



Data Sheet

Form No.	Issue Date	Rev. Date
DS-1001	04/19/96	3/4/20

WATEROUS CS SERIES PUMPS

DESCRIPTION: MIDSHIP MOUNTED SINGLE STAGE CENTRIFUGAL FIRE PUMP

WATEROUS CS SERIES CENTRIFUGAL FIRE PUMPS ARE AVAILABLE AS FOLLOWS:

CS Single Stage: 750, 1000, 1250 GPM capacities at 150 psi

CSU Single Stage: 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: CS and CSU: 400 PSIG maximum discharge pressure

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WATEROUS CS SERIES PUMPS

SPECIFY A COMPLETE PUMP AS FOLLOWS:

1.) VEHICLE INFORMATION

(See order form)

2.) PUMP INFORMATION

Rated Capacity-

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

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

4c.) K Series- See data sheet DS-2000

4d.) PA Series- See data sheet DS-2004

4e.) Q Series- Rear mounted, CCW input, vertical case rotated CW 22.5°

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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

CS- Standard: Without

Optional: With

CSU- Standard: With

Part Numbers

Model	Capacity	Main Impeller			Note
		Standard		Optional	
		Non-Flame Plated	Flame Plated		
CS	750 GPM 1000 GPM 1250 GPM	71799	71799-T	-	-
CSU	1250 GPM 1500 GPM 1750 GPM 2000 GPM	-	81882-T	71651-T	Optional Impeller 71651-T only available if altitude exceeds 2000 feet
	2250 GPM	-	71651-T	-	-

6.) TRANSFER VALVE ACTUATOR

Not Used on CS Models

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)

or

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 DPL81962)

With Electric Rotary Actuator:

Mounting: Top (see DPL82771)

Voltage: 12 or 24 Volt

With Manual Rotary Actuator Handle (Indicating):

Mounting: Top

Fig. No. 1-2 (see dwg DPL83630)

Voltage: 12 or 24 Volt

With Manual Rotary Actuator Handle (Indicating):

Mounting: Top

Fig No. 1-2 (see dwg DPL83630)

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.

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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

9d.) Front Discharge (not available on 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

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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, C20 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

AVAILABLE MODELS:

Capacities and Ratings	Basic Pump Model	Available Drives				Complete Pump/Trans Model	Drawing
		Trans Series	Trans Type	Trans Model	Driveline Size		
750, 1000, 1250 GPM at 150 psi	CS	C20	Split-Shaft, Chain Drive	C20B, C20C, C20D, C20E, C20F	2.35-46T Involute	CSC20B	DPL82791 (Rear Drive)
						CSC20C	
						CSC20D	
						CSC20E	
						CSC20F	DPL83130 (Front Drive)
		K	Two-Gear No Clutch	Heavy Duty K	1-3/8-10 SAE	CSK	DPL82791
D	Direct Drive	No Pump Mounted Trans (PTO Driven)	1-3/8-10 SAE	CSD			
P	PTO Chain Drive	PA	1-1/2-10 SAE	CSPA			
Q	PTO Chain Drive	QC	1-3/4-10 SAE	CSQC	DPL82791		
1250, 1500, 1750, 2000, 2250 GPM at 150 psi	CSU	C20	Split-Shaft, Chain Drive	C20B, C20C, C20D, C20E, C20F	2.35-46T Involute	CSUC20B	DPL82791 (Rear Drive)
						CSUC20C	
						CSUC20D	
						CSUC20E	
						CSUC20F	DPL83130 (Front Drive)
		K*	Two-Gear No Clutch	Extra Heavy Duty K	SAE Class D	CSUK	DPL82791
D	Direct Drive	No Pump Mounted Trans (PTO Driven)	1-3/8-10 SAE	CSUD			
P*	PTO Chain Drive	PA	1-1/2-10 SAE	CSUPA			
QC	PTO Chain Drive	QC	1-3/4-10 SAE	CSUQC	DPL82791		

* Models CSUK and CSUPA limited to 1500 GPM max rating.