Model NPE Close-Coupled Unit

TYPICAL ENGINEERING SPECIFICATIONS

BUILT IN THE USA
ENGINEERED, ASSEMBLED & TESTED

I. SCOPE

The contractor shall provide _____ (quantity) horizontal close-coupled, end suction centrifugal pump unit/s, Model NPE as manufactured by Goulds Water Technology or equal.

All pump units shall be of one manufacturer and provided complete including electric motor.

II. CONDITIONS OF SERVICE

A. Equipment item number	_____	_____	_____
B. Flange Inside Diameter			
Suction (inches) RF	_____	_____	_____
Discharge (inches) RF	_____	_____	_____
C. Design Service Condition			
Capacity (GPM)	_____	_____	_____
Total Head (feet)	_____	_____	_____
Efficiency (%)	_____	_____	_____
D. Minimum Total Head at Shutoff (feet)	_____	_____	_____
E. Maximum Impeller Diameter (inches)	_____	_____	_____
F. Operating Speed (RPM)	_____	_____	_____
G. Maximum Motor HP	_____	_____	_____

III. PUMP CONSTRUCTION

Each pump shall be designed for clockwise rotation viewed from driver end and include the following design features.

A. PUMP END COMPONENTS

A.1. Casing

The pump casing shall be concentric volute, diffuser type, back pull-out design with NPT suction and discharge connections and shall be constructed of AISI TYPE 316 stainless steel material.

The pump discharge shall be center line oriented to allow simplified system design and installation.

Pump casing vent/fill and drain shall be provided with stainless steel plugs.

A.2. Floating Suction O-Ring

The pump shall be provided with an easily replaceable suction O-ring, pumpage lubricated and self-aligning to maintain maximum pump efficiency without adjustment of impeller clearances.

A.3. Impeller

The impeller shall be of enclosed design, constructed of AISI TYPE 316 stainless steel material, threaded shaft connection secured with lock nut.

A.4. Seal Housing

The seal housing shall be self-flushing design, constructed of AISI TYPE 316 stainless steel material and shall hold the stationary seat of the mechanical shaft seal. The seal housing shall be clamped in place over a machined fit on the motor adapter to maintain component alignment and "O-ring" sealed to insure against leakage.

A.5. Mechanical Seal

The pump shaft seal shall be a John Crane Type 21 as standard, constructed of the following materials:

Seal Type	Stationary Face	Rotating Face	Elastomers	Metal Components
Standard	Ceramic	Carbon	Viton	316 SS
Option				

A.6. Motor Mounting Adapter

Adapter shall be constructed of AISI Type 316 stainless steel and support the pump liquid end and maintain pump to motor alignment. A bottom port shall be provided to allow condensation or seal leakage to drain and not be retained within the adapter.

IV. ELECTRIC MOTOR

The motor shall be non-overloading NEMA standard design with J 300 Series stainless steel shaft extension and 56C-Face suitable for close-coupled pump mounting. All motors shall be dual rated 50/60 Hz and meet electrical standards of UL, CSA and CE. Motor rating shall be:

_____ HP, _____ RPM, _____phase, _____ Hz, _____volts,_____enclosures

V. TESTING

Production performance testing will be conducted by the manufacturer on each pump unit using the actual motor. Head at shut off and a minimum of 2 operating points will be measured at operating speed to verify performance.

VI. NPE SPECIFICATIONS

Capacities to: 75 GPM (283L/min) at 1750 RPM, 150 GPM (550L/min) at 3500 RPM

Heads to: 39 feet (11 m) at 1750 RPM, 150 feet (50 m) at 3500 RPM

Working pressures to: 125 PSIG (9 bars)

Maximum temperatures to: 212°F (100°C) with standard seal or 250°F (121°C) with optional high temperature seal.

Direction of rotation: Clockwise when viewed from motor end.

Motor specifications: NEMA 56J frame, 1750 RPM, ½ HP, 3500 RPM ½ through 5 HP. Open drip-proof, 3 HP totally enclosed fan-cooled or explosion proof enclosures. Stainless steel shaft with ball bearings.

Single phase: Voltage 115/230 ODP and TEFC. (3 HP model – 230 V only) Built-in overload with auto-reset provided.

Three phase: Voltage 208-230/460 ODP, TEFC and EX PROOF.

NOTE: For three phase motors, overload protection must be provided in starter unit. Starter and heaters must be ordered separately.

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