

# **United Built** *WaterTrucks.com*



**MFG IN  
USA**

**WHERE THE DUST SETTLES**  
**WATER TRUCKS • TANKS • PARTS**

**PRODUCT CATALOG 2020**



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# UNITEDBUILT EQUIPMENT QUALITY DESIGN & CRAFTSMANSHIP



### QUALITY SINCE 1947

United Truck & Equipment, Inc. is a manufacturer and leading nationwide supplier of UnitedBuilt water truck spray systems for a wide range of applications.

UnitedBuilt tanks are constructed from the ground up, starting with A36 sheet steel with a minimum thickness of 3/16". Tank shells are rolled either to a modified ellipse or a modified trapezoid with a radius bottom, yielding the desired volume distribution and rearview visibility. All shell seams are welded 100% on both inside and outside of the tank.

### ANTI SURGE BAFFLING

Our tank design distributes the forces of hauled water evenly throughout the vessel. Bulkheads and baffles are curved and fitted into the shell of the tank, which match or exceed the shell thickness.

All contact between heads and shell is welded 100% on both sides. To suppress fluid surge during stops and starts, depending on capacity and dimension, we baffle our tanks with ported and curved lateral steel sheets. Internally, our tanks contain no un baffled chamber exceeding 1700 gallons.



### 2X BOTTOM THICKNESS FULL LENGTH BELLY PLATE

Tanks of 3000 gallons and above are reinforced with a full-length belly plate, effectively doubling the bottom thickness of the shell. Bottom runner skids are fully welded to the bottom of the tank for a precise interface to the chassis frame. Between the truck frame and tank runner, a vulcanized rubber wear pad diffuses stress and surge even further.

### EXTERIOR & INTERIOR PROTECTION

After the tank construction is complete, our coating department stands ready to apply treatments according to customer needs. Exteriors can be powder-coated in our industrial oven, either with our stock fleet white or customized color. Internally, to protect against rust, we can line our tank interiors with high-grade epoxy, further ensuring multi-year service.



### 5 YEAR LIMITED TANK CONSTRUCTION WARRANTY

Our specifications do not merely meet industry standards; they exceed them. Over years of quality manufacturing, our specifications have become the standard, offering not only safety by design but durability so stout that United Truck & Equipment can confidently offer a limited five-year tank construction warranty.



# UNITEDBUILT EQUIPMENT

## QUALITY DESIGN & CRAFTSMANSHIP



### MAXIMUM OUTPUT WITH MINIMUM WATER HAMMER

Our fabrication department builds water truck spray systems that work in functional concert with tank and truck. All pressurized lines are at least schedule 40 black pipe and professionally plumbed for unrestricted water flow, using air-actuated water valves and spray heads of our manufacture, specifically designed to maximize output and minimize water hammer throughout the system.

### CUSTOM TAILORED WATER TRUCK SYSTEM

Informed by over 30 years of experience with a myriad of chassis specifications, our shop installs the optimum interface between spray system and chassis - most often a power-take-off, customized to the combination of transmission and pump, spinning the impeller to the desired efficiency for both volume and pressure.

As an alternative to the strict PTO system, we also have extensive experience installing hydraulically driven spray applications. Mechanical and lighting specs are tailored to the individual truck, and we can adjust the frame length or even relocate chassis components to accommodate both the tank and plumbing.



### ON YOUR TRUCK OR OURS

We can supply the chassis, or tailor a water truck spray system to yours. With transmission and axle information, we can build an uninstalled tank spray system in kit form, customized to those specifications.

### UNITEDBUILT WATER TRUCK PARTS

Our warehouse is stocked with the industry's most reliable water truck parts to keep your water trucks operating efficiently. We pride ourselves on maximizing our service level for repair and replacement parts for water trucks, maintaining a 96% fill rate on stock parts orders.



### UNITEDBUILT WATER TRUCKS

United Truck & Equipment, Inc. manufactures the most functional, precisely tailored, and complete water truck spray system possible for your application. UnitedBuilt offers top quality tanks, parts, and service at a great value.



# WARRANTY & FEATURES

## 5 YEAR LIMITED TANK CONSTRUCTION WARRANTY

Customer satisfaction and quality products are our main focus at United Truck & Equipment. We build our tanks with longevity in mind using only the best materials, such as ASTM A36 steel, 100% full welds inside and out (no skip welding), and belly plates on all 3000+ gallon tanks.

We take great pride manufacturing superior water tanks and proudly backing that up with our standard five-year tank warranty. From the date of your purchase, we cover against defective workmanship or defective materials for a full five years.

We want your tank to outlive your truck!



## HEAVY-DUTY BELLY PLATE

As part of our superior craftsmanship, all of our 3000+ gallon tanks come standard with a full belly plate. These plates increase the longevity of the tank by reinforcing the area most affected by stress and vibration. This additional detail is critical for preventing premature cracking and deterioration.

Standard belly plates are constructed with  $\frac{3}{16}$ " ASTM A36 steel, running the entire length of the tank and measure 60" across. The belly plates, like all elements of our tanks, are 100% full welds, no skip welding.

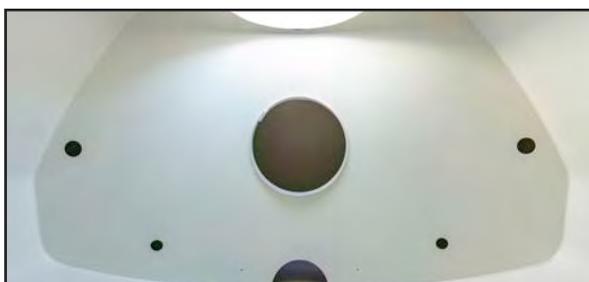


## EXTERIOR POWDER COATING

In our continuing pursuit to offer the highest quality product and achieve the longest lasting and most appealing finish, we have installed a state of the art powder coating facility.

Powder coating is an eco-friendly method of painting that requires no solvents and generates little or no hazardous material waste. The coating is applied as a dry powder and then cured to a solid, durable surface using heat.

The result is an attractive finish that is harder and more durable than conventional paint. Powder coating can be used to create a wide range of finishes and colors.



## INTERIOR EPOXY COATING

Our tank interior liner is a solid, corrosion-resistant epoxy lining. Tanks are sandblasted to white metal and cleaned before the epoxy application.

Epoxy coating significantly enhances the durability of the tank interior by protecting it from rust and corrosion.



# VISION TANK MAXIMIZE OPERATOR VISIBILITY

## STANDARD FEATURES

**Shape:** Modified trapezoid that improves operator visibility with flat sides for low profile and a rounded bottom.

**Construction:** Full penetration welds, all seams welded 100% on both sides.

**Belly Plate:** Full-length 3/16" ASTM A36 steel belly plate along the bottom of 3000+ gallon tanks.

**Shell:** Minimum thickness of 3/16" ASTM A36 steel. Rolled to a modified trapezoid.

**Heads:** Minimum thickness of 1/4" ASTM A36 steel. Curved and fitted with 4" - 6" offset welded 100% inside and out.

**Baffle(s):** Minimum thickness of 3/16" ASTM A36 steel. Curved and fitted with 4" - 6" offset. Built with 20" crawl hole and 6" flow holes on top, sides, and bottom.

**Sacrificial Anodes:** Two sacrificial anodes installed per baffle to help prevent corrosion.

**Mounting Skids:** Heavy-duty U-shaped skids with full continuous weld to the tank.

**Fenders:** Welded to the tank and constructed from 12 gauge steel.

**Ladder:** Constructed of 3/4" pipe with non-slip rungs.

**Manway:** Hinged non-sealing 25" lid with 10" anti-slosh ring.

**Lights & Brackets:** Standard DOT sealed LED marker, stop, clearance & beam lights.

**Sight Gauges:** Clear, flexible tubing mounted on the front and rear of the tank.

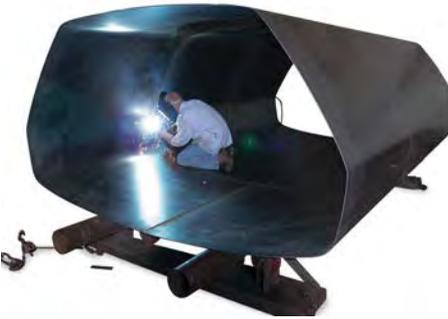


## VISION TANK DIMENSIONS & CAPACITIES

MODEL	HEIGHT	WIDTH	GALLONS PER FOOT	STANDARD CAPACITIES IN GALLONS					
				10'	15'	17'	18'	19'	20'
6D	60"	96"	243	2300	3500	4000	4250	4500	4700
6V	66"	102"	285	2700	4000	4700	5000	5200	5500
6G	72"	102"	310	2900	4500	5000	5400	5700	6000

CONTACT UNITEDBUILT TANK SALES FOR OPTIONS • 800.600.TANK(8265)

\*Nominal capacities. Actual operational capacities will vary.



**FULL PENTRATION WELDS  
INSIDE & OUT 100%**



**HEAVY-DUTY 3/16" STEEL BELLY PLATE  
3000+ GALLONS TANKS**



**HEAVY-DUTY TANK RUNNERS  
FULL-LENGTH OF TANK**



**CURVED & FITTED BAFFLES  
FLOW HOLES ALL SIDES**

Shown with optional Epoxy Coating



**SACRIFICIAL ANODES  
PROTECTIVE CORROSION BARRIER**



**SHELLS ROLLED WITH MINIMUM  
THICKNESS 3/16" A36 SHEET STEEL**



# CONVENTIONAL TANK CLASSIC SHAPE & DESIGN

## STANDARD FEATURES

- Shape:** Modified ellipse with flat sides for low profile and a rounded bottom.
- Construction:** Full penetration welds, all seams welded 100% on both sides.
- Belly Plate:** Full-length  $\frac{3}{16}$ " ASTM A36 steel belly plate along the bottom of 3000+ gallon tanks.
- Shell:** Minimum thickness of  $\frac{3}{16}$ " ASTM A36 steel. Rolled to a modified ellipse.
- Heads:** Minimum thickness of  $\frac{1}{4}$ " ASTM A36 steel. Curved and fitted with 4" - 6" offset welded 100% inside and out.
- Baffle(s):** Minimum thickness of  $\frac{3}{16}$ " ASTM A36 steel. Curved and fitted with 4" - 6" offset. Built with 20" crawl hole and 6" flow holes on top, sides, and bottom.
- Sacrificial Anodes:** Two sacrificial anodes installed per baffle to help prevent corrosion.
- Mounting Skids:** Heavy-duty U-shaped skids with full continuous weld to the tank.
- Fenders:** Welded to the tank and constructed from 12 gauge steel.
- Ladder:** Constructed of  $\frac{3}{4}$ " pipe with non-slip rungs.
- Manway:** Hinged non-sealing 25" lid with 10" anti-slosh ring.
- Lights & Brackets:** Standard DOT sealed LED marker, stop, clearance & beam lights.
- Sight Gauges:** Clear, flexible tubing mounted on the front and rear of the tank.



## CONVENTIONAL TANK DIMENSIONS & CAPACITIES

MODEL	HEIGHT	WIDTH	GALLONS PER FOOT	STANDARD CAPACITIES IN GALLONS					
				10'	15'	17'	18'	19'	20'
SK	41.5"	96"	170	1600	2450	2800	3000	3150	3300
SU	40"	100"	170	1600	2450	2800	3000	3150	3300
SH	51"	80"	178	1700	2600	2950	3100	3300	3450
SX	45"	102"	195	1850	2850	3200	3400	3600	3800
SE	53"	88"	204	1950	2950	3350	3550	3750	4000
SC	53"	96"	227	2150	3300	3750	3950	4200	4450
SJ	57"	96"	242	2300	3500	4000	4250	4500	4700
SD	60"	96"	257	2450	3750	4250	4500	4750	5000
SA	60"	98"	276	2600	4000	4550	4850	5100	5400
SR	64"	100"	290	2750	4200	4800	5100	5350	5650
SV	66"	102"	310	2950	4500	5100	5400	5750	6050
SG ≤ 16'	72"	100"	325	3000	4700	-	-	-	-
M3 ≤ 17'	72"	100"	325	-	-	5350	5650	6000	6300
M4	78"	102"	385	3850	5800	6550	6950	7300	7700
M5	76"	120"	425	4250	6400	7200	7650	8100	8500
M6	96"	144"	590	5900	8850	10000	10600	11200	11800
M7	96"	168"	691	6900	10350	11750	12450	13150	13800

CONTACT UNITEDBUILT TANK SALES FOR OPTIONS • 800.600.TANK(8265)

\*Nominal capacities. Actual operational capacities will vary.





# FACTORY INSTALLED SINGLE AXLE

ON YOUR TRUCK OR OURS • CALL FOR MODELS & AVAILABILITY

Shown with optional  
Vision Tank & hose reel



## WATER TRUCK SYSTEM 5 SPRAY VALVES SINGLE AXLE CHASSIS STANDARD CAPACITY: 1800 - 2400 Gallons

### UnitedBuilt® Water Truck Tank

#### 5 Year Limited Tank Construction Warranty

Five independently air operated UnitedBuilt AV1100 valves. Standard Setup: Two valves with adjustable fan nozzles BC2399 at the rear of the tank. Two valves with adjustable fan nozzles BC2399 at the front of the truck. One mid-ship valve with side spray nozzle BC2179. Each valve is independently air operated from the cab control console.

**PLUMBING:** All plumbing is schedule 40 steel pipe with groove style flexible fittings throughout (no threaded fittings or hose plumbing). **WATER PUMP:** Heavy-duty 4x3 centrifugal cast iron pump 750GPM@65PSI, with ceramic mechanical seal (1000GPM@180PSI available). **PTO:** Chelsea heavy-duty two gear air or hot shift PTO with 1310 series balanced tube drive line (HOT shift PTO available for automatic transmission). **JET VALVE:** Standard 1-½" ball valve on the tank passenger side of the manifold. **SIGHT GAUGE:** All-season clear ⅝" flexible rubber tubing at front and rear of tank with brass hardware connections.

**LIGHTS:** LED sealed beam lights with wiring encased in rubber harness. **POWDER COAT:** Exterior sandblasted and powder coated. **SACRIFICIAL ANODES:** Magnesium anodes act as a sacrificial corrosion barrier protecting and improving the longevity of the tank interior. **MOUNTING:** Heavy-duty schedule 80 solid angle tie-down mounts, spring-loaded at the front of the tank.

**REAR BUMPER:** Frame is tailed out; push block constructed of ½" steel, reinforced with ½" steel gussets, storage box with hinged lid. **DRIVE-UNDER PROTECTION:** 3x3 square tubing lowered from the bumper. **FRONT SPRAY GUARD:** Fitted with a ¾" steel plate welded to front spray bar to provide protection. **1 Year Limited Plumbing Warranty**



## WATER TRUCK OPTIONS (SEE PAGES 16 - 18 FOR MORE OPTIONS & DETAILS)

- **Epoxy Lining:** Interior epoxy line dramatically increases tank life
- **Hose Reel:** Manual or electric rewind
- **Water Cannon:** Elkhart manual or remote operated with toggle box or joystick
- **Suction Fill:** Ditch fill plumbing, valving, suction hose and foot valve
- **Gravity Drop:** Gravity drop 6" pipe with 2-way air operated butterfly valve and splash plate
- **Rear View Camera:** Rear mounted camera with in cab display.
- **Articulated Spray:** Electric 12 volt rotating joint for articulated spray
- **Rear Dust Suppression Bar:** Air operated 3" or 4" pipe 8' wide. Gravity fed or pressurized with brass VeeJets
- **Tool Box:** Add storage with steel or aluminum locking toolboxes.
- **Auxiliary Lights:** Add auxiliary lights such as strobe, beacon or work lights.



# FACTORY INSTALLED TANDEM AXLE

ON YOUR TRUCK OR OURS • CALL FOR MODELS & AVAILABILITY



*Shown with optional Vision Tank, hose reel & suction fill.*



## WATER TRUCK SYSTEM 6 SPRAY VALVES TANDEM AXLE CHASSIS STANDARD CAPACITY: 3000 - 6000 Gallons UnitedBuilt® Water Truck Tank

### 5 Year Limited Tank Construction Warranty

Six independently air operated UnitedBuilt AV1100 valves. Standard Setup: Two valves with adjustable fan nozzles BC2399 at front of truck. Two valves with adjustable fan nozzles BC2399 at rear of tank. Two mid-ship valves with fan side spray nozzles BC2179 one on each side. Each valve is independently air operated from the cab control console.

**PLUMBING:** All plumbing is schedule 40 steel pipe with groove style flexible fittings throughout (no threaded fittings or hose plumbing). **WATER PUMP:** Heavy-duty 4x3 centrifugal cast iron pump 750GPM@65PSI, with ceramic mechanical seal (1000GPM@180PSI available). **PTO:** Chelsea heavy-duty two gear air shift PTO with 1310 series balanced tube drive line (HOT shift PTO available for automatic transmission). **JET VALVE:** Standard 1-1/2" ball valve on tank ladder side of the manifold. **SIGHT GAUGE:** 5/8" clear all season, flexible rubber tubing at front and rear of tank with brass hardware connections.

**LIGHTS:** LED sealed beam lights with wiring encased in rubber harness. **POWDER COAT:** Exterior sand blasted and powder coated. **BELLY PLATE:** Heavy-duty tanks 3000 gallons and larger are enhanced with full-length belly plate that effectively doubles bottom thickness of tank. Increases durability by reinforcing area most affected by stress and vibration. **SACRIFICIAL ANODES:** Magnesium anodes act as a sacrificial corrosion barrier protecting and improving the longevity of the tank interior. **MOUNTING:** Heavy-duty schedule 80 solid angle tie-down mounts, spring-loaded at the front of the tank. Vulcanized rubber wear pad for tanks 3000 gallons and larger. **REAR BUMPER:** Frame is tailed out; push block constructed of 1/2" steel, reinforced with 1/2" steel gussets, storage box with hinged lid. **DRIVE-UNDER PROTECTION:** 3x3 square tubing lowered from the bumper. **FRONT SPRAY GUARD:** Fitted with a 3/16" steel plate welded to front spray bar to provide protection. **1 Year Limited Plumbing Warranty**

## WATER TRUCK OPTIONS (SEE PAGES 16 - 18 FOR MORE OPTIONS & DETAILS)

- **Epoxy Lining:** Interior epoxy line dramatically increases tank life
- **Hose Reel:** Manual or electric rewind
- **Water Cannon:** Elkhart manual or remote operated with toggle box or joystick
- **Suction Fill:** Ditch fill plumbing, valving, suction hose and foot valve
- **Gravity Drop:** Gravity drop 6" pipe with 2-way air operated butterfly valve and splash plate
- **Rear View Camera:** Rear mounted camera with in cab display.
- **Articulated Spray:** Electric 12 volt rotating joint for articulated spray
- **Rear Dust Suppression Bar:** Air operated 3" or 4" pipe 8' wide. Gravity fed or pressurized with brass VeeJets
- **Tool Box:** Add storage with steel or aluminum locking toolboxes.
- **Auxiliary Lights:** Add auxiliary lights such as strobe, beacon or work lights.



# DROP-ON R-KIT

## FULLY PLUMBED & READY TO GO



### STANDARD CAPACITY:

1800-2400 gallons (single axle)  
3000-6000 gallons (tandem axle).  
UnitedBuilt® Water Truck Tank. **5 Year Limited Tank Warranty.**

**4 VALVE SPRAY SYSTEM:** Four air operated UnitedBuilt AV1100 valves: two valves mounted opposite sides at the front, two valves mounted opposite sides at the rear. Valves are independently air operated from the cab control console. All plumbing is schedule 40 steel pipe with groove style flexible fittings. (no threaded fittings or hose plumbing). **WATER PUMP:** Heavy-duty 4x3 centrifugal cast iron pump 750GPM@65PSI, with ceramic mechanical seal. **OPTIONAL**

**SELF-PRIMING WATER PUMP:** Heavy-duty 4x4 self-prime centrifugal cast iron pump 650GPM@50PSI, required with self-loading option (pictured below). **DRIVE:** Hydraulic drive, with bi-directional hydraulic pump and motor. Motor pre-plumbed to the water pump with filter, pressure relief valve, and oil reservoir. Hydraulic lines (pressure and suction) pre-plumbed through the water tank for fluid cooling. **JET VALVE:** Standard 1-1/2" ball valve on the tank ladder side of the manifold. **SIGHT GAUGE:** 5/8" clear all season, flexible rubber tubing at front and rear of tank with brass hardware connections. **LIGHTS:** LED sealed beam lights with wiring encased in rubber harness. **BELLY PLATE:** Heavy-duty tanks 3000 gallons and larger are enhanced with a full-length belly plate that effectively doubles the bottom thickness of the tank. Increases durability by reinforcing area most affected by stress and vibration. **MOUNTING KIT:** Six schedule 80 solid heavy-duty angle tie-down mounts with four tank springs, tank guides and hardware. Vulcanized rubber wear pad for tanks 3000 gallons and larger. **LIGHTS:** LED sealed beam lights with wiring encased in rubber harness. **COATING:** Exterior sandblasted and primed. (Shown with optional powder coated exterior.) See page 16 for coating options. **1 Year Limited Plumbing Warranty**

### "R" KIT OPTIONS

Vision Tank • Hose Reel - Manual or Electric Rewind • Front Spray with Plumbing and Hardware  
Suction Fill Plumbing with Hose and Strainer • Gravity Drop • Water Cannon - Manual or Electric  
Newton Kwik-Dump Valve • Custom Color Powder Coat • Epoxy Line Interior

**CAPACITY OPTIONS:** 1500-8000 gallons.

**VALVE OPTIONS:** (see page 34-35)

AV1100 Air Valves (standard): Air to Close, Interchangeable Nozzle Options

BC2410 Spray Head Valve: Air to Open, Built-in Adj. Nozzle

Inline Air Operated Valves: Heavy-duty or 323

Electric Operated Valves: BMC 12 volt or 24 volt

**NOZZLE OPTIONS:** (see page 33)

Street Flusher Nozzle

Side Spray Nozzle

Adjustable Spray Nozzle

Fan Spray Nozzle

**OTHER SET UP OPTIONS**

Articulated Spray Nozzle

Raised/Centered Spray Head

Lowered Flusher Spray Nozzle

Manually Controlled Spray Heads





# 5 AIR VALVE U-KIT

## PUMP, PLUMBING, VALVES & SPRAY HEADS

### STANDARD CAPACITY:

1800-2400 gallons (single axle)

3000-6000 gallons (tandem axle)

UnitedBuilt® Water Truck Tank. **5 Year**

**Limited Tank Warranty**

### 5 VALVE SPRAY SYSTEM:

Five independently air operated UnitedBuilt AV1100 valves. Two valves for rear spray, two valves for front spray, one valve for side spray. All plumbing provided is schedule 40 steel pipe with groove style flexible fittings. The kit comes standard with a UTE console to independently air operate each valve from inside the cab. **WATER PUMP:** Heavy-duty 4x3 centrifugal cast iron pump 750GPM@65PSI, with ceramic mechanical seal. **JET VALVE:** Standard 1-½" ball valve on the tank ladder side of the manifold.

**SIGHT GAUGE:** ⅝" clear all season,

flexible rubber tubing at front and rear of tank with brass hardware connections. **LIGHTS:** LED sealed beam lights with wiring encased in rubber harness. **BELLY PLATE:** Heavy-duty tanks 3000 gallons and larger are enhanced with a full-length belly plate that effectively doubles the bottom thickness of the tank. Increases durability by reinforcing area most affected by stress and vibration. **MOUNTING KIT:** Six schedule 80 solid heavy-duty angle tie-down mounts with four tank springs, tank guides and hardware. Vulcanized rubber wear pad for tanks 3000 gallons and larger. **CUT OUTS:** Pre-measured steel arches for manifold pipe clearance under the tank, packed loose for custom installation. **LIGHTS:** LED sealed beam lights with wiring encased in rubber harness. **COATING:** Exterior sandblasted and primed. (Shown with optional powder coated exterior.) See page 16 for coating options.

**1 Year Limited Plumbing Warranty**



### "U" KIT OPTIONS

Vision Tank • Hose Reel - Manual or Electric Rewind • Curb Side Spray with Plumbing and Hardware  
Suction Fill Plumbing with Hose and Strainer • Gravity Drop • Water Cannon - Manual or Electric  
Newton Kwik-Dump Valve • Custom Color Powder Coat • Epoxy Line Interior

**CAPACITY OPTIONS:** 1500-8000 gallons.

**VALVE OPTIONS:** (see page 34-35)

AV1100 Air Valves (standard): Air to Close, Interchangeable Nozzle Options

BC2410 Spray Head Valve: Air to Open, Built-in Adjustable Nozzle

Inline Air Operated Valves: Heavy-duty or 323

Electric Operated Valves: BMC 12 volt or 24 volt

**NOZZLE OPTIONS:** (see page 33)

Street Flusher Nozzle

Side Spray Nozzle

Adjustable Spray Nozzle

Fan Spray Nozzle

### OTHER SET UP OPTIONS

Articulated Spray Nozzle

Raised/Centered Spray Head

Lowered Flusher Spray Nozzle

Manually Controlled Spray Heads





## HOOK OR ROLL OFF TANK KIT

### PLUMBED & READY TO GO

**STANDARD CAPACITY:** 2000-4000 gallons. UnitedBuilt® Water Truck Tank **5 Year Limited Tank Warranty**.  
**HOOK/ROLL RECEIVER:** Receiver A-frame for hook arm/Rollers for roll off bed and skids built to the specifications of the hook/roller manufacturer. **SKIDS:** Heavy-duty 3" x 6" tubing with 3/8" wall full-length skids extending out the back of the tank for the water pump platform and rollers. **BELLY PLATE:** Full belly plate along bottom of tank. **WATER PUMP:** Heavy-duty 4x3 centrifugal cast iron pump 750GPM@65PSI, with ceramic mechanical seal. **OPTIONAL SELF-PRIMING WATER PUMP:** FMIH-40 or Berkeley B4ZRKS 4x4 self-prime centrifugal cast iron pump 650GPM@50PSI, required with self-loading option. (Shown with FMIH-40 4x4 self-prime pump.) **HYDRAULICS:** Bi-directional motor and quick disconnect fittings. **OPTIONAL:** Hydraulic lines routed through tank depending on the location of chassis' quick couplers. **COATING:** Exterior sandblasted and primed. Optional powder coating or interior epoxy lining. **NOTE:** Customer truck must have an extra hydraulic circuit to drive the water pump. **1 Year Limited Plumbing Warranty**

## SLIDE IN TANK

### PLUMBED & READY TO GO

**STANDARD CAPACITY:** 2000-4000 gallons. UnitedBuilt® Water Truck Tank. **5 Year Limited Tank Warranty** **TANK:** Rectangular shape constructed of 3/16" ASTM-A-36 steel. Ends recessed in shell, welded 100% on both sides. **BAFFLES:** Two lateral. **SKIDS:** Six inch channel skids running full-length of tank and extending out the rear for the pump mounting platform. **MOUNTING:** Heavy-duty tie-down eyes at each corner of the tank. **WATER PUMP:** Franklin 3" pump with Honda 9HP engine or heavy-duty 4x3 centrifugal pump with Robin 13.5HP engine. **OPTIONAL SELF-PRIMING WATER PUMP WITH QUICK DISCONNECT HYDRAULIC DRIVE (SHOWN):** FMIH-40 or Berkeley B4ZRKS 4x4 self-prime centrifugal cast iron pump 650GPM@50PSI, required with self-loading option. (Shown with FMIH-40 4x4 self-prime pump.) **SPRAY SYSTEM:** Two fan heads at rear of tank with one air operated in-line valve. **1 Year Limited Plumbing Warranty**





Shown with optional stainless steel tanker.

## TANKER TRAILER

### PLUMBED & READY TO GO

**STANDARD CAPACITY:** 6500 gallons. UnitedBuilt® Tanker **5 Year Limited Tank Warranty** **SELF-PRIMING WATER PUMP:** FMIH-40 or Berkeley B4ZRKS 4x4 self-prime centrifugal cast iron pump 650GPM@50PSI, required with self-loading option. **SPRAY SYSTEM:** 2-6 independently air operated valves with spray nozzles. **HYDRAULICS:** Bi-directional motor and quick disconnect fittings. **OPTIONAL:** Hydraulic lines routed through tank depending on the location of chassis' quick couplers. **COATING:** Exterior sandblasted and primed. Optional powder coating or interior epoxy lining. **TRAILER:** 5th wheel plate, landing gear and heavy-duty tandem axle. **NOTE:** Customer truck must have an extra hydraulic circuit to drive the water pump. **1 Year Limited Plumbing Warranty**



## FLUSHER SYSTEM

### HIGH PRESSURE WATER PUMP

**STANDARD CAPACITY:** 2000-2400 gallons (single axle) 3000-5200 gallons (tandem axle). UnitedBuilt® Water Truck Tank **5 Year Limited Tank Warranty** **SPRAY SYSTEM:** Six independently air operated valves with flusher nozzles: Two valves with lowered flusher nozzles at front of truck. Two valves with lowered flusher nozzles on opposite sides of system. Two valves at back of the tank with standard adjustable fan sprays. (Truck pictured with optional front center flushing nozzle and remote control cannon.) All plumbing in schedule 40 steel pipe with groove style flexible fittings throughout (no thread fittings or hose plumbing). **WATER PUMP:** High pressure 5x4 centrifugal cast iron pump 1000GPM@180PSI with ceramic mechanical seal. **DRIVE:** Chelsea heavy-duty two gear air shift PTO with 1310 series balanced tube drive line. **MOUNTING:** Heavy-duty schedule 80 solid angle tie-down mounts, spring-loaded at front of tank. Vulcanized rubber wear pad for tanks 3000 gallon and larger. **LIGHTS:** LED sealed beam lights with wire looms encased in rubber harness. **COATING:** Exterior sandblasted, powder coat exterior. Optional interior sandblasting and epoxy lining. **REAR BUMPER:** Frame is tailed out: Push block constructed of 1/2" steel with storage and hinged lid.

**1 Year Limited Plumbing Warranty**



## ON HIGHWAY TANK SYSTEM

### WEIGHT TRANSFER FORWARD

**STANDARD CAPACITY:** 3450-4200 gallons (3450 pictured) legal load. UnitedBuilt® Tank **5 Year Limited Tank Warranty** **SPRAY SYSTEM:** Five independently air operated UnitedBuilt valves; two valves at rear of tank, two valves at front of truck, and one valve on driver's side. Each valve is independently air operated from cab control console. **PLUMBING:** All plumbing is schedule 40 steel pipe with groove style flexible fittings throughout. **WATER PUMP:** Heavy-duty 4x3 centrifugal cast iron pump 750GPM@65PSI, with ceramic mechanical seal. **PTO:** Chelsea heavy-duty two gear air shift PTO with 1310 series balanced tube drive line. **LIGHTS:** LED sealed beam lights with wiring encased in rubber harness. **COATING:** Exterior sand blasted and primed, powder coat applied. Optional sandblasted interior with epoxy lining. **MOUNTING:** Heavy-duty schedule 80 solid angle tie-down mounts, spring-loaded at front of tank. Vulcanized rubber wear pads. **REAR BUMPER:** Frame is tailed out; push block constructed of 1/2" steel with storage and hinged lid. **FRONT SPRAY GUARD:** Fitted with a 3/16" steel plate welded to front spray bar to provide protection. **1 Year Limited Plumbing Warranty**



## OFF HIGHWAY TANK SYSTEM

### RIGID OR ARTICULATED FRAME • SEVERE SERVICE TANK

**STANDARD CAPACITY:** 5500 - 15000 gallons. UnitedBuilt® Tank **SEVERE SERVICE OFF HIGHWAY TANK SYSTEM:** 1/4" ASTM-A-36 top, 5/16" ASTM-A-36 bottom construction. Full lateral and longitudinal baffles. Safety railings run the length of the tank on both sides. 30" screened manway. Drive tire fenders cut and welded into tank. Flexing tank mount system with pin box built into bottom of tank. LED lights and reflectors with wiring encased in conduit, hydraulic motor close coupled to water pump. Heavy-duty 4x3 centrifugal cast iron pump 750GPM@65PSI, with ceramic mechanical seal. (Optional high volume and pressure water pump rated at 1500GPM@100PSI) UnitedBuilt heavy-duty air operated spray heads adjustable pattern and volume spray band. **1 Year Limited Plumbing Warranty**



# FIRE TENDER SYSTEM

CUSTOM BUILT TO YOUR SPECIFICATIONS

**STANDARD CAPACITY:** 2000-4000 gallons. UnitedBuilt Tank **5 Year Limited Tank Warranty**  
**WATER PUMP:** Standard cast iron centrifugal pump, 750GPM@65PSI or high pressure 1000GPM@180PSI with a ceramic mechanical seal. **DISCHARGE:** 2½" discharge valves with male NST threads plumbed to any location of the truck. **SPRAYS:** Air operated side spray valves. **QUICK DUMP:** 10" manual, air or electric quick dump with optional 90 degree chute for rear dump or side dump. **MONITORS:** Manual or 12V remote control monitor. **STORAGE:** Portable tank storage and ladder holders built onto main tank. Tool boxes around frame of truck.  
**1 Year Limited Plumbing Warranty** CALL WITH YOUR CUSTOM SPECIFICATIONS



Standard Drive Side Mounted Cannon



Standard Rear Tank Head Mounted



American Reel Crank Style



**NITRO HD CANNON**

Sealed high torque motors and sealed heavy-duty nozzle with joystick control.



