

# Metropolitan

Metropolitan Pump Company  
Metropolitan Marketing  
Metropolitan Equipment



# Industries, Inc.

37 FORESTWOOD DRIVE ROMEOVILLE, ILLINOIS 60446-1343  
(815) 886-9200 outside IL (800) 323-1665 fax (815) 886-4573 www.metropolitanind.com

To: Rick Carlen - Village of Orland Park  
Fax - 708-403-6381

Re: Village of Orland Park Aquatic Center  
Vertical Turbine Pump Replacement  
Quote# 311S5264BS

Design 3000gpm @ 45tdh 82.1%eff 41.4bhp 1800rpm 104.00' TPL

Quote Includes

- a) 1.1875" x 416SS Head Shaft Assembly
- b) 50hp US WP1 1800rpm VHS 460v 3ph Motor w/1.1875" NRR
- c) 12" Ductile Iron Discharge Head w/1.1875" Packing Box Assembly
- d) Steel Base Plate
- e) 12" x .375wall Column Assembly w/1.1875" x 416SS Head Shaft Assembly
- f) Hydroflo 14HH 1stg - Cast Iron Bows - 201SS Impellers - Vesconite Bearings - 17-4PH Shafting - 12" Discharge - 10" Suction Case
- g) 304SS Basket Strainer
- h) Assembly, Crating, Painting

Your cost for the above listed equipment including Start Up Services is: \$16,338.00

If Mechanical Seals are desired in lieu of packing, ADD \$1,440.00.

Freight is not included and will be prepaid and add. Start up is included.

Lead Time is approximately 3 weeks.

Note: If necessary, it may be possible to utilize your existing discharge head with the new pump in an effort to limit any piping modifications. The estimated deduct if this option is desired is \$1,000 - \$2,000.

Please review this information and feel free to contact Keith Girup or myself with any questions at 815-886-9200. Thank you for this opportunity.

Sincerely,

Brandon Schwab  
Metropolitan Industries

Engineering



Manufacturing



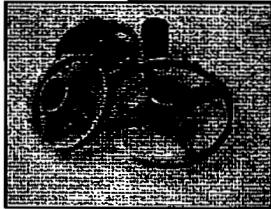
Service

**Hydroflo Pumps USA, Inc.**

**Engineering Facts**

**Hydroflo  
pumps**  
"Realize the Power of Stainless"

[www.hydroflopumps.com](http://www.hydroflopumps.com)



### More Stainless Products:

- Stainless steel bearing retainers.
- Stainless steel packing boxes.
- Stainless steel column couplings.
- Stainless steel shaft sleeves.
- Complete Stainless Steel Pumps.



**8" All 316SS**

**Offshore Fire Pumps**

## Lost Wax Investment Cast Stainless Steel Impellers

1. Lost wax investment castings are superior to all other impeller castings.
  - A. The smoothness of the casting increases efficiencies.
  - B. The wax is injected into a stainless pattern, thus a perfect mold each injection.
  - C. Sand castings will have core shifts, increased void areas, and rough surfaces.
2. Stainless is superior to bronze in all engineering applications.
  - A. Strength and Hardness are considered two of the most important physical properties when choosing pump impeller material. Stainless impellers have a Brinell Hardness Range of 212–280, the best choices in bronze are 60–159. Tensile Strength for stainless is 80,000–135,000 PSI, again bronze is only 26,000–85,000 PSI.
  - B. Stainless steel is better against abrasion and corrosion. Stainless is the choice in high chlorine concentrations, salt water applications, and in low PH water.
  - C. Stainless should always be chosen for applications where the presence of sand or abrasion particles are known to be in the water.

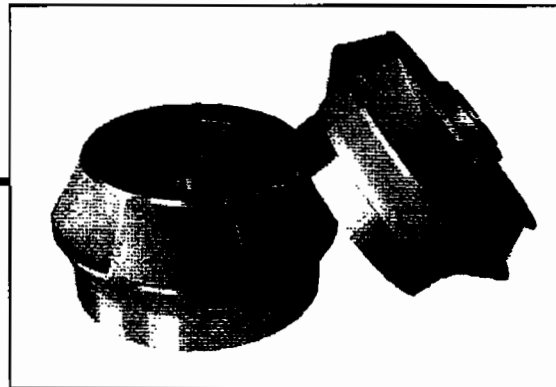
### 201 Stainless

201SS Brinell 215–280

304SS Brinell 212–277

316SS Brinell 150–190

316SS is the better material against corrosion, but 201SS is best in abrasive applications.



Hydroflo Pumps USA, Inc.

7118 Loblolly Pine Blvd. Fairview, TN. 37062

Phone: (615) 799-9662 Fax: (615) 799-5654

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**More Ductile Iron Products:**

- 5", 6" & 7" Submersibles are all Ductile Iron castings.
- Hydroflo has pump models available in Ductile Iron Double Tapped and O-Ringed for High Pressure Applications.
- 12", 14" & 16" Ductile Iron Bearing Retainers.
- Ductile Iron Tube Adapters

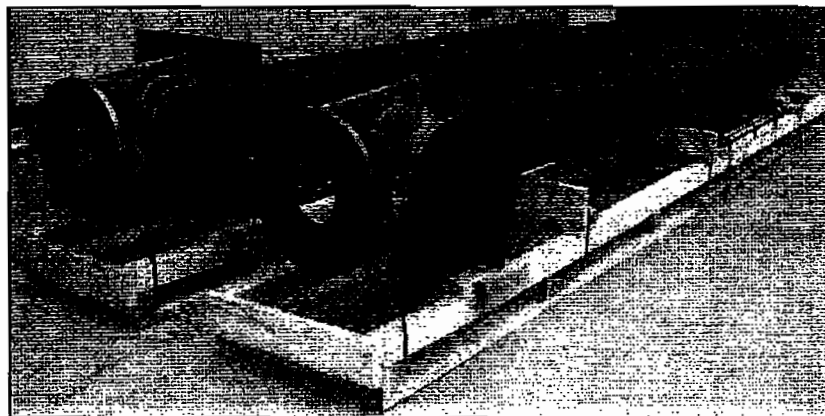


**ANSI 300 lb. 4" Ductile Iron Discharge Head**

Hydroflo Pumps USA, Inc.  
7118 Loblolly Pine Blvd.  
Fairview, TN. 37062

**Ductile Iron Discharge Heads  
With Identical Centerlines**

1. Ductile Iron is a superior casting material over Class 30, Cast Iron.
2. Ductile Iron Tensile Strength - 65,000 lbs  
Class 30 Cast Iron Tensile Strength - 30,000 lbs
3. Because of this strength, Hydroflo Ductile Iron discharge heads can handle higher pressures and more hang weight.
4. The porosity in Ductile Iron is much smaller, thus providing a better corrosive resistance than Cast Iron.
5. Cast Iron is a brittle casting. Ductile Iron has a stretch factor and will not break or crack as easy as Cast Iron.
6. Hydroflo provides 4", 6", 8" and 10" Ductile Iron discharge heads with identical centerlines. This allows different size pumps to connect into the same height header pipe.
7. Hydroflo has 4" and 6" Ductile Iron discharge heads with a 300 lb. ANSI discharge flange.



**Hydroflo assembled short set pumps with 12" Discharge Heads.**

PART #	DESCRIPTION	QTY	price ea.	lead time (weeks)
1213-316-38.00	SHAFT,UPR-HD-1.18X038.00-THD	1	1113.4	5 weeks
6761-1-060	NUT,ADJUSTING ASSY-1.18	1	65.45	5 weeks
.. 4464-130	BOX,PACKING-STD-1.18X4.50-G-S	1	1569.27	12 weeks
.. 61500-3-704-2.50	BRG,SLV-PACKING BOX	1	266.06	6 weeks
.. 2484-953	GLAND,PACKING-1.18	1	524	6 weeks
.. 2932-836	RING,LAN-1.18X1.93X0.75-STD	1	59.57	4 weeks
.. PK1001-03-741	PACKING,RING-1.18X1.93X0.37	1	103.21	4 weeks
.. 1022-720	GASKET,PKG BOX-4.50 REG-STD	1	27.8	2 weeks
.. 1073-706	DEFLECTOR-1.18	1	23.83	2 weeks
. 21092-838	RETAINER,LS BRG-2.00X12-FLG	1	1755	8 weeks
. 21319-3-705	BRG,SNAP-IN-1.18X2.00X3.12	1	47.65	4 weeks
. 1168-316-91.87	LINESHAFT 91.87" LONG	1	1417.4	5 weeks
. 714-416	CPLG,SHAFT-(LINESHAFT TO HEADSHAFT)	1	63.54	5 weeks
. 3678-A-130	FLOW RING, DISCHARGE CASE	1	575	8 weeks
. 61500-7-704-3.50	BEARING, DISCHARGE CASE	1	452.69	6 weeks
. 61500-7-704-4.37	BEARING, BOWL	1 (now 61500-7-704-4.00)	335.56	6 weeks
. 1579-836/954	IMP,TUR-14DC-COL-STD (WITH RING INSTALLED)	1	3986.89	14 weeks
. 1270-064	COLLET,IMPELLER LOCK-1.93	1 (now 1270-416)	55.59	4 weeks
. 3169-130	BELL,TUR-14DC-STD-2.25	1	2497.66	12 weeks
. 61500-7-704-3.00	BEARING, BELL	2	293.85	6 weeks
. 13598-316-35.06	BOWLSHAFT -1.93X035.06-1.18	1	1968.4	5 weeks
. 714-416	CPLG,SHAFT-(BOWLSHAFT TO LINESHAFT)	1	63.54	6 weeks
. 61968-1-304	STRAINER,BSKT ASSY-14T PUMP	1	900	6 weeks