



**Equipment Supplied by Smith**

Item	Description	Model No.
1	Air Eliminator with Petro-gard R.B. Head+	AR4-2040-1P**
2	Strainer	44-E3
3	P.D. Meter	F4-S1
4	Counter Printer	2612-G
5	Petro-gard Valve	(4") 200-23*
6	Automatic Temperature Compensator (Optional)	ATC

\*See Note 3.

\*\*Vertical Air Eliminator Model No. VAR-4-1P.

**Application Notes**

1. On-site pump is required if transport does not have a pump or if transport pump has insufficient pressure.
2. For below ground storage application:
  - a. Sump Metering System - Centerline of discharge pipe should be approximately 7" higher than centerline of metering system at some point between Petro-gard valve and below ground storage tank.
  - b. Vent from air eliminator may be connected to high point of line between Petro-gard valve and below ground storage tank.
3. For Petro-gard valve plumbing schematics for various products, refer to Bulletin No. SS03003.

**+Alternate Selections**

Reference Bulletin SS01057, Model DE Air Release Head Specifications, for systems with:

- Wide variations in pressure or rapid flow changes, use Items 1A and 5A.
- High viscosity (45 cP and higher), use Items 1B and 5B.

Item	Description	Model No.
1A	Air Eliminator with DE-1 Air Release Head	AR3-1030-1DE-1**
1B	Air Eliminator with DE-2 Air Release Head	AR3-1030-1DE-2**
5A	Electrical Block Valve	200-30A
5B	Block Valve (With Oil Filled Cover)	202

\*\*Vertical Air Eliminator Model Nos. VAR-4-1 DE-1 and VAR-4 DE-2, respectively.

## Specifications

### Approximate System Pressure Drop ( $\Delta P$ )

(System includes Air Eliminator, Strainer, Meter, and Petro-gard Valve).

Flow GPM	$\Delta P$ PSI†	Viscosity Centipoise	Approximate $\Delta P$ Multiplier*
100	4	10	1.02
200	6	200	1.10
300	9	500+	1.14
400	13	1,000+	1.17
600	21	2,000+	1.22
720	30		

†Data based on a 2.0 centipoise (cP), 0.82 specific gravity (sp. gr.) liquid.

+Meter with high viscosity clearances.

\* At 0.82 sp. gr.; for other sp. gr. products:

$$\Delta P @ \text{ sp. gr.} = \frac{\text{sp. gr.}}{0.82} \times \Delta P @ 0.82 \text{ sp. gr.}$$

### End Connections

#### All Items:

Standard: 4 Inch Class 150 ANSI Raised Face Flanges - Inlet and Outlet.

### Operating Conditions

#### Viscosity:

Standard: To 2,000 SSU maximum.

Optional: 2,000 to 5,000 SSU, add special meter clearances.

Over 5,000 SSU - consult factory.

#### Pressure:

Standard: 150 psig maximum working pressure.

Optional: Over 150 psig, consult factory and specify maximum working pressure required.

### Temperature:

Standard: -20° to 150°F.

Optional: 150° to 200°F, add high temperature meter clearances.

Other temperatures, consult factory.

### Registration

#### Counter/Printer:

Standard: Units - whole gallons. Maximum registration - reset counter, 5 digit; totalizer, 8 digit accumulative; printer, 7 digit accumulative.

Optional: Units - barrels, pounds, tons, liters, cubic meters, or kilograms (specify units and resolution, e.g., tenth barrels).

### Automatic Temperature Compensator (Optional)

#### ATC:

Standard: 0-150°F temperature range for fuel oil.

Optional: Other temperature ranges, consult factory (specify temperature range and product API or specific gravity at 60°F).

### Materials of Construction

	Housing	Internals	Seals
Meter:	Steel	Iron, Steel, Aluminum, Stainless Steel	Viton
Strainer:	Steel	Steel, Stainless Steel	Buna*
Air Eliminator:	Steel	Steel, Aluminum, Stainless Steel	Buna*
Petro-gard Valve:	Steel	Steel, Iron, Bronze, Stainless Steel	Buna*

\*Viton or EPR optional.

The specifications contained herein are subject to change without notice and any user of said specifications should verify from the manufacturer that the specifications are currently in effect. Otherwise, the manufacturer assumes no responsibility for the use of specifications which may have been changed and are no longer in effect.

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