



# Commercial Products

• PUMPS • CONTROLS • PRESSURE BOOSTING

BRGLCAR R3

 **GOULDS**  
WATER TECHNOLOGY  
a xylem brand



# Proven Performance Through The Power Of Experience.

Goulds Water Technology combines over 155 years of pump experience with the most modern design and manufacturing systems—deep drawn metal fabrication, laser cutting, laser welding, precision casting, and worldwide design systems—plus a total commitment to quality based on full performance testing of every pump we make.

Whether you need stainless steel, bronze, or cast iron, multi-stage verticals or horizontals, end suction centrifugals or submersibles, there's a Goulds Water Technology design that's proven itself through years of dependable service. For booster service, liquid transfer, spray systems, water circulation, dewatering, light chemical and industrial applications, there's a pump that's done long time duty. Horizontal and vertical multi-stage capacities from 5 gpm to 350 gpm. Submersible capacities from 5 gpm to 500 gpm. And end suction centrifugal capacities from 4 gpm to 5000 gpm. Goulds Water Technology—a brand offering the power of experience to more than 100 nations of the world. In addition to the standard pump designs shown here, we offer specialized O.E.M. pumps designed to meet the specifications of your particular needs.

# Table of Contents

|                                     |    |  |    |
|-------------------------------------|----|--|----|
| <b>End Suction, Stainless Steel</b> |    | <b>High Pressure, Cast Iron:</b>       |    |
| NPE                                 | 4  | GB                                     | 10 |
| NPO                                 | 4  | HSC                                    | 10 |
| MCS                                 | 4  | <b>High Pressure, Stainless Steel:</b> |    |
| SSH                                 | 5  | e-SV                                   | 11 |
| ICS/ICS-F                           | 5  | e-HM                                   | 11 |
| 3657/3757                           | 5  | <b>Multi-Stage:</b>                    |    |
| LB                                  | 6  | MPVN                                   | 12 |
| <b>End Suction, Cast Iron:</b>      |    | SMVT                                   | 12 |
| 3642/3742                           | 6  | <b>Variable Speed Control:</b>         |    |
| MCC                                 | 6  | Hydrovar, Aquavar CPC & IPC            | 13 |
| 3656LH/3756LH                       | 6  | Aquavar ABII                           | 13 |
| 3656/3756 S-Group                   | 7  | <b>Pressure Booster Packages:</b>      |    |
| 3656/3756 M&L-Group                 | 7  | AquaForce                              | 14 |
| <b>Self Priming, Clear Liquids:</b> |    | <b>Controls:</b>                       |    |
| PrimeLine SP                        | 8  | Hydrovar                               | 15 |
| GT IRRI-GATOR                       | 9  | Aquavar IPC                            | 16 |
| PrimeLine                           | 9  | Aquavar CPC                            | 17 |
| 2AUW, 3AUW                          | 9  | Aquavar S-Drive                        | 18 |
| <b>Vertically Immersed:</b>         |    | Aquavar ABII                           | 19 |
| NPV                                 | 10 |  |    |



## Overview

### A full range of end suction centrifugal pumps

- Cast iron, bronze, investment cast 316 stainless steel and 304 stainless steel pump-end materials of construction.
- 1 x 1¼-5 through 8 x 10-13 sizes
- Close coupled, frame mounted or engine drive configuration
- Capacities to 4500 USGPM (1000 m<sup>3</sup>/hr)
- Heads to 500 ft. TDH (152 m)
- Working pressure to 250 PSI
- Temperatures to 250° F (120° C)
- ANSI Flanged and NPT Connections
- Motors 1 and 3 phase. 50 or 60 hz ODP, TEFC or explosion proof enclosures 3500 and 1750 RPM.
- Standard John Crane mechanical seals with high temperature and chemical duty options.

### End Suction - Stainless Steel



#### NPE

- 316L Stainless Steel Enclosed Impeller
- Optional Seal Flush

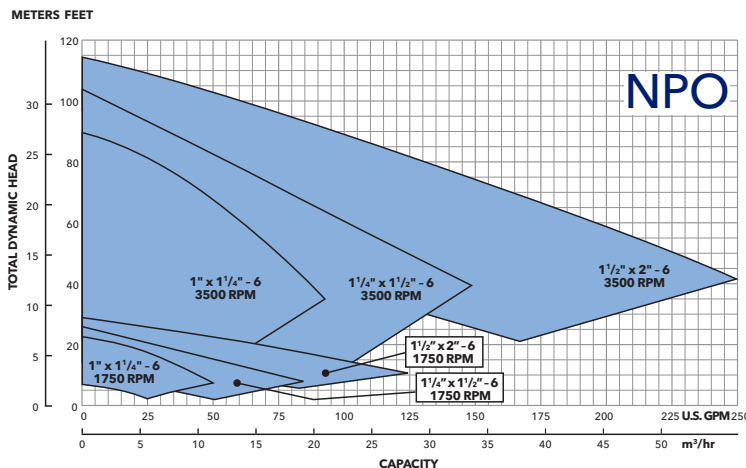
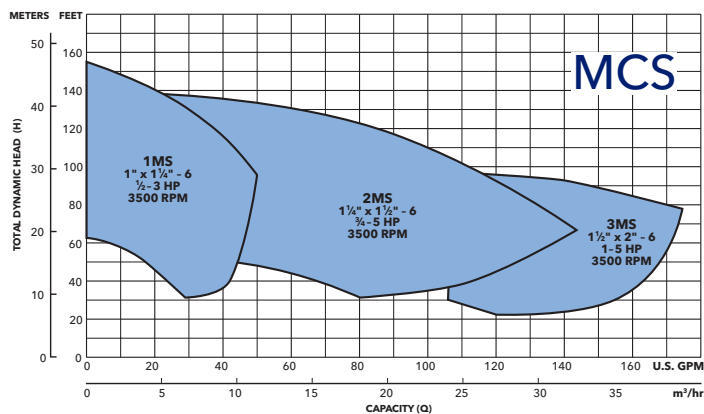
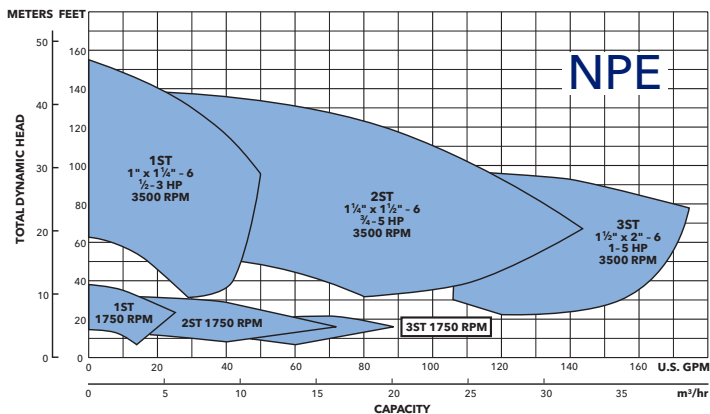
#### NPO

