# VIKING® DUPLEX FUEL OIL SYSTEMS & CONTROL PANELS



- 25 YEARS EXPERIENCE
- SINGLE SOURCE RESPONSIBILITY
- COMPACT INTEGRATED SYSTEM
- EASE OF SELECTION
- FACTORY-BUILT / LOCAL SUPPORT



# STANDARD EQUIPMENT PUMP SETS

### **BASIC Pump Sets:**

#### Include equipment as follows:

SG-05--Spur Gear Pump in cast iron construction, UL-Listed, heat treated steel gears, case-hardened shafts, carbon graphite bushings, Viton® lip seal, plain head

SG407--Spur Gear Pump in cast iron construction, heat treated steel gears, case-hardened shafts, carbon graphite bushings, Viton® mechanical seal, plain head

Viking M drive brackets to allow pumps to be close-coupled to C faced motors (2)

Motors - Totally Enclosed Fan Cooled, foot mounted, NEMA C or TC, UL, CSA (2)

Common steel baseplate shall be made of heavy gauge steel plate with 1 1/2" high drip-lip and 1/2" NPT drain (1)

#### **Suction Line Equipment**

- Viking Lid-Ease Basket Strainers, cast iron body, 40 mesh stainless steel basket (2)
- Ball valves, 600 PSI pressure rated, full port (2)
- Compound Gauges, 30" Hg-0-30 PSI 2.5" dial, liquid filled (2)
- Gauge Valves brass ball valves, 600 PSI rated (2)

#### **Discharge Line Equipment**

- Swing Check Valves, 400 PSI pressure rated (3)
- Ball valves, 600 PSI pressure rated, full port (2)
- Relief Valves continuous bypass type, cast iron body, stainless steel spring (2)
- Pressure Gauges, 0-100 PSI, 2.5" dial, liquid filled (2)
- Gauge Valves brass ball valves, 600 PSI rated (2)

#### **Suction and Discharge Piping**

 Schedule 40 carbon steel piping and nipples, 150 PSI malleable iron screwed fittings

Unit to be coated with Vinyl Toluene Alkyd, quick dry enamel.

Duplex pump set to be leak tested with 100 PSI air and soap water.



# **STANDARD Pump Sets:**

Include all equipment from Basic Pump Sets, as well as:

Pressure Switch - Dual Stage - High & Low, EEMAC1 enclosure, installed

Magnetic Float Switch with Alarm for Drip Tray Leak Detection

# **PREMIUM Pump Sets:**

Include all equipment from Basic Pump Sets, as well as:

- ULC listed Flexible Connectors, SS hose/Steel nipple, set of 3
- API 607 Steel Ball and API 602 Check Valves

   installed
- Magnetic Float Switch with Alarm for Drip Tray Leak Detection
- Pre-plumbed Return-to-Tank Header
- Flow Switch (2) High Pressure to 1450 PSI

# **PREMIUM PLUS Pump Sets:**

Include all equipment from Premium Pump Sets, as well as:

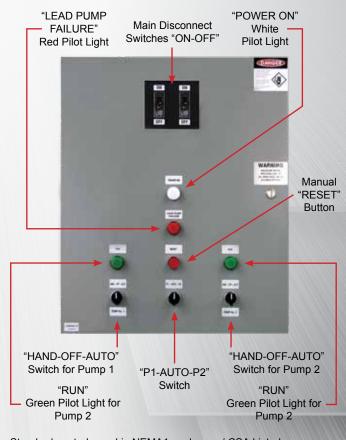
• Pressure Switch - Single Stage

# STANDARD EQUIPMENT

# **CONTROL PANELS**

#### **BASIC Control Panels:**

- Single pole circuit breaker (2) c/w through the door operation (120 volt) or individual disconnect switches, motor protectors and transformer (208-575 volt)
- Magnetic motor starters (2)
- Hand-Off-Auto selector switches (2)
- · Power on pilot light (white)
- Run pilot light (green) (2)
- Terminal Strip
- · Control circuit fuse
- Lead pump failure pilot light & manual reset, lag pump start
- P1 Auto P2 alternating selector switch
- Provision to connect 3 float switches (normally closed)



Standard control panel is NEMA1 enclosure / CSA Listed option for UL listed.

Consult Factory for other control panel options.

#### **STANDARD Control Panels:**

#### Include all Basic Control Panel items, as well as:

- Provision to connect 4 float switches and 1 single point float switch - normally closed
- · High pressure cut out red pilot light & manual reset
- Low pressure cut out red pilot light & override timers
   (2) (manual reset)
- Low and high pressure alarm signals
- Low, high and critical high level alarm signal & red pilot light
- Provision to connect valve (each)
- Redundant Contactors (Back-up to Primary Contactors)
- Drip tray leak detection alarm signal & red pilot light

### **PREMIUM Control Panels:**

#### Include all Basic Control Panel items, as well as:

- Low flow signal to start lag pump c/w timers (2), red pilot lights & reset push button
- Low, high and critical high level alarm signals & red pilot lights
- Provision to connect valve (each)
- Redundant Contactors (Back-up to Primary Contactors)
- Drip tray leak detection alarm signal & red pilot light
- One (1) proof of flow in RTT line with red light

#### **PREMIUM PLUS Control Panels:**

#### Include all Premium Control Panel items, as well as:

Low pressure alarm signal & red pilot light

# DUPLEX FUEL OIL ADVANTAGES

### Viking Duplex Fuel Oil systems:

- · Fueling diesel generators for backup electrical power generation
- · Boosting low pressure fuel oil on oil-fired boilers and oil-fired furnaces
- Fuel oil transfer from storage to day tank

#### Viking Advantages:

- Experience Viking Pump have been worldwide leaders of PD pumping solutions since 1911 and have over 25 years of engineering and manufacturing DFO systems
- One Source-One Responsibility With a Viking DFO set we pre-engineer, pre-plumb, and with available pre-wiring give you a complete "plug-n-play" system so you don't have to worry about sourcing and assembling the components
- Compact The Viking DFO set provides you with a compact integrated system that allows you mounting flexibility
- Factory-Built / Local Support With Viking's extensive Distributor network we can
  provide you with local support and start-up assistance for you Viking DFO set

#### **Customer Benefits:**

- Reliable fuel delivery with plumbed-and-wired standby pump
- Alternate pumps automatically minimize run time on any one pump
- · Proven, factory manufactured sets built custom to your order
- UL-CSA electrical control panels
- Quick access comparison sheets, specification sheets and illustration drawings
- · Easily requested CAD submittal drawings

## **Typical Applications:**

· Emergency Generators





Boilers







Viking Pump of Canada Inc. • A Unit of IDEX Corporation P. O. Box 398, 661 Grove Avenue • Windsor, Ontario, Canada N9A 6M3 Phone: (519) 256-5438 • Fax: (519) 256-5070 Direct Email: VWCDFOrfq@idexcorp.com

Viking Pump, Inc. • A Unit of IDEX Corporation 406 State Street • Cedar Falls, Iowa 50613 U.S.A. Telephone: (319) 266-1741 • Fax: (319) 273-8157