

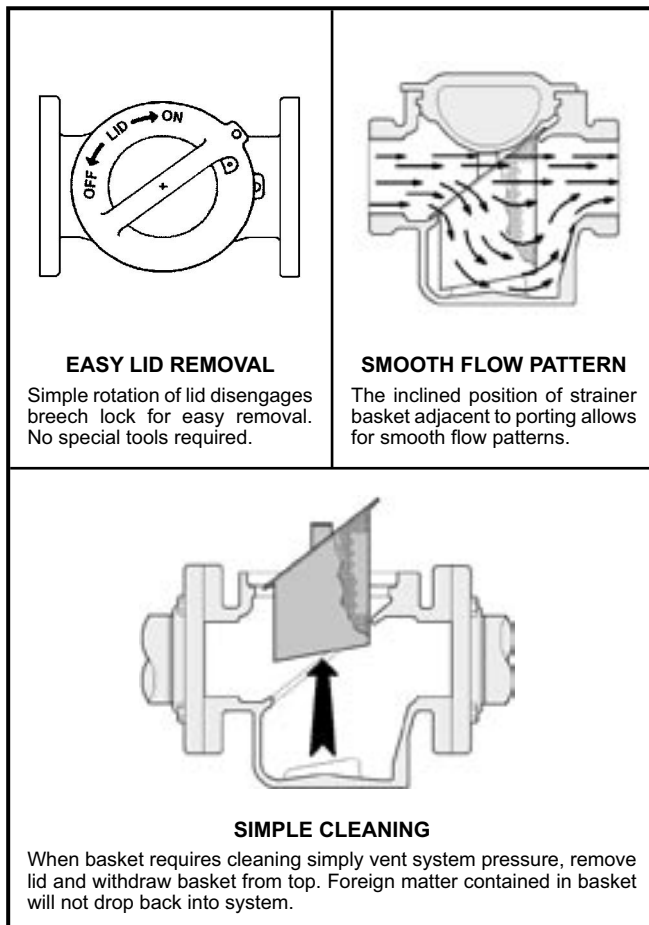
VIKING® LID-EASE PUMPS

BASKET-TYPE LINE STRAINERS

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FEATURES

- LIGHT IN WEIGHT
- EASY TO CLEAN
- LOW PRESSURE DROP
- SMALL IN OVERALL DIMENSION
- VIKING QUALITY CONSTRUCTION IN ALUMINUM, CAST IRON, DUCTILE IRON OR STAINLESS STEEL



Viking Lid-Ease® Simplex Strainers provide protection for your pumping system with low pressure drop. The inclined position of the strainer basket adjacent to the porting provides smooth flow patterns not found in conventional basket-type strainers.

Viking's Lid-Ease Simplex Strainers reduce cleaning problems encountered with conventional strainers. Simple lid rotation disengages the breech lock type lid permitting easy removal of the basket. Basket is removed from the top of the strainer, possibly eliminating the need to completely drain the system or allowing foreign matter to drop back into the line when the strainer is cleaned. The relatively small port-to-port dimensions of the strainer allow easy installation.



Viking Lid-Ease Simplex Strainers are designed with a weatherseal lid to protect the breech lock area from exterior elements and prevent air infiltration into the pump suction. Strainers are also equipped with a drain plug for complete draining of strainer if needed.

Tapped, flanged or grooved end ports available. See page 2.

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VIKING® LID-EASE PUMPS

BASKET-TYPE LINE STRAINERS

MODEL NUMBERING CODES

LID-EASE® STRAINER NUMBERS / AVAILABILITY

F - 1 020 - I IRN - 01 3

PRODUCT:
F = Strainer

PRODUCT TYPE:
1 = Simplex Type

PORT SIZES:
007 = ¾"
010 = 1"
013 = 1¼"
015 = 1½"
020 = 2"
030 = 3"
040 = 4"
060 = 6"
080 = 8"

PORT TYPES:
I = Internal Tapped Threads
F = Flanged
G = Grooved Ends

MATERIAL:
DUC = Ductile Iron
IRN = Iron
ALM = Aluminum
SST = Stainless Steel

BASKET MESH:
0 = No Mesh
1 = 10 Mesh
2 = 20 Mesh
3 = 40 Mesh
4 = 60 Mesh
5 = 80 Mesh
6 = 100 Mesh

ELASTOMER SEAL:
01 = Buna-N
02 = Viton®*
03 = Teflon®* Encapsulated

Example: F-1020-IIRN-013. A cast iron simplex strainer with 2" NPT ports, Buna-N O-Ring seal, 40 mesh basket.

