

## 2000 Series Pumps

### Applications

The 2000 Series pumping systems are available in two sizes. The smaller system 2245 has 61 L/min (16 gal[US]/min) flow capacity and can supply oil up to 14 238 N·m (10 500 lb-ft) governors. This system replaces the following 20 Series Woodward pumps: Sizes 21, 22, 23.5, and 24.5 pumps. The larger system 2275 has 155 L/min (41 gal[US]/min) flow capacity and can supply oil up to 56 952 N·m (42 000 lb-ft) governors. This system replaces Woodward 20 Series pumps: Sizes 25, 26, 27, and 27.5 pumps. Adjustable blade turbines or penstock valves may be operated from the pump by using a pump of sufficient capacity.

### Description

Woodward 2000 Series pumping systems are complete, self-contained units designed to supply oil pressure from 1241 to 1379 kPa (180–200 psi) for hydraulic governors.

### Specifications

#### Cleanliness Control System

Maintains system cleanliness from ISO 16/13 to ISO 18/15

#### ASME Tank Rating

Manufactured and tested to ASME Section 8, Division 1 of the code

#### Ambient Temperature Range

10 to 43 °C (50 to 110 °F)

#### ASME Safety Rating

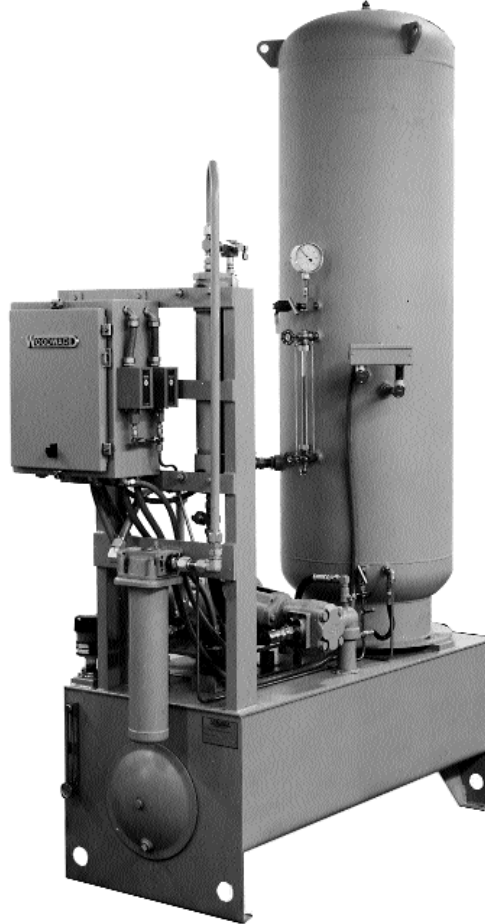
The ASME certified air safety will blow at or below 2137 kPa (310 psi)

#### Oil Safety

Factory set to operate at 1724 kPa (250 psi)

#### Switches

- Oil Sump Float Switch: Rated at 0.13 A @ 125 Vdc
- Oil Temperature Switch: 4 A @ 125 Vdc
- Pressure Switch: 0.5 A @ 123 Vdc



- Cleanliness control system
- ASME certified pressure tank and air safety
- Oil safety
- 2 oil sump level switches
- Oil temperature switch
- 2 pressure switches
- Pressure tank float valve
- Sump air breathers
- Oil sump thermometer
- Air charging capability
- Manual air blowoff valve
- Magnet trap in sump
- Options:
  - –Air admission system
  - –Automatic air release system
  - –Dirty oil filter switch

**Pressure Tank Float Valve**

Maximum flow: 1249 L/min (330 gal/min)  
Maximum pressure: 2758 kPa (400 psi)

**Sump Air Breather**

3 micron filter elements and water-removing desiccants

**Oil Sump Thermometer**

Reads from -18 to 104 °C (0 to 220 °F)

**Air Charging Capability**

1.5 hours for complete tank charge

**Automatic Air Release System (optional)**

1–10 seconds per release

**Automatic Air Admission System (optional)**

Makes up for air loss up to 38 mm (1.5") per day

**Dirty Filter Detection (optional)**

Switch trips at 186 kPa (27 psi)  
Contact rating is 5 A for 125/250 Vac

**2245 Pump Specifications****Dimensions**

Width: 686 mm (27")  
Length: 1219 mm (48")  
Height (sump): 533 mm (21")  
Height (sump and pressure tank): 1803 mm (71")

**Weight (including normal oil levels)**

680 kg (1500 lb)

**Motor**

3.7 kW (5 hp); 230/460 Vac; 60 Hz; 1750 rpm

**Pump**

61 L/min (16 gal/min) gear pump

**Sump Oil Capacity:**

227 L (60 gal[US])

**Pressure Tank Capacity**

With 14 238 N·m (10 500 lb-ft) governor (11.6 L/0.41 ft<sup>3</sup> servo), the pressure tank has 3.5 servos of usable oil from normal pressure 1379 kPa (200 psi) down to float valve closed pressure 862 kPa (125 psi)  
Nominal sump filling volume: 114 L (30 gal)

**2275 Pump Specifications****Dimensions**

Width: 686 mm (27")  
Length: 1524 mm (60")  
Height (sump): 622 mm (24.5")  
Height (sump and pressure tank): 2794 mm (110")

**Weight (including normal oil levels)**

1134 kg (2500 lb)

**Motor**

7.5 kW (10 hp); 230/460 Vac; 60 Hz; 1750 rpm

**Pump**

155 L/min (41 gal/min) gear pump

**Sump Oil Capacity**

378 L (100 gal[US])

**Pressure Tank Capacity**

With 56 952 N·m (42 000 lb-ft) governor (45.6 L/1.61 ft<sup>3</sup> servo), the pressure tank has 3.5 servos of usable oil from normal pressure 1379 kPa (200 psi) down to float valve closed pressure 862 kPa (125 psi)  
Nominal sump filling volume: 322 L (85 gal)



PO Box 1519, Fort Collins CO, USA 80522-1519  
1000 East Drake Road, Fort Collins CO 80525  
Tel.: +1 (970) 482-5811 • Fax: +1 (970) 498-3058  
[www.woodward.com](http://www.woodward.com)

**Distributors & Service**

Woodward has an international network of distributors and service facilities. For your nearest representative, call the Fort Collins plant or see the Worldwide Directory on our website.

This document is distributed for informational purposes only. It is not to be construed as creating or becoming part of any Woodward contractual or warranty obligation unless expressly stated in a written sales contract.

Copyright © Woodward 1994, All Rights Reserved

For more information contact:

