



Jet Edge

WATERJET SYSTEMS

WATERJET INTENSIFIER PUMPS
PRECISION CUTTING



The Widest Range of Waterjet Pumps in the Industry!

1.800.JET.EDGE | 763.497.8700 | www.jetedge.com

JET EDGE WATERJET PUMPS

HYDRAULIC INTENSIFIER PUMPS FOR PRECISION SYSTEMS



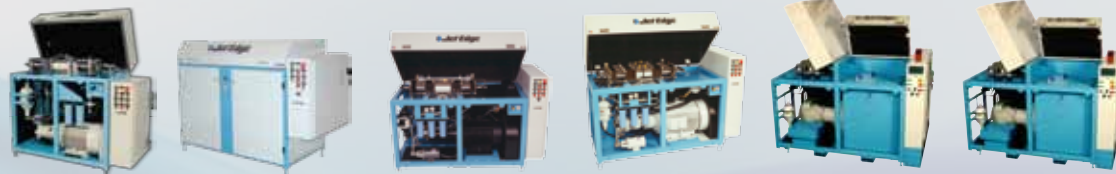
Take your waterjet cutting to a new X-Stream!
Our X-Stream Series Intensifier Pumps Cut Parts up to 50% faster and lower operating costs as much as 40%!


Model	xP90-50	xP90-100
Intensifiers	1	2
Pressure	75KSI (5200 bar) continuous, 90KSI (6200 bar static)	
Power	50hp	100hp
Flow GPM (L/m)	0.7 (2.6)	1.45 (5.5)



There's a reason our Dominator Series hydraulic intensifier pumps dominate the market!
They are built to provide years of dependable service and are the easiest and most cost-efficient pumps to maintain.

Model	iP55-30	iP60-50	iP55-75	iP60-100	iP60-150	iP55-200
Intensifiers	1	1	1	1 and 2	2	2
Pressure	55KSI (3800 bar) continuous, 60KSI (4100 bar) static					
Power	30hp	50hp	75hp	100hp	150hp	200hp
Flow GPM (L/m)	0.6 (2.3)	1 (3.8)	1.5 (5.7)	2.3 (8.7)	3 (11.4)	4.0 (15.2)



 Jet Edge also offers diesel-powered pumps for use in remote locations. See www.jetedge.com.



DIRECT-DRIVE PUMPS

Eco-friendly and economical to purchase and operate, our Eco-Jet direct-drive pumps use 40% less electricity than a 50hp hydraulic intensifier pump, yet produce the same output!

Model	Eco-Jet
Type	Direct-Drive
Pressure	55KSI (3800 bar)
Power	30hp
Max Orifice	.015 (.38)

NEW! AN INDUSTRY FIRST!

Turn your tractor or skid steer into a powerful waterjet cutting tool! These unique pumps incorporate our Eco-Jet direct-drive pump design, but use tractor or skid steer hydraulics, creating a powerful yet inexpensive waterjet pump that requires only 120 V 60Hz power, fresh water and a suitable tractor or skid steer.

ECO-JET PTO: Available for 540 RPM and 1000 RPM PTO shafts capable of producing a minimum of 50hp. Category 1 & 2 Three-point hitches.

ECO-JET TACH: Available for hydraulic circuit units capable of producing a minimum of 50hp. Maximum pressure is dependent on tractor's hydraulic fluid flow and pressure.

See www.jetedge.com for details.

 **Many of our customers have 35,000 + hours on Jet Edge pumps that are still going strong!**

Jet Edge builds the most reliable and easy-to-maintain intensifier pumps on the market.