* Teflon® and Viton® are registered trade names of DuPont Dow Elastomers L.L.C.

VIKING® LID-EASE PUMPS

BASKET-TYPE LINE STRAINERS

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FEATURES – SPECIFICATIONS



Tapped Ports
3/4", 1", 1 1/4", 1 1/2", 2" & 3"



Grooved End Ports
2", 3", 4" & 6"



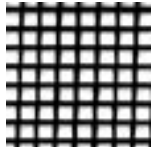
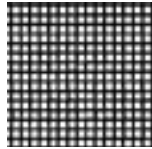
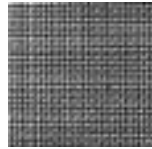
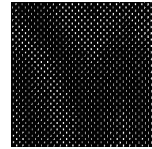
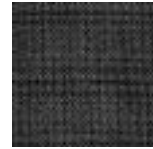
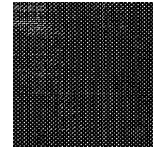
Flanged Ports
2", 3", 4", 6" & 8"

Strainer bodies are available in aluminum, cast iron, ductile iron, or stainless steel materials. For normal use, baskets of double wall construction are recommended. The inner stainless steel screen (10, 20, 40, 60, 80 or 100 mesh) is rigidly supported by a perforated stainless steel basket having maximum hoop strength so that a high

differential pressure over the basket will not burst or distort the basket to the extent that it cannot be withdrawn from the body.

Stainless steel or ductile construction can also be used for steel requirements in the chemical, petrochemical and pharmaceutical industries.

SPECIFICATIONS — AVAILABLE MESH SIZES

						
Mesh	10	20	40	60	80	100
Opening (Inches)	.075	.034	.015	.0092	.007	.0055
Opening (Microns)	1910	860	380	230	190	140

SPECIFICATIONS — STRAINERS

Model Number	Port Size	Nominal Pipe Area	① Standard Basket Perforation	Basket Surface Area	Basket Free Area	Ratio Free Area / Port Area	Maximum Basket Differential Pressure
	Inches	Inches ²	Inches	Inches ²	Inches ²		PSID
F-1007	3/4"	.53	.156	8.6	5.4	10.2	150
F-1010	1"	.86	.156	8.6	5.4	6.3	150
F-1013	1 1/4"	1.50	.156	17.9	11.3	7.5	150
F-1015	1 1/2"	2.04	.156	17.9	11.3	5.5	150
F-1020	2"	3.36	.188	33	16.8	5.0	150
F-1030	3"	7.39	.188	66	33.7	4.6	125
F-1040	4"	12.73	.188	113	57.6	4.5	125
F-1060	6"	28.9	.188	233	118.8	4.1	75
F-1080	8"	50.0	.188	636	324.7	6.5	50

① For other basket perforations, consult the factory.

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VIKING® LID-EASE PUMPS

BASKET-TYPE LINE STRAINERS

OPTIONS – SPECIFICATIONS



OPTIONAL MAGNETIC INSERTS

Magnetic inserts are available for trapping ferrous particles too small for the basket straining media. The inserts are secured to basket handle using a spring clip which makes removal for cleaning a simple task.



OPTIONAL PRESSURE DIFFERENTIAL INDICATORS

Pressure differential indicators are available as an option to indicate when basket needs to be cleaned. Consult Factory.



Viking Lid-Ease® Strainer
3" size, Aluminum
with grooved ports.

CONSTRUCTION—ALUMINUM

Body & Lid	O-Ring for Lid	Basket Material
Aluminum	① Buna-N	304 or 316 Stainless Steel

① Buna-N O-Ring standard, Viton® and Teflon® Encapsulated optional. For other materials consult factory.

