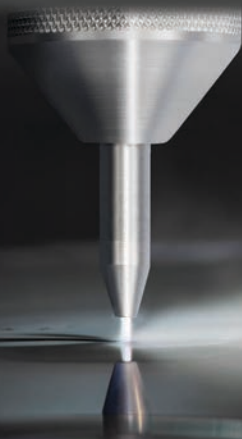




Waterjet Systems
INTERNATIONAL



UNRIVALED DEPENDABILITY IN CUTTING PUMPS, PARTS, AND SERVICE



Waterjet Systems
INTERNATIONAL

Only WSI Handcrafts



WSI Waterjet Systems International is the only waterjet designer and manufacturer to handcraft its high-pressure cutting pumps, components, and replacement parts, which means everything from frame welding to patented technology is created onsite by WSI's skilled team of engineers and machinists.

UNRIVALED DEPENDABILITY IN CUTTING PUMPS, PARTS, AND SERVICE

The WSI Commitment

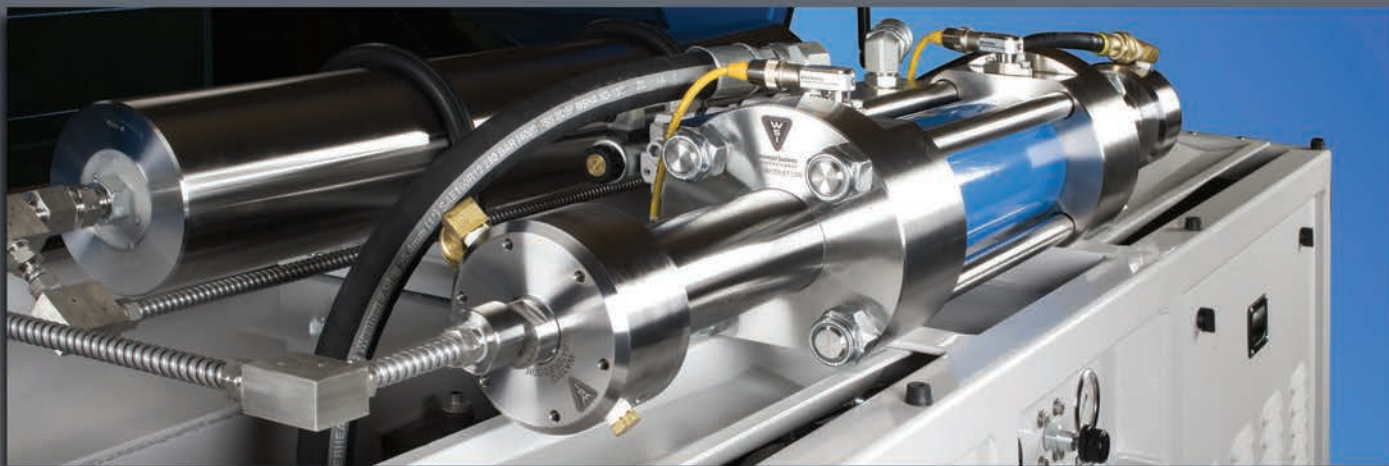
WSI Waterjet Systems International takes pride in being the globally established, recommended, and trusted designer, manufacturer, and servicer of ultra-high-pressure and high-performance waterjet-cutting pumps and replacement parts.

With an internationally unmatched commitment to quality and service, WSI is defined by its unique approach to providing customers with the reliable long-term relationship necessary for the successful operation and maintenance of high-pressure waterjet-cutting pumps, long after the sale.

Worldwide Customer Service and Support



Patented Technology. Next-Generation Performance.



Built on more than 25 years of experience and cutting-edge research and development, all WSI Waterjet Systems International products are made in America, and built to deliver proprietary technology and unrivaled dependability to the world.

WSI's cutting pumps and parts offer reduced operating costs and a longer running life – including its line of preferred replacement parts for use on KMT-style waterjet equipment – which lend to its reputation of great value and pricing for businesses both large and small.

WSI Headquarters, Joplin, MO – USA



Rigorous Quality Control Standards



WSI Waterjet Systems International's attention to detail and rigorous quality control standards are unmatched within the waterjet industry. No part, component, or pump will be branded with the WSI name before passing a meticulous inspection that guarantees both aesthetic and working perfection. It is this strict process that plays into WSI's reputation for having the most durable and dependable waterjet cutting products.

