

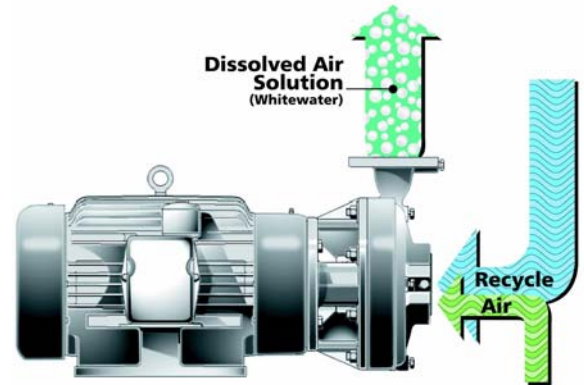


## DISSOLVED AIR FLOTATION PUMPS

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, wastewater, and other waste streams.
- Clarified effluent from a DAF unit 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 by the 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 operate at high (~100 psi) pressures and pump water with entrained air *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 smaller bubbles, allowing for large amounts of air to be entrained in the water.

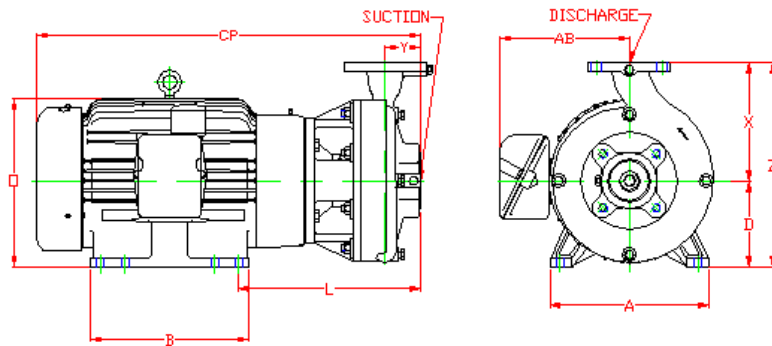
### Features of the **HELLBENDER**® DAF Pump

- Simple single-stage, single-impeller design
- Reliable, long life
- Available in bronze-fitted or all-bronze models
- Supplied with mechanical seals and rugged Baldor motors
- Superior whitewater production with very fine bubbles
- 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**
- Pumps and parts in stock for quick delivery
- Enclosed impeller allows for **greater solids handling capability** than other DAF pumps
- Replaceable wear ring prevents erosion of pump casing due to high velocities in suction area of pump
- **No intake throttling required, eliminating cavitation due to throttling and extending pump life**
- Single impeller reduces capital and maintenance costs and simplifies maintenance
- Can be used either with an eductor loop or with a compressed air source
- **Application assistance from highly experienced technical staff**
- Close-coupled, eliminating the need for alignment and an external coupling and baseplate
- Compact footprint



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
HB-60	2	1½	11-1/2	9-13/32	9-3/4	26-3/8	6-1/4	13-1/2	12-3/16	9	3	15-1/4
HB-90	2	1½	11-1/2	9-13/32	9-3/4	26-3/8	6-1/4	13-1/2	12-3/16	9	3	15-1/4
HB-150	2½	2	11-1/2	9-13/32	11-1/2	27-3/4	6-1/4	13-5/32	12-3/16	8-1/2	2-9/16	14-3/4
HB-250	2½	2	12-3/4	13-1/8	12-7/8	31-1/2	7	13-5/32	14-7/16	8-1/2	2-9/16	15-1/2

Note: Dimensional drawing shows flanged pump; however, HB-60 and HB-90 are supplied with NPT, not flanged, connections.

### Performance and Features

PUMP MODEL	HB-60	HB-90	HB-150	HB-250
<b>PERFORMANCE</b>				
Flow, nominal	60 GPM	90 GPM	150 GPM	250 GPM
Pressure, nominal	100 PSI	100 PSI	100 PSI	100 PSI
Max Solids Size	3/16"	3/16"	3/8"	3/8"
<b>PHYSICAL CHARACTERISTICS</b>				
Motor Size	15 HP	15 HP	20 HP	30 HP
Motor Speed	3500 RPM	3500 RPM	3500 RPM	3500 RPM
Motor Design	TEFC, 230/460 V, 60 Hz	TEFC, 230/460 V, 60Hz	TEFC, 230/460 V, 60Hz	TEFC, 230/460 V, 60Hz
Suction	2" NPT	2" NPT	2½" ANSI 125#	2½" ANSI 125#
Discharge	1½" NPT	1½" NPT	2" ANSI 125# FF	2" ANSI 125# FF
Weight w/ motor	279 lb	279 lb	330 lb	495 lb

### Materials of Construction

MODEL	CASING	IMPELLER	WEAR RING	SHAFT/SLEEVE	MECHANICAL SEAL
Bronze-Fitted	Cast Iron	Bronze	Bronze	Steel/Bronze	Carbon/Ceramic/Buna,Viton,EPT
All-Bronze	Bronze	Bronze	Bronze	Steel/Bronze	Carbon/Ceramic/Buna,Viton,EPT



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