

Neptune Series 500 “dia-PUMP”

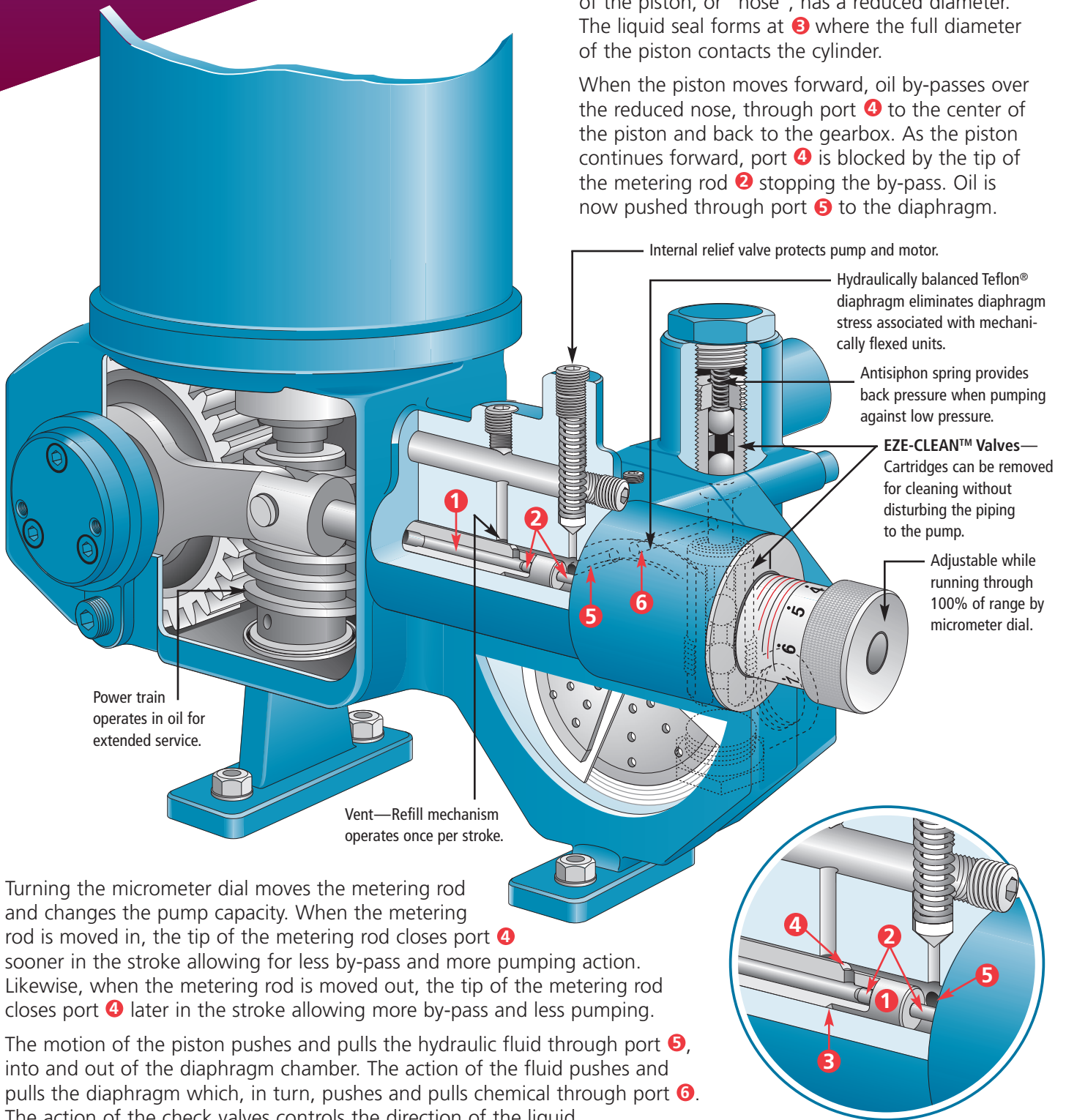
The only pumps with
EZE-CLEAN™ Valves

Variable Oil By-pass™ stroke adjustment allows better valve performance than variable linkage designs. *The valve checks have extra time to seat even in heavy liquids since they are idle during the by-pass portion of the suction and discharge strokes.*

How It Works

Hollow piston ① reciprocates within a cylinder. Metering rod ② fits into the piston. Note the front of the piston, or “nose”, has a reduced diameter. The liquid seal forms at ③ where the full diameter of the piston contacts the cylinder.

When the piston moves forward, oil by-passes over the reduced nose, through port ④ to the center of the piston and back to the gearbox. As the piston continues forward, port ④ is blocked by the tip of the metering rod ② stopping the by-pass. Oil is now pushed through port ⑤ to the diaphragm.



Power train operates in oil for extended service.

Vent—Refill mechanism operates once per stroke.

Internal relief valve protects pump and motor.

Hydraulically balanced Teflon® diaphragm eliminates diaphragm stress associated with mechanically flexed units.

Antisiphon spring provides back pressure when pumping against low pressure.

EZE-CLEAN™ Valves—Cartridges can be removed for cleaning without disturbing the piping to the pump.

Adjustable while running through 100% of range by micrometer dial.

Turning the micrometer dial moves the metering rod and changes the pump capacity. When the metering rod is moved in, the tip of the metering rod closes port ④ sooner in the stroke allowing for less by-pass and more pumping action. Likewise, when the metering rod is moved out, the tip of the metering rod closes port ④ later in the stroke allowing more by-pass and less pumping.

The motion of the piston pushes and pulls the hydraulic fluid through port ⑤, into and out of the diaphragm chamber. The action of the fluid pushes and pulls the diaphragm which, in turn, pushes and pulls chemical through port ⑥. The action of the check valves controls the direction of the liquid.