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MAHLE Industry

Simplex Cast Basket Strainers
Nowata KS Series ANSI 150/300 Class

Sizes 1" to 8" Flanged, 3/8" to 3" NPT

1. Introduction

The KS series, simplex basket strainers in cast 316 stainless steel or carbon steel, are in-line T-strainer housings and are commonly installed into pipeline systems to remove debris from the pipeline flow. Basket strainers are commonly used in pipelines where debris loading is high and the collection of solids is required. Straining is achieved by using a perforated or mesh lined straining basket, inside the strainer housing. It is important to note that the proper size of a basket strainer is determined by its job function, not by the size of the pipeline.

These ANSI class 150 or 300 strainers are available with NPT threaded or flanged (RF) end connections, with inlet & outlet sizes available from 3/8 to 8 inches. NPT connections can also be rated for ANSI 300 class service. Housings come equipped with a standard 1/16" perforated 304 stainless steel basket and 1/4" NPT vent.

The KS series, simplex basket strainer, with its large body and sizeable basket, can store large amounts of debris which increases the time between servicing. Housings have a machined seat with o-ring that allows fine filtration, down to 40 microns, by preventing debris bypass.

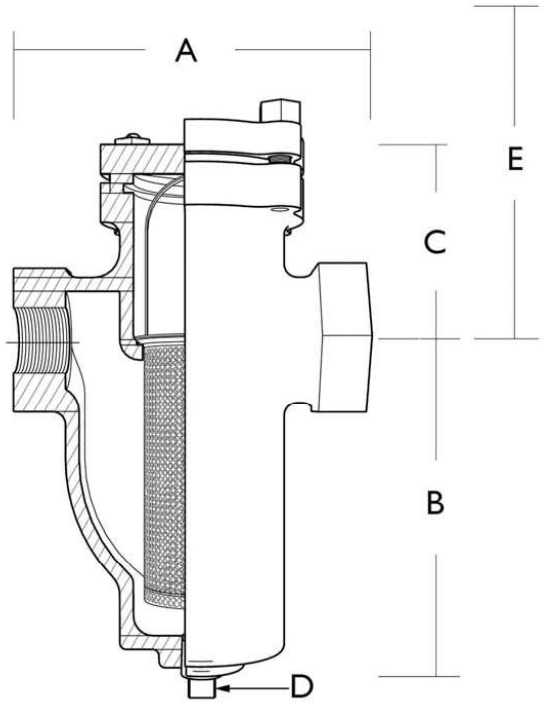
Typical applications include: petroleum, oil and gas, water and wastewater, pulp and paper, chemical and petrochemical, transportation, marine, and food industries.

Features

- Cast carbon steel or 316 stainless steel construction
- ANSI class 300 rating with NPT connections
- ANSI class 150 Rating with NPT or flanged connections
- 304 non-asbestos flat closure gasket as standard (Other materials available)
- Viton or Buna basket seat o-ring
- Bolted flange closure standard
- 1/4 inch NPT vent with plug
- 304 SS perforated basket included as standard
- Variety of basket material, perforation and mesh sizes

2. Dimensions

	Inlet and Outlet Size											
Dimensional Data	**3/8**	**1/2**	**3/4**	**1**	**1-1/4**	**1-1/2**	**2**	**2-1/2**	**3**	**4**	**6**	**8**
A Face to Face (+/- 1/16") - Threaded	4.6	4.6	4.6	5.3	6.31	6.3	8.3	11.3	11.3	n/a	n/a	n/a
A Face to Face (+/- 1/16") - Flanged	n/a	n/a	n/a	5.7	n/a	7.0	9.0	10.4	11.8	15	20.3	27.4
B Center Line to Bottom - Threaded	4.0	4.0	4.0	4.7	6.5	6.5	7.9	8.8	11.4	n/a	n/a	n/a
B Center Line to Bottom - Flanged	n/a	n/a	n/a	4.7	n/a	6.5	8.0	8.8	11.5	13.8	20	24.3
C Center Line to Top - Flanged	2.5	2.5	2.5	2.75	3.0	3.0	3.7	4.0	4.5	n/a	n/a	n/a
C Center Line to Top - Flanged	n/a	n/a	n/a	3.0	n/a	3.0	3.8	4.0	4.8	6.2	7.9	10.5
D NPT Blow-Off - Both	3/8	3/8	3/8	3/8	1/2	1/2	3/4	1.0	1.0	2.0	2.0	2.0
E Clearance Needed for Screen Removal	5.0	5.0	5.0	5.9	8.13	8.2	10.2	11.9	14.8	20	29.2	37.2
Assembled Weight Threaded (Lbs.)	6.0	6.0	6.0	8.0	16	16	25.5	49	51	n/a	n/a	n/a
Assembled Weight Flanged (Lbs.)	n/a	n/a	n/a	11	n/a	19.5	31.5	44.5	65.5	118	266	518
Flow Coefficient Cv	14	14	14	24	43	43	70	90	140	290	780	1600



All dimensions are in inches, except where noted. The following housing dimensions are approximate values and are not intended for piping specifications.

Due to our continuing program of product improvement, dimensions are for reference only and subject to change without notice.

Illustration shows threaded end connection unit only. Table above contains dimensions for both threaded and flanged type units.
Threaded (NPT) End Sizes: 3/8" to 3"
Raised Face Flanged End Sizes: 1" to 8"

Standard Screen Selections				
Inlet/Outlet Sizes	**Liquid Service**	**Open Area**	**Steam**	**Open Area**
3/8" to 2"	1/16 (0.0625)	41%	1/32 (0.033)	28%
2.5" to 8"	1/16 (0.0625)	41%	3/64 (0.045)	36%

3. Additional Information

ANSI Class 150 Strainers Working Pressures & Temperatures (non-shock)		
ANSI Class 150	**KS Series Carbon Steel** (A216 Gr WCB)	**KS Series 316 Stainless Steel** (A351 Gr CF8M)
W.O.G. (Water, Oil, Gas)	285 psi at 100 °F	275 psi at 100 °F
Saturated Steam	150 psi at 366 °F	150 psi at 366 °F
Maximum Liquid	80 psi at 800 °F	20 psi at 1000 °F

ANSI Class 300 Strainers Working Pressures & Temperatures (non-shock)		
ANSI Class 300	**KS Series Carbon Steel** (A216 Gr WCB)	**KS Series 316 Stainless Steel** (A351 Gr CF8M)
W.O.G. (Water, Oil, Gas)	740 psi @ 100 °F	720 psi @ 100 °F
Saturated Steam	300 psi @ 420 °F	300 psi @ 420 °F
Maximum Liquid	400 psi @ 800 °F	350 psi @ 1000 °F

4. Typical Model Number

Example

K	S	S	15	F	2	F	B

Nowata Strainer
K = Nowata strainer

Cast Type
S = Simplex style model

Body Material
S = 316 stainless steel
C = Carbon steel

Pressure rating
15 = 150 psi
30 = 300 psi

Connection Type
N = NPT threaded
F = Flanged

Connection Size Options

F = 3/8"	L = 2-1/2"
G = 1/2"	3 = 3"
H = 3/4"	4 = 4"
1 = 1"	6 = 6"
K = 1-1/2"	8 = 8"
2 = 2"	

Seal Material
F = Flat gasket
N = Buna-N
V = Viton

Closure Type
B = Bolted flange