

# TurboDrum IN<sup>TM</sup>

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Headworks<sup>®</sup> Inclined Drum Screen

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# TurboDrum IN™ Inclined Drum Screen

## MUNICIPAL WASTEWATER

The treatment of municipal wastewater is experiencing tremendous change today with the development of advanced treatment systems such as Membrane Bio Reactors (MBR), Moving Bed Biofilm Reactors (MBBR) and Integrated Fixed-Film Activated Sludge (IFAS) processes. These processes have performed exceptionally well in achieving the new higher levels of treatment required today, but also require higher levels of screenings removal (liquid-solid separation) in front of the processes. Headworks Internally Fed Drum Screen is an effective and cost efficient way to achieve these removal challenges. This equipment is available in a wide range of hydraulic and separation capacities to allow customizing for the most effective solution for your unique application.

### ALL IN ONE SOLUTION:

- ▶ **No bypassing as the flow is directed inside the drum and exits to the outside**
- ▶ **0.25 to 6mm wedgewire, 2 - 6 mm perforated plate or wire mesh**
- ▶ **Screenings, conveying, compaction, washing, and bagging is handled in one unit with one motor.**
- ▶ **Optional TurboWash™ for superior screenings washing**
- ▶ **Flow Capacities to 4600 m<sup>3</sup>/h or 30 MGD**



*The rotating wedgewire screens have the capacity to handle large flows efficiently, with slot openings from .25 mm to 6 mm.*

## Gravity Fed Applications

The TurboDrum IN is installed in a channel or opening at a 35° angle. For pressure feed applications, the same unit can also be installed as a self-contained TurboTank™ system. The operation cycle is controlled by monitoring the differential headloss across the screen. Solids separation is performed by rotating the basket with the process flow entering the internal diameter of the screen and exiting through the screen elements to the outside. Paddles, which are fixed longitudinally to the inner screen surface, carry the screenings to the top where they are sprayed with water and fall into the receiving hopper, which conveys the screenings material through the optional washer and compaction zone to the discharge outlet.

## Producing Clean Fecal and Odor Free Screenings

The patented TurboWash™ agitator can be added to the influent opening of the TurboDrum IN to enhance the cleaning of the screenings creating a highly turbulent mixing zone. The turbulent zone of influence created by the TurboWash™ agitator loosens and emulsifies the organic BOD material attached to the screenings, allowing the soluble and fine particulate BOD material to pass through the screen openings. This totally integrated design provides the client with a compact efficient piece of equipment.

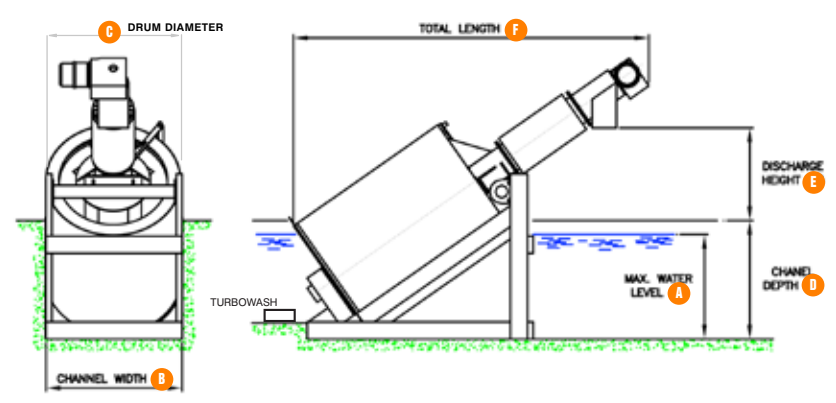
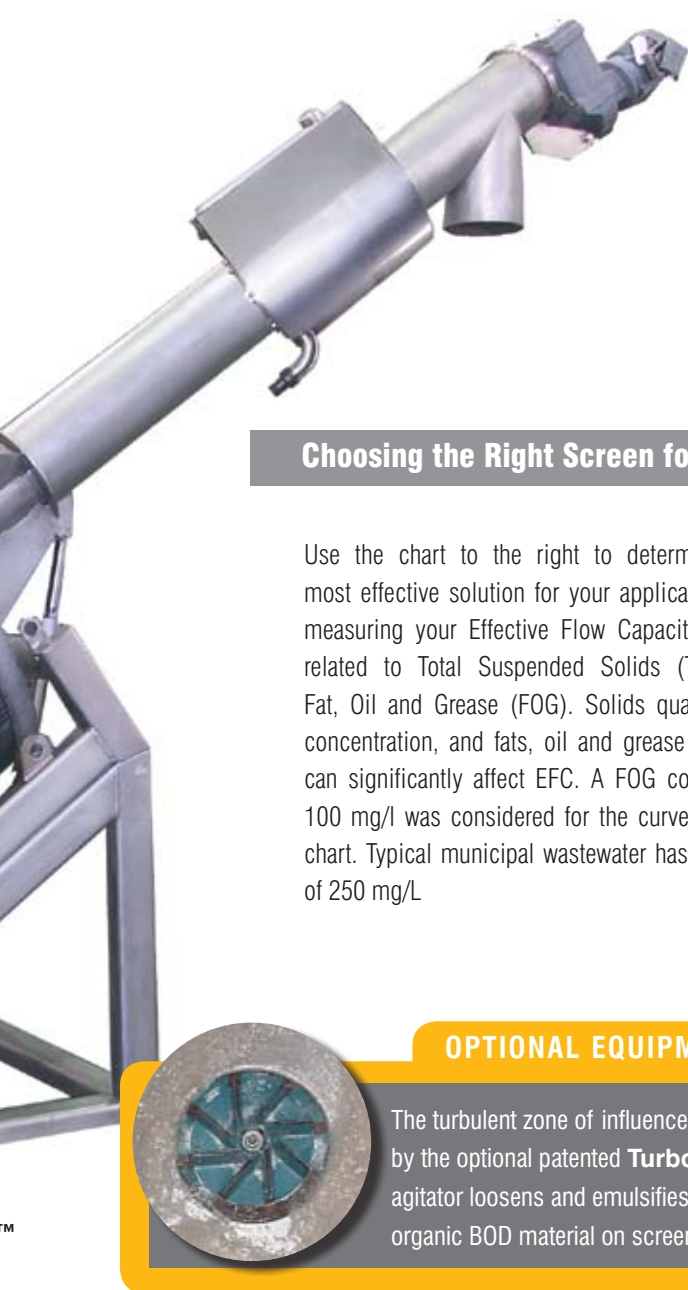
### Applications

- Smaller to medium sized wastewater treatment plants
- A fine screen in front of membrane or advanced treatment systems
- Scum screening
- Water treatment plants
- Industrial wastewater plants



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Inclined Drum Screen

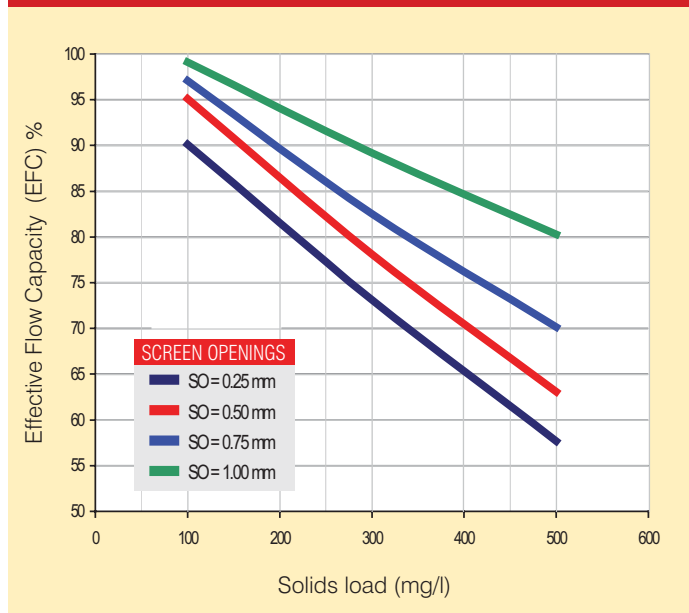
MODEL	FLOW (slot openings in mm)										DIMENSION (mm) See chart below						Motor kW
	1.0		1.5		2.0		2.5		3.0		A	B	C	D	E	F	
	m <sup>3</sup> /hr	gpm	m <sup>3</sup> /hr	gpm	m <sup>3</sup> /hr	gpm	m <sup>3</sup> /hr	gpm	m <sup>3</sup> /hr	gpm							
IN 0707	170	750	190	838	220	970	250	1103	270	1191	450	770	700	550	1600	3460	0.75
IN 0909	260	1147	340	1499	430	1896	470	2073	560	2470	590	990	900	700	1600	3700	1.1
IN 1313	580	2558	680	2999	800	3528	890	3925	1100	4851	850	1430	1300	1020	1600	4170	1.1
IN 1616	970	4278	1150	5072	1300	5733	1450	6395	1650	7277	1050	1760	1600	1250	1600	4560	2.2
IN 1818	1300	5733	1550	6836	1780	7850	1950	8600	2200	9702	1180	1980	1800	1410	1600	4800	2.2
IN 2020	1600	7056	1950	8600	2200	9702	2400	10584	2700	11907	1300	2200	2000	1570	1600	5060	2.2
IN 2222	1900	8379	2300	10143	2630	11598	2900	12789	3280	14465	1440	2420	2200	1730	1600	5310	2.2
IN 2424	2280	10055	2750	12128	3200	14112	3500	15435	3900	17199	1570	2640	2400	1880	1600	5550	3
IN 2626	2700	11907	3200	14112	3780	16670	4200	18522	4600	20286	1700	2860	2600	2040	1600	5800	3



## Choosing the Right Screen for your Application

Use the chart to the right to determine the most effective solution for your application by measuring your Effective Flow Capacity (EFC) related to Total Suspended Solids (TSS) of Fat, Oil and Grease (FOG). Solids quality and concentration, and fats, oil and grease content can significantly affect EFC. A FOG content of 100 mg/l was considered for the curves in the chart. Typical municipal wastewater has an EFC of 250 mg/L

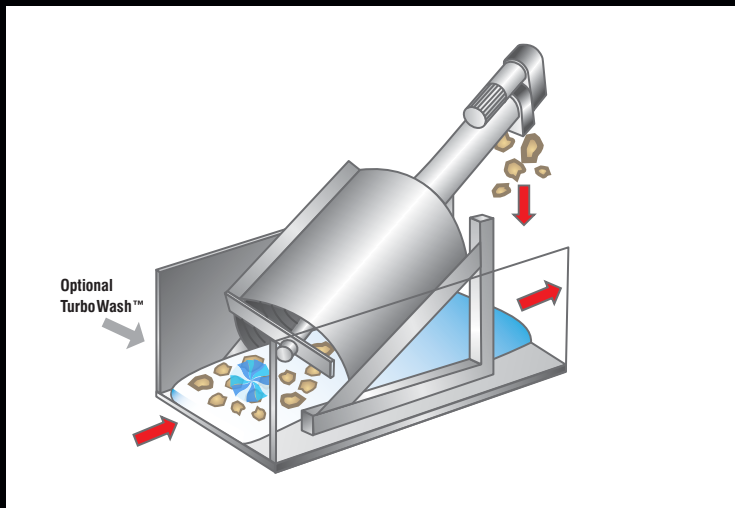
### Effective Flow Capacity in Municipal Sewage



**OPTIONAL EQUIPMENT**

The turbulent zone of influence created by the optional patented **TurboWash™** agitator loosens and emulsifies the organic BOD material on screenings.

For a detailed explanation of Effective Flow Capacity (EFC), contact your local representative or call Headworks at +1.713.647.6667



## **TurboDrum IN™**

Headworks® in-channel inclined drum screen is installed at a 35° angle to maximize flow capacity and screenings conveying.



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