REDI-OILED Duplex Power Pumps are the product of more than sixty years of specialized experience, plus sound, conservative engineering. They are built to stand the gaff of hard, continuous service.

The design offers mechanical simplicity and complete accessibility to all parts. Adjustments and replacements can be quickly and easily made.

Smooth, quiet and efficient operation, with low maintenance cost and a minimum of attention, are insured by the use of herringbone gear and pinion, flood lubrication and the enclosure of all moving parts.

The pinion shaft is furnished with double row ball bearings; the crankshaft with roller bearings.

Every moving part is thoroughly lubricated from the crank case oil reservoir, which is of liberal size so as to require refilling only at long intervals.

Another important feature is flexibility of drive, as shown above and on following pages. Almost any desirable type and arrangement of drive can be used.

Each pump is carefully inspected and subjected to rigid operating tests.
REDI-OILED, PISTON PACKED, DUPLEX POWER PUMPS

<table>
<thead>
<tr>
<th>CODE WORD</th>
<th>SIZE PUMP</th>
<th><strong>TYPE LINER IN FLUID CYLINDER</strong></th>
<th>PIPE OPENINGS</th>
<th><strong>Maximum Capacity At 75 R.P.M. of Crank</strong></th>
<th>Maximum Working Pressure Lbs. per Sq. Inch</th>
<th>POWER AT MAXIMUM CAPACITY AND PRESSURE</th>
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<td>P or R</td>
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<td>2.88</td>
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</table>

* P = Pressed-in Liner; R = Cast Removable Liner.

** For long life and most satisfactory service, it is recommended that these pumps be operated at 45 r.p.m. or less. The capacity will be reduced in direct proportion to the speed reduction.

NOTE: Being of the positive displacement type, these pumps require that a relief valve be installed in the discharge line near the pump. Relief valve should be one-half the size of the discharge pipe.

**TYPES OF DRIVE**

**FLAT BELT.** Pump furnished with Single Tight Pulley or with Tight and Loose Pulleys, as ordered.

**V-BELT.** These drives are very compact for Top Motor Mounting and can be furnished with or without guard totally enclosing belts, chain or gears. These drives may also be employed with steam, gas or oil engine mounted on common cast iron base with the pump, or on separate foundation at the back or side of pump.

**CHAIN.**

**GEAR.**

**DIRECT DRIVE.** Steam, gas or oil engine may be direct connected through clutch to pinion shaft of pump; or, geared-head electric motor may be direct coupled to pinion shaft of pump without the use of clutch.
SPECIFICATIONS

POWER END

POWER FRAME is of the Horizontal Duplex, Enclosed, Self-Lubricating Type, with crosshead guides and bearing supports cast integral.

CRANKCASE COVER is of cast iron, accurately machined, dust tight and oil tight—and when removed gives complete access to the power end.

SIDE PLATES give access to stuffing boxes and piston rods.

BEARINGS. Roller Bearings for crankshaft and Double Row Ball Bearings for pinion shaft are fitted to housings carried in the frame. The housings are readily removable for inspection of bearings or for replacement. The bearings are lubricated by the splash-oiling system and excess oil is returned to the crankcase. All bearings are amply large for continuous operation at any load within the ratings.

PINION SHAFT is of high carbon steel, carefully machined, and ground to receive pinion and ball bearings. It extends beyond the frame to receive pulley, chain sprockets, gear or V-belt sheaves, as may be used.

CONNECTING RODS are of cast steel of the marine type. The crank end is adjustable through shims and fitted with removable bronze bearings. The crosshead end is fitted with removable bronze bearing shells.

CROSSHEADS are cast iron, of large diameter, machined to size, and operate in bored guides cast integral with the frame to assure permanent alignment. Extra thickness of metal is provided where crossheads are bored for crosshead pin and piston rod. Crosshead pins are of high-grade carbon steel, ground to size, and securely held in crosshead.

CRANKSHAFT is a one-piece, chromium nickel steel casting of the two-throw type with cranks at 90° and a flange between cranks on which the main gear is mounted.

GEARING. Main Herringbone Gear, machined from a forging, is forced on and keyed to the crankshaft. The Herringbone Pinion is of carbon steel, forced on the pinion shaft with a feather key at each end. The pinion has long hub on each side of teeth extending to the ball bearings so as to give extra stiffness to the pinion shaft.

(Continued on Next Page)
SPECIFICATIONS—Continued

OIL WIPERS. Oil retainers with a scraper gland between them prevent oil loss from crankcase and leakage from fluid cylinder passing along piston rods into the crankcase. An oil retainer is also provided for the pinion shaft housing to prevent oil leakage from bearings.

FLUID END

The fluid ends furnished on the pumps listed in this Bulletin are our standard Valve Plate Type, as used on American-Marsh Duplex, Piston Pack-
ed Steam Pumps.

SHOP TEST

Each pump is given a running and hydrostatic test and must meet the performance for which it is sold.

INTERCHANGEABILITY OF PARTS

is guaranteed by modern and approved manufacturing methods, close tolerances and very careful inspection.

OTHER TYPES OF REDI-OILED POWER PUMPS

In addition to pumps shown in this bulletin, which all have Valve Plate Type, Piston Packed, Fluid Ends, we can furnish Side Pot Piston Packed Pumps, Outside Center Pack-
ed Plunger Pumps or Outside End Packed Plunger Pumps.

HOME OFFICE AND PLANT OF THE AMERICAN STEAM PUMP COMPANY, BATTLE CREEK, MICH.