Vaughan
Unmatched Reliability
®

CHOPPER PUMPS INQUIRY FORM

Name: _____
Company: _____
Address: _____
City: _____
State/Country: _____ Zip/Code: _____

Phone: _____
Fax: _____
e-mail: _____
Project Name: _____
Project Location: _____

Application: _____

Type of Pump:
○ Vertical Wet Well: Length: _____ Feet
○ Vertical Recirculator: Length: _____ Feet
○ Horizontal   ○ Vertical Pedestal
○ Submersible: ☐ Explosion Proof
          ☐ Guide Rail System
          ☐ Recirculator
          ☐ Hydraulic Submersible
○ Self-Primer

Property of Liquids:
Temperature: ____ °F ____ °C
PH: _____   % SOLIDS: _____
Specific Gravity: _____
Viscosity (cps): _____ (ssu): _____
Describe Solids: _____

Sump Dimensions:
___ ft deep x ___ ft wide x ___ ft long
___ M deep x ___ M wide x ___ M long
___ ft, ___ meters diameter x ___ deep

Pump Performance:
Capacity: _____ GPM
       _____ M^3/Hr

Head: _____ feet
       _____ meters
       _____ psi

System Description:
Pipe Diameter: ___ inch ___ mm
Disch. Static Head: ___ feet ___ meters
Disch. Length: ___ feet ___ meters
Inlet Static: ___ feet ___ meters
Inlet Length: ___ feet ___ meters
Header PSI: ___ PSI
Other: _____
_____
_____
_____
_____

Electric Motor Requirements:
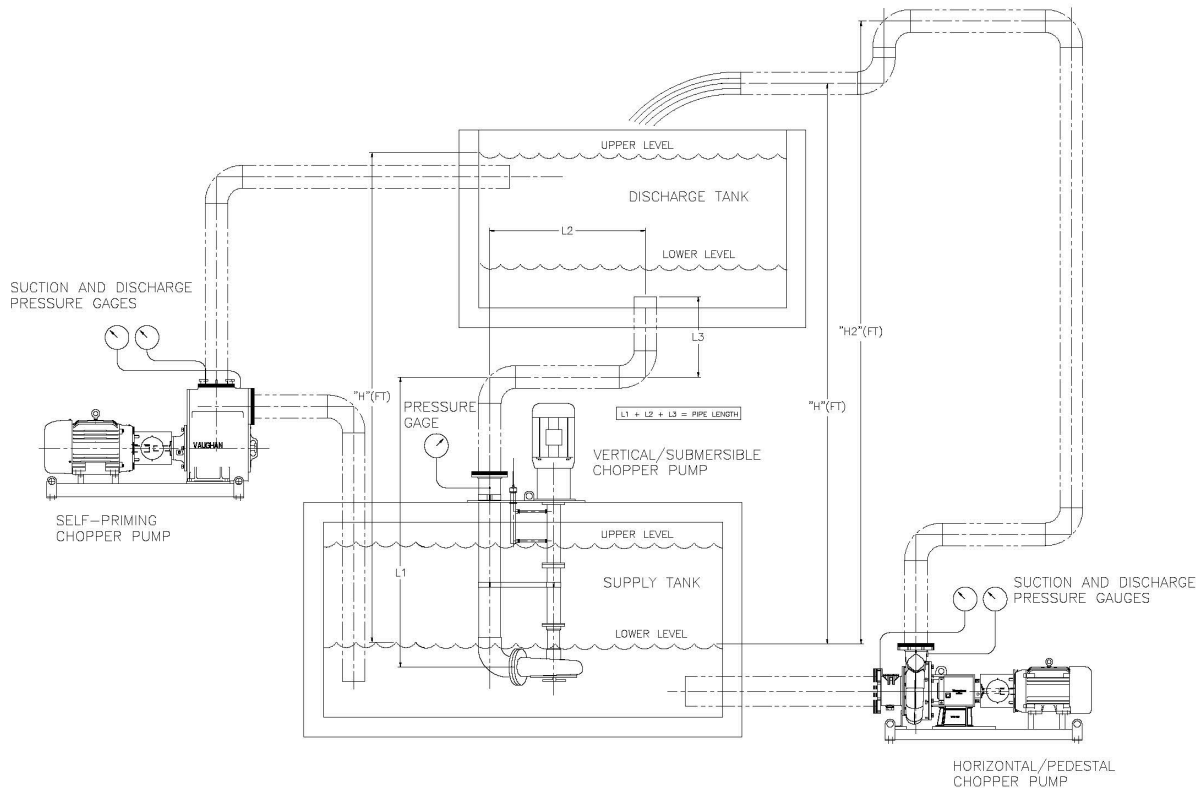___ HP, ____ RPM, ___ Volts, ___ Ph, __ Hz
___ KW, ____ RPM, ___ Volts, ___ Ph, __ Hz

Enclosure Type: _____

Please tell us how you heard about Vaughan: _____
Fax, email, or mail form directly to: Vaughan Company, Inc., 364 Monte Elma Road, Montesano, WA 98563
Phone: 360-249-4042; Fax: 360-249-6155 E-mail: info@chopperpumps.com

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TOTAL HEAD CALCULATIONS
CHOPPER

TOTAL HEAD:

TDH = Pipeline Friction + Vertical Lift (H) + Velocity Head ($V^2/2g$)

- Pipeline Friction = [Pipe Length (ft) / 100] x friction factor (table on form V137)

Water friction tables are suitable for sewage & most water-borne slurries up to 5% solids. For high solids loadings & heavy organic sludge, use the biological friction table on form V137.

- Vertical Lift = feet up from supply tank low-water level to high level in discharge tank, or to the center of the open discharge pipe.
  Note: - Lift may be negative (-) if the pipeline is downhill.
           - Intermediate pipeline elevations (H2) higher than the final discharge can be ignored, except that the pump shutoff head must be higher than H2 in order to initiate flow.

- Velocity Head = Energy in the liquid being discharged due to its velocity.
  Note: - Usually ignored as insignificant in low head sump pump systems.
           - For high head systems, use nozzle manufacturer's printed data, or calculate using data as follows:
                    V = Velocity of the stream at the discharge diameter (ft/sec)
                    G = Acceleration due to gravity (32.2 ft/sec^2)

SPECIAL CASES:

Pipelines with valves & fitting, add appropriate equivalent pipe length.
Pressurized supply or discharge tanks, add the discharge tank pressure, in feet, less any supply tank pressure, in feet, to the above Total Head calculation. Gauge pressure, in psi x 2.31 = head in feet.
Very high solids content sludges & slurries, contact Vaughan on reliable test data for friction values.