WSI Waterjet Systems International, European Office



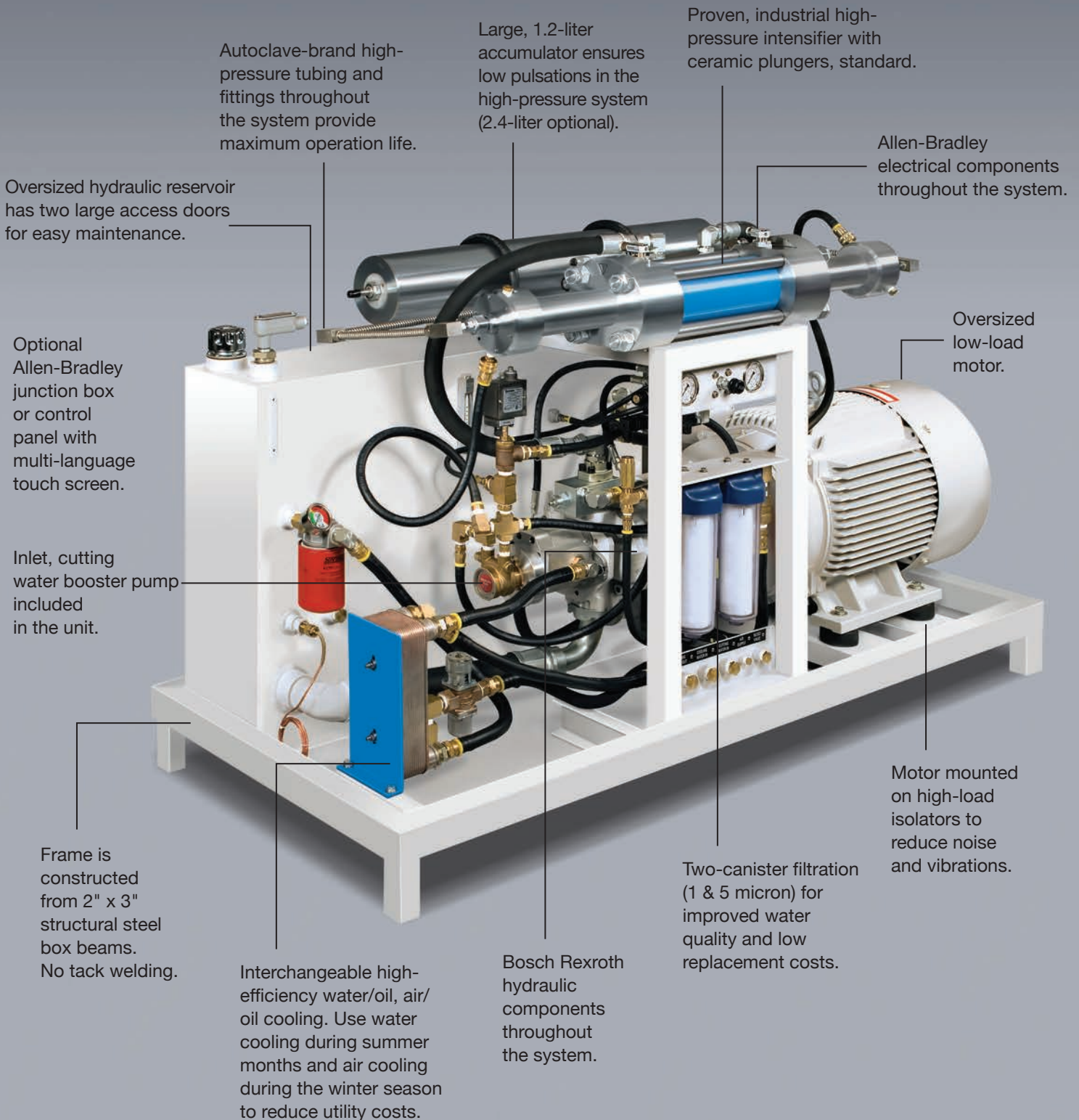
WSI Waterjet Systems International's European office provides a full range of WSI Factory Certified Waterjet Service and Support to WSI's extensive European customer base.

In addition to waterjet service and support, the European office maintains a complete inventory of genuine WSI waterjet replacement parts as well as WSI's extensive line of waterjet spare parts manufactured to replace KMT Waterjet parts.

WSI's European office is centrally located in Bioggio (Lugano-Agno Airport), Switzerland, just 40 minutes north of Milan, Italy.



Pump Features and Advantages

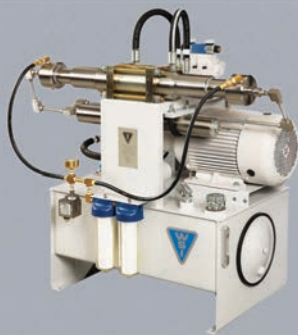


- Slow intensifier speed – Reduces the number of pressure spikes in the system and the number of pressure reversals. Virtually doubles the fatigue life as compared to other waterjet pumps.
- Pneumatic bleed-down assembly for depressurization of the high-pressure system immediately upon shutdown.
- A PLC control panel monitors the system. The control panel includes an Allen-Bradley MicroLogix processor, shutdown enunciators, emergency shutdown, motor starters, overload relays and disconnects in the U.S. models.
- Power-saving soft starter standard on most units
- Low hydraulic oil pressure – 2700 psi / 185 bar.

- Hydraulic recirculation pump provides more efficient cooling and enhanced oil filtration.
- Hydraulic throttle block helps reduce shifting intensity on pressure reversals.
- Dial compensator allows easy control of the cutting pressure.
- Dual compensator provides simple control of the cutting pressure for tasks such as piercing or drilling.
- Hydraulic oil cooling system with full-flow heat exchangers and thermostat-controlled temperature.
- Complete set of spares, special tools, and comprehensive manuals with each unit.
- Bosch Rexroth hydraulic pump and components.

Model WA15:

Small System. Big Performance. Perfect for prototype and straight water applications, the WA15 delivers the same reliable high-pressure as our largest pumps while requiring a fraction of the space and electrical requirements. Basic controls and a compact, yet open design, make the WA15 the most user friendly and easy to maintain member of the WSI family.



Model E50c:

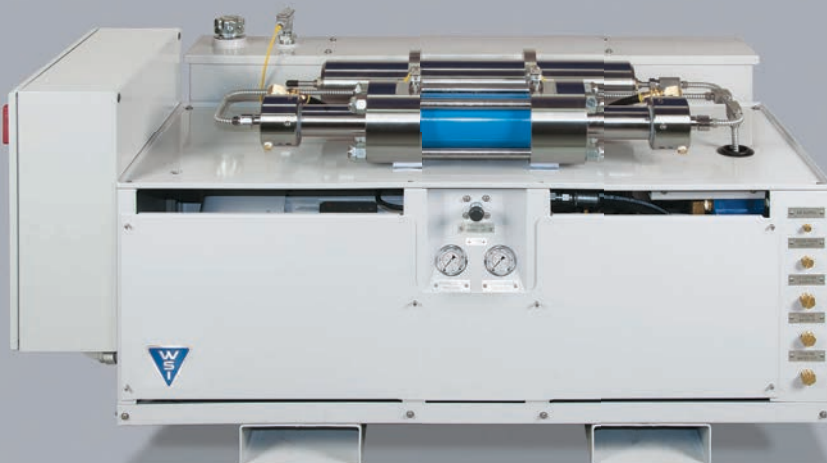
Optional side panels and top cover provide additional sound proofing and protect against external contaminants.



Model V40:

High-End Performance. Low-End Price.

The V40 utilizes WSI's industrially-proven intensifier technology for a fraction of the price and footprint. Designed to serve the waterjet needs of the masses, the V40 maximizes efficiency and output, and is poised to make pump ownership a first-time reality for many businesses.



