KleenScreen™ Orbitor Range

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

KS140

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 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.

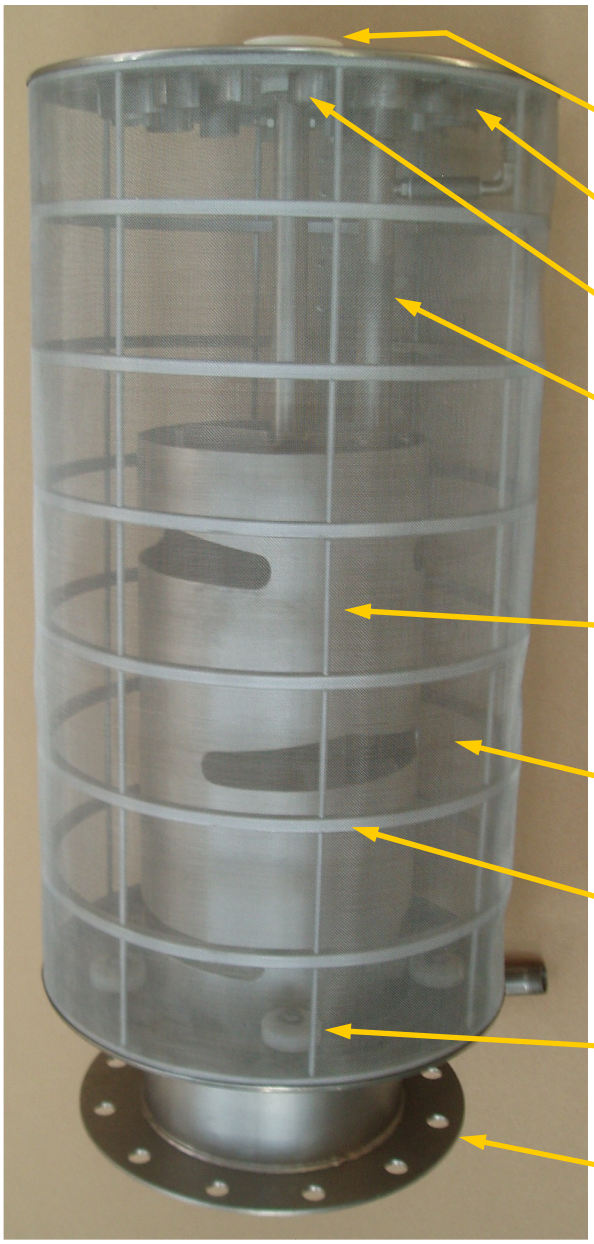
KS35

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.



KS90

Components

Quick-remove cap allows easy removal of screen cage for servicing internal components.

Drive nozzle directs water jet onto ring of blades to rotate the screen.

Thermoplastic bearing for reduced wear.

Backwash nozzles at right angles to the screen for uniform and efficient backwashing. The flow for backwashing and drive varies from **3.75 % to 1.8%** of total flow, depending on size of screen.

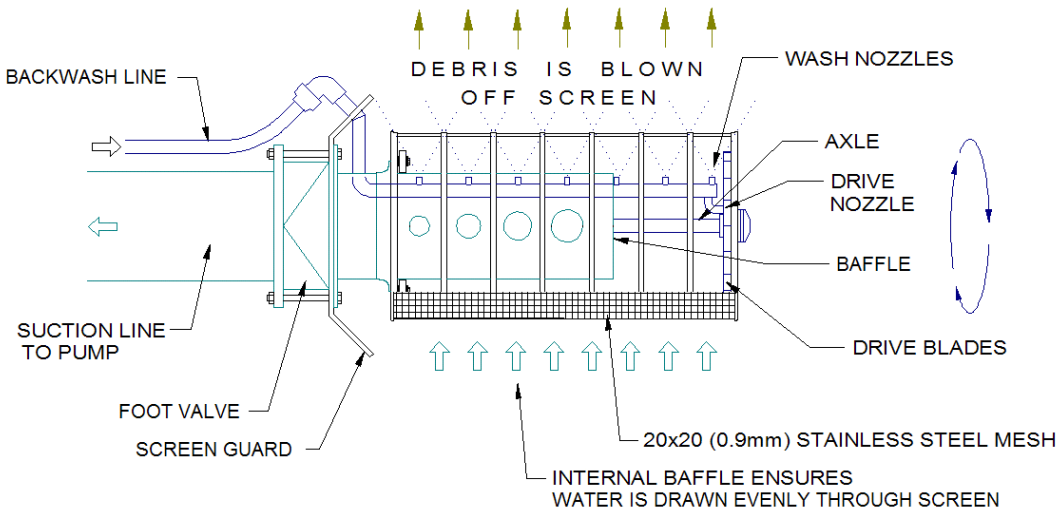
Internal baffle to evenly distribute flow over whole screen and keep maximum intake velocity below 0.15m/sec.

Standard Mesh hole size 0.9mm (20 mesh), optional 0.6mm (30 mesh) 1.9mm (10 mesh). Other meshes also available.

Stainless Steel screen, frame and baffle provide strength and durability.

Wheels allow rotation of screen around outlet pipe.

KleenScreen Operation



Features

KleenScreens are designed and manufactured for New Zealand and Australian conditions.

Baffle ensures uniform intake velocity across screen, which stops any "hot spots" of high velocity occurring. These "hot spots" can cause a build up of debris, and the entrapment of fish.

No electrolysis

All materials are 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.

