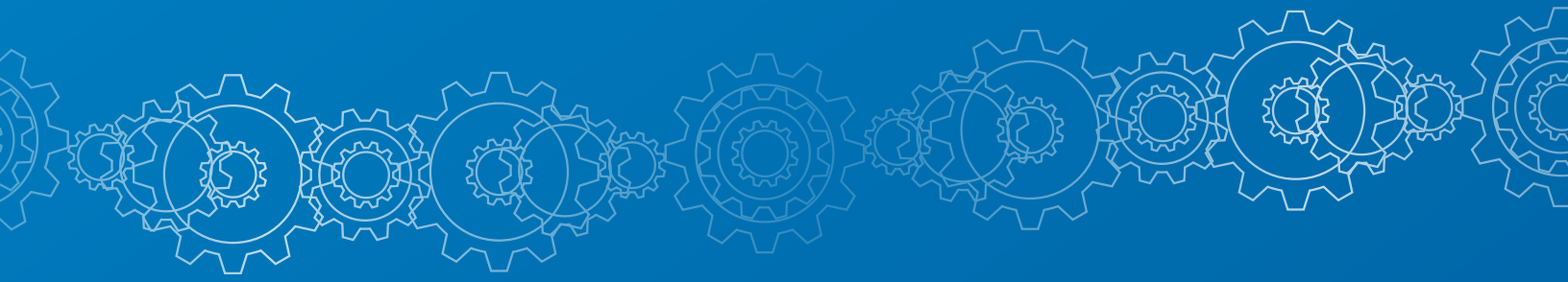
MTS SilentFlo™ 515 Hydraulic Power Units – Compact

Clean quiet, and reliable power generation



Powered by Knowledge

Designed with the knowledge gained through years of experience in servohydraulic power generation, the reliable MTS SilentFlo™ 515 Hydraulic Power Unit (HPU) can help you increase uptime and improve overall lab efficiency for a lower total cost of ownership.

Energy Conservation

The MTS SilentFlo 515 HPU delivers significant improvements in energy efficiency. With new power modules and cooling circuits, the MTS SilentFlo 515 HPU is up to 8% more energy efficient than previous models. The circulating pump on each power module saves energy by requiring far less power to cool.

Performance Reliability

These HPUs are easy to operate and maintain with fewer parts, accessible controls and the elimination of surge suppressors and bypass circuits. In addition, many design features improve performance such as the tuned tubes that reduce outlet noise ripple and the new pressure control that maintains pressure stability.

Whole Lab Productivity

Compatibility with existing SilentFlo HPUs and new smart monitoring capabilities increase overall lab productivity. A common interface between legacy and new MTS SilentFlo HPUs protects your current investment, enables seamless integration of all units and extends the operating life of the lab. Smart monitoring capabilities give greater access to information about HPU functioning and provide the ability to pre-empt disruptions and manage resources efficiently.

The SilentFlo 515 Family

Known for their unmatched quiet and clean operation, MTS SilentFlo hydraulic power units (HPUs) help you power your test systems with superior flexibility and cost-efficiency. SilentFlo HPUs are specifically designed to handle the rigors of extreme, continuous-duty servohydraulic applications, and they perform reliably, year after year.

Energy efficient

SilentFlo HPUs conserve valuable resources. Variable-displacement piston pumps ensure maximum hydraulic efficiency, even during times of reduced flow demand. And an innovative water-cooling system maintains the proper hydraulic fluid operating temperature. These pumps also offer optional water-shutoff valves to minimize water consumption.

Remote monitoring and control

The SilentFlo 515 HPU comes equipped to integrate monitoring options for easier access to HPU control and information about HPU condition. MTS Echo® Health Monitoring options allow you to monitor your HPU's operational and health status from your control room, office or mobile device. In addition, a Remote Human-Machine Interface (RHMI) lets you transfer tethered control of a single HPU to another location of your choice, with identical screens, functionality and full E-stop capability. Instead of leaving a test station and walking to the pump room to monitor or change HPU settings, test engineers can now perform such tasks from a far more convenient location, improving their productivity.

Designed for safety

Automatic interlocks protect against inadvertent damage due to high temperatures or high/low fluid levels. For added protection, there are user-selectable shutdown limit and alarms for both temperature and fluid levels. The insulated enclosure keeps SilentFlo HPUs completely cool to the touch on the outside, even after hours of operation. This design helps prevent injury, while eliminating the need for costly ventilation systems.

Quiet, clean and compact

Depending on the model, SilentFlo HPUs run at 58 – 72 dB(A)–that's up to 30 dB(A) quieter than conventional HPUs–and are designed for extremely clean operation. SilentFlo HPUs require minimal floor space and are small enough to fit through standard doorways. With their quiet, clean and compact design, MTS SilentFlo HPUs can be placed directly on the test lab floor, eliminating the expenses associated with managing a separate pump room and transporting hydraulic fluid across the test facility.

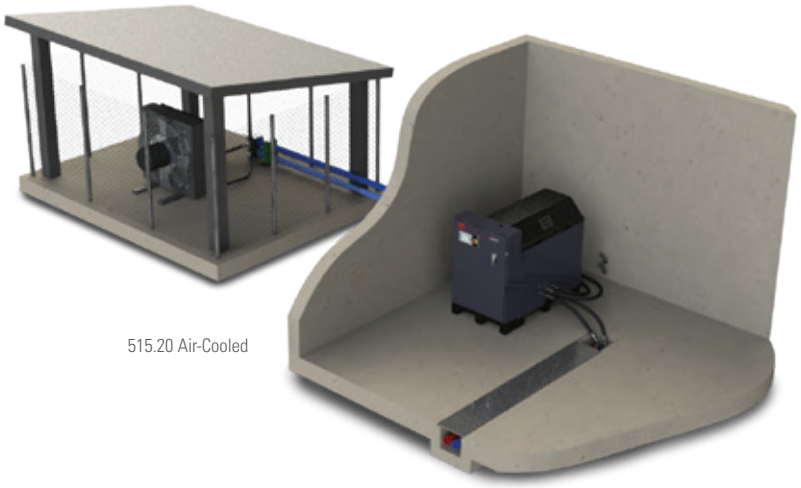
FEATURES

- Intuitive interface
- TÜV certified*
- Energy efficient
- Integrated cooling options
- Remote monitoring capability

**The SilentFlo product family is certified by TÜV Rheinland, a Nationally Recognized Testing Laboratory (NRTL). The "cTUVus mark" accredited test mark is proof of compliance with U.S. National and Canadian National standards in accordance with Occupational Safety and Health Administration (OSHA) and the Standards Council of Canada (SCC).*

Cooling Choices

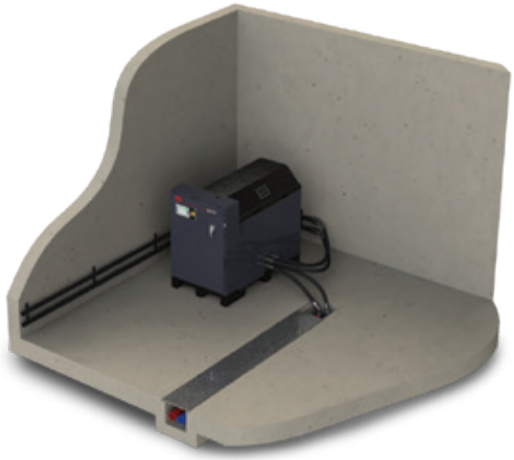
System cooling is an important consideration because it can place significant demand on facility services. MTS SilentFlo 515 HPUs feature a highly efficient cooling system with options for both air and water heat exchanging.