Optional Joystick

**SIDEWINDER 8494**

Classic remote controlled monitor with either toggle or joystick control.



Deck Mounted



American Reel 12V Motor Rewind

**HOSE REEL**

American or COX hose reels. Available in manual or electric rewind. Frame, tank or deck mounted. Available sizes:

- 50' x 1 1/2" Hose
- 100' x 1 1/2" Hose
- 50' x 1" Hose
- 100' x 1" Hose



Manual Rear Mounted



8494 Remote Operated Rear Mounted

**WATER CANNON**

Ehart Brass water cannons. Available in manual or electric (12 volt or 24 volt) with toggle box or joystick cab control. New Nitro HD cannon available suited for the most extreme environments with sealed high torque motors, sealed heavy-duty nozzle and joystick control.



**EPOXY COATING TANK INTERIOR**

Maximize tank life with epoxy interior lining that protects against rust. Sandblast tank interior to white metal. Clean out and spray in epoxy lining. Potable application available.



Tank Runner Storage



Fender Hose Tube Storage

**SUCTION FILL**

Self-load plumbing with internal priming tank. Suction hose with foot valve. Standard tank runner storage, tank hose hooks or tank hose tubes. Protek Hand Primer pump available.



**UNDERCOAT APPLICATION**

Thick resilient coating applied to the tank belly, plumbing, pump, and chassis. Waterproof coating that protects against abrasion, rust, corrosive salt, damp and extreme temperatures. Excellent UV protection.



### HOT SHIFT PTO

Heavy-duty 2-Gear Chelsea Hot Shift PTO. Call with you transmission model number.



MOTOR	PUMP
1½" Gear	2" Gear
	1¾" Gear

### HYDRAULIC MOTOR & PUMP

Bi-Direction series hydraulic motor and pump.



### AUXILIARY ENGINE

Isuzu 3CH1 diesel pony motor direct coupled to water pump with in cab controls.



### HIGH PRESSURE WATER PUMP

Reach maximum performance with a high pressure heavy-duty Berkeley B4ERBMS centrifugal water pump 1000GPM @ 180PSI.



### SUPER SINGLE TIRES & ALUMINUM RIMS

Super single tires are stronger and lighter than their counterparts. Aluminum rims are resistant to corrosion, stronger and lighter than steel wheels. Both improve gas mileage, load capacity and longevity.



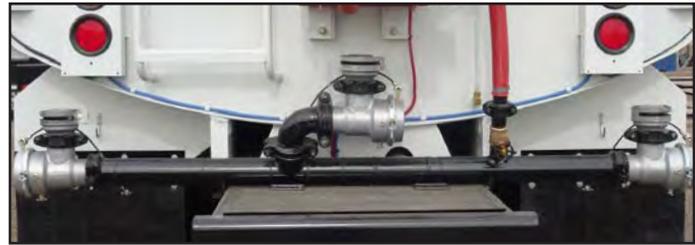
### ARTICULATED SPRAY

Electric articulated spray head with in cab controls. Vertically or horizontally adjust or your spray position from your cab.



### LOWERED SPRAY HEADS

Easily adjust the height or direction of your spray nozzles with 90° Gruvlok elbows.



### CENTER SPRAY HEAD

Maximize spray coverage with a third rear or front center spray valve.



### GRAVITY DROP

Tank fed 6" gravity drop with splash plate. Air operated from the cab control console. Reduces wear on pumping system.



### DUST SUPPRESSION BAR

Dust suppression spray bars are 8' wide available in 3" or 4" pipe. Air operated from the cab control console. Gravity fed from the tank or plumbed to water pump for pressure. Optional nozzles are ½" VeeJets on 6" centers (16 nozzles.)



**TOOL BOX STORAGE**

Frame or tank mounted locking tool boxes. Aluminum or steel.



**TOOL HOLSTERS OR BASKET**

Tank mounted tool holsters or basket for additional storage.



**REAR VIEW CAMERA**

Rear view camera with in cab display for additional visibility and safety.



**WORK LIGHT**

LED tank mounted work lights.



**STROBE OR BEACON**

LED tank mounted strobe or beacon lights.



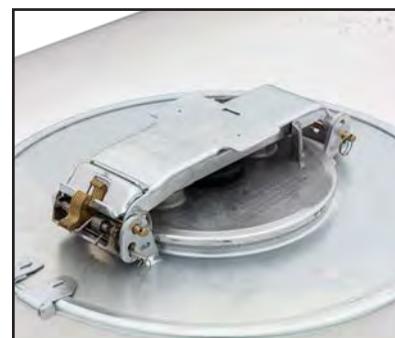
**FENDER HOSE TRAY**

Integrated fender hose trays for lay flat hose storage.



**DUMP VALVE**

Newton Kwik-Dump Valve manual or air operated. Optional 90° chute.



**SEALING MANWAY**

Sealing vented 20" tank manway lid.



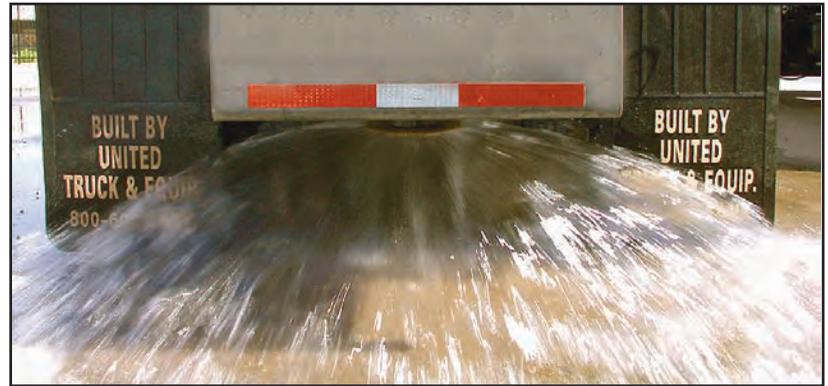
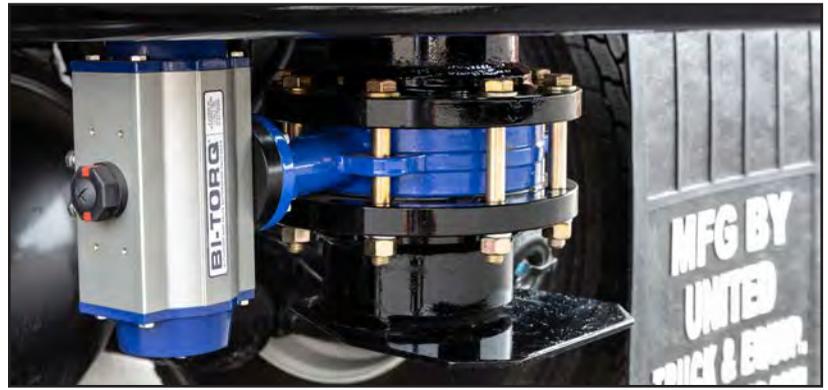
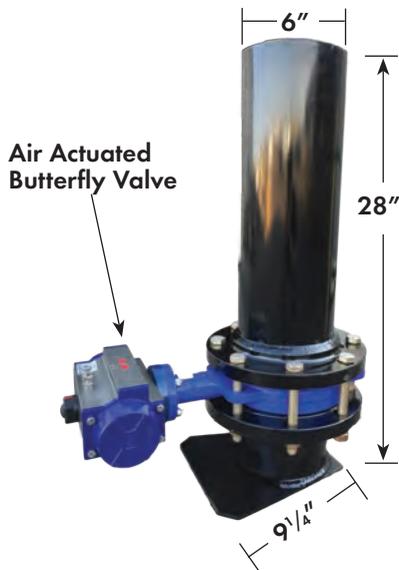
**PORTATANK**

PortaTank storage built into rear tank runners or side mounted.



**ELECTRONIC WATER LEVEL DISPLAY**

Convenient display of water level with a gauge inside and outside of the cab.



**GRAVITY DROP ASSEMBLY**

2-Way Air Operated Butterfly Valve • 6" Black Pipe  
Maximize Pump Life with Gravity Spray

DESCRIPTION	WT/LB	PART#
Gravity Drop Assembly Air Operated	120	9455



**MOUNTING PARTS**

INDEX	DESCRIPTION	PART#
A	6" Groove Coupling Rigidlok	4248
B	6" Weld x Groove Nipple 6" Long	4495

**DRIP BAR KIT**

8' Wide with 1/2" Female Threaded Ports on 6" Centers.  
Optional Brass VeeJets Sold Separately.  
2-Way Air Operated Butterfly Valve  
Plumb to Pump for Pressure or Tank for Gravity Spray

**3" DRIP BAR KIT**

DESCRIPTION	QTY	PART#
3" Drip Pipe with Flange	1	8409
3" Groove Cap	2	0683
3" Groove Coupling	6	0687
3" Groove 90°	1	0677
3" Weld x Groove Nipple 3" Long	1	1486
3" Weld Flange w/ Groove Nipple	1	4595
3" Pipe Groove x Groove 20" Long	2	9293
Mounting Bracket for 3" Drip Pipe	2	9625
3" Air Operated Butterfly Valve	1	9157
2-Way Air Switch	1	1494
2-Way Air Switch Bracket	1	8270
Airline Fitting 90° Swivel 1/4" Tube x 1/8" MNPT	5	5547



**4" DRIP BAR KIT**

DESCRIPTION	QTY	PART#
4" Drip Pipe with Flange	1	6841
4" Groove Cap	2	4783
4" Groove Coupling	6	0689
4" Groove 90°	1	0678
4" Weld x Groove Nipple 4" Long	2	2747
4" Weld Flange	1	1642
4" Pipe Groove x Groove 20" Long	2	7008
Mounting Bracket for 4" Drip Pipe	2	6961
4" Air Operated Butterfly Valve	1	9158
2-Way Air Switch	1	1494
2-Way Air Switch Bracket	1	8270
Airline Fitting 90° Swivel 1/4" Tube x 1/8" MNPT	5	5547



**PARTS FOR 3" OR 4" PRESSURE SPRAY BAR**

Plumb directly into rear feed pipe for pressure spray.

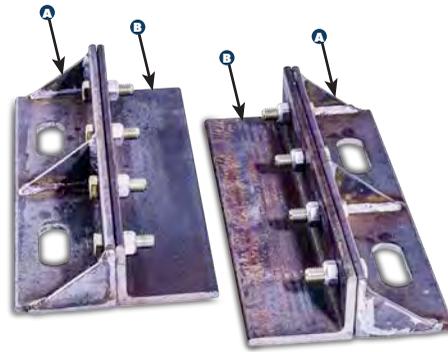
INDEX	DESCRIPTION	QTY	PART#
A	Brass VeeJet Nozzle 1/2" MNPT	16	3909
B	3" Groove x Notch 2 3/4" Long	1	3938
For 4" pressure spray bar add above and below parts.			
C	3" Groove Coupling	1	0687
D	4" x 3" Groove Reducer	1	7041



**TANK MOUNTING KITS**

For tandem and single axle chassis

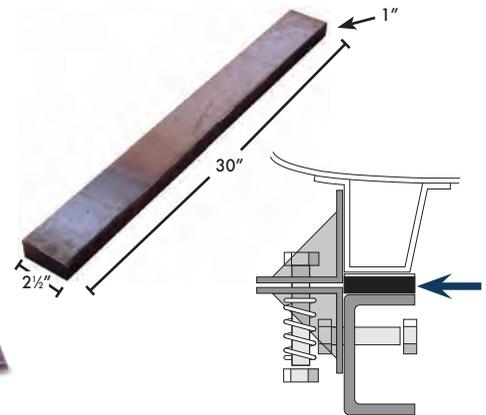
DESCRIPTION	WT/LB	PART#
Heavy-duty Mount Kit w/ Springs & 3/4" Hardware (Tandem Axle)	60	9730
Light-duty Mount Kit w/ Springs & 5/8" Hardware (Single Axle)	55	3342
Tank Spring (4 Req)	0.60	1203
See page 57 for installation instructions and diagrams		



**BOGIE BRACKETS**

For tanks greater than 4000 gallons

INDEX	DESCRIPTION	WT/LB	PART#
A	Chassis Bogie Brackets (2 Req)	12.94	9744
B	Tank Bogie Brackets (2 Req)	11.11	9773
See page 57 for installation instructions and diagrams			



**SKIRTBOARD**

Vulcanized Rubber Wear Pad  
Absorbs Vibration Maximizing Tank Life

DESCRIPTION	WT/LB	PART#
Vulcanized Rubber Wear Pad 2 1/2"x30"	5.5	9865



**HOSE REEL BRACKETS**

For tank mounted hose reels

DESCRIPTION	WT/LB	PART#
Tank brackets American Reels (2 Req)	7	8289
Tank brackets COX Reels (2 Req)	7	3609

**HOSE RACK**

For simple hose storage

DESCRIPTION	WT/LB	PART#
Weld on hose rack	34	9875
American Reel tank bracket conversion	45	9805
COX Reel tank bracket conversion	45	9806

**TANK Baffle ANODES**

Acts as a sacrificial corrosion barrier

DESCRIPTION	WT/LB	PART#
Magnesium Anodes for Tank Baffles	1.25	9462
2 Required Per Baffle		



**TANK SIGHT GAUGE**

All weather flexible clear tubing

INDEX	DESCRIPTION	WT/LB	PART#
A	Flexible PVC Clear Tubing (5/8" cut by the foot)	0.1	1201
B	Sight Gauge Fitting w/ Ferrule 5/8" Tube x 1/2" MNPT	0.27	1194
C	Ferrule 60X10	0.0006	7631
D	Insert 2030X10	0.0006	7632



**MUDFLAPS**

DESCRIPTION	DIMENSIONS	WT/LB	PART#
UTE Mud Flap (Sold as Pair)	24" W x 36" L	18/Pair	0821
Mud Flap Extension 12 Gauge Steel	6" W x 24" L	4.5	8325
Anti Sail Mud Flap	24" W x 36" L	26 Pair	3215
Anti Sail Bracket	22" W x 21" L	2.5	4360
Mud Flap Hook		0.12	5925



**HYDRANT FILL**

2½" Black Pipe

INDEX	DESCRIPTION	WT/LB	PART#
A	Hydrant Fill 10' Tank	45	4018
A	Hydrant Fill 15' Tank	60	3475
B	2½" Groove Coupling Rigidlok	2.8	0696
C	2½" Groove 90°	2.77	0676
D	Hydrant Fill T-Nut	0.3	4815
E	Hydrant Fill Swing Spout	9	3476

**HYDRANT FILL KIT**

Hydrant Fill Pipe, T-Nut, Spout, (2) Groove Couplings Zeroflex & Groove 90°

DESCRIPTION	WT/LB	PART#
10' Tank Hydrant Fill Kit	64	5910
15' Tank Hydrant Fill Kit	79	5909



**MANWAY SCREEN**

DESCRIPTION	WT/LB	PART#
Manway Screen for 25" Manway	25	7481



**QUICK DUMP**

Newton Kwik Dump Valve

DESCRIPTION	MODEL	WT/LB	PART#
10" Gate Style Quick Dump Valve	1050	65	2263
Special Order			



**FIRE HYDRANT ADAPTER**

Brass

DESCRIPTION	WT/LB	PART#
2½" Male NPT x 2½" Female Phoenix	2.5	3000
2½" Male NPT x 2½" Female NST	2	3002
2½" Male NPT x 2½" Female NST Swivel	2.72	3405
2½" Male NPT x 2½" Male NST	1.5	3802
2½" Female NPT x 2½" Female NST Swivel	3.53	3626
2½" Female NPT x 2½" Male NST	1.49	4030
2½" Female Phoenix x 2½" Male NST	2.5	4268
2½" Male NST x 2½" Male NST	1.61	6024



**ADJUSTABLE HYDRANT WRENCH**

DESCRIPTION	WT/LB	PART#
Adjustable Hydrant Wrench	3	2999



**TANK MANWAY**

UnitedBuilt Standard Manway 25" Diameter

DESCRIPTION	WT/LB	PART#
Manway Ring 25"	30	3565
Manway Lid for 25" Ring	19	2488
Manway Lid Handle	1	3394
Manway Hinge 4x4	1	1199
Manway Ring with Hinged Lid Assembly	50	1740



**QUICK DUMP CHUTE 90°**

Newton Kwik Dump Valves

DESCRIPTION	MODEL	WT/LB	PART#
10" Slip On 90°	2090	34	4307
Special Order			



**CHECK VALVE**

Bronze

DESCRIPTION	WT/LB	PART#
2½ Female NPT"	4.5	7570
3" Female NPT	7	7624



**STRAINER VALVE**

Stainless Steel Basket

DESCRIPTION	WT/LB	PART#
2½ Female NPT"	24	4293



**MANWAY COVERS**

Inspection Covers & Sealing Lid

DESCRIPTION	DIAMETER	WT/LB	PART#
Inspection Cover Cad Plated	16"	14	9534
Inspection Cover Cad Plated	20"	18	4831
Vented Sealing Manway Lid	20"	33	1179
Manway Ring Steel	16"	5	9535
Manway Ring Stainless Steel	16"	5	9536
Manway Ring Steel	20"	9	5012
Manway Ring Stainless Steel	20"	9	4830



**QUICK DUMP FLANGE**

Mild Steel Shown

DESCRIPTION	WT/LB	PART#
Quick Dump Flange Mild Steel	4	6068
Quick Dump Flange Stainless Steel	4	3734
4-Bolt Strip	0.5	5518



**TANK LIGHT KIT**  
Back Up, Stop, Turn & Marker Lights LED

**LIGHT BRACKETS**

INDEX	DESCRIPTION	WT/LB	PART#
A	Rear Light Bracket	4.50	7127
B	Marker Light Bracket	0.50	2085
C	ID Light Bracket	1	2101

INDEX	DESCRIPTION	QTY REQ	WT/LB EACH	PART#
A	Back Up Lamp LED	2	0.25	9310
B	Tail Lamp Red LED	4	0.25	9311
C	Pigtail Adapter for Part # 9311	4	0.06	9330
D	Marker Light Amber LED	2	0.10	9308
E	Marker Light Red LED	5	0.10	9309
F	Tail Light Grommet	6	0.17	3354
G	Marker Light Grommet	7	0.12	2928
H	License Plate Light (Mounts on 2" Centers)	1	0.25	3518
(A-H)	Tank Light Kit LED		4.52	9312



**WORK LIGHT**  
ECCO E92004  
LED - 700 LUMENS

DESCRIPTION	WT/LB	PART#
Work Light LED ECCO E92004	1.05	9504



**STROBE AMBER LED**  
ECCO 7965A  
LED

DESCRIPTION	WT/LB	PART#
Strobe Amber LED ECCO 7965A	1.77	9604



**BEACON AMBER LED**  
WHELEN L31HAFA  
LED

DESCRIPTION	WT/LB	PART#
Beacon Amber LED Whelen L31HAFA	2.55	9510



**LIGHT HARNESS KIT**

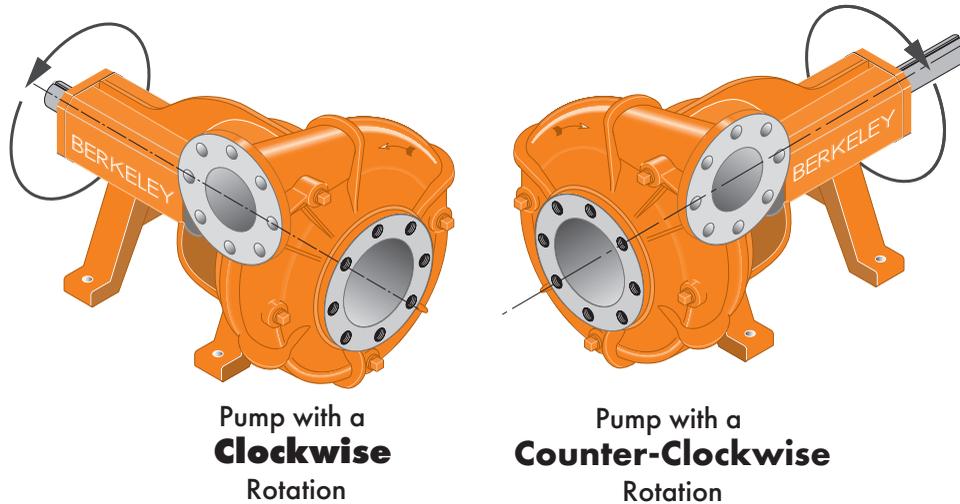
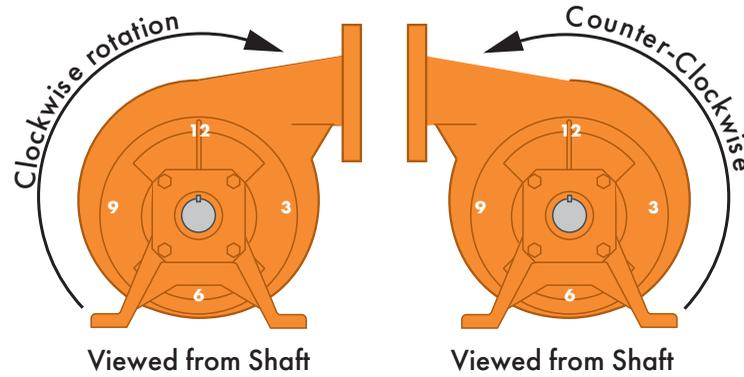
INDEX	DESCRIPTION	QTY REQ	WT/LB EACH	PART#
A	6 Lamp Pig Tails, 3 Marker Pig Tails	1	2.65	9861
B	Single Marker 36" Long	2	0.15	9862
C	Single Marker 90" Long	2	0.36	9863
D	Triple Marker Pig Tail 138" Long	1	0.56	9864
(A-D)	Light Harness Kit		4.26	9885

**TRUCK ADAPTER**

INDEX	DESCRIPTION	WT/LB	PART#
A	Kenworth Adapter Plug	0.36	9887
B	Universal Adapter Plug	0.37	9888



## PUMP ROTATION GUIDE



## FIRST TIME USE

### ROPE PACKING:

Before starting the pump for the first time, **LOOSEN GLAND NUTS** and retighten, **FINGER TIGHT**. Once running, allow packing to leak liberally for a few moments. Then tighten gland nuts one complete turn each until leakage is reduced to 40 to 60 drops per minute.

### MECHANICAL SEAL:

Adjustment or maintenance is normally not required. The seal is enclosed within the pump and is self adjusting.

## CAUTION

### CLOSING SPRAY VALVES:

**NEVER** close spray valve(s) under full pressure. Pump or spray valve damage may occur. Let engine wind down with clutch disengaged, then close spray valves.

### LUBRICATION:

Grease pump and PTO drive shaft every 40 hours of operation with high quality multipurpose NGLI 2 grease. Excess grease will cause bearings to run hot and damage internal parts. The liquid end of the pump is lubricated by pumped water. **NEVER** run pump without water or it will over heat and cause premature failure.

### PACKING GLANDS:

**NEVER** over tighten packing glands or the pump will over heat and cause premature failure.

## PRIMING PUMP

Pump volute **MUST BE** completely filled with water when operating.

A self-priming pump only needs to be manually primed at the first start-up. Once primed, under normal conditions pump will re-prime automatically at each subsequent start-up.

To prime, remove plug from top of pump case and fill case with water. Replace plug and start pump. Unit is equipped with a flapper type check valve which will open at start-up and allow pump to evacuate air from the suction line. After several minutes of operation, pump will be fully primed and pumping water. Priming time will vary.



### UNITEDBUILT 4X3 WATER TRUCK PUMP

UnitedBuilt manufactures pumps of certified quality gray iron with precision casting, machining, and balancing to maximize performance and service time.

- Cast components made from SAE grade 30,000 PSI Virgin Gray Iron.
- Pump components only cast from certified alloys of known quality.
- Shafts manufactured from StressProof® Steel maximizing strength.
- Precision machined and balanced impellers reduce vibrations.
- Extreme tolerances ensure lasting performance.
- Machined, balanced, calibrated and assembled in the USA

#### M3ZRM ROPE PACKING (PICTURED)

MAX RPM: 2,500  
RATED: 750GPM @ 65PSI

DESCRIPTION	MODEL#	WT/LB	PART#
Water Truck Pump Grooved (CW) Rope Packing	B66899MS	97	9762
Water Truck Pump Grooved (CCW) Rope Packing	B66895MS	97	9335

Direct Interchange with B66899 & B66895

#### M3ZRMS MECHANICAL SEAL

MAX RPM: 2,500  
RATED: 750GPM @ 65PSI

DESCRIPTION	MODEL#	WT/LB	PART#
Water Truck Pump Grooved (CW) Mech Seal	B68417MS	97	9601
Water Truck Pump Grooved (CCW) Mech Seal	B68416MS	97	9960

Direct Interchange with B68417 & B68416

### UNITEDBUILT PUMP REPAIR PARTS

Designed and manufactured for lasting performance and direct interchange with B3ZRM and B3ZRMS pumps.

#### UNITEDBUILT VOLUTES

UnitedBuilt manufactures volutes of heavy-duty cast gray iron with grooved ends for convenient maintenance and enhanced longevity.



DESCRIPTION	MODEL#	WT/LB	PART#
Volute Grooved (CW)	H04040MS	45	9795
Volute Grooved (CCW)	H04041MS	45	9331

Interchangeable with B3ZRM(S) Parts

#### UNITEDBUILT M3ZRM(S) POWERHEADS

Powerheads are a great way to keep your operation going, offering minimal repair time.



DESCRIPTION	MODEL#	WT/LB	PART#
Powerhead (CW) Rope Packing (Pictured)	B85552MS	60	9752
Powerhead (CCW) Rope Packing (Pictured)	B85551MS	60	9322
Powerhead (CW) Mechanical Seal	B85550MS	60	9965
Powerhead (CCW) Mechanical Seal	B85549MS	60	9964

Interchangeable with B3ZRM(S) Parts

#### UNITEDBUILT SHAFT KITS

Made with StressProof® Steel to maximize strength.



DESCRIPTION	MODEL#	WT/LB	PART#
Shaft Kit (CW) Rope Packing	B80698MS	8	8111
Shaft Kit (CCW) Rope Packing	B80696MS	8	8110
Shaft Kit (CW) Mech Seal (Includes SS Snap Ring)	B80699MS	8	8115
Shaft Kit (CCW) Mech Seal (Includes SS Snap Ring)	B80697MS	8	8113

Interchangeable with B3ZRM(S) Parts

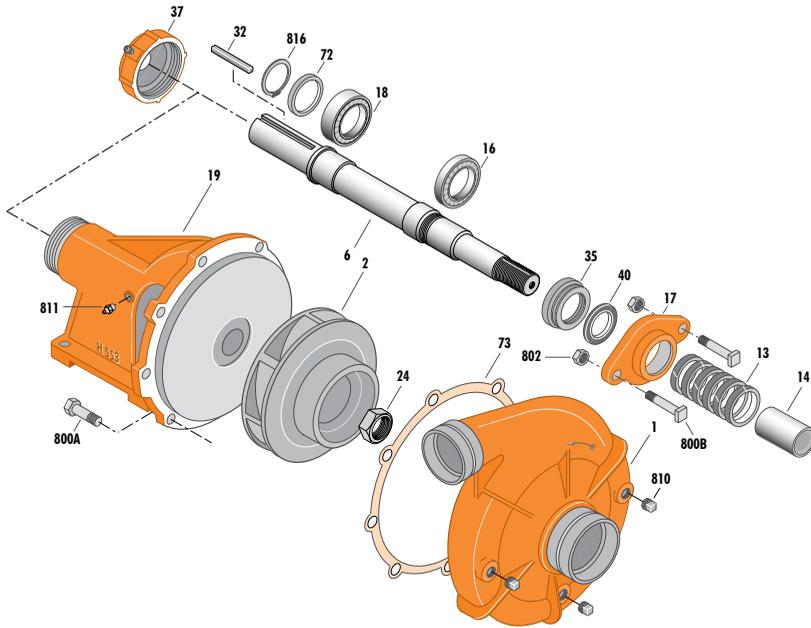
#### UNITEDBUILT IMPELLERS

Manufactured of certified gray iron. Precision machined and balanced to maximize performance and life.



