



 **KleenScreen**
WATER INTAKE FILTERS

PASSIVE | SELF-CLEANING
STAINLESS WATER INTAKE SCREENS



TABLE OF CONTENTS



PS Passive Screens	3
KSO Standard Screens (over 15 l/s)	6
KSR Small Screens (under 15 l/s)	14
KSE KleenScreen Effluent Range	18
KSL Floatation KleenScreens	23
KST Torq+ Electric Drive	27
KSC Compact Kleenscreens	31



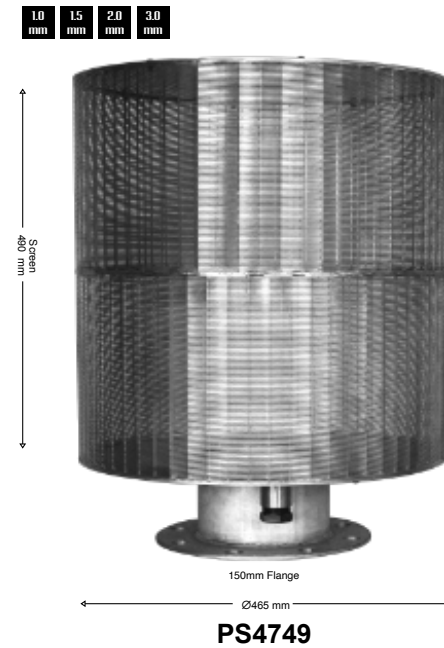
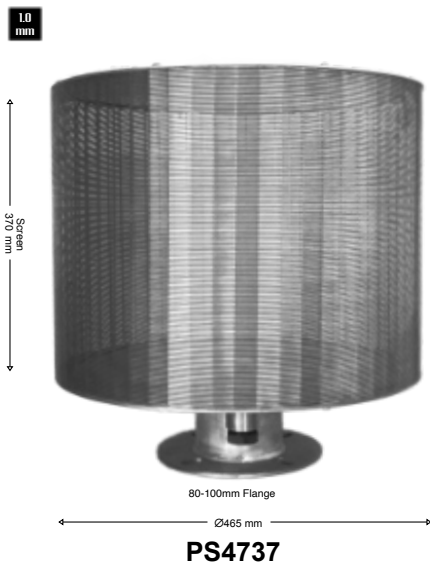
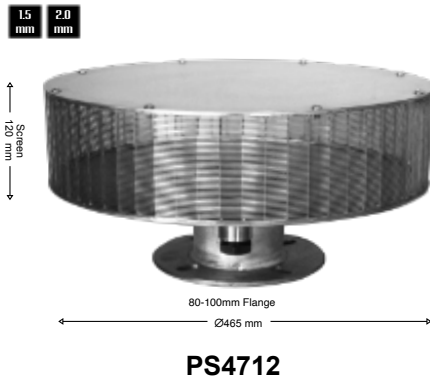
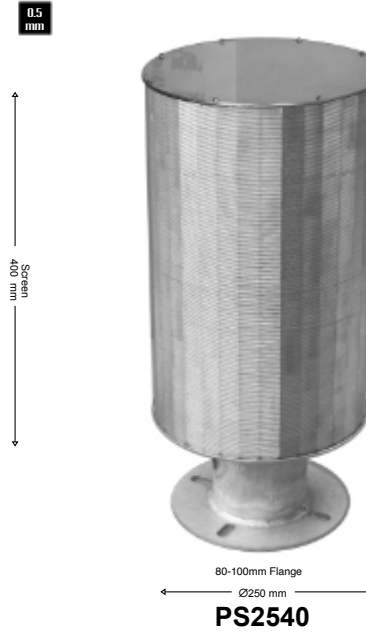
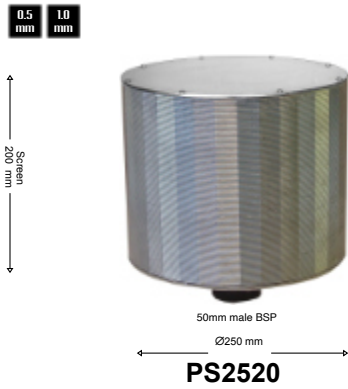
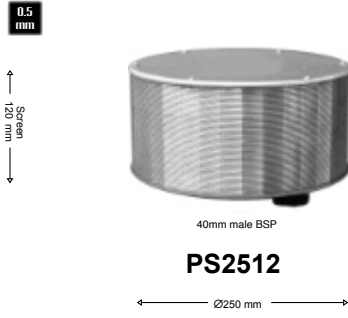
PS Passive Screens

Our passive screens are constructed from stainless 3mm wedge-wire. As per the table below, there are various gap size options.

While standard outlet sizes are listed in the table, we can provide the screens with any connection type you require.

Some of the finer mesh sizes can be paired with a foot valve in gravity feed situations to filter out fine particles. If a self-cleaning mechanism is required, our KSR fixed screen, self-cleaning models come in similar sizes to the passive screens - so you can choose passive or self-cleaning, depending on your situation.

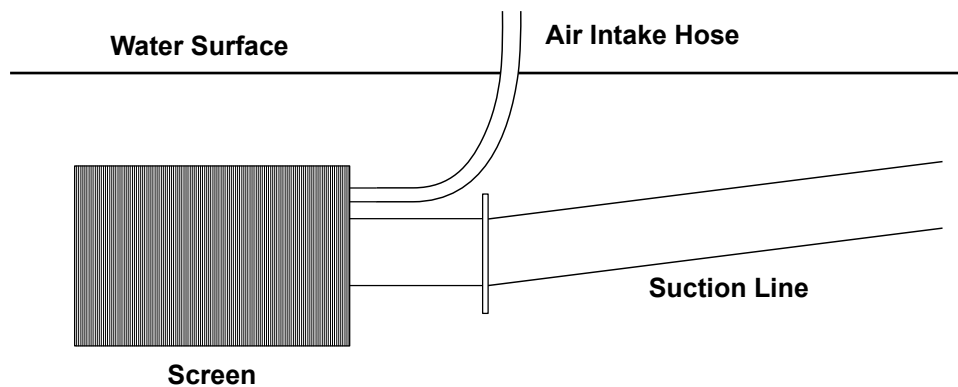
Model	Diameter	Length	Outlet	Gap
PS2512	250mm	120mm	40mm male BSP	0.5mm
PS2520	250mm	200mm	50mm male BSP	0.5, 1.0mm
PS2540	250mm	400mm	80-100 Flange	0.5mm
PS4712	465mm	120mm	80-100 Flange	1.5, 2.0mm
PS4725	465mm	245mm	80-100 Flange	1.0, 1.5, 2.0, 3.0mm
PS4737	465mm	370mm	80-100 Flange	1.0mm
PS4749	465mm	490mm	150 Flange	1.0, 1.5, 2.0, 3.0mm



Damage Protection Air Intake Hose Connection

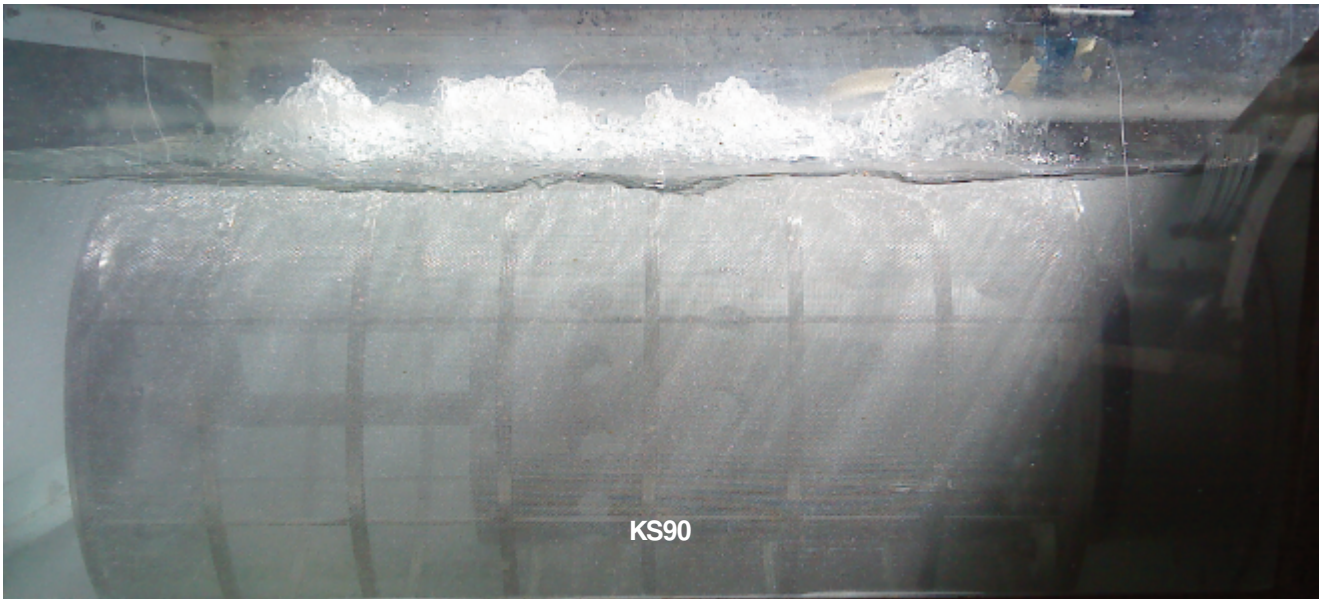
Larger models come standard with an air intake connection to prevent them from collapsing under suction in situations where screens become completely blocked from silt or other debris.

The the 25mm female bsp air inlet is supplied with a screw-in bung but can be attached to a hose which sits above the water level. If the screen becomes too blocked, it will draw air into the suction line, shutting off the pump and preventing the screen from collapsing.

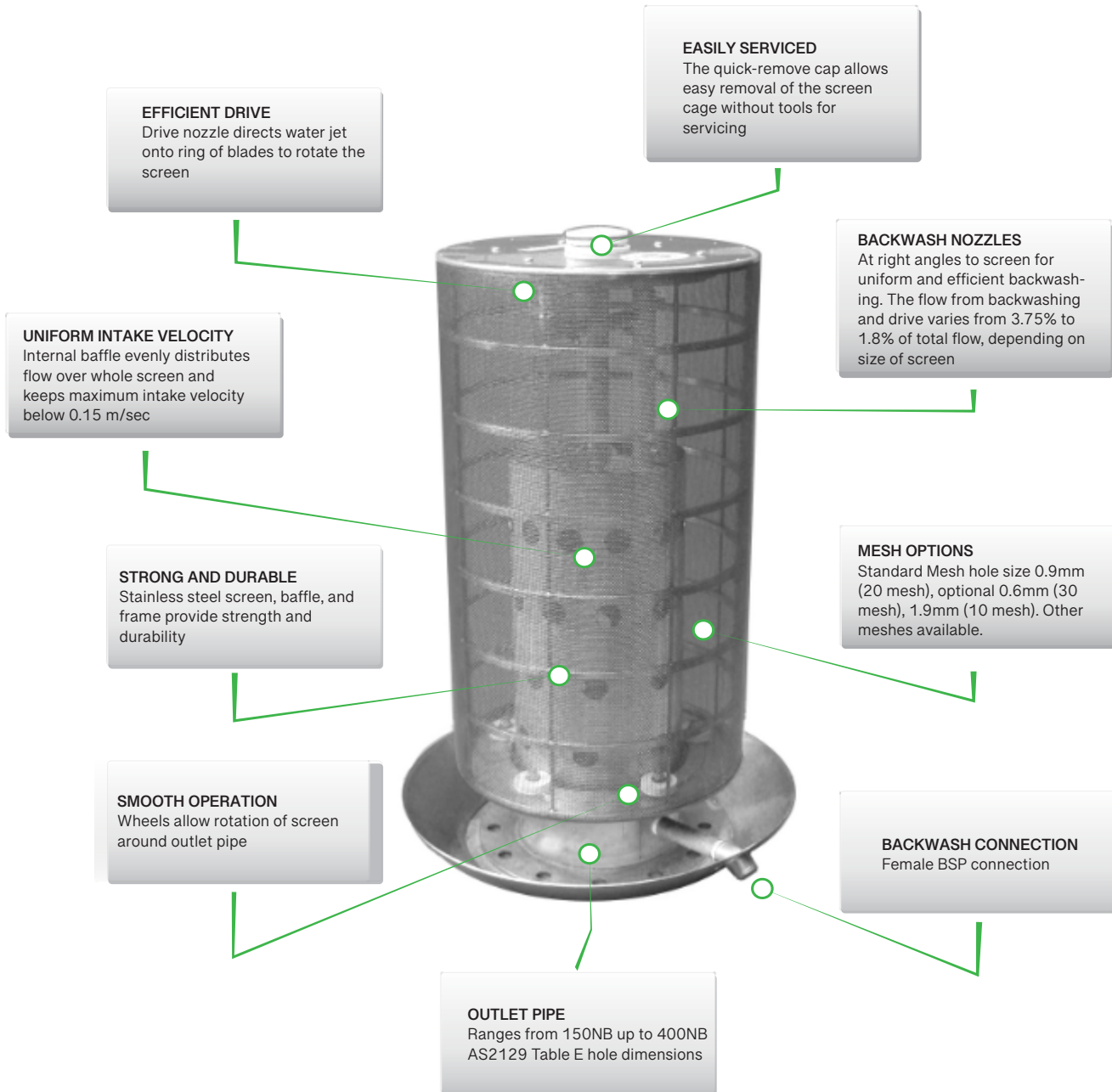


KSO Standard Screens (over 15 l/s)

All-stainless construction with thermoplastic bearings, KSO self-cleaning screens rotate around the intake pipe, which also houses spray nozzles that backwash debris off the screens. The Orbitor comes in a range of flow rates and sizes.



Features



KS90 - KleenScreen Orbitor
*Pictured with optional Screen Guard

Benefits

ENERGY SAVING

With a small portion (1.8% - 3.75%) of pumped water backwashing and rotating the screen, it is continuously cleaned. This maintains the pumping efficiency of the system at optimum, thereby reducing power consumption.

REPAIRS AND MAINTENANCE

The small screen holes (10 mesh 1.9mm, 20 mesh 0.9mm, 30 mesh 0.6mm) filter water entering the system. This can significantly reduce wear on pump and other system components.

LABOUR SAVING

By reducing major causes of water supply problems, ie screen blockage, loss of prime, and wear on pump, the labour required to maintain the system is reduced significantly.

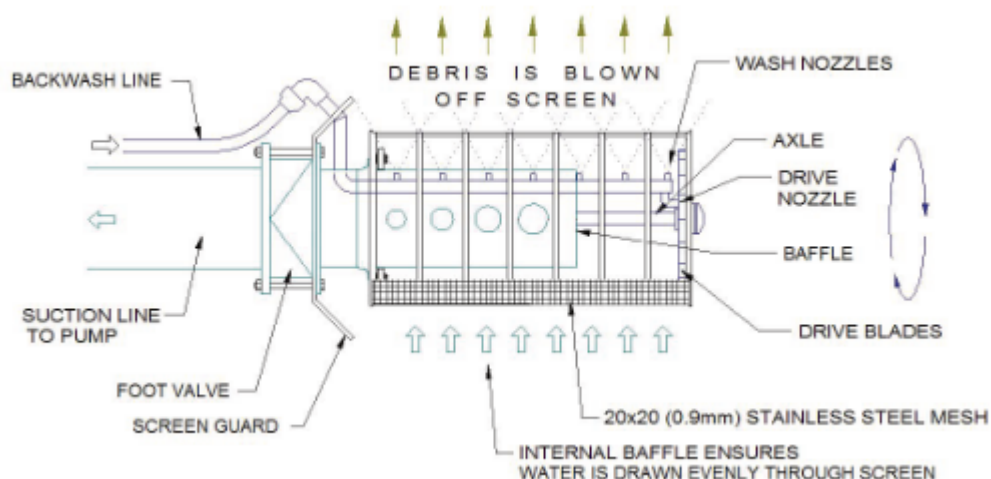
DURABLE

Stainless steel and thermoplastic components for rugged construction and long operational life.

