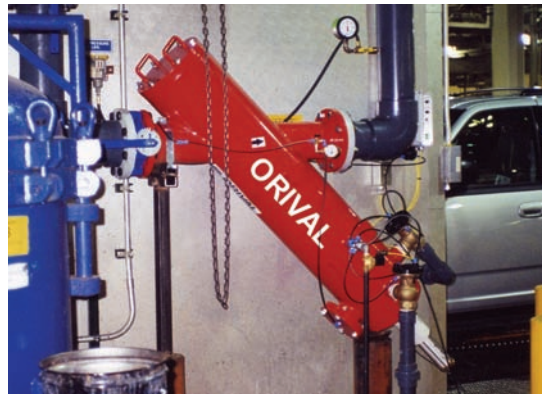


OR SERIES

Automatic Self
Cleaning Water
Filtration Systems

*For Industry, HVAC
and Mining*

COOLING TOWERS RIVERS LAKES WELLS RECIRCULATING



SAND POLLEN ALGAE BUGS SILT MUSSELS SCALE



213 S. Van Brunt St.,
Englewood, NJ 07631
(800) 567-9767
(201) 568-3311
Fax (201) 568-1916
www.orival.com
filters@orival.com

Company Profile

Providing automatic self-cleaning filtration systems for removal of suspended solids from water is more than a job for Orival – it's a way of life. Since its establishment in 1986, Orival has supplied thousands of filtration units, for a wide variety of customers, including Fortune 500 companies and local and federal government agencies. Units are installed in over 40 countries worldwide, meeting any local standard. Single units, flange-to-flange systems, complete skid mounted packages, construction standards, alternate flange or voltage standards – all are no problem for Orival. No matter what your requirements, we can build it!

Orival's network of application specialists will provide expert solutions tailored to your specific needs. Contact us today to see how we can help you resolve your water problems. After all, solving your filtration requirements is what we do best.

Filters

Features	Standard	Optional
Power	None, line pressure powered	Electrical (See ORE/P series)
Self Cleaning Operation	Fully automatic	Semi-Automatic, Manual
Material of Construction	Carbon Steel & Stainless Steel	Titanium, Hastelloy & Others
Operating Pressure	30 psi min., 150 psi max.	12 psi min., 1000 psi max.
Operating Temperature	No min., 150°F max.	No min., 212°F max.
Screen Pattern	Wire Mesh/PVC Support	Wedgewire, Multi-layer sintered
Screen Aperture	50-3,000 mic.	5-10,000 mic.
Single Unit Flow Rate	Up to 8,100 gpm	Up to 15,000 gpm
Code	ISO 9001	ASME "U" Stamp, Others
PH Resistance	4-9	1-12
Compatible Fluid	Water	Sea water, Oily, Highly corrosive fluids
Connections	Flanged, threaded	Victaulic, Other
Installation	Any position even upside down	

Controls

Features	Standard	Optional
Power	110V/220V AC ½ Amp, 9V / 12V DC	Hydraulic
Enclosure	NEMA 4X	Explosion Proof
Backwash Activation	DP, Timer, Manual	Volumetric, Remotely
Number of Filters	1 – 10	1 – Unlimited

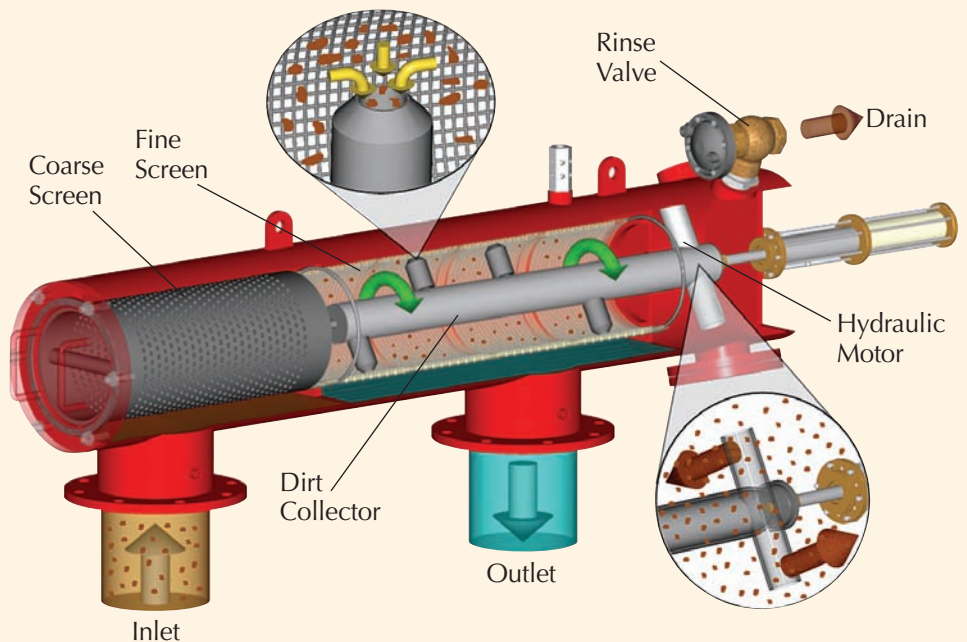
How It Works

The unit consists of two stages of filtration, a coarse pre-filter and a stainless steel fine screen.

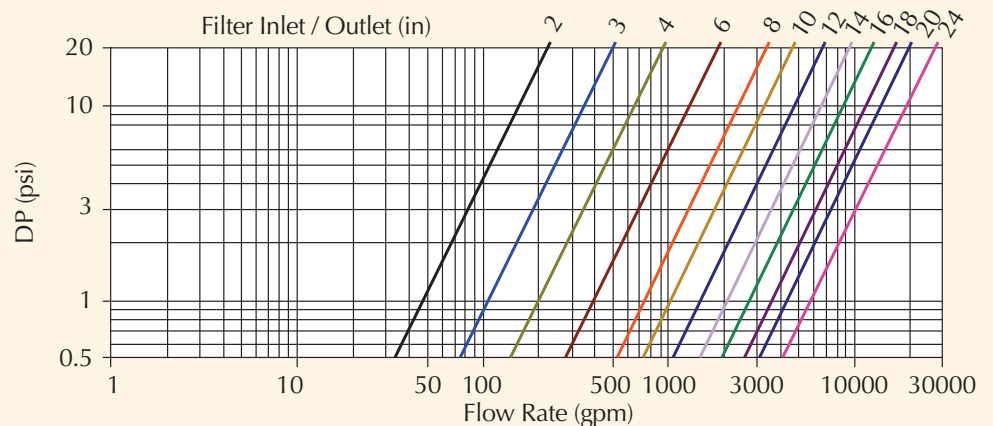
The unwanted solids accumulate on the inner surface of the fine screen, building up a filter cake, which filters out even finer particles, creating a pressure differential. Once the pressure drop reaches a preset level, a rinse cycle is activated by the factory supplied control system.

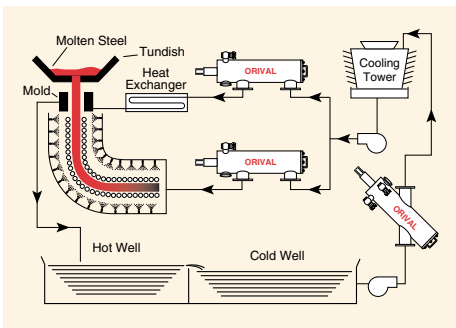
The solids are removed from the fine screen using a spot backwashing method, which aggressively sucks the dirt off the screen, similar to a vacuum cleaner, and are carried to the drain via the rinse valve. The dirt collector rotates, ensuring the entire screen is cleaned each cycle.

The process takes a matter of seconds, without interruption of system flow.

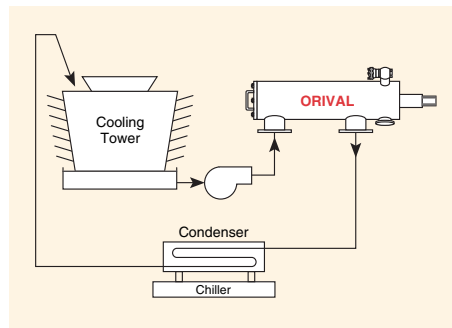


Pressure Drop vs. Flow Rate

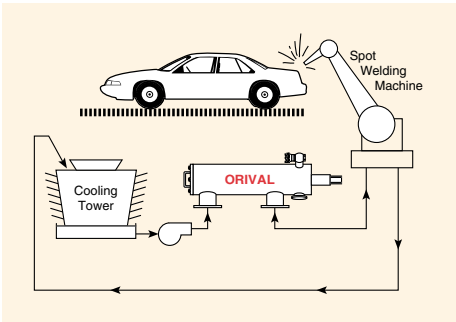




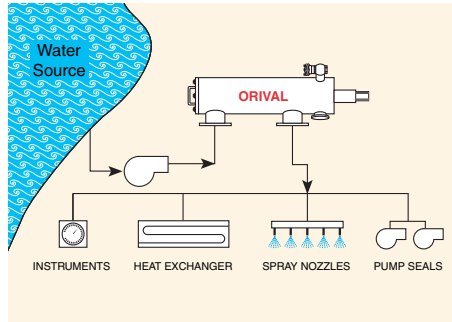
Steel / Continuous Casting



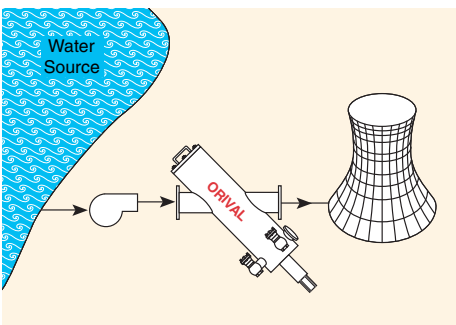
HVAC / Full Flow



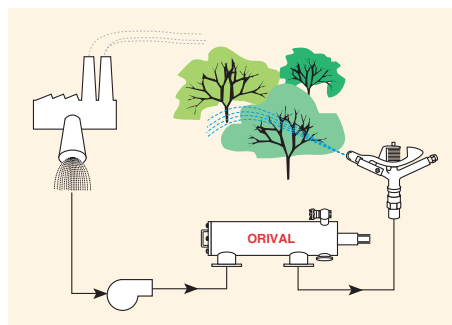
Spot Welding



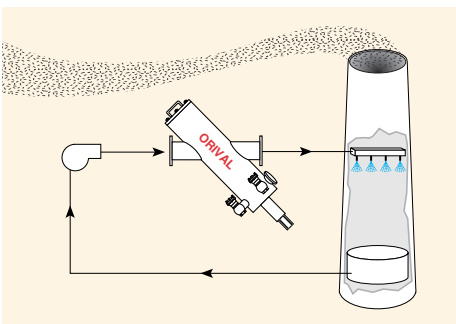
Process Cooling



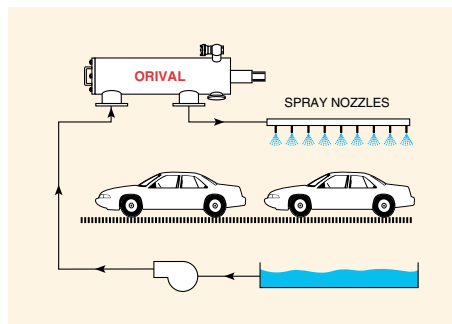
Power / Make Up



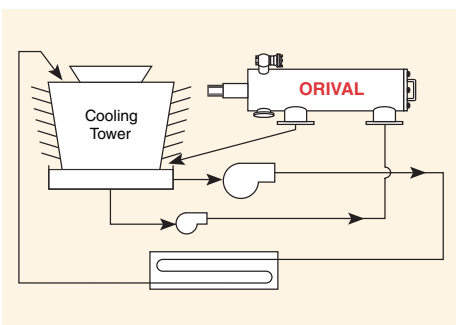
Wastewater / Irrigation



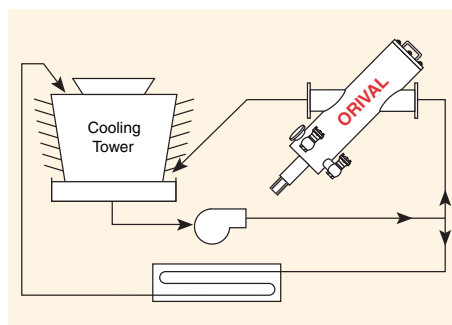
Pollution / Wet Scrubber



Automotive / Leak Test



Side Stream w/ Recirculating Pump



Side Stream w/ Existing Pump

Thoroughly Proven In:

- HVAC
- Chemical
- Hydrocarbon
- Plastics
- Food
- Sugar
- Mining
- Steel
- Automotive
- Paper
- Pharmaceutical
- Power
- Sewage Treatment

Removing Solids, of any Specific Gravity:

- Sand
- Gravel
- Algae
- Pollen
- Silt
- Microbiological Growth
- Bugs
- Scale
- Rust
- Mussels

From Virtually any Source:

- Cooling Towers
- Rivers
- Lakes
- Wells
- Ponds
- Reservoirs

For any Application:

- Cooling Water
- Process Water
- Reclaim Water
- Effluent Water
- Intake Water
- Waste Water
- Wash Water
- Potable Water
- Irrigation

For Protection Of:

- Heat Exchangers
- Spray Nozzles
- Instrumentation
- Pump Seals
- I.E. & R.O. Units
- Air Compressors
- The Environment




Technical Data *(Add "-S" to model number for stainless steel construction)*

"I" Series	MODEL		Flange Size (in.)	Max Flow Rate (gpm)	Open Screen Area (in ²)		Empty Weight (lb)		
	"P" Series	"B" Series			Woven	Sintered	I Series	P Series	B Series
—	OR-02-PE	—	2" NPT	110	64	96	—	95	—
OR-03-IS	OR-03-PS	—	3	175	64	96	105	105	—
OR-03-IE	OR-03-PE	OR-03-BE	3	175	237	356	205	215	225
OR-04-IS	OR-04-PS	—	4	350	120	180	135	135	—
OR-04-IE	OR-04-PE	OR-04-BE	4	350	474	713	235	225	280
OR-06-IE	OR-06-PE	OR-06-BE	6	660	474	713	290	285	335
OR-08-IS	OR-08-PS	OR-08-BS	8	1320	474	713	340	325	380
—	OR-08-PE	OR-08-BE	8	1320	713	1070	—	355	425
OR-10-IS	OR-10-PS	OR-10-BS	10	1760	632	950	565	575	865
—	OR-10-PE	OR-10-BE	10	1760	945	1420	665	645	975
OR-12-IS	OR-12-PS	OR-12-BS	12	2640	945	1420	665	645	975
OR-14-IS	OR-14-PS	OR-14-BS	14	3960	1070	1605	965	700	1040
—	OR-16-PS	OR-16-BS	16	4840	1070	1605	—	965	1305
—	OR-18-PS	—	18	6125	1070	1605	—	1025	—
—	OR-20-PS	—	20	8100	2140	3210	—	1400	—
—	OR-24-PS	—	24	12000	3210	4815	—	2100	—

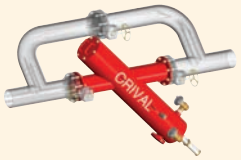




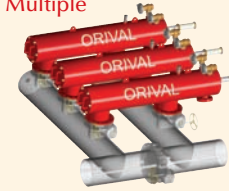
Other Great Products:

- **ORG Filters**
2 gallons per backwash, 10 mic
- **ORE/P-Electrical Filters**
For high loading, 10 mic
- **ORS-Suction Filters**
For pump protection
- **SLS Series**
5%-10% loading
- **ORM-Manual Filters**
For low cost operations
- **Skid Mounted Filters**
With pump, starter & connections
- **Drinking Water Plants**
Also for rural location


Screens

Screen Patterns	Woven on PVC Support	Multilayer Sintered	Wedgewire
			
Screen Apertures	15-5000 Mic	1-5000 Mic	25-2500 Mic
Open Screen Area	40%	60%	30%
Hydraulic Collapse D.P.	300 PSI	300 PSI	450 PSI
Temp Rating	150°F	300°F	750°F
Material	St/St 316L	St/St 316L	St/St 316L
Optional Material	Titanium, Hastelloy and other exotic material		
Fibrous Mat. Filtration	Poor	Poor	Excellent
Price	Low	Medium	High

Installations & Configurations

 <p>I Series</p>	 <p>I Series</p> <ul style="list-style-type: none"> • In-line model • Inlet and outlet are concentric • Commonly used in single unit installations and vertical installations
 <p>P Series</p>	 <p>P Series</p> <ul style="list-style-type: none"> • On-line model • Inlet and outlet are parallel • Commonly used in single and multiple unit installations and upside down installations
 <p>B Series</p>	 <p>Multiple</p> <p>B Series</p> <ul style="list-style-type: none"> • Bypass model • Inlet and outlet are parallel • Commonly used in full flow applications where a constant flow of water is critical

Screen Apertures

	Visible to the naked eye. 																
Micron	5	10	15	25	30	40	50	80	100	120	150	200	400	800	1000	1500	3000
Mesh*	3000	1500	1000	600	500	400	250	200	150	120	100	80	40	20	16	10	5
in*	.0002	.0004	.0006	.0010	.0012	.0016	.002	.003	.004	.005	.006	.008	.016	.032	.04	.06	.12
Physical Size																	

* Approximate and for reference only