DESCRIPTION	MODEL#	WT/LB	PART#
Impeller (CW)	M02153MS	10	8517
Impeller (CCW)	M02181MS	10	8516

Interchangeable with B3ZRM(S) Parts



**MODEL# B3ZRM**

MAX RPM: 2,500

RATED: 750GPM @ 65PSI

DESCRIPTION	MODEL#
Berkeley CW Water Pump, Grooved, Rope Seal	B66899
Berkeley CCW Water Pump, Grooved, Rope Seal	B66895
Berkeley CW Water Pump, Threaded, Rope Seal	B66161
Berkeley CCW Water Pump, Threaded, Rope Seal	B66168

**B3ZRM REPAIR PARTS**

INDEX	DESCRIPTION	MODEL#	PART#
1	UnitedBuilt Volute Grooved (CW)	H04040MS	9795
1	UnitedBuilt Volute Grooved(CCW)	H04041MS	9331
1	Volute Case Threaded (CW)	H00689	Call
1	Volute Case Threaded(CCW)	H00698	Call
2	UnitedBuilt Impeller (CW)	M02153MS	8517
2	UnitedBuilt Impeller (CCW)	M02181MS	8516
17	UnitedBuilt Split Packing Gland	B82468MS	9946
19	Frame, Housing	H00553	3025
37	Outer Bearing Cap	S19914	0968
Not Shown	Spacer, Sleeve	S08980	0957
800A	Capscrew, Hex 3/8"-16x1" (8 Req.)	S26826	4543
Not Shown	Washer, Bearing Lock	S16181	3818
810A	Brass Hex Socket Plug 1/4" (4 Req.)	S23715	7639
811	Fitting, Grease	S23670	7855

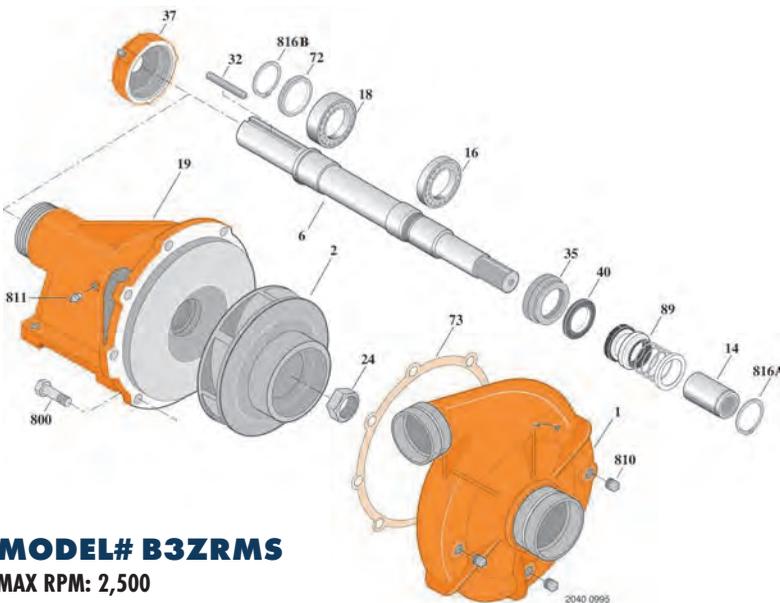
**B3ZRM SHAFT KIT ROPE SEAL**

UnitedBuilt shaft kits are made with StressProof Steel for extra strength

INDEX	DESCRIPTION	MODEL#	PART#
Includes *	UnitedBuilt Shaft Kit Rope (CW)	B80698MS	8111
Includes *	UnitedBuilt Shaft Kit Rope (CCW)	B80696MS	8110
* 6	Shaft	N/A	N/A
* 14	UnitedBuilt Shaft Sleeve	S39242MS	9958
* 16	Bearing, Inboard	S13270	3149
* 18	Bearing, Outboard	S13271	3158
* 24	Nut, Impeller (CW) (1 Per Kit)	M10220	3146
* 24	Nut, Impeller (CCW) (1 Per Kit)	U36-189SS	4379
* 32	Shaft Key, 1/4" x 2 1/8"	S24255	6260
* 72	UnitedBuilt Thrust Ring	S29218MS	9957
* 816B	Snap Ring, Retaining External	S23010	3150

**B3ZRM ROPE SEAL KIT**

INDEX	DESCRIPTION	MODEL#	PART#
Includes **	Complete Rope Packing Seal Kit		9807
** 13	Ring, Packing (Set of 6)	S14022	3924
** 35	UnitedBuilt Inner Grease Cap	S19033MS	9397
** 40	Slinger, Water	S12260	2174
** 73	Gasket, Volute	S05126	0954
** 800B	Bolt, Sq. Head 3/8"-16x2 1/2" (2 Req.)	S23762	0970
** 802	Nut, Hex 3/8"-16 (2 req.)	S23343	0969



**MODEL# B3ZRMS**

MAX RPM: 2,500

RATED: 750GPM @ 65PSI

DESCRIPTION	MODEL#
Berkeley CW Water Pump, Grooved, Mechanical Seal	B68417
Berkeley CCW Water Pump, Grooved, Mechanical Seal	B68416
Berkeley CW Water Pump, Threaded, Mechanical Seal	B68414
Berkeley CCW Water Pump, Threaded, Mechanical Seal	B68415

**B3ZRMS REPAIR PARTS**

INDEX	DESCRIPTION	MODEL#	PART#
1	UnitedBuilt Volute Grooved (CW)	H04040MS	9795
1	UnitedBuilt Volute Grooved(CCW)	H04041MS	9331
1	Volute Case Threaded (CW)	H00689	Call
1	Volute Case Threaded(CCW)	H00698	Call
2	UnitedBuilt Impeller (CW)	M02153MS	8517
2	UnitedBuilt Impeller (CCW)	M02181MS	8516
19	Frame, Housing	H04007	2249
37	Outer Bearing Cap	S19914	0968
Not Shown	Spacer, Sleeve	S08980	0957
800	Bolt, Hex 3/8"-16x1" (8 Req.)	S26826	4543
Not Shown	Washer, Bearing Lock	S16181	3818
810	Brass Hex Socket Plug 1/4" (4 Req.)	S23715	7639
811	Fitting, Grease	S23670	7855

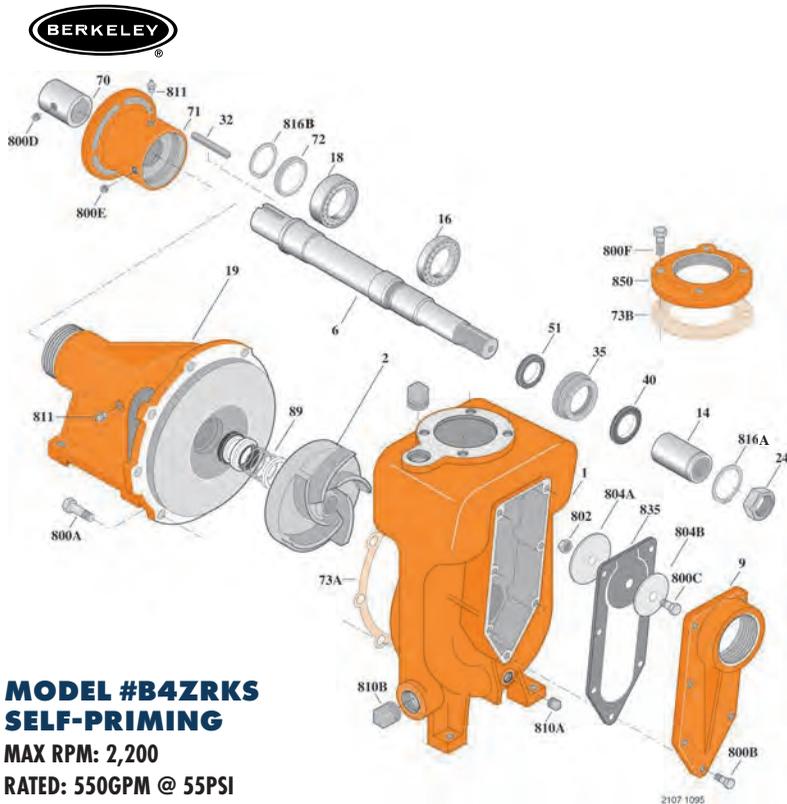
**B3ZRMS SHAFT KIT MECHANICAL SEAL**

UnitedBuilt shaft kits are made with StressProof Steel for extra strength

INDEX	DESCRIPTION	MODEL#	PART#
Includes *	UnitedBuilt Shaft Kit Mech (CW)	B80699MS	8115
Includes *	UnitedBuilt Shaft Kit Mech(CCW)	B80697MS	8113
* 6	Shaft	N/A	N/A
* 14	UnitedBuilt Shaft Sleeve	S39242MS	9958
* 16	Bearing, Inboard	S13270	3149
* 18	Bearing, Outboard	S13271	3158
* 24	Nut, Impeller (CW) (1 Per Kit)	M10220	3146
* 24	Nut, Impeller (CCW) (1 Per Kit)	U36-189SS	4379
* 32	Shaft Key, 1/4" x 2 1/8"	S24255	6260
* 72	UnitedBuilt Thrust Ring	S29218MS	9957
* 816A	Snap Ring, Retaining External SS	S23009	2173
* 816B	Snap Ring, Retaining External	S23010	3150

**B3ZRMS MECHANICAL SEAL KIT**

INDEX	DESCRIPTION	MODEL#	PART#
Includes **	Complete Mechanical Seal Kit		9808
** 89	UnitedBuilt Mechanical Seal	S32690MS	9967
** 35	UnitedBuilt Inner Grease Cap	S19033MS	9397
** 40	Slinger, Water	S12260	2174
** 73	Gasket, Volute	S05126	0954



**MODEL #B4ZRKS  
SELF-PRIMING**

**MAX RPM: 2,200**

**RATED: 550GPM @ 55PSI**

DESCRIPTION	MODEL#	PART#
CW Self Priming Water Pump w/ Hydraulic Adapter	B69876	2020

**B4ZRKS REPAIR PARTS**

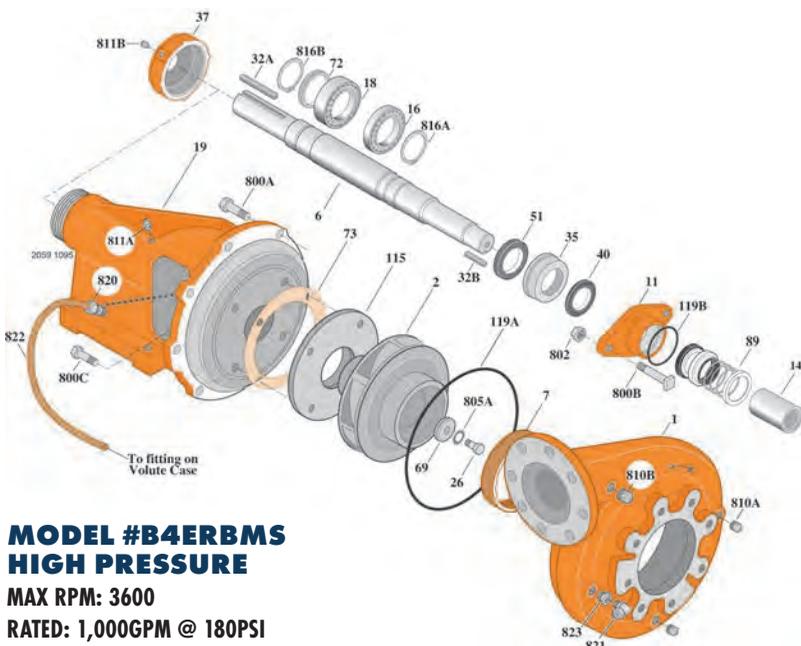
INDEX	DESCRIPTION	MODEL#	PART#
1	Volute Case	H02505	Call
2	Open Face Impeller	M08095	2176
9	Cover, Suction	L04108	2461
19	Frame	H04007	2249
70	UnitedBuilt Hydraulic Shaft Coupler	S30636MS	9848
71	Arms Bracket, Coupling Kit	B0779	9911
73B	Gasket, Blind Flange	S10364	3010
800A	Capscrew, Hex 3/8"-16x1" (8 Req.)	S26826	4543
800B	Capscrew, Hex 3/8"-16x1 1/4" (7 Req.)	S26828	Call
800C	Capscrew, Hex 3/8"-16x3/4"	S26824	3005
800D	Set Screw, Hex 1/2"	S23964	Call
800E	Set Screw, Hex 3/8" (2 Req.)	S23965	5122
800F	Capscrew, Hex 5/8"-11x1 3/4" (4 Req.)	S27001	3011
802	Nut, Hex 3/8"-16	S23103	3008
804A	Weight Clack	S14842	3007
804B	Weight Clack	S15325	3006
810A	Plug, 1/2"	S23717	4541
810B	Plug, 1 1/2" (2 Req.)	S23695	6794
811	Grease Zerk (3 Req.)	S23670	7855
835	Clack Rubber	L04119	2210
850	Flange Companion	S15933	3009

**B4ZRKS SHAFT KIT - HYDRAULIC DRIVE**

INDEX	DESCRIPTION	MODEL#	PART#
Includes *	UnitedBuilt Shaft Kit Mech (CW)	B80703MS	9868
*6	Shaft	N/A	N/A
*14	UnitedBuilt Shaft Sleeve	S39242MS	9958
*16	Bearing, Inboard	S13270	3149
*18	Bearing, Outboard	S13271	3158
*24	Nut, Impeller (CW)	M10220	3146
*32	Shaft Key, 1/2" x 2 1/8"	S24255	6260
*72	UnitedBuilt Thrust Ring	S29218MS	9957
*816A	Snap Ring, Retaining External SS	S23009	2173
*816B	Snap Ring, Retaining External	S23010	3150

**B4ZRKS MECHANICAL SEAL KIT**

INDEX	DESCRIPTION	MODEL#	PART#
Includes **	Complete Mechanical Seal Kit		9808
**89	UnitedBuilt Mechanical Seal	S32690MS	9967
**35	UnitedBuilt Inner Bearing Cap	S19033MS	9397
*40	Slinger, Water	S12260	2174
*73A	Gasket, Volute	S05126	0954



**MODEL #B4ERBMS  
HIGH PRESSURE**

**MAX RPM: 3600**

**RATED: 1,000GPM @ 180PSI**

DESCRIPTION	MODEL#	PART#
CW Water Pump 5X4	B73023	3844
CCW Water Pump 5X4	B73027	3845

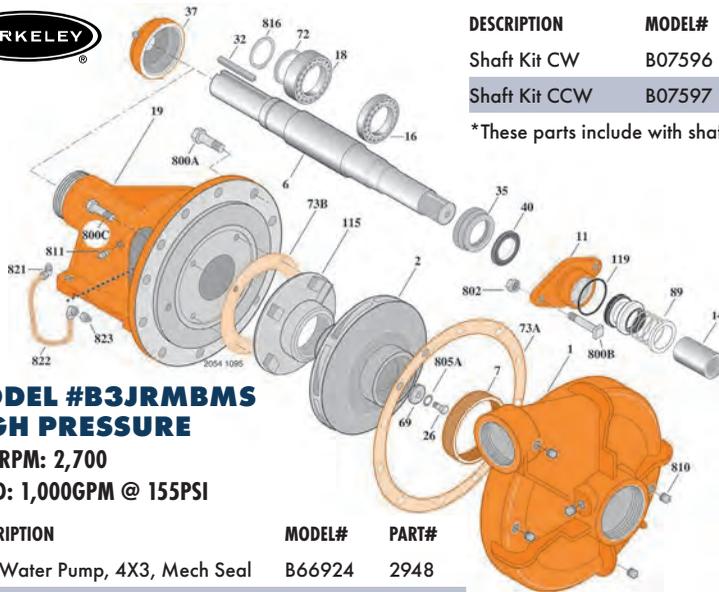
**B4ERBMS REPAIR PARTS**

INDEX	DESCRIPTION	MODEL#	PART#
1	Volute Case CW	H01939	4111
1	Volute Case CCW	H01940	9654
2	Impeller CW	L06015	4435
2	Impeller CCW	L06020	5239
7	Wear Ring	S32745	4415
11	Retainer Mechanical Shaft Seal	S11452	4531
26	Screw, Impeller 1/2-13x1 1/2"	S23623	4533
35	Inner Bearing Cap	S13213	5860
37	Outer Bearing Cap	S35277	9689
40	Slinger, Water	S10964	3636
51	Seal, Oil	S14764	4413
69	Washer, Impeller	S18117	4863
73	Gasket, Balance Ring	S09943	4029
89	Seal, Mechanical Shaft	S32693	3917
115	Balance Ring	L03649	5859
119A	O-Ring	S13760	1936
119B	O-Ring	S24599	4414
800A	Capscrew, Hex 1/2-13x1 1/4" (8 Req.)	S26914	N/A
800B	Bolt, SQ Head 1/2-13x2 1/4" (2 Req.)	S23792	4539
800C	Capscrew, Hex 3/8-16x1" (6 Req.)	S26826	4543
802	Nut, Hex 1/2-13x 7/16" (2 Req.)	S23347	3639
805A	Washer, Lock	S23038	4197

**B4ERBMS SHAFT KIT**

INDEX	DESCRIPTION	MODEL#	PART#
Includes *	Shaft Kit CW/CCW	B60659	5238
*6	Shaft	N/A	N/A
*14	Sleeve, Shaft	S05974L	4200
*16	Bearing, Inboard	S13395	4265
*18	Bearing, Outboard	S13754	4410
*32A	Key, 1/2"	S24214	6688
*32B	Key, 1/4"	S24170	6849
*72	Ring, Thrust	S19221	4411
*816A	Ring, Retaining Internal	S23016	4352
*816B	Ring, Retaining External	S23017	N/A

**\* PARTS MAY SHIP FROM FACTORY WITH SPECIAL ORDER TERMS \***



**MODEL #B3JRMBS  
HIGH PRESSURE**

MAX RPM: 2,700

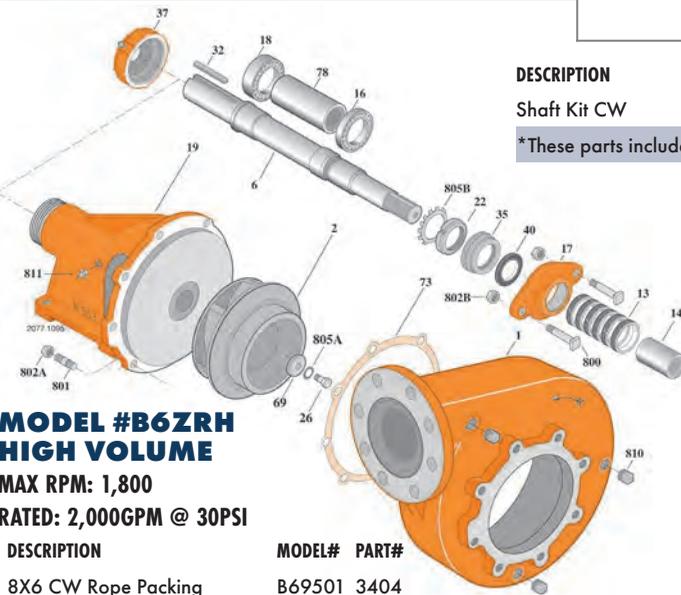
RATED: 1,000GPM @ 155PSI

DESCRIPTION	MODEL#	PART#
CW Water Pump, 4X3, Mech Seal	B66924	2948
CCW Water Pump, 4X3, Mech Seal	B61999	N/A

DESCRIPTION	MODEL#	PART#
Shaft Kit CW	B07596	N/A
Shaft Kit CCW	B07597	4687

\*These parts include with shaft kit

INDEX	DESCRIPTION	MODEL#	PART#
1	Case, Volute CW	H01863	7088
1	Case, Volute CCW	H01892	9548
2	Impeller CW	L03038	4027
2	Impeller CCW	L03115	4688
*6	Shaft	N/A	N/A
7	Ring, Wearing	S04176	6179
11	Retainer, Mechanical Shaft Seal	S11452	4531
*14	Sleeve, Shaft	S05974	4200
*16	Bearing, Ball	S15604	4026
*18	Bearing, Ball	S13396	4264
19	Frame	H01838	N/A
26	Screw, Impeller 1/2-13x1-1/2"	S23623	4533
*32	Key, 1/2x4"	S24214	6688
35	Inner Bearing Cap	S05928	4032
37	Outer Bearing Cap Assembly	S35277	9689
40	Slinger, Water	S10964	3636
69	Washer, Impeller	S06319	4271
*72	Ring, Thrust	S06519	4351
73A	Gasket, Volute	S06271	4028
73B	Gasket, Balance Ring	S09943	4029
89	Seal, Mechanical Shaft	S32693	3917
115	Ring, Balance	M05073	N/A
119	O-Ring	S26471	4537
800A	Capscrew, Hex 3/8-11x1 1/2" (12 Req)	S26999	N/A
800B	Bolt, Sq Head 1/2-13x2 1/4" (2 Req)	S23792	4539
800C	Capscrew, Hex 3/8-16x1" (4 Req)	S26826	4543
802	Nut, Hex 1/2-13x7/16" (2 Req)	S23347	3639
805A	Washer, Lock	S23038	4197
810	Plug, Pipe 1/2" NPT (6 Req)	S23717	4541
811	Fitting, Grease	S23670	7855
*816	Ring, Retaining	S23016	4352



**MODEL #B6ZRH  
HIGH VOLUME**

MAX RPM: 1,800

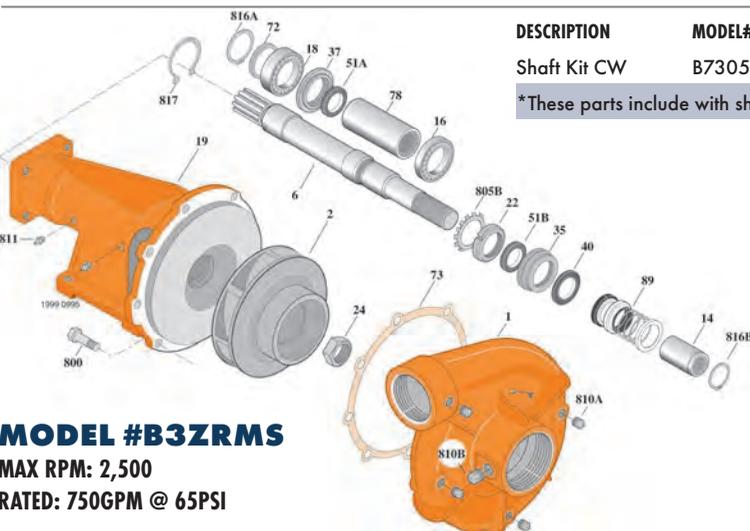
RATED: 2,000GPM @ 30PSI

DESCRIPTION	MODEL#	PART#
8X6 CW Rope Packing	B69501	3404
8X6 CW Sq. Discharge, Rope	B56372	3469

DESCRIPTION	MODEL#	PART#
Shaft Kit CW	B82184	3403

\*These parts include with shaft kit

INDEX	DESCRIPTION	MODEL#	PART#
1	Case, Volute	H05065	3811
Not Shown	Volute Sq Discharge	H01750	N/A
2	Impeller CW	M04186	0950
**13	Ring, Packing (Set of 6)	S14022	3924
*14	Sleeve, Shaft	S05127L	2916
*16	Bearing, Ball	S13270	3149
17	UnitedBuilt Split Packing Gland	B82468MS	9946
*18	Bearing, Ball	S13271	N/A
19	Frame	H00553	3025
22	Locknut	M10221	3819
26	Screw, Impeller 3/8-16x1 3/4"	S23572	N/A
*32	Key, 1/2x2 1/8"	S24255	6260
**35	Inner Bearing Cap	S19033MS	9397
37	Outer Bearing Cap	S19914	0968
**40	Slinger, Water	S12260	2174
69	Washer, Impeller	S06314	2647
**73	Gasket, Volute	S05126	0954
*78	Sleeve, Spacer	S08980	0957
**800	Bolt, Sq Head 3/8-16x2 1/2" (2 Req)	S23762	0970
801	Stud, 3/8-16x1 1/4" (8 Req)	S23994	4227
802A	Nut, Hex 3/8-16 (8 Req)	S23103	3008
**802B	Nut, Hex 3/8-16 (2 Req)	S23343	0969
805A	Washer, Lock	S23036	2694
805B	Washer, Bearing Lock	S16181	3818
Includes **	Complete Rope Packing Seal Kit		9807



**MODEL #B3ZRMS**

MAX RPM: 2,500

RATED: 750GPM @ 65PSI

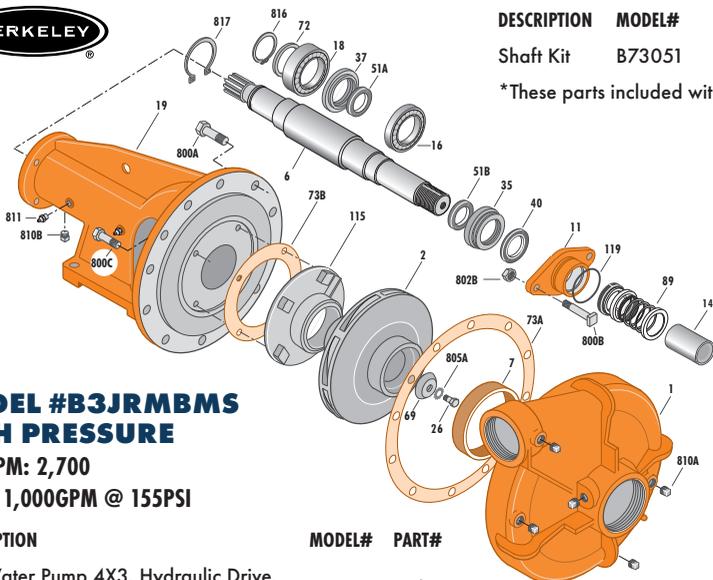
DESCRIPTION	MODEL#	MEGA#	PART#
CW Water Pump, 4x3, Splined Shaft, Hydraulic Drive, Mechanical Seal	B69875	302001	3931

DESCRIPTION	MODEL#	PART#
Shaft Kit CW	B73053	N/A

\*These parts include with shaft kit

INDEX	DESCRIPTION	MODEL#	PART#
1	Volute Case (CW) Threaded	H00689	Call
2	UnitedBuilt Impeller CW	M02153MS	8517
*14	UnitedBuilt Shaft Sleeve	S39242MS	9958
*16	Single Row Ball Brg.	S13270	3149
*18	Double Row Ball Brg.	M10218	3148
19	Frame	H05119	4544
*22	Brg. Lock Nut	M10221	3819
24	Locknut, Impeller	M10220	3146
*35	Drip Brg. Cap	M10213	3004
*37	Outer Brg. Cap	M10214	N/A
40	Slinger, Water	S12260	2174
*51A	Lip Oil Seal	M10217	3153
*51B	Lip Oil Seal	M10216	3003
*72	Thrust Washer	M10222	3152
73	Case Gasket	S05126	0954
*78	Spacer Sleeve	M10215	N/A
89	UnitedBuilt Mechanical Seal	S32690MS	9967
800	Cap Screw 3/8-16x1" (8 Req)	S26826	4543
*805B	Lock Washer, Brg.	S16181	3818
810A	Pipe Plug 1/4" NPT	S23715	7639
811	Grease Fitting	S23670	7855
*816A	Retaining Ring Ext.	S23010	3150
*816B	Retaining Ring Int.	S23009	2173
*817	Retaining Ring Int.	S23023	N/A

\* PARTS MAY SHIP FROM FACTORY WITH SPECIAL ORDER TERMS \*



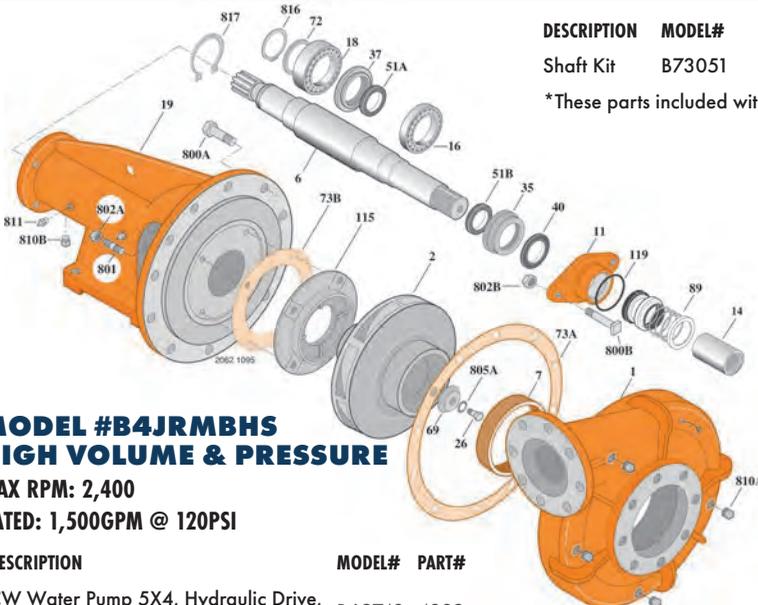
DESCRIPTION MODEL# PART#  
 Shaft Kit B73051 N/A  
 \*These parts included with shaft kit

**MODEL #B3JRMBS  
 HIGH PRESSURE**

MAX RPM: 2,700  
 RATED: 1,000GPM @ 155PSI

DESCRIPTION MODEL# PART#  
 CW Water Pump 4X3, Hydraulic Drive, Mechanical Seal B73403 N/A

INDEX	DESCRIPTION	MODEL#	PART#
1	Volute, Case CW 4X3 NPT	H01863	N/A
2	Impeller	L03038	4027
*6	Shaft	H05105	4348
7	Ring, Wearing	S04176	6179
11	Retainer, Mechanical Shaft Seal	S11452	4531
*14	Sleeve, Shaft	S05974	4200
*16	Bearing, Ball	S15604	4026
*18	Bearing, Ball	M10184	4349
*26	Screw, Impeller 1/2-13x1-1/2"	S23623	4533
35	Inner Bearing Cap	M10200	4534
*37	Outer Bearing Cap	M10209	4535
40	Slinger, Water	S10964	3636
*51A	Seal, Oil	M10210	4350
*51B	Seal, Oil	S14765	4196
*69	Washer, Impeller	S19275	N/A
*72	Ring, Thrust	S06519	4351
73A	Gasket, Volute	S06271	4028
73B	Gasket, Balance Ring	S09943	4029
89	Seal, Mechanical Shaft	S32693	3917
115	Ring, Balance	M05073	N/A
119	O-Ring	S26471	4537
800A	Capscrew, Hex 3/8-11x1-1/2" (12 Req)	S26999	N/A
800B	Bolt, Sq Head 1/2-13x2-1/4 (2 Req)	S23792	4539
800C	Capscrew, Hex 3/8-16x1" (4 Req)	S26826	4543
802	Nut, Hex 1/2-13x7/8 (2 Req)	S23347	3639
*805A	Washer, Lock	S23038	4197
810A	Plug, Pipe 1/2" NPT (4 Req)	S23717	4541
810B	Plug, Pipe 1/4" NPT	S23715	4542
811	Fitting, Grease (2 Req)	S23670	7855
*816	Ring, Retaining	S23016	4352
*817	Ring, Retaining	S23025	4353



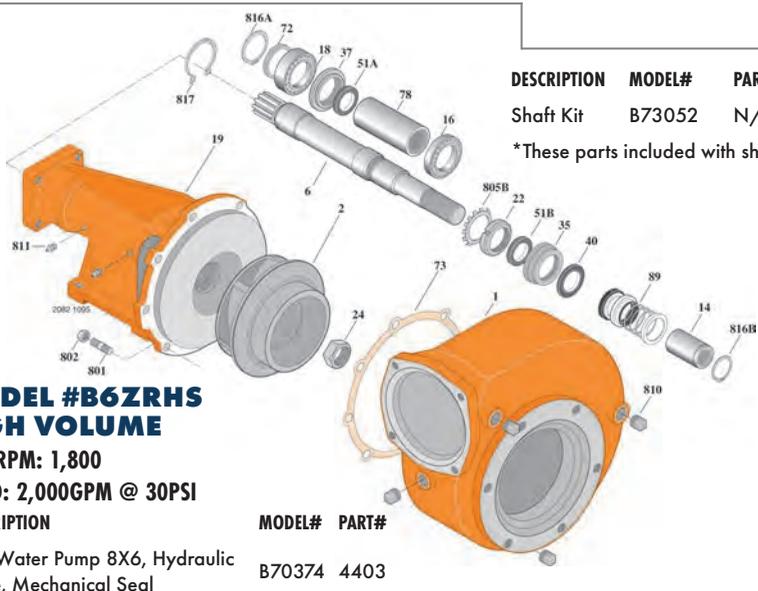
DESCRIPTION MODEL# PART#  
 Shaft Kit B73051 N/A  
 \*These parts included with shaft kit

**MODEL #B4JRMBS  
 HIGH VOLUME & PRESSURE**

MAX RPM: 2,400  
 RATED: 1,500GPM @ 120PSI

DESCRIPTION MODEL# PART#  
 CW Water Pump 5X4, Hydraulic Drive, Mechanical Seal B69743 4332

INDEX	DESCRIPTION	MODEL#	PART#
1	Volute, Case CW 5X4 Flanged	H03843	N/A
2	Impeller CW	L05976	4423
*6	Shaft	H05105	4348
7	Ring, Wearing	S02894	4530
11	Retainer, Mechanical Seal	S11452	4531
*14	Shaft Sleeve	S05974	4200
*16	Bearing, Ball (Inner)	S15604	4026
*18	Bearing, Ball (Outer)	M10184	4349
*26	Screw, Impeller 1/2-13x1-1/2"	S23623	4533
35	Inner Bearing Cap	M10200	4534
*37	Outer Bearing Cap	M10209	4535
40	Slinger, Water	S10964	3636
*51A	Seal, Oil	M10210	4350
*51B	Seal, Oil	S14765	4196
*69	Washer, Impeller	S19275/M14217	7155
*72	Ring, Thrust	S06519	4351
73A	Gasket, Volute	S06271	4028
73B	Gasket, Balance Ring	S09943	4029
89	Seal, Mechanical Shaft	S32693	3917
115	Ring, Balance	S13591	4536
119	O-Ring	S26471	4537
800A	Capscrew, Hex 3/8-11x1-1/2" (12 Req)	S26999	N/A
800B	Bolt, Sq Head 1/2-13x2-1/4 (2 Req)	S23792	4539
801	Stud, 3/8-16x1-1/2" (4 Req)	S23995	4540
802A	Nut, Hex 3/8-16 (4 Req)	S23103	3008
802B	Nut, Hex 1/2-13x7/8 (2 Req)	S23347	3639
*805A	Washer, Lock	S23038	4197
810A	Plug, Pipe 1/2" NPT (4 Req)	S23717	4541
810B	Plug, Pipe 1/4" NPT	S23715	4542
811	Fitting, Grease (2 Req)	S23670	7855
*816	Ring, Retaining	S23016	4352
*817	Ring, Retaining	S23025	4353



