

MONSTER INDUSTRIAL®

HYDRO SERIES In-line/Open Channel Grinders

Overview

JWC Environmental's Hydro series are high efficiency, dual-shafted waste grinders. The Hydro series is designed to reduce the size of solids in a liquid/slurry solution to protect downstream equipment, such as pumps, centrifuges and heat exchangers.

Applications include:

- Borehole drilling, oil sands processing, tank bottom cleaning.
- Fats/Oil/Grease (FOG), food/beverage processing, animal and fish processing.
- Biogas digesters, sludge, sewage and more.

1-HYDRO In-line/Open Channel Grinders

The 1-HYDRO is a compact grinder, tough on solids in a variety of applications. It fits into areas with limited space requirements while still providing the necessary power for downstream protection. The 1-HYDRO is an ideal, low-cost solution that fits perfectly into office buildings, apartment complexes, resorts, retail centers and food processing plants.

3-HYDRO In-line/Open Channel Grinders

The 3-HYDRO is a grinder that easily reduces troublesome solids. Its slow speed, high-torque, dual-shaft design easily shreds tough solids that typically cause problems, including drill cuttings, fish/seafood waste, food waste, manure, and more.

4-HYDRO In-line/Open Channel Grinders

The 4-HYDRO excels in wet applications. It's a powerful grinder for large sludge processing systems, or any applications with large flow. Industrial applications including fish/beef/poultry processing, petroleum, pulp and paper mills, chemical plants, oil sands processing and recycling plants.

Features

Dual Shafted Grinder

- Slow-speed, high torque grinders handle food, rags, rocks, wood, wipes, clothing, plastics and other debris.
- Capable of grinding a wider variety of solids than single shafted machines, macerators, or chopper pumps.

Compact and Efficient Design

- Adapts to many applications with little or no modification.
- HYDRO-IX Industrial Monster incorporate an easy to remove cutter cartridge.

Automated Monitoring and Controls

- Auto load sensing and reversal mechanism, optimise to the grinder's performance.

Benefits

Powerful

- Slow speed, high torque grinders easily shred tough solids to keep pipes and pumps flowing.

Flexible

- A variety of standard and custom cutters are available to ensure a large variety of tough solids are cut down to size.

Equipment Protection

- Protect pumps, Heat exchangers centrifuges and other critical equipment from costly clogs and damage from tough solids.

Lower Operating Cost

- Clear pipes and pumps means shorter pump run cycles, lower maintenance costs and lower electrical costs.



In-Line Models

SEALS: MECHANICAL OR FLUSH PORT



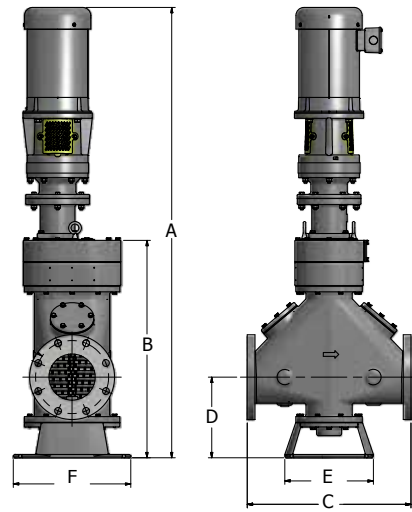
1-HYDRO-I



3-HYDRO-IX



4-HYDRO-I



IN-LINE Model	Flow Rate m ³ /hr*	Pressure Drop bar	Standard Dimensions mm						Pipeline Size mm	Approximate Net Weight kg****
			A	B	C	D	E	F		
1-HYDRO-I-B100	62	0.03	1118 ¹	470	406	159	210	305	100	137
1-HYDRO-I-B150	125	0.09	1118 ¹	470	483	184	210	305	150	147
3-HYDRO-I-B100**	102	0.06	180 ²	521	489	238	178	305	100	172
3-HYDRO-I-B150**	159	0.08	1391 ²	632	540	264	178	305	150	202
3-HYDRO-I-B200**	250	0.21	1391 ²	632	591	238	178	305	200	213
3-HYDRO-I-B250**	386	0.35	1543 ²	784	692	313	178	305	250	261
3-HYDRO-I-B300**	556	0.40	1689 ²	930	794	337	178	305	300	295
3-HYDRO-IX-B100***	102	0.04	1476 ²	718	489	238	292	387	100	250
3-HYDRO-IX-B150***	159	0.08	1476 ²	718	540	264	292	387	150	254
3-HYDRO-IX-B200***	250	0.21	1476 ²	718	591	238	292	387	200	259
3-HYDRO-IX-B250***	386	0.20	1768 ²	1010	692	313	292	387	250	356
3-HYDRO-IX-B300***	556	0.40	1768 ²	1010	794	337	292	387	300	368
4-HYDRO-I-18B300	613	0.24	1772 ³	768	895	382	279	492	300	690
4-HYDRO-I-24B300	727	0.08	1949 ³	946	895	382	279	492	300	805
4-HYDRO-I-24B400	999	0.15	1949 ³	946	1099	382	279	492	400	860
4-HYDRO-I-24B450	1249	0.23	1949 ³	946	1200	382	279	492	450	950
4-HYDRO-I-32B500	1558	0.29	2118 ³	1114	1302	382	279	492	500	1184

Notes: * 0-2% solids. ** Available with Scrapers. *** Easy to Remove Cartridges. **** Weight includes grinder & motor only.

• In-Line unit typically installed prior to suction side of pump. • Consult factory for final analysis of application.

1. Drive dimensions are a maximum based on a unit with a 2.2 kW drive. | 2. Drive dimensions are a maximum based on a unit with a 4 kW drive.

3. Drive dimensions are a maximum based on a unit with a 7.5 kW drive.



IX = Easy to Remove Cartridges



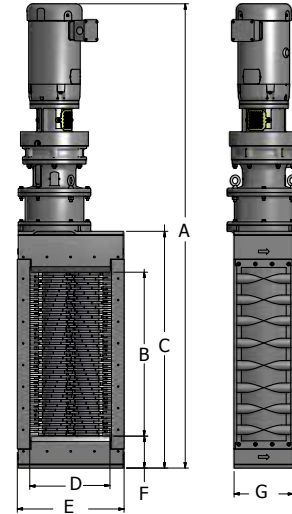
IX = Easy to Remove Cartridges



IX = Easy to Remove Cartridges

Open Channel Models

SEALS: MECHANICAL



OPEN CHANNEL Model	Flow Rate m ³ /hr*	Head Drop mm	Standard Dimensions mm							Approximate Net Weight kg**
			A	B	C	D	E	F	G	
1-HYDRO-C-0800	41.4	146	1124 ¹	185	474	8220	305	114	210	153
3-HYDRO-C-0800	84	178	1254 ²	203	495	216	298	86	178	168
3-HYDRO-C-1200	141	290	1359 ²	305	600	216	298	86	178	186
3-HYDRO-C-1800	223	405	1508 ²	457	746	216	298	86	178	211
3-HYDRO-C-2400	311	405	1654 ²	609	895	216	298	86	178	236
3-HYDRO-C-3200	447	445	1851 ²	813	1092	216	298	86	178	263
3-HYDRO-C-4000	686	495	2054 ²	1016	1295	216	298	86	178	295
3-HYDRO-C-5000	979	595	2308 ²	1270	1549	216	298	86	178	336
3-HYDRO-C-6000	1277	760	2572 ²	1524	1813	216	298	86	178	377
4-HYDRO-C-1800	207	203	1772 ³	457	768	371	502	114	279	659
4-HYDRO-C-2400	327	406	1949 ³	610	946	371	502	114	279	746
4-HYDRO-C-3200	477	457	2118 ³	813	1114	371	502	114	279	834

Notes: * Flow based on optimum conditions. ** Weight includes grinder & motor only.

• Consult factory for final analysis of application.

1. Drive dimensions are a maximum based on a unit with a 2.2 kW drive. | 2. Drive dimensions are a maximum based on a unit with a 4 kW drive.

3. Drive dimensions are a maximum based on a unit with a 7.5 kW drive.



A 3-HYDRO-C Sewage Shredder with submersible Motor at a Veterinary Clinic



Wet Application 3-HYDRO-C



Cutters and Patented Side Rails

Seal Options

Mechanical Seal Cartridge

Provides liquid protection of the shaft bearings for up to 6 bar. No lubrication or flush water is required. The seal is used with the Hydro series, pressurized pipe line or channel applications.

Flush Port Seal

Provides the greatest protection of the shaft bearings when aggressive media is involved in the process. Flush water is provided at the seal faces to wash away particles and destructive media increasing intervals between maintenance. This seal can be used in pressurized pipe line applications.



Motor Options

Motors

- TEFC: Totally enclosed fan cooled electric.
- ATEX – Explosion proof & IP68.
- Hydraulic Drives available in: 1.5, 2.2, 3.7, 7.5 kW

Hydraulic Power Packs

- Available in 3.7, 7.5, 11 kW



Submersible Motors



Optional Hydraulic Motors with or without a hydraulic power pack.



Standard Electric Motors

Cutters

- 3, 7, 11, 13, and 23 tooth options.
- * 17-Tooth Serrated Wipes Ready™ Cutter.
(Only available on 1, 3-Hydro- “IX” & -“C” models)
- Optional stainless steel cutters.

Custom Wall Frames

- Stainless steel guide frames attach to pump station to make installation easier.
- Frame is customised to fit each site and includes: guide rails, shredder support base, overflow bar racks and more.

Custom Channel Frames

- Adapt grinders to fit any channel.
- Guide rails for easy installation and maintenance.
- Stainless Steel construction.

Smart Controllers

- Load sensing control system automatically reverse to clear jams.
- Standard: IP65 enclosure with 3-position switch and status indicators.
- Optional: IP65 stainless steel.
- Customised control configurations for any installation.

Scrapers

- Integrated steel scrapers increase throughput and help cutters clean-out faster. (Only available on 3, 4-Hydro- “I” or -“C” models)

Extended Motor Shaft

- Places motor above highest water level. Available in 305 mm increments. Maximum: 4570 mm.

Monster Industrial Manhole (MIM)

- Pre-fabricated fiberglass reinforced manhole with grinder.
- Custom depth.
- Hinged cover BSEN124 GRP Grade D.



7-Tooth



11-Tooth



13-Tooth



17-Tooth *



Custom Wall Frames



Custom Channel Frame



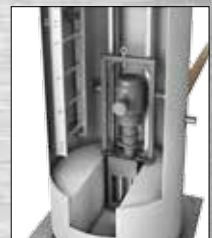
Model PC2200 Standard Enclosure



Scrapers (optional)



Extended Motor Shaft



Pre-fab Monster Industrial Manhole (MIM)



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Trust Monster Quality™

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