



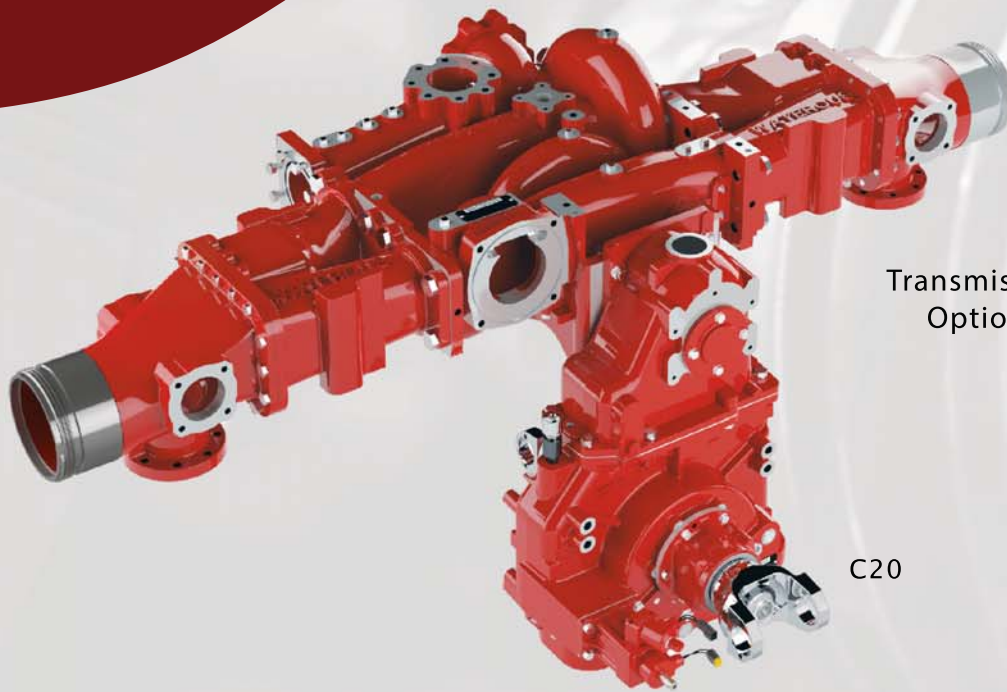
FOAM SYSTEMS

CAFSystems™

FIRE PUMPS

VEHICLE-MOUNTED PUMP

# CS/CSU



K



PA



TC20

Transmission  
Options

C20

Designed with a two-piece, horizontally split body with intake and discharge passageways in a single casting and on the same level. This design provides the lowest possible height, a lower center of gravity, and more room for hose reels, hose beds and other equipment.

## PERFORMANCE

- 750 to 2250 GPM (3000 to 9000 l/min)
- Maximum Pressure: 400 PSI (34 bar)

## AVAILABLE MOUNTING

- Mid-Ship: Equipped with C20 Chain Drive Transmission
- PTO: Equipped with PA Chain Drive PTO or K Series Gear Drive Transmission
- Rear Mount: Equipped with TC20 Transmission

# SPECIFICATIONS: VEHICLE MOUNTED: CS/CSU

## Single Stage Centrifugal Fire Pump

CS/CSU Pump Performance							
Model	FLOW			PRESSURE			
	GPM	l/min	l/sec	PSI	bar	kPa	MPa
CS	750, 1000, 1250	3000, 4000, 5000	100, 120, 130, 150	150	10	1000	1.0
CSU	1500, 1750, 2000, 2250	6000, 7000, 8000, 9000					

### Pump Features

#### Casing

Two-piece, horizontally-split, high-tensile, close grained gray iron or bronze (optional). All passageways are carefully matched to assure the very best hydraulic flow characteristics.

#### Wear Rings

Bronze, reverse-flow, labyrinth-type replaceable wear rings increase pump life and keep maintenance costs to a minimum.

#### Impellers

Bronze impeller, balanced both mechanically and hydraulically for vibration-free operation. Flame-plated impeller hubs are standard on CSU to assure longer life despite the presence of abrasives in the water supply (optional on CS).

#### Impeller Shaft

Heat-treated stainless steel is ground at all critical areas, polished under packing. An exclusive two-piece impeller shaft allows separation of the transmission from the pump without disassembling either component. This simplifies repair procedures, resulting in less down time.

#### Bearings

Three deep-groove, anti-friction ball bearings, located outside the pumping chamber, give support and proper alignment to the impeller shaft assembly. Bearings are oil or grease lubricated, completely separated from the water being pumped, and protected by seal housings, flinger rings and oil seals.

#### Shaft Seal

Seal housings on packed pumps are equipped with braided flexible graphite (BFG) rings held in place by a split bronze gland which is fully removable and adjustable. BFG packing improves heat dissipation, reduces maintenance and minimizes shaft wear. Self-adjusting, spring-loaded mechanical seals are available which eliminate leakage and routine maintenance.

#### Flinger Rings

Located on the impeller shaft between seal housings and bearing housings, flinger rings provide added protection and keep water and foreign matter out of the bearings.

#### Oil Seals

Standard lip type for lubrication and additional bearing protection from dirt and water.

### Simple to Operate

- Power shift system engages the pump with indicating lights confirming the shift is complete.
- Single control activates the priming system, automatically opening the priming valve and starting the primer.
- Single ON-OFF control activates the automatic relief valve systems.

### Versatility

The Waterous CS/CSU pump was designed with versatility in mind. Waterous offers a complete selection of intake and discharge locations and sizes, and overall piping arrangements.

- Discharge locations are available to meet any need, and sizes from 2-1/2 inches to 5 inches are available.
- Extra large discharge system assures you of the most efficient water delivery system available to the fire service.
- Thoroughly tested to meet NFPA and special contract provisions.

### Optional Equipment

- Priming System, see F-2418
- Pressure Governor, see F-2995
- Pressure Control Systems:
  - Discharge Valve, see F-897
  - Intake Relief Valve (Piloted), see F-2192
  - New Intake Relief Valve (Non-Piloted), see F-2192-N
- Corrosion Protection – Zinc Intake Screens and Magnesium Anodes
- Overheat Protection Manager, see F-2422
- Drain Valves, see F-1158
- 3-1/2" Tank to Pump Valve
- Discharge Valves, see F-1161
- Seven-Year Limited Warranty with Total Protection Package (TPP-5)
- Transmissions Available:

#### C20 Series Transmission (Split-Shaft)

**Housings:** High-strength aluminum, three-piece, horizontally-split.

**Drive Ratios:** 1.27, 1.41, 1.48, 1.58, 1.69, 1.79, 1.88, 1.97, 2.03, 2.27, 2.46

**Shafts:** Drive line shafts made from alloy steel forgings, hardened and ground to size, 2.35 inch 46-tooth involute spline.

#### Drive and Driven Sprockets

Made of steel. All sprockets are hardened and have ground bores.

**Drive Chain:** High-strength involute form chain.

#### Bearings

Deep-groove, anti-friction ball bearings give support and proper alignment to the impeller shaft assembly. Bearings are oil-splash lubricated, completely separated from the water being pumped, and protected by a V-ring and oil seals.

#### Lubrication System

An internal lubrication system delivers lubricant directly to the drive chain. This unique design eliminates the need for an external lubrication pump and auxiliary cooling.

#### Shift Mechanism

Constant-mesh, two-position sliding collar that engages all teeth simultaneously. In-cab controlled pneumatic shift. An internal locking mechanism provides a positive lock in PUMP or ROAD position.

#### PA Series Transmission (PTO Driven)

**Housings:** Cast aluminum body

**Drive Ratios:** 1.71, 1.91, 2.05

#### Drive & Driven Sprockets

Made of a steel. All sprockets are hardened and have ground bores.

**Drive Chain:** High-strength involute form chain

**Bearings:** Anti-friction ball bearings

#### Optional Rear Facing Output Shaft

1-3/8-10 SAE spline for Spicer 1280 or 1310 series end yokes

#### K Series Transmission (PTO-Driven)

**Housing:** Aluminum

**Gears:** Helical, precision cut, crown shaved for proper load distribution and quiet operation.

### Conditions of Sales

For details on Waterous Conditions of Sales, refer to F-2190, *Conditions of Sales* located on the Waterous web site at [www.waterousco.com](http://www.waterousco.com) or by contacting Waterous.

### Warranty

Waterous Seven-Year Limited Warranty