

# SELF-PRIMER SEWAGE AND TRASH PUMPS

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# Self-Primer Sewage and Trash Pumps

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# Self-Primer Sewage and Trash Pumps

**Hydromatic** self-primers offer drive options to meet your needs.

You can depend on Hydromatic self-primer pumps to provide years of reliable service. Thousands of units are operating trouble-free throughout the world.

## Economical

Hydromatic self-primers are designed for economical long-term operation. You'll find a number of unique features to make service and maintenance quick and easy. Quick and easy service means you'll reduce downtime and save money.

## Easy Installation and Start-Up

You mount the Hydromatic self-primer on top of the wet well or sump and drop the piping into the wet well. Connect piping, fill the case with water, power up and you're running.

When you turn the pump on, it automatically primes. The flap check valve retains the prime in the pump and suction leg to give you worry-free operation.



## Installations:

- Lift Stations
- Wastewater Treatment Plants
- Industrial Plants
- Food Processing
- Citrus Processing
- Commercial Buildings
- Apartments
- Schools, Universities
- Hospitals
- Agricultural Irrigation
- Contractor Dewatering
- Vehicle Washdown Areas
- Dewatering
  - Airport Runways
  - Mines
  - Elevator Shafts

## Benefits:

- Economical
- Easy Installation
- Dependable Operation
- Save Money with Peak Performance
- Less Maintenance
- Easy to Maintain When Necessary
- Save Space
- Long Pump Life
- Corrosion-Resistant Option
- Quick Delivery
- Above Ground
- Not in Sewage

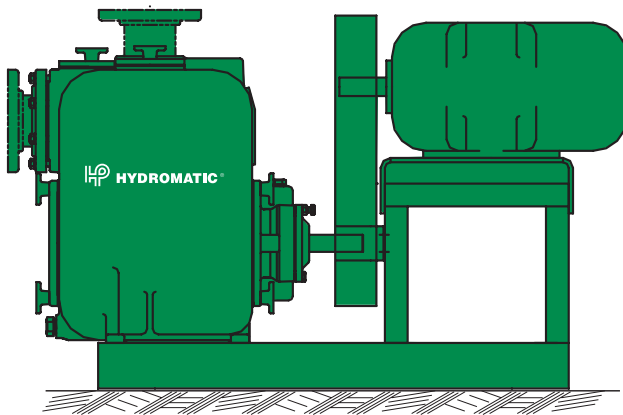
# Self-Primer Sewage and Trash Pumps

**Hydromatic** self-primers offer drive options to meet your needs.

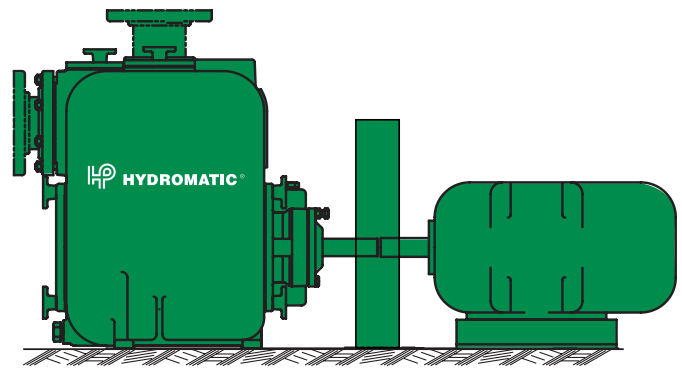
## Save Space

Hydromatic self-primers are available with V-belt drive in order to save space and money. When space is expensive or just not available, the V-belt configuration allows the motor to be mounted above the pump or to the side of the pump.

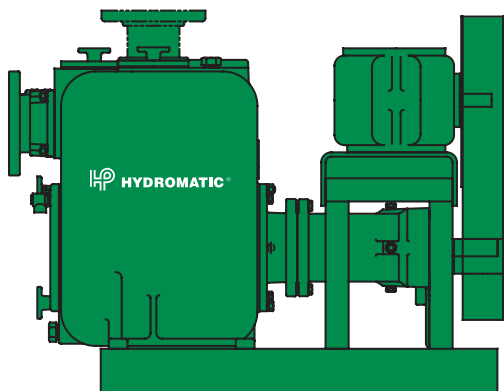
The Hydromatic direct drive option with flexible coupling reduces shaft stress so you get longer pump life. It is easy to maintain and keeps running for years.



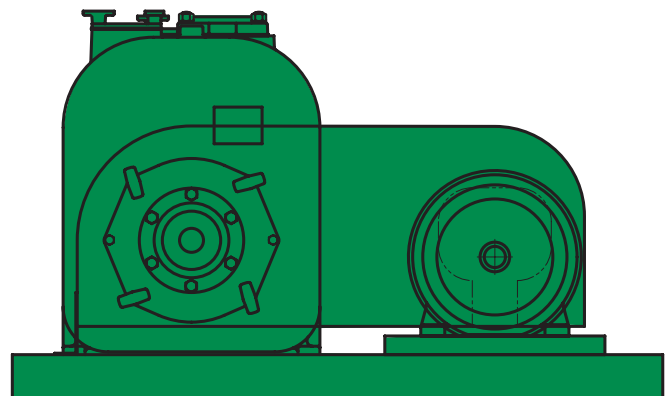
*You save money and space with the vertical in-line V-belt drive option.*



*The direct drive, flexible coupled option reduces shaft stress for long pump life.*



*You save money and space with the vertical in-line V-belt piggyback drive option.*



*Right- or left-hand horizontal mount V-belt drive option.*

# Self-Primer Sewage and Trash Pumps

**Hydromatic** saves money with external adjustment.

## Save Money with Peak Performance

External adjustment allows you to easily maintain original operating efficiency and peak performance. By simply turning the external cap screws you easily adjust the clearance between the impeller and wear plate.

You can make the external adjustment without disturbing the piping system. You don't have to disassemble the pump or piping.

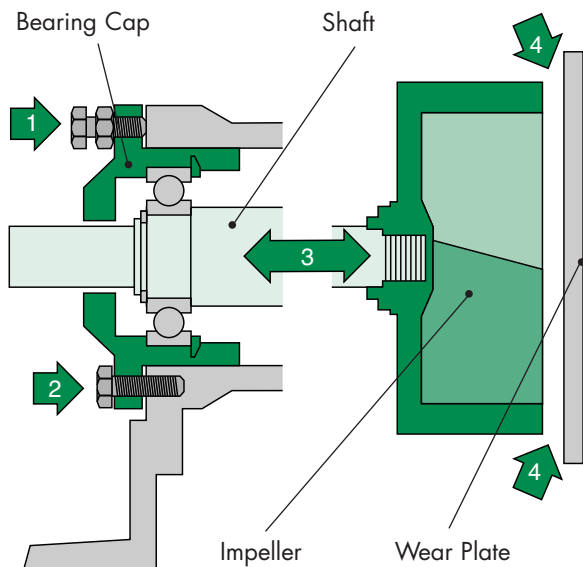
## Dependable Operation

You get dependable pumping operation with the Hydromatic Dual Seal Series. Two seals protect the bearings to give you longer pump life. Pump-out vanes on the back shroud of the impeller to prolong service life and seal protection.

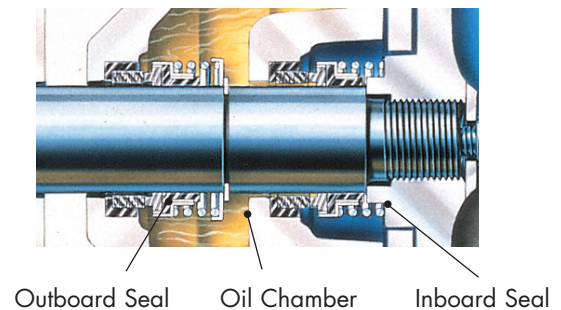
The unique dual seal system incorporates an oil chamber which provides lubrication for the seals. The inboard seal offers protection because it "self-seals" tightly against the stationary face with pressure surges from the volute.

Hydromatic Dual Seal Series use low friction, long-lasting John Crane\* Type 21 mechanical seals that you can obtain off-the-shelf worldwide. Tungsten carbide seals are optional.

The Hydromatic MP and RDP models with Dual Seal Series offer you long, dependable pump operation.



