



**Data Sheet**

Form No.	Issue Date	Rev. Date
<b>DS-1000</b>	<b>04/19/96</b>	<b>11/14/14</b>

**WATEROUS CM SERIES PUMPS**

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**DESCRIPTION: MIDSHIP MOUNTED TWO STAGE SERIES/PARALLEL CENTRIFUGAL FIRE PUMP**

***WATEROUS CM SERIES CENTRIFUGAL FIRE PUMPS ARE AVAILABLE AS FOLLOWS:***

- CM** Two stage series/parallel: 750, 1000, 1250 GPM capacities at 150 psi
  - CMU** Two stage series/parallel: 1250, 1500, 1750, 2000, 2250 GPM capacities at 150 psi
- Refer to performance sheets for performance data.

Pump Pressure Limits:    Hydrostatic Test:    Cast Iron Body: 600 PSIG  
 Discharge Pressure:    CM and CMU: 600 PSIG maximum discharge pressure

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### ***SPECIFY A COMPLETE PUMP AS FOLLOWS:***

#### **1.) VEHICLE INFORMATION**

(See order form)

#### **2.) PUMP INFORMATION**

##### **Rated Capacity-**

U.S. GPM:	CM- 750, 1000, 1250	CMU- 1250, 1500, 1750, 2000, 2250
L/min.:	CM- 3000, 4000, 5000	CMU- 5000, 6000, 7000
Imperial GPM:	CM- 620, 840, 1050	CMU- 1050, 1250, 1450, 1660

##### **Certification-**

NFPA or list other if required

##### **Additional (Dual) Rating-**

List capacity of dual rating if required

#### **3.) PUMP MODEL**

##### **Complete Pump/Transmission Model-**

See tables on page 6 & 7

##### **Discharge Flanges-**

Standard, with angle compensated discharge

Optional on special order, non-angle compensated discharge

(Side discharge openings perpendicular to pump mounting pads resulting in discharge openings offset 4° to the vehicle frames)

##### **Pump Body Mounting-**

Standard, non-inverted

Optional on special order, inverted (contact Waterous for details)

#### **4.) TRANSMISSIONS**

**4a.) C20 Series-** See data sheet DS-2006 (front or rear mounting must be specified)

**4b.) D Series-** Specify front or rear drive

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### 5.) IMPELLER SHAFT

**Shaft Material-** 17-4 Stainless Steel

**Seal Type**

Standard- Flexible Graphite (Grafoil®) adjustable packing in main pump (extra pressure (H) stage pump utilizes braided Graph-Lock® with aramind filament)

Optional- Self adjusting mechanical seal (for salt or corrosive water applications order a bronze pump with monel shaft, Waterous furnishes special seals with this configuration)

**Impellers:**

**Flame Plating**

CM- Standard without

Optional with

CMU- Standard with

**Part Numbers**

CM- Standard, 71796/71797, 750 to 1250 GPM capacities

CMU- Standard, 71649-T/71650-T, all capacities

### 6.) TRANSFER VALVE ACTUATOR

**Position-** Bottom or top

**Type-** Manual or electric

**Manual Override (Electric Only)-** With or without

**28 in. Control Rod for Panel Linkage**

(Manual Actuators and Electric Actuators with Manual Override Only) - With or without

**Notes:**

1. Bottom mounted electric transfer valve actuator is not available with C20B or PA transmissions due to actuator interference with driveline.
2. Bottom mounted manual transfer valve actuator is not available with PA transmission or C20B transmission with 1810 series end yoke due to actuator interference with driveline.

### 7.) PRESSURE CONTROL SYSTEM

**7a.) Discharge Relief Valve System-** See data sheet DS-4004

**7b.) Intake Relief Valve-** See data sheet DS-4004

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### 8.) INTAKE

#### 8a.) Tank to Pump Connection

**Check Valve:** With or without

**Fitting:** Blank (no fitting), 2-1/2 in. NPT, 3 in. NPT, 4 in. ANSI flange, blind flange  
**(Note: 4 in. ANSI flange not available when PA transmission is used)**

**Tank to Pump Valve:**

**Fitting:** 3-1/2 in. angle comp. hose connection  
4 in. non-angle comp. hose connection  
4 in. angle comp. hose fitting

**With Manual Operator Handle:**

**Mounting:** Top or left

**Fig. No. (Open-Close Position):** 1 through 16 (see dwg DPL81962)

**With Electric Rotary Actuator:**

**Mounting:** Top (see dwg DPL82771)

**Voltage:** 12 or 24 Volt

#### 8b, 8e.) Left and Right Rear Intake Adapters

Standard - Without

Optional - 5 in. ANSI fitting, 5 in. victaulic fitting

#### 8c, 8f.) Left and Right Intake Extensions (Use for Wider Panel Widths)

Standard - Without

Optional - 4 in.

