GENUINE MEGA.

MEGA COMPONENT & PERFORMANCE SOURCEBOOK

www.megacorpinc.com

We are genuine in every sense of the word.

We offer more than just a product; we provide detailed product support and personal on-site assistance by qualified experts no matter where in the world you are located.

Mega Corp. developed the first spray head valve designed specifically for roadway water distribution applications (patented in 1976). We also patented a baffled water tank design (M.A.S.S) that revolutionized the market. We are the pioneers and our priorities are high quality, long-lasting durability, and exceptional service.

TABLE OF CONTENTS

GENUINE MEGA.

We are not a big business, but we do big things.

We are an American company with international manufacturing, support and dealer partners. No matter where you are in the world, we have the ability to provide you with the Genuine Mega solutions and mobile water tank support.

At Mega Corp., we understand that our products will be used in a wide variety of applications and environments. We therefore strive not only for high quality, reliability, and durability in our products, but also for variety, adaptability, and customization.

Our product support specialists and sales representatives are highly-qualified experts with years, sometimes decades, of experience in the field, and are willing to spend time with each and every individual client to determine how Mega can best fulfill your specific needs.

This sourcebook is designed to provide an overview of Mega Corp's water distribution systems, specifically our spray heads, water pumps, water cannons, and spray control systems. We explain the importance of optimizing your water distribution capabilities, and how Mega Corp's products are designed to allow you to do exactly that.

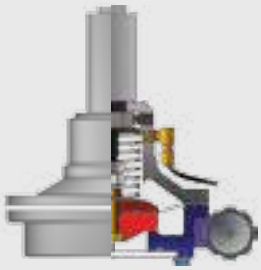
MEGA SPRAY HEAD VALVES

Originally patented in 1976, the MEGA Corp. Spray Head Valve is a combination water control valve and fully adjustable fan spray nozzle that produces a flat, dense variable spray pattern. The corrosion resistant, anti-clog, cast aluminum housing permits variable flow rates up to 700 gpm per spray head. Spray fan direction, volume, and width are easily adjustable by hand. Mega spray head valves are available in both pneumatic and hydraulic models to accommodate any heavy equipment application.

MEGA SPRAY HEAD VALVES

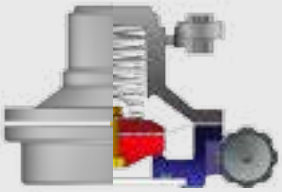
Mega Corp. developed and patented its spray heads in 1976 and has continually improved them since. Each Genuine Mega spray head is fully adjustable for fan volume, width, and direction. Precision water application is a simple matter of proper selection of spray head settings and the number of spray heads activated.

Standard Mega spray head valves are constructed of a high-quality aluminum alloy metal. We offer optional stainless steel models to better resist corrosion and abrasion by the harsh waters often found in mining environments. Our spray head valves are available in both pneumatic and hydraulic actuated models. Hydraulic Mega spray heads are available in both Aluminum and stainless steel models.



Mega Hydraulic Spray Heads

The Mega hydraulic spray head valve utilizes a custom made, high quality, heavy duty, double acting hydraulic cylinder to open and close the valve portion of the spray head. This spray head is suitable for any heavy equipment prime mover, and requires a hydraulic solenoid spray control system.



Mega Pneumatic Spray Heads

Air pressure produced by the prime mover's pneumatic system opens and closes the pneumatic spray head valves. Air pressure forced into the valve closes the spray head. Release of air pressure from the top spray spray head cavity opens the valve. This spray head is suitable for any heavy equipment prime mover with a pneumatic system, and requires a pneumatic spray control system.

Full Coverage.

Advantages and Benefits of Mega Spray Heads

All Mega Spray Heads are adjustable and can be fine-tuned to provide the optimal water distribution for a specific application. This allows for high efficiency, reduced water consumption, and prevention of roadway over-watering.

Adjustable Base Plate

Mega spray heads can be rotated 360° on their base plate mounts to adjust the horizontal direction of the discharge spray for each individual spray head.

Adjusting Ring

An adjusting ring allows for simple and easy control over the discharge spray flow and fan width.

Vertical Orientation

With the spray head set level with the ground, water exits at a 10° upward angle above horizontal, creating a uniform, fully atomized fan of water. In hot and very arid climates, water can be quickly lost to evaporation as it settles onto the hot ground. Optional swivels on spray heads allow them to be tilted downward to concentrate the spray fan onto the ground. This is also useful for flushing and sweeping operations.

The Perils of Overwatering

Recently, over-watering of mine haul roads has been the subject of increased study by mine planning and safety. Many mines have improved their efficiency, lowered resource and equipment maintenance costs, and improved the safety of their working conditions by employing water conservation practices.

Safety

Safety is the most important factor to consider. Over-watering of roadways decreases tire traction (skid resistance), increases break time, destabilizes fill slopes, and hastens erosion, all of which place the haulage truck operators at a much higher risk for potentially fatal or traumatic haulage accidents. In wet road conditions, haulage trucks cannot stop as quickly as on dry roads, and forceful application of brakes can easily result in the truck skidding out of control and colliding with safety berms. Additionally, standing water can soften road bases, potentially leading to washouts and collapsing of fill sections and slopes.

Water Waste

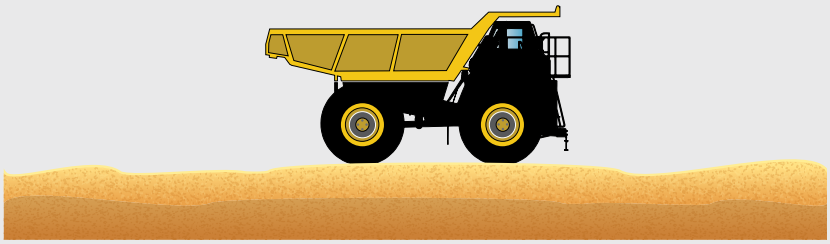
Water conservation is extremely important, particularly in drier climates where water is already a scarce and precious resource. Many governments have implemented strict regulations concerning water usage, and require mines to develop and adhere to a water conservation plan. These areas include (but are not limited to) South Africa (through the Department of Water Affairs), California (through the California Department of Conservation), Texas (through the Texas Administrative Code Title 30, Chapter 288), and most regions and cities in Australia.

Labor and Resources

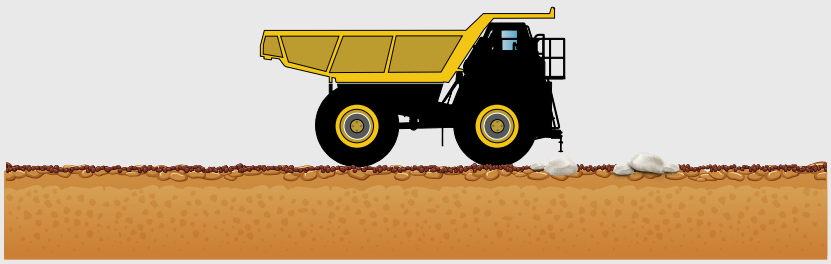
It has already been mentioned that over-watering degrades road quality. In order to maintain overwatered, eroding haul roads, the roads must be serviced and repaired more frequently, at the cost of resources and man-hours. The heavier a water truck's spray is, the quicker its tank is emptied. This is perhaps the most obvious consequence of over-watering. When using too much water, water trucks are required to return to water fill stations more often, wasting both fuel and man-hours as well as subjecting the over-watered roads to heavier traffic.

Tire Wear

A haul road in good, safe condition will have a compacted top layer of fine, cushioning particles protecting tires from the larger, coarse, sharp rocks below. Over-watering erodes away this protective top layer, subjecting tires to severe wear by the exposed coarse rocks. Not only is this costly in terms of tire replacement, but also in terms of production rates and man-hours—a grater must resurface the road in order to repair it, and the road cannot be used by haul trucks during this time.



Normal haul road with compacted top layer.



Overwatered road washes away protective top layer exposing rocks below.

HOW MEGA CAN HELP YOU OPTIMIZE YOUR WATER APPLICATIONS

No other company offers a spray head as adjustable as ours. At Mega Corp., we understand that every mine and construction site faces its own unique set of challenges, and that no single spray system configuration will work for all applications. To tackle this challenge, Mega spray heads are designed to be adjustable enough to meet any spray application requirement.

In order to optimize water distribution efficiency, many environmental factors must be considered. The composition of the road, the grade of the slope, the temperature and humidity of the air, and the desired water coverage must all be taken into account. If your spray heads cannot be adjusted for these conditions, it will be nearly impossible to avoid either over-watering or under-watering, thereby wasting time and resources in the process.

No other tank company has the depth of experience and staff expertise available to serve our customers that Mega Corp. offers. Contact our Product Support Department to see how we can help you improve your water spray applications.

At Mega Corp., we understand that our most precious natural resources are limited. Water conservation is essential for reducing waste and for safe road conditions, which is why we emphasize efficient water usage methods and equipment.

Spray Pattern Customization

Mega spray heads can be adjusted to create a wide variety of spray patterns through horizontal rotation of the spray head and adjustment of the flow rate and fan width of each individual spray head. This ability to orient and adjust the flow of water from each spray head allows the operator to create the ideal spray pattern for nearly any application.

Horizontal Orientation and Fan Width

Mega spray heads can be rotated on their base plate mounts to adjust the horizontal direction of the discharge spray for each individual spray head, allowing the spray heads to be 'aimed' for optimal spray coverage. An adjusting ring allows for further customization by providing control over the width of the spray fan. The adjusting ring can be rotated to widen or narrow the spray between a 90° and a 10° fan opening.

A Mega spray head in the default full (90°) opening setting emits a wide, even fan of fine spray.

A Mega spray head adjusted to a narrower opening width sprays a more focused stream of water that travels further.

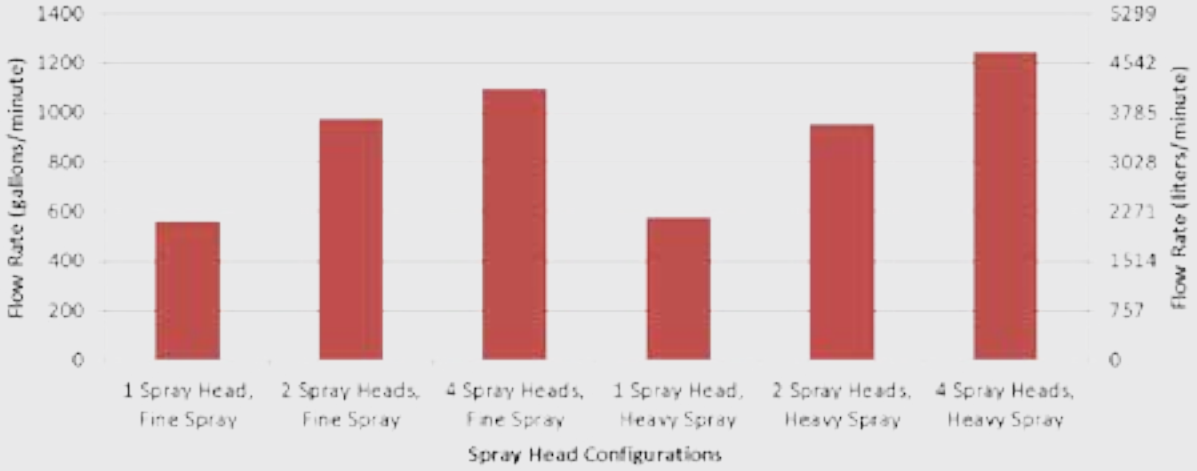
Spray Intensity

An adjusting ring allows for simple and easy control over the spray intensity. A ⅜ inch tall opening ("heavy spray" setting) will provide heavy, short-range spray appropriate for ground material that is very sandy or porous, or for extremely hot and dry environments where a heavy lay-down of water is necessary to saturate the ground. The 1/4 inch opening provides a finer, longer-reaching spray ideal for precision watering and water conservation.

The "heavy" spray head opening is ⅜ inch tall. This setting provides a very heavy spray of water with reduced width and reach.

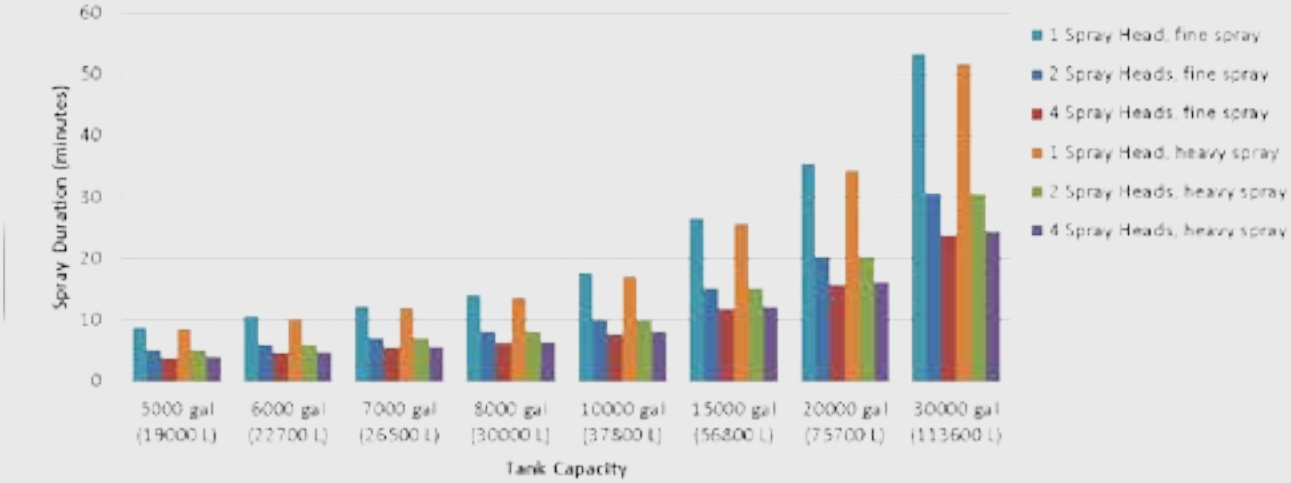
The "fine" spray head opening is ¼ inch tall. This setting results in a finer spray of water with maximum reach and width at high pump speeds. This is the recommended setting for most water distribution applications.

Spray Head Configuration Flow Rates



Total flow rates of different spray head configurations. The approximate total flow rates in gallons/minute (left vertical axis) and liters/minute (right vertical axis) of four possible spray head configurations. The “fine spray” opening is ¼ inches in height, and the “heavy spray opening” setting is ⅜ inches in height. These flow rates were recorded on an MST8 CAT621K with an M-4 Mega water pump.

Approximate Spray Duration

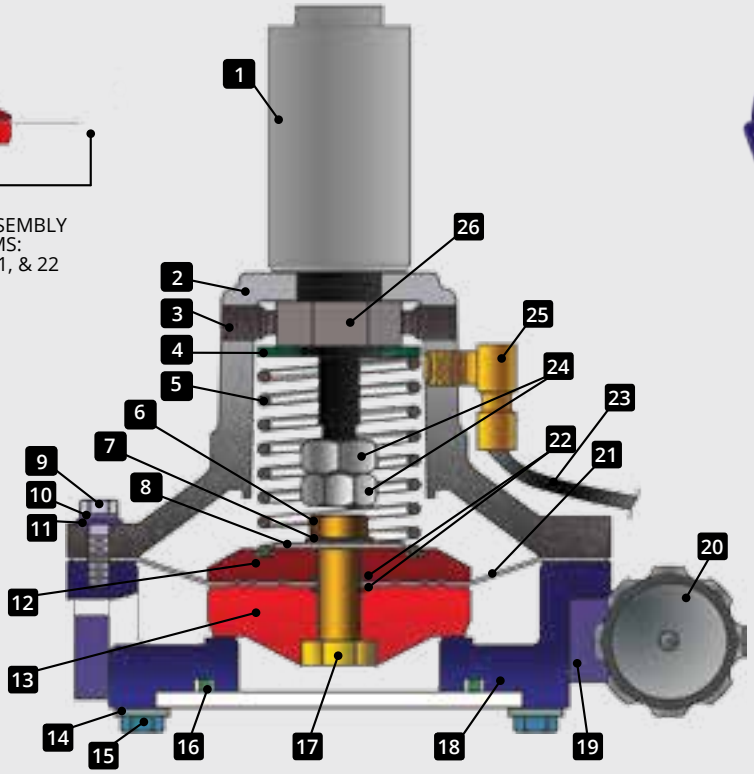


Estimated spray duration for various capacity tanks with four different spray head configurations. Spray duration in minutes is shown on the vertical axis. The “fine spray” opening is ¼ inches in height, and the “heavy spray opening” setting is ⅜ inches in height. These flow rates were recorded on an MST8 CAT621K with an M-4 Mega water pump.

Mega Spray Head, 3 inch, Hydraulic, Stainless Steel
Part No. 047062

The Mega stainless steel hydraulic spray head is optimized for use in the most severe environments. The stainless steel hydraulic spray head shares the same design as the Mega aluminum hydraulic spray head, with the exception that all metallic parts that come into contact with water during use are stainless steel. The Mega 3 inch hydraulic spray head valve is actuated by a long life double-acting hydraulic cylinder.

3 INCH DROP-IN ASSEMBLY
INCLUDES ITEMS:
6, 7, 8, 12, 13, 17, 21, & 22



ITEM	PART NO.	DESCRIPTION	QTY
	047062	Mega SHV*, 3 inch, Hydraulic, Stainless Steel	1
1	306808	Cylinder, Hydraulic	1
2	306395	Housing, Upper, Stainless Steel	1
3	354513	Set Screw, Cylinder	2
4	350011	Washer, 1.25 inches	1
5	305304	Spring	1
6	300211	**Bolt, Stem	1
7	300212	**Washer, Bell	1
8	354598	**Washer, Flat, 5/8	1
9	306148	Cap Screw, 5/16 X 1 1/4 inch Stainless Steel	8
10	355337	Washer, Lock, 5/16 Stainless Steel	8
11	355336	Washer, Flat 5/16 Stainless Steel	8
12	300210	**Guide Disk, Upper	1
13	300209	**Guide Disk, Lower	1

ITEM	PART NO.	DESCRIPTION	QTY
14	355295	Washer, Flat, Stainless Steel	4
15	355946	Cap Screw, 3/8 X 3/4 inch, Stainless Steel	4
16	354502	O-Ring, Base	1
17	300214	**Nut, Stem	1
18	045099	Housing, Base, Stainless Steel	1
19	045508	Adjusting Ring, Stainless Steel	1
20	302912	Knob, Adjusting Ring	1
21	300208	**Diaphragm	1
22	300215	**O-Ring, Stem	2
23	351141	Tubing, Nylon, 3/8 inch tube, 8 inch long tube	1
24	350044	Nut, Hex, 1/2 inch-20	2
25	351082	Elbow, 1/4 inch, NPT-3/8 inch Tube	1
26	305294	Nut, Cylinder Retaining	1
27	300409	Drop-In Assembly	1

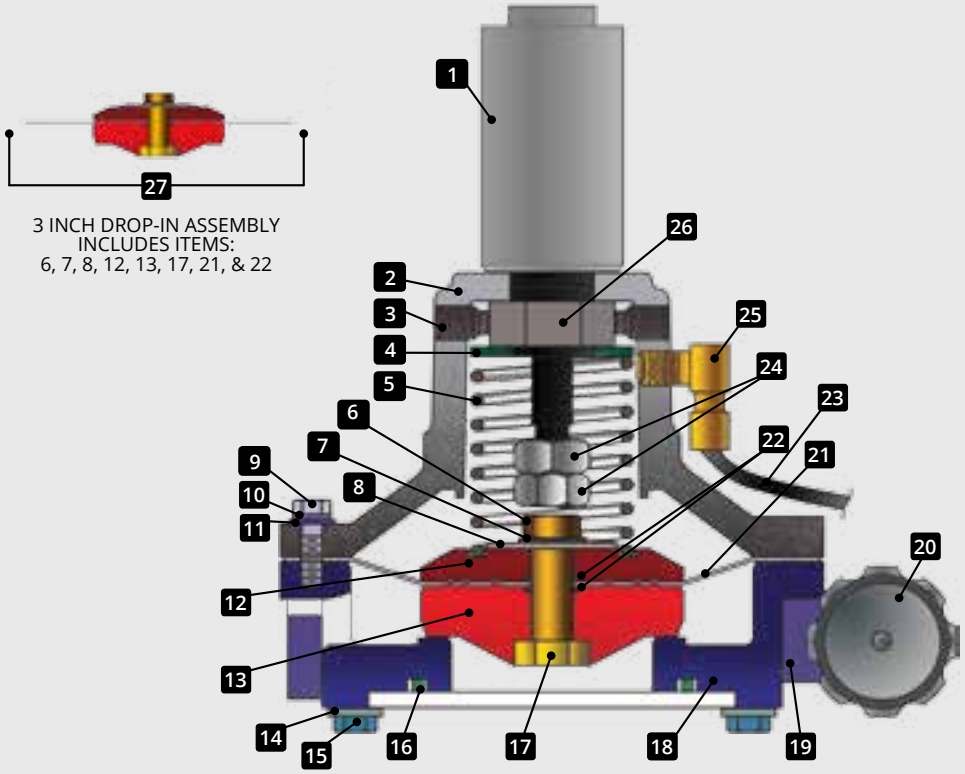
* SHV - Spray Head Valve

** These parts are included in the Drop-in Assembly.

If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

Mega Spray Head, 3 inch, Hydraulic, Aluminum
Part No. 025610

The MEGA Corp. 3 inch hydraulic spray head valve is actuated by a long life double acting hydraulic cylinder. The Mega hydraulic spray head is designed for use in harsh conditions and/or where there is no air supply available.



ITEM	PART NO.	DESCRIPTION	QTY
	025610	Mega SHV*, 3 inch, Hydraulic, Aluminum	1
1	306808	Cylinder, Hydraulic	1
2	025615	Housing, Upper	1
3	354513	Set Screw, Cylinder	2
4	350011	Washer, 1.25 inches	1
5	305304	Spring	1
6	300211	**Bolt, Stem	1
7	300212	**Washer, Bell	1
8	354598	**Washer, Flat, 5/8	1
9	355335	Cap Screw, 5/16 X 1 1/4 inch	8
10	355337	Washer, Lock, 5/16 Stainless Steel	8
11	355336	Washer, Flat 5/16 Stainless Steel	8
12	300210	**Guide Disk, Upper	1
13	300209	**Guide Disk, Lower	1

ITEM	PART NO.	DESCRIPTION	QTY
14	355295	Washer, Flat, Stainless Steel	4
15	355294	Cap Screw, 3/8 X 3/4 inch	4
16	354502	O-Ring, Base	1
17	300214	**Nut, Stem	1
18	300207	Housing, Base	1
19	300216	Adjusting Ring	1
20	302912	Knob, Adjusting Ring	1
21	300208	**Diaphragm	1
22	300215	**O-Ring, Stem	2
23	351141	Tubing, Nylon, 3/8 inch tube, 8 inch long tube	1
24	350044	Nut, Hex, 1/2 inch-20	2
25	351082	Elbow, 1/4 inch, NPT-3/8 inch Tube	1
26	305294	Nut, Cylinder Retaining	1
27	300409	Drop-In Stainless Steel Assembly	1

* SHV - Spray Head Valve

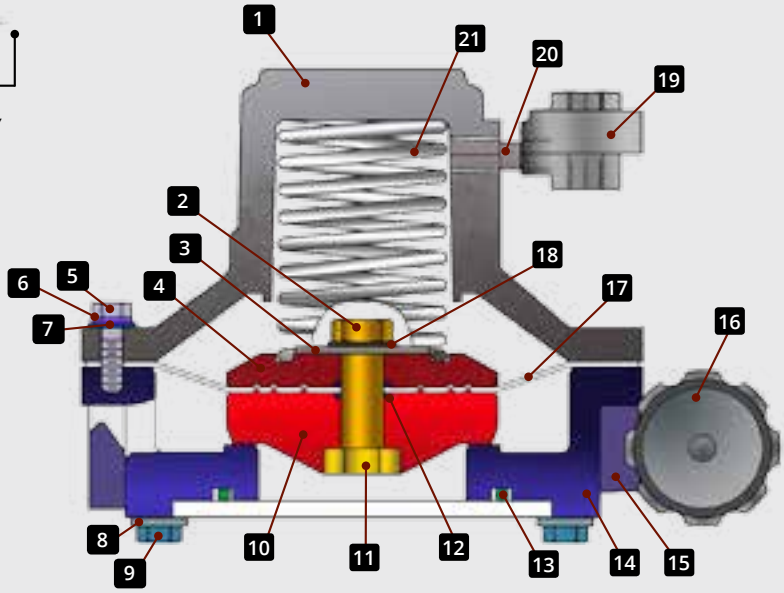
** These parts are included in the Drop-in Assembly.

If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

Mega Spray Head, 3 inch, Pneumatic, Aluminum
Part No. 300198

The Mega pneumatic spray head is actuated by pressure regulated air supplied by the tractor. The anodized and hardened aluminum provides superior protection from corrosive water.

3 INCH DROP-IN ASSEMBLY
INCLUDES ITEMS:
2-4,10-12,17,18



ITEM	PART NO.	DESCRIPTION	QTY
	300198	Mega SHV* , 3 inch, Pneumatic, Aluminum	1
1	300206	Housing, Upper	1
2	300211	**Bolt, Stem	1
3	354598	**Washer, Flat, 5/8	1
4	300210	**Guide Disk, Upper	1
5	355335	Cap Screw, 5/16 X 1 1/4 inch, Stainless Steel	8
6	355337	Washer, Lock, 5/16, Stainless Steel	8
7	355336	Washer, Flat 5/16, Stainless Steel	8
8	355295	Washer, Flat, Stainless Steel	4
9	355294	Cap Screw, 3/8 X 3/4 inch, Stainless Steel	4
10	300209	**Guide Disk, Lower	1
11	300214	**Nut, Stem	1

ITEM	PART NO.	DESCRIPTION	QTY
12	300215	** O-Ring, Stem	2
13	354502	O-Ring, Base	1
14	300207	Housing, Base	1
15	300216	Adjusting Ring	1
16	302912	Knob, Adjusting Ring	1
17	300208	**Diaphragm	1
18	300212	**Washer, Bell	1
19	300468	Valve, Quick Discharge, Pneumatic	1
20	352467	Nipple, Quick Discharge Valve, Pneumatic	1
21	300213	Spring	1
22	300409	Drop-In Assembly	1

* SHV - Spray Head Valve

** These parts are included in the Drop-in Assembly.

If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

ADAPTABILITY

WATER PUMPS

No pump, no spray. It's that simple. Mega Corp. water pumps are not off-the-shelf irrigation pumps designed to run sprinklers; they are the product of over 35 years of experience and constant improvement. We know what works best, and we are continuing to develop our water pumps for the varied demands of heavy equipment use.

MEGA WATER PUMPS

WHEN YOU LOOK AT A GENUINE MEGA WATER PUMP YOU'LL SEE HEAVY DUTY.

The American-made Mega M series pumps are designed specifically for heavy equipment use. We have pumps designed for almost any water truck application, whether it's a 2,000 gallon on-highway tank or the largest tanks made on rigid frame trucks. Our pumps are made to provide the industry's best performance in the harshest conditions known.

All Mega M series pumps provide for direct drive motor mounting to eliminate coupling alignment failures and to provide the strongest, longest-lived motor-to-pump connection. If corrosive water is a problem, the Mega M-4B corrosion resistant pump is the answer. All Mega M series pumps feature heavy dual bearings and heavy stress-proof shafts to withstand the shock loads of sudden start and stop water hammering that water tankers dish out.

M4-B Mega Water Pump

M-4B Standard, CW 306200

M-4B Corrosion Resistant, CW 306201

M-4 Complete Stainless Steel, CW 306647

The M-4B is a clockwise-rotation centrifugal pump with a 6 inch inlet, 4 inch outlet, and maximum speed of 2,400 RPM. Inlet and outlet connections are flanged to provide a solid, leak-proof mount to the tank plumbing. The heavy-duty stress-relieved cast iron frame and volute case provide solid mounting to the tank and more than 1,300 gpm flow (up to 140 psi max).

The enclosed drive motor mount reduces the potential for contamination of the coupling housing, and the threaded shaft-to-impeller connection allows for easier maintenance and increased durability under abrupt start/stop water hammering conditions. Additionally, the M-4B pump does not need to be removed from the tank for rope packing replacement, making service quick and simple. For all of these reasons and more, the M-4B is Mega's most robust and operator-friendly water pump to date.

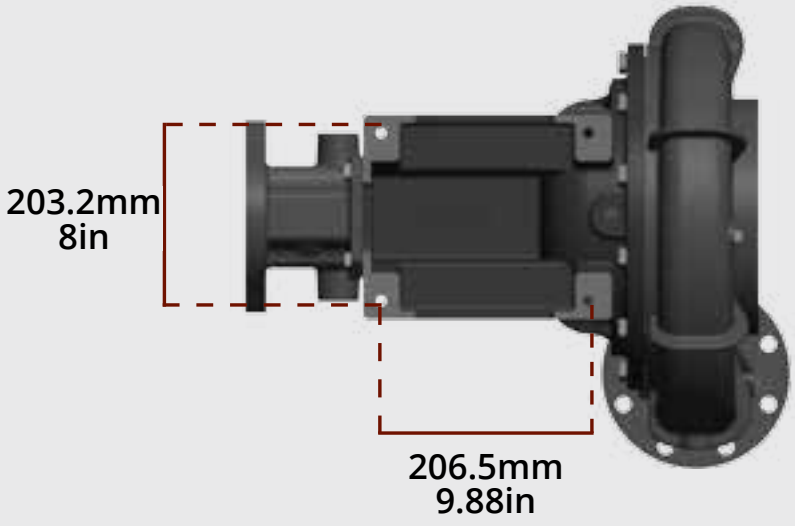
- Rope-packing shaft seal.
- Corrosion-resistant stainless steel, pressure balance impeller (improves rope seal and bearing life).
- Vented frame cavity (prevents damage from over-greasing and allows the use of an auto lubrication system).
- Engineered high-performance drive end bearing & roller impeller bearing.
- Floating impeller-end bearing.
- SAE 'C' fit four bolt direct motor mount.
- Splined input shaft to splined drive motor coupling (allows for minor amounts of misalignment with reduced motor wear).
- Threaded shaft-to-impeller connection (for ease of maintenance and increased durability under start/stop and water hammer conditions).

The M-4B pump is available in both standard cast iron and corrosion resistant forms. As with all of our water pumps, the M-4B comes with complete parts and service manuals and Genuine Mega technical support.

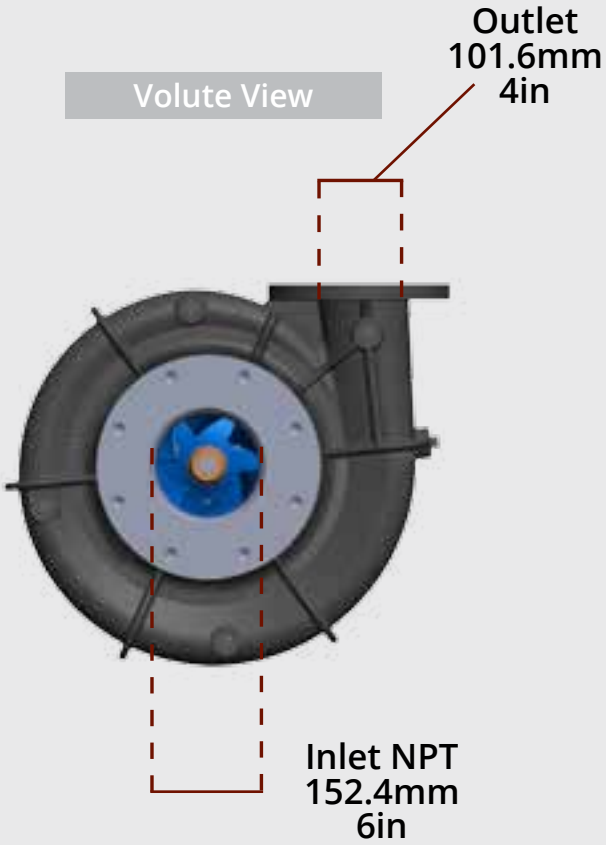
M4-B Basic Dimensions

Please contact Parts Sales at 1-800-345-8889 for more dimensional information on our M4-B water pump.

Footprint/ Bottom



Volute View



M4-B Performance Curve

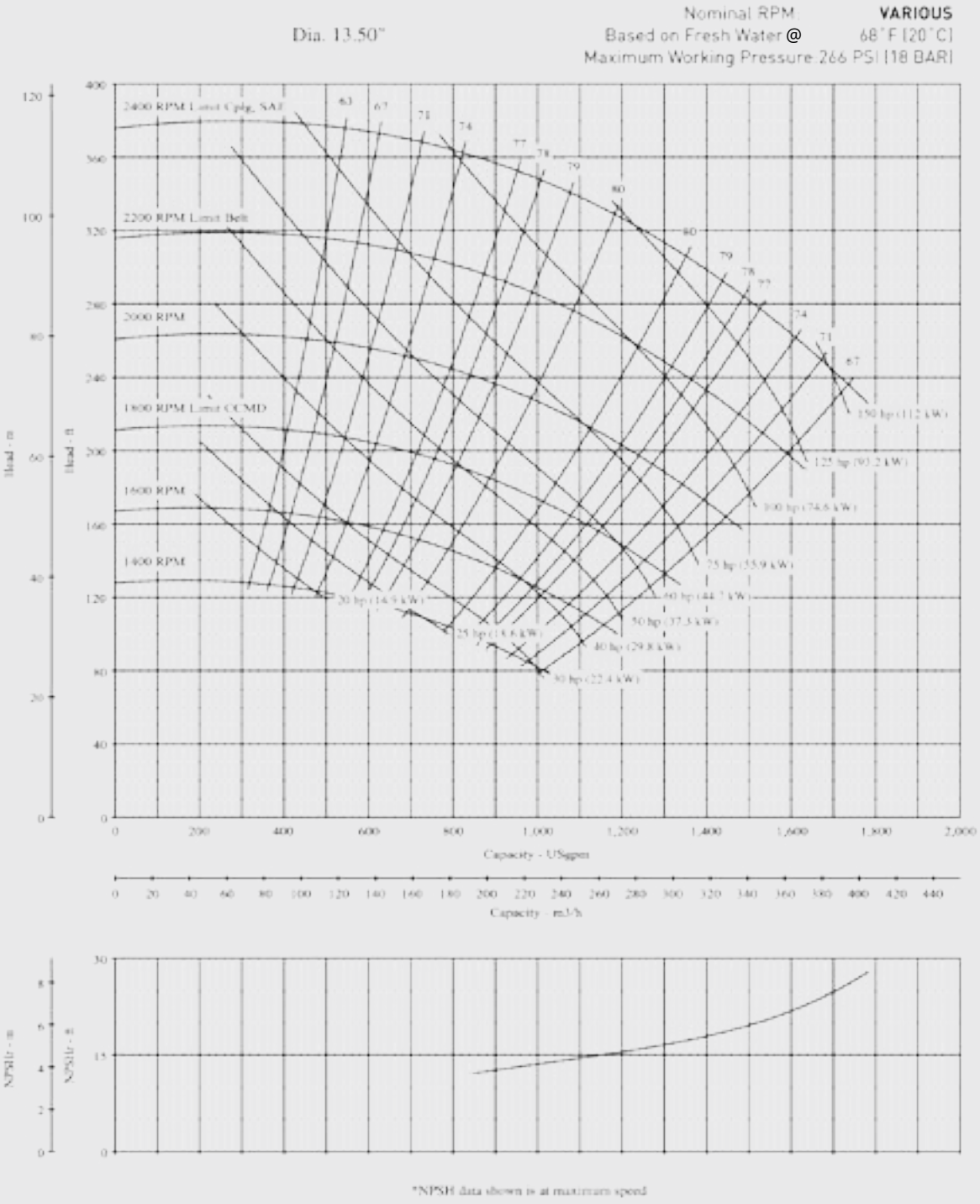
M-4B Standard, CW
306200

M-4B Standard, Mechanical Seal, CW, 306670

M-4B Corrosion Resistant, CW
306201

M-4B Corrosion Resistant,Mechanical Seal, CW, 306671

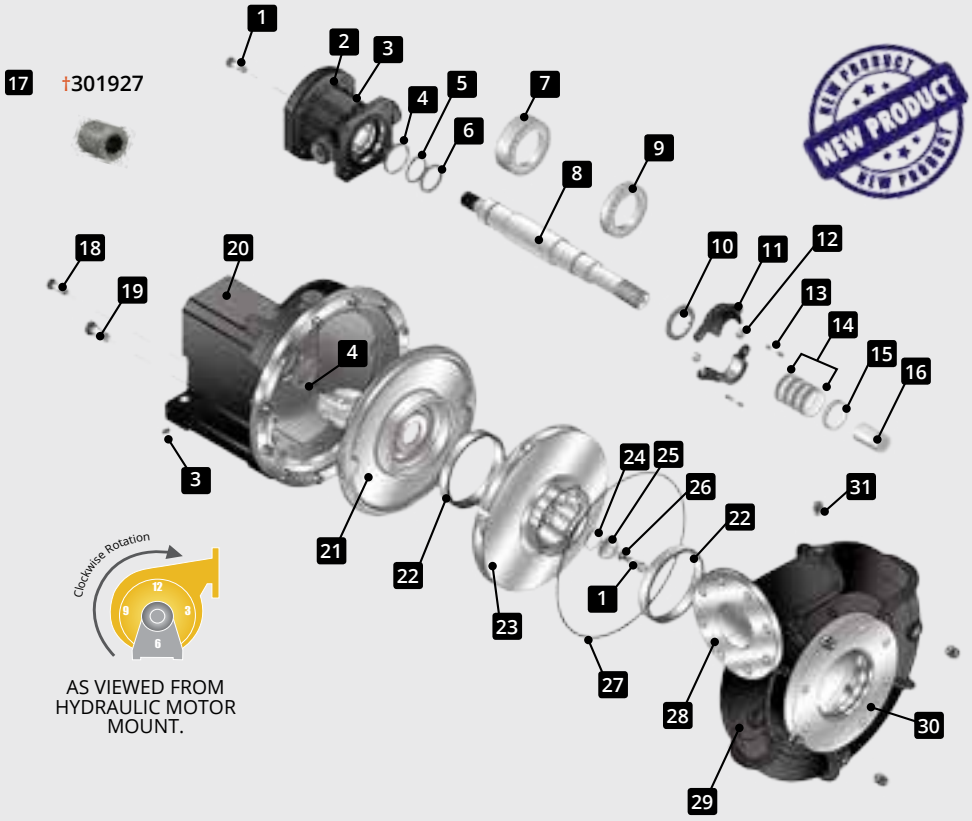
M-4 Complete Stainless Steel, CW
306647



*NPSH data shown is at maximum speed

MEGA M-4B Water Pump, CW, Standard, Rope Seal
Part No. 306200

Mega Corp. cast iron frame (bracket) and packing mount. Stress proof carbon steel shaft.
• Clockwise Rotation • 6 inch Inlet • 4 inch Discharge • Rope Packing Seal



CASING KIT-306795
INCLUDES PARTS: 18,27,29

ROPE PACKING KIT-300719
INCLUDES PARTS: 14,15

IMPELLER KIT-306664
INCLUDES PARTS: 1,18,22-27

SHAFT KIT-306663
INCLUDES PARTS: 1,4-10,16,24-27

ITEM	PART NO.	DESCRIPTION	QTY
	306200	M-4B, CW, Rope Seal, Standard	
1	306720	*Capscrew, Hex HD ½-13NC X 1-1/2L 316SS	4
2	306736	Bearing Cap Motor Bracket	1
3	306697	Grease Fitting, 5/16-24NPS	2
4	302302	*Seal, Oil	2
5	300536	*Ring, Retaining, 1.819"	1
6	300542	*Thrust Ring, 1.973", Bearing Frame	1
7	302296	*Bearing, Drive Side	1
8	306718	*Shaft, Splined, 20.15"	1
9	302297	*Bearing, Impeller Side	1
10	300541	*Water Slinger	1
11	300533	Slotted Split Gland	1
12	306734	Nut, Hex ½-13NC 304SS	2
13	306723	Stud, ½-13NC X 2-1/2L 316SS	2
14	306699	*Ring, Packing	4
15	306732	*Ring, Metallic	1
16	306735	*Sleeve, Shaft	1
17	301927	†Coupling	1
18	306722	Capscrew, Hex ¼-20X1-1/2	12

ITEM	PART NO.	DESCRIPTION	QTY
19	306730	Capscrew, Hex HD 5/8 in	2
20	306716	Bracket, Frame Mount	1
21	307128	Seal Plate	1
22	306717	Wear Ring, Stainless Steel	2
23	306727	Impeller	1
24	306729	*O-Ring	1
25	306719	*Washer, Impeller, Stainless Steel	1
26	306721	*Washer, External Tooth, Stainless Steel	1
27	306698	*O-Ring, Casing	1
28	012930	Gasket, Outlet Flange, 4 inch	1
29	306798	Volute Case With Wear Ring	1
30	302527	Gasket, Inlet Flange, 6 inch	1
31	306724	Plug, Pipe, SS	5
32	306795	Casing Kit	1
33	300719	Rope Packing Kit	1
34	306664	Impeller Kit	1
35	306663	Shaft Kit	1

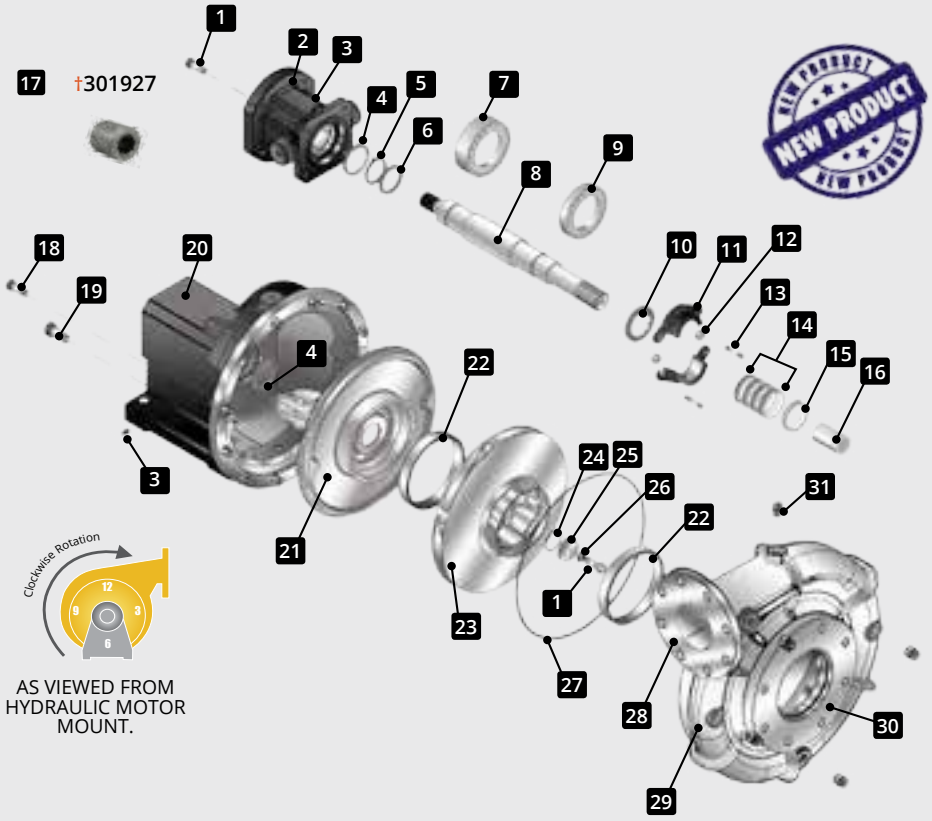
* These parts are included in the shaft kit. The shaft is not sold separately and is only sold as a shaft kit.

† **Replacement part only. Part sold seperately and not included with the water pump.**

If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

MEGA M-4B Water Pump, CW, Corrosion Resistant, Rope Seal
Part No. 306201

Mega Corp. cast iron frame (bracket) and stainless steel packing mount. Stress proof carbon steel shaft.
• Clockwise Rotation • 6 inch Inlet • 4 inch Discharge • Rope Packing Seal



CASING KIT-306665
INCLUDES PARTS: 18,27,29

ROPE PACKING KIT-300719
INCLUDES PARTS: 14,15

IMPELLER KIT-306664
INCLUDES PARTS: 1,18,22-27

SHAFT KIT-306663
INCLUDES PARTS: 1,4-10,16,24-27

ITEM	PART NO.	DESCRIPTION	QTY
	306201	M-4B, CW, Rope Seal, Corrosion Resistant	
1	306720	*Capscrew, Hex HD ½-13NC X 1-1/2L 316SS	4
2	306736	Bearing Cap Motor Bracket	1
3	306697	Grease Fitting, 5/16-24NPS	2
4	302302	*Seal, Oil	2
5	300536	*Ring, Retaining, 1.819"	1
6	300542	*Thrust Ring, 1.973", Bearing Frame	1
7	302296	*Bearing, Drive Side	1
8	306718	*Shaft, Splined, 20.15"	1
9	302297	*Bearing, Impeller Side	1
10	300541	*Water Slinger	1
11	300533	Slotted Split Gland	1
12	306734	Nut, Hex ½-13NC 304SS	2
13	306723	Stud, ½-13NC X 2-1/2L 316SS	2
14	306699	*Ring, Packing	4
15	306732	*Ring, Metallic	1
16	306735	*Sleeve, Shaft	1
17	301927	† Coupling	1
18	306722	Capscrew, Hex ¼-20X1-1/2	12

ITEM	PART NO.	DESCRIPTION	QTY
19	306730	Capscrew, Hex HD 5/8 in,	2
20	306716	Bracket, Frame Mount	1
21	306726	Seal Plate, Stainless Steel	1
22	306717	Wear Ring, Stainless Steel	2
23	306727	Impeller	1
24	306729	* O-Ring	1
25	306719	*Washer, Impeller, Stainless Steel	1
26	306721	*Washer, External Tooth, Stainless Steel	1
27	306698	*O-Ring, Casing	1
28	012930	Gasket, Outlet Flange, 4 inch	1
29	306728	Volute Case With Wear Ring, Stainless Steel	1
30	302527	Gasket, Inlet Flange, 6 inch	1
31	306724	Plug, Pipe, Stainless Steel	5
32	306665	Casing Kit	1
33	300719	Rope Packing Kit	1
34	306664	Impeller Kit	1
35	306663	Shaft Kit	1

* These parts are included in the shaft kit. The shaft is not sold separately and is only sold as a shaft kit.

† **Replacement part only. Part sold seperately and not included with the water pump.**

If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

MEGA M-4B Water Pump, CW, Mechanical Seal, Part No. 306670

Mega Corp. cast iron frame (bracket) and stainless steel packing mount. Stress proof carbon steel shaft.
• Clockwise Rotation • 6 inch Inlet • 4 inch Discharge • Mechanical Shaft Seal

CASING KIT-306795
INCLUDES PARTS: 14,23,25

IMPELLER KIT-306664
INCLUDES PARTS: 1,14, 18-23

SHAFT KIT-306663
INCLUDES PARTS:1, 4-10,12,20-23

ITEM	PART NO.	DESCRIPTION	QTY
	306670	M4-B, CW, Mechanical Seal	
1	306720	*Capscrew, Hex HD ½-13NC X 1-1/2L 316SS	4
2	306736	Bearing Cap Motor Bracket	1
3	306697	Grease Fitting, 5/16-24NPS	2
4	302302	*Seal, Oil	2
5	300536	*Ring, Retaining, 1.819"	1
6	300542	*Thrust Ring, 1.973", Bearing Frame	1
7	302296	*Bearing, Drive Side	1
8	306718	*Shaft, Splined, 20.15"	1
9	302297	*Bearing, Impeller Side	1
10	300541	*Water Slinger	1
11	302299	Seal, Mechanical Shaft	1
12	306735	*Sleeve, Shaft	1
13	301927	Coupling	1
14	306722	Capscrew, Hex ¼-20X1-1/2	12
15	306730	Capscrew, Hex HD 5/8 inch	2

ITEM	PART NO.	DESCRIPTION	QTY
16	306716	Bracket, Frame Mount	2
17	307127	Seal Plate	1
18	306717	Wear Ring, Stainless Steel	2
19	306727	Impeller	1
20	306729	*O-Ring	1
21	306719	*Washer, Impeller, Stainless Steel	1
22	306721	*Washer, External Tooth, Stainless Steel	1
23	306698	*O-Ring, Casing	1
24	012930	Gasket, Outlet Flange, 4 inch	1
25	306798	Volute Case With Wear Ring	1
26	302527	Gasket, Inlet Flange, 6 inch	1
27	306724	Plug, Pipe, Stainless Steel	5
28	306795	Casing Kit	1
29	306664	Impeller Kit	1
30	306663	Shaft Kit	1

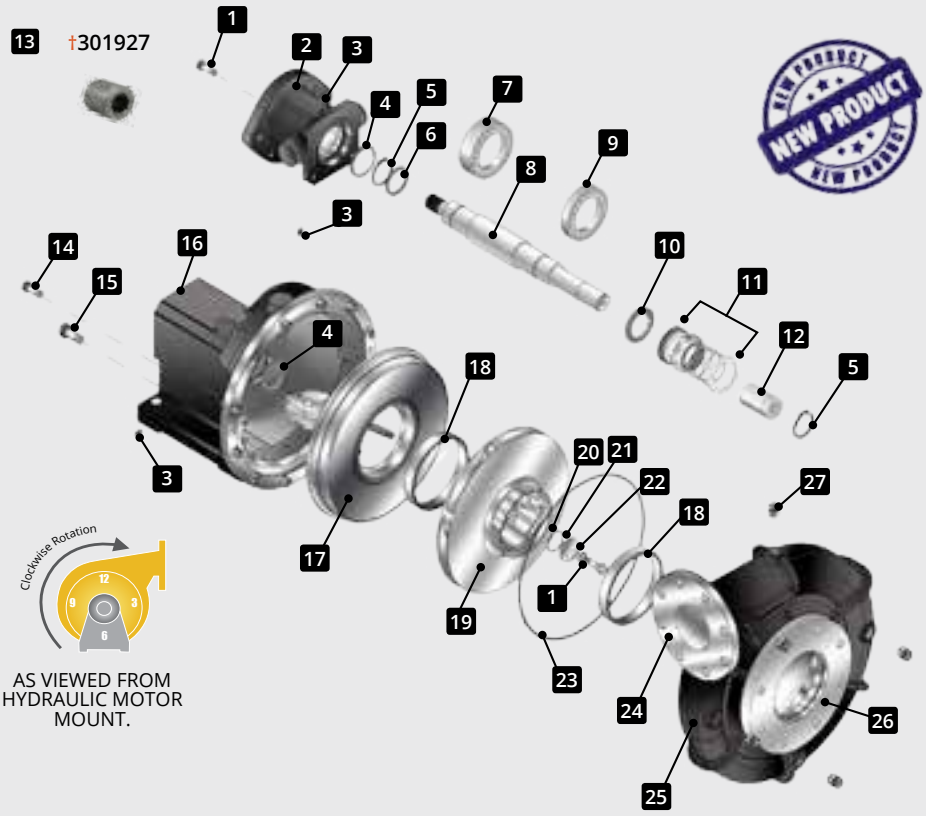
* These parts are included in the shaft kit. The shaft is not sold separately and is only sold as a shaft kit.

† **Replacement part only. Part sold seperately and not included with the water pump.**

If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

MEGA M-4B Water Pump, CW, Corrosion Resistant, Mechanical Seal
Part No. 306671

Mega Corp. cast iron frame (bracket) and stainless steel packing mount. Stress proof carbon steel shaft.
• Clockwise Rotation • 6 inch Inlet • 4 inch Discharge • Mechanical Packing Seal



CASING KIT-306665
INCLUDES PARTS: 14,23,25

IMPELLER KIT-306664
INCLUDES PARTS: 1,14, 18-23

SHAFT KIT-306663
INCLUDES PARTS: 1,4-10,12,20-23

ITEM	PART NO.	DESCRIPTION	QTY
	306671	M4-B, CW, Mechanical Seal	
1	306720	*Capscrew, Hex HD ½-13NC X 1-1/2L 316SS	4
2	306736	Bearing Cap Motor Bracket	1
3	306697	Grease Fitting, 5/16-24NPS	2
4	302302	*Seal, Oil	2
5	300536	*Ring, Retaining, 1.819"	1
6	300542	*Thrust Ring, 1.973", Bearing Frame	1
7	302296	*Bearing, Drive Side	1
8	306718	*Shaft, Splined, 20.15"	1
9	302297	*Bearing, Impeller Side	1
10	300541	*Water Slinger	1
11	302299	Seal, Mechanical Shaft	1
12	306735	*Sleeve, Shaft	1
13	301927	Coupling	1
14	306722	Capscrew, Hex ¼-20X1-1/2	12
15	306730	Capscrew, Hex HD 5/8 inch	2

ITEM	PART NO.	DESCRIPTION	QTY
16	306716	Bracket, Frame Mount	2
17	306725	Seal Plate, Stainless Steel	1
18	306717	Wear Ring, Stainless Steel	2
19	306727	Impeller	1
20	306729	*O-Ring	1
21	306719	*Washer, Impeller, Stainless Steel	1
22	306721	*Washer, External Tooth, Stainless Steel	1
23	306698	*O-Ring, Casing	1
24	012930	Gasket, Outlet Flange, 4 inch	1
25	306798	Volute Case With Wear Ring	1
26	302527	Gasket, Inlet Flange, 6 inch	1
27	306724	Plug, Pipe, Stainless Steel	5
28	306665	Casing Kit	1
29	306664	Impeller Kit	1
30	306663	Shaft Kit	1

* These parts are included in the shaft kit. The shaft is not sold separately and is only sold as a shaft kit.

† **Replacement part only. Part sold seperately and not included with the water pump.**

If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

HAVE CORROSIVE WATER?

GET A MEGA

COMPLETE STAINLESS STEEL

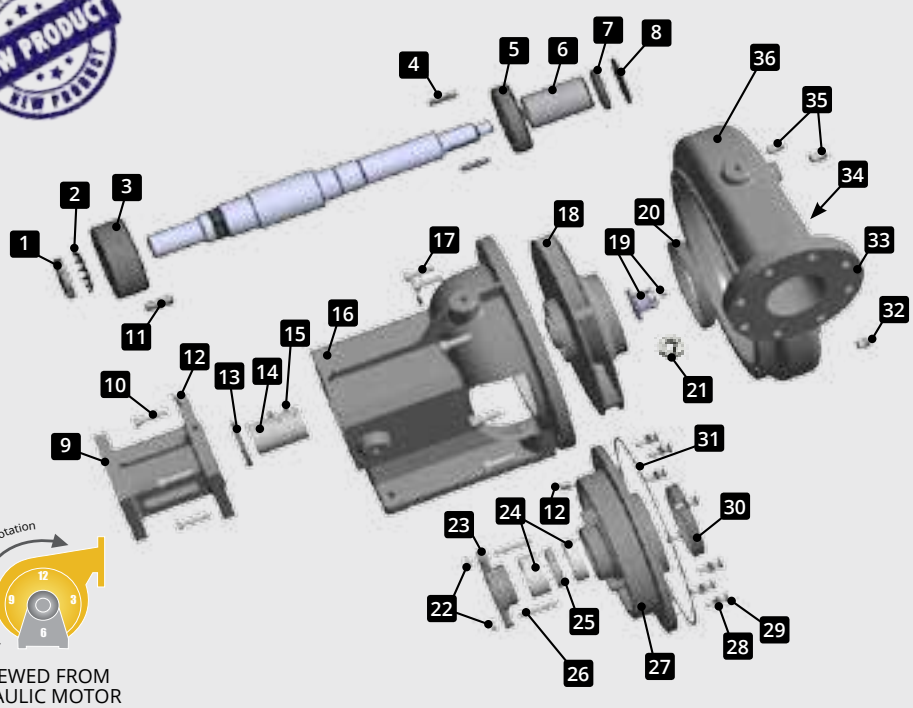
M-4 WATER PUMP

- 100% stainless steel
- Perfect for the most corrosive environments
- Clockwise centrifugal pump
- Rope packing seal

To order this complete stainless steel Mega M-4 water pump, please call Parts Sales at 1-800-345-8889.

MEGA M-4 Water Pump, CW, Complete Stainless Steel
Part No. 306647

Mega Corp. complete stainless steel which includes packing mount, shaft and 13 inch impeller.
• Clockwise Rotation • 6 inch Inlet • 4 inch Discharge • Rope Packing Seal



AS VIEWED FROM HYDRAULIC MOTOR MOUNT.

37 ROPE PACKING KIT-305402
INCLUDES PARTS: 24,25

38 IMPELLER KIT-305404
INCLUDES PARTS: 4,18-20,30,31

39 SHAFT KIT-305405
INCLUDES PARTS: 1-8,11, 13-15,19,21,24,25,28-31

ITEM	PART NO.	DESCRIPTION	QTY
	306647	M-4, Water Pump, Complete Stainless Steel	1
1	305630	*Nut, Drive Side, Shaft	1
2	305631	*Washer, Tab, Bearing Retainer	1
3	305108	*Bearing, Drive Side	1
4	305106	*Key, Impeller	2
5	304956	*Bearing, Impeller Side M4 Pump	1
6	305096	*Sleeve, Wear, Shaft	1
7	304960	*Seal, Grease, Impeller Side	1
8	305100	*Water Slinger	1
9	307064	Mount, Hydraulic Motor	1
10	350149	Bolt, 3/8 inch x 2 inch GR 8, Motor Mount	4
11	305101	*Key, Shaft Drive End	1
12	304968	Grease Fitting, 1/8 inch, NPT	3
13	305113	*Seal, Grease, Drive Side, M4	1
14	305102	*Coupling, Shaft to Motor	1
15	305107	*Set Screw, Coupling	2
16	307063	Bracket	1
17	350232	Bolt, ½ inch X 1 ¾ inch GR 8, Volute Case	8
18	305075	Impeller 13 inch Diameter, Stainless Steel	1
19	305627	*Nut Impeller	1
20	305092	Wear Ring, Volute	1

ITEM	PART NO.	DESCRIPTION	QTY
21	044583	*Drill Guide, Impeller Nut	1
22	305288	Nut, Packing Gland Flanged	2
23	305098	Packing Gland (Pair)	1
24	305114	*Packing 3/8 inch, Set of 5 Rings	1
25	305112	*Lantern Ring	1
26	305105	Stud, Packing Gland	2
27	305118	Packing Mount, Stainless Steel	1
28	305626	*Cap Screw Nyltite Seals	8
29	305340	*Bolt, Packing Mount	8
30	305091	Wear Ring, Packing Mount	1
31	305111	*Seal, O-Ring, Volute	1
32	300460	Petcock Drain, 1/2 inch	1
33	012930	Outlet Gasket, 4 inch	1
34	302527	Inlet Flange Gasket, 6 inch	1
35	350852	Plug, Volute, 1/4 inch	3
36	305115	Volute Case, Stainless Steel	1
37	305402	Rope Packing Kit	1
38	305405	Impeller Kit	1
39	305404	Shaft Kit, Stainless Steel	1

* These parts are included in the shaft kit. The shaft is not sold separately and is only sold as a shaft kit.

If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

M-3 Mega Water Pump

M-3 Direct Motor Mount, CW
304954

M-3 Direct Motor Mount, CCW
304985

The Mega M-3 water pump is a cost effective open centrifugal water pump suitable for water tanker applications where up to 3 spray heads will be operated simultaneously. The low horse-power draw of this pump is well-suited for on-highway type tankers as well as for small articulated tractor type water tankers where available space is limited.

Pump construction of high quality gray cast iron gives good durability and long life. The heavy duty stress proof 1.875 inch diameter shaft and heavy twin bearings allow the M-3 Pump to operate on higher drive RPM units (optimal range of 2,350 ± 50 RPM, maximum capability of 3,000 RPM).

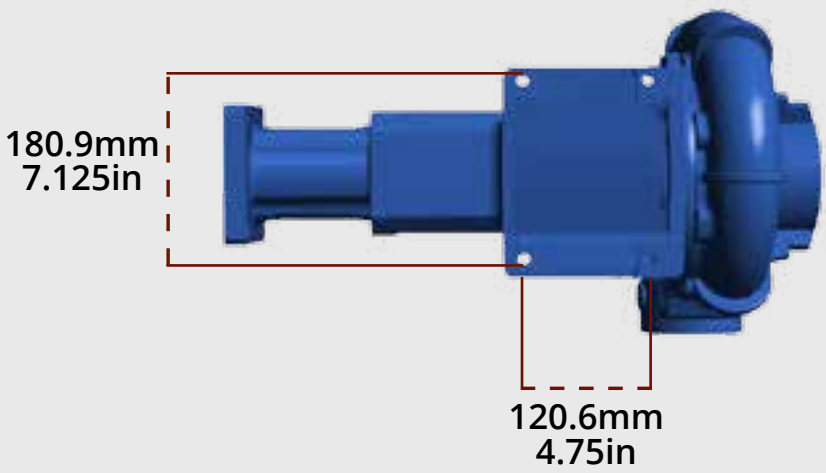
- Equipped with a rope-packing seal.
- Capable of over 800 gpm available flow, and over 80 psi available pressure.
- Mega M-3 series water pumps feature a 4 inch NPT threaded inlet and a 3 inch NPT threaded outlet.
- Available in both clockwise and counterclockwise configuration.

The standard pump drive is configured for direct mount of a ‘C’ fit face hydraulic motor with splined shaft or with ‘B’ fit face direct motor mount. The pump can also be configured for plain-keyed shaft external coupling to a variety of drive motors.

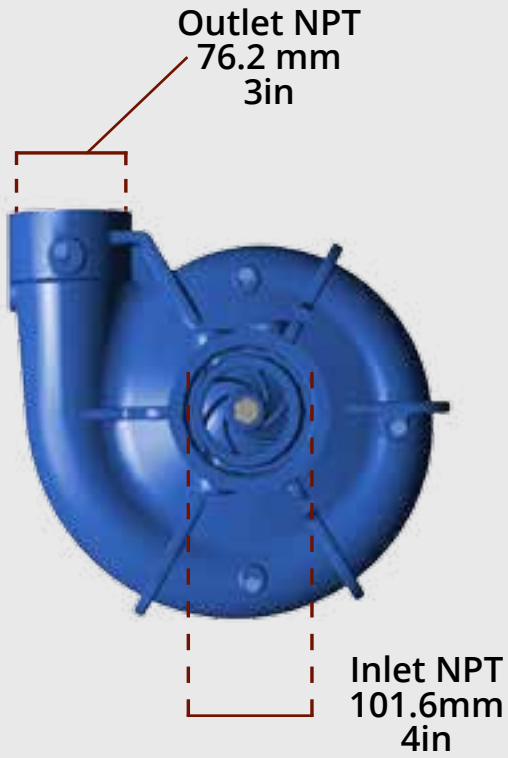
M-3 Basic Dimensions

**Please contact Parts Sales at 1-800-345-8889
for more dimensional information on our M-3 water pump.**

Footprint/ Bottom



Volute View

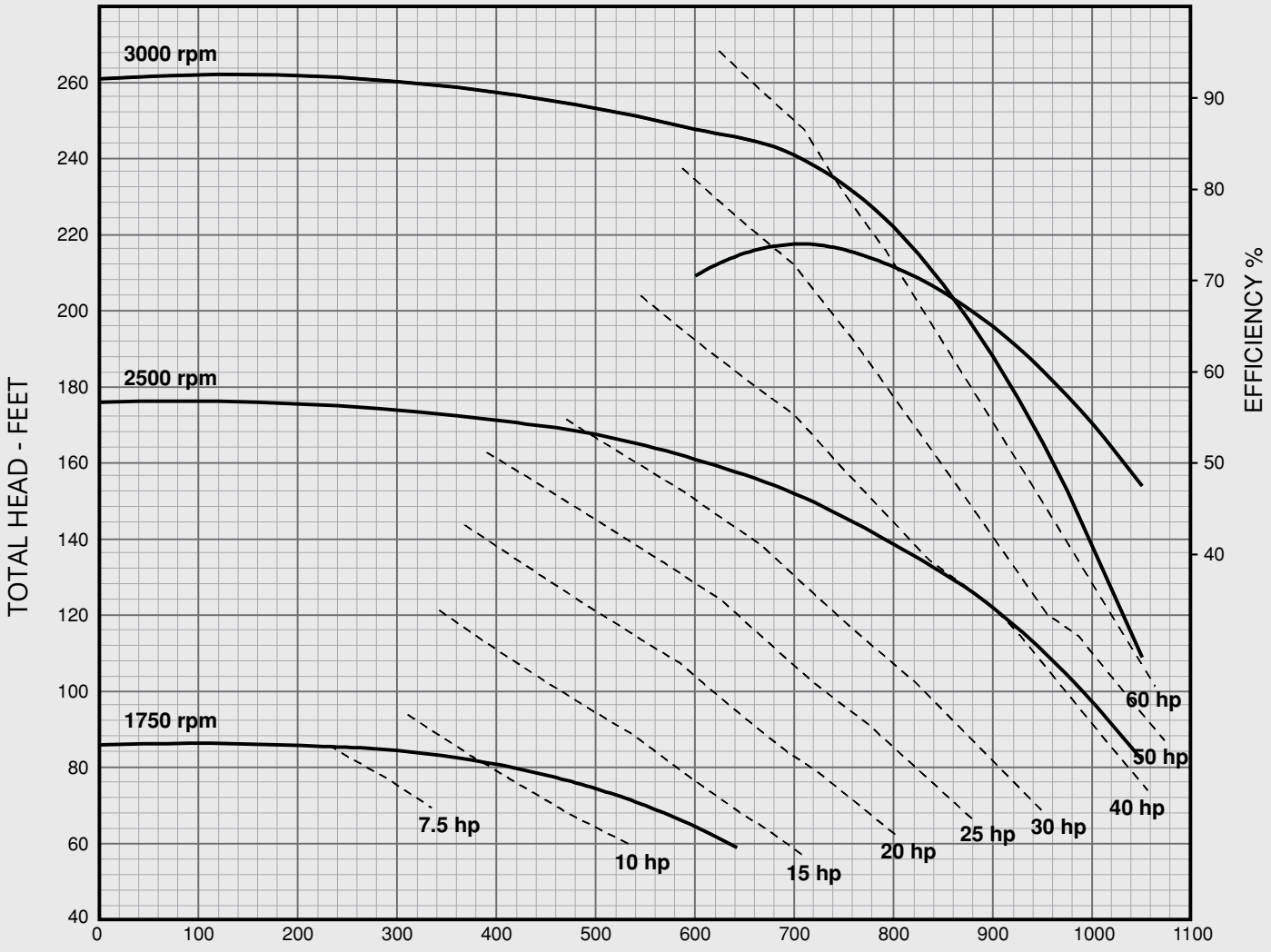


M-3 Performance Curve

M-3 Direct Motor Mount, CW
304954

M-3 Direct Motor Mount, CCW
304985

M-3 1.5 inch Plain Keyed, CCW
304977

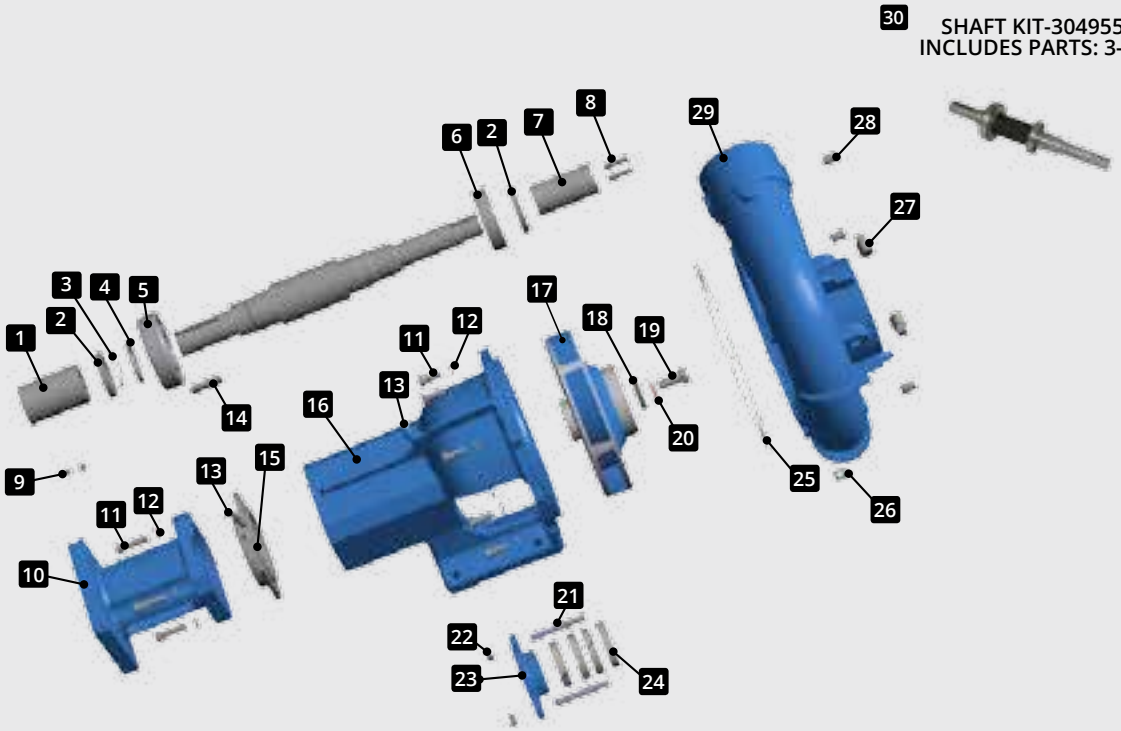


Flow Rate (U.S. gallons per minute)

Speed: Various
IMPELLER DIA: 9 inches
SOLIDS: 1.06 inches

Mega M-3 Water Pump - CCW, Direct Motor Mount
Part No. 304985

Mega M-3 Water Pump configured for direct mount of "C" fit hydraulic motor.
• Counterclockwise Rotation • 4 inch NPT • 3 inch NPT • 9 inch Impeller



AS VIEWED FROM HYDRAULIC MOTOR MOUNT.

ITEM	PART NO.	DESCRIPTION	QTY
	304985	M-3 Water Pump - CCW, Direct Motor Mount	
1	305102	Hydraulic Shaft Coupler	1
2	304960	Seal, Grease	2
3	304957	*Retainer, Snap Ring	1
4	304958	*Ring, Thrust	1
5	304956	*Bearing, Drive Side	1
6	304959	*Bearing, Impeller Side	1
7	304961	*Sleeve, Wear, Shaft	1
8	304962	*Key, Impeller	2
9	305107	Set Screw, Coupling	2
10	304981	Hydraulic Motor Mount, C-Fit	1
11	350146	Bolt, 3/8 inch-16 x 1.25 inch	12
12	350016	Washer, 3/8 inch	12
13	304968	Grease Fitting, 1/8 inch	2
14	305101	Key, Coupling	1

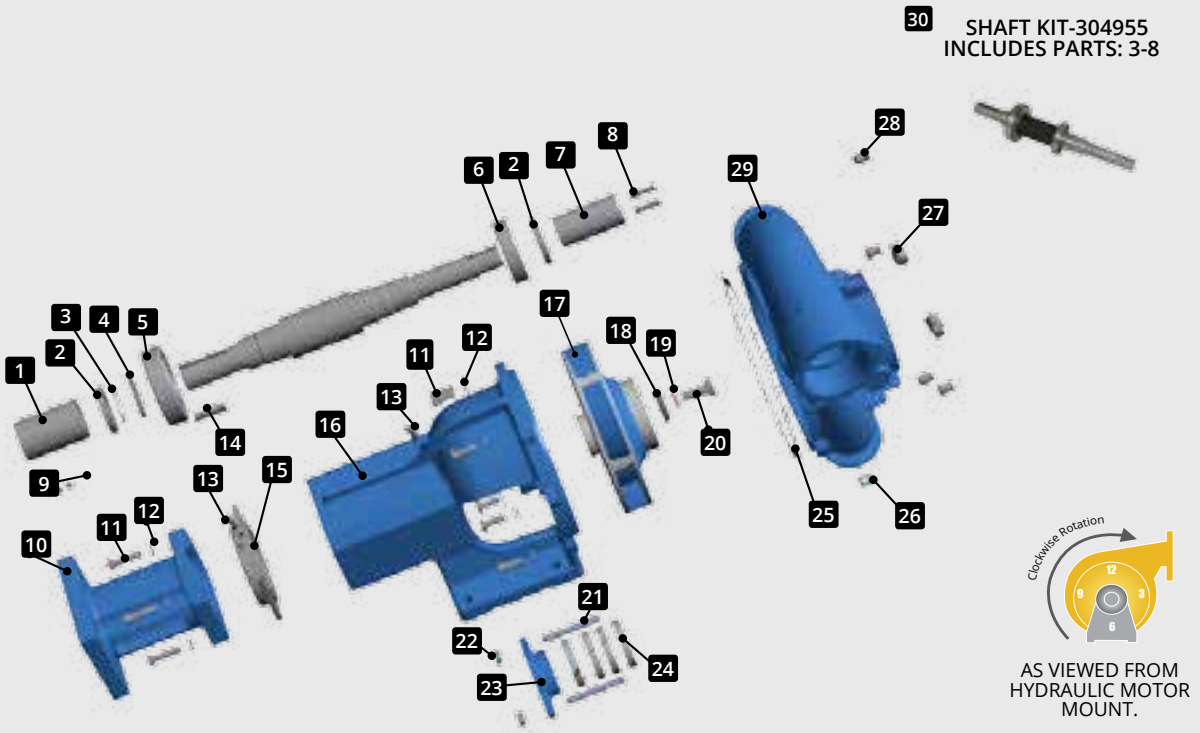
ITEM	PART NO.	DESCRIPTION	QTY
15	304983	Bearing Cap	1
16	304984	Bracket	1
17	304974	Impeller CCW	1
18	304971	Washer, Lock, Impeller	1
19	304972	Bolt, Impeller	1
20	304970	Washer, Impeller	1
21	304966	Stud, Packing Gland	2
22	304757	Nut, Packing Gland, 3/8 inch-16	2
23	304969	Packing Gland (Pair)	1
24	304967	Packing 3/8 inch, Set of 4 Rings	1
25	304973	Seal, Volute Gasket	1
26	300460	Petcock Drain, 1/2 inch	1
27	350852	Plug, 1/2 inch	2
28	350850	Plug, 1/4 inch, NPT	4
29	304975	Volute Case, CCW	1
30	304955	Shaft Kit Assembly	1

* These parts are included in the shaft kit. The shaft is not sold separately and is only sold as a shaft kit.

If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

MEGA M-3 Water Pump-CW, C-Fit Direct Motor Mount
Part No. 304954

Mega M-3 Water Pump configured for direct mount of "C" fit hydraulic motor.
• Clockwise Rotation • 4 inch NPT • 3 inch NPT • 9 inch Impeller



ITEM	PART NO.	DESCRIPTION	QTY
	304954	M-3 Water Pump - CW, Direct Motor Mount	
1	305102	Hydraulic Shaft Coupler	1
2	304960	Seal, Grease	2
3	304957	*Retainer, Snap Ring	1
4	304958	*Ring, Thrust	1
5	304956	*Bearing, Drive Side	1
6	304959	*Bearing, Impeller Side	1
7	304961	*Sleeve, Wear, Shaft	1
8	304962	Key, Impeller	2
9	305107	Set Screw, Coupling	2
10	304981	Hydraulic Motor Mount, C-Fit	1
11	350146	Bolt, 3/8 inch-16 x 1.25 inch	12
12	350016	Washer, 3/8 inch	12
13	304968	Grease Fitting, 1/8 inch	2
14	305101	Key, Coupling	1

ITEM	PART NO.	DESCRIPTION	QTY
15	304983	Bearing Cap	1
16	304984	Bracket	1
17	304965	Impeller CW	1
18	304971	Washer, Lock, Impeller	1
19	304972	Bolt, Impeller	1
20	304970	Washer, Impeller	1
21	304966	Stud, Packing Gland	2
22	304757	Nut, Packing Gland, 3/8 inch-16	2
23	304969	Packing Gland (Pair)	1
24	304967	Packing 3/8 inch, Set of 4 Rings	1
25	304973	Seal, Volute Gasket	1
26	300460	Petcock Drain, 1/2 inch	1
27	350852	Plug, 1/2 inch	2
28	350850	Plug, 1/4 inch, NPT	4
29	304963	Volute Case, CW	1
30	304955	* Shaft Kit Assembly	1

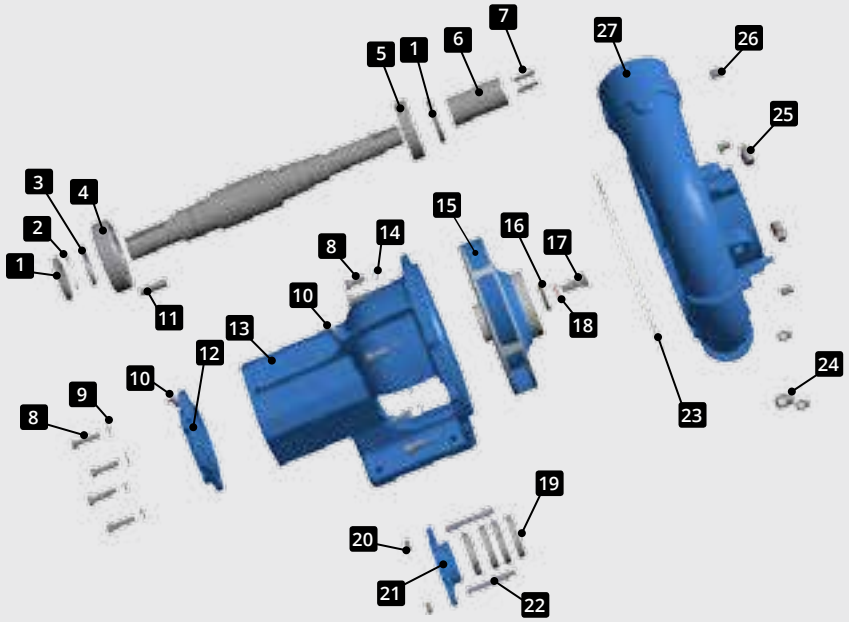
* These parts are included in the shaft kit. The shaft is not sold separately and is only sold as a shaft kit.

If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

Mega M-3 Water Pump-CCW, Plain Keyed 1.5 inch Diameter Shaft
Part No. 304977

Mega M-3 Water Pump configured with plain input shaft, 1.5 inch, keyed.
• Counterclockwise Rotation • 4 inch NPT • 3 inch NPT • 9 inch Impeller

28 SHAFT KIT-304955
INCLUDES PARTS: 5,7,9,10,11



AS VIEWED FROM HYDRAULIC MOTOR MOUNT.

ITEM	PART NO.	DESCRIPTION	QTY
	304977	M-3 Water Pump-CCW, Plain Keyed	1
1	304960	Seal, Grease	2
2	304957	* Retainer, Snap Ring	1
3	304958	*Ring, Thrust	1
4	304956	* Bearing, Drive Side	1
5	304959	* Bearing, Impeller Side	1
6	304961	* Sleeve, Wear, Shaft	1
7	304962	Key, Impeller	2
8	350146	Bolt, 3/8 inch-16 x 1.25 inch	12
9	350016	Washer, 3/8 inch	12
10	304968	Grease Fitting, 1/8 inch	2
11	305101	Key, Coupling	1
12	304983	Bearing Cap	1
13	304984	Bracket	1
14	350016	Washer, 3/8 inch	12

ITEM	PART NO.	DESCRIPTION	QTY
15	304975	Impeller ,CCW	1
16	304970	Washer, Impeller	1
17	304972	Bolt, Impeller	1
18	304971	Washer, Lock, Impeller	1
19	304967	Packing 3/8 inch, Set of 4 Rings	1
20	304757	Nut, Packing Gland, 3/8 inch-16	2
21	304969	Packing Gland, In 2 pieces	1
22	304966	Stud, Packing Gland	2
23	304973	Seal, Volute Gasket	1
24	300460	Petcock Drain, 1/2 inch	1
25	350852	Plug, 1/2 inch	2
26	350850	Plug, 1/4 inch, NPT	4
27	304974	Volute Case, CCW	1
28	304955	* Shaft Kit Assembly	1

* These parts are included in the shaft kit. The shaft is not sold separately and is only sold as a shaft kit.

If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

MEGA PUMPS HAVE MANY USES

Open Centrifugal pumps are used for...

MEGA HAS THE WATER PUMP FOR YOU.

Call a Mega sales rep today for more information.

WE ALSO CARRY BERKELEY WATER PUMPS!

In addition to our own Mega water pumps, we also offer several widely-used Berkeley water pumps and pump parts for the convenience of customers with existing fleet Berkeley pumps and parts. These include the B-4J, B-3Z, B6Z, and B4Z water pumps.

Berkeley Water Pumps

B-4J Splined Shaft, CW 304755

B-3 Splined Shaft, CW 302001

B-4Z Splined Shaft, CW 302430

B-6Z Keyed Shaft, CW 300048

B-4J Water Pumps

The B-4J water pump is widely-used and has a durable, proven design. Mega Corp. offers this water pump for the convenience of customers with existing fleet B-4J parts commonality.

- Both plain keyed shaft and direct motor mount versions are available.
- Can be purchased with either a rope-packing seal or a mechanical seal.
- A trimmed impeller for low horsepower applications is available.

The B-3 & B-3Z Water Pumps

The Berkeley B-3 and the B-3Z frame water pump is likely the most commonly used water pump in the mobile water tank industry. Mega Corp. maintains a complete stock of replacement water pumps and repair parts. As a Berkeley dealer for over 30 years, we are well versed in all technical aspects of this and other Berkeley open centrifugal water pumps. Contact us today for more information.

B-4Z Water Pumps

This clockwise-rotation water pump is self-priming and is used for the suction loading option on Mega's smaller water trucks. It is available in both plain-keyed shaft and direct motor mount versions.

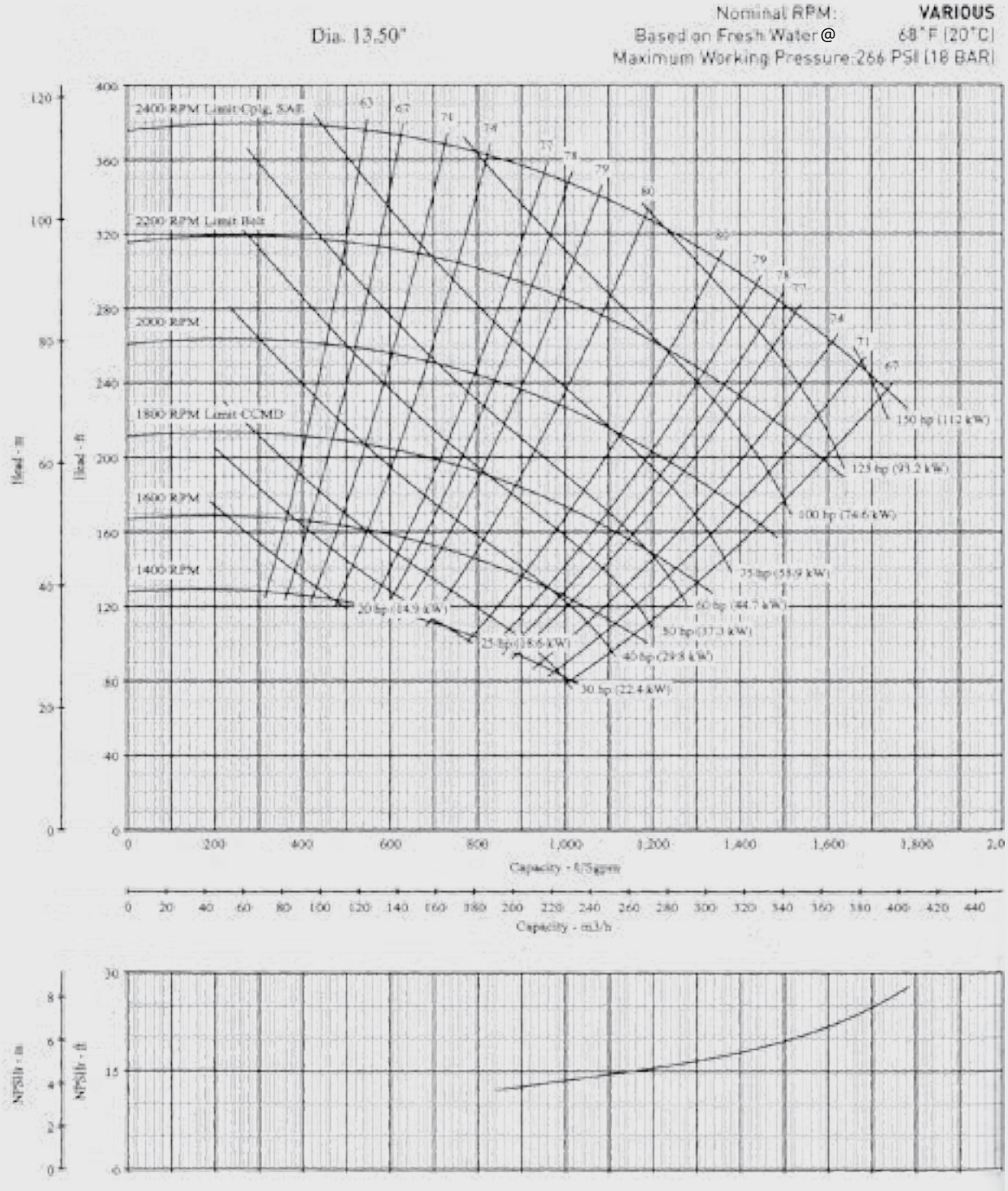
B-6Z Water Pumps

This inexpensive water pump is still commonly found in older machines. Mega Corp. offers this pump for the convenience of customers with existing B-6Z stock parts. This pump is available in both direct motor mount and plain keyed shaft versions as well as either clockwise or counterclockwise configurations.

B-4J Berkeley Pump Performance Curve

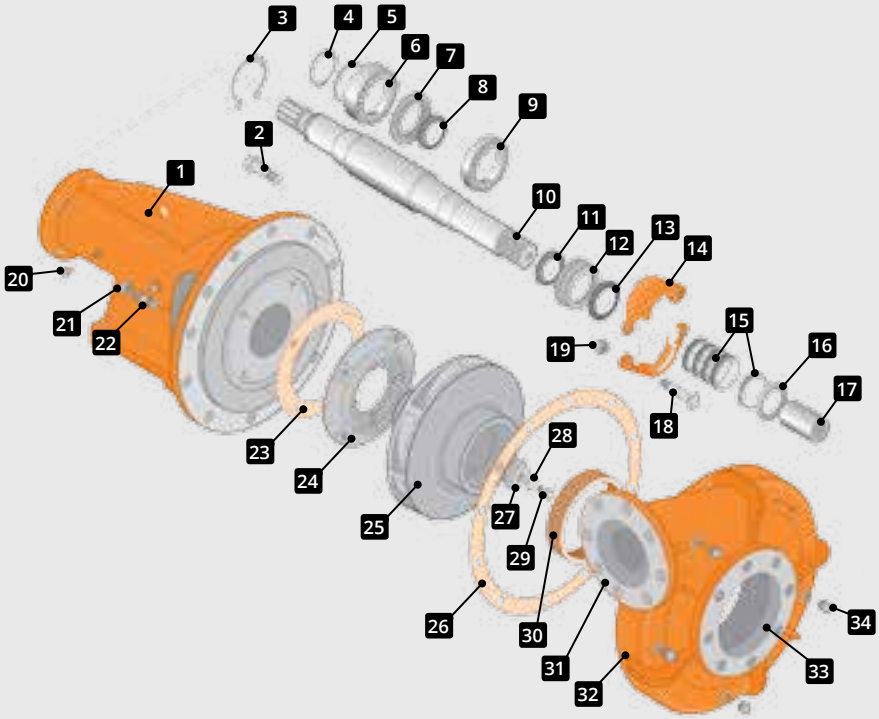
B-4J Splined Shaft, CW
Applies to part numbers:
304755, 301908, 304742

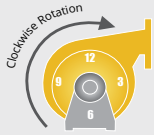
B-4J Keyed Shaft, CW
301104



Berkeley B-4J Water Pump - CW (Splined Shaft)
Part No. 304755

Berkeley standard high performance open centrifugal water pump. Rope packing shaft seal.
• Clockwise Rotation • Inlet 5 inch Flange Mount • Outlet 4 inch Flange Mount • 13 inch Impeller





AS VIEWED FROM HYDRAULIC MOTOR MOUNT.

ITEM	PART NO.	DESCRIPTION	QTY
	304755	Berkeley, B-4J Water Pump-CW (Splined Shaft)	1
1	302292	Bracket	1
2	350283	Bolt, 5/8 x 1.5 inch	12
3	300536	*Retainer, Snap Ring	1
4	300524	*Thrust Ring	1
5	302301	*Retainer, Snap Ring	1
6	302296	*Bearing, Drive Side	1
7	302305	*Bearing Cap, Drive Side	1
8	302304	Oil Seal, Motor Side	1
9	302297	*Bearing, Impeller Side	1
10	302293	*Shaft, Clockwise Rotation	1
11	302302	*Oil Seal, Impeller Side**	1
12	302294	Bearing Cap, Impeller Side	1
13	300541	**Water Slinger	1
14	300533	Gland, in 2 pieces	1
15	300719	**Rope Packing	1
16	300540	Throat Bushing	1
17	300535	*Wear Sleeve, Shaft	1
18	354187	Bold, Gland	2

ITEM	PART NO.	DESCRIPTION	QTY
19	300363	Gland Nut	2
20	303812	Grease Fitting, 0.25 inch	2
21	350025	Nut, 3/8 inch	4
22	302298	Stud Balance Ring	4
23	300545	**Gasket, Balance Ring	1
24	301099	Balance Ring	1
25	301097	13 inch Impeller, Clockwise	1
26	300552	**Gasket, Volute Case	1
27	301103	*Washer, Impeller	1
28	300551	Washer, Lock, Impeller	1
29	300549	Bolt, Impeller	1
30	301101	Wear Ring	1
31	012930	Gasket, Outlet, 4 inch	1
32	301098	Volute Case, CW	1
33	012929	Gasket, Inlet, 5 inch	1
34	350852	Plug, Pipe, 1/2 inch	4
35	301927	†Coupling Spline	1
36	302486	Shaft Kit	1

If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

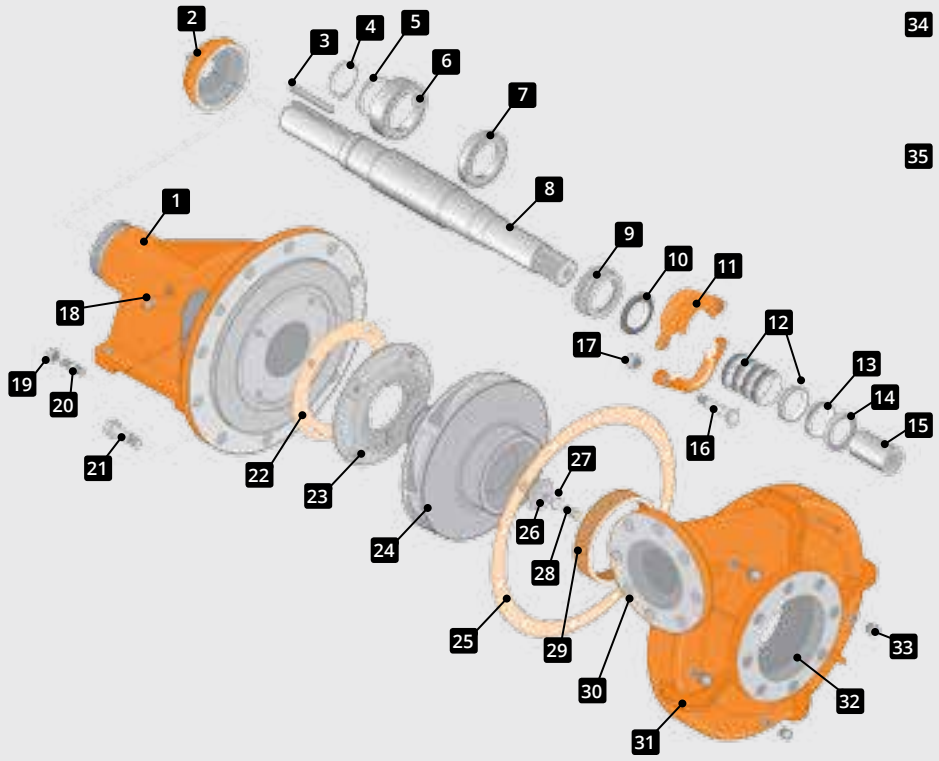
* These parts are included in the shaft kit. The shaft is not sold separately and is only sold as a shaft kit.

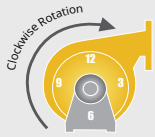
** Gasket and seals required for pump rebuild assembly.

† **Replacement parts only. Parts sold seperately and not included with the water pump.**

Berkeley B-4J Water Pump - CW (Keyed Shaft)
Part No. 301104

Berkeley standard high performance open centrifugal water pump. Rope packing shaft seal.
• Clockwise Rotation • Inlet 5 inch Flange Mount • Outlet 4 inch Flange Mount • 13 inch Impeller





AS VIEWED FROM HYDRAULIC MOTOR MOUNT.

ITEM	PART NO.	DESCRIPTION	QTY
	301104	Berkeley, B-4J Water Pump-CW (Keyed Shaft)	1
1	300531	Bracket	1
2	300532	Outer Bearing Cap	1
3	301687	*Shaft Key	1
4	300536	*Retainer, Snap Ring	1
5	300542	*Thrust Ring	1
6	300538	*Ball Bearing, Outer	1
7	300537	*Bearing, Impeller Side	1
8	300534	*Keyed Shaft, Clockwise Rotation	1
9	300539	Bearing Cap, Impeller Side	1
10	300541	**Water Slinger	1
11	300533	Gland, in 2 pieces	1
12	300719	**Rope Packing	1
13	300540	Throat Bushing	1
14	300543	Lantern Ring	1
15	300535	*Wear Sleeve, Shaft	1
16	354187	Bolt, Gland	2
17	300363	Gland Nut	2

ITEM	PART NO.	DESCRIPTION	QTY
18	303812	Grease Fitting, 0.25 inch	2
19	350025	Nut, 3/8 inch	4
20	302298	Stud Balance Ring	4
21	350283	Bolt, 5/8 x 1.5 inch	12
22	300545	**Gasket, Balance Ring	1
23	301099	Balance Ring	1
24	301097	13 inch Impeller	1
25	300552	**Gasket, Volute Case	1
26	301103	Washer, Impeller	1
27	300551	Washer, Lock, Impeller	1
28	300549	Bolt, Impeller	1
29	301101	Wear Ring	1
30	012930	Gasket, Outlet, 4 inch	1
31	301098	Volute Case, CW	1
32	012929	Gasket, Inlet, 5 inch	1
33	350852	Plug, Pipe, 1/2 inch	4
33	350852	Plug, Pipe, 1/2 inch	4
34	301458	†Coupling	1
35	300554	Shaft Kit	1

* These parts are included in the shaft kit. The shaft is not sold separately and is only sold as a shaft kit.

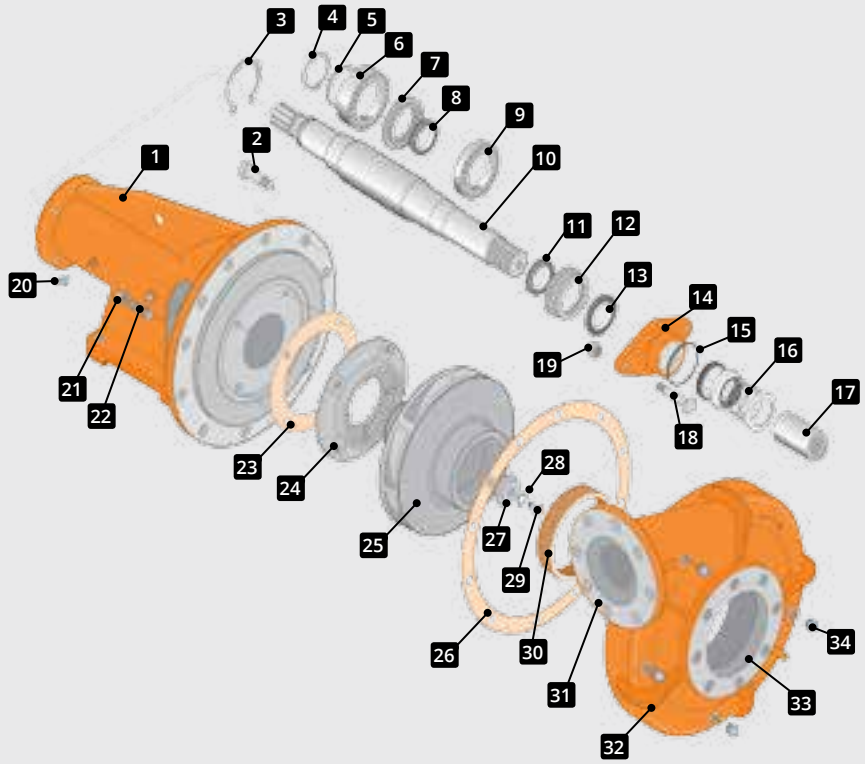
** Gasket and seals required for pump rebuild assembly.

† **Replacement parts only. Parts sold seperately and not included with the water pump.**

If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

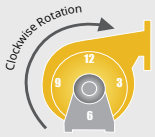
Berkeley B-4J Water Pump - CW (Splined Shaft)
Part No. 301908 or 304742

Berkeley standard high performance open centrifugal water pump. Mechanical shaft seal.
• Clockwise Rotation • Inlet 5 inch Flange Mount • Outlet 4 inch Flange Mount • 13 inch Impeller



†301927

SHAFT KIT-302486
INCLUDES PARTS:
3-7,9-11,17



AS VIEWED FROM
HYDRAULIC MOTOR
MOUNT.

ITEM	PART NO.	DESCRIPTION	QTY
	301908	Berkeley, B-4J Water Pump - CW (Splined Shaft)	1
	304742	Berkeley, B-4J Water Pump - CW (Splined Shaft)	1
1	302292	Bracket	1
2	350283	Bolt, 5/8 x 1.5 inch	12
3	302301	*Retainer, Snap Ring	1
4	300536	*Retainer, Snap Ring	1
5	300542	*Thrust Ring	1
6	302296	*Bearing, Drive Side	1
7	302305	*Bearing Cap, Drive Side	1
8	302304	*Oil Seal, Motor Side	1
9	302297	*Bearing, Impeller Side	1
10	302293	*Shaft	1
11	302302	**Oil Seal, Impeller Side	1
12	302294	Bearing Cap, Impeller Side	1
13	300541	**Water Slinger	1
14	302295	Retainer, Mechanical Seal	1
15	302300	**O-ring, Shaft Seal Retainer	1
16	302299	**Shaft Seal, Mechanical	1
17	300535	*Wear Sleeve, Shaft	1
18	354187	Bolt, Gland	2

If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

ITEM	PART NO.	DESCRIPTION	QTY
19	300363	Gland Nut	2
20	303812	Grease Fitting 0.25 inch	1
21	350025	Nut, 3/8 inch	4
22	302298	Stud Balance Ring	4
23	300545	**Gasket, Balance Ring	1
24	303212	Balance Ring	1
25	301097	13 inch Impeller, Clockwise	1
26	300552	**Gasket, Volute Case	1
27	301103	*Washer, Impeller	1
28	300551	*Washer, Lock, Impeller	1
29	300549	Bolt, Impeller	1
30	301101	Wear Ring	1
31	012930	Gasket, Outlet, 4 inch	1
32	301098	Volute Case	1
33	012929	Gasket, Inlet, 5 inch	1
34	350852	Pipe Plug, 1/2 inch	1
35	301927	†Coupling	1
36	302486	Shaft Kit	1

* These parts are included in the shaft kit. The shaft is not sold separately and is only sold as a shaft kit.

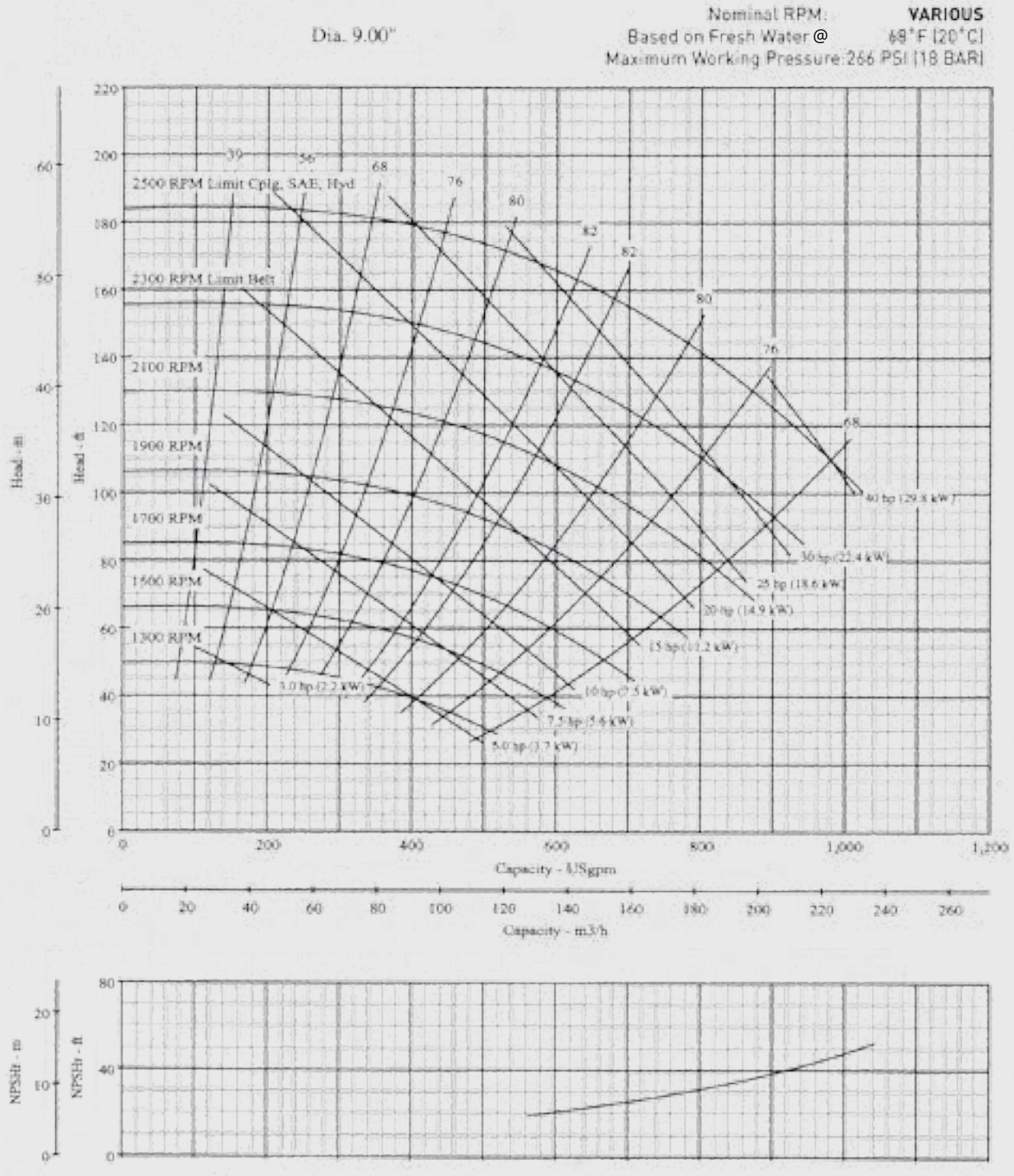
** Gasket and seals required for pump rebuild assembly.

† **Replacement parts only. Parts sold seperately and not included with the water pump.**

B-3 & B-3Z Berkeley Pump Performance Curve

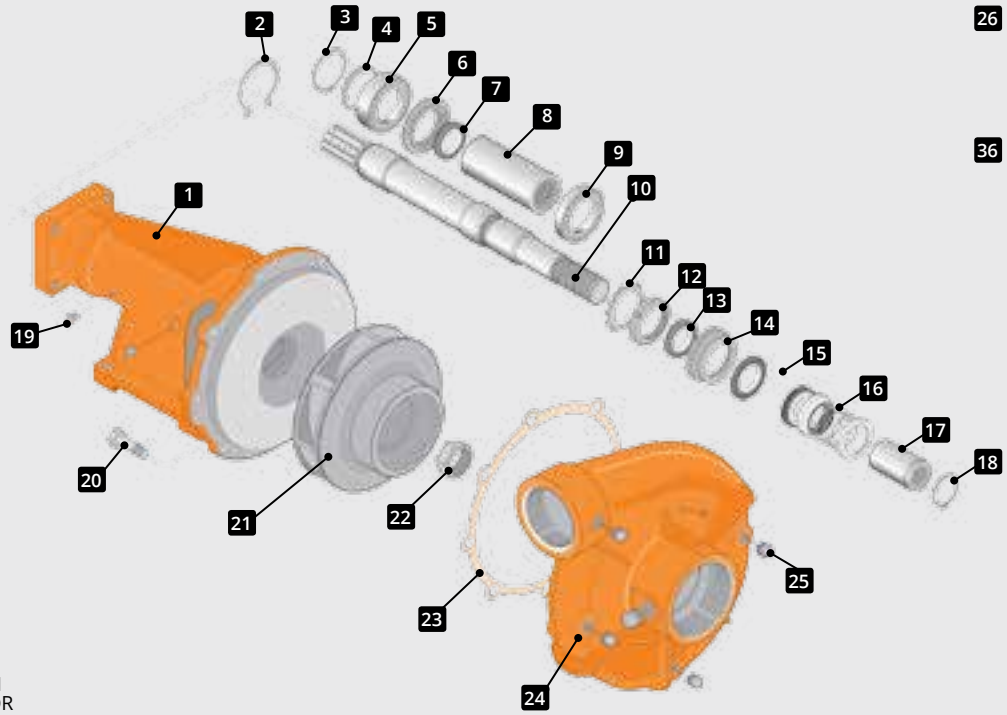
B-3Z Keyed Shaft, CW
300049

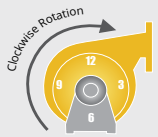
B-3 Splined Shaft, CW
302001



Berkeley B-3 Water Pump - CW (Splined Shaft/Direct Motor Mount)
Part No. 302001

Berkeley standard open centrifugal water pump with direct motor mount. Mechanical shaft seal.
• Clockwise Rotation • Inlet 4 inch NPT • Outlet 3 inch NPT • 9 inch Impeller





AS VIEWED FROM HYDRAULIC MOTOR MOUNT.

ITEM	PART NO.	DESCRIPTION	QTY
	302001	Berkeley, B3 Berkeley-CW (Splined Shaft)	1
1	302004	Bracket	1
2	302483	*Retaining Ring	1
3	302482	*Retainer Ring	1
4	302009	*Thrust Washer	1
5	302450	*Bearing, Drive Side	1
6	302453	*Bearing Cap, Drive Side	1
7	302446	*Oil Seal, Motor Side	1
8	302448	*Spacer Sleeve	1
9	302449	*Bearing, Impeller Side	1
10	302006	*Shaft, CW	1
11	300379	*Washer, Lock, Impeller	1
12	300378	*Locknut	1
13	302447	**Oil Seal, Impeller Side	1

If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

ITEM	PART NO.	DESCRIPTION	QTY
14	302451	*Bearing Cap, Impeller Side	1
15	300558	**Water Slinger	1
16	302452	**Mechanical Shaft Seal	1
17	303952	*Wear Sleeve, Shaft	1
18	302484	*Retaining Ring	1
19	300519	Grease Fitting, 0.25	2
20	350145	Bolt, 3/8 inch	8
21	300389	9 inch Impeller	1
22	302480	Locknut, Impeller	1
23	300385	**Volute Case Gasket	1
24	300391	Volute Case	1
25	350850	Plug, 1/4 inch, NPT	4
26	301927	†Coupling	1
27	302485	Shaft Kit	1

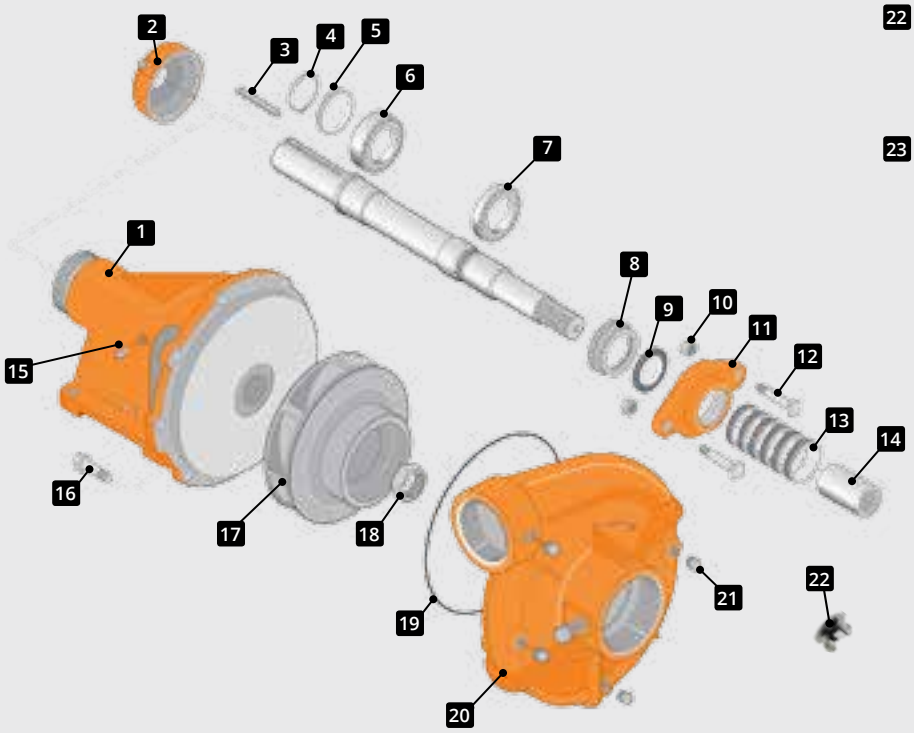
* These parts are included in the shaft kit. The shaft is not sold separately and is only sold as a shaft kit.

** Gasket and seals required for pump rebuild assembly.

† **Replacement parts only. Parts sold seperately and not included with the water pump.**

Berkeley B-3Z Water Pump - CW (Keyed Shaft)
Part No. 300049

Berkeley standard open centrifugal water pump with direct motor mount. Rope packing shaft seal.
• Clockwise Rotation • Inlet 4 inch NPT • Outlet 3 inch NPT • 9 inch Impeller



ITEM	PART NO.	DESCRIPTION	QTY
	300049	Berkeley, B-3Z Water Pump (Keyed Shaft)	1
1	300390	Bracket	1
2	301831	Cap, Outer Bearing	1
3	301008	*Key, 1/4 inch X 2 1/8 inch	1
4	302482	Retaining Ring	1
5	307077	Thrust Ring	1
6	300383	*Bearing, Ball	1
7	300384	*Bearing, Ball	1
8	300374	Inner, Bearing, Cap	1
9	300558	**Water Slinger	1
10	300518	Nut, Hex, 3/8 inch-16 inch	2
11	300372	Gland, in 2 pieces	1
12	300517	Bolt, SQ Head 3/8-16 X 2 1/2	2

ITEM	PART NO.	DESCRIPTION	QTY
13	300380	Ring, Packing, Set of 6	1
14	300373	*Sleeve, Shaft	1
15	300519	Fitting, Grease	1
16	350145	Bolt, 3/8 inch	8
17	300389	9 inch, Impeller	1
18	300524	*Locknut, Impeller	1
19	300385	**Volute Case Gasket	1
20	300391	Volute Case	1
21	350850	Pipe Plug, 1/4 inch	4
22	301464	†Coupling	1
23	301818	Shaft Kit	1

If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

* These parts are included in the shaft kit. The shaft is not sold separately and is only sold as a shaft kit.

** Gasket and seals required for pump rebuild assembly.

† **Replacement parts only. Parts sold seperately and not included with the water pump.**

We reach out **GLOBALLY** to take care of **YOU**

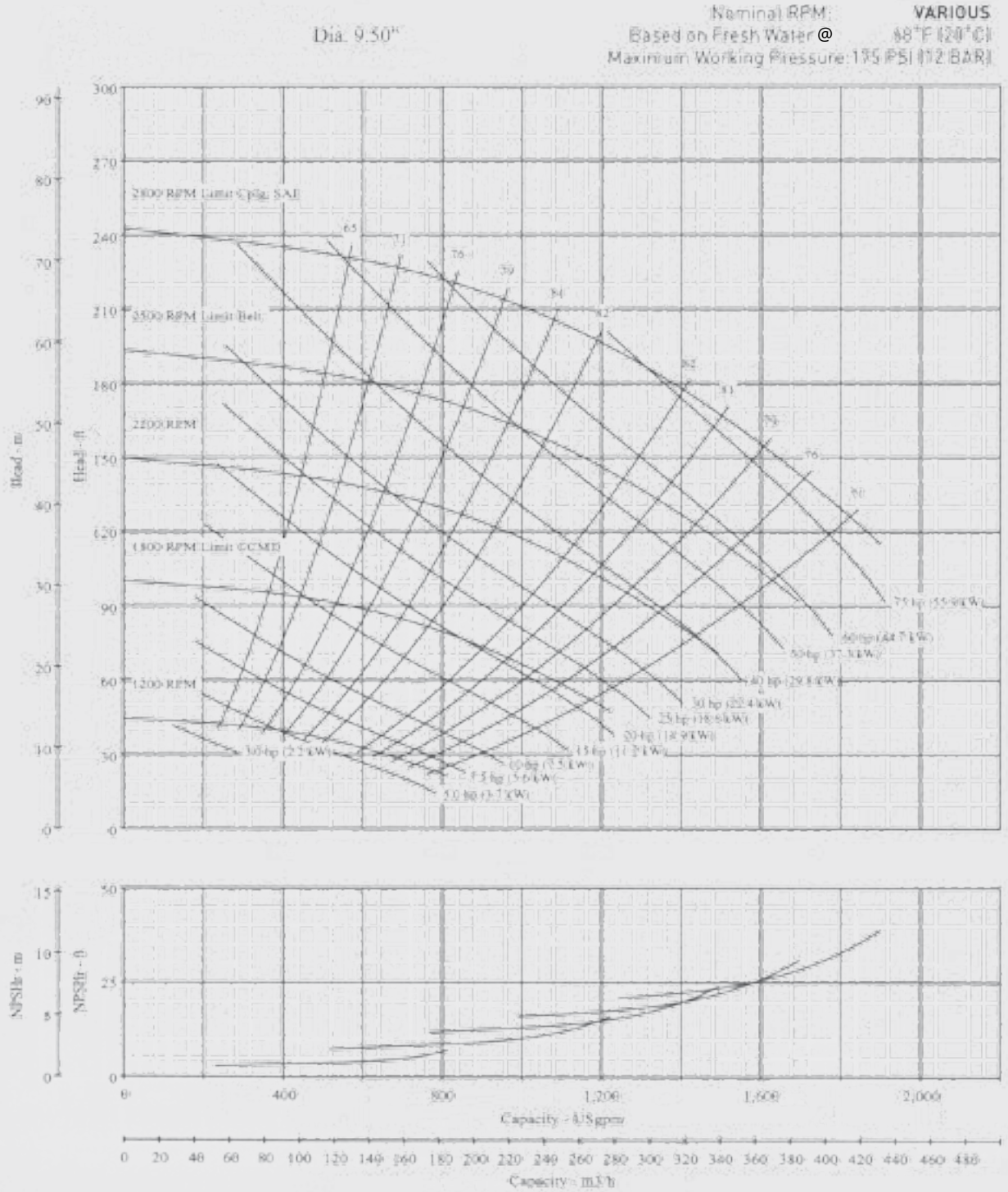
Wherever you are in the world, we're here to ensure you get the highest quality, most effective and durable water tank in the industry. Mega is responsible for the design, development, manufacture, marketing, and sale of products used in surface mining and construction projects worldwide.

Mega's products include all varieties of water haulage equipment, 34 cubic yard elevating scrapers, coal haulers, bottom-dump trailers, equipment transports, specialty dumper bodies, mobile pumps, and stand tanks, as well as parts service and technical support. Mega's products are manufactured at its headquarters in Albuquerque, New Mexico, U.S.A. as well as by its partners in Chile, Columbia, South Africa, United Kingdom, India, and Australia.

Parts and Product Support available 24 hours a day, seven days a week.

B-4Z Berkeley Pump Performance Curve

B-4Z Splined Shaft, CW
302430



Berkeley B-4Z Self Priming Water Pump
CW (Splined Shaft)-Part No. 302430

Berkeley standard open centrifugal water pump with direct motor mount. Mechanical shaft seal.
• Clockwise Rotation • Inlet 4 inch NPT • Outlet 4 inch NPT • 9 inch Impeller

ITEM	PART NO.	DESCRIPTION	QTY
	302430	Berkeley, B-4Z Water Pump-CW (Splined Shaft)	1
1	302004	Bracket	1
2	302483	*Retainer Ring	1
3	302482	*Retaining Ring	1
4	302009	*Thrust Washer	1
5	302450	*Bearing, Drive Side	1
6	302453	* Bearing Cap, Drive Side	1
7	302446	*Oil Seal, Motor Side	1
8	302448	*Spacer Sleeve	1
9	300384	*Bearing, Ball	1
10	302006	*Shaft, Spline	1
11	300379	*Washer, Lock, Impeller	1
12	300378	*Locknut	1
13	302447	**Oil Seal, Impeller Side	1
14	302451	*Bearing Cap, Impeller Side	1
15	300558	**Water Slinger	1
16	303952	*Wear Sleeve, Shaft	1
17	302484	*Retaining Ring	1
18	302480	Locknut, Impeller	1
19	350284	CS 5/8-11X1 3/4 inch	4

If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

ITEM	PART NO.	DESCRIPTION	QTY
20	300581	Companion Flange	1
21	300582	Gasket, Companion Flange	1
22	300519	Fitting, Grease	2
23	350144	Cap Screw 3/8-16 X 0.85 inch	8
24	302452	**Mechanical Shaft Seal	1
25	300575	Impeller, 9 inch, CW	1
26	300556	Volute Case, B42	1
27	300385	Gasket, Case	1
28	350856	Plug, Pipe, 1 1/2 inch	2
29	350852	Plug, Pipe, 1/2 inch	1
30	350025	Nut, Hex	1
31	300580	Weight, Clack	1
32	300576	Check Value, Gasket	1
33	300578	Weight, Clack	1
34	350143	CS 3/8-16 X 3/4	1
35	300579	Suction, Cover	1
36	350146	CS 3/8-16 X 1 1/4	7
37	301927	†Coupling	1
38	302485	Shaft Kit	1

* These parts are included in the shaft kit. The shaft is not sold separately and is only sold as a shaft kit.

** Gasket and seals required for pump rebuild assembly.

† **Replacement parts only. Parts sold seperately and not included with the water pump.**

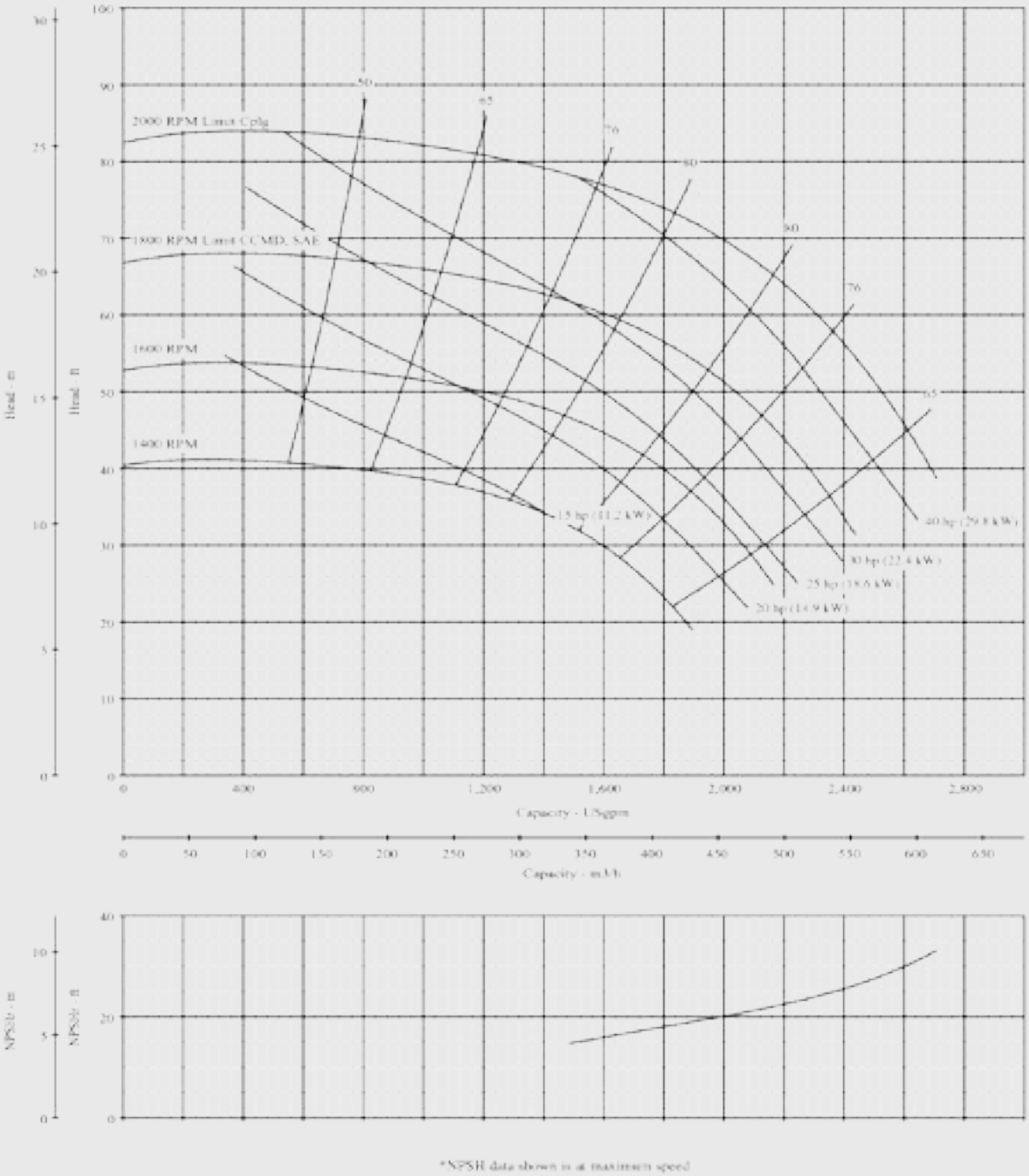
B-6Z Berkeley Pump Performance Curve

B-6Z Keyed Shaft, CW
300048

B-6Z Splined Shaft, CW
302565

Dia. 9.00"

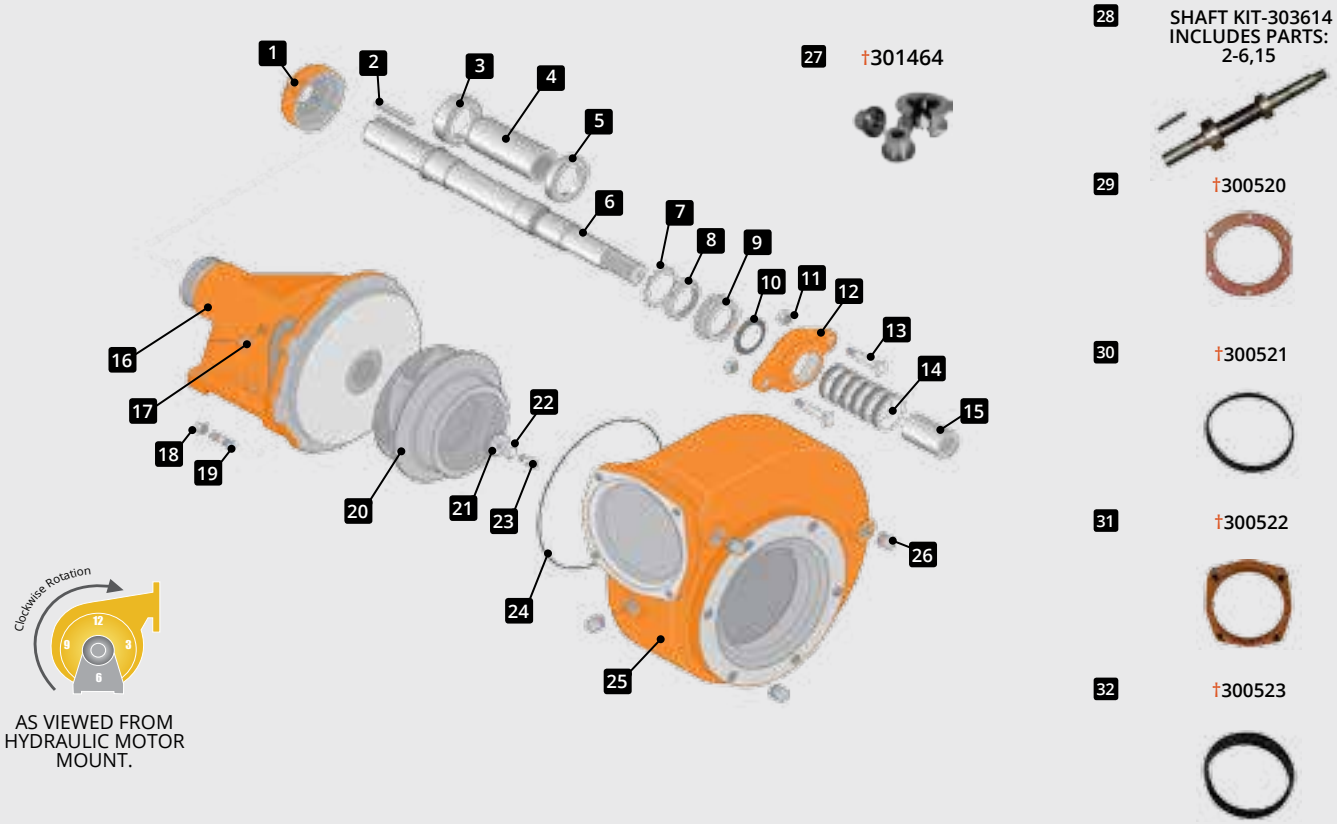
Nominal RPM: **VARIOUS**
Based on Fresh Water @ 68°F (20°C)
Maximum Working Pressure 266 PSI (18 BAR)



*NPSH data shown is at maximum speed

Berkeley B-6Z Water Pump - CW (Keyed Shaft)
Part No. 300048

Berkeley standard open centrifugal water pump with rope packing shaft seal.
• Clockwise Rotation • Inlet 6 inch • Outlet 8 inch • 9 inch Impeller



ITEM	PART NO.	DESCRIPTION	QTY
	300048	Berkeley, B-6Z Water Pump-CW (Keyed Shaft)	1
1	301831	Outer Bracking Cap	1
2	301008	*Key 1/4 X 2 1/8	1
3	300383	*Bearing, Pulley End	1
4	300381	*Spacer, Bearing	1
5	300384	*Bearing, Pump End	1
6	300516	*Shaft, CW	1
7	300379	Washer, lock bearing	1
8	300378	Nut, Bearing, Lock	1
9	300374	Bearing, Closure, Drip Cap	1
10	300558	Slinger, Water	1
11	300518	Nut, Gland	2
12	300372	Gland, in 2 pieces	1
13	300517	Bolt, Gland	2
14	300380	Ring Packing	1
15	300373	*Sleeve, Shaft	1
16	300390	Bracket	1

ITEM	PART NO.	DESCRIPTION	QTY
17	306697	Grease Fitting	1
18	350025	Nut, 3/8 inch	8
19	302298	Stud, 3/8-16 X 1 3/8 inch	8
20	300388	Impeller	1
21	300524	Lock, Washer, Impeller	1
22	300526	Washer, Lock	1
23	300525	Cap Screw, Impeller	1
24	300385	Case, Gasket	1
25	300392	Volute, Case	1
26	350852	Pipe Plug, 1/2 inch	4
27	301464	†Coupling	1
28	303614	Shaft Kit	1
29	300521	† Gasket, 8 inch	1
30	300520	† Flange, 8 inch	1
31	300522	† Flange, 6 inch	1
32	300523	† Gasket, 6 inch	1

If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

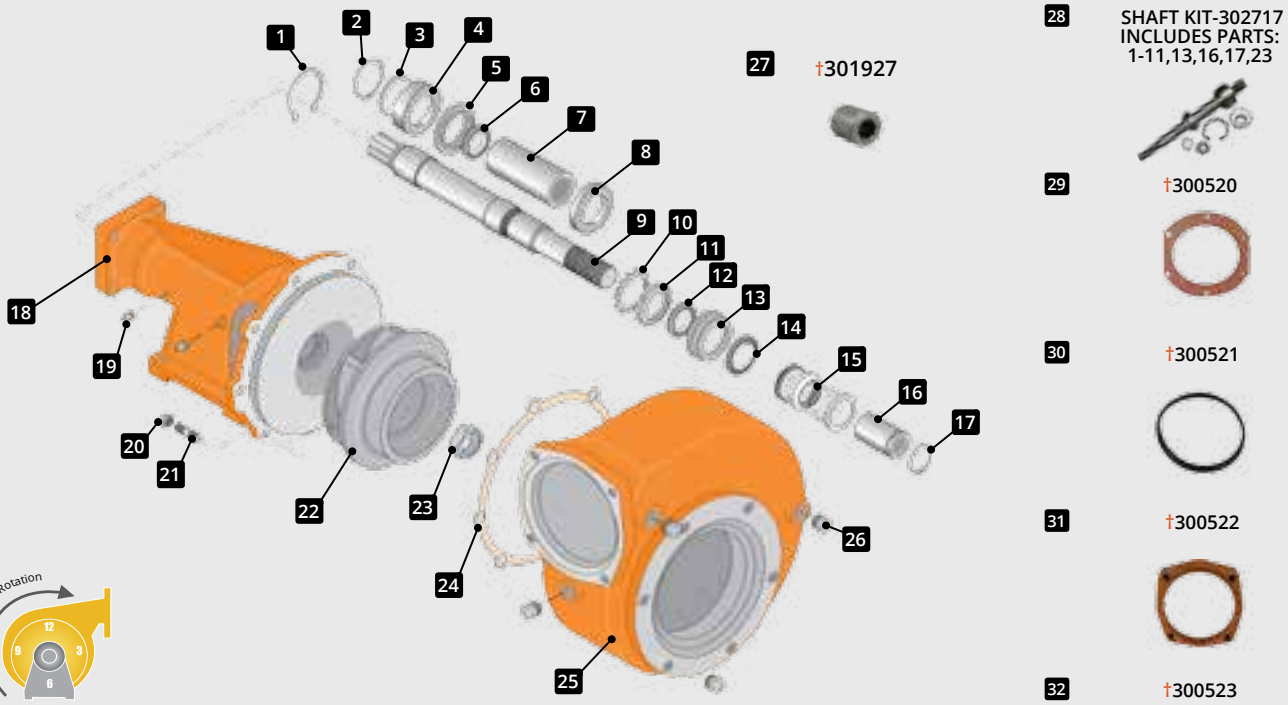
* These parts are included in the shaft kit. The shaft is not sold separately and is only sold as a shaft kit.

** Gasket and seals required for pump rebuild assembly.

† **Replacement parts only. Parts sold seperately and not included with the water pump.**

Berkeley B-6Z Water Pump - CW (Splined Shaft)
Part No. 302565

Berkeley standard open centrifugal water pump with direct motor mount. Mechanical shaft seal.
• Clockwise Rotation • Inlet 6 inch • Outlet 8 inch • 9 inch Impeller



AS VIEWED FROM HYDRAULIC MOTOR MOUNT.

ITEM	PART NO.	DESCRIPTION	QTY
	302565	Berkeley, B-6Z Water Pump-CW (Splined Shaft)	1
1	302483	*Ring, Retaining	1
2	302482	*RIng, External, Retaining	1
3	302009	*Washer, Thrust	1
4	302450	*Bearing, Ball	1
5	302453	*Cap, Outer Bearing	1
6	302446	*Seal, Oil	1
7	302448	*Sleeve, Spacer	1
8	303884	*Bearing, Ball	1
9	303190	*Shaft	1
10	300379	*Washer, Bearing, Lock	1
11	300378	*Nut, bearing, lock	1
12	302447	Seal, Oil	1
13	302451	*Cap Drip, Bearing	1
14	300558	Slinger, Water	1
15	302452	Seal, Mechanical	1

ITEM	PART NO.	DESCRIPTION	QTY
16	303952	*Sleeve, Shaft	1
17	302484	*Ring, External, Retaining	1
18	302004	Bracket	1
19	300519	Fitting, Grease	2
20	350025	Nut, 3/8 inch	8
21	302298	Stud, 3/8-16 X 1 3/8 inch	8
22	300388	Impeller, CW	1
23	302480	*Nut, Impeller	1
24	300385	Gasket, Case	1
25	300392	Volute Case	1
26	350852	Pipe Plug,1/2 inch	4
27	301927	†Coupling Spline	1
28	303614	Shaft Kit	1
29	300521	† Gasket, 8 inch	1
30	300520	† Flange, 8 inch	1
31	300522	† Flange, 6 inch	1
32	300523	† Gasket, 6 inch	1

* These parts are included in the shaft kit. The shaft is not sold separately and is only sold as a shaft kit.

** Gasket and seals required for pump rebuild assembly.

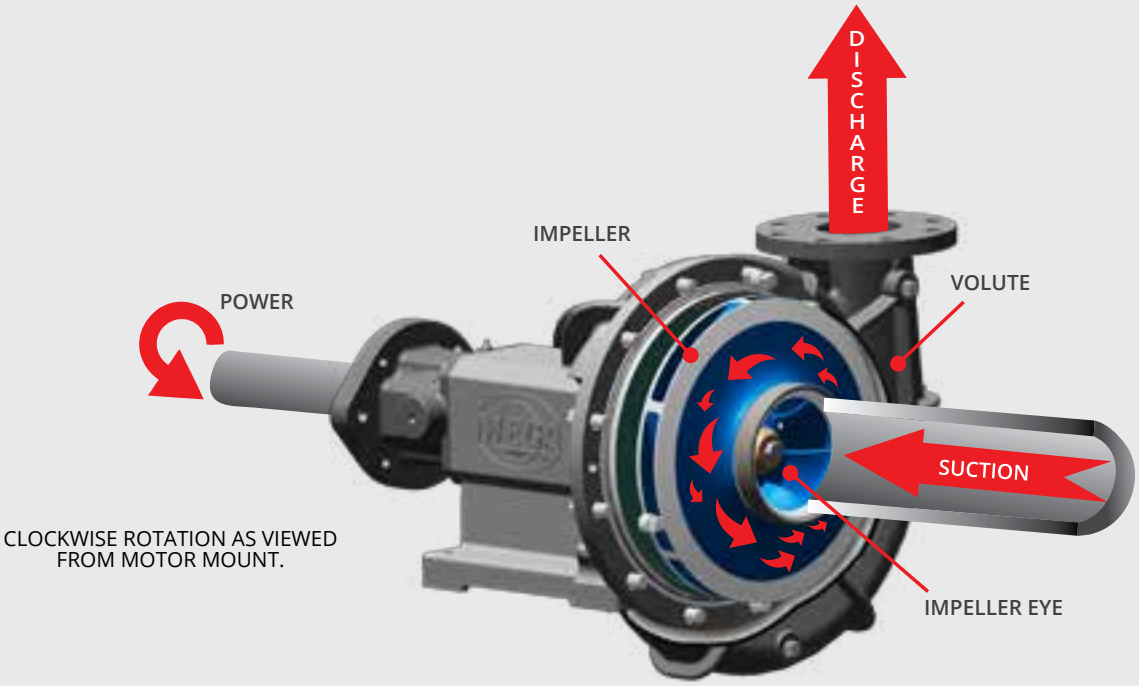
† **Replacement parts only. Parts sold seperately and not included with the water pump.**

If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

Mega Water Pump FAQ Section

What is an open centrifugal pump?

Centrifugal water pumps use centrifugal force to pressurize and move water from the inlet to the outlet. A rotating set of vanes (called an 'impeller') is spun by the pump shaft. As water is forced through the impeller, rotational energy is transferred from the impeller to the water, which gains velocity and pressure through the centrifugal force applied and is flung from the impeller. The volute (a spiral-shaped case) funnels the now-pressurized water to the outlet.



Pressure and Flow, and what causes water pressure.

Pressure and flow are inversely related−that is, if pressure is increased, then flow decreases, and vice versa. "Pressure" is the amount of force per area, and "flow" is the volume of material moving through a given area per second (not the same as velocity, which is the distance traveled per time).

Water pressure is caused by resistance to flow. If a force tries to move water and there is resistance to that movement, then the water becomes pressurized. Consider a standard garden hose; when the end of the hose is unrestricted, water flows out of the hose in large quantities, but without much force. If you press your thumb over the opening, however, the stream of water that shoots out from around your thumb will be much more forceful and will travel further, but there will also be less water per second leaving the hose.

What happens when an open centrifugal pump is "Dead-headed"?

A centrifugal pump is 'dead-headed' when it is operated without an open discharge outlet. Contrary to what one might assume, centrifugal pumps cannot be stalled if water flow is cut off. Very little horsepower input is required in order to spin the impeller with no water flow, so if the pump is driven by a hydraulic motor, the input hydraulic pressure will be low and the pump will not stall, instead continuing to spin the same volume of water as it would during normal operation. With no outlet, the rotational energy of the shaft and impeller is converted into heat; eventually, the water will boil inside the volute, causing severe damage over time.

When should I replace gaskets?

Any time that the water pump is serviced and the gaskets are removed, replace the gaskets. Gaskets are inexpensive, and a faulty gasket will cause the pump to leak.

How do I adjust the packing, and when should I adjust it?

Different types of packing are designed to leak at certain rates. If the packing begins to leak at a greater rate than the allowed amount, tighten the packing gland with a simple end wrench until the leakage is reduced to lie within the packing parameters. Additionally, the stuffing box temperature should be checked regularly. If the temperature becomes too high, loosen the packing gland until the temperature drops to a consistently safe level.

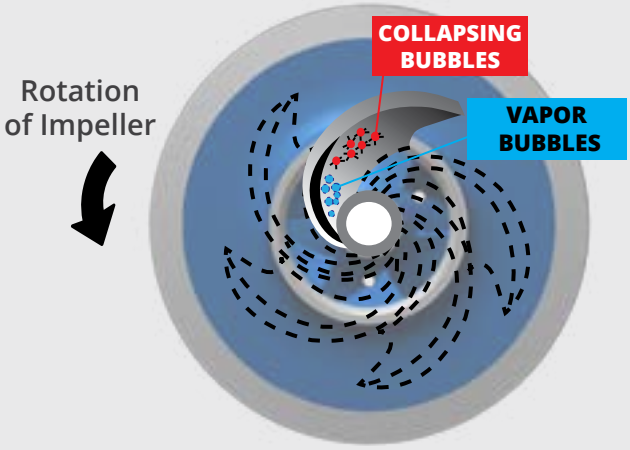
When should I replace the packing?

Over time as the packing is subjected to continual heat and pressure through normal use, lubricant will be forced out of the packing material. The life of the packing material can be extended by periodically tightening the packing gland whenever there is packing leakage greater than the specified amount (Mega's rope packing seals are designed to leak approximately 60 drops per minute). Eventually, however, all of the lubricant will have been squeezed out of the packing material, and tightening the packing gland will no longer prevent leakage. When this happens, it is time to replace the packing.

New rope packing installed

What causes pump cavitation?

When the inlet pressure of a water pump falls below pump design specifications, tiny vapor bubbles can form in the water around the eye of the impeller. When the water containing these bubbles is forced into a high pressure environment on the other side of the impeller, these bubbles collapse, thereby creating tiny shock waves and points of high temperature. These shock waves can actually corrode the surface of the impeller. To prevent cavitation, always be sure to operate your water pump within its pressure and flow specifications.



Is it bad to run the pump dry?

Absolutely. The water pump shaft and impeller are spinning at extremely fast rates. With no water to transfer their rotational energy to, that energy is released as heat instead. If the pump is run dry, its moving parts will become extremely hot, causing severe damage to the pump over time and greatly limiting its service life.

Will this pump pull water up vertically?

Mega Corp. offers one self-priming centrifugal pump for suction lifting applications: the B4-Z. This pump can lift water a vertical distance of 7-10 feet.

Why is my spray performance low?

Several factors can affect water pump performance. If low water output is noticed, one of the first things to check is the water pump shaft rpm to ensure it is spinning within specifications. Also check that the water inlet of the pump is not obstructed. Also check to see if the impeller is damaged or if the shaft bearings are worn or damaged. Consult your Mega Field Service Manual or call Mega Corp. Product Support for complete details.

Why isn't my pump pumping?

There could be several factors behind this:

•*Is there enough water?* Check to ensure that there is enough water present in the tank to allow safe pumping; the Mega Digital Spray Control System shuts the water pump once a sufficiently low water level has been reached.

•*Beware of air locks.* If there is too little water in the tank, the pump may have drawn in a large air pocket that is preventing the flow of water (see '*What is an air lock?*').

•*Is the lift displacement too great?* If you are operating a suction lift pump, be sure that the water reservoir you are drawing from is no more than 7 feet below the pump, otherwise the resistance to flow may be too great.

•*Are you using pipes that are too small or have too many elbows?* Pumping water through small diameter pipes (and pipes with elbows and check valves) increases the water pressure, but as a result also increases flow resistance. If the resistance is too great, your pump will not perform.

What is an air lock?

An air lock occurs when large pockets of air are drawn into the inlet side of the water pump. This essentially acts as a void, and can prevent the pump from drawing in water. Not only will this decrease (or even stop) pump performance, it can be very damaging as well. If the air pocket is drawn through the impeller and into an area of high water pressure, the bubbles will collapse and create large shock waves that will severely damage the pump.

Why did the pump shaft break?

Water pump shaft failures can be caused by several factors:

- Sudden start or stop of the pump.
- Pump rpm should be ramped up and down over a minimum of 2 seconds.
- Engaging a water pump suddenly can twist the impeller off the shaft and damage shaft bearings.
- Water hammer caused by sudden shut off of water flow can cause the impeller to break the pump shaft and damage shaft bearings over time.
- An unbalanced or damaged impeller can cause shaft failure and bearing damage over time.

Does Mega Corp. offer a corrosion-resistant water pump?

Yes, we do! Our M-4B pump (part number 306201) is available in a corrosion-resistant form. In this version of the M-4B, all parts that come into contact with water are stainless steel.

Does Mega Corp. offer a water pump with a mechanical shaft seal?

Yes! The B-4J water pump is available with a mechanical seal (part numbers 301908 and 304742).

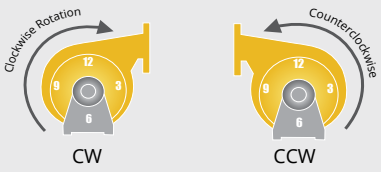
What type of materials are Mega water pumps constructed?

Mega water pump are constructed of cast plain carbon steel and grade 316 stainless steels.

How do I identify what water pump I have?

Look for a metal identification tag on the frame of the pump. Compare your pump with the photos in this catalog or on our website: www.megacorpinc.com. Send us a photo of the water pump and request identification at 1-800-345-8889 and ask for either Product Support or Parts Sales.

Which direction should my pump be spinning?



CW CCW

AS VIEWED FROM HYDRAULIC MOTOR MOUNT.

Water pumps rotate either clockwise or counterclockwise as viewed from the drive shaft end of the pump. To determine rotation direction position the pump with the shaft end facing yourself. If the outlet of the pump is facing 90 degrees to the right, straight down on the right side of the pump centerline, or straight up on the left side of the pump centerline, then it is a clockwise rotation pump.

If the outlet of the pump is facing 90 degrees to the left, straight down on the left of the pump centerline, or straight up on the right side of the pump centerline, it is a counterclockwise pump.

Can Mega water pumps be damaged by freezing?

Yes. If a pump is allowed to freeze with water in it, cracking of the volute case as well as damage to the shaft and bearing set may occur. Thoroughly drain the water system of your pump and tank in freezing weather. If the pump has been frozen, inspect it for damage before returning it to service.

How often should the water pump bearings be greased?

Water pump bearings should be greased with about 2 oz of grease every 250 hours of service. Most water pumps should only be greased by hand and it should be noted that over greasing can damage bearings as well as no grease. High pressure grease guns can blow out grease seals in the pump causing grease loss and bearing failure. Mega M-4B water pumps, (306200 and 306201) can be greased with an auto greaser or looped into a prime mover's auto greasing circuit. Refer to Mega maintenance manuals for complete details.

The water pump shaft is spinning, but there is low/no water pressure. What is wrong?

1. Ensure the shaft is spinning in the correct direction. The pump will flow a little bit of water when run backwards. Refer to how to determine whether your pump is clockwise or counterclockwise. All Mega hydraulically driven pumps are clockwise. Only some shaft driven water pumps are counterclockwise.

2. Check to see if the impeller is still connected to the shaft.

My pump is noisy. What is wrong?

While most water pumps are fairly quiet during operation, hydraulic drive motors can be quite noisy. Ensure that the noise you hear is in fact coming from the water pump. If the pump is making a growling, grinding, squealing, or popping noise, it should be immediately disassembled and inspected for damage.

How much water pressure should my pump develop?

Find and refer to the water pump performance curve chart for the water pump you have, available in this manual and on our website (or by calling Mega Product Support). Water pressure should be checked with water in the tank and water pump, and with no spray heads open while the tractor engine's at high idle. To obtain acceptable spray performance, a minimum of 85 psi water pressure under static conditions (no water flowing) is required. A static water pressure exceeding 125 psi can cause damage to water lines, connections, and spray heads.

DEPENDABILITY

MEGA WATER CANNONS

Mega Corp.'s water cannons are designed and built to perform in the most severe environments of mining and construction. Designed for the water pressures and flows required in the mobile water equipment industry, Mega's water cannons are ideal for fire suppression, high pressure equipment washing, and applications that require long-distance, concentrated spray. We offer water cannons for use with both electric and electro-hydraulic systems, as well as a manually-operated water cannon for use where no power is available.

MEGA WATER CANNONS

Mega water cannons (known as 'monitors' in the fire fighting industry) are designed for the severe duty environments of mining and construction. Mega water cannons feature 2.5 inch stainless steel waterways and a unique, permanently lubricated swivel joint design that minimizes maintenance requirements and improves service life. Mega Corp. also offers application-specific water cannons, so that no matter what your needs are, we have a water cannon that will work for you.

Mega water cannons are available in both electric drive (24 VDC) and electro-hydraulic drive (24 VDC) models. We also offer a manually-operated water cannon suitable for both stationary and mobile applications. Kit options are available for the hydraulic and electric water cannons.

Mega Severe Duty Water Cannons

Mega Hydraulic Water Cannon

Optional Nozzle shown.

The stainless steel Mega Hydraulic Water Cannon is compatible with electro-hydraulic systems that have a 24 VDC power source available. The Water Cannon is directed by a hydraulic control valve,which receives command signals from the Mega cab control system joystick. The hydraulic water cannon is rated for up to 450 psi hydraulic pressure, 200 psi water pressure, and has a reach of up to 200 ft at 750 gpm (using the straight bore nozzle and stream shaper).

- Hydraulic drive motor; requires 24 VDC power source
- 1/2 gpm hydraulic motor flow at 500psi
- Stainless steel waterway
- 320° horizontal rotation range, 155° vertical rotation range (+90° to -65°), and rotational speed of 20°/sec

Mega Electric Water Cannon

Optional Nozzle shown.

The stainless steel Mega Hydraulic Water Cannon is compatible with any water tank that has a 24 VDC power source available. The Water Cannon is directed by a logic box, which receives command signals from either the Mega cab control system joystick or a stand alone joystick box. The electric water cannon is rated for up to 450 psi hydraulic pressure, 200 psi water pressure, and has a reach of up to 200 ft. (using the straight bore nozzle with stream shaper).

- Electric drive motor; requires 24 VDC power source
- 1/2 gpm hydraulic motor flow at 500psi
- Stainless steel waterway
- 320° horizontal rotation range, 155° vertical rotation range (+90° to -65°), and rotational speed of 20°/sec

Mega Specialty Water Cannons

Mega Manual Water Cannon

Optional Nozzle shown.

For environments where no electrical power is available, we offer the Mega Manual Water Cannon. This water cannon uses a simple tiller bar control and manual friction brake, and is designed for fixed installations in non-corrosive environments. Easy to use and capable of up to 1250 gpm, this water cannon is ideal for fire suppression, equipment wash-down, and agricultural applications where no electric power is available.

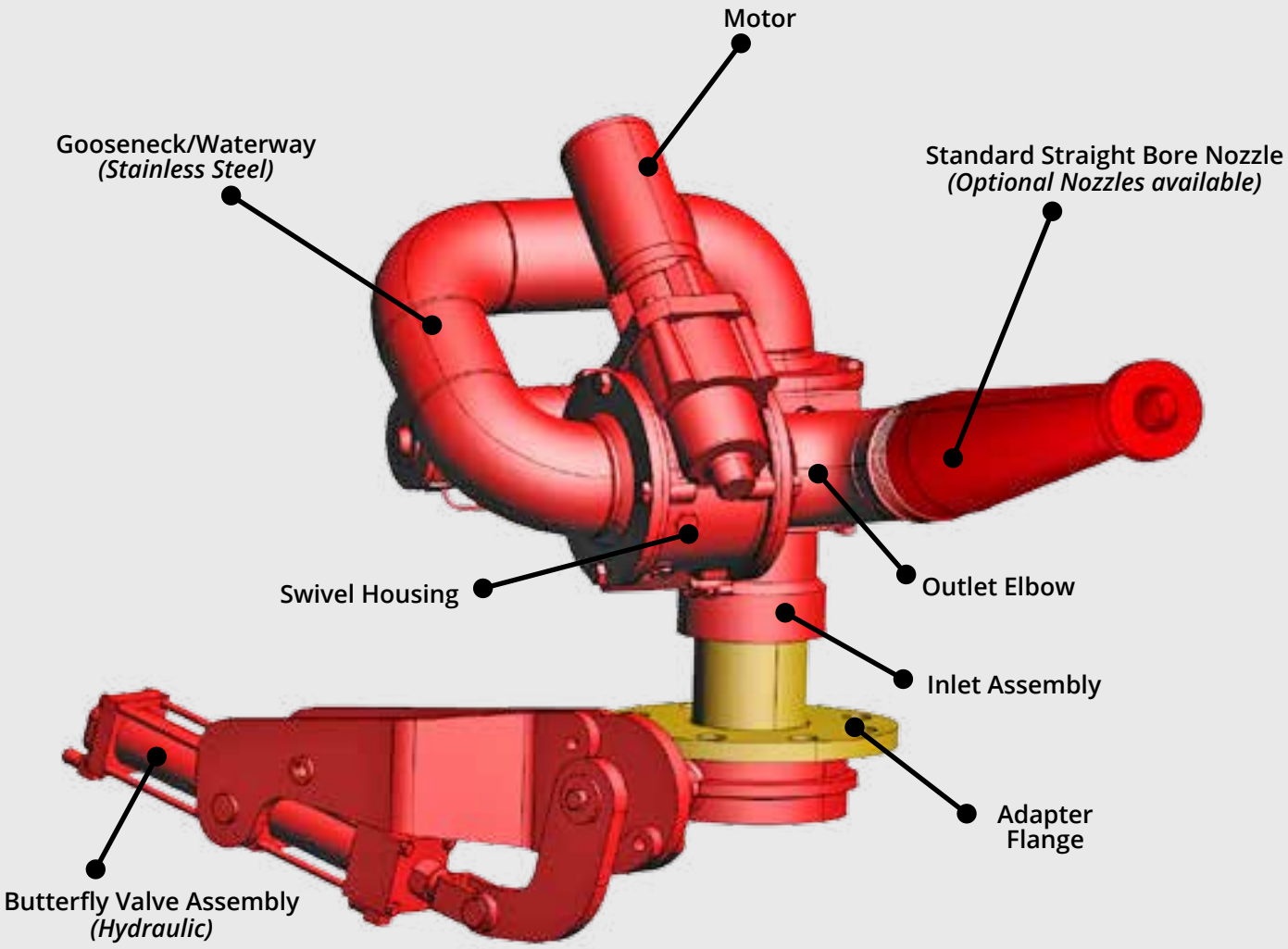
- Not severe-duty
- Durable, lightweight Pyrolite construction
- Cast-in turning vanes in each elbow for more efficient flow and improved stream performance
- 360° horizontal rotation range, 150° vertical rotation range (+90° to -60°)
- Friction lock on horizontal and vertical rotation
- Built-in pressure gauge and gauge guard

Mega Forestry Water Cannon

This specialty electric water cannon is designed for brush and wildfire firefighting, and is compatible with any water tank that has a 24 VDC power source available. The high-speed electric motor allows for swift positioning and high accuracy. The Forestry Water Cannon comes with a low flow adjustable electric fog nozzle, and is best suited for small water tank units with lower flows and pressures.

- Not severe-duty
- Easy installation
- Durable, lightweight Pyrolite construction; 10.4 kg (23 lbs) without nozzle
- Integrated and sealed electronics
- Waterproof (IP 67 rated) locking connectors
- 320° horizontal rotation range, 135° vertical rotation range (+90° to -45°), and rotational speed of 20°/sec
- Adjustable rotation stops
- Quick disconnect

Main Parts of a Water Cannon



Features	Benefits
Stainless Steel Waterway	Long life in harsh waters.
Large Polymer Bearings	No ball bearings. Improved service life. Easily re-buildable swivel joints.
2.5 inch Diameter Waterway	Perfectly matched with Mega high performance pumps for long distance water stream shots.
2.5 inch NFT Nozzle Adapter	Plug and play application of adjustable nozzles, stream straighteners, and foam eduction equipment.
Electric or Hydraulic Motor Drives	Can be adapted to any water tanker application.
Complete Control Packages	Modular design for any retrofit application.

Advantages and Benefits of Severe Duty Mega Water Cannons

No matter what your application or environment is, Mega Corp. has a water cannon that will work for you. All Mega Water Cannons are designed to endure harsh environments and poor water conditions. With the option of electric or hydraulic drive motors, as well as a completely manually operated version, our water cannons can be adapted to any water tank application. A variety of adjustable nozzles, stream shapers, and foam eduction equipment allows for even further customization.

High Density Polymer Bearings

With a much longer service life, these bearings are far superior to ball bearings, and are exclusive in the mining industry. The Mega water cannon high density polymer bearings are specially designed for severe duty mining, and are present only in severe duty water cannons.

Heavy Duty Gears & Shafts

Heavy duty worm gears and planetary drives absorb shock to provide longer life in heavy duty environments. Additionally, the swivels and bearings are sealed and do not require regular service.

Specialty Nozzles

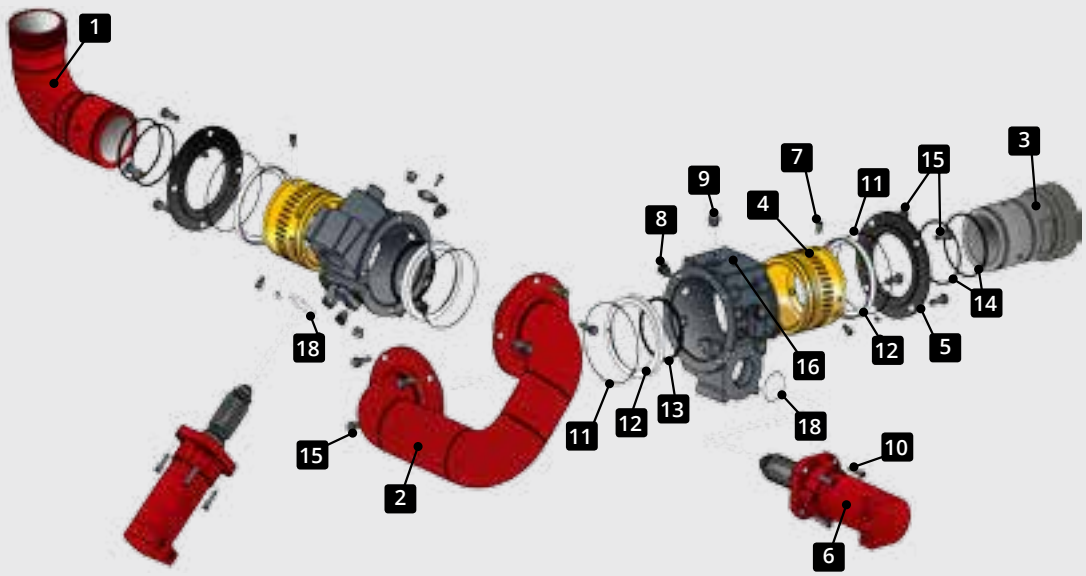
Mega's water cannons can be fitted with a variety of adjustable nozzles to customize the spray pattern and distance. In addition to the standard straight bore nozzle, Mega offers fog to stream,fog to stream with foam eduction, fan to stream (electric water cannon only), and foam eduction nozzles.

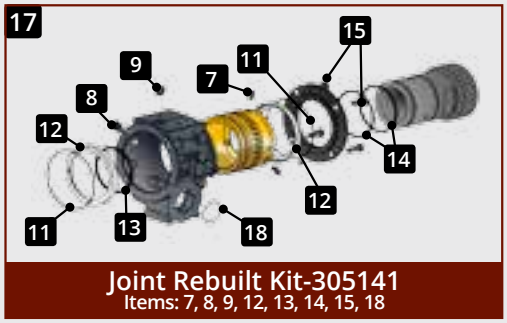
Foam Eduction Available

On-call, mobile fire suppression systems are essential for the safety of any mine or construction site. Mega Corp. offers a variety of adjustable air aspirating foam eduction nozzles for use with our water cannons. Further details on Mega's full Fire Suppression System can be found later in this water cannon section of the sourcebook.

Mega Water Cannon, Hydraulic, Remote
Part No. 304952

• Stainless steel • 450 PSI Drive Motors • 2.5 inch waterway • Severe duty construction
• Wear resistant polymer bearings • Heavy duty shafts & gears.





Joint Rebuilt Kit-305141
Items: 7, 8, 9, 12, 13, 14, 15, 18

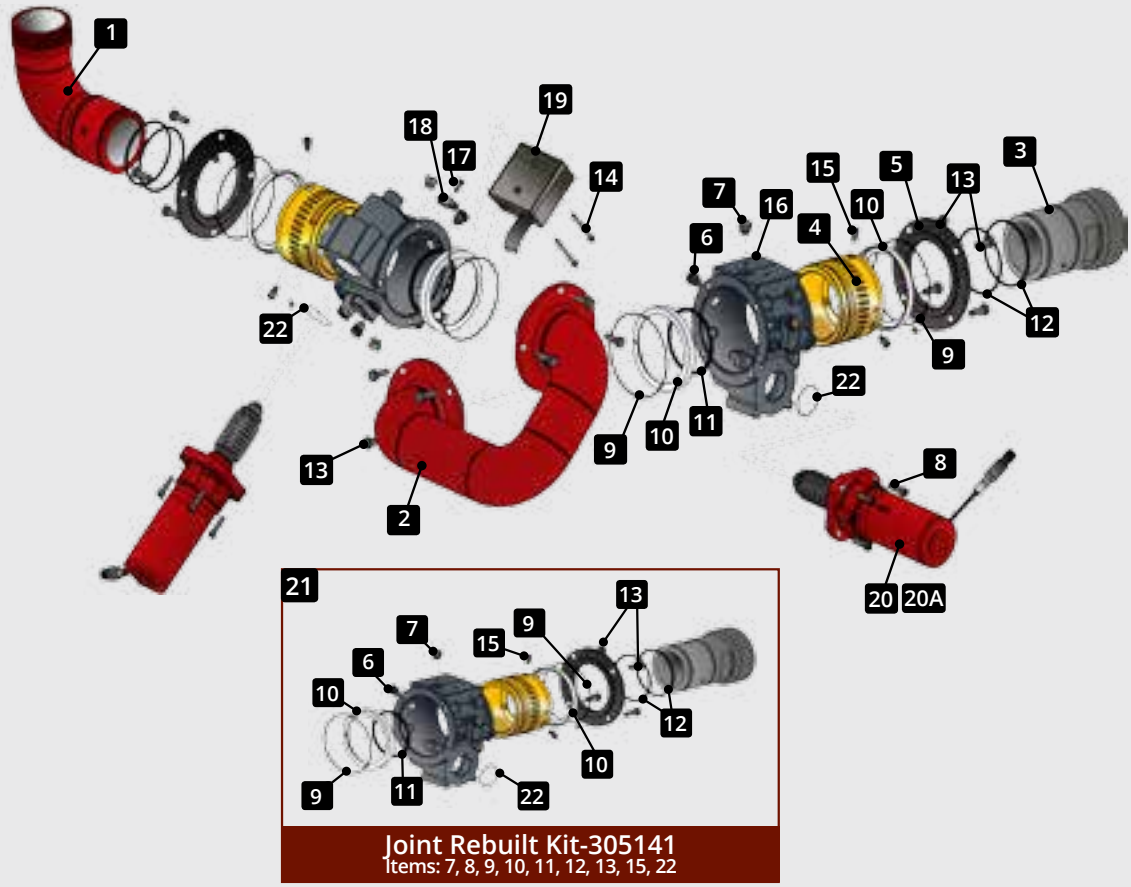
ITEM	PART NO.	DESCRIPTION	QTY
	304952	Hydraulic, Water Cannon	
1	304627	Elbow, Outlet	1
2	304628	Gooseneck Assembly	1
3	304629	Inlet Assembly	1
4	304630	Worm Gear	2
5	304631	Joint Cap	2
6	304656	Motor & Gear Assembly, Hydraulic	2
7	304642	Fastener, Stud	6
8	304632	Rotation Stop	4
9	304633	Plug	6

ITEM	PART NO.	DESCRIPTION	QTY
10	304635	Fastener, Motor	8
11	304636	O-Ring Seal, Joint	4
12	304637	Bearing	4
13	304638	O-Ring Seal, Joint	2
14	304639	O-Ring Seal, Joint	4
15	304640	Fastener, Swivel	16
16	304643	Swivel Housing	2
17	305141	Joint Rebuilt Kit (Rebuilds 2 Joints)	1
18	304897	O-Ring Seal, Drive	2

To order specialty nozzles please see pg.61

Mega Water Cannon, Electric, Remote
24 VDC Part No. 304652

• 24 VDC motors • 450 PSI Drive Motors • 2.5 inch waterway • Severe duty construction
• Wear resistant polymer bearings • Heavy duty shafts & gears.



Joint Rebuilt Kit-305141
Items: 7, 8, 9, 10, 11, 12, 13, 15, 22

ITEM	PART NO.	DESCRIPTION	QTY
	304652	Electric, 24 VDC only, Water Cannon	
1	304627	Elbow, Outlet	1
2	304628	Gooseneck Assembly	1
3	304629	Inlet Assembly	1
4	304630	Worm Gear	2
5	304631	Joint Cap	2
6	304632	Rotation Stop	4
7	304633	Plug	6
8	304635	Fastener, Motor	8
9	304636	O-Ring Seal, Joint	4
10	304637	Bearing	4
11	304638	O-Ring Seal, Joint	2

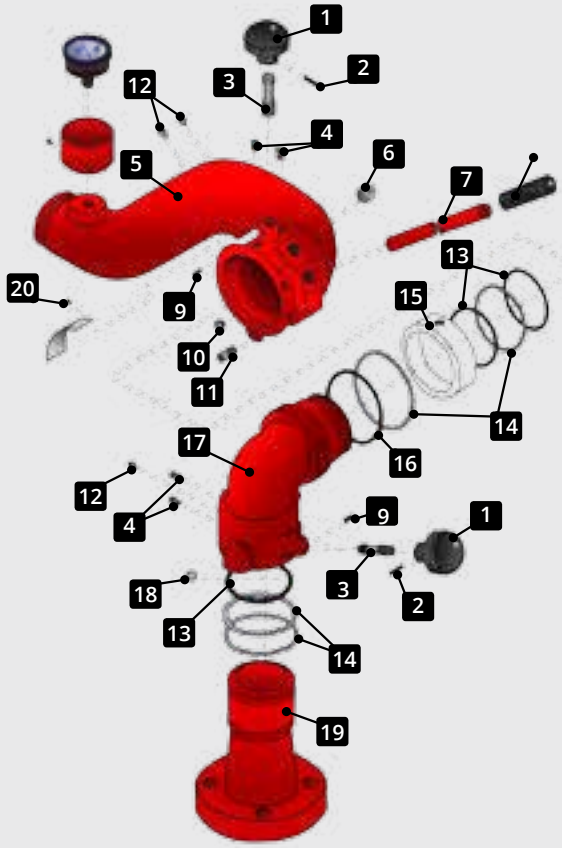
ITEM	PART NO.	DESCRIPTION	QTY
12	304639	O-Ring Seal, Joint	4
13	304640	Fastener, Swivel	16
14	304641	Fastener, Junction Box	2
15	304642	Rotation Stop	6
16	304643	Swivel Housing	2
17	304650	Fastener, Speed Clip	1
18	304651	Clip, Speed Clip	1
19	304620	Wiring, Harness	1
20	304619	Motor & Gear Assembly, Electric 12 VDC	2
20A	304618	Motor & Gear Assembly, Electric 24 VDC	2
21	305141	Joint Rebuilt Kit (Rebuilds 2 Joints)	1
22	304897	O-Ring Seal, Drive	2

* VDC-Volts Direct Current

To order specialty nozzles please see pg.61

Mega Water Cannon, Manual
Part No. 304612

Mega Corp. Manual Water Cannon is used where no power is available.
• Stainless Steel • Fire Suppression • Worker Friendly; Easy to Use • Equipment wash down
• Agriculture Applications • 3 inch waterway • Up to 1250 gpm flow



ITEM	PART NO.	DESCRIPTION	QTY
	304612	Manual Water Cannon	
1	304900	Brake Knob	2
2	304901	Gooseneck Assembly	2
3	304902	Brake Shaft	2
4	304903	Plug	4
5	304904	Elbow, Outlet	1
6	304905	Plug	1
7	304906	Handle	1
8	304907	Handle Grip	1
9	304908	Fastener, Swivel	2
10	304909	Plug	1
11	304910	Rotation Stop	1
12	304911	Grease Fitting	4

ITEM	PART NO.	DESCRIPTION	QTY
13	304912	O-Ring Seal, Joint	3
14	304913	Ball Bearing, Joint	4
15	304914	Brake Band	1
16	304915	O-Ring Seal, Joint	1
17	304916	Elbow, Swivel Joint	1
18	304917	Brake Ball	1
19	304918	Inlet Assembly	1
20	304920	Fastener, Swivel	1

To order specialty nozzles please see pg.61

PERFORMANCE

Standard Nozzles for Mega Water Cannon

The water cannon system is a versatile tool suitable for many different mining and construction applications. The straight bore nozzles produce a straight stream of water able to reach long distances. The water cannon will obtain maximum reach when the nozzle is at about 32 degrees of elevation with the chassis RPM at high idle. Reach can further be increased with the addition of an in-line stream shaper when extreme reach is required for "high wall" or "stockpile" operations.

300087

1 inch Standard Straight Bore With Built-In Stream Shaper

- On-Highway truck applications (low pressure systems)
- Single stream
- Built-in stream shaper straightens water flow & increases distance for lower pressure water pump systems
- 2.5 inch NH connection

300091

1.5 inch Standard Straight Bore With Built-In Stream Shaper

- Single stream
- Built-in stream shaper straightens water flow & increases distance
- 2.5 inch NH connection systems
- 2.5 inch NH connection

Performance Enhancements

Mega Corp. offers a variety of nozzles for use with both hydraulic and electric water cannons. These nozzles allow the customer to adjust a water cannon's spray pattern and reach to meet their specific application requirements. Contact our Parts Sales or Product Support Department for assistance in selecting the right nozzle for your water cannon.

300822

Grid For Standard Straight Bore Nozzle

- Single stream
- Built-in stream shaper straightens water flow & increases distance
- 2.5 inch NH connection systems
- 2.5 inch NH connection

304299

Short Stream Shaper

- Increases performance of straight bore nozzles
- Shapes water stream to produce efficient flow
- In-line Short increases reach
- In-line Long maximizes reach

Specialty Nozzles for Mega Water Cannon

Mega Corp. offers a variety of nozzles for use with both hydraulic and electric water cannons. These nozzles allow the customer to adjust a water cannon's spray pattern and reach to meet their specific application requirements. Contact our Parts Sales or Product Support Department for assistance in selecting the right nozzle for your water cannon.

Hydraulically Adjustable Nozzles For Hydraulic Drive Mega Water Cannon.

305875

Fog To Stream

- Hydraulic Adjustment
- Variable Fog Pattern
- 150 feet stream reach

305876

Fog To Stream With Foam Eduction

- Hydraulic Adjustment
- Variable Fog Pattern
- 150 feet stream reach
- Adjustable fog pattern with foam (1, 3 and 6% proportioning)
- System does not include foam agent
- Requires foam agent system

Electrically Adjustable Nozzles For Mega Electric Drive Water Cannon.

305151

Fan To Stream

- 140 feet reach
- Adjustable fan pattern
- Useful for washdown operations.

305150

Fog To Stream

- 165 feet reach
- Adjustable fog pattern

Foam Eduction

305149

- 150 feet reach
- Adjustable fog pattern with foam (1, 3 and 6% proportioning)
- System does not include foam agent
- Requires foam agent system

Manual Adjustable Hydraulic Nozzle With Foam Eduction

300656

- Manually adjustable fog pattern
- Foam eduction (1, 3 and 6% proportioning)
- 150 feet stream reach
- Adjustable fog pattern with foam (1, 3 and 6% proportioning)
- System does not include foam agent
- Requires foam agent system

PROTECT YOUR INVESTMENT

STOP FIRES WITH A MEGA FOAM TANK

Mega Foam Eduction System

Fire Suppression

For decades, foam concentrates have been used extensively to combat surface fires in the mining, construction, and forestry industries. Foam concentrates change how water reacts with fuels, drastically increasing the water's effectiveness in suppressing and containing fires. The use of foam reduces water consumption, suppresses fires more quickly, and more effectively prevents the fire from spreading to nearby combustible materials. No matter how large or small the operation, the safety of everyone on site depends on adequate preparation for an outbreak of fire in any class of fuel.

Tire and Equipment Fires

Tire and equipment fires are a dangerous and costly hazard in the mining and construction industries. Tire fires in particular are extremely difficult to extinguish, as the fire can smolder deep within the rubber where water cannot reach. The presence of an on-call, mobile fire suppression system is essential for the safety of any mine or construction site, to rapidly contain, mop up, and minimize the damage these fires cause. Mega's Fire Suppression System is designed to be installed on water trucks, creating a multi-purpose mobile fire response unit without needing to repurpose or purchase a dedicated fire suppression vehicle.

Hydrocarbon Fuel

Lighter than water and highly flammable, hydrocarbons present an extreme fire hazard. Hydrocarbon fires are capable of reaching temperatures in excess of 1000°C (1832°F) in as little as 10 minutes if left unchecked. Mine and construction sites must be prepared to respond immediately in order to contain a hydrocarbon fuel fire and minimize its destructive potential.

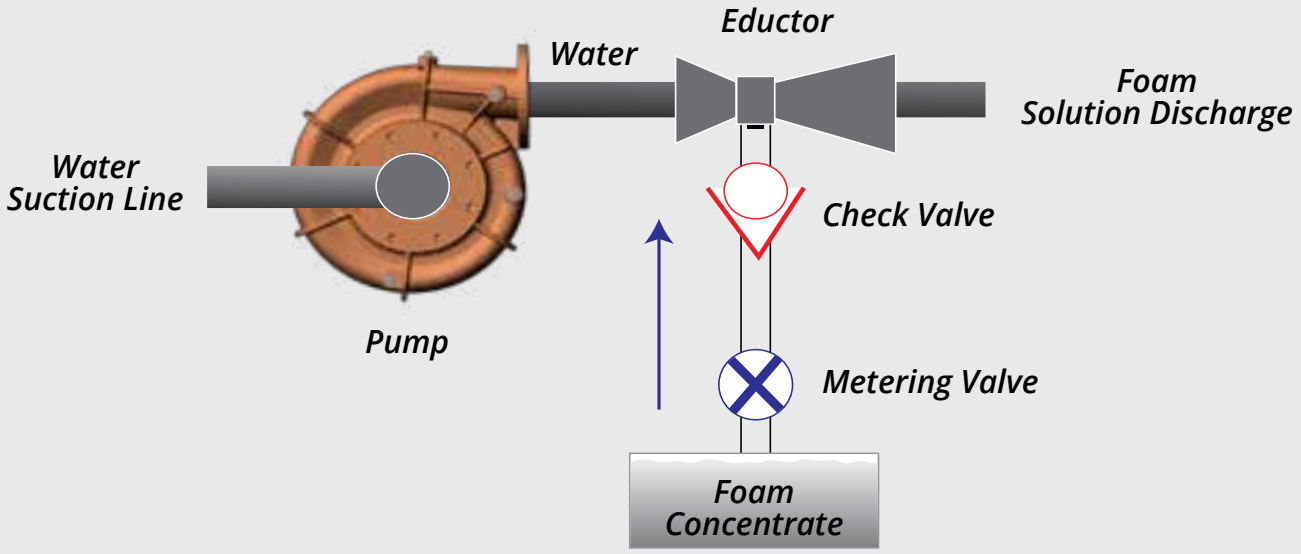
Forest Fires

Mega's Forestry Monitor (Water Cannon) was designed specifically for brush and wildfire firefighting. A high speed electric drive motor allows for swift positioning and high accuracy. The forestry monitor comes with a mid-flow adjustable fog nozzle that can be adapted for use with a foam eduction system.

FAQ's

What type of foam system does Mega offer?

Mega's foam fire suppression system is a foam eduction system. In this type of system, pressurized water flows through a narrowed section waterway in the eductor (an air-aspirated nozzle on the Mega water cannon), creating an area of negative pressure that draws foam concentrate from a storage container (foam concentrate tank) into the nozzle throat. There, the concentrate is mixed with water to create foam. Eduction systems require a pump capable of generating at least 200 psi water pressure in order to



function.

What are Class A fuels?

Solid, combustible materials that are not metals are considered to be Class A fuels. Examples of Class A fuels are paper, wood, cloth, rubber (tires, etc), plastics, trash, etc.

Ex. of a class A fire

What is Class A foam?

Class A foam is created by mixing Class A foam concentrate with water, creating a solution of bubbles that is effective at suppressing Class A fuel fires. This solution has a lower density than water and contains 'wetting agents' that reduce the surface tension of the water and increase its heat absorption potential. This allows the solution to penetrate and soak the burning fuel more quickly and efficiently than plain water. Class A foam is commonly said to "make water wetter".

What are Class B fuels?

Combustible non-metal liquids are considered to be Class B fuels. Examples of Class B fuels are gasoline, oil, and grease.

Ex. of a class B fire

What is Class B foam?

Class B foam is created by mixing Class B foam concentrate with water to create a foam solution effective at suppressing Class B fuel fires. Instead of soaking into the burning fuel (Class B fuels are liquids), Class B foam forms a film or blanket on top of

the fuel. This effectively deprives the fire of oxygen and suffocates it.

Can Class A foam be used to suppress Class B fuel fires, and vice versa?

This is not recommended. Class A and Class B foams interact very differently with fuel, and they are most effective when used against their respective classes of fuel fires. Class A foam attracts carbon and reduces the surface tension of water, allowing it to penetrate fuels more easily--this is more effective on solid fuels than on liquid fuels. Conversely, Class B foam repels carbon and forms a film on top of the fuel instead of soaking in, making it very effective at smothering liquid fuels. It is highly recommended for mining and construction sites to have both Class A and Class B foam on hand.

What about Class C and D fires?

Class C fires are electrical fires. Do not use water or a water-based foam to combat Class C fires. Water is an excellent conductor of electricity, and it is therefore extremely dangerous to use foam (which is generally at least 90% water) on electrical fires. Class D fires involve combustible metals like magnesium, sodium, and potassium. These metals are highly reactive with water, so water and water-based foam should not be used to suppress Class D fires.

When is foam not effective?

• *Class C and D Fires* – Water or water-based foams should never be used to combat electrical fires or fires involving combustible metals. Water is highly conductive, and most combustible metals are reactive with water.

• *Pressurized Gases* – Pressurized gases are often stored as liquids, but are vapors at room temperature and atmospheric pressure. Class B foam solutions are designed to blanket flammable fuel and smother the fire, but the vapor pressure of pressurized gases is much too high for this to be possible.

• *Three-dimensional Class B Fires* – 'Three-dimensional' fires are Class B fires in which fuel is being discharged from an elevated or a pressurized source, creating a pool of combustible fuel on a lower surface. Because of the geometry of these types of fires, foam solutions cannot blanket the fuel to smother the fire.

How do I store foam concentrate?

Always refer to the foam concentrate manufacturer's specifications and recommendations for storage. Mega's foam concentrate tank is made with grade 304 stainless steel, and does not have an interior coating.

Additional resources:

• Class A and B: What You Need to Know About Foam. Fire Apparatus and Emergency Equipment.
http://www.fireapparatusmagazine.com/articles/print/volume-15/issue-4/features/class-a-and-b-what-you-need-to-know-about-foam.html

• Fire Fighting Foam Principles and Ethanol-blended Fuel. North Carolina Department of Insurance.
http://www.ncdoi.com/osfm/rpd/pt/documents/coursework/ethanol/module5_participantmanuals.pdf

• Interactions of Fire-fighting Foam with Hydrocarbon Fuel. 5th Reebok Foam Seminar, Bolton, UK.
http://www.dynaxcorp.com/resources/pdf/ChangJho-Reebok2013Presentation-final2.pdf

• Foam vs Fire - Class A Foam for Wildland Fires. A publication of the National Wildfire
Coordinating Group. http://www.fs.fed.us/eng/pubs/pdf/hi_res/93511208hi.pdf

• Wildland Fire Suppression Tactics Reference Guide. A publication of the National Wildfire Coordinating Group.
http://www.coloradofirecamp.com/suppression-tactics/suppression-tacticsguide.pdf

Thank You

....For Your Business!

GENUINE MEGA.

01-2015- Vol. 1

Meet your **MEGA** team

JEFF LINN
Director-
Sales, Marketing & Product Support
jlinn@megacorpinc.com
505-345-2661

JOHN STUBBS
Parts Sales Manager
Regional Sales Manager
jstubbs@megacorpinc.com
505-259-5975

JOSE BARRAZA
Parts Sales
jbarraza@megacorpinc.com
505-341-6969

DAVID HOLLY
Parts Sales & Product Support Technician
dholly@megacorpinc.com
505-341-6990

NORM REDENSHEK
Product Support Manager
Regional Sales Manager
nredenshek@megacorpinc.com
505-341-6987

BILL TAYLOR
Product Support Sales Representative
btaylor@megacorpinc.com
505-341-6988

ALEXANDRA LUTS
Technical Writer
aluts@megacorpinc.com
505-998-6507

CLAUDIO CÓRDOVA M.
Independent Sales Representative-
Latin America
ccordova@megacorpinc.cl
011-56996476128

KELLY KURDY
Regional Sales Manager
kkurdy@megacorpinc.com
208.860.1013

PAUL DORNBERGER
Independent Sales Representative-
Europe/Africa/Middle East
pdornberger@megacorpinc.com
+41 22 751 0020

WAYNE KELLARD
Regional Sales Manager
wkellard@megacorpinc.com
562-755-8498

JENNIFER GOCKLEY
Sales Administrator
jgockley@megacorpinc.com
505-341-6998

MEGA CORP. WORLDWIDE

GENUINE MEGA.

www.megacorpinc.com