



KECKLEY

BULLETIN NO. 9400-3

DUPLEX STRAINERS

800-KECKLEY (800-532-5539)

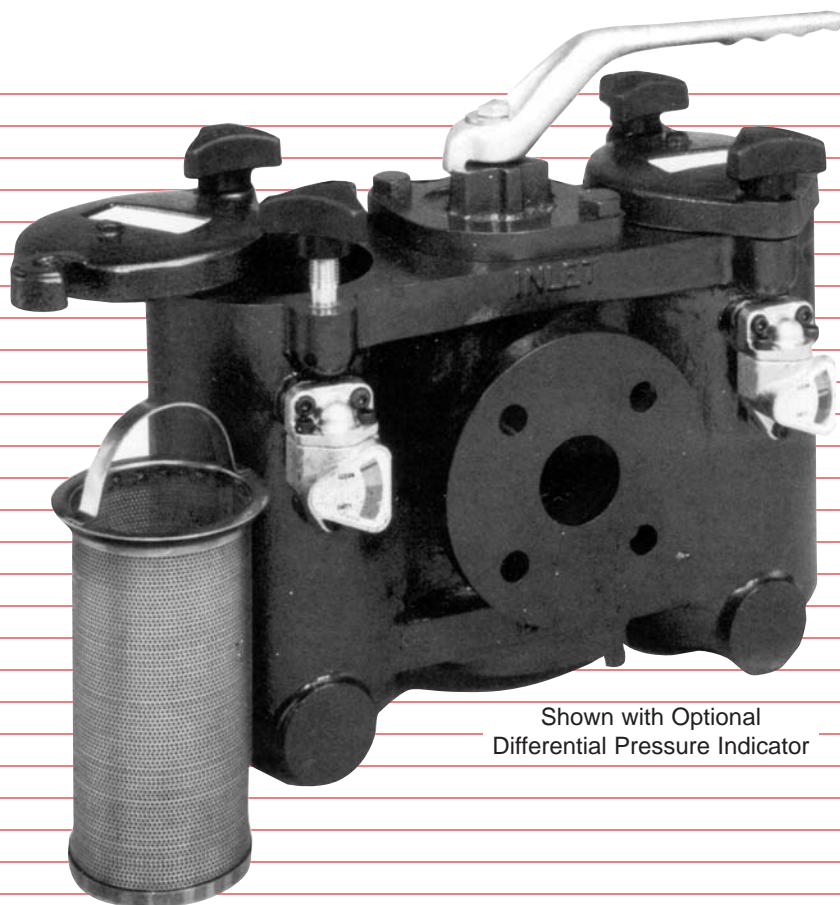
847/674-8422

FAX: 847/674-2106

E-MAIL: SALES@KECKLEY.COM

WEB SITE: WWW.KECKLEY.COM

NO QUESTION. WE HAVE THE ANSWERS.



Shown with Optional
Differential Pressure Indicator

DUPLEX STRAINERS

STYLE Screwed (NPT) 3/4" to 2 1/2"	DPXS	WDPXS	CDPXS
STYLE Flanged (ANSI) 1" to 8"	DPXF 125lb.	WDPXF 125lb.	CDPXF 125lb.
Body & Cover	Cast Iron ASTM A 126 Class B	Cast Iron ASTM A 126 Class B	Cast Iron ASTM A 126 Class B
Diverter Valve	Bronze	Iron	Stainless Steel*
Sleeve	Bronze	No Sleeve	No Sleeve
Drive Shaft & Spindle	Stainless Steel	Mild Steel	Stainless Steel
Basket Screens Standard Perforation 1/4"	Stainless Steel	Stainless Steel	Stainless Steel
Drain Plugs	Brass	Brass	Stainless Steel
Seals, Standard	Nitrile -31°F to +248°F	Nitrile -31°F to +248°F	Nitrile -31°F to +248°F
Maximum Non-Shock Water, Oil, Gas Not Recommended For Steam	200 PSIG at 150°F	200 PSIG at 150°F	200 PSIG at 120°F
Maximum Temperature with Optional Seal	+302°F	+392°F	+120°F

Larger sizes available upon request.

