



**SPECIFICATIONS – ARFF: MODEL CH-4**  
**Meet Your Large Capacity Requirements with Confidence**

The CH-4 is designed for ARFF users looking for large capacity, single-stage centrifugal fire pumps. The Waterous CH-4 pump comes in both direct-drive and PTO models that deliver up to 1400 GPM @ 250 PSI (5300 L/min @ 17 bar). The CH-4, like all of our pumps, is tested at full power prior to shipment to ensure it meets the demanding Waterous standard. The CH-4 is also backed by an industry exclusive five-year warranty.



**Design Features:**

CH-4 pump construction features a mechanical self-adjusting seal, replaceable wear rings, a mechanically and hydraulically-balanced impeller for smooth operating and oil-lubricated, anti-friction ball bearings throughout.

Available with a K Series Transmission or with a 1-3/8 inch tapered input shaft for direct mounting.

Waterous pumps are built to fit individual requirements. A qualified apparatus application engineer can assist you in determining which combination pump, truck chassis and engine will produce maximum performance to suit your needs.

Every pump is tested under full power before shipment to assure it meets established performance criteria.

**Pump Specifications:**

**Volute Body and Head:**

Horizontally-split, bronze (also available in high-tensile gray iron)

**Intake Connections:**

8 inch ANSI intake flange (bronze) with adapter or 10 inch flange (less adapter)

**Discharge Connections:**

5 inch discharge flange

**Impeller:**

Bronze, fully-enclosed, double-hubbed to balance hydraulic thrust, mechanically balanced to eliminate vibration.

**Wear Rings:**

Replaceable wear rings to increase pump life and keep maintenance costs to a minimum.

**Impeller Shaft:**

17-4 stainless steel (CHK4 and CHD4) or Monel (CHK4 only), heat treated, ground to precise size and polished under shaft seal. Fully supported by anti-friction bearings.

**Shaft Seal:**

Mechanical seal is standard

**Bearings:**

All bearings are oil or grease lubricated, anti-friction (ball-type) and located outside the pump casing to accurately align and support the impeller shaft assembly. Ball bearings are deep-groove type designed to carry both radial and axial thrust.

**Performance Ratings:**

Model	Capacity – GPM / L/min	Pressure – PSI / Bar
CHK-4	1400 (5300)	250 (17)
CHD-4	1200 (4550)	226 (16)

**Industry-Leading Sales and Support**

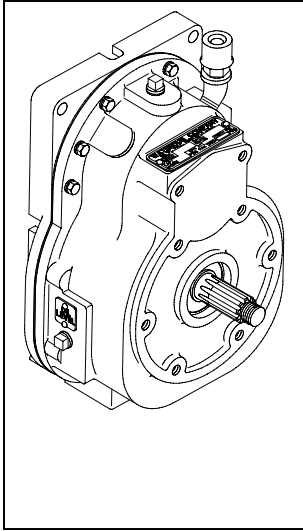
When you purchase Waterous equipment, not only do you get quality products, you get quality service. Our expert service technicians are the best in the business and they are always happy to answer any service questions you might have.

**Sales/Applications Assistance**  
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 pumps@waterousco.com

**Service Assistance**  
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## SPECIFICATIONS - ARFF: MODEL CH-4

### Pump Transmission



#### **K Series**

The K Series Transmission is normally used when a truck transmission mounted power take-off is selected as the pump drive.

**Housings:** High-tensile gray iron, two-piece, vertically-split

**Ratios:** 2.26, 2.12, 2.00, 1.69, 1.42, 1.27

**Input Shaft:** Shaft is hardened and ground alloy steel 1-3/8 inch SAE 10 spline.

**Gears:** Constant mesh, helical gears made of alloy steel. All gears are crown shaved, carburized, hardened and have ground bores. Splash lubricated.

**Bearings:** Ball bearings are deep-groove type designed to carry both radial and axial thrust.

### Dimensions

Model	Length (in/cm)	Width (in/cm)	Height (in/cm)
CHK-4	27.75 (70.5)	20 (51)	19 (48.25)
CHD-4	28 (71)	20 (51)	19 (48.25)

### Accessories & Optional Equipment

The accessories below are available for Waterous CH-4 pumps. For detailed information about these accessories, request each specification sheet by number.

#### **Primer**

Select an electric rotary vane primer for fast, reliable priming. F-2418

#### **Pressure Control Systems**

##### **Discharge Relief Valve**

Simple ON-OFF control permits placing the system in or out of operation in seconds. See Relief Valve, F-897.

##### **Intake Relief Valves**

The Waterous intake relief valve is designed to dump excess pressure from the inlet side of the pump. See Intake Relief Valves, F-2192.

#### **Corrosion Protection**

Waterous offers replaceable zinc intake screens and anodes to provide corrosion protection. These items are designed to sacrifice the zinc element to galvanic corrosion. Without this protection, galvanic corrosion may damage the iron pump body and fittings.

#### **Overheat Protection Manager**

The OPM consists of an illuminated warning light on the operator's panel whenever the pump approaches an overheat condition. F-2422

#### **Drain Valves**

Drains all points of the pump simultaneously with the operation of a single control. F-1158

#### **Discharge Valves**

The following Waterous ball-type discharge valves are available: 2-1/2 inch, 3-1/2 inch, rack and sector push-pull, worm gear and electric. Chrome-plated brass ball and hydraulically-balanced seal assembly standard. See Discharge Valves, F-1161.

#### **Oil Cooler Piping**

The oil cooler piping is a length of copper tubing that is routed through the transmission. Water from the pump is circulated through this tubing to cool the transmission.