

#### SUNFLO Industrial Grade High-Pressure Pumps



RELIABILITY REALIZED.

#### The most versatile solution for high pressure water applications.

Industrial grade Sunflo pumps are specifically designed for high-pressure applications such as boiler feed, NOx suppression, reverse osmosis and high-pressure washdown applications that are common to power generation, maritime, transportation or food & beverage industries.

Single-stage centrifugal integrally geared Sunflo pumps leverage the engineering knowledge and legacy of Sundyne heavy-duty API pumps to create a family of industrial grade pumps that are ready to take on the toughest applications. Each member of the Sunflo family is optimized to provide a range of flow rates from 10 GPM (1 m<sup>3</sup>/hr) to 550 GPM (125 m<sup>3</sup>/hr), and head from 100 feet (22 m) to 5,200 feet (1,585 m).

The preferred Choice for Boiler Feed Applications

Boiler feed applications in hospitals, hotels, office complexes and universities need highly efficient, high-pressure pumps that can operate reliably. Similarly, boiler feed applications in chemical plants, manufacturing plants and some refineries are also best-served by Sunflo industrial-grade pumps.



Sunflo integrally geared high-pressure pumps feature robust thrust bearings engineered to withstand the high thrust loads produced during upset conditions common in plants with low deaerator heights. Sunflo pumps will withstand such upsets and continue to perform in transient conditions under which ring-section pumps will fail.

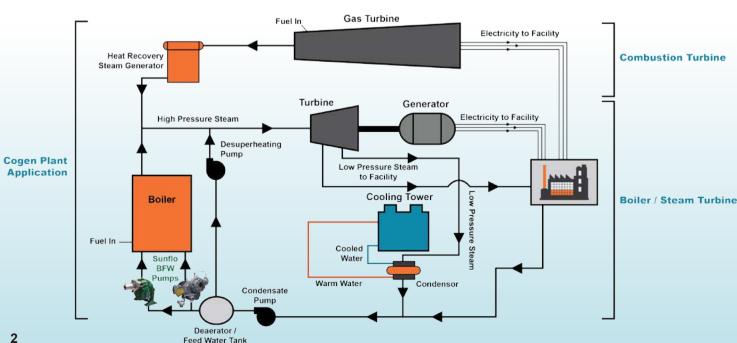


The impellers on Sunflo pumps feature a unique suction inducer technology, which is optimized for low NPSH requirements – enabling the pump to operate without cavitation. Sunflo pumps also leverage Sundyne's field-proven high-pressure impeller technology that is optimized to deliver high head.

Sunflo pumps are well suited for the corrosive nature of today's boiler feed water applications, featuring 316stainless steel construction as a standard, compared to segmented ring pumps that are commonly constructed from cast iron or carbon steel.

▼ Segmented Ring Pump from **Boiler Feed Application** 







Sunflo pumps are available in close-coupled, frame-mount, or base plate configurations. Their versatility, small footprint and ability to be repaired/maintained in place makes them a preferred choice for OEMs and end users around the globe.









Sunflo

**Ease of Maintenance** 









**Simple By Design** 

**Elapsed Time - 1 Hour** 

# Typical Applications.

Sunflo pumps are in service around the world typically in medium-duty applications in the Chemical Processing, Power Generation, Industrial, Hydrocarbon Processing and Oil & Gas Production segments.



#### **CHEMICAL PROCESSING**

**■ CHEMICAL** 

Caustic Service, Seal Flushing, Descaling, Spraying, Transfer, Boiler Feed









#### **HYDROCARBON PROCESSING**

■ PETROLEUM, PETROCHEMICAL
Refining, Caustic Service, Seal Flushing, Well Injection









#### **INDUSTRIAL**

#### **■ FOOD AND BEVERAGE PRODUCTION**

Central Cleaning, Beverage Container Washing, Boiler Feed

#### **■ GENERAL INDUSTRIAL**

Boiler Feed, Vehicle Washing, Tank Cleaning, Water, High Pressure Wash, Filter Clean

#### ■ PULP AND PAPER

Boiler Feed, Reverse Osmosis, Trim Squirt, Roll & Felt Cleaning

#### **■ MANUFACTURING**

**Gun Drill Coolant Feed** 

#### **■ MINING**

**Dust Suppression, Low Flow Dewatering** 

#### **POWER GENERATION**

#### **■ POLLUTION CONTROL**

Reverse Osmosis, NOx Suppression, Spraying, Descaling, Wet Scrubbing

#### **■ POWER SYSTEMS**

Combustion Turbine Water Injection and Inlet Fogging, Desuperheating, Condensate Return









#### OIL & GAS

#### OIL PRODUCTION

Saltwater Disposal, Distillate Injection, Water Flood, Reverse Osmosis, Water Reinjection







## P-1500



The P-1500 is part of the Sunflo line of industrial grade, general service pumps. It expands the product family performance envelope in the lower ranges and offers a better cost effective solution over other higher head and flow Sunflo models.

- Flows to 33 gpm (7.5 m<sup>3</sup>/hr)
- Heads to 1,300 ft (396 m)

For general industry services such as wash water, condensate, mineral processing, reverse osmosis, high pressure wash down and tank farm transfer, the P-1500 is a highly efficient, high pressure pump that operates reliably.

The P-1500 is designed to deliver maximized up-time, reduced maintenance costs and optimized productivity over the lifecycle of the unit.

#### **Industrial Grade High-Pressure Pump**

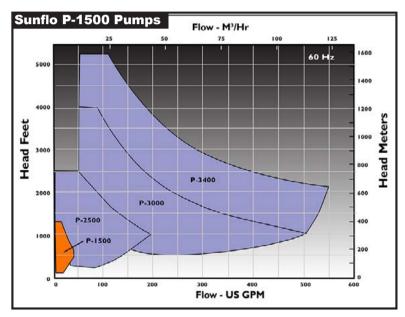
**General Industry** 

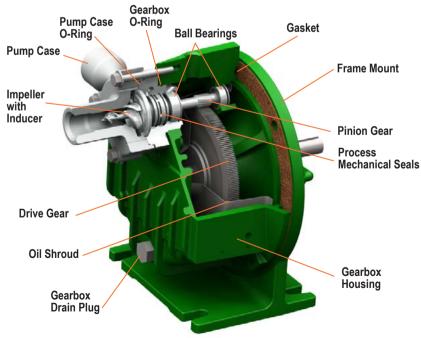
Flow: to 33 GPM (7.5m<sup>3</sup>/hr)

Head: to 1,300 Feet (396m)

Temp: -50F (-46C) to 300F (149C)

Pressure: to 1,000 PSI (70kg/cm<sup>2</sup>)





## P-2500.



The P-2500 is part of the Sunflo line of industrial grade, high pressure pumps for general service. It covers the middle range in the product family performance envelope to address ranges that include:

- Flows to 180 gpm (41 m<sup>3</sup>/hr)
- Heads to 2,600 ft (792 m)

Used in general industry services including wash water, boiler feed, condensate, mineral processing, reverse osmosis, high

pressure wash down and tank farm transfer, the Sunflo P-2500 is a highly efficient, high pressure pump that remains in continuous service worldwide.

The P-2500 is designed to deliver maximized up-time, reduced maintenance costs and optimized productivity over the lifecycle of the unit.

#### **Industrial Grade High-Pressure Pump**

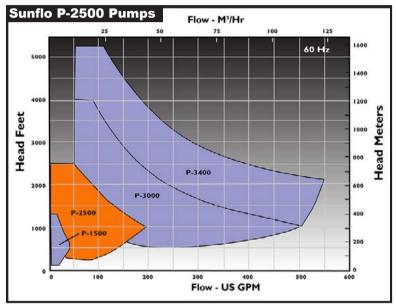
**General Industry** 

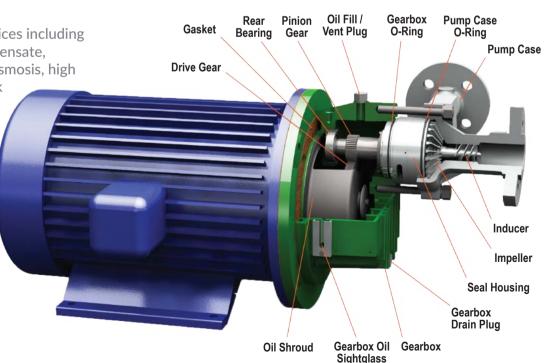
Flow: to 180 GPM (41m<sup>3</sup>/hr)

Head: to 2,600 Feet (792m)

Temp: -50F (-46C) to 300F (149C)

Pressure: to 1,440 PSI (105 kg/cm<sup>2</sup>)





### P-300



The P-3000 is part of the Sunflo line of industrial grade, high pressure pumps for general service. It extends the performance of the product family by expanding the performance envelope to address ranges that include:

- Flows to 500 gpm (114 m<sup>3</sup>/hr)
- Heads to 5,200 ft (1,585 m)

The P-3000 is ideal for high-pressure water applications, including wash water and boiler feeds for powerplants. It is designed to deliver maximized up-time, reduced maintenance costs and optimized productivity over the lifecycle of the unit.

#### **Industrial Grade High-Pressure Pump**

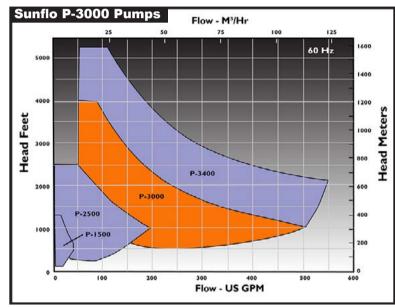
High Pressure Water

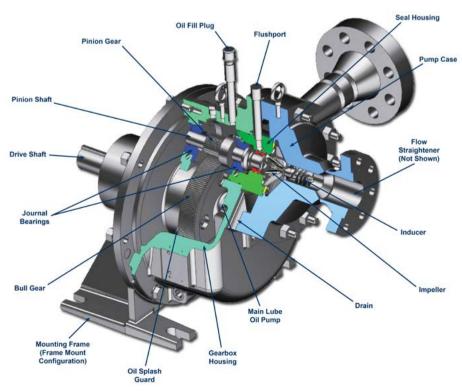
Flow: to 500 GPM (114m<sup>3</sup>/hr)

Head: to 4,200 Feet (1,280m)

Temp: -50F (-46C) to 350F (177C)

Pressure: to 2,160 PSI (152 kg/cm<sup>2</sup>)





## P-3400



The P-3400 is part of the Sunflo line of industrial grade, high pressure pumps for general service. It extends the performance of the product family by expanding the performance envelope to address ranges that include:

- Flows to 550 gpm (125 m<sup>3</sup>/hr)
- Heads from 1,000 to 5,200 ft (305 to 1,585 m)

The P-3400 is ideal for high-pressure water applications, including wash water and boiler feeds for powerplants. It is designed to deliver maximized up-time, reduced maintenance costs and optimized productivity over the lifecycle of the unit.

#### **Industrial Grade High-Pressure Pump**

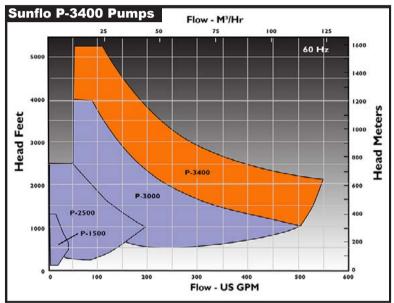
**General Industry** 

Flow: to 550 GPM (125m<sup>3</sup>/hr)

Head: to 5,200 Feet (1,585m)

Temp: -50F (-46C) to 350F (177C)

Pressure: to 2,160 PSI (152 kg/cm<sup>2</sup>)





## Sunfo Pumps.

Industrial Grade High-Press	sure Pumps			
	P-1500	P-2500 *	*P-3000	P-3400
Key Benefit:	High-pressure	Highly efficient	Reliable	Enhanced (HI Compliant)
Heads To	100 to 1,300 ft (22 to 277 m)	250 to 2,600 ft (53 to 554 m)	500 to 4,200 ft (106 to 1,280 m)	1000 to 5,200 ft (305 to 1,585 m)
Flows To	10 to 33 gpm (1 to 6 m³/hr)	20 to 180 gpm (3 to 40 m³/hr)	50 to 500 gpm (9 to 91 m³/hr)	50 to 550 gpm (9 to 125 m³/hr)
Max Power	10 hp (7 kW)	75 hp (55 kW)	100 – 250 hp (74 – 186 kW)	100 - 400 hp (73 - 293 kW)
Temp Range	-50 to 300°F (-46 to 149°C)	-50 to 300°F (-46 to 149°C)	-50 to 350°F (-46 to 177°C)	-50 to 350°F (-46 to 177°C)
Number of Stages	1.0	1.0	1.0	1.0
Max Case Working Pressure	1,000 psi (70 kg/cm²)	1,440 psi (105 kg/cm²)	2,160 psi (152 kg/cm²)	2,160 psi (152 kg/cm²)
Max Suction Pressure	200 psi (14 kg/cm²)	250 psi (18 kg/cm²)	350 psi (25 kg/cm²)	350 psi (25 kg/cm²)
Speed Range	13,000 to 32,000 rpm-60Hz	5,987 to 14,707 rpm-60Hz	6,756 to 17,750 rpm-60Hz	6,756 to 21,000 rpm-60Hz
Materials Of Construction	316SS	316SS (Duplex SS Optional), Hastelloy, AISI 4140 / 8620 / 9310 Steel, Aluminum or Cast Steel	316SS (Duplex SS Optional), Hastelloy, AISI 4140 / 8620 / 9310 Steel, Aluminum or Cast Steel	316SS (Duplex SS Optional), Hastelloy, AISI 4140 / 8620 / 9310 Steel, Aluminum or Cast Steel
Bearing Technology	Splash Lubricated, Rolling Element	Splash Lubricated, Rolling Element	Splash Lubricated, Rolling Element Pressure Lubricated, Journal Bearings	Pressure Lubricated, Journal Bearings
Hydrotest Pressure	1,080 psig (75 kg/cm²g)	2,160 psig (151 kg/cm²g)	2,160 psig (151 kg/cm²g)	2,160 psig (151 kg/cm²g)
Max Viscosity	10 ср	10 ср	10 cp	10 cp
Solids Range	0.015" (0.381mm), 400 microns	0.015" (0.381mm), 400 microns	0.015" (0.381mm), 400 microns	0.015" (0.381mm), 400 microns
Mounting Configurations	Close Coupled, Frame Mounted	Close Coupled, Frame Mounted	Close Coupled, Frame Mounted	Frame Mounted
Number Of Available Hydraulics	36.0	147.0	244.0	244.0
Seal Configurations Available	Single, Double	Single, Double, Tandem	Single, Double	Single, Double
Available Inducer	Yes	Yes	Yes	Yes
Available Connections	NPT, 300#RF	NPT, 300#RF, 600#RF	600#RF, 900#RF Discharge Flange	600#RF, 900#RF Discharge Flange
Pump Case Corrosion Allowance	Generous Clearances	Generous Clearances	Generous Clearances	Generous Clearances
Suction and Discharge Size	1"X1"	2"X1.5"	3"X2" and 4"X3"	3"X2" and 4"X3"
Seal Plans for Sunflo Pumps	11, 13, 21, 31, 41, 53	11, 13, 21, 23, 31, 32, 41, 52, 53	11, 13, 21, 23, 31, 32, 41, 53	11, 13, 21, 23, 31, 32, 41, 53

