

APS Series

Bulletin SS03033E Issue/Rev. 0.4 (2/16)

Smith Meter® Air Purger/Strainer

The **Smith Meter® Model APS**, a combined air purger/strainer, is used to prevent measuring faults due to gas and air pockets in products to be measured. The compact construction makes the APS ideal for use in loading applications. In conjunction with a Smith Meter® Vertical Meter and Valve, the APS offers an economical and space-saving solution.

Features

- **Compact Design** – Requiring minimal space.
- **Air Sense Switch** – For positive valve closure when air is present.
- **Removable Inner Basket** – For easy cleaning.

Standard Specifications

Design and Fabrication

According to AD 2000 Regulations.

EC – Approved by Weights & Measures.

Max. Working Pressure

16 bar.

Temperature Range

-29°C to +65°C with Buna-N Sealing.

Body Material

Carbon Steel to EN Standard.

Lifting Lugs

Flanges

Carbon Steel raised face according to DIN/EN PN16 or ANSI B16.5 – 150 lb. RF.

Strainer Cover

Type-B blind flange.

Basket

Outer galvanized, carbon steel. Inner basket 40 mesh stainless steel.



Automatic Air Release Head

Model RB, with switch mechanism.

Reed Switch

ATEX approved – Explosion-Proof EEx d II C T4.
max. 230V AC/DC 1.0A.

Elastomer Seals

RB Head – Buna-N.

Drain

1-1/2" NPT plugged.

Pressure Taps

1/2" NPT.

Supporting Legs

APS-35 only and APS-25 cast version.

Options

- **Temperature Range** – -12°C to +65°C with Viton sealing.
- **Temperatures/Sealings other than specified** – Consult factory.
- **Elastomer Seals** – RB head - Viton.
- **Inner Basket** – 10, 20, 40, or 80 mesh stainless steel.
- **Special Surface Treatment/Painting** – Inside/outside, consult factory.
- **Flanged Drain Connection** – 1-1/2" DIN/EN or ANSI flanges.
- **Differential Pressure Gauge Kit** – with isolation valves to monitor basket cleanliness.
- **Supporting Legs** (3) on APS-25.

Functional Description

After entry into the vessel, the enlarged cross section rapidly slows the velocity entering from the bottom. Inclined baffle plates deflect the flow in such a manner that it is guided under the automatically operating air release head. The flow then passes the basket filter through the filter chamber to the outlet nozzle, which is directly connected to the filter chamber.

The automatically operating air release head for discharging any air or gas collected, is fitted with a float operated switch which activates a shut-off valve installed downstream from the meter to close if any air or gas is present.

The valve does not re-open until all air or gas has been released.

Installation

Air Purger should be installed downstream from the pump, as close to the meter as possible. The air release should be piped to a vapor recovery system or to a convenient and safe point of discharge. (Provide the end of the air release pipe with a suitable flame arrestor.) The condensate return line can be discharged into a suitable container or back to storage.

Modeling

Example:

APS — 25 — 2 — 4A — B — 40 — T0 — B — G0 — 0

Type of Equipment

APS – Air Purger/Strainer

APS Model

25 – APS-25

35 – APS-35

Working Pressure

2 – 16 bar

Flange Size

3A – 3"-150 ANSI

3D – DIN 80

4A – 4"-150 ANSI

4D – DIN 100

6A – 6"-150 ANSI

6D – DIN 150

C4A – 4"-150 ANSI**

C4D – DIN 100**

Strainer Cover

B – Blind Flange

Inner Liner Mesh Size

10 – 10 Mesh

40 – 40 Mesh

20 – 20 Mesh

80 – 80 Mesh

APS Legs

L – With Legs

0 – Without Legs

Miscellaneous Options

G0 – Not Required

G1 – Differential Pressure Gauge Bu

G2 – Differential Pressure Gauge Vi

G3 – Other Gauge

Design Standards*

A – Smith Meter Ellerbek Standard

B – PED-F Product Liquid (VP < 1,5 bar)

