

WARMAN®

Centrifugal Slurry Pumps

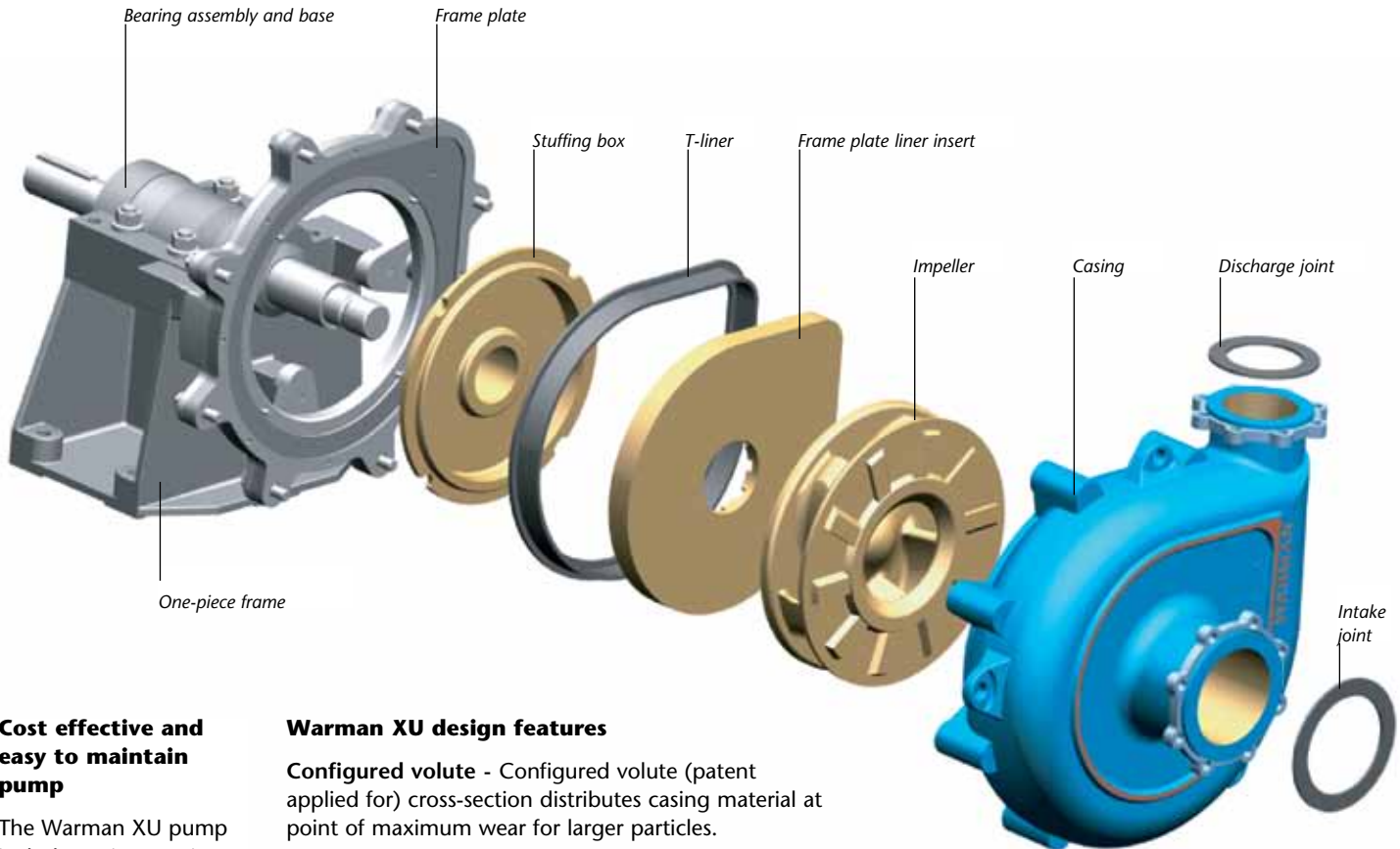
Excellent
Minerals
Solutions



XU



Warman® XU is the result of the latest fluid dynamics techniques, advanced computer wear modeling, years of field and lab testing, and decades of design experience.



Cost effective and easy to maintain pump

The Warman XU pump includes unique casing, impeller and sealing design to ensure lowest possible wear rates in sand and gravel, coal, and many other medium to coarse slurry applications.

The XU is in most cases dimensionally interchangeable, fitting directly onto the tried and proven Warman bearing assembly and base.

The XU's unique design is not only cost effective, but easy to maintain.

Warman XU design features

Configured volute - Configured volute (patent applied for) cross-section distributes casing material at point of maximum wear for larger particles.

Low V cutwater - Low V open cutwater design lowers slurry velocity and consequent wear and prevents separation at flows less than BEP. Low V design also produces more forgiving operating range and broader efficiency band.

Impeller wear ring - Patented impeller wear ring profile reduces wear on the throatbush and impeller by reducing turbulence and restricting recirculation.

Extended shroud impeller - Unique (patent applied for) extended shroud impeller design reduces side-liner wear by trapping the pump-out vane tip vortices against the shroud preventing further vortex development.

Profiled impeller tip - Unique (patent applied for) impeller vane tip profile increased radial velocity of flow in center of vane preventing inward spiral flow and reducing wear in the casing.

"Tear drop" frame liner - Unique (patent applied for) frame plate liner insert shape ensures any local side wall wear occurs on the liner, not in the more expensive casing.

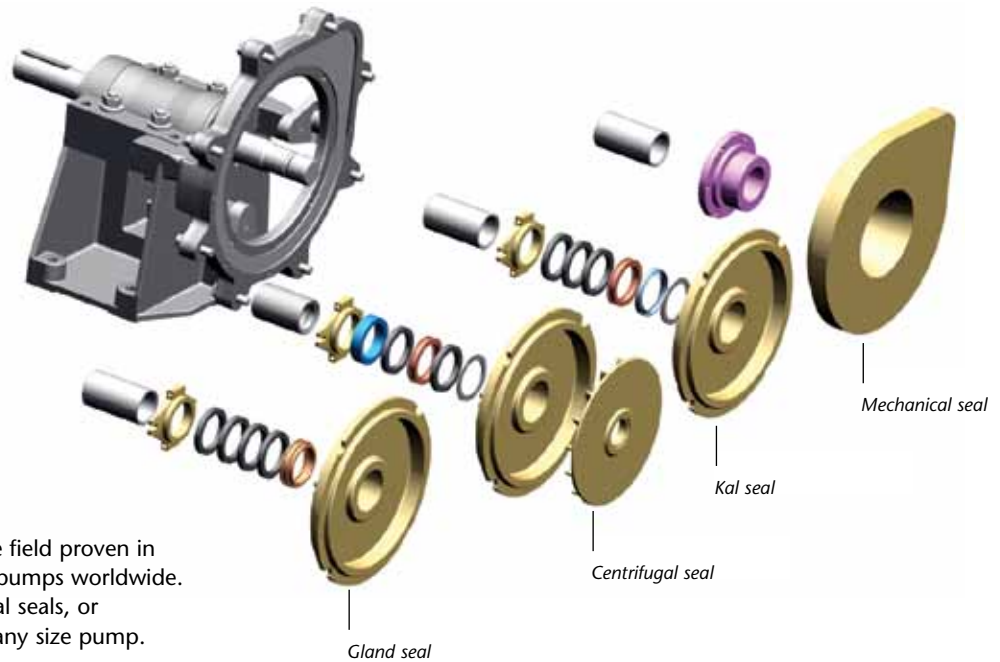
Ease of maintenance - Unique "T-liner" and spigotted fits ensure all components can be assembled easily. Casing has 3 shackle lifting points. Gland seal pump is easily converted to centrifugal seal by adding expeller and new shaft sleeve.

Centrifugal seal performance - Deep and efficient impeller pump out vanes combine with high ratios (85%) expeller diameter produce exceptional dry sealing performance.

Expelling vane shape - Leading edge of expelling vane is a patented shape designed to reduce tip turbulence and maximize pressure reduction and sealing effect.

One-piece frame - A very robust one-piece frame cradles the cartridge type bearing and shaft assembly. An external impeller adjustment mechanism is provided below the bearing housing for easy adjustment of impeller clearance.

Unique design features ensure the Warman® XU pump has the lowest ownership cost in its class.



Our shaft sealing arrangements are field proven in thousands of successful operating pumps worldwide. Our standard gland, centrifugal, Kal seals, or mechanical seals may be fitted to any size pump.

Shaft sleeve

An easily removable shaft sleeve manufactured in either hardened steel or ceramic coated steel with o-ring seals at both ends protects the shaft from abrasive or corrosive contaminants.

Centrifugal seal

External gland sealing is available in most applications. Deep and efficient impeller pump out vanes combine with high ratios (85%) expeller diameter produce exceptional dry sealing performance

Kal seal

The optional Kal seal arrangement utilizes a lip seal located at the front of the box. Kal seal prevents contamination of packing during gland water interruptions and reduces overall water consumption. A neck ring protects the lip seal.

Mechanical seal

Optional mechanical seal is available from leading manufacturers to suit demanding applications that cannot tolerate gland seal water dilution or when seal water is unavailable.

Applications

- Sand and gravel
- Coal
- Potash
- Ash/dust
- Gold/copper
- Sugar
- Alumina

Materials of Construction

Part Material	Specification	
Impeller	Ultrachrome	A05
Casing	Ultrachrome	A05
Frame plate liner insert	Ultrachrome	A05
Flanges	SG Iron	D21
Shaft sleeve	Martensitic SS	C21
Shaft	Carbon steel	E05
Stuffing box	Ultrachrome	A05
Expeller	Ultrachrome	A05

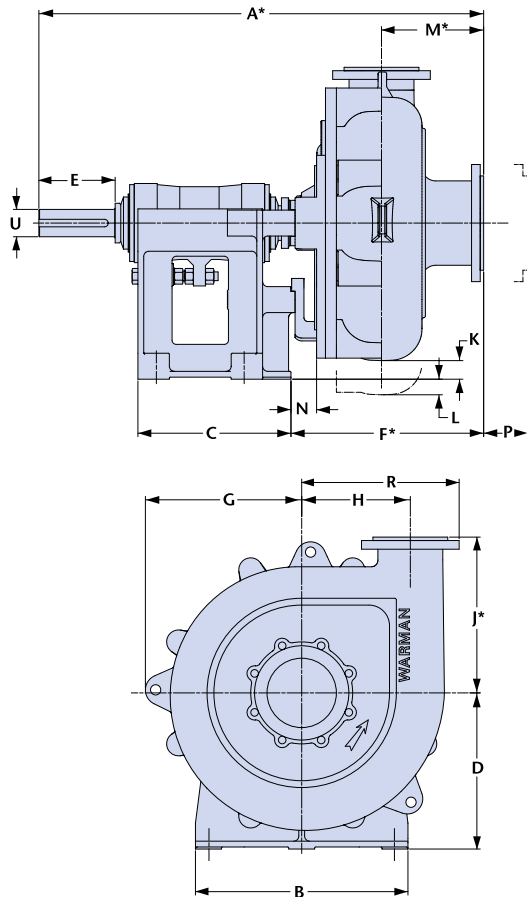


Dimensions

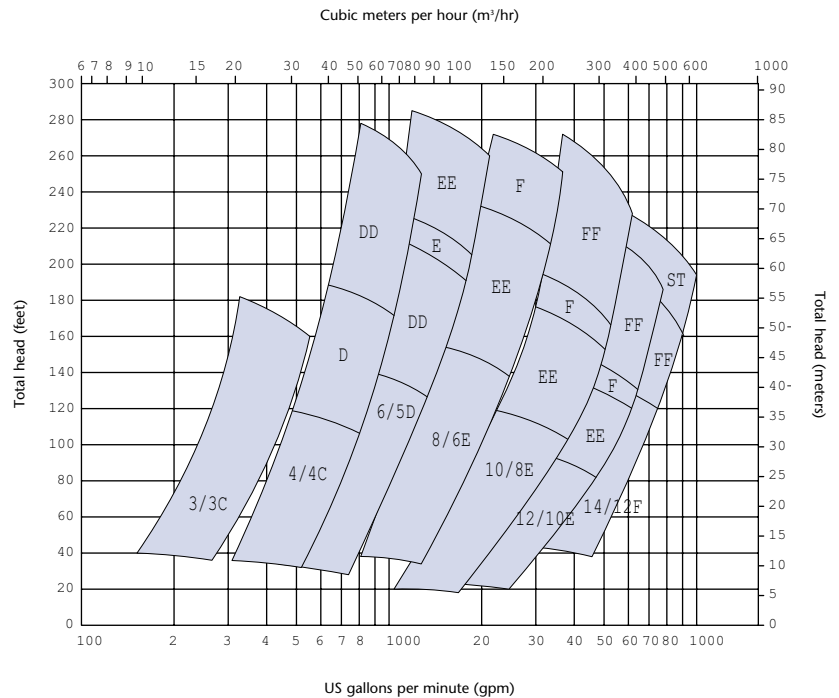
Pump size	A* inches	B inches	C inches	D inches	U mm	key size mm	E inches	F* inches	G inches	H inches	J* inches	K inches	L inches	M* inches	N inches	P inches	R inches	wt./lbs. approx
3/3 CXU	30.24	16.00	12.25	10.00	42	12x8	4.75	11.26	8.07	5.43	8.27	2.95	-	6.18	2.56	4.33	8.43	335
4/4 CXU	33.07	16.00	12.25	10.00	42	12x8	4.75	14.13	10.71	7.87	11.97	0.31	-	7.56	3.23	5.59	12.09	535
4/4 DXU	36.97	19.37	14.33	13.00	65	18x11	6.50	14.13	10.71	7.87	11.97	3.19	-	7.56	3.23	5.59	12.09	690
6/5 DXU	40.16	19.37	14.33	13.00	65	18x11	5.94	17.01	13.58	9.00	13.94	1.46	-	8.94	4.13	6.50	13.82	1070
6/5 EXU	46.26	24.50	17.64	18.00	80	22x14	8.07	17.36	13.58	9.00	13.94	6.46	-	8.94	4.49	6.50	13.82	1380
8/6 EXU	51.42	24.50	17.64	18.00	80	22x14	8.75	22.36	18.03	12.50	18.11	2.13	-	11.93	5.24	8.86	17.80	2260
8/6 FXU	59.41	33.75	25.00	24.00	100	28x16	11.00	21.65	18.03	12.50	18.11	8.15	-	11.93	4.53	8.86	17.80	2900
10/8 EXU	52.83	24.50	17.64	18.00	80	22x14	8.75	23.46	21.97	15.00	21.81	-	1.69	13.00	4.17	11.42	21.22	3400
10/8 FXU	60.67	33.75	25.00	24.00	100	28x16	11.00	23.03	21.97	15.00	21.81	4.33	-	13.00	3.70	11.42	21.22	3985
12/10 EXU	54.17	24.50	17.64	18.00	80	22x14	8.75	25.12	23.58	15.94	26.50	-	3.86	13.19	4.45	12.80	23.82	4385
12/10 FXU	62.24	33.75	25.00	24.00	100	28x16	11.00	24.57	23.58	15.94	26.50	2.17	-	13.19	3.90	12.80	23.82	5100
14/12 FXU	65.91	39.00	27.75	24.00	100	28x16	11.00	28.46	26.69	18.11	26.50	-	0.55	14.92	5.35	13.39	27.32	6315
14/12 STXU	70.79	45.28	30.71	25.59	120	32x18	11.00	28.82	26.69	18.11	26.50	1.00	-	14.92	2.76	13.39	27.32	7252

* Dimension includes compression of Warman rubber joint.

Note: U dimensions and key sizes are in millimeters. All others are in inches. Dimensions are for reference only



Warman® XU Selection Chart



Most XU wet ends are interchangeable with Warman AH and AHU models. Please consult your local Weir Minerals representative for details.

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