

Dewatering Screen

With superior efficiencies and capabilities, the Enduron® dewatering screen is a combination of proven screen media technology and innovative screen design

Weir Minerals has been a global leader in the design, manufacture, installation and servicing of dewatering screens for more than 30 years.

The Enduron® dewatering screen range is designed for heavy-duty applications in the sand and aggregate, mining and minerals processing industries. Supported by our robust Linatex® Snapdeck® Classic modular screen media systems, the Enduron® dewatering screens have been specifically designed to meet the rigorous demands of the market.

Engineering excellence

Our engineers have utilized the latest screen design technology, their collective experience and “Finite Element Analysis” to develop the Enduron® screen range.

Custom design

The Enduron® dewatering screen has been designed with an innovative curved sieve-like feed section. This curved profile increases dewatering capacities over the standard 45 degree sloped back deck design, using centrifugal force to aid in the dewatering process.

The end result is a series of screens that are engineered to provide:

- Excellent water recovery
- High load capacity
- Low total cost of ownership



Enduron® DW Dewatering Screen

Selection process

While design and accuracy of engineering are critical components to maximize water recovery, guidance in the appropriate selection of screen sizing is just as important. The Enduron® dewatering screen range delivers excellent load capacity and water recovery when applied in the appropriate environment. Factors that need to be considered include:

- Type of material to be screened
- Specific gravity of material
- Dry feed rate or slurry mph or m³/hr (stph or ft³/hr)
- Percentage of solids by w/w in feed slurry
- Bulk density of the material to be screened (t/m³ or lbs/ft³)
- Particle size distribution

Applications

While primarily applied to dewatering with retained fines, the Enduron® dewatering screen range is capable of being used in a wide range of other applications, some examples of which are outlined below.

Scalping oversize from suspensions and slurries

- Removal of tramp material such as wood chips from gold ore pulp (CIP)
- Removal of oversize material from pulp of beach sand cutting at 1mm (.039in)

Dewatering and draining (open circuit)

- Dewatering activated carbon in CIP circuits
- Replacement of rake classifiers, rotary sand dewatering machines and sand screws
- Tailings dewatering
- Sand dewatering

Desliming/media recovery

- Removing of fines from activated carbon (CIP)
- Removal of fines in 65 um fine coal

Designed with productivity benefits in mind

Curved sieve-like feed section

- Curved, sieve-like feed section and upward inclination of main deck provides for increased dewatering capacity
- Uses centrifugal force to assist with dewatering and incorporates a larger total screening area without increasing the size of the machine. This facilitates the potential use of smaller units, which may thereby reduce the overall investment cost in machines and structure
- Designed to offer higher production rates than conventional dewatering screens and lower overall moisture content, allowing easier transportation of dewatered material

Linatex® screen media

Enduron® dewatering screens are fitted with highly abrasion resistant polyurethane modular screen panels, utilizing our robust Linatex® Snapdeck® Classic system.

These polyurethane panels can be made with a range of aperture sizes to suit each application. In a number of applications the screens have been shown to exceed one million tons of ore processed without the need for replacement parts.

Linatex® screen media are extremely easy to maintain, with the entire screen surface of a Enduron® dewatering screen able to be changed by one person in less than one hour.

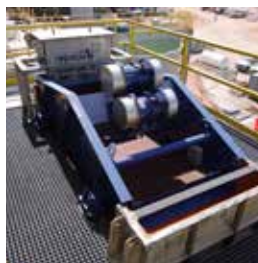
Linatex® screen media are coupled with polyurethane U channel stringers. These polyurethane stringers can eliminate fine wet abrasion problems that are frequently associated with conventional steel stringers. They provide long life and are easy to maintain.

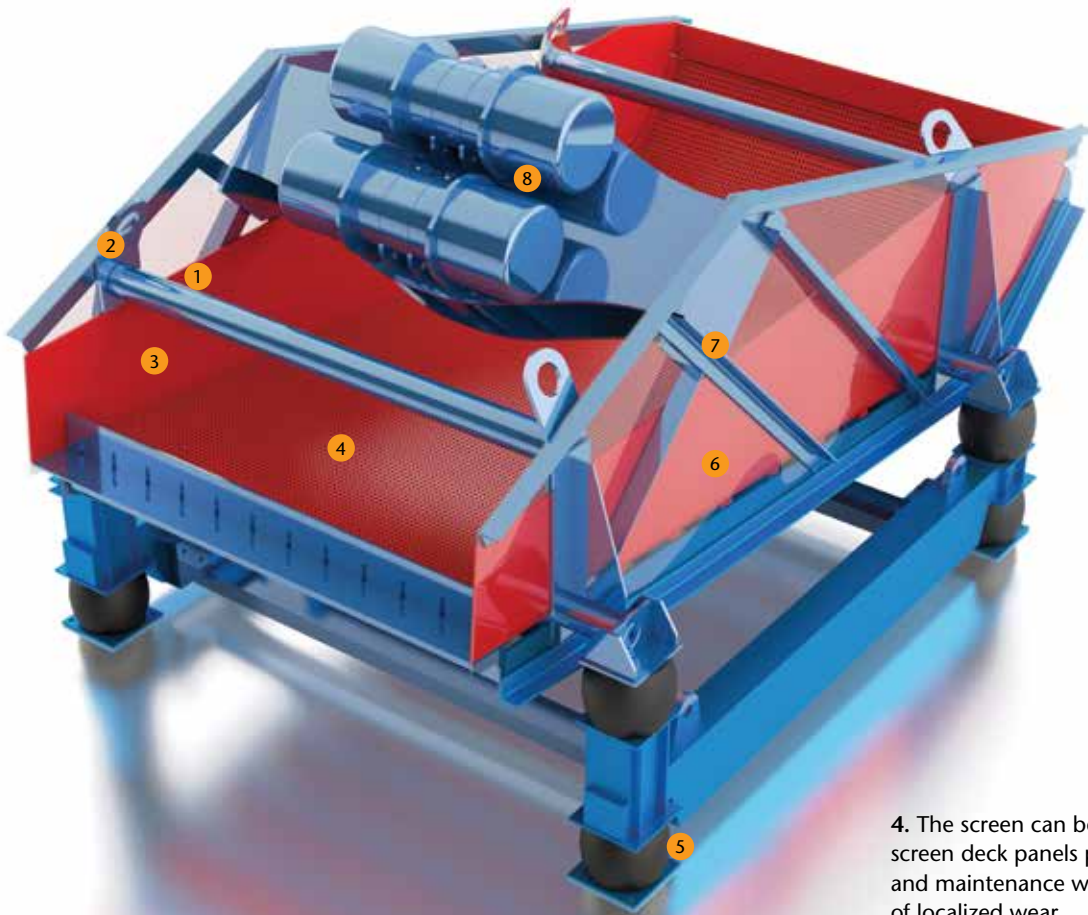
Easy Maintenance

Maintenance of the Enduron® dewatering screen range is designed to be extremely easy, saving downtime and reducing production loss thereby reducing total operating costs.

Key maintenance features include:

- Quick alteration of the screen deck inclination angle allowing fine tuning of the product flow to maximize output and efficiency
- Easily adjustable discharge weir height to better control the discharge moisture content
- The amplitude of the machine can be readily modified to optimize performance



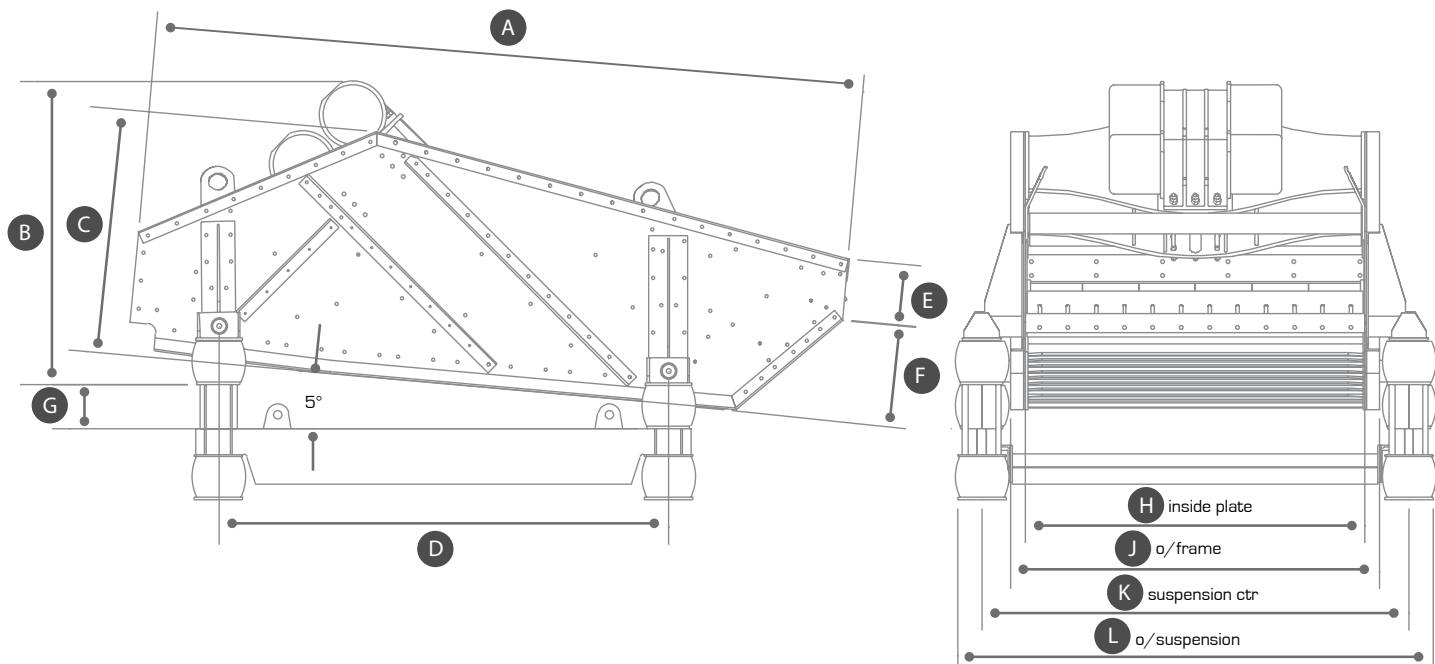


1. The fabricated main exciter bridge, the vital component in the transmission of the vibration from the vibrator motor to screen, is stress relieved. The surfaces mating with the screen side plates and the motors are machined to exacting tolerances to provide a precise fit for long, trouble-free life.
2. Epoxy adhesive is used between all mating surfaces of the screen frame, eliminating corrosion and uniformly distributing stresses in these areas.
3. The side plates of the machine are fitted with easily replaceable (bolt-in) Linatex® premium rubber wear liners, affording protection to the structure of the machine and ensuring long service life.

4. The screen can be fitted with snap-in modular screen deck panels providing long life, easy handling and maintenance with the ability to replace small areas of localized wear.
5. Molded rubber buffers are used on all four support points to isolate live frame vibrating loads. These are designed to provide longer life and less maintenance than coil springs in wet applications.
6. Standard surface protection is provided to ensure a high degree of corrosion resistance. This comprises abrasive blasting followed by two coats of vinyl etch primer and two coats of finishing epoxy polyamide paint.
7. The steel screen frame is predominantly of bolted construction, avoiding the stresses created by welding.
8. Both the linear motion low noise vibrating motors and the robust geared exciter have been designed specifically to ensure long life with minimum maintenance requirements.

Enduron® DW dewatering screen feed capacities - metric tons per hour

Screen Model	SG 1.5			SG 2.7			SG 4.0		
	(-)300 um +38 um	(-)600 um +150 um	(-)4,750 um +150 um	(-)300 um +38 um	(-)600 um +150 um	(-)4,750 um +150 um	(-)300 um +38 um	(-)600 um +150 um	(-)4,750 um +150 um
DW-6	7	13	22	12	24	39	17	35	58
DW-9	15	30	49	27	53	59	39	79	131
DW-12	22	44	73	39	79	131	58	117	194
DW-15	33	66	109	59	118	197	87	175	292
DW-18	39	79	131	71	142	236	105	210	350
DW-21	54	107	179	96	193	321	143	286	476
DW-24	consult Weir Minerals			108	216	360	consult Weir Minerals		



Enduron® DW dewatering screen dimensions

MODEL	A	B	C	D	E	F	G	H	J	K	L	
DW-6	2170.00	832.00	670.00	1353.00	213.00	397.00	0.00	610.00	740.00	896.00	1036.00	MM
	85.43	32.76	26.38	53.27	8.39	15.63	0.00	24.02	29.13	35.28	40.79	INCHES
DW-9	2515.00	1013.00	870.00	1640.00	229.00	451.00	0.00	915.00	1107.00	1295.00	1435.00	MM
	99.02	39.88	34.25	64.57	9.02	17.76	0.00	36.02	43.58	50.98	56.50	INCHES
DW-12	3036.00	1218.00	1050.00	1840.00	287.00	608.00	0.00	1220.00	1416.00	1604.00	1744.00	MM
	119.53	47.95	41.34	72.44	11.30	23.94	0.00	48.03	55.75	63.15	68.66	INCHES
DW-15	3866.00	1632.00	1320.00	2423.00	330.00	546.00	238.00	1525.00	1681.00	1995.00	2205.00	MM
	152.20	64.25	51.97	95.39	12.99	21.50	9.37	60.04	66.18	78.54	86.81	INCHES
DW-18	3866.00	1632.00	1320.00	2423.00	330.00	546.00	238.00	1830.00	1986.00	2300.00	2530.00	MM
	152.20	64.25	51.97	95.39	12.99	21.50	9.37	72.05	78.19	90.55	99.61	INCHES
DW-21	4956.00	2438.00	1990.00	3361.00	554.00	653.00	171.50	2135.00	2351.00	2659.00	2919.00	MM
	195.12	95.98	78.35	132.32	21.81	25.71	6.75	84.06	92.56	104.69	114.92	INCHES
DW-24	4956.00	2438.00	1990.00	3361.00	554.00	653.00	171.50	2440.00	2656.00	2964.00	3224.00	MM
	195.12	95.98	78.35	132.32	21.81	25.71	6.75	96.06	104.57	116.69	126.93	INCHES

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