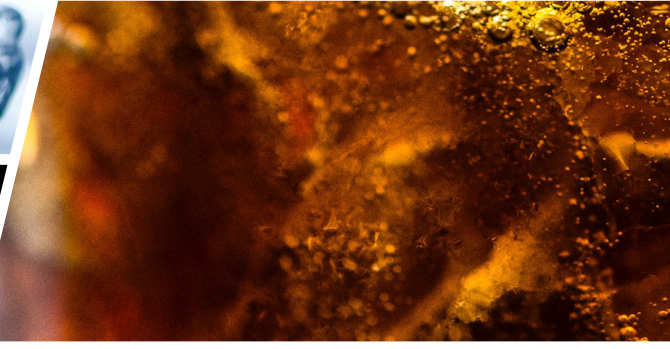




PROCON[®]

custom | fluid | solutions[™]



CONTENTS

- 01 Introduction**
 - Our Markets 6
 - Who We Are 7
 - Safety Guidelines 8
 - Products Families & Compliance 10
 - Performance Selection & Features 11

- 02 Product Line**
 - Electronically Controlled Pumps (ECP) 13
 - Gear Pumps 19
 - Micro Vane Pumps 51
 - Rotary Vane Pumps (RVP) 61
 - Motors & Controllers 84
 - Clamps 87
 - Couplings 88
 - Valves 92
 - RVP Relief Valve Kit 94
 - RVP Repair Kit 95

- 03 Installation** 96
 - Mounting Styles 97
 - Piping Layout 101

- 04 Troubleshooting Tips** 104

- 05 Ordering** 107

- 06 Doing Business** 108

ABOUT THIS CATALOG

Safety Guidelines lists warnings that you should know before you use your pump. This chapter describes things you can do to ensure that everyone who uses your pump uses it safely.

PROCON Family describes the pumps that we make. This section tells you about the differences among the pumps and the advantages of each different type of pump.

Piping Layout describes a piping layout that can help you get a long, trouble-free life from your pump. It shows you a suggested layout and describes the various components.

Components describe the material of each part of the pump.

Options for the Pumps tells you about the options that we offer on our basic pump models. Your PROCON factory representative can help you tailor a pump to meet your needs.

Mounting Styles describes two ways you can mount your pump to your motor.

Installation contains instructions and guidelines you should follow when you prepare and install your pump into a system. In this section you will find instructions for the two types of motors that you can use.

Troubleshooting Tips gives you some hints about potential problems that occur in pump systems. It tells you what may cause a problem and how to solve it.

Ordering tells you how to order new pumps from our factory. This section contains a key to help you determine a model number for the pump that you want and also contains a list of part numbers for pump accessories.

Doing Business tells you about our payment terms, our factory rebuild program and exchange centers, and the service life of our pumps. A summary of our warranty also appears here.

NOTE

This catalog gives you general guidelines for selecting, installing, using, and troubleshooting your pump. It may not answer every question you have nor provide a solution for every situation that occurs. If you need more information about your pump, please contact us. Contact information is on the back.

OUR MARKETS



WHO WE ARE

PROCON®

Established in 1948, PROCON engineers dependable, high quality products. PROCON was acquired by Standex International (SXI) in 1966 and has been part of the Standex family since then.

We manufacture many different styles of positive displacement vane and gear pumps. Our products support OEM's in a variety of industries. PROCON is considered the standard for performance and value in the markets we serve.

We have ISO certified plants in North America, Europe and Asia Pacific (licensee) and are available to provide "custom fluid solutions" in 70+ countries through direct sales and distributors.



SAFETY GUIDELINES

NOTE

Learn to recognize safety information, and always follow recommended precautions and safe operating practices. When you see a safety-alert symbol, be alert to the potential for causing personal injury or property damages. Read these safety guidelines before you install or operate the equipment. Be sure to follow the instructions carefully.



Do not pump flammable or hazardous fluids through your pump

Your pump was not designed to be used with flammable or otherwise hazardous fluids. If you use your pump with hazardous fluids and it leaks, it could create various hazards including fire, health, environmental, etc.



Do not use a pump that is leaking

If a pump begins to leak, stop using it immediately. Disconnect the power to the pump motor and clean up the fluid. Leaking pumps should no longer be used; replace with new pump or have pump rebuilt.

Keep your pump from leaking by following these three rules:

1. Do not let the pump run dry
 - Do not let the pump run dry for more than 2 minutes. The self-lubricating, internal parts protect the pump only against very brief dry runs.
 - Running the pump dry may score or wear out the internal parts, causing performance loss. It may also damage the mechanical seal, causing the pump to leak fluid.
2. Do not run the pump against a closed discharge
 - Running a pump against a closed or blocked discharge may cause pressure to build up to a dangerous level if there is no relief valve.
 - Heat will build up in the pump and may cause the internal parts to wear out rapidly. It may also ruin the mechanical seal.
 - PROCON's relief valves are designed to protect your pump against only short periods of over-pressure. Relief valves should not be used as flow control valves.
3. Do not tamper with the setting of the relief valve
 - The relief valve is set at the factory to your specifications.



Keep the floor around the pump dry

Make sure you keep the floor around your pump dry. If any liquid leaks onto the floor, clean it up immediately. Serious injury can occur if you slip.



Do not touch the pump when there is liquid on the floor

Your pump operates with an electric motor. You can be electrocuted if you touch the pump when you are standing in liquid. You can increase your safety by using "ground fault interrupter" type circuit breakers.

TERMS

Warning: You may seriously hurt or kill yourself or someone else if you ignore the message

Caution: You may seriously hurt or kill yourself or someone else if you ignore the message

Notice: Pay special attention to this important installation, operation, or maintenance information. If you ignore this information, you may damage your pump



Protect children

Keep children and other people who do not know how to operate the pump away from your pumps and the systems in which they are used. Children may not understand that equipment is sometimes dangerous to them and others. Never allow children to play with or operate your pumps.



Be prepared for emergencies

Be prepared for fires, injuries, or other emergencies. Keep a first aid kit and a fire extinguisher near the pumps and the systems in which they are used. Keep emergency numbers for doctors, ambulance services, hospitals, and the fire department near your telephone. Know how and where to disconnect power to the pump motor.



A note to all employers

Know your responsibilities as an employer.

1. Make sure your employees know how to operate the pumps safely.
2. Make sure your employees are aware of the safety warnings in this catalog
3. Thoroughly train your employees about operating the pumps and other equipment safely.
4. Keep the pumps in proper working condition. If you make unauthorized modifications to a pump, you may reduce the function and safety of the pump.
5. Communicate all safety information to your customers.

PRODUCT FAMILIES

- **ROTARY VANE PUMPS** are mechanically sealed driven pumps that transfer clean fluids at pressures up to 250 psi and flows up to 11 gallons per minute. They are available in brass and stainless-steel housings with various mounting and drive options for standard carbonator motors. The flow rates range from 15 to 660 gallons per hour. The typical motor shaft power required ranges from 0.06 hp to 2.35 hp. All Rotary Vane Pumps are approved for all food contact applications.
- **MAG DRIVE PUMPS** are magnetically coupled (seal-less) pumps that transfer clean fluids at pressures up to 250 psi and flows up to 11 gallons per minute. They are available as a stainless-steel housing and motor package and are typically used in the applications where leak is more frequent and/or quiet operation is required. The flow rates range from 15 to 660 gallons per hour. The typical motor shaft power required ranges from 0.06 hp to 2.35 hp. All Mag Drive Pumps are approved for all food contact applications.
- **MICRO VANE PUMPS** are mechanically sealed and magnetically coupled (seal-less) driven pumps that transfer clean fluids at pressures up to 180 psi and flows up to 0.6 gallon per minute. They are available as a stainless-steel housing and (AC & DC) motor package and are typically used in applications where a small footprint is required. The flow rates range from 3 to 35 gallons per hour. The typical motor shaft power required ranges from 20 watts to 80 watts. All Micro Vane Pumps are approved for all food contact applications.
- **GEAR PUMPS** are mechanically sealed and magnetically coupled (seal-less) driven pumps that transfer clean fluids at pressures up to 230 psi and flows up to 1 gallon per minute. They are available as a stainless-steel housing and (AC & DC) motor package and are typically used in applications where a small footprint is required. The flow rates range from 0.1 gallons per hour to 220 gallons per hour. The typical motor shaft power required ranges from 30 watts to 150 watts. All Gear Pumps are approved for all food contact applications.

PRODUCT COMPLIANCE

Product Compliance

PROCON is concerned with public health, safety, and the environment, and complies with these strict standards and international certifications such as NSF, WRAS, EU 1935/2004, and Australian Drinking Water. For more information email productcompliance@PROCONpump.com.



RoHS

CE



WRAS



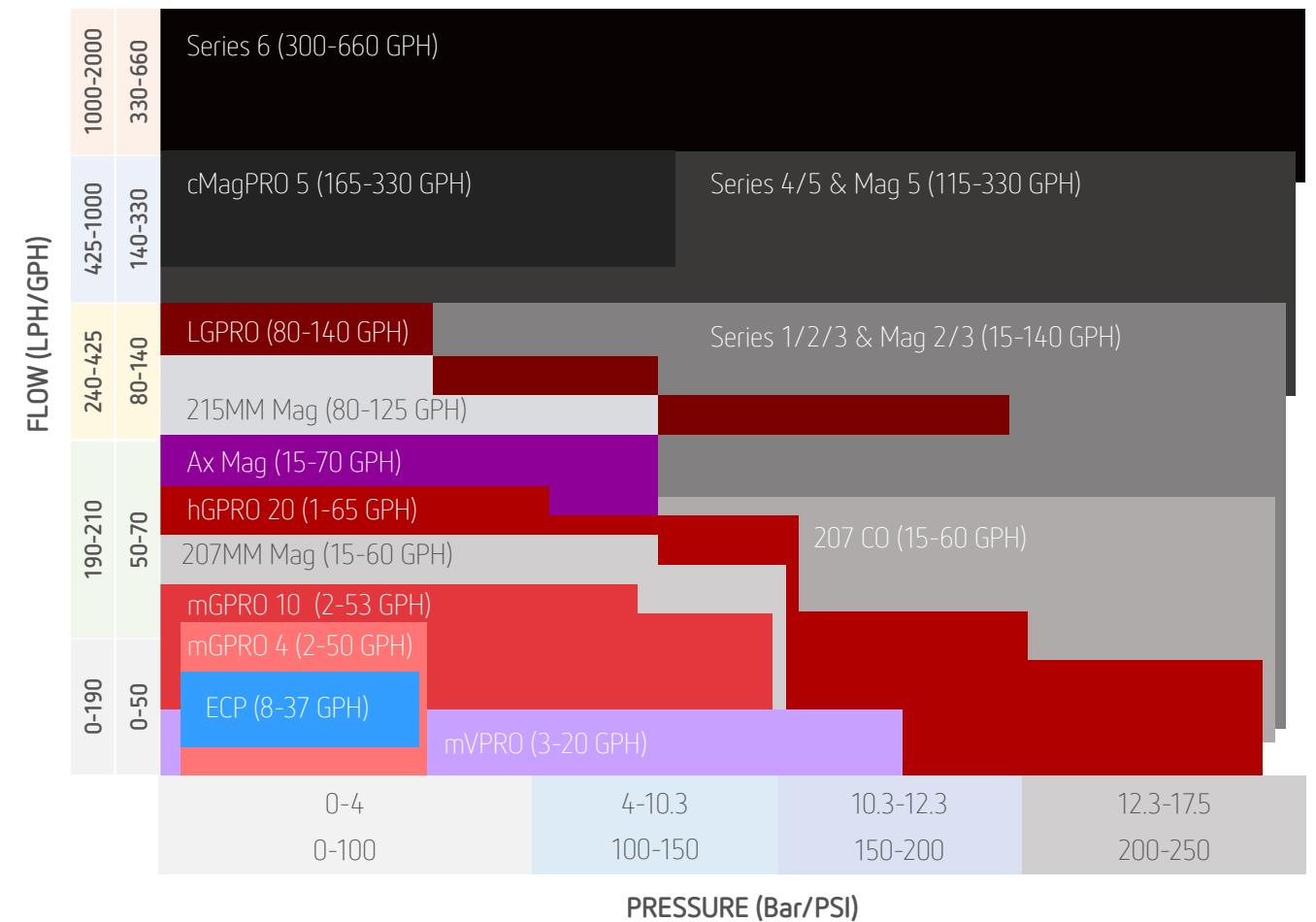
ISO 9001

PROCON's state of the art manufacturing facilities in Mexico and Ireland are ISO 9001 certified. For up to date certification email productcompliance@PROCONpump.com.

Model Number

The model number contains the information on the pump and its configuration. It can be identified as alphanumeric code on the product label along with pump's performance (flow and pressure), manufacturing date and location. Model numbers can be used for reordering and verification of product compliance on third party certification agency. For clarification and more information on the model number please contact your sales representative.

PERFORMANCE SELECTION



PRODUCT FEATURES

PROCON pumps are ideally suited for handling many clean fluids.

1. They have the unique ability to handle many liquids with low lubricating characteristics at relatively high pressures.
2. Special internal materials and unique design eliminate metal-to-metal contact and make PROCON pumps low in starting torque.
3. Most PROCON pumps are self-priming.
4. PROCON pumps are quiet and have low vibration and pulsation characteristics.

Our pumps have advantages that are not usually found in other pumps.

1. Flow remains almost constant over the entire pressure range.
2. PROCON pumps do not have to be lubricated and are virtually maintenance-free throughout their entire life except for cleaning the strainer (optional feature).

NOTE

Specifications and dimensions are subject to change without notice.



Features and Benefits

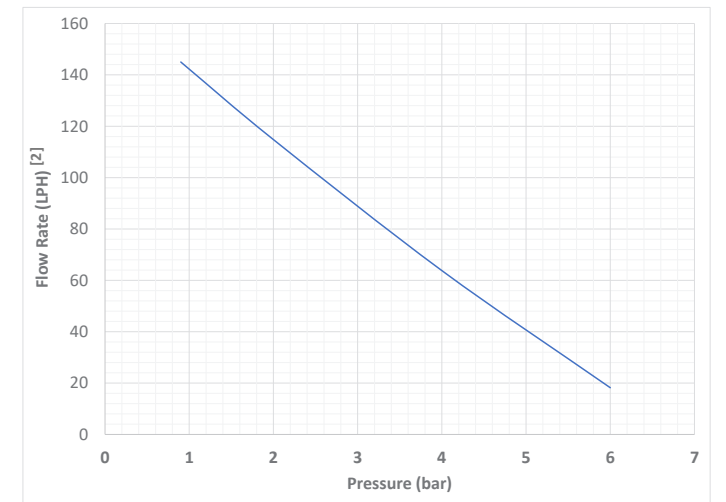
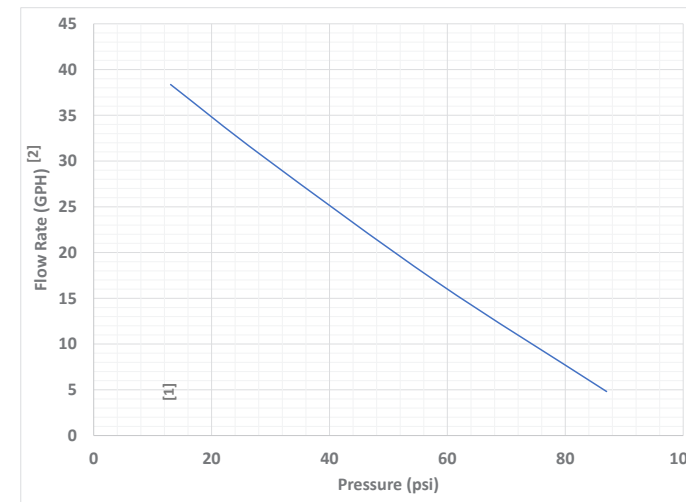
- Positive Displacement Gear Pump with patented programmable microprocessor controller
- Self-priming and maintenance free with low vibration and pulsation characteristics
- Brushless 24VDC motor with manual speed pot control
- Reverse polarity protection to prevent incorrect wiring/installation
- Ceramic pressure sensor and adjustable timer up to 60 seconds
- Dispensing accuracy within 3%; ideal for dosing applications
- Adjustable low and high pressure set points between 0 to 10 bar (0 to 150 psi)
- Push buttons to reset for priming after bag or BIB change
- **NO FLAVOR ABSORPTION**

General Applications

- Dosing Application
- Milk Frothing
- Espresso/Coffee
- Misting Systems
- Syrup Dispensing
- Boiler Feeds
- Ink Dispensing
- Temperature Control
- Syrup Dispensing
- Detergent Dispensing
- Inkjet printing
- Medical Application

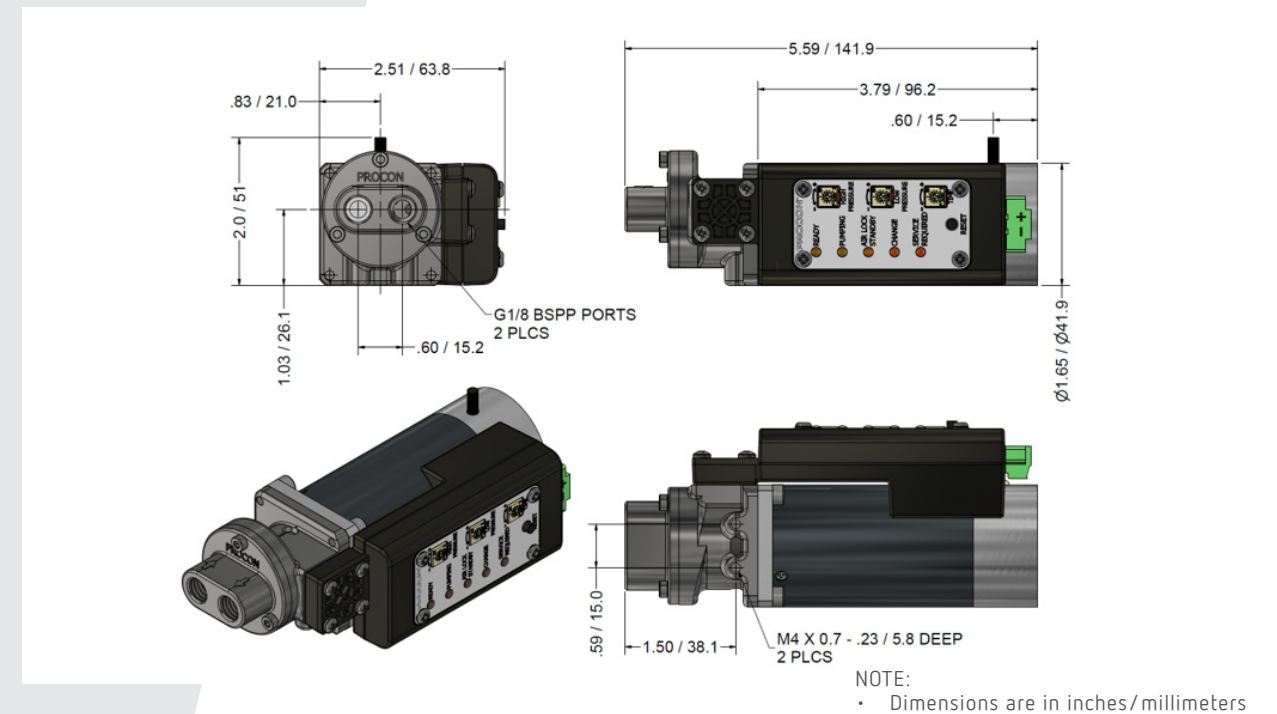
Technical Information			
Housing and motor shaft	304 Stainless Steel	Motor Type	24V Brushless DC
Gears and Bushing	Carbon Fiber PEEK	Max Speed	3,400 RPM No Load
Elastomer	Fluoroprene (Freudenberg XP41) (FDA, NSF, EU Food Contact Approved)	Max Input Current	4 A
Ports	G 1/8" Thread	Max Output Power	40W
Max Static Pressure	20 bar (290 psi)	Motor IP Protection	IP20
Max Vacuum Dry	1 M (3.3 Ft)	Insulation Class	F
Max Vacuum Wet	8 M (26.25 Ft)	Speed Control	Speed Pot
Low Pressure Range	0 - 2 bar (0 - 30 psi)	Unit Weight	0.9kg (2 lbs.)
High Pressure Range	2 - 10 bar (30 - 150 psi)		

Operating Range	
Max Ambient Temperature	150° F (70° C)
Fluid Temperature	104° F (40° C)
Max. Fluid Viscosity	20,000 Centipoise ^[1]



NOTES:
 [1] - Flow may vary with viscosity
 [2] - Flow curve based on pump tested with water at room temperature

DIMENSION AND CONNECTION DETAILS



Tennessee, USA
 869 Seven Oaks Blvd.
 Suite 120
 Smyrna, TN 37167
 001.615.355.8000
 sales@proconpump.com

Mountmellick, Ireland
 Irishtown, Mountmellick, CO.
 Laois, Republic of Ireland
 00353.57.86.24350
 sales@standex.ie

Tianjin, China
 J3A101, Western Area
 Xuefu Huigu Industrial Park
 Tianjin, China 300402
 00.86.22.86996885



Features and Benefits

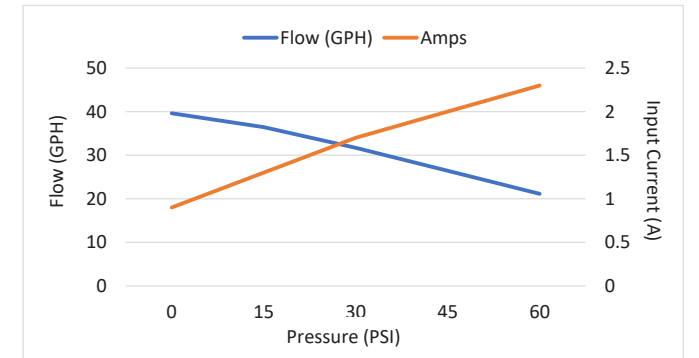
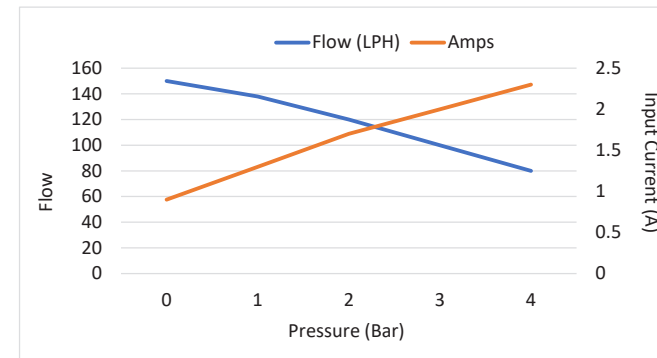
- No flavor absorption allows reuse of pump with simple cleaning
- Suitable for up to eight dispense valve pack
- Reduce/eliminate need for semi-annual calibration
- PROCON Syrup Pump Pack eliminates CO2 in the backroom
- Pumps are 24V DC with 110 to 120VAC or 200 – 240VAC, 50 / 60Hz power being supplied to the unit
- Flow is consistent. Does not vary in relation to the length of run
- Pumps turn off and on based on valve actuation at dispensing unit
- Each pump unit detects syrup bag outage by low pressure signal
- Leak detection will shut unit off within one minute of detection
- LED indicator displays current system condition

General Applications

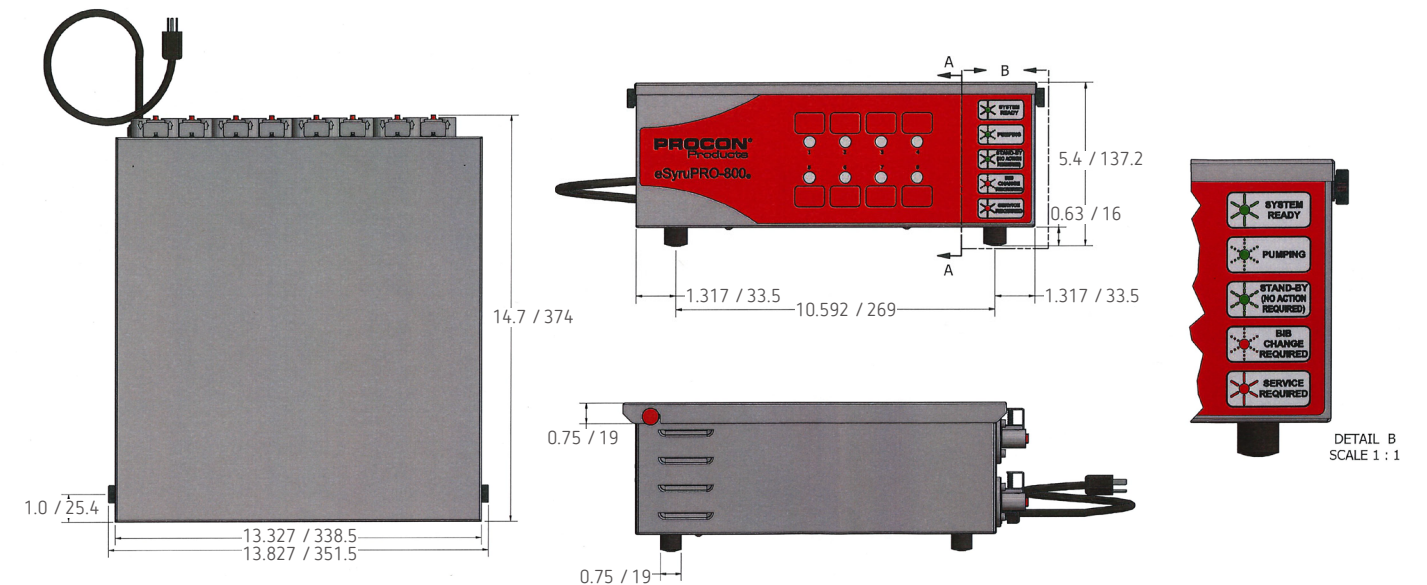
- Carbonation
- Espresso/Coffee
- Syrup Delivery
- Dosing
- Medical

Technical Information

Pump Housing Material	Stainless Steel	Motor Type	24V Brushed DC
Gears and Bushing Material	PEEK	Max Speed	3,400 RPM
Ports	Double O-Ring Quick Release	Max Output Power	40 Watt
Max Static Pressure	17 BAR (200 PSI)	Motor IP Protection	20
Max Vacuum	1 M (3.3Ft)	Insulation Class	F
Wet Lift with Water	8 M (26.25 Ft)	Unit Weight	Approx 40 lbs. (18.14kg)



DIMENSION AND CONNECTION DETAILS





Features and Benefits

- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Innovative mechanical seal design requires less sanitizing
- Positive Displacement Gear Pump with 24VDC brushed motor
- Self-priming and maintenance free with low vibration and pulsation characteristics
- Stainless steel housing works with acidity > 2 pH^[1]
- Available without an Internal Relief valve, with a set range of 1 to 4 Bar (14 to 60 PSI)

General Applications

- Milk Frothing
- Espresso/Coffee
- Syrup Dispensing
- Ink Dispensing
- Syrup Dispensing
- Detergent Dispensing
- Medical Application

Technical Information

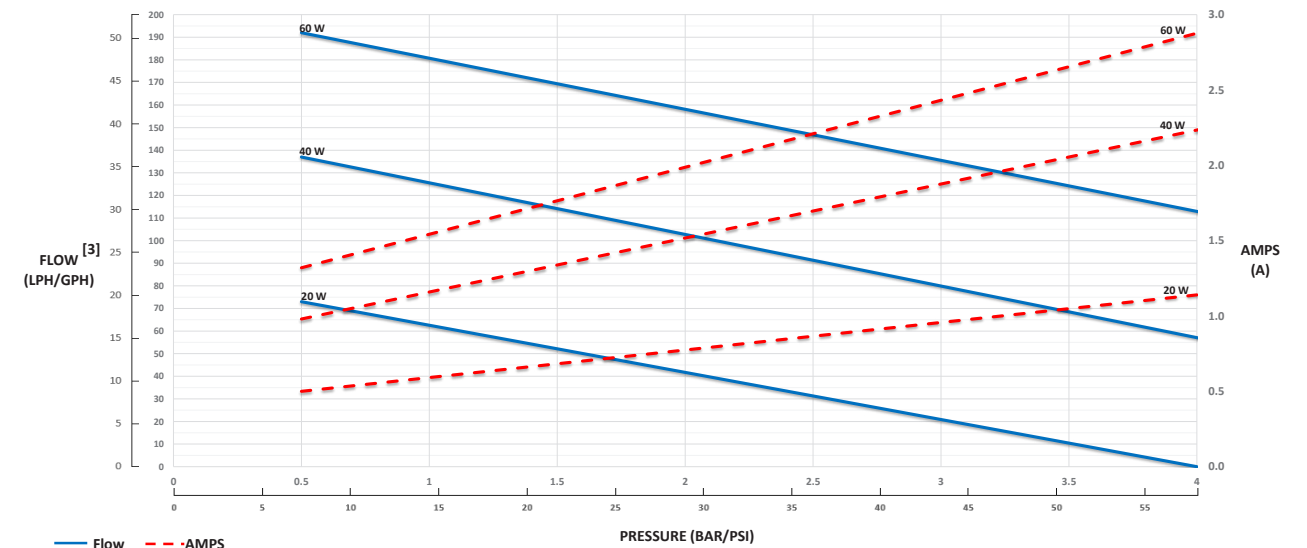
Housing and motor shaft	304 Stainless Steel	Valve Material	Teflon
Gears and Bushing	Carbon Fiber PEEK	Motor Type	24V Brushed DC
Seals	Carbon / Silicon Carbide	Motor IP Protection	IP 20 or IP 55
Elastomers	EPDM (FDA,NSF Approved), Fluorocarbon	Insulation Class	F
Ports	G 1/8"	Unit Weight	0.79 kg (1.74 lbs.)

