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PUMPING PRINCIPLES 3-6

The operation and features of 16 unique pump designs are described, including a cross-section drawing showing the liquid path.

GEAR 7-18

The positive displacement gear pump design is self-priming and known for smooth, repeatable, metering pump-like dependability in pumping clean, non-abrasive liquids of low to high viscosity.

FLEXIBLE IMPELLER 19-26

The positive displacement flexible impeller pump design is self-priming, capable of solids handling, and has a gentle, low shear pumping action for thin to viscous materials.

DIAPHRAGM / OSCILLATING 27-36

The positive displacement diaphragm and oscillating pump designs are self-priming and utilize reciprocating action to move liquid. Diaphragm pumps will handle thin to viscous liquids with low to high solids content. The extremely compact oscillating pump will move low volumes in dispensing, circulating or spraying applications.

PROGRESSING CAVITY / PERISTALTIC 37-42

These self-priming, solids handling positive displacement pumps are capable of pumping thin to viscous liquids. Progressing cavity pumps deliver a pulse-free repeatable flow for normal to shear sensitive liquids. Peristaltic pumps totally isolate the fluid within the hose they utilize.

VANE / ROLLER 43-48

The self-priming, positive displacement vane and roller pump designs utilize rotary motion to move liquid at low to medium pressures. The vane pump will handle clean liquids with thin to medium viscosity while the roller pump design is ideal for handling small abrasives suspended in thin liquids.

CENTRIFUGAL 49-76

The centrifugal pump design is not positive displacement. It utilizes centrifugal force to move liquid and while not normally self-priming they are available with integral priming chambers that add self-priming capabilities. Centrifugals are ideal for recirculating or transfer of low viscosity liquids in low head, low to high volume applications (high head is possible with multistage versions - see high pressure section).

HIGH PRESSURE 77-84

High pressure pumps utilize the diaphragm, plunger, piston, turbine or multistage centrifugal designs. Diaphragm pumps can handle thin to viscous liquids that are clean or abrasive (slurry versions available) at medium to high pressures. Plunger, piston, turbine and multistage centrifugals will handle thin clean liquids at medium to high pressures.

HYGIENIC / SANITARY 85-96

Hygienic/sanitary pumps utilize a wide array of pumping principles manufactured to 3A, USDA or FDA cleanliness standards to move any fluid required for food, cosmetic, beverage, pharmaceutical or bioprocess applications.

DRUM, TRANSFER AND METERING 97-108

These pumps utilize a variety of pumping principles to dispense, dose or meter thin to viscous liquids that are clean, abrasive, volatile or corrosive. Drum pumps are designed to be manually controlled to dispense liquid from barrels, totes or other containers. Metering pumps are available with manual or electronic controls that will variably and precisely supply liquid as your system requires.

SUBMERSIBLE / CONDENSATE 109-118

These pumps typically utilize the centrifugal design. Submersible pumps are available in manual or automatic operation and are capable of handling some solids. Condensate pumps automatically evacuate accumulated liquid from a collection reservoir.

SPECIALTY 119-132

Specialty pumps encompass pumps that have been applied in narrow markets to perform very specific tasks. This section includes pool, well, well test, machine tool coolant, carpet cleaning, film developing, heliarc welder coolant, remediation, hot water boosters and closed loop recirculators.

APPLICATIONS AND TROUBLESHOOTING ASSISTANCE 133-142

This section provides a variety of engineering tables, troubleshooting suggestions and rules of thumb to assist and simplify your life with the product that gives us at Depco purpose...pumps.

