Griswold™ Technical Capabilities

Where Innovation Flows

Griswold™ centrifugal pumps are backed by a world-class testing facility and quality assurance procedures unmatched by any other pump manufacturer. All Griswold products are engineered with industry-leading performance and reliability for a wide variety of critical applications.

Integrated Management System

- ISO 9001:2008
- ISO 14001:2004
- OHSAS 18001:2007

Product Certifications

- ASME B73.1-2012
- NSF 50

Engineering

- Member of the Hydraulic Institute

Software and Equipment

- 2D & 3D CAD Software: Solidworks, AutoCAD
- FEA: ANSYS
- CFD (Computational Fluid Dynamics):
  - Pump Head Curve Performance Prediction
  - NPSH Optimization

Capabilities

- Hydraulic Design
- Pressure Boundary Calculations
- Rotating Element Design
- Structural Analysis
- Modal Analysis
- Nozzle Load

PSG a DOVER company

CNC Mill
Quality Control Test Lab

In-house Testing

Standards

- Hydraulic Institute Pump Test Lab Approval: HI 40.6
- Performance Testing: ANSI/HI 14.6-2016
- NSPH Testing: ANSI/HI 14.6-2016
- Vibration Testing: ANSI/HI 9.6.4-2009
- Hydrostatic Testing: ANSI/HI 14.6-2016 & ASME B73.1-2012
- Mechanical Run Testing: ANSI/HI 14.6-2016
- String Testing: ANSI/HI 14.6-2016 Appendix G

Test Equipment

- 10,000 GPM Flow
- Pressure and Vacuum Rated Tank
- Venturi Flow Meters
- Rigid Baseplates
- Himmelstein Torque Meters
- Rosemount Pressure Transmitters
- Automated Performance Testing
- Rosemount Temperature Transmitters

Manufacturing

- CNC Mills
- CNC Lathes
- Centerless Grinders
- Wire EDM
- Rapid Prototyping Capabilities
- Welding

QC Equipment

- CMM: Wenzel
- Portable CMM: Romer Arm with Probe and Surface Scan Capabilities
- Hardness Testers: United and Wilson
- PMI: Niton XRF
- Functional Gauges
- Surface roughness

Calibration Laboratory

- In-House Calibration Capabilities: Pressure, Torque, Thread, etc.
- Third Party Calibration: Flow, PMI, CMM, etc.

Supply Chain

- All Suppliers Qualified per Production Part Approval Process (PAPP)
- Global Quality Team Conducting Routine Audits
- Materials Meet or Exceed ASTM Specifications

Design Standards

Pump Design

- ASME B73.1-2012

Pressure Boundary Calculations

- ASME Boiler & Pressure Vessel Code 2017

Bearing Designs

- ANSI/ABMA-9, Load Ratings and Fatigue Life for Ball Bearings
- ANSI/ABMA-11, Load Ratings and Fatigue Life for Roller Bearings

Design Standards (continued)

Drawing Standards

- ASME Y14.7

Flange Designs

- ASME B16.5, Pipe Flanges and Flanged Fittings
- ASME B16.42, Ductile Iron Pipe Flanges and Flanged Fittings: Classes 150 and 300

Material Specifications

- ASME B73.1-2012
- ASTM Standards

Assembly

- Dynamic Balancers Per ISO 1940-1 Grade 6.3 or Better
- Hydrostatic Test Bench (1.5 MAWP)
- Bench Leak Test (100 psi)
- Power Frame Assembly Room
- Paint Booth
- Base Mount and Fabrication Center

Available Certifications

Material Certification

- Declaration of Compliance with Order 2.1 - EN 10204:2004
- Test Report 2.2 - EN 10204:2004 Chemical and Mechanical
- Inspection Report 3.1 - EN 10204:2004 Chemical Only
- Inspection Certificate 3.1 - EN 10204:2004 Mechanical Only
- Inspection Certificate 3.1 - EN 10204:2004 Chemical and Mechanical

Non-Destructive Testing

- PMI (Positive Material Identification)
- Hydrostatic Case and Stuffing Box Test per ASME B73.1-2012
- Impeller Balance per ISO 1940-1 Grade 6.3 or better
- LPI (Liquid Penetrant Inspection)
- Weld Certification

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Authorized PSG® Partner: