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| Form No.<br><b>DS-1020</b> | Issue Date<br><b>4/17/24</b> | Rev. Date |
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## WATEROUS ES SERIES PUMPS

### ES PUMPS ARE AVAILABLE AS FOLLOWS:

Table 1. Available Pump Models

| Intake                                  | Pump Model | Discharge                              | Transmission             |                |                     | Pump and Transmission            |                               | Hydraulic Pump Mounting Provision<br><i>(See Note 1)</i> | See Dwg  |
|---|------------|--|--------------------------|----------------|---------------------|----------------------------------|-------------------------------|--|----------|
|   |            |  | Series                   | Input Rotation | Driveline           | Model                            | Pump Mounting on Transmission |  |          |
| 8 in. Victaulic or Dual 6 in. Victaulic | ESU1       | 4 in. or 5 in. ANSI Flange or Manifold | C22                      | CW             | 2.35-46T Spline     | ESU1C22C                         | Front (Input Shaft Side)      | With or Without  | DPL83991 |
|   |            |  |                          |                |                     | ESU1C22D<br>ESU1C22E<br>ESU1C22F | Rear (Output Shaft Side)      | With or Without  |          |
|   |            |  | D<br><i>(See Note 2)</i> | CW or CCW      | 1-3/8-10 SAE Spline | ESU1D                            | -                             | Not Available  |          |

Table 2. Available Rated Capacities

| Model |   |                       | U.S. GPM            | Additional Dual Rating |
|-------|---|-----------------------|---------------------|------------------------|
| Pump  | Intake                                  | Pump and Transmission |                     |                        |
| ESU1  | 8 in. Victaulic or Dual 6 in. Victaulic | ESU1C22C              | 1500                | 2000                   |
|       |   | ESU1C22D              | 1750                | 2000                   |
|       |   | ESU1C22E              | 2000                | 1500                   |
|       |   | ESU1C22F              | 2250                | 2000                   |
|       |   | ESU1D                 | <i>(See Note 3)</i> |                        |

**Notes:**

- 1) Hydraulic Pump Mounting Provision consists of an SAE Class B 2-bolt flange with a 3/4-13T, 16/32 internal involute spline on the transmission end opposite of the pump.
- 2) ESU1D Direct Drive pump has mounting pads on the bearing housing, pump body and intake adapter.
- 3) 2250 GPM rated ESU1 pump models incorporate an intake inducer.

# DATA SHEET

## WATEROUS ESU1 SERIES PUMPS

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

**1.) VEHICLE INFORMATION**

(See order form)

**2.) PUMP INFORMATION**

**Rated Capacity-**

See table 2

**Certification-**

NFPA or list other

**Additional (Dual) Rating-**

See table 2

**3.) PUMP MODEL**

**Pump and Transmission Model-**

See table 1

**Material-**

Standard - Grey iron body and fittings, bronze fitted

(See form F-2011 for additional information on materials)

**Pump Discharge Position-**

ESU1C22 Series: Left, Up, Right (See DPL83991 for Restrictions)

ESU1D Model: Left, Up, Right

**Bearing Housing Bracket Position (ESU1D Model Only)-**

Inverted or Vertical

**4.) TRANSMISSIONS**

**4a.) C22 Series -** See data sheet DS-2009

**4b.) Direct Drive -**

Input Rotation: CW or CCW

Input Shaft: 1-3/8-10 SAE Spline

# DATA SHEET

## WATEROUS ESU1 SERIES PUMPS

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### 5.) IMPELLER SHAFT

**Shaft Material-**

Standard: 17-4 Stainless steel

**Seal Type-**

Standard: Self-adjusting mechanical seal

**Impeller Part No.-**

|                |     |                            |
|----------------|-----|----------------------------|
| ESU1C22 Series | — [ | 83955 (Front Mounted Pump) |
|                |     | 83986 (Rear Mounted Pump)  |

|              |     |                   |
|--------------|-----|-------------------|
| ESU1D Series | — [ | 83986 (CW Input)  |
|              |     | 83955 (CCW Input) |

### 6.) PRESSURE CONTROL SYSTEM

**6a.) Discharge Relief Valve-** Builder Supplied Governor System or Waterous supplied,  
See Data Sheet DS-4004

**6b.) Intake Relief Valve-** See data sheet DS-4004

### 7.) INTAKE

**7a.) Intake, ESU1 Models**

**1.) Intake Size -** 8 in. Victaulic® or dual 6 in. Victaulic

# DATA SHEET

## WATEROUS ESU1 SERIES PUMPS

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### 8.) DISCHARGE

#### 8a.) Discharge Fitting-

(Blank) No Fitting 5 in. ANSI Flange

or

Manifold with 4 in. end flanges and (8) 2-1/2 in. 4-bolt pads mounted parallel or perpendicular to intake (with 4° angle compensated or without angle compensation)

or

Manifold with 3-1/2 in. end flanges and (2) 2-1/2 4-bolt and (2) 2 in. NPT side pads mounted parallel or perpendicular to intake (with 4° angle compensation or without angle compensation)

or

5 in. ANSI to 4 in. ANSI flange adapter (with 4° angle compensation or without angle compensation)

#### 8b.) Manifold-

Select any auxiliary fittings and discharge valves which are to be mounted on the discharge manifold.

See data sheet DS-4001 (auxiliary fittings)

See data sheet DS-4000 (discharge valves)

#### 8c.) Additional Discharge Valves-

List all valves to be shipped loose

See data sheet DS-4000

#### 8d.) Discharge Valve Accessories-

List any control rods, panel items, etc.

See data sheet DS-4000

### 9.) PRIMING SYSTEM

9a.) Priming Pump- See data sheet DS-4002

9b.) Priming Valve- See data sheet DS-4002

9c.) Optional Lubricant Tank- See data sheet DS-4002

9d.) Prime-Safe Lubricant- See data sheet DS-4002

### 10.) FOAM SYSTEM

10a.) Foam Manager- See data sheet DS-4010

10b.) Accessories- See data sheet DS-4010

### 11.) DRAIN VALVE

See data sheet DS-4006

# DATA SHEET

## WATEROUS ESU1 SERIES PUMPS

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### 12.) MISCELLANEOUS

**13a.) Additional Fittings-** List any additional discharge and auxiliary fittings which are to be shipped loose  
See data sheet DS-4001

**13b.) Other Items-** List any miscellaneous items such as Anode, OPM items, kits as required  
See data sheet DS-4009

### 13.) SPECIALITY OPTIONS

**14a.) Warranty-** See data sheet DS-4008

**14b.) Paint-** See data sheet DS-4008

**14c.) Extra Operators Manuals-** See data sheet DS-4008

**14d.) Operation and Maintenance Video-** See data sheet DS-4008