Variable Speed Booster System

Energy Saving With Frequency Inverter Controlled System

Custom built to meet all kind of pumping needs

Complete System
ONE source

CALGONPUMP

Easy-To-Operate Calgon Booster System

Calgon Variable Speed Booster Set is an advanced water supply pumping equipment which consists two or more centrifugal pumps assembled in parallel and mounted on a common base frame. Calgon ready-to-install system is designed to address the pressure needs of commercial and domestic water supply system. The variable speed control function utilizing one or more frequency inverters to enable the pump system to maintain a constant set pressure under varied water demand condition. The control system is equipped with standard protective device on motor over-current and water shortage condition. Upon request, wireless (GSM/GPRS) pump monitoring and reporting system can be incorporated to meet the specific requirement.

Water Supply

Water Supply

Pressure boosting system for high rise buildings, hotels, condominiums, schools and other institutions.
Water supply system for waterworks and distribution system for housing estate.

Irrigation

Irrigation

Irrigation for sport fields, golf courses and landscapes.
Orchard and agricultural plantation.
Parks and recreational areas.

Industry

Industry

Water supply for all kind of industries.
Water treatment plants and filtration system.

Advantages Of Choosing A Variable Speed System

- Space saving, effectively designed with small foot print to minimize floor space.
- Energy saving, through energy-efficient variable speed controls.
- Ready to install, complete packaged system to save time and money.
- Maintain constant pressure.
- Reduction in water surge during pump stop.
- Demand very minimal maintenance.

Operating Conditions

Liquid temperature : 0°C to 75°C
Ambient temperature : 0°C to 40°C

The selection of pressure transmitter range is dependent on desired system pressure for any specific pumping application.

Construction

- The Calgon variable speed system which consists of 2 or more centrifugal pump is built on a common base frame.
- The control panel is fixed to the base frame with a mild steel support. For bigger kW motor, the control panel can be supplied as separate entity.
- The control unit is fitted with frequency inverter(s), contactors, ventilation fan, pressure transmitter and other necessary components as standard supply. Hydrologic pump controller is available upon request.
- Suction and discharge manifold is mounted on both side of the pumps complete with isolating valves. Non-return valve is installed on either the suction or discharge side of the pump subject to suction condition.
- The manifold material and the type of valves used can be selected to suit client's requirement.

Designation	Quantity
Control Panel	1
Frequency Inverter	1 or more
Hydrologic™ Controller (optional)	1
Pressure Transmitter	1
Suction Manifold	1
Discharge Manifold	1
Non-Return Valve	1 Per Pump
Isolating Valves	2 Per Pump
Base Frame	1
Pressure Gauge	1
Diaphragm Tank	1
Calgon Vertical Multi-Stage Pumps *(other type of pumps can be supplied upon request)*	2 - 6

Hydrologic™ Controller

Hydrologic™ is an electronic unit capable of controlling one to six pumps. It receives an input signal of 4 - 20 mA from pressure transmitter and regulate the speed of duty pump via the frequency inverter(s) to maintain constant pressure at discharge. The operating status and set datas are easily accessible through a large backlit LCD display. Please refer to Hydrologic catalogue for more information.

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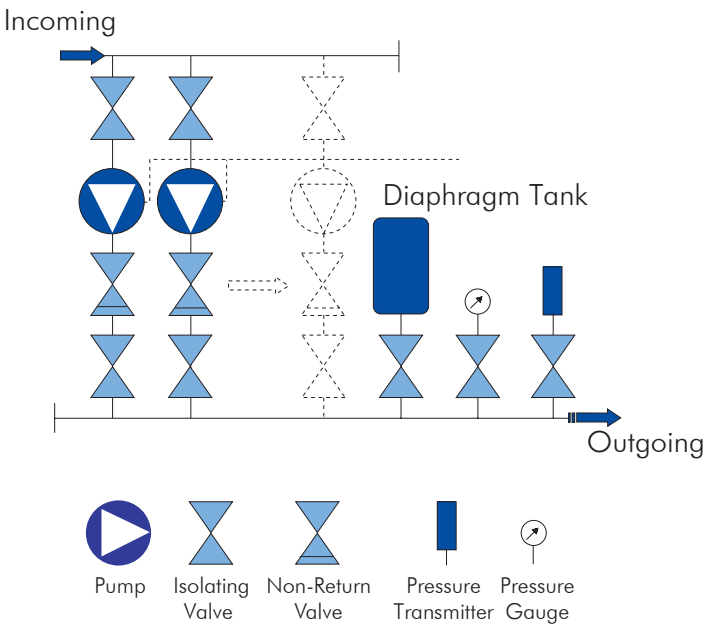
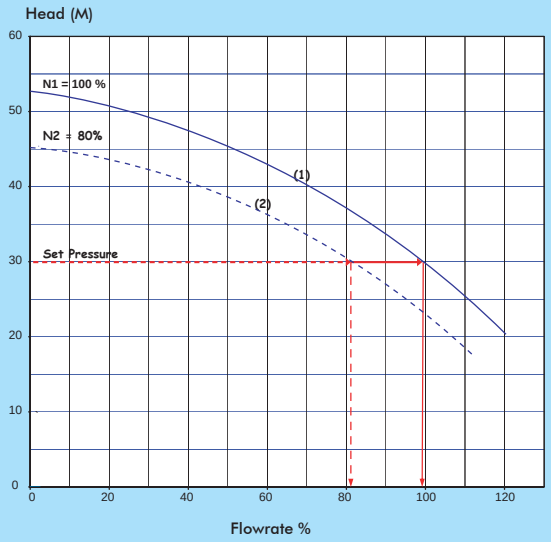


Energy Saving

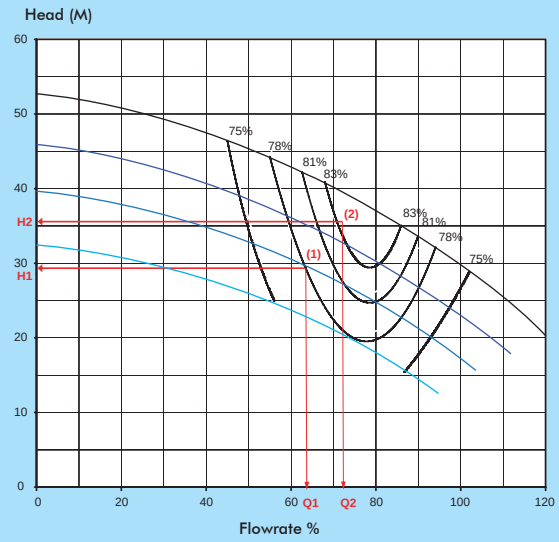


1. Pump characteristic curve at full speed of 100%.
2. Operating point of pump under reduced speed of 80% while maintaining constant set pressure.

   Saving of power consumption is achieved by:

   Affinity Law $\frac{P1}{P2} = \left(\frac{N1}{N2}\right)^3$

   Where P = power, N= motor speed



1. Pump duty point at fixed speed with operating efficiency of 78%
2. By using enlarge impeller, same pump duty point is achieved by reducing motor speed. Higher operating efficiency is achieved.

   Affinity Law $\frac{Q1}{Q2} = \frac{N1}{N2}$

   $\frac{H1}{H2} = \left(\frac{N1}{N2}\right)^2$

   Where Q= flow rate, N= motor speed, H= pressure

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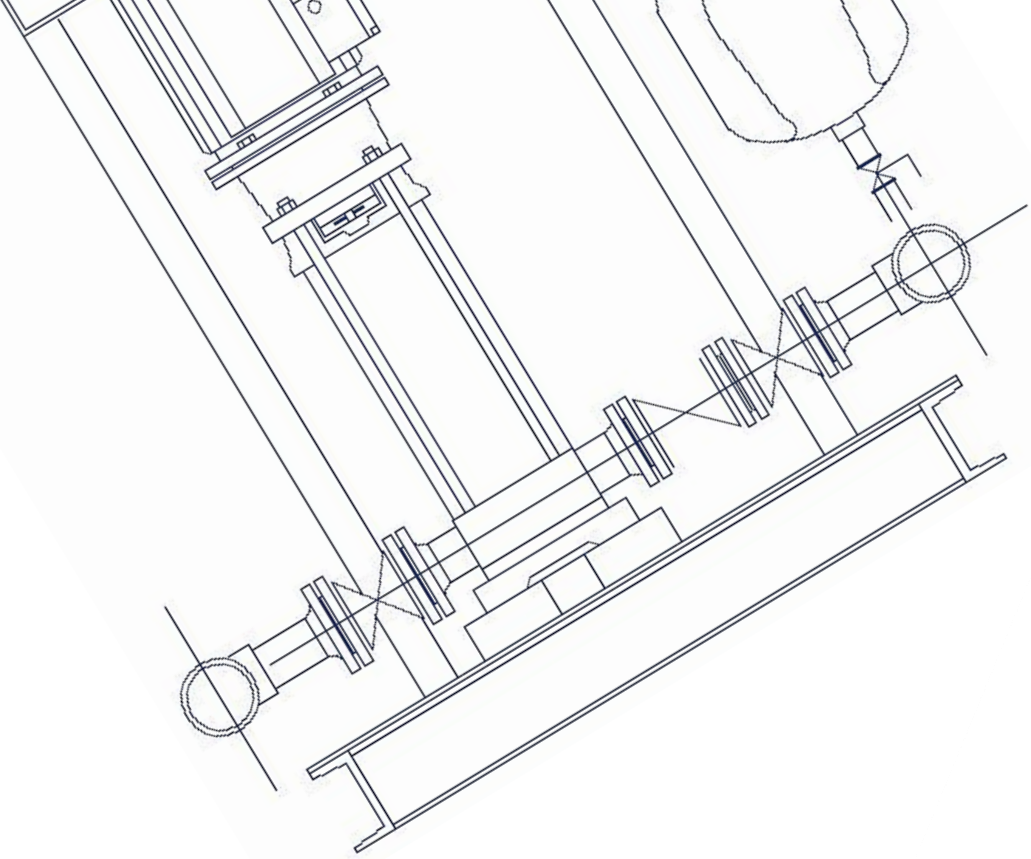
Version 2/2009



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