1000 SERIES

Liqua-Blasters® Up To 500hp

Pressures from 5,000 - 25,000 PSI
Flows to 155 GPM

High-Pressure, High-Flow Industrial Water Jetting

This 500-horsepower unit has been engineered to provide more useable flow and pressure than any other similar unit on the market. The rugged design makes it ideal for contractors and plants using automated systems to clean air-preheaters and tanks or for concrete demolition. Equipped with our QF-450S/HB pump, it is ideal for power plants or other locations that utilize semi- or fully-automated systems. When equipped with our sectionalized fluid end (QF-450S), it is possible to use water from cooling lakes or other "dirty" water sources. All units include diesel engine or electric motor, appropriate drive system, fuel tank, pump filtration, pump instrumentation, and safety relief systems.



The Liqua-Blaster 1008VS ranges from 5,000 PSI at flows up to 155 GPM to 8,000 PSI at flows up to 96 gpm and is equipped with our QF-450S pump for using "dirty" water when blasting.



The Liqua-Blaster 1000 Series' higher flows and pressures make it an ideal choice for powering automated systems. Above a Model 1008 is being used with Gardner Denver's Automated Preheater Cleaning System to remove flyash from a power plant preheater. This computerized system eliminates the need for personnel entry and increases productivity by using higher flows.

Model 1000 Pressures & Flows – 500hp

UNIT	PRESSURE		FLOW		POWER		PLUNGER		PUMP
Model	PSI	Bar	GPM	LPM	HP	kW	In.	mm	Model
1005	5,000	345	153	579	500	374	2.000	51	QF-450S
1006	6,000	414	135	511	500	374	1.875	48	QF-450S
1007	7,000	483	117	450	500	374	1.750	44	QF-450S
1008	8,000	552	101	382	500	374	1.625	41	QF-450S
1010	10,000	690	86	326	500	374	1.500	38	QF-450S
1015	15,000	1035	54	202	500	374	1.187	30	QF-450HB
1020	20,000	1379	43	162	500	374	1.0625	27	QF-450HB

Model 1000VS (Variable Speed) Pressures & Flows – 500hp

UNIT	PRESSURE		FLOW		POWER		PLUNGER		PUMP
MODEL	PSI	Bar	GPM	LPM	HP	kW	In.	mm	MODEL
1008VS	5,000-8,000	345-552	155-96	586-363	500	374	2.000	51	QF-450S
1010VS	7,000-10,000	483-690	119-77	450-291	500	374	1.750	44	QF-450S
1017VS	10,500-17,000	793-1034	73-45	276-170	500	374	1.375	35	QF-450HB
1020VS	12,500-20,000	862-1379	61-37	231-140	500	374	1.250	32	QF-450HB
1025VS	17,500-25,000	1214-1724	44-32	167-121	500	374	1.0625	27	QF-450HB

Flow rates based on 100% volumetric efficiency; rates may vary according to pump speed.

1000 SERIES THE MOST VERSATILE AN

Each component of the Liqua-Blaster 1000 Series is designed with a specific customer benefit. Below is detailed information on the pump, engine and other unit components.

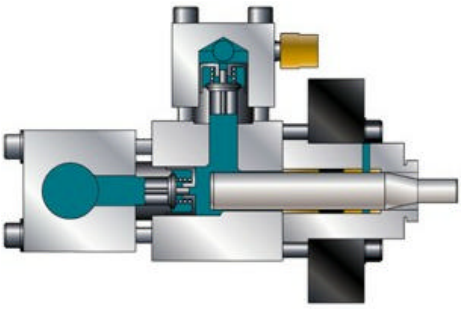
QF-450S/HB PUMP

The QF-450 pump consists of the power end and a fluid end. The power end, consisting of crankshaft, connecting rods and crossheads transmits power from the pump driver which may be diesel or electric motor to the fluid end. Utilizing plungers and valves, the fluid end converts inlet water to a high pressure stream. Two standard fluid ends are offered for the QF-450; the Sectionalized "L" (QF-450S) for pressures to 10,000 PSI and the Inline (QF-450HB) for pressures to 25,000 PSI.

Fluid End

Partek's fluid ends share several features that significantly improve the pump's life, performance and maintainability.

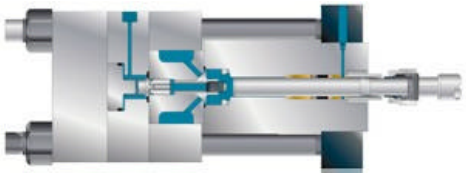
- All high pressure wetted components are constructed of special high strength stainless steel to eliminate corrosion and maximize strength.
- Suction manifolds are manufactured from aircraft aluminum to facilitate field service. They also incorporate stainless-steel valve disc inserts to reduce wear. Complete stainless steel manifolds are available for salt water service.
- Sectionalized "L" style fluid cylinders and Inline style stuffing boxes and valve seats are *autofrettaged* to provide maximum strength and reliability. (Autofrettaging is a unique process that utilizes ultrahigh pressure to significantly increase component life.)
- Partek fluid end designs are characterized by minimal internal clearances to insure highest possible volumetric efficiency. High volumetric efficiency allows the pump to operate at slower, life extending speeds.
- Plungers are non threaded, collet style for positive alignment and rapid removal.
- Plungers and packing are lubricated and cooled by water. Unlike messy oil or grease systems, water lubrication is environmentally safe, inexpensive and requires minimal maintenance.
- Gardner Denver's APC (advanced polymer composite) packing systems utilize space age materials and spring loading to deliver long even wear.
- Gardner Denver fluid ends are configured to permit rapid removal of packing and plungers from the rear of the stuffing box through the pump cradle.



Sectionalized "L" Operation to 10,000 psi

The Sectionalized "L" fluid end is clearly the water jetting industry's standard of excellence. Sectionalized design reduces replacement costs and facilitates maintenance. This simple design allows you to easily remove valves, plungers and packing one section at a time for fast, efficient field maintenance. Plungers are colmonoy coated stainless steel which, unlike fragile ceramic styles, are not affected by thermal shock.

The Sectionalized "L" has unique suction and discharge valves designed to handle "dirty" water with little wear to the seats. Inexpensive replaceable inserts extend valve life. Both suction and discharge ports are flanged to facilitate use of different threads.



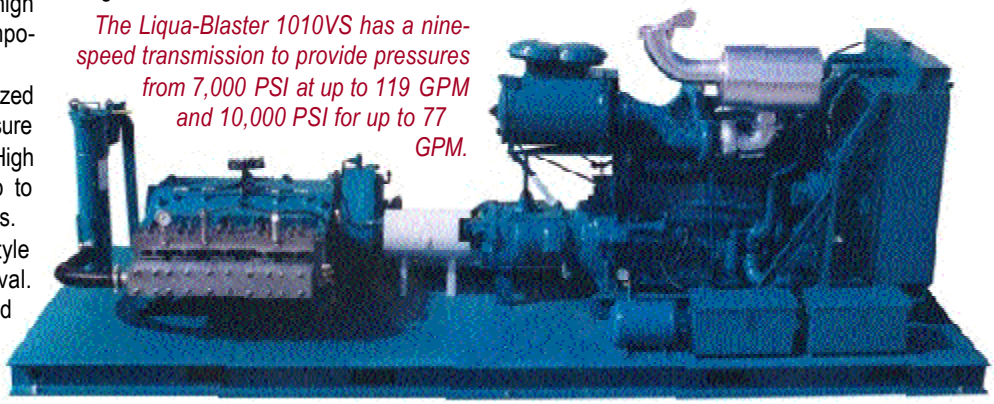
Inline–Operation from 10,000 to 25,000 PSI

The HB version of our reliable Inline fluid end design has a larger internal bore to allow higher flows. Since its introduction in 1982, Partek's Inline fluid end design has performed flawlessly in applications all over the world. Horizontal, "in line" suction and discharge valves and seats eliminate intersecting bores which can lead to premature fluid end failures at pressures above 15,000 PSI. Gardner Denver Water Jetting Systems offers a unique reconditioning service for valves and seats which adds hundreds of hours of life while reducing operating costs. Plungers are solid polished tungsten carbide resulting in exceedingly long plunger and packing life.

Patented fluid end stud extenders provide rails for supporting fluid end components during maintenance. By eliminating the need for hoisting mechanisms, like forklifts or cranes, packing, plungers and valves can be serviced faster.

Patented torque plate utilizes fluid end pressure to evenly and safely lock-in fluid end components, eliminating the need for large torque wrenches or torque multipliers.

The Liqua-Blaster 1010VS has a nine-speed transmission to provide pressures from 7,000 PSI at up to 119 GPM and 10,000 PSI for up to 77 GPM.