Motor Information

	Max Output Power	Max Speed	Max. Input Current	IP Protection	Wire Connection	Relief Valve
5191FCT2GXAAJ	20W	1,900 RPM	2.1 A	IP 20	B	NO
5191GCT2GXAAJ	20W	1,900 RPM	2.1 A	IP 20	B	YES
5191FCT2GXAAK	40W	3,400 RPM	3.0 A	IP 20	A	NO
5191GCT2GXAAK	40W	3,400 RPM	3.0 A	IP 20	A	YES
5191FCT2GXAAP	40W	3,400 RPM	3.0 A	IP 55	A	NO
5191GCT2GXAAP	40W	3,400 RPM	3.0 A	IP 55	A	YES
51J1FCT2GXX	60W	4,000 RPM	4.1 A	IP 20	A	NO
51J1GCT2GXX	60W	4,000 RPM	4.1 A	IP 20	A	YES
5191FCT2GXAAAS	60W	4,000 RPM	4.1 A	IP 55	A	NO
5191GCT2GXAAAS	60W	4,000 RPM	4.1 A	IP 55	A	YES

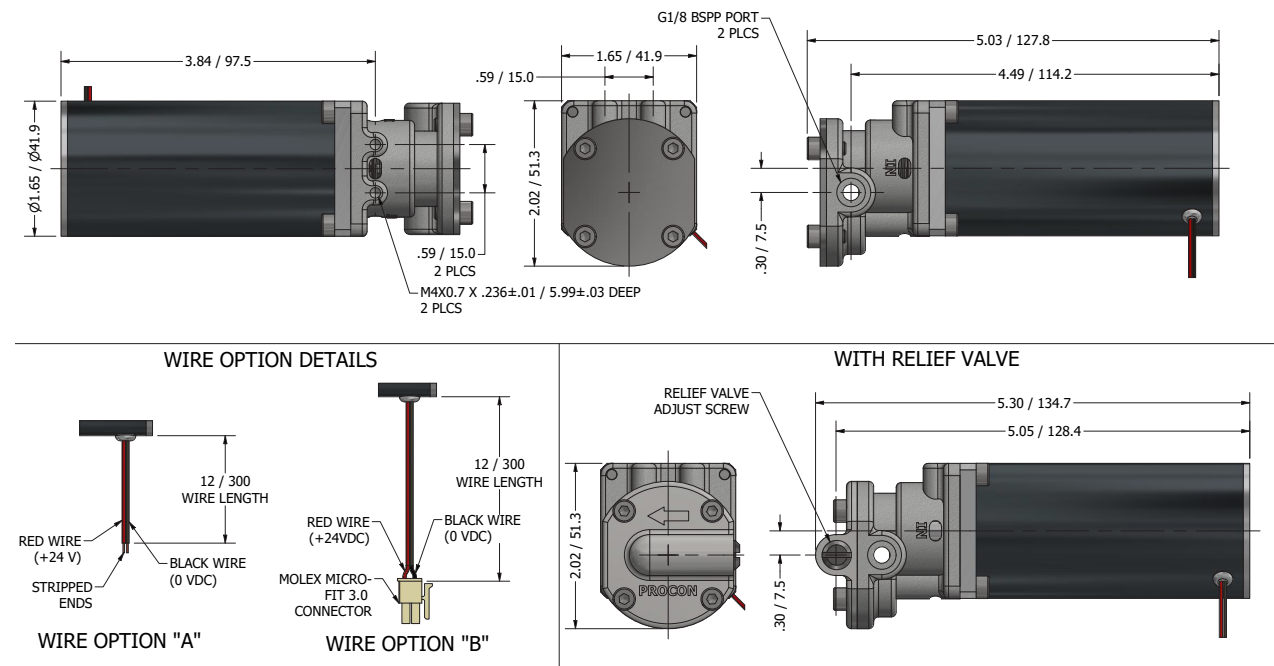
Operating Range

Max. Fluid Viscosity ^[2]	20,000 Centipoise	Fluid Temperature	-20° to 80°C (-4° to 176°F)
Max. Sound Level	60 dBA	Max Static Pressure	4 bar (60 PSI)
Max Vacuum Dry	1M (3.3 ft)	Max Discharge Pressure (Intermittent)	6 bar (90 PSI)
Max Vacuum Wet	2M (6 ft)	Max Discharge Pressure (Continuous)	3 bar (45 PSI)



NOTES:
 [1] Consult with manufacturer for extreme operating conditions
 [2] Flow may vary with viscosity
 [3] Performance based on pump tested with water at room temperature
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DIMENSION AND CONNECTION DETAILS



NOTE: Dimensions are in inches/millimeters

Tennessee, USA
 869 Seven Oaks Blvd.
 Suite 120
 Smyrna, TN 37167
 001.615.355.8000
 sales@proconpump.com

Mountmellick, Ireland
 Irishtown, Mountmellick, CO.
 Laois, Republic of Ireland
 00353.57.86.24350
 sales@standex.ie

Tianjin, China
 J3A101, Western Area
 Xuefu Huigu Industrial Park
 Tianjin, China 300402
 00.86.22.86996885



Features and Benefits

- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Innovative mechanical seal design requires less sanitizing
- Positive Displacement Gear Pump with 24VDC brushed motor
- Self-priming and maintenance free with low vibration and pulsation characteristics
- Available without an Internal Relief valve, with a set range of 1 to 4 Bar (14 to 60 PSI)

General Applications

- Milk Frothing
- Espresso/Coffee
- Syrup Dispensing
- Ink Dispensing
- Syrup Dispensing
- Detergent Dispensing
- Medical Application

Technical Information

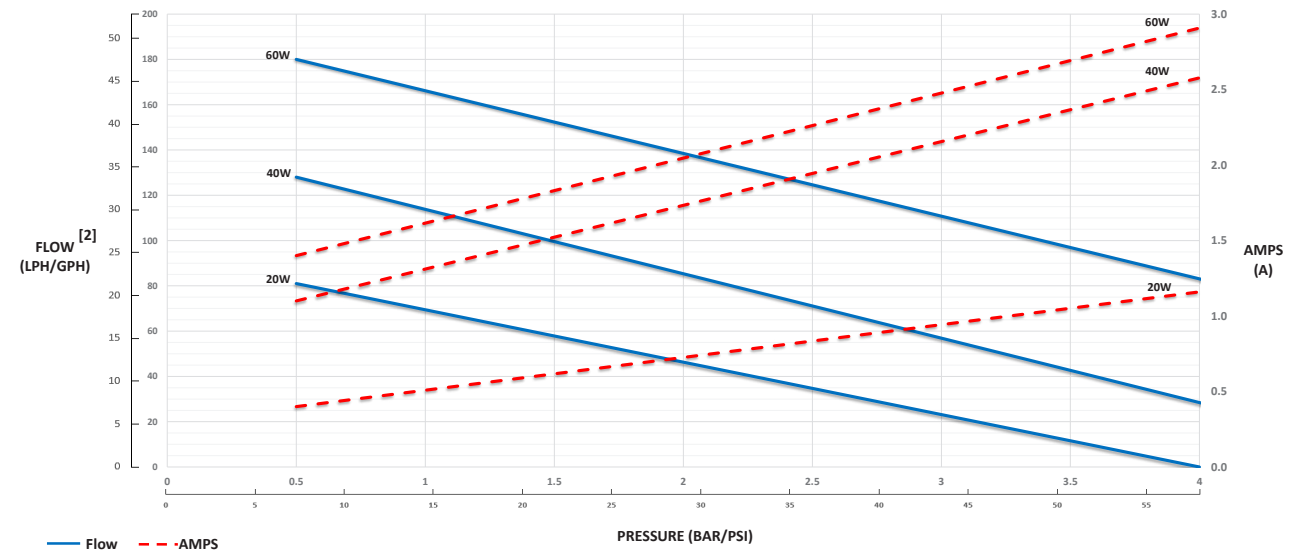
Housing and motor shaft	PPS Glass filled / 304 Stainless Steel	Valve Material	Teflon
Gears and Bushing	Carbon Fiber PEEK	Motor Type	24V Brushed DC
Seals	Carbon / Silicon Carbide	Motor IP Protection	IP 20 or IP 55
Elastomers	EPDM or Fluorocarbon	Insulation Class	F
Ports	G 1/8"	Unit Weight	0.68 kg (1.5 lbs.)

Motor Information

Pump Code	Max Output Power	Max Speed	Max. Input Current	IP Protection	Wire Connection	Relief Valve
5191HCT2GXXAAJ	20W	1,900 RPM	2.1 A	IP 20	B	NO
5191LCT2GXXAAJ	20W	1,900 RPM	2.1 A	IP 20	B	YES
5191HCT2GXXAAK	40W	3,400 RPM	3.0 A	IP 20	A	NO
5191LCT2GXXAAK	40W	3,400 RPM	3.0 A	IP 20	A	YES
5191HCT2GXXAAP	40W	3,400 RPM	3.0 A	IP 55	A	NO
5191LCT2GXXAAP	40W	3,400 RPM	3.0 A	IP 55	A	YES
51J1HCT2GXX	60W	4,000 RPM	4.1 A	IP 20	A	NO
51J1LCT2GXX	60W	4,000 RPM	4.1 A	IP 20	A	YES
5191HCT2GXXAAS	60W	4,000 RPM	4.1 A	IP 55	A	NO
5191LCT2GXXAAS	60W	4,000 RPM	4.1 A	IP 55	A	YES

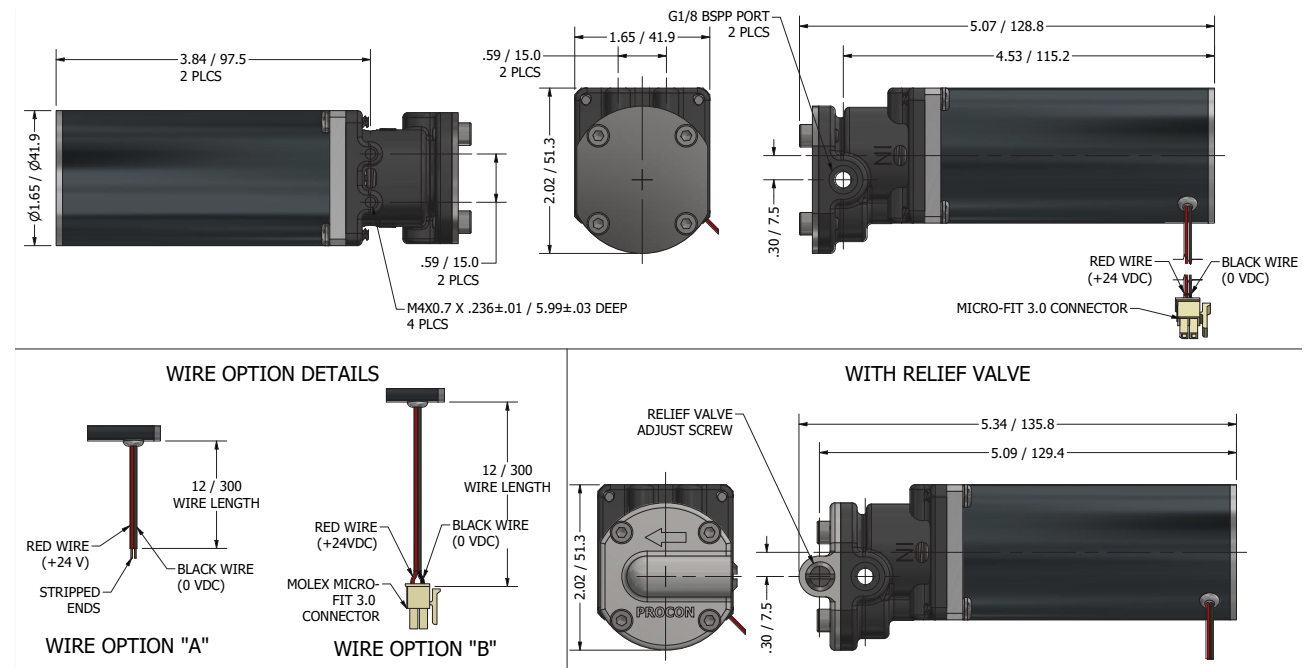
Operating Range

Max. Fluid Viscosity ^[1]	20,000 Centipoise	Fluid Temperature	-20° to 80°C (-4° to 176°F)
Max. Sound Level	60 dBA	Max Static Pressure	4 bar (60 PSI)
Max Vacuum Dry	1M (3.3 ft)	Max Discharge Pressure (Intermittent)	6 bar (90 PSI)
Max Vacuum Wet	2M (6 ft)	Max Discharge Pressure (Continuous)	3 bar (45 PSI)



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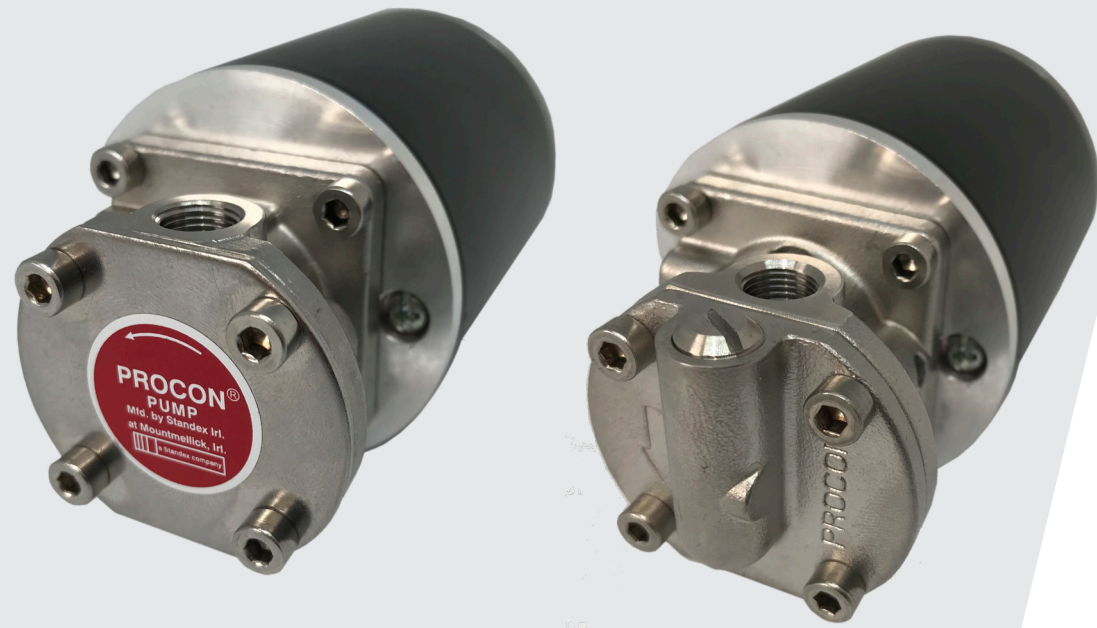


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 Suite 120
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- Ink Dispensing
- Syrup Dispensing
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- Medical Application

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- Positive Displacement Gear Pump with 24VDC brushed motor
- Self-priming and maintenance free with low vibration and pulsation characteristics
- Stainless Steel housing works with acidity > 2 pH^[1]
- Available without an Internal Relief valve, with a set range of 1 to 4 Bar (14 to 60 PSI)

Technical Information

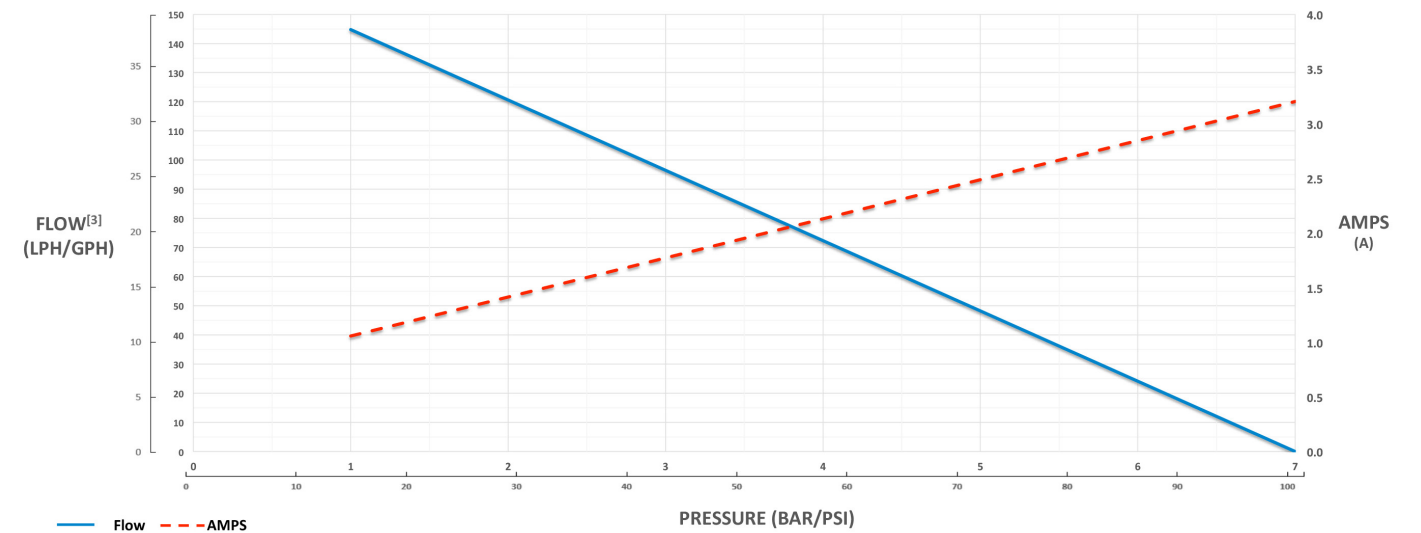
Housing and motor shaft	304 Stainless Steel	Valve Material	Teflon
Gears and Bushing	Carbon Fiber PEEK	Motor Type	24V Brushed DC
Seals	Carbon / Silicon Carbide	Motor IP Protection	IP 20
Elastomers	EPDM (FDA,NSF Approved), Fluorocarbon	Insulation Class	F
Ports	G 1/8"	Unit Weight	0.8 kg (1.76 lbs.)

Motor Performance

	Max Output Power	Max Speed	Max. Input Current	Relief Valve
5191FCT2GXXACX	30W	3,000 RPM	2.6 A	No
5191GCT2GXXACX	30W	3,000 RPM	2.6 A	Yes

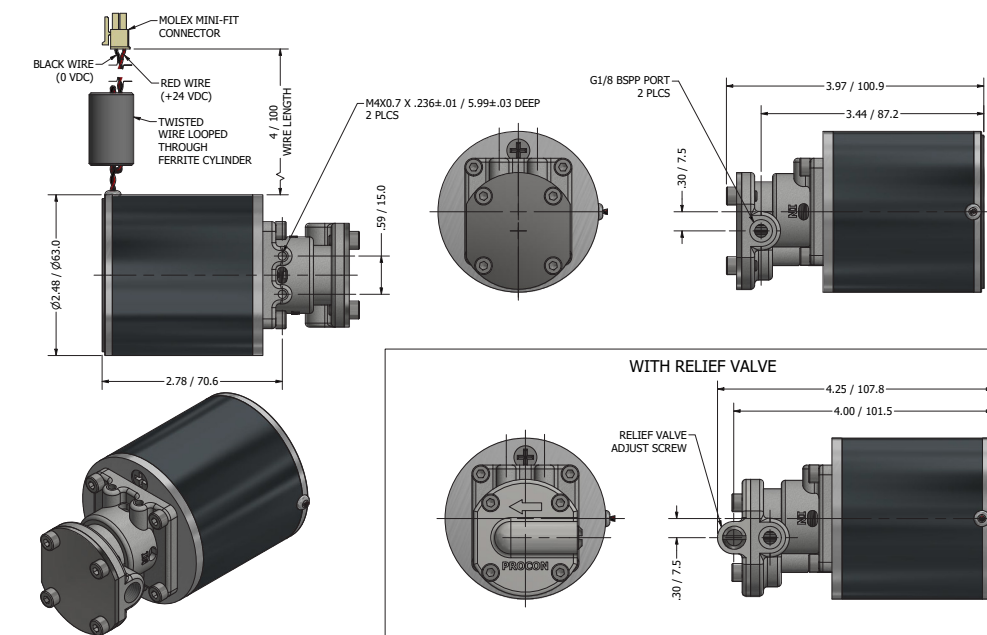
Operating Range

Max. Fluid Viscosity	20,000 Centipoise ^[2]	Fluid Temperature	-20° to 80°C (-4° to 176°F)
Max. Sound Level	60 dBA	Max Static Pressure	4 bar (60 PSI)
Max Vacuum Dry	1M (3.3 ft)	Max Discharge Pressure (Intermittent)	6 bar (90 PSI)
Max Vacuum Wet	2M (6 ft)	Max Discharge Pressure (Continuous)	3 bar (45 PSI)



NOTES:
 [1] Consult with manufacturer for extreme operating conditions
 [2] Flow may vary with viscosity
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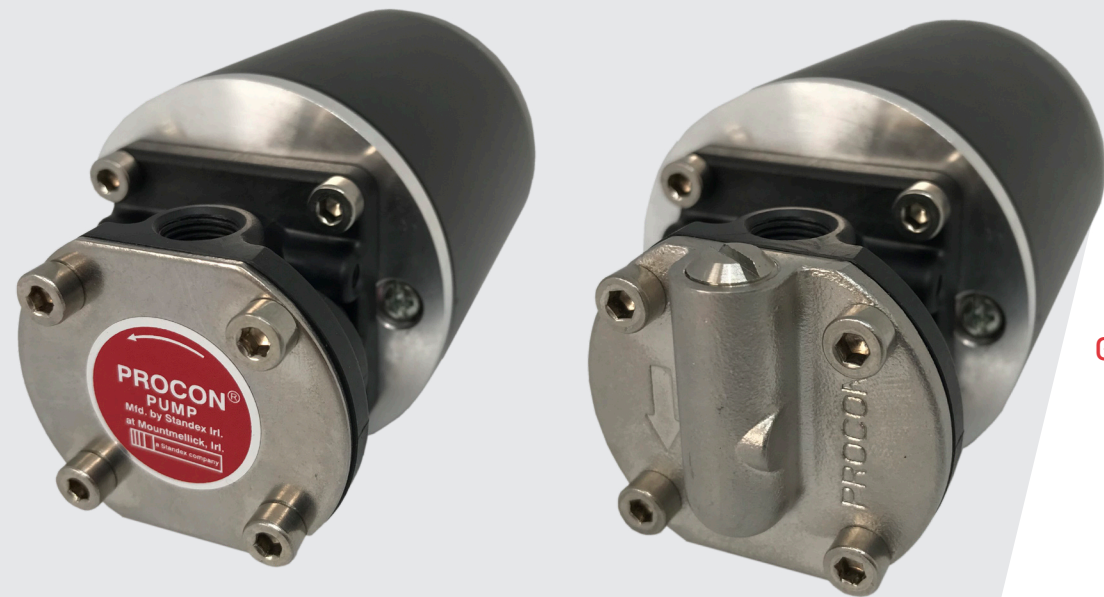


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General Applications

- Milk Frothing
- Espresso/Coffee
- Syrup Dispensing
- Ink Dispensing
- Syrup Dispensing
- Detergent Dispensing
- Medical Application

Features and Benefits

- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Innovative mechanical seal design requires less sanitizing
- Positive Displacement Gear Pump with 24VDC brushed motor
- Self-priming and maintenance free with low vibration and pulsation characteristics
- Available without an Internal Relief valve, with a set range of 1 to 4 Bar (14 to 60 PSI)

Technical Information

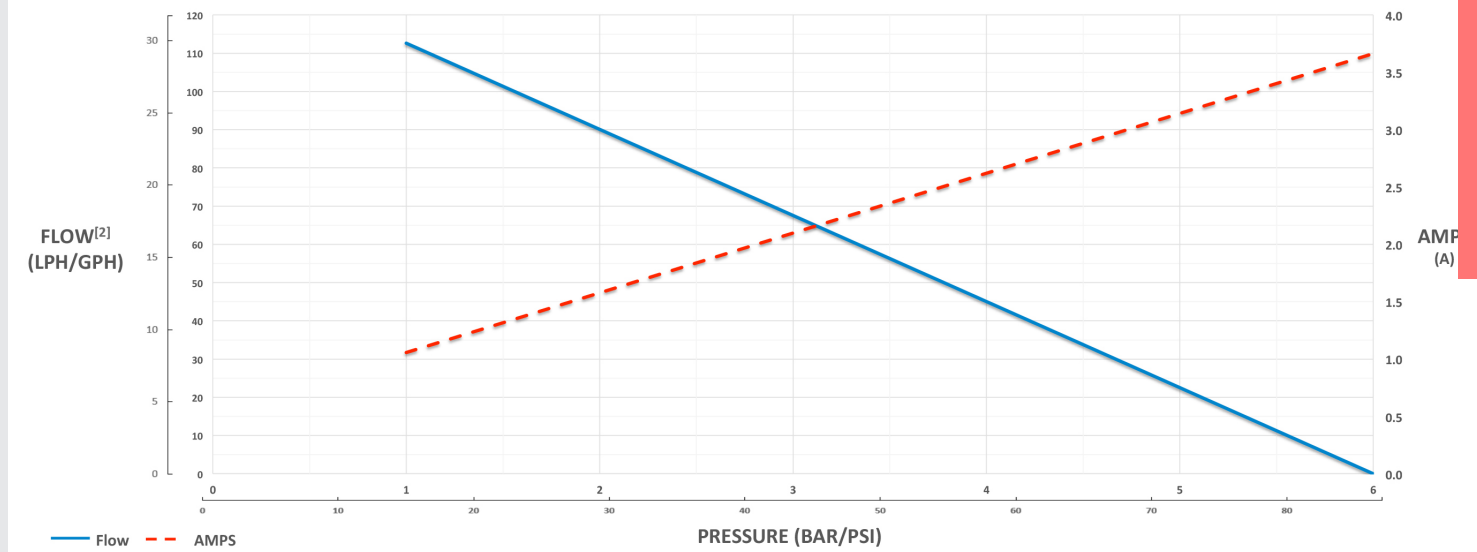
Housing and motor shaft	PPS Glass filled / 304 Stainless Steel	Valve Material	Teflon
Gears and Bushing	Carbon Fiber PEEK	Motor Type	24V Brushed DC
Seals	Carbon / Silicon Carbide	Motor IP Protection	IP 20
Elastomers	EPDM (FDA,NSF Approved), Fluorocarbon	Insulation Class	F
Ports	G 1/8"	Unit Weight	0.8 kg (1.76 lbs.)

Motor Performance

	Max Output Power	Max Speed	Max Input Current	Relief Valve
5191HCT2GXXACX	30W	3,000 RPM	2.6 A	No
5191LCT2GXXACX	30W	3,000 RPM	2.6 A	Yes

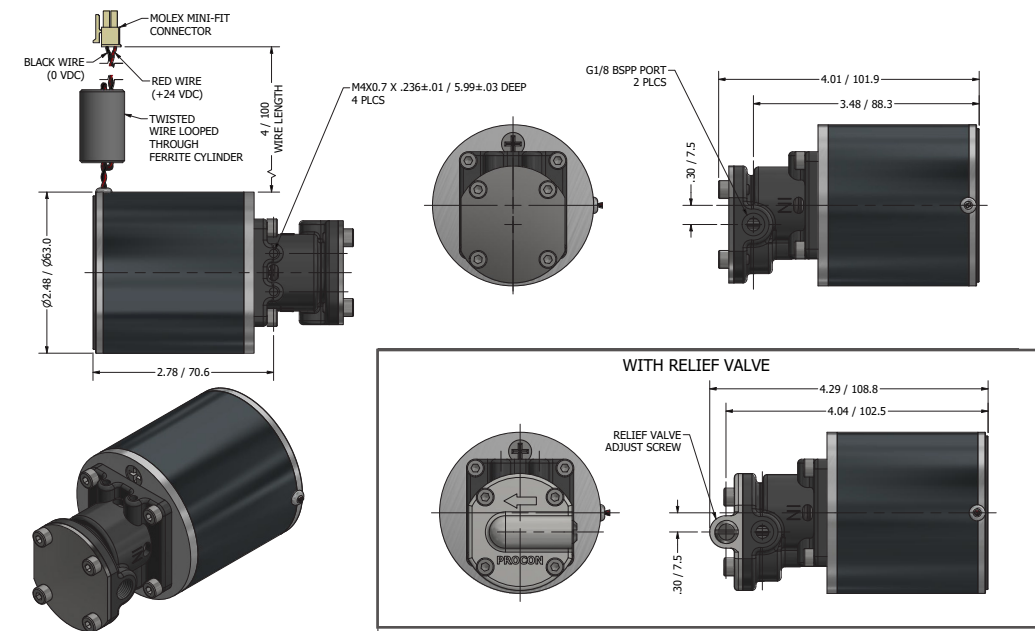
Operating Range

	20,000 Centipoise ^[1]	Fluid Temperature	-20° to 80°C (-4° to 176°F)
Max. Fluid Viscosity	20,000 Centipoise ^[1]	Fluid Temperature	-20° to 80°C (-4° to 176°F)
Max. Sound Level	60 dBA	Max Static Pressure	4 bar (60 PSI)
Max Vacuum Dry	1M (3.3 ft)	Max Discharge Pressure (Intermittent)	6 bar (90 PSI)
Max Vacuum Wet	2M (6 ft)	Max Discharge Pressure (Continuous)	3 bar (45 PSI)



NOTES:
[1] Flow may vary with viscosity
[2] Performance based on pump tested with water at room temperature

DIMENSION AND CONNECTION DETAILS

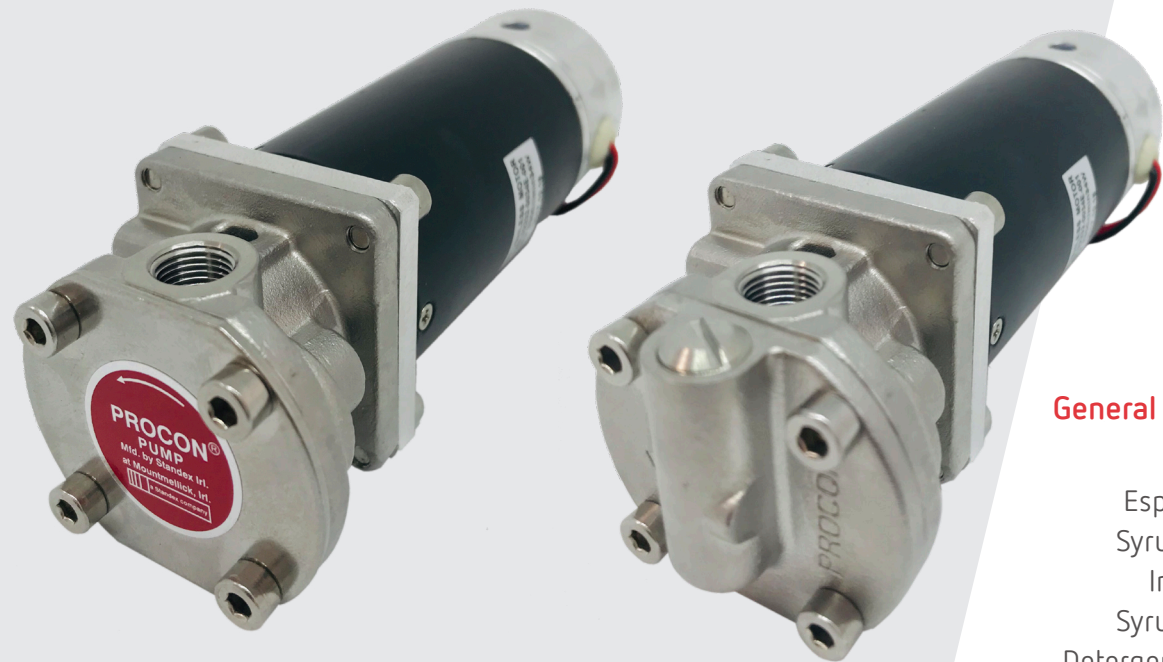


NOTE: Dimensions are in inches/millimeters

Tennessee, USA
869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@proconpump.com

Mountmellick, Ireland
Irishtown, Mountmellick, CO.
Laois, Republic of Ireland
00353.57.86.24350
sales@standex.ie

Tianjin, China
J3A101, Western Area
Xuefu Huigu Industrial Park
Tianjin, China 300402
00.86.22.86996885



General Applications

- Milk Frothing
- Espresso/Coffee
- Syrup Dispensing
- Ink Dispensing
- Syrup Dispensing
- Detergent Dispensing
- Medical Application

Features and Benefits

- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Innovative mechanical seal design requires less sanitizing
- Positive Displacement Gear Pump with 24VDC brushless motor with built in controller
- Self-priming and maintenance free with low vibration and pulsation characteristics
- Stainless Steel housing works with acidity > 2 pH [1]
- Available without an Internal Relief valve, with a set range of 1 to 4 Bar (14 to 60 PSI)