SPECIFICATIONS—ALUMINUM

Model Number	Port Size	① Nominal Capacity Suction Rating	Rated System Pressure	② Maximum Temperature	Approximate Shipping Weight
	Inches	GPM	PSI	Degrees F.	Pounds
F-1020-GALM	④ 2"	100	200	400	5
F-1020-IALM	③ 2"				6
F-1030-FALM	⑤ 3"	200	⑥ 125	400	18
F-1030-GALM	④ 3"				10
F-1030-IALM	③ 3"				13
F-1040-FALM	⑤ 4"	400	⑥ 125	400	28
F-1040-GALM	④ 4"				18

① Capacity based on approx. 1 PSI pressure drop with 40 mesh basket and 38 SSU liquid.

② Maximum temperature obtained with optional high temperature Teflon® Encapsulated O-Ring.

③ Tapped ports compatible with standard pipe. (NPT Threads)

④ Grooved end ports compatible with ANSI/AWWA C606-81 grooved fittings.

⑤ Flanged ports suitable for use with 150# ANSI Aluminum companion flanges or flanged fittings.

⑥ 175 PSI on liquid temperature below 150° F.

VIKING® LID-EASE PUMPS

BASKET-TYPE LINE STRAINERS

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SPECIFICATIONS

CONSTRUCTION—CAST IRON

Body & Lid	O-Ring for Lid	Basket Material
Cast Iron	① Buna-N	304 or 316 Stainless Steel

① Buna-N O-Ring standard, Viton® and Teflon® Encapsulated optional. For other materials consult factory.

SPECIFICATIONS—CAST IRON

	Port Size	① Nominal Capacity Suction Rating	Rated System Pressure	② Maximum Temperature	Approximate Shipping Weight
	Inches	GPM	PSI	Degrees F.	Pounds
F-1007-IIRN	③ ¾"	20	200	400	7
F-1010-IIRN	③ 1"	30	200	400	7
F-1013-IIRN	③ 1¼"	40	200	400	9
F-1015-IIRN	③ 1½"	50	200	400	9
F-1020-FIRN	④ 2"	100	200	400	16
F-1020-IIRN	③ 2"				13
F-1030-FIRN	④ 3"	200	⑤ 125	400	40
F-1030-IIRN	③ 3"				30
F-1040-FIRN	④ 4"	400	⑤ 125	400	73
F-1060-FIRN	④ 6"	800	⑤ 125	400	120
F-1080-FIRN	④ 8"	1500	⑤ 125	400	300

① Capacity based on approx. 1 PSI pressure drop with 40 mesh basket and 38 SSU liquid.

② Maximum temperature obtained with optional high temperature Teflon® Encapsulated O-Ring.

③ Tapped ports compatible with standard pipe. (NPT Threads)

④ Flanged ports suitable for use with 125# ANSI cast iron or 150# ANSI steel companion flanges or flanged fittings.

⑤ 175 PSI on liquid temperature below 150° F.



Viking Lid-Ease® Strainer
1½" size, Cast Iron
with tapped ports.

CONSTRUCTION—DUCTILE IRON

Body & Lid	O-Ring for Lid	Basket Material
Ductile Iron	① Buna-N	316 Stainless Steel

① Buna-N O-Ring standard, Viton® and Teflon® Encapsulated optional. For other materials, consult factory.

SPECIFICATIONS—DUCTILE IRON

Model Numbers	Port Size	① Nominal Capacity Suction Rating	Rated System Pressure	② Maximum Temperature	Approximate Shipping Weight
	Inches	GPM	PSI	Degrees F.	Pounds
F-1020-FDUC	2"	100	200	400	19
F-1030-FDUC	3"	200	④ 125	400	40
F-1040-FDUC	4"	400	④ 125	400	73
F-1060-FDUC	6"	800	④ 125	400	120

① Capacity based on approx. 1 PSI pressure drop with 40 mesh basket and 38 SSU liquid.

② Maximum temperature obtained with optional high temperature Teflon® Encapsulated O-Ring.

③ Flanged ports suitable for use with 150# ANSI ductile iron or steel companion flanges or flanged fittings.

④ 175 PSI on liquid temperature below 150° F.



Viking Lid-Ease® Strainer
2" size, Ductile Iron
with flanged ports.

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VIKING® LID-EASE PUMPS

BASKET-TYPE LINE STRAINERS

SPECIFICATIONS – DIMENSIONS



Viking Lid-Ease Strainer
4" Size, Stainless Steel
with flanged ports.

SPECIFICATIONS—STAINLESS STEEL

Model Numbers	Port Size	① Nominal Capacity Suction Rating	Rated System Pressure	② Maximum Temperature	Approximate Shipping Weight
	Inches	GPM	PSI	Degrees F.	Pounds
F-1007-ISST	③ ¾"	20	200	400	7
F-1010-ISST	③ 1"	30	200	400	7
F-1013-ISST	③ 1¼"	40	200	400	10
F-1015-ISST	③ 1½"	50	200	400	10
F-1020-FSST	⑤ 2"	100	200	400	20
F-1020-GSST	④ 2"				11
F-1020-ISST	③ 2"				14
F-1030-FSST	⑤ 3"	200	⑥ 125	400	44
F-1030-GSST	④ 3"				31
F-1040-FSST	⑤ 4"	400	⑥ 125	400	77
F-1040-GSST	④ 4"				44
F-1060-FSST	⑤ 6"	800	⑥ 125	400	128

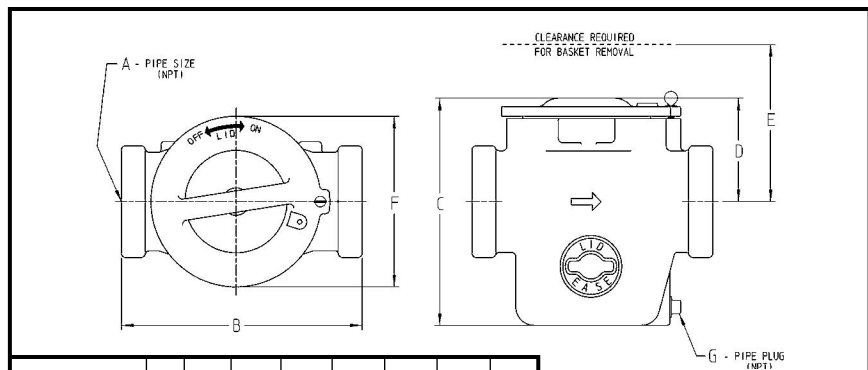
- ① Capacity based on approx. 1 PSI pressure drop with 40 mesh basket and 38 SSU liquid.
- ② Maximum temperature using optional high temperature Teflon® Encapsulated O-Ring.
- ③ Tapped ports compatible with standard pipe. (NPT Threads)
- ④ Grooved end ports compatible with ANSI/AWWA C606-81 grooved fittings.
- ⑤ Flanged ports suitable for use with 150# ANSI steel or stainless steel companion flanges or flanged fittings.
- ⑥ 175 PSI on liquid temperature below 150° F.

CONSTRUCTION—STAINLESS STEEL

Body & Lid	O-Ring for Lid	Basket Material
316 Stainless Steel	① Teflon Encapsulated	316 Stainless Steel

① Teflon® Encapsulated O-Ring standard, Buna-N and Viton® optional. For other materials, consult factory.

DIMENSIONS— STRAINERS WITH TAPPED PORTS



MODEL		A	B	C	D	E	F	C
F-1007-I ①	in	¾	4.40	5.36	2.46	7.00	3.25	⅜
	mm		112	136	63	178	83	
F-1010-I ①	in	1	4.40	5.36	2.46	7.00	3.25	⅜
	mm		112	136	63	178	83	
F-1013-I ①	in	1¼	5.00	6.36	2.74	8.00	4.00	⅜
	mm		127	162	70	203	102	
F-1015-I ①	in	1½	5.00	6.36	2.74	8.00	4.00	⅜
	mm		127	162	70	203	102	
F-1020-I ①	in	2	6.38	7.12	3.32	7.50	4.60	¼
	mm		162	181	84	191	117	
F-1030-I ①	in	3	10.00	9.31	4.18	9.50	7.06	½
	mm		254	236	106	241	179	

① ALM—Aluminum. IRN—Iron, SST—Stainless Steel. (See specifications tables for available materials of construction).