DESCRIPTION MODEL# PART#  
 Shaft Kit B73052 N/A  
 \*These parts included with shaft kit

**MODEL #B6ZRHS  
 HIGH VOLUME**

MAX RPM: 1,800  
 RATED: 2,000GPM @ 30PSI

DESCRIPTION MODEL# PART#  
 CW Water Pump 8X6, Hydraulic Drive, Mechanical Seal B70374 4403

INDEX	DESCRIPTION	MODEL#	PART#
1	Case, Volute CW 8X6 Flanged	H01750	N/A
2	Impeller CW	M04186	0950
*6	Shaft	L07261	N/A
*14	UnitedBuilt Shaft Sleeve	S39242MS	9958
*16	Bearing, Ball	S13270	3149
*18	Bearing, Ball	M10218	3148
19	Frame	H05119	4544
*22	Locknut	M10221	3819
*24	Locknut, Impeller	M10220	3146
*35	Inner Bearing Cap	M10213	3004
*37	Outer Bearing Cap	M10214	N/A
40	Slinger, Water	S12260	2174
*51A	Seal, Oil	M10217	3153
*51B	Seal, Oil	M10216	3003
*72	Ring, Thrust	M10222	3152
73	Gasket, Volute	S05126	0954
*78	Sleeve, Spacer	M10215	N/A
89	UnitedBuilt Mechanical Seal	S32690MS	9967
801	Stud, 3/8-16x1 1/2 (8 Req)	S23995	4540
802	Nut, Hex 3/8-16 (8 Req)	S23103	3008
*805B	Washer, Bearing, Lock	S16181	3818
810	Pipe, Plug 1/2" NPT (4 Req)	S23717	4541
811	Fitting, Grease (2 Req)	S23670	7855
*816A	Ring, Retaining	S23010	3150
*816B	Ring, Retaining	S23009	2173
*817	Ring, Retaining	S23023	N/A

\* PARTS MAY SHIP FROM FACTORY WITH SPECIAL ORDER TERMS \*



**MODEL #XS-439  
HEAVY-DUTY**

**MAX RPM: 3,000 • RATED: 800GPM @ 95PSI**

Heavy-duty, 4X3, cast iron centrifugal water pump. Heavy-duty Bearing Frame • Rugged shaft made with StressProof® Steel • Hefty Double Keyed Impeller Mount • Maximized Bearing Life 30,000 hours



**DESCRIPTION**

CW 439M Water Pump, Groove, Mechanical Seal  
CCW 439M Water Pump, Groove, Mechanical Seal

**MODEL# PART#**

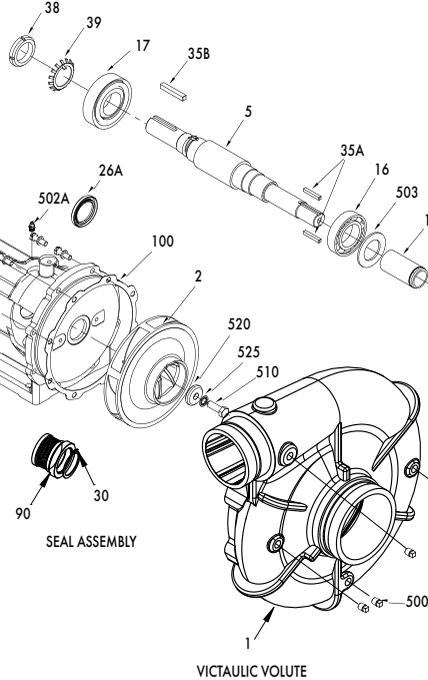
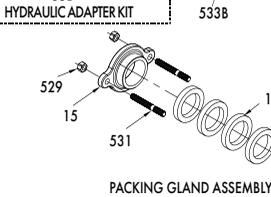
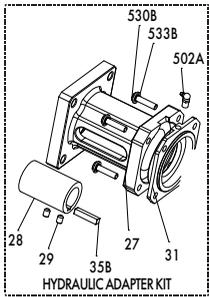
65040309301 7026  
65040309401 6988

**XS-439 REPAIR PARTS**

INDEX	DESCRIPTION	MODEL#	PART#
1	Volute Case, CW Groove	305462019	7281
1	Volute Case, CCW Groove	305462035	7280
2	Impeller CW	305462008	7078
2	Impeller CCW	305462036	7077
*5	Shaft	See Shaft Kit	Sold as Kit
9	Bearing Cap Frame Cover	305462021	7308
*12	Shaft Sleeve	305462022	7752
13	Rope Packing Set	305731917	7739
15	Packing Gland (2 Piece)	305462033	7740
*16	Bearing, Pump Side	305462025	8285
*17	Bearing, Drive Side	305463145	7073
26A	Lip Seal, Pump Side	305463148	8157
26B	Lip Seal, Drive Side	305463184	8121
30	Mechanical Seal Retaining Ring	305462028	7366
*35A	Shaft Key, Impeller Side (2 Pack)	305450006	8276
*,**35B	Shaft Key, Drive Side (2 Pack)	305464032	7616
*38	Bearing Nut	305463039	9576
*39	Bearing Lock Washer	305463042	9577
90	Mechanical Shaft Seal	305462029	7079
100	Volute Case Gasket	305463138	8279
**502A	Grease Zerk Straight (3-Pack)	305463160	Call
503	Water Slinger	305464015	8271
510	Impeller Hex Cap Screw	305462030	8277
520	Impeller Washer	305462031	8278
525	Impeller Lock Washer	305462032	8272
530A	Hex Capscrew (8-Pack)	305463053	8323
**530B	Hex Capscrew (8-Pack)	305463053	8323
**533B	Lock Washer (8-Pack)	305463135	8324
Includes *	Shaft Kit	305462100	7076

**XS-439 HYDRAULIC MOUNT PARTS**

INDEX	DESCRIPTION	MODEL#	PART#
**27	Hydraulic Motor Mount SAEB	305462039	Call
**28	Hydraulic Motor Coupling SAEB	305462041	9379
**29	Hydraulic Coupling Set Screw (2-Pack)	305462043	Call
**31	Hydraulic Lip Seal Adapter Plate	305462045	Call
Includes **	Hydraulic Motor Mount Kit with Bracket, Coupling and Hardware	305731905	7151



**MODEL #FMIH-40  
SELF PRIMING**

**MAX RPM: 2,400  
RATED: 600GPM @ 45PSI**

The FMIH-40 heavy-duty self priming pumps are of all iron construction and feature a large self priming capacity.

- Stainless Steel Shaft.
- Semi-open impeller with replaceable wear plate.
- Viton and Stainless steel mechanical seal.
- Cast gray iron casing with large self priming capacity

**DESCRIPTION**

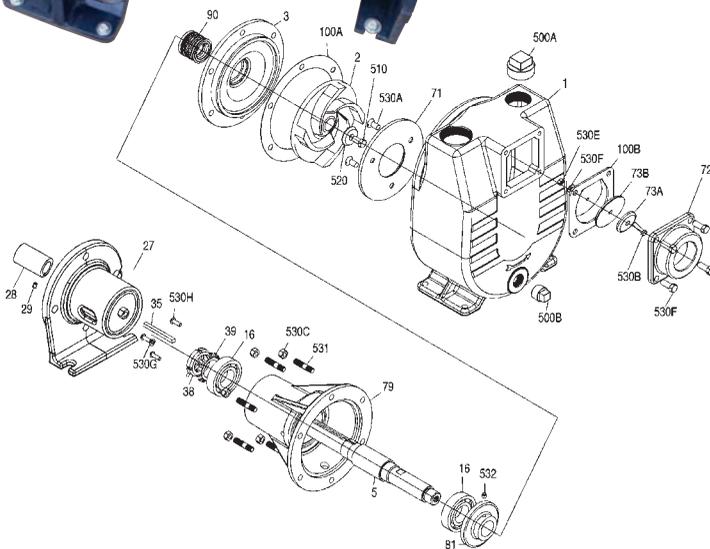
FMIH-40 4X4 Self Priming Water Pump

**MODEL# PART#**

90295004 5460

**FMIH-40 REPAIR PARTS**

INDEX	DESCRIPTION	MODEL#	PART#
1	Volute Case, Impeller Housing	305455003	6876
2	Impeller	305455006	5940
3	Seal Plate	305454009	6188
5	Shaft	305454015	9579
16	Ball Bearing (2 Req.)	305463036	9580
27	Hydraulic Adapter Bracket	305455017	9383
28	Hydraulic Adapter Coupling	305455016	8433
29	Set Screw (2 Pack) 3/8"-16	305463198	8434
35	Shaft Key	305454017	8438
38	Bearing Nut	305463039	9576
39	Bearing Lockwasher	305463042	9577
71	Wear Plate	305455009	6494
73A	Top Weight - Check Valve	305454023	7888
73B	Bottom Weight - Check Valve	305454025	7887
79	Transmission Head	305454033	9578
81	Seal Cover	305454039	6186
90	Mechanical Shaft Seal	305463044	9582
100A	Volute Case Gasket	305454042	9584
100B	Flapper Valve	305454045	6955
520	Impeller Washer	305455015	7412
530A	Wear Plate Bolts (6 Pack) 3/8"-16 x 3/4" SS	305463079	7371
530B	Flapper Bolt	305463081	7886
530C	Hex Nuts (6 Pack)	305463059	8437
532	Set Screw (2 Pack)	305463075	9581





**MODEL A39VRMS**

CAST IRON CENTRIFUGAL 4X3

MAX RPM: 2,500

RATED: 750GPM @ 65PSI



**MODEL A39RM**

CAST IRON CENTRIFUGAL 4X3

MAX RPM: 2,500

RATED: 750GPM @ 65PSI

DESCRIPTION	ARMS	PART#
CW Water Pump, Grooved, Mechanical Seal	BM-1306	9907
CCW Water Pump, Grooved, Mechanical Seal	BM-1303	9906

DESCRIPTION	ARMS	PART#
CW Water Pump, Threaded, Rope Seal	BM-1085	9926
CCW Water Pump, Threaded, Rope Seal	BM-1086	9912

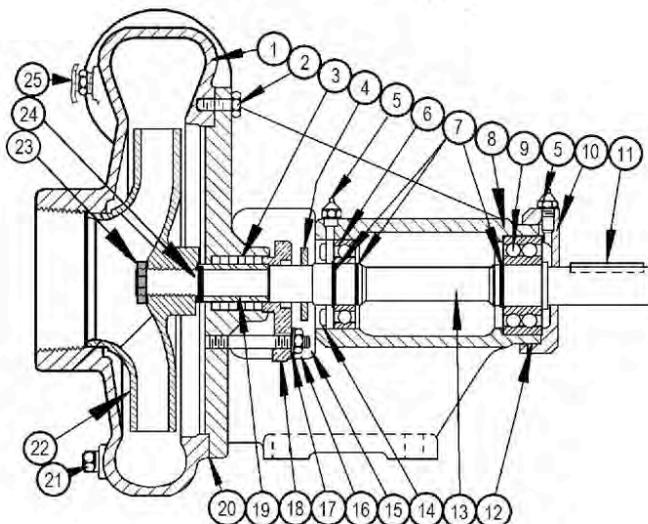
**POWER HEAD ASSEMBLY**

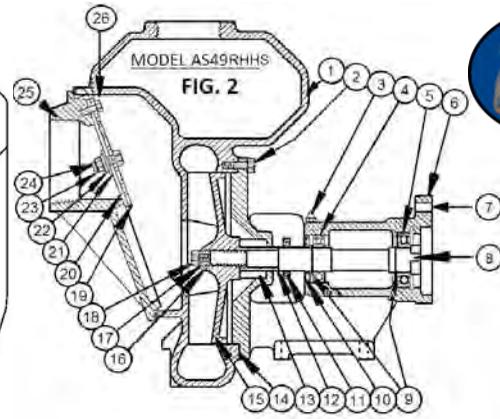
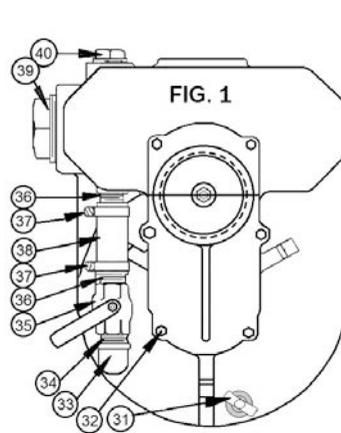
DESCRIPTION	ARMS#	PART#
CW Power Head, Mechanical Seal	BM-1306PF	9914
CCW Power Head, Mechanical Seal	BM-1303PF	9951
CW Power Head, Rope Seal	BM-1085PF	Call
CCW Power Head, Rope Seal	BM-1086PF	Call



**A39 REPAIR PARTS**

INDEX	DESCRIPTION	ARMS#	PART#
1	Volute Case, CW Groove	B-187	Call
1	Volute Case, CCW Groove	B-188	Call
1	Volute Case CW Threaded	B-106	9942
1	Volute Case CCW Threaded	B-108	9915
2	Capscrew 3/8"-16x7/8" (8 Req.)	A-445	4819
3	Rope Packing (Set of 6)	A-281	3924
3	Mechanical Seal	A-393	9967
4	Water Slinger	A-279	9918
5	Grease Zerk, 1/8" NPT	A-327	7855
8	Pump Bracket	C-109	Call
10	Bearing Cap	A-233	Call
11	Shaft Key, 1/4" x 2 1/8"	A-322	6260
12	Set Screw 1-31 X 1/2"	A-447	Call
13	Shaft Kit CW	BM-1165	9913
13	Shaft Kit CCW	BM-1166	9949
14	Grease Seal	A-280	9928
15	Rope Packing Stud 3/8"	A-412	9973
16	Rope Packing Hex Nut	A-413	9922
17	Rope Packing Flat Washer	A-414	9974
18	Rope Packing Gland	A-339	9916
19	Shaft Sleeve	A-277	1004
20	Volute Case Gasket	A-268	0954
22	Impeller CW Bronze	A-198	9953
22	Impeller CCW Bronze	A-199	Call
23	Impeller Jam Nut CW	M10220	3146
23	Impeller Jam Nut CCW	US36-189SS	4379
24	Thrust Washer	A-791	9929
25	Drain Valve 1/4" NPT	A-488	7626





**MODEL AS49RHS**

CAST IRON SELF-PRIMING PUMP 4X4

MAX RPM: 2,400

RATED: 600GPM @ 60PSI

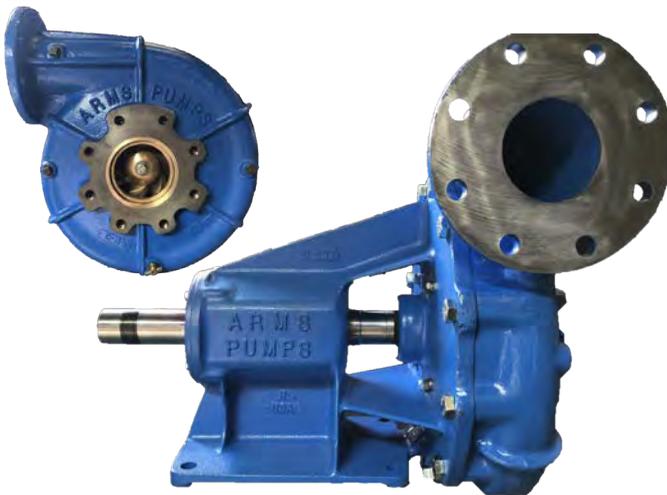
**DESCRIPTION**

Self-Priming, Hydraulic Drive, Mechanical Seal

**ARMS# PART#**  
BM-1336 9923

**AS49RHS REPAIR PARTS**

INDEX	DESCRIPTION	ARMS#	PART#
1	Volute Case	C-140	Call
2	Capscrew 3/8-16x7/8"	A-445	4819
3	Grease Fitting	A-327	7855
4	Ball Bearing	A-275	Call
5	Ball Bearing	A-333	Call
7	Retaining Ring	A-338	Call
8	Shaft Kit	BM-1283	Call
9A	Retaining Ring Ext 5100-118	A-336	Call
9B	Retaining Ring Ext 5100-156	A-337	Call
10	Grease Seal	A-280	9928
11	Water Slinger	A-279	9918
12	Shaft Sleeve	A-277	9958
13	Mechanical Seal	A-393	Call
14	Volute Case Gasket	A-268	0954
15	Impeller Open Face	A-419	9963
16	Impeller Washer	A-278	Call
17	Lockwasher 3/8" Split SS	A-488	Call
18	Capscrew 3/8-16x1"	A-417	4543
19	Clackweight	A-695	Call
20	Suction Cover Gasket	B-193	Call
21	Flat Washer 3/8x2"	A-397	Call
22	Lockwasher 3/8"	A-478	Call
23	Hex Nut, 3/8-16 SS	A-434	Call
24	Capscrew 3/8-16x1" SS	A-477	Call
31	Vent Valve 1/4" NPT	A-326	7626
35	Ball Valve Brass 3/4" FNPT	A-469	1511



**MODEL A413RMS**

CAST IRON CENTRIFUGAL 5X4 • 13" IMPELLER • HIGH PRESSURE

MAX RPM: 2,400

RATED: 1,200GPM @ 135PSI

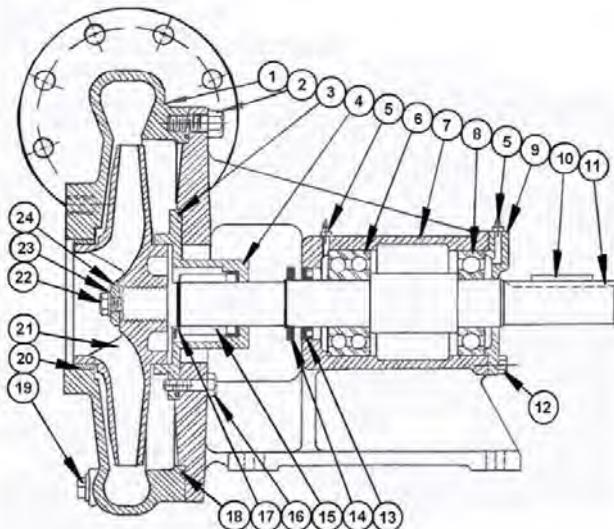
**DESCRIPTION**

CW 5X4 Pump, Flanged, Mechanical Seal

**ARMS# PART#**  
BM-1257 9927

**A413 REPAIR PARTS**

INDEX	DESCRIPTION	ARMS#	PART#
1	Volute Case	A-569	Call
2	Cap Screw 5/8"	A-576	Call
3	Balance Gasket	A-552	Call
4	Seal Housing	A-556	Call
5	Grease Fitting	A-327	7855
6	Ball Bearing, Pulley End	A-283	Call
8	Ball Bearing, Pump End	A-286	Call
9	Bearing Cap	A-264	Call
10	Key, 1/2" x 2-1/2"	A-566	Call
11	Shaft Kit CW	BM-1356	Call
12	Cap Screw 1/2-20x5/8"	A-435	Call
13	Grease Seal	A-285	Call
14	Slinger Ring	A-296	Call
15	Mechanical Seal	A-554	Call
16	Capscrew 3/8"	A-575	Call
17	Retaining Ring	A-509	Call
18	O-Ring, Volute Case	A-553	Call
19	Pipe Plug, 1/2" NPT	A-555	6869
20	Wear Ring	A-573	Call
21	Impeller 13" CW	A-570	Call
22	Capscrew 1/2"	A-439	Call
23	Split Lockwasher 1/2"	A-491	Call
24	Impeller Washer	A-571	Call





**AV1100 ADJUSTABLE SPRAY KIT**

UnitedBuilt

INDEX	DESCRIPTION	QTY		WT/LB	PART#
		REQ	EACH		
A	3" Weld x Groove Nipple	1	2	1486	
B	3" Groove Coupling Rigid	1	4	0697	
C	1/8" Quick Exhaust Valve w/ Air Fitting	1	1	9786	
D	UnitedBuilt AV1100 Air Operated Valve	1	9	8030	
E	3" Groove Coupling	1	3	0687	
F	UnitedBuilt BC2399 Adjustable Nozzle	1	3	3484	
(A-F)	UnitedBuilt AV1100 Adj. Spray Kit	22		4038	



**AV1100 SIDE SPRAY KIT**

UnitedBuilt

INDEX	DESCRIPTION	QTY		WT/LB	PART#
		REQ	EACH		
A	3" Weld x Groove Nipple	1	2	1486	
B	3" Groove Coupling Rigid	1	4	0697	
C	1/8" Quick Exhaust Valve w/ Air Fitting	1	1	9786	
D	UnitedBuilt AV1100 Air Operated Valve	1	9	8030	
E	3" Groove Coupling	1	3	0687	
F	UnitedBuilt MP2200 Side Nozzle	1	2	7790	
(A-F)	UnitedBuilt AV1100 Side Spray Kit	21		4036	



**AV1100 DUCKBILL SPRAY KIT**

UnitedBuilt

INDEX	DESCRIPTION	QTY		WT/LB	PART#
		REQ	EACH		
A	3" Weld x Groove Nipple	1	2	1486	
B	3" Groove Coupling Rigid	1	4	0697	
C	1/8" Quick Exhaust Valve w/ Air Fitting	1	1	9786	
D	UnitedBuilt AV1100 Air Operated Valve	1	9	8030	
E	3" Groove Coupling	1	3	0687	
F	UnitedBuilt BC2178 Flusher Nozzle	1	2	1043	
F	UnitedBuilt BC2179 Side Nozzle	1	2	1045	
F	UnitedBuilt BC2384 Fan Nozzle	1	2	1048	
(A-F)	UnitedBuilt AV1100 Flusher Spray Kit	21		4037	
(A-F)	UnitedBuilt AV1100 Side Spray Kit	21		5081	
(A-F)	UnitedBuilt AV1100 Fan Spray Kit	21		4588	



**AV1100 90° DUCKBILL SPRAY KIT**

UnitedBuilt

INDEX	DESCRIPTION	QTY		WT/LB	PART#
		REQ	EACH		
A	3" Weld x Groove Nipple	1	2	1486	
B	3" Groove Coupling Rigid	2	4	0697	
C	1/8" Quick Exhaust Valve w/ Air Fitting	1	1	9786	
D	UnitedBuilt AV1100 Air Operated Valve	1	9	8030	
E	3" Groove Coupling	1	3	0687	
F	3" 90° Groove Elbow	1	4	0677	
G	UnitedBuilt BC2178 Flusher Nozzle	1	2	1043	
G	UnitedBuilt BC2179 Side Nozzle	1	2	1045	
G	UnitedBuilt BC2384 Fan Nozzle	1	2	1048	
(A-G)	UnitedBuilt AV1100 90° Flush Spray Kit	29		4843	
(A-G)	UnitedBuilt AV1100 90° Side Spray Kit	29		4718	
(A-G)	UnitedBuilt AV1100 90° Fan Spray Kit	29		5059	



**AV1100 SLIP-ON FAN SPRAY KIT**

UnitedBuilt

INDEX	DESCRIPTION	QTY		WT/LB	PART#
		REQ	EACH		
A	3" Weld x Groove Nipple	1	2	1486	
B	3" Groove Coupling Rigid	1	4	0697	
C	1/8" Quick Exhaust Valve w/ Air Fitting	1	1	9786	
D	UnitedBuilt AV1100 Air Operated Valve	1	9	8030	
E	3" Groove Coupling	1	3	0687	
F	3" Weld x Groove Nipple 4 1/2" Long	1	3	8442	
G	BBD Slip-On Fan Nozzle	1	2	6117	
(A-G)	AV1100 Slip-On Spray Kit	1	19	Call	



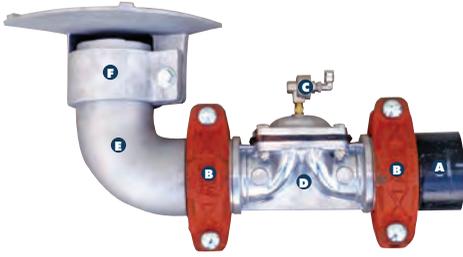
**BC2410 SPRAY HEAD VALVE KIT**

UnitedBuilt

INDEX	DESCRIPTION	QTY		WT/LB	PART#
		REQ	EACH		
A	3" Weld x Groove Nipple	1	2	1486	
B	3" Groove Coupling Rigid	2	4	0697	
C	3" 90° Groove Elbow	1	4	0677	
D	UnitedBuilt BC2410 Spray Head Valve	1	10	6204	
E	1/8" x 1/4" 90° Push-On Air Fitting	1	0.05	5547	
(A-E)	BC2410 Spray Head Valve Kit	24		4636	

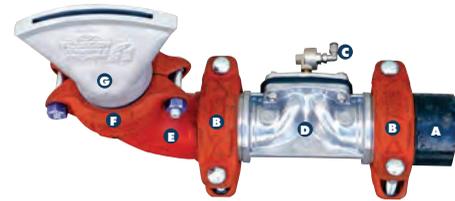
**BC2410 SIDE SPRAY NOZZLE**

INDEX	DESCRIPTION	WT/LB	PART#
F	BC2410 Nozzle 4 1/2" Wide x 1/4" Slot	4	1040



**323 INLINE SLIP-ON FAN SPRAY KIT**

INDEX	DESCRIPTION	QTY		WT/LB	PART#
		REQ	EACH		
A	3" Weld x Groove Nipple	1	2	1486	
B	3" Groove Coupling Rigid	2	4	0697	
C	1/2" Quick Exhaust Valve w/ Air Fitting	1	1	9786	
D	323 Inline Aluminum Air Valve	1	3	7207	
E	Aluminum Elbow for BBD Slip-On Noz	1	3	7270	
F	BBD Slip-On Fan Nozzle	1	2	6117	
(A-F)	323 Inline Slip-On Spray Kit	19		9415	



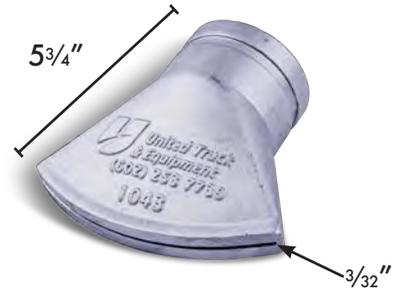
**323 INLINE 90° SPRAY KIT**

INDEX	DESCRIPTION	QTY		WT/LB	PART#
		REQ	EACH		
A	3" Weld x Groove Nipple	1	2	1486	
B	3" Groove Coupling Rigid	2	4	0697	
C	1/2" Quick Exhaust Valve w/ Air Fitting	1	1	9786	
D	323 Inline Aluminum Air Valve	1	3	7207	
E	3" 90° Groove Elbow	1	4	0677	
F	3" Groove Coupling	1	3	0687	
G	UnitedBuilt BC2178 Flush Spray Nozzle	1	2	1043	
G	UnitedBuilt BC2179 Side Spray Nozzle	1	2	1045	
G	UnitedBuilt BC2384 Fan Spray Nozzle	1	2	1048	
G	UnitedBuilt BC2399 Adj Spray Nozzle	1	3	3484	
(A-G)	323 Inline BC2178 Flush Spray Kit	23		9418	
(A-G)	323 Inline BC2179 Side Spray Kit	23		Call	
(A-G)	323 Inline BC2384 Fan Spray Kit	23		9417	
(A-G)	323 Inline BC2399 Adj Spray Kit	24		9416	



**BC2399 ADJUSTABLE SPRAY NOZZLE**  
UnitedBuilt  
Aluminum • 3" Groove

DESCRIPTION	WT/LB	PART#
Spray Nozzle with Adjustable Band	3	3484
Adjustable Band	0.6	3305



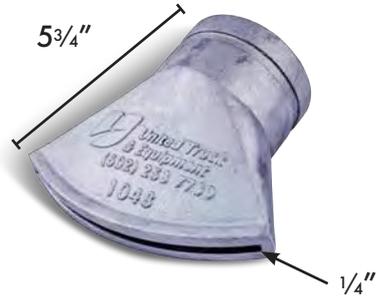
**BC2178 FLUSHER SPRAY NOZZLE**  
UnitedBuilt  
Aluminum • 3" Groove

DESCRIPTION	WT/LB	PART#
Flusher Nozzle, 7" Wide x 3/32" Slot	2	1043



**BC2179 SIDE SPRAY NOZZLE**  
UnitedBuilt  
Aluminum • 3" Groove

DESCRIPTION	WT/LB	PART#
Side Spray Nozzle, 5" Wide x 1/4" Slot	2	1045



**BC2384 FAN SPRAY NOZZLE**  
UnitedBuilt  
Aluminum • 3" Groove

DESCRIPTION	WT/LB	PART#
Fan Nozzle, 7" Wide x 1/4" Slot	2	1048



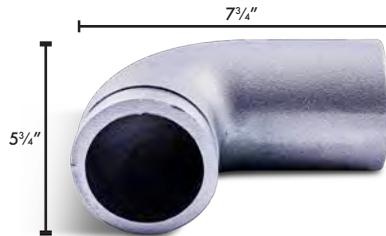
**BBS FIN SIDE SPRAY NOZZLE**  
UnitedBuilt  
Aluminum • 3" Groove • 2" Reduced Flow

DESCRIPTION	WT/LB	PART#
Fin Side Nozzle, 5 1/2" Wide x 3/16" Slot	3	7017



**MP2200 SIDE SPRAY NOZZLE**  
UnitedBuilt  
Aluminum • 3" Groove

DESCRIPTION	WT/LB	PART#
Side Spray Nozzle, 4" Wide x 1/4" Slot	2	7790



**SLIP-ON ELBOW FOR BBD NOZZLE**  
UnitedBuilt  
Aluminum • 3" Groove

DESCRIPTION	WT/LB	PART#
Slip-on Elbow for BBD Nozzle	3	7270



**BBD SLIP-ON FAN NOZZLE**  
UnitedBuilt  
Aluminum • Slip-On Nozzle  
Fits 3 1/2" Outside Diameter Pipe

DESCRIPTION	WT/LB	PART#
Slip-On Nozzle 3 1/2"	3	6117



**AV1100 WATER TRUCK SPRAY VALVE**

UnitedBuilt  
Heavy-duty, High Quality Aluminum  
Air to Close

Air to close water truck spray valve designed for maximized flow with minimum water hammer. Smooth flow and quick operation. Industry's most versatile and reliable water truck valve.

- 1/8" FNPT Air Port
- 1/4" FNPT Drain Ports with 1/4" Hex Socket Brass Plugs
- 3" Grooved Ends

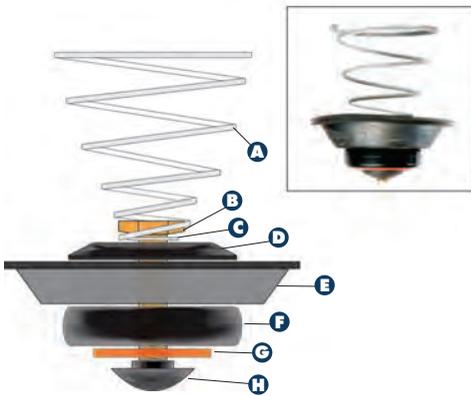
DESCRIPTION	WT/LB PART#
AV1100 Air to Close Spray Valve	7.74 8030

**AV1100 REPAIR PARTS**

INDEX	DESCRIPTION	WT/LB PART#
A	AV1100 Valve Cap	0.95 7132
B	AV1100 Cap Clamp	0.89 1038
C	AV1100 Valve Body	4.85 8145

**AV1100 SEAL KIT**

INDEX	DESCRIPTION	WT/LB PART#
A	Spring	0.40 8212
B	Bolt	0.07 6690
C	Stainless Steel Washer 5/8"	0.03 5736
D	Retainer Top	0.10 8140
E	Diaphragm Center Punched	0.24 3106
F	Retainer Bottom	0.16 8141
G	Washer Seat	0.08 8143
H	Nut	0.04 8142
(A-H)	Seal Assembly with Spring	1.16 8147
(B-H)	Seal Assembly (No Spring)	0.71 8146



Diaphragm Outside Diameter 6 1/4"



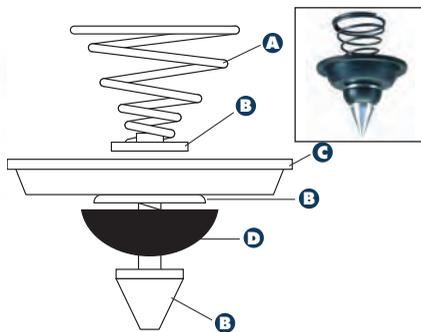
**DISCONTINUED**

**AV9030 WATER TRUCK SPRAY VALVE**

UnitedBuilt  
AV9030 Valve No Longer Available.  
Seal Kits Are Available Below.

**AV9030 SEAL KIT**

INDEX	DESCRIPTION	WT/LB PART#
A	Spring	0.34 1056
B	Aluminum Assembly	0.51 6720
C	Diaphragm Center Punched	0.24 3106
D	Half Ball Seat	0.21 4116
(A-D)	Seal Assembly with Spring	1.20 4373
(B-D)	Seal Assembly (No Spring)	0.98 7191



Diaphragm Outside Diameter 6 1/4"



**BC2410 WATER TRUCK SPRAY HEAD VALVE**

UnitedBuilt  
Heavy-duty, High Quality Aluminum  
Air to Open

Heavy-duty spray head valve air to open with 3" groove connection. Integrated valve and spray nozzle design. Manually adjustable spray pattern.

- 1/8" FNPT Air Port
- 3" Grooved End for Intake

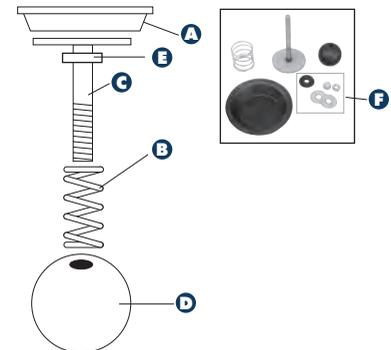
DESCRIPTION	WT/LB PART#
BC2410 Air to Open Spray Head Valve with Adjustable Band	9.37 6204

**BC2410 REPAIR PARTS**

INDEX	DESCRIPTION	WT/LB PART#
A	BC2410 Valve Cap	0.95 7132
B	BC2410 Cap Clamp	0.89 1038
C	BC2410 Adj. Spray Band	0.74 1074
D	BC2410 Valve Body	4.89 7226

**BC2410 SEAL KIT**

INDEX	DESCRIPTION	WT/LB PART#
A	Diaphragm	0.25 1076
B	Spring	0.20 1079
C	Stainless Steel Stem	1 1394
D	Ball Seat	0.50 1073
E	Rubber Washer	0.02 5008
F	71A Fastener Kit	0.20 3265
(A-F)	BC2410 Seal Kit w/ Spring Unassembled	1.70 4065



Diaphragm Outside Diameter 6 1/4"



**BC2403 SPRAY HEAD VALVE**

UnitedBuilt

Heavy-duty Aluminum • Air to Close  
Interchanges with MEGA 300198

INDEX	DESCRIPTION	WT/LB	PART#
	BC2403 SHV w/ O-Ring	11.29	5826
A	Top Cap	4.08	5928
B	Valve Body	4.09	5929
C	Spray Band	1.22	5930
D	Adjustment Knob	0.16	5948
E	Mounting O-Ring	0.09	4009
F	1/4" Quick Exhaust Valve	0.33	6100
G	1/4" Brass Nipple	0.05	9851
H	Mounting Plate	1.73	5945
(A-H)	BC2403 Spray Head Valve Kit	23.09	6016



**BC2403H SPRAY HEAD VALVE**

UnitedBuilt

Heavy-duty Aluminum • Hydraulic Cylinder  
Interchanges with MEGA 025610

INDEX	DESCRIPTION	WT/LB	PART#
	BC2403H Hyd SHV w/ O-Ring	15	7690
A	Top Cap	4	CALL
B	Valve Body	4.09	5929
C	Spray Band	1.22	5930
D	Adjustment Knob	0.16	5948
E	Mounting O-Ring	0.09	4009
H	Mounting Plate	1.73	5945
I	Hydraulic Cylinder	1.80	7685
	Cylinder Mounting Nut (Not Shown)	0.25	7686



Internal repair kit compatible with both air and hydraulic BC2403

**BC2403 & BC2403H SEAL KIT**

Interchanges with MEGA 300409

DESCRIPTION	WT/LB	PART#
Spring	0.44	4008
Diaphragm	0.28	1077
Assembled Seal Kit w/ Spring	1.64	6017

**BC2403H HYDRAULIC CYLINDER MOUNTING HARDWARE**

DESCRIPTION	WT/LB	PART#
Jam Nut (Not Shown)	0.03	3266
Hex Nut (Not Shown)	0.04	3267



Adapters Sold with #7568

**INLINE VALVE AV5293**

UnitedBuilt

Heavy-duty Cast Iron • Air to Close  
Interchangeable with Cla-Val 3"

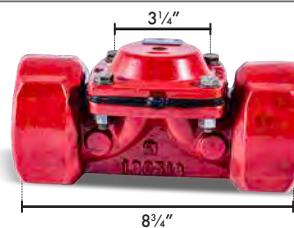
CONNECTION	DESCRIPTION	WT/LB	PART#
3" FNPT	Inline Valve	29	5293
3" Groove	Inline Valve w/ (2) 3" MNPTxGRV Adapters	32.68	7568
	Valve Cap Cast Iron	7.20	5374



**AV5293 SEAL KIT**

Seal Kit for AV5293 & Cla-Val 3" Inline Valves

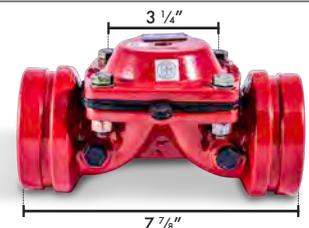
INDEX	DESCRIPTION	WT/LB	PART#
A	Spring	0.12	1570
B	Thread Stem	0.07	6690
C	Top Retainer	0.24	6617
D	Diaphragm	0.19	1578
E	Bottom Retainer	0.20	6615
F	Gasket	0.12	6618
G	Nut	0.10	6616
(A-G)	Seal Kit Assembly with Spring	1.16	2745



**INLINE VALVE 323 NETAFIM**

Cast Iron • Air to Close • Female NPT

CONNECTION DESCRIPTION	WT/LB	PART#
3" FNPT Inline Valve 323 3" FNPT	11.43	4525
323 Valve Cap Cast Iron	1.98	5046



**INLINE VALVE 323 NETAFIM**

Cast Iron • Air to Close • Grooved

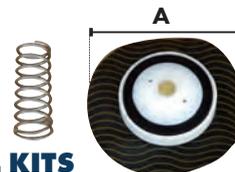
CONNECTION DESCRIPTION	WT/LB	PART#
3" Groove Inline Valve 323 3" Groove	8.89	4767
323 Valve Cap Cast Iron	1.98	5046



**INLINE VALVE CLA-VAL**

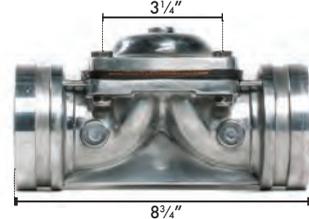
Cast Iron • Air to Close • Heavy-duty

DESCRIPTION	A INCHES	B INCHES	WT/LB	PART#
Inline Valve 2" FNPT	3 3/8"	6 1/2"	10.09	4602
Inline Valve 2 1/2" FNPT	4 1/2"	7 1/2"	19.02	5665
Inline Valve 3" FNPT	5"	8"	26.46	7927



**CLA-VAL SEAL KITS**

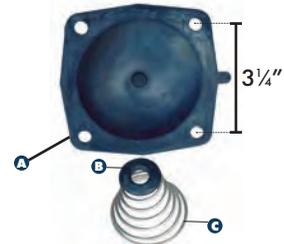
VALVE DESCRIPTION	A INCHES	WT/LB	PART#
2" Spring		0.05	5032
2" Seal Kit (No Spring)	4 1/2"	0.41	4955
2 1/2" Spring		0.12	1570
2 1/2" Seal Kit (No Spring)	5 1/2"	0.74	5591
2 1/2" Seal Kit with Spring	5 1/2"	0.86	6025



**INLINE VALVE 323**

Aluminum • Air to Close • Grooved

CONNECTION	DESCRIPTION	WT/LB	PART#
3" Groove	Inline Valve 323 Groove	3.15	7207



**323 SEAL KIT**

INDEX	DESCRIPTION	WT/LB	PART#
A	323 Diaphragm	0.22	5590
B	Button Seat	0.01	3883
C	Spring	0.05	1588
(A-C)	323 Seal Kit	0.30	6535



**SIDEWINDER 8494 CANNON KITS  
REMOTE CONTROL  
ELKHART BRASS**

2" Female NPT Inlet  
Available in both 12V & 24V  
5000-24 Stream to Fog Nozzle 350GPM  
Vertical Travel: 135°  
Horizontal Travel: 180° or 334°

**12V**

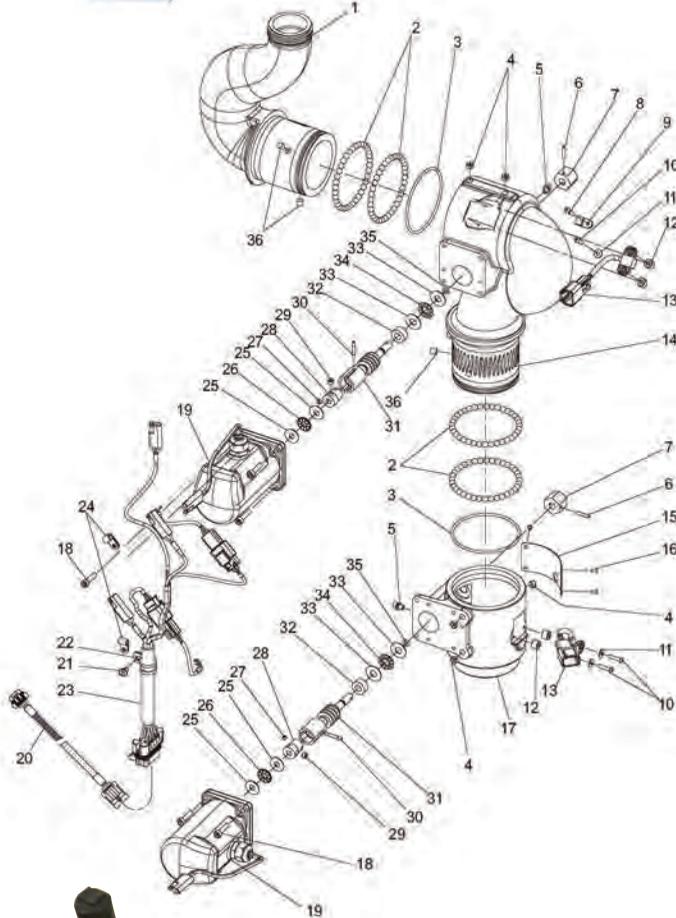
VDC	DESCRIPTION	WT/LB	PART#
12V	Sidewinder 8494 12V (no nozzle or control)	18	5247
12V	Sidewinder 8494 12V w/ Nozzle & Toggle Control	21	3516
12V	Sidewinder 8494 12V w/ Nozzle & Joystick Control	25	4553

**24V**

VDC	DESCRIPTION	WT/LB	PART#
24V	Sidewinder 8494 24V (no nozzle or control)	18	7309
24V	Sidewinder 8494 24V w/ Nozzle & Toggle Control	21	6123
24V	Sidewinder 8494 24V w/ Nozzle & Joystick Control	25	6115

**REPAIR PARTS**

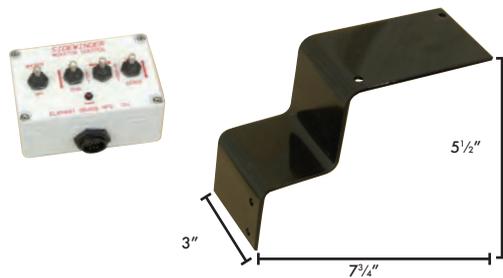
INDEX	DESCRIPTION	MODEL#	QTY REQUIRED	PART#
1	8494 Outlet Body	17908001	1	6299
2	Ball Stainless Steel 1/4" (36 Per Race)	15027000	144	6464
3	O-Ring	57502000	2	6153
4	Set Screw	63687000	5	7534
6	Roll Pin	51248000	2	6484
7	Over-Ride Nut Brass	47652001	2	6485
8	Screw	65140000	1	7747
10	Screws	65139000	3	7748
11	Washer	71176000	3	7945
13	Position Sensor	65104000	2	7306
14	8494 Inlet Body	18219001	1	7484
16	Drive Screw Stainless Steel	61215100	4	9332
17	8494 Base 2" FNPT	17975001	1	7956
18	Cap Screw Stainless Steel	64072000	8	6630
19	Motor Assy, 12V Slow (Vertical)	81119001	1	5061
19	Motor Assy, 12V Fast (Horizontal)	81147001	1	5030
19	Motor Assy, 24V Slow (Vertical)	81207001	1	6891
19	Motor Assy, 24V Fast (Horizontal)	81240001	1	7501
20	Quick Connect Harness Extension 5'	36791200	1	6945
23	Monitor Control Harness	36833100	1	7149
25	Thrust Washer	71515000	4	7235
26	Thrust Bearing	17701000	2	6492
27	Set Screw Stainless Steel	65201000	2	7234
28	Coupling	20991001	2	6491
29	Set Screw Stainless Steel	65219000	2	7242
30	Solid Pin	51071000	2	7239
31	Worm Shaft Stainless Steel	63935901	2	7264
32	Spacer	63601001	2	7240
33	Thrust Washer	71516000	4	6486
34	Thrust Bearing	17702000	2	6487
35	O-Ring	57380000	2	7241
36	Magnet	46054000	4	7231



(Joystick & Stand sold separately)

**JOYSTICK CONTROL**

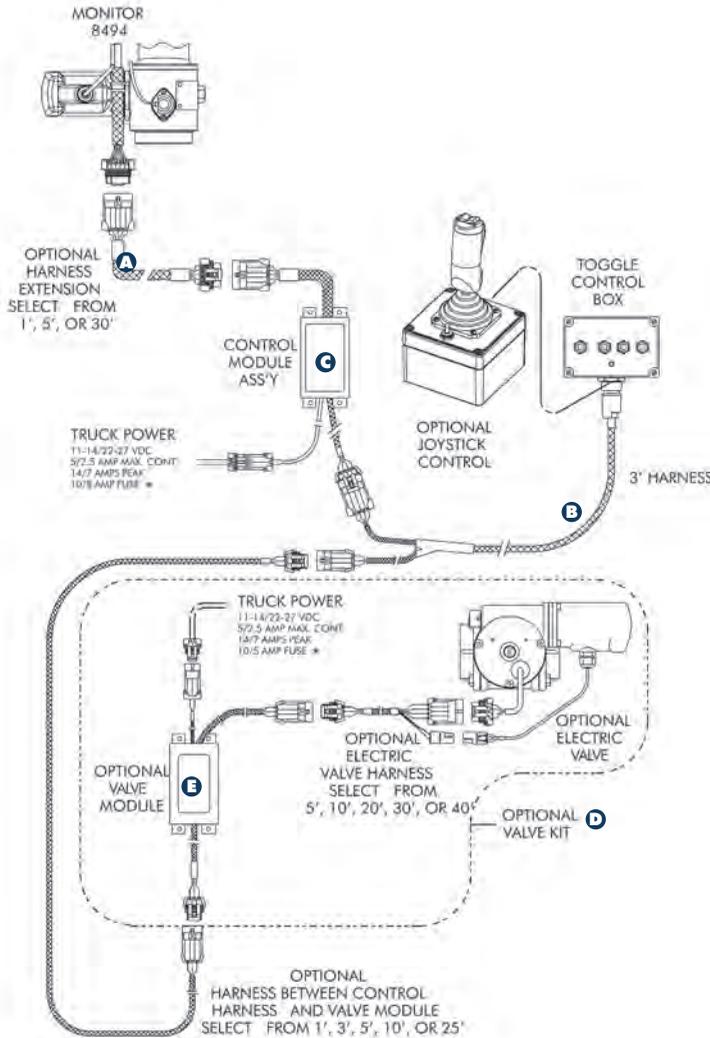
DESCRIPTION	MODEL#	WT/LB	PART#
Sidewinder 8494 Joystick Control	81172001	6	4713
Joystick Stand		4	7295



**TOGGLE CONTROL**

(Toggle Box & Bracket sold separately)

DESCRIPTION	MODEL#	WT/LB	PART#
Sidewinder 8494 Toggle Control Box	81122001	2	4712
Toggle Box Bracket			6924



**A 8494 EXTENSION HARNESS**  
MONITOR TO CONTROL MODULE

LENGTH	DESCRIPTION	MODEL#	WT/LB	PART#
5'	Harness Extension	36791200	1.25	6945
30'	Harness Extension	36791000	4	5707



**B 8494 CONTROL HARNESS**  
CONTROL MODULE TO TOGGLE BOX OR JOYSTICK

LENGTH	DESCRIPTION	MODEL#	WT/LB	PART#
12'	Control Harness	36787000	2	5332
50'	Control Harness	36795000	8	6135



**C 8494 CONTROL MODULE**

DESCRIPTION	MODEL#	WT/LB	PART#
Control Module	81713000	1.5	5808



**8494 NOZZLE ASSEMBLIES**  
350 GPM

VDC	DESCRIPTION	MODEL#	WT/LB	PART#
12V	Nozzle Assembly 12V	5000-24	4	4987
24V	Nozzle Assembly 24V	5000-24	4	7310



**8494 NOZZLE**

DESCRIPTION	MODEL#	WT/LB	PART#
1 1/2" NHT Tip	187A	0.5	4488

**D 8494 WATER VALVE**  
REMOTE CONTROL

VDC	DESCRIPTION	MODEL#	PART#
12V	Valve Kit 12V	81181001	7527
24V	Valve Kit 24V	81298001	7522



**5000-24 NOZZLE ACTUATORS**

VDC	DESCRIPTION	MODEL#	WT/LB	PART#
12V	5000-24 Actuator 12V	81186001	2	6631
24V	5000-24 Actuator 24V	81227001	2	8217



**8494 MOTOR ASSEMBLIES**

VDC	DESCRIPTION	MODEL#	WT/LB	PART#
12V	Slow Vertical 12V	81119001	2	5061
12V	Fast Horizontal 12V	81147000	2	5030
24V	Slow Vertical 24V	8120700	2	6891
24V	Fast Horizontal 24V	8124001	2	7501

**E WATER VALVE CONTROL MODULE**

VDC	DESCRIPTION	MODEL#	WT/LB	PART#
12V	Control Module 12V	81196000	2	5950





**NITRO HD CANNON KIT  
JOYSTICK CONTROL  
ELKHART BRASS**

MODEL: 8100

Sealed High Torque Motors

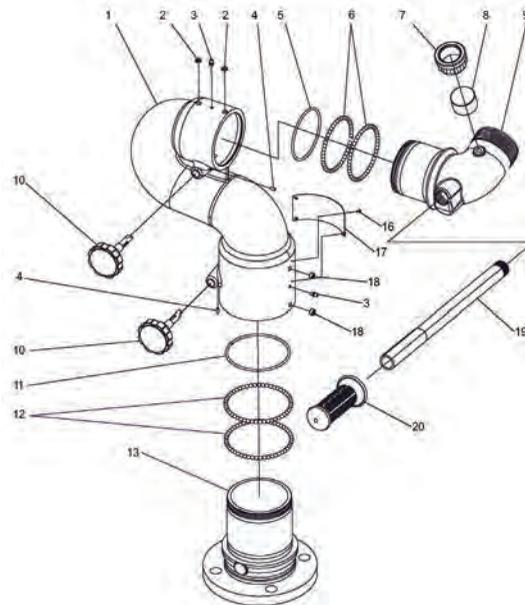
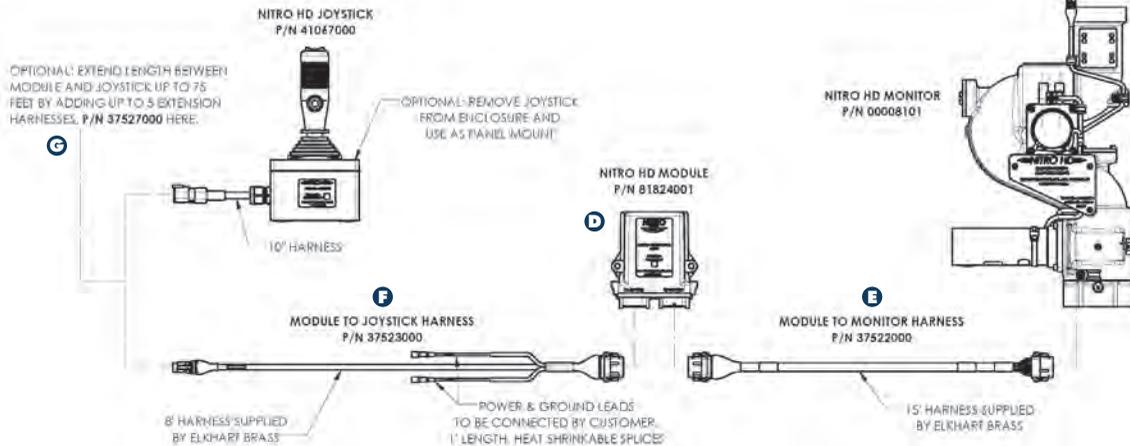
Sealed Heavy-duty Stream to Fog Nozzle 350GPM

Vertical Travel: 90° or 135°

Horizontal Travel: 180° or 350°

DESCRIPTION	WT/LB	PART#
Nitro HD Monitor Kit	35	9945
Includes Monitor, Nozzle, Module, Joystick & Harnesses		

INDEX	DESCRIPTION	MODEL#	WT/LB	PART#
A	Nitro HD Monitor	00008101	17	9879
B	Nitro HD Nozzle 350GPM 2½" FNST	7000-EHD	6	9880
C	Nitro HD Joystick	41067000	1.8	9881
D	Nitro HD Module	81824001	0.25	Call
E	Harness Module-to-Monitor 15'	37522000	0.75	Call
F	Harness Module-to-Joystick 8'	37523000	0.5	Call
G	Harness Joystick Extension 15'	37527000	0.65	9895

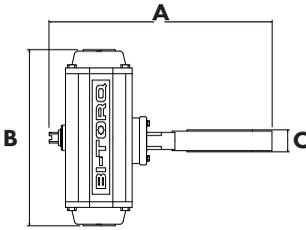


**VULCAN 8500-02 CANNON KITS  
MANUAL OPERATED  
ELKHART BRASS**

3" Flange

DESCRIPTION	WT/LB	PART#
Vulcan 8500-02 (no nozzle)	22	5809
Vulcan 8500-02 w/ Brass Cone Nozzle	25	6550
A. 2 ½" Female NST Brass Cone Nozzle	2.40	1066
B. 2 ½" Female NST Brass Fog Nozzle	7.40	1069

INDEX	DESCRIPTION	MODEL#	QTY REQUIRED	PART#
2	Set Screw	63674000	2	6865
5	O-Ring	57312000	1	7777
6	¼" Ball Bearing Stainless Steel	15027000	2 x 46	6464
7	Cover - Pressure Gauge	23544000	1	7921
8	Pressure Gauge	39130000	1	7095
10	Lock Knob	42034001	2	7717
11	O-Ring	57316000	1	7347
12	¼" Ball Bearing Stainless Steel	15027000	2 x 51	6464
13	Vulcan Base 3" Flange	15616001	1	6103
16	Drive Screw	61215100	4	9332
18	Set Screw	63688000	2	6866
19	Handle	65456001	1	9432
20	Handle Grip	33645000	1	7716

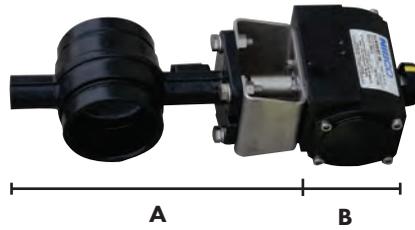


**WAFER BUTTERFLY VALVE  
AIR OPERATED 2-WAY**

Stainless Steel Stem & Disc

BJ-TORQ

SIZE	A INCHES	B INCHES	C INCHES	WT/LB	PART#
2 1/2"	14.38	6.38	1.81	12	9547
3"	14.83	6.38	1.81	12	9157
4"	16.32	6.38	2.05	16	9158
6"	19.43	9.35	2.20	26	9159



**GROOVE BUTTERFLY VALVE  
AIR OPERATED 2-WAY**

NIBCO

SIZE	A INCHES	B INCHES	C INCHES	WT/LB	PART#
2 1/2"	8.66	3.56	5.75	10	4868
3"	9.16	3.56	5.75	12	3379
4"	10.92	3.56	5.75	15	4447



**AIR ACTUATOR  
AIR OPERATED 2-WAY**

For Nibco Grooved Butterfly Valves 2 1/2" - 4"  
NIBCO

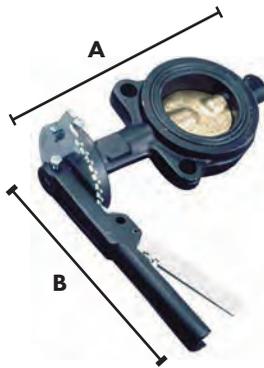
FOR NIBCO BUTTERFLY VALVE SIZE	C INCHES	WT/LB	PART#
2" - 4" Groove Butterfly Valve	5.75	4	6341



**BRACKET & COUPLING KIT**

For Nibco Grooved Butterfly Valves 2 1/2",  
3" & 4"

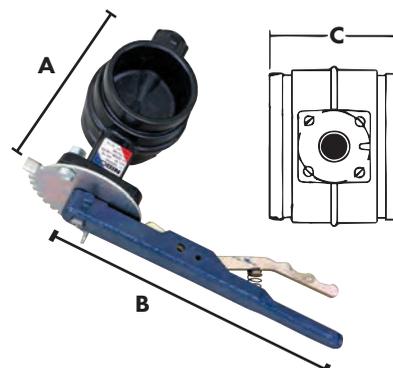
FOR NIBCO BUTTERFLY VALVE SIZE	WT/LB	PART#
2 1/2" - 3" Groove Butterfly Valve	1	6343
4" Groove Butterfly Valve	1	8177



**WAFER BUTTERFLY VALVE**

MILWAUKEE

SIZE	A INCHES	B INCHES	WT/LB	PART#
2"	8.5	9.5	9	1521
2 1/2"	9.25	9.5	11	4317
3"	10	9.5	11	2657
4"	11.25	11.5	14	1525
5"	12.5	11.5	18	3495
6"	13.5	11.5	21	2686



**GROOVE BUTTERFLY VALVE**

NIBCO

SIZE	A INCHES	B INCHES	C INCHES	WT/LB	PART#
2"	8.45	9.5	3.33	6	5684
2 1/2"	8.66	9.5	3.85	7	4490
3"	9.16	9.5	3.85	9	4691
4"	10.96	11.5	4.56	13	4825
5"	11.91	11.5	5.86	18	2701



**BALL VALVE**

Brass

SIZE	WT/LB	PART#
1/4"	0.35	3377
1/2"	0.75	1510
3/4"	0.75	1511
1"	1	1737
1 1/2"	3	1514
2"	4	1516
2 1/2"	5	1518
3"	8	2243
4"	11	3526



**GATE VALVE**

Brass

SIZE	WT/LB	PART#
1/2"	0.75	5796
3/4"	1	6633
1"	1.25	1544
1 1/2"	2	1546
2"	4	1547
2 1/2"	6	2644
3"	9	1549



**OUT CAP**

Schedule 40 Black Steel  
3" Groove by Female NPT

DESCRIPTION	WT/LB	PART#
3" Groove by 3/4" Female NPT	1.50	6612
3" Groove by 1 1/2" Female NPT	1.50	7337

**HOSE BIBB**

Brass

SIZE	WT/LB	PART#
3/4" MNPT x 3/4" MGHT	0.75	1552

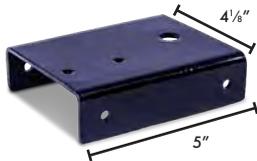




**CONTROL CONSOLE  
UNITEDBUILT**

Spray System Control Console  
Includes Standard OFF/ON Labels  
See Label Options to the Right

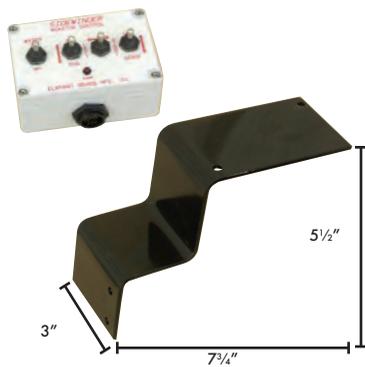
DESCRIPTION	HEIGHT	WT/LB	PART#
2 Switch Air Console	14 5/16"	3.5	3944
3 Switch Air Console	14 5/16"	4	2728
4 Switch Air Console	14 5/16"	4.5	2695
5 Switch Air Console	14 5/16"	5	2729
6 Switch Air Console	14 5/16"	5.5	2725
7 Switch Air Console	14 5/16"	6.5	4050
8 Switch Air Console	14 5/16"	7	4051



**CONSOLE EXTENSION BRACKET**

Mounts to UnitedBuilt Control Console

DESCRIPTION	WT/LB	PART#
Mount Holes for Switches C(1494), D(3375), or On/Off Switch A(7634)	1.09	8270



(Toggle Box & Bracket sold separately)

**TOGGLE BOX BRACKET**

DESCRIPTION	WT/LB	PART#
Toggle Box Bracket	1.5	6924



**AIR SWITCHES**

INDEX	DESCRIPTION	WT/LB	PART#
A	1-Way Toggle Lever	0.40	1493
B	2-Way Toggle Lever	0.30	6029
C	2-Way Toggle Lever	0.60	1494
D	2-Way Toggle Push/Pull	0.40	3375
E	2-Way Momentary	0.30	1492

**LABELS FOR SWITCHES**

DESCRIPTION	PART#
Labels for Switches	2669

**LABEL OPTIONS (OFF/ON)**

- Right Front
- Left Front
- Right Side
- Left Side
- Right Rear
- Left Rear
- Monitor
- Front Center
- Rear Center
- Front Bar
- Rear Bar
- Gravity Drop

**LABEL OPTIONS (ON/OFF)**

- Right Front
- Left Front
- Right Side
- Left Side
- Right Rear
- Left Rear



(Joystick & Stand sold separately)

**JOYSTICK STAND**

DESCRIPTION	HEIGHT	WT/LB	PART#
Joystick Stand	13.5"	3.78	7295



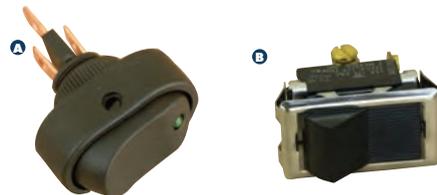
**AIR REGULATOR & BRACKET  
ADJUSTABLE**

INDEX	DESCRIPTION	WT/LB	PART#
A	Air Regulator, 1/4" FNPT Ports	0.65	1597
B	Regulator Bracket	0.10	2885



**ELECTRIC OVER AIR SOLENOID**

INDEX	DESCRIPTION	PART#
A	Electric Over Air Solenoid 12V	3028
B	Solenoid Valve 12V	9740
B	Solenoid Valve 24V	9802



**ELECTRIC SWITCHES**

INDEX	DESCRIPTION	WT/LB	PART#
A	Red LED On/Off Switch 12V	0.09	7634
B	PTO Switch	0.05	0898



**AIR CYLINDER**

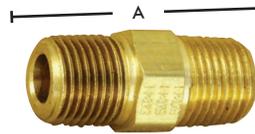
STROKE	THROW	WT/LB	PART#
6"	13 3/8 - 6"	2.53	1500
10"	17 1/8 - 10"	3.24	3904