Note: If a pump mounted discharge relief valve is ordered, also order a relief valve spacer the same length as the intake extension on the intake fitting relief valve pad.

#### 8d, 8g.) Left and Right Intake Fittings

Select a fitting to be mounted on the pump plus any auxiliary fittings mounted on the main fitting pads. Also select an intake screen if required.

See data sheet DS-4003.

### 9.) DISCHARGE

#### 9a, 9b.) Left and Right Discharge Fittings

Select a fitting to be mounted on the pump plus any auxiliary fittings and discharge valves mounted on the main fitting pads.

See data sheet DS-4001 (discharge and auxiliary fittings)

See data sheet DS-4000 (discharge valves)

#### 9c.) Center Discharge Piping

See data sheet DS-4007

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### **9d.) Front Discharge (not available on all bronze pumps)**

Non-angle compensated

Angle compensated

Angle compensated to match 4° offset on vehicle frame.

### **9e.) Additional Discharge Valves**

List all valves to be shipped loose

See data sheet DS-4000

### **9f.) Discharge Valve Accessories**

List any control rods, panel items, etc.

See data sheet DS-4000

## **10.) PRIMING SYSTEM**

**10a.) Priming Pump-** See data sheet DS-4002

**10b.) Priming Valve-** See data sheet DS-4002

**10c.) Priming Tank-** See data sheet DS-4002

**10d.) Prime-Safe Lubricant-** See data sheet DS-4002

## **11.) FOAM SYSTEM**

**11a.) Foam Manager-** See data sheet DS-4010

**11b.) Eclipse CAFS-** See data sheet DS-4011

**11c.) FoamPro Accessories-** See data sheet DS-4010

## **12.) DRAIN VALVE**

See data sheet DS-4006

## **13.) OVERHEAT PROTECTION MANAGER (OPM)**

See data sheet DS-4012

## **14.) MISCELLANEOUS**

**14a.) Additional Fittings-** List any additional discharge and auxiliary fittings which are to be shipped loose

See data sheet DS-4001

**14b.) Other Items-** List any miscellaneous items such as Monarch BFV items, kits, Y transmission oil cooler as required

See data sheet DS-4009

## **15.) SPECIALITY ITEMS**

**15a.) Warranty-** See data sheet DS-4008

**15b.) Paint-** See data sheet DS-4008

## DATA SHEET WATEROUS CM SERIES PUMPS

### AVAILABLE MODELS:

Capacities and Ratings	Basic Pump Model	Available Drives				Complete Pump/Trans Model	Assembly No.	Drawing
		Trans Series	Trans Type	Trans Model	Driveline Size			
500, 750, 1000, 1250 GPM at 150 psi	CM	C20	Split-Shaft, Chain Drive	C20B, C20C, C20D, C20E, C20F	2.35-46T Involute	CMC20B	82843 (Rear Drive)	DPL82843 (Rear Drive)
						CMC20C		
						CMC20D	83129 (Front Drive)	DPL83129 (Front Drive)
						CMC20E		
						CMC20F		
		K	Two-Gear No Clutch	Heavy Duty K	1-3/8-10 SAE	CMK	82843-2	DPL82843
D	Direct Drive	No Pump Mounted Trans (PTO Driven)	1-3/8-10 SAE	CMD	82843-4			
P	PTO Chain Drive	PA	1-1/2-10 SAE	CMPA	82843-6			
1250, 1500, 1750, 2000, 2250 GPM at 150 psi	CMU	C20	Split-Shaft, Chain Drive	C20B, C20C, C20D, C20E, C20F	2.35-46T Involute	CMUC20B	82843-1 (Rear Drive)	DPL82843 (Rear Drive)
						CMUC20C		
						CMUC20D	83129-1 (Front Drive)	DPL83129 (Front Drive)
						CMUC20E		
		CMUC20F						
D	Direct Drive	No Pump Mounted Trans (PTO Driven)	1-3/8-10 SAE	CMUD	82843-5	DPL82843		