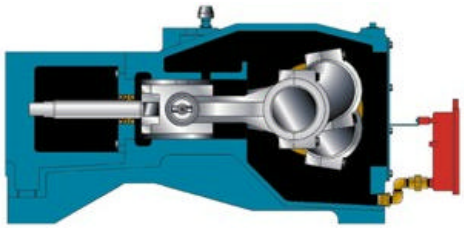
GARDNER DENVER WATER JETTING SYSTEMS, INC.

Partek • Liqua-Blaster • Geoquip • CRS Power Flow • Jetting Systems • American Waterblaster

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RELIABLE WATER-JETTING UNITS AVAILABLE.



Power End

- Extra-heavy steel crankshaft, tapered roller bearings and large cylindrical crossheads assure accurate alignment and long life.
- All components run in a heavy, precision machined cast iron frame.
- High-capacity, forced-oil system through rifle-drilled crank shaft for even lubrication even at low RPMs.
- Triple-lip baffle seals and splash deflectors avert power end oil contamination.
- Equipped with sight gauges and safety system to shut down the unit if power end oil falls below or exceeds optimum operating level.
- Maximum frame load is 25,000 lbs.

PLUMBING

The plumbing on Gardner Denver's Liqua-Blaster 1000 Series is designed for safe, reliable operation.

Discharge Plumbing

- All high-pressure connections are rated for at least 2.5 times the working pressure.
- Gardner Denver offers a wide variety of adapters to accommodate most applications.
- Pressure gauge is stainless-steel glycerine-filled with built-in snubber to extend gauge life.
- The Inline fluid end includes dual rupture discs for redundant over pressure protection.
- Standard "L" fluid ends are equipped with stainless steel relief valves and rupture discs.

Suction Plumbing

- Bladder style pulsation dampener minimizes potential for cavitation.
- Suction piping is corrosion-resistant bronze on the Inline and galvanized on the Sectionalized "L".
- Over-sized stainless steel filter delivers clean water to the pump to reduce plunger, valve and packing failure. The filter on a 10,000 PSI model filters to 50 microns. The 20,000 PSI model is filtered to 10 microns.

POWER UNIT

Diesel Power

The Liqua-Blaster 1000 Series is equipped with a powerful water-cooled diesel engine (525 HP). Parts and services are available worldwide with engine emissions that meet or exceed most worldwide regulations.

- Fuel filters, dip stick, oil drain and other service points are conveniently located.
- Convenient, large engine-mounted instrument panel includes key ignition, vernier or automatic hydraulic throttle control, low oil pressure and high water temperature shut down for maximum engine protection.
- 300-gallon fuel tank combined with the low fuel consumption of the engine provides more hours of run time.
- Engine is equipped with front and rear cowling and hood for added protection.
- The 1000 Series has a three-plate 14" clutched PTO installed between the engine and pump drive. This permits independent operation of the engine. Sealed pilot bearing eliminates frequent lubrication.

Electric Power

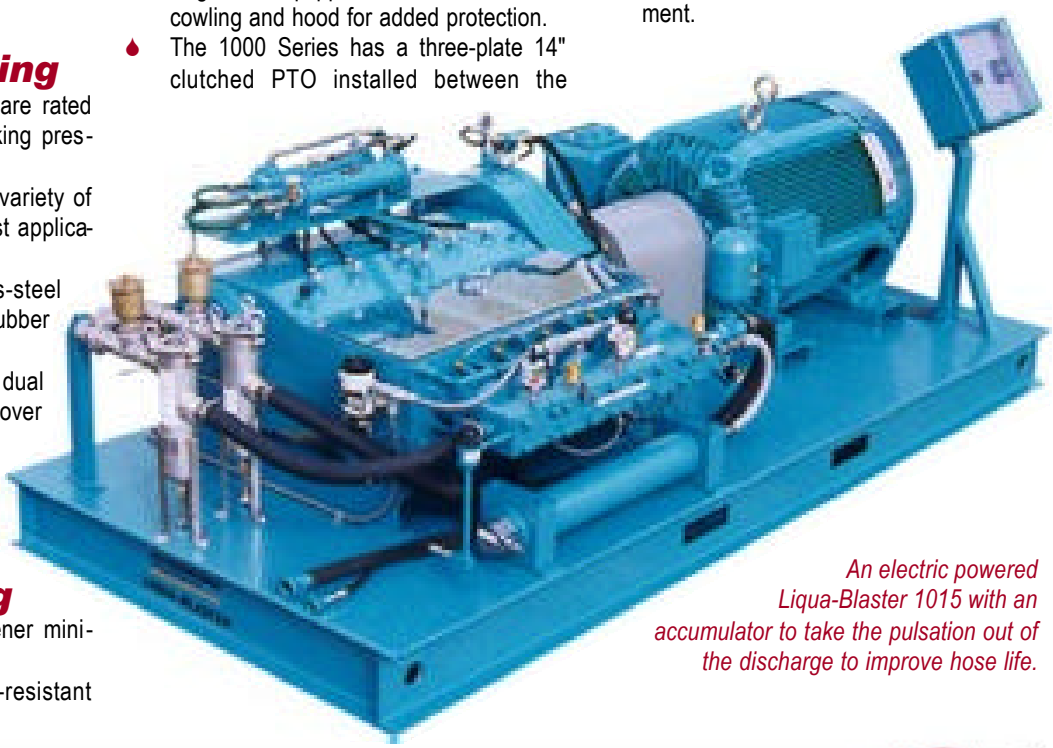
The Liqua-Blaster 1000 Series can also be equipped with an electric motor (500 HP). Motors come in TEFC, explosion proof or open drip enclosures with a variety of voltages. Starters are also available.