- 316L Stainless Steel Open Impeller
- Optional Seal Flush



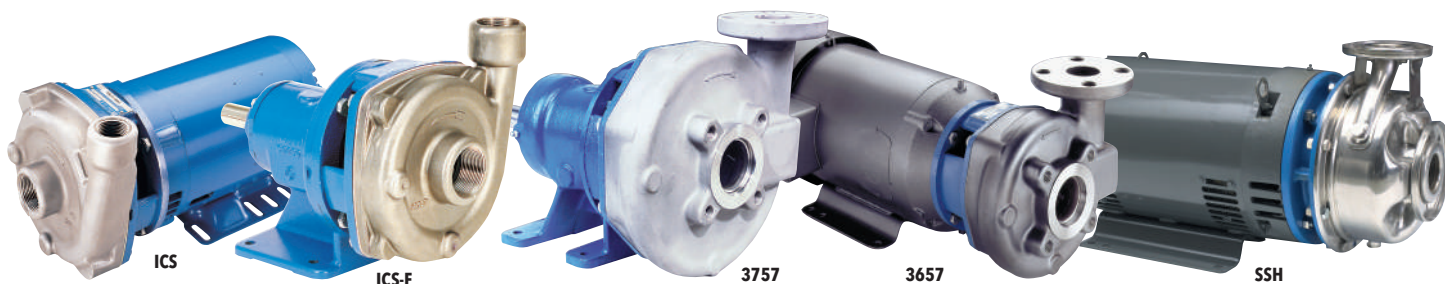
#### MCS

- 316L Stainless Steel Enclosed Impeller





### End Suction - Stainless Steel



#### ICS/ICS-F

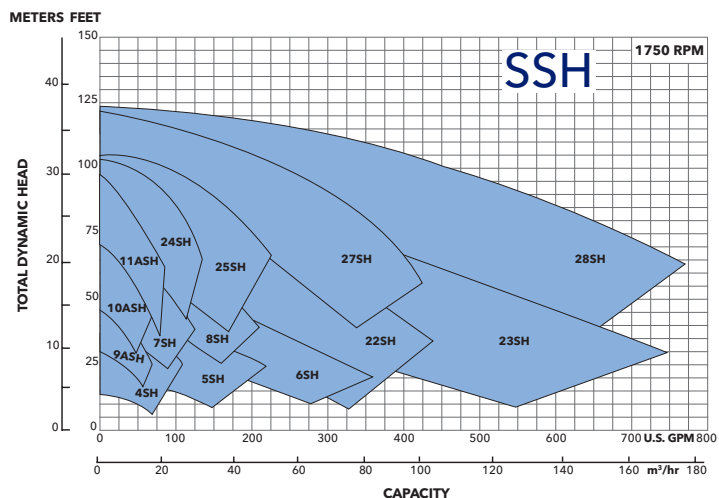
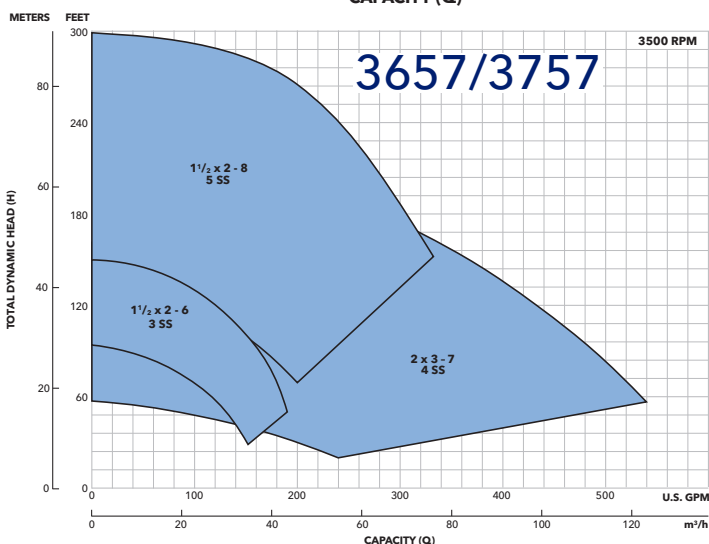
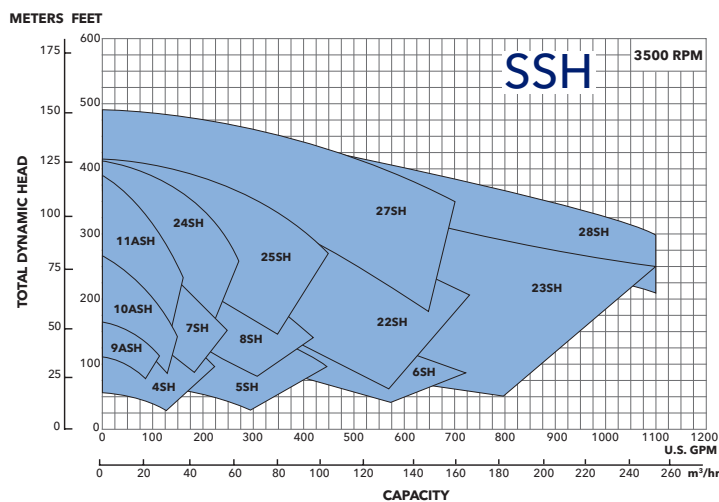
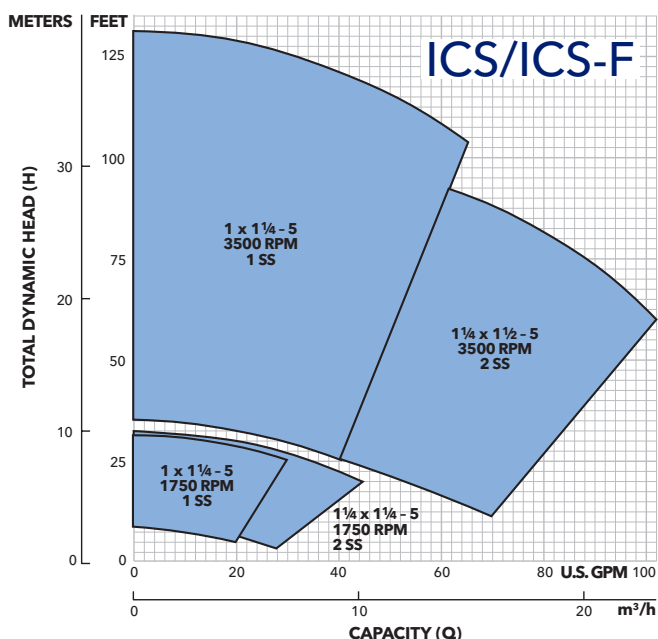
- Investment Cast 316 Stainless Steel Open Impeller

#### 3657/3757

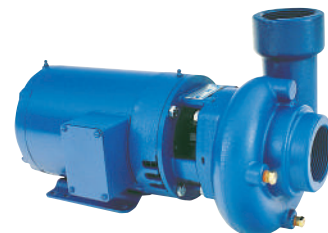
- Investment Cast 316 Stainless Steel Enclosed Impeller

#### SSH

- 316L Stainless Steel Enclosed Impeller
- Available in frame-mounted or close-coupled design
- Cast iron power frame



### End Suction - Stainless Steel and Cast Iron



#### LB

- 304 Stainless Steel Enclosed Impeller
- Economical boosting for heads up to 190 feet
- Engineered thermoplastic internal components

#### 3642/3742 Cast Iron

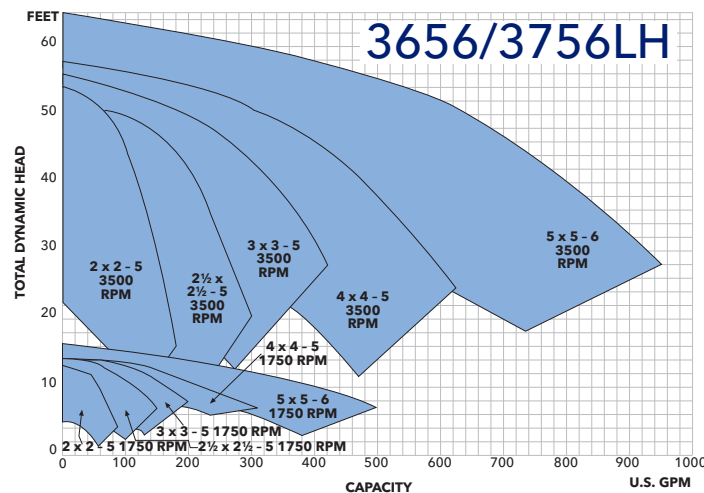
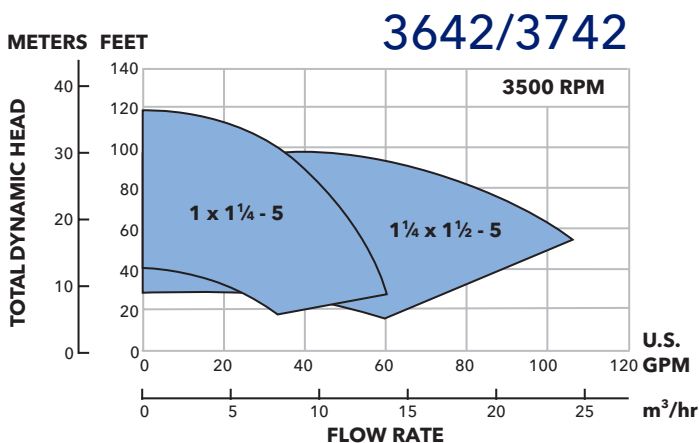
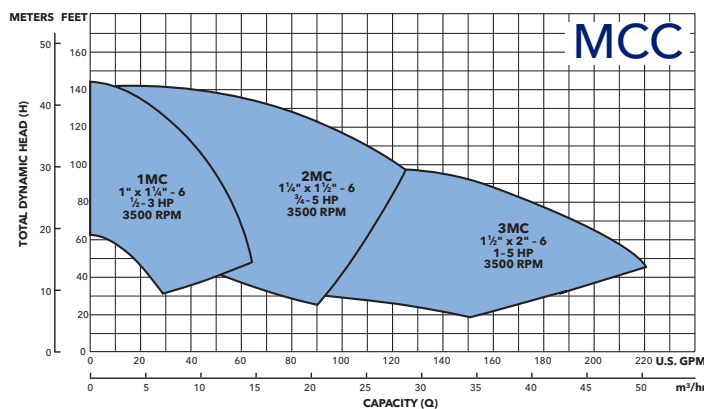
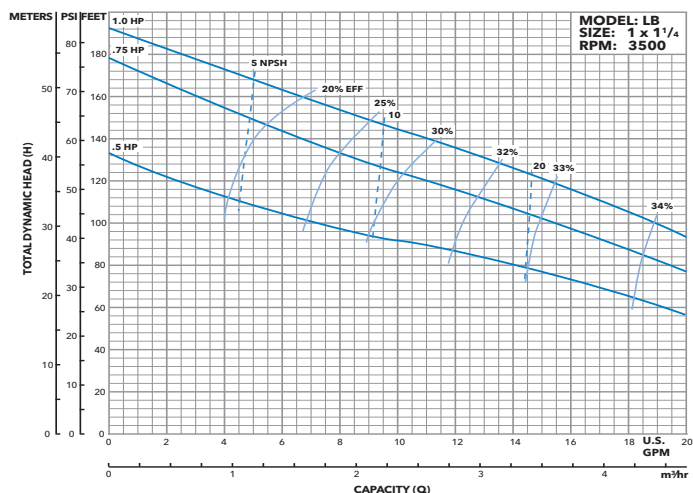
- Enclosed Impeller, Iron, Bronze or Bronze Fitted, Cast Iron Pump

#### MCC

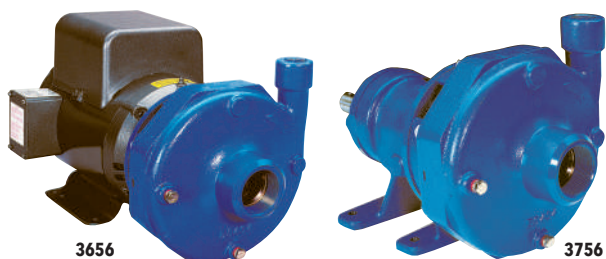
- Enclosed 316SS Impeller Iron Casing Stainless-Fitted
- Centerline connections

#### 3656LH/ 3756LH

- Enclosed Impeller Low Head, Bronze Fitted



### End Suction - Cast Iron

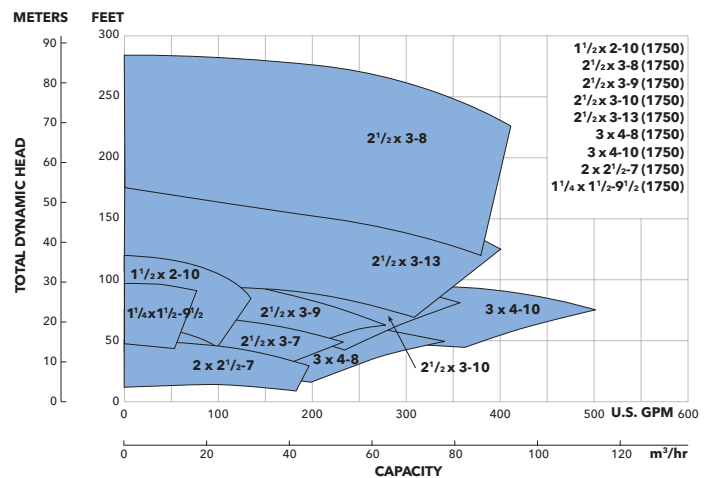
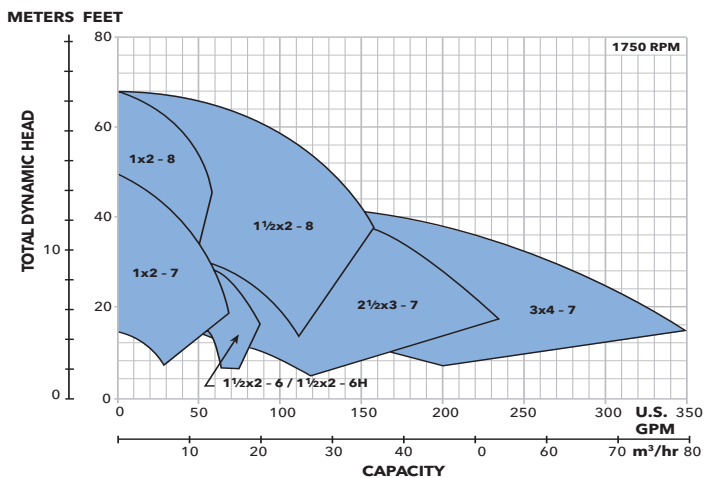
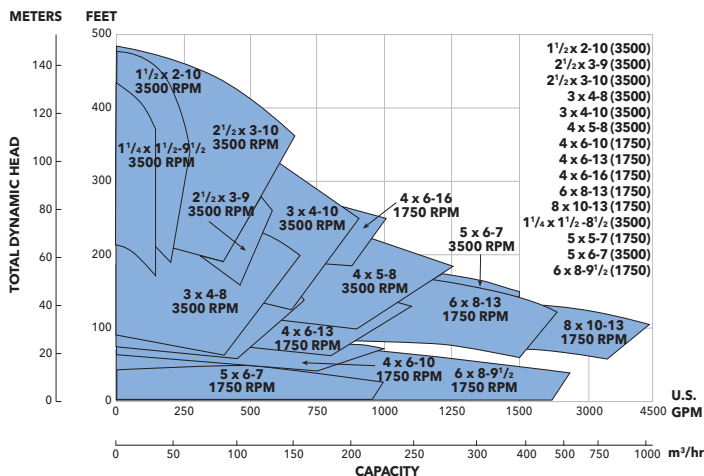
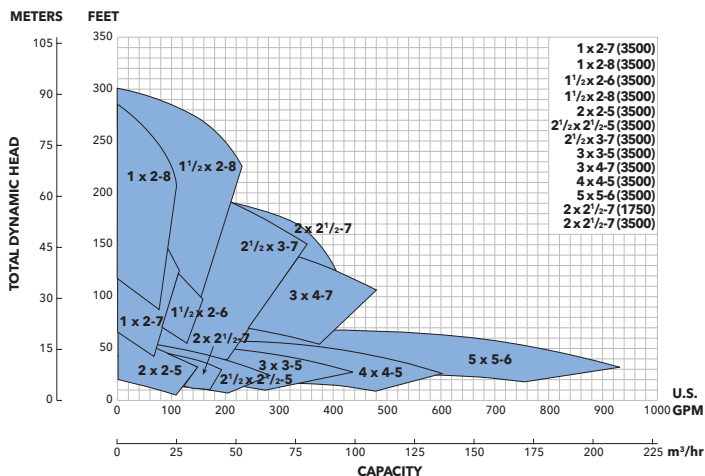


### 3656/3756 S-GROUP

- Enclosed Impeller Iron, Bronze or Bronze Fitted Mechanical Seal or Packing
- Back pull-out design for easy maintenance
- Renewable wear rings

### 3656/3756 M & L-GROUP

- Enclosed Impeller Cast Iron or Bronze Fitted Mechanical Seal or Packing



### Self Priming - Clear Liquids

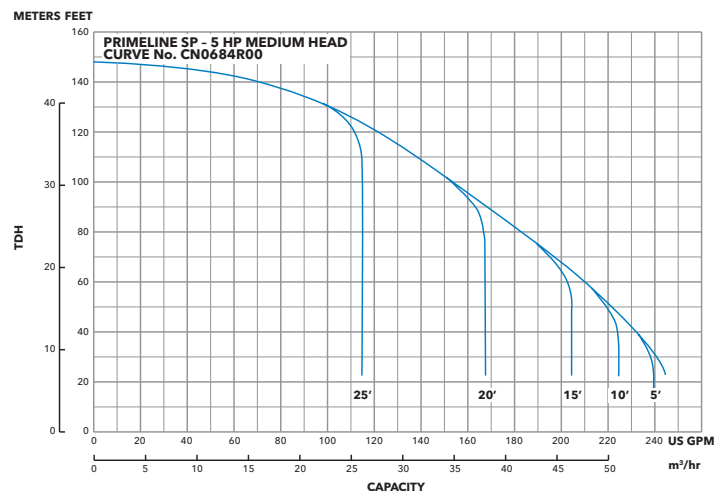
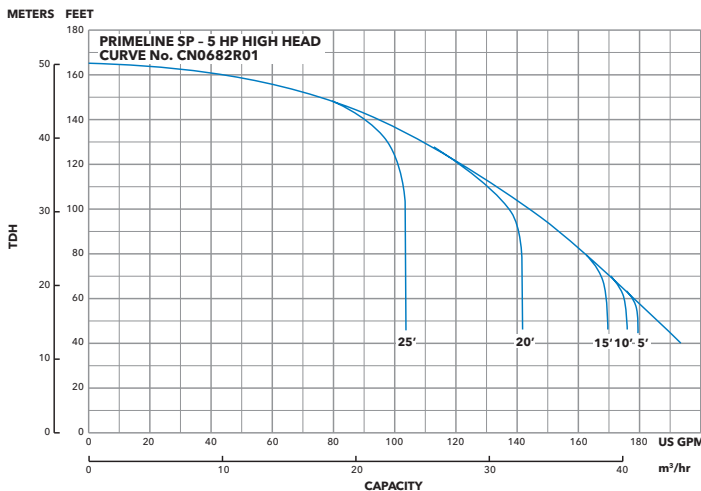
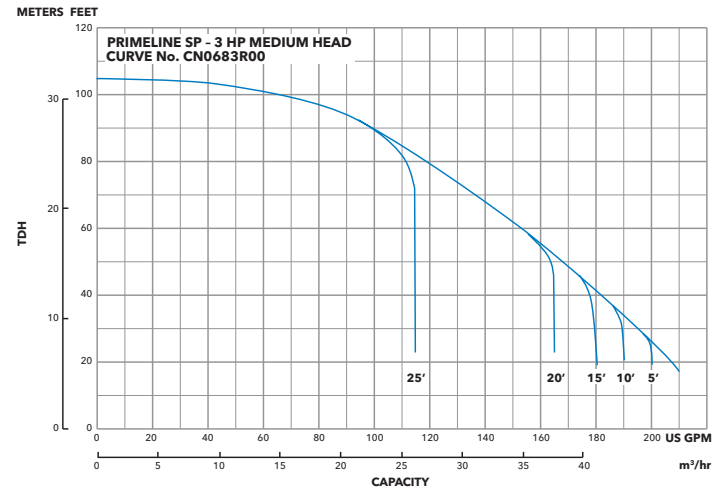
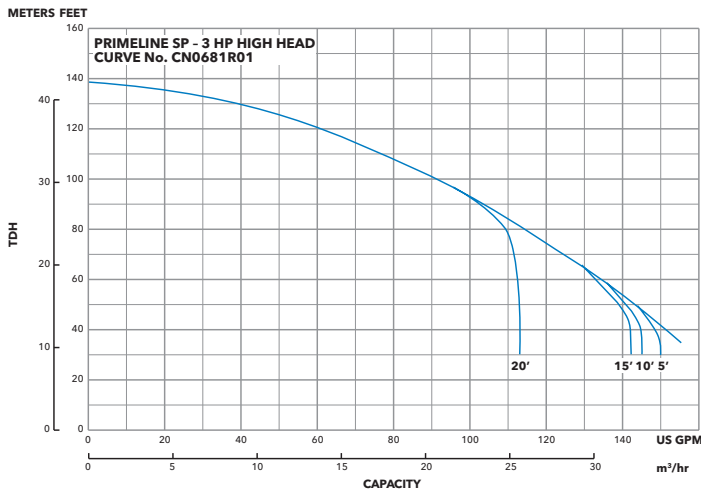


### General information on Self-Priming pumps

- General water handling in applications where the liquid level is below the pump.
- Models are available with electric motor, or bearing frame depending on installation requirements.
- Ideal for irrigation, emergency cellar draining and farm water supply.

### PRIMELINE SP®

- Enclosed Impeller, Bronze Fitted



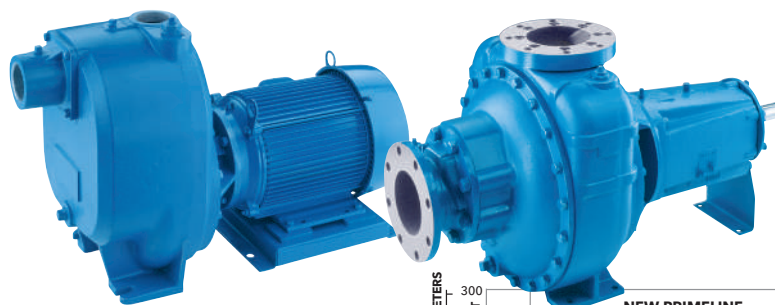
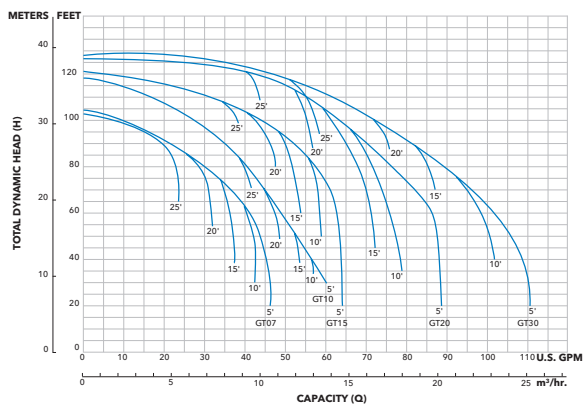


### Self Priming - Clear Liquids



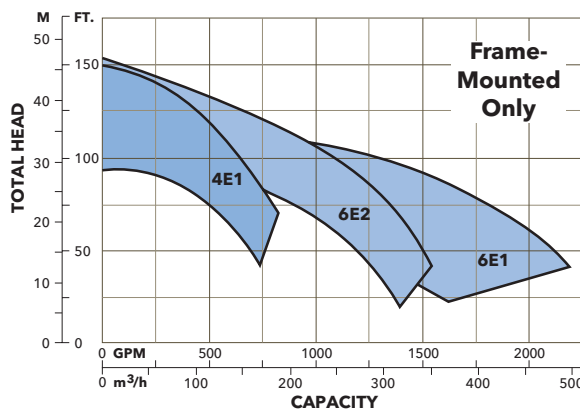
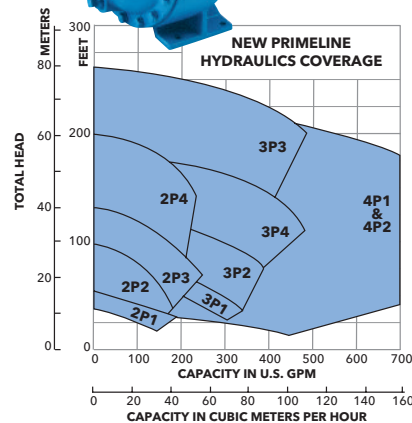
#### GT - IRRIGATOR®

- Self Priming design
- Field Serviceable
- Strong and Durable cast iron casing design
- Excellent corrosion and abrasion resistance materials
- Optional Silicone Brass Impeller

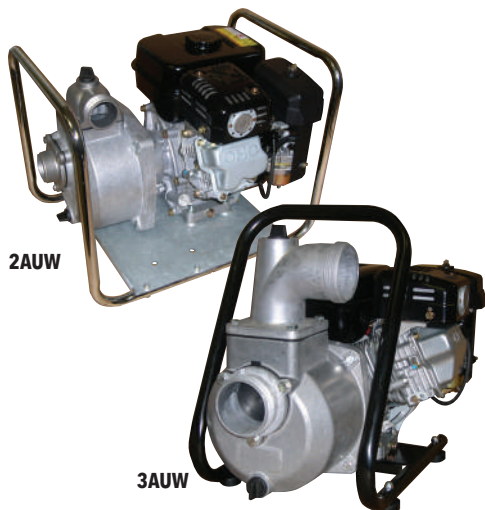


#### PRIMELINE®

- Self-Priming Centrifugal Pumps
- Internal suction check valve
- Available in close-coupled and frame-mounted design

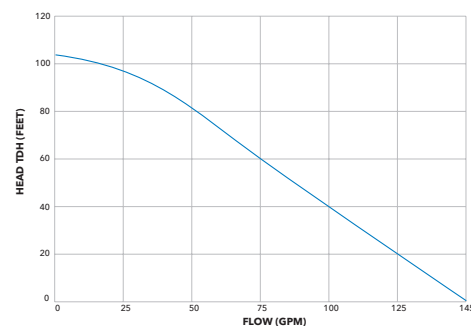
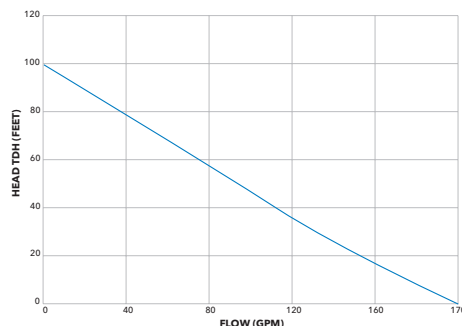


### Self Priming - Solids



#### 2AUW, 3AUW

- Portable Contractor Pumps



### Vertically Immersed



#### NPV

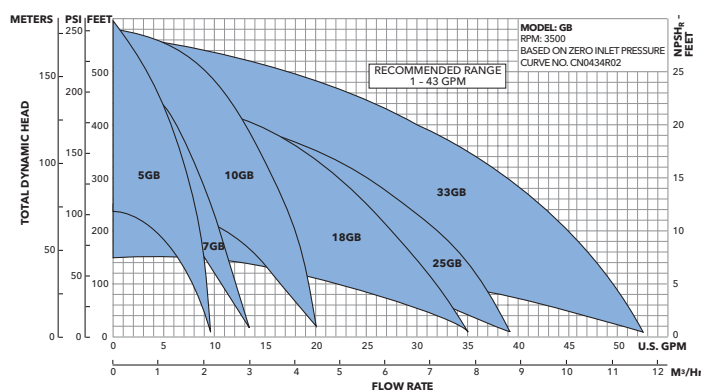
- Vertically Immersed End-Suction Pump

### High Pressure - Cast Iron / Stainless Steel



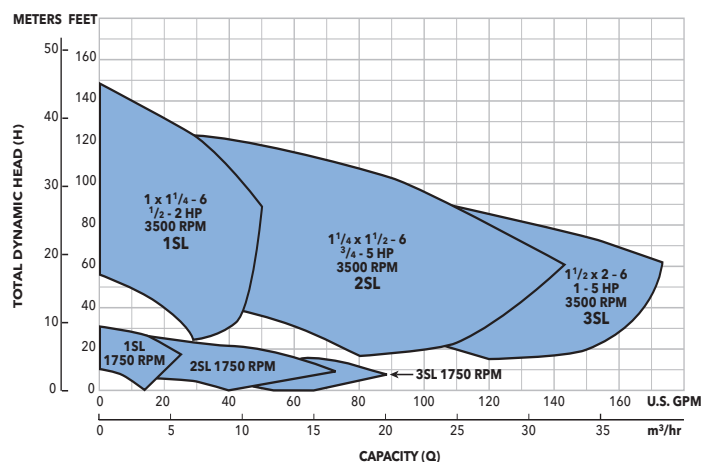
#### GB

- Cast Iron or 304 Stainless Steel



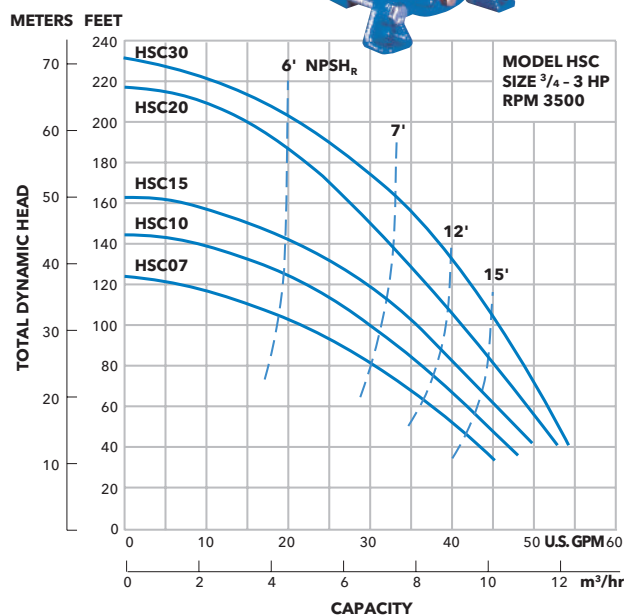
### General information on vertical immersed pumps

- 304 and 316 stainless steel pumps for machine tool, wash system and tank mount applications.
- Pump head is immersed in pumped liquid. May be set at various depths depending on tank.
- Single stage and high pressure multistage versions are available.
- Available with both open and enclosed impellers



#### HSC

- Cast Iron



### High Pressure - Stainless Steel

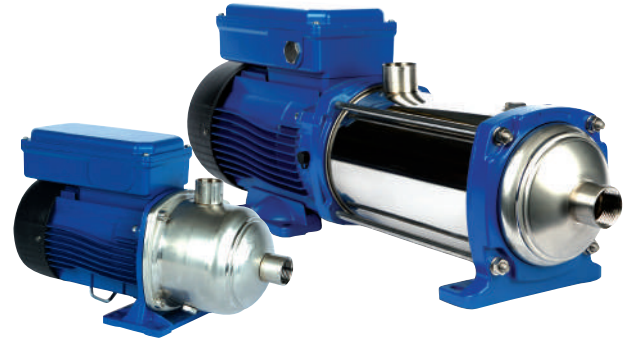
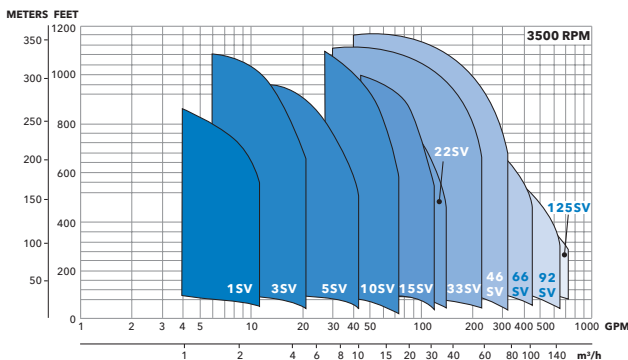
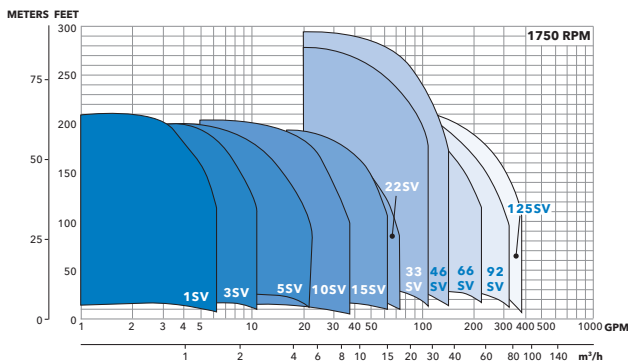


#### e-SV

- Vertical Multi-Stage Pumps

#### General information on high pressure multi-stage pumps

- Stainless steel or cast iron pumps for pressure boosting.
- Applications: potable water, boiler feed, filtration, RO and Pure Water
- Broad coverage range • Increased efficiency
- Improved serviceability - fast easy seal replacement without removing the motor
- Compatible with the Hydrovar or Aquavar CPC Variable Speed Pump Controllers
- Flows to 750 GPM, Heads to 1150'

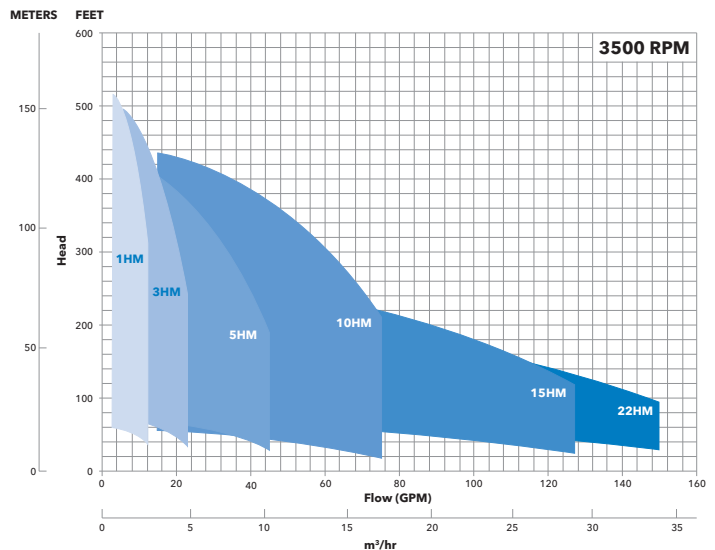


#### e-HM Series

- Stainless Steel Horizontal Multi-Stage Pumps

The **e-HM** is our newly redesigned horizontal multi-stage high pressure centrifugal pump that offers outstanding efficiencies. The high-efficiency motor coupled with an innovative hydraulic design, NPT threaded inlet and outlet connections, and broad coverage which provides flexible options for a variety of applications. Whether you're in the market for industry specific applications, building services, or residential applications, the e-HM is designed to meet your water needs.

- everything to boost your bottom line
- excellent efficiency
- expanded applications
- economical operation





### Vertical High Pressure



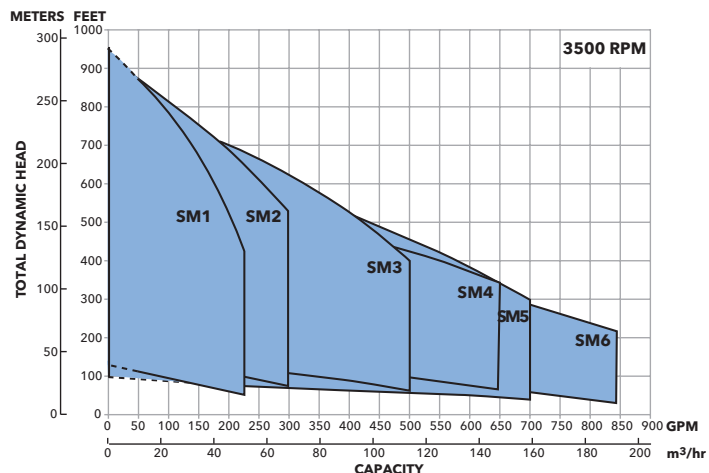
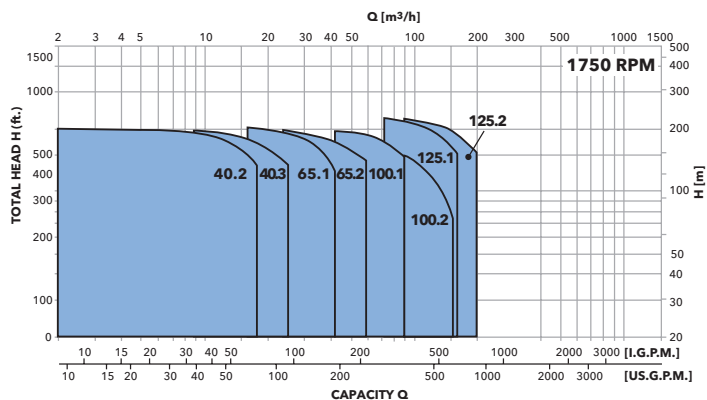
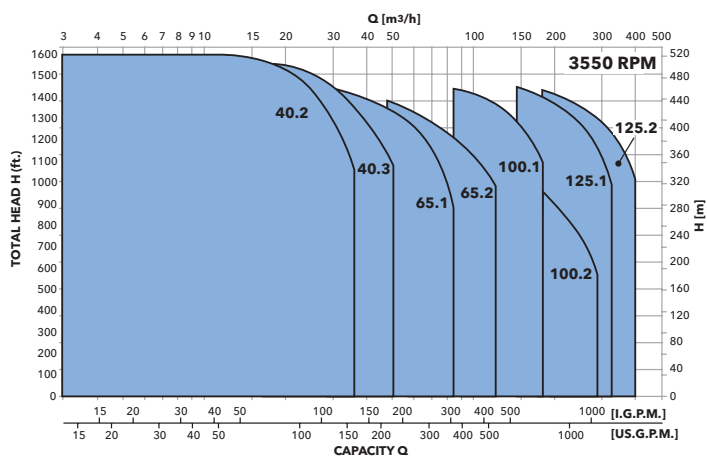
#### MPVN

- Vertical High Pressure Multi-Stage Pump
- Rugged vertical segmented ring construction.
- Available in all iron, stainless fitted or all stainless for fluid compatibility.
- Recommended for a wide variety of industrial, commercial, municipal and building trades pressure boosting applications.



#### SMVT

- Surface mounted, multi-stage vertical turbine pumps. Turbine hydraulics, in-line configuration.
- High efficiency, high pressure design.
- Heavy duty cast iron stainless steel fitted bowl assembly.
- Motor coupling is precision balanced for vibration-free operation.
- Ideal for limited space environments, packaging, and water booster applications.
- Flows from 50 to 850 GPM. TDH up to 880 feet.
- Pre-engineered product with construction options such as stainless steel flanged casing, 50 Hz and horizontal configurations.
- Unit can be serviced without disturbing system piping arrangement.
- Mechanical cartridge-type seal can be replaced without removing motor.