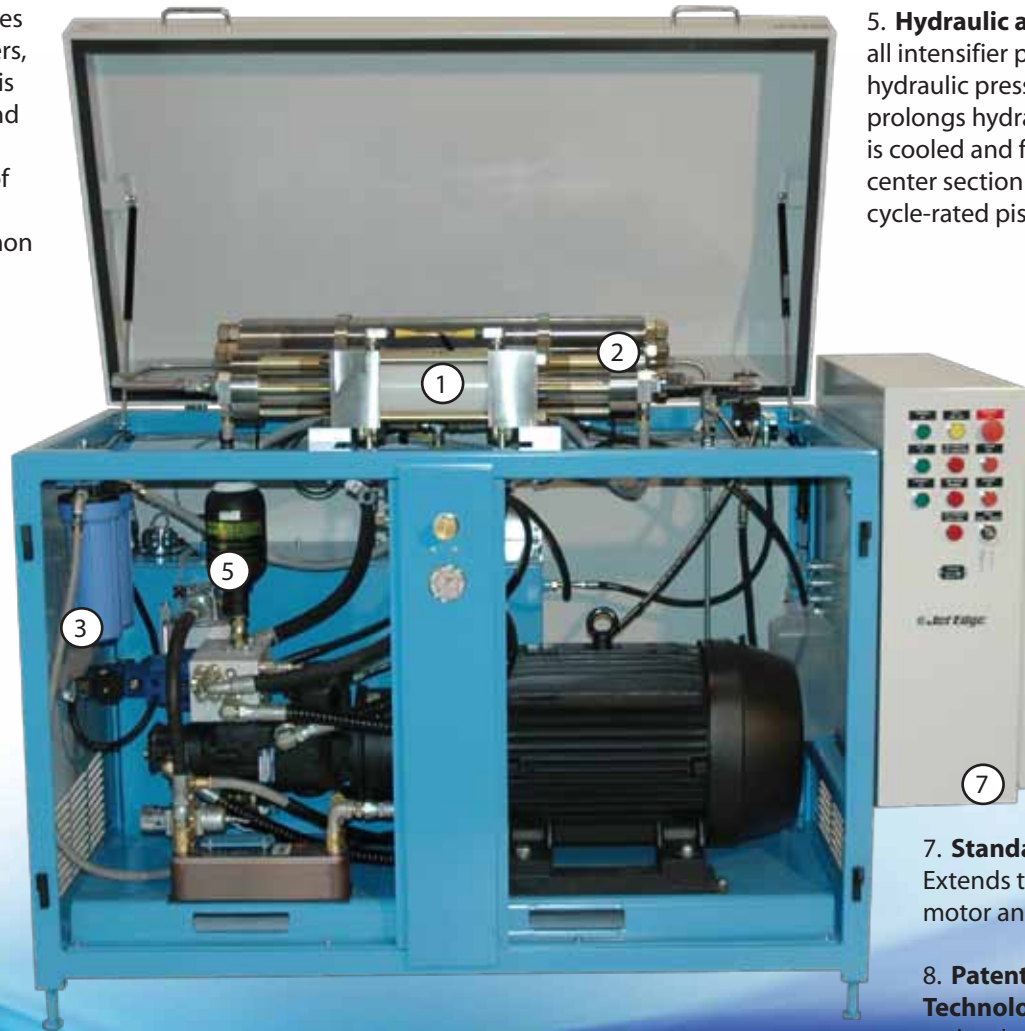
We stand behind our pumps with an industry-leading warranty, free lifetime training, 24/7 service 365 days a year and 99% on-time parts delivery.

1. Reliable Tie-Rod Design eliminates threads on the high pressure cylinders, end caps, and hydraulic cylinders. This reduces the likelihood of cracking and increases component life. Matched-metal components prevent galling of hydraulic components. Intensifier designs allow for the usage of common tools instead of specialized jacking system tools.

2. CE-marked attenuator smoothes pressure fluctuations and delivers constant and steady stream of UHP water.

3. On-board water filtration protects pump components, maximizing machine run time.

4. Easy Operation - Jet Edge pumps can be controlled remotely from the motion controller and have programmable dual pressures.



5. Hydraulic accumulators are standard on all intensifier pumps. This provides smoother hydraulic pressure, reduces spikes and prolongs hydraulic pump life. Hydraulic fluid is cooled and filtered. Rugged hydraulic center section incorporates high duty cycle-rated piston seal and wear rings.

