



## HELLBENDER® DISSOLVED AIR FLOTATION PUMPS

THE NEW STANDARD FOR INDUSTRIAL AND MUNICIPAL WASTEWATER TREATMENT



### WHAT IS A HELLBENDER DAF PUMP, AND HOW IS IT USED?

- Specially designed to be used in dissolved air flotation (DAF) systems, which are used to remove solids, oils, and greases from water, and wastewater.
- Clarified DAF effluent is pumped by the DAF pump under high pressure. Air is introduced into the pump suction either by an eductor loop or by compressed air. The air is sheared into small bubbles by the pump and then dissolved into the water under high pressure.

When this air-water solution is released into the incoming waste stream at atmospheric pressure, the air comes out of solution in the form of tiny (~10-50 micron) bubbles. These tiny bubbles attach to oil, grease, and solid particles and float them to the surface of the DAF unit. The floated material is then removed from the surface by a skimming device.

### HOW IS THE HELLBENDER DAF PUMP DIFFERENT FROM A REGULAR CENTRIFUGAL PUMP?

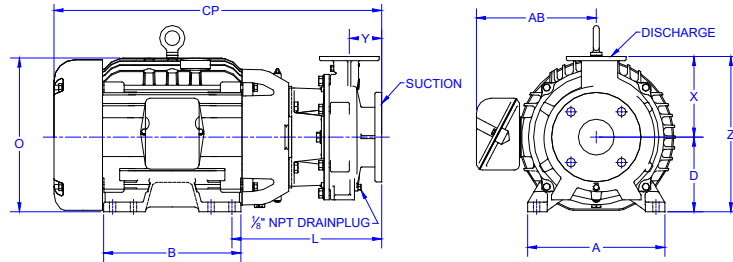
- Specially designed to pump water with entrained air at high pressure (~100psi) without cavitating
- Capable of achieving 100% of theoretical air-in-water saturation
- Higher air dissolving efficiency vs. standard centrifugal pumps due to high pressure and unique design
- Efficiently shears incoming air into very fine bubbles, allowing large amounts of air to be entrained in the water for superior whitewater production

### FEATURES OF THE HELLBENDER DAF PUMP

- Robust 316 SST construction single-stage, single-impeller design for a long reliable life and easy maintenance
- Supplied with mechanical seals and IEEE841 premium efficiency motor
- Available as a replacement recycle pump for existing DAF systems, or can be packaged as part of a complete whitewater system for gravity settler/skimmer retrofits

### THE HELLBENDER DAF PUMP VS. OTHER DAF PUMPS

- Made in the USA. pump/parts in stock for quick delivery
- Enclosed impeller allows for greater solids handling capability compared to other DAF pumps
- No intake throttling required, eliminating and extending pump life



NOTES:  
 1. ALL DIMENSIONS +/- .030", UNLESS OTHERWISE SPECIFIED  
 2. DIMENSIONS SHOWN ARE APPROXIMATE DIMENSIONS FOR STANDARD PUMPS EQUIPPED WITH TEFC MOTORS, DO NOT USE FOR CONSTRUCTION PURPOSES.

## DIMENSIONS

PUMP	SUCT	DISC	A	AB	B	CP	D	L	O	X	Y	Z
HB60-SS	2"	1"	11-1/2"	10-1/16"	11-1/2"	27-3/16"	6-1/4"	12-1/4"	12-7/8"	6-3/4"	2-3/8"	13"
HB90-SS	2"	1"	11-1/2"	10-1/16"	11-1/2"	27-3/16"	6-1/4"	12-1/4"	12-7/8"	6-3/4"	2-3/8"	13"
HB150-SS	3"	1-1/2"	11-1/2"	10-1/16"	11-1/2"	27-7/16"	6-1/4"	12-9/16"	12-7/8"	6-3/4"	2-11/16"	13"
HB250-SS	3"	1-1/2"	12-3/4"	13-1/8"	12-7/8"	30-9/32"	7"	11-7/8"	14-3/8"	6-3/4"	6-7/8"	13-3/4"

## PERFORMANCE AND FEATURES

PUMP MODEL	HB60-SS	HB90-SS	HB150-SS	HB250-SS
<b>PERFORMANCE</b>				
Flow, nominal	60 GPM	90 GPM	150 GPM	250 GPM
Pressure, nominal	100 PSI	100 PSI	100 PSI	100 PSI
<b>PHYSICAL CHARACTERISTICS</b>				
Motor Size	15 HP	15 HP	20 HP	30 HP
Motor Speed	3600 RPM	3600 RPM	3600 RPM	3600 RPM
Motor Design	IEEE841, TEFC, 460 V, 60 Hz	IEEE841, TEFC, 460 V, 60Hz	IEEE841, TEFC, 460 V, 60Hz	IEEE841, TEFC, 460 V, 60Hz
Suction	2" ANSI 125# Flange	2" ANSI 125# Flange	3" ANSI 125# Flange	3" ANSI 125# Flange
Discharge	1" ANSI 125# Flange	1" ANSI 125# Flange	1-1/2" ANSI 125# Flange	1-1/2" ANSI 125# Flange
Weight w/ motor	337 lb	337 lb	347 lb	484 lb

## MATERIALS OF CONSTRUCTION

MODEL	CASING	IMPELLER	WEAR RING	SHAFT/SLEEVE	MECHANICAL SEAL
Stainless Steel	316 SST	316 SST	None	316 SST	Silicon Carbide/ Tungsten Carbide/ Viton



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