*Nickel / Teflon (PTFE) Coated

AVAILABLE OPTIONS FOR ALL STYLES

DIFFERENTIAL PRESSURE INDICATORS - Mounts directly to the strainer body and visually indicates when the baskets require cleaning. Preset at a differential pressure of 10 PSI with an option for settings of 5 and 15 PSI.

DIN ELECTRICAL PROBES - For use with the above differential pressure indicator. Provides an electrical signal when the pre-set maximum differential pressure is reached.

BASKETS - Screens available in sizes ranging from 300 mesh to 1/4" perforations.

MAGNETIC INSERTS - Mounted to the strainer baskets to collect metallic particles.

100% SHUT-OFF - Achieved through the use of special seals within the change-over mechanism to eliminate leakage between chambers.

AIR ELIMINATORS - Automatically vents air from basket chambers. (ex. After basket cleaning).

DUPLEX STRAINERS

STYLE Screwed (NPT) ¾" to 2½"	BDPXS	SDPXS	SCDPXS	SSDPXS
STYLE Flanged (ANSI) 1" to 8"	BDPXS 150lb.	SDPXS 150lb.	SCDPXS 150lb.	SSDPXS 150lb.
Body & Cover	Cast Bronze ASTM B62	Cast Carbon Steel ASTM A 216 WCB	Cast Carbon Steel ASTM A 216 WCB	Cast Stainless Steel 316 ASTM A 351 CF8M
Diverter Valve	Bronze	Bronze	Stainless Steel*	Stainless Steel*
Sleeve	No Sleeve	Bronze	No Sleeve	No Sleeve
Drive Shaft & Spindle	Phosphor Bronze	Stainless Steel	Stainless Steel	Stainless Steel
Basket Screens Standard Perforation ¼"	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Drain Plugs	Phosphor Bronze	Brass	Stainless Steel	Stainless Steel
Seals, Standard	Nitrile -31°F to +248°F	Nitrile -31°F to +248°F	Nitrile -31°F to +248°F	Viton -4°F to +392°F
Maximum Non-Shock Water, Oil, Gas Not Recommended For Steam	225 PSIG at 150°F	285 PSIG at 100°F	285 PSIG at 100°F	275 PSIG at 100°F
Maximum Temperature with Optional Seal	+392°F	+302°F	+120°F	+392°F

Larger sizes available upon request.

*Nickel / Teflon (PTFE) Coated

AVAILABLE OPTIONS FOR ALL STYLES

FULLY AUTOMATED BACKFLUSHING - A special version of the duplex strainer provides automatic basket cleaning, when baskets become clogged, by reversing the flow within the strainer using filtered water to backflush the baskets.

MOUNTING STUDS / BRACKETS - Allowing the strainer to be independently supported.

HEATING JACKETS - Used to maintain the temperature of the process fluid inside the strainer. Mounted permanently to the strainer body allowing a supply of steam or hot water to pass around the body.

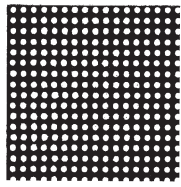
PRESSURE EQUALIZING VALVES - Standard on the 5, 6, and 8IN. strainers, these may be fitted to other sizes upon request.

SPECIAL SEALING MATERIALS - EPDM, PTFE, Viton. Others upon request.

BODY AND INTERNALS - Available in other material combinations, consult factory.

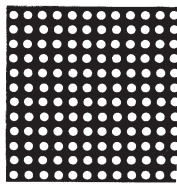
BASKETS

PERFORATED SHEET METAL



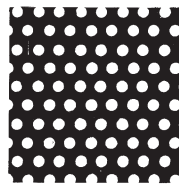
.033 DIA.

¹/₄" prox.
331 Holes Per Sq. In.



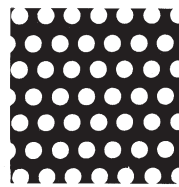
.045 DIA.

³/₁₆" prox.
225 Holes Per Sq. In.



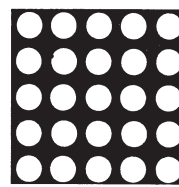
.062 DIA.