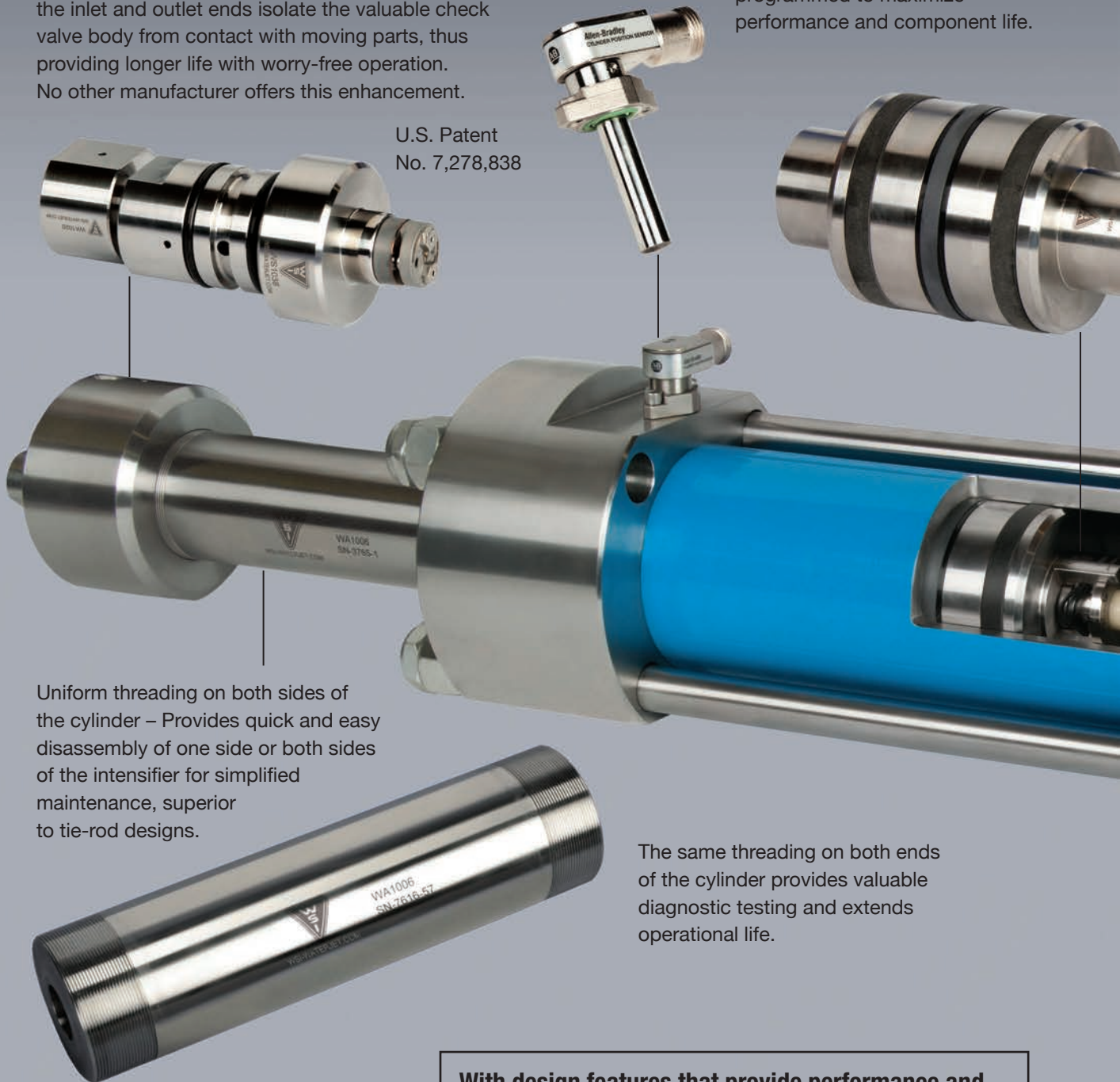


Intensifier Technology

Dura-Check Replaceable Seat Check Valve Assembly – Patented replaceable seats on both the inlet and outlet ends isolate the valuable check valve body from contact with moving parts, thus providing longer life with worry-free operation. No other manufacturer offers this enhancement.

U.S. Patent
No. 7,278,838

Industry-leading Allen-Bradley electronic shifting precisely programmed to maximize performance and component life.



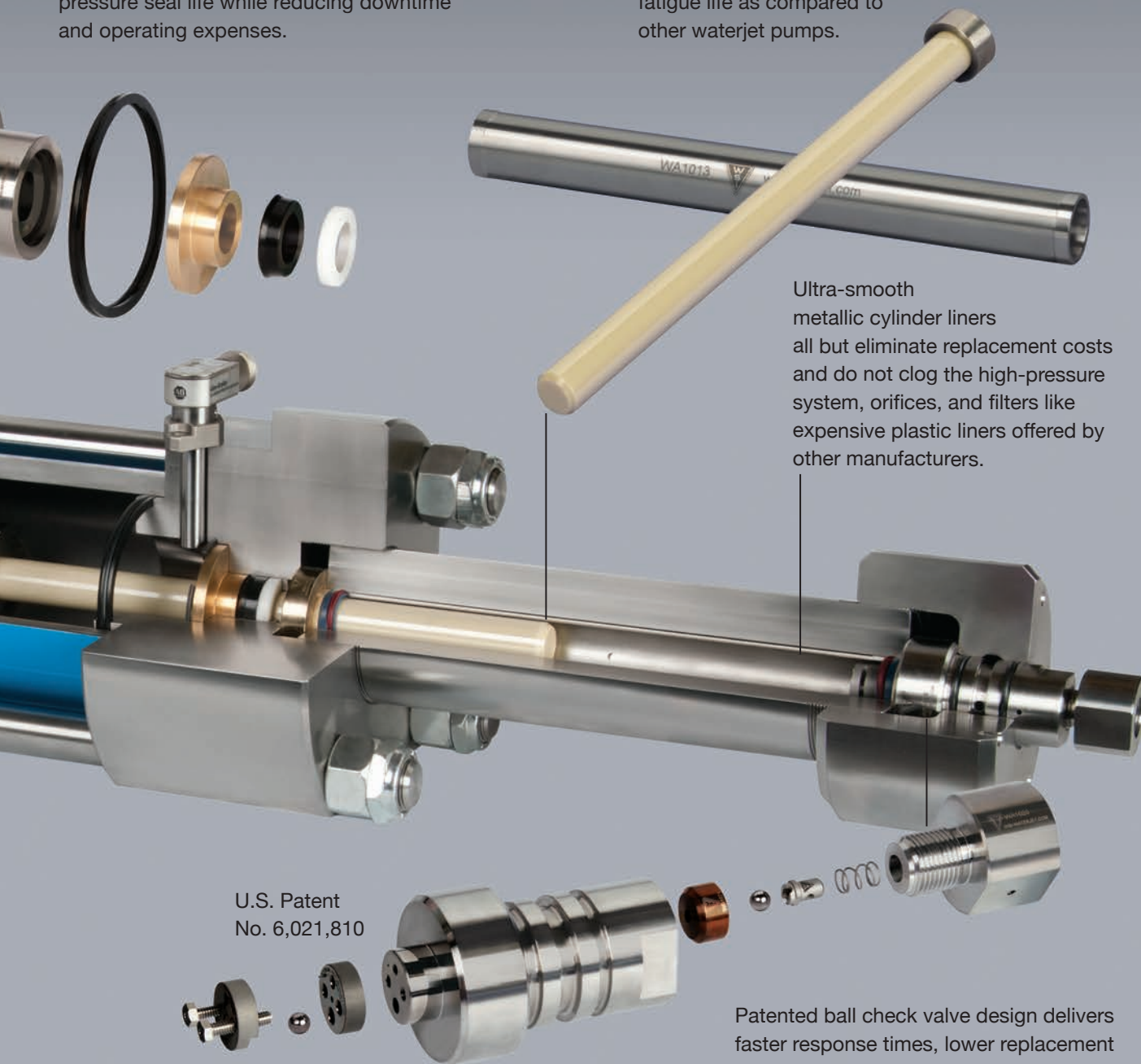
Uniform threading on both sides of the cylinder – Provides quick and easy disassembly of one side or both sides of the intensifier for simplified maintenance, superior to tie-rod designs.

