

ST21 Series

Regenerative Turbine Pumps

Design Features

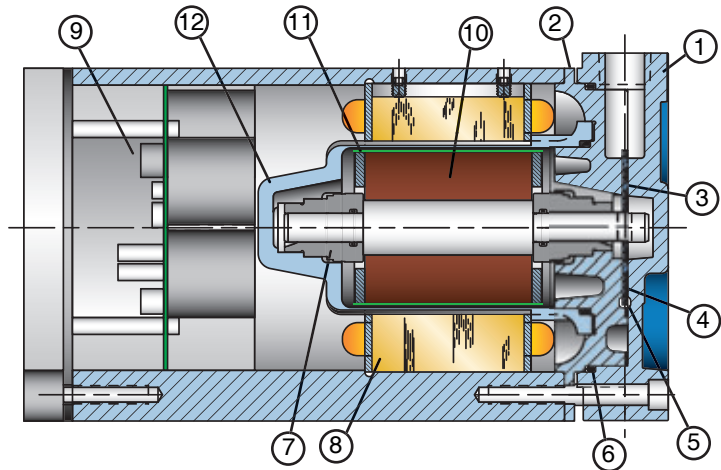
- Variable Capacities to 2 GPM
- Heads to 450 Feet
- Temperatures from -60° to 190°F
- Leak free Sealless Canned Design
- High efficiency motor (94%)
reduces heat input to fluid
- Stainless Steel Construction
- Compact Size
- Top Suction and Discharge
- 2,000 - 10,000 RPM Variable Speed
- 115/230VAC or 12/24/48/100VDC Motor
- Integrated Variable Speed Controller
- Closed loop 0-10V, 4-20ma, PWM, or manual control inputs



ST21 Patent Pending

Diagram & Specs

- (1) Stainless Steel Casing
- (2) Stainless Steel Motor Bracket
- (3) Stainless Steel Impeller
- (4) Self-centering Balanced Impeller
- (5) High Efficiency Water Channel Design
- (6) "O" Ring Gaskets
- (7) Long lasting Carbon Graphite/Ceramic Bearings
- (8) Compact 115/230 VAC 12/24/48/100VDC Stator
- (9) Integrated Variable Speed Controller
- (10) Permanent Magnet Rotor
- (11) Stainless Steel Rotor Retaining Sleeve
- (12) High Strength Thermoplastic Liner



Limitations

Casing Pressure (Max.)*	300 PSI
Suction Pressure (Min.)	26" Hg Vac.
Speed (Max.)	10,000 RPM
Speed (Min.)	2,000 RPM

Temperature**

Minimum	-60° F
Maximum	+190° F

Horsepower

115/230VAC (1 Phase)	.75HP
100VDC	.50HP
48VDC	.33HP
24VDC	.33HP
12VDC	.17HP

*Suction Pressure Plus pump Differential Pressure
**Consult factory for extended temperature ranges

Construction Materials

PART	MATERIAL	OPTIONS
Motor Bracket and Cover/Casing	316 Stainless Steel (AISI 316)	---
Impeller	W88 (A494)	Consult Factory
Elastomers	Viton A	Buna/EPR/Neoprene
Bearings	Carbon - Ceramic	Si Carbide
Shaft	Stainless Steel	---
Stator Liner	Thermoplastic	---
Rotor Sleeve	316 Stainless Steel	---

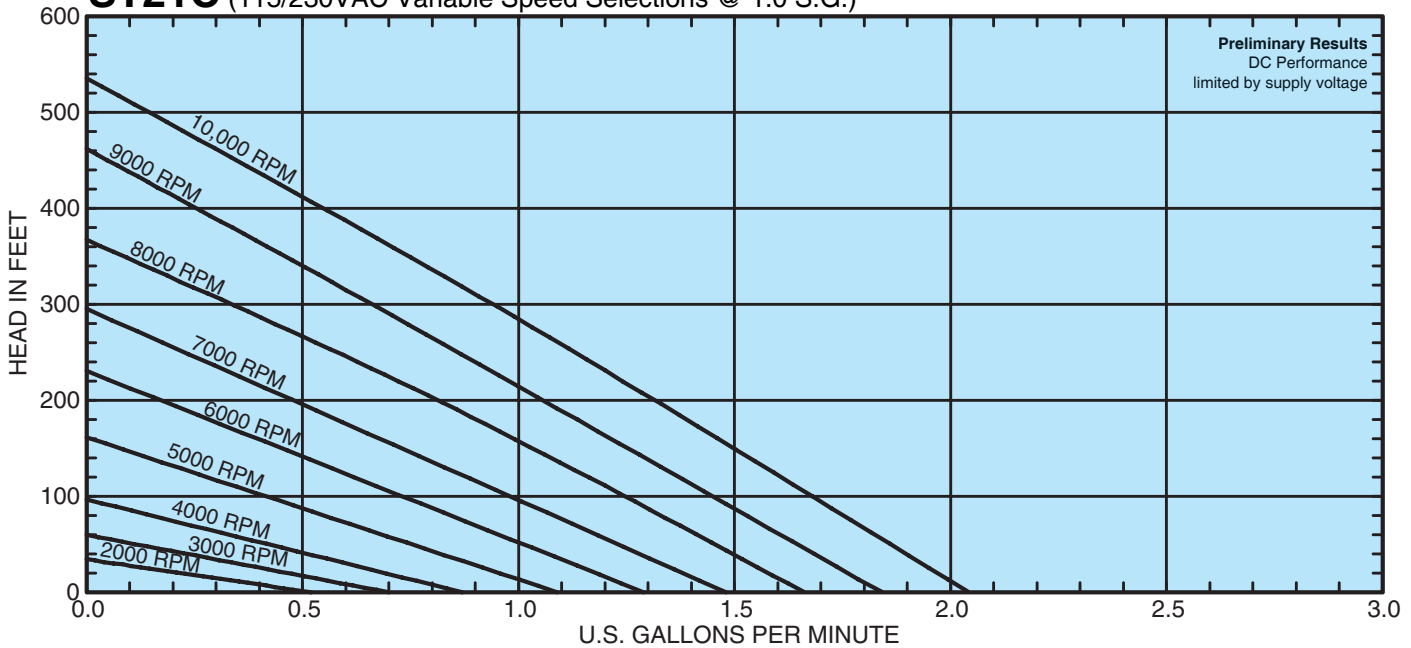
Optional Features

Controllers available for 12/24/48/100 VDC or 115/230 VAC power. Controller options for manual speed control, external control via PWM, or closed-loop 0-10V or 4-20ma transducer speed control.

Pressure transducers and optional bearing and elastomer materials available upon request. Future SC31 centrifugal version for capacities up to 15 GPM and Low NPSH applications.

ST21 Series Performance Curves

ST21C (115/230VAC Variable Speed Selections @ 1.0 S.G.)



Design Features

300 PSI Case Working Pressure

Rigid structure is designed for maximum casing strength.

High Motor Efficiency

94% efficient permanent magnet motor minimizes heat input to fluid in heat sensitive applications like chillers and refrigerant handling.

Non-Caviting

ST21 Series pumps may be operated under adverse inlet conditions without audible or measurable cavitation.

Low NPSH

Special inlet design provides superior fluid handling ability with low head inlet conditions.

100% Tested

Every pump is fully tested to verify performance prior to shipment.

Leak Free Sealless Design

Canned Sealless motor eliminates downtime, risk, and damage associated with mechanical seal failures. More compact and reliable than mag-drive solutions.

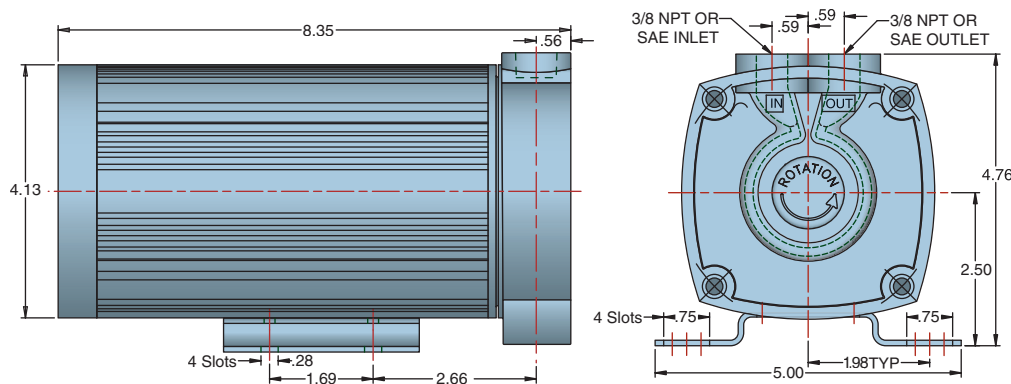
Versatile Controller

Controller accepts AC and DC power inputs and features variable speed output that can be controlled via closed loop feedback from 4-20ma, 0-10VDC, or PWM transducers or other control circuitry.

Volatile Fluid Handling

The turbine impeller handles vapors up to 20% by volume, minimizing the possibility of vapor lock.

Dimensions



Notes:

A 50 mesh nominal strainer should be installed ahead of the pump suction to prevent foreign materials from damaging the pump impeller and bearings.
Rated for continuous duty operation at all ratings shown.



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