



SHAPE TECHNOLOGIES GROUP®

FLOW's 7X combines value and performance in a full-featured pump.



Benefits:

- Highest grade materials provide optimum performance
- Versatile configurations for job shop, paper, food, automotive, aerospace and architectural industries
- Designed and manufactured by the world's ultrahigh-pressure technology leader
- Customer and technical service available around the clock, around the globe

Standard Features:

- Single-bank filter package(1.0 and 0.5) micron filters in series
- Pump frame and utility hook-ups designed for easy installation
- PLC control to monitor shut-down and warning sensors
- Auto bleed-down valve
- USDA-approved for food cutting applications

The FLOW Edge

FLOW combines its 30-plus years of expertise in the water-jet industry with the latest technology to bring you the 7X pump. Backed by unsurpassed quality and reliability field-proven through thousands of systems worldwide, FLOW intensifier pumps such as the 7X offer you continuous operation 24 hours a day, seven days a week.

Environmentally Sound Technology

With the 7X, you also gain the environmental benefits of ultrahigh-pressure waterjet technology. Waterjet cutting uses filtered tap water to cut materials, adding no hazardous substances to the machining process. As a cold-cutting technology, ultrahigh-pressure waterjet cutting eliminates toxic fumes generated by heat. And, the water-jet carries the cut kerf material into a catcher tank, significantly reducing airborne dust. As a result, you run a cleaner, safer operation.

Cutting Performance

FLOW's patented intensifier design and large-volume attenuator offer unmatched pressure stability at the nozzle. The intensifier pump automatically compensates for variable demand with minimal pressure decrease or spikes, resulting in superior cutting quality.

Durable Components

FLOW's patented designs and dedication to research and development produce superior performance and extended service hours for our components. You can feel confident your pump will continue to run at peak efficiency with high-quality, genuine FLOW spare parts and consumables.

The Technology

FLOW's reciprocating intensifier pumps consist of an electric motor, a hydraulic system and a high-pressure intensification system. Hydraulic oil pressure acts on a double-acting piston resulting in a force on a plunger that pressurizes water in a small chamber. Because the ratio of the piston area to the plunger area is constant, output water pressure can be regulated by controlling input hydraulic oil pressure

Available Options

- Filtered and cooling water shutoff solenoids
- Energy efficient motor
- Cooling water control valve
- Warning sensors
- Dual pressure control option

Specifications

Performance - maximum continuous operation

Intensifier

Pressure (bar)[psi]	2,760[40,000]	4,137[60,000]
Ratio	13 : 1	20 : 1
Output flow rate (lpm)[gpm]		
38 KW (50 HP)	5.94[1.57]	3.79[1.00]
45 KW (60 HP)	7.61[2.01]	4.69[1.24]
Orifice diameter (mm)[in]		
38 KW (50 HP)	0.483[0.019]	0.356[0.014]
45 KW (60 HP)	0.559[0.022]	0.406[0.016]

Equipment

Intensifier ESL.....	4,137 bar (60,000 psi)
Intensifier H.O.....	2,758 bar (40,000 psi)

Hydraulic system

Type

Single, 38 KW (50 HP, 60 Hz).....	66 cm ³ [4.0 in ³], heavy duty variable displacement, pressure compensated radial piston pump
Single, 38 KW (50 HP, 50 Hz).....	82 cm ³ [5.0 in ³], heavy duty variable displacement, pressure compensated radial piston pump
Dual, 45 KW (60 HP).....	82 cm ³ [5.0 in ³], heavy duty variable displacement, pressure compensated radial piston pump

Hydraulic oil reservoir capacity (approx.)..... 140 liters [37 gallons]

Hydraulic oil filtration efficiency/type..... B10=44/full flow

Hydraulic oil

Type..... Oil to water heat exchanger

Cooling water flow rate..... 10-20 lpm[3-6 gpm]

Attenuator size..... 2,032 cm³[124in³]

Electric Motors Available

	50 Hz	60 Hz
Voltage (VAC)	190,380	208,230,460,575
Current (full load amps)		
38 KW (50 HP)	156,77	142,138,64,51
45 KW (60 HP)	177,89	169,154,77,62

General

Pumped fluid.....	Water
Intensifier.....	High output intensifier with extended life components
Required inlet water pressure, 50 and 60 horsepower.....	>0.7 bar[10 psi]
Weight.....	999 Kg[2,200 lbs]
Overall dimensions.....	160.6 x 90.2 x 147.3 cm[63.25 x 36.5 x 58 inches]

FLOW is the world's leading developer and manufacturer of ultrahigh pressure waterjet technology for cutting and cleaning applications.

FLOW provides total system solutions for industries including electronic, metal, aerospace, paper, job shop, automotive, ceramics and surface preparation.



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