ENVIRONMENTALLY FRIENDLY

Satisfies Environmental Council requirements for screen hole size, and intake velocity.

Operation



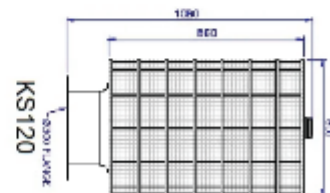
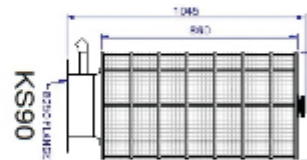
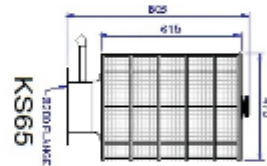
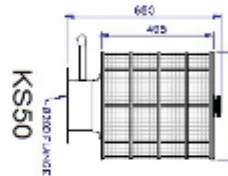
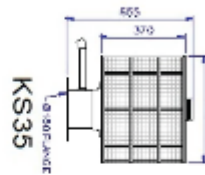
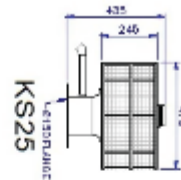
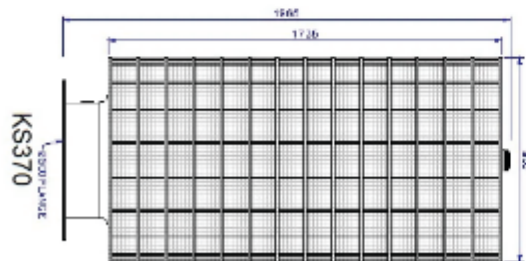
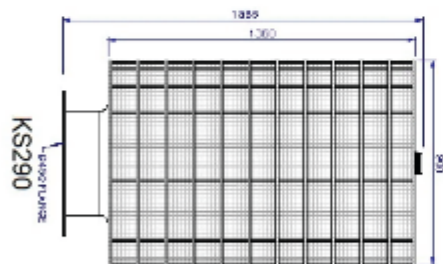
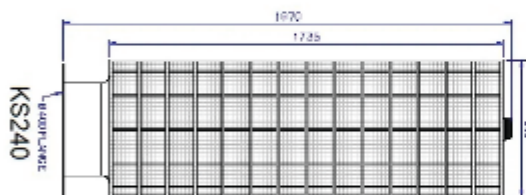
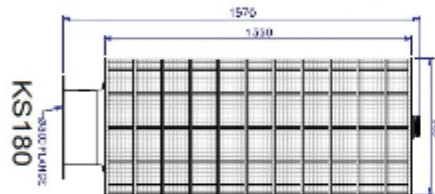
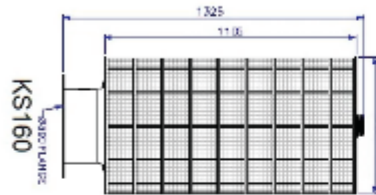
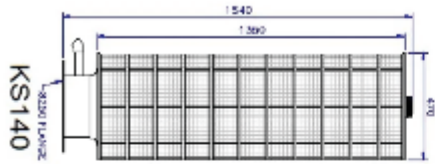
Flow | Pressure | Connections

Base Model	Maximum Flow (Wedge-wire with 0.5mm wire spacing)				Backwash Connection	Outlet Connection	Required Pressure for Backwash.	Backwash Flow at Required Pressure.
	L/S	M ³ /Hour	IGPM	USGPM	International (USA)	International (USA)	Meters (USA)	L/S (USA)
KS25	25	90	330	397	3/4" BSP fem (3/4" NPT)	150NB Tab E (6" Flange)	35 (50)	0.8 (13)
KS35	35	126	463	556	3/4" BSP fem (3/4" NPT)	150NB Tab E (6" Flange)	35 (50)	0.9 (14)
KS50	50	180	661	794	3/4" BSP fem (3/4" NPT)	200NB Tab EEz (8" Flange)	40 (60)	1.2 (19)
KS65	65	234	859	1032	3/4" BSP fem (3/4" NPT)	200NB Tab E (8" Flange)	40 (60)	1.3 (21)
KS90	90	324	1189	1429	1" BSP fem (1" NPT)	250NB Tab E (10" Flange)	40 (60)	2.1 (33)
KS115	115	414	1520	1825	1" BSP fem (1" NPT)	250NB Tab E (10" Flange)	45 (60)	2.6 (41)
KS140	140	504	1850	2222	1" BSP fem (1" NPT)	250NB Tab E (10" Flange)	50 (75)	3.1 (49)
KS180	180	648	2378	2858	1 1/2" BSP (1 1/2" NPT)	300NB Tab E (12" Flange)	50 (75)	4.4 (70)
KS240	240	864	3168	3840	1 1/2" BSP (1 1/2" NPT)	400NB Tab E (16" Flange)	50 (80)	4.9 (78)
KS290	290	1044	3828	4640	1 1/2" BSP (1 1/2" NPT)	450NB Tab E		
KS370	370	1332	4884	5920	1 1/2" BSP (1 1/2" NPT)	500NB Tab E		

Dimensions A

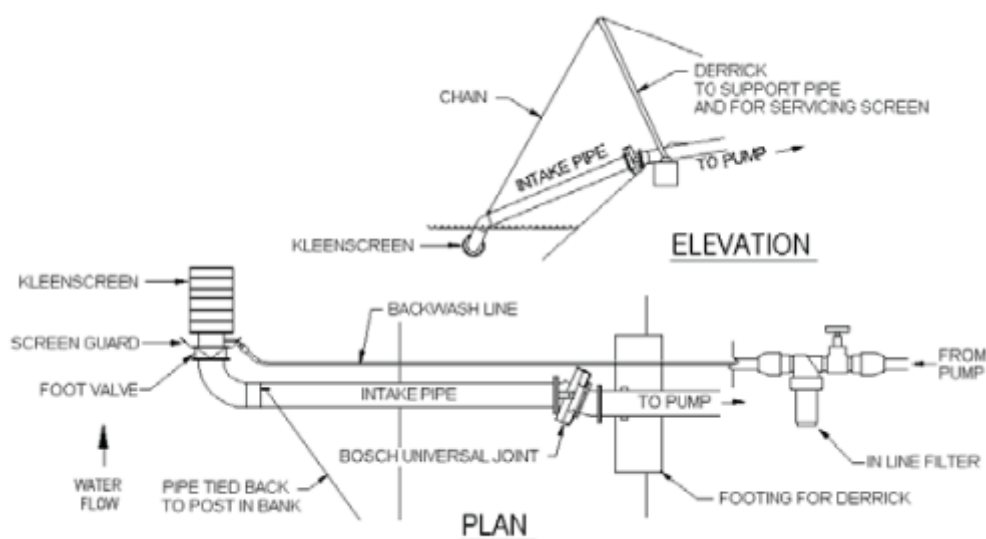
Base Model	Screen Length MM (inches)	Screen Diameter MM (inches)	Overall Length MM (inches)	Net Weight KG (pounds)
KS25	245 (9.6)	470 (18.5)	435 (17.1)	17 (37)
KS35	370 (14.6)	470 (18.5)	555 (21.9)	20 (44)
KS50	490 (19.3)	470 (18.5)	690 (27.2)	23 (51)
KS65	610 (24)	470 (18.5)	810 (31.9)	24 (53)
KS90	855 (33.7)	470 (18.5)	1045 (41.1)	33 (73)
KS115	1100 (43.3)	470 (18.5)	1295 (51)	35 (77)
KS140	1345 (53)	470 (18.5)	1540 (60.6)	4.8 (106)
KS180	1345 (53)	600 (23.6)	1570 (61.8)	60 (132)
KS240	1730 (68.1)	600 (23.6)	1970 (77.6)	120 (264)
KS290	1350 (53)	900 (23)	1585 (62.4)	
KS370	1735 (68.3)	900 (23)	1965 (77.4)	

Dimensions B



Installation

1. The KleenScreen must be able to rotate. Sufficient clearance (100mm) under the screen is required.
2. At least 50mm is required between water surface and top of screen.
3. The recommended position in a stream/river, is to have a 90° bend at end of intake pipe, with the screen facing downstream. The backwash nozzles should be facing the opposite bank of the stream, at a 45° angle up from horizontal. This is the most effective position to flush any debris away from the screen.
4. A screen retrieval system is required to lift the screen out of the water for servicing, and periods of inactivity.
5. It is recommended to lift the screen out of the water when not in use. This prevents the build up of silt and trash around the screen and the growth of algae on the screen.
6. The KS Universal Joint is recommended to provide the flexibility to lift the intake pipe and swing it around to the bank.
7. The backwash line should be plumbed into the discharge of the pump before the valve.
8. The recommended pressure range for backwashing is 40-60 m (60 – 90 psi). If pressure is below this a booster pump is required, or if significantly above a pressure reducing valve.
9. An inline filter with 16 mesh(1.2mm) is required on the backwash line.