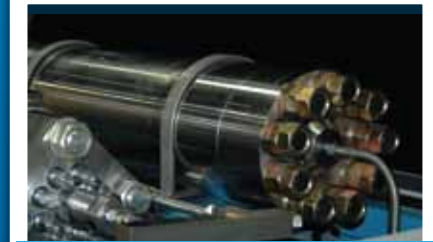
6. Easy Maintenance - Access panels make it easy to maintain the pump. Intensifier components can be accessed without having to get into the hydraulic center section and hydraulic rod seal. Leak detection block indicates seals needing replacement. (optional on some pumps). No special tools required.

7. Standard Wye-Delta motor starter - Extends the life of the high-efficiency motor and minimizes installation costs.

8. Patented Metal-on-Metal Seal Technology - This revolutionary technology eliminates half of the seals needing to be replaced.



Hydraulic Intensifier



Attenuator



Tie-Rod Design



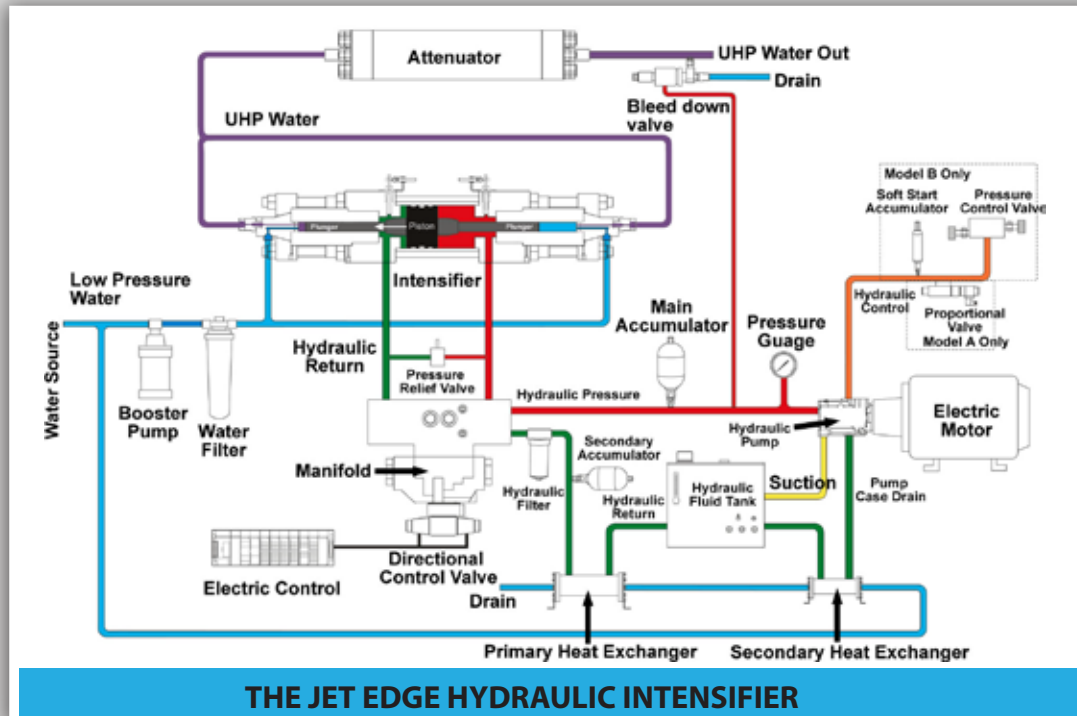
Leak Detection Block

"Jet Edge waterjet intensifier pumps are the best there are. They are the Rolls Royce of ultra-high pressure waterjet pumps."
- Martin Grijpstra, Jet Set Hydro Technics B.V.

