

# **Custom Pumping Systems**

Custom engineered systems to meet your applications demands



Product Quality, Reliability and Support You Expect

www.catpumps.com

# Pumping System Solutions

Cat Pumps is the industry leader in providing quality custom-engineered pumping systems. Each custom system is built to meet the needs of the individual customer, backed by the expertise of the Cat Pumps technical sales and engineering team. Our team assists customers in all phases of the build, including gathering application information, component/configuration selection, building, testing, and after-sales support. Technical support includes guidance about installation, start-up, operation, maintenance, and troubleshooting. Every system is designed, built, and pressure tested to verify performance.

Purchasing a custom system from Cat Pumps offers more benefits than simply providing a high quality pumping system. By choosing Cat Pumps for your next custom system need, you save the time and expense of the following tasks:

- Initial Design
- Multiple Source Buying and Receiving
- Assembly
- Testing and Validation
- System Documentation
- Packaging

Each system includes safety and pressure regulation valves to optimize performance and provide a basis for safe operations.

With thousands of installations operating around the world, choose Cat Pumps for your next custom pumping system. We have the experience and know-how to help you get the job done. Contact Cat Pumps to start the quoting process; we will help you every step of the way.





# Custom Engineered to Meet your Application Demands







## **Applications**

With experience in hundreds of different applications around the globe, we have built custom systems that can be configured to meet even the most challenging application demands. Applications served include:

- Ag Fertilizer/Pesticide Injection
- Airplane De-icing
- Arch Misting Systems
- Bakery Sanitizing
- Barnacle Removal
- Barrel Cleaning
- Boiler Feed
- Butter/Margarine Processing
- Central Cleaning Systems
- Compressor Cleaning
- Conveyor Cleaning
- Drain, Pipe, Sewer Cleaning
- Equestrian Misting
- Exposed Aggregate
- Fire Suppression
- Fish Scale Removal
- Food Processing
- Glycol/Methanol Injection
- Golf Course Injection/Aeration
- Gypsum Cutting

- Ham, Chicken, Turkey Deboning
- Heavy Equipment Drive-thru Arch Cleaning
- Homogenization
- Hydraulic Powered Cleaner
- Hydro-evacuation
- Hydrostatic Testing
- Industrial Cleaning
- Label Removal
- Laser Cutting
- Laundry Moisture Extracting
- Liquid CO<sub>2</sub>
- Lumber Humidity Control
- Machining Flushing and Cooling
- Mining Dust Suppression
- Mold and Casting Cleaning
- Moss and Mildew Treatment
- Odor Control
- Oil, Gas Process Systems
- Outdoor Cattle, Swine & Horse
  Cooling System

- Paint and Rust Removal
- Pesticide Injection
- Portable Rubber Remover
- Pulp and Paper
- Reclaim Vehicle Washing
- Screen Cleaning
- Seawater Reverse Osmosis
- Secondary Recovery
- Sewer and Pipe Cleaning
- Slaughter and Smoke House Cleaning
- Swimming Pool Cleaning
- Temperature Control Hen Houses
- Train Washing
- Turbine Mist Cooling
- Waste Water Re-injection
- Wet Sandblasting
- Window Awning and Blind Cleaning
- Underground Boring
- Underground Tank Cleaning

## **Built to Be the Best**

"We have used Cat Pumps customized pumping system over the years because they know how to get the job done right. From the beginning of the process to the completion, Cat Pumps provides a quick turnaround and a very professional looking piece of equipment that meets our customer needs."

> Michael Brown President (Atlanta, GA)



# Base Configuration

System design starts with choosing the base that best fits your application. Numerous base configurations are available to meet space, portability, sound and material demands.



# Popular configurations include:

### Standard

Our standard base configuration is constructed of heavy duty steel, epoxy coated for added protection and available in a variety of sizes. Includes heavy-duty shock mounts for easy leveling and shock absorption. Drive guard also included for proper ventilation and operator safety. Aluminum and stainless steel models available by request.

### Stacked

For compact installations, we offer a variety of vertically stacked options that provide smaller footprint, yet still provide easy accessibility for maintenance.

## Portable

We offer a wide variety of base configurations to suit any portable application. Wheels and handles can be added to our standard base package or we can design a custom base to better meet your requirements. Carrying handles, carts, fork lift slots, lifting lugs and truck mount bases are popular configurations.

### Enclosed

For installations that require extra protection or lower sound levels, we have designed fully enclosed bases. Enclosed bases also provide easy accessibility for routine maintenance.

## **Multiple Pump**

For applications that require a higher flow or pressure rating than a single pump can achieve, we have special configurations designed for multiple pumps to meet your application demands.











# Power Source

Evaluate which power source best fits the needs of your installation. A qualified tech support representative with extensive experience can assist in recommending the correct product for any source available.



# Popular configurations include:

#### Electric

Our most popular power source is electric motors. There are number of options available but not limited to the following: Horsepower range: 1/4 to 200; RPM: 1180, 1760 or 3600; Phase: single or three; Enclosure: TEFC, ODP, explosion proof; Frequency: 60 Hz or 50 Hz; Nema frame styles: 56C to 449T; Voltages: 115 to 575.

#### Gas

For portable applications or installations without electric service available, we offer a variety gas engine options: Horsepower range: 3.5 to 40; 3600 rpm; 4 stroke OHV; horizontal shaft; electric or manual start; cyclonic air cleaner; muffler.

#### Diesel

For higher horsepower options and portable applications or installations without electric service available, we offer a variety of diesel engine options: Horsepower range 9.9 to 125; RPM: 2600 to 3600; four stroke; electric start; manual clutch; air or liquid cooled.

#### Hydraulic

Hydraulic options with a variety of displacement sizes for systems using hydraulic power include:

- SAE "A" 2 bolt mount, dual rotation, 3000 rpm, up to 17.5 gpm, 3000 psi.
- SAE "B" 2 bolt mount, dual rotation, 3000 rpm, up to 44.0 gpm, 3000 psi.
- SAE "B" 4 bolt mount, dual rotation, 2400 rpm, up to 62.0 gpm, 2400 psi.
- SAE "C" 2 bolt mount, dual rotation, 400 to 2500 rpm, 14 to 50 gpm, up to 3500 psi.

#### Pneumatic

For explosive-proof requirements or where an air source is plentiful, we offer variety of lubricated pneumatic (air-driven) motors with and without gearboxes available. Mounting configurations include hub, foot, face, NEMA C-flange to metric D series.











# Drive Packages

A wide variety of drive packages are available to complement your power source of choice.



## Popular drive packages include:

#### Belt

Our most common drive package gives you the flexibility to run pump at different performances based on set up. Anti-static, synchronized, V-belt and clutch options available.



For lower flow applications, we have a variety of compact, direct-drive pumps available. These models bolt directly to a electric motor or gas engine for easy installation and space saving. Available for 5/8", 3/4", 1", 1-1/8" shaft sizes.

## **Direct – Flex Coupling / Bell Housing**

Another space saving direct-drive option is a flex coupling and/or bell housing. Options available range from small 3CP models to large frame models. This configuration provides a simpler, more compact design while eliminating belt maintenance.

### **Direct – Gear Drive**

For compact installations that require increased efficiency (less friction) and decreased noise (less vibration). We offer a variety of gear drive options to cover many of our plunger pump models.









# Accessories

Choose from hundreds of high-quality genuine Cat Pumps accessories for optimum system performance.



## Popular accessories include:

### **Regulator/Unloader**

A pressure regulator is used to accurately set and maintain consistent system pressure. For trigger gun applications, an unloader is recommended, which reduces load on the pump and motor when the system is in by-pass.



### **Pressure Gauge**

A pressure gauge is used to accurately monitor pump pressure. All models are glycerine-filled for consistent and accurate pressure readings, with brass and stainless steel options available. We also offer a variety of panel mount options.

### **Oil Level Indicator**

Oil level indicators can be installed in a variety of locations for convenient monitoring of crankcase oil levels. Kits are also equipped with oil drain plugs for fast and convenient oil changes.

## Inlet Filter / Strainer

Inlet filters or strainers are used to capture particulates and other solids, preventing possible pump damage. Removable bowl permits easy cleaning without removing filter or plumbing.



### Relief / Pop-off Valve

A relief or pop-off valve provides your system with reliable secondary pressure relief to protect your pump and system from damage caused by overpressurization.



#### **Pulsation Dampener**

A pulsation dampener is used to provide smooth and consistent flow as well as increase overall system life. Most models available are rechargeable and are available in steel or stainless steel.



## Captive Acceleration Tube (C.A.T.)

A captive acceleration tube or C.A.T. is used to stabilize and maintain consistent inlet pressure when dealing with high temperatures, booster pump feed, long inlet lines or pressure spikes caused by regulating valves or other sources.

### **LPS Monitor**

A low pressure seal monitor can be added to your system to alert you when the low pressure seals are worn and need replacement. Either PLC or lighted versions are available to signal maintenance personnel the seals need to be replaced.





# Advanced Control Options



Ask about Cat Pumps variety of advanced control options, designed to help provide maximum system performance and protection. Options include:

- Variable Frequency Drives
- PID Loop (varies speed of pump to maintain system pressure)
- Multiple Pump Systems
- Low-Pressure Seal Monitors
- Auto Shutdowns (Temperature and Low Inlet Pressure)

Other control options to suit your application needs are available upon request. Contact Cat Pumps for more information.

## Quality Service and Support

Cat Pumps has partnered with many leading manufacturers in many industries. You can expect responsive service and technical support, as well as the reliability and durability you expect from your equipment.

#### **Product Availability**

You can count on quick turnaround time for pumps and service parts with our 99% fill and accuracy rate and over 95% of orders shipped within 24 hours (U.S. and Canada).

#### **Distributor Partners**

Our global distributors represent the very best in our industry and can provide local after-market support for parts, accessories, and technical support.

#### **Technical Support**

Our technical sales and support staff are ready to answer your application questions. Many of our sales and engineering team members have over 25 years of application experience. Live technical support is available Monday-Friday, 8:00 a.m. to 5:00 p.m. CST.



# Online Resources Available 24/7

Catpumps.com offers a variety of helpful tools to assist in all phases of system design. In addition to browsing our complete line of pumps and accessories using the online product selector, there are also a variety of training resources including:

- Training Articles
- Maintenance and Repair Information
- Troubleshooting
- FAQ's
- Helpful Resource Documents



#### CAT PUMPS

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