515.20 Air-Cooled

Air-cooled

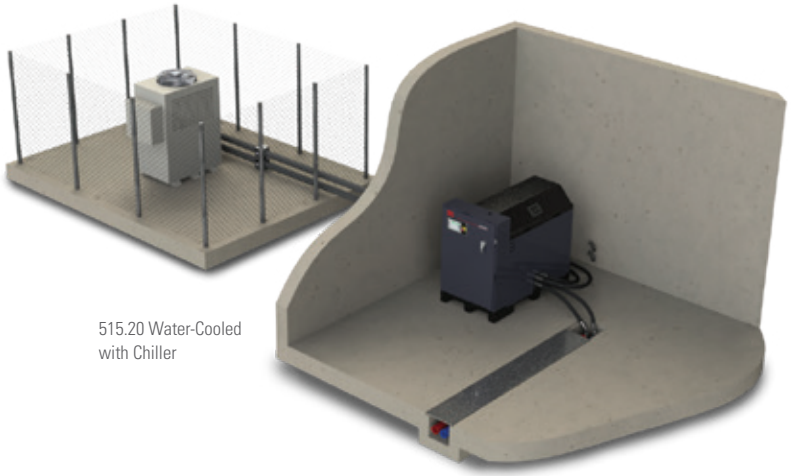
This energy-saving option is a good alternative in moderate climates. The MTS standard packages for air cooling are designed to be used in a sheltered outside installation and require the site to supply a separate three-phase power feed. All standard air cooling packages operate at temperatures from -7˚ to 40˚C (20˚ to 104˚F), so temperature in and around the structure needs to be within this range. The standard air coolers need to be placed within nine meters (30 feet) of the hydraulic power unit.



515.20 Water-Cooled with Site-Supplied Water

Water-cooled, site-supplied water

This option is one of the most common ways to cool your system. If you are using city or well water, you may want to include an optional positive shutoff valve that turns off the water when the HPU is not running. This water-saving valve will increase the pressure required to maintain flow rates during operation.



515.20 Water-Cooled with Chiller

Water-cooled, chiller

MTS can help estimate the size chiller necessary to maintain a closed-loop cooling system for the SilentFlo HPUs in your facility. The SilentFlo 515 HPU is compatible with a wide variety of chiller systems types:

- Refrigeration
- Cooling tower – closed-loop
- Cooling tower – open-loop
- Cooling tower – open-loop indirect

Improve Testing Efficiency and Accuracy

Decisions regarding hydraulic fluid power and distribution have a profound impact on test lab productivity. MTS has vast experience across a wide range of industries, and can offer multiple solutions to maximize hydraulic power while minimizing energy use. How you use hydraulic power to start, halt, restart or shutdown safely during planned or unplanned events can greatly impact the amount of testing you can accomplish and the quality of results you receive. With several options for monitoring and proactive care of your hydraulic systems, you can detect threats to hydraulic system health and keep your distribution system operating in optimal condition.

Optimize power generation

MTS Echo Health Monitoring can help you optimize power generation by protecting your hydraulic power unit from common failures. Early detection of potential issues prevents unplanned downtime for maintenance.

Manage energy use

With MTS Fluid Power System Management, you can best manage day-to-day energy use and prolong equipment life. Various elements of this solution allow you to control and monitor the pump/motor module(s) within a single HPU, or operate up to eight hydraulically-commoned HPUs as a single system. As a customized solution, more HPUs may be commoned and operated as a single system.

Monitor system condition

MTS offers several options that allow you to create a customized approach to proactively monitor your entire hydraulic distribution system. Combining onsite fluid sampling with sensor technology, MTS Routine Maintenance and MTS Echo Health Monitoring Services enable the remote measurement and trending of hydraulic system performance.

Observe lab operations

The MTS Echo Intelligent Lab makes it possible to track tests, monitor test equipment and much more, from anywhere and at any time. Using their preferred mobile technology, authorized personnel get highly secure, on-demand access to the information that is most important to them.

The MTS Echo Intelligent Lab currently includes the following capabilities:

- **Equipment Monitoring.** Learn the status of any test at any time and from anywhere.
- **Health Monitoring.** Proactively maintain your test systems with on-demand health updates.
- **Test Tracking.** Allow your customers to easily track the progress of their tests online.
- **Online Service Resources.** Manage your MTS software updates and version information from a single location.

Model 515.07 – 515.30 Options

ELECTRICAL PACKAGE (FACTORY INSTALLED ONLY)
SilentFlo HPUs support your electrical requirements. Standard voltages from 200 – 575 V AC and frequencies of 50 or 60 Hz may be selected as a factory option (please specify at time of initial order).

HIGH PRESSURE FILTRATION
As a standard feature, all SilentFlo HPUs come with a kidney loop for cooling and filtration. A high pressure filter can be added for additional system filtration at the outlet of the pump.

