

The advertisement features a blue-tinted background of a modern skyscraper. In the upper right, a black silhouette of a city skyline is visible. The main product, a blue horizontal turbine pump system, is shown in the center, mounted on a blue metal frame. The system includes three blue electric motors, a control panel with gauges, and various pipes and valves. The text 'METRO-VARIPAC' is in large blue letters, 'HORIZONTAL TURBINE PUMP' is in smaller black letters, and 'SYSTEM 2200' is in large red letters with a black outline.

METRO-VARIPAC

**HORIZONTAL
TURBINE
PUMP**

SYSTEM 2200

- **Low Seal Pressure**
- **Easy Access to Motors**
- **Standard "C" Face Motor**
- **Efficient & Economical Operation**
- **Energy-Saving Variable Speed Control**



The Pumping World's One Stop Shop!

OVERVIEW

Metropolitan Industries, Inc. has fifty years experience in the design and manufacture of pump systems.

Working with one of our sales engineers, Metropolitan will design, build and deliver a pump system right to the project site, ready to install.

All controls are installed and programmed in-house, making one-stop shopping possible and leaving us solely responsible for the entire system. Our 24/7 service department provides you with a safety net eliminating any costly downtime.

Call a Metropolitan Industries distributor or sales engineer today to speak with a qualified representative.

THE HAC PUMP

High Tensile Strength Cast Iron Bowls (Stainless Steel Optional)

Discharge Connection



Bronze Impellers (Stainless Steel Optional)

Metropolitan Industries, Inc. uses HAC Series Pumps - a multi-stage high-pressure turbine unit with inlet-end mechanical seals.

They contain features not found on vertical pumps, such as:

Long-Lasting Mechanical Seals

Located at the inlet-end of the bowls, the seal is subjected to low inlet pressures instead of the damaging high discharge pressures found in most other multi-stage and turbine pump designs.

THE SYSTEM

HAC-Series Pumps

Horizontally mounted turbine pumps with "inlet-end seal"

The revolutionary design incorporates the use of bowl assemblies which are mounted horizontally, just a few inches above the floor elevation, and an air-cooled motor, which is located on the inlet-end of the multi-stage bowl assembly. The design offers the following advantages to the operating engineer:





Modular Liquid End

Allows service of the mechanical seal without disassembling the liquid end of the pump. The modular design also simplifies service of both pump and motor, and permits design flexibility when positioning piping.

No Suction Barrel

Bowl assemblies are exposed and easily accessed, requiring no need for hazardous vertical lifting gear or climbing to access pump end. Horizontal design simplifies maintenance.

Heavy-Duty Construction

Design of this pump meets the challenges of industrial systems. HAC Series pumps excel in any high-pressure application and are ideal for water boosting, hot water recirculation in buildings, high-pressure transfer and spray applications.

Wide Selection

Wide arrays of models are available. There is an HAC Series Pump to fit any pressure or flow requirement.

The troublesome mechanical seals required by pumps with air-cooled motors are typically located at the discharge end of the multi-stage bowl assemblies where they're subjected to extremely high pressures. With this pump design, the seals are relocated to the inlet end of the bowls, thus ensuring extremely low pressures at the seal. This greatly reduces the risk that the pump will experience frequent seal failure and the need for replacement.

Lifting equipment and scaffolding normally required by pumps that are mounted vertically are eliminated, thus also eliminating the associated liability. Maintenance on the pump, seals, and motor are no longer performed high above the floor. Since the pumps are lying horizontally, all components are simply maintained or repaired near the floor, saving time, money and risk of injury.



OPTIONS

Available:

- **Constant Speed Control**
- **Pressure Regulating Valves (instead of variable speed drives)**
- **Hydropneumatic Tank Adjacent to System, or at Remote Location**
- **Touch Screen Control**
- **Stainless Steel Construction**

Other Metropolitan Products

Titan

Variable & Constant Speed Booster Systems

- Pre-Engineered Systems Ready for Quick Shipment
- Variable Speed or Constant Speed Control System
- Available with Optional Stainless Steel Piping
- Low Flow Shutdown Hydro Accumulator Tank
- For Low to Medium Pressure Applications
- All Systems Factory Tested and Pre-Set
- Compact and Affordable



System 2000

Variable & Constant Speed Booster Systems

- For Low to Medium Pressure Applications
- Many Pump Types and Sizes Available
- Energy-Saving Variable Speed Controls
- Compact and Affordable
- Remote Monitoring Available
- Touch Screen Control Available



System 2100

Variable & Constant Speed Booster Systems

- For Medium to High Pressure Applications
- Utilizes Reliable Multi-Stage Vertical Centrifugal Pumps
- Cartridge-Type Maintenance-Free Shaft Seal
- Stainless Steel Shaft, Impeller and Outer Sleeve
- Requires No Routine Maintenance
- Energy-Saving Variable Speed Controls



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