② Tapped ports compatible with standard pipe. (NPT Threads)

These dimensions are average and not for construction purposes. Certified prints on request.

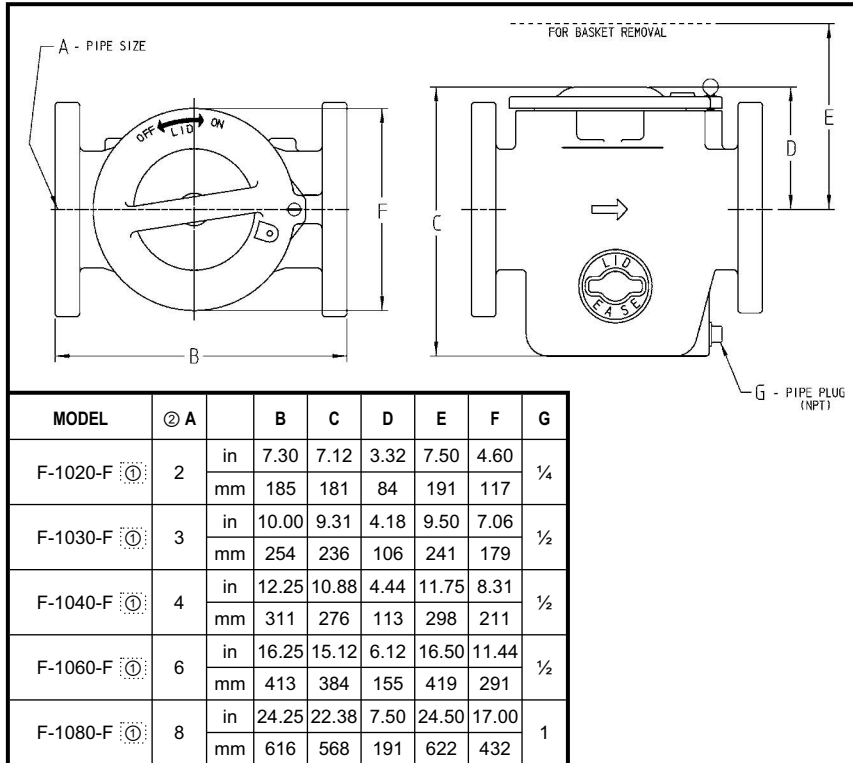
VIKING® LID-EASE PUMPS

BASKET-TYPE LINE STRAINERS

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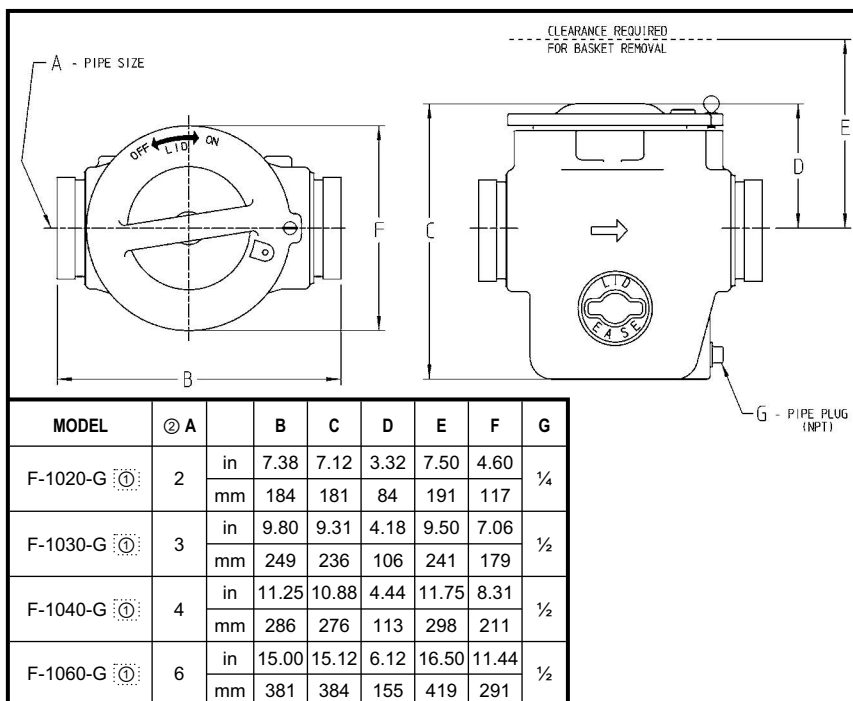
DIMENSIONS

These dimensions are average and not for construction purposes. Certified prints on request.