ACCUMULATORS
High pressure accumulators are available as an option on SilentFlo 515.20 and 515.30 models to help manage surges in flow demand.

AIR COOLING (FACTORY INSTALLED ONLY)
While water cooling is the standard method for maintaining proper hydraulic fluid operating temperature, an environmentally friendly air cooling option is also available.

HEAT EXCHANGER
All 515 models are designed with stainless steel heat exchangers for corrosion protection.

TRANSPORT
For applications where mobility is especially important, a convenient transport kit is available. The transport kit may be installed on your new unit at the factory or added later at your site should your needs change.

Smaller SilentFlo HPUs

Model 515.07 – 515.30 Specifications

Operating pressure: 21 MPa (3,000 psi)
Pump type: Variable displacement pumps
Filtration: Full flow on the return side
Maximum ambient operating temperature: 40°C (104°F)
Minimum ambient operating temperature: 5°C (40°F)

	Model 515.07	Model 515.11	Model 515.20	Model 515.30
Flow rates *(for 60 Hz models)*	26.5 lpm (7 gpm)	41.6 lpm (11 gpm)	75.7 lpm (20 gpm)	113.5 lpm (30 gpm)
Flow rates *(for 50 Hz models)*	22.7 lpm (6 gpm)	37.9 lpm (10 gpm)	62.5 lpm (16.5 gpm)	100.7 lpm (26.6 gpm)
Noise level*	58 dB(A)	60 dB(A)	63 dB(A)	63 dB(A)
Reservoir capacity *(maximum)*	174 L (46 gal)	174 L (46 gal)	341 L (90 gal)	341 L (90 gal)
Unit dimensions				
Width	77.0 cm (30.3 in)	77.0 cm (30.3 in)	89.7 cm (35.3 in)	89.7 cm (35.3 in)
Height	120.1 cm (47.3 in)	120.1 cm (47.3 in)	138.9 cm (54.7 in)	138.9 cm (54.7 in)
Length	114.6 cm (45.1 in)	114.6 cm (45.1 in)	163.1 cm (64.2 in)	163.1 cm (64.2 in)
Weight without oil	381 kg (840 lb)	404 kg (890 lb)	676 kg (1,490 lb)	712 kg (1,570 lb)
Weight with minimum oil	476 kg (1,050 lb)	499 kg (1,100 lb)	866 kg (1,910 lb)	903 kg (1,990 lb)
Weight with maximum oil	581 kg (1,280 lb)	603 kg (1,330 lb)	984 kg (2,170 lb)	1,021 kg (2,250 lb)
Motor size	11 kW (15 hp)	18.5 kW (25 hp)	30 kW (40 hp)	45 kW (60 hp)

** Sound levels [dbA] are expressed as a free field value. Readings may vary with acoustic environment.*
Specifications subject to change without notice. Please contact MTS for specifications critical to your application.

Model 515.07 – 515.30 Order Guide

You can order a SilentFlo HPU by selecting the flow rating, supply voltage, operating pressure and the desired options. Note that some options are not available on all models.

Model 515.07 – 515.30 SilentFlo HPU

Hydraulic Power Unit	☐ 515.07 ☐ 515.11 ☐ 515.20 ☐ 515.30			
Supply Voltage *(Voltage-phase-frequency)*	☐ 200-3-50 ☐ 220-3-50 ☐ 230-3-50 ☐ 380-3-50	☐ 400-3-50 ☐ 415-3-50 ☐ 440-3-50	☐ 200-3-60 ☐ 208-3-60 ☐ 220-3-60 ☐ 230-3-60 ☐ 240-3-60 ☐ 380-3-60	☐ 400-3-60 ☐ 440-3-60 ☐ 460-3-60 ☐ 480-3-60 ☐ 575-3-60
Operating Pressure	☐ 21 MPa (3000 psi)			
High Pressure Filter *(Optional)*	☐ High-pressure full flow filter on the outlet			
Accumulator *(Optional – Available on 515.20 & 30 models only)*	☐ US customary certified ☐ CE certified ☐ KHK certified ☐ SELO certified ☐ CRN certified			
Transport Kit *(Optional)*	☐ Transport kit			
Monitoring Options	☐ Remote monitoring (RHMI) ☐ MTS Echo Health Monitoring			

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