



Tri-Rotor® PUMPER

ISSUE
NO
2

PUMP AND SYSTEM ANALYSIS SHEET

Figuratively and actually the heart of a system is its pump. For so vital a role, this necessitates careful selection, else the system will not be a success.

We manufacture the **Tri-Rotor®** pump, a **Positive Displacement [PD] class**, featuring a unique rotary piston design, in a wide range of sizes, material and construction configurations and internal modifications to satisfy almost every application requiring a **PD class** pump.

The engineer in need of a pump must provide us with some rather exacting information. **Four items** are particularly essential for:

SELECTING THE PUMP

GPM
GALLONS
PER MINUTE

Flow rate [GPM] required establishes the model size pump, its shaft speed, and port size.

VIS
VISCOSITY
(SSU/CPS/OTHER)

Nature and composition of the pumpage, most importantly the **viscosity [VIS]**, also enter into determination of shaft speed, pump size, etc. as well as dictating pump make-up (pH, temperature, et al, call out materials of construction).

PSI
LBS. PER
SQ. IN.

We adjust relief valve setting based on **total pumping pressure [PSI/TDH]** of the system, which in turn enables us to calculate horsepower of motor to be used, and so on.

**TYPE
OF
HEAD**

Our competitors furnish only two alternative pump variations per model, **solid head** for simple transfer service, or bypass head, (we call ours "**X-Head**") incorporating an integral relief valve for system protection. **Tri-Rotor®** users enjoy a third choice - the "**V-Head**", providing automatic variable control of volume or pressure, multi-viscosity capability, remote and/or computer feedback governing, all at constant pump shaft RPM.

MOUNTING PUMP WITH MOTOR AND DRIVE

**TYPE
OF
DRIVE**

Tri-Rotor® can do it all, **in house**, with rugged design mounts, bases, risers, chain couplings, arc guards and V-Belt drives. **Style "M"** designates direct connected integral or gearhead motor drive. **Style "SM"** uses gearmotor drive, **"CFM"** incorporates a "C" Flanged adaptor. For footed double shaft enclosed helical gear reducer drive, **Style "GR"** or **"SGR"** [In-line]. **Style "BD"** indicates belt driven.

**TYPE
OF
MOTOR**

Available from stock are standard horizontal motors from 1/3 HP to 25 HP, 1140 RPM and 1725 RPM in Single and Three phase, 60 Hertz in popular Voltages and NEMA frame sizes. Where low pump shaft speeds are required, we carry a wide range of gearhead and gearmotor drives.

Inserting the above essentials into **Pumper Issues Nos. 3 & 4**, we, or our user, easily targets the **Tri-Rotor®** pump model for the application.

For submitting the above information, we supply on the back of this page, our **Pump and System Analysis Sheet**. Make copies, fill out, and fax back to us. We respond with recommendations and formal quotation in 24 hours.

TRI-ROTOR® PUMP and SYSTEM ANALYSIS SHEET

FAX TO 860-482-8435

along with a dimensioned layout of piping systems and equipment arrangement.

Pump Being Replaced _____ Pump Shaft RPM _____ Flooded / Suct. Lift

Old / New Pump _____ Old / New System [yrs.] _____ Indoor / Outdoor _____ Pump Req. Bare / Mounted

Required gallons per minute [GPM] _____ Maximum system pressure [PSI/TDH] _____

LIQUID HANDLED [Describe] _____

Clean _____ Gritty _____ Volatile _____ Shear Sensitive _____ Water % _____

Semi-Solid _____ Entrained Air _____ Solids in Liquids % _____ Sticky _____

Liquid Temp. at Pump _____ °F. Sp. Gr. _____ at _____ °F. Liquid pH _____

VIScosity [SSU] _____ at _____ °F. CPS/Other _____ at _____ °F.

Abrasives Content _____ % Material _____ Particle Size _____

SUCTION CONDITIONS

Pipe Size (in.) _____ Total Length (ft.) _____ Suct. Lift (ft.) _____ Pos. Suct. Head (ft.) _____

No. of Els. 45° _____ 90° _____ Valves _____ / _____ (in.) Strainer [Type/Mesh/PSI Dif.]/Other _____

DISCHARGE CONDITIONS

Pipe Size (in.) _____ Total Length (ft.) _____ Discharge Head [Vertical Rise] (ft.) _____

No. of Els. 45° _____ 90° _____ Flow Meters _____ / _____ (in.) Valves [Relief or Other State Number and

Size] (in.) _____ Filter [PSI DIF.] _____

TYPE OF PUMP DESIRED

Simple Transfer [**SOLID HEAD**] _____ Integral Relief Valve [**"X-HEAD"**] _____ Metering [**"V-HEAD"**] _____

Variable Volume and/or Pressure [**"V-HEAD"**] _____ [**"DERATED"**] Other* _____

TYPE OF OPERATION

Tank Truck _____ Drum Filling _____ Circulating _____ Transfer _____ Batching _____

Blending _____ Metering _____ Other _____

DRIVE POWER

Motor Make _____ HP _____ RPM _____ Phase _____ Hertz _____ Volts _____

NEMA Frame _____ TEFC _____ Exp. Prf. _____ Other _____

Direct Connected **Styles "M"** (Gearhead) _____ **"SM"** (Gearmotor) _____ **"CFM"** ("C" Flgd. Adpt.) _____

Footed Double Shaft Enclosed Helical Gear Reducer **Styles "GR"** _____ **"SGR"** _____ V-Belt **Style "BD"** _____

***CUSTOM ENGINEERED INSTALLATIONS & PROPORTIONING / BLENDING / BATCHING SYSTEMS**

NAME _____ **TITLE** _____

COMPANY _____

ADDRESS _____

CITY _____ **STATE** _____ **ZIP** _____

PHONE _____ **FAX** _____