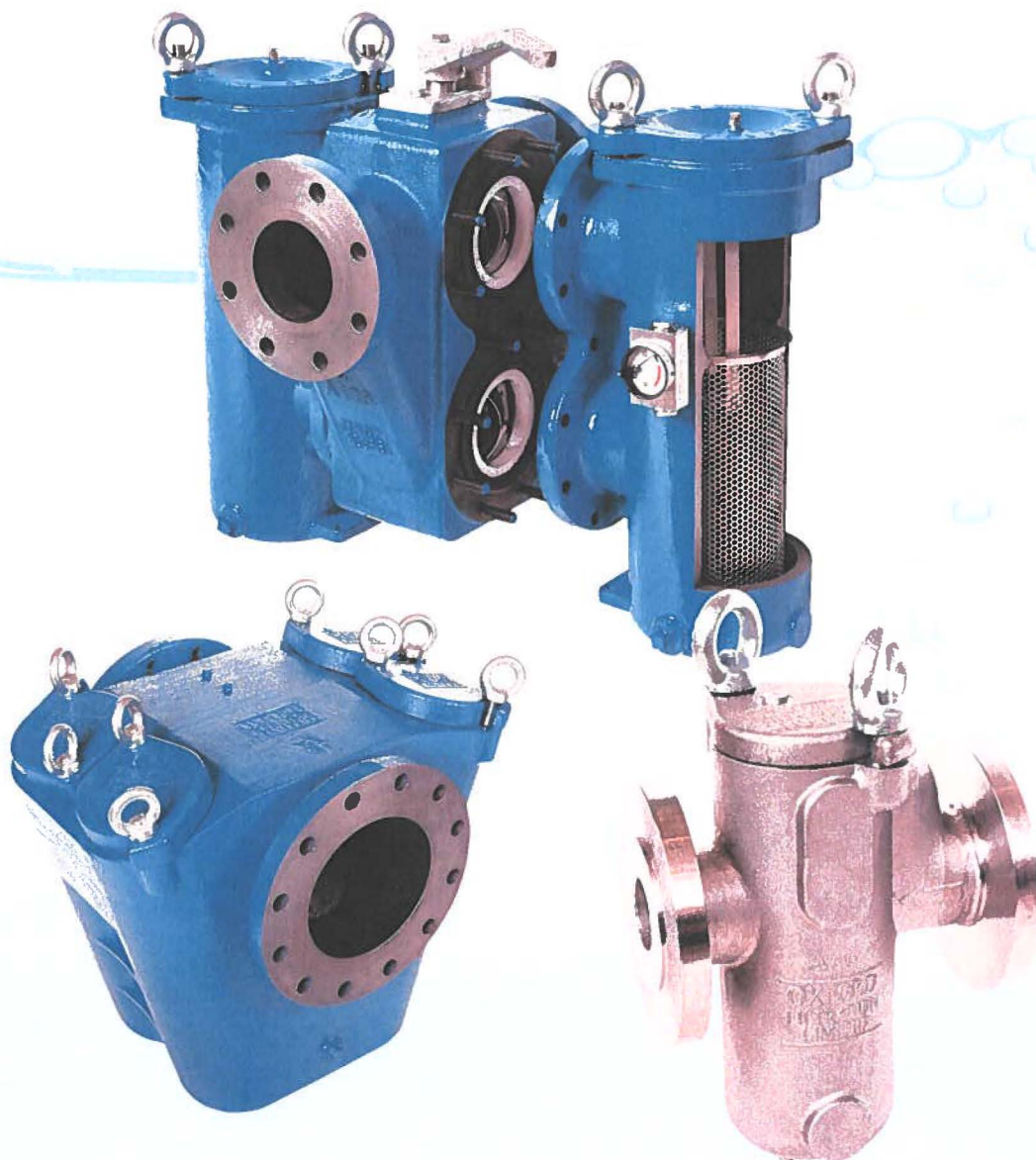


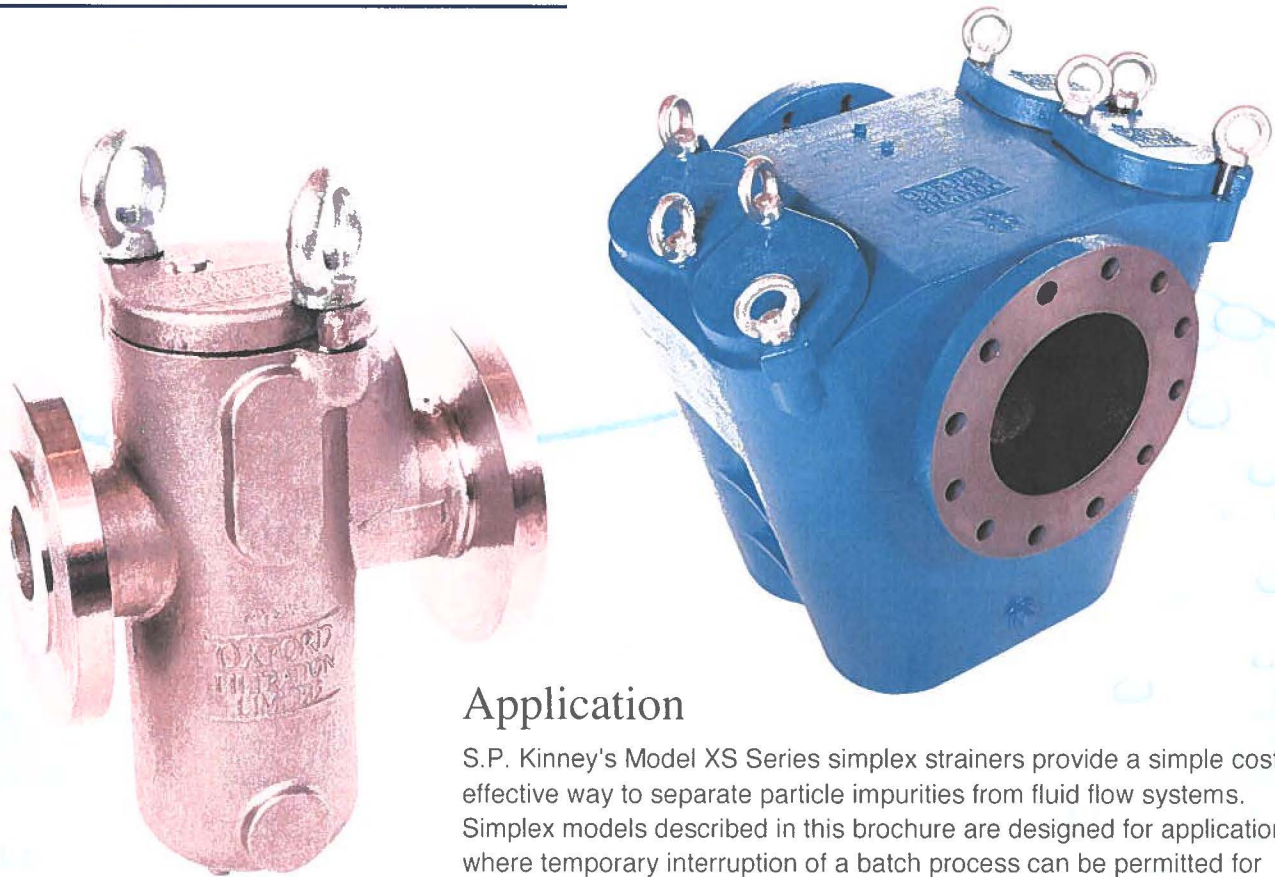


S.P. KINNEY ENGINEERS, INC. SIMPLEX AND DUPLEX STRAINERS



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SIMPLEX STRAINERS



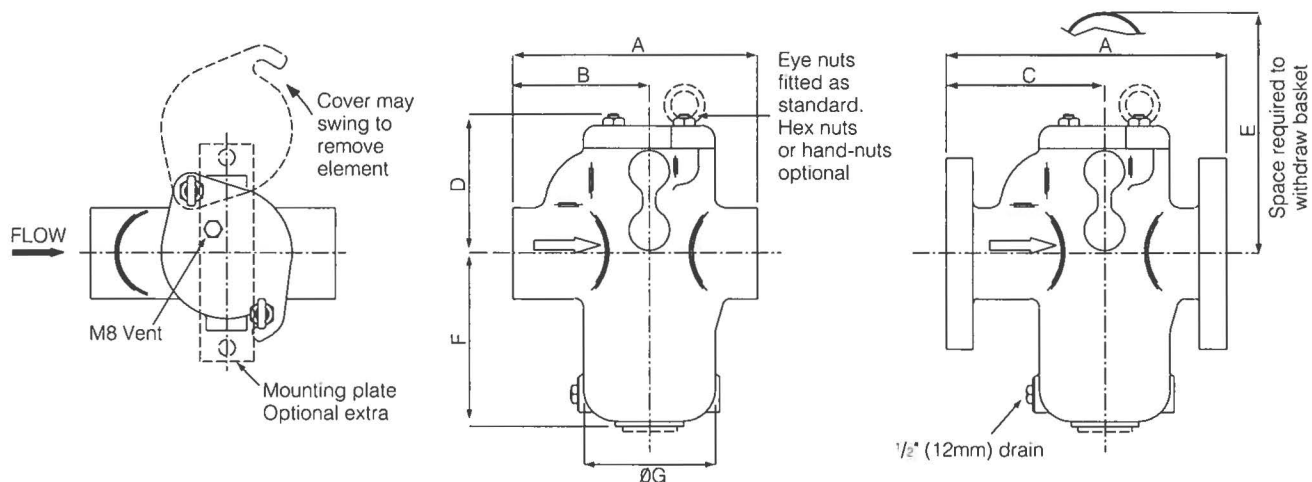
Application

S.P. Kinney's Model XS Series simplex strainers provide a simple cost-effective way to separate particle impurities from fluid flow systems. Simplex models described in this brochure are designed for applications where temporary interruption of a batch process can be permitted for basket cleaning. Where continuous, uninterrupted flow is required, our duplex strainers or self cleaning filters described on pages 7 and 9 of this brochure should be used. All strainers are individually pressure tested.

- Available in cast iron, bronze, carbon and stainless steel and other materials to customer order.
- Pipeline sizes from 20mm (3/4") to 450mm (18") (ask for details of sizes above 200mm (8")).
- Available flanged in all common drillings including PN16 and ANSI150 (ANSI300 and 600 on request) and screwed ports both BSP and NPT or socket weld.
- XS range with PN16 drilling up to 16 BarG*
- XS steel range with ANSI150 drilling up to 19BarG* (cast iron ANSI125 limited to 13.8 BarG*).
- Large filter basket areas and manufactured in st. steel 316.
- 100% full flow.
- Extended area basket available.
- Various options including differential pressure indicator, magnets to remove ferrous particles, heating jackets.

(*Note – pressures quoted at 50C max. Pressures will reduce with higher temperatures and are limited to flange rating. Temperature limited by seal selection. For 8" and above refer to table on page 4.)

