

## Cannabis Industry

High-Pressure Pumps and Systems





### Cat Pumps Advantages

Cat Pumps offers a complete line of positive displacement highpressure pumps and systems that exceed industry expectations for reliability, availability and support. Our commitment to producing the highest-quality, longest-lasting products available is supported by maintaining a rigorous zero-defect quality assurance program.

Cat Pumps is the supplier of choice when high-pressure liquid is required for pumps, pumping systems and control accessories. Applications include CO<sub>2</sub> extraction, humidity and climate control, odor and pest control, and numerous other industry uses.

#### **Quality You Can Rely On**

Equipment builders stake their reputations on system performance. Lost time, production, and customer satisfaction cannot be recovered — this is why Cat Pumps is the leading pump provider in the industry. With over 50 years of high-pressure pump manufacturing, Cat Pumps has built a solid reputation for producing the highest quality, longest-lasting pumps.

Quality is never an accident. Cat Pumps has engineered every last detail of pump design for long life and reliable performance. When service is necessary, repairs can be made fast and without special tools. Cat Pumps stocks service kits and parts for off-the-shelf delivery, plus is supported by a strong worldwide distribution network.



#### **Best Products, Delivery & Support**

In addition to receiving the highest quality products available, Cat Pumps customers also benefit from the following services:

- Worldwide sales and distribution channels stocking genuine Cat Pumps products
- Industry-leading support team available Monday–Friday, 8:00 a.m.–5:00 p.m. CST
- Engineering and technical support for product selection, installation, maintenance and troubleshooting

### Quality to Keep Your Operation Running

Cat Pumps designs and builds pumps to the highest quality levels. Every design detail is optimized for product life and performance. Examples include the following features:

- Specially-formulated seals and high-density, polished ceramic plungers typify the attention to design detail that results in thousands of hours of trouble-free service
- Stainless steel valves, seats and springs provide corrosion resistance, positive seating and long life
- Wet seal design increases service life by allowing pumped fluids to cool and lubricate the elastomers on both sides

Cat Pumps is the number one choice for precision triplex reciprocating pumps and systems worldwide. Unrivaled reliability and performance lead to fewer repairs and less downtime. The result? Higher productivity and a lower cost of ownership.



### Pump Performance Range

A wide range of pump options are available, including a variety of products that meet industry certifications and directives.

- Flow: 0.34 to 100 gpm (1.3 to 378.5 lpm)
- Pressure: Up to 10,000 psi (689 bar)
- RPM: 100 to 3450
- Liquid Temperature: -20 to 200° F (-29° to 93° C)
- Manifold Materials: Brass, Nickel Aluminum Bronze, 304 and 316 Stainless Steel, Duplex Stainless Steel.\*
- Sealing Material Options: NBR, FPM, EPDM, PTFE, silicone-free.\*
- Drives: Electric, Engine, Hydraulic, Pneumatic
- \* Other materials available upon request.







### Humidity and Climate Control

Cannabis growing and production facilities are closely monitored to ensure ideal conditions are maintained while meeting government regulations. High-pressure misting contributes to the success of growing and processing facilities. The pump is the heart of any misting system, and Cat Pumps is the pump of choice because of their consistent reliability and low cost of ownership. Equipment builders, growing facilities and production facilities count on the proven dependability of Cat Pumps products to ensure ideal growing conditions are met.

#### **Humidity and Moisture Control**

High-pressure misting and moisture control systems maintain proper moisture and/or consistent humidity year-round. They ensure optimal growing conditions, reduced plant spoilage, and large spaces can be efficiently humidified at nominal operating costs. The larger water droplets from low-pressure spraying systems are too big to atomize and do not evaporate quickly like high-pressure pumping systems, creating the potential for mold, mildew, and microbial bacteria to form.

#### **Evaporative Cooling and Temperature Control**

A high-pressure pump system and nozzles inject atomized water into the air. The results of this type of cooling are dramatic and can reduce air temperature by 20 to 30° F, depending upon ambient conditions. This type of temperature control can aid in a consistent, favorable indoor climate throughout different seasons and areas of the country.

### Odor and Pest Control

Misting and fogging systems are commonly used with chemicals to neutralize odors or manage unwanted insects and other pests. High-pressure misting systems use less water and chemicals than other methods, making them an economical control solution.



Direct-drive pumps offer high-performance in a small footprint:

Flows from 0.13 to 15.8 gpm (0.49 to 59.8 lpm)

### High-Pressure CO<sub>2</sub> Extraction

 $CO_2$  extraction equipment is preferred for  $CO_2$  extraction applications because it creates a pure, quality oil. Therefore,  $CO_2$  extraction guarantees that your concentrates will be cleaner and significantly healthier for consumption. The equipment also allows the extract makers to isolate, capture, scientifically research and understand cannabinoids and terpenes.

The heart of the extraction equipment is the high-pressure liquid  $CO_2$  pump. For over 30 years, Cat Pumps has provided dependable liquid  $CO_2$  pumping systems, working closely with research facilities, universities and equipment manufacturers to develop reliable solutions in challenging liquid  $CO_2$  applications. From 0.34 gpm up to 50 gpm (1.3 to 189 lpm) and pressures up to 7,000 psi (483 bar), Cat Pumps has a solution for your pumping needs. Cat Pumps has dedicated and knowledgeable technical sales and engineering teams to help select and troubleshoot liquid  $CO_2$  pump applications.

#### CO<sub>2</sub> Pump Configurations

Cat Pumps liquid  $CO_2$  series of pumps feature modifications to accommodate the unique properties of liquid  $CO_2$ .

- Specialty seals are used to handle the low lubricity of liquid CO<sub>2</sub> and required cold temperatures.
- Pump manifolds are modified to allow higher inlet pressures up to 800 psi (55 bar) and discharge pressures up to 7,000 psi (483 bar).
- Drive-end and manifold material combinations are available to cover a wide flow range from 0.34 to 50 gpm (1.3 to 189 lpm) (189 to 27,800 lbs/hr).
- Pumps are available in brass, 316 stainless steel and nickel aluminum bronze.





### Foliar Spraying



Foliar spraying is an effective and fast-acting method to add nutrients and protect cannabis plants from insects, molds, fungi and diseases. This application's small water droplet size is critical to ensure maximum absorption with minimal drift. A high-pressure system with a positive displacement pump provides consistent flow for optimal water droplet size.

Cat Pumps has products specifically designed for foliar spraying. Our 2SF Series pumps are compact and direct-driven with an electric motor. These pumps have either brass or 316 stainless steel manifolds and various seal options. We offer a full line of accessories to match any pump configuration, including pressure controls, gauges, shut-off guns and much more.

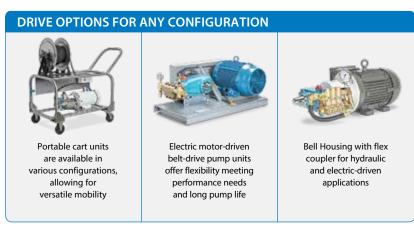
Stainless steel direct-drive options:

- Flows from 0.5 to 4.2 gpm (1.9 to 15.9 lpm)
- Pressures from 100 to 1,200 psi (6.9 to 83 bar)



### Lab and Facility Cleaning

Cat Pumps offers an extensive product line of pumps and accessories for highpressure lab and facility cleaning applications. Various drive options and a wide range of flows and pressures allow Cat Pumps to offer reliable solutions for everything from small portable washers to stationary systems to vehicle-mounted washing equipment. Indoors or out, our world-class pressure washer pumps meet the demands of almost any job.



Electric options with flows from 0.34 to 100 gpm (1.3 to 378.5 lpm) and pressures up to 10,000 psi (689 bar).



# Your Complete High-Pressure Pump and System Supplier

Growing and production facilities are under ongoing pressure to meet increasing demands while adhering to stringent quality, sanitation and cleanliness requirements. In addition, there is pressure to reduce water usage, use fewer chemicals and increase labor efficiency. Given these demands, the industry continuously looks for ways to conserve resource consumption while maintaining quality and cleanliness standards.

Cat Pumps high-pressure pumps and systems keep production lines running by significantly reducing the time needed for cleaning and maintenance. With less cleaning time, there is substantially lower water usage, chemicals and labor. These benefits are in addition to the greatly improved cleaning effectiveness of the Cat Pumps high-pressure system.

#### **Custom-Engineered to Meet Your Application Demands**



Cat Pumps is an industry leader in providing customers with quality custom-engineered pumping systems to meet a wide range of application needs. Selecting a Cat Pumps custom system lets customers eliminate the hassle and expense of designing, multiple source buying, fabricating and testing. Our knowledgeable and helpful technical sales team assists with proper component selection and installation, operation and maintenance support.

All systems are designed, built and pressure-tested to verify performance. To begin the quoting process, contact us at (763) 780-5440 or submit the custom system quote form at catpumps.com.

With thousands of installations running around the world, Cat Pumps is the supplier of choice for custom pumping systems.

#### You Define. We Design and Deliver.



#### **ABOUT CAT PUMPS**

#### **Proven Quality, Customer Focused**

Cat Pumps is the world leader in the design, manufacture and marketing of the most dependable high-pressure positive displacement reciprocating triplex pumps and systems in the market. Our mission to exceed customer expectations for quality, reliability, availability, delivery, technical expertise and aftermarket support to assure the best value in all the industries served.

#### **LOCATIONS**

#### **Worldwide Headquarters**

#### **Cat Pumps**

1681 94th Lane Northeast Minneapolis, MN 55449 USA

P: (763) 780-5440 F: (763) 780-2958 techsupport@catpumps.com www.catpumps.com

#### **Territories Served** U.S., Canada

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#### International Division P: (763) 780-5440 F: (763) 785-4329

intlsales@catpumps.com www.catpumps.com

#### **Territories Served**

Africa, Asia, Australia, Central and South America, Mexico, Middle East, New Zealand, Turkey

#### Cat Pumps International N.V.

Heiveldekens 6A 2550 Kontich Belgium

P: 32 3 450 71 50 F: 32 3 450 71 51 cpi@catpumps.be www.catpumps.be

#### **Territories Served**

Western Europe (except U.K., Germany, and Austria)

#### Cat Pump (U.K.) Ltd.

1 Fleet Business Park, Sandy Lane Church Crookham FLEET, Hampshire GU52 8BF England

P: +44 (0)1252 622031 sales@catpumps.co.uk www.catpumps.co.uk

#### Territories Served

England, Ireland, Scotland, N. Ireland, Wales

#### **Cat Pumps Deutschland GmbH**

Buchwiesse 2, D-65510 Idstein Germany

P: +49 6126 9303 0 F: +49 6126 9303 33 catpumps@t-online.de www.catpumps.de

#### **Territories Served**

Austria, Commonwealth of Independent States (CIS), Germany and Eastern Europe

#### SALES, DISTRIBUTION, SERVICE

Call today for product and application assistance. (763) 780-5440 or visit us at www.catpumps.com



#### **CAT PUMPS**

1681 - 94TH LANE N.E. MINNEAPOLIS, MN 55449-4324 PHONE (763) 780-5440 — FAX (763) 780-2958 e-mail: info@catpumps.com | www.catpumps.com

For International inquiries go to www.catpumps.com and navigate to the "Contact" link.