

Metering system components require protection against the damage potential of dirt and debris. Smith Meter™ Pipeline Strainers provide this protection for 4" and larger turbine and positive displacement meter applications.

## Standard Features

- 304 Stainless Steel Perforated Plate Basket
- Blind Flange-Type Cover with Lifting Lug
- ½" NPT Differential Pressure Taps
- NPT Vent and Drain Taps
- Basket Seal

## Options

- 304 Stainless Steel Basket Liners in 10, 20, or 40 mesh.
- Air Release Kit for static air elimination.
- Basket Differential Pressure Gauge Kit with isolation valves to monitor basket cleanliness. Also available with reed **Switch Kit** adjustable from 0 – 30 psi (0 – 207 kPa) for remote indication.
- Quick Closure style covers.
- Design and Fabrication in Accordance with ANSI B31.3.
- ASME Section VIII design and fabrication.
- NACE Compliance. Pressure containing components in compliance with the material requirements of the latest revision of NACE standard MR-01-75 for hydrogen sulfide applications.

## Operating Specifications

### Maximum Working Pressure

Flange Class	Working Pressure @ 100°F (93.3°C) PSI (kPa)
ANSI B16.5, 150 RF	285 (1965)
ANSI B16.5, 300 RF	740 (5102)
ANSI B16.5, 600 RF	1480 (10,204)



8" - 150 Pound Strainer With Optional Quick Closure and Flanged Drain

### Temperature Range

Elastomer	Range
<b>Non-Asbestos</b> Blind Flange Cover Fiber Gasket	-20°F to 500°F (-29°C to 260°C)
<b>Optional Cover Seals</b>	C/F
<b>Buna-N</b> (Optional RB Air Release Head)	-20°F to 225°F (-29°C to 107°C)
<b>Viton</b> (Optional RB / UB Air Release Head)	0°F to 400°F (-18°C to 205°C)
<b>EPR</b> (Optional RB Air Release Head)	-20°F to 300°F (-29°C to 149°C)
<b>Teflon</b> (Optional UB Air Release Head)	-20°F to 450°F (-29°C to 232°C)

### Baskets

Perforation/Mesh	Opening Size	Open Area
304 SS Perforated Plate (Standard)	1/8" holes on 3/16" Centers	40%
10 Mesh Liner	0.075"	56%*
20 Mesh Liner	0.034"	46%*
40 Mesh Liner	0.015"	36%*

\*Open area for liner only, not a combination of liner and perforated plate.

## Standard Materials of Construction

### Strainer Body / Internals

Housing	Carbon Steel
Flanges	Carbon Steel
Basket	304 Stainless Steel
Optional Mesh Liners	304 Stainless Steel
Cover Seals	Non-Asbestos Gasket (Blind Flange-Type Cover); Buna-N Quick Closures)
Basket Seal	Buna-N

### Optional Air Release Kits

Kit	Pressure Ratings	Seals	Materials
RB-Type	Up to 300 psi (2068 kPa)	Buna-N, Viton, EPR	Housing: Carbon Steel; Float: Stainless Steel; Internal Parts: Aluminum, Stainless Steel
UB-Type	Up to 720 psi (4964 kPa)	Viton, Teflon	Housing: Carbon Steel; Float: Stainless Steel; Internal Parts: Stainless Steel
HP-Type	For 1480 psi (9929 kPa)	Buna-N	Housing: Cast Iron; Float: Stainless Steel; Internal Parts: Stainless Steel

### Pressure Drop

Base Model	Meter Reference	Flow Units (1)	Nominal Flow Range		Pressure Drop Max. Flow (2)	
			min.	max.	psi	Kg/cm <sup>2</sup>
03-_-6-B	E3	GPM	80	500	C/F	C/F
		BPH	115	720		
		m <sup>3</sup> h	18	115		
04-_-10-B	F4	GPM	120	720	2.5	0.18
		BPH	172	1,030		
		m <sup>3</sup> h	27	163		
06-_-12-B	G6	GPM	200	1,200	2.0	0.14
		BPH	286	1,714		
		m <sup>3</sup> h	45	273		
06-_-18-B	6" Sentry	GPM	350	2,800	1.25	0.09
		BPH	500	4,000		
		m <sup>3</sup> h	80	635		
08-_-14-B	H8	GPM	320	1,750	1.5	0.11
		BPH	457	2,500		
		m <sup>3</sup> h	73	400		
08-_-20-B	8" Sentry	GPM	700	6,440	8.0	0.56
		BPH	1,000	9,200		
		m <sup>3</sup> h	160	1,460		
10-_-16-B	JA10	GPM	490	2,450	1.5	0.11
		BPH	700	3,500		
		m <sup>3</sup> h	110	550		

Base Model	Meter Reference	Flow Units (1)	Nominal Flow Range		Pressure Drop Max. Flow (2)	
			min.	max.	psi	Kg/cm <sup>2</sup>
10-_-18-B	JB10	GPM	658	3,290	2.0	0.14
		BPH	940	4,700		
		m <sup>3</sup> h	148	740		
10-_-24-B	10" Sentry	GPM	1,050	11,200	10.0	0.70
		BPH	1,500	16,000		
		m <sup>3</sup> h	250	2,540		
12-_-18-B	K12	GPM	1,008	5,040	3.5	0.25
		BPH	1,440	7,200		
		m <sup>3</sup> h	228	1,140		
12-_-20-B	K12	GPM	1,008	5,040	2.5	0.18
		BPH	1,440	7,200		
		m <sup>3</sup> h	228	1,140		
12-_-26-B	12" Sentry	GPM	1,750	15,050	9.0	0.63
		BPH	2,500	21,500		
		m <sup>3</sup> h	400	3,400		
16-_-24-B	M16	GPM	1,750	8,750	3.0	0.21
		BPH	2,500	12,500		
		m <sup>3</sup> h	400	2,000		
16-_-36-B	16" Sentry	GPM	2,450	23,450	9.3	0.65
		BPH	3,500	33,500		
		m <sup>3</sup> h	556	5,325		

(1) Metric Units are nominal and may not convert precisely.

(2) Estimated Pressure Drop based upon 0.8 s.g., 2.0 cP liquid, clean perforated plate basket with 1/8" holes on 3/16" centers. For pressure drop with liners, multiply by the following factors: 10 mesh: x 1.25; 20 mesh: x 1.30; 40 mesh: x 1.35.

# Modeling\*

Example: 10 - 1 - 18 - B - 3 - PP - N - PL - T - 0

## Flange Size

04 - 4" 10 - 10"  
 06 - 6" 12 - 12"  
 08 - 8" 16 - 16"

## ANSI Flange Class/Max. Working Pressure @ 100° F (38° C)

1 - Class 150 RF / 285 psi  
 3 - Class 300 RF / 740 psi  
 6 - Class 600 RF / 1480 psi

## Body Diameter (Inches)

## Closure Style

**B** - Blind Flange  
 (Standard - All Ratings)  
**S** - Swing Bolt  
 (Optional for 150# Only)  
**D** - Davit  
 (Optional for 300# / 600# Only)

## Design

**0** - Designed per Smith Meter Standard  
**3** - ANSI B31.3 (Standard)  
**8** - ASME Sect VIII

## Special Features

**0** - None  
**D** - Dye Penetrant  
**M** - Mag Particle  
**N** - Nace  
**S** - Special  
**X** - 100% X-ray

## Differential Pressure Gauge/Switch

**T** - None - Pressure Taps Only (Standard)  
**G** - Differential Pressure Gauge  
**S** - Differential Pressure Gauge & Switch Kit

## Vent / Air Release

**PL** - Plugged NPT Vent Port (Standard)  
**R1** - RB Head w/ Buna-N  
**R2** - RB Head w/ Viton  
**U1** - UB Head w/ Viton  
**U2** - UB Head w/ Teflon  
**HP** - High Pressure Type w/ Buna-N, 1480 psig w.p.

## Cover Seals

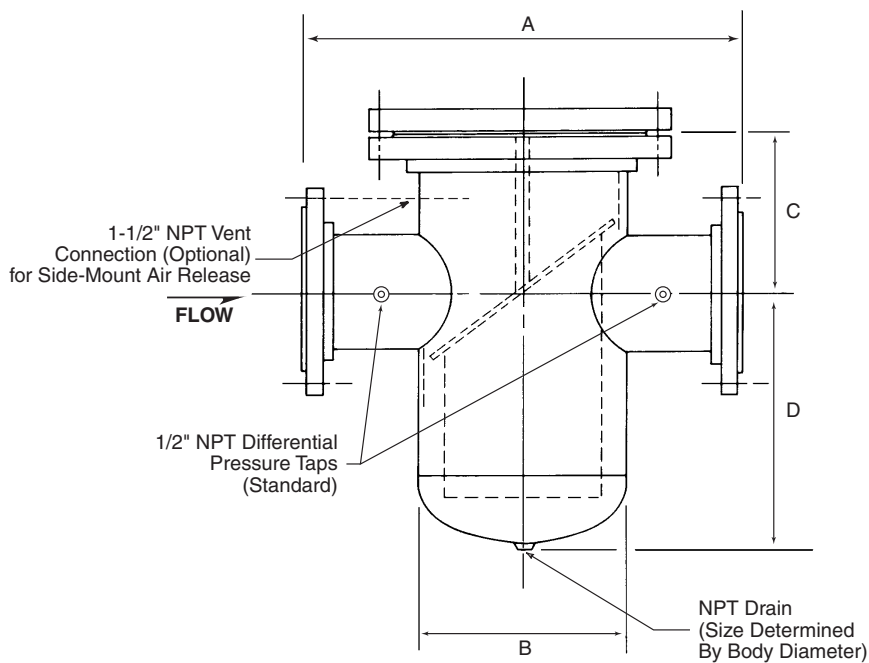
**N** - Non-Asbestos Fiber Gasket (Standard)  
**B** - Buna-N (Swing Bolt and Davit Style Closures)  
**S** - Special

## Basket

**PP** - 304 SS Perforated Plate - No Liner (Standard)  
**10** - Basket + 10 Mesh 304 SS Permanent Liner  
**20** - Basket + 20 Mesh 304 SS Permanent Liner  
**40** - Basket + 40 Mesh 304 SS Permanent Liner  
**SP** - Special

\* Standard Design Includes Carbon Steel Body, Blind Flange-Type Cover w/ Lifting Lug & Non-Asbestos Fiber Gasket, 304 SS Perforated Plate Basket, NPT Differential Pressure, Vent and Drain Taps, Fabrication in Accordance with ASME B31.3

## Dimensions and Weights



**Note:** Dimensions are for reference only. Actual certified dimensions available after order placement and pending acceptance of approval drawings.

ANSI Flange Class									
	A			B	C	D	Estimated Net Weight Lbs. (kg)		
Base Model	150	300	600	150/300/600			150	300	600
03_-6-B	13.5 (343)	20.9 (531)	C/F	6 (152)	7.5 (190)	11.6 (295)	C/F	C/F	C/F
04_-10-B	18 (457)	20 (508)	23 (584)	10 (254)	C/F	C/F	315 (143)	C/F	C/F
06_-12-B	25 (635)	25 (635)	30 (762)	12 (305)	C/F	C/F	420 (190)	C/F	C/F
06_-18-B	46 (1,168)	46 (1,168)	50 (1,270)	18 (457)	C/F	C/F	790 (358)	C/F	C/F
08_-14-B	28 (711)	28 (711)	34.5 (876)	14 (356)	C/F	C/F	590 (268)	C/F	C/F
08_-20-B	48 (1,219)	48 (1,219)	52 (1,321)	20 (508)	C/F	C/F	C/F	C/F	C/F
10_-16-B	32 (813)	34 (864)	36 (914)	16 (406)	C/F	C/F	725 (329)	C/F	C/F
10_-18-B	36 (914)	36 (914)	42 (1,067)	18 (457)	C/F	C/F	870 (395)	C/F	C/F
10_-24-B	57 (1,448)	57 (1,448)	62 (1,575)	24 (610)	C/F	C/F	C/F	C/F	C/F
12_-18-B	36 (914)	36 (914)	42 (1,067)	18 (457)	C/F	C/F	950 (431)	C/F	C/F
12_-20-B	C/F	C/F	C/F	20 (508)	C/F	C/F	1120 (508)	C/F	C/F
12_-26-B	57 (1,448)	57 (1,448)	62 (1,575)	26 (660)	C/F	C/F	C/F	C/F	C/F
16_-24-B	44 (1,118)	44 (1,118)	C/F	24 (610)	C/F	C/F	1600 (726)	C/F	C/F
16_-36-B	68 (1,727)	68 (1,727)	C/F	36 (914)	C/F	C/F	C/F	C/F	C/F

**Note:** Dimensions — Inches to the nearest tenth (millimetres to the nearest whole mm), each independently dimensioned from respective engineering drawings.

Revisions included in SS03038 Issue/Rev. 0.2 (5/05):

Revised Modeling Code, ANSI B31.3 is now Standard Design. Deleted ANSI B31.4. Added Basket Seal feature.

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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