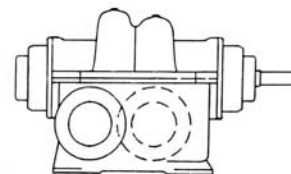




## PRODUCT BULLETIN MODEL HJ MULTISTAGE HSC

The American-Marsh Model HJ multistage splitcase pumps are designed for long, dependable life in many applications. The Model HJ multistage splitcase pumps operate at 1750 RPM quietly and efficiently. The HJ product line, with its many options, allows the end user increased flexibility in today's pump applications.



### Material Specifications

PART	CONSTRUCTION			
	BRONZE FITTED	ALL IRON	NI-RESIST FITTED	316SS FITTED
Casing	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Impellers	Bronze	Cast Iron	Ni-Resist	316 Stainless Steel
Stuffing Boxes	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Shaft	420 Stainless Steel	420 Stainless Steel	316 Stainless Steel	316 Stainless Steel
Lantern Rings	Bronze	Cast Iron	Ni-Resist	316 Stainless Steel
Stuffing Box Glands	Bronze	Cast Iron	Ni-Resist	316 Stainless Steel
Shaft Sleeves	Bronze	416 Stainless Steel	316 Stainless Steel	316 Stainless Steel
Bearing Housings	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Mechanical Seal	Carbon/Si-C/Buna	Carbon/Si-C/Buna	Carbon/Si-C/Buna	Carbon/Si-C/Buna

### MODEL HJ SPECIFICATIONS

**Casing:** The casing is of high tensile cast iron or other specified material. It is of the volute type, split on the horizontal center line with the suction and discharge flanges casted integral with the lower half. The casing utilizes *Thru-Bore* lineboring technology simplifying the machining operation and allows the advantage of using only a few modular rotating assemblies. The *Thru-Bore* feature allows for the complete removal and replacement of the stuffing boxes without replacing the casing. Removal of the upper half of the casing gives complete access to the interior of the pump without disturbing the piping connections or pump alignment.

**Impellers:** The impellers are of the single suction, enclosed, non-overloading type. They are placed back to back to balance the end thrust without the use of extra seal rings or other balancing devices. Impellers are made of bronze, or other special material, machined and polished all over, and dynamically and hydraulically balanced. They are keyed to the shaft, secured by lock nuts and adjustable for position.

**Case Wear Rings:** Case wear rings are made of bronze or other specified material. They are designed with a large wearing surface with the diameter at wearing surface reduced to a minimum, and are firmly secured to the casing by dowel pins.

**Shaft:** The shaft is of stainless steel, ground to accurate dimensions and polished to a smooth surface. It is designed for extra stiffness to

avoid all critical speeds in operation, and is threaded for bearing and lock nuts.

**Stuffing Boxes:** The stuffing boxes are extra deep, designed for packing or mechanical seals. The stuffing boxes are completely removable and replaceable.

**Glands:** The glands are of the hinge bolt type, split for easy removal and fastened together with capscrews.

**Bearings:** Both the inboard and outboard ball bearings are of the single row, deep groove type, precision grade, with cartridge mounting, permitting the removal of the shaft without exposing or disturbing the bearing assembly. They are of extra large capacity for both radial and thrust loads, and are locked to the shaft with nut and positive nut lock. The outboard bearing is confined rigidly in the bearing housing to take the end thrust, while the inboard bearing is set with sufficient clearance to allow for shaft expansion. Each bearing is designed for grease lubrication and is provided with a water slinger to prevent leakage from the stuffing box into the bearing. A grease zerk fitting is furnished for each bearing.