KS54-WW

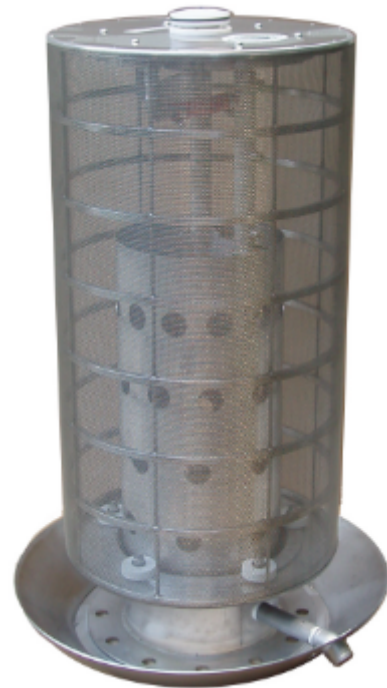
*Pictured with optional Screen Guard



KS240



KS120



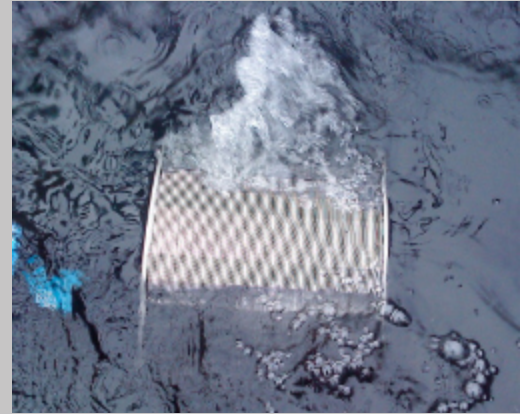
KS90

*Pictured with optional Screen Guard

KSR Small Screens (under 15 l/s)

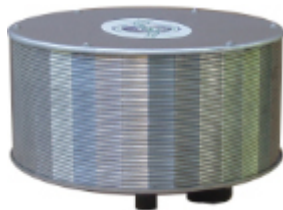
Self Cleaning Intake Screens to protect pumps and systems from organic and inorganic debris

The KleenScreen™ Revolver has a unique backwashing system with all revolving components inside a stationery screen. The drive system has the backwashing nozzle passing across a sail, which creates a pressure differential, rotating the sail and nozzle. This design is particularly effective in self-cleaning screens for relatively small flow rates.

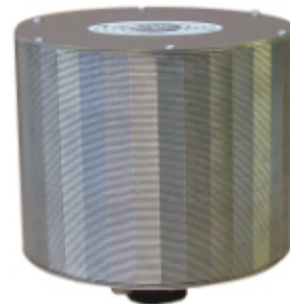


KS 5

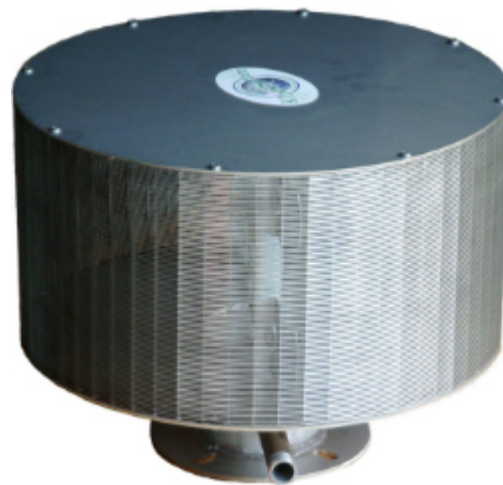
KS 25



KS 5

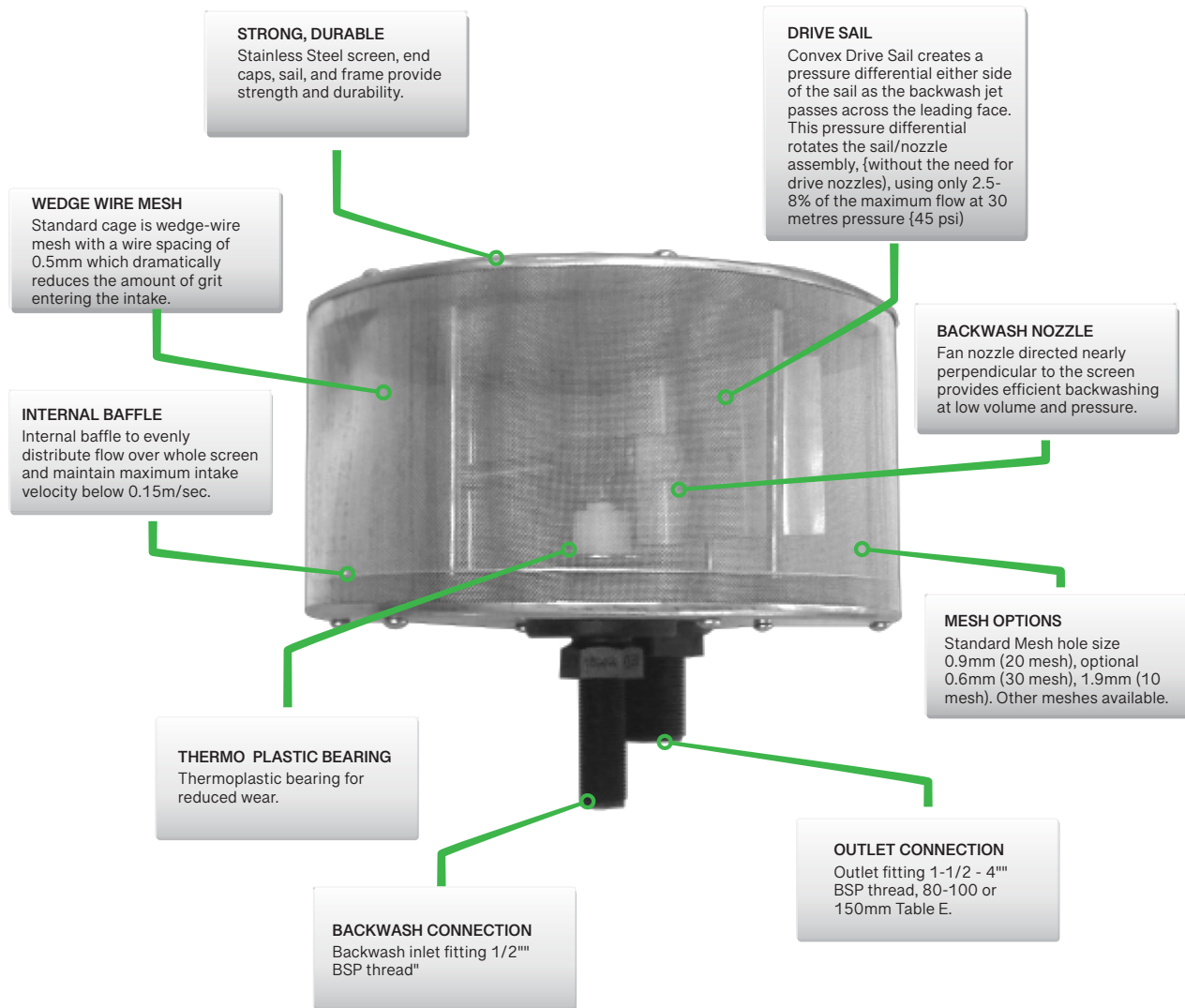


KS 10



KS 15

Components



KS 2.5

Benefits

ENERGY SAVING

With a small portion {2.5% - 8%} of pumped water backwashing and rotating the screen, it is continuously cleaned. This maintains the pumping efficiency of the system at optimum, thereby reducing power consumption

REPAIRS AND MAINTENANCE

The narrow screen slots {0.5mm wide} filter water entering system. This can significantly reduce the wear on pump and other system components

LABOUR SAVING

By reducing major causes of water supply problems, ie screen blockage, loss of prime, and wear on pump the labour required to maintain the system is reduced significantly.