Technical Information

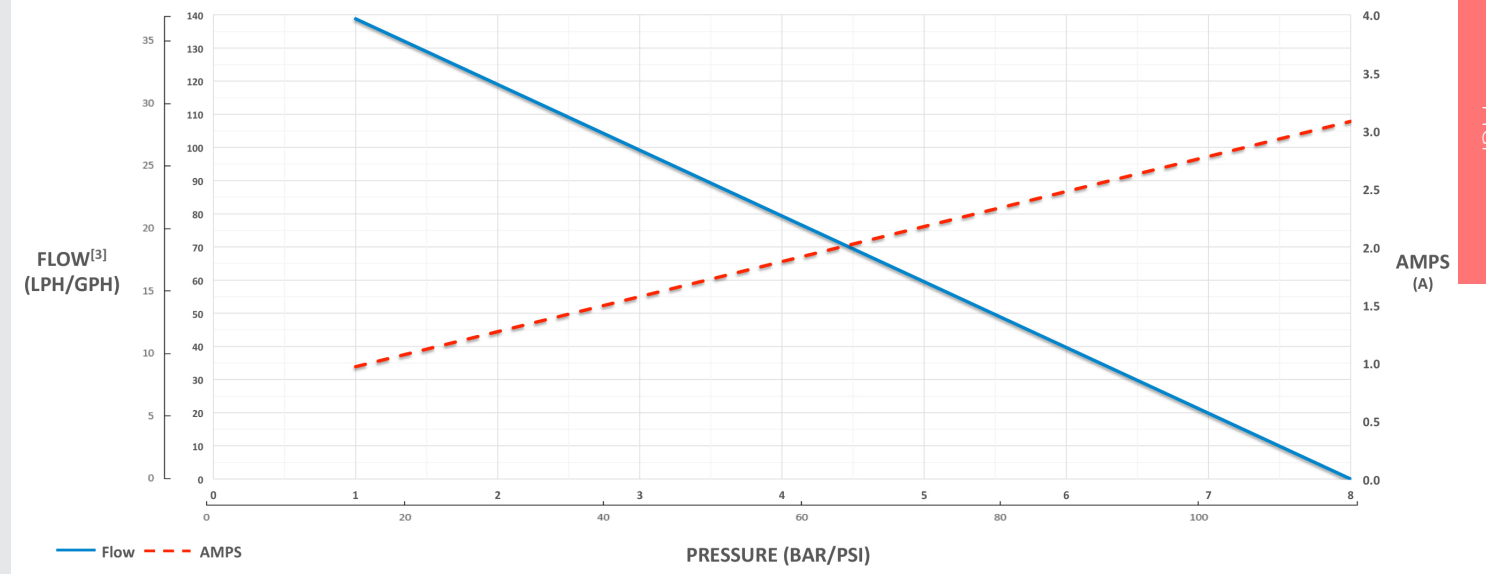
Housing and motor shaft	304 Stainless Steel	Motor Type	24V Brushless DC with control
Gears and Bushing	Carbon Fiber PEEK	Motor IP Protection	IP 20
Seals	Carbon / Silicon Carbide	Insulation Class	B
Elastomers	EPDM or Fluorocarbon	Speed Control	0-5VDC Input Signal
Ports	G 1/8"	Unit Weight	0.75 kg (1.65 lbs.)
Valve Material	Teflon		

Motor Performance

	Max Output Power	Max Speed	Max. Input Current	Relief Valve
5191FCT2GXXBAA	34 W	3,300 RPM	1.6 A	No
5191GCT2GXXBAA	34 W	3,300 RPM	1.6 A	Yes

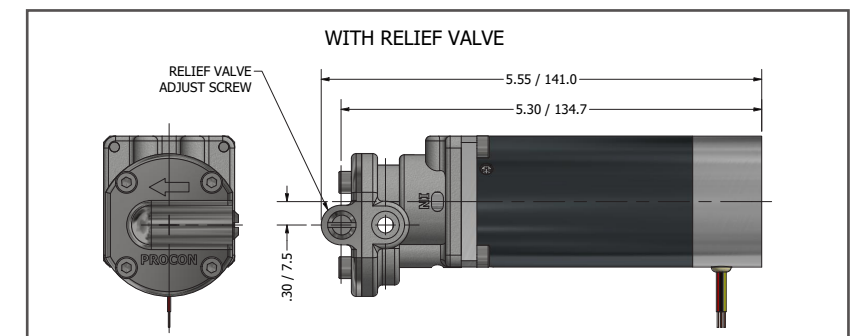
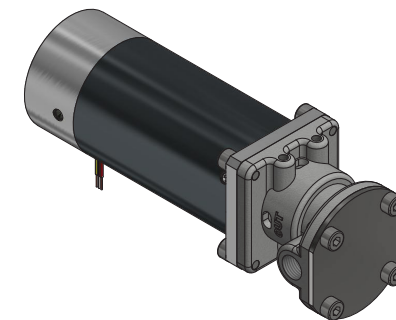
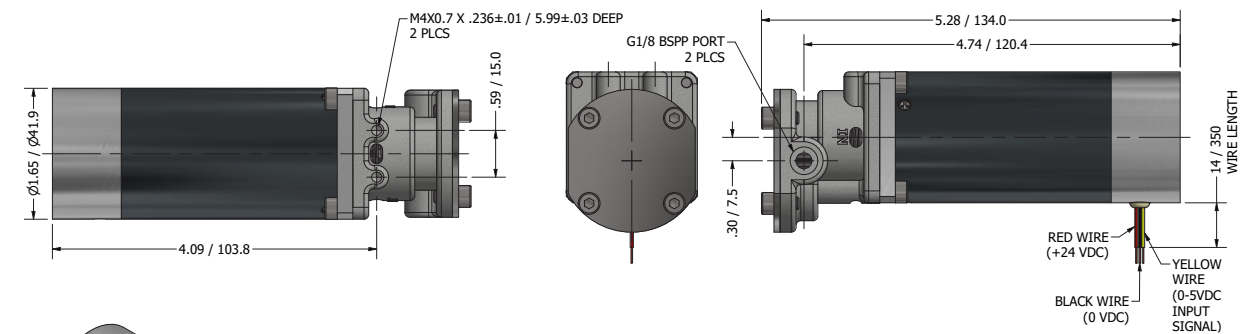
Operating Range

Max. Fluid Viscosity	20,000 Centipoise [2]	Fluid Temperature	-20° to 80°C (-4° to 176°F)
Max. Sound Level	60 dBA	Max Static Pressure	4 bar (60 PSI)
Max Vacuum Dry	1M (3.3 ft)	Max Discharge Pressure (Intermittent)	6 bar (90 PSI)
Max Vacuum Wet	2M (6 ft)	Max Discharge Pressure (Continuous)	3 bar (45 PSI)



NOTES:
 [1] Consult with manufacturer for extreme operating conditions
 [2] Flow may vary with viscosity
 [3] Performance based on pump tested with water at room temperature & at full speed

DIMENSION AND CONNECTION DETAILS



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 Suite 120
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 001.615.355.8000
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Mountmellick, Ireland
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 Laois, Republic of Ireland
 00353.57.86.24350
 sales@standex.ie

Tianjin, China
 J3A101, Western Area
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 Tianjin, China 300402
 00.86.22.86996885



Features and Benefits

- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Innovative mechanical seal design requires less sanitizing
- Positive Displacement Gear Pump with 24VDC brushless motor with built in controller
- Self-priming and maintenance free with low vibration and pulsation characteristics
- Available without an Internal Relief valve, with a set range of 1 to 4 Bar (14 to 60 PSI)

General Applications

- Milk Frothing
- Espresso/Coffee
- Syrup Dispensing
- Ink Dispensing
- Syrup Dispensing
- Detergent Dispensing
- Medical Application

Technical Information

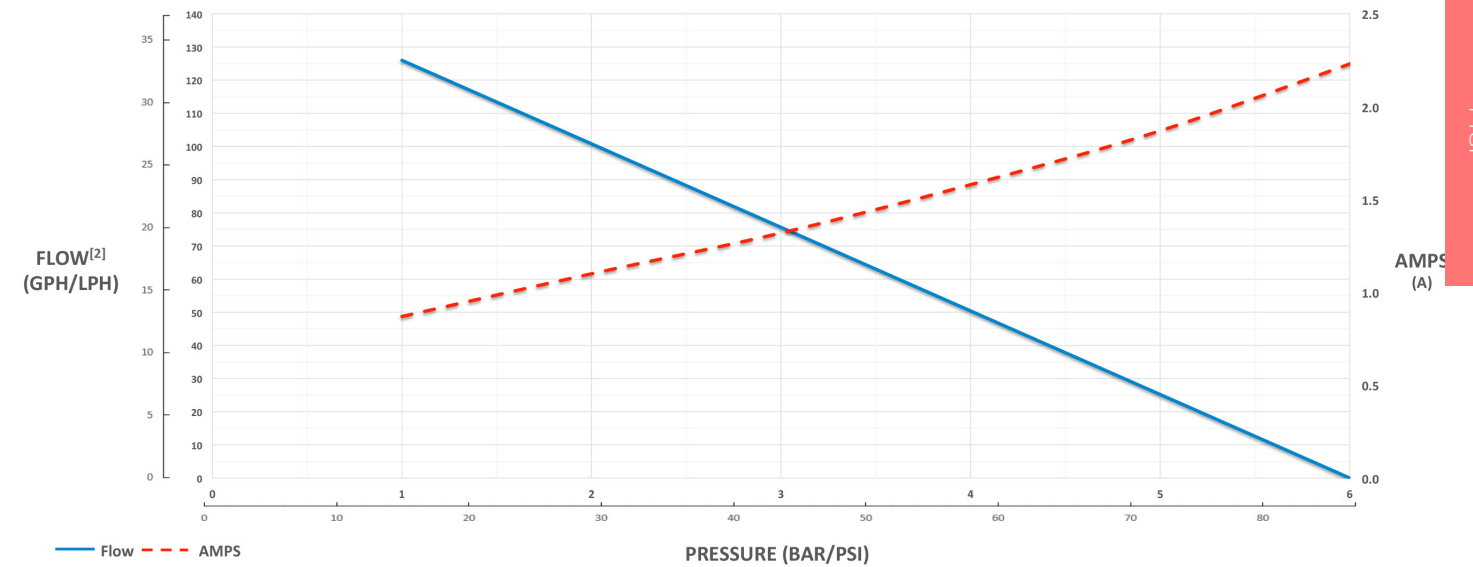
Housing and motor shaft	Glass filled PPS / 304 Stainless Steel	Motor Type	24V Brushless DC with control
Gears and Bushing	Carbon Fiber PEEK	Motor IP Protection	IP 20
Seals	Carbon / Silicon Carbide	Insulation Class	B
Elastomers	EPDM (FDA,NSF Approved), Fluorocarbon	Speed Control	Manual adjust speed pot
Ports	G 1/8"	Unit Weight	0.75 kg (1.65 lbs.)
Valve Material	Teflon		

Motor Performance

	Max Output Power	Max Speed	Max. Input Current	Relief Valve
5191FCT2GXXBAA	34 W	3,300 RPM	1.6 A	No
5191GCT2GXXBAA	34 W	3,300 RPM	1.6 A	Yes

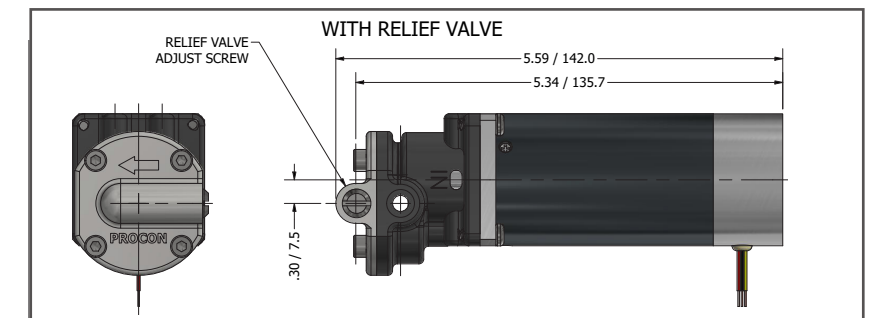
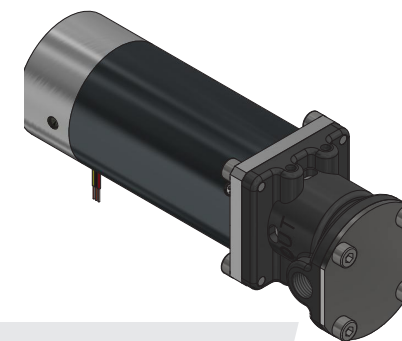
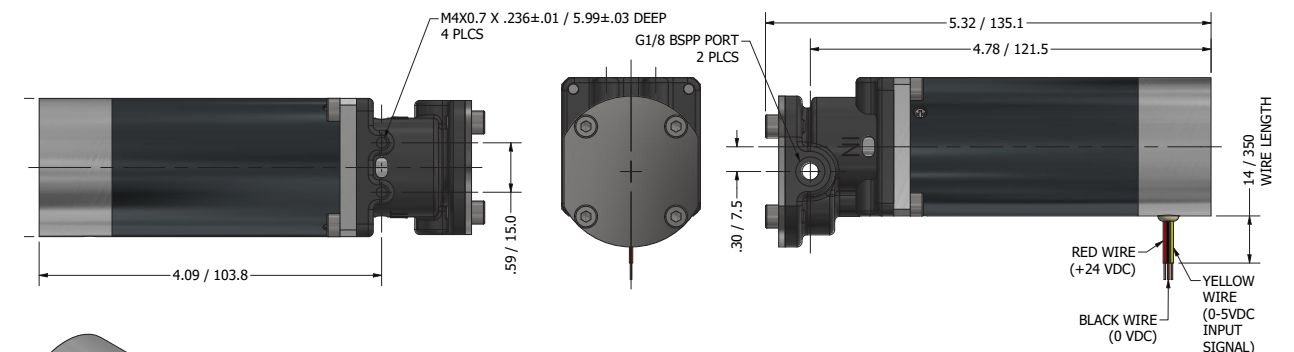
Operating Range

Max. Fluid Viscosity	20,000 Centipoise ^[1]	Fluid Temperature	-20° to 80°C (-4° to 176°F)
Max. Sound Level	60 dBA	Max Static Pressure	4 bar (60 PSI)
Max Vacuum Dry	1M (3.3 ft)	Max Discharge Pressure (Intermittent)	6 bar (90 PSI)
Max Vacuum Wet	2M (6 ft)	Max Discharge Pressure (Continuous)	3 bar (45 PSI)



NOTES:
[1] Flow may vary with viscosity
[2] Performance based on pump tested with water at room temperature & at full speed

DIMENSION AND CONNECTION DETAILS

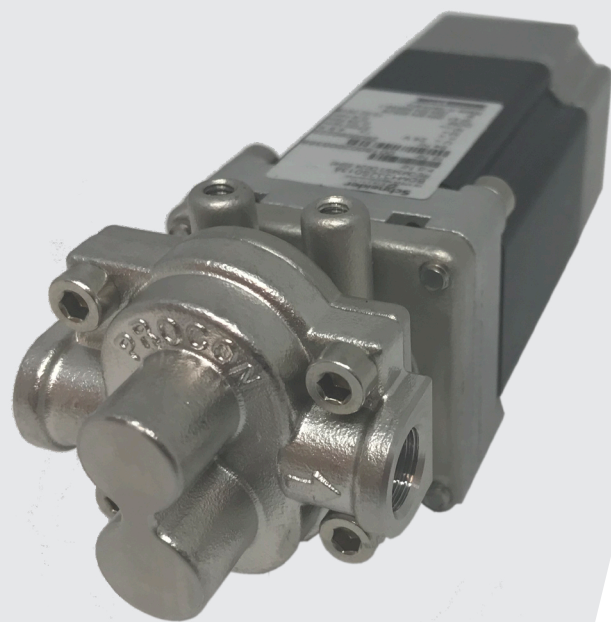


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869 Seven Oaks Blvd.
Suite 120
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Xuefu Huigu Industrial Park
Tianjin, China 300402
00.86.22.86996885



General Applications

- Milk Frothing
- Espresso/Coffee
- Misting Systems
- Syrup Dispensing
- Boiler Feeds
- Ink Dispensing
- Temperature Control
- Syrup Dispensing
- Detergent Dispensing
- Inkjet printing
- Medical Application

Features and Benefits

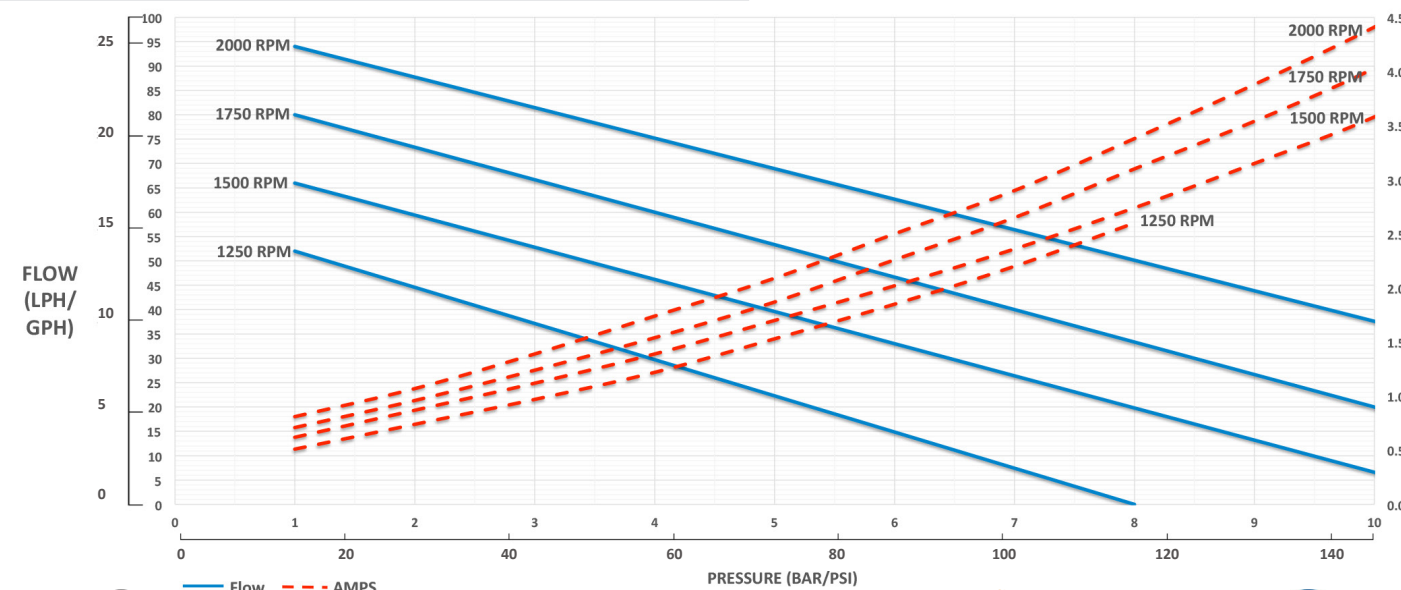
- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Innovative mechanical seal design requires less sanitizing
- Positive Displacement Gear Pump with 24VDC brushless motor
- Self-priming and maintenance free with low vibration and pulsation characteristics
- Stainless steel housing works with acidity > 2 pH¹

Technical Information

Housing and motor shaft	304 Stainless Steel	Motor Type	24V Brushless DC Dual Direction
Gears and Bushing	Carbon Fiber PEEK	Max Speed	3000 RPM
Seals	Carbon / Silicon Carbide	Max Output Power	80W
Elastomers	EPDM (FDA,NSF Approved)	Max. Input Current	4A
Ports	G 1/8"	Motor IP Protection	IP41
Unit Weight	2.05 lbs. (0.93 kg)	Insulation Class	B
		Speed Control	0-5V (needs controller)

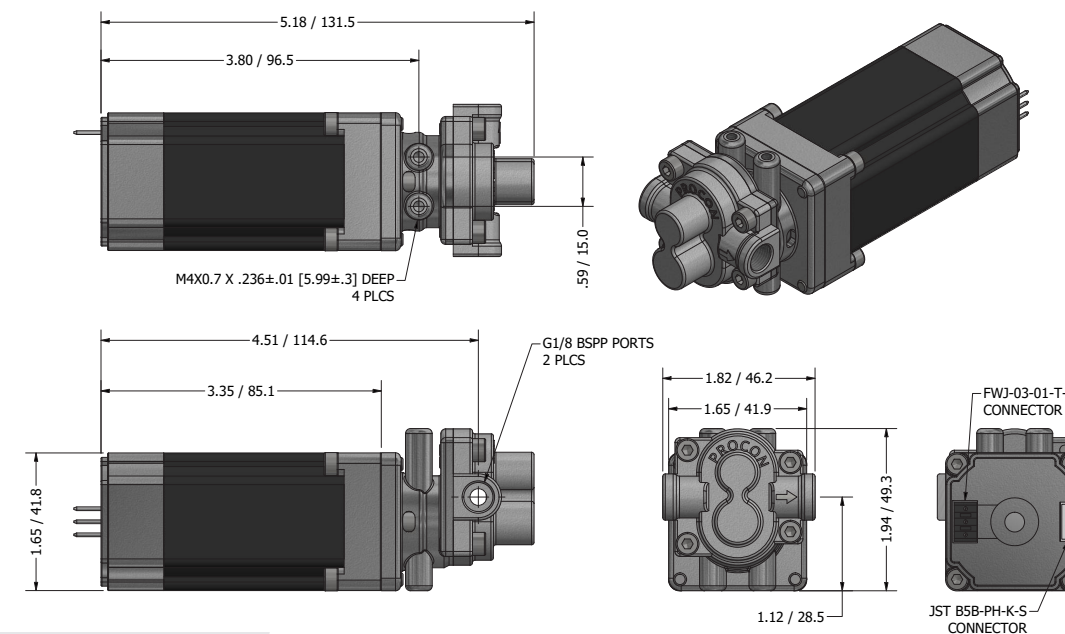
Operating Range

Max. Fluid Viscosity	20,000 Centipoise [2]	Fluid Temperature	-4° to 194 °F (-20° to 90 °C)
Max. Sound Level	60 dBA	Max Static Pressure	130 PSI (9 bar)
Max Vacuum Dry	3.3 ft (1M)	Max Discharge Pressure (Intermittent)	250 PSI (17 bar)
Max Vacuum Wet	6 ft (2M)	Max Discharge Pressure (Continuous)	90 PSI (6 bar)



NOTES:
 [1] Consult with manufacturer for extreme operating conditions
 [2] Consult with manufacturer for information on other applications
 [3] For certificate of compliance or declarations please visit our website or email at productcompliance@proconpump.com

DIMENSION AND CONNECTION DETAILS

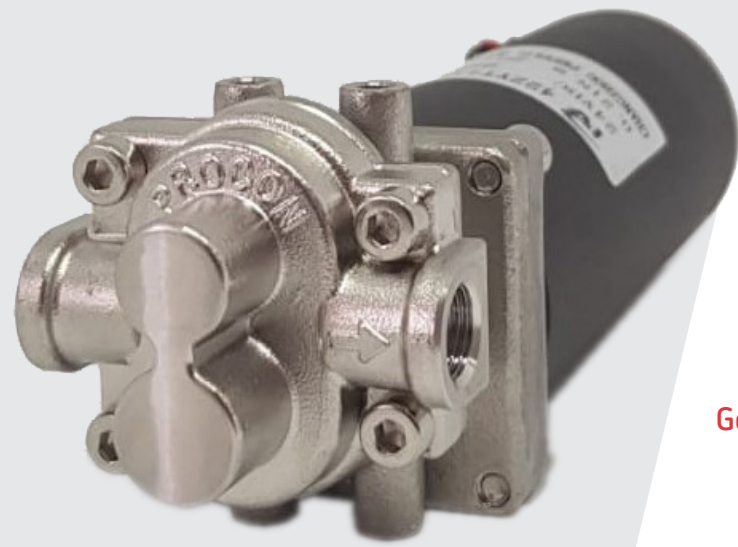


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 Suite 120
 Smyrna, TN 37167
 001.615.355.8000
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 Laois, Republic of Ireland
 00353.57.86.24350
 sales@standex.ie

Tianjin, China
 J3A101, Western Area
 Xuefu Huigu Industrial Park
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 00.86.22.86996885



General Applications

- Milk Frothing
- Espresso/Coffee
- Misting Systems
- Syrup Dispensing
- Boiler Feeds
- Ink Dispensing
- Temperature Control
- Syrup Dispensing
- Detergent Dispensing
- Inkjet printing
- Medical Application

Features and Benefits

- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Innovative mechanical seal design requires less sanitizing
- Positive Displacement Gear Pump with 24VDC brushed motor
- Self-priming and maintenance free with low vibration and pulsation characteristics
- Stainless steel housing works with acidity > 2 pH^[1]

Technical Information

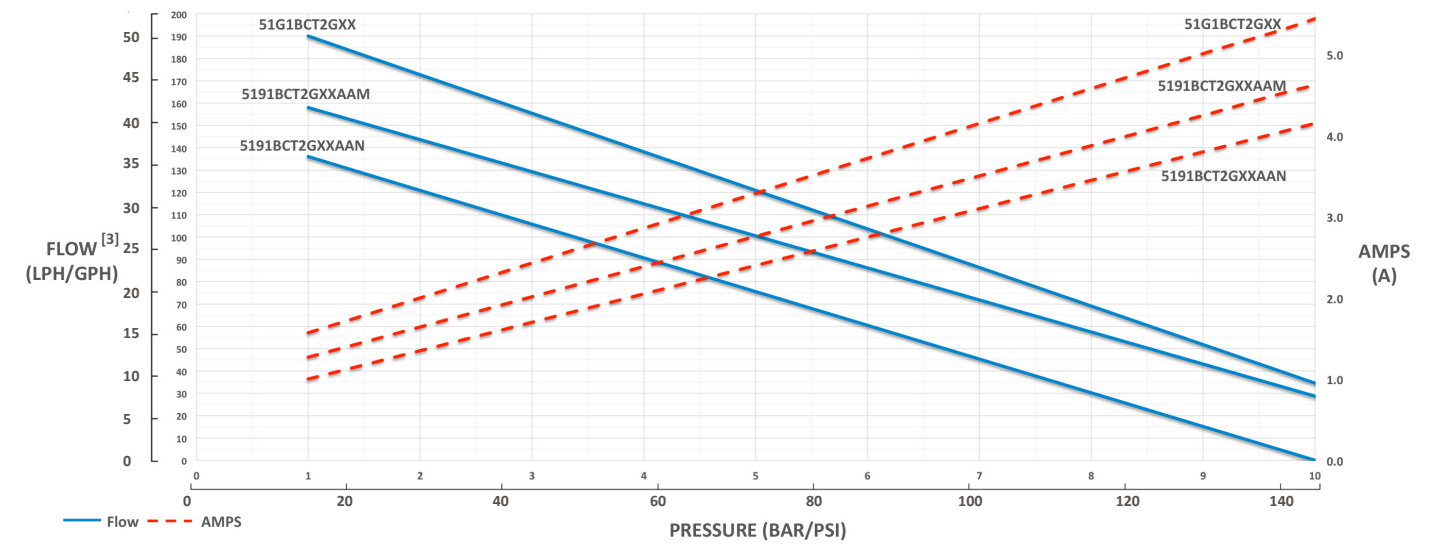
Housing and motor shaft	304 Stainless Steel	Motor Type	24V Brushed DC
Gears and Bushing	Carbon Fiber PEEK	Motor IP Protection	IP 20
Seals	Carbon / Silicon Carbide	Insulation Class	F
Elastomers	EPDM or Fluorocarbon	Unit Weight	0.97 kg (2.13 lbs.)
Ports	G 1/8"		

Motor Information

Pump Code	Max Speed	Max Output Power	Max. Input Current	Wire Connection
5191BCT2GXXAAN	3,400 RPM	40 W	3.0 A	C
5191BCT2GXXAAM	3,440 RPM	50 W	3.0 A	B
51G1BCT2GXX	4,000 RPM	60 W	4.1 A	A

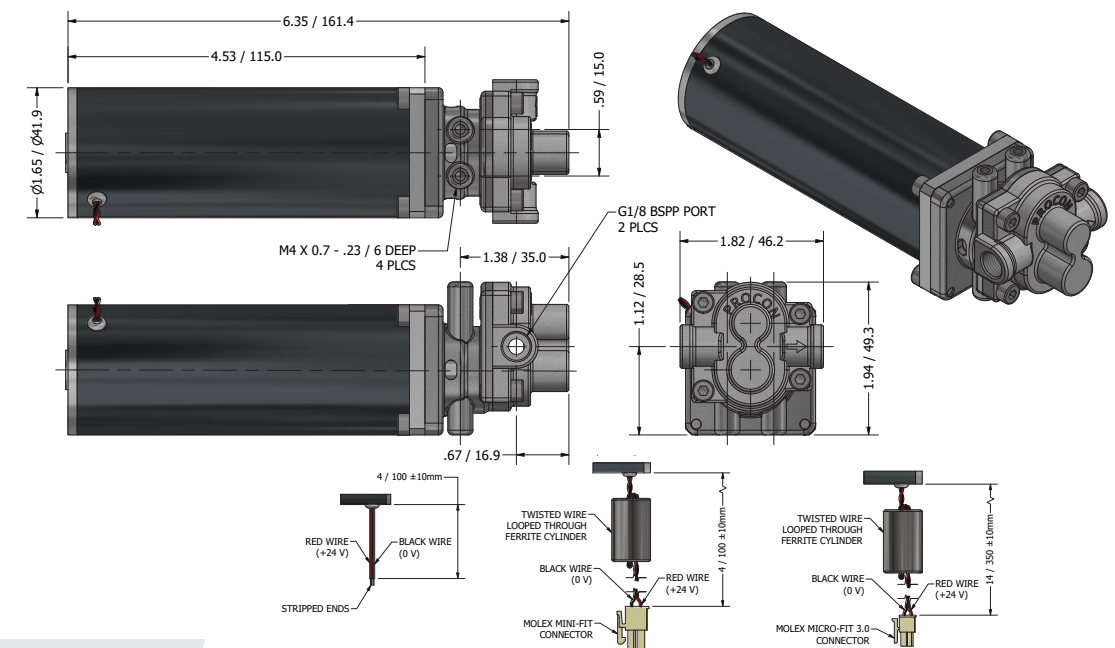
Operating Range

Max. Fluid Viscosity [2]	20,000 Centipoise	Fluid Temperature	-20° to 80°C (-4° to 176°F)
Max. Sound Level	60 dBA	Max Static Pressure	9 bar (130 PSI)
Max Vacuum Dry	1M (3.3 ft)	Max Discharge Pressure (Intermittent)	17 bar (250 PSI)
Max Vacuum Wet	2M (6 ft)	Max Discharge Pressure (Continuous)	6 bar (90 PSI)



NOTES:
 [1] Consult with manufacturer for extreme operating conditions
 [2] Flow may vary with viscosity
 [3] Performance based on pump tested with water at room temperature
 For certificate of compliance or declarations please visit our website or email at productcompliance@proconpump.com

DIMENSION AND CONNECTION DETAILS



NOTE: Dimensions are in inches/millimeters

Wire Connection "A" Detail

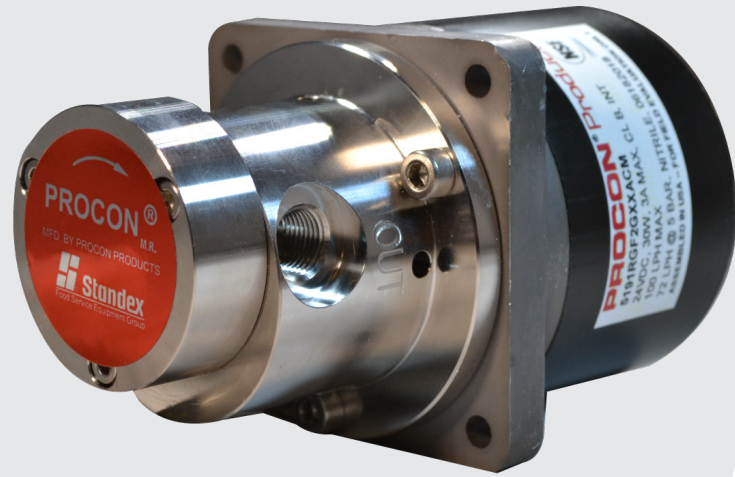
Wire Connection "B" Detail

Wire Connection "C" Detail

Tennessee, USA
 869 Seven Oaks Blvd.
 Suite 120
 Smyrna, TN 37167
 001.615.355.8000
 sales@proconpump.com

Mountmellick, Ireland
 Irishtown, Mountmellick, CO.
 Laois, Republic of Ireland
 00353.57.86.24350
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Tianjin, China
 J3A101, Western Area
 Xuefu Huigu Industrial Park
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 00.86.22.86996885



Features and Benefits

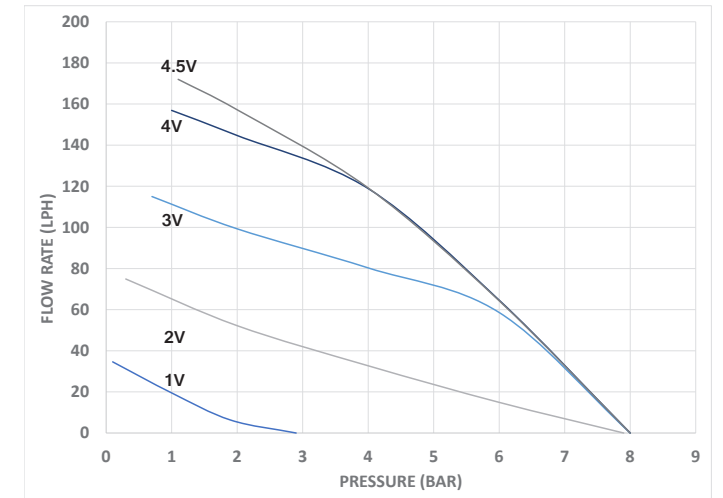
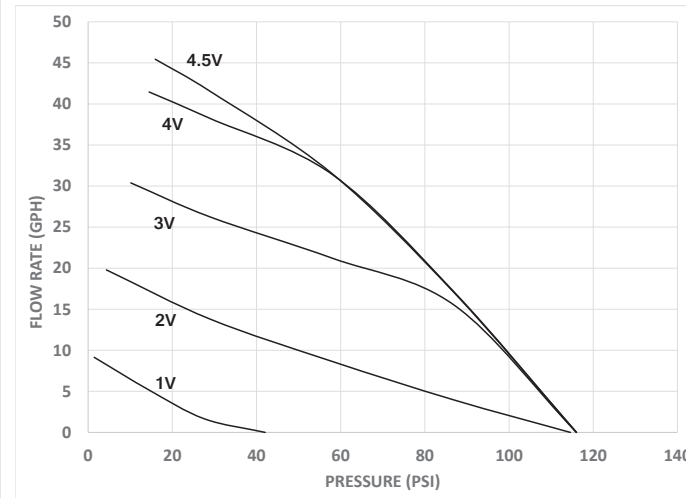
- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Works with thermal sanitization cycle/process; eliminates need for chemical based cleaning process
- Innovative mechanical seal design requires less sanitizing and reduces the foot print of the pump compared with the conventional Magnetically coupled Gear pumps.
- Suitable for higher load and pressure applications; less wear and compact size
- Higher gear contact area; smoother and quieter operation

General Applications

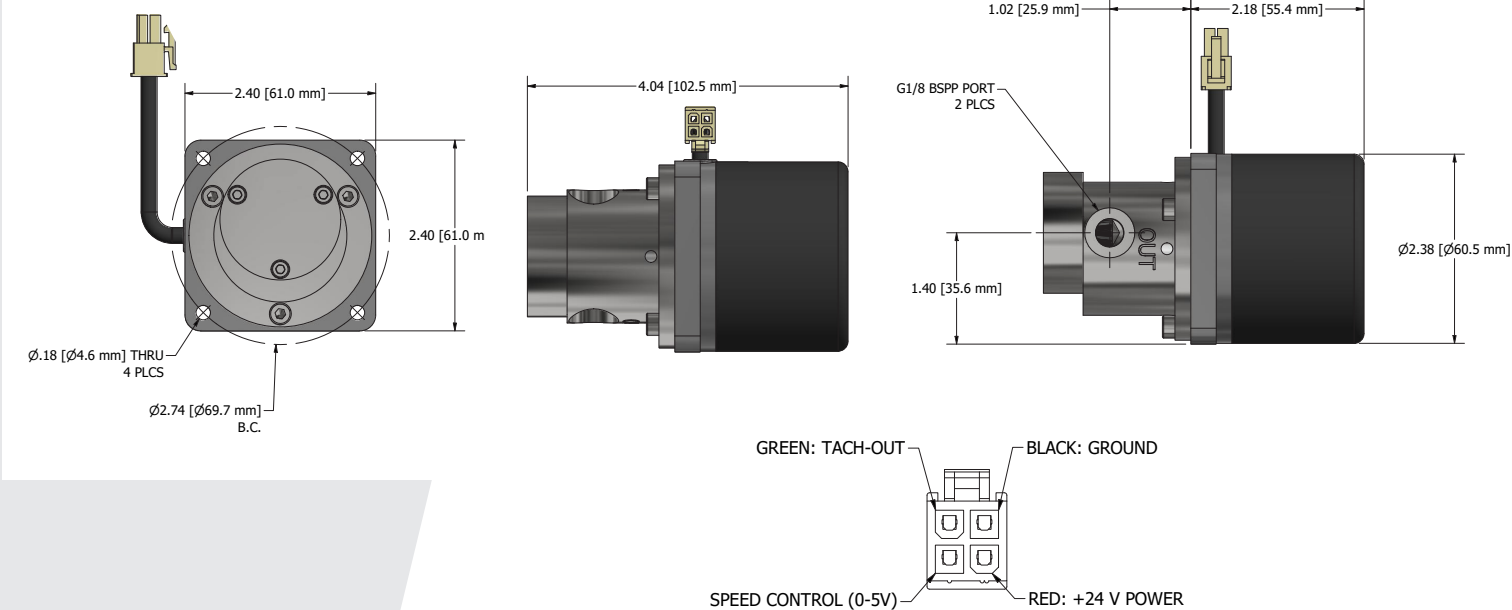
- Milk Frothing
- Espresso/Coffee
- Misting Systems
- Syrup Dispensing
- Boiler Feeds
- Ink Dispensing
- Temperature Control
- Syrup Dispensing
- Detergent Dispensing
- Inkjet printing
- Medical Application

Technical Information			
Housing and motor shaft	304 Stainless Steel	Motor Type	24V Brushless DC
Gears and Bushing	Carbon Fiber PEEK	Max Speed	4,500 RPM
Elastomer	EPDM (FDA,NSF Approved)	Max Output Power	60W
Ports	G 1/8" Thread	Motor IP Protection	IP54
Max Static Pressure	20 Bar (290PSI)	Insulation Class	F
Max Vacuum Dry	1 M (3.3 Ft)	Speed Control	0-5V
Max Vacuum Wet	8 M (26.25 Ft)	Unit Weight	0.9kg (2 lbs.)

Operating Range			
Max Ambient Temperature	90°C(194°F)	70°C(150°F)	40°C(104°F)
Fluid Temperature	80°C(176°F)	60°C(140°F)	40°C(104°F)
Max Torque	35mNm(4.9 in-oz at 4500 rpm)	80mNm(11.3 in-oz at 3500 rpm)	110mNm(15.5 in-oz at 3500 rpm)
Min Ambient Temperature	-10°C (non water applications)		



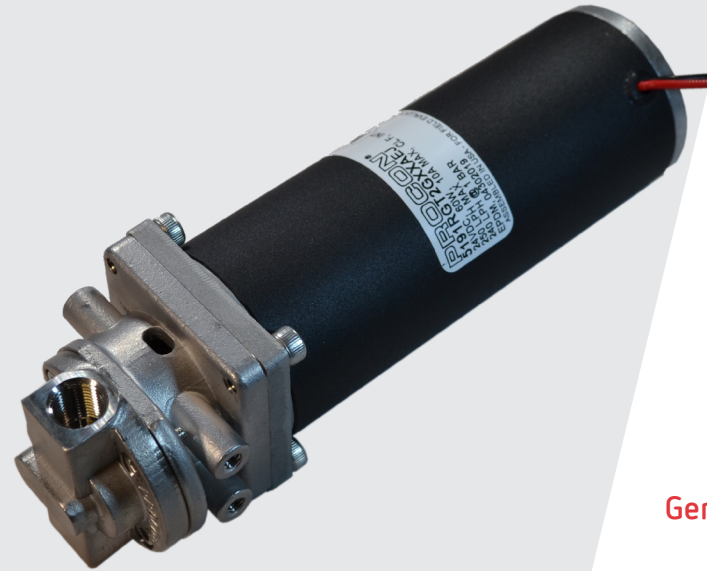
DIMENSION AND CONNECTION DETAILS



Tennessee, USA
869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@proconpump.com

Mountmellick, Ireland
Irishtown, Mountmellick, CO.
Laois, Republic of Ireland
00353.57.86.24350
sales@standex.ie

Tianjin, China
J3A101, Western Area
Xuefu Huigu Industrial Park
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00.86.22.86996885



Features and Benefits

- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Innovative mechanical seal design requires less sanitizing and reduces the foot print of the pump compared with the conventional Magnetically coupled Gear pumps.
- Suitable for higher load and pressure applications; less wear and compact size
- Higher gear contact area; smoother and quieter operation

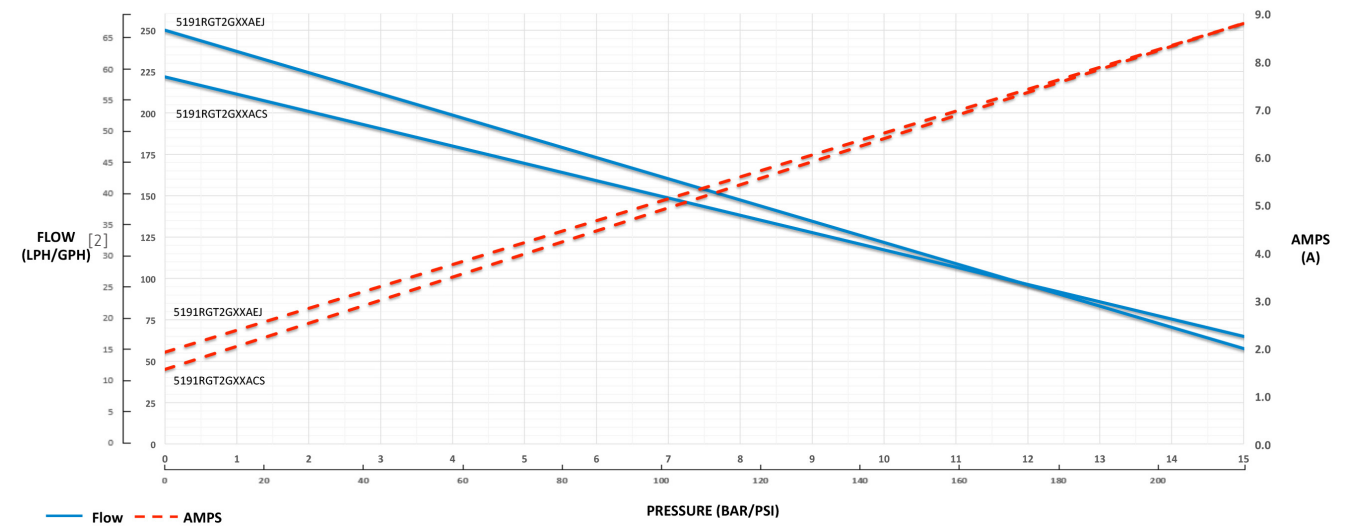
General Applications

- Milk Frothing
- Espresso/Coffee
- Misting Systems
- Syrup Dispensing
- Boiler Feeds
- Ink Dispensing
- Temperature Control
- Syrup Dispensing
- Detergent Dispensing
- Inkjet printing
- Medical Application

Technical Information			
Housing and motor shaft	304 Stainless Steel	Motor Type	24V Brushed DC
Gears and Bushing	Carbon Fiber PEEK	Motor IP Protection	IP 20
Seals	Carbon / Silicon Carbide	Insulation Class	F
Elastomers	EPDM (FDA,NSF Approved)	Unit Weight	0.9 kg (1.97 lbs.)
Ports	G 1/8"		

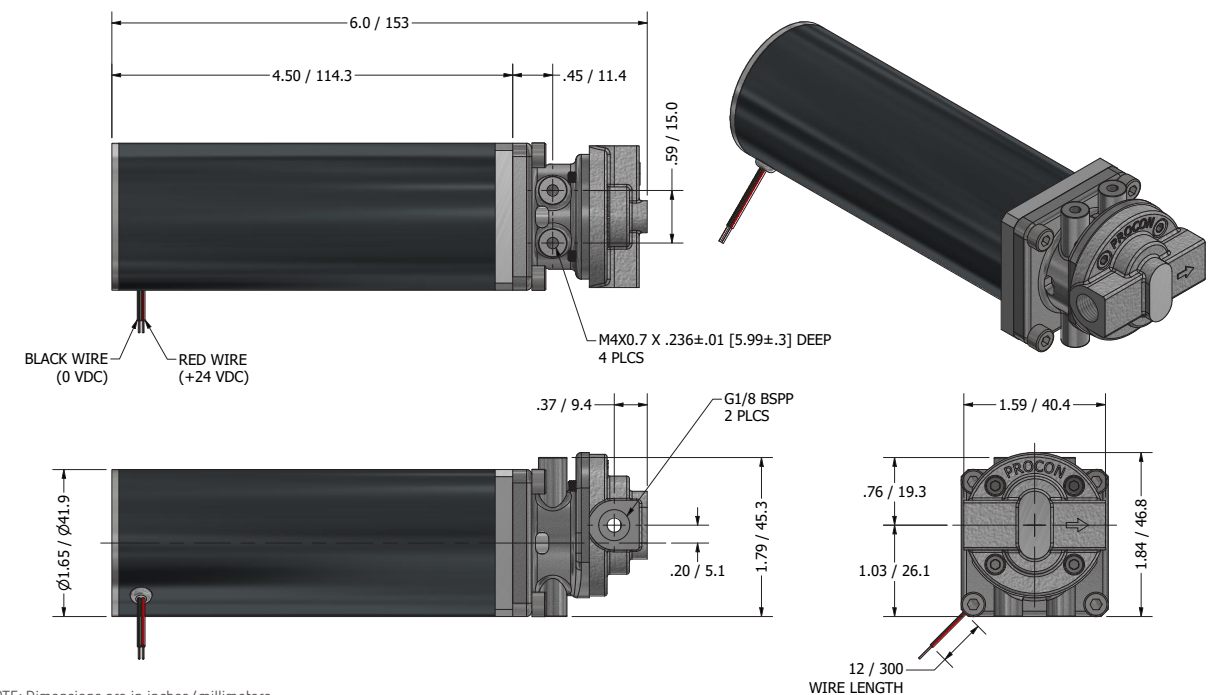
Motor Performance			
	Max Speed	Max Output Power	Max. Input Current
5191RGT2GXXACS	3,440 RPM	50 W	3.0 A
5191RGT2GXXAEJ	4,000 RPM	60 W	4.1 A

Operating Range			
Max. Fluid Viscosity	20,000 Centipoise ^[1]	Fluid Temperature	-20° to 90°C (-4° to 194°F)
Max. Sound Level	60 dBA	Max Static Pressure	20 bar (290 PSI)
Max Vacuum Dry	1M (3.3 ft)	Max Discharge Pressure (Intermittent)	17 bar (250 PSI)
Max Vacuum Wet	8M (26 ft)	Max Discharge Pressure (Continuous)	6 bar (90 PSI)



NOTES:
[1] Flow may vary with viscosity
[2] Flow curve based on pump tested with water at room temperature

DIMENSION AND CONNECTION DETAILS

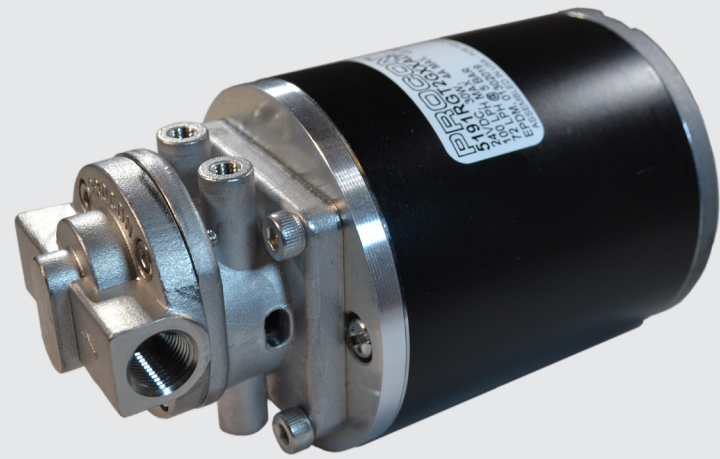


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Features and Benefits

- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Innovative mechanical seal design requires less sanitizing
- Positive Displacement Gear Pump with 24VDC brushed motor
- Self-priming and maintenance free with low vibration and pulsation characteristics
- Stainless steel housing works with acidity > 2 pH¹
- Suitable for higher load and pressure applications; less wear and compact size
- Higher gear contact area; smoother and quieter operation Food

General Applications

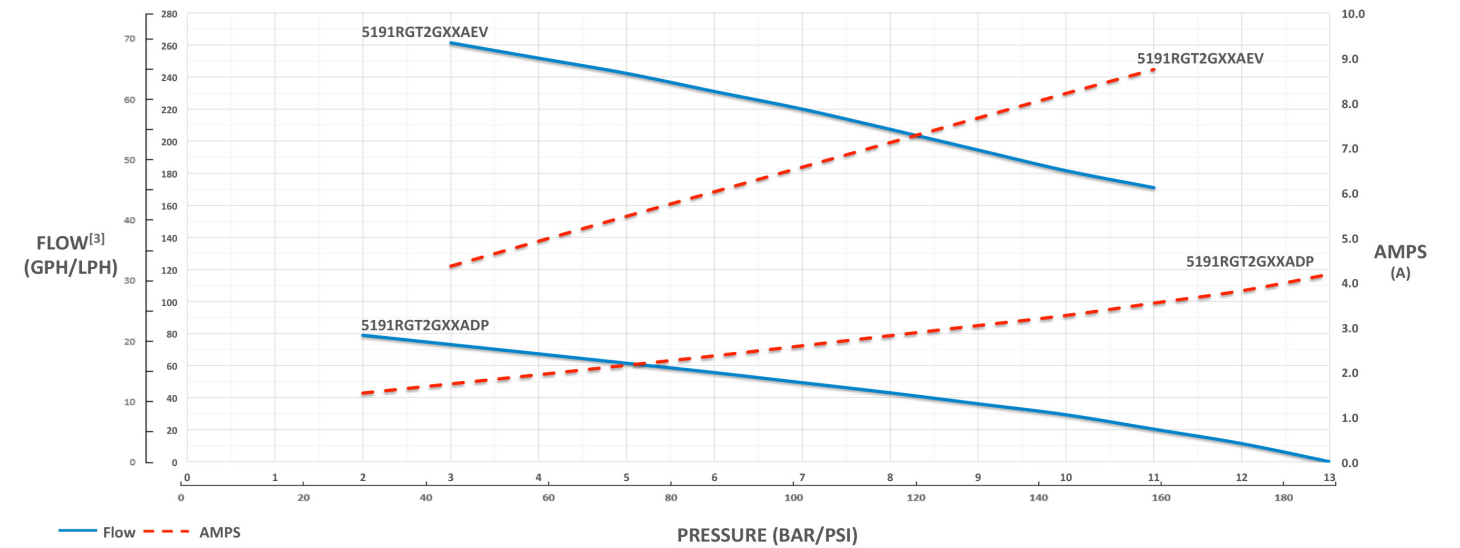
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- Boiler Feeds
- Ink Dispensing
- Temperature Control
- Syrup Dispensing
- Detergent Dispensing
- Inkjet printing
- Medical Application

Technical Information

Housing and motor shaft	304 Stainless Steel	Motor Type	24V Brushed DC
Gears and Bushing	Carbon Fiber PEEK	Max Speed (5191RGT2GXXAEV)	7,500 RPM
Seals	Carbon / Silicon Carbide	Max Speed (5191RGT2GXXADP)	4,500 RPM
Elastomers	EPDM (FDA,NSF Approved)	Max Output Power	30W
Ports	G 1/8"	Max. Input Current	3.0A
Unit Weight	0.9kg (2 lbs.)	Motor IP Protection	IP44
		Insulation Class	F

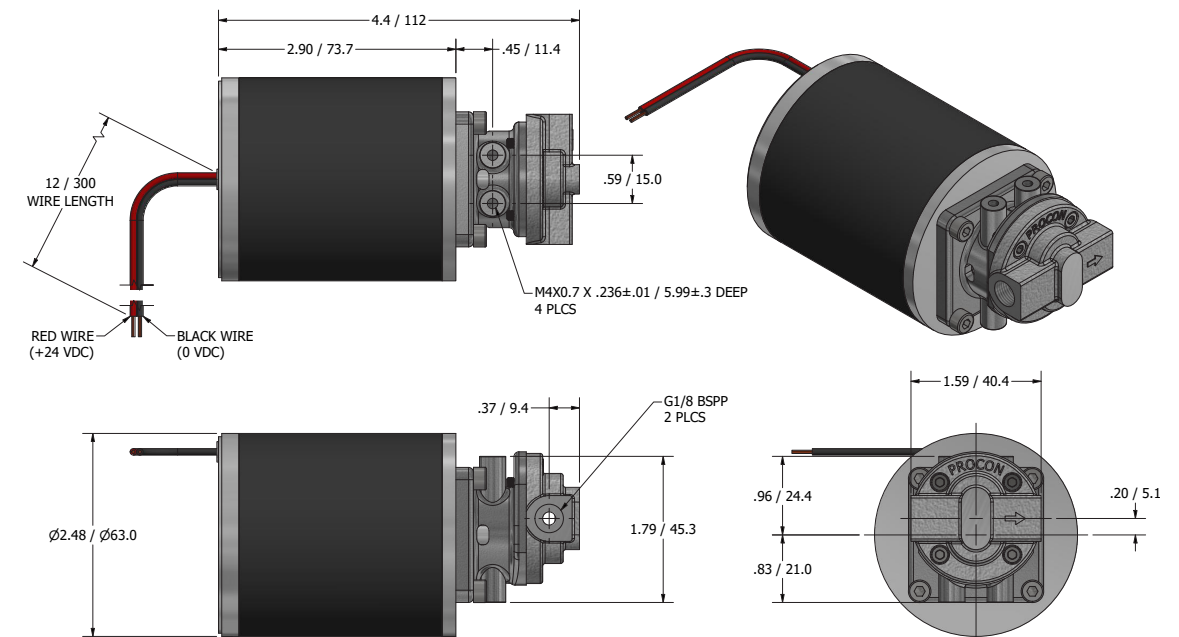
Operating Range

Max. Fluid Viscosity	20,000 Centipoise ^[2]	Fluid Temperature	95°C (203°F)
Max Vacuum Dry	1 M (3.3 ft)	Max Static Pressure	20 bar (290 PSI)
Max Vacuum Wet	8 M (26.25 ft)		



NOTES:
 [1] Consult with manufacturer for extreme operating conditions
 [2] Flow may vary with viscosity
 [3] Flow curve based on pump tested with water at room temperature

DIMENSION AND CONNECTION DETAILS



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General Applications

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- Medical Application

Features and Benefits

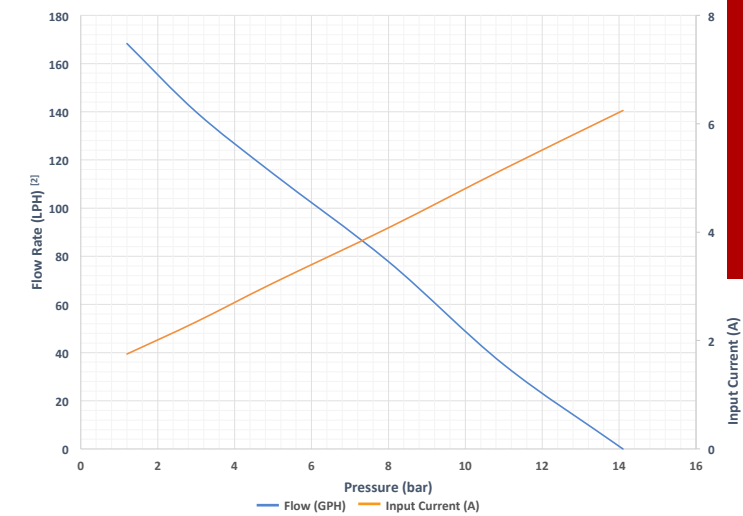
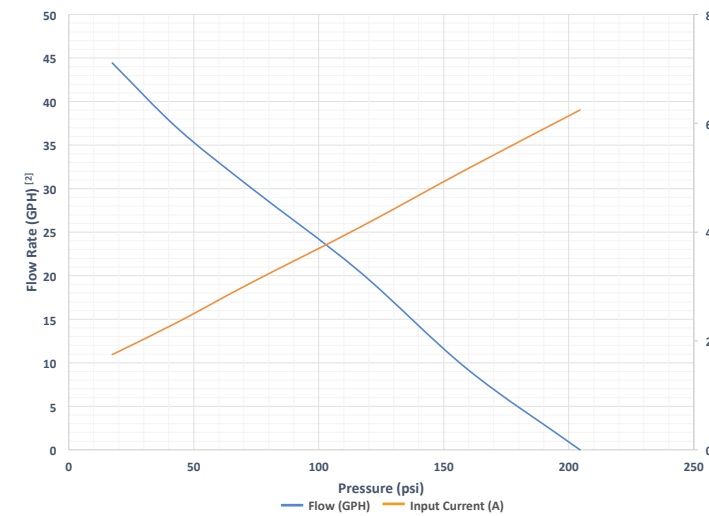
- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Innovative mechanical seal design requires less sanitizing and reduces the foot print of the pump compared with the conventional Magnetically coupled Gear pumps.
- Suitable for higher load and pressure applications; less wear and compact size
- Higher gear contact area; smoother and quieter operation

Technical Information

Housing and motor shaft	304 Stainless Steel	Motor Type	24V Brushed DC
Gears and Bushing	Carbon Fiber PEEK	Max Speed	4,500 RPM
Elastomer	EPDM (FDA,NSF Approved)	Max Output Power	35 W
Ports	G 1/8" Thread	Motor IP Protection	IP40
Max Static Pressure	290 PSI (20 bar)	Insulation Class	F
Max Vacuum Dry	1 M (3.3 Ft)	Unit Weight	0.9kg (2 lbs.)
Max Vacuum Wet	8 M (26.25 Ft)		

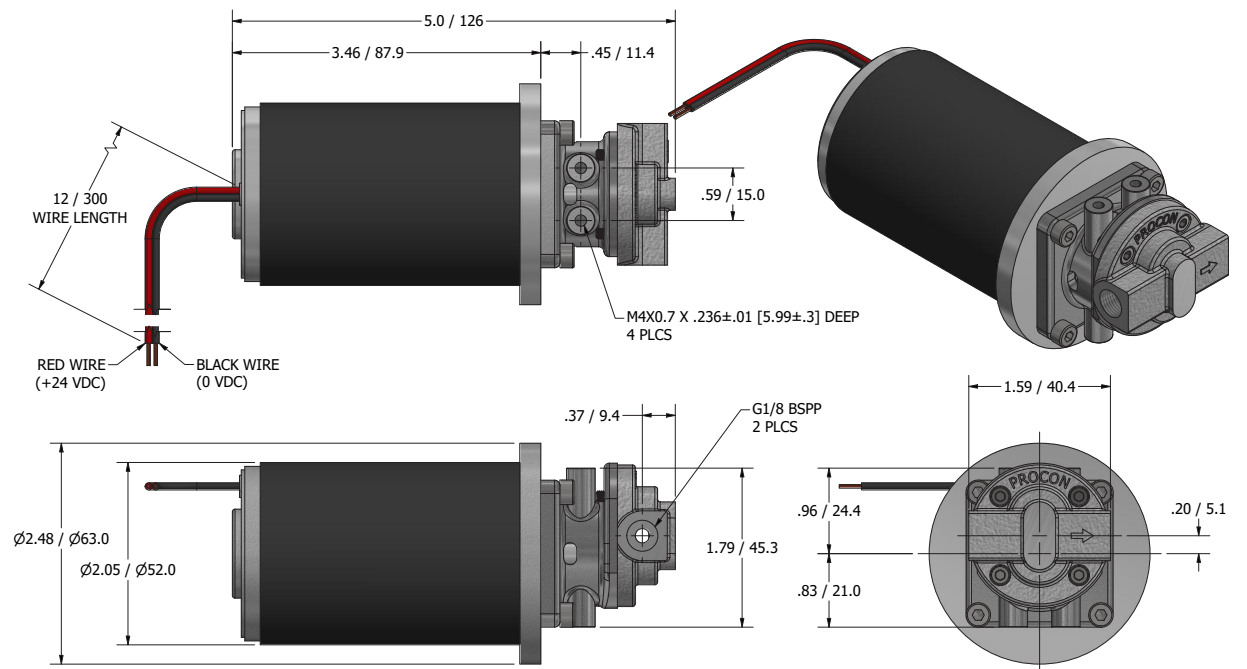
Operating Range

Max Ambient Temperature	70 °C (150 °F)
Fluid Temperature	95 °C (104 °F)
Max Fluid Viscosity	20,000 Centipoise ^[1]



NOTES:
[1] Flow may vary with viscosity
[2] Flow curve based on pump tested with water at room temperature

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Features and Benefits

- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Positive Displacement Gear Pump with 24VDC brushless motor with built in controller
- Flow up to 216 GPH (817 LPH)
- Horsepower required 0.14 to 0.40 hp (100 to 300 watts)
- Stainless steel housing works with acidity > 2 pH

General Applications

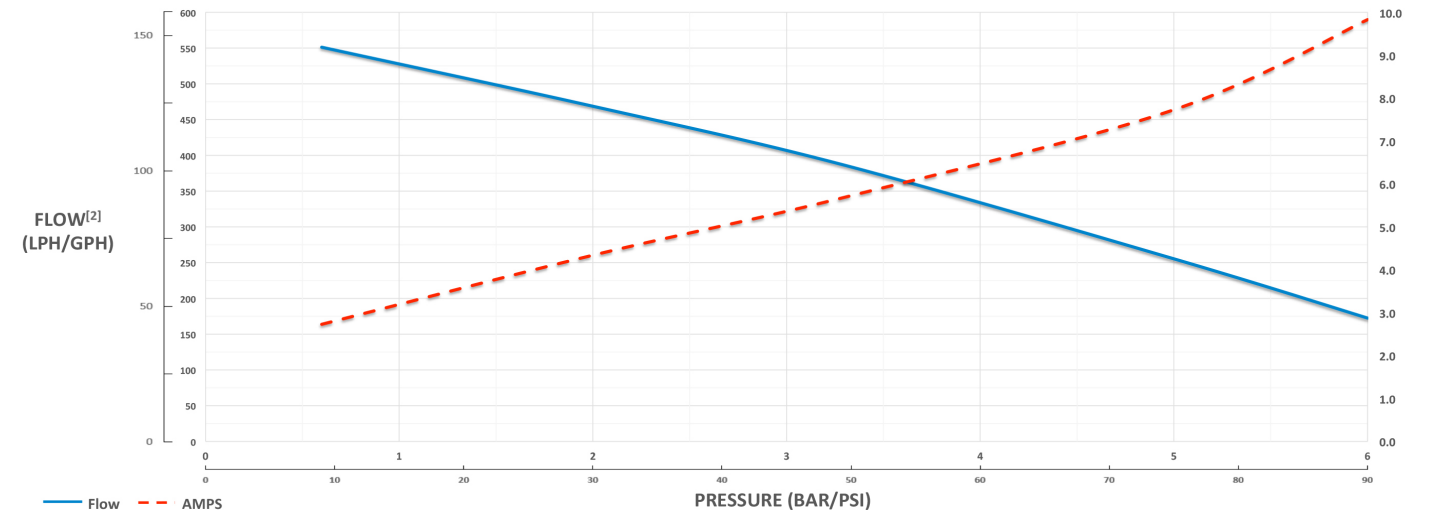
- Boiler Feeds
- Temperature Control
- Medical Application
- Reverse Osmosis
- Beer Chillers
- Pesticide Systems
- Cooling Systems

Technical Information

Housing and motor shaft	304 Stainless Steel	Ports	NPT 3/8" Thread
Gears and Bushing	Carbon Fiber PEEK	Motor Type	24V Brushed DC with Control
Elastomer	EPDM (FDA,NSF Approved)	Insulation Class	F
Seals	Carbon / Silicon Carbide	Unit Weight	2.5 kg (5.6 lbs.)