INDUSTRIAL

Process, Petrochemical,  
Chemical Injection

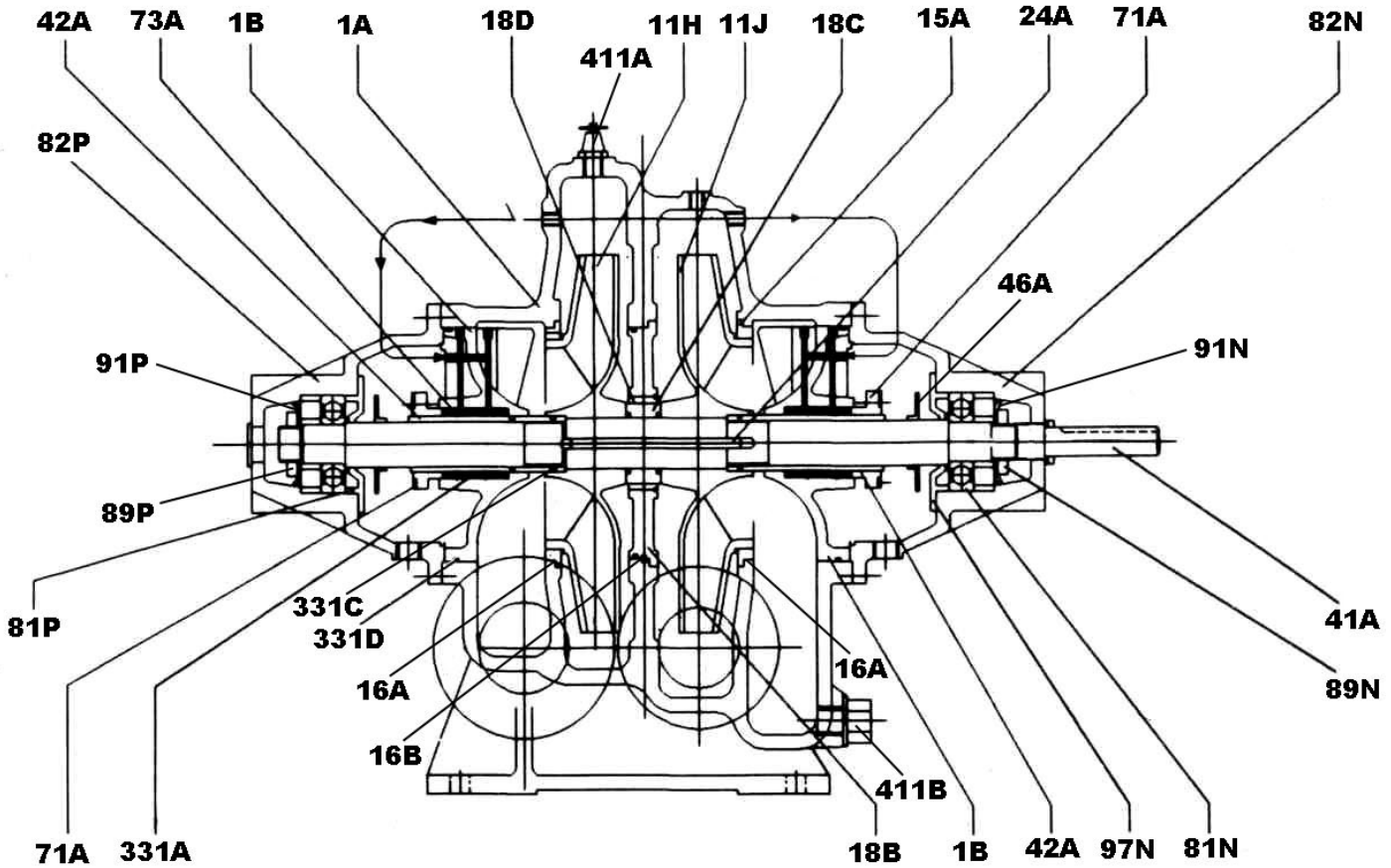
COMMERCIAL

HVAC, Booster, Boiler Feed,  
High Rise, Condenser Water

MUNICIPAL

Booster Systems, Chemical  
Injection

PRODUCT BULLETIN  
MODEL HJ MULTISTAGE



HJ Sectional Drawing

Item Number	Item Description	Num. Req.
1A	Casing	1
1B	Stuffing Box	2
<b>11H</b>	Impeller, 1 <sup>st</sup> Stage	1
<b>11J</b>	Impeller, 2 <sup>nd</sup> Stage	1
15A	Ring, Casing Wearing	2
16A	Pin, Dowel, Casing Ring	2
16B	Pin, Dowel, Casing Bushing	1
<b>18B</b>	Bushing, Casing	1
<b>18C</b>	Impeller Spacer	1
<b>18D</b>	Stage Piece Bushing	1
24A	Key, Impeller	1
41A	Shaft	1
42A	Sleeve, Shaft	2
46A	Deflector	2
71A	Gland, Complete	2
72B*	Bolt, Gland, with Nut and Washer	4
73A	Ring, Lantern	2

Item Number	Item Description	Num. Req.
<b>81N</b>	Bearing, Ball, Outboard	1
<b>81P</b>	Bearing, Ball, Inboard	1
82N	Housing, Bearing, Inboard	1
82P	Housing, Bearing, Outboard	1
<b>89N</b>	Locknut, Bearing, Outboard	1
<b>89P</b>	Locknut, Bearing, Inboard	1
<b>91N</b>	Lockwasher, Bearing, Outboard	1
<b>91P</b>	Lockwasher, Bearing, Inboard	1
97N	Bearing Housing Cap	2
281A*	Fitting, Zerk	2
<b>331A</b>	Packing, Stuffing Box	1 set
<b>331C</b>	Shaft Sleeve O-Ring	2
<b>331D</b>	Stuffing Box O-Ring	2
411A	Plug, Pipe, Vent	2
411B	Plug, Pipe, Bearing Cap	1
<b>353A*</b>	Gasket, Casing	1
381B*	Bolt, Casing	Varies

\*Not shown in sectional.

Recommended spare parts are in BOLD.