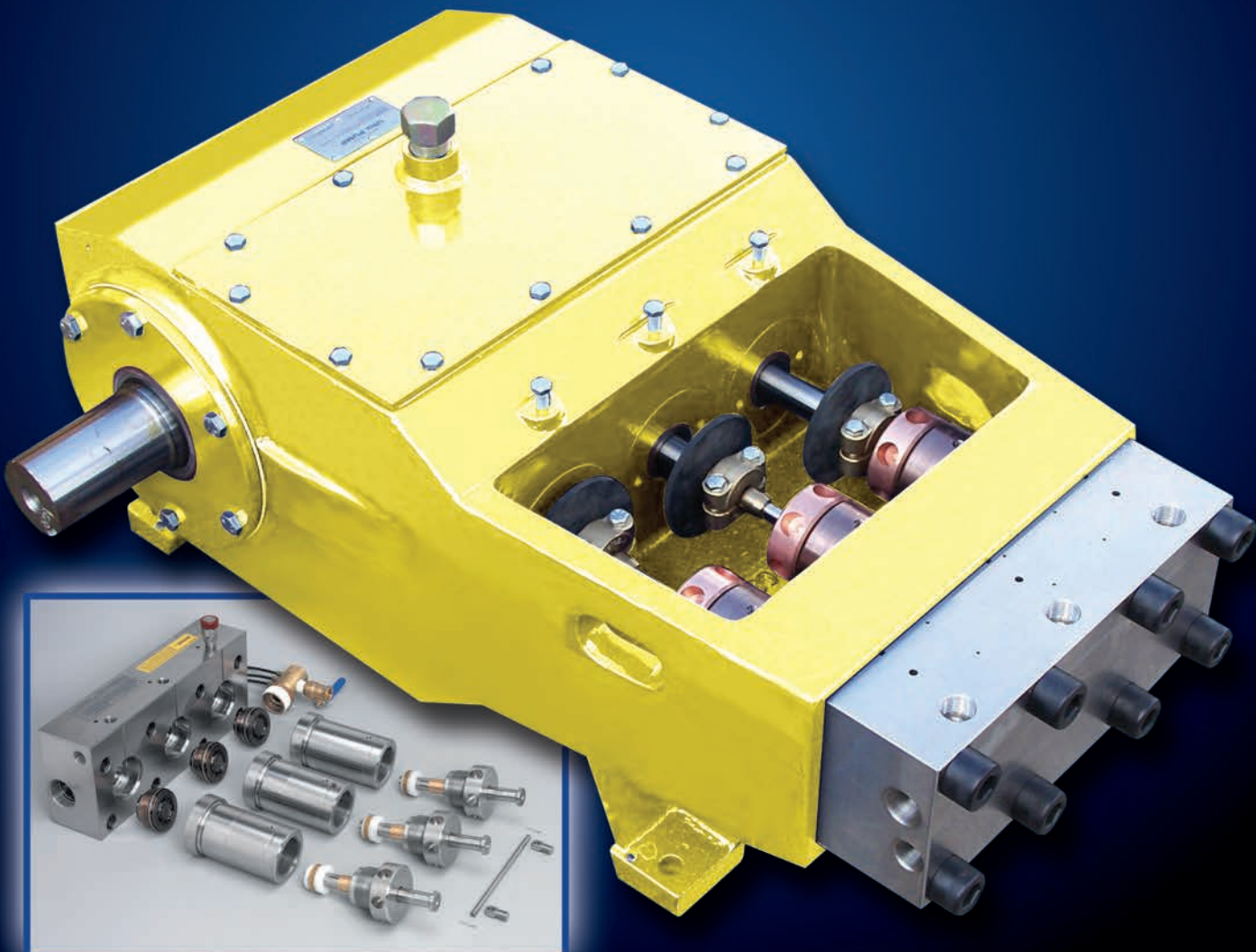




Jetstream[®]

Subsidiary of Federal Signal Corporation

UNx[™] Bareshaft Pumps and Fluid Ends



COMPANY HISTORY



24/7
SUPPORT PROGRAM

Anytime Support!

The 24/7 Support Program provides Jetstream customers uninterrupted access to critical parts and accessories, service and expertise to keep the job running, no matter the time of day.