DRIVE SYSTEM

The Liqua-Blaster 1000 Series uses an oversized, heavy-duty shaft-mounted gear box for longer life.

The Liqua-Blaster 1000VS is equipped with a nine-speed heavy duty transmission. This provides nine distinct pump speeds without changing plungers or fluid ends (see page one for ranges).

- Clutch is engaged or disengaged via foot pedal for maximum operator convenience.
- Power is transmitted to the pump through a short-coupled drive shaft, which provides low vibration operation, reduces maintenance, and is tolerant of misalignment.



An electric powered Liqua-Blaster 1015 with an accumulator to take the pulsation out of the discharge to improve hose life.

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1000 SERIES

BASE

The Liqua-Blaster 1000 Series base is constructed of heavy 10-inch steel channel with four lifting points.

- The sturdy design of the Liqua-Blaster skid allows you to lift the unit without twisting the base and skewing the alignment.
- The entire footprint of the engine and pump are welded directly to structural members providing an extremely strong, low vibration design.
- The skid surface is quarter-inch thick steel plate decking to create a safer, non-slip work surface and to enhance the structural integrity of the skid.

The Liqua-Blaster 1020VSDS offers pressure ranges from 12,500 to 20,000 PSI at flows from 61 to 37 GPM, and is equipped with our QF-450HB pump for water blasting. Notice the heavy duty filtration system.



Quality Parts, Reasonable Costs

Gardner Denver Water Jetting Systems, Inc. parts are designed and manufactured to fit perfectly and to last. Because every part we design is manufactured by Gardner Denver, each part is inspected to meet our demanding quality standards before it goes into a product or inventory. And with thousands of units in service, parts are manufactured in high volumes to keep your costs low.

1000 Approximate Weights & Dimensions

UNIT	HEIGHT		WIDTH		LENGTH		WEIGHT	
Model	In.	mm	In.	mm	In.	mm	Lbs.	Kg
Diesel Skid	82	2083	96	2438	200	5080	15,000	6804
Electric Skid	72	1829	96	2433	188	4775	14,000	6350

1000VS Approximate Weights & Dimensions

UNIT	HEIGHT		WIDTH		LENGTH		WEIGHT	
Model	In.	mm	In.	mm	In.	mm	Lbs.	Kg
Diesel Skid	81	2057	96	2438	290	7366	20,000	9072

Custom systems and options are available. Please contact your Gardner Denver sales representative or authorized dealer for details. Gardner Denver Water Jetting Systems, Inc. offers a complete line of accessories for surface preparation, tube cleaning, jet cutting and other applications. Please call or write for a free catalog today.

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STANDARD OPTIONS

The following options are available for all Liqua-Blaster 1000 Series models.

Engine Throttle Control. Governs engine speed. Engine is at idle RPM with gun(s) in dump mode. Rpm climbs to preset level when gun trigger is depressed.

Hose Rack. Hose rack made of tubular steel with 150' capacity.

Hoses & Fittings. Hoses are available in 50' (15.2m) sections with a minimum burst of 2.5 times the working pressure. Stainless steel quick connect couplers are available for 10, 15 or 20 KPSI working pressure.

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Your local distributor/representative is: