



Data Sheet

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DS-2009	10/24/22	8/27/24

WATEROUS C22 SERIES CHAIN DRIVE TRANSMISSION

DESCRIPTION: SPLIT SHAFT CHAIN DRIVE FIRE PUMP TRANSMISSIONS

C22 SERIES TRANSMISSIONS ARE AVAILABLE AS FOLLOWS:

Table 1. C22 Series Transmissions

Model	Drop Dimension	Driveline				For Pumps Rated	Used on Pump Models	Dim. Drawing
		Type	Size	Spline	Chain Width			
C22B, C22C, C22D, C22E, C22F	See Table 2	Extra Heavy Duty	2.35 in.	2.35-46T Involute	2-1/2 in.	500 - 2250 GPM 1893-8517 L/min	CM, CMU	DPL83913
							CM, CGV	DPL83914
							CS, CSU	DPL83915
							CXN, CXS, CXV	DPL83916
							CGV, CGVG	DPL83917
							S100, S101	DPL83918
							ESU1	DPL83991

Table 2. Drop Dimensions (Distance from impeller shaft to driveline) by transmission model

Transmission Model	Drop Dimension	
C22B	11.840 to 12.327	300.74 to 313.11 mm
C22C	13.680 to 14.303	347.47 to 363.30 mm
C22D	14.722 to 15.174	373.94 to 385.42 mm
C22E	16.763 to 17.155	425.78 to 435.73 mm
C22F	18.812 to 19.205	477.82 to 487.81 mm

NOTE: Drop values vary by ratio. Refer to pump dimensional drawings for exact dimensions.

DATA SHEET

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SPECIFY A COMPLETE C22 SERIES TRANSMISSION AS FOLLOWS:

TRANSMISSION MODEL

Determine model based on drop dimension; add to basic pump model. Ex: CSUC**22C**

RATIO

Specify one of the following: 1.14, 1.27, 1.41, 1.48, 1.58, 1.69, 1.79, 1.88, 1.97, 2.03, 2.27, 2.46, 2.68

MOUNTING ON PUMP (*CM, CMU, CS and CSU Models Only*)

Rear (Rear Drive)

Front (Front Drive)

HYDRAULIC PUMP MOUNTING ON BACK OF TRANSMISSION (*Choice Optional*)

SAE Class B 2-Bolt with 7/8-13T, 16-32 Internal Spline

Available only on S100, S101, CM, CMU, CS and CSU Models

Note that transmission must be mounted on the rear of CM, CMU, CS and CSU models for this option

TACHOMETER

Not Offered

PUMP SHIFT

See data sheet, DS-4005

DRIVELINE

Size: 2.35-46T, 20/40 DP, 37-1/2 degree involute spline
19,000 ft-lb (25,840 N·m) maximum torque
Compatible with 2-25/64-46T (2.35-46T) internal involute spline

Type: Standard: Input and output shaft
Optional: Input shaft only

Maximum Input Shaft Speed: 4000 RPM

Optional End Yokes and Companion Flanges: See table on next page.

DATA SHEET

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Optional Driveline End Yokes and Companion Flanges								
Type	U-Joint Series	Pilot Diameter	Waterous Part No.	Optional End Yoke Cross and Bearing Kit <i>(See Note 1)</i>	Mates with Spicer Flanged Yokes <i>(Not available from Waterous)</i>		Qty Required for Driveline Type	
					Series	Spicer Part No.	Input and Output Shaft	Input Shaft Only
End Yoke, BP <i>(Bearing Plate Type)</i>	1710	-	V 2837	V 2839	-	-	2	1
	1810	-	V 2838	V 2840				
	SPL 140	-	V 3388	V 3389				
End Yoke, HR <i>(Half Round Type)</i>	1810	-	V 4102	Uses Spicer 5-675X <i>(Not available from Waterous)</i>				
Companion flange	ISO 8667 <i>(Serrated)</i>	-	63714	-	-	-		
	1710/1810	7.750	V 3619	-	SPL 90	90-2-69-1		
					SPL 140	140-2-29		
					SPL 170	170-2-19		
					SPL 250	250-2-19		
					1610	5-2-619		
					1710 BP	6-2-749		
					1710 HR	6-4-4771-1		
					1810 BP	6.5-2.239		
	1810 HR	6.5-4-2541-1						
	1480/1610	6.625	V 3719	-	SPL 90	90-2-19		
					1480	3-2-499		
					1550	4-2-689		
					1610	5-2-629		

Note:

- 1) Cross and Bearing Kits are shipped loose.