JET EDGE WATERJET PUMPS HYDRAULIC INTENSIFIER VS. DIRECT DRIVE

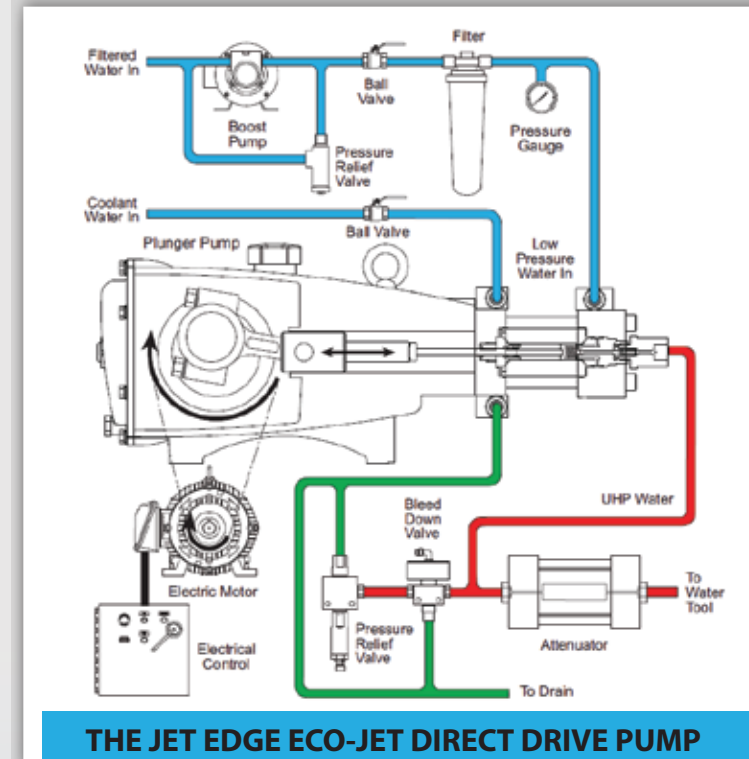
WHAT'S THE DIFFERENCE?

A crankshaft or direct-drive style pump uses a crank to drive the pump's plunger, while an intensifier uses a hydraulic cylinder to drive the plunger. Jet Edge offers both styles of pumps. Each pump has its advantages. Hydraulic intensifiers are less expensive to maintain and last longer, but cost more upfront. Direct drive pumps cost less upfront and use less electricity, but require more maintenance as intensifiers stroke at less than 60 strokes per minute, while direct drives stroke at over 1,000. Each cycle consists of a pressure cycle that goes from 60 psi to 60,000 or 90,000 psi.



The Jet Edge hydraulic intensifier pump acts as an amplifier as it converts the energy from the low-pressure hydraulic fluid into ultra-high pressure water. The hydraulic system provides fluid power to a reciprocating piston in the intensifier center section. A limit switch, located at each end of the piston travel, signals the electronic controls to shift the directional control valve and reverse the piston direction.

The intensifier assembly, with a plunger on each side of the piston, generates pressure in both directions. As one side of the intensifier is in the inlet stroke, the opposite side is generating ultra-high pressure output. During the plunger inlet stroke, filtered water enters the high pressure cylinder through the check valve assembly. After the plunger reverses direction, the water is compressed and exits as ultra-high pressure water and then enters the pressure vessel (attenuator). The attenuator smooths pressure fluctuations from the intensifier and delivers a constant and steady stream of ultra-high pressure water to the cutting or cleaning tool.



Jet Edge's Eco-Jet direct drive positive displacement pump utilizes an electric motor to power a plunger pump. Drive belts connect pulleys on the electric motor and the plunger pump. The drive belts rotate a crank shaft in the plunger pump. The crank shaft cycles three pistons; each piston is connected to a plunger that produces ultra high pressure water in a high pressure assembly.

The crankshaft driven piston inside the plunger pump cycles a plunger in and out of a high pressure cylinder. When the plunger is pulled from the high pressure cylinder, the low pressure cycle begins. When the plunger is pushed into the high pressure cylinder the high pressure cycle begins.

The pressure in the high pressure cylinder increases to overcome the spring pressure on the high pressure poppet. The high pressure poppet moves away from the seat allowing UHP water to flow past the high pressure poppet. The UHP water is output through UHP tubing to an attenuator and made available to a water tool connected to the UHP water circuit.



Jet Edge's Eco-Jet Direct Drive pump features an independent attenuator. This increases component life and cutting speed!



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