**90° SWIVEL**

*Airline Push On Fitting*

AIR HOSE	MNPT	HEX SIZE	WT/LB	MODEL#	PART#
1/4"	1/8"	12MM	0.04	P6520	5547



**HEX NIPPLE**

*Brass Fitting*

MNPT	HEX SIZE	A	WT/LB	MODEL#	PART#
1/8"	7/16"	0.96"	0.02	3325X2	7643
1/4"	9/16"	1.38"	0.05	3325X4	9851



**STRAIGHT**

*Airline Push On Fitting*

AIR HOSE	MNPT	HEX SIZE	WT/LB	MODEL#	PART#
1/4"	1/8"	12MM	0.02	P6510	5546



**HEX NIPPLE REDUCER**

*Brass Fitting*

MNPT	HEX SIZE	WT/LB	MODEL#	PART#
1/8" x 1/4"	9/16"	0.05	3325X4X2	7644



**AIRLINE HOSE**

*Airline Synflex Kits*

AIRHOSE	LENGTH	WT/LB	PART#
1/4"	25'	0.30	4255
1/4"	100'	1.25	0487



**BRANCH TEE**

*Airline Push On Fitting*

AIR HOSE	MNPT	HEX SIZE	WT/LB	MODEL#	PART#
1/4"	1/8"	12MM	0.08	P6430	5548



**HEX BUSHING**

*Brass Fitting*

FNPT	MNPT	HEX SIZE	WT/LB	MODEL#	PART#
1/8"	1/4"	5/8"	0.05	3220X4X2	7642



**QUICK EXHAUST VALVE**

*Increases Air Valve Efficiency*

FNPT	WT/LB	PART#
1/8"	0.25	4520
1/4"	0.40	6100



**RUN TEE**

*Airline Push On Fitting*

AIR HOSE	MNPT	HEX SIZE	WT/LB	MODEL#	PART#
1/4"	1/8"	12MM	0.07	P6440	5545



**HEX SOCKET PLUG**

*Brass Fitting*

MNPT	SOCKET HEX	WT/LB	MODEL#	PART#
1/8"	3/16"	0.01	3153X2	7638
1/4"	1/4"	0.03	3153X4	7639



**QUICK EXHAUST ASSEMBLY**

*Increases Air Valve Efficiency*

DESCRIPTION	WT/LB	PART#
1/8" Quick Exhaust Assembly	0.25	9786



**UNION TEE**

*Airline Push On Fitting*

AIR HOSE	WT/LB	MODEL#	PART#
1/4"	0.05	6540	7160



**DRAIN VALVE**

*External Seat*

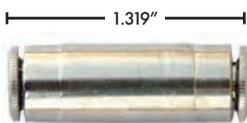
MNPT	HEX SIZE	WT/LB	MODEL#	PART#
1/4"	9/16"	0.04	145	7626



**PRESSURE PROTECTION VALVE**

*Chelsea Parker 378414*

FNPT	LENGTH	NOMINAL PSI	WT/LB	PART#
1/8" x 1/4"	2 3/8"	70	0.35	6673



**UNION**

*Airline Push On Fitting*

AIR HOSE	WT/LB	MODEL#	PART#
1/4"	0.05	6580	5894



**THREAD SEALANT COMPOUND**

*Blue Monster*

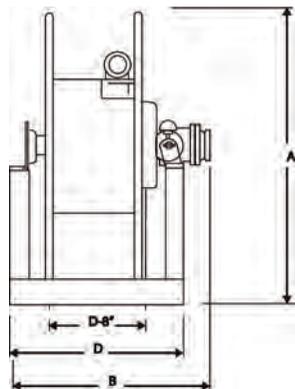
DESCRIPTION	WT/LB	PART#
PTFE Sealant Compound 8oz	1	9757



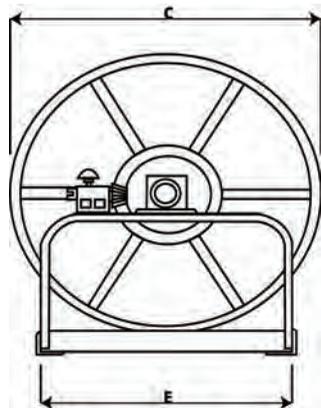
**THREAD SEALANT TAPE**

*Blue Monster*

DESCRIPTION	WT/LB	PART#
PTFE Sealant Tape 3/4" x 1429'	0.25	9756



Front view of hose reel



Side view of hose reel



Hose sold separately



Hose sold separately

**1" & 1 1/2" MANUAL HOSE REELS**

Heavy-duty Hose Reel

HOSE SIZE	HOSE LENGTH	A HEIGHT	B OVERALL WIDTH	C OVERALL DEPTH	D FRAME WIDTH	E FRAME DEPTH	MODEL#	PART#
1"	50'	23 1/2"	15"	22"	13"	20"	C10050-22	8300
1 1/2"	50'	23 1/2"	19"	22"	17"	20"	C15050-22	8269
1 1/2"	100'	29 1/2"	24"	28"	22"	20"	C15100-28	8301

**1 1/2" ELECTRIC HOSE REELS**

Heavy-duty Hose Reel

HOSE SIZE	HOSE LENGTH	A HEIGHT	B OVERALL WIDTH	C OVERALL DEPTH	D FRAME WIDTH	E FRAME DEPTH	MODEL#	PART#
1 1/2"	50'	23 1/2"	21"	22"	16"	20"	E15050-22	8302
1 1/2"	100'	29 1/2"	26"	28"	21"	20"	E15100-28	8303



**SWIVEL JOINT ASSEMBLY**

For 1 1/2" Hose Reel

DESCRIPTION	MODEL#	PART#
Swivel Joint Assembly	29-15D	8422



**SWIVEL JOINT HOUSING**

For 1 1/2" Hose Reel • Seal Kit Sold Separately

DESCRIPTION	MODEL#	PART#
Swivel Joint Housing	29-2	9127



**PILLOW BLOCK**

DESCRIPTION	MODEL#	PART#
Pillow Block 3/4"	50-8A	8424



**SWIVEL REPAIR KIT**

For 1 1/2" Hose Reel

INDEX DESCRIPTION	MODEL#	PART#
Kit: Bearings, O-Rings & Gasket	150-23K	8423
A Gasket Seal Only	150-2	8505



**MOTOR 12 VOLT**

DESCRIPTION	MODEL#	PART#
1/3 HP Motor 12V	23-12S	8421



**CRANK HOUSING**

DESCRIPTION	MODEL#	PART#
Crank Housing Assembly	40-1AG	8425



**CRANK HANDLE**

DESCRIPTION	MODEL#	PART#
Crank Handle 8"	58-1A	8426



**CIRCUIT BREAKER**

DESCRIPTION	MODEL#	PART#
Cole-Hersee Circuit Breaker	20878	3880



**BRAKE PARTS**

For Crank Housing

INDEX DESCRIPTION	MODEL#	PART#
Brake Knob with Spring & Stud	41-1	8427
A Brake Stud	41-2	8428
B Brake Spring	72-3	8429



**PUSH BUTTON SWITCH**

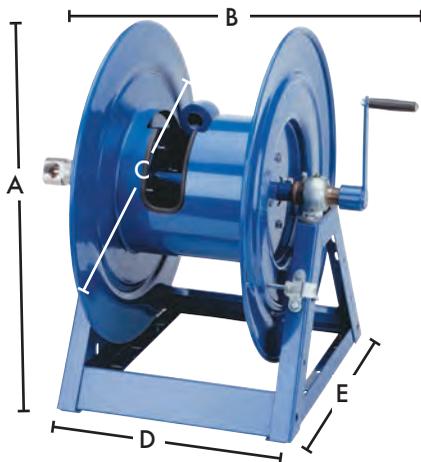
DESCRIPTION	MODEL#	PART#
Cole-Hersee Sealed Push Button	20876	3882



**SOLENOID**

DESCRIPTION	MODEL#	PART#
Cole-Hersee Solenoid	20877	3881

See page 53 for hose reel kits.

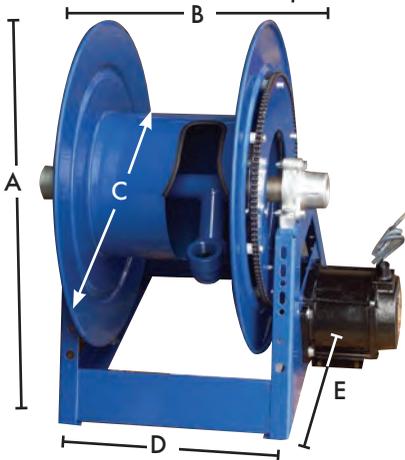


**1" & 1½" MANUAL HOSE REELS**

HOSE SIZE	HOSE LENGTH	A HEIGHT	B OVERALL WIDTH	C OVERALL DEPTH	D FRAME WIDTH	E FRAME DEPTH	WT/LB	MODEL#	PART#
1"	50'	26¼"	24¾"	24"	12⅞"	20⅞"	67	1175-6-50	3998
1"	100'	26¼"	28¾"	24"	16⅞"	20⅞"	67	1175-6-100	3997
1½"	50'	25"	24⅞"	24"	17⅞"	22⅞"	76	1185-1124	6329
1½"	100'	25"	34⅞"	24"	24⅞"	22⅞"	94	1185-2024	6336

**1" & 1½" ELECTRIC HOSE REELS**

HOSE SIZE	HOSE LENGTH	A HEIGHT	B OVERALL WIDTH	C OVERALL DEPTH	D FRAME WIDTH	E FRAME DEPTH	WT/LB	MODEL#	PART#
1"	50'	26¼"	24¾"	24"	12⅞"	20⅞"	80	1175-6-50E	6332
1"	100'	26¼"	24¾"	24"	16⅞"	20⅞"	83	1175-6-100E	6953
1½"	50'	25"	26⅞"	24"	17⅞"	22⅞"	89	1185-1124E	6471
1½"	100'	25"	34⅞"	24"	24⅞"	22⅞"	112	1185-2024E	6735



**SWIVEL**  
For 1½" 1185 Hose Reel

INDEX DESCRIPTION	MODEL#	PART#
A Inline Swivel 1185 Reel	20288-2	9499
B Inline Swivel (2014 Rev. D) 1185	8970-2	9516
C Retaining Plate for 8970-2	8956	Call

**SWIVEL O-RING KIT**  
For 1½" 1185 Hose Reel

DESCRIPTION	MODEL#	PART#
Swivel O-Ring Kit	8970-2	9475

**SWIVEL**  
For 1" 1175-6 Hose Reel

DESCRIPTION	MODEL#	PART#
90 Swivel 1" 1175-6 Reel	15257-1	5104



**RETAINING RING**  
External Snap Ring

DESCRIPTION	MODEL#	PART#
Retaining Ring	20266	4039
Retaining Ring (2014 Rev D)	20252	5025



**COX REELS MOTOR 12 VOLT**

DESCRIPTION	MODEL#	PART#
½ HP Motor 12V	15223-1	5213

**BEARING ASSEMBLY**  
For 1½" 1185 Hose Reel

INDEX DESCRIPTION	MODEL#	PART#
A Bearing Assembly	8166	6818
B Bearing Asy for 8970 (2014 Rev D)	8954	9749



**LOCK PIN**

DESCRIPTION	MODEL#	PART#
Spring-loaded Locking Pin	20843	3542



**BEARING WASHER**

INDEX DESCRIPTION	MODEL#	PART#
A Bearing Washer	20264	4040
B Thrust Washer (2014 Rev D)	8960-1	9748
A Bearing Washer (2014 Rev D)	8960	9750



**ELECTRIC REEL PARTS**

INDEX DESCRIPTION	MODEL#	PART#
A Cole-Hersee Circuit Breaker	20878	3880
B Cole-Hersee Solenoid	20877	3881
C Cole-Hersee Sealed Button	20876	3882



**AXLE ASSEMBLY**  
For 1½" x 50' Hose Reel

DESCRIPTION	MODEL#	PART#
Axle Assembly	8169-11.5	7377
Axle Assembly (2014 Rev. D)	8962-11.5	9905

**HOSE STOP**

DESCRIPTION	MODEL#	PART#
Hose Stop for 1.5" Hose	20216	9528



**CRANK HANDLE**  
For 1½" 1185 Hose Reel

DESCRIPTION	MODEL#	PART#
Crank Handle	8191	7301

See page 53 for hose reel kits.



Shown: 3" MNPT x Female Cam Lock



**SUCTION FILL HOSE**

SIZE	CONNECTION	LENGTH	WT/LB	PART#
3"	MNPT x Female Camlock	10'	16	9474
3"	MNPT x Male Camlock	10'	16	9444
3"	MNPT x Male Camlock	14'	21	8407
3"	MNPT x Female Camlock	15'	22	4058
3"	MNPT x Female Camlock	20'	27	2032
3"	MNPT x Female Camlock	25'	31	4769
3"	MNPT x Female Camlock	30'	36	5784

**STRAIGHT STREAM NOZZLE**

**BRASS**

SIZE	THREAD TYPE	WT/LB	PART#
1 1/2"	NPT	1	2852
1 1/2"	NST	1	5330
2"	NPT	2	4486
2 1/2"	NST	3	1066

**T-BOLT CLAMP**

SIZE	WT/LB	PART#
2 1/4"	0.15	4247
2 1/2"	0.15	5370
2 3/4"	0.15	5371
3"	0.15	4608
3 1/2"	0.15	4620
4 1/2"	0.18	5506



(from stream to 120°)



**HOSE REEL HOSE**

SIZE	LENGTH	WT/LB	PART#
1"	50'	29	3800
1"	100'	54	3257
1 1/2"	50'	42	0744
1 1/2"	100'	91	0743

**ADJUSTABLE FOG NOZZLE**

**BRASS**

From Stream to 120°

SIZE	THREAD TYPE	WT/LB	PART#
1 1/2"	NPT	1.55	1071
1 1/2"	NST	1.15	4800
2"	NPT	2.90	3852
2 1/2"	NST	7.50	1069

**DOUBLE BOLT CLAMP**

SIZE	WT/LB	PART#
3"	1.95	4334
3 1/2"	2.20	4335
4 1/2"	2.20	5123



2 1/2" Female NST Swivel x Female Camloc



**PUNCH CLAMP**

Requires Punch Clamp Tool

SIZE	WT/LB	PART#
1/2"	0.05	6858
1 1/2"	0.10	3127
2"	0.12	0610
3"	0.15	0611
3 1/2"	0.17	0612

**HYDRANT FILL HOSE**

SIZE	LENGTH	WT/LB	PART#
2 1/2"	15'	8	5199
2 1/2"	25'	12.90	3932
2 1/2"	50'	22.60	5864

**ADJUSTABLE FOG NOZZLE**

**PLASTIC**

SIZE	THREAD TYPE	WT/LB	PART#
1"	NPT	0.55	3130
1"	NST	0.55	5626
1 1/2"	NPT	0.55	1068
1 1/2"	NST	0.55	3370
2"	NPT	1.25	5121
Bracket for 1" Plastic Nozzle		0.80	7098
Bracket for 1 1/2" Plastic Nozzle		0.80	7097

**PUNCH CLAMP BINDER**

DESCRIPTION	WT/LB	PART#
Punch Clamp Binding Tool	3	5503



1 1/2" MNPT x 1 1/2" MNPT



**JET FEED HOSE**

SIZE	LENGTH	WT/LB	PART#
1 1/2"	25'	5.80	2981
1 1/2"	50'	10	2800
1 1/2"	100'	19.35	5342
2"	25'	8	8022
2"	50'	15	5741

**SUCTION HOSE STRAINER**

SIZE	LENGTH	WIDTH	WT/LB	PART#
3"	5"	3 7/8"	3	1084
3"	9 5/8"	4"	2	1085
4"	5 1/16"	6 7/8"	3	1086

**SUCTION HOSE FOOT VALVE**

SIZE	WT/LB	PART#
2 1/2"	7	8288
3"	8	1535
4"	18	1536



**GROOVE COUPLING GASKET**

Grvlok

SIZE	WT/LB	PART#
1"	0.05	4521
1½"	0.06	3600
2"	0.08	1729
2½"	0.09	0700
3"	0.10	0701
4"	0.21	0702
5"	0.26	5056
6"	0.30	1959



**NST SWIVEL GASKET**

SIZE	WT/LB	PART#
2½"	0.02	4965



**GROOVE COUPLING BOLT & NUT**

SIZE	WT/LB	PART#
2½"	0.11	3238
3"	0.25	3395
4"	0.25	6808



**GROOVE COUPLING REDUCER GASKET**

Grvlok

SIZE	WT/LB	PART#
3" x 2"	0.20	5013
3" x 2½"	0.20	5039
4" x 3"	0.30	3859



**CAMLOC GASKET**

SIZE	WT/LB	PART#
1½"	0.03	3020
2"	0.04	0560
2½"	0.04	0561
3"	0.05	0562
4"	0.07	2971



**SWIVEL REPAIR KIT**

Style 20, 30 & 40

SIZE	WT/LB	PART#
3"	0.14	4078
4"	0.17	4079



**FLANGE GASKET**

SIZE	WT/LB	PART#
2½"	0.12	4091
3"	0.13	2365
4"	0.18	1649
5"	0.19	1647
6"	0.23	1648



**SPRAY NOZZLE GASKET**

SIZE	DESCRIPTION	WT/LB	PART#
1½"	For 1½" Plastic Nozzle NST/NPT	0.01	3667
2½"	For 2½" Brass Nozzle NST/NPT	0.03	5980



**FOOT VALVE REPAIR KIT**

SIZE	DESCRIPTION	WT/LB	PART#
2½"	Foot Valve Flapper Assembly	0.95	8514
3"	Foot Valve Flapper Assembly	1	4896
3"	Flapper Diaphragm Insert Only	0.09	7608





**CAMLOCK SPECS**

THREAD SIZE	THREAD O.D.	CAMLOC
1 1/2"	1 3/4"	2"
2"	2 1/2"	2 3/8"
2 1/2"	3"	3 3/4"
3"	3 3/8"	3 1/2"
4"	4 3/4"	4 1/2"



**TYPE A**

Male Camlock x Female NPT

SIZE	LENGTH	WT/LB	PART#
1 1/2"	2 1/4"	0.30	0567
2"	2 1/2"	0.40	0573
2 1/2"	2 3/4"	0.55	0578
3"	2 7/8"	0.85	0585
4"	3 1/4"	1.50	3205



**TYPE B**

Female Camlock x Male NPT

SIZE	LENGTH	WT/LB	PART#
1 1/2"	3"	0.75	0568
2"	3"	0.85	0574
2 1/2"	3 1/2"	1.20	0579
3"	3 3/4"	1.70	0586
4"	4 1/8"	2.20	3327



**TYPE C**

Female Camlock x Hose Barb

SIZE	LENGTH	WT/LB	PART#
1 1/2"	4 7/8"	0.90	2980
2"	5 1/2"	1.15	2645
2 1/2"	6"	1.30	0580
3"	6 3/8"	2	0587
4"	7 1/4"	3.20	3091



**TYPE D**

Female Camlock x Female NPT

SIZE	LENGTH	WT/LB	PART#
1 1/2"	2 1/2"	0.75	2406
2"	2 7/8"	0.90	0575
2 1/2"	3"	1.50	0581
3"	3 1/4"	1.75	0588
4"	3 5/8"	2.60	2834



**TYPE E**

Male Camlock x Hose Barb

SIZE	LENGTH	WT/LB	PART#
1 1/2"	5 1/8"	0.60	3390
2"	5 3/4"	0.72	5630
2 1/2"	6 1/2"	1.20	0582
3"	6 7/16"	1.40	0589
4"	8 1/8"	2.45	4625



**TYPE F**

Male Camlock x Male NPT

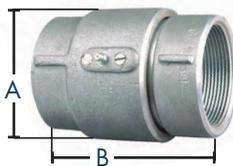
SIZE	LENGTH	WT/LB	PART#
1 1/2"	3 1/8"	0.50	0571
2"	3 7/8"	0.70	0576
2 1/2"	4 1/8"	1	0583
3"	4 1/8"	1.10	0590
4"	4 7/16"	2.15	0597



**TYPE V**

Female Camlock Dust Cap

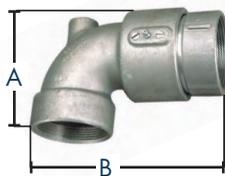
SIZE	LENGTH	WT/LB	PART#
1 1/2"	1 13/16"	0.75	0572
2"	2 1/8"	0.90	3015
2 1/2"	2 13/16"	1.30	2835
3"	2 3/8"	1.15	2722
4"	2 5/8"	1.75	0598



**SWIVEL STYLE 20**

Aluminum

SIZE	A	B	WT/LB	PART#
1 1/2"	3 1/2"	4"	1.40	5224
3"	5 3/4"	5 3/4"	3.55	1030



**SWIVEL STYLE 30**

Aluminum

SIZE	A	B	WT/LB	PART#
1 1/2"	4 3/16"	5 13/16"	1.75	5625
2"	4 1/4"	7 3/8"	3	3705
3"	6"	9 1/2"	4.70	3981



**HOSE BARB GROOVE NIPPLE**

Malleable Steel

SIZE	LENGTH	WT/LB	PART#
1 1/2"	4 1/8"	0.70	2612
2"	4 5/8"	1.15	5629
2 1/2"	5 1/8"	2	0705
3"	5 5/16"	3	0706
4"	7 3/16"	4.50	3259



**HOSE BARB THREAD NIPPLE**

Malleable Steel

SIZE	LENGTH	WT/LB	PART#
1 1/2"	4 1/4"	0.60	1302
2"	4 5/8"	1	1303
2 1/2"	5 1/2"	2	1306
3"	6"	2.55	1307
4"	7 3/16"	4.40	3066



**HOSE BARB WELD NIPPLE**

Malleable Steel

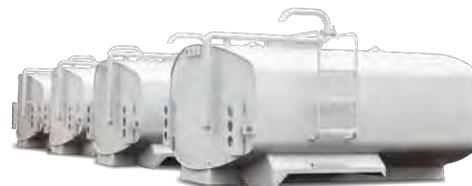
SIZE	LENGTH	WT/LB	PART#
2 1/2"	5 5/8"	2.25	1652
3"	5 7/8"	3	1653
4"	7 1/4"	5	4158



**HOSE BARB SWIVEL**

NPT, NST & JIC Connections

SIZE	THREAD TYPE	WT/LB	PART#
1 1/2"	NPT	0.56	4330
1 1/2"	NST	0.69	4261
1 1/2"	JIC	1.20	5198
2"	NPT	1.06	4291
2 1/2"	NPT	1.25	3314
2 1/2"	NST	1.35	3315





**GROOVE COUPLING FLEXIBLE**  
Grovlok 7000 • Cast Iron

SIZE	WT/LB	PART#
1 1/2"	1.45	0684
2"	1.94	0685
2 1/2"	2.20	0686
3"	3.09	0687
4"	4.54	0689
5"	6.01	0691
6"	8.24	0692



**GROOVE BY NOTCH NIPPLE**  
SCH 40 Black Steel

SIZE	A	B	WT/LB	PART#
2 1/2"	2 1/4"	3"	1.20	3996
3"	2"	3"	1.50	3938
3"	3"	4"	1.88	6020
3"	3 3/4"	4 1/2"	2	4904



**THREAD NIPPLE**  
SCH 40 Black Steel

SIZE	O.D.	LENGTH	WT/LB	PART#
1"	1 1/8"	6"	0.72	5667
1 1/2"	1 7/8"	4"	0.75	4557
1 1/2"	1 7/8"	6"	1.19	1276
1 1/2"	1 7/8"	12"	2.60	6553
2"	2 1/4"	4"	0.94	1277
2"	2 1/4"	6"	1.55	1278
2"	2 1/4"	12"	3.50	5098
2 1/2"	2 3/4"	6"	2.30	1281
2 1/2"	2 3/4"	8"	3.10	4450
2 1/2"	2 3/4"	12"	5.39	1279
3"	3 1/2"	4"	1.80	2505
3"	3 1/2"	6"	3.24	1284
3"	3 1/2"	8"	4.10	3670
3"	3 1/2"	12"	6.50	1283
4"	4 1/2"	6"	4.50	1287
4"	4 1/2"	8"	5.75	3999
4"	4 1/2"	12"	6.75	5047



**GROOVE COUPLING RIGIDLOK**  
Grovlok 7401 • Cast Iron  
Used to connect unsupported valves, pipe & elbows

SIZE	WT/LB	PART#
2"	2.31	1941
2 1/2"	2.81	0696
3"	3.57	0697
4"	5.40	0698
5"	6.80	9497
6"	8.23	4248



**THREAD BY GROOVE NIPPLE**  
SCH 40 Black Steel

SIZE	O.D.	LENGTH	WT/LB	PART#
1 1/2"	1 7/8"	3"	0.75	2128
2"	2 1/4"	3"	1	2751
2 1/2"	2 3/4"	3"	1.75	1298
3"	3 1/2"	3"	2	1299
4"	4 1/2"	3"	2.50	4000



**GROOVE COUPLING REDUCER**  
Grovlok 7010 • Cast Iron

SIZE	WT/LB	PART#
2 1/2" x 2"	2.81	2750
3" x 2"	4.50	2764
3" x 2 1/2"	4.13	0694
4" x 3"	6.46	0695



**THREAD BY WELD NIPPLE**  
SCH 40 Black Steel

SIZE	O.D.	LENGTH	WT/LB	PART#
1 1/2"	1 7/8"	3"	0.50	3319
2"	2 1/4"	3"	0.55	3320
2 1/2"	2 3/4"	3"	0.75	1488
3"	3 1/2"	3"	1.50	1489
4"	4 1/2"	3"	2.73	4134



**THREAD COUPLER**  
Merchant Steel

SIZE	LENGTH	WT/LB	PART#
* 1/4"	5/8"	0.03	9852
* 1/2"	3/4"	0.10	6916
* 3/4"	13/16"	0.22	4193
1 1/2"	2"	0.70	1228
2"	2 1/4"	1.02	1229
2 1/2"	3 1/8"	1.25	1230
3"	3 1/4"	2.94	1231
* 3"	1 3/4"	1.25	6705
4"	3 5/8"	4.50	1233
* Half Coupler			



**GROOVE BY WELD NIPPLE**  
SCH 40 Black Steel

SIZE	O.D.	LENGTH	WT/LB	PART#
1 1/2"	1 7/8"	3"	0.90	2223
2"	2 1/4"	3"	0.95	4686
2 1/2"	2 3/4"	1 1/2"	0.75	2897
2 1/2"	2 3/4"	3"	1.40	1485
3"	3 1/2"	3"	1.85	1486
3"	3 1/2"	4 1/2"	2.66	8442
3"	3 1/2"	8"	5.03	3095
4"	4 1/2"	4"	3.60	2747
4"	4 1/2"	7"	6.06	1958
5"	5 3/4"	4"	6	5295
6"	6 3/4"	6"	8.50	4495

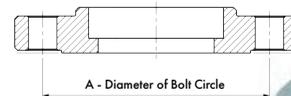
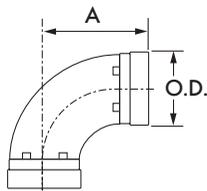
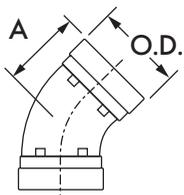


**THREAD CLOSE NIPPLE**  
SCH 40 Black Steel

SIZE	O.D.	LENGTH	WT/LB	PART#
1/2"	3/4"	1 1/4"	0.04	6861
1"	1 1/8"	1 1/2"	0.14	1763
1 1/2"	1 7/8"	1 3/4"	0.29	1292
2"	2 1/4"	2"	0.44	1293
2 1/2"	2 3/4"	2 1/4"	0.84	1294
3"	3 1/2"	3 1/2"	0.94	1295
4"	4 1/2"	4"	1.74	1296

**PRECUT PIPE PLUMBING**  
SCH 40 Black Steel

SIZE	O.D.	LENGTH	CONNECTION	WT/LB	PART#
2 1/2"	2 3/4"	12"	Groove by Weld	5	7002
2 1/2"	2 3/4"	24"	Groove by Groove	11.58	8322
2 1/2"	2 3/4"	84"	Groove by Weld	39	7004
2 1/2"	2 3/4"	84"	Weld by Weld	39	7003
3"	3 1/2"	12"	Groove by Weld	6.87	9783
3"	3 1/2"	15"	Groove by Groove	8.25	8315
3"	3 1/2"	18"	Groove by Groove	11	7319
3"	3 1/2"	20"	Groove by Groove	12.63	9293
3"	3 1/2"	52"	Groove by Groove	32	3634
3"	3 1/2"	66"	Groove by Groove	41	0864
3"	3 1/2"	72"	Groove by Weld	45.48	8313
3"	3 1/2"	72"	Weld by Weld	45.48	7005
3"	3 1/2"	84"	Groove by Weld	53.06	7006
3"	3 1/2"	84"	Weld by Weld	53.06	9782
4"	4 1/2"	18"	Groove by Groove	15.43	7007
4"	4 1/2"	20"	Groove by Groove	17	7008



**GROOVE ELBOW 45°**

Gruvlok 7051 • Cast Iron

SIZE	O.D.	A	WT/LB	PART#
2"	2.375"	2"	1.5	6810
2½"	2.875"	2¼"	1.86	4832
3"	3.5"	2½"	2.72	0673
4"	4.5"	3"	5.46	2458

**GROOVE ELBOW 90°**

Gruvlok 7050 • Cast Iron

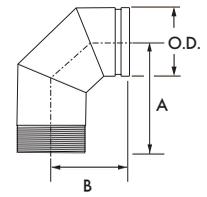
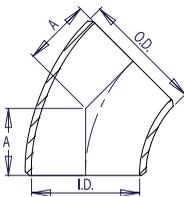
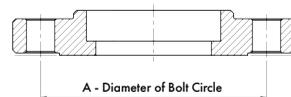
SIZE	O.D.	A	WT/LB	PART#
2"	2.375	3¼"	1.90	0675
2½"	2.875	3¾"	2.77	0676
3"	3.5	4¼"	3.75	0677
4"	4.5	5"	7.39	0678
5"	5.563	5½"	11.28	2988

**COMPANION FLANGE FEMALE NPT**

Malleable Iron

SIZE	BOLT HOLES	A	WT/LB	PART#
2"	4	4¾"	4.24	1258
2½"	4	5½"	5.85	1259
3"	4	6"	7.35	1260
4"	8	7½"	12.03	1261
5"	8	8½"	15.15	4664
6"	8	9½"	16.39	3549
8"	8	11¾"	26.10	9426

\*Black Steel



**WELD ELBOW 45°**

SCH 40 Black Steel

SIZE	O.D.	A	WT/LB	PART#
1½"	1.9"	1.12"	0.80	6777
2"	2.375"	1.38"	1.12	1615
2½"	2.875"	1.75"	1.58	1616
3"	3.5"	2"	2.52	1618
4"	4.5"	2.5"	4.62	1620
5"	5.563"	3.12"	7.54	1621
6"	6.625"	3.75"	11.01	3986

**GROOVE BY MALE NPT 90°**

Gruvlok 7055

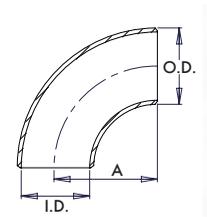
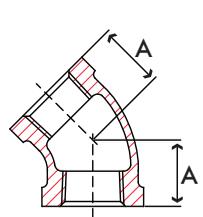
SIZE	A	B	WT/LB	PART#
2½"	3¾"	3¾"	2.85	0710
3"	4¼"	6"	5.59	0711

**WELD FLANGE**

SCH 40 Black Steel

SIZE	BOLT HOLES	A	WT/LB	PART#
2"	4	4¾"	4.64	1639
2½"	4	5½"	7.72	1640
3"	4	6"	8.80	1641
3"	4	6"	8.75	6774
4"x3"***	8	6"	15.19	1650
4"	8	7½"	12.70	1642
5"	8	8½"	14.02	1644
6"	8	9½"	16.50	1645
8"	8	11¾"	29.11	4928

\*Flat Faced  
\*\*Reducing Flange



**FEMALE NPT ELBOW 45°**

Malleable Iron 150#

SIZE	A	WT/LB	PART#
¾"	0.98"	0.30	7470
1½"	1.43"	1.07	3384
2"	1.68"	1.84	1247
2½"	1.95"	2.80	1248
3"	2.17"	3.29	1249
4"	2.61"	7.30	3278

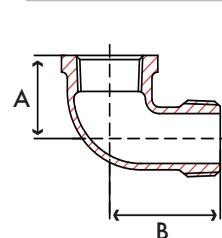
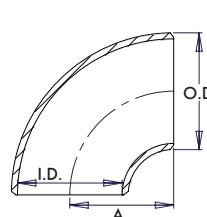
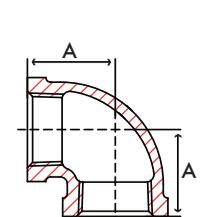
**WELD ELBOW 90°**

SCH 40 Black Steel

SIZE	O.D.	A	WT/LB	PART#
1½"	1.9"	2.25"	0.79	1624
2"	2.375"	3"	1.50	1625
2½"	2.875"	3.75"	2.71	1626
3"	3.50"	4.25"	4.57	1628
4"	4.50"	6"	8.13	1631
5"	5.563"	7.5"	15.73	1633
6"	6.625"	9"	22.88	4679

**PHOENIX FLANGE**

SIZE	WT/LB	PART#
½"	0.14	1266
¾"	0.20	1267
1"	0.20	1268
1½"	0.45	1270
2"	0.47	1271
2½"	1.13	1272
3"	1.15	1273
4"	2	1274



**FEMALE NPT ELBOW 90°**

Malleable Iron 150#

SIZE	A	WT/LB	PART#
1½"	1.94"	1.31	3939
2"	2.25"	1.75	1251
2½"	2.70"	3.30	1252
3"	3.08"	4.93	1253
4"	3.79"	8.97	1254

**WELD ELBOW SHORT RADIUS 90°**

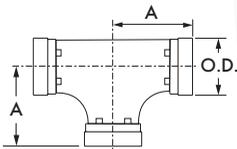
SCH 40 Black Steel

SIZE	O.D.	A	WT/LB	PART#
2	2.38"	2"	1.00	7754
2½"	2.88"	2.5"	1.87	1627
3"	3.5"	3"	3.25	1629
4"	4.5"	4"	5.95	1632
5"	5.56"	5"	10.54	4699
6"	6.62"	6"	17.78	4951

**STREET 90° MALE NPT BY FEMALE NPT**

Malleable Iron 150#

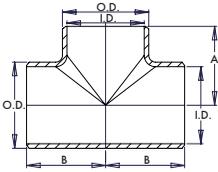
SIZE	A	B	WT/LB	PART#
½"	1.12"	1.61"	0.20	6863
¾"	1.30"	1.89"	0.43	2111
1"	1.50"	2.13"	0.65	2291
1½"	1.94"	2.67"	1.33	1314
2"	2.25"	3.27"	2.67	1315
2½"	2.70"	3.86"	3.85	1316
3"	3.08"	4.51"	5.47	1317
4"	3.79"	5.69"	9.18	5017



**GROOVE TEE**

Gruvlok 7060 • Cast Iron

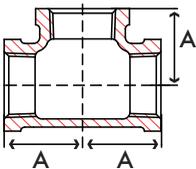
SIZE	O.D.	A	WT/LB	PART#
2 1/2"	2.875"	3 3/4"	3.89	0715
3"	3.5"	4 1/4"	5.94	0716
4"	4.5"	5"	10.50	0717



**WELD TEE**

SCH 40 Black Steel

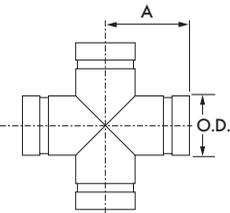
SIZE	A	B	WT/LB	PART#
2"	2.5"	2.5"	2.38	1665
2 1/2"	3"	3"	4.19	1666
3"	3.38"	3.38"	6.08	1667
4"	4.12"	4.12"	10.13	1668



**THREAD TEE**

Malleable Iron 150#

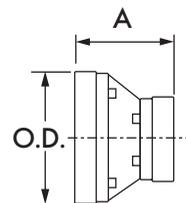
SIZE	A	WT/LB	PART#
1 1/2"	1.94"	1.68	1319
2"	2.25"	2.49	6689
2 1/2"	2.70"	5.02	1321
3"	3.08"	6.82	1322
4"	3.79"	11.69	1323



**GROOVE CROSS**

Gruvlok 7068

SIZE	O.D.	A	WT/LB	PART#
3"	3.5"	4 1/4"	9.71	1738



**GROOVE REDUCER**

Gruvlok 7072 • Cast Iron

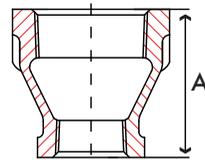
SIZE	A	WT/LB	PART#
3" x 2 1/2"	2 1/2"	1.51	0713
4" x 3"	4"	3.20	7041
5" x 4"	5"	4.50	0714



**BUSHING FEMALE BY MALE NPT**

Malleable Iron

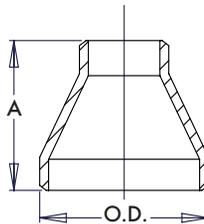
SIZE	WT/LB	PART#
1 1/2" x 3/4"	0.61	5019
1 1/2" x 1"	0.49	2766
2" x 1 1/2"	0.70	1733
2 1/2" x 1 1/2"	1.36	2965
2 1/2" x 2"	0.84	1208
3" x 2"	1.77	1210
3" x 2 1/2"	1.52	1211
4" x 3"	3.19	3329



**BELL REDUCER FEMALE NPT**

Malleable Iron 150#

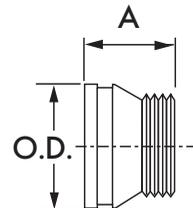
SIZE	A	WT/LB	PART#
1 1/2" x 1"	2.31"	0.80	4850
2 1/2" x 1 1/2"	3.25"	2.00	4759
2 1/2" x 2"	3.25"	2.20	3978
3" x 2"	3.69"	2.80	4528
3" x 2 1/2"	3.69"	3.20	1242
4" x 3"	4.38"	5.40	5357



**BELL REDUCER WELD**

SCH 40 Black Steel • Concentric

SIZE	A	WT/LB	PART#
3" x 2"	3.5"	1.81	1656
3" x 2 1/2"	3.5"	2.03	1657
4" x 3"	4"	3.24	1658
5" x 3"	5"	5.62	1659
5" x 4"	5"	5.60	6227



**GROOVE BY MALE NPT REDUCER**

Gruvlok 7076 • Schedule 40 Steel

SIZE	A	WT/LB	PART#
2 1/2" x 2"	2 1/2"	1.20	8395
3" x 2"	2 1/2"	1.30	0707
3" x 2 1/2"	2 1/2"	1.50	2419
4" x 3"	3"	2.60	9190



**GROOVE CAP**

Gruvlok 7074 • Cast Iron

SIZE	WT/LB	PART#
2"	0.50	4804
2 1/2"	1.00	0682
3"	1.14	0683
4"	2.54	4783



**GROOVE CAP**

SCH 40 Black Steel

SIZE	WT/LB	PART#
3"	1.25	1359



**OUT CAP GROOVE BY FEMALE NPT**

SCH 40 Black Steel

SIZE	WT/LB	PART#
3" Groove x 3/4" FNPT	1.43	6612
3" Groove x 1 1/2" FNPT	0.93	7337



**CAP FEMALE NPT**

Malleable Iron

SIZE	WT/LB	PART#
1 1/2"	0.58	1220
2"	0.80	1728
2 1/2"	1.64	1221
3"	2.22	1222



**PLUG MALE NPT**

Malleable Iron

SIZE	WT/LB	PART#
3/4"	0.25	7367
1 1/2"	0.50	1309
2"	0.77	3471
2 1/2"	1.19	5553
3"	1.73	1310
4"	2.87	3651
6"	10.01	4209



**BI-DIRECTIONAL SERIES HYDRAULIC MOTOR**

DESCRIPTION	WT/LB	PART#
1½" Gear, SAEB, ¾" JIC, 13 Tooth	35	7959



**BI-DIRECTIONAL SERIES HYDRAULIC PUMP**

DESCRIPTION	WT/LB	PART#
1¾" Gear, SAEB, ¾" JIC, 13 Tooth	40	8042
2" Gear, SAEB, ¾" JIC, 13 Tooth	42	8043



**HYDRAULIC RELIEF VALVE**

BRAND HYDRAULICS RL-10

DESCRIPTION	WT/LB	PART#
RL-10 Hydraulic Relief Valve	2.29	1015



**MANUAL HYDRAULIC FLOW CONTROL VALVE**

BRAND HYDRAULICS FC51-12SAE

DESCRIPTION	WT/LB	PART#
3000 PSI, ¾" ORB	8.25	7358



**WATERMAN HYDRAULIC FLOW CONTROL VALVE 12VOLT**

DESCRIPTION	WT/LB	PART#
3000 PSI Normally Open	3.75	0767



**BERKELEY HYDRAULIC ADAPTER BRACKET & COUPLER**

Berkeley B3ZRM(S) & B4ZRKS

DESCRIPTION	WT/LB	PART#
Adapter Kit (Bracket & Coupler) SAEB Hydraulic Coupler	15	0916
Aftermarket Adapter Kit (Bracket & Coupler) SAEB	15	9978



**HYDRAULIC PUMP ADAPTER BRACKET & COUPLER**

Franklin 439M

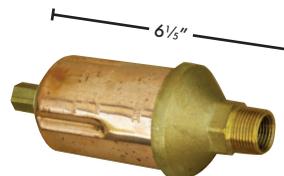
DESCRIPTION	WT/LB	PART#
Adapter Kit (Bracket & Coupler) SAEB	16.35	7151
Hydraulic Coupler	3.25	9379



**HYDRAULIC PUMP ADAPTER BRACKET & COUPLER**

Franklin FMIH-40

INDEX	DESCRIPTION	WT/LB	PART#
A	Hydraulic Adapter Bracket	18	9383
B	Hydraulic Adapter Coupler	2	8433
(A-B)	Adapter Kit (Bracket & Coupler)	20	6207



**AIR VENT**

Hoffman #79

DESCRIPTION	WT/LB	PART#
Female NPT ¼" x Male NPT ¾"	1.23	4112



**HYDRAULIC OIL TANK DECK MOUNT**

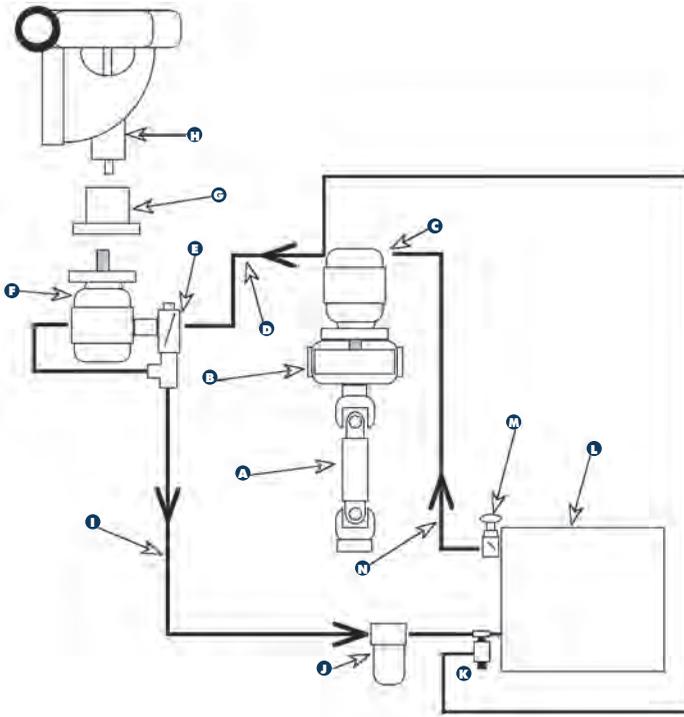
INDEX	DESCRIPTION	WT/LB	PART#
A	20 Gallon Hydraulic Tank	70	4238
B	Tank Cap & Strainer	0.74	2802
C	1½" Gate Valve	2	1546
D	Tank Sight Gauge	0.10	1195
E	10 Micron Filter Assembly	4	2248
(A-E)	20G Hyd Tank Kit (Unassembled)	78	6551



**HYDRAULIC FILTER**

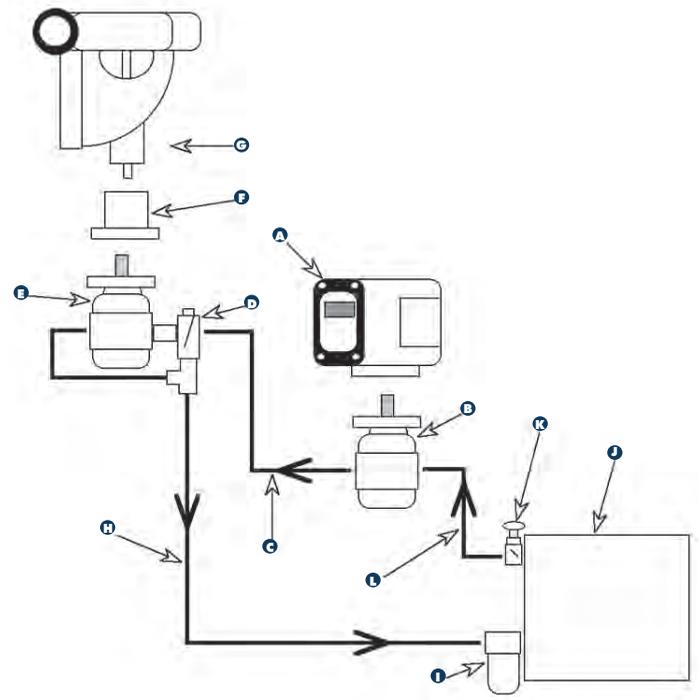
INDEX	DESCRIPTION	WT/LB	PART#
A	Filter 10 Micron	2.25	0815
B	Filter Cap	1.44	3504
(A-B)	Hydraulic Filter Assembly	4	2248





**ENGINE BY HYDRAULIC DRIVE WATER PUMP SYSTEM DIAGRAM**

INDEX	DESCRIPTION
A	1310 Series Drive Shaft
B	Pitts Clutch (Optional)
C	Bi-Directional Hydraulic Pump
D	3/4" High Pressure Hydraulic Hose 2250 Max PSI
E	Relief Valve
F	Bi-Direction Hydraulic Motor
G	Water Pump Hydraulic Adapter
H	Water Pump
I	3/4" Hydraulic Hose Return Line 750 Max PSI
J	Hydraulic Filter
K	Waterman Hydraulic Flow Control Valve 12 Volt (Optional)
L	Hydraulic Oil Tank
M	1 1/2" Gate Valve
N	1 1/2" Hydraulic Hose Suction Line 350 Max PSI



**PTO BY HYDRAULIC DRIVE WATER PUMP SYSTEM DIAGRAM**

INDEX	DESCRIPTION
A	K Mount PTO
B	Bi-Directional Hydraulic Pump
C	3/4" High Pressure Hydraulic Hose 2250 Max PSI
D	Relief Valve
E	Bi-Direction Hydraulic Motor
F	Water Pump Hydraulic Adapter
G	Water Pump
H	3/4" Hydraulic Hose Return Line 750 Max PSI
I	Hydraulic Filter
J	Hydraulic Oil Tank
K	1 1/2" Gate Valve
L	1 1/2" Hydraulic Hose Suction Line 350 Max PSI



**END YOKES & U-JOINTS 1310 SERIES**

INDEX	DESCRIPTION	MODEL#	WT/LB	PART#
A	1 1/8" Shaft x 1/4" Key (B3ZRM(S) & B4ZRKS)	2-4-503	1.50	3704
A	1 1/4" Shaft x 3/8" Key (Chelsea PTO)	2-4-533	1.75	0885
A	1 1/2" Shaft x 3/8" Key (439M)	2-4-1233	1.80	7169
B	U-Joint 1310 Series Drive Shaft	5-153	1.12	0902

**PTO SHAFT KEY & SET SCREW**

INDEX	DESCRIPTION	WT/LB	PART#
A	Chelsea PTO Wood Ruff Key 500007-29	0.03	9758
B	Set Screw 3/8" x 3/4" Sq Head with 3/32" Hole	0.03	9759



**PRESSURE BYPASS KIT**

Relieves spray system pressure by returning water to the tank. Maximize the lifetime of your water pump.



INDEX DESCRIPTION	QTY REQUIRED	PART#
A AV1100 Water Truck Valve	1	8030
B 3" Groove Coupling	2	0687
C 3" Weld x Groove Nipple	1	1486
D 3" Weld Notch x Groove Nipple	1	4904
E Adjustable Pressure Regulator	1	1597
F Regulator Bracket	1	2885
G Brass Bushing 1/4" x 1/8"	2	7642
H Air Fit 1/4" Tube x 1/8", Straight	2	5546
I Air Fit 1/4" Tube x 1/8", Tee	1	5548
J Drain Valve 1/4" MNPT	1	7626
K Quick Exhaust Valve Assembly	1	9786
(A-K) Pressure Bypass Kit		7479

**REAR SPRAY BAR KIT**

Rear spray kit with adjustable spray heads.

INDEX DESCRIPTION	QTY REQUIRED	PART#
A Rear Spray Bar 3"x66" GBE SCH40	1	3318
B FNPT Half Coupler 1/4" (Not Welded)	2	9852
C Airline 1/4" 25' Roll	2	4255
D AV1100 Water Truck Valve	2	8030
E Rear Bar Brackets	2	2005
F BC2399 Adjustable Spray Heads	2	3484
G 3" Groove Coupling Rigidlok	2	0697
H 3" Groove Coupling	2	0687
I Quick Exhaust Valve Assembly	2	9786
J Drain Valve 1/4" MNPT	4	7626
K 1-Way Air Valve w/ Nameplate	2	1493
(A-K) Rear Spray Bar Kit		7627



**FRONT SPRAY BAR KIT**

Front spray kit with adjustable, fan or flusher spray nozzles.

**ADJUSTABLE SPRAY HEADS**

INDEX DESCRIPTION	QTY REQUIRED	PART#
A Front Spray Bar 3"x52" GBE SCH40	1	3634
B FNPT Half Coupler 1/4" (Not Welded)	2	9852
C Airline 1/4" 25' Roll	2	4255
D AV1100 Water Truck Valve	2	8030
E Front Bar Brackets	2	2137
F BC2399 Adjustable Spray Heads	2	3484
G 3" Groove Coupling Rigidlok	2	0697
H 3" Groove Coupling	2	0687
I Quick Exhaust Valve Assembly	2	9786
J Drain Valve 1/4" MNPT	4	7626
K 1-Way Air Valve w/ Nameplate	2	1493
(A-K) Front Spray Bar Fan Kit		7628



**FAN NOZZLES - SUBSTITUTE F**

INDEX DESCRIPTION	QTY REQUIRED	PART#
F BC2384 Fan Duck Bill Nozzle	2	1043
(A-K) Front Spray Bar Fan Nozzle Kit		8100

**STREET FLUSHERS - SUBSTITUTE F**

INDEX DESCRIPTION	QTY REQUIRED	PART#
F BC2178 Flusher Duck Bill Nozzle	2	1043
(A-K) Front Spray Bar Flusher Kit		7629

**LOWERED STREET FLUSHERS - SUBSTITUTE F & G - ADD L**

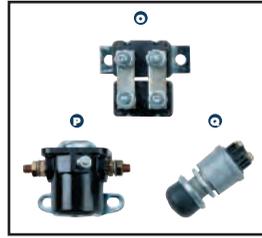
INDEX DESCRIPTION	QTY REQUIRED	PART#
F BC2178 Flusher Nozzle	2	1043
G 3" Groove Coupling Rigidlok	4	0697
L 3" Groove 90°	2	0677
(A-L) Front Spray Bar Lowered Flusher Kit		7630



Cox Crank Reel • 1 1/2" x 50'



American Crank Reel • 1 1/2" x 50'



**HOSE REEL KITS**

Manual or Electric

INDEX	DESCRIPTION	QTY REQUIRED	PART#
A	2" Preformed Punch Clamp	2	0610
B	1 1/2" Groove Coupling	1	0684
C	1 1/2" Groove x Hose Barb	1	2612
D	1 1/2" Rubber Water Hose	4FT	0738
E	1 1/2" MNPT x Hose Barb	1	1302
F	1 1/2" Street 90° MNPT x FNPT	1	1314
G	Tank Mount Brackets for Cox Reels	2	3609
G	Tank Mount Brackets for American Reels	2	8289
H	1 1/2" MNPT x Groove Nipple	1	2128
I	1 1/2" MNPT x Weld Nipple	1	3319
J	1 1/2" Gate Valve	1	1546
K	1 1/2" Adjustable Fog Nozzle	1	1068
L	Rubber Hose Reel Hose	1	Varies
M	Hose Reel	1	Varies
N	1 1/2" x 1" FNPT Reducer (1" Reel Kit Only)	1	4850

**ELECTRIC HOSE REEL KITS**

INDEX	DESCRIPTION	QTY REQUIRED	PART#
O	Circuit Breaker	1	3880
P	Solenoid	1	3881
Q	Push Button Switch Heavy-duty	1	3882

**COX REEL KITS**

INDEX	DESCRIPTION	PART#
(A-N)	1" x 50' Manual Rewind	6543
(A-N)	1" x 100' Manual Rewind	6545
(A-M)	1 1/2" x 50' Manual Rewind	3867
(A-M)	1 1/2" x 100' Manual Rewind	4967
(A-P)	1 1/2" x 50' Electric Rewind 12 Volt	6092
(A-P)	1 1/2" x 100' Electric Rewind 12 Volt	6093

**AMERICAN REEL KITS**

INDEX	DESCRIPTION	PART#
(A-M)	1 1/2" x 50' Manual Rewind	9387



**SUCTION FILL KIT**

INDEX	DESCRIPTION	QTY REQUIRED	PART#
A	3" x 20' Suction Hose	1	2032
B	3" Suction Branch	1	4657
C	3" Butterfly Wafer Valve	1	2657
D	Support Strap for Suction Branch	1	2165
E	3" Male NPT x Male Camlock	1	0590
F	3" Campion Flange Female NPT	1	1260
G	3" Foot Valve	1	1535
H	3" Groove 90°	1	0677
I	3" Butterfly Valve Groove	1	3598
J	4" Butterfly Valve Groove	1	3606
K	3" Groove Coupling	3	0687
L	4" Groove Coupling	1	0689
M	3" Groove x Weld Nipple	1	1486
N	3" Groove x Weld Notch Nipple	1	6020
(A-N)	Suction Fill Kit		4758



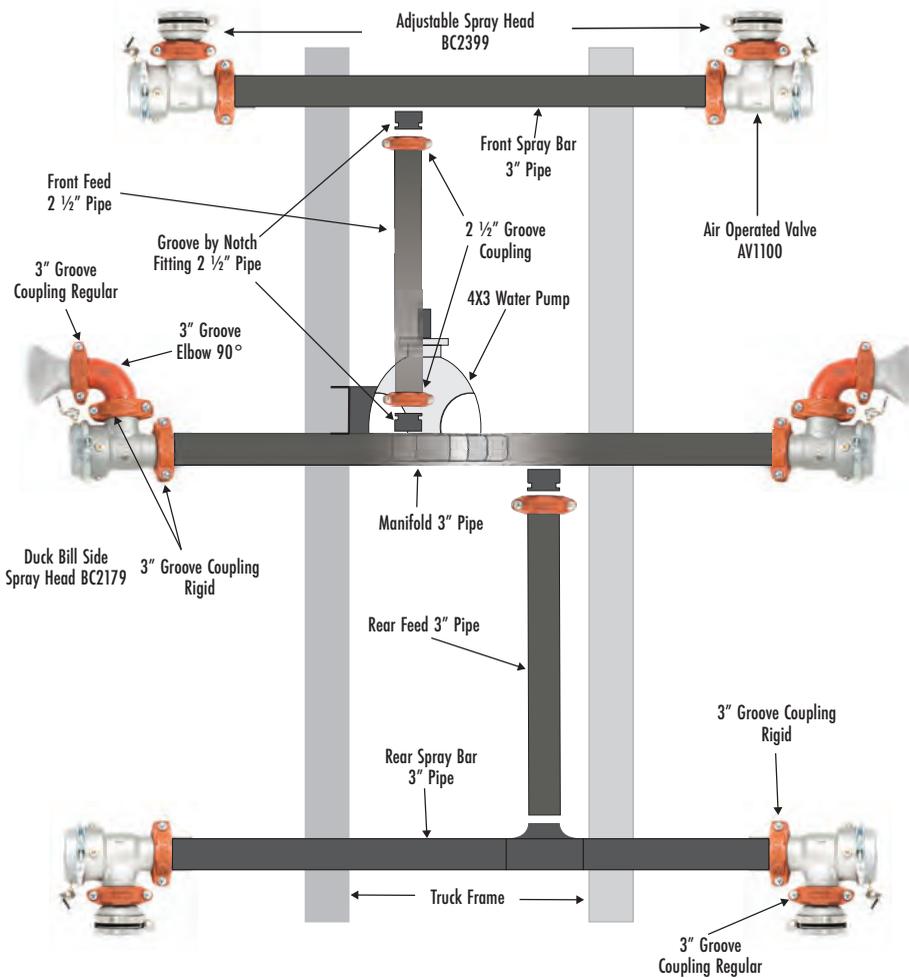
**ELKHART REMOTE MONITOR KIT**

INDEX	DESCRIPTION	QTY REQUIRED	PART#
A	3" x 72" Groove x Weld SCH 40 Pipe	1	8313
B	3" x 18" Groove x Groove SCH 40 Pipe	1	7319
C	AV1100 Water Truck Valve	1	8030
D	3" Groove Tee	1	0716
E	3" x 2" Groove x Male NPT	1	0707
F	3" Groove x Weld Nipple	1	1486
G	3" Groove Coupling Rigidlok	1	0697
H	3" Groove Coupling	3	0687
I	Quick Exhaust Valve Assembly	1	9786
J	Elkhart Remote Monitor	1	Varies
(A-J)	Elkhart Remote Monitor Kit 12 Volt w/ Toggle		6479
(A-J)	Elkhart Remote Monitor Kit 12 Volt w/ Joy Stick		7092
(A-J)	Elkhart Remote Monitor Kit 24 Volt w/ Toggle		7274
(A-J)	Elkhart Remote Monitor Kit 24 Volt w/ Joy Stick		7826





**6 SPRAY VALVE PLUMBING KIT  
DIAGRAM**



**5 SPRAY VALVE PLUMBING KIT  
PICTURED**



**PLUMBING KITS**

Plumbing kits are based on our standard UnitedBuilt Water Truck plumbing layout and fit most spray systems. There may be additional plumbing and fittings required depending on your chassis, tank and how you choose to layout your plumbing.

**PLUMBING:** From tank to water pump and from pump to each spray head. All plumbing is schedule 40 steel pipe with groove style flexible fittings.

**WATER PUMP:** Heavy-duty 4x3 centrifugal cast iron pump. UnitedBuilt M3ZRM(S), Berkeley B3ZRM(S), Franklin 439M or Arms A39VRMS.

**SPRAY SYSTEM:** Cab control console for independently air operated valves with spray heads.

**STANDARD PLUMBING KITS:**

**6 SPRAY VALVES:** (2) Rear Adjustable Spray Heads, (2) 90°Side Spray Nozzles, (2) Front Adjustable Spray Heads

**5 SPRAY VALVES:**(2) Rear Adjustable Spray Heads, (1) 90°Side Spray Nozzle, (2) Front Adjustable Spray Heads

**4 SPRAY VALVES:** (2) 90°Side Spray Nozzles, (2) Front Adjustable Spray Heads

**4 SPRAY VALVES:** (2) Rear Adjustable Spray Heads, (2) Front Adjustable Spray Heads

**3 SPRAY VALVES:** (2) Rear Adjustable Spray Heads, (1) 90°Side Spray Nozzles

**PLUMBING KIT OPTIONS:**

**HOSE REEL:** Manual or electric rewind

**WATER CANNON:** Elkhart remote operated cannon with toggle box or joystick

**SUCTION FILL:** Ditch fill plumbing, valving, suction hose and foot valve

**GRAVITY DROP:** Gravity drop 6" pipe with 2-way air operated butterfly valve and splash plate

**ARTICULATED SPRAY:** Electric 12 volt rotating joint for articulated spray

**DUST SUPPRESSION BAR:** 3" or 4" pipe 8' wide with 2-way air operated butterfly valve. Setup as either gravity fed from tank or pressurized with pump



### REAR DECK PLUMBING KIT 4X4 SELF-PRIMING PUMP HYDRAULIC DRIVE

Heavy-duty Centrifugal Self-Priming Water Pump  
Bi-Direction Series Hydraulic Motor & Pump  
Pre-Assembled Rear Deck Mount

**PLUMBING:** Schedule 40 steel pipe with groove style flexible fittings throughout.

**WATER PUMP:** Heavy-duty centrifugal 4x4 self-priming water pump.

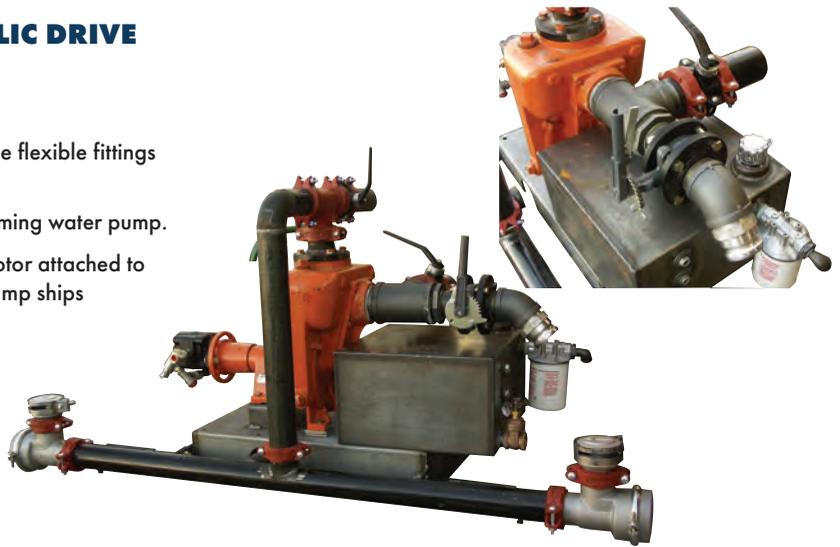
**HYDRAULICS:** Bi-Direction series hydraulics with motor attached to water pump. Hydraulic tank pre-plumbed. Hydraulic pump ships loose.

**VALVES:** Two UnitedBuilt AV1100 air operated water truck valves.

**SPRAYHEADS:** Two UnitedBuilt BC2399 adjustable spray head.

**SUCTION FILL:** Self-load plumbing with suction hose & strainer.

**CONSOLE:** UnitedBuilt cab console to control spray valves.



### REAR DECK PLUMBING KIT 4X3 PUMP HYDRAULIC DRIVE

Heavy-duty 4x3 Centrifugal Pump  
Bi-Direction Series Hydraulic Motor & Pump  
Pre-Assembled Rear Deck Mount

**PLUMBING:** Schedule 40 steel pipe with groove style flexible fittings throughout.

**WATER PUMP:** Heavy-duty 4x3 centrifugal water pump.

**HYDRAULICS:** Bi-Direction series hydraulics with motor attached to water pump. Hydraulic tank pre-plumbed. Hydraulic pump ships loose.