**External adjustment allows you to quickly restore original efficiency and performance. External bolts (1 and 2) move the bearing cap, which in turn moves the bearing and shaft assembly (3). This moves the impeller closer to the stationary wear plate for the proper clearance (4) to restore peak performance and save money.**

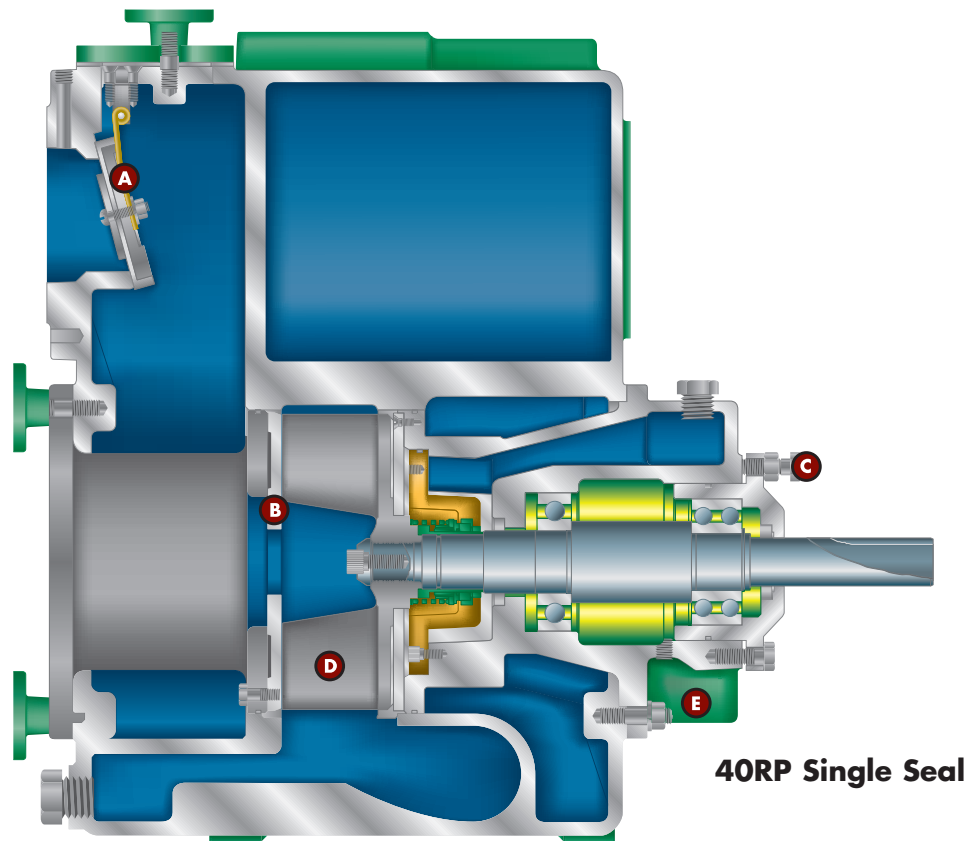


**The dual seal system protects your bearings from media contamination to provide you exceptionally long pump service with direct drive (coupling) or V-belt drive designs.**

\*John Crane is a registered trademark of John Crane, Inc.

# Self-Primer Sewage and Trash Pumps

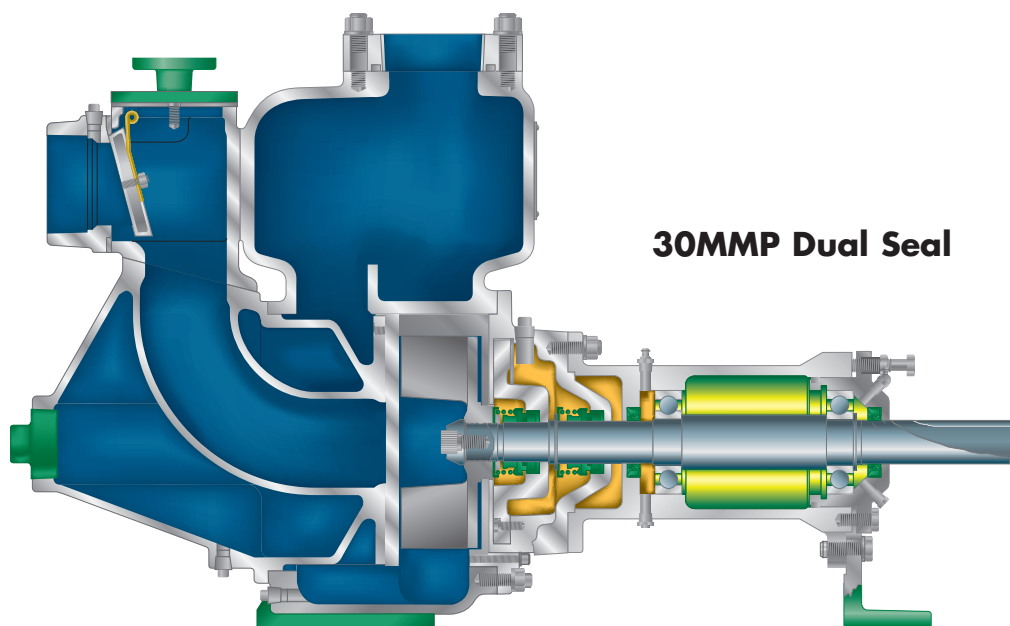
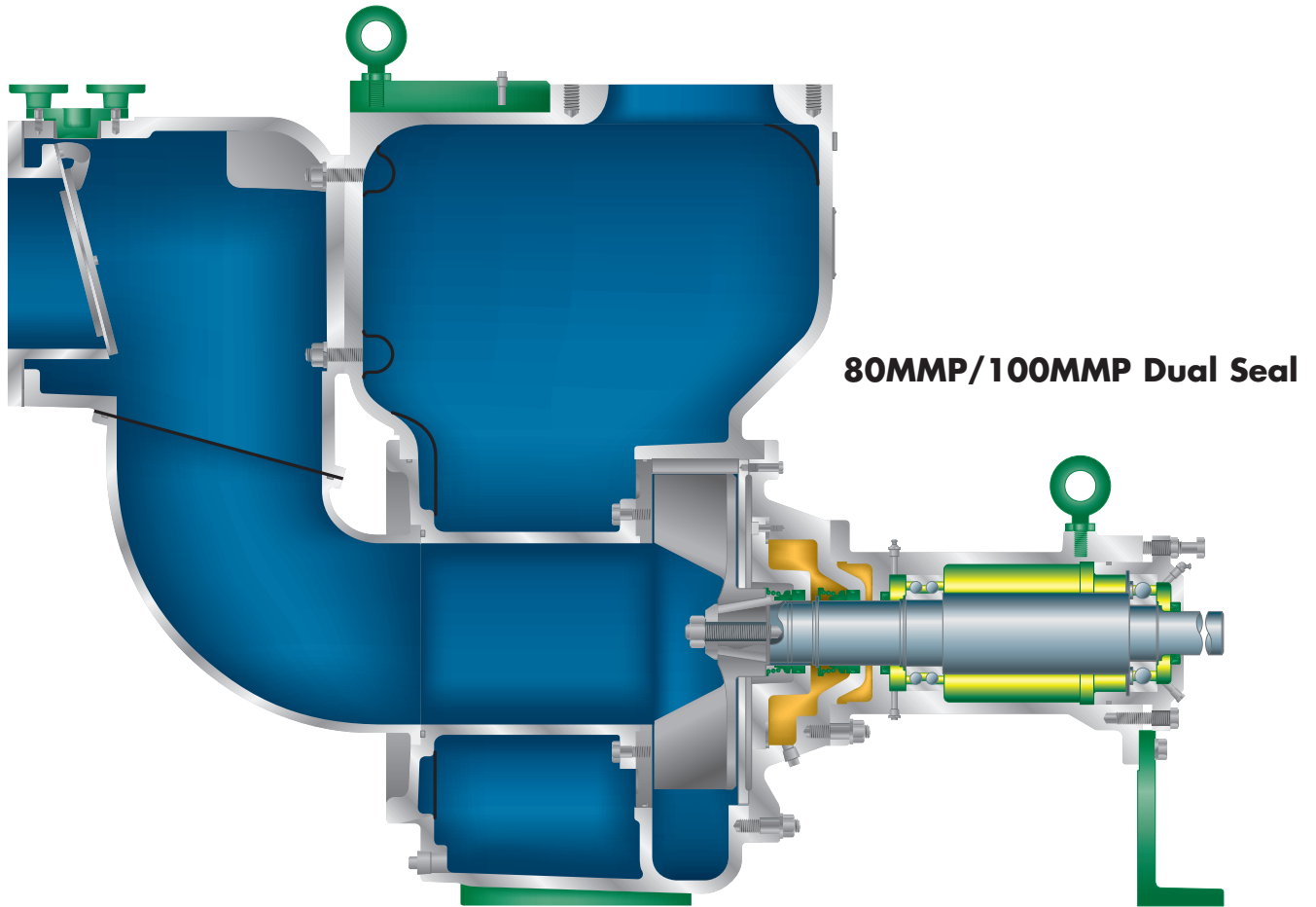
**Hydromatic** saves money with external adjustment.