### Variable Speed Control

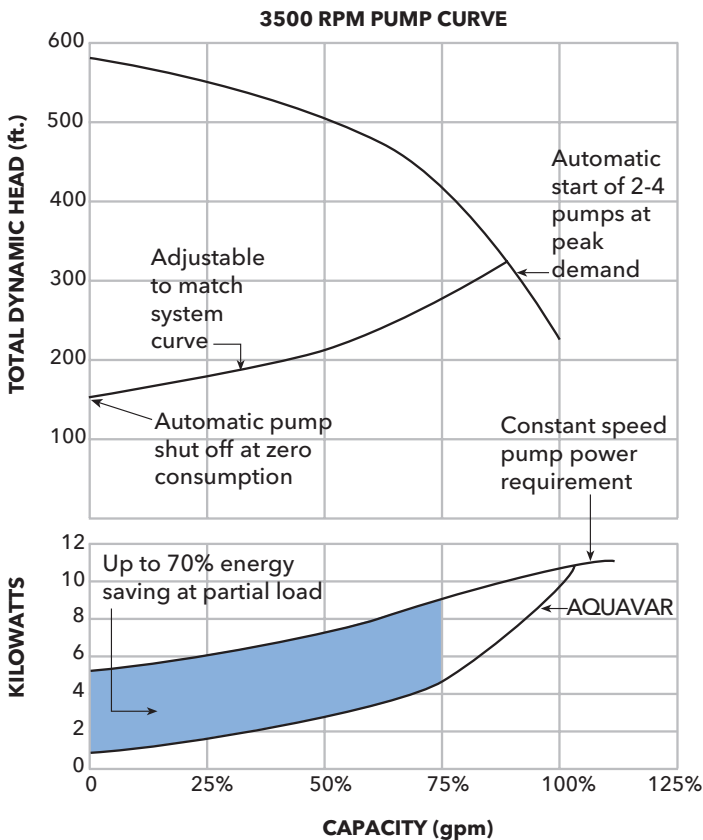


### HYDROVAR®, AQUAVAR® CPC AND IPC

- Centrifugal Pump Controller, PLC and Variable Frequency Drive

### General information on Variable Speed Control Systems

- Aquavar pump control for constant pressure, constant flow, or system curve performance. Versions from 1 HP to 600 HP. Pump or wall mounted. Any three phase centrifugal pump motor (230/460 V). Eliminate large pressure tanks, separate control panels, by-pass lines, automatic valves, etc. Up to four pumps can be linked for automatic alternation.
- Aquavar ABII constant pressure system provides constant water pressure for homes and commercial properties, up to 100 GPM systems. Automatically changes pump speed based on water demand. Complete with all needed components for installation. 1 to 5 HP available.



### Variable Speed Pressure Booster Packages



AquaForce  
(2-4 pumps and max 75 HP)



AquaForce XL  
(2-4 pumps and max 75 HP)



AquaForce e-HV  
(2-4 pumps and max 15 HP)

### AquaForce™

- Engineered Pump Stations
- All systems are cUL Listed
- NSF/ANSI 61 and 372 certified for potable water
- Maximum footprint, on most sizes, allow systems to fit through standard doorways.
- Power: 3 x 208, 230, 460, 575V
- GWT e-SV stainless steel multi-stage pumps or NPE or SSH 316L stainless steel end suction pumps.
- Premium efficiency "off the shelf" motors by Baldor or USEM Motors.
- System protection from overvoltage, under-voltage, blocked suction, cavitation, NPSHa, phase loss, short circuit, transducer failure and motor overload.
- Liquid temperatures up to 212° F
- Maximum operating pressures up to 300 psi
- Pump run-out protection
- Dry running protection
- Programmable lead/lag alternation.
- Programmable system curve/ friction loss compensation.
- Programmable system pressure starting.
- Fault detection and alarms relay.
- Motor run relay.
- Programmable soft start
- 304 S.S. manifolds
- Isolation valves



### Variable Speed Control



Pump Mounted Variable Speed Controller

Packaged Hydrovar

**NOTE:** Pressure Transducer, fused disconnect, complete wiring and conduit included.

### HYDROVAR®

Hydrovar is the intelligent pump controller that matches the performance to system demand. The Hydrovar is easily mounted directly on the motor of the pump and will fit on any standard TEFC NEMA motor. This makes the Hydrovar an excellent choice for retrofitting and upgrading of fixed speed systems. There's no need for an external control panel when using Hydrovar.

#### APPLICATIONS

Designed for centrifugal pump systems requiring constant pressure, flow control or differential pressure in commercial and municipal applications.

#### FEATURES

- **Input Supply:** 1Ø Input 208/230 volt 2 - 5 HP  
3Ø Input 208/230 volt 2 - 15 HP  
3Ø Input 460 volt 2 - 30 HP  
(208 - 240V ± 10%, 15 - 70 Hz)  
(380 - 460V ± 10%, 15 - 70 Hz)
- **Motor Requirements:** 3 phase, TEFC, 208 - 230V or 460V, 0 - 60 HZ, Class F insulation, NEMA design A or B
- Motor mount to fan cover of TEFC motor for a packaged unit with a small footprint
- Maximum ambient temperature 104° F.
- **Indoor enclosure:** NEMA 1. Avoid excessive dust, corrosives, salts and direct sunlight.
- **Display:** Large LCD display. Easy to read pump language, pump on, system pressure, fault codes and system conditions are displayed.
- Control up to 8 pumps in parallel
- **Control:** Analog input control (4 - 20mA) two point control based on pressure, flow or differential pressure.
- **Alternate Input:** Up to two transducers may be used with each controller. These may be pressure, flow, differential pressure, temperature or other 4 - 20mA signals.
- Remote start/stop via switch input (low water, low pressure, etc.) and emergency stop.
- Dry relay contacts available for pump run and fault.
- **Protection:** Over/Under voltage, motor overload, short circuit, ground fault, programmable no/low flow shut-down, low suction pressure, pump run-out.
- MODBUS® and BACnet as standard. Optional Wi-Fi card for the flexibility of wireless connection.
- Advanced motor control to reduce heating and extend the lifetime of the motor
- Embedded THDi filter for better electricity quality from the grid, extending the lifetime of the equipment.
- **Pressure Transducer:** 316 SS, 17-4 PH stainless steel, ¼" NPT connection, shielded two wire cable, 0 - 300 PSI range. Included with drive.

### Intelligent Variable Speed Control

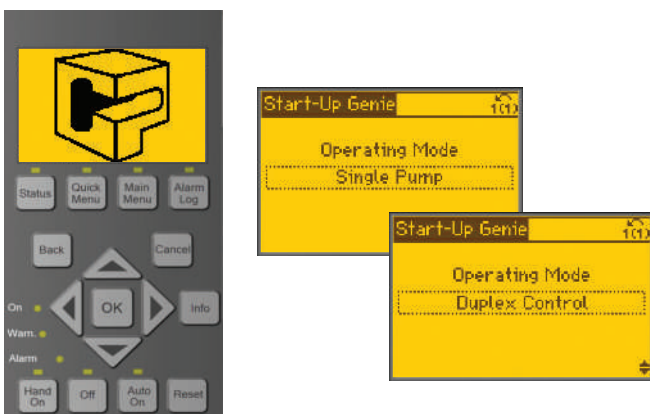


### AQUAVAR® Intelligent Pump Controller

- Input Supply: 1Ø Input 208-230 volt 1.5 - 30 HP  
3Ø Input 208-230 volt 1.5 - 60 HP  
3Ø Input 380-460 volt 1.5 - 600 HP  
3Ø Input 575 volt 1.5 - 600 HP
- Three phase output to motor
- Wall mounted with fan cooling
- Ambient temperatures up to 113° F (Up to 122° F with 10% derate)
- Indoor Enclosures to meet IP20 Open, UL TYPE 1, UL TYPE 12
- Outdoor enclosures to meet UL TYPE 3R and UL TYPE 4X
- Removable, graphical control panel with display
- Fully backlit display with large text makes the control pad easy to read
- Alarm Log key for quick access to last 5 alarms and maintenance events
- My Personal Menu allows user to focus on specific user selected and saved Parameters
- USB Connectivity - Remotely commission and monitor through PC Software
- Duplex variable speed pumping control with auto lead/lag and alternate
- Capable of controlling up to 2 fixed speed lag pumps, with one standard drive
- Hand on, Auto on, and Off buttons for easy pump operation at the keypad - No toggling between local and remote operation
- Modbus® RTU, included in standard drive - Other communications available with option cards
- Standard dual DC-link reactors - Reduces the level of harmonics similar to a 5% AC line reactor without the voltage drop across the full load range
- EMC/RFI filters designed to reduce drive noise emissions and interference to strict standards

### YOUR WISH IS AQUAVAR'S COMMAND!

The proprietary CentriPro Start-Up Genie guides you through quick and easy commissioning. Take advantage of the complete Genie with 10 sections to configure applications with pump protections, I/O options, and Duplex operation, or for the more straightforward applications just set your motor information, operation mode and "Autoset" the rest of the parameters. With support for the most common control configurations, the Genie reduces set-up and configuration time to about 15 minutes!



# Variable Speed Control



## AQUAVAR® CPC Wall Mounted Version

The Aquavar® CPC (Centrifugal Pump Controller) from CentriPro incorporates the latest state-of-the-art Aquavar technology. The Aquavar CPC is a variable frequency drive and pump specific PLC in one compact unit, that will vary the speed of the motor to maintain a consistent pressure, flow, temperature or level. Here are just a few of the features and benefits of this innovative product:

- Start-up “wizards” expedite the programming process.
- Removable control panel/display.
- Fully backlit display with large text makes the control pad easy to read.
- Transducer assembly (0-300 psi) included for constant pressure.
- Protect the pump from cavitation, dead head and blocked suction.
- Protect the motor from short circuit, phase loss, overload, undervoltage, overvoltage.
- Input choke reduces harmonics and provides 3-5% impedance line reactor.

- EMC/RFI filters reduce drive noise emissions and interference.
- MODBUS® compatible. MODBUS is standard protocol with SCADA networks.
- Capable of controlling up to 3 fixed speed pumps, with one drive.
- Multipump control for up to 4 pumps, without additional PLC’s or control panels.
- Auto lead/lag and switching control built in.

### Ratings and Enclosures

- NEMA 1 (indoor use) standard. Other enclosures available upon request.
- 1 - 200 HP (frame R1 - R6) wall mounted, 250 - 550 HP (frame R7 and R8) floor mounted.
- Ambient temperature 5° F - 104° F. Higher temperatures can be achieved using optional enclosure upgrades and derating factor for up to 122° F.
- At altitudes from 0 to 3300 feet rated current is available, for every 328 feet above 3300 feet the current must be derated 1%. Maximum 6600 feet (consult factory above 6600 feet).
- Relative humidity lower than 95% without condensation.
- UL 508C compliant. UL, cUL, CE approved.

### Electrical Characteristics

#### Input Power

- 3 phase 380 V to 480 V +10%/-15%
- Frequency 48 to 63 Hz
- 1 phase 208 V to 240 V +10%/-15%
- .98 power factor
- 3 phase 208 V to 240 V +10%/-15%

#### Output Power

- 3 phase from 0 to  $V_{supply}$  (All motors must be 3 phase)
- 0 to 60 Hz frequency



# Variable Speed Controls



**Aquavar SPD** models with an "F" suffix are configured for submersible pumps. Models without the "F" suffix are configured for centrifugal pumps.

## AQUAVAR SPD™

### Simplex Variable Speed Pump Controller

- **Easy Set-up:** Pre-set for submersible or surface motor characteristics. Pre-wired and tested transducer. Touch button pressure setting. No complicated menus or electrical programming to cope with. Total set up time including wiring is less than 30 minutes.
- **NEMA 3R:** Outdoor rated enclosure eliminates the need for separate cover panels required by competitive standard NEMA 1 enclosures. Operating temperature -22° F to 122° F!
- **Dual Phase Input:** UL Listed for either three phase or single phase input (de-rated).
- **Filter Pack:** Aquavar SPD models with an "F" suffix come complete with output filter rated to 1000 feet of motor lead. It is ready to go without having to source and install components from other sources. Programming is also pre-set to 30 Hz minimum to protect motor bearing lubrication required by some motor manufacturers.
- **True Motor Match:** The Aquavar SPD is already rated for the higher amps typical of higher HP submersible pump start-up. There is no need to oversize the drive as with other units. A 10 HP Aquavar SPD will run a 10 HP submersible pump!
- **Transducer:** As with all Goolds drives, the pressure transducer is included with the drive so there is no need for separate sourcing and compatibility checks. The transducer is pre-wired and tested, with internal case grounding!
- **Full Diagnostics:** In addition to typical electrical protection and diagnostics, the Aquavar SPD has a full range of pump protection features such as bound pump or motor shut down, low water or loss of prime shut down. These added features require no added input devices.
- **Remote on/off:** Permits external control by timers (irrigation), float or pressure switches (tank draining) or manual control. Dry contact closure required.
- **Hand/Auto Option:** Allows the drive to be run at full speed without a pressure transducer for longer periods of time as in the case of new well development or system start up. Turning the control back to auto resumes the automatic pressure tracking and control.
- **Remote Monitoring:** External monitors may be connected to the drive for monitoring pump running speed (4-20 mA output based on speed), pump on, and system fault. The fault indicator can also be connected to devices like an auto-dialer. This enables control of pumps and drives in un-manned locations. The 4-20 mA output can be utilized for functions such as an external dosing system, chlorine injection.
- **Pressure Drop:** The reaction time of the drive to pressure drops can be adjusted from the typical 5 PSI drop to as much as 20 PSI. This allows for fewer starts.
- **Dual Set Point:** The Aquavar SPD has the capability to be programmed with two pressure set points. An external contact such as a timer can be used to change between them, so that a booster pump serving both a building and an irrigation system can do both jobs without manual resets.
- **No Water Restart:** The Aquavar SPD has the capability to adjust the time delay in between each "dry well" fault. Adjustable from 10 minutes to 2 hours between each restart. Ideal for low yielding wells.

# Variable Speed Controls





## AQUAVAR® ABII

### Variable Speed Constant Pressure Systems

#### 1151AB2, 1AB2 and 2AB2

- Input Power\* – 1151AB2 115V +/- 15%, 50/60Hz  
1AB2, 2AB2 230V +/- 15% 50/60Hz  
(controller only)
- Output Power – Up to 230V three phase (based on input voltage). Motor rated for 208-230V, ±10%.
- Maximum Output Current – 4.2 amps - 1151AB2 and 1AB2; 6.9 amps - 2AB2
- Input Controls – Up and down buttons to set pressure.
- Signal Lights – Power on, pump running, inverter stopped, pump stopped, standby, faults/errors.
- Electrical Efficiency – Over 95%
- Protection Against – Short circuit, under voltage, overload, motor temperature, dead heading, run out, suction loss, sensor fault, bound pump, over voltage, static discharge.

- Ambient Temperature – 34° F to 104° F
  - Maximum Humidity – 95% at 104° F, non-condensing
  - Air Pollution – Avoid mounting in areas with excessive dust, acids, corrosives and salts.
  - Approvals –  
  - Controller Enclosure – NEMA 3R, IP 43 (Rain-tight)
  - Mounting – Wall mount with mounting hardware.
  - Cooling – Convection with heat sink.
  - Transducer – 0.5 - 4.5 VDC with 5 VDC power supply, 100 psi range, 80-inch 3-core cable.
  - Input Wire – 5 feet of 14 gauge cable. Cable is pre-wired to controller and junction box.
  - Output Wire – 10 feet of 14 gauge cable. Cable is pre-wired to controller and pump motor (when provided).
- \* Low input voltage may affect motor operation.

#### Pressure Range

Nominal Range – Field adjustable from 20 - 85 psi, total system pressure.

**⚠ WARNING DO NOT SET REQUIRED SYSTEM PRESSURE ABOVE 85 PSI. SEVERE DAMAGE TO PLUMBING COULD RESULT.**

- Available as a complete booster system with several pump options. See BAQUABII bulletin.



## Distributor Information

Xylem Inc. manufactures professional grade pumps, controls and accessories for commercial and residential sump, effluent and wastewater applications. Our nationwide distribution and U.S.-based manufacturing facilities can get you the products you need quickly. Backed by over 160 years in the pump business and the Goulds Water Technology customer support and service that is second to none.

Xylem Inc. is a global leader in the water technologies market. The Goulds Water Technology product portfolio includes submersible and line shaft turbine, 4" submersible, jet, wastewater and centrifugal pumps for residential, agriculture and irrigation, sewage and drainage, building services, commercial and light industrial use.

**For more information visit [www.gouldswatertechnology.com](http://www.gouldswatertechnology.com) or [www.centripro.com](http://www.centripro.com).**



Xylem Inc.  
2881 East Bayard Street Ext.  
Seneca Falls, NY 13148  
Phone: (800) 453-6777  
Fax: (888) 322-5877  
[www.gouldswatertechnology.com](http://www.gouldswatertechnology.com)

Goulds is a registered trademark of Goulds Pumps, Inc. and is used under license.  
CentriPro, Aquavar, Aquavar ABII, Aquavar SPD, AquaForce, CentriGuard,  
GT Irri-Gator and PrimeLine are trademarks of Xylem Inc. or one of its subsidiaries.  
Modbus Protocol is a registered trademark of Modicon Inc.  
© 2017 Xylem Inc. BRGLCAR R3 March 2017