Servicability

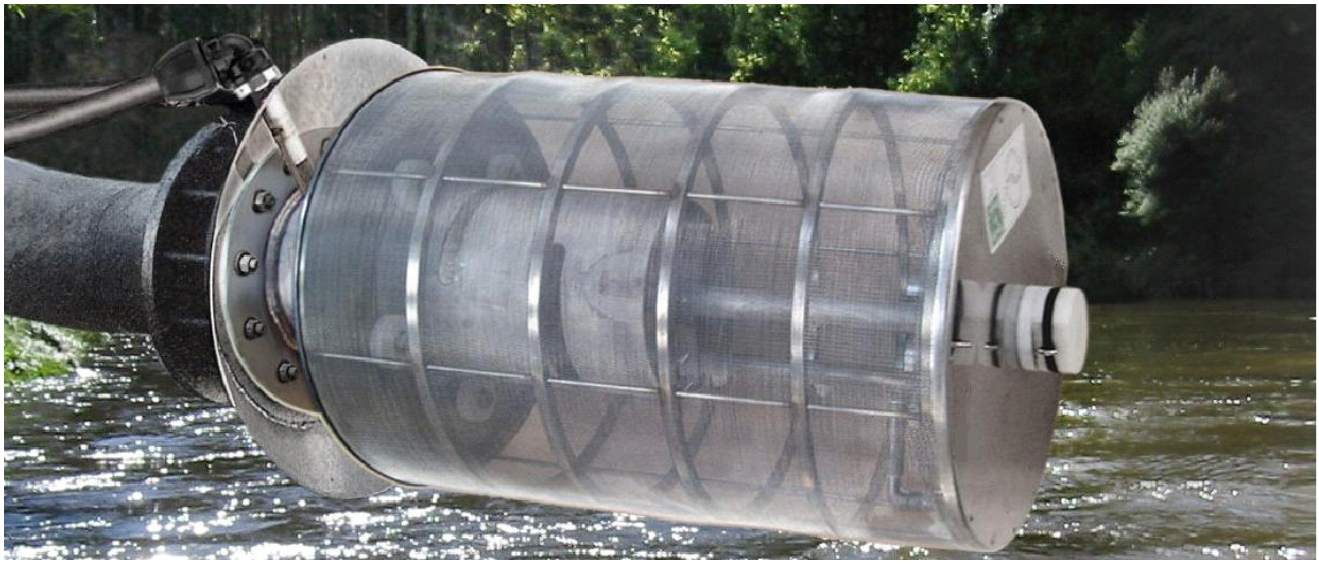
The screen can be easily serviced, no tools are required to remove the screen cage for internal maintenance.

Standard connection

The flanges have standard AS 2129 Table E hole dimensions.

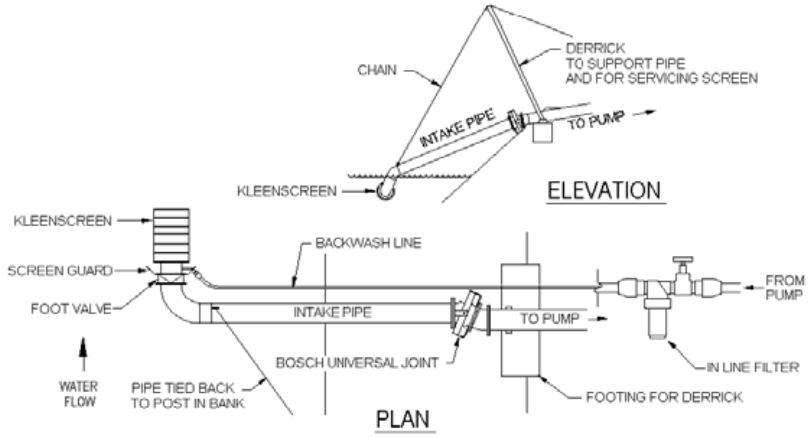
MODEL	Maximum Flow (20 mesh) (10 mesh x 1.15, 30 mesh x 0.8)				Outlet Pipe Table E	Backwash Flow @ 40m head	Screen Diameter	Overall Length
	L/s	m^3/hr	IGPM	USGPM	mm	L/s	mm	mm
KS25	25	90	330	397	150	0.9	470	415
KS35	35	126	463	556	150	1.0	470	535
KS50	50	180	661	794	200	1.2	470	660
KS65	65	234	859	1032	200	1.3	470	780
KS90	90	324	1189	1429	250	2.1	470	1030
KS115	115	414	1520	1825	250	2.3	470	1275
KS140	140	504	1850	2222	250	2.5	470	1520
KS180	180	648	2378	2858	300	3.8	600	1550
KS215	215	774	2870	3446	400	4.5	600	2000

- **Please use maximum system flow to select appropriate model of screen.**
- **For higher flow rates, two or more KleenScreens can be manifolded.**
- **Standard screen is 20 mesh.**



Installation Notes:

- The KleenScreen must be able to rotate. Sufficient clearance (100mm) under the screen is required.
- At least 50mm is required between water surface and top of screen.
- The recommended position in a stream/river, is to have a 90º 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 45º angle up from horizontal. This is the most effective position to flush any debris away from the
- A screen retrieval system is required to lift the screen out of the water for servicing, and periods of inactivity.
- 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.
- The KS Universal Joint is recommended to provide the flexibility to lift the intake pipe and swing it around to the bank.



- The backwash line should be plumbed into the discharge of the pump before the valve.
- 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.
- An inline filter with 16 mesh (1.2mm) is required on the backwash line.

Related KleenScreen Products:

KleenScreen Revolver range of self-cleaning intake screens for maximum flows from 2.5L/s to 15L/s

Effluent KleenScreen - KSE to provide filtration for sprinkler based effluent systems. Best suited to situations where most fibrous material has been removed or allowed to break down.

DAMA MANUFACTURING LIMITED

46A Weaver St
WHANGAREI, 0112
NEW ZEALAND

Ph: +64 27 493 3183
Fax: +64 9 437 3338
info@kleenscreen.com