The same threading on both ends of the cylinder provides valuable diagnostic testing and extends operational life.

With design features that provide performance and reliability that are unmatched by our waterjet-cutting competition, WSI's Intensifier Technology is among the most advanced in the world.

WS2002 Hydraulic Drive Assembly – Precision-aligned internal plunger seals offer triple the life as compared to externally accessible hydraulic cartridge designs. This precision alignment also extends high-pressure seal life while reducing downtime and operating expenses.

Large-diameter, ultra-high-sheen ceramic plungers further extend hydraulic and dynamic high-pressure seal life. The longest, slowest cycle rate in the industry reduces pressure spikes in the system and virtually doubles fatigue life as compared to other waterjet pumps.



Ultra-smooth metallic cylinder liners all but eliminate replacement costs and do not clog the high-pressure system, orifices, and filters like expensive plastic liners offered by other manufacturers.

U.S. Patent
No. 6,021,810

Patented ball check valve design delivers faster response times, lower replacement costs, and more forgiving operation.



High-Pressure Waterjet Pumping Systems

WA15



Design Pressure:
60,000 psi (4,140 bars)

Maximum Operating Pressure:
55,000 psi (3,800 bars)

High-Pressure Flow Rate:
0.30 gpm (1.13 lpm)

Intensifier Cycle Rate:
15 cycles/min. at max. flow rate

Electrical System:
Main Motor: 15 hp / 11 kW (TEFC)
208v / 3 ph. / 60 Hz
230v / 3 ph. / 60 Hz
460v / 3 ph. / 60 Hz
380v / 3 ph. / 50 Hz
Air/Oil Heat Exchanger Motor:
1/4 hp / 0.18 kW
120 VAC / 1 ph. / 60-50 Hz
208 VAC / 1 ph. / 60-50 Hz
230 VAC / 1 ph. / 60-50 Hz
Motor Speeds:
1800 rpm @ 60 Hz
1500 rpm @ 50 Hz
Controls:
120 VAC / 24 VDC
Safety Shutdown Circuits:
High Oil Temperature
Low Oil Level
Low Water Pressure

Hydraulic System:
1.71 cu. in. (28 cu. cm) Axial Piston Pump
Max. Pressure: 2,500 psi (172 bars)
Cooling Water Flow Rate: 1 gpm (3.78 lpm)

Low-Pressure Cutting Water System:
Optimum Inlet Pressure: 65 psi (4.50 bar)

Orifice Capacity at 55,000 psi (3,800 bars):
Quantity/Orifice Diameter:
1 – 0.008 in. (0.20 mm)
2 – 0.005 in. (0.12 mm)
3 – 0.004 in. (0.10 mm)

Physical Dimensions:
Height: 55 inches (1.40 meters)
Width: 45 inches (1.14 meter)
Length: 55 inches (1.40 meters)
Weight: 1,200 pounds (544 kg)

E30



Design Pressure:
60,000 psi (4,140 bars)

Maximum Operating Pressure:
55,000 psi (3,800 bars)

High-Pressure Flow Rate:
0.60 gpm (2.27 lpm)

Intensifier Cycle Rate:
22 cycles/min. at max. flow rate

Electrical System:
Main Motor: 30 hp / 22 kW (TEFC)
208v / 3 ph. / 60 Hz
230v / 3 ph. / 60 Hz
460v / 3 ph. / 60 Hz
390v / 3 ph. / 50 Hz
Air/Oil Heat Exchanger Motor:
1/4 hp / 0.18 kW
120 VAC / 1 ph. / 60-50 Hz
208 VAC / 1 ph. / 60-50 Hz
230 VAC / 1 ph. / 60-50 Hz
Motor Speeds:
1800 rpm @ 60 Hz
1500 rpm @ 50 Hz
Controls:
120 VAC / 24 VDC
Safety Shutdown Circuits:
High Oil Temperature
Low Oil Level
Low Water Pressure
Intensifier Over-Speed
Intensifier Stall

Hydraulic System:
2.75 cu. in. (45 cu. cm) Axial Piston Pump
Max. Pressure: 3,000 psi (207 bars)
Cooling Water Flow Rate: 2 gpm (7.56 lpm)

Low-Pressure Cutting Water System:
Optimum Inlet Pressure: 65 psi (4.50 bar)
Booster Pump Setting: 175 psi (12 bars)

Orifice Capacity at 55,000 psi (3,800 bars):
Quantity/Orifice Diameter:
1 – 0.010 in. (0.25 mm)
2 – 0.007 in. (0.17 mm)
4 – 0.005 in. (0.12 mm)

Physical Dimensions:
Height: 46 inches (1.17 meters)
Width: 32 inches (0.81 meter)
Length: 80 inches (2.03 meters) without control panel
Length: 92 inches (2.34 meters) with control panel
Weight: 2,300 pounds (1,043 kg)

V40



Design Pressure:
60,000 psi (4,140 bars)

Maximum Operating Pressure:
55,000 psi (3,800 bars)

High-Pressure Flow Rate:
.80 gpm (3.03 lpm)

Intensifier Cycle Rate:
25 cycles/min. at max. flow rate

Electrical System:
Main Motor: 40 hp / 30 kW (TEFC)
208v / 3 ph. / 60 Hz
230v / 3 ph. / 60 Hz
460v / 3 ph. / 60 Hz
380v / 3 ph. / 50 Hz
Air/Oil Heat Exchanger Motor: 1/4 hp / 0.18 kW
120 VAC / 1 ph. / 60-50 Hz
208 VAC / 1 ph. / 60-50 Hz
230 VAC / 1 ph. / 60-50 Hz
Motor Speeds:
1800 rpm @ 60 Hz
1500 rpm @ 50 Hz
Controls:
120 VAC / 24 VDC
Safety Shutdown Circuits:
High Oil Temperature
Low Oil Level
Low Water Pressure
Intensifier Over-Speed
Intensifier Stall

Hydraulic System:
2.75 cu. in. (45 cu. cm) Axial Piston Pump
Max. Pressure: 3,000 psi (207 bars)
Cooling Water Flow Rate: 2 gpm (7.56 lpm)

Low-Pressure Cutting Water System:
Optimum Inlet Pressure: 65 psi (4.50 bars)
Booster Pump Setting: 175 psi (12 bars)

Orifice Capacity at 55,000 psi (3,800 bars):
Quantity/Orifice Diameter
1 – 0.012 in. (0.30 mm)
1 – 0.010 in. (0.25 mm)
2 – 0.007 in. (0.17 mm)
4 – 0.005 in. (0.12 mm)

Physical Dimensions:
Height: 36 inches (0.92 meter)
Width: 34 inches (0.86 meter)
Length: 59 inches (1.50 meters) without control panel
Length: 70 inches (1.78 meters) with control panel
Weight: 1,625 pounds (737 kg)

E50



Design Pressure:
60,000 psi (4,140 bars)

Maximum Operating Pressure:
55,000 psi (3,800 bars)

High-Pressure Flow Rate:
1.00 gpm (3.78 lpm)

Intensifier Cycle Rate:
22 cycles/min. at max. flow rate

Electrical System:
Main Motor: 50 hp / 37 kW (TEFC)
208v / 3 ph. / 60 Hz
230v / 3 ph. / 60 Hz
460v / 3 ph. / 60 Hz
380v / 3 ph. / 50 Hz
Air/Oil Heat Exchanger Motor:
1/4 hp / 0.18 kW
120 VAC / 1 ph. / 60-50 Hz
208 VAC / 1 ph. / 60-50 Hz
230 VAC / 1 ph. / 60-50 Hz
Motor Speeds:
1800 rpm @ 60 Hz
1500 rpm @ 50 Hz
Controls:
120 VAC / 24 VDC
Safety Shutdown Circuits:
High Oil Temperature
Low Oil Level
Low Water Pressure
Intensifier Over-Speed
Intensifier Stall

Hydraulic System:
4.33 cu. in. (71 cu. cm) Axial Piston Pump
Max. Pressure: 3,000 psi (207 bars)
Cooling Water Flow Rate: 2 gpm (7.56 lpm)

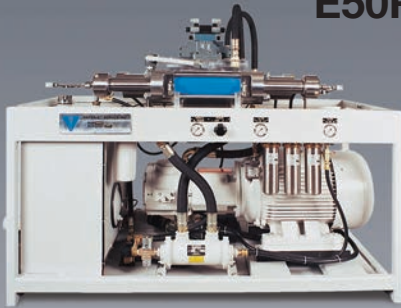
Low-Pressure Cutting Water System:
Optimum Inlet Pressure: 65 psi (4.50 bars)
Booster Pump Setting: 175 psi (12 bars)

Orifice Capacity at 55,000 psi (3,800 bars):
Quantity/Orifice Diameter:
1 – 0.014 in. (0.35 mm)
2 – 0.010 in. (0.25 mm)
4 – 0.007 in. (0.17 mm)
8 – 0.005 in. (0.12 mm)

Physical Dimensions:
Height: 46 inches (1.17 meters)
Width: 32 inches (0.81 meter)
Length: 80 inches (2.03 meters) without control panel
Length: 92 inches (2.34 meters) with control panel
Weight: 2,550 pounds (1,157 kg)

Technical Specifications

E50R

**Design Pressure:**

60,000 psi (4,140 bars)

Maximum Operating Pressure:

55,000 psi (3,800 bars)

High-Pressure Flow Rate:

1.00 gpm (3.78 lpm)

Intensifier Cycle Rate:

22 cycles/min. at max. flow rate

Electrical System:

Main Motor: 50 hp / 37 kW (TEFC)

208v / 3 ph. / 60 Hz

230v / 3 ph. / 60 Hz

460v / 3 ph. / 60 Hz

380v / 3 ph. / 50 Hz

Air/Oil Heat Exchanger Motor: 1/4 hp / 0.18 kW

120 VAC / 1 ph. / 60-50 Hz

208 VAC / 1 ph. / 60-50 Hz

230 VAC / 1 ph. / 60-50 Hz

Motor Speeds:

1800 rpm @ 60 Hz

1500 rpm @ 50 Hz

Controls:

120 VAC / 24 VDC

Safety Shutdown Circuits:

High Oil Temperature

Low Oil Level

Low Water Pressure

Intensifier Over-Speed

Intensifier Stall

Hydraulic System:

4.33 cu. in. (71 cu. cm) Axial Piston Pump

Max. Operating Pressure: 3,000 psi (207 bars)

Cooling Water Flow Rate: 2 gpm (7.56 lpm)

Low-Pressure Cutting Water System:

Optimum Inlet Pressure: 65 psi (4.50 bars)

Booster Pump Setting: 175 psi (12 bars)

Orifice Capacity at 55,000 psi (3,800 bars):

Quantity/Orifice Diameter:

1 – 0.014 in. (0.35 mm)

2 – 0.010 in. (0.25 mm)

4 – 0.007 in. (0.17 mm)

8 – 0.005 in. (0.12 mm)

Physical Dimensions:

Height: 64 inches (1.62 meters)

Width: 36 inches (0.91 meter)

Length: 80 inches (2.03 meters) without control panel

Length: 92 inches (2.34 meters) with control panel

Weight: 3,000 pounds (1,360 kg)

E60

**Design Pressure:**

60,000 psi (4,140 bars)

Maximum Operating Pressure:

55,000 psi (3,800 bars)

High-Pressure Flow Rate:

1.10 gpm (4.15 lpm)

Intensifier Cycle Rate:

24 cycles/min. at max. flow rate

Electrical System:

Main Motor: 60 hp / 45 kW (TEFC)

208v / 3 ph. / 60 Hz

230v / 3 ph. / 60 Hz

460v / 3 ph. / 60 Hz

380v / 3 ph. / 50 Hz

Air/Oil Heat Exchanger Motor: 1/4 hp / 0.18 kW

120 VAC / 1 ph. / 60-50 Hz

208 VAC / 1 ph. / 60-50 Hz

230 VAC / 1 ph. / 60-50 Hz

Motor Speeds:

1800 rpm @ 60 Hz

1500 rpm @ 50 Hz

Controls:

120 VAC / 24 VDC

Safety Shutdown Circuits:

High Oil Temperature

Low Oil Level

Low Water Pressure

Intensifier Over-Speed

Intensifier Stall

Hydraulic System:

4.33 cu. in. (71 cu. cm) Axial Piston Pump

Max. Operating Pressure: 3,000 psi (207 bars)

Cooling Water Flow Rate: 2 gpm (7.56 lpm)

Low-Pressure Cutting Water System:

Optimum Inlet Pressure: 65 psi (4.50 bars)

Booster Pump Setting: 175 psi (12 bars)

Orifice Capacity at 55,000 psi (3,800 bars):

Quantity/Orifice Diameter:

1 – 0.015 in. (0.38 mm)

2 – 0.011 in. (0.28 mm)

5 – 0.007 in. (0.17 mm)

9 – 0.005 in. (0.12 mm)

Physical Dimensions:

Height: 46 inches (1.17 meters)

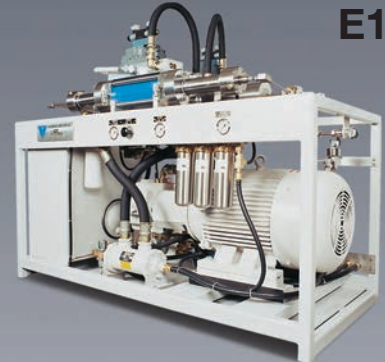
Width: 32 inches (0.81 meter)

Length: 80 inches (2.03 meters) without control panel

Length: 92 inches (2.34 meters) with control panel

Weight: 2,650 pounds (1,202 kg)

E100

**Design Pressure:**

60,000 psi (4,140 bars)

Maximum Operating Pressure:

55,000 psi (3,800 bars)

High-Pressure Flow Rate:

2.00 gpm (7.56 lpm)

Intensifier Cycle Rate:

22 cycles/min. at max. flow rate

Electrical System:

Main Motor: 100 hp / 74 kW (TEFC)

208v / 3 ph. / 60 Hz

230v / 3 ph. / 60 Hz

460v / 3 ph. / 60 Hz

380v / 3 ph. / 50 Hz

Booster Pump Motor: 1/2 hp / 0.37 kW (TEFC)

120v / 1 ph. / 60 Hz

208v / 1 ph. / 60 Hz

230v / 1 ph. / 60 Hz

Motor Speeds:

1800 rpm @ 60 Hz

1500 rpm @ 50 Hz

Controls:

120 VAC / 24 VDC

Safety Shutdown Circuits:

High Oil Temperature

Low Oil Level

Low Water Pressure

Intensifier Over-Speed

Intensifier Stall

Hydraulic System:

8.5 cu. in. (140 cu. cm) Piston Pump

Max. Operating Pressure: 3,000 psi (207 bars)

Cooling Water Flow Rate: 4 gpm (15 lpm)

Low-Pressure Cutting Water System:

Optimum Inlet Pressure: 65 psi (4.50 bars)

Booster Pump Setting: 175 psi (12 bars)

Orifice Capacity at 55,000 psi (3,800 bars):

Quantity/Orifice Diameter:

1 – 0.021 in. (0.53 mm)

2 – 0.014 in. (0.35 mm)

4 – 0.010 in. (0.25 mm)

8 – 0.007 in. (0.17 mm)

Physical Dimensions:

Height: 64 inches (1.62 meters)

Width: 36 inches (0.91 meter)

Length: 80 inches (2.03 meters) without control panel

Length: 92 inches (2.34 meters) with control panel

Weight: 4,300 pounds (1,950 kg)



Dedication and Service, Long After the Sale



WSI Waterjet Systems International is known industry-wide for its unparalleled commitment to service after the sale. Your phone call to WSI will be answered before the third ring by a person instead of a machine. You will be directed immediately to an experienced service technician who stands ready to address your questions quickly and accurately.

Should you ever have additional service questions, you will speak with the same technician, a technician who knows your cutting application, maintenance history, and more importantly, you.

Service assistance is always free of charge and we'll stay with you until all your needs are met.

Worldwide Partner Network



To provide comprehensive solutions and support to our thousands of installations around the world, WSI has established a global network of sales, service, and distribution outlets.

Authorized WSI distributors and service centers stand ready to assist our customers from the United States to Australia, from Switzerland to China, and from Russia to South Africa.

To ensure the highest level of service and facilitate fast, efficient supply of product, Waterjet Systems International will continue to develop new partnerships worldwide.

An Extensive Line of Replacement Parts and Accessories



To ensure the timely fulfillment of replacement part orders, WSI maintains an inventory of virtually all components used in our waterjet systems. As a result, orders are shipped the same business day in which they are received.

Our parts are produced using the highest quality materials and are specifically engineered to work together seamlessly with your original pump as if it were new.

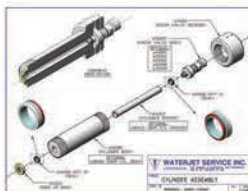
In addition, WSI produces and maintains a complete line of accessory items. Accessories include high-pressure tubing and fittings, on/off valves, swivels, manual cutting stations, and abrasive systems. We also offer consulting services and an extensive OEM network of system integrators to provide you with a variety of cutting solutions.



Complete Web Shop For Your Convenience



[Click here to enlarge image](#)



[Click here to enlarge image](#)

WSI Part number:
Equipment Description:
Drawing Number:
Price (USD)

WS3022
Cylinder Assembly
\$1,460.38

Item#	Description	View	Qty	
WS3022	Cylinder Assembly	View	<input type="text"/>	add

The WSI Store and Customer Center provides a portal where guests can address all aspects of their high-pressure waterjet requirements.

- Manage account and shipping details
- Search for and view parts by part number, description, pump model, and assembly
- View detailed "exploded view" drawings for assistance with part selection and assembly
- Place orders 24 hours a day
- View order history and order statistics
- Convenient "quick order pad" for bulk ordering

Order with convenience and confidence 24 hours a day, 7 days a week, 365 days a year.



Waterjet Systems
INTERNATIONAL

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