**40RP Single Seal**

- A. **Flap Check Valve** - Knock-off handles allow easy access for cleaning or replacing the flap check valve to save you time, energy and money.
- B. **Wear Plate** - The wear plate and volute lip are easily replaceable to keep your pump at optimum performance.
- C. **External Adjustment** - Cap screws allow you to easily adjust the clearance between the impeller and wear plate to maintain original peak efficiency and performance.
- D. **Impeller** - The two vane, semi-open impeller easily handles solids and stringy materials to give you dependable pumping action. Pump-out vanes on the back shroud keep grit and media away from the seal area for longer life.
- E. **Removable Rotating Assembly** - To allow for bench-top repair.

# Self-Primer Sewage and Trash Pumps



# Self-Primer Sewage and Trash Pumps

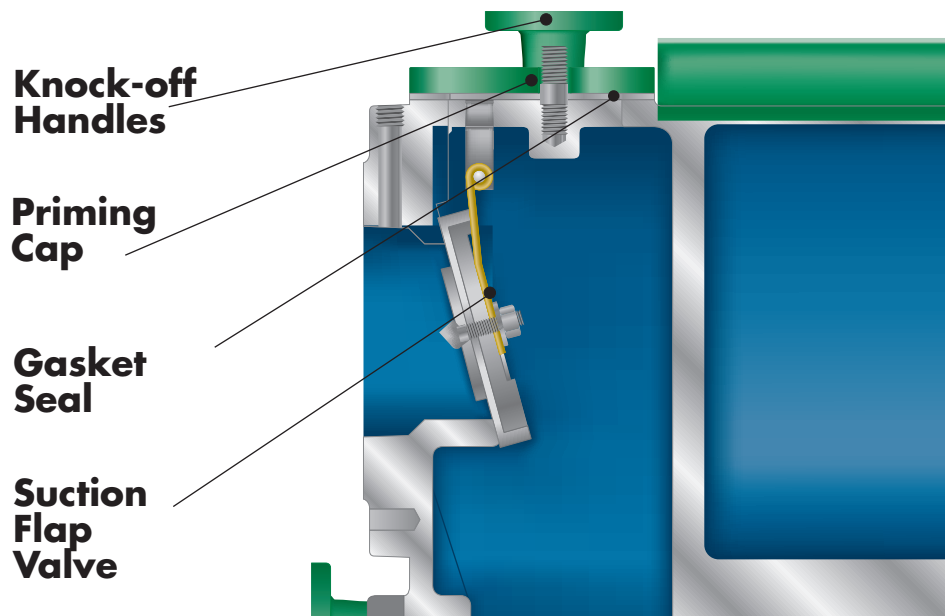
## Hydromatic self-primers...

The Hydromatic self-primers are easy to service with their unique check valve design. "Knock off" tee handles allow quick and easy cleaning or replacement of the suction flap valve without draining the pump case. Hydromatic self-primers allow you to replace the Suction Flap Valve without disturbing the piping.

Other manufacturers require you to drain the case, disconnect the suction pipe, disconnect the suction elbow, and then replace the check valve. Everything has to be put back together and the case refilled to resume operation.

With the 3", 4", 6", 8" and 10" Hydromatic pumps, you unscrew the handles, lift the cover or priming cap, inspect or replace the flapper, replace the cover or priming cap and start up the pump. All in minutes.

You don't have the mess from draining the case and you don't have to refill the case when done. Hydromatic self-primers are easy to service, no-hassle, with their unique check valve design.



*You'll find it easy to remove knock-off tee handles to quickly clean or replace the suction flap valve.*



# Self-Primer Sewage and Trash Pumps

are easy to service.

## Maintenance Simplified—RP Units

Maintenance is simplified on the Hydromatic self-primer with easy removal of the suction cover plate and easy back pull-out of the rotating unit without disconnecting the piping.

You can quickly unscrew four “knock-off” tee handles or nuts to remove the suction cover plate. It’s easy to clean or inspect the impeller without disturbing the piping.

The back pull-out design allows you to quickly inspect or service all wearing and rotating parts without disconnecting any piping. You can easily and quickly maintain the shaft, bearings, seals, impeller and wear plate with less downtime and less work.



**4" Single or Dual Seal Available**



**6" Single or Dual Seal Available**

***Maintenance and inspection of impeller and wear plate are easy with removable suction cover plate. Piping is not disturbed.***

# Self-Primer Sewage and Trash Pumps

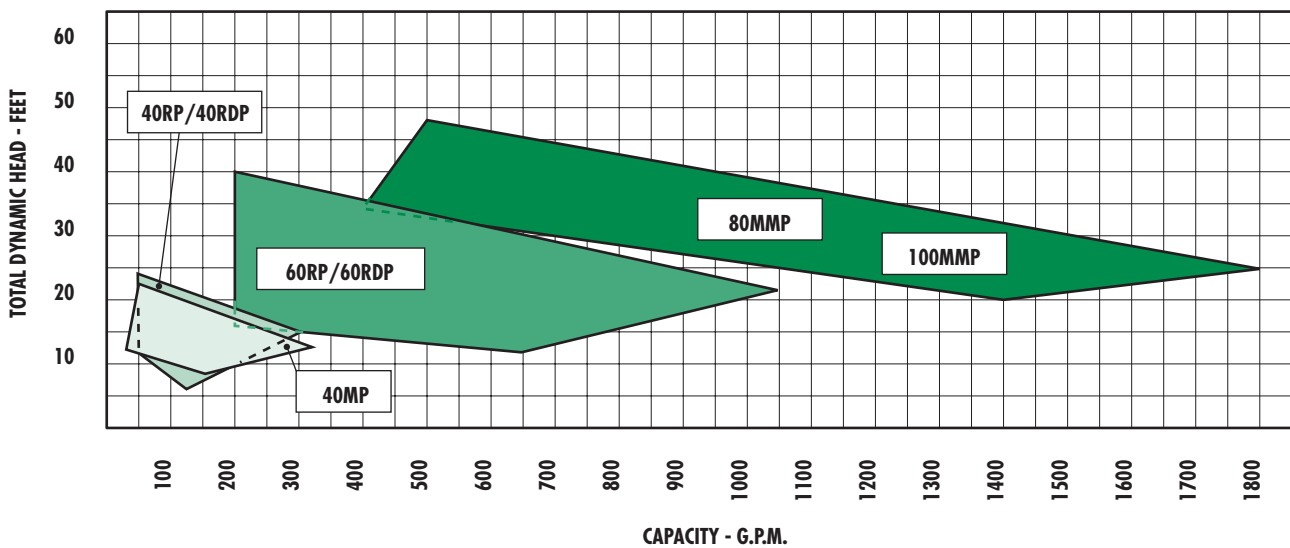
## Hydromatic Performance Curves

### Pump Nomenclature

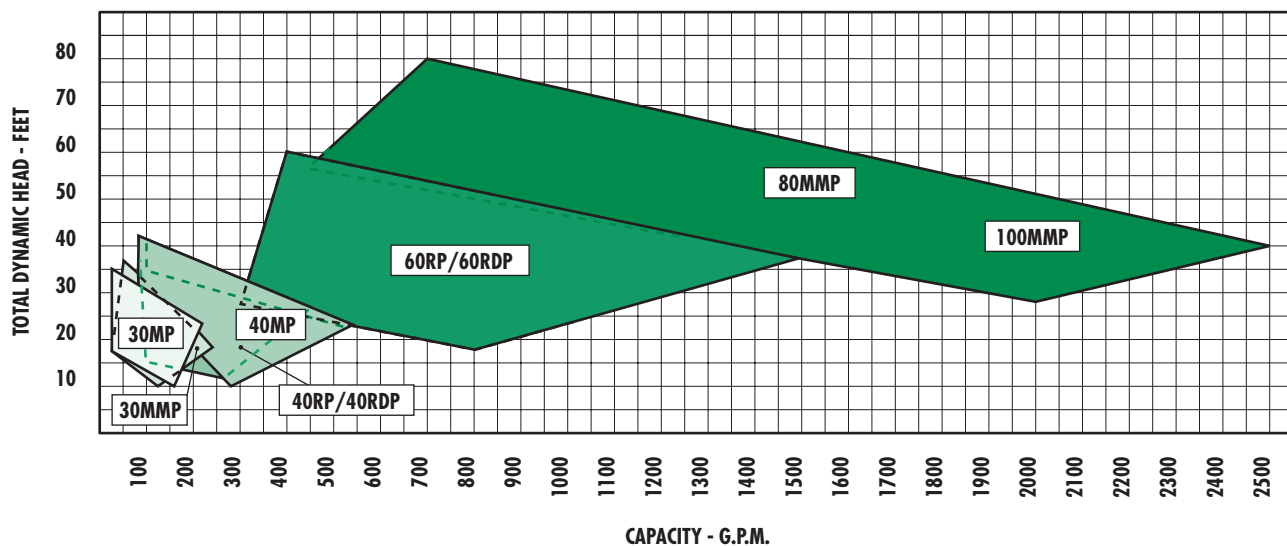
### Sizes

MP	Standard Self-Primer	30	3"
MMP	Self-primer with double chamber for better efficiency and suction lift capability	40	4"
		60	6"
		80	8"
RP	Rapid Prime – Single Seal	100	10"
RDP	Rapid Prime – Dual Seal		
D	Flexible Coupled Drive		
V	V-Belt Drive		
H	Heavy-Duty Shaft		
S	Stainless Steel		
F	Stainless Steel Fitted		

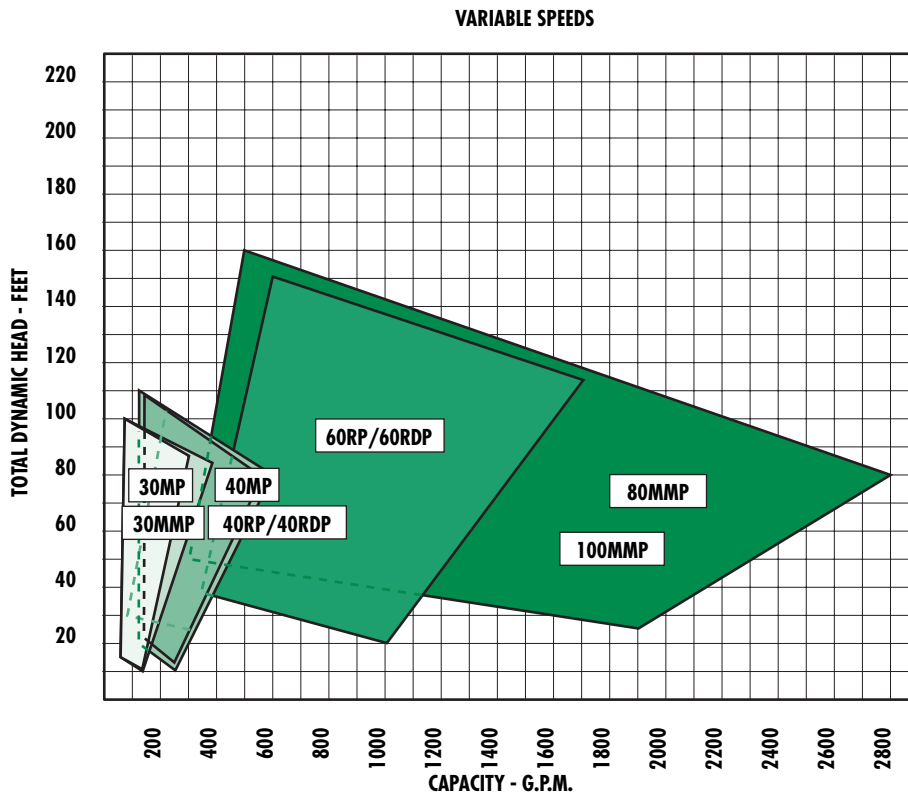
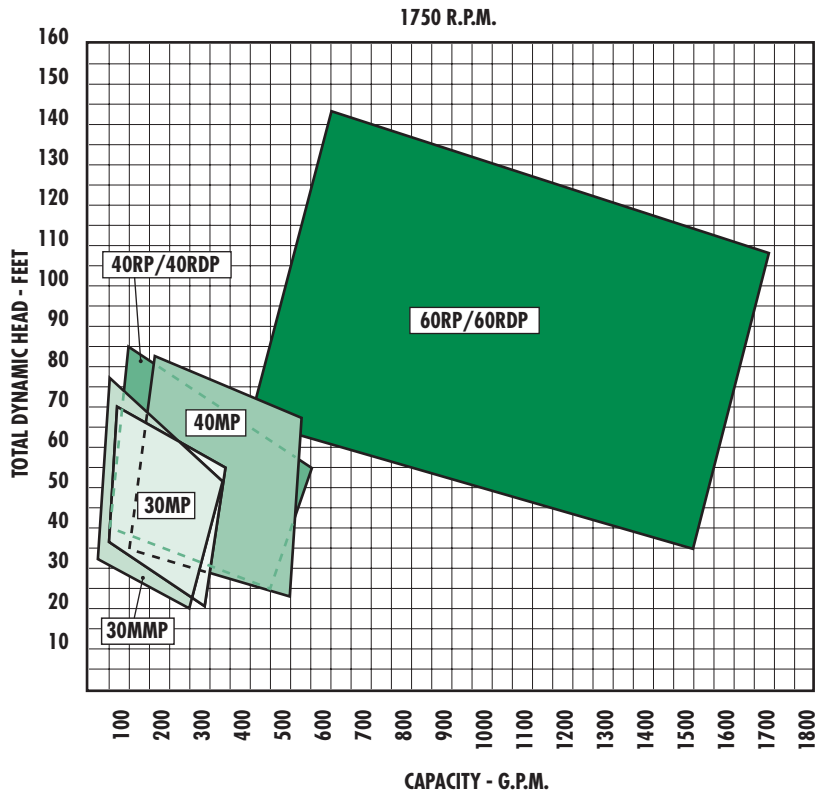
850 R.P.M.



1150 R.P.M.



# Self-Primer Sewage and Trash Pumps

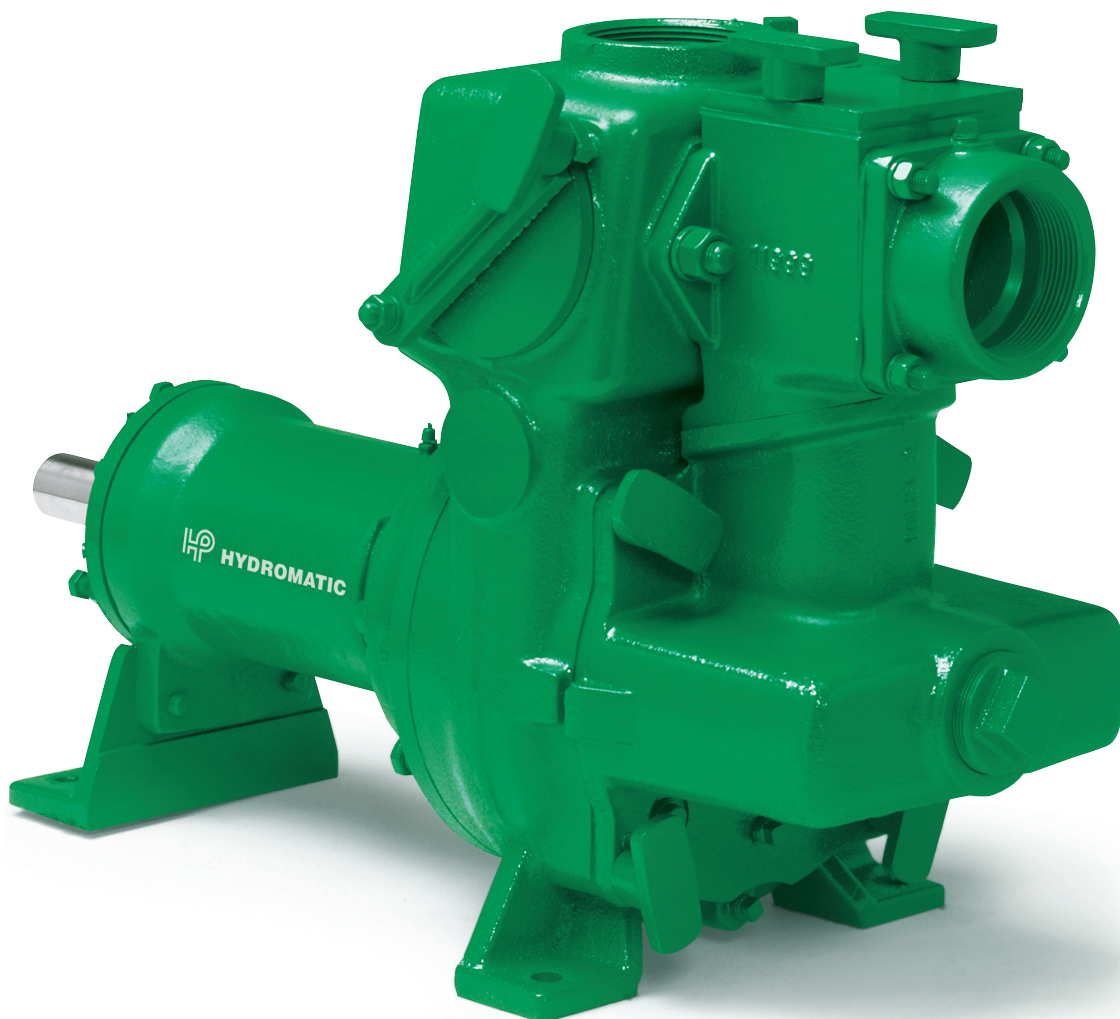


## 30MP Self-Primer Pump

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### Benefits and Features:

- 30MP: Dual Seal Primer
- 2-1/2" Solids Handling
- Standard Seals: Carbon Ceramic
- Optional Seals: Silicon Carbide or Tungsten Carbide
- Heavy-Duty Ball Bearing Design
- Oil or Grease Lubricated Bearings



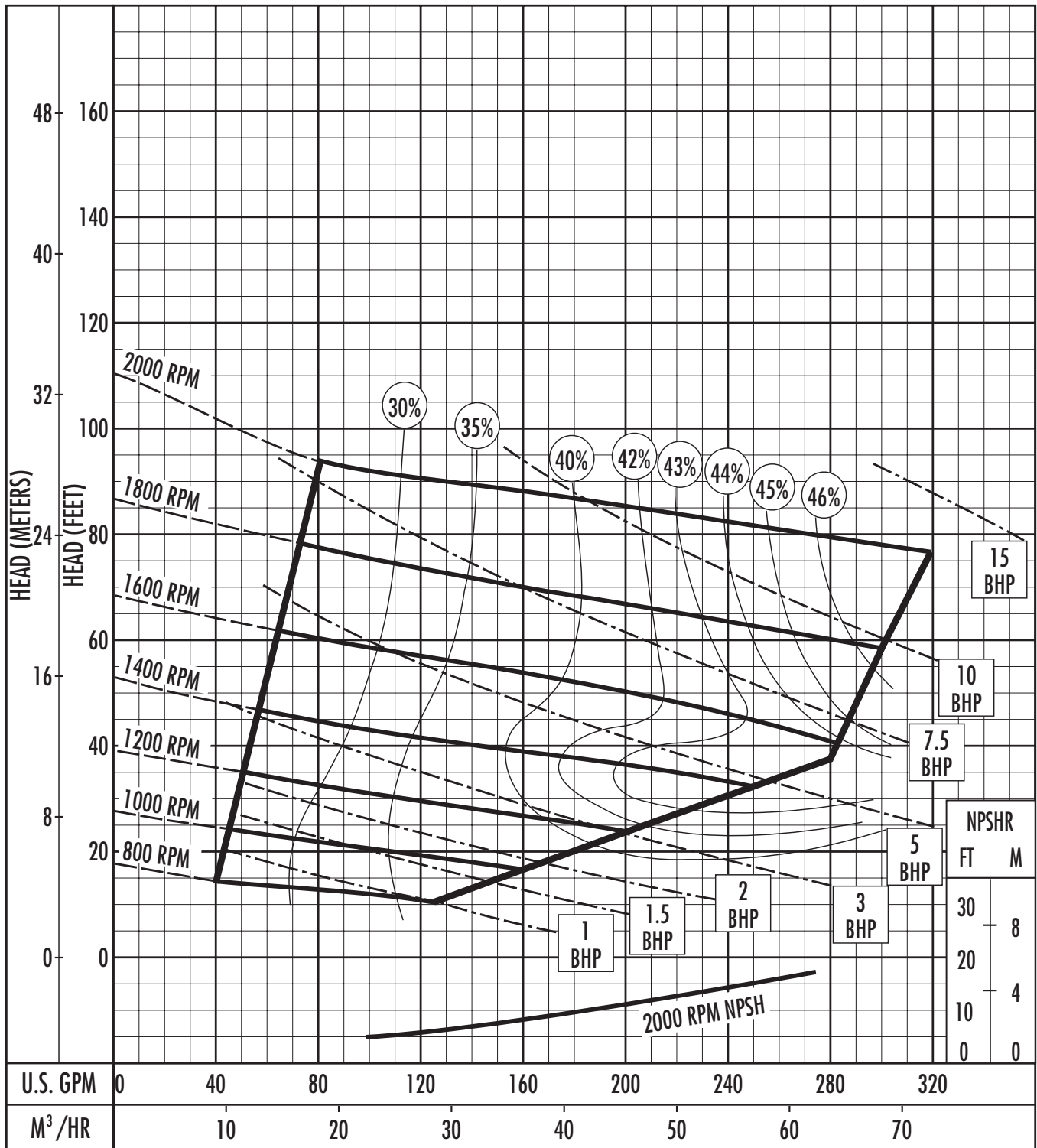
# Self-Primer Sewage and Trash Pumps

RPM: **Variable**

Discharge: **3" or 4"**

Solids: **2-1/2"**

Impeller: **8-13/32"**



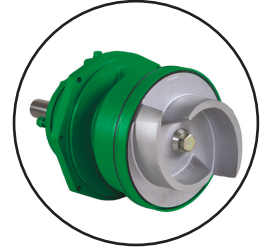
Operation is recommended in the bounded area with operational point within the curve limit. Performance curves are based on actual tests with clear water at 70°F and 1280 feet site elevation.

# Self-Primer Sewage and Trash Pumps

## 40RP/40RDP Self-Primer Pump

### Benefits and Features:

- 40RP: Single Seal Primer
- 40RDP: Dual Seal Primer
- 3" Solids Handling, Including Recirculation Port
- Reprime Lifts to 25 ft.
- Standard Seals: Carbon Ceramic
- Optional Seals: Silicon Carbide or Tungsten Carbide
- Heavy-Duty Ball Bearing Design
- Oil Lubricated Bearings



Removable rotating assembly



Serviceable flap valve without draining the pump



External adjustment saves downtime and doubles the life of the impeller/wear plate



# Self-Primer Sewage and Trash Pumps

RPM: **Variable**

Discharge: **4"**

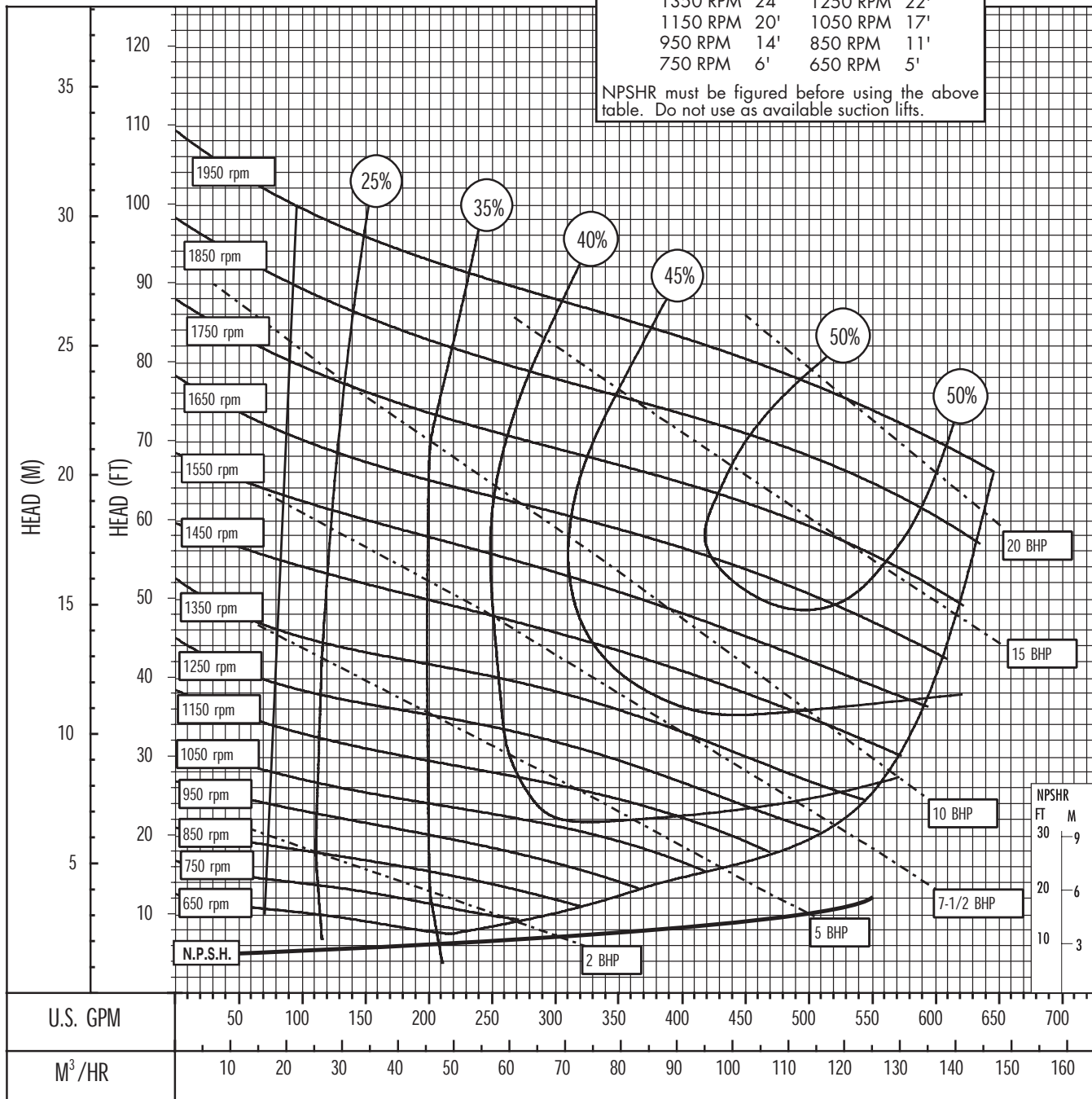
Solids: **3"**

Impeller: **9-5/32"**

**Meets ten state standards. Pumps will pass a 3" solid through all critical areas including the recirculation port.**

REPRIMING LIFTS - 9-5/32" TRIM			
1750 RPM	25'	1650 RPM	25'
1550 RPM	25'	1450 RPM	24'
1350 RPM	24'	1250 RPM	22'
1150 RPM	20'	1050 RPM	17'
950 RPM	14'	850 RPM	11'
750 RPM	6'	650 RPM	5'

NPSHR must be figured before using the above table. Do not use as available suction lifts.



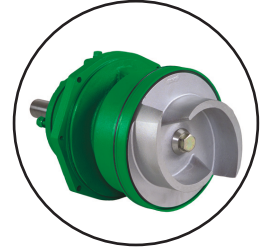
Operation is recommended in the bounded area with operational point within the curve limit. Performance curves are based on actual tests with clear water at 70°F and 1280 feet site elevation.

# Self-Primer Sewage and Trash Pumps

## 60RP/60RDP Self-Primer Pump

### Benefits and Features:

- 60RP: Single Seal Primer
- 60RDP: Dual Seal Primer
- 3" Solids Handling, Including Recirculation Port
- Reprime Lifts to 25 ft.
- Standard Seals: Carbon Ceramic
- Optional Seals: Silicon Carbide or Tungsten Carbide
- Heavy-Duty Ball Bearing Design
- Oil Lubricated Bearings



Removable rotating assembly



Serviceable flap valve without draining the pump



External adjustment saves downtime and doubles the life of the impeller/wear plate





# Self-Primer Sewage and Trash Pumps

RPM: **Variable**

Discharge: **6"**

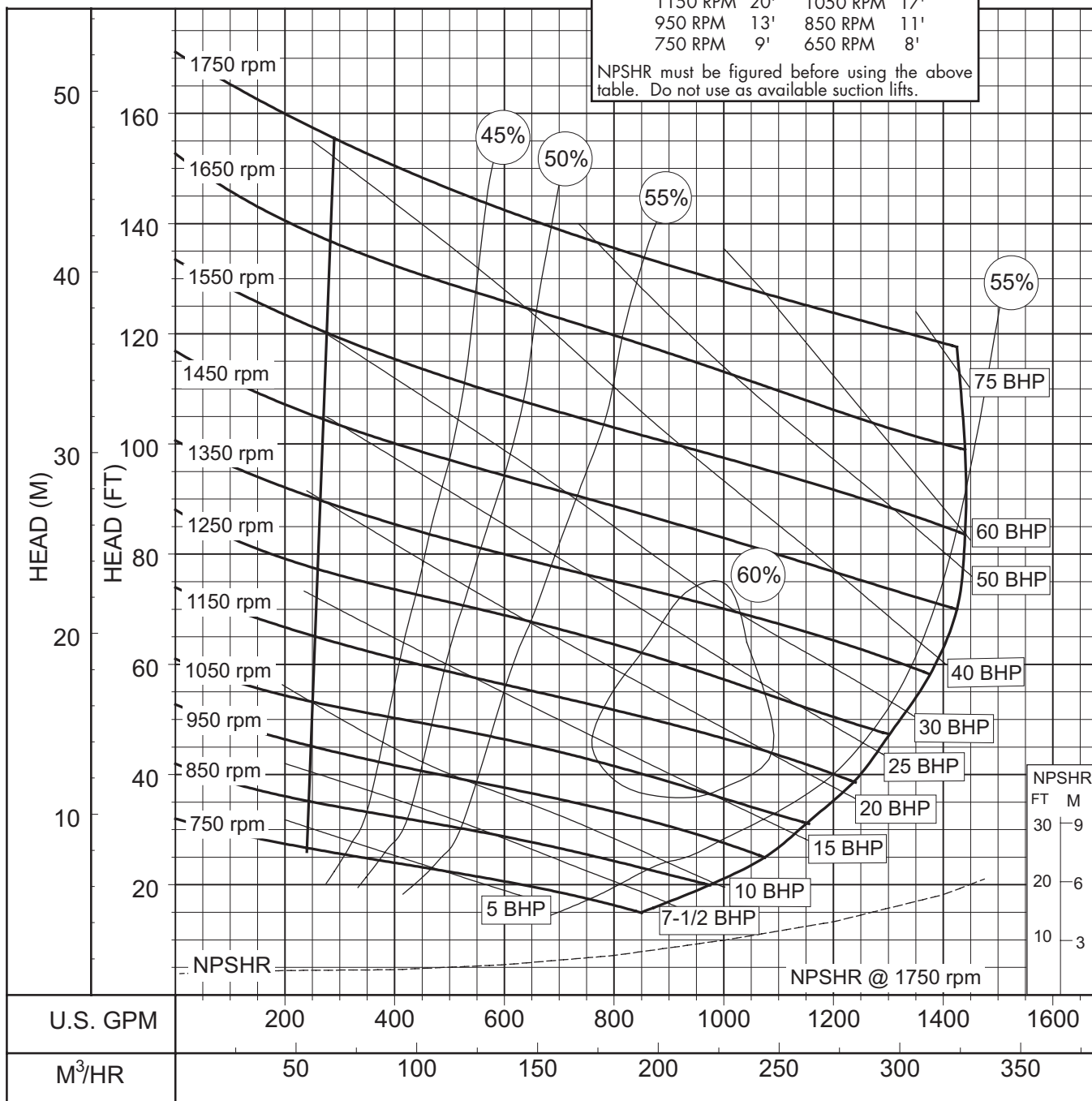
Solids: **3"**

Impeller: **12-7/8"**

**Meets ten state standards. Pumps will pass a 3" solid through all critical areas including the recirculation port.**

REPRIMING LIFTS - 12-7/8" TRIM			
1750 RPM	25'	1650 RPM	25'
1550 RPM	25'	1450 RPM	25'
1350 RPM	25'	1250 RPM	22'
1150 RPM	20'	1050 RPM	17'
950 RPM	13'	850 RPM	11'
750 RPM	9'	650 RPM	8'

NPSHR must be figured before using the above table. Do not use as available suction lifts.



Operation is recommended in the bounded area with operational point within the curve limit. Performance curves are based on actual tests with clear water at 70°F and 1280 feet site elevation.

## 80MMP Self-Primer Pump

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### Benefits and Features:

- 80MMP: Dual Seal Primer
- 3-1/2" Solids Handling
- Standard Seals: Carbon Ceramic
- Optional Seals: Silicon Carbide or Tungsten Carbide
- Heavy-Duty Ball Bearing Design
- Oil or Grease Lubricated Bearings



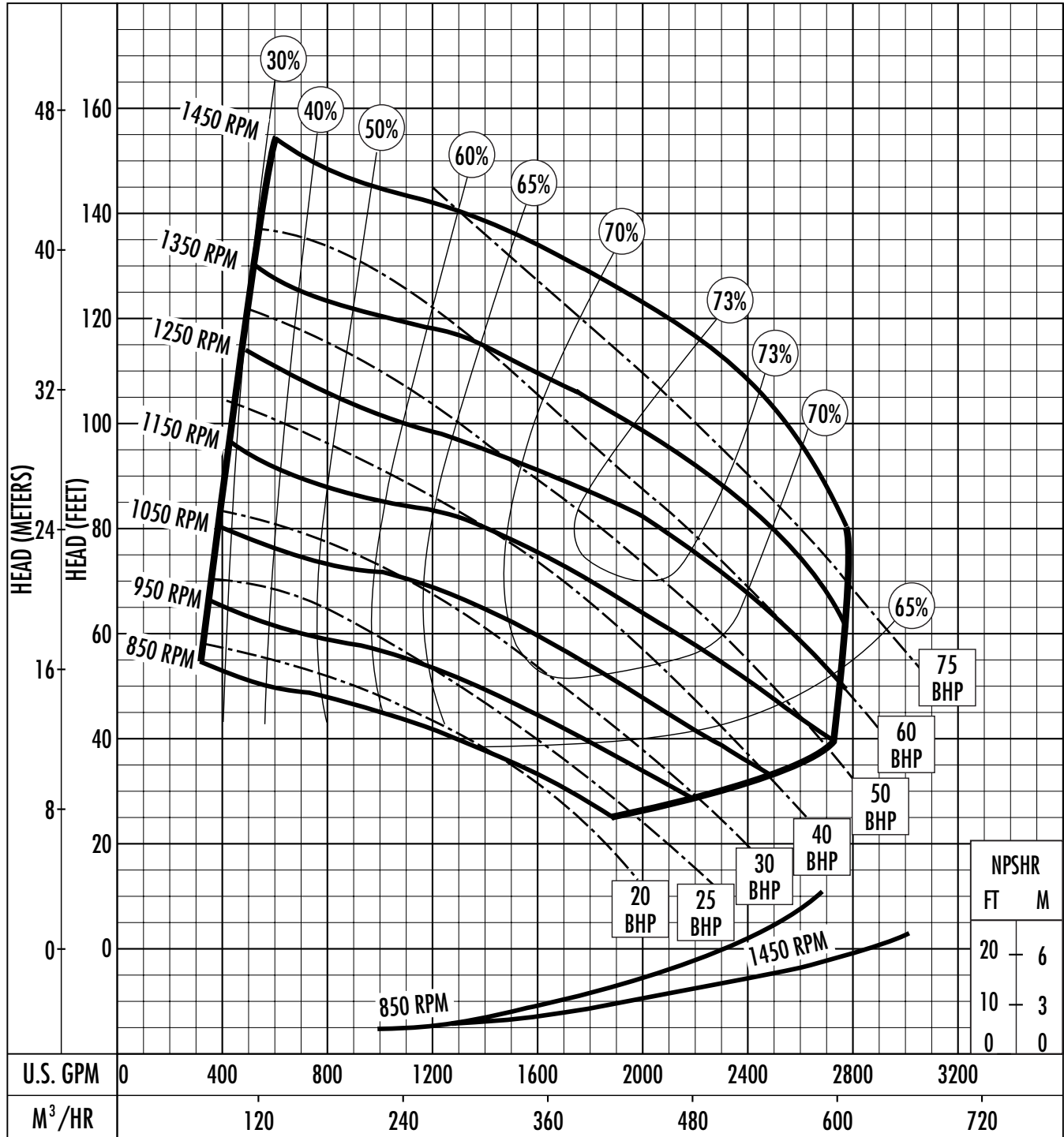
# Self-Primer Sewage and Trash Pumps

RPM: **Variable**

Discharge: **8"**

Solids: **3-1/2"**

Impeller: **15"**



Operation is recommended in the bounded area with operational point within the curve limit. Performance curves are based on actual tests with clear water at 70°F and 1280 feet site elevation.

## 100MMP Self-Primer Pump

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### Benefits and Features:

- 100MMP: Dual Seal Primer
- 3-1/2" Solids Handling
- Standard Seals: Carbon Ceramic
- Optional Seals: Silicon Carbide or Tungsten Carbide
- Heavy-Duty Ball Bearing Design
- Oil or Grease Lubricated Bearings



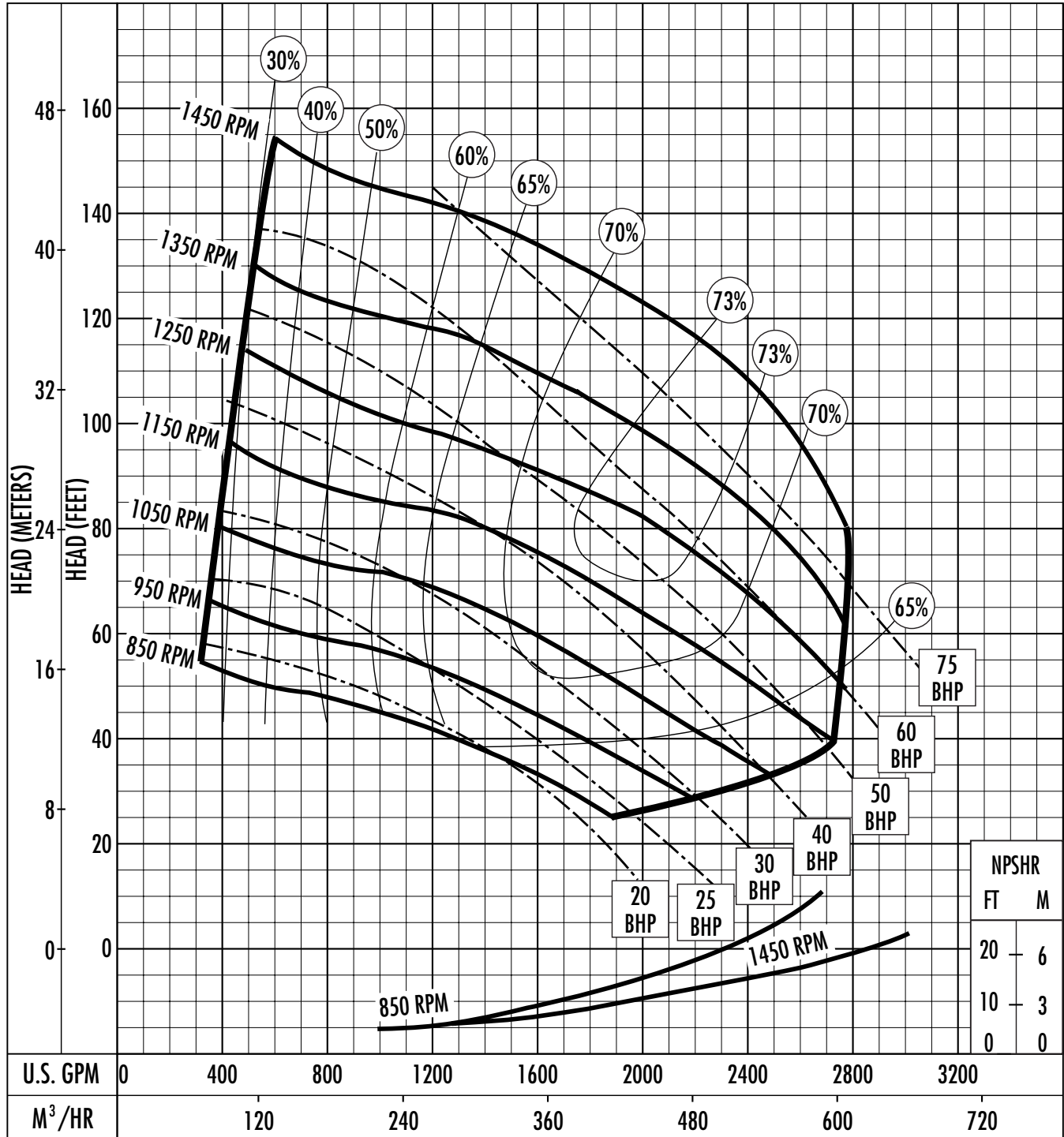
# Self-Primer Sewage and Trash Pumps

RPM: **Variable**

Discharge: **10"**

Solids: **3-1/2"**

Impeller: **15"**



Operation is recommended in the bounded area with operational point within the curve limit. Performance curves are based on actual tests with clear water at 70°F and 1280 feet site elevation.

# Self-Primer Sewage and Trash Pumps

## PFC6x6

### Fiberglass Enclosed 6' x 6' Primer Lift Station

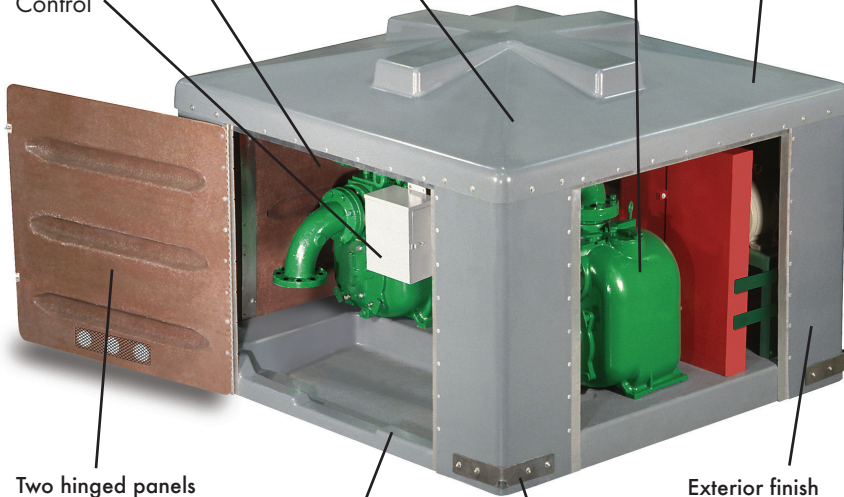
Two removable side panels with tamper-proof fasteners for routine maintenance

Weather-tight, molded fiberglass reinforced enclosure for superior corrosion resistance and strength

Equipped with "RP" series pumps designed for dirty water and wastewater applications

Removable roof and corner panels for major maintenance when required

Liquid-Level Control

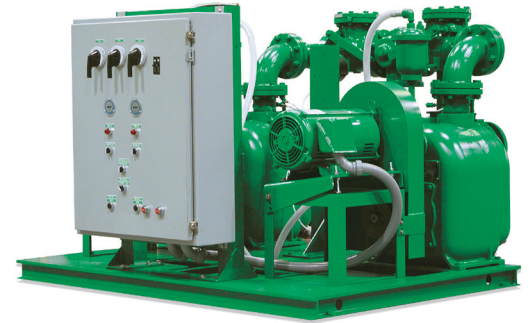


Two hinged panels for easy access to the controls (on opposite sides)

Fiberglass encapsulated concrete and steel reinforced base supports all components

Four lifting bails for unloading and installation

Exterior finish resists mildew, mold, and fungus

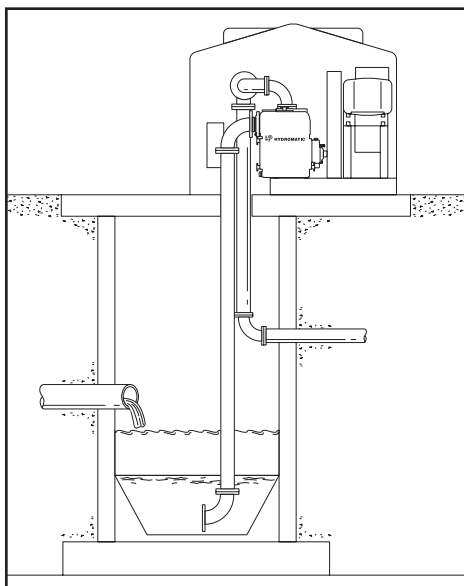


Base Mounted Pump Station Available

### Factory-Built Base Mounted Above Ground Pump Station with Duplex Self-Priming Pumps and Solid State Liquid Level Control

The base mounted lift station is a pre-engineered station, shipped complete from the factory. Connect the incoming power supply and piping connections and be on line in a short period of time. The pumps, discharge header piping, v-belt drives, motors and controls are mounted on one common base prewired for easy installation.

Available horsepower: 3 HP - 100 HP  
Pumps: 3", 4", 6", 8", 10"



The 6' x 6' above ground lift station is a pre-engineered, economical station shipped complete from the factory. Just connect the incoming power and piping connections to be on line. The low silhouette fiberglass station blends in with the surroundings. Since it is an all fiberglass enclosure, it will resist organic corrosion and is weather-tight.

The four access panels, two lockable hinged and two with tamper-proof fasteners, provide easy access for routine maintenance. For added security, the station is designed to be vandal-resistant. The station will accommodate two 40RP, 4" pumps with a maximum of 25 HP and flows from 70 to 600 GPM, discharge heads of 8' to 100'. Also two 30MP, 3" pumps with a maximum of 7-1/2 HP and flows from 50 to 300 GPM, discharge heads of 10' to 80'.

## Mechanical

Standard equipped 6' x 6' above ground lift station includes the following mechanical components:

Station is equipped with duplex 40RP sewage pumps or 30MP pumps, V-belt driven by 1750 r.p.m. open drip proof "T" frame motors, 25 horsepower maximum. Piping includes individual suction lines terminating at the 90° suction elbow, individual discharge swing check valves, a three-way plug valve and individual air bleed lines with shut-off valves. A thermostat controlled vent fan is furnished in the station.

## Electrical

The standard station electrical components include the following devices:

The motor control and liquid level controls are mounted in individual NEMA 3R steel enclosures. Features include thermal-magnetic motor branch circuit breaker, magnetic motor starters across the line start with overload protection on all phases, corrosion inhibitor, pressure-activated liquid level control, high water alarm circuit, lead pump/lag pump alternator, fault indicators, elapsed time meters, pump run lights, high pump temperature shut-down circuit, motor overload resetters, pump sequence selector switch, duplex GFI receptacle and UL approved controls.

## Piping

Standard piping arrangements that are offered:

### PFC6x6 Station, 4" pumps

Suction	Header	Discharge
4"	4"	4"

### PFC6x6 Station, 3" pumps

Suction	Header	Discharge
3"	4"	4"
4"	4"	4"

## Available Station Options:

- Automatic air release valve assembly
- Hand-held station light
- Pump drain kit (RP pumps only)
- Pump spare parts kit
- Station heater 1300/1500 watts
- Suction and discharge gauges
- Volute casing heaters
- Station insulation package
- Emergency bypass piping
- Four hinged doors



## Available Control Options:

- Air bubbler
- Alarm bell
- Alarm horn
- Alarm light
- Dry alarm contacts
- Lag pump delay circuit
- Low water alarm circuit
- NEMA rated starters
- Panel heater
- Power "ON" indicating light
- Power transformer
- Three phase voltage monitor
- Transient voltage surge
- Low station enclosure temperature alarm circuit



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