DIMENSIONS- STRAINERS WITH FLANGED PORTS

- ① ALM—Aluminum, IRN—Iron, SST—Stainless Steel, DUC—Ductile Iron (See specifications tables for available materials of construction).
 ② Flanged ports suitable for use with 125# ANSI cast Iron, ductile iron, or 150# ANSI steel or stainless steel companion flanges or flanged fittings.



DIMENSIONS- STRAINERS WITH GROOVED END PORTS

- ① ALM—Aluminum, SST—Stainless Steel. (See specifications tables for available materials of construction).
 ② Grooved end ports compatible with ANSI/AWWA C606-81 grooved fittings.

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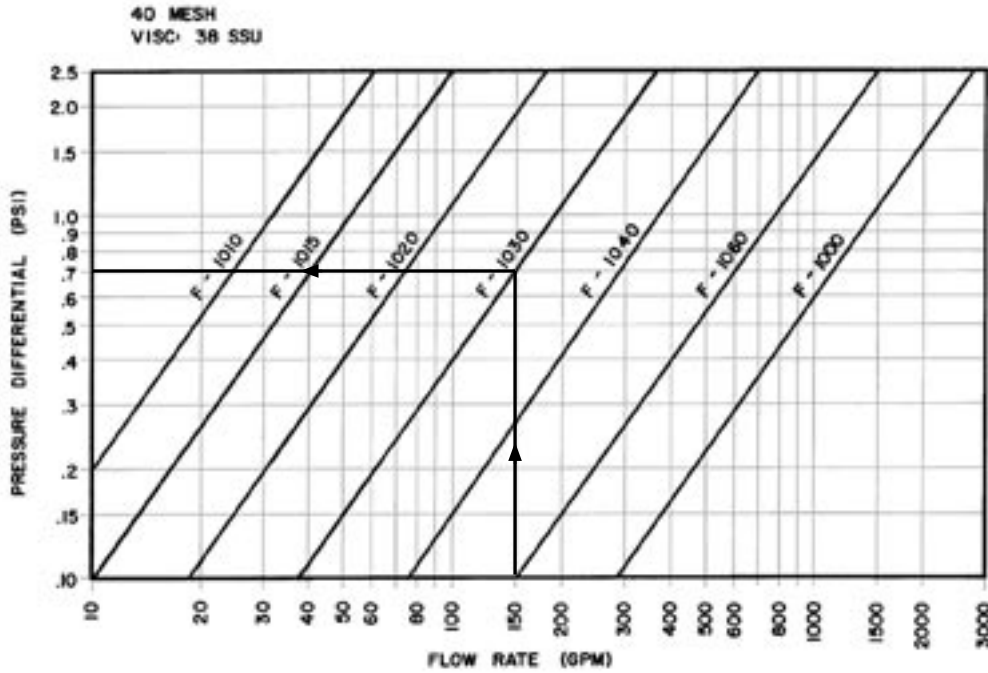
BASKET-TYPE LINE STRAINERS

PRESSURE DROP INFORMATION

Example: To determine the pressure drop across a strainer for a pump with 3" ports producing a flow rate of 150 GPM, with a viscosity of 700 SSU; first, determine the nominal pressure differential for the 3" strainer (F-1030) by following 150 GPM vertically until it intersects the F-1030 curve then read horizontally on the Pressure Drop Curve

the nominal pressure differential (.7 psi). Using the Correction Curves, enter vertically at 700 SSU and proceed until intersecting the 60 mesh curve, then read the correction factor horizontally (3.0). Therefore, the actual pressure drop will be $3.0 \times .7 = 2.1$ psi (4.28" of Hg.)

PRESSURE DROP CURVES



CORRECTION CURVES