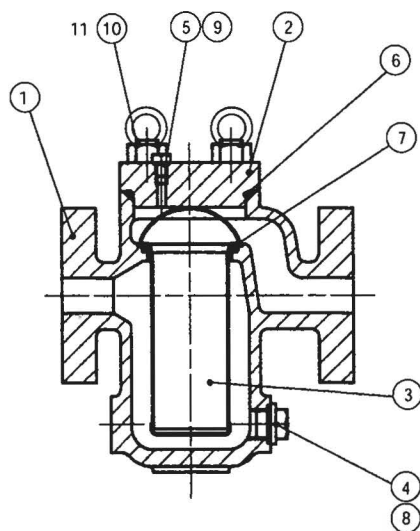
Dimensional Data



Bore Size	Flanged Filters	Screwed Filters	Common Dimensions (mm)						Basket Area	Mass (dry)	
	A	A	B	C	D	E	F	G	cm sq	Flanged kg	Screwed kg
DN25	195	160	90	110	95	245	126	100	200	14	10
DN40	210	175	95	115	120	310	160	100	280	14	10
DN50/65	310	270	150	170	155	355	160	145	514	26/30	20
DN80	345	-	-	200	195	455	210	160	770	38	-
DN100	355	-	-	210	225	580	270	160	1018	48	-
DN150	415	-	-	255	270	680	280	170X345	2036	81	-
DN200	485	-	-	242.5	223	565	385	-	4076	170	-
DN250	813	-	-	406.5	445	1103	670	460	6320	325	-
DN300	857	-	-	428.5	465	1315	850	460	8545	420	-

N.B. Table data refers to PN16 & ANSI125/150 only. DN200 8" model limited to max 10 Barg (at 50C). DN250 and DN300 to max 8 barg.

Parts List



Item No.	No. off	Description
1	1	Body
2	1	Filter Cover
3	1	Basket As-sembly
4	1	Drain Plug
5	1	Bleed Screw
6	1	O Ring Cover
7	1	O Ring Basket
8	1	O Ring Drain
9	1	O Ring Bleed
10	3/4	Stud
11	2	Eye-nut

Model	Body and Cover Material	Seal Material (as standard)	Drain Plug	Colour
XS	Cast Iron* BS EN1561 EN-JL1030 DIN1691 GG25 ASTM A48/76 CLASS 35	Nitrile** max 120°C	Bronze	Blue
XSC	Carbon Steel BS EN10213 1.0625 DIN17245 GS22 Mo 4 ASTM A216 GRADE WCB	Nitrile** max 120°C	St. Steel	Grey
XSS	Stainless Steel BS EN10213 1.4408 DIN 17445 GX5 Cr Ni Mo 18 10 ASTM A351 CF8M	Viton**	St. Steel	Self
XSGM	Bronze BS 1400 LG4C DIN DGS 203 ASTM B62/52T	Nitrile** max 120°C	Bronze	Self

* Cast iron recommended for use up to 120C on suitable applications.

** PTFE and EP also available.
Operating temperatures of seal only.
All applications should be checked with our technical department for suitability.

Examples of Simplex Basket Strainer Model Number Identification

XS (Cast Iron body and cover)	50 (2" connection)	S (screwed BSP, NPT also available)
XSS (Cast Steel body and cover)	80 (3" connection)	F (flanged, specify PN16, ASA150 etc)

Basket and Mesh Data

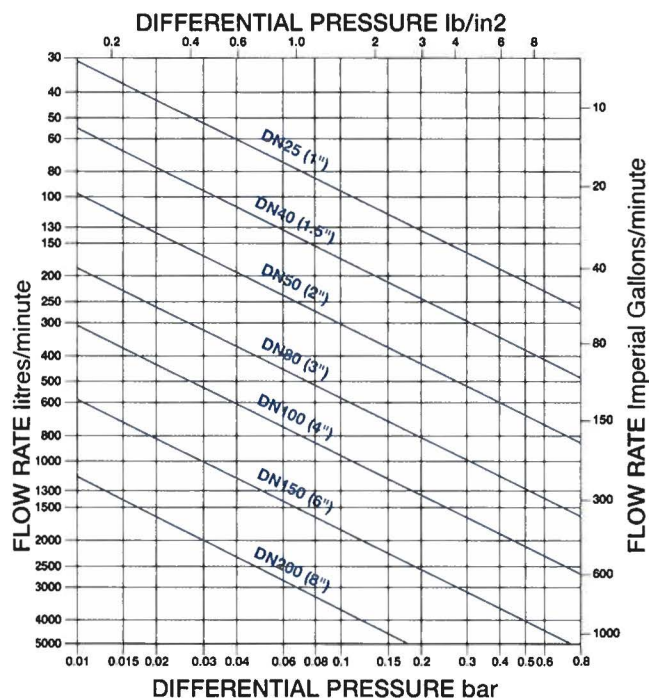
Meshes per linear inch	Size of aperture
20 mesh	0.91mm
30 mesh	0.56mm
40 mesh	0.38mm
60 mesh	0.25mm
80 mesh	0.19mm
120 mesh	0.13mm
200 mesh	0.08mm
300 mesh	0.05mm

Perforated baskets in stainless steel 316 and available with 1mm, 2mm or 3mm or larger diameter holes.

Example of Basket Model Identification

Basket Identification	Size	Size Mesh/Perf.
B -	25 -	80M (DN25 1" with 80 mesh fitted)
B -	50 -	2P (DN50 2" unit with 2mm perf. fitted)

Flow Chart for Single Basket Filters



The chart is for water (1cSt) flowing through a filter with an element coarser than 1 millimetre perforations. Multiply the chart pressure drop by the following factors for different ratings and different viscosities to calculate the actual pressure drop.

Viscosity (Centistokes)	Filtration Rating (mesh size)					
	perf.	20	40	80	120	200
1	1	1	1	1.1	1.2	1.3
50	1.6	1.7	1.9	2.1	2.3	2.5
100	1.7	1.9	2.1	2.4	2.6	2.9
200	2	2.2	2.5	2.9	3.2	3.6
400	2.2	2.7	3.1	3.5	3.9	4.4
800	2.9	3.4	3.8	4.1	4.9	5.8
1500	5	5.8	6.4	6.9	8.1	10.2

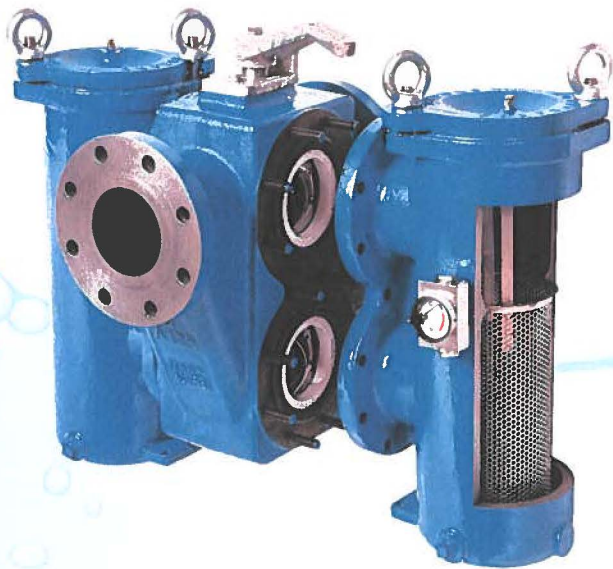
Factors to be Taken Account of when Selecting a Strainer:

- Fluid type (refer to our compatibility tables)
- Flow
- Viscosity
- Temperature – operating and design
- Pressure – operating and design
- Degree of filtration required
- Connection type i.e. flanged PN16, ASA150, screwed BSP, NPT
- Any special requirements i.e. heating jacket, magnets, mounting brackets, dp indicator/switch etc.

Choice of Strainer Type:

- If flow can be interrupted to enable cleaning of the basket use a **Simplex Basket Strainer** and refer to this brochure.
- If flow needs to be continuous even when the basket needs cleaning use a **Duplex Basket Strainer** or a manual or automated **Self Cleaning Filter**. A Manual or Automated Self Clean Filter will enable the operator to clean the filter without actually touching the screen or the process liquid.
- If cleaning of the screen needs to be carried out without operator involvement use an automated **Self Cleaning Filter**.
- Higher pressure strainers available as required. Designs offered rated 600 and 900 lbs.

DUPLEX STRAINERS



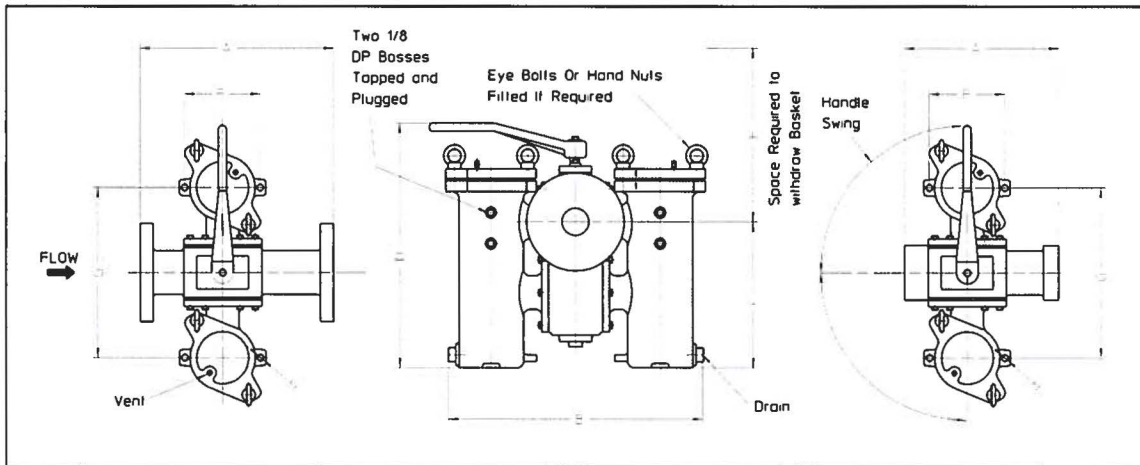
Application

S.P. Kinney's Duplex Basket Strainers are designed for applications where continuous flow must be maintained whilst cleaning filter baskets. The strainer uses integral 3 way stainless steel ball valves with PTFE seals. This design provides drop tight shutoff eliminating costly and potentially dangerous leakage into the chamber not in use which can occur in some other duplex strainer designs. This also eliminates some problems which can occur in particular suction conditions where in other designs air ingress could occur. All parts of the valve mechanism are accessible after removing the basket chamber without taking the strainer out of the pipeline.

The handle covers the strainer chamber when in use and prevents accidental opening of the filter cover.

- Available in cast iron, bronze, carbon and stainless steel.
- Pipeline sizes from 20mm (3/4") to 200mm (8") (ask for details of sizes above 200mm).
- Available flanged in all common drillings including PN16 and ANSI150 (ANSI300 and 600 on request) and screwed ports both BSP and NPT or socket weld.
- XD range up to 13.8 Barg (pressure stated at 50C, lower pressure at higher temperatures, ask if unsure). Temperature limited by chosen seal. Pressure also limited by flange rating. 200mm and above lower working pressure.
- Large filter baskets areas, manufactured in st. steel 316.
- Various options including differential pressure indicator, magnets and heating jackets.
- Can be coated internally and externally.

Dimensional Data



Bore Size	Flanged Filters	Threaded Filters	Common Dimensions (mm)							Basket Area	Mass (dry)	
	A	A	B	C	D	E	F	G	H	CM sq	Flanged kg	Screwed kg
DN20/25	178	142	329	148	305	243	-	224	-	130	21	19.8
DN32/40	238	191	384	205	377	335	136	260	12	243	33.5	31.7
DN50	270	254	468	271	471	400	158	310	14	425	55	54
DN65	343	292	560	347	579	538	158	310	14	701	107.5	103
DN80	343	-	560	347	579	538	196	370	14	701	108	-
DN100	406	-	682	403	649	637	228	464	17	1057	169.5	-
DN150	559	-	897	621	905	640	310	600	24	2060	390	-
DN200	680	-	1368	772	1146	820	416	834	24	4161	763	-
DN250	928	-	1520	731	1226	820	500	1000	22	5774	900	-

N.B. Table data refers to PN16 & ANSI125/150 only

Basket and Mesh Data

Mesher per linear inch	Size of aperture
20 mesh	0.91mm
30 mesh	0.56mm
40 mesh	0.38mm
60 mesh	0.25mm
80 mesh	0.19mm
120 mesh	0.13mm
200 mesh	0.08mm
300 mesh	0.05mm

Flow Chart for Duplex Basket Strainers