(713) 302-7718

After Hours Support Hotline

(800) 231-8192

(832) 590-1300

Jetstream Support

Standard business hours 7 am – 6 pm CST

Jetstream of Houston is a **leading supplier of innovative Waterblasting solutions for a wide range of applications** including – industrial cleaning, surface preparation, hydro-demolition and abrasive waterjet cutting.

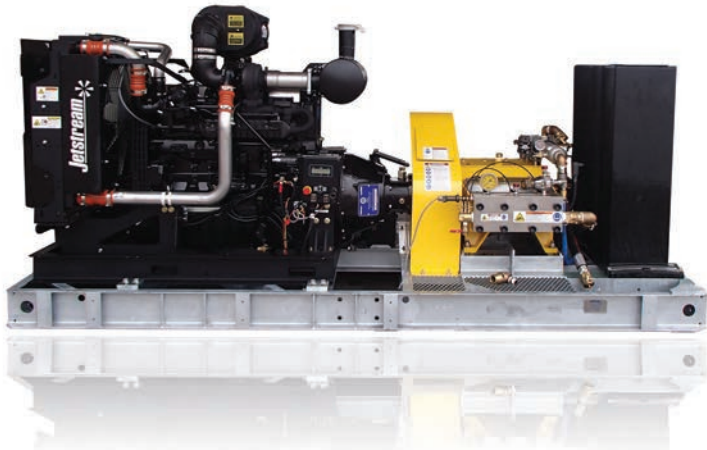
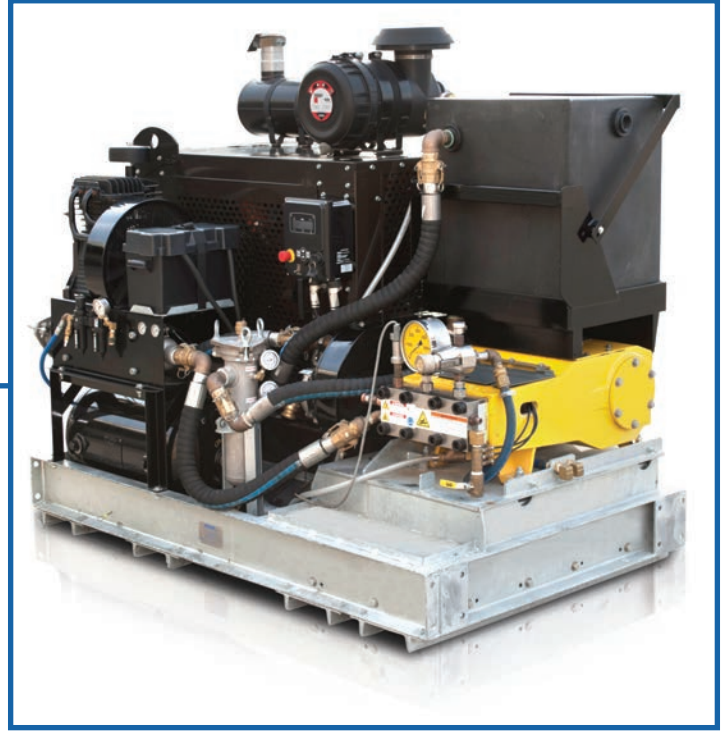
Jetstream is committed to providing customers with **safe, sure, simple solutions** in everything we do. Our total waterblasting solutions include:

- Manufacture and distribution of **quality industrial high-pressure Waterblasting** units, pumps, parts and accessories; that are all built to last and easy to maintain
- Lead the way with an approved **Visual Safety System (VSS)** color coding on most Waterblasting components for safer operation within each pressure zone
- Provide a wide range of application appropriate **automation tools** – for **safe, hands-free** cleaning
- Share **Application Expertise** with customers for the best total solution approach for maximum productivity
- Train – operators on the **application, product operation and safety**
- **Rentals** for short term jobs or rent to own – units, accessories, automation tools – complete with training
- **Service equipment** with experienced technicians, **provide 24/7 support by telephone and ship parts quick** (most same day)



JETSTREAM UNITS

IX100 Units – The IX100 incorporates a host of features to serve a global market without compromising our commitment to provide products that are simple to operate and maintain, dependable and versatile machine to operators around the world. The IX100 is offered on a stationary skid with engine power of 125HP (93kW) providing pressures from 8,000 psi (550 bar) to 40,000 psi (2750 bar) providing flows of 4.76 gpm (18 lpm) to 23.5 gpm (89 lpm).