¹/₂" prox.
98 Holes Per Sq. In.



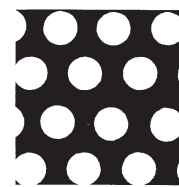
.094 DIA.

³/₈" prox.
51 Holes Per Sq. In.



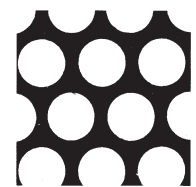
.125 DIA.

¹/₂" prox.
29 Holes Per Sq. In.



.1875 DIA.

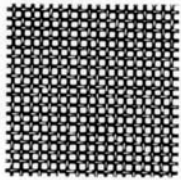
³/₁₆" prox.
18 Holes Per Sq. In.



.25 DIA.

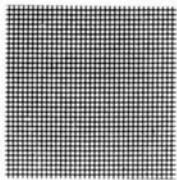
¹/₂" prox.
12 Holes Per Sq. In.

WOVEN METAL WIRE MESH



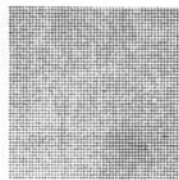
20 MESH

Wire Dia. .016
Opening .0340



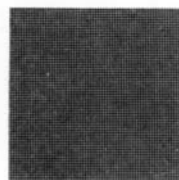
40 MESH

Wire Dia. .010
Opening .0150



60 MESH

Wire Dia. .0075
Opening .0092



80 MESH

Wire Dia. .0055
Opening .0070



100 MESH

Wire Dia. .0045
Opening .0055

Mesh Size	Microns
20	840
40	420
60	250
80	177
100	149
200	74
300	50

Also available in 200 and 300 Mesh (not shown).

WIRE MESH BASKETS REINFORCED WITH PERFORATED MATERIAL AVAILABLE.

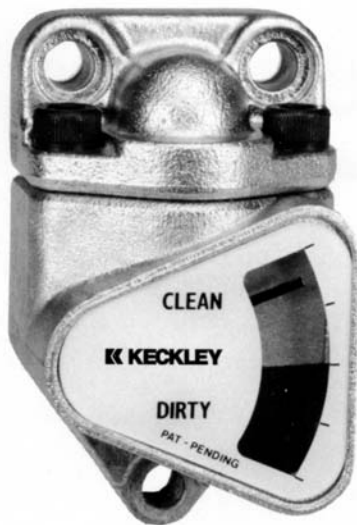
MAGNETS

Magnets can be provided as an option which, when placed inside the strainer basket, will remove very fine iron or steel particles present in fluid.

MATERIAL

Stainless steel baskets are standard in all strainers.

DIFFERENTIAL PRESSURE INDICATORS



As strainer baskets become clogged with debris, the pressure drop increases. In order to maintain efficient straining and line pressure, it is important that the baskets are cleaned regularly.

The Keckley Differential Pressure Indicator is designed to monitor basket conditions and provide visual warning that cleaning is required.

Available as an option on all duplex strainers, the indicator is mounted directly to the strainer body and indicates the differential pressure across each basket, taking the guesswork out of strainer maintenance.

FEATURES

- ¥ Easy to read
- ¥ Compact design
- ¥ No piping to become clogged

- ¥ Positive seal separates clean and dirty liquids
- ¥ Remote operation via electrical signal available if required
- ¥ Purpose designed for Keckley duplex basket strainers

SPECIFICATIONS

- ¥ Anodized aluminum casing and nitrile diaphragm for water and oil applications
- ¥ Stainless steel casing, stainless steel internals and viton diaphragm for other liquids
- ¥ Indicator preset at 10 PSI. Other spring ratings available on request
- ¥ Pointer operated by internal magnet avoiding leakage through seals

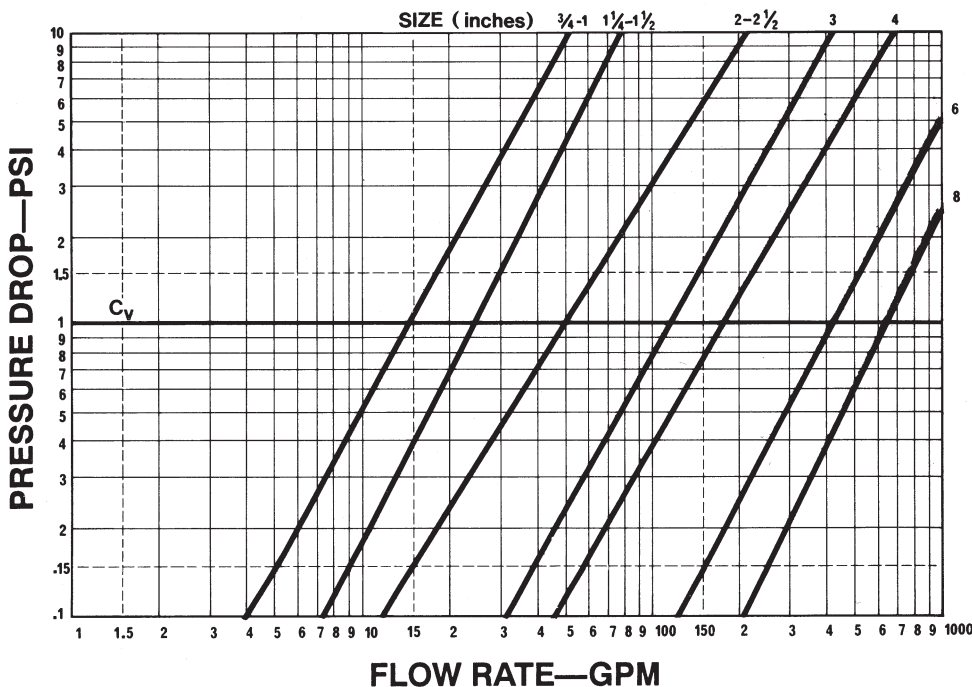
RATIOS: Net Free Area To Pipe Area

STANDARD PERFORATIONS AND WIRE MESH*

STRAINER SIZE (ALL STYLES)	TOTAL SCREEN AREA (SQ. IN.)	INSIDE AREA PIPE (SQ. IN.)	.033	.045	.0625	.094	.125	.1875	.250	20	40	60	80	100	SIZE
			$\frac{1}{4}$ "	$\frac{3}{8}$ "	$\frac{1}{2}$ "	$\frac{3}{4}$ "	$\frac{1}{2}$ "	$\frac{3}{4}$ "	$\frac{1}{2}$ "	Mesh	Mesh	Mesh	Mesh	Mesh	
$\frac{3}{8}$ "	29	.533	15.78	17.96	16.32	19.59	23.40	27.75	31.56	12.12	8.42	7.14	7.37	8.42	$\frac{3}{8}$ "
1	29	.864	9.73	11.08	10.07	12.08	14.43	17.12	19.47	7.48	5.19	4.40	4.55	5.19	1
$1\frac{1}{8}$ "	42	1.496	8.14	9.27	8.42	10.11	12.07	14.32	16.28	6.25	4.35	3.68	3.80	4.35	$1\frac{1}{8}$ "
$1\frac{1}{2}$ "	42	2.036	5.98	6.81	6.19	7.43	8.87	10.52	11.97	4.60	3.20	2.71	2.80	3.14	$1\frac{1}{2}$ "
2	75	3.355	6.48	7.38	6.71	8.05	9.61	11.40	12.97	4.98	3.46	2.93	3.03	3.46	2
$2\frac{1}{2}$ "	75	4.788	4.54	5.17	4.70	5.64	6.74	7.99	9.09	3.49	2.43	2.06	2.12	2.43	$2\frac{1}{2}$ "
3	111	7.393	4.35	4.96	4.50	5.41	6.46	7.66	8.71	3.35	2.33	1.97	2.03	2.33	3
4	150	12.73	3.42	3.89	3.54	4.24	5.07	6.01	6.83	2.62	1.82	1.54	1.60	1.82	4
6	350	28.89	3.51	4.00	3.63	4.36	5.21	6.18	7.03	2.70	1.88	1.59	1.64	1.88	6
8	618	50.00	3.58	4.08	3.71	4.45	5.32	6.30	7.17	2.75	1.91	1.62	1.67	1.91	8
% OPEN AREA			29%	33%	30%	36%	43%	51%	58%	51.8%	36%	30.5%	31.5%	36%	

*Wire mesh screens are reinforced with a $\frac{1}{8}$ " perforated sheet.

PRESSURE DROP CHART



NOTE:

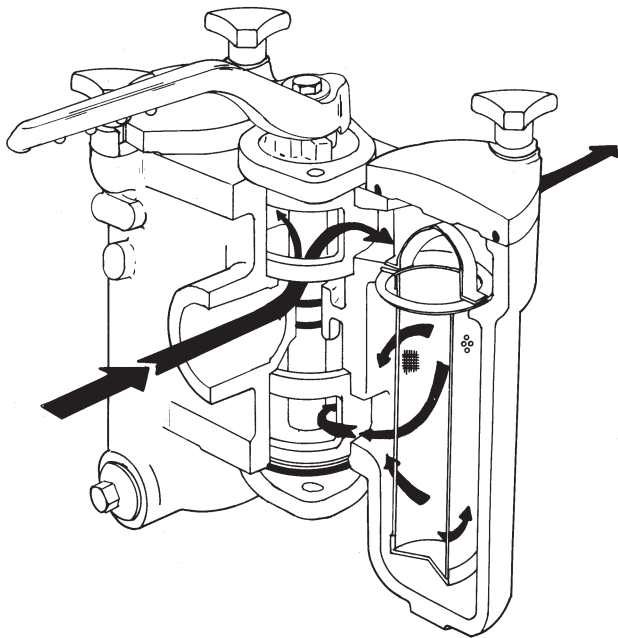
These charts are based on flow of clean water through .125" perforated baskets. For multiplying factors for clogged screens, see page 6.

CORRECTION FACTORS

(for mesh lined baskets):
Multiply pressure drops shown in chart at left by the following:

- 20 mesh x 1.05
- 80 mesh x 1.10
- 100 mesh x 1.25
- 200 mesh x 1.35

FLOW DIAGRAM



Center position of handle (as shown) allows flow to both chambers

Moving handle to far right or left diverts flow to the chamber UNDER the handle. This allows for removal and cleaning of the basket not in use.

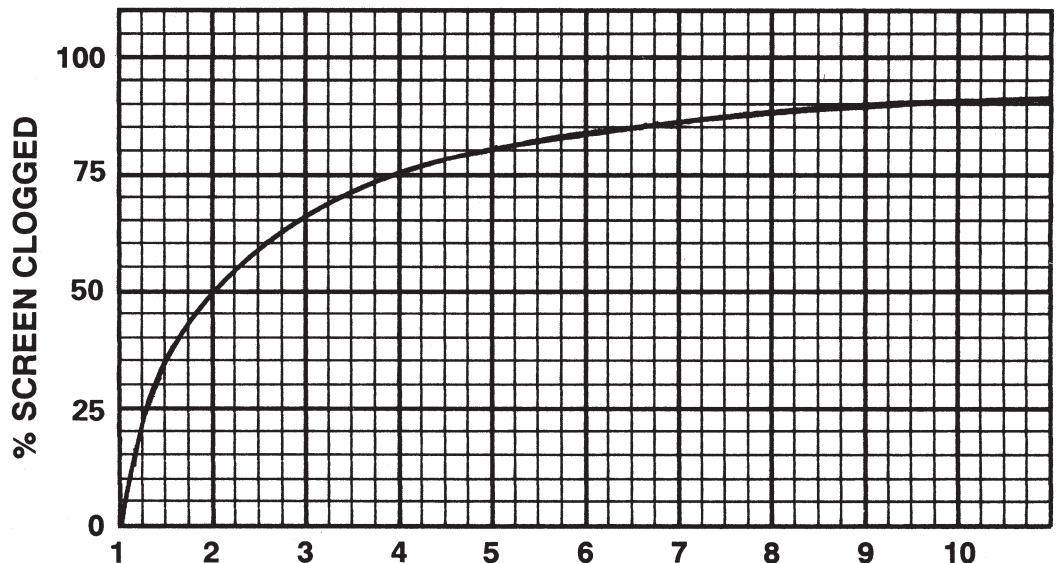
PRESSURE DROP CHART (CLOGGED SCREENS)

TO USE CHART:

Anticipate the allowable percentage of clogged screen to the left of the chart. Follow that value to the right where it intersects the curve. From that point, extend a line straight down to determine the pressure drop multiplier. For example: If it is anticipated that the screens will become 50% clogged before cleaning, then the pressure drop multiplier would be 2.

Example:

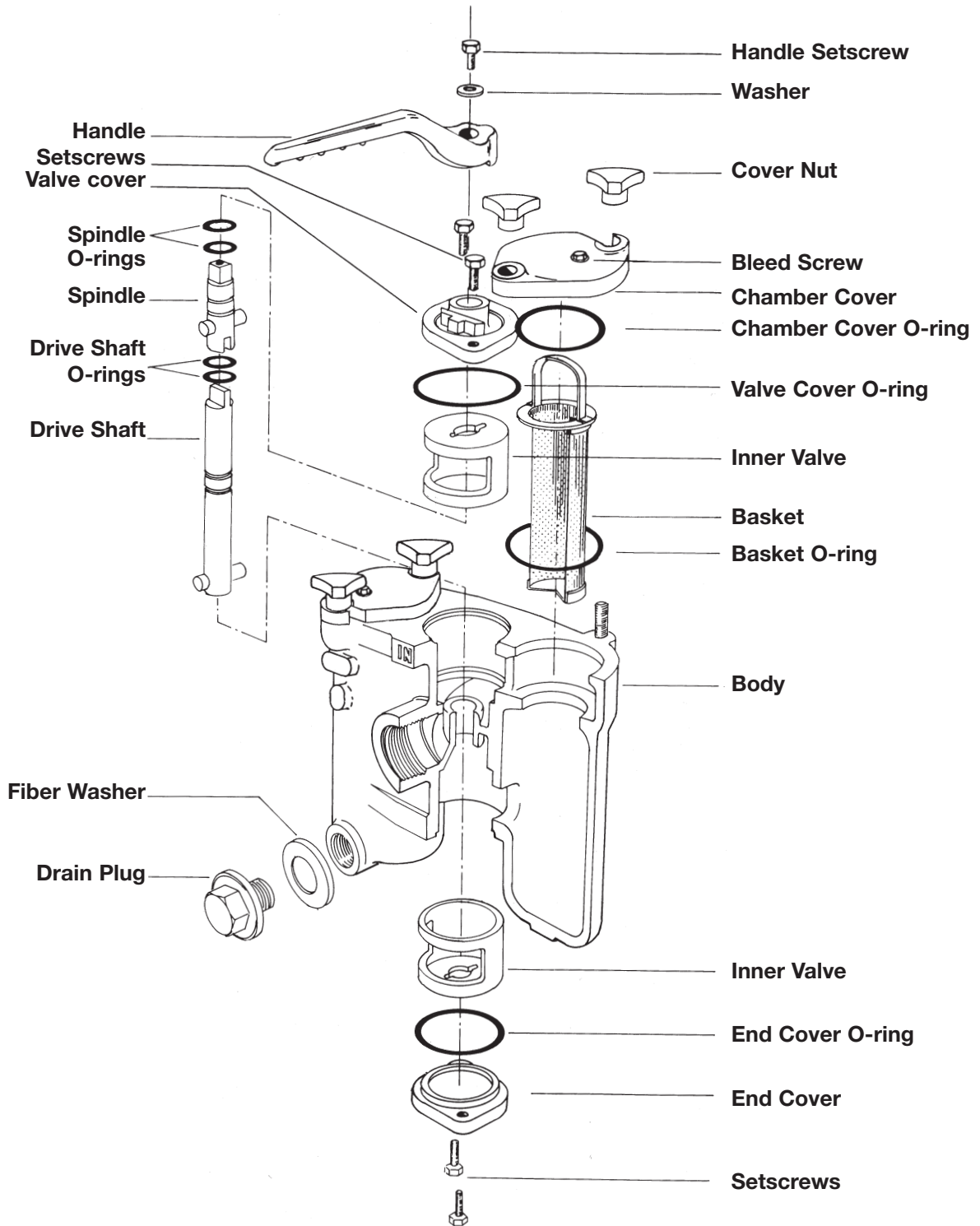
To determine the pressure drop for a flow rate of 150 GPM through a 4" duplex strainer with 1/8" perforated stainless steel screens that are 50% clogged: First determine the pressure drop for a clean screen from the chart on page 7.