#### INDUSTRIAL GRADE PUMPS

- MULTISTAGE PERFORMANCE IN A SINGLE STAGE DESIGN | Best Efficiency Point is the operating point which is maintained over the life of the pump.
- CLOSE COUPLED | Eliminates alignment issues and simplifies installation.
- LOW NPSHr PERFORMANCE | Sunflo inducer technology provides for industry leading low NPSHr.
- ROBUST BEARING SYSTEM | Bearing systems are designed to fully handle all hydraulic loading without dependence on problematic thrust balancing devices.
- 316SS CONSTRUCTION | Provides corrosion free service in a small package reducing initial installation and life-cycle costs.
- BARSKE OPEN IMPELLER | Pump impeller design clearances provide thermal stability thus eliminating pre-warming requirements.
- MAINTENANCE IN PLACE I No need to remove and send pump out for repairs, quick removal and replacement of cartridge shaft assembly on site under 2 hours.

# Sales & Service Support.

#### **AFTERMARKET SUPPORT**

■ Genuine Service and Parts Program

■ Factory authorized overhaul and repair centers worldwide

Off-the-shelf repair kits and parts

■ 24 hour customer service phone line

■ Complete in-field serviceability



Sundyne is more than just a manufacturer of high quality compressors and pumps...much more. Not only do we offer some of the fastest delivery times in the industry, we also back each and every product shipped with a full range of aftermarket support services, extending the value of our precision engineered equipment well beyond the point of sale.

And with our training services, worldwide presence and compact designs, installation and maintenance has never been more efficient.



COMPRESSORS

**PUMPS** 

**GENUINE PARTS** 

**SERVICE** 

Sundyne, LLC

14845 West 64th Avenue Arvada, Colorado 80007

USA

1-866-Sundyne

Phone: 1 303 425 0800 Fax: 1 303 425 0896 www.sundyne.com

Sundyne HMD/Kontro Sealless Pumps, Ltd.

Marshall Road

Hampden Park Industrial Estate Eastbourne East Sussex, BN22 9AN

United Kingdom

Phone: +44 1323 452000 Fax: +44 1323 503369

Sundyne Marelli Bombas, S.R.L.

Ctra. Madrid-Toledo, Km.30.8

45200 Illescas Toledo, Spain

Phone: +34 925 53 45 00 Fax: +34 925 51 16 00

Sundyne China

Building 1, No. 879 Shen Fu Road XinZhuang Industrial Zone Min Hang District Shanghai, China 201108

Phone: +86 21 50555005 Fax: +86 21 54425265

Sundyne International S.A.

13-15, Bld. Eiffel - B.P. 30 21604 Longvic Cedex

France

Phone: +33 (0)3 80 38 33 00 Fax: +33 (0)3 80 38 33 66



To learn more about our extended service offerings and specific application references, visit www.sundyne.com or contact the dealer nearest you.

#### RELIABILITY REALIZED:

All information provided is subject to change without notice.

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