

FEATURES

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



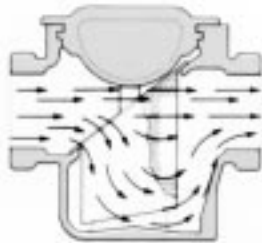
RANGER Simplex Strainers provide protection for your pumping system with low pressure drop. The inclined position of the strainer basket adjacent to the porting provides smooth flow patterns not found in conventional basket-type strainers.

RANGER 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 physical dimensions of the strainer make installations possible in many systems that cannot even be considered with the usual large strainer furnished for comparable purposes.



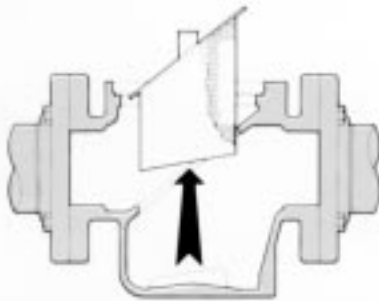
EASY LID REMOVAL

Simple rotation of lid disengages breech lock for easy removal. No special tools required.



SMOOTH FLOW PATTERN

The inclined position of strainer basket adjacent to porting allows for smooth flow patterns.



SIMPLE CLEANING

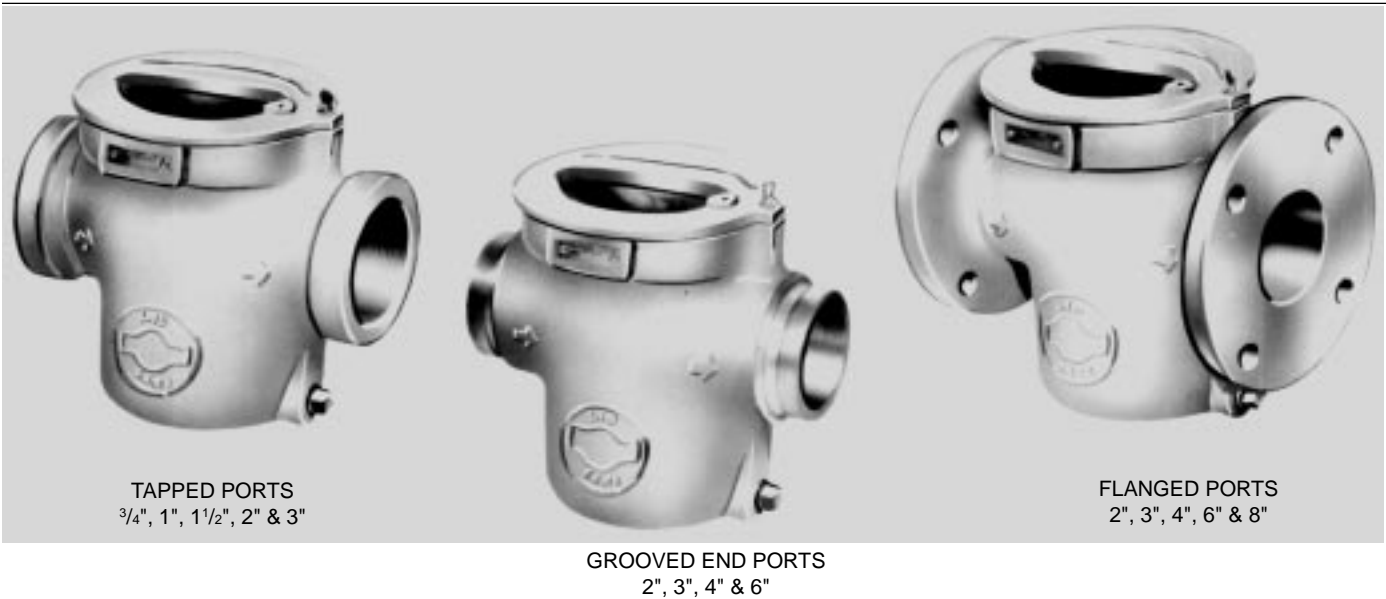
When basket requires cleaning, simply vent system pressure, remove lid and withdraw basket from top. Foreign matter contained in basket will not drop back into system.



RANGER Simplex Strainers are designed with a weatherseal lid to protect the breech lock area from exterior elements, thus eliminating problems with lid removal. 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.

FEATURES—SPECIFICATIONS



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 * See Note ↓	Port Size	Nominal Pipe Area	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
3_07	3/4"	.53	.156	8.6	5.4	10.2	150
3_10	1"	.86	.156	8.6	5.4	6.3	150
3_13	1 1/4"	1.50	.156	17.9	11.3	7.5	150
3_15	1 1/2"	2.04	.156	17.9	11.3	5.5	150
3_20	2"	3.36	.188	33	16.8	5.0	150
3_30	3"	7.39	.188	66	33.7	4.6	125
3_40	4"	12.73	.188	113	57.6	4.5	125
3_60	6"	28.9	.188	233	118.8	4.1	75
3_80	8"	50.0	.188	636	324.7	6.5	50

For other basket perforations, consult Ranger.

*Complete Model Number as follows: A—Aluminum, G—Gray Iron, S—Stainless Steel, D—Ductile Iron (For example: 3A07)

RANGER, INC.
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.

CONSTRUCTION—ALUMINUM

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

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

SPECIFICATIONS—ALUMINUM

Model Numbers	Port Size	Nominal Capacity Suction Rating GPM	Rated System Pressure PSI	Maximum Temperature Degrees F.	Approximate Shipping Weight Pounds
	Inches				
3A20G	√ 2"	100	200	400	5
3A20T	2"				6
3A30F	∞ 3"	200	≈ 125	400	18
3A30G	√ 3"				10
3A30T	3"				13
3A40F	∞ 4"	400	≈ 125	400	28
3A40G	√ 4"				18

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

Maximum temperature using optional high temperature Teflon® Encapsulated O-Ring.

√ Tapped ports compatible with standard pipe.

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

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

≈ 175 PSI on liquid temperature below 150° F.



3" size, Aluminum with grooved ports

SPECIFICATIONS

CONSTRUCTION—CAST IRON

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

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

SPECIFICATIONS—CAST IRON

Model Numbers	Port Size	Nominal Capacity Suction Rating GPM	Rated System Pressure PSI	Maximum Temperature Degrees F.	Approximate Shipping Weight Pounds
	Inches				
3G07T	3/4"	20	200	400	7
3G10T	1"	30	200	400	7
3G13T	1 1/4"	40	200	400	9
3G15T	1 1/2"	50	200	400	9
3G20F	√ 2"	100	200	400	16
3G20T	2"				13
3G30F	√ 3"	200	125	400	40
3G30T	3"				30
3G40F	√ 4"	400	125	400	73
3G60F	√ 6"	800	125	400	120
3G80F	√ 8"	800	125	400	300

Capacity based on approx. 1 PSI pressure drop with 40 mesh basket and 38 SSU liquid.
Maximum temperature obtained with optional high temperature Teflon® Encapsulated O-Ring.
Tapped ports compatible with standard pipe.
√ Flanged ports suitable for use with 125# ANSI cast iron or 150# ANSI steel companion flanges or flanged fittings.
175 PSI on liquid temperature below 150° F.



1 1/2" size, Cast Iron with tapped ports

CONSTRUCTION—DUCTILE IRON

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

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

SPECIFICATIONS—DUCTILE IRON

Model Numbers	Port Size	Nominal Capacity Suction Rating GPM	Rated System Pressure PSI	Maximum Temperature Degrees F.	Approximate Shipping Weight Pounds
	Inches				
3D20F	2"	100	200	400	19
3D30F	3"	200	√ 125	400	40
3D40F	4"	400	√ 125	400	73
3D60F	6"	800	√ 125	400	120

Capacity based on approx. 1 PSI pressure drop with 40 mesh basket and 38 SSU liquid.
Maximum temperature obtained with optional high temperature Teflon® Encapsulated O-Ring.
Flanged ports suitable for use with 125# ANSI cast iron or 150# ANSI steel companion flanges or flanged fittings.
√ 175 PSI on liquid temperature below 150° F.



2" size, Ductile Iron with flanged ports

RANGER, INC.
BASKET-TYPE LINE STRAINERS

SPECIFICATIONS—DIMENSIONS



4" Size, Stainless Steel
 with flanged ports

CONSTRUCTION—STAINLESS STEEL

Body & Lid	O-Ring For Lid	Basket Material
316 Stainless Steel	Teflon® Encapsulated	316 Stainless Steel

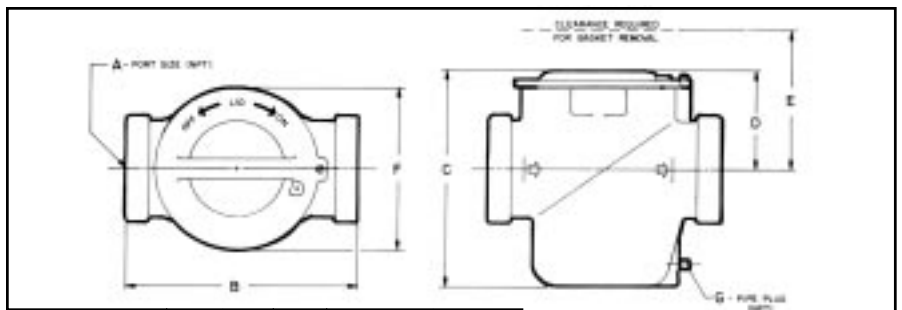
Teflon® Encapsulated O-Ring standard, Buna-N and Viton optional.
 For other materials, consult RANGER.

SPECIFICATIONS—STAINLESS STEEL

Model Numbers	Port Size	Nominal Capacity Suction Rating GPM	Rated System Pressure PSI	Maximum Temperature Degrees F.	Approximate Shipping Weight Pounds
	Inches				
3S07T	3/4"	20	200	400	7
3S10T	1"	30	200	400	7
3S13T	1 1/4"	40	200	400	10
3S15T	1 1/2"	50	200	400	10
3S20F	2"	100	200	400	20
3S20G	√ 2"				11
3S20T	2"				14
3S30F	3"	200	≈ 125	400	44
3S30G	√ 3"				31
3S40F	4"	400	≈ 125	400	77
3S40G	√ 4"				44
3S60F	6"	800	≈ 125	400	128

Capacity based on approx. 1 PSI pressure drop with 40 mesh basket and 38 SSU liquid.
 Maximum temperature using optional high temperature Teflon® Encapsulated O-Ring.
 Tapped ports compatible with standard pipe.
 √ Grooved end ports compatible with ANSI/AWWA C606-81 grooved fittings.
 Flanged ports suitable for use with 125# ANSI cast iron or 150# ANSI steel companion flanges or flanged fittings.
 ≈ 175 PSI on liquid temperature below 150° F.

**DIMENSIONS—
 TAPPED PORTS**



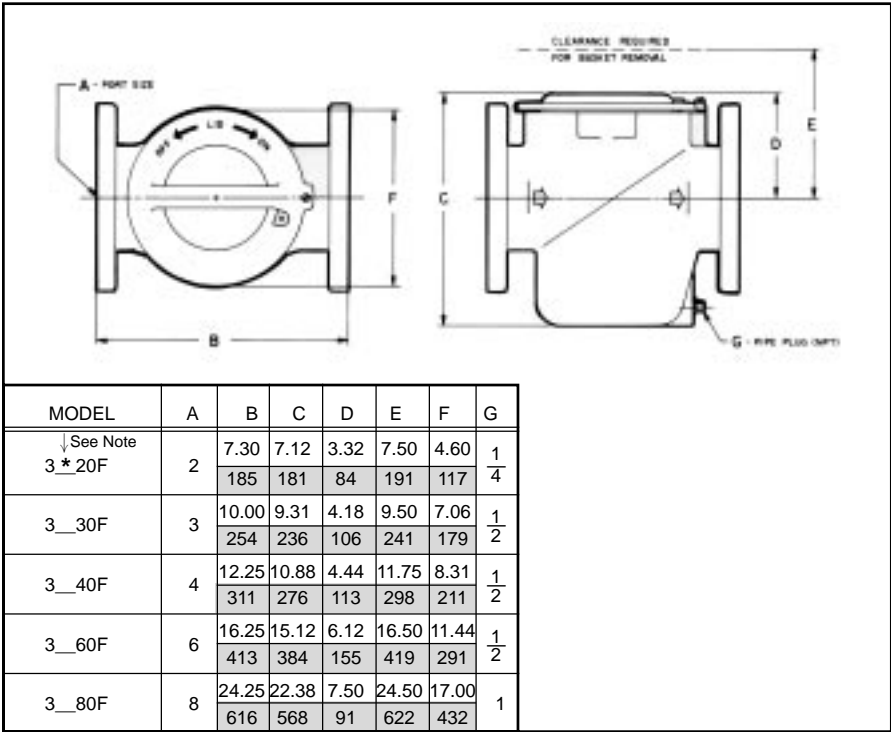
MODEL	A	B	C	D	E	F	G
3*_07T	3/4	4.40	5.36	2.46	7.00	3.25	1/8
		112	136	63	178	83	
3__10T	1	4.40	5.36	2.46	7.00	3.25	1/8
		112	136	63	178	83	
3__13T	1 1/4	5.00	6.36	2.74	8.00	4.00	1/8
		127	162	70	203	102	
3__15T	1 1/2	5.00	6.36	2.74	8.00	4.00	1/8
		127	162	70	203	102	
3__20T	2	6.38	7.12	3.32	7.50	4.60	1/4
		162	181	84	191	117	
3__30T	3	10.00	9.31	4.18	9.50	7.06	1/2
		254	236	106	241	179	

← See Note →
 *Complete Model Number as follows:
 A—Aluminum, G—Gray Iron, S—Stainless Steel,
 D—Ductile Iron (For example: 3A07T) See
 specifications tables for available materials of
 construction.
 Tapped ports compatible with standard pipe.
 These dimensions are averaged and not for
 construction purpose. Certified prints on
 request.
 Dimensions shown in gray area are millimeters,
 other are inches.

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BASKET-TYPE LINE STRAINERS

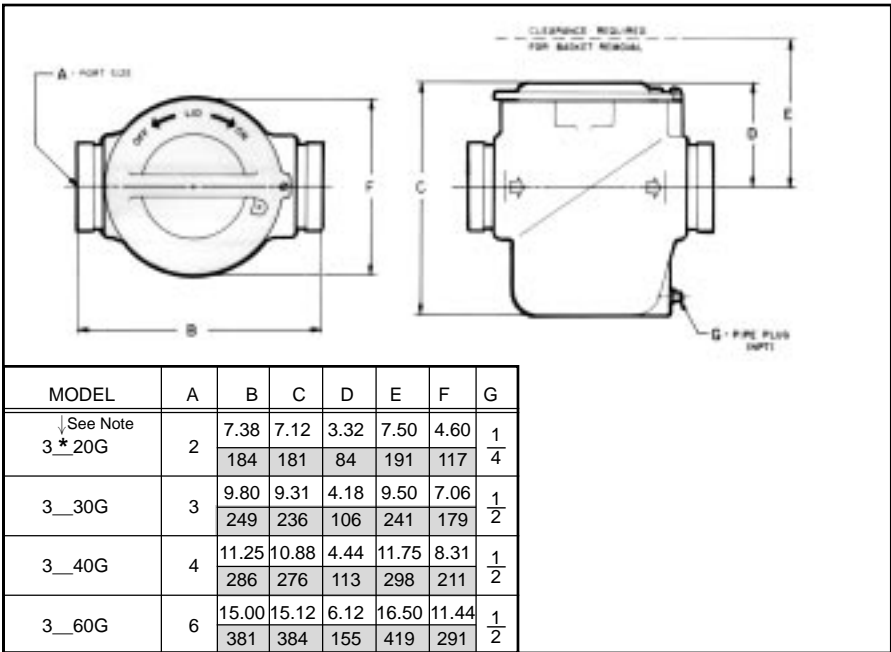
DIMENSIONS

NOT FOR CONSTRUCTION. CERTIFIED DRAWING ON REQUEST



**DIMENSIONS—
 FLANGED PORTS**

*Complete Model Number as follows:
 A—Aluminum, G—Gray Iron, S—Stainless Steel,
 D—Ductile Iron (For example: 3A20F). (See
 specifications tables for available materials of
 construction.)
 Flanged ports suitable for use with 125#ANSI
 cast iron or 150# ANSI steel companion
 flanges or flanged fittings.
 Dimensions shown in gray area are millimeters,
 other are inches.



**DIMENSIONS—
 GROOVED END PORTS**

*Complete Model Number as follows:
 A—Aluminum, G—Gray Iron, S—Stainless Steel,
 D—Ductile Iron (For example: 3A20G).
 (See specifications tables for available materials
 of construction.)
 Grooved end ports compatible with ANSI/AWWA
 C606-81 grooved fittings.
 Dimensions shown in gray area are millimeters,
 other are inches.

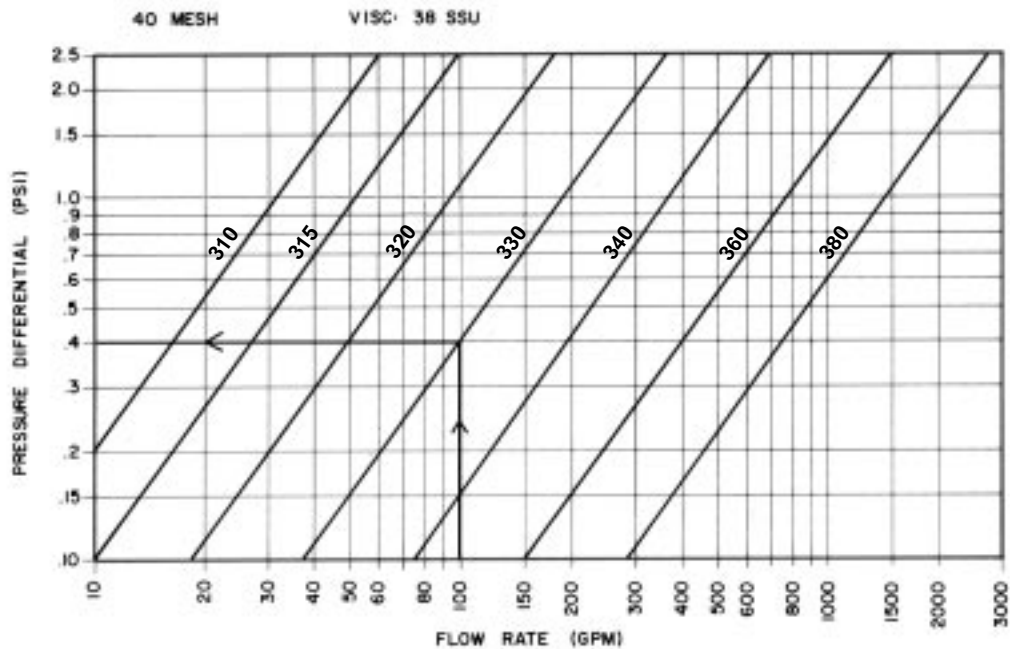
RANGER, INC.
BASKET-TYPE LINE STRAINERS

PRESSURE DROP INFORMATION

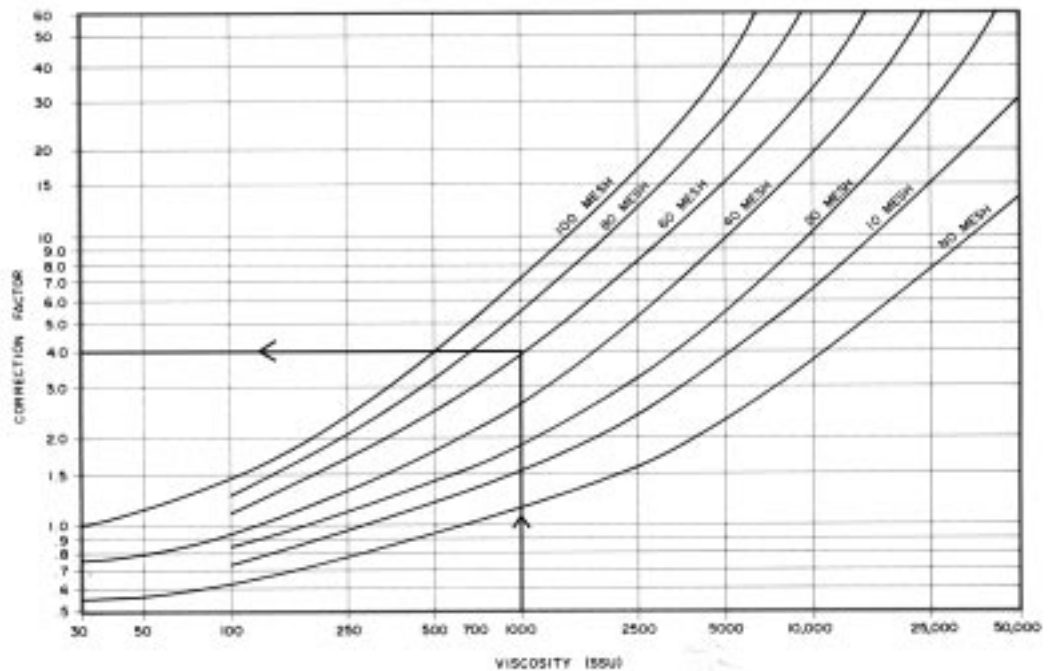
Example: To determine the pressure drop across a strainer for a pump with 3" ports producing a flow rate of 100 GPM, with a viscosity of 1,000 SSU; first, determine the nominal pressure differential for the 3" strainer (330) by following 100 GPM vertically until it intersects the 330 curve; then read horizontally on the Pressure Drop Curve the nominal pressure

differential (.4 psi). Using the Correction Curves, enter vertically at 1,000 SSU and proceed until intersecting the 60 mesh curve, then read the correction factor horizontally (4.0). Therefore, the actual pressure drop will be $4.0 \times .4 = 1.6$ psi (3.27" of Hg.).

PRESSURE DROP CURVES



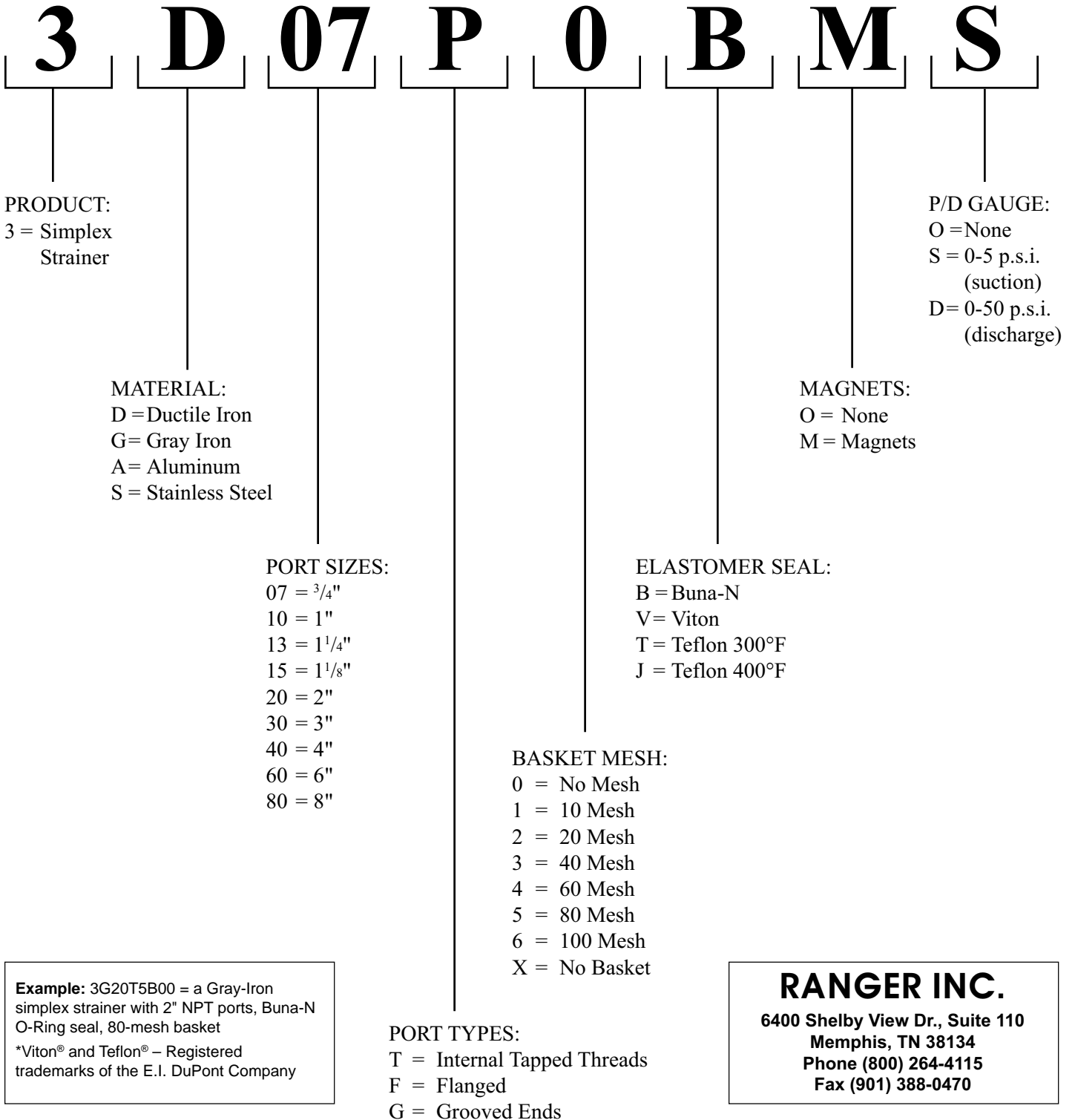
CORRECTION CURVES





SERIES NUMBERING CODES

STRAINER NUMBERS AVAILABILITY



Example: 3G20T5B00 = a Gray-Iron simplex strainer with 2" NPT ports, Buna-N O-Ring seal, 80-mesh basket
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