**VALVES:** Two UnitedBuilt AV1100 air operated water truck valves.

**SPRAYHEADS:** Two UnitedBuilt BC2399 adjustable spray head for rear deck.

**CONSOLE:** UnitedBuilt cab console to control spray valves.



### REAR DECK PLUMBING KIT OPTIONS:

**SIDE SPRAY:** Plumbing, valves and nozzles for side sprays on each side of truck.

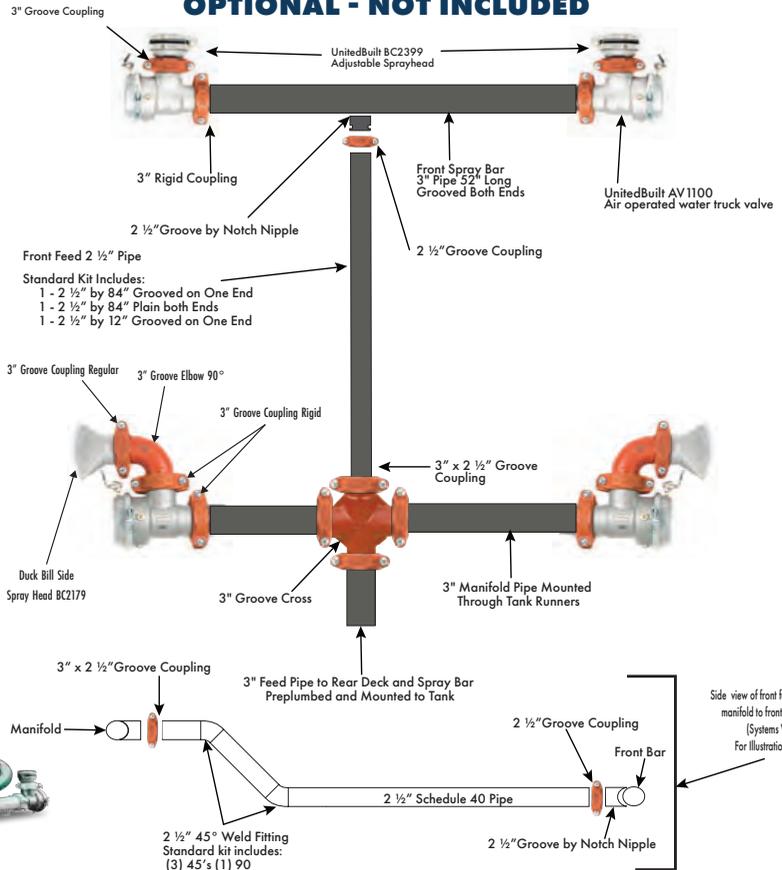
**FRONT SPRAY:** Plumbing, valves and nozzles for front spray bar spray heads.

**HOSE REEL:** Manual or electric rewind

**WATER CANNON:** Elkhart manual or remote operated with toggle box or joystick

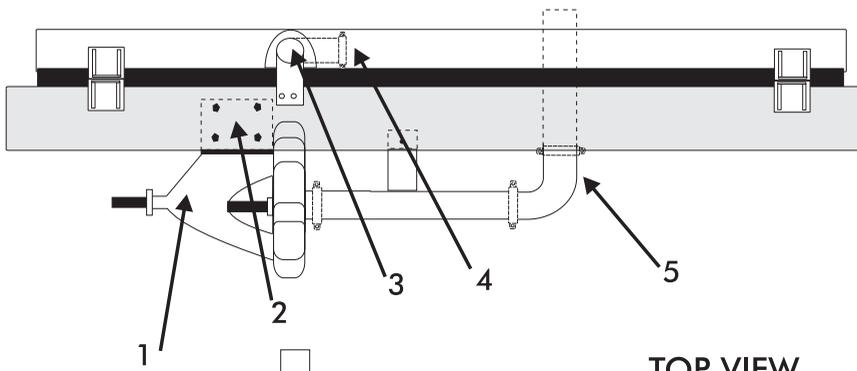


### R-KIT STYLE FRONT & SIDE SPRAY OPTIONAL - NOT INCLUDED

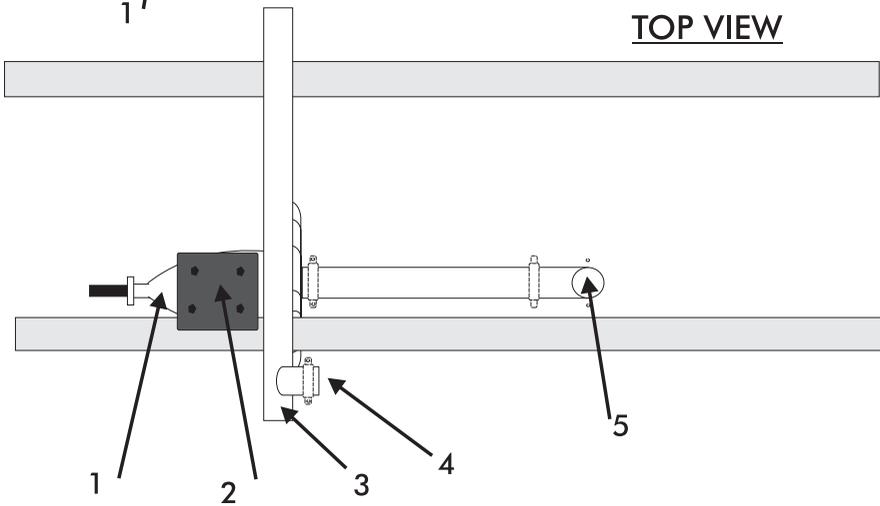




**SIDE VIEW**



**TOP VIEW**

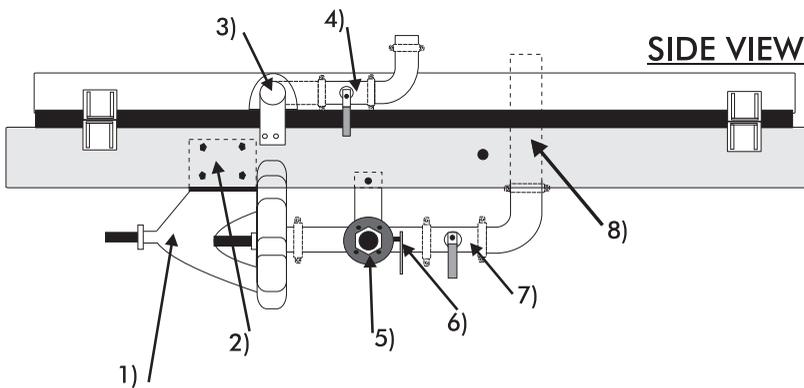


**STANDARD FRAME MOUNTED 4X3 PUMP PLUMBING**

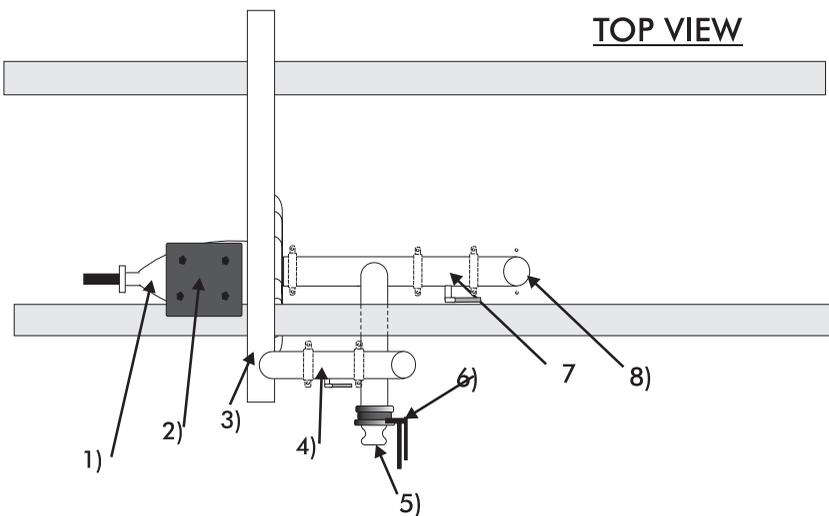
1. 4x3 Water Pump
2. Water Pump Mounting Bracket
3. 3" Manifold Pipe Mounted Across Frame Rails
4. Stubbed For Optional Suction Fill Plumbing
5. 4" Intake Pipe From Tank To Water Pump



**SIDE VIEW**



**TOP VIEW**



**STANDARD FRAME MOUNTED 4X3 PUMP PLUMBING WITH SUCTION FILL**

1. 4x3 Water Pump
2. Water Pump Mounting Bracket
3. 3" Manifold Pipe Mounted Across Frame Rails
4. 3" Groove Butterfly Valve
5. 3" Camloc "F" For Suction Hose Hook Up
6. 3" Wafer Butterfly Valve
7. 4" Victaulic Butterfly Valve For Pump To Tank Intake Shut Off.
8. 4" Intake Pipe From Tank To Water Pump





## TANK MOUNTING WITH 1/4" x 3" FLAT BAR

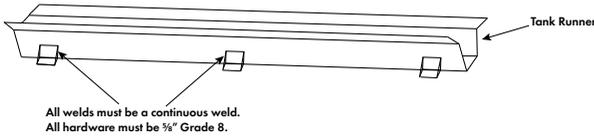
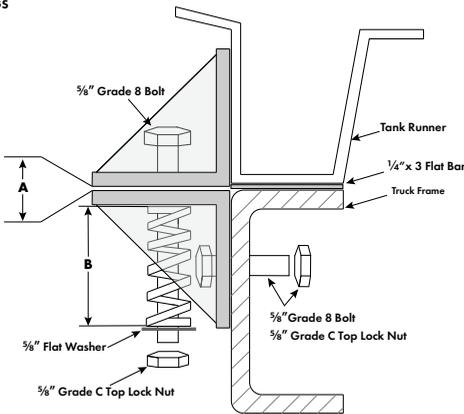
### FRONT TANK MOUNTS WITH SPRINGS

1. Mount lower tie down to truck frame, even with top of frame rail.
2. Use a 1/4" spacer between the upper and lower tie downs. (A)
3. Weld upper tie down to the tank runner, must be a continuous weld.

4. Remove 1/4" spacer, install bolts with springs. Tighten until spring is compressed to 3/4" (B)

### MIDDLE & REAR TANK MOUNTS

1. Mount lower tie down to truck frame, even with the top of frame rail.
2. Use an 1/8" spacer between the upper and lower tie downs. (A)
3. Weld upper tie down to the tank runner, must be a continuous weld.
4. Remove 1/8" spacer install bolts. Tighten until the outside of the tie downs make contact.



NOTE: Drawing is not to scale.

## TANK MOUNTING WITH RUBBER SKIRTBOARD

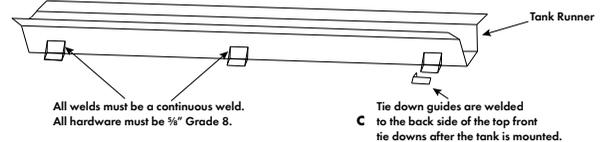
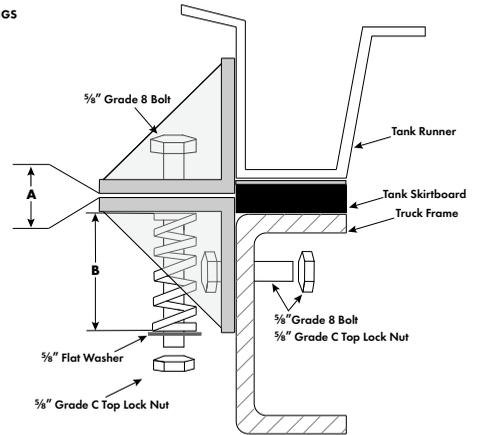
### FRONT TANK MOUNTS WITH SPRINGS

1. Mount lower tie down to truck frame, 1/2" above the top of frame rail.
2. Use a 1/4" spacer between the upper and lower tie downs. (A)
3. Weld upper tie down to the tank runner, must be a continuous weld.

4. Weld tie down guide to the back side of the upper tie down. (C)
5. Remove 1/4" spacer, install bolts with springs. Tighten until spring is compressed to 3/4" (B)

### MIDDLE & REAR TANK MOUNTS

1. Mount lower tie down to truck frame, 1/2" above the top of frame rail.
2. Use an 1/8" spacer between the upper and lower tie downs. (A)
3. Weld upper tie down to the tank runner a continuous weld.
4. Remove 1/8" spacer install bolts. Tighten until the outside of the tie downs make contact.



NOTE: Drawing is not to scale.

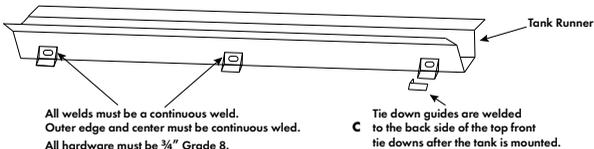
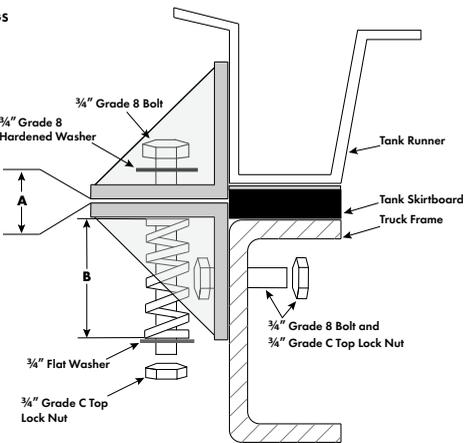
## TANK MOUNTING WITH RUBBER SKIRTBOARD

### FRONT TANK MOUNTS WITH SPRINGS

1. Mount lower tie down to truck frame, 1/2" above the top of frame rail.
2. Use a 1/4" spacer between the upper and lower tie downs. (A)
3. Weld upper tie down to the tank runner. The outer edge as well as the center of the tie downs must be welded with a continuous weld.
4. Weld tie down guide to the back side of the upper tie down. (C)
5. Remove 1/4" spacer, install bolts with springs. Tighten until spring is compressed to 3/4" (B)

### MIDDLE & REAR TANK MOUNTS

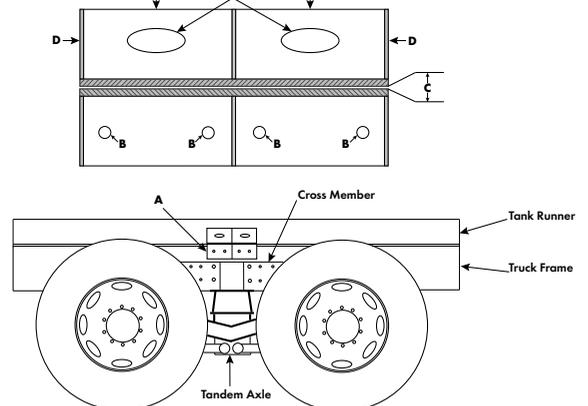
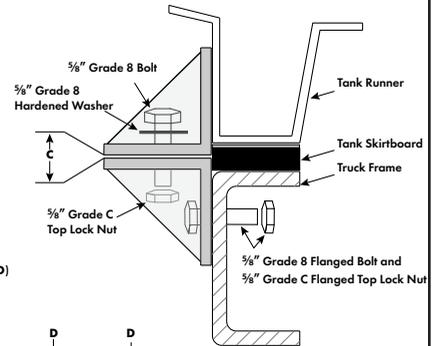
1. Mount lower tie down to truck frame, 1/2" above the top of frame rail.
2. Use an 1/8" spacer between the upper and lower tie downs. (A)
3. Weld upper tie down to the tank runner. The outer edge as well as the center of the tie down must be welded with a continuous weld.
4. Remove 1/8" spacer install bolts. Tighten until the outside of the tie downs make contact.



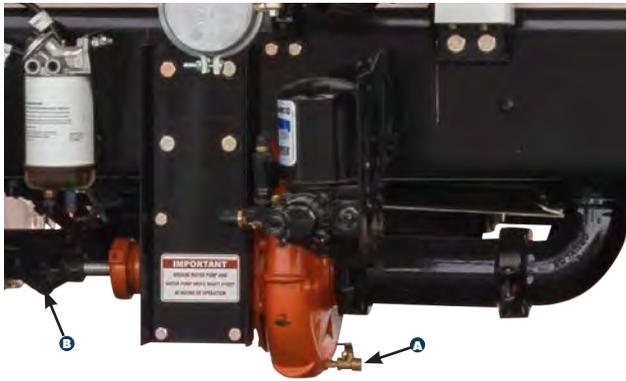
NOTE: Drawing is not to scale.

## BOGIE BRACKET MOUNTING INSTRUCTIONS FOR TANKS OVER 4000 GALLONS

1. Remove the top truck bolts on the crossmember that is centered over the tandem. (A)
2. Drill 1 1/4" holes in the lower brackets matching the bolt pattern of the removed truck bolts. (B)
3. Mount the lower brackets to the truck frame a 1/2" above the top of the frame rail. Using 3/8" Grade 8 Flanged bolts and 3/8" Grade C Flanged top lock nuts.
4. Use an 1/8" spacer between the upper and lower brackets. (C)
5. Weld upper bracket to the tank runner. The outer edge as well as the center of the bracket must be welded with a continuous weld. (D)
6. Remove the 1/8" spacer. Install the 3/8" Grade 8 bolts and Grade C top lock nuts, tighten until the outside of the brackets contact.



NOTE: Drawing is not to scale.



Pump mounted to standard transmission. PTO bottom mounted to transmission, water pump mounted inside frame rail on driver side. (A) Pump shaft connected to PTO by 1310 series balanced drive shaft. (B) ¼" brass ball valve to drain pump for maintenance or winterizing.



(A) The 3" rear spray bar tees into the supply line. (B) 3" manifold with grooved ends to be installed at a specified mid-ship location. The manifold pipe and rear bar pipe are mounted to the outside of the frame rail with bolt on brackets.



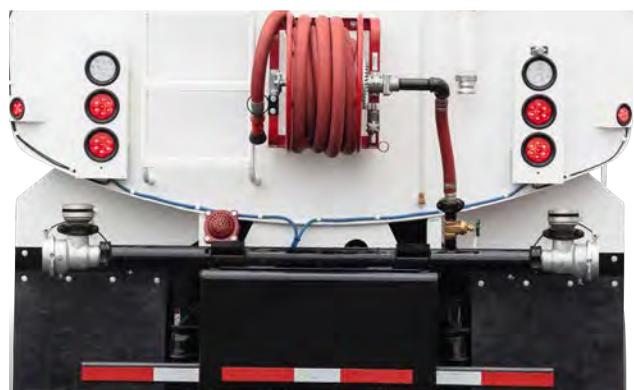
Top view of water pump mounted frame rail on driver side. Plumbed to manifold with rear supply pipe attached.



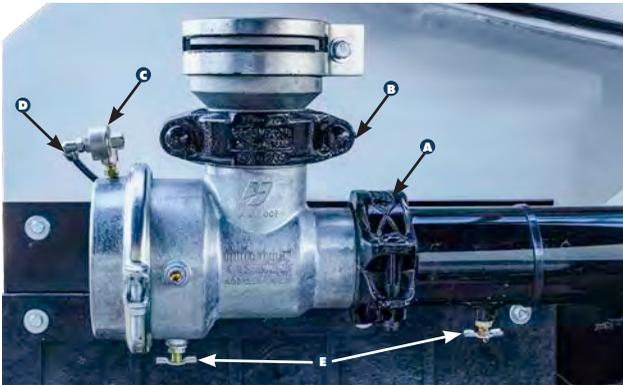
(A) Cut out arch in the tank runner for the manifold pipe mounted to the frame rail. (B) 1½" brass jet valve mounted on passenger side of truck. Note the mounting bracket for the manifold pipe.



Plumbing from manifold to the front bar is 2½" schedule 40 steel pipe (kits include elbows for custom installation.) (A) Front bumper guard is ¾" steel. (B) Front bar is 3" x 52" grooved on both ends. (C) Front spray nozzles equipped with adjustable band to easily adjust spray pattern. (D) Nozzles can be horizontally adjusted. (E) Valve can be vertically adjusted.



Plumbing from manifold to rear bar is 3" schedule 40 pipe. Note the cut out on the tank end plate. Standard spray valves are fitted with adjustable nozzles. Easily adjust your spray pattern and vertical/horizontal direction. Shown with optional suction hose runner storage and hose reel.



(A) Rigid mount couplers are used to attach the valve to the grooved end of the pipe. (B) Standard grooved couplings are used to attach nozzle. (C) Exhaust valves rapidly release air pressure to quickly open water valves. (D) Swivel fittings attach to air line plumbed to control console. (E) 1/4" drain valves for maintenance and winterizing plumbing.



Optional 90° side spray valve on passenger side of truck (standard on stock tandem axle systems). Easily adjust 90° fitting and nozzle orientation for desired spray pattern and direction.



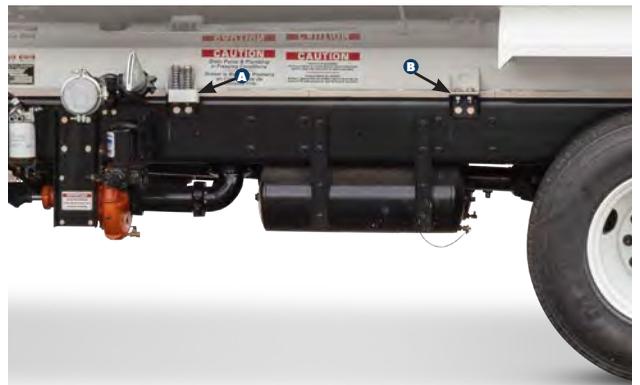
Spray valves are independently controlled with the in cab mounted control tower. Each switch is plumbed with 1/4" airline to a spray valve for independent control.



(A) Push plate is constructed of 1/2" steel with internal storage and lid. (B) Drive under protection is constructed from 3x3" square tubing welded to the push plate.



(A) Full length belly plate for tanks 3,000 gallons or more effectively doubling bottom tank thickness. (B) Extra duty bogie mounting brackets for tanks exceeding 4,000 gallons. (C) Vulcanized rubber wear pads welded to runners on tanks 3,000 gallons or more absorb vibration and increase the life of the tank. (See mounting instructions page 57.)



(A) Front mounts are spring-loaded. (B) The mid and the rear mounts are rigid. (See mounting instructions page 57.)



# OPERATION OF WATER TRUCK SPRAY SYSTEM

## GENERAL GUIDELINES

### HOT SHIFT PTO

1. Before starting truck, be sure all sprayhead controls are in the off position.
2. Engage PTO while engine is turning **900 RPM OR LESS**. Engaging at higher engine speeds will damage the transmission, PTO, drive shaft or water pump. Disengage PTO at any RPM.

### AIR OR CABLE SHIFT PTO

1. While truck is at a **COMPLETE STOP**, engage clutch, move PTO lever to "in" position. Slowly release clutch. Water pump is now on. **NEVER** try to engage or disengage PTO while truck is moving. Transmission or PTO failure will result.

### HYDRAULIC

1. Before starting truck, be sure all sprayhead controls are in the off position.
2. Engage PTO while engine is turning **900 RPM OR LESS**. Engaging at higher engine speeds will damage the transmission, PTO, drive shaft or water pump. Disengage PTO at any RPM.

## DITCH FILL OPERATION

### SELF-PRIMING PUMPS

1. Pump volute must be filled with water.
2. Connect fill hose to cam-loc fitting on pump suction plumbing and lower strainer into water source.
3. Close 4" valve between tank and pump suction. Open the valve between pump and fill hose. Open valve between pump discharge and tank.
4. Engage pump drive and set engine speed at 2000 RPM.
5. When tank is filled, turn off pump drive. Reverse position of the three valves to prepare system for spraying.

### NON-SELF-PRIMING PUMPS

1. There must be enough water in the tank to flood the pump volute and the fill hose. Check the foot valve on the fill hose to assure it closes. If the foot valve does not hold water, repair or replace it before proceeding.
2. Connect fill hose to camloc fitting on the pump suction plumbing and lower foot valve into water source.
3. Close the valve between tank and pump suction. Open the valve between pump and fill hose. Open valve between pump discharge and tank.
4. Engage pump drive and set engine speed at 2000 RPM. If at this point the pump is not moving water, do the following:
  - Leave the pump turning. Simultaneously, close the hose valve and open the tank to pump valve. This creates a flow of water through the pump. Then, reverse these valves at the same time. The momentum of the flow through the pump should start filling the tank.
5. When filling is complete and pump drive is shut down, reverse valve positions before disconnecting the suction hose at the camloc.

### TROUBLE SHOOTING

If you encounter problems with filling, check for:

- Valve positioning
- Obstruction in the pump or plumbing
- Broken pump shaft
- Suction hose is both water tight and air tight including camloc
- Foot valve or strainer are not blocked by mud or sand

## CAUTION

- **DO NOT** close all spray head(s) under full pressure. Pump or spray head damage may occur. Let engine wind down with clutch disengaged, then close spray heads.
- **DO NOT** operate water pump with empty water tank. Water lubricates the pump seals, therefore, lack of water will result in seal failure.
- **DO NOT** over tighten packing glands or the pump will over heat and cause premature failure.
- The PTO on your truck is matched to your pumping system. The engine on a diesel powered unit should never exceed 2200 RPM while pumping. Gasoline powered units should not exceed 3000 RPM while pumping. Over-speeding the pump can cause premature drive line and pump failure.
- **WINTERIZE YOUR SYSTEM:** Always drain pump and plumbing before a freeze. Freezing water will split the pump and plumbing.
- Grease pump and PTO drive shaft every 40 hours of operation with high quality lithium-based multipurpose NGLI 2 extra pressure ball bearing grease.
- Always use a strainer or foot valve when ditch filling to avoid damage to the water pump, plumbing and sprayheads with sand, silt or small gravel.
- Rocks or pieces of rust periodically make their way through the water loading system (top or ditch fill.) Check inside the tank weekly for foreign objects and remove them. Pea sized rocks can damage the pump and spray system.



# WATER TRUCK SYSTEM MAINTENANCE

## GENERAL GUIDELINES

### DAILY

**LUBRICATION:** Check pump shaft lubrication daily to ensure properly grease. Never over apply grease. Excessive grease can cause the bearings to run hot reducing their life. Lubricate pump and PTO drive shaft every 40 hours of operation or as necessary with high quality lithium-based multipurpose NGLI 2 extra pressure ball bearing grease.

### WEEKLY

**VIBRATION:** Vibration is expected with all rotating machinery. However, excessive vibration can cause premature wear and reduce the life span of your pump. If vibration of the unit appears to exceed the norm, stop operation and determine the cause of the excessive vibration.

**NOISE:** While pump is operating, listen for unusual noises. Unusual sounds can indicate that the pump is under stress. Stop operation and determine the cause.

**OPERATING TEMPERATURE:** While pump is operating, heat will dissipate from the bearings and shaft. The pump bracket can reach up to 150°F after a short period of time. If it exceeds 150°F discontinue operation and determine the cause. After installing new rope packing the bearings will run hotter for a brief period of time. Worn out bearings will cause excessive temperatures and require replacement before damaging internal parts.

**PACKING BOX:** Verify that the packing box and gland are not hot. If the packing box is creating excessive heat, loosen the packing gland nut evenly so the water drips 40 to 60 drops a minute. Adjust the packing nuts evenly periodically to ensure proper lubrication and cooling from the water. Replace packing material if the packing gland has been tightened to its limit.

**MECHANICAL SEAL:** The mechanical seal should never leak. Inspect for leakage periodically and replace when necessary.

**SUCTION PLUMBING:** Periodically inspect the suction plumbing for obstruction. Inspect suction hose and screen if equipped with ditch fill.

**TANK & PLUMBING:** Check inside the tank weekly for foreign objects and remove them. Pea sized rocks can damage the pump and spray system. Rocks or pieces of rust periodically make their way through the water loading system (top or ditch fill.) Verify tank mounting is secure, tighten as necessary. Check tank skirtboards and replace as necessary.

**TANK ANODES:** Check the condition of anodes inside the tank weekly. Replace if worn to maximize tank life.

**VALVES & COUPLINGS:** Check valves and couplings weekly for leaks. Valves and couplings should not leak. Replace seals and gaskets as necessary.

### ANNUALLY

**PUMP & PUMPING SYSTEM:** Inspect pump and entire pumping system for signs of excessive wear. Check impeller eye clearance, volute case, and seal chamber for corrosion. Replace worn out or corroded parts to ensure lasting performance and maximize life.

**VALVES & COUPLINGS:** Inspect valves and couplings for signs of excessive wear or leakage. Replace worn out parts to ensure lasting performance and maximize life.

**TANK & MOUNTING:** Inspect inside of tank for foreign objects and remove them. Verify tank mounting is secure, tighten as necessary. Check tank skirtboards and replace as necessary.

### RECOMMENDED SPARE PARTS

- Valves & Seal Kits
- Couplings & Gaskets
- Pump Seal Kits
- Pump Impeller & Shaft Kit
- Replacement Pump or Power Head  
(When Continued Operation is Critical)
- Tank Anodes
- Tank Skirtboard
- Tank Springs & Mounting Hardware
- Air Line & Fittings
- Control Console Switches



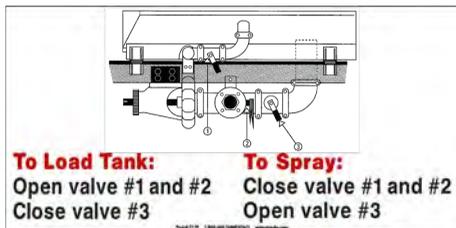
**FOR COMPLETE INVENTORY & TO ORDER PARTS GO TO  
WATERTRUCKS.COM**



**UNITEDBUILT TANK LOGO**

SIZE  
4 1/4" x 13 1/2"

PART#  
8180



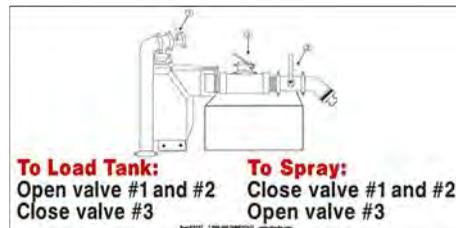
**To Load Tank:**  
Open valve #1 and #2  
Close valve #3

**To Spray:**  
Close valve #1 and #2  
Open valve #3

**SUCTION FILL: FRAME MOUNT**

SIZE  
6" x 12"

PART#  
7179



**To Load Tank:**  
Open valve #1 and #2  
Close valve #3

**To Spray:**  
Close valve #1 and #2  
Open valve #3

**SUCTION FILL: REAR DECK**

SIZE  
6" x 12"

PART#  
8237



**CAUTION: PTO BOLTS**

SIZE  
6" x 12"

PART#  
7571



**CAUTION: DRAIN PUMP**

SIZE  
6" x 12"

PART#  
7178



**CAUTION: LEGAL WEIGHT**

SIZE  
6" x 12"

PART#  
7177



**CAUTION: SPRAYHEADS**

SIZE  
3" x 5"

PART#  
8498



**IMPORTANT: GREASE PUMP**

SIZE  
3" x 5"

PART#  
8414



**WARNING: ROTATING SHAFTS**

SIZE  
5" x 7"

PART#  
8321



**WARNING: PTO ENGAGEMENT**

SIZE  
3 1/2" x 4 3/8"

PART#  
8521



**WARNING: ROLLOVER RISK**

SIZE  
3 1/2" x 4 3/8"

PART#  
8215

**NON POTABLE WATER**

**NON POTABLE WATER**

SIZE  
3 1/2" x 3' 3 1/2"

PART#  
3213



# TRUCK SPECIFICATION FORM

BUSINESS NAME \_\_\_\_\_  
 CUSTOMER NAME \_\_\_\_\_  
 PHONE \_\_\_\_\_ FAX \_\_\_\_\_  
 ADDRESS \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIPCODE \_\_\_\_\_



MAKE _____	TANK SIZE (GAL) _____
MODEL _____	PTO DRIVE      HYDRAULIC DRIVE
YEAR _____	SPRAY HEADS _____
CONVENTIONAL      CABOVER	HOSE REEL _____
ENGINE _____	SUCTION FILL _____
TRANSMISSION _____	MONITOR _____
FRONT AXLE CAPACITY _____	EPOXY COATING _____
REAR AXLE CAPACITY _____ RATIO _____	GRAVITY DROP _____
CAB TO AXLE (CA) _____	HOT SHIFT PTO _____
CAB TO CENTER OF TANDEM (CT) _____	POWDER COAT _____

NOTES: \_\_\_\_\_  
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