

PACKAGED CIRCULATING SYSTEMS: SERIES PCS

CONSTANT SPEED

SUGGESTED SPECIFICATIONS

Furnish and install a packaged constant speed circulating system series PCS as manufactured by **Penn Pump & Equipment Company, Inc.** of Hatfield, PA (215-997-6100). The packaged and tested system shall provide the capacity as scheduled on the drawings.

- A. The pumps shall be cast iron bronze fitted end suction centrifugal type with a minimum of 175 psig case working pressure, equipped with a replaceable bronze shaft sleeve and a mechanical shaft seal. The pumps shall be back pullout design and capable of being serviced with the system in operation.
- B. Each pump shall include a suction diffuser with 304 stainless steel strainers, cast iron lug style butterfly valve, triple duty valve with bronze flow metering valves, and a common pressure gauge.
- C. Provide a NEMA 1 Disconnect starter panel mounted and wired to contain:
 - Main power disconnect switches with cover interlock
 - Individual motor fuse blocks with fuses or circuit breakers
 - Across the line magnetic starters with overload protection and resets
 - Auxiliary pump running contacts
 - Control circuit transformer 120 volt
 - Pump to operate selector switch
 - Pump running pilot lights
 - HOA selector switches
 - Numbered terminal strip
 - Wiring diagrams
- D. The packaged circulating system shall be factory assembled and tested with schedule 40 steel welded piping and headers. Each header shall include a stainless steel braided flexible connector and a spare plugged 0.75" npt auxiliary piping connection. The entire system shall be cleaned and painted with a high grade enamel prior to shipment.
- E. The system manufacturer shall provide single source responsibility for all the components provided on the packaged system. The service of a factory trained representative shall be made available on the project site for startup and instructing operating personnel.

PACKAGED CIRCULATING SYSTEMS: SERIES PCS

VARIABLE SPEED

SUGGESTED SPECIFICATIONS

Furnish and install a packaged variable speed circulating system series PCS as manufactured by **Penn Pump & Equipment Company, Inc.** of Hatfield, PA (215-997-6100). The packaged and tested system shall provide the capacity as scheduled on the drawings.

- A.** The pumps shall be cast iron bronze fitted end suction centrifugal type with a minimum of 175 psig case working pressure, equipped with a replaceable bronze shaft sleeve and a mechanical shaft seal. The pumps shall be back pullout design and capable of being serviced with the system in operation.
- B.** Each pump shall include a suction diffuser with 304 stainless steel strainers, cast iron lug style butterfly valve, triple duty valve with bronze flow metering valves, and a common pressure gauge.
- C.** Provide NEMA 1 Variable Frequency Drive(s) mounted and wired to contain:
 - Main circuit breaker disconnect
 - LCD Keypad Display
 - 32 Bit Microprocessor Logic
 - Programmable multifunction input terminals
 - Remote speed command
 - Programmable Analog Outputs
 - Communication Interface
 - Wiring diagrams
- D.** The packaged circulating system shall be factory assembled and tested with schedule 40 steel welded piping and headers. Each header shall include a stainless steel braided flexible connector and a spare plugged 0.75" npt auxiliary piping connection. The entire system shall be cleaned and painted with a high grade enamel prior to shipment.
- E.** The system manufacturer shall provide single source responsibility for all the components provided on the packaged system. The service of a factory trained representative shall be made available on the project site for startup and instructing operating personnel.

SPECIFY WITH CONFIDENCE, SPECIFY PENN PUMP SYSTEMS