C – PED-G Product Gas (VP > 1,5 bar)

D – PED-G Product Gas, Inspection Module

G certified (TÜV)

Elastomer Seals

T0 – Buna-N

T1 – Viton

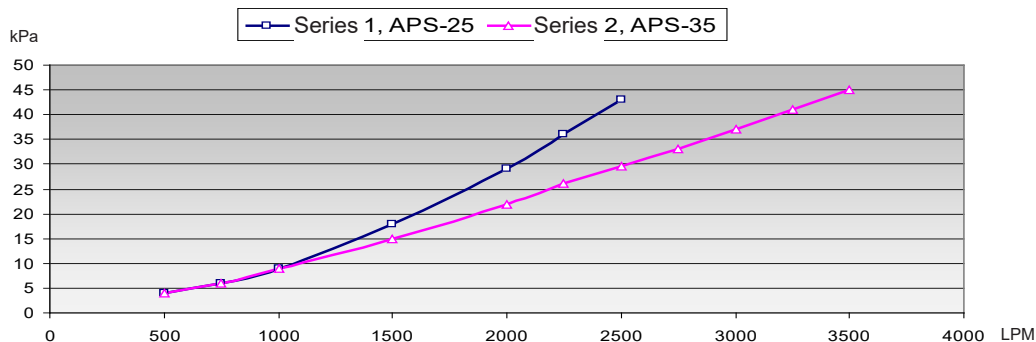
T2 – Other

* PED required for all European Countries. Equipment must be manufactured by Ellerbek, Germany facility.

** only for APS-25 - cast version

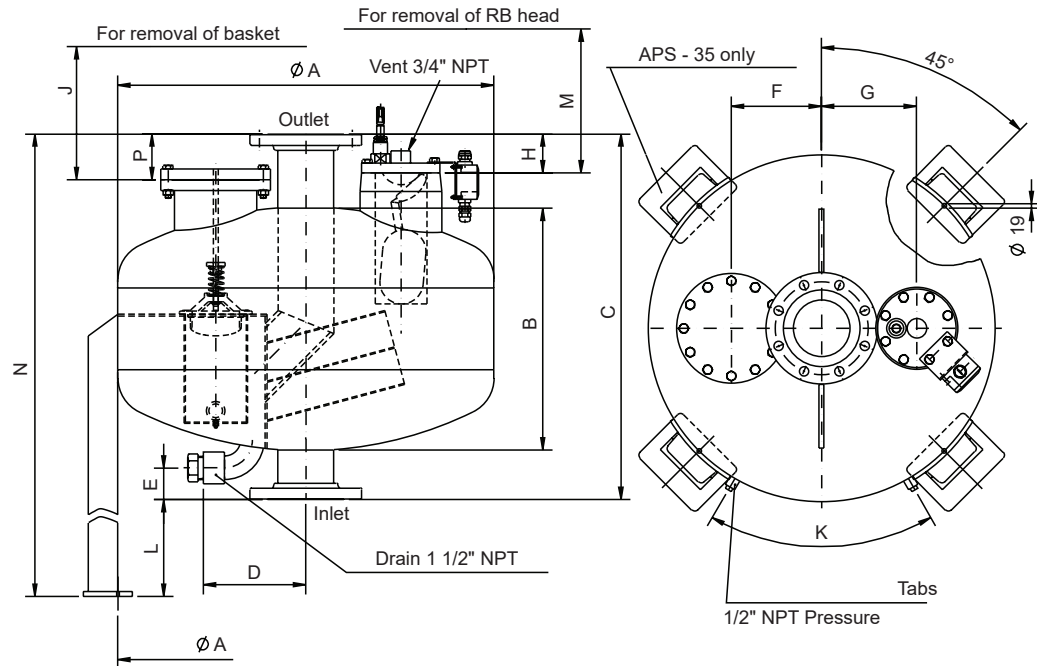
Pressure Drop

Air Purger Strainer, Model APS with 40 Mesh Basket

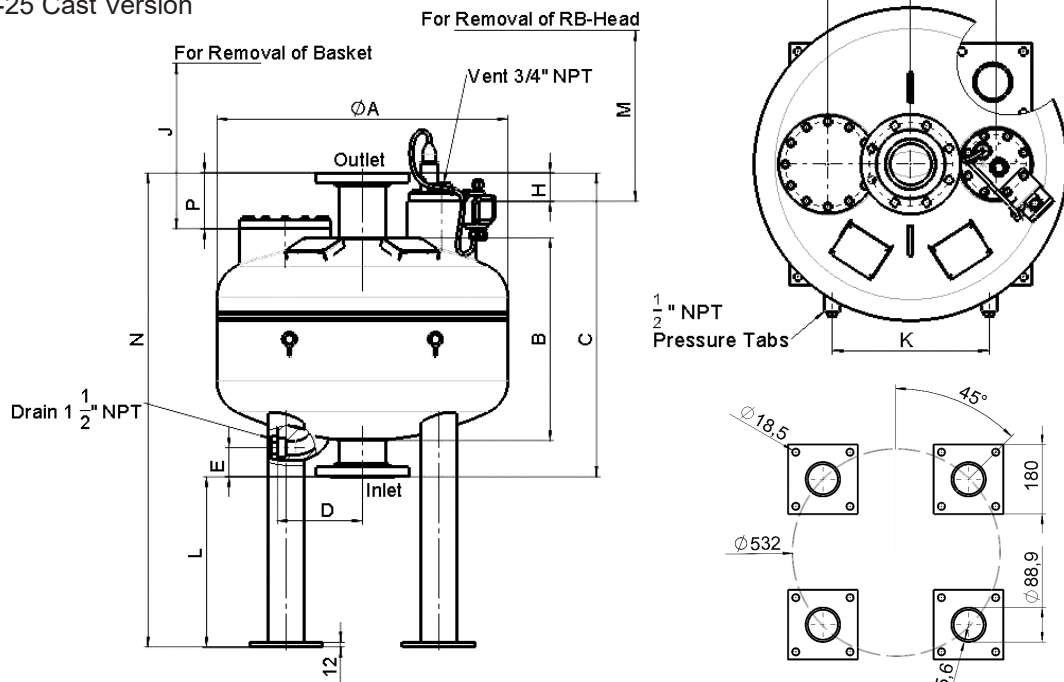


Dimensions And Weights

APS-25 and APS-25-Welded Version



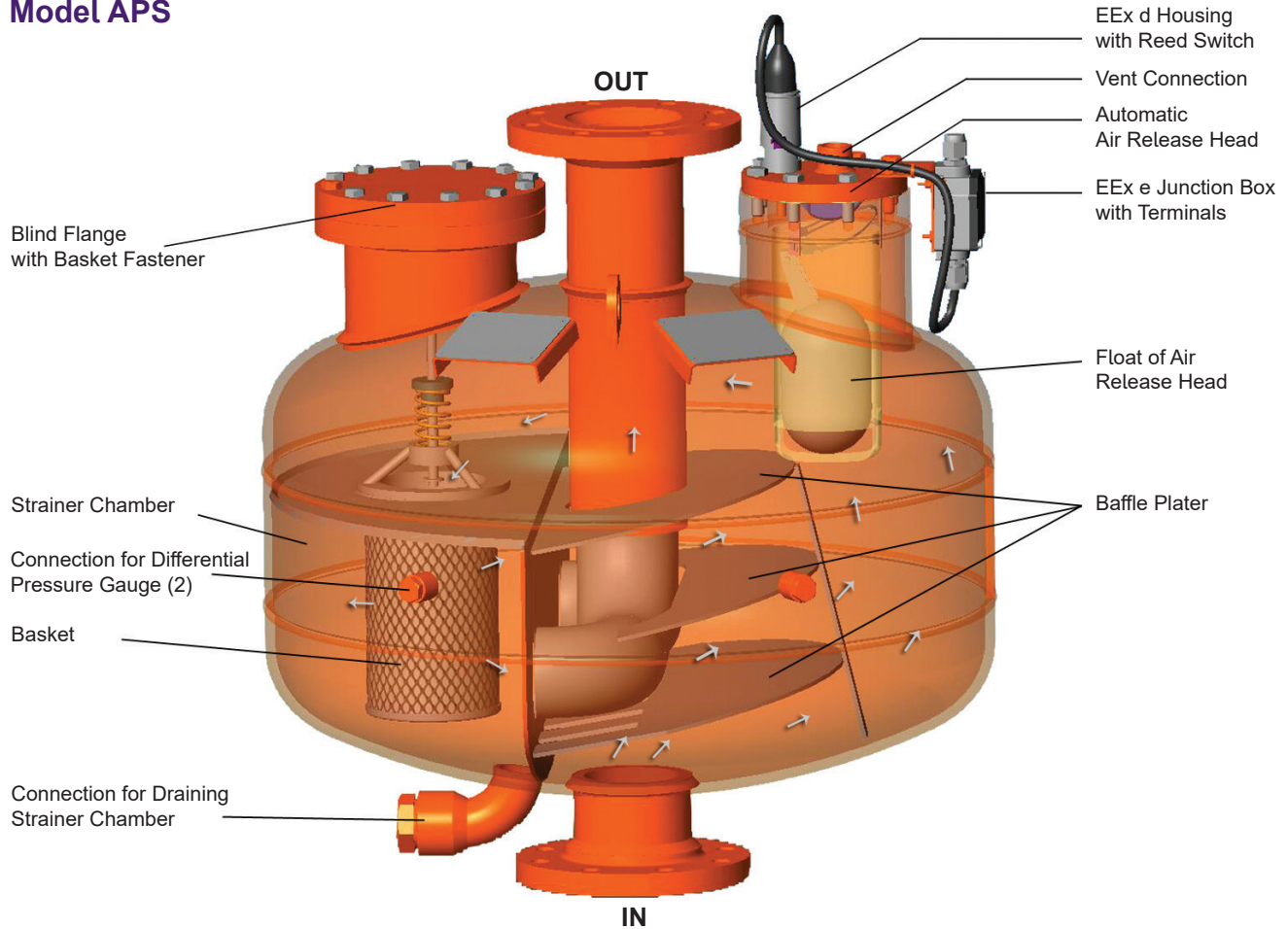
APS-25 Cast Version



	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Approx. Weight KG (pounds)
APS-25	711 (28.0)	500 (19.7)	750 (29.5)	210 (8.3)	65 (2.6)	190 (7.5)	195 (7.7)	70 (2.8)	355 (14.0)	60°	420 (16.5)	440 (17.3)	1170 (46.1)	90 (3.5)	183 (403)
APS-25 cast	717 (28.2)	500 (19.7)	750 (29.5)	210 (8.3)	72 (2.8)	190 (7.5)	195 (7.7)	70 (2.8)	355 (14.0)	360 (14.1)	420 (16.5)	440 (17.3)	1170 (46.1)	138 (5.4)	
APS-35	850 (33.5)	640 (25.2)	980 (38.6)	242 (9.5)	92 (3.6)	215 (8.5)	215 (8.5)	130 (5.1)	455 (17.9)	45°	420 (16.5)	440 (17.3)	1400 (55.1)	150 (5.9)	280 (617)

Note: Millimetres to nearest whole mm (inches to nearest tenth), each independently dimensioned from respective engineering drawings.

Model APS



Model APS-25-2-4-B

Revisions included in SS03033E Issue/Rev. 0.4 (2/16):

Total revision.

March 2019 - updated branding and contact information.

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.