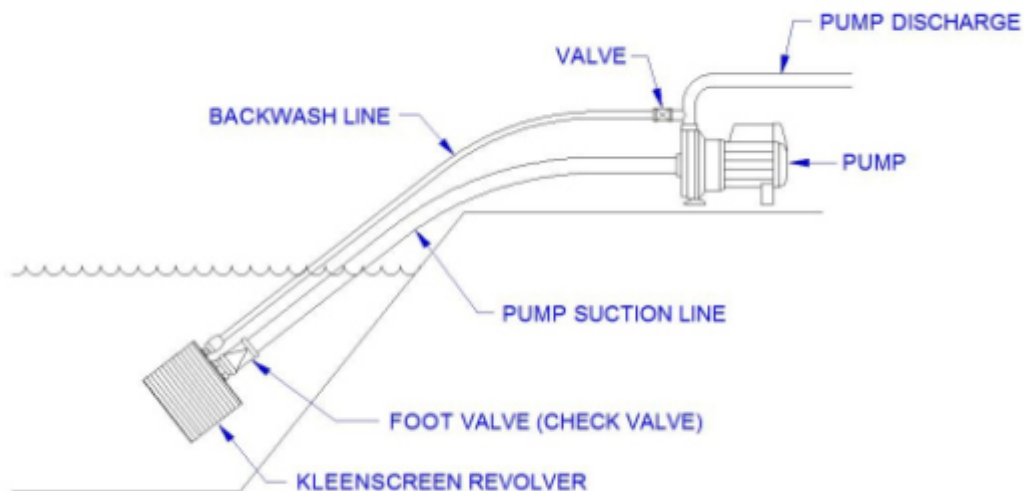
DURABLE

Stainless steel and thermoplastic components ensure rugged construction and long operational life.

ENVIRONMENTALLY FRIENDLY

Satisfies Environmental Council requirements for screen hole size, and intake velocity.

Installation

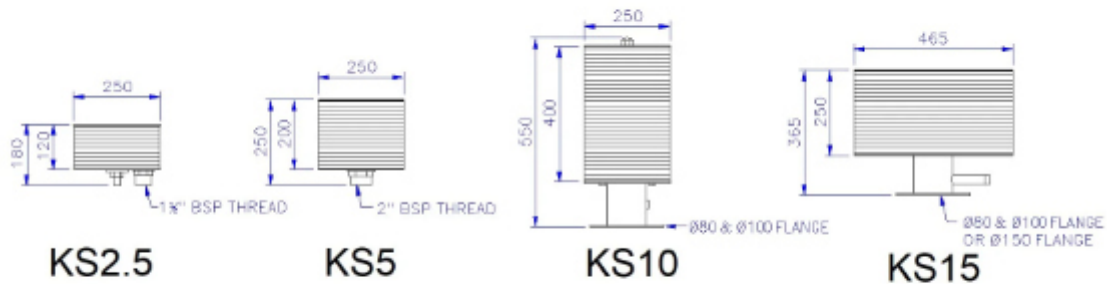


Flow | Pressure | Connections

Base Model	Maximum Flow (Wedge-wire with 0.5mm wire spacing)				Backwash Connection	Outlet Connection	Required Pressure for Backwash.	Backwash Flow at Required Pressure.
	L/S	M ³ /Hour	IGPM		International (USA)	International (USA)	Meters (USA)	L/S (USA)
KS2.5	2.5	9	33	40	1/2" BSP male (1/2" NPT)	1 1/2" BSP male (1 1/2" NPT)	30 (45)	0.3 (5)
KS5	5	18	66	79	1/2" BSP male (1/2" NPT)	2" BSP male (2 options)	30 (45)	0.3 (5)
KS10	10	36	132	158	1/2" BSP fem (1/2" NPT)	80-100NB Tab Ez (2-3" Flange)	30 (45)	0.5 (8)
KS15 (0.9mm)	15	54	198	237	3/4" BSP male (3/5" NPT)	80-100 or 150mm Flange (2 options)	30 (45)	0.5 (8)

Dimensions

Base Model	Screen Length MM (Inches)	Screen Diameter MM (Inches)	Overall Length MM (Inches)	Net Weight KG (pounds)
KS2.5	120 (4.7)	250 (9.8)	180 (7.1)	3 (7)
KS5	200 (7.9)	250 (9.8)	250 (21.7)	5 (11)
KS10	400 (15.7)	250 (9.8)	550 (21.7)	8 (18)
KS15	245 (9.6)	470 (18.5)	365 (14.4)	13 (29)



KSE KleenScreen Effluent Range

Self-Cleaning Intake Screens for filtration of particles likely to cause system blockages in modern, sprinkler based effluent application systems.

As dairy effluent systems develop to better utilise nutrients and reduce environmental impact they are tending to be designed to apply much smaller amounts at greatly reduced application rates. A consequence of this is the use of relatively small nozzles to apply the effluent. These nozzles have a tendency to block when they are supplied direct from a dirty source such as an effluent pond, causing poor system performance and frustration for the user.

The KSE Range has been developed to greatly reduce this problem and decrease system maintenance. It effectively stops potentially troublesome particles from entering the effluent system.

The KSE Range use a pair of internal backwashing jets that rotate to continuously blast the screen and nearby area to break up or wash particles off and away from the screen.

In comparison to a KSE self-cleaning intake screen, standard irrigation filtration systems are either high-maintenance, due to the dirty situation, or very expensive to install.



Benefits

ENERGY SAVING

Although some of the pumped fluid is directed back to the backwashing system, the small screen hole size allows the use of conventional closed impeller pumps. This allows smaller motors to be used and higher heads to be pumped than standard open impeller and trash pumps, thereby reducing power consumption.

REPAIRS AND MAINTENANCE

The small screen holes filter water entering system. This can significantly reduce the wear on the pump and other system components, while also dramatically reducing the incidence of nozzle blockages.

LABOUR SAVING

By reducing one of the major causes of sprinkler based effluent system problems, i.e. blockage, the labour required to maintain the system is significantly reduced.

DURABLE

Stainless steel and thermoplastic components ensure rugged construction and long operational life.



KS5-E

Features

NO ELECTROLYSIS

Materials are mainly stainless steel or plastic, which prevents a corrosive situation with dissimilar metals.

DURABLE AND RELATIVELY LIGHT

The stainless steel construction provides a strong and durable screen, with a relatively light weight.

FILTERING OPTIONS

The KleenScreen Effluent range is produced using a Wedgewire cage which is suited to the typically fibrous effluent environment. The KS5-E is available with a 0.5mm or 1.0mm gap between the wires. The KSES is available with 1.5mm or 2.0mm between the wires, whereas the KSE is available with the full range of slot widths between 1.0mm and 3.0mm.

STANDARD CONNECTION

The KS5-E can have either a 2" or 3" BSP male connection where the KSES can have a 2½" BSP female connection or the slotted 80-100NB flange. The KSE - either the slotted 80-100NB flange or a 150NB AS2129 Table D flange. Backwash connections are standard BSP male connections.

INSTALLATION NOTES

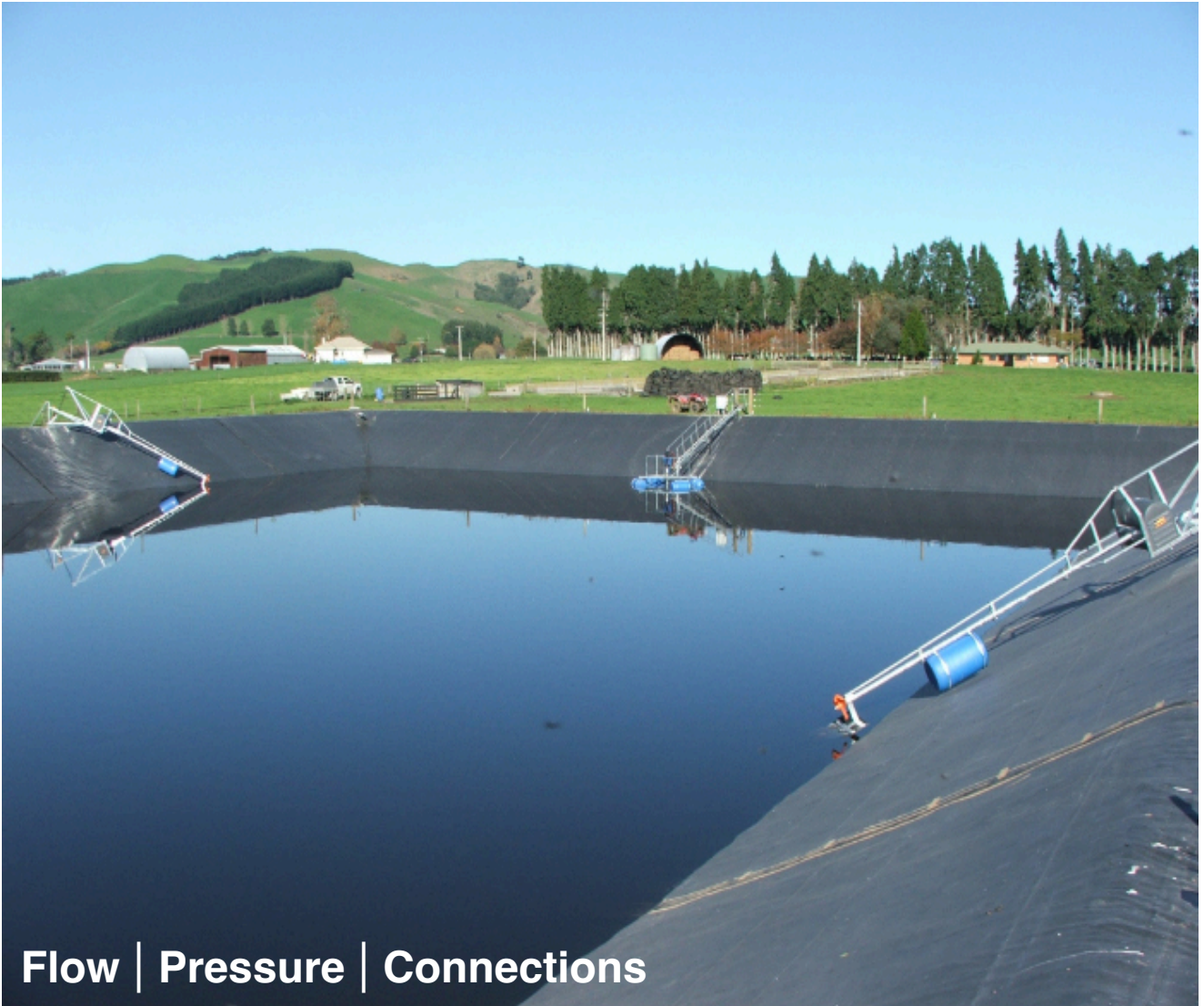
The KSE Range of screens is best suited to being installed in a second oxidation pond, or at a minimum on the side opposite the pond inlet in a first pond. This range of screens is not recommended for sumps with relatively small volumes or situations that have large amounts of fibrous material. The recommended pressure range for backwashing is 25-60m (40-90 psi).



KSES



KSE

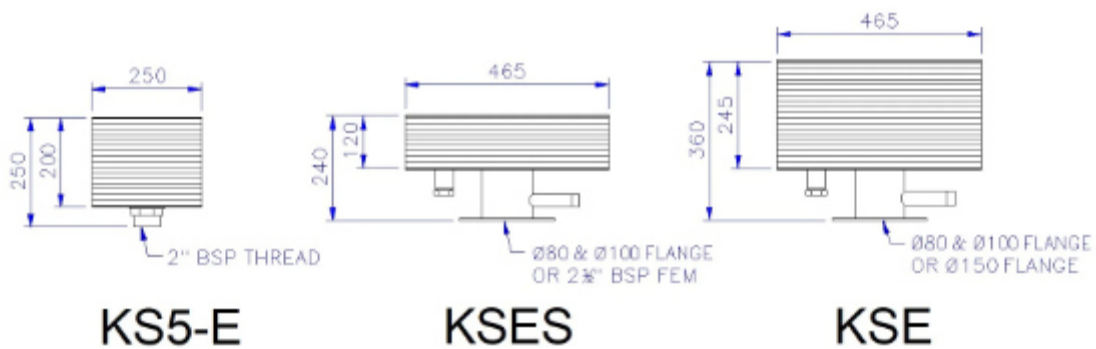


Flow | Pressure | Connections

Base Model	Maximum Flow (Wedge-wire with 0.5mm wire spacing)				Backwash Connection	Outlet Connection	Required Pressure for Backwash.	Backwash Flow at Required Pressure.
	L/S	M ³ /Hour	IGPM		International (USA)	International (USA)	Meters (USA)	L/S (USA)
KS5-E	8	29	106	128	1/2" BSP male (1/2" NPT)	2" (50mm)	30 (45)	0.7 (11)
KSES	12	43	158	192	3/4" BSP male (3/4" NPT)	4" (100mm)	30 (45)	1.3 (21)
KSE	25	90	330	400	1" BSP male (1" NPT)	4" 6" (100mm 150mm)	30 (45)	2.6 (41)

Dimensions

Base Model	Screen Length MM (inches)	Screen Diameter MM (inches)	Overall Length MM (inches)	Net Weight KG (pounds)
KS5-E	200 (7.9)	250 (9.8)	250 (9.8)	5 (11)
KSES	120 (4.7)	470 (18.5)	240 (9.4)	13 (29)
KSE	245 (9.6)	470 (18.5)	365 (14.4)	17 (47)



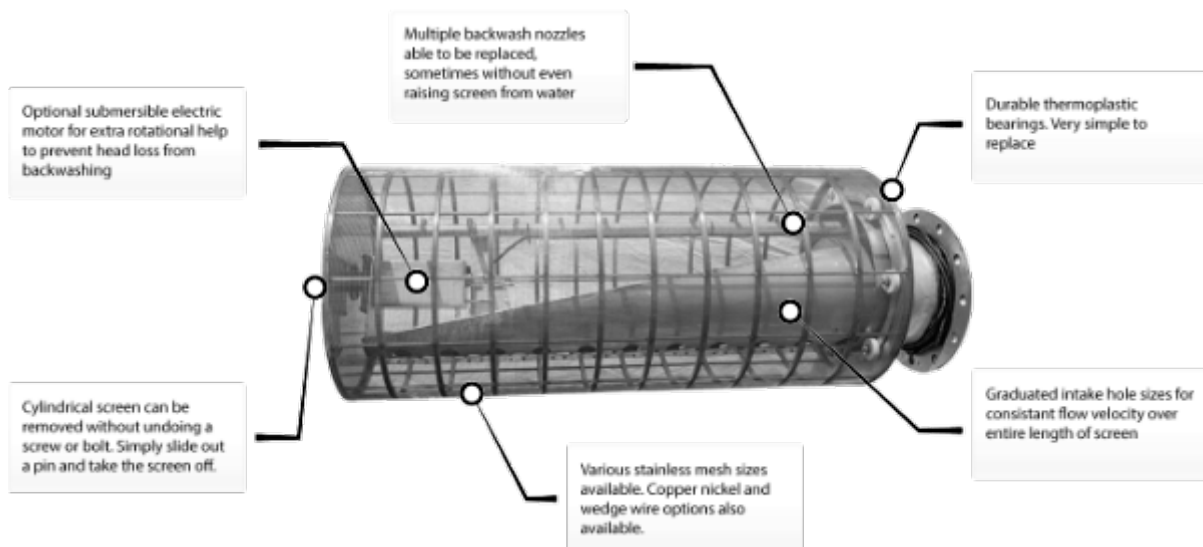
KSL Floatation KleenScreens

Takes water from depths as shallow as 125mm.

The KSL is designed for applications where the intake screen is required to be mostly above the surface of the water. These applications include shallow streams and channels and can also be used for skimming off the surface of effluent/wastewater ponds.

Dimensions

- Galleries
- Irrigation Canals
- Ditch fed Linear Irrigators where the ditch is the storage. This screen will enable you to use the majority of the water available in the channel.
- Skimming Ponds to take the surface liquid away and leave the solids at the bottom.



KSL12 Torq+ Electric Drive



KSL 24



KSL 10



KSL 20

Features

- Direction of rotation can be changed to ensure that the debris is most effectively blown away from the screen.
- The intake pipe only draws water from underneath, allowing the screen to be mostly above water level
- The backwash is above the water level making it more effective in cleaning the screen and blowing debris well clear.



KSL 10



KSL 12



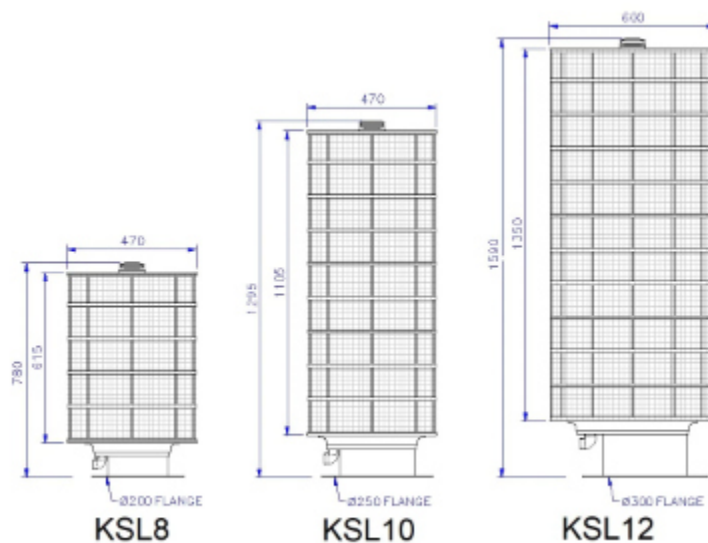
KSL12 Torq+ Electric Drive

Flow | Pressure | Connections

Base Model	Maximum Flow (Wedge-wire with 0.5mm wire spacing)			Backwash Connection International (USA)	Outlet Connection International (USA)	Required Pressure for Backwash. Meters (USA)	Backwash Flow at Required Pressure. L/S (USA)	
	L/S	M ³ /Hour	IGPM					
KSL-8	80	288	1056	1280	1" fem BSP	8" flange	40	1.3 l/s (21)
KSL-10	115	414	1518	1840	1" fem BSP	10" flange	40	2.1 l/s (34)
KSL-12	180	648	2376	2880	1" fem BSP	12" flange	50	3.1 l/s (50)

Dimensions

Base Model	Screen Length MM (inches)	Screen Diameter MM (inches)	Overall Length MM (inches)	Net Weight KG (pounds)
KSL-8	615 (24.2)	470 (18.5)	780 (30.7)	24 (53)
KSL-10	1105	470 (18.5)	1295 (60)	43 (95)
KSL-12	1350 (53.1)	600 (23.6)	1590 (626)	70 (154)

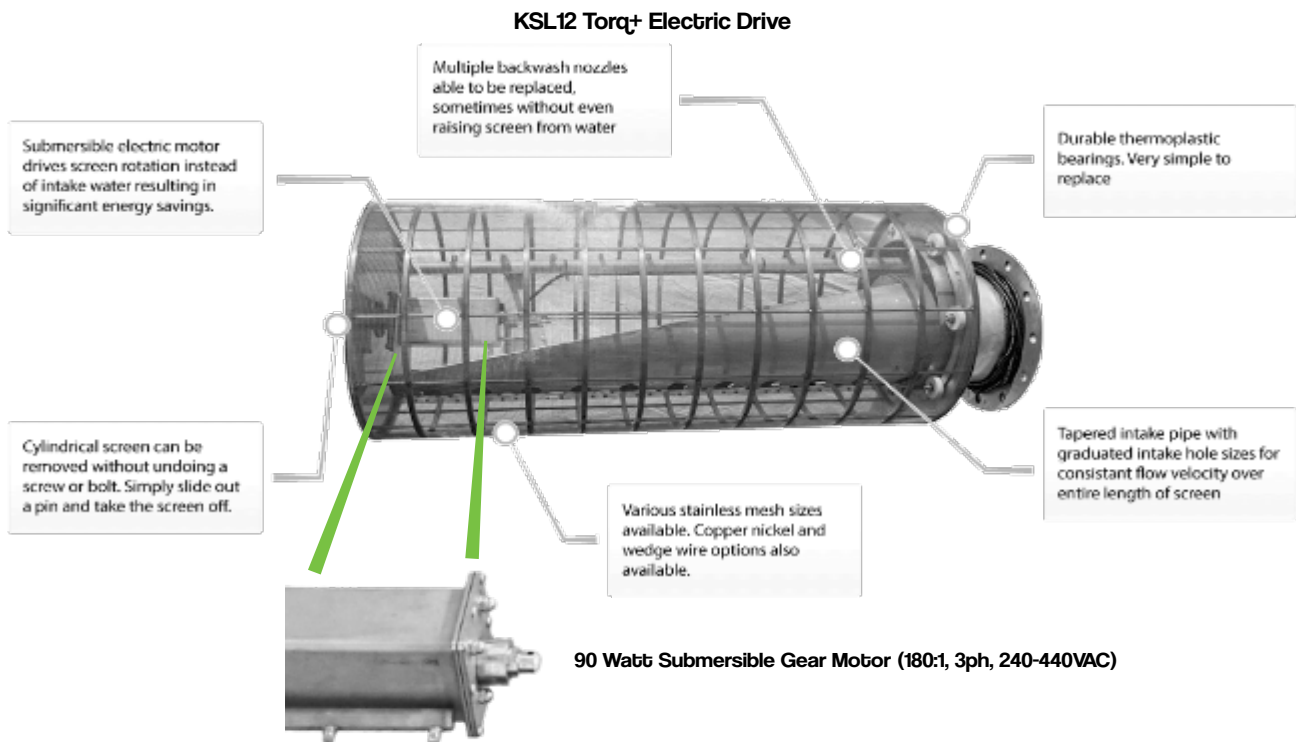


KST Torq+ Electric Drive

The KleenScreen Torque Plus (KST+) Range features an electric drive which increases cleaning efficiency by dramatically reducing the energy used to rotate the screen during its cleaning phase.

The system utilises a miniature variable speed drive in combination with a submersible gear-motor to increase the power of the drive, thereby increasing the reliability of the screen's self-cleaning operation.

The standard KSO Range rotate the screen cage by directing a water jet against a series of blades. Although this is effective, there are many cases where the screens are rotating continuously and so this drive jet can use a considerable amount of energy (up to 2 kW on the larger screens). The electric drive in the KST+ Range achieves the same result and uses just 10-20 watts. Pressurised water is still required to run the wash jets.



Features Of Kst+ Range



KleenScreens are designed and manufactured in New Zealand for local and overseas conditions.

NO ELECTROLYSIS

Materials are mainly stainless steel or plastic, which prevents a corrosive situation with dissimilar metals. A gasket and bolt bushes may be used to ensure that there is no contact with the intake pipe.

DURABLE AND RELATIVELY LIGHT

The stainless steel construction provides a strong and durable screen, with a relatively light weight.

FILTERING OPTIONS

The KleenScreen Torque-Plus range is available with 10, 20 or 30 mesh consisting of stainless steel woven

wire. Additionally sizes up to the KS140-T+ are available with a Wedge wire Cage with slots of either 1.0mm, 1.5mm and 2.0mm. The KS180-T+ & KS215-T+ are available with the 1.5mm wedge wire cage.

STANDARD CONNECTION

The KST+ range has AS2129 Table 'E' Flanges. Backwash connections are standard BSP male connections.

Benefits

ENERGY SAVING

As well as the benefits of installing a self-cleaning intake screen, the Torque-Plus range of KleenScreens further build on the energy saving benefit by using less water and therefore comparatively less energy to run the screen. This means that the size of the pump contributing to the backwash can be smaller and cheaper.

REPAIRS AND MAINTENANCE

The small screen holes filter water entering system. This can significantly reduce the wear on the pump and other system components, while also dramatically reducing the incidence of nozzle blockages.

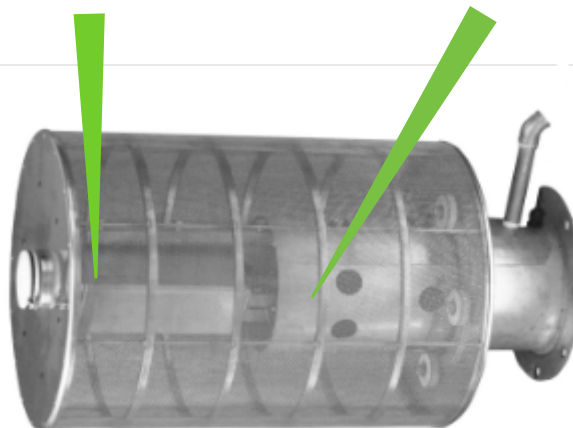
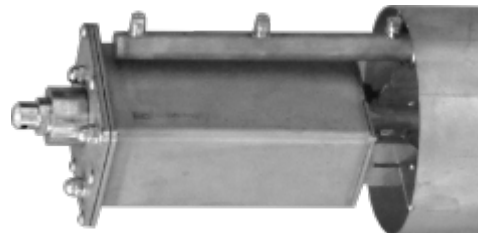
SERVICEABILITY

The screen can be easily serviced; no tools are required to remove the screen cage for internal maintenance.

DURABLE

Stainless steel and thermoplastic components ensure rugged construction and long operational life.

Compatible with KSO
and KSL ranges



KS65 T+

Flow | Pressure | Connections

Base Model	Maximum Flow (Wedge-wire with 0.5mm wire spacing)				Backwash Connection International (USA)	Outlet Connection International (USA)	Required Pressure for Backwash. Meters (USA)	Backwash Flow at Required Pressure. L/S (USA)
	L/S	M ³ /Hour	IGPM					
KS50 - T+	50	180	661	794	3/4" BSP fem (3/4" NPT)	200NB Tab EEz (8" Flange)	40 (60)	0.5 (19)
KS65 - T+	65	234	859	1032	3/4" BSP fem (3/4" NPT)	200NB Tab E (8" Flange)	40 (60)	0.6 (21)
KS90 - T+	90	324	1189	1429	1" BSP fem (1" NPT)	250NB Tab E (10" Flange)	40 (60)	1 (33)
KS115 - T+	115	414	1520	1825	1" BSP fem (1" NPT)	250NB Tab E (10" Flange)	40 (60)	1.2 (41)
KS140 - T+	140	504	1850	2222	1" BSP fem (1" NPT)	250NB Tab E (10" Flange)	40 (60)	1.5 (49)
KS180 - T+	180	648	2378	2858	1 1/2" BSP (1 1/2" NPT)	300NB Tab E (12" Flange)	40 (60)	1.5 (70)
KS240 - T+	240	864	3168	3840	1 1/2" BSP (1 1/2" NPT)	400NB Tab E (16" Flange)	40 (60)	2.2 (78)
KS290 - T+	290	1044	3828	4640	1 1/2" BSP (1 1/2" NPT)	450NB Tab E	40 (60)	2.2
KS370 - T+	370	1332	4884	5920	1 1/2" BSP (1 1/2" NPT)	500NB Tab Ev	40 (60)	2.8

Dimensions

Base Model	Screen Length MM (inches)	Screen Diameter MM (inches)	Overall Length MM (inches)	Net Weight KG (pounds)
KS50-T+	490 (19.3)	470 (18.5)	690 (27.2)	38 (84)
KS65-T+	610 (24)	470 (18.5)	810 (31.9)	39 (86)
KS90-T+	855 (33.7)	470 (18.5)	1045 (41.1)	48 (106)
KS115-T+	1100 (43.3)	470 (18.5)	1295 (51)	50 (110)
KS140-T+	1345 (53)	470 (18.5)	1540 (60.6)	63 (139)
KS180-T+	1345 (53)	600 (23.6)	1570 (61.8)	75 (165)
KS240-T+	1730 (68.1)	600 (23.6)	1970 (77.6)	120 (264)
KS290 - T+	1350 (53)	900 (23)	1585 (62.4)	
KS370 - T+	1735 (68.3)	900 (23)	1965 (77.4)	

*Tables above apply to KSO range (not shown here but Torq also available with KSL range)

KSC Compact Kleenscreens

Where low intake velocities are not an environmental requirement



KSC95



KSC20

Features

COMPACT DESIGN

Same flow capacity as fish screens, but in a smaller sized build.

DURABLE CONSTRUCTION

Made from tough stainless steel with thermoplastic bearings.

EFFICIENT SELF CLEANING

Fixed screen with a rotating inner and a powerful backwash mechanism.

EASY MAINTENANCE

Designed for hassle-free upkeep.

ECO-FRIENDLY

Meets Environmental Council standards.

QUALITY SCREEN

10 mesh stainless steel with 1.9mm holes, 470mm diameter.

SHALLOW WATER OPERATION

The compact KSC20 works in water as shallow as 150mm.

Applications

Ponds | Galleries | Irrigation Canals

Anywhere where intake velocities are allowed to be up to 0.25 m/s

Flow | Pressure | Connections

Base Model	Maximum Flow (Wedge-wire with 0.5mm wirespacing)				Backwash Connection International (USA)	Outlet Connection International (USA)	Required Pressure for Backwash. Meters (USA)	Backwash Flow at Required Pressure. L/S (USA)
	L/S	M ³ /Hour	IGPM					
KSC20	20	72	264	320	3/4" BSP fem (3/4" NPT)	150NB Tab E (6" Flange)	25 (40)	0.9 (14)
KSC40	40	144	528	640	3/4" BSP fem (3/4" NPT)	150NB Tab E (6" Flange)	35 (50)	1.3 (21)
KSC70	70	252	924	1120	1" BSP fem (1" NPT)	200NB Tab E (8" Flange)	40 (60)	1.8 (29)
KSC95	95	342	1254	1520	1" BSP fem (1" NPT)	250NB Tab E (10" Flange)	40 (60)	2.3 (37)
KSC150	150	540	1980	2400	1" BSP fem (1" NPT)	250NB Tab E (10" Flange)	40 (60)	3.3 (52)

Dimensions

Base Model	Screen Length MM (Inches)	Screen Diameter MM (Inches)	Overall Length MM (Inches)	Net Weight KG (pounds)
KSC20	130 (5.1)	470 (18.5)	260 (10.2)	13 (29)
KSC40	245 (9.6)	470 (18.5)	435 (17.1)	18 (40)
KSC70	370 (14.6)	470 (18.5)	555 (21.9)	22 (48)
KSC95	490 (19.3)	470 (18.5)	680 (26.8)	25 (55)
KSC150	855 (33.7)	470 (18.5)	1045 (41.1)	30 (66)

