



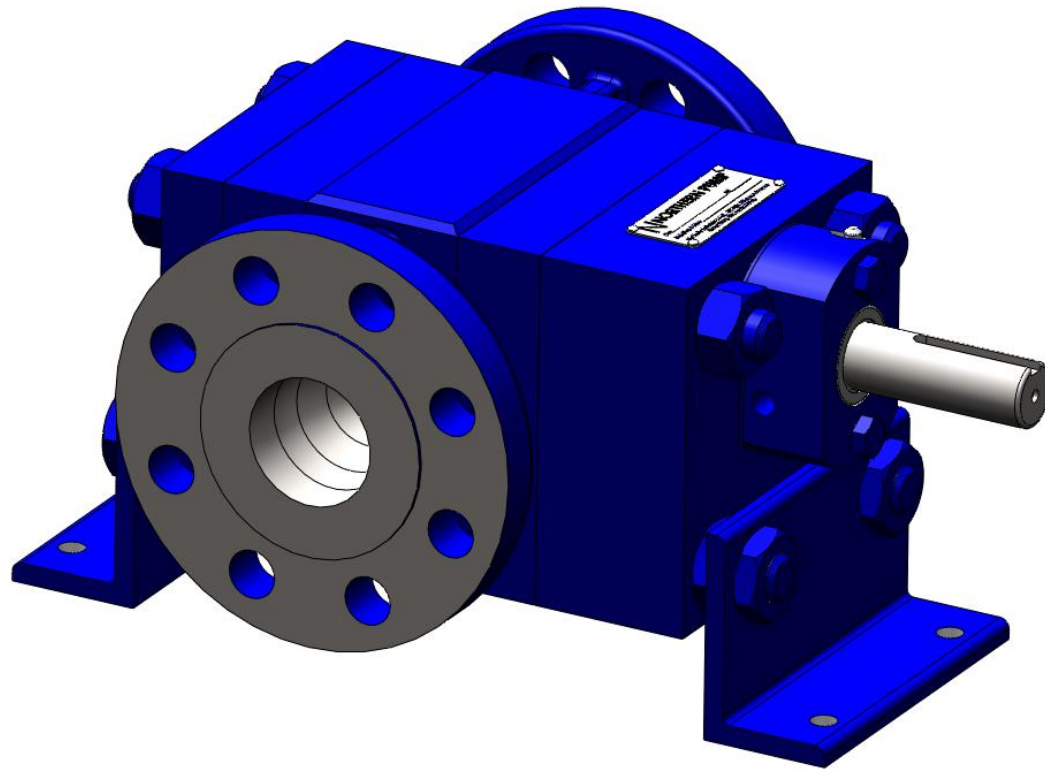
P&PE

PUMPS & PROCESS EQUIPMENT INC.

To Request a Quote,

CALL US 1-847-882-8116

Gear Pump 101

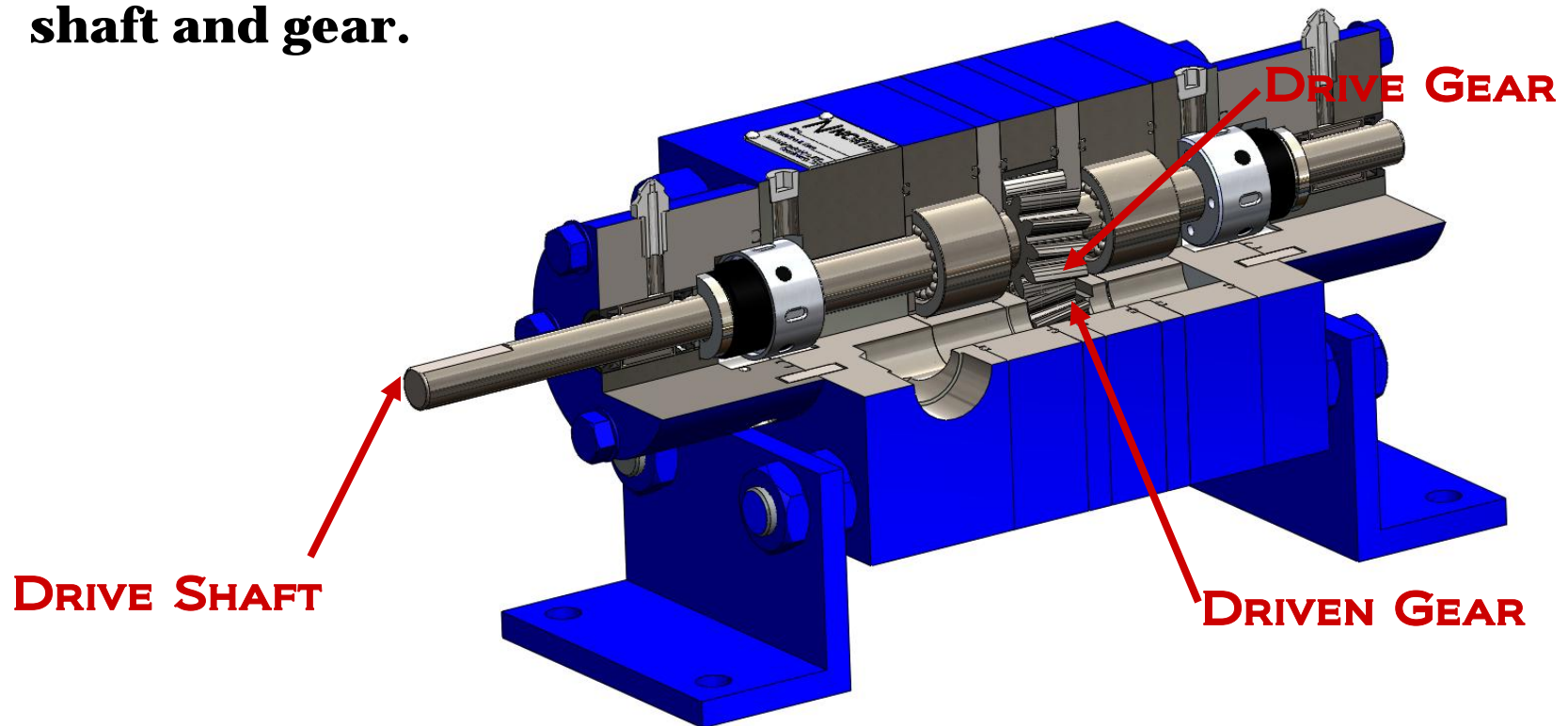


Lesson 1: Gear pump Basics

Gear Pump 101

Lesson 1: Gear Pump Basics

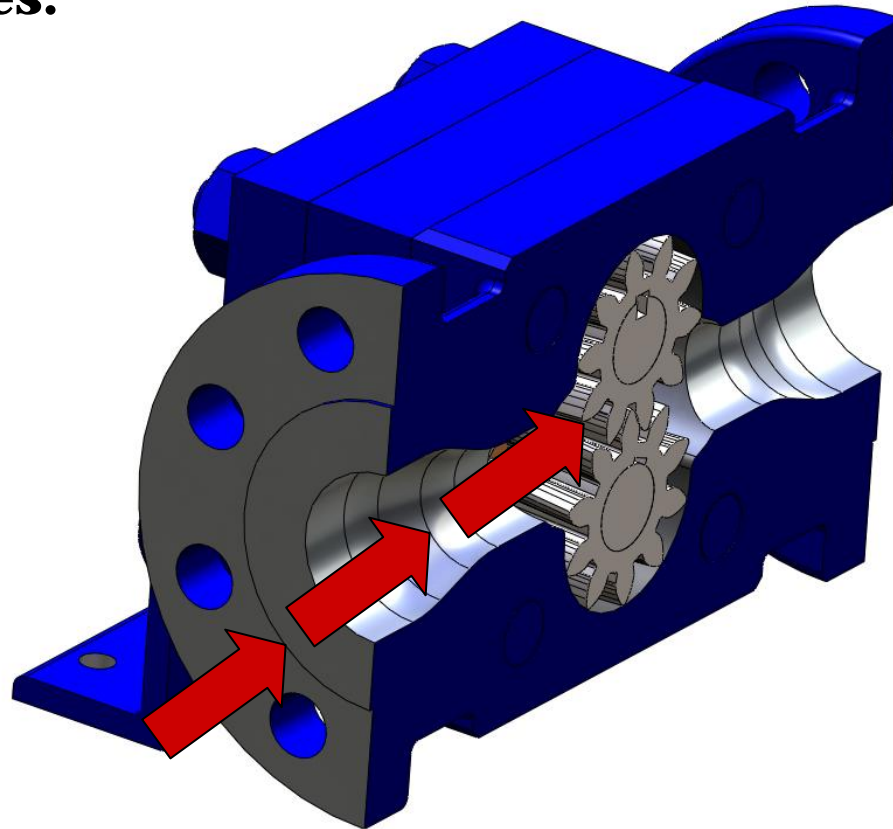
- **Northern Pump manufactures gear pumps that are positive displacement, rotary pumps, with two gears of equal size.**
- **The drive shaft and gear is rotated by a motor or by extension of an auxiliary motion shaft. The drive gear turns the driven shaft and gear.**



Gear Pump 101

Lesson 1: Gear Pump Basics

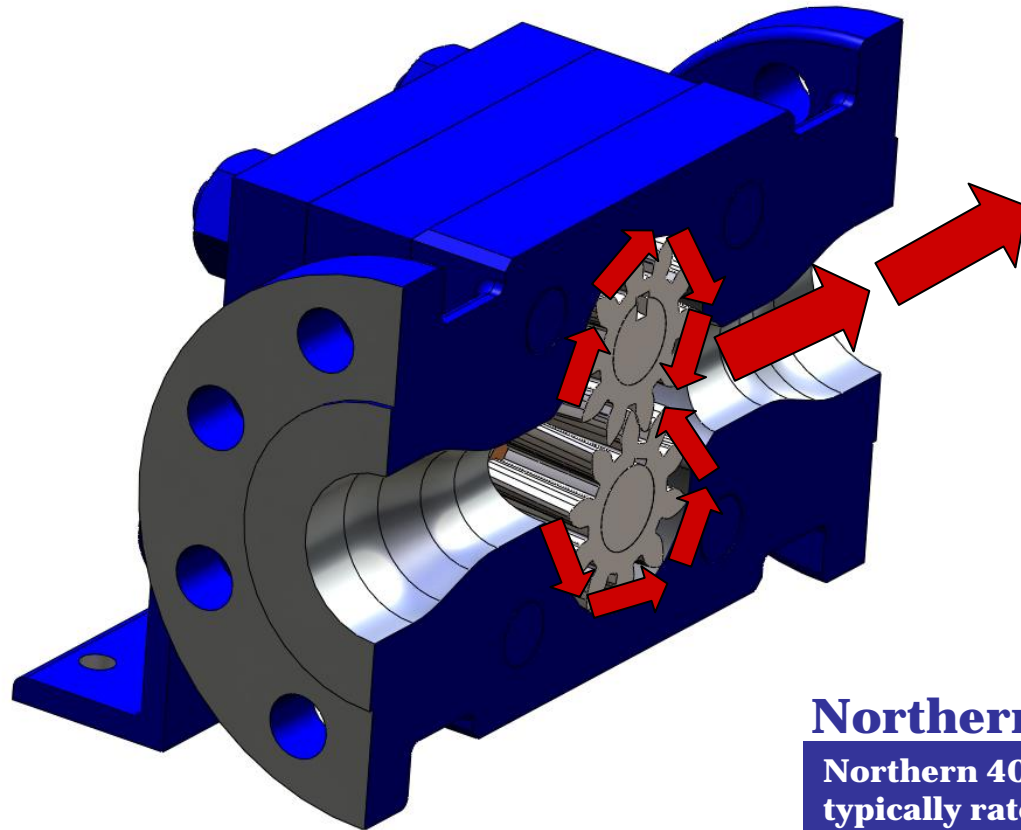
- **Fluid is pulled into the pump by the hydraulic vacuum force created from the pump, or forced into the pump by either gravity or a charge pump. Typically, a charge pump is only needed for extremely high viscosities, or for exceptionally high flow rates.**



Gear Pump 101

Lesson 1: Gear Pump Basics

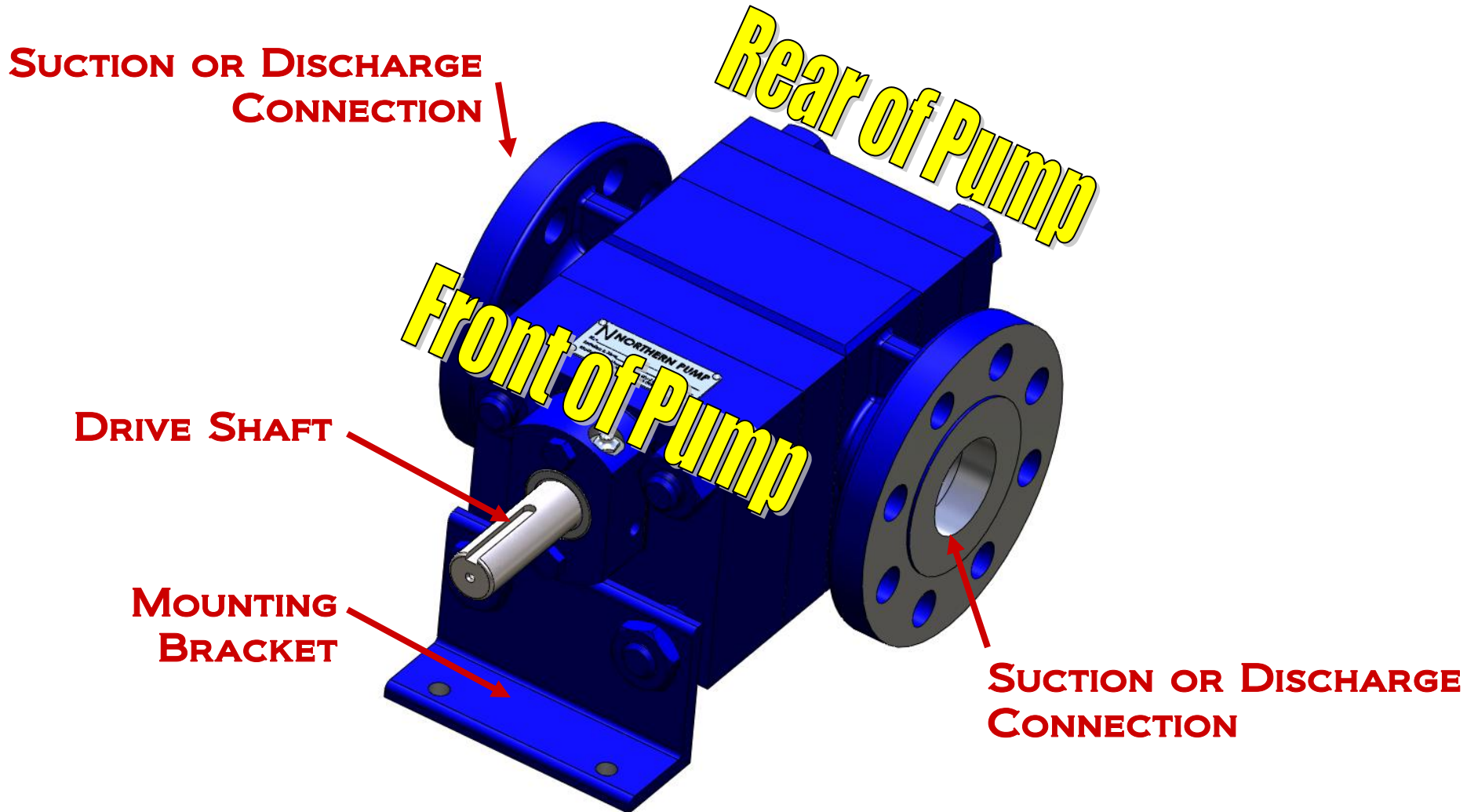
- **Next, the fluid is carried around the gears in the area between the teeth. As the gears begin to mesh, the fluid is forced out of the area between the teeth. This mechanical force is able to generate an exceptionally high amount of hydraulic pressure.**



Northern® Fast Fact.....

Northern 4000 Series pumps are typically rated to generate up to 2000 pounds per inch² (PSI)

BASIC PUMP LAYOUT

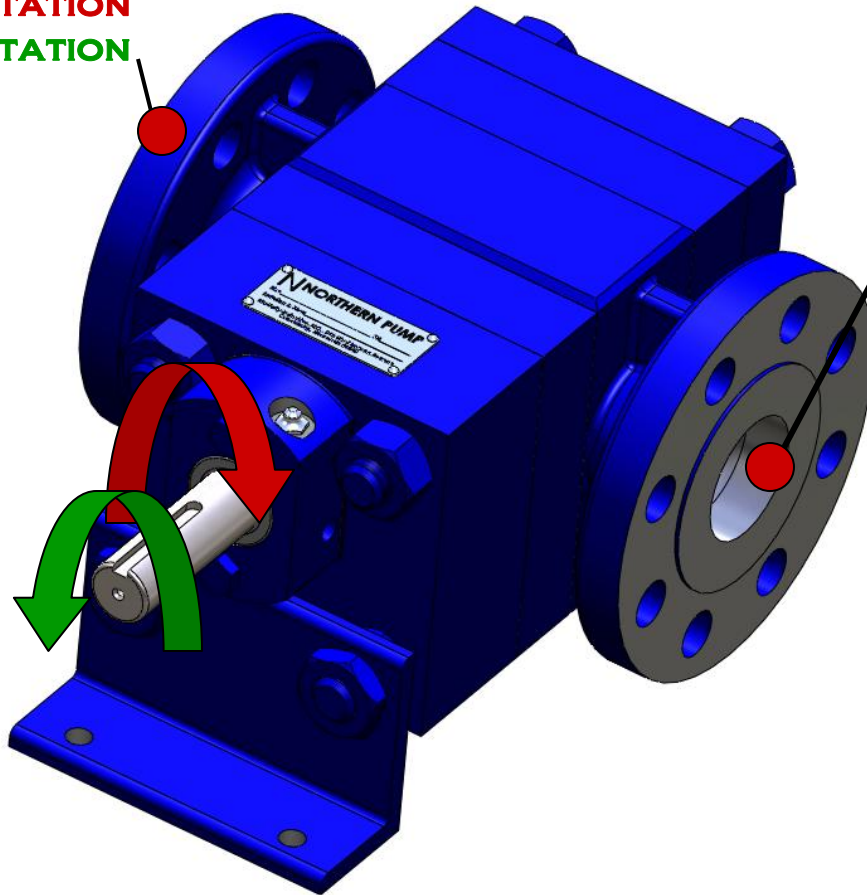


Gear Pump 101

Lesson 1: Gear Pump Basics

- **Pump rotation is determined by standing over the motor, and Look at the front of the pump. It is described as Clockwise, or Counter Clockwise.**

SUCTION-CW ROTATION
DISCHARGE-CCW ROTATION



DISCHARGE-CW ROTATION
SUCTION-CCW ROTATION

Northern® Fast Fact.....

Northern pumps can be designed
To operate in either direction,
However they can only operate
In the manner they are designed.