X-Series Units – X-Series diesel waterblast systems are available in both skid and trailer configurations. Every detail of the X-Series was engineered to minimize maintenance and provide the world with the most productive and versatile waterblaster on the market today. The high performance diesel engines are available in engine powers from 80 HP (60 kW) to 600 HP (447 kW). X-Series units can be offered skid-mounted or on a trailer.



Electric Units – Ideal for industrial plants and military environments, electric waterblasters have been manufactured for in-plant installations configured to user requirements. Motor sizes range from 60 HP (44 kW) to 600 HP (447 kW). (T.E.F.C. available)

UNx BARESHAFT PUMPS



UNx Bareshaft Pumps | Features and Benefits

The Jetstream UNx Bareshaft pumps provide unrivaled durability and strength. The pump is capable of power inputs up to 600 horsepower (447 kiloWatts) and coupled with the best Jetstream UNx fluid end, provides flow rates approaching 115 gpm (435 lpm). Jetstream bareshaft pumps are the best choice for those building their own system or replacing a complicated, worn, or unreliable pump.

The following UNx Bareshaft Pumps are available:

- 6000 Series: 600 HP (447 kW) @ 46.1 gpm (174.5 lpm)
- 4200 Series: 325 HP (242 kW) @ 11.9 gpm (45 lpm)
- 3600 Series: 170 HP (126 kW) @ 6.7 gpm (25.7 lpm)
- 3000 Series: 125 HP (93 kW) @ 5.4 gpm (19.7 lpm)

Fourteen different pump displacement levels are available within the four series.

Power End:

- Ductile iron power frame is the strongest in the industry
- Heat treated billet alloy steel crankshaft
- Largest bearings of any pump on the market

UNx Fluid End:

- Superior performance
- Greater flexibility
- Reduced downtime and maintenance

6000 Series: The Jetstream 6000 series waterblast pump is the most advanced and efficient compact pump in the industry providing powerful performance and dependable reliability needed to meet heavy-duty demands of continuous operation, while keeping maintenance to a minimum. The flexible, easily-convertible pump meets your needs in any application. Pressures ranging from 8,000 psi (551 bar) to 20,000 psi (1379 bar) with flows from 115.4 gpm (437 lpm) to 46.1 gpm (174.5 lpm).

Dimensions: 64.9 in (1648 mm) x 43.2 in (1097 mm) x 28.6 in (726 mm)

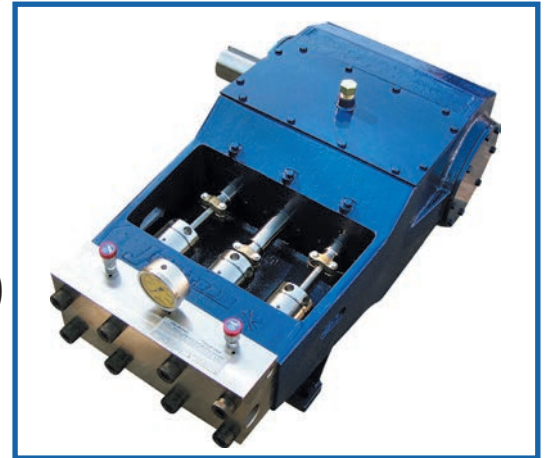


UNx Bareshaft Pumps Specifications:

PRESSURE		MAX POWER INPUT		PLUNGERS			CONNECTION TYPE		PUMP RPM		MAX FRAME LOAD		TOTAL WEIGHT		PUMP OIL		
psi	bar	hp	kW	#	Stroke		Discharge Port	Top Ports	Range*		lb	kN	lb	kg	Type	Capacity	
					in	mm										gal	l
20000	1379	600	447	3	5.51	140	Jetstream HHP		100	457	28775.5	128	2800	1270	150-320	11.9	45
15000	1034	600	447	3	5.51	140	Jetstream HF		100	457	28775.5	128	2800	1279	150-320	11.9	45

4200/3600 Series: Jetstream's 4200/3600 series pumps are simple, durable and reliable; exceeding customer's needs. With trouble-free pressure conversions and competitor upgrades, the Jetstream UNx Fluid End compliments the power end to make it the best choice for any application. Pressures range from 5000 psi (344 bar) with flows at 45.4 gpm (172 lpm) to 40000 psi (2750 bar) with flows at 11.9 gpm (45 lpm).

Dimensions: 50.56 in (1284 mm) x 34.41 in (874 mm) x 20.88 in (530 mm)



UNx Bareshaft Pumps Specifications:

4200 Series

PRESSURE		MAX POWER INPUT		PLUNGERS			CONNECTION TYPE		PUMP RPM		MAX FRAME LOAD		TOTAL WEIGHT		PUMP OIL		
psi	bar	hp	kW	#	Stroke		Discharge Port	Top Ports	Range*		lb	kN	lb	kg	Type	Capacity	
					in	mm										gal	l
40000	2750	325	242	3	4.25	108	40K Pump Female	40K Port Female	174	518	17500	77.84	1800	820	80W-90	9	34
20000	1379						20K Port Female										
15000	1034						3/4" NPT Female	1/2" NPT Female									

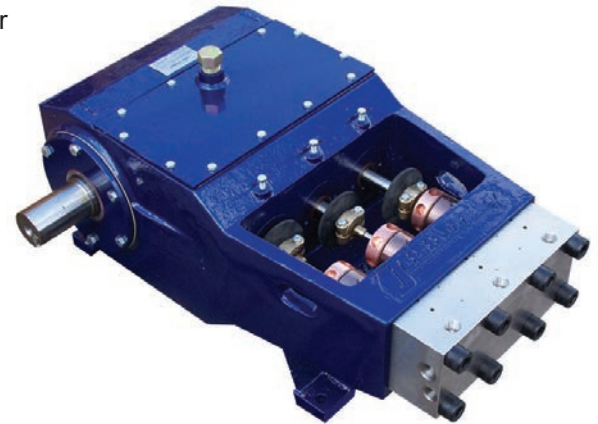
3600 Series

PRESSURE		MAX POWER INPUT		PLUNGERS			CONNECTION TYPE		PUMP RPM		MAX FRAME LOAD		TOTAL WEIGHT		PUMP OIL		
psi	bar	hp	kW	#	Stroke		Discharge Port	Top Ports	Range*		lb	kN	lb	kg	Type	Capacity	
					in	mm										gal	l
40000	2750	200	149	3	3.6	92	40K Pump Female	40K Port Female	182	550	11300	50.26	1720	780	80W-90	9	34
20000	1379						20K Port Female										
15000	1034						3/4" NPT Female	1/2" NPT Female									

UNx BARESHAFT PUMPS

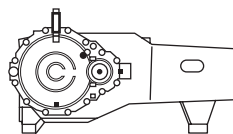
3000 Series: The advanced 3000 series low horsepower (kiloWatt) pumps were built with the standard Jetstream design combining strength and durability through the ductile iron power frame, the strongest in the industry. These pumps have the largest bearings of any comparable pump on the market. Pressures ranging from 6000 psi (413 bar) to 40,000 psi (2750 bar) with flows from 23.2 gpm (87.8 lpm) to 4.7 gpm (17.8 lpm).

Dimensions: 38.7 in (983 mm) x 25.27 in (642 mm) x 16.38 in (416 mm)

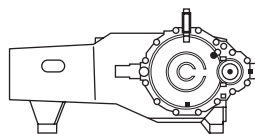


UNx Bareshaft Pumps Specifications:

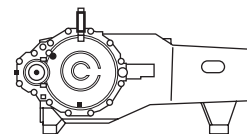
PRESSURE		MAX POWER INPUT		PLUNGERS			CONNECTION TYPE		PUMP RPM		MAX FRAME LOAD		TOTAL WEIGHT		PUMP OIL		
psi	bar	hp	kW	#	Stroke		Discharge Port	Top Ports	Range*		lb	kN	lb	kg	Type	Capacity	
					in	mm											
40000	2750	190	142	3	3	76.2	40K Pump Female	40K Port Female	150	600	9500	42.25	970	440	80W-90	5	19
20000	1379						20K Port Female										
15000	1034						1/2" NPT Female	1/2" NPT Female									



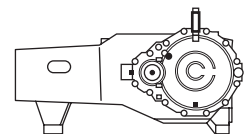
3 O'CLOCK LEFT



3 O'CLOCK RIGHT



9 O'CLOCK LEFT



9 O'CLOCK RIGHT

Gear Box:

External Gear Drives are available on the 4200/3600/3000 series pumps. An external, robust gear drive system provides a compact, trouble-free power transmission. It permits direct coupling of the UNx pump to the engine.

- Available in various ratios to suit any engine or motor
 - 3000 Standard: 4.00:1, 3.67:1, 3.00:1, 2.50:1
 - 4200/3600 Standard: 4.31:1, 3.53:1, 2.91:1; Special Order: 4.00:1
- Five clocking positions available on each side of the power end
- Eliminates belts and large sheaves
- Helical gears for low noise and vibration
- Available with 12V or 24V cooling fans (4200/3600 Series)
- Self contained lubrication system; no external oil plumbing
- Gear ratios available for all common power sources



UNx FLUID ENDS

UNx Fluid Ends

Features and Benefits

The Jetstream UNx fluid end is available in pressures ranging from 6,000 psi (413 bar) to 40,000 psi (2750 bar). They are also available as a conversion package for popular pump models or as an addition to an existing Jetstream 3000, 3600, 4200, or 6000 pump.

Every UNx Fluid End Features:

Serviceability

- Reduced downtime and maintenance
- Five minute packing change (3000/3600/4200); Seven minute packing change (6000)
- Fifteen minute pop-out valve cartridge change
- No special tools or equipment required
- Plungers clamped, not threaded

Simplicity

- Fewer parts than other competitor fluid ends
- Uni-valve one-piece cartridges include suction & discharge valves, seats, springs and seals
- Swing-down manifold for easy access to components

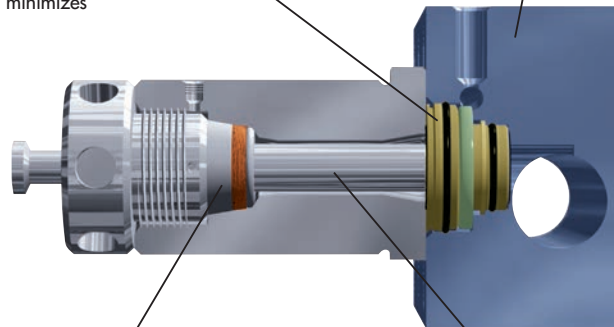
Simple & Dependable

Uni-Valve™ Cartridge

- self-contained suction and discharge valve assembly
- slip-fit for easy maintenance
- in-line design minimizes turbulence

Swing-Down Manifold

- easy access to valves
- weep holes indicate source of seal leaks



Plunger Packing Set

- three-piece and one-piece packing
- tapered for easy removal
- water lubricated — no oil

Clamp-Style Plungers

- specifically designed for the rigors associated with each operating pressure
- clamp-on design for easy maintenance

Serviceable

Fewer parts ... faster servicing. No special tools or equipment required.



- 5-minute packing change*



- 15-minute valve cartridge change*

*Times for 3000/3600/4200 model

Versatility

- Fast in-the-field pressure range conversion with simple bolt-on Jetstream UNx Fluid Ends
- Convertibility of the UNx design allows one unit to do the work that another manufacturer would require multiple units or several hours of downtime to perform

UNx FLUID END UPGRADES

Jetstream has created a wide variety of UNx Fluid End conversions to adapt to your existing competitor pump. The upgrade delivers all of the benefits of the UNx Fluid End design:

- Superior performance
- Greater flexibility in the field
- Reduced downtime and maintenance

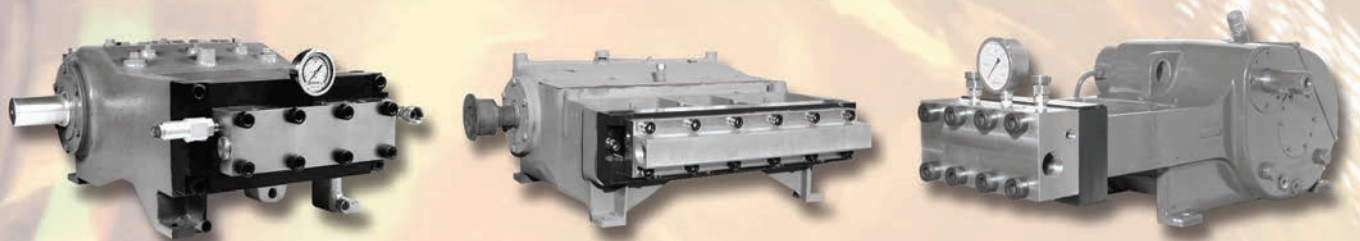
Conversions Available:

Other upgrades are available upon request

Jetstream UNx Fluid End Model	Manufacturer	Manufacturer Model	Pump Description
15K, 20K, 40K	Butterworth/Gardner Denver	L-375, T-375, I-375, TF-375, L-130	Triplex
15K, 20K		L-74, L-300	Triplex
15K, 20K		L-450, TF-450	Triplex
15K		L-450, T-450, TF-450, L-200, TF-450	Triplex
15K		L-77	#9 Triplex
40K		L-450, TF-450	Triplex
15K, 20K, 40K	NLB	10150, 10200, 10225, 15203, 20153, 20156, 20203, 20225, 24155, 24205, 24225, 40201, TD-120	Triplex
15K, 20K, 40K		10250, 20253, 36250, QD-200 (power end)	Quintuplex
20K, 40K		1012, 10120	Triplex
15K		1012C, 1012D, TD-60 (power end)	Triplex
15K	Tritan	3310SS, 3310WSS, P-313, P-323, P-330A	Triplex
20K		P313	Triplex
15K	Weatherford	FE85	#7 Triplex
20K		FE85, TD60	Triplex
20K		FS105, QD100, MB10125	Quintuplex
20K	Weathley, Tritan	W:HP125, T: 5127	Quintuplex
15K, 20K, 40K	Woma	1502, 1503	Triplex
15K, 20K, 40K		150-Z	Triplex
40K		180-M	Triplex

Euro Conversion Packages: Jetstream has also packaged many of our standard fluid ends into inclusive packages that include the following European option items:

- Euro Filter Package
- Euro Lube Harness
- Euro Bypass Valve
- Dual Pressure Gauge



PERFORMANCE SPECIFICATIONS

Jetstream has a wide variety of pump specifications to accommodate all pressures and flow rates required. Through the Jetstream convertible pumps, we have the most productive options on the market, giving you the power to switch from 15,000 psi (1034 bar) to 20,000 psi (1379 bar) to 40,000 psi (2750 bar), and all sizes in between, in only a matter of minutes. As a result, one pump does the work of three, reducing your overall cost of operation. *For specific part numbers and available pressures/flows, reference the Jetstream 15K, 20K and 40K catalogs.

Diesel System Performance Specifications

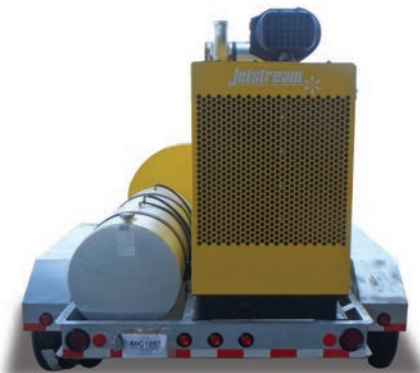
X3000 Series	110 HP	Pressure (psi)	6,000	7,500	10,000	12,500	15,000	20,000	-	36,000	40,000
		Plunger Size (no.)	11	10	9	8	7	6	-	5	5
		Flow (gpm)*	23.2	18.4	14.9	11.8	9.9	11.2	-	9.9	4.3
125 HP	Pressure (psi)	6,000	7,500	10,000	12,500	15,000	20,000	36,000	36,000	40,000	
	Plunger Size (no.)	-	11	10	9	8	7	6	5	5	
	Flow (gpm)*	-	23.3	18.4	14.9	11.8	9.7	6.1	5.2	4.9	
X3600 Series	150 HP	Pressure (psi)	5,000	7,500	10,000	12,500	15,000	20,000	-	30,000	40,000
		Plunger Size (no.)	15	13	11	10	9	8	-	-	-
		Flow (gpm)*	45.4	31.2	23.2	18.6	15.7	11.7	-	-	-
170 HP	Pressure (psi)	6,000	7,500	10,000	12,500	15,000	20,000	-	30,000	40,000	
	Plunger Size (no.)	15	13	12	11	10	8	-	7	6	
	Flow (gpm)*	45.2	35.6	27.0	21.4	18	12.9	-	9.1	6.8	
X4200 Series	215 HP	Pressure (psi)	6,000	8,000	10,000	12,500	15,000	20,000	-	30,000	40,000
		Plunger Size (no.)	15	13	12	11	10	9	-	7	6
		Flow (gpm)*	50.3	39.8	32.2	27.0	21.5	17.0	-	10.0	8.0
250 HP	Pressure (psi)	6,000	8,000	10,000	12,500	15,000	20,000	-	30,000	40,000	
	Plunger Size (no.)	16	15	13	12	11	10	-	8	7	
	Flow (gpm)*	62.1	48.6	38.7	31.3	26.3	19.4	-	11.9	9.7	
325 HP	Pressure (psi)	6,000	8,000	10,000	12,500	15,000	20,000	-	30,000	40,000	
	Plunger Size (no.)	-	16	15	13	12	11	-	-	8	
	Flow (gpm)*	-	62.1	50.1	39.7	32.0	25.1	-	-	11.9	
X6000 Series	500 HP	Pressure (psi)	6,000	8,000	12,500	15,000	20,000	-	-	-	-
		Plunger Size (no.)	21	19	16	-	-	-	-	-	-
		Flow (gpm)*	115.5	92.8	64.1	-	-	-	-	-	-
600 HP	Pressure (psi)	8,000	10,000	12,500	15,000	20,000	-	-	-	-	
	Plunger Size (no.)	21	19	16	15	13	-	-	-	-	
	Flow (gpm)*	115.4	92.8	64.1	61.7	46.1	-	-	-	-	

* Flow values assume up to 10% inefficiency resulting from mechanical power transfer and do not account for compressibility of water. Actual output will vary based on the performance specifications of the engine (or motor), drive sheave ratio, and actual working pressure.



Electric System Performance Specifications

X3000 Series	60 HP	Pressure (psi)	6,000	7,500	10,000	12,500	15,000	20,000	-	-	-
		Plunger Size (no.)	11	10	9	8	7	6	-	-	-
		Flow (gpm)**	16.9	13.3	10.8	8.5	7.2	5.4	-	-	-
75 HP	Pressure (psi)	6,000	7,500	10,000	12,500	15,000	20,000	-	-	-	
	Plunger Size (no.)	11	11	10	9	8	7	-	-	-	
	Flow (gpm)**	16.9	16.9	13.3	10.8	8.5	6.5	-	-	-	
100 HP	Pressure (psi)	6,000	7,500	10,000	12,500	15,000	20,000	-	-	-	
	Plunger Size (no.)	11	11	10	9	8	7	-	-	-	
	Flow (gpm)**	21.3	21.3	16.8	13.6	10.8	8.2	-	-	-	
125 HP	Pressure (psi)	6,000	7,500	10,000	12,500	15,000	20,000	-	-	-	
	Plunger Size (no.)	11	11	11	10	9	7	-	-	-	
	Flow (gpm)**	21.3	21.3	21.3	16.8	13.6	8.2	-	-	-	
X3600 Series	125 HP	Pressure (psi)	6,000	7,500	10,000	12,500	15,000	20,000	30,000	35,000	40,000
		Plunger Size (no.)	15	13	12	11	10	8	-	-	6
		Flow (gpm)**	34.1	27.0	21.8	18.3	14.5	9.7	-	-	5.4
150 HP	Pressure (psi)	6,000	7,500	10,000	12,500	15,000	20,000	30,000	35,000	40,000	
	Plunger Size (no.)	15	13	12	11	10	8	8	7	6	
	Flow (gpm)**	38.7	30.6	24.8	20.8	16.5	11.0	9.2	7.7	6.2	
X4200 Series	200 HP	Pressure (psi)	6,000	7,500	10,000	12,500	15,000	20,000	30,000	35,000	40,000
		Plunger Size (no.)	15	13	12	11	10	9	8	8	7
		Flow (gpm)**	43.2	43.2	34.2	27.6	23.2	15.5	10.2	10.2	8.6
250 HP	Pressure (psi)	6,000	7,500	10,000	12,500	15,000	20,000	30,000	35,000	40,000	
	Plunger Size (no.)	15	15	15	13	12	10	8	8	8	
	Flow (gpm)**	41.9	41.9	41.9	33.2	26.8	17.9	10.0	10.0	10.0	
X6000 Series	500 HP	Pressure (psi)	6,000	8,000	12,500	15,000	20,000	-	-	-	-
		Plunger Size (no.)	21	19	16	-	-	-	-	-	-
		Flow (gpm)**	115.5	92.8	64.1	-	-	-	-	-	-
600 HP	Pressure (psi)	8,000	10,000	12,500	15,000	20,000	-	-	-	-	
	Plunger Size (no.)	21	19	16	15	13	-	-	-	-	
	Flow (gpm)**	115.4	92.8	64.1	61.7	46.1	-	-	-	-	



** Depending on the application, there are other belt and sheave combinations that may be applicable for more horsepower or utilization.

PUMP ACCESSORIES

Jetstream offers recommended pump and fluid end parts to ensure a safe and uninterrupted workday. From spare parts packages to filters to pump tools, necessary and optional parts associated with the bareshaft pump and fluid end are provided by Jetstream. These parts are the skeleton to the functionality of the fluid end. Easily maintained parts ensure the pump is performing at required pressures throughout the entire job.

Pump Spare Parts Packages

A must-have for field repairs, the pump spare parts packages include all major fluid end replacement parts in one place for easy transport and storage. These packages are available for most 15K (1034 bar), 20K (1378 bar) and 40K (2750 bar) UNx fluid ends. Each kit is packaged in a top-of-the-line, waterproof Pelican® case with tough custom foam inlay.



Package Contents

- 1 or 3 Plungers (dependent upon the kit ordered)
- 3 Uni-Valves
- 3 Packing Sets
- 3 Uni-Valve Seal Kits
- 10 Burst Discs (five each at primary and secondary relief pressures, or ten at the same relief pressure if only one rupture disc holder is used)
- Locking waterproof case and keys

Plunger Packages

Plunger packages only include the items needed to convert an existing UNx pump to another pump size. This kit is ideal to have on-hand for a quick and cost-effective conversion for jobs that require higher flow at lower pressures or higher pressure at lower flows.

Package Contents

3 of each for triplex or 5 of each for quintuplex

- Plungers
- Packing sets
- Gland nuts
- Stuffing boxes (when needed)

PUMP ACCESSORIES

Jetstream can provide a TOTAL SOLUTION for your new UNx bareshaft pump, UNx fluid end or your UNx fluid end upgrade for a competitor pump. Pump Accessories include, but not limited to, the following parts:

- Fluid end spare parts packages
- Pump tools (wrenches, studs, lubricants)
- Filters and filter assemblies
- Pressure gauges
- Rupture disc assembly and discs
- Valves (bypass, air-operated, hydraulic, multi-gun valves)
- Hydro-throttle assemblies
- Multi-unit manifold
- Hydrostatic test valve (HTV)



Jetstream products are also sold and serviced by FS Solutions, with 12 convenient locations across the U.S. FS Solutions provides high-performance parts, accessories, Jetstream rentals, repair, rebuild and safety training.

Gonzales, LA
(225) 647-0660

Highland, IN
(219) 924-3180

Lakewood, WA
(253) 584-0653

LaPorte, TX
(281) 674-8668

Streator, IL
(815) 672-6028

Toledo, OH
(888) 415-7368

Williston, ND
(701) 572-7421

Leeds, AL
(800) 822-8785

Lexington, SC
(803) 996-0741

Long Beach, CA
(866) 515-9891

New Brunswick, NJ
(732) 448-7830

Midland, TX
(432) 563-4450



Jetstream of Houston, LLP

5905 Thomas Rd. • Houston, TX 77041

Phone: (832) 590-1300 • Fax: (832) 590-1304 • Toll Free: (800) 231-8192

www.waterblast.com

P/N JSM-63799 5/2016

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