PRESSURE DROP MULTIPLIER:

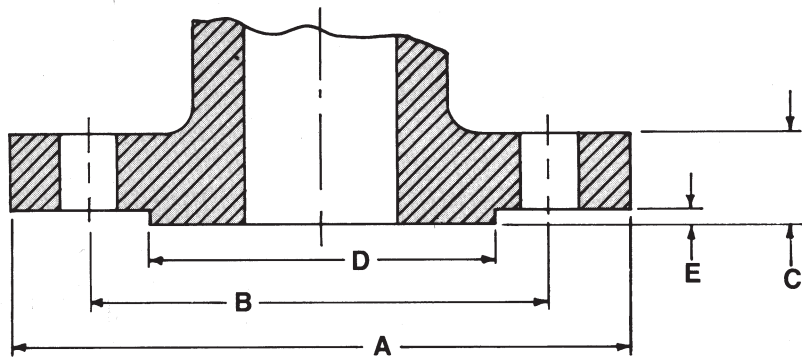
As described above, the multiplying factor for a 50% clogged screen is 2. It can now be determined that the pressure drop would be .8 PSI x 2 = 1.6 PSI.

PARTS LIST



5" & 6" Size - Four basket design not shown.
 8" Size - Bolted cover.

ANSI STANDARDS



CAST IRON FLANGES

125 lb	PIPE SIZE, INCHES		1	1 ¹ / ₂	2	2 ¹ / ₂	3	4	5	6	8
	Flange Dia.	A	4 ¹ / ₂	5	6	7	7 ¹ / ₂	9	10	11	13 ¹ / ₂
	Bolt Circle Dia.	B	3 ¹ / ₂	3 ⁷ / ₈	4 ³ / ₈	5 ¹ / ₈	6	7 ¹ / ₈	8 ¹ / ₈	9 ¹ / ₈	11 ³ / ₈
	Flange Thk.	C	7 ¹ / ₈	9 ¹ / ₈	9 ¹ / ₈	1 ¹ / ₂	3 ¹ / ₈	1 ⁵ / ₈	1	1	1 ¹ / ₂
	No. Bolts		4	4	4	4	4	8	8	8	8
	Bolt Dia.		1 ¹ / ₂	1 ¹ / ₂	1 ⁵ / ₈	1 ⁵ / ₈	1 ⁵ / ₈	1 ⁵ / ₈	1 ⁵ / ₈	1 ⁵ / ₈	1 ⁵ / ₈

BRONZE FLANGES

150 lb	PIPE SIZE, INCHES		1	1 ¹ / ₂	2	2 ¹ / ₂	3	4	5	6	8
	Flange Dia.	A	4 ¹ / ₂	5	6	7	7 ¹ / ₂	9	10	11	13 ¹ / ₂
	Bolt Circle Dia.	B	3 ¹ / ₂	3 ⁷ / ₈	4 ³ / ₈	5 ¹ / ₈	6	7 ¹ / ₈	8 ¹ / ₈	9 ¹ / ₈	11 ³ / ₈
	Flange Thk.	C	3 ¹ / ₈	7 ¹ / ₈	1 ¹ / ₂	9 ¹ / ₈	1 ⁵ / ₈	1 ¹ / ₂	1 ⁵ / ₈	1 ⁵ / ₈	1 ⁵ / ₈
	No. Bolts		4	4	4	4	4	8	8	8	8
	Bolt Dia.		1 ¹ / ₂	1 ¹ / ₂	1 ⁵ / ₈	1 ⁵ / ₈	1 ⁵ / ₈	1 ⁵ / ₈	1 ⁵ / ₈	1 ⁵ / ₈	1 ⁵ / ₈

STEEL FLANGES

150 lb	PIPE SIZE, INCHES		1	1 ¹ / ₂	2	2 ¹ / ₂	3	4	5	6	8
	Flange Dia.	A	4 ¹ / ₂	5	6	7	7 ¹ / ₂	9	10	11	13 ¹ / ₂
	Bolt Circle Dia.	B	3 ¹ / ₂	3 ⁷ / ₈	4 ³ / ₈	5 ¹ / ₈	6	7 ¹ / ₈	8 ¹ / ₈	9 ¹ / ₈	11 ³ / ₈
	Flange Thk.	C	7 ¹ / ₈	9 ¹ / ₈	9 ¹ / ₈	1 ¹ / ₂	3 ¹ / ₈	1 ⁵ / ₈	1 ⁵ / ₈	1	1 ¹ / ₂
	Raised Face Dia.	D	2	2 ¹ / ₂	3 ³ / ₈	4 ¹ / ₈	5	6 ³ / ₈	7 ⁵ / ₈	8 ¹ / ₈	10 ³ / ₈
	No. Bolts		4	4	4	4	4	8	8	8	8
	Bolt Dia.		1 ¹ / ₂	1 ¹ / ₂	1 ⁵ / ₈	1 ⁵ / ₈	1 ⁵ / ₈	1 ⁵ / ₈	1 ⁵ / ₈	1 ⁵ / ₈	1 ⁵ / ₈

* Flange thickness (dimension C) includes the 1¹/₈ inch high raised face (Shown above as dimension E)

Other Products

Since 1914, Keckley engineering and manufacturing has been working for industry and commercial building installations worldwide. Keckley products excel in their construction, durability and performance.

It's no wonder so many engineers specify Keckley. If you need Control Valves, Float and Lever Valves, 'Y' Baskets and Duplex Strainers...ask for Keckley.

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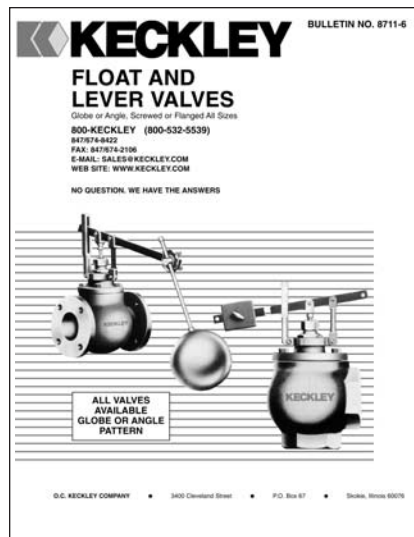
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We'll send you our catalogs by return mail. If you have special requirements or questions, please contact our expert staff of sales people and engineers. They will be happy to assist you.



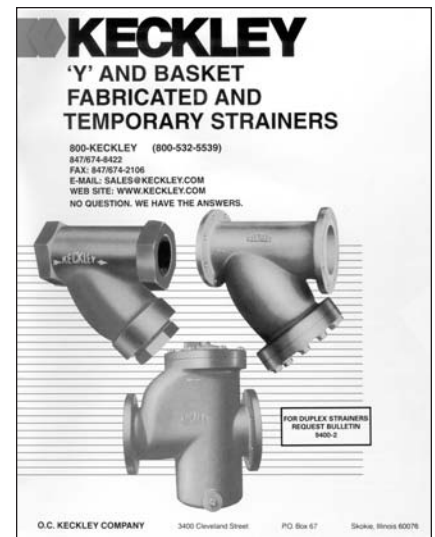
KECKLEY CONTROL VALVES

Bulletin 8900



KECKLEY FLOAT & LEVER VALVES

Bulletin 8711



KECKLEY 'Y' AND BASKETS STRAINERS

Bulletin 8815