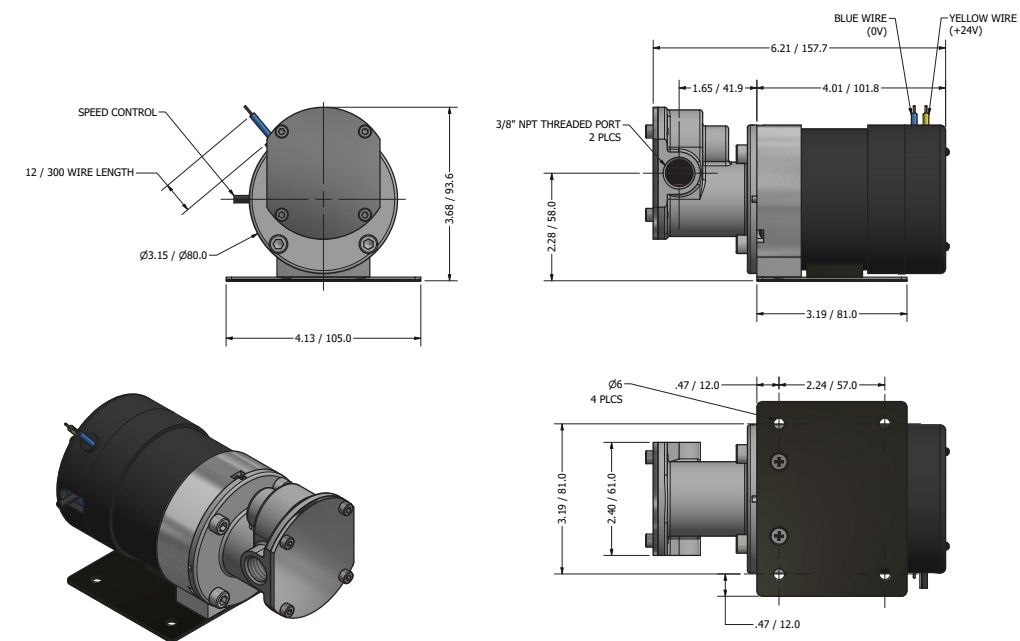
Operating Range

Max Static Pressure	20 bar (290 PSI)	Fluid Temperature	-20° to 90°C (-4° to 194°F)
Max Vacuum Dry	1 M (3.3 ft)	Viscosity ^[1]	10,000 cP
Max Vacuum Wet	8 M (26.25 ft)	Max Discharge Pressure	4 bar (60 psi)
Wet Lift with Water	2 M (6 ft)	Speed	500 to 3500 RPM



NOTES:
[1] Flow may vary with viscosity
[2] Flow curve based on pump tested with water at room temperature

DIMENSION AND CONNECTION DETAILS



NOTE: Dimensions are in inches/millimeters

Tennessee, USA
869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@proconpump.com

Mountmellick, Ireland
Irishtown, Mountmellick, CO.
Laois, Republic of Ireland
00353.57.86.24350
sales@standex.ie

Tianjin, China
J3A101, Western Area
Xuefu Huigu Industrial Park
Tianjin, China 300402
00.86.22.86996885



Features and Benefits

- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Less wear and compact size
- Flow up to 216 GPH (817 LPH)
- Horsepower required 0.14 to 0.40 hp (100 to 300 watts)
- Stainless steel housing works with acidity > 2 pH

General Applications²

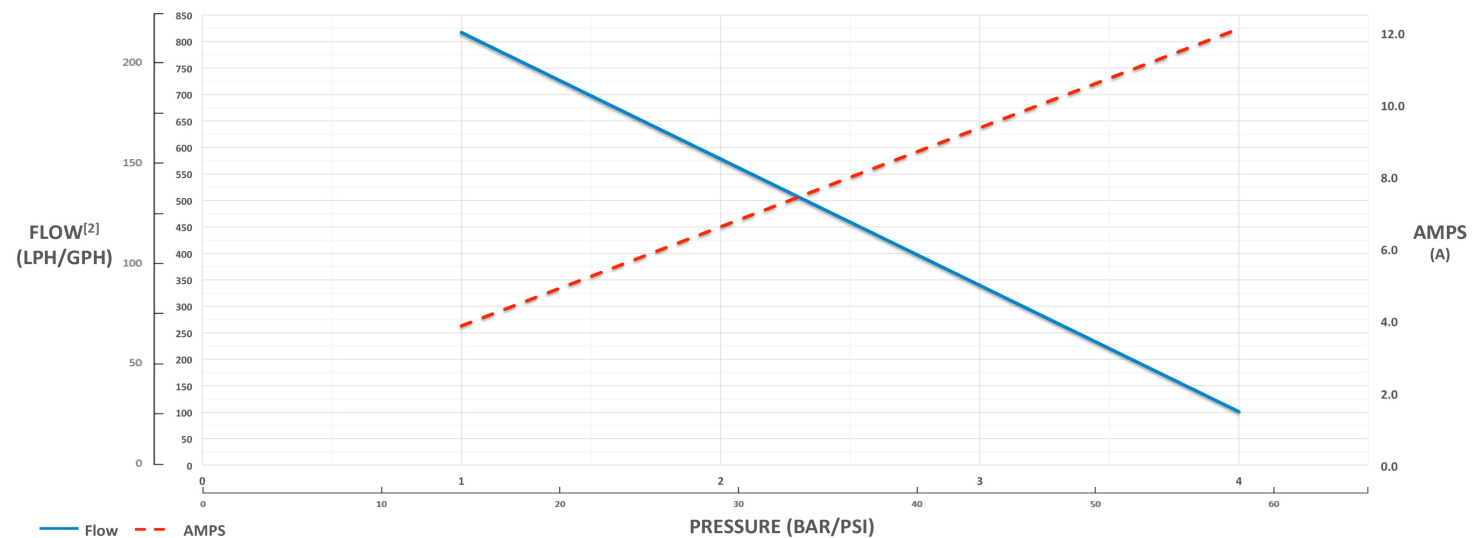
- Boiler Feeds
- Temperature Control
- Medical Application
- Reverse Osmosis
- Beer Chillers
- Pesticide Systems
- Cooling Systems

Technical Information³

Housing and motor shaft	304 Stainless Steel
Gears and Bushing	Carbon Fiber PEEK
Elastomer	EPDM (FDA,NSF Approved)
Seals	Carbon / Silicon Carbide

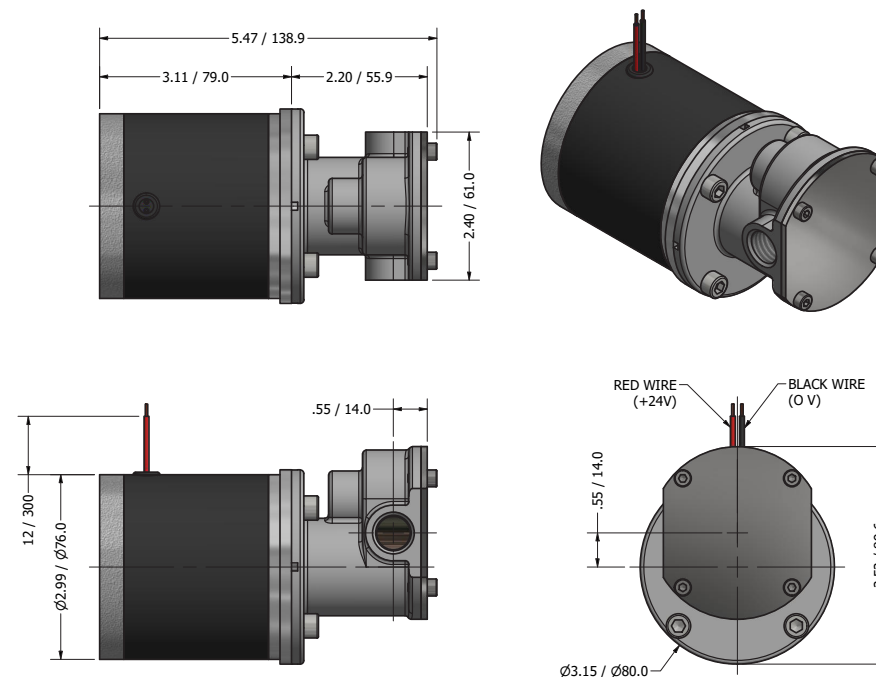
Operating Range

Max Static Pressure	20 bar (290 PSI)	Fluid Temperature	-20° to 90°C (-4° to 194°F)
Max Vacuum Dry	1 M (3.3 ft)	Viscosity ^[1]	10,000 cP
Max Vacuum Wet	8 M (26.25 ft)	Max Discharge Pressure	4 bar (60 psi)
Wet Lift with Water	2 M (6 ft)	Speed	500 to 3500 RPM



NOTES:
[1] Flow may vary with viscosity
[2] Flow curve based on pump tested with water at room temperature

DIMENSION AND CONNECTION DETAILS

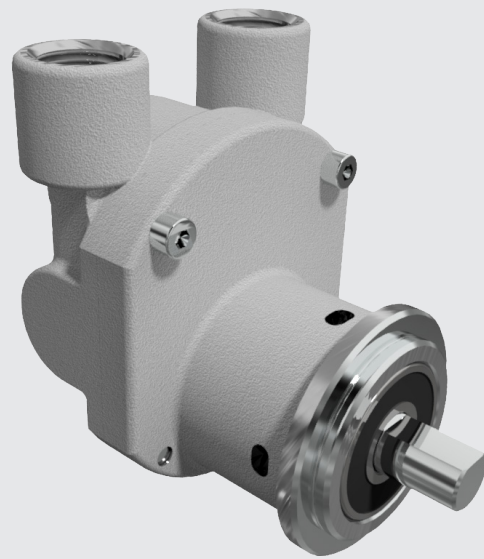


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869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@proconpump.com

Mountmellick, Ireland
Irishtown, Mountmellick, CO.
Laois, Republic of Ireland
00353.57.86.24350
sales@standex.ie

Tianjin, China
J3A101, Western Area
Xuefu Huigu Industrial Park
Tianjin, China 300402
00.86.22.86996885



Features and Benefits

- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Suitable for higher load and pressure applications; less wear and compact size
- Flow up to 150 GPH (480 LPH)*
- Horsepower required 0.06 to 0.51 hp (38 to 380 watts)*
- Stainless steel housing works with acidity > 2 pH
- Clamp-on housing compatible with standard Carbonator pump motor interface

General Applications

- Boiler Feeds
- Temperature Control
- Medical Application
- Reverse Osmosis
- Beer Chillers
- Pesticide Systems
- Cooling Systems

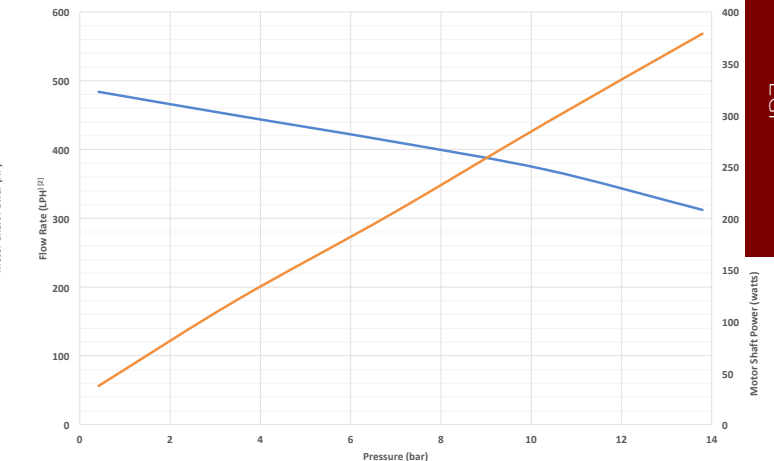
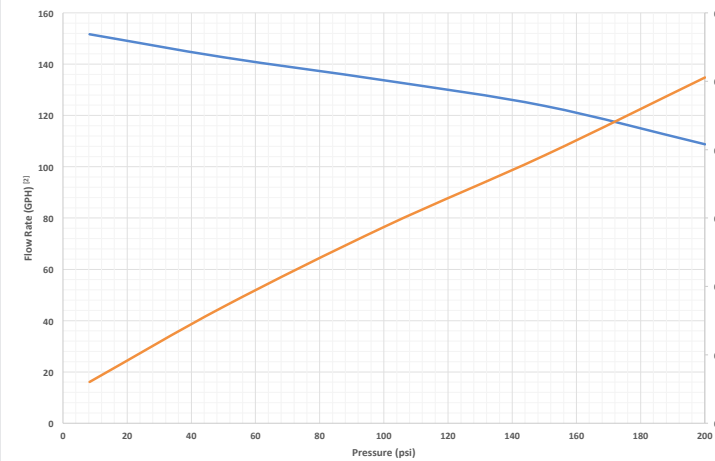
* GPH/HP rating at 1725 RPM/60 Hz and LPH/watts rating at 1450 RPM/50 Hz

Technical Information

Housing and motor shaft	304 Stainless Steel	Ports	NPT 3/8" Thread
Gears and Bushing	Carbon Fiber PEEK	Mounting Options	Clamp-on
Elastomer	EPDM (FDA,NSF Approved)	Unit Weight	1.35 kg (3 lb)
Seals	Carbon / Silicon Carbide	Drive Configurations	Single flat

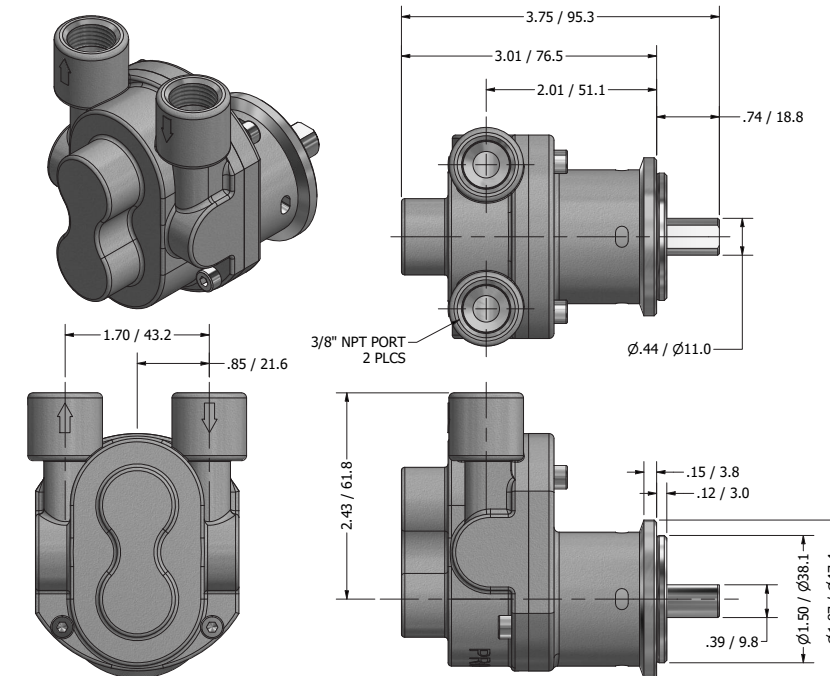
Operating Range

Max Static Pressure	20 bar (290 PSI)	Fluid Temperature	-20° to 90°C (-4° to 194°F)
Max Vacuum Dry	1 M (3.3 ft)	Viscosity ^[1]	10,000 cP
Max Vacuum Wet	8 M (26.25 ft)	Max Discharge Pressure	14 bar (200 PSI)
Wet Lift with Water	2 M (6 ft)	Speed	500 to 3500 RPM



NOTES:
[1] Flow may vary with viscosity
[2] Flow curve based on pump tested with water at room temperature

DIMENSION AND CONNECTION DETAILS



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Suite 120
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sales@proconpump.com

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J3A101, Western Area
Xuefu Huigu Industrial Park
Tianjin, China 300402
00.86.22.86996885



Features and Benefits

- Self priming (water) and maintenance free
- Consistent flow rate across variable pressures
- Compact unit with 24Vdc Brushed motors
- Flow range from 10 to 100 LPH (3 to 35 GPH)
- Patented twin cavity and cam ring technology
- Eight vanes for low vibration and pulsation
- Stainless steel housing works with acidity > 2 pH^[1]

General Applications

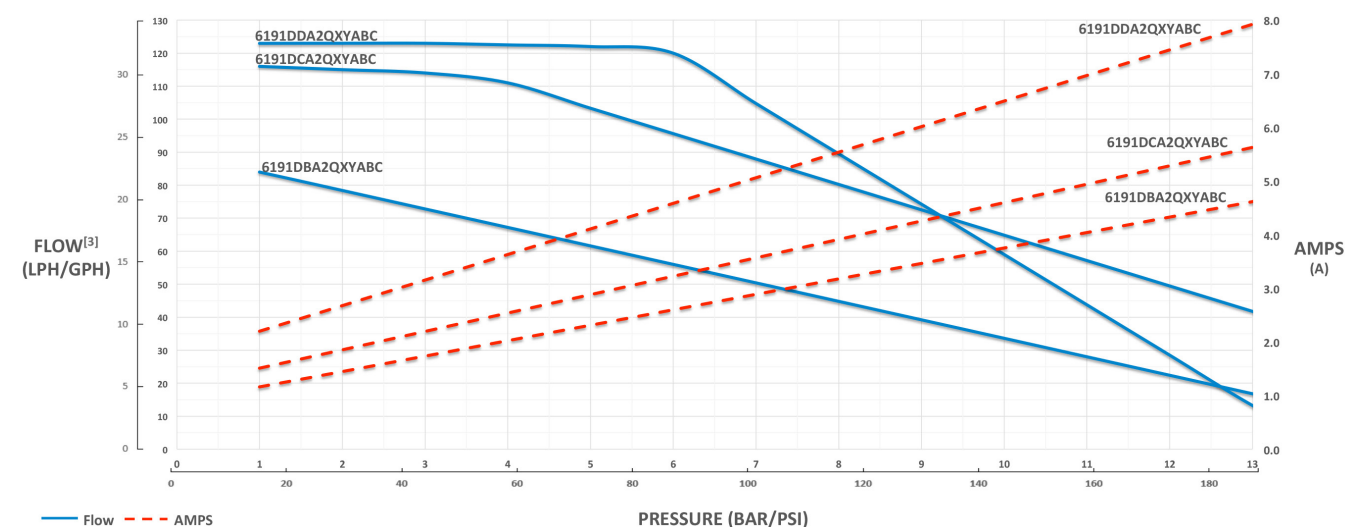
- Espresso/Coffee
- Beer Chillers
- Pesticide Systems
- Solar Applications
- Cooling Systems
- Medical Devices

Technical Information

Housing and motor shaft	304 Stainless Steel	Motor Type	24V Brushed DC
Gears and Bushing	Carbon Fiber PEEK	Max Speed	4000 RPM
Seals	Carbon / Silicon Carbide	Max Output Power	60W
Elastomers	Nitrile, EPDM (FDA,NSF Approved)	Max. Input Current	2.9A
Valves	Plastic (ultem & acetal)	Motor IP Protection	IP20
Ports	G 1/8"	Insulation Class	F
Unit Weight	1.1 kg (2.5 lbs.)		

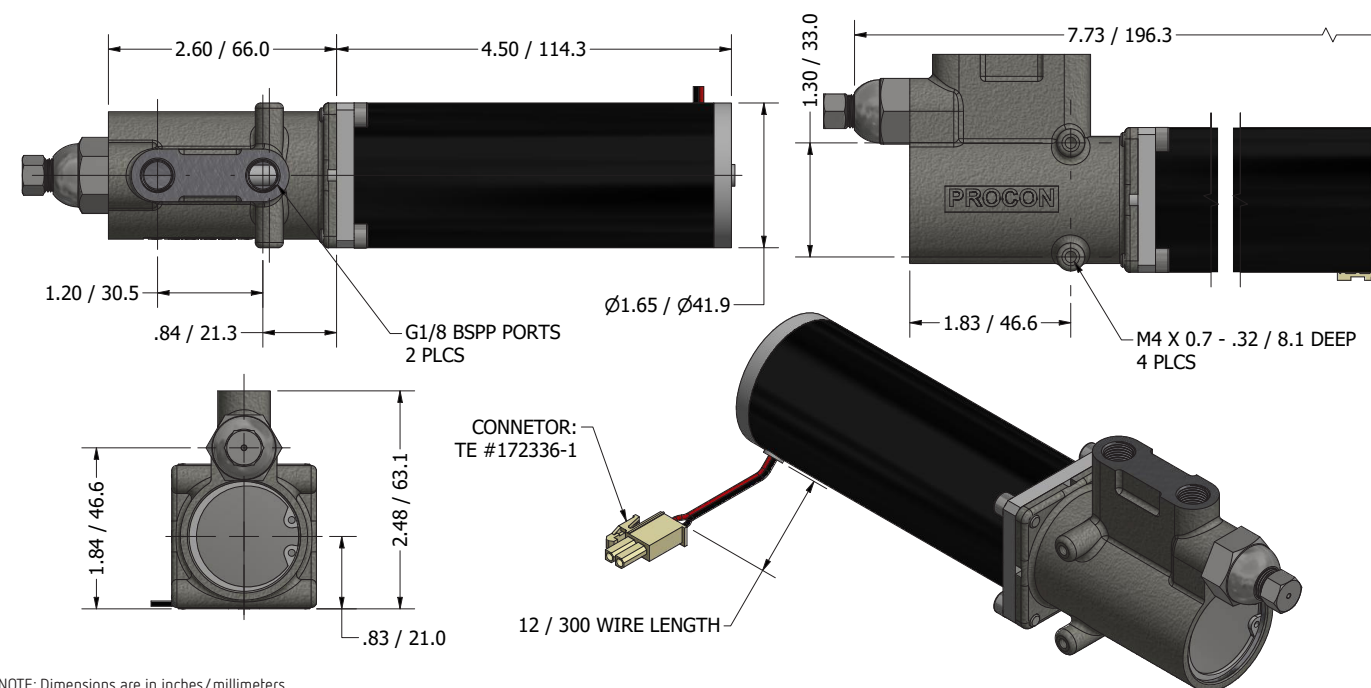
Operating Range

Max. Fluid Viscosity ^[2]	100 Centipoise	Fluid Temperature	-20° to 90°C (-4° to 194°F)
Max Vacuum Dry	1 M (3.3 ft)	Max Static Pressure	7 bar (100PSI)
Max Vacuum Wet	2 M (6 ft)	Max Discharge Pressure (Intermittent)	12.5 bar (180 PSI)



NOTES:
[1] Consult with manufacturer for extreme operating conditions
[2] Flow may vary with viscosity
[3] Performance based on pump tested with water at room temperature

DIMENSION AND CONNECTION DETAILS



NOTE: Dimensions are in inches / millimeters



Features and Benefits

- Self priming (water) and maintenance free
- Magnetically Driven Pump for a leak free design
- Consistent flow rate across variable pressures
- Compact unit with 24Vdc Brushed motors
- Flow range from 10 to 100 LPH (3 to 35 GPH)
- Patented twin cavity and cam ring technology
- Eight vanes for low vibration and pulsation
- Stainless steel housing works with acidity > 2 pH^[1]

General Applications

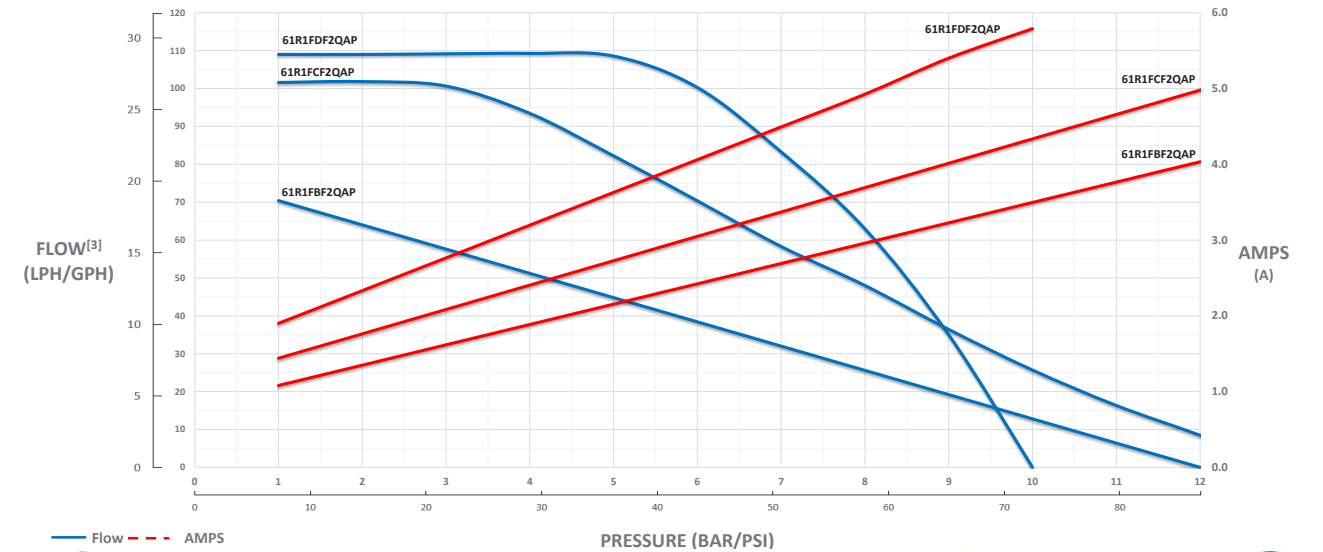
- Espresso/Coffee
- Beer Chillers
- Pesticide Systems
- Solar Applications
- Cooling Systems
- Medical Devices

Technical Information

Housing and motor shaft	304 Stainless Steel	Motor Type	24V Brushed DC
Gears and Bushing	Carbon Fiber PEEK	Max Speed	4000 RPM
Magnets	PPS coated Neodymium	Max Output Power	60W
Elastomers	Nitrile, EPDM (FDA,NSF Approved)	Max. Input Current	2.9A
Valves	Plastic (ultem & acetal)	Motor IP Protection	IP20
Ports	G 1/4"	Insulation Class	F
Unit Weight	1.16 Kg (2.556 lbs.)		

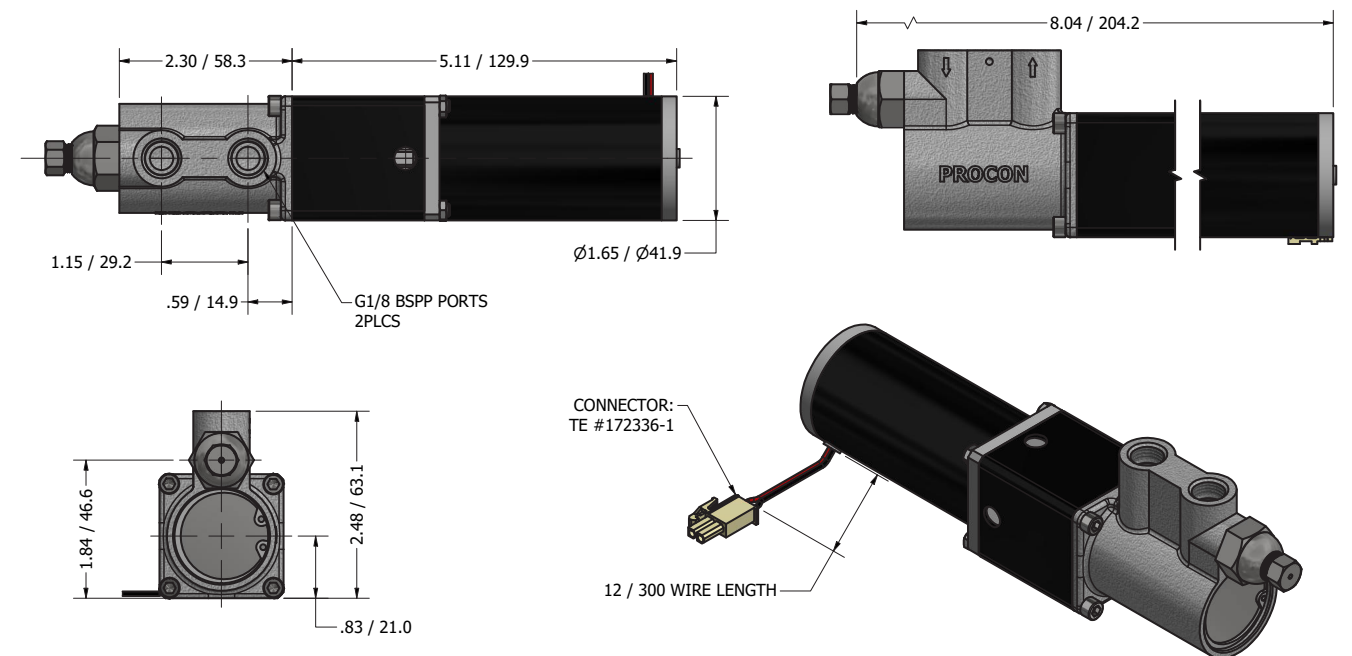
Operating Range

Max. Fluid Viscosity ^[2]	100 Centipoise	Fluid Temperature	-20° to 90°C (-4° to 194°F)
Max Vacuum Dry	1 M (3.3 ft)	Max Static Pressure	7 bar (100PSI)
Max Vacuum Wet	2 M (6 ft)	Max Discharge Pressure (Intermittent)	12.5 bar (180 PSI)



NOTES:
 [1] Consult with manufacturer for extreme operating conditions
 [2] Flow may vary with viscosity
 [3] Performance based on pump tested with water at room temperature

DIMENSION AND CONNECTION DETAILS



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Tennessee, USA
 869 Seven Oaks Blvd.
 Suite 120
 Smyrna, TN 37167
 001.615.355.8000
 sales@proconpump.com

Mountmellick, Ireland
 Irishtown, Mountmellick, CO.
 Laois, Republic of Ireland
 00353.57.86.24350
 sales@standex.ie

Tianjin, China
 J3A101, Western Area
 Xuefu Huigu Industrial Park
 Tianjin, China 300402
 00.86.22.86996885



Features and Benefits

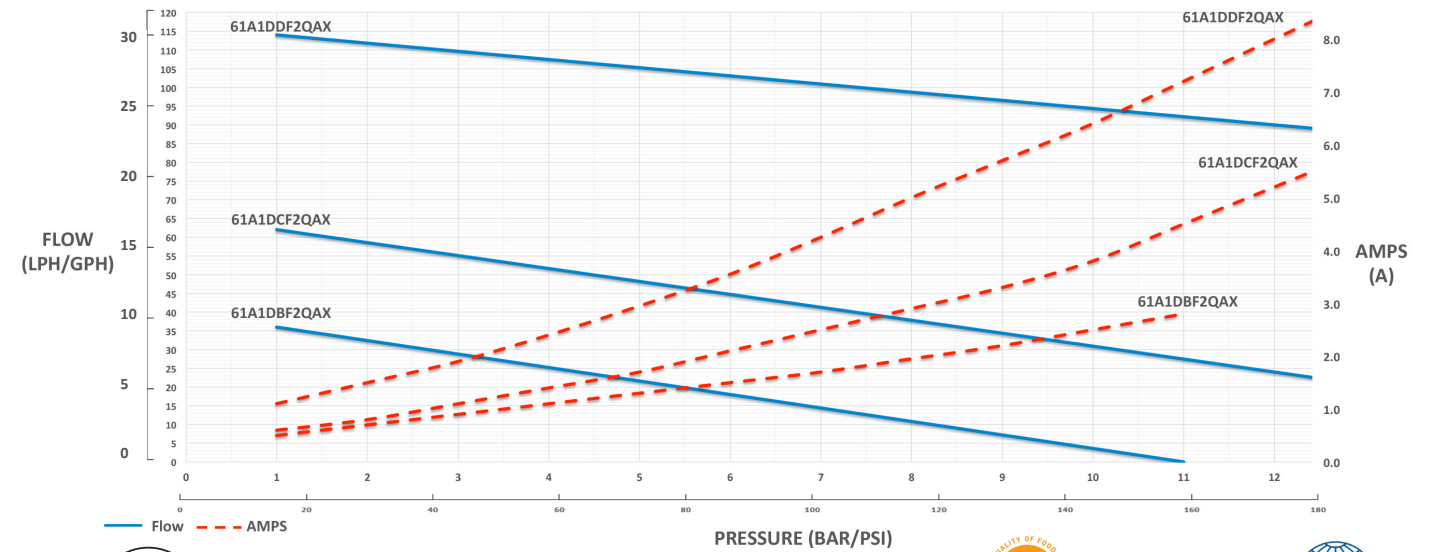
- Self priming (water) and maintenance free
- Consistent flow rate across variable pressures
- Compact unit with 24Vdc Brushless motors without controller
- Flow range from 10 to 100 LPH (3 to 35 GPH)
- Patented twin cavity and cam ring technology
- Eight vanes for low vibration and pulsation
- Stainless steel housing works with acidity > 2 pH

General Applications

- Espresso/Coffee
- Beer Chillers
- Pesticide Systems
- Solar Applications
- Cooling Systems
- Medical Devices

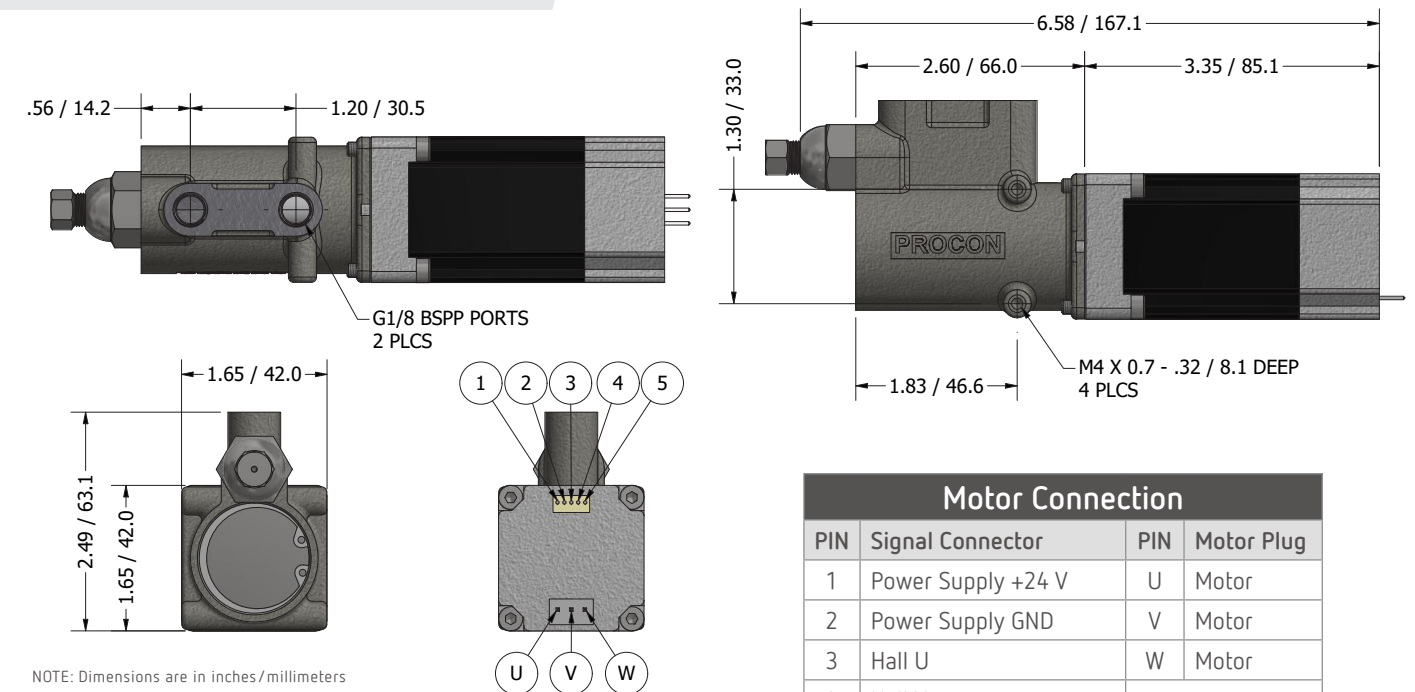
Technical Information			
Housing and motor shaft	304 Stainless Steel	Motor Type	24V Brushless DC Dual Direction
Gears and Bushing	Carbon Fiber PEEK	Max Speed	3000 RPM
Seals	Carbon / Silicon Carbide	Max Output Power	80W
Elastomers	Nitrite / EPDM	Max. Input Current	4A
Valves	Plastic (ultem & acetal)	Motor IP Protection	IP41
Ports	G 1/8"	Insulation Class	B
Unit Weight	1.1 kg (2.5 lbs.)	Speed Control	0-5V (needs controller)

Operating Range			
Max. Fluid Viscosity	100 Centipoise [2]	Fluid Temperature	-20° to 90°C (-4° to 194°F)
Max Vacuum Dry	1 M (3.3 ft)	Max Static Pressure	7 bar (100PSI)
Max Vacuum Wet	2 M (6 ft)	Max Discharge Pressure (Intermittent)	12.5 bar (180 PSI)



NOTES:
 [1] Flow curve based on pump tested @ 1800 RPM
 [2] Flow curve based on pump tested with water at room temperature
 [3] Flow may vary with viscosity

DIMENSION AND CONNECTION DETAILS



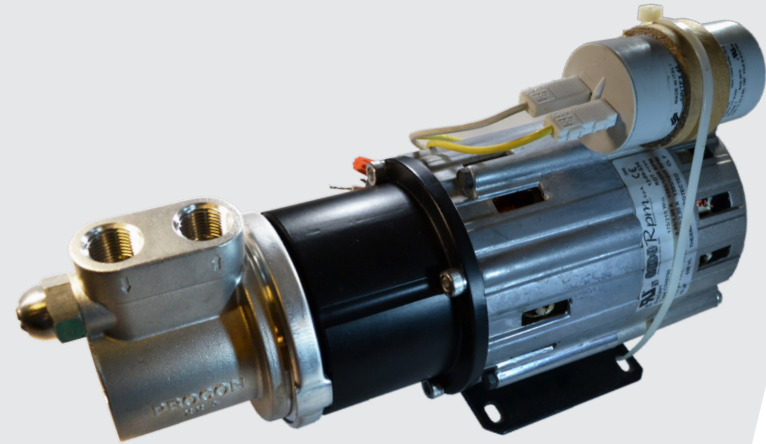
NOTE: Dimensions are in inches/millimeters

Motor Connection			
PIN	Signal Connector	PIN	Motor Plug
1	Power Supply +24 V	U	Motor
2	Power Supply GND	V	Motor
3	Hall U	W	Motor
4	Hall V		
5	Hall W		

Tennessee, USA
 869 Seven Oaks Blvd.
 Suite 120
 Smyrna, TN 37167
 001.615.355.8000
 sales@proconpump.com

Mountmellick, Ireland
 Irishtown, Mountmellick, CO.
 Laois, Republic of Ireland
 00353.57.86.24350
 sales@standex.ie

Tianjin, China
 J3A101, Western Area
 Xuefu Huigu Industrial Park
 Tianjin, China 300402
 00.86.22.86996885



Features and Benefits

- Consistent flow rate across variable pressures
- Magnetically coupled drive for leak free design
- Patentend twin cavity and cam ring technology
- Eight vanes for low vibration and pulsation
- Flow range from 15 to 70 GPH (45 to 210 LPH)*
- Horsepower required 0.06 to 0.17 hp (45 to 125 watts)
- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Stainless steel housing works with acidity > 2 pH¹

*GPH rating at 1600 RPM/60 Hz and LPH rating at 1300 RPM/50 Hz

General Applications

- Nitro Coffee
- Espresso/Coffee
- Carbonation
- Reverse Osmosis
- Beer Chillers
- Cold Carb Circulation
- Welding
- Pesticide Systems
- Solar Applications
- Cooling Systems

Technical Information			
Pump housing and motor shaft	304 Stainless Steel	Motor Type	PSC (Open)
Sealless (optional)	PPS encapsulated ceramic magnet paired with neodymium or ceramic outer magnet	Frequency/Voltage	60/50 Hz, 115/230 V
Elastomers	Nitrile, Ethylene Propylene (EPDM), Fluorocarbon, or Neoprene	Max Output Power	125 W
Valves	Stainless steel, Brass, or Plastic (high temp ultem, low temp acetal)	Max. Input Current	4 A
Vane Material	Carbon or PEEK	Protection	Thermally Protected
Ports	NPT 3/8"	Insulation Class	F
Unit Weight	10.1 lbs. (4.6 kg)		

Operating Range			
Max Static Pressure	100 PSI (7 bar)	Max Discharge Pressure	130 PSI (9 bar)
Fluid Temperature	-4° to 194°F (-20° to 90°C)	Speed	1300/1600 RPM
Max. Fluid Viscosity ^[2]	100 cP	Wet Lift with Water	6 ft (2 M)
Max. Sound Level	55 dBA		

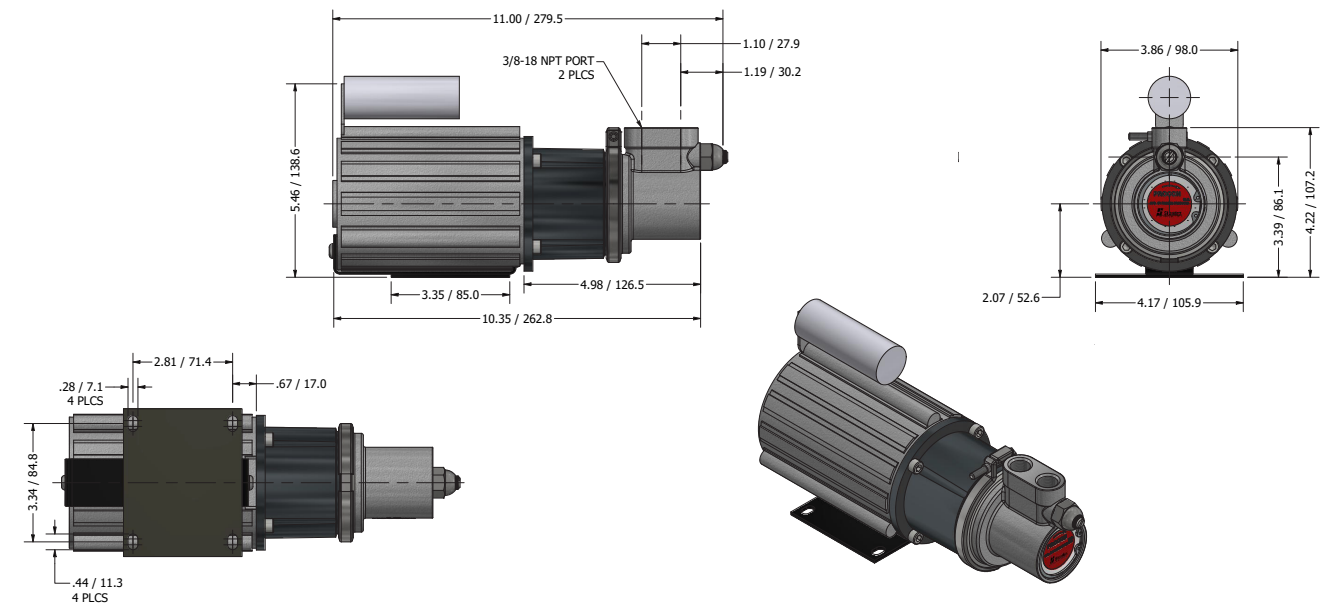


Flow rate (GPH/LPH)	Gallons Per Hour/Liters Per Hour					Brake Horsepower/Watts (motor shaft power)				
	Pressure (PSI/Bar)					Pressure (PSI/Bar)				
	50/3.4	100/6.9	150/10.3	200/13.8	250/17.5	50/3.4	100/6.9	150/10.3	200/13.8	250/17.5
70/210	77/243	68/214	62/195	-	-	0.08/60	0.11/83	0.15/112	-	-
60/180	69/217	63/198	58/183	-	-	0.08/58	0.11/81	0.14/108	-	-
50/150	62/195	57/180	53/167	48/151	-	0.08/56	0.10/76	0.13/98	0.17/129	-
35/100	48/151	44/139	41/129	37/117	-	0.08/57	0.10/75	0.13/96	0.17/125	-
25/75	30/95	26/82	24/21	23/72	21/66	0.07/52	0.09/64	0.11/82	0.14/104	0.17/125
20/60	27/85	23/72	21/66	20/63	19/60	0.07/51	0.08/62	0.11/79	0.13/100	0.16/121
15/45	16/50	13/41	12/38	11/35	11/35	0.07/50	0.08/61	0.10/76	0.12/91	0.14/104



NOTES:
 [1] Consult with manufacturer for extreme operating conditions
 [2] Flow may vary with viscosity
 [3] Performance based on pump tested with water at room temperature & at full speed

DIMENSION AND CONNECTION DETAILS

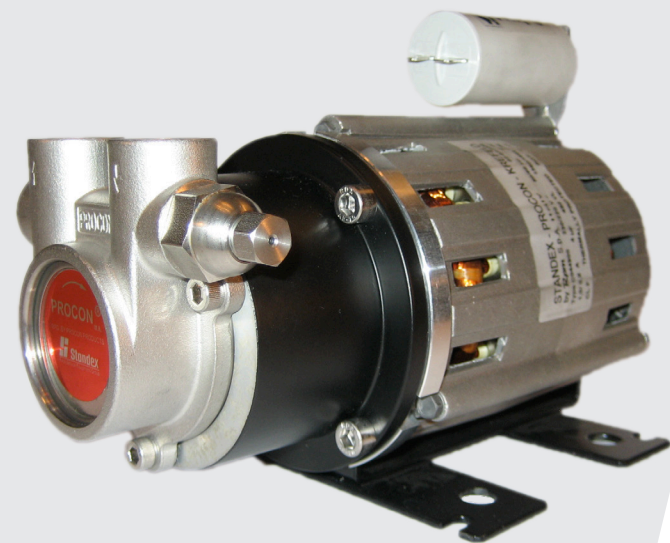


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Tennessee, USA
 869 Seven Oaks Blvd.
 Suite 120
 Smyrna, TN 37167
 001.615.355.8000
 sales@proconpump.com

Mountmellick, Ireland
 Irishtown, Mountmellick, CO.
 Laois, Republic of Ireland
 00353.57.86.24350
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Tianjin, China
 J3A101, Western Area
 Xuefu Huigu Industrial Park
 Tianjin, China 300402
 00.86.22.86996885



Features and Benefits

- Consistent flow rate across variable pressures
- Magnetically coupled drive for leak free design
- Flow range from 15 to 60 GPH (45 to 180 LPH)*
- Horsepower required 0.06 to 0.17 hp (45 to 125 watts)
- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Stainless steel housing works with acidity > 2 pH^[1]
- High temperature relief valve configuration
- Clockwise rotation available

*GPH rating at 1600 RPM/60 Hz and LPH rating at 1300 RPM/50 Hz

General Applications

- Carbonation
- Espresso/Coffee
- Welding
- Cold Carb Circulation
- Reverse Osmosis
- Beer Chillers
- Pesticide Systems
- Solar Applications
- Cooling Systems

Technical Information			
Pump housing and motor shaft	304 Stainless Steel	Motor Type	PSC (Open)
Sealless (optional)	PPS encapsulated neodymium or ceramic magnet paired with neodymium or ceramic outer magnet	Frequency/Voltage	60/50 HZ, 115/230V
Elastomers	Nitrile, Ethylene Propylene (EPDM), Fluorocarbon, or Neoprene	Max Output Power	125 W
Vane Material	Carbon or PEEK	Max. Input Current	4 A
Ports	G 3/8" or NPT 3/8"	Protection	Thermally Protected
Unit Weight	10 lbs. (4 kg)	Insulation Class	F

Operating Range			
Max Static Pressure	100 PSI (7 bar)	Max Discharge Pressure	150 PSI (10 bar)
Fluid Temperature	-4° to 194°F (-20° to 90°C)	Speed	1600/1300 RPM
Max. Fluid Viscosity ^[2]	100 Centipoise ^[2]	Wet Lift with Water	6 ft (2 M)
Max. Sound Level	55 dBA		



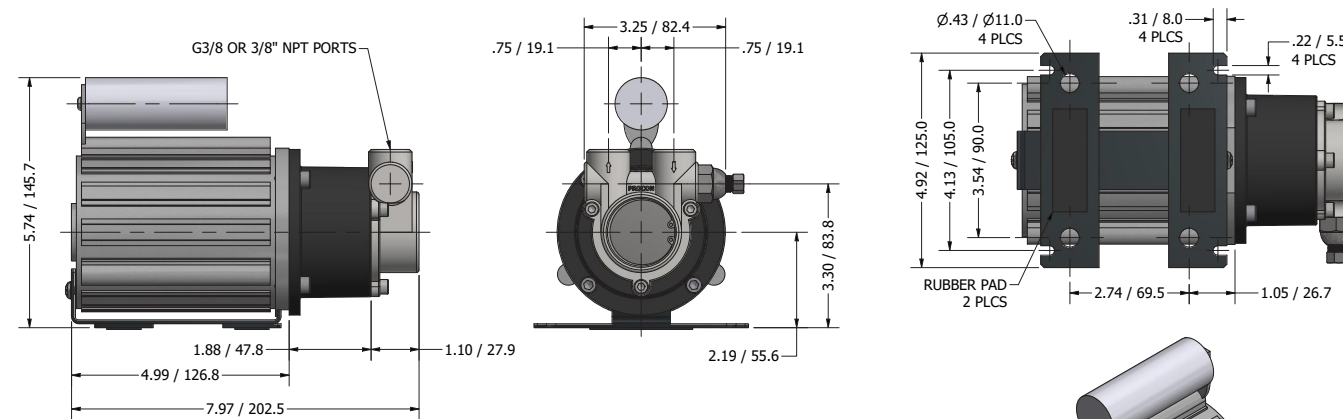
207MM Mag Drive Nominal Volume ^[3]						
Flow rate (GPH/ LPH)	Gallons Per Hour/Liters Per Hour			Brake Horsepower/Watts (motor shaft power)		
	Pressure (PSI/Bar)			Pressure (PSI/Bar)		
	50/3.4	100/6.9	150/10.3	50/3.4	100/6.9	150/10.3
60/180	62/194	60/188	--	0.10/75	0.16/119	--
50/150	52/163	50/157	--	0.09/67	0.15/112	--
35/100	37/116	35/110	--	0.08/51	0.14/104	--
25/75	27/85	25/78	23/72	0.07/52	0.12/89	0.17/127
15/45	17/53	15/47	13/41	0.06/45	0.10/75	0.15/112



NOTES:

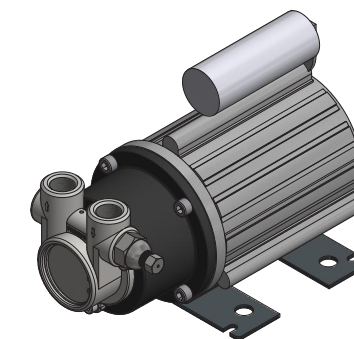
- [1] Consult with manufacturer for extreme operating conditions
- [2] Flow may vary with viscosity
- [3] Performance based on pump tested with water at room temperature

PUMP DIMENSIONS



NOTE:

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Tennessee, USA
869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@proconpump.com

Mountmellick, Ireland
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Laois, Republic of Ireland
00353.57.86.24350
sales@standex.ie

Tianjin, China
J3A101, Western Area
Xuefu Huigu Industrial Park
Tianjin, China 300402
00.86.22.86996885



Features and Benefits

- Consistent flow rate across variable pressures
- Magnetically coupled drive for leak free design
- Flow range from 80 to 125 GPH (240 to 375 LPH)*
- Horsepower required 0.12 to 0.17 hp (60 to 125 watts)
- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Stainless steel housing works with acidity > 2 pH^[1]
- High temperature relief valve configuration
- Clockwise rotation available

General Applications

- Carbonation
- Espresso/Coffee
- Welding
- Cold Carb Circulation
- Reverse Osmosis
- Beer Chillers
- Pesticide Systems
- Solar Applications
- Cooling Systems

*GPH rating at 1600 RPM/60 Hz and LPH rating at 1300 RPM/50 Hz

Technical Information

Pump housing and motor shaft	304 Stainless Steel	Motor Type	PSC (Open)
Sealless (optional)	PPS encapsulated neodymium or ceramic magnet paired with neodymium or ceramic outer magnet	Frequency/Voltage	60/50 Hz, 115/230 V
Elastomers	Nitrile, Ethylene Propylene (EPDM), Fluorocarbon, or Neoprene	Max Output Power	125 W
Vane Material	Carbon or PEEK	Max. Input Current	4 A
Ports	NPT 3/8"	Protection	Thermally Protected
Unit Weight	10.1 lbs. (4.6 kg)	Insulation Class	F

Operating Range

Max Static Pressure	100 PSI (7 bar)	Max Discharge Pressure	100 PSI (7 bar)
Fluid Temperature	-4° to 194°F (-20° to 90°C)	Speed	1300/1600 RPM
Max. Fluid Viscosity ^[2]	100 cP	Wet Lift with Water	6 ft (2 M)
Max. Sound Level	55 dBA		



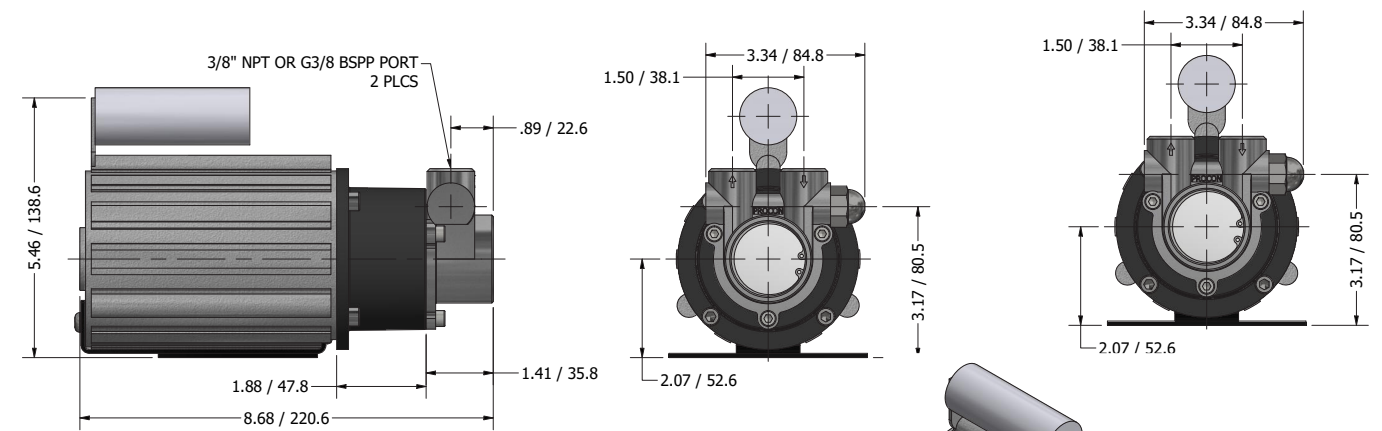
215MM Mag Drive Nominal Volume ^[3]				
Flow rate (GPH/LPH)	Gallons Per Hour/Liters Per Hour		Brake Horsepower/Watts (motor shaft power)	
	Pressure (PSI/Bar)		Pressure (PSI/Bar)	
	50/3.4	100/6.9	50/3.4	100/6.9
125/375	128/400	--	0.16/119	--
100/300	102/319	--	0.13/97	--
80/240	82/257	80/256	0.12/89	0.18/134



NOTES:

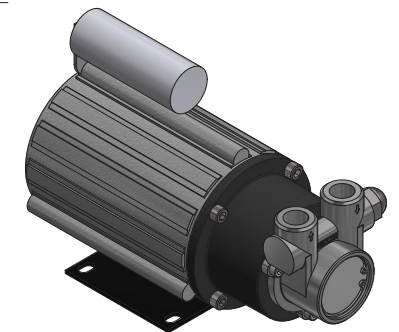
- [1] Consult with manufacturer for extreme operating conditions
- [2] Flow may vary with viscosity
- [3] Performance based on pump tested with water at room temperature

PUMP DIMENSIONS



NOTE:

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Tennessee, USA
869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@proconpump.com

Mountmellick, Ireland
Irishtown, Mountmellick, CO.
Laois, Republic of Ireland
00353.57.86.24350
sales@standex.ie

Tianjin, China
J3A101, Western Area
Xuefu Huigu Industrial Park
Tianjin, China 300402
00.86.22.86996885

Mag 2



Mag 3



Features and Benefits

- Consistent flow rate across variable pressures
- Magnetically coupled drive for leak free design
- Flow range from 15 to 140 GPH (45 to 420 LPH)*
- Horsepower required 0.08 to 0.51 hp (60 to 380 watts)
- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Stainless steel housing works with acidity > 2 pH and brass housing works with acidity > 6 pH¹
- Clockwise and counter clockwise rotation available
- High temperature relief valve configuration (also available without relief valve)

*GPH rating at 1600 RPM/60 Hz and LPH rating at 1300 RPM/50 Hz

General Applications²

- Carbonation
- Espresso/Coffee
- Welding
- Cold Carb Circulation
- Reverse Osmosis
- Beer Chillers
- Pesticide Systems
- Solar Applications
- Cooling Systems

Technical Information³

Pump housing	304 Stainless Steel	Vane Material	Carbon or PEEK
Sealless (optional)	PPS encapsulated neodymium or ceramic magnet paired with neodymium or ceramic outer magnet	Ports	G 3/8" or NPT 3/8"
Elastomers	Nitrile, Ethylene Propylene (EPDM), Fluorocarbon, or Neoprene	Unit Weight	10.1 lbs. (4.6 kg)
Valves	Stainless steel or Plastic (high temp ultem)		

Operating Range

Max Static Pressure	100 PSI (7 bar)	Max Discharge Pressure	250 PSI (17 BAR)
Fluid Temperature	-4° to 194°F (-20° to 90°C)	Speed	1725 RPM (60 Hz); 1450 RPM (50Hz)
Max. Fluid Viscosity	100 cP [2]	Wet Lift with Water	6 ft (2 M)
Max. Sound Level	55 dBA		



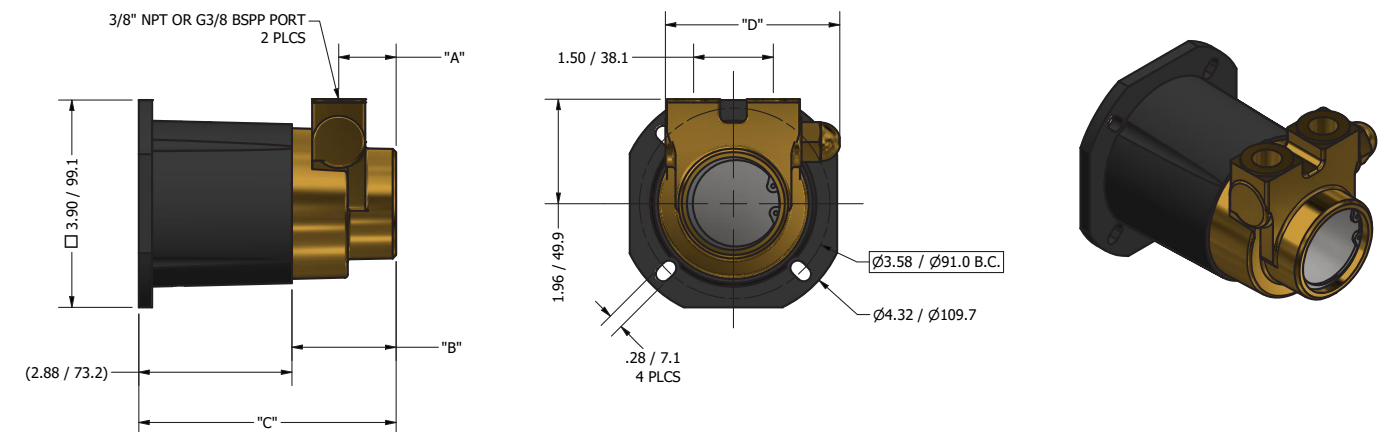
Mag Drive Series 2 & 3 Nominal Volume*

Flow rate (GPH/LPH)	Gallons Per Hour/Liters Per Hour					Brake Horsepower/Watts (motor shaft power)				
	Pressure (PSI/Bar)					Pressure (PSI/Bar)				
	50/3.4	100/6.9	150/10.3	200/13.8	250/17.5	50/3.4	100/6.9	150/10.3	200/13.8	250/17.5
140/425	143/447	141/441	139/434	137/428	135/422	0.17/127	0.28/209	0.40/298	0.52/387	0.63/469
125/375	128/400	126/394	124/388	122/381	120/375	0.16/119	0.26/194	0.36/268	0.47/350	0.57/425
110/330	111/347	109/341	107/334	105/328	103/322	0.15/112	0.25/186	0.34/253	0.44/328	0.54/402
100/300	102/319	100/313	98/306	96/300	94/294	0.13/97	0.20/149	0.28/209	0.35/261	0.42/313
80/240	82/257	80/256	78/244	76/238	74/231	0.12/89	0.18/134	0.25/186	0.32/238	0.39/291
70/210	72/225	70/219	68/213	66/206	64/200	0.11/82	0.17/127	0.24/179	0.30/224	0.37/276
60/180	62/194	60/188	58/181	56/175	54/169	0.10/75	0.16/119	0.21/171	0.29/216	0.35/261
50/150	52/163	50/157	48/150	46/144	44/138	0.09/67	0.15/112	0.21/157	0.27/201	0.33/246
35/100	37/116	35/110	33/103	31/97	29/91	0.08/51	0.14/104	0.19/142	0.24/179	0.29/216
25/75	27/85	25/78	23/72	21/66	19/59	0.07/52	0.12/89	0.17/127	0.22/164	0.27/201
15/45	17/53	15/47	13/41	11/34	--	0.06/45	0.10/75	0.15/112	0.19/142	--



- 1 Consult with manufacturer for extreme operating conditions
 - 2 Consult with manufacturer for information on other applications
 - 3 Motor options not shown here, consult with manufacturer for motor requirements
- * GPH rating at 1725 RPM/60Hz and LPH rating at 1450 RPM/50Hz

MAG DRIVE PUMP DIMENSIONS



PUMP	MAT'L	DIM "A"	DIM "B"	DIM "C"	DIM "D"
MAG 2	BRASS	1.08 / 27.4	1.96 / 49.8	4.84 / 122.9	3.28 / 83.3
MAG 3	ST STL	1.03 / 26.2	1.86 / 47.2	4.74 / 120.4	3.34 / 84.8

- NOTE:
- All dimensions are in inches/millimeters
 - Bronze and plastic coupling available for clamp-on

Tennessee, USA
869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@proconpump.com

Mountmellick, Ireland
Irishtown, Mountmellick, CO.
Laois, Republic of Ireland
00353.57.86.24350
sales@standex.ie

Tianjin, China
J3A101, Western Area
Xuefu Huigu Industrial Park
Tianjin, China 300402
00.86.22.86996885



Features and Benefits

- Consistent flow rate across variable pressures
- Magnetically coupled drive for leak free design
- Flow range from 115 to 330 GPH (350 to 1000 LPH)*
- Horsepower required 0.35 to 2.35 hp (260 to 1740 watts)
- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Stainless steel housing works with acidity > 2 pH¹
- Clockwise and counter clockwise rotation available
- High temperature relief valve configuration (also available without relief valve)

General Applications²

- X-Ray/MRI
- Carbonation
- Espresso/Coffee
- Welding
- Cold Carb Circulation
- Reverse Osmosis
- Beer Chillers
- Pesticide Systems
- Solar Applications
- Cooling Systems

* GPH rating at 1725 RPM/60Hz and LPH rating at 1450 RPM/50Hz

Technical Information³

Pump housing	304 Stainless Steel	Vane Material	Carbon or PEEK
Sealless (optional)	PPS encapsulated neodymium or ceramic magnet paired with neodymium or ceramic outer magnet	Ports	7/8" SAE O-Ring
Elastomers	Nitrile, Ethylene Propylene (EPDM), Fluorocarbon, or Neoprene	Unit Weight	Approx. 9.59 lbs. (4.35 kg) Approx. 9.59 lbs. (4.35 kg)
Valves	Stainless steel or Plastic (high temp ultem)		

Operating Range

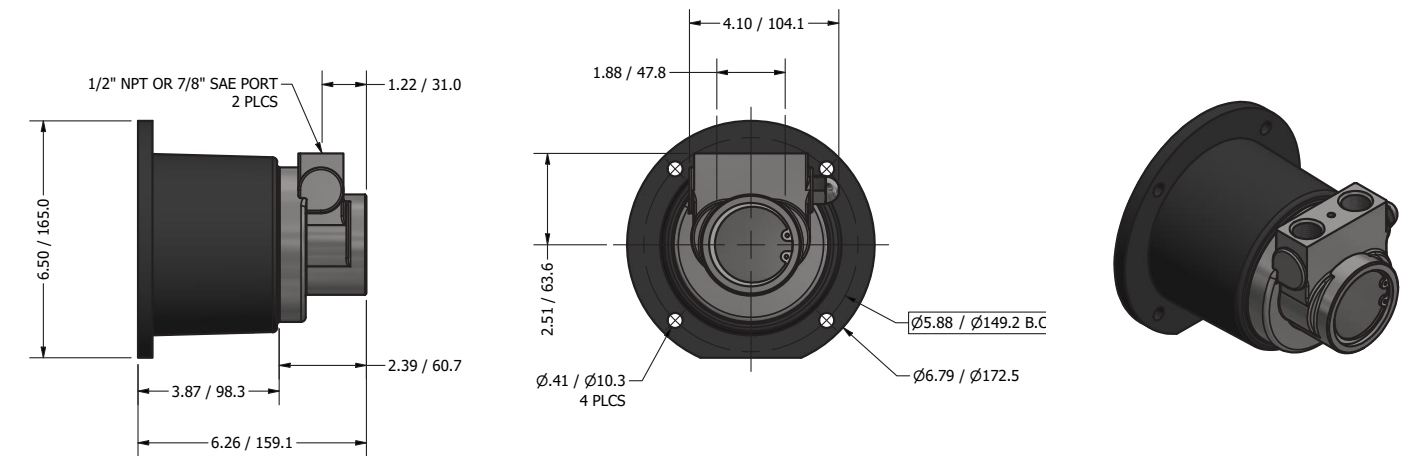
Max Static Pressure	100 PSI (7 bar)	Max Discharge Pressure	250 PSI (17 BAR)
Fluid Temperature	-4° to 194°F (-20° to 90°C)	Max Speed	2200 RPM
Max. Fluid Viscosity	100 cP ^[1]	Wet Lift with Water	6 ft (2 M)

Flow rate (GPH/ LPH)	5 Nominal Volume*					Brake Horsepower/Watts (motor shaft power)				
	Gallons Per Hour/Liters Per Hour					Pressure (PSI/Bar)				
	50/3.4	100/6.9	150/10.3	200/13.8	250/17.5	50/3.4	100/6.9	150/10.3	200/13.8	250/17.5
330/1,000	331/1,034	330/1,031	328/1,025	327/1,022	326/1,019	0.33/246	0.55/410	0.78/581	1.00/745	1.22/909
265/800	265/828	263/822	261/816	259/809	257/803	0.24/179	0.43/320	0.63/469	0.82/611	1.01/753
240/725	243/759	240/750	236/738	232/725	228/713	0.21/157	0.37/276	0.54/402	0.70/522	0.86/641
215/650	218/681	215/672	211/659	207/647	203/634	0.20/149	0.35/261	0.50/3723	0.65/484	0.80/596
190/575	193/603	190/594	189/591	182/569	178/556	0.18/134	0.33/246	0.47/351	0.61/455	0.75/559
165/500	168/525	165/516	161/503	157/491	153/478	0.17/127	0.30/224	0.43/320	0.57/425	0.70/522
140/425	143/447	140/438	136/425	132/413	128/400	0.16/119	0.28/209	0.40/298	0.52/387	0.64/477
115/350	116/363	115/359	111/347	107/334	103/322	0.15/112	0.25/186	0.35/261	0.45/335	0.55/410



1 Consult with manufacturer for extreme operating conditions
 2 Consult with manufacturer for information on other applications
 3 Motor options not shown here, consult with manufacturer for motor requirements
 * GPH rating at 1725 RPM/60Hz and LPH rating at 1450 RPM/50Hz

MAG DRIVE DIMENSIONS

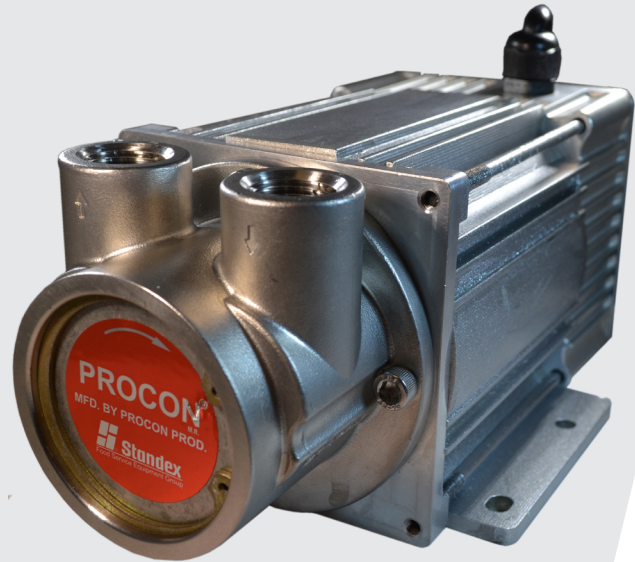


NOTE:
• Dimensions are in inches/millimeters

Tennessee, USA
869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@proconpump.com

Mountmellick, Ireland
Irishtown, Mountmellick, CO.
Laois, Republic of Ireland
00353.57.86.24350
sales@standex.ie

Tianjin, China
J3A101, Western Area
Xuefu Huigu Industrial Park
Tianjin, China 300402
00.86.22.86996885



General Applications

- Medical Applications
- X-Ray & CT Scanner
- Hydrotherapy
- Radar

Features and Benefits

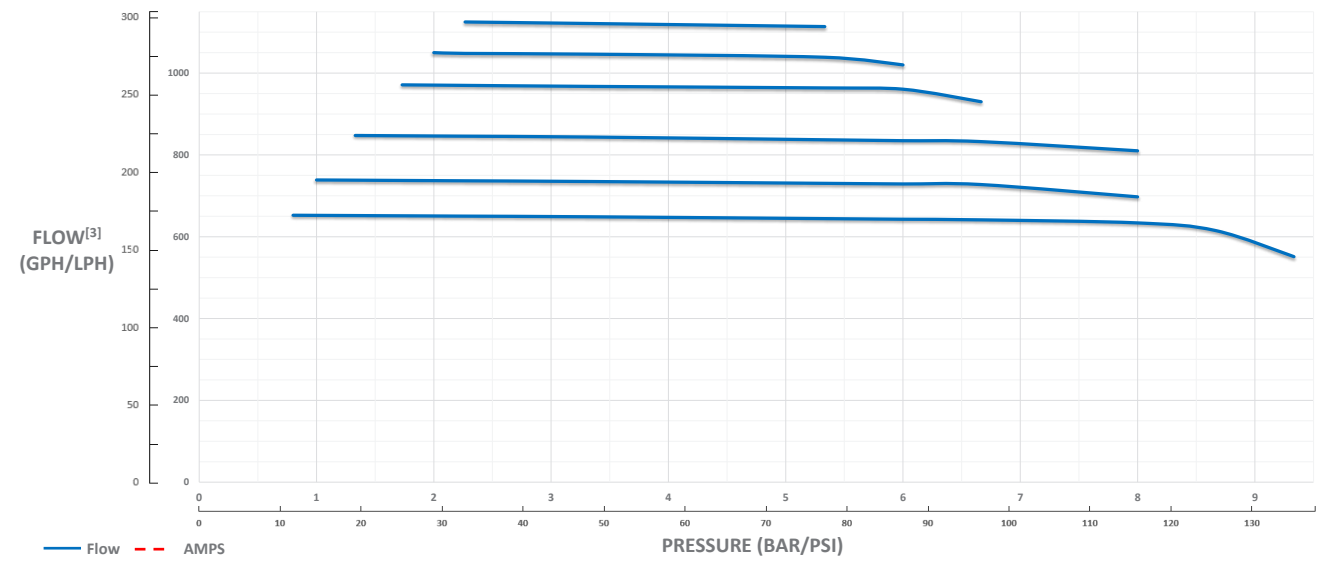
- Canned Motor design for leak-free applications
- Compact size ideal for applications requiring light weight and quiet operation (<55 dBA)
- Wet rotor for internal cooling and energy efficiency
- Consistent flow rate across variable pressures
- Flow range from 175 to 300 GPH (660 to 1130 LPH)
- Horsepower required 0.17 hp to 0.5 hp (125 to 375 watts)
- Motor speed same at 50 and 60 Hz
- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Stainless steel housing works with acidity > 2 pH¹

Technical Information

Pump housing and motor shaft	304 Stainless Steel	Motor Type	Brushless
Sealless (optional)	PPS encapsulated permanent magnet (neodymium) motor rotor	Frequency/Voltage	60/50 Hz, 115/230 VAC
Elastomers	Nitrile, Ethylene Propylene (EPDM), Fluorocarbon, or Neoprene	Max Output Power	250 W
Vane Material	Carbon	Max. Input Current	5 A
Ports	NPT 1/2"	Protection	Thermally Protected
Unit Weight	13 lbs. (6 kg)	Insulation Class	B

Operating Range

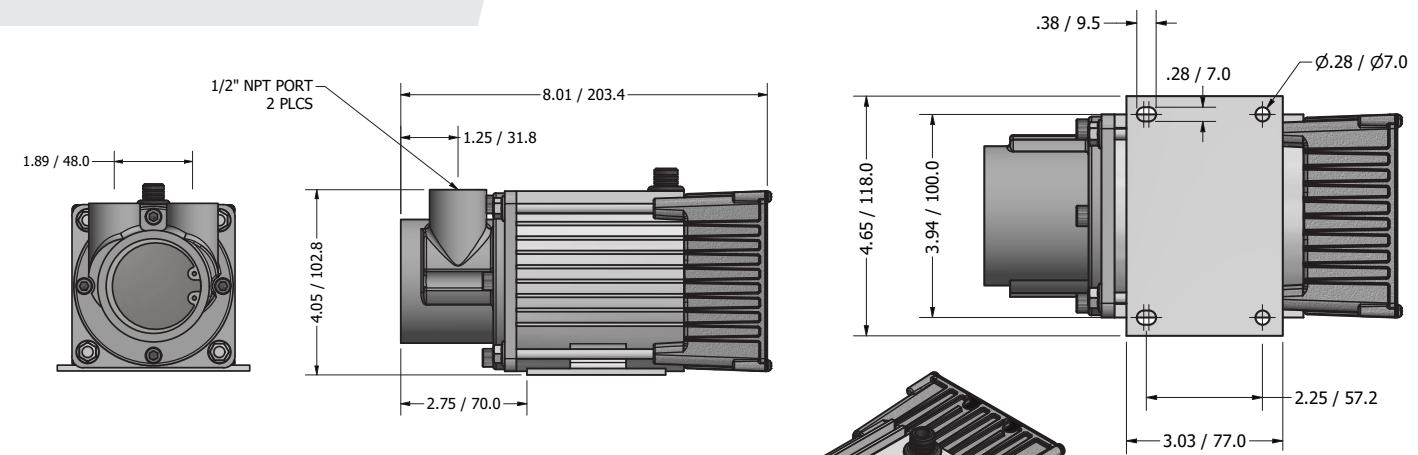
Max Static Pressure	200 PSI (14 bar)	Max Discharge Pressure	120 PSI (8 bar)
Fluid Temperature	-4° to 140°F (-20° to 60°C)	Speed at 50/60 Hz	1750 RPM
Max. Fluid Viscosity	100 cP [2]	Wet Lift with Water	6 ft (2 M)
Max. Sound Level	55 dBA		



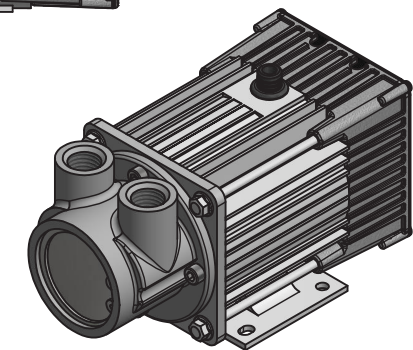
NOTES:
 [1] Consult with manufacturer for extreme operating conditions
 [2] Flow may vary with viscosity
 [3] Performance based on pump tested with water at room temperature



cMagPRO 5 DIMENSIONS



NOTE:
 • All dimensions are in inches/millimeters



Tennessee, USA
 869 Seven Oaks Blvd.
 Suite 120
 Smyrna, TN 37167
 001.615.355.8000
 sales@proconpump.com

Mountmellick, Ireland
 Irishtown, Mountmellick, CO.
 Laois, Republic of Ireland
 00353.57.86.24350
 sales@standex.ie

Tianjin, China
 J3A101, Western Area
 Xuefu Huigu Industrial Park
 Tianjin, China 300402
 00.86.22.86996885

Series 1



Series 2



Series 3



Features and Benefits

- Consistent flow rate across variable pressures
- Flow range from 15 to 140 GPH (45 to 425 LPH)*
- Horsepower required 0.06 to 0.63 hp (45 to 469 Watt)
- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Works with fluid with viscosity up to 100 centipoise (cP), temperature between -4°F to 194°F (-20°C to 90°C)¹
- Brass housing works with TDS max 5,000
- Stainless steel housing works with acidity > 2 pH and brass housing works with acidity > 6 pH¹
- Clockwise and counter clockwise rotation available only for Series 2 and 3
- Internal Relief valve configuration (also available without relief valve)
- Series 1 available in long Neck clamp-on for special applications
- Integral strainer for debris removal available in Series 1

General Applications

- Carbonation
- Espresso/Coffee
- Welding
- Cold Carb Circulation
- Reverse Osmosis
- Beer Chillers
- Pesticide Systems
- Solar Applications
- Cooling Systems

* GPH rating at 1725 RPM/60Hz and LPH rating at 1450 RPM/50Hz

Technical Information

Pump Housing Material	Series 1 & 2 - Brass (1.5%) or Low Lead Brass (0.2%); Series 3 - 304 Stainless Steel		
Seals	Carbon / Ceramic, or Carbon / Silicon Carbide (balanced and non-balanced)		
Elastomers	Nitrile, Ethylene Propylene (EPDM), Fluorocarbon, or Neoprene		
Valves	Stainless steel, Brass, or Plastic (high temp ultem, low temp acetal)		
Drive configurations	Single flat, Double flat or Slotted with bronze or Plastic Couplings		
Vanes	Carbon or PEEK	Mounting Options	Clamp-on or Bolt-on
Ports	G 3/8" or NPT 3/8"	Unit Weight	Approx. 2.5 lbs. (1.1kg)

Operating Range

Max Static Pressure	100 PSI (7 BAR)	Max Discharge Pressure	250 PSI (17 BAR)
Fluid Temperature	-4° to 194°F (-20° to 90°C)	Speed	1000 to 2400 RPM
Viscosity	100 cP	Wet Lift with Water	6 ft (2M)



Series 1, 2, and 3 Nominal Volume*

Flow rate (GPH/LPH)	Gallons Per Hour/Liters Per Hour					Brake Horsepower/Watts (motor shaft power)				
	Pressure (PSI/Bar)					Pressure (PSI/Bar)				
	50/3.4	100/6.9	150/10.3	200/13.8	250/17.5	50/3.4	100/6.9	150/10.3	200/13.8	250/17.5
140/425	143/447	141/441	139/434	137/428	135/422	0.17/127	0.28/209	0.40/298	0.52/387	0.63/469
125/375	128/400	126/394	124/388	122/381	120/375	0.16/119	0.26/194	0.36/268	0.47/350	0.57/425
110/330	111/347	109/341	107/334	105/328	103/322	0.15/112	0.25/186	0.34/253	0.44/328	0.54/402
100/300	102/319	100/313	98/306	96/300	94/294	0.13/97	0.20/149	0.28/209	0.35/261	0.42/313
80/240	82/257	80/256	78/244	76/238	74/231	0.12/89	0.18/134	0.25/186	0.32/238	0.39/291
70/210	72/225	70/219	68/213	66/206	64/200	0.11/82	0.17/127	0.24/179	0.30/224	0.37/276
60/180	62/194	60/188	58/181	56/175	54/169	0.10/75	0.16/119	0.23/171	0.29/216	0.35/261
50/150	52/163	50/157	48/150	46/144	44/138	0.09/67	0.15/112	0.21/157	0.27/201	0.33/246
35/100	37/116	35/110	33/103	31/97	29/91	0.08/51	0.14/104	0.19/142	0.24/179	0.29/216
25/75	27/85	25/78	23/72	21/66	19/59	0.07/52	0.12/89	0.17/127	0.22/164	0.27/201
15/45	17/53	15/47	13/41	11/34	--	0.06/45	0.10/75	0.15/112	0.19/142	--



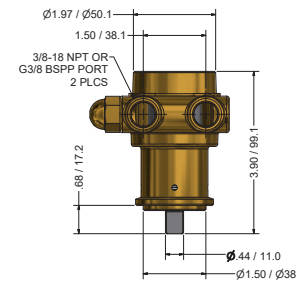
¹ Consult with manufacturer for extreme operating conditions

² Consult with manufacturer for information on other applications

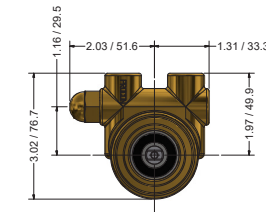
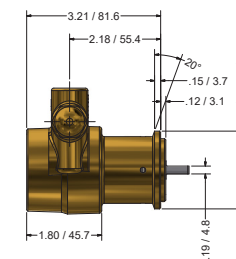
³ For certificate of compliance or declarations please visit our website or email at productcompliance@proconpump.com

* GPH rating at 1725 RPM/60Hz and LPH rating at 1450 RPM/50Hz

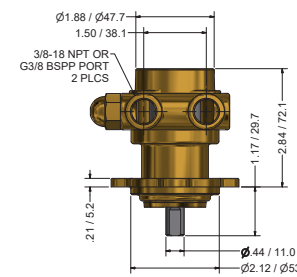
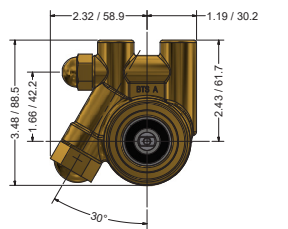
ROTARY VANE PUMP DIMENSIONS



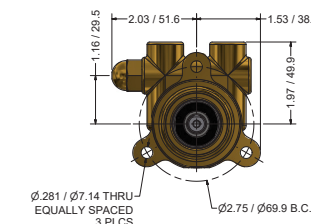
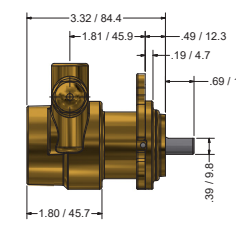
Clamp-On Mounting



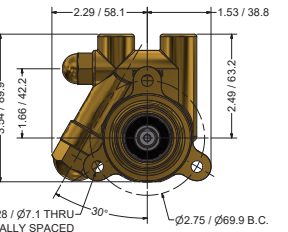
With Strainer



Bolt-On Mounting



With Strainer



NOTE:

- All dimensions are in inches/millimeters
- Bronze and plastic coupling available for clamp-on

Tennessee, USA
869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@proconpump.com

Mountmellick, Ireland
Irishtown, Mountmellick, CO.
Laois, Republic of Ireland
00353.57.86.24350
sales@standex.ie

Tianjin, China
J3A101, Western Area
Xuefu Huigu Industrial Park
Tianjin, China 300402
00.86.22.86996885



Features and Benefits

- Consistent flow rate across variable pressures
- Flow range from 115 to 330 GPH (350 to 1000 LPH)*
- Horsepower required 0.15 to 1.22 hp (112 to 909 Watt)
- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Works with fluid with viscosity up to 100 centipoise (cP), temperature between -4°F to 194°F (-20°C to 90°C)¹
- Brass housing works with TDS max 5,000
- Stainless steel housing works with acidity > 2 pH and brass housing works with acidity > 6 pH¹
- Clockwise and counter clockwise rotation available
- Internal Relief valve configuration (also available without relief valve)
- Series 4 available in long Neck clamp-on for special applications

General Applications

- Circulation
- Reverse Osmosis
- Booster Pumps
- Solar Applications
- Hydraulic Systems
- Desalination
- Cooling Systems

* GPH rating at 1725 RPM/60Hz and LPH rating at 1450 RPM/50Hz

Technical Information

Pump Housing Material	Series 4 Brass (1.5%), Series 5 - 304 Stainless Steel		
Seals	Carbon / Ceramic, or Carbon / Silicon Carbide (balanced and non-balanced)		
Elastomer	Nitrile, EPDM, Fluorocarbon, Neoprene		
Valves	Stainless steel, Brass, or Plastic (high temp ultem, low temp acetal)		
Drive configuration	Single flat, Double flat or Slotted with bronze or Plastic Couplings		
Vanes	Carbon	Mounting Options	Clamp-on or Bolt-on
Ports	G 1/2" OR NPT 1/2"	Unit Weight	Approx. 4.5 lbs. (2 kg)

Operating Range

Max Static Pressure	100 PSI (7 BAR)	Max Discharge Pressure	250 PSI (17 BAR)
Fluid Temperature	-4° to 194°F (-20° to 90°C)	Speed	1000 to 2400 RPM
Viscosity	100 cP	Wet Lift with Water	6 ft (2M)



Series 4 and 5 Nominal Volume*

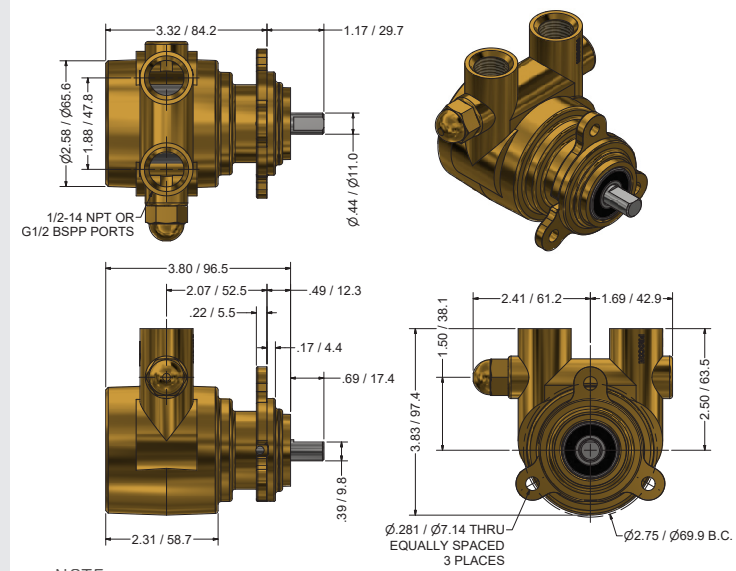
Flow rate (GPH/LPH)	Gallons Per Hour/Liters Per Hour					Brake Horsepower/Watts (motor shaft power)				
	Pressure (PSI/Bar)					Pressure (PSI/Bar)				
	50/3.4	100/6.9	150/10.3	200/13.8	250/17.5	50/3.4	100/6.9	150/10.3	200/13.8	250/17.5
330/1,000	331/1,034	330/1,031	328/1,025	327/1,022	326/1,019	0.33/246	0.55/410	0.78/581	1.00/745	1.22/909
265/800	265/828	263/822	261/816	259/809	257/803	0.24/179	0.43/320	0.63/469	0.82/611	1.01/753
240/725	243/759	240/750	236/738	232/725	228/713	0.21/157	0.37/276	0.54/402	0.70/522	0.86/641
215/650	218/681	215/672	211/659	207/647	203/634	0.20/149	0.35/261	0.50/3723	0.65/484	0.80/596
190/575	193/603	190/594	189/591	182/569	178/556	0.18/134	0.33/246	0.47/351	0.61/455	0.75/559
165/500	168/525	165/516	161/503	157/491	153/478	0.17/127	0.30/224	0.43/320	0.57/425	0.70/522
140/425	143/447	140/438	136/425	132/413	128/400	0.16/119	0.28/209	0.40/298	0.52/387	0.64/477
115/350	116/363	115/359	111/347	107/334	103/322	0.15/112	0.25/186	0.35/261	0.45/335	0.55/410



¹ Consult with manufacturer for extreme operating conditions
² Consult with manufacturer for information on other applications
³ For certificate of compliance or declarations please visit our website or email at productcompliance@proconpump.com
 * GPH rating at 1725 RPM/60Hz and LPH rating at 1450 RPM/50Hz

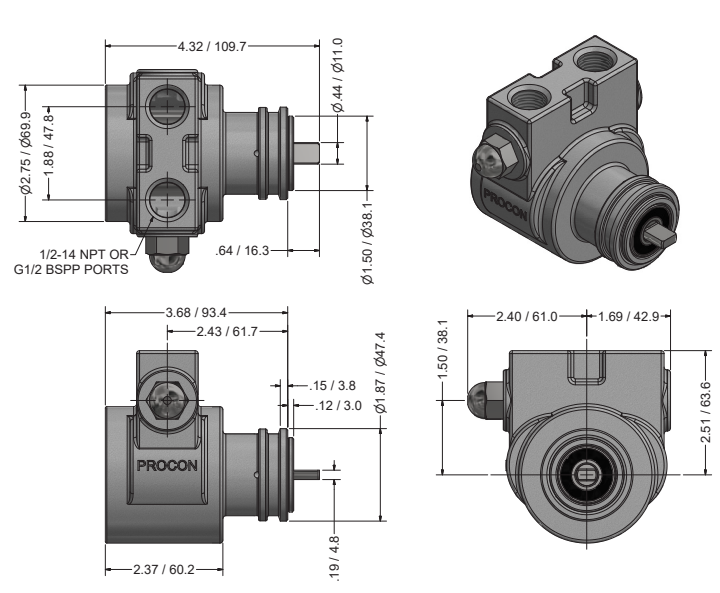
ROTARY VANE DIMENSIONS

Rotary Vane Series 4 Bolt-On Style



NOTE:
 • Dimensions are in inches/millimeters
 • Clamp-on and Bolt-on versions available in both series 4 and series 5
 • Bronze and plastic coupling available for clamp-on

Rotary Vane Series 5 Clamp-On Style



Tennessee, USA
 869 Seven Oaks Blvd.
 Suite 120
 Smyrna, TN 37167
 001.615.355.8000
 sales@PROCONpump.com

Mountmellick, Ireland
 Irishtown, Mountmellick, CO.
 Laois, Republic of Ireland
 00353.57.86.24350
 sales@standex.ie

Tianjin, China
 J3A101, Western Area
 Xuefu Huigu Industrial Park
 Tianjin, China 300402
 00.86.22.86996885



Features and Benefits

- Consistent flow rate across variable pressures
- Flow range from 300 to 600 GPH (900 to 2000 LPH)* requires flooded inlet
- Horsepower required 0.35 to 2.35 hp (261 to 1.75 Watt)
- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Works with fluid with viscosity up to 100 centipoise (cP), temperature between -4°F to 194°F (-20°C to 90°C)¹
- Stainless steel housing works with acidity > 2 pH
- Clockwise and counter clockwise rotation available

General Applications

- Circulation
- Reverse Osmosis
- Booster Pumps
- Solar Applications
- Hydraulic Systems
- Desalination

*GPH rating at 1725 RPM/60Hz and LPH rating at 1450 RPM/50Hz

Technical Information

Pump Housing Material	304 Stainless Steel		
Seals	Carbon / Ceramic		
Elastomer	Nitrile or Fluorocarbon		
Valves	No valve available		
Drive configurations	Keyway		
Vanes	Carbon	Mounting Options	Bolt-on only
Ports	NPT 1"	Unit Weight	Approx. 15 LBS. (6.8 KG)

Operating Range

Max Static Pressure	100 PSI (7 BAR)	Max Discharge Pressure	250 PSI (17 BAR)
Fluid Temperature	-4° to 194°F (-20° to 90°C)	Speed	1000 to 2100 RPM
Viscosity	100 cP	Inlet Conditions	Flooded



Series 6 Nominal Volume*

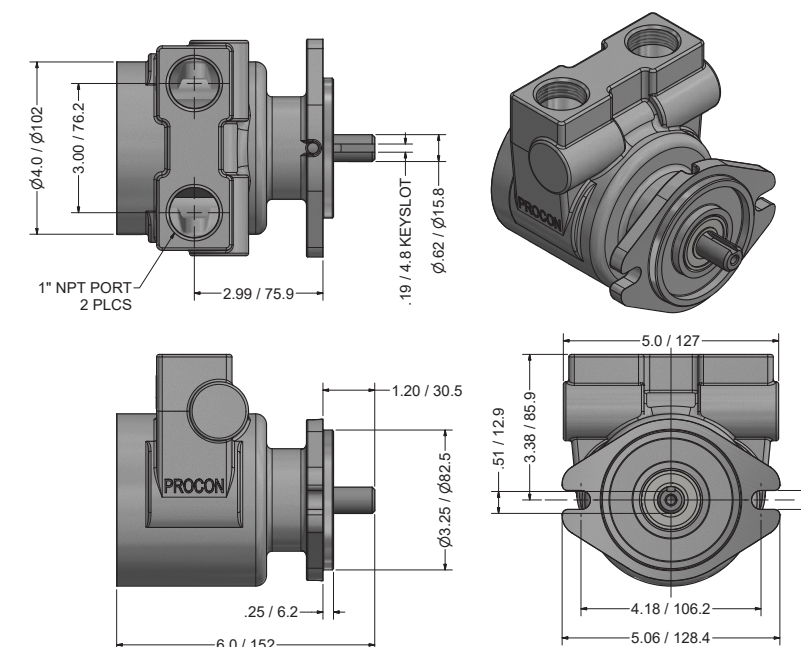
Flow rate (GPH/LPH)	Gallons Per Hour/Liters Per Hour					Brake Horsepower/Watts (motor shaft power)				
	Pressure (PSI/Bar)					Pressure (PSI/Bar)				
	50/3.4	100/6.9	150/10.3	200/13.8	250/17.5	50/3.4	100/6.9	150/10.3	200/13.8	250/17.5
660/2,000	663/2,072	660/2,063	657/2,053	654/2,044	651/2,034	.50/373	.95/708	1.40/1,043	1.85/1,378	2.35/1,751
600/1,800	612/1,913	609/2,903	606/1,894	603/1,884	600/1,875	.50/373	.90/671	1.35/1,006	1.80/1,341	2.30/1,714
540/1,620	552/1,725	549/1,716	546/1,706	543/1,699	540/1,688	.50/373	.85/633	1.30/969	1.70/1,267	2.00/1,490
480/1,440	489/1,528	486/1,519	483/1,509	480/1,500	477/1,491	.45/335	.75/559	1.15/857	1.50/1,118	1.80/1,341
420/1,260	435/1,359	432/1,350	429/1,341	426/1,331	423/1,322	.45/335	.70/522	1.00/745	1.35/1,006	1.75/1,304
360/1,080	372/1,163	369/1,153	366/1,143	363/1,134	360/1,125	.40/298	.65/484	.95/708	1.25/931	1.55/1,155
300/900	303/947	300/938	297/928	294/919	291/909	.35/261	.55/410	.85/633	1.15/857	1.45/1,080



¹ Consult with manufacturer for extreme operating conditions
² Consult with manufacturer for information on other applications

³ For certificate of compliance or declarations please visit our website or email at productcompliance@proconpump.com
 * GPH rating at 1725 RPM/60Hz and LPH rating at 1450 RPM/50Hz

ROTARY VANE DIMENSIONS



NOTE:
• Dimensions are in inches/millimeters

Tennessee, USA
869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@PROCONpump.com

Mountmellick, Ireland
Irishtown, Mountmellick, CO.
Laois, Republic of Ireland
00353.57.86.24350
sales@standex.ie

Tianjin, China
J3A101, Western Area
Xuefu Huigu Industrial Park
Tianjin, China 300402
00.86.22.86996885



Features and Benefits

- Consistent flow rate across variable pressures
- Flow range from 15 to 25 GPH (45 to 75 LPH)*
- Horsepower required 0.08 to 0.27 hp (60 to 201 watts)
- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Brass housing works with acidity > 6 pH¹
- Internal Relief valve configuration
- Compact size with the same high performance as standard rotary vane pump

* GPH rating at 1725 RPM/60Hz and LPH rating at 1450 RPM/50Hz

General Applications²

- Carbonation
- Espresso/Coffee
- Welding
- Cold Carb Circulation
- Reverse Osmosis
- Beer Chillers
- Pesticide Systems
- Solar Applications
- Cooling Systems

Technical Information

Pump Housing Material	Brass (1.5% Lead)		
Seals	Carbon / Ceramic		
Elastomers	Nitrile or Ethylene Propylene (EPDM)		
Valves	Brass, or Plastic (high temp ultem, low temp acetal)		
Drive configurations	Double flat		
Vanes	Carbon	Mounting Options	Clamp-on
Ports	G 3/8"	Weight	Approx. 1.8 lbs. (0.82kg)

Operating Range

Max Static Pressure	100 PSI (7 BAR)	Max Discharge Pressure	250 PSI (17 BAR)
Fluid Temperature	-4° to 194°F (-20° to 90°C)	Speed	1000 to 2400 RPM
Viscosity	100 cP	Wet Lift with Water	6 ft (2M)

* All Flow Rates in GPH is @ 60Hz (1750RPM) & LPH is @ 50Hz (1400RPM)



Flow rate (GPH/ LPH)	207 Nominal Volume ³					207 Nominal Volume ³				
	Gallons Per Hour / Liters Per Hour					Brake Horsepower / Watts (motor shaft power)				
	Pressure (PSI / Bar)					Pressure (PSI / Bar)				
	50/3.4	100/6.9	150/10.3	200/13.8	250/17.5	50/3.4	100/6.9	150/10.3	200/13.8	250/17.5
25/75	27/85	25/78	23/72	21/66	19/59	0.07/52	0.12/89	0.17/127	0.22/164	0.27/201
15/45	17/53	15/47	13/41	11/34	--	0.06/45	0.10/75	0.15/112	0.19/142	--



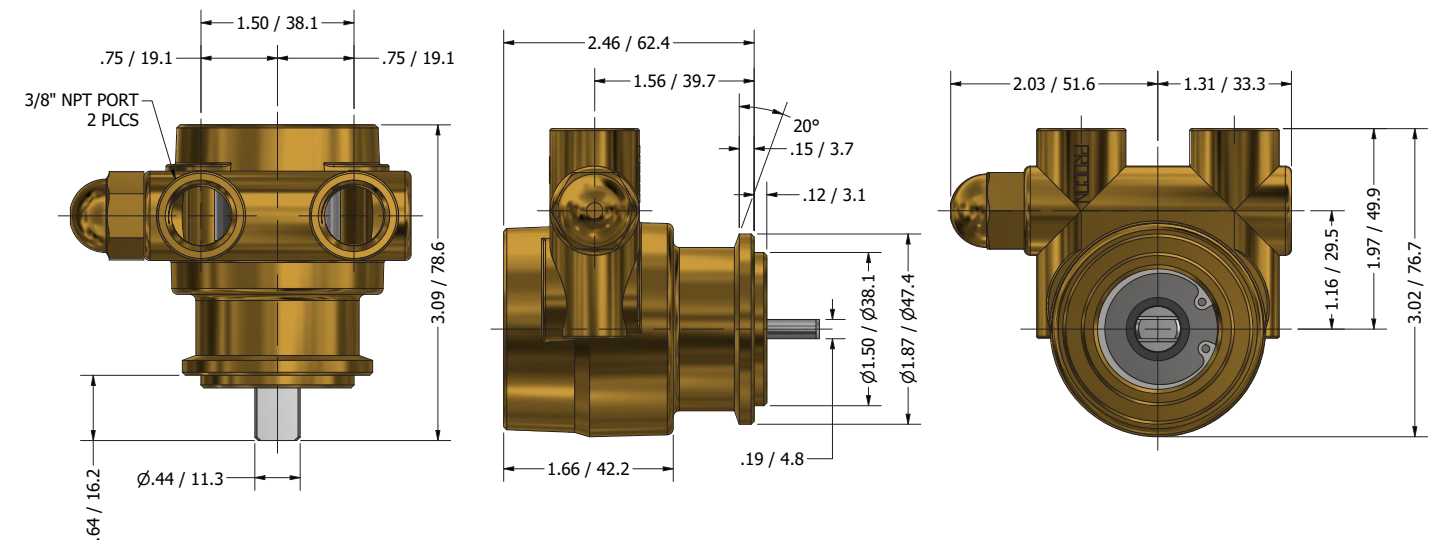
¹ Consult with manufacturer for extreme operating conditions

² Consult with manufacturer for information on other applications

³ GPH rating at 1725 RPM/60Hz and LPH rating at 1450 RPM/50Hz

⁴ For certificate of compliance or declarations please visit our website or email at productcompliance@proconpump.com

ROTARY VANE PUMP DIMENSIONS



NOTE:
• All dimensions are in inches/millimeters
• Bronze and plastic coupling available

Tennessee, USA

869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@PROCONpump.com

Mountmellick, Ireland

Irishtown, Mountmellick, CO.
Laois, Republic of Ireland
00353.57.86.24350
sales@standex.ie

Tianjin, China

J3A101, Western Area
Xuefu Huigu Industrial Park
Tianjin, China 300402
00.86.22.86996885



Features and Benefits

- Consistent flow rate across variable pressures
- Flow range from 15 to 60 GPH (45 to 180 LPH)*
- Horsepower required 0.06 to 0.35 hp (45 to 261 Watt)
- Self priming (water) and maintenance free with low vibration and pulsation characteristics
- Stainless steel housing works with acidity > 2 pH
- Internal Relief valve configuration
- Compact size with the same High performance as a standard rotary vane pump

General Applications²

- Carbonation
- Espresso/Coffee
- Welding
- Cold Carb Circulation
- Reverse Osmosis
- Beer Chillers
- Pesticide Systems
- Solar Applications
- Cooling Systems

* GPH rating at 1725 RPM/60Hz and LPH rating at 1450 RPM/50Hz

Technical Information			
Pump Housing Material	304 Stainless Steel		
Seals	Carbon / Ceramic		
Elastomers	Nitrile, Ethylene Propylene (EPDM)		
Valves	Stainless steel or Plastic (high temp ultem, low temp acetal)		
Drive configurations	Double flat or Slotted with bronze or Plastic Couplings		
Vanes	Carbon or PEEK	Mounting Options	Clamp-on
Ports	G 3/8"	Unit Weight	Approx. 1.6lbs. (0.7kg)

Operating Range ¹			
Max Static Pressure	100 PSI (7 BAR)	Max Discharge Pressure	250 PSI (17 BAR)
Fluid Temperature	-4° to 194°F (-20° to 90°C)	Speed	1000 to 2400 RPM
Viscosity	100 cP	Wet Lift with Water	6 ft (2M)

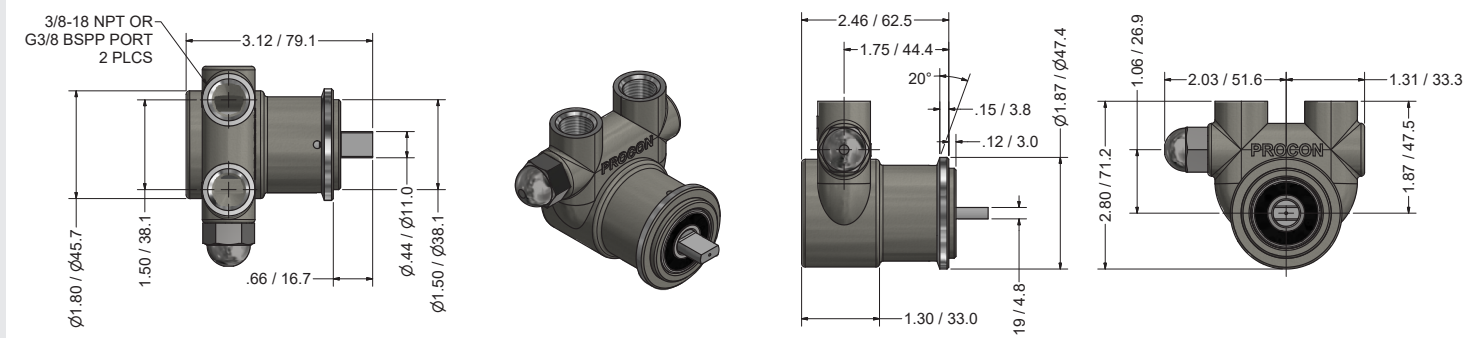


Flow rate (GPH/LPH)	207 Nominal Volume ³					Gallons Per Hour / Liters Per Hour					Brake Horsepower / Watts (motor shaft power)				
	Pressure (PSI/Bar)					Pressure (PSI/Bar)					Pressure (PSI/Bar)				
	50/3.4	100/6.9	150/10.3	200/13.8	250/17.5	50/3.4	100/6.9	150/10.3	200/13.8	250/17.5	50/3.4	100/6.9	150/10.3	200/13.8	250/17.5
60/180	62/194	60/188	58/181	56/175	54/169	0.10/75	0.16/119	0.23/171	0.29/216	0.35/261					
50/150	52/163	50/157	48/150	46/144	44/138	0.09/67	0.15/112	0.21/157	0.27/201	0.33/246					
35/100	37/116	35/110	33/103	31/97	29/91	0.08/51	0.14/104	0.19/142	0.24/179	0.29/216					
25/75	27/85	25/78	23/72	21/66	19/59	0.07/52	0.12/89	0.17/127	0.22/164	0.27/201					
15/45	17/53	15/47	13/41	11/34	--	0.06/45	0.10/75	0.15/112	0.19/142	--					



¹ Consult with manufacturer for extreme operating conditions
² Consult with manufacturer for information on other applications
³ GPH rating at 1725 RPM/60Hz and LPH rating at 1450 RPM/50Hz
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ROTARY VANE PUMP DIMENSIONS



NOTE:
 • All dimensions are in inches/millimeters
 • Bronze and plastic coupling available

Tennessee, USA
 869 Seven Oaks Blvd.
 Suite 120
 Smyrna, TN 37167
 001.615.355.8000
 sales@proconpump.com

Mountmellick, Ireland
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 00353.57.86.24350
 sales@standex.ie

Tianjin, China
 J3A101, Western Area
 Xuefu Huigu Industrial Park
 Tianjin, China 300402
 00.86.22.86996885

NOTES

Grid area for taking notes.

**MOTORS &
ACCESSORIES**



RPM Motor



NIDEC Motor



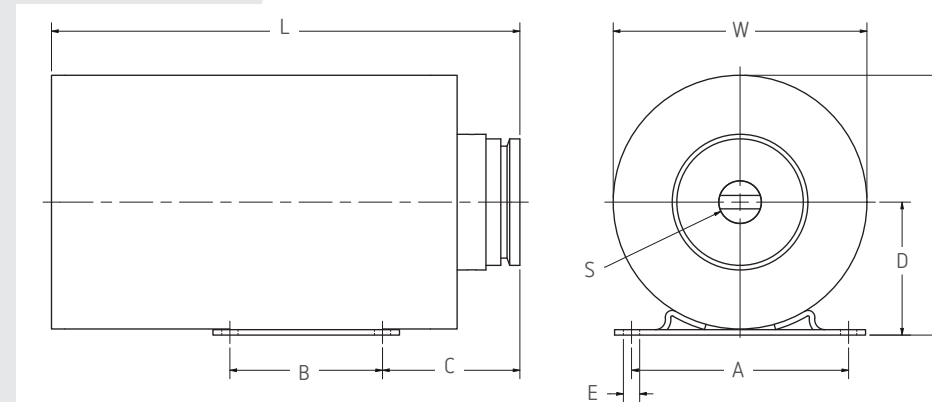
ATB Motor

PERFORMANCE REFERENCE

PUMP SERIES	FLOW RATE	230V < IP 55	115V < IP 55	115/230V < IP 55	230V IP 55	115V IP 55	Power require- ment @ 250psi (17.5Bar)
1,2 & 3	15 GPH (45 LPH)	717	906	928	611	649	0.16Hp (120W)
1,2 & 3	25 GPH (75 LPH)						0.21Hp (160W)
1,2 & 3	35 GPH (100 LPH)						0.29Hp (170W)
1,2 & 3	50 GPH (150 LPH)						0.33Hp (200W)
1,2 & 3	60 GPH (180 LPH)						0.35Hp (210W)
1,2 & 3	70 GPH (210 LPH)						0.37Hp (220W)
1,2 & 3	80 GPH (160 LPH)						0.39Hp (230W)
1,2 & 3	100 GPH (300 LPH)						0.42Hp (250W)
1,2 & 3	125 GPH (375 LPH)	712	NO OPTION	972	637	710	0.57Hp (340W)
1,2,3,4 & 5	140 GPH (425 LPH)						0.63Hp (380W)
4 & 5	115GPH (350 LPH)						0.55Hp (330W)
4 & 5	165 GPH (500 LPH)						0.70Hp (420W)
4 & 5	190 GPH (575 LPH)						0.75Hp (450W)
4 & 5	215 GPH (650 LPH)						0.80Hp (480W)
4 & 5	240 GPH (725 LPH)						0.86Hp (510W)
4 & 5	265 GPH (800 LPH)						1.01Hp (600W)
4 & 5	330 GPH (1000 LPH)	NO OPTION	NO OPTION	NO OPTION	NO OPTION	NO OPTION	1.22Hp (730W)

Note: Values for power consumption- Break Horsepower @ 110V, 60Hz and Watts @ 230V, 50Hz

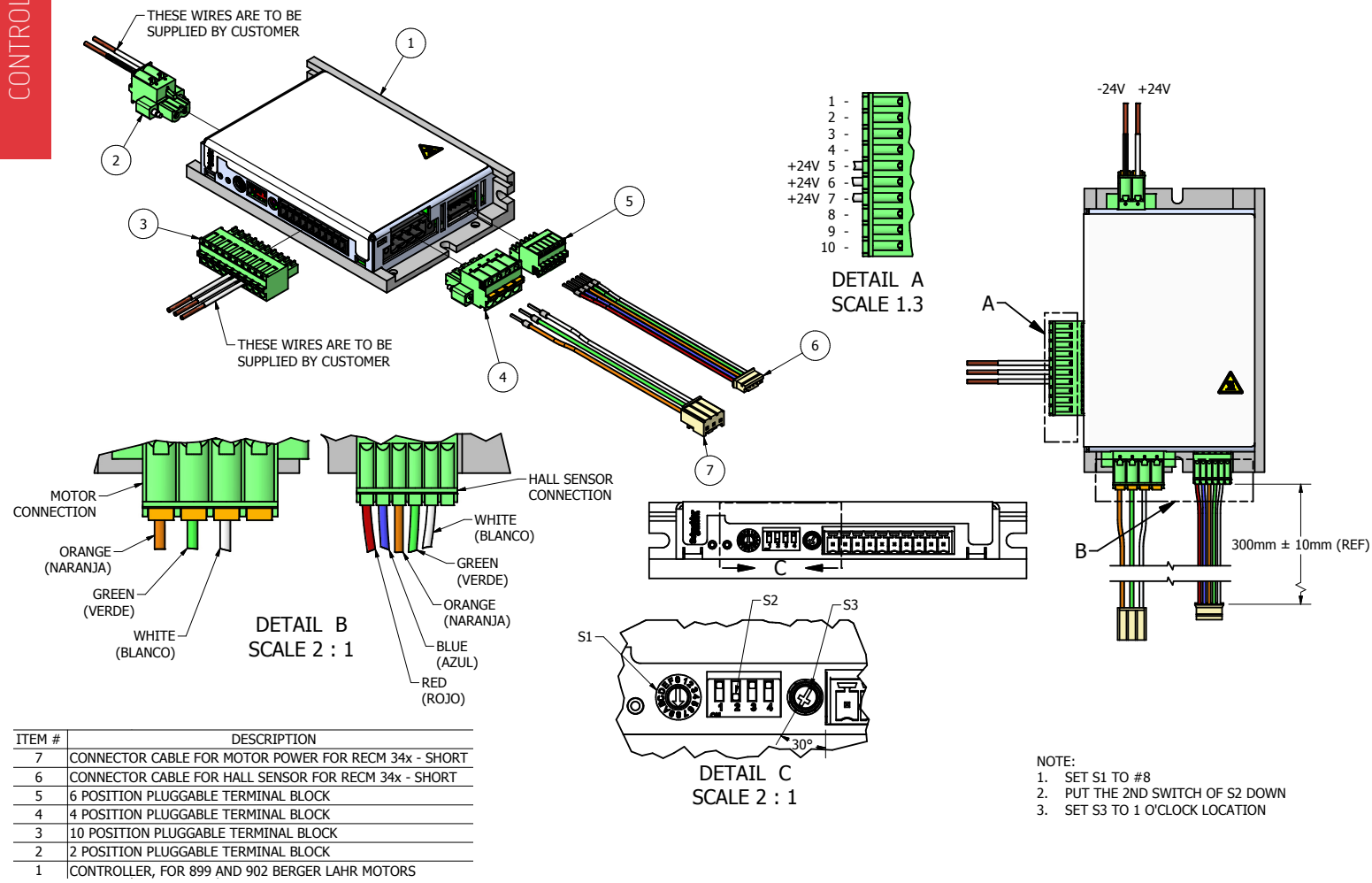
PROCON PART NO.	717	928	906	611	649	712	972	710	749	639
VENDOR	RPM	NIDEC	NIDEC	ATB	ATB	RPM	NIDEC	RPM	RPM	ATB
VENDOR PART NO.	C011522	S055N-SR7299022J	S055N-SN7297032J	350849	384565	11082700	S055P-NA7672012J	11068101	11023817	377660
VOLTAGE (V)	230	115/230	115	230	115/230	230	115/230	115	230	230
PHASES	1	1	1	1	1	1	1	1	1	1
FREQUENCY [HZ]	50/60	50/60	60	50/60	50/60	50	60	60	50	50
POWER [W]	245	245	245	250	250	560	560	560	640	750
HORSE POWER (HP)	1/3	1/3	1/3	1/3	1/3	3/4	3/4	3/4	4/5	1
SPEED [RPM]	1320	1425/1725	1425/1725	1380/1680	1380/1680	1360	1725	1660	1250	1360
CAPACITOR [μF]	6	N/A	N/A	10	20	14	N/A	35	16	25
POLES	4	4	4	4	4	4	4	4	4	4
AMP [A]	2.35	2.5/2.7	5.6	1.1	2.2/1.1	4.2	10.4/5.2	8.5	4.6	3.3
PROTECTION CLASS	IP54	IP12	IP12	IP55	IP55	IP55	IP12	IP30	IP55	IP55
ENCLOSURE		ODP	ODP				ODP			
INSULATION CLASS	F	B	B	F	F	F	B	F	F	F
AGENCY		UL Recognized					UL Recognized			
WEIGHT (APPX.)	11.3 lbs. (5.2 Kg)	15 lbs. (6.8 Kg)	14 lbs. (6.4 Kg)	11.7 lbs. (5.3 Kg)	13.9 lbs. (6.3 Kg)	20.3 lbs. (9.2 Kg)	25 lbs. (11.4 Kg)	18.3 lbs. (8.3 Kg)	21.6 lbs. (9.8 Kg)	25.6 lbs. (11.6 Kg)
DIMENSIONS (APPX.) INCHES [MM]	H	6.6 [168]	5.8 [147]	5.8 [147]	6.3 [160]	6.3 [160]	8.1 [204]	5.8 [147]	6.3 [160]	8.1 [204]
	W	4.9 [124]	5.6 [142]	5.6 [142]	6.1 [155]	6.1 [155]	6.8 [172]	5.6 [142]	6.8 [172]	6.8 [172]
	L	8.0 [203]	8.8 [224]	7.7 [196]	8.3 [211]	8.3 [211]	9.5 [241]	9.7 [246]	8.7 [221]	9.5 [241]
	A	3.43 [87]	4.26 [108]	4.26 [108]	3.9 [100]	3.9 [100]	5.5 [140]	4.26 [108]	4.47 [113.5]	5.5 [140]
	B	3.74 [95]	2.76 [70]	2.76 [70]	3.15 [80]	3.15 [80]	1.96 [50]	2.76 [70]	3.0 [76.5]	1.96 [50]
	C	0.69 [17.5]	2.75 [69.9]	2.75 [69.9]	2.66 [67.5]	2.66 [67.5]	1.46 [37]	2.75 [69.9]	1.67 [42.5]	1.46 [37]
	D	∅ 2.73 [69.5]	∅ 3.0 [76]	∅ 3.0 [76]	∅ 2.48 [63]	∅ 2.48 [63]	∅ 3.28 [83.3]	∅ 3.0 [76]	∅ 3.29 [83.5]	∅ 3.28 [83.3]
E	0.31 [8]	0.34 [8.6]	0.34 [8.6]	0.28 [7]	0.28 [7]	0.25 [6.4]	0.34 [8.6]	0.35 [8.8]	0.25 [6.4]	
S	∅ 0.5 [12.7]	∅ 0.62 [15.7]	∅ 0.62 [15.7]	∅ 0.58 [14.9]	∅ 0.58 [14.9]	∅ 0.59 [15]	∅ 0.62 [15.7]	∅ 0.59 [15]	∅ 0.59 [15]	



Tennessee, USA
869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@proconpump.com

Mountmellick, Ireland
Irishtown, Mountmellick, CO.
Laois, Republic of Ireland
00353.57.86.24350
sales@standex.ie

Tianjin, China
J3A101, Western Area
Xuefu Huigu Industrial Park
Tianjin, China 300402
00.86.22.86996885



ITEM #	DESCRIPTION
7	CONNECTOR CABLE FOR MOTOR POWER FOR RECM 34x - SHORT
6	CONNECTOR CABLE FOR HALL SENSOR FOR RECM 34x - SHORT
5	6 POSITION PLUGGABLE TERMINAL BLOCK
4	4 POSITION PLUGGABLE TERMINAL BLOCK
3	10 POSITION PLUGGABLE TERMINAL BLOCK
2	2 POSITION PLUGGABLE TERMINAL BLOCK
1	CONTROLLER, FOR 899 AND 902 BERGER LAHR MOTORS

www.proconpump.com



9057 v5



4155



1113

Features and Benefits

- Multiple use clamp with a robust thread design to eliminated fastener stripping problems
- Wing nut design eliminates the need for tools
- Compatible for brass and stainless steel housing PROCON rotary vane pumps and standard 48Y Frame carbonator motors
- Stainless steel construction
- Weight 0.3 lb (0.14 kg)

Features and Benefits

- Single use clamp
- Slotted, #2 Phillips and Hex Washer Head machine screw to adapt to all major fastening tool options
- Compatible for brass and stainless steel housing PROCON rotary vane pumps and standard 48Y Frame carbonator motors
- Stainless steel construction
- Weight 0.06 lb (0.03 kg)



RoHS



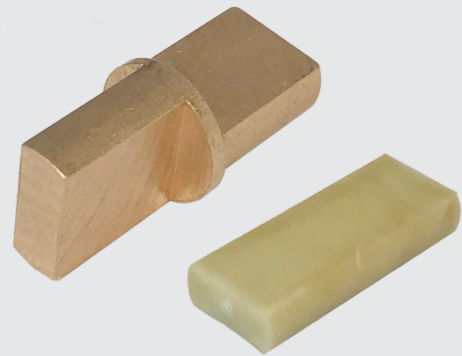
9011 v4

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Tennessee, USA
869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@proconpump.com

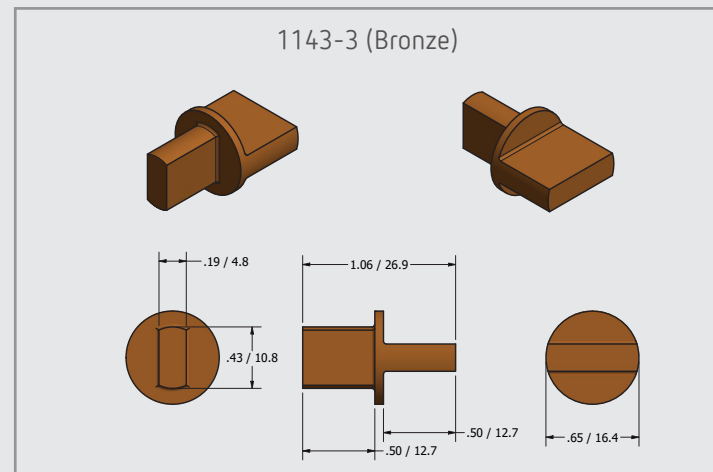
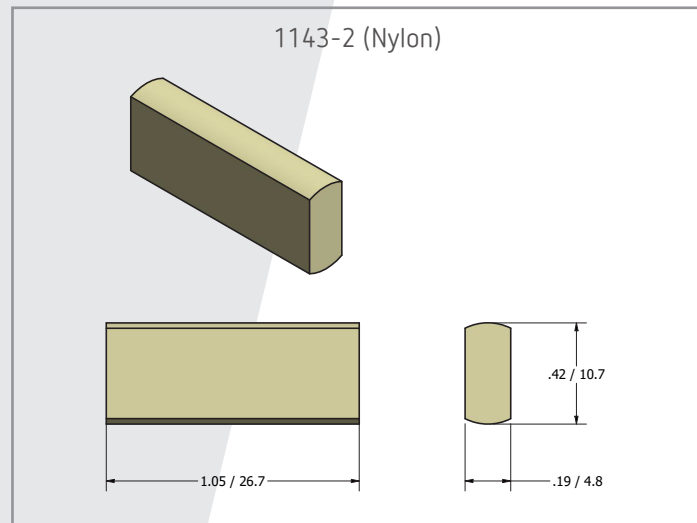
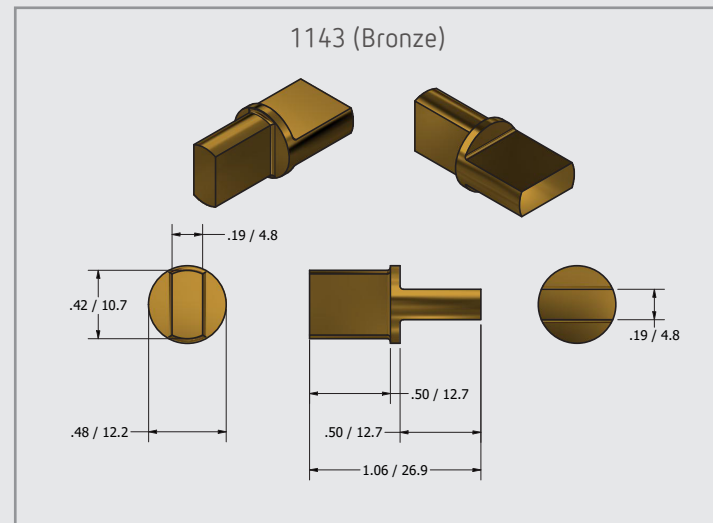
Mountmellick, Ireland
Irishtown, Mountmellick, CO.
Laois, Republic of Ireland
00353.57.86.24350
sales@standex.ie

Tianjin, China
J3A101, Western Area
Xuefu Huigu Industrial Park
Tianjin, China 300402
00.86.22.86996885



Technical Information		
Materials	Bronze	Nylon
Weight	Approx. 0.028lbs. (0.014kg)	Approx. 0.0022lbs. (0.0019kg)
Procon Pump Types	Series 1,2,3,4,5 & 207	Series 1,2,3 & 207

Operating Range		
Max Flow Rate@250PSI (17.5Bar)	Bronze- 265GPH(800LPH)	Nylon- 140GPH(425LPH)

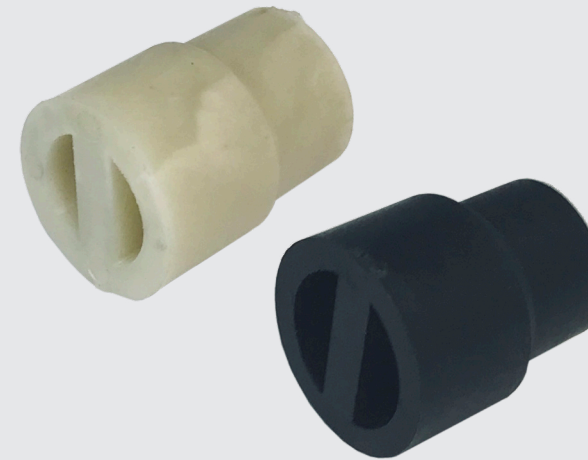


RoHS

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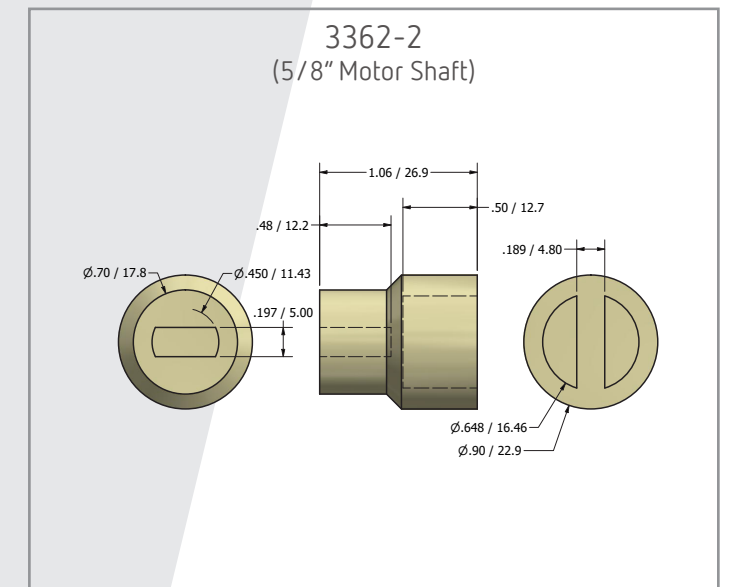
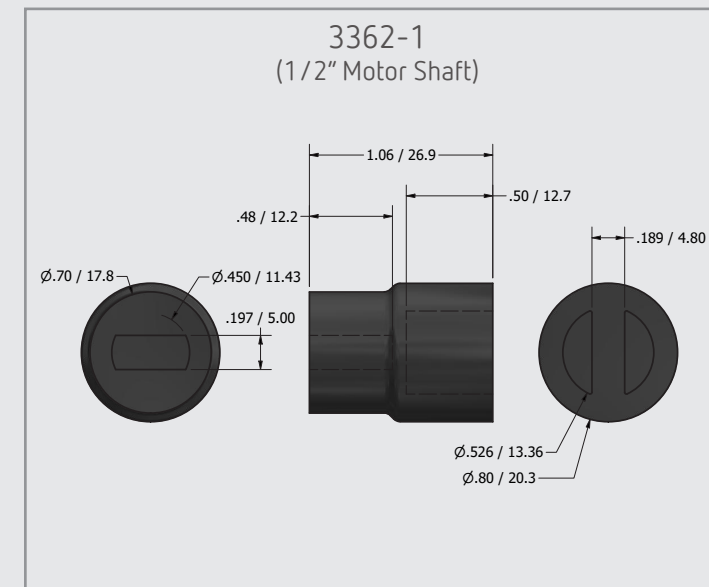


9046 v3



Technical Information	
Materials	Nylon
Weight	Approx. 0.019lbs. (0.009kg)
Procon Pump Types	Long Neck Series 1 & 4

Operating Range	
Max Flow Rate@250PSI (17.5 Bar)	330GPH (1000LPH)



RoHS

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9047 v2

Tennessee, USA
869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@proconpump.com

Mountmellick, Ireland
Irishtown, Mountmellick, CO.
Laois, Republic of Ireland
00353.57.86.24350
sales@standex.ie

Tianjin, China
J3A101, Western Area
Xuefu Huigu Industrial Park
Tianjin, China 300402
00.86.22.86996885

Tennessee, USA
869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@proconpump.com

Mountmellick, Ireland
Irishtown, Mountmellick, CO.
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00353.57.86.24350
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