



# Data Sheet

Form No.	Issue Date	Rev. Date
<b>DS-3012</b>	<b>10/24/22</b>	<b>11/14/22</b>

## WATEROUS TC22 SERIES POWER TAKE-OFF

### DESCRIPTION: SPLIT SHAFT CHAIN DRIVE POWER TAKE-OFF

#### TC22 SERIES PTOs ARE AVAILABLE AS FOLLOWS

Table 1. TC22 Series PTOs

Model	Driveline		CAFS	Output Shaft			CAFS Model	Dim. Dwg
	Spline	Input		Type	Front Facing	Rear Facing		
TC22B TC22C TC22D TC22E TC22F	2.35-46T Involute	CW	Without	Single	1410 Series End Yoke	None	-	DPL83920
					SAE Class B 2-Bolt Hydraulic Flange with 7/8-13T (SAE B) Internal Involute Spline	None		
					None	1410 Series End Yoke		
				None	SAE Class B 2-Bolt Hydraulic Flange with 7/8-13T (SAE B) Internal Involute Spline			
				Dual	1410 Series End Yoke	SAE Class B 2-Bolt Hydraulic Flange with 7/8-13T (SAE B) Internal Involute Spline		
					SAE Class B 2-Bolt Hydraulic Flange with 7/8-13T (SAE B) Internal Involute Spline	1410 Series End Yoke		
With	Single	None, Air Compressor is Mounted on Front	1410 Series End Yoke	Eclipse ES	DPL83921			
				150-ESD	DPL83924			
				150-ESECL				

Table 2. Drop Dimensions (Distance from Output Shaft to Driveline) by PTO Model

PTO Model	Drop Dimension (Distance from Output Shaft to Driveline)	
	TC22B	11.840 to 12.326 in.
TC22C	13.680 to 14.302 in.	347.47 to 363.27 mm
TC22D	14.722 to 15.173 in.	373.94 to 385.39 mm
TC22E	16.763 to 17.154 in.	425.78 to 435.71 mm
TC22F	18.814 to 19.205 in.	477.88 to 487.81 mm

**Note: Drop values vary by ratio. Refer to Dimensional Drawings for exact dimensions.**

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### ***SPECIFY A COMPLETE TC22 SERIES PTO AS FOLLOWS:***

#### **PTO MODEL**

Determine model needed based on drop dimension. Refer to Dimensional Drawings.

#### **DIMENSIONAL ASSEMBLY NUMBER**

Without CAFS:	83920
With Eclipse ES CAFS:	83921
With 150-ESD CAFS:	83924
With 150-ESECL CAFS:	83927

#### **OUTPUT**

##### **Without CAFS**

**Type -** Single or Dual Output

**Location -** Front or Rear

**Connection -**       **Single:** 1410 Series End Yoke with U-Bolts (Facing Front or Rear)

or

SAE Class B 2-Bolt Hydraulic Adapter with 7/8-13T (SAE B) Internal Involute Spline (Facing Front or Rear)

**Dual:** 1410 Series End Yoke with U-Bolts (Facing Front or Rear) and

SAE Class B 2-Bolt Hydraulic Adapter with 7/8-13T (SAE B) Internal Involute Spline (Facing Front or Rear)

##### **With CAFS**

**Type -** Single

**Location -** Rear (Air Compressor is Mounted on Front)

**Connection -** 1410 Series End Yoke with U-Bolts (Facing Rear)

#### **RATIO**

##### **Without CAFS**

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

##### **With CAFS**

1.58, 1.69, 1.79, 1.88, 1.97, 2.03, 2.27, 2.68

#### **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.

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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	2	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	2	1
					1480	3-2-499		
					1550	4-2-689		
					1610	5-2-629		

**Note:**

- 1) Cross and Bearing Kits are shipped loose.

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### Tachometer:

Not Offered

### SHIFT TYPE

**Pneumatic or No Shift**

### INDICATING LIGHTS (PER NFPA 1901)

**Pneumatic:** With or Without (OEM to furnish)

**No Shift:** Not applicable

### SYSTEM VOLTAGE

**12 volt or 24 volt**

### OPTIONAL AIR COMPRESSOR KIT (PNEUMATIC SHIFT ONLY)

Consists of a 12 Volt compressor (6.00" L x 3.30" W x 4.90" H), .50 gallon air tank (6.00" L x 6.50" W x 7.00" H) and on-board air hook-up kit.

### PRIMING PUMP

See data sheet, DS-4002

(Required only if PTO is used in a fire pump application, this option may be mounted on the PTO)

### FOAM PUMP

If required, must be ordered with fire pump. See Data Sheet DS-4014.

### CAFS

See DS-4017 for Eclipse ES and 150-ESD

See DS-4021 for 150-ESECL