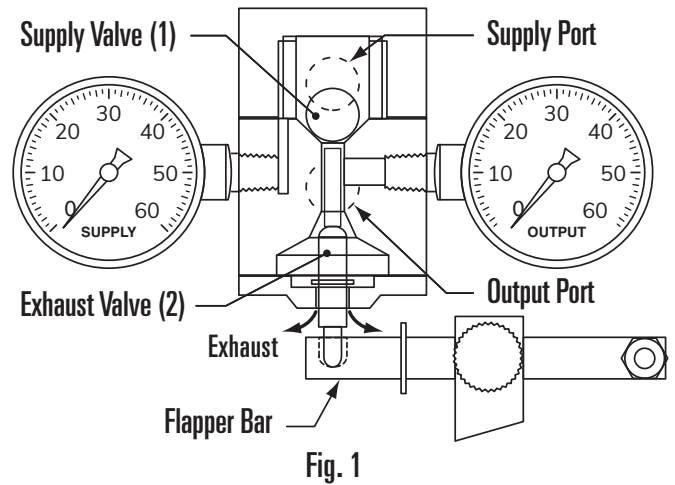
Dimensional Data



Snap-acting and throttle pilots

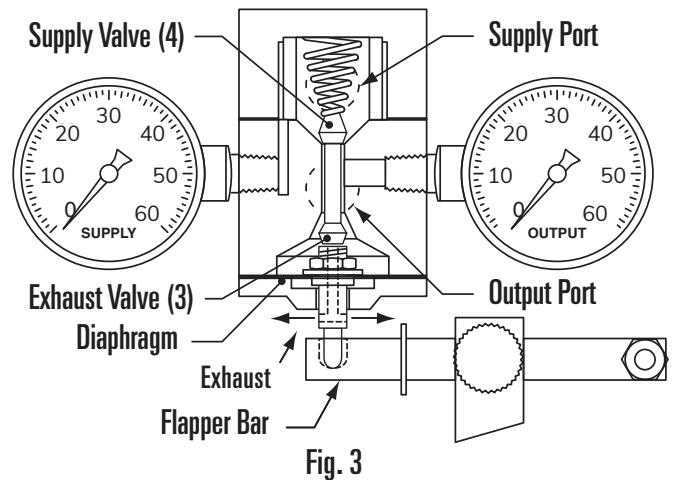
Snap-acting pilot - Standard metal-to-metal seats on/off flow action

The Snap-Acting Pilot is comprised of two inner valves. Valve (1) admits system supply gas to output. Valve (2) controls system exhaust from output. Valve (1), as shown in the closed position (Fig. 1), is held closed by force exerted from supply gas. When upward flapper bar force transferred to Valve (2) is sufficient enough to overcome supply force, the ball snaps upward, allowing supply pressure to output port, which operates the diaphragm motore valve (not shown nor included with the control). The spherical end of valve (2) closes the exhaust port the instant the ball snaps upward and remains seated against supply pressure until force on the valve diminishes. As force is removed from valve (2), causing it to unseat, a simultaneous action occurs, causing valve (1) to seat instantly, closing the supply port to output and opening output to exhaust, allowing the diaphragm motor valve to reverse it's action



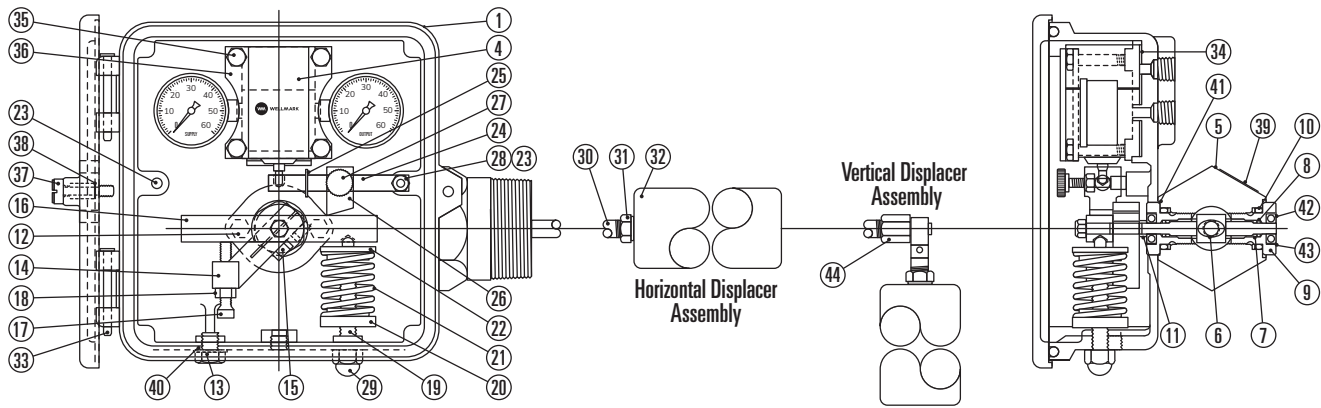
Throttle pilot - No-bleed modulating flow action

The Throttle Pilot utilizes a diaphragm, which creates a forced balance pilot (Fig 3). Output pressure acts upon the diaphragm causing it to push back at the same force being applied to the lower seat. More force on the seat produces a proportionate increase in pilot pressure. When the flapper bar of the control exerts upward force on the lower valve seat (3), it forces the lower seat closed against valve body and opens the supply valve (4). (Supply pressure enters the system, increasing until the control and diaphragm motor valve pressure equals the flapper bar force and produces a forced system balance.) The control will stay in this position until a decrease in the tank level reduces the force allowing exhaust, or an increase in the level produces an action as described. System supply gas does not flow while the pilot is in balance.



Part numbers

2001NB Pneumatic Liquid Level Control, High Pressure No-Bleed



ITEM	DESCRIPTION	QTY.
1	Control box, die cast aluminum	1
	Snap pilot assy., aluminum & 316 S.S.	1
4**	Throttle pilot assy., aluminum & 316 S.S.	1
	Zero bleed pilot assy., aluminum & 316 S.S.	1
5	Body, ASTM A-108GR. 1018	1
6	Pivot shaft, ASTM A-276 TY.316	1
7**	O-ring, Viton™†	2
8**	Back up ring, Teflon™†	2
9	Shaft retainer, ASTM A-276 TY.316	2
10**	O-ring, Viton	2
11	Spacer, ASTM A-276 TY. 316	1
12	Cap screw, 18-8 S.S.	2
13	Cap screw, 18-8 S.S.	1
14	Adjusting bar, aluminum	1
15	Cap screw, 18-8 S.S.	2
16	Torque bar, aluminum	1
17	Adj. Screw, ASTM A-276 TY.316	1
18	Jam nut, 18-8 S.S.	1
19	Stud, 18-8 S.S.	1
20	Lower spring guide, aluminum	1
	Spring, ASTM A-313, standard (yellow)	1
21	Spring, ASTM A-313, light (green)	1
	Spring, ASTM A-313, heavy (red)	1
22	Upper spring guide, aluminum	1
23	Stud, flapper bar, ASTM A-276 TY.316	2

ITEM	DESCRIPTION	QTY.
24	Flapper bar, ASTM A-276 TY.316	1
25	Tru-arc ring, PH 15-7 Mo	1
26	Fulcrum, aluminum	1
27	Thumb screw, S.S./Plastic	1
28	Ny-loc nut, stainless steel	2
29	Acorn nut, stainless steel	1
30	Displacer arm, STD., ASTM A-276 TY.316	1
	Displacer arm, VF, ASTM A-276 TY.316	1
31	Displacer bushing, ASTM A-276 TY.316	1
32	Displacer, PVC	1
33	Hinge pin, steel plated	2
34**	Gasket, neoprene	1
35	Cap screw, 18-8 S.S.	4
36	Pilot clamp, 304 S.S.	1
37	Panel screw, stainless steel	1
38	Retainer, stainless steel	1
39	Serial tag, aluminum	1
40**	Thread seal, steel / Buna-N	1
41**	Gasket, Viton	1
42	Bearing, stainless steel	2
43	Tolerance ring, stainless steel	2
44	Adapter V.D. assy., ASTM A-276 TY.316	1
45*	Cover glass, lexan	2
46*	Cover glass plate, S.S.	2
47*	Cover glass gasket, neoprene	2
48*	Screw, plated steel	8

*Not shown on model
 **Recommended spare parts.
 †Teflon™ is a registered trademark and a brand name (Teflon®) owned by Chemours
 †Viton™ is a registered trademark and a brand name (Viton®) owned by Chemours

Repair kits, model and part numbers

Repair kits

DESCRIPTION	QTY.
BAR FLAPPER KIT - PN 1126150	1
Nut	1
Retainer ring	1
Flapper bar	1
CLAMP KIT - PN 1120064	1
Cap screw	4
Clamp	1
SHAFT RETAINER KIT - PN 1123866	1
Shaft retainer	1
Bearing	1
Tolerance ring	1
STD. FULCRUM KIT - PN 1125055	1
Fulcrum	1
Thumb screw	1
BAR ADJUSTING LEVEL KIT - PN 1122572	1
Bar adjusting level	1
Jam nut	1
Cap screw	2
Adjusting screw	1
TORQUE BAR KIT - PN 1120108	1
Std. Torque bar	1
Lock nut	1
Sensitivity scale	1

DESCRIPTION	QTY.
SNAP PILOT KIT - PN 1124199	1
Filter	1
Gasket	1
Pin w/ retainer ring	1
	1
Ball	1
THROTTLE PILOT KIT - PN 1119478	1
Filter	1
Gasket	1
Diaphragm	1
Seat	1
Flat washer-nylon	1
Jam nut	1
Peanut	1
Spring	1
ZERO BLEED KIT - PN 1130536	1
Filter	1
Gasket	1
Upper O-ring	1
Lower seat	1

Charts indicate the kit and part descriptions, the quantities required and the part number for ordering.

Model and part numbers

MODEL NO.	DISPLACER ORIENTATION	PART NO.
2AS-SLD-A	HORIZONTAL-STANDARD	1123552
2AS-SRD-A	HORIZONTAL-STANDARD	1125295
2AS-TLD	HORIZONTAL-STANDARD	1125053
2AS-TRD	HORIZONTAL-STANDARD	1120256
2AS-SLD-VF	VERTICAL DISPLACER	1125511
2AS-SRD-VF	VERTICAL DISPLACER	1123952
2AS-TLD-VF	VERTICAL DISPLACER	1119517
2AS-TRD-VF	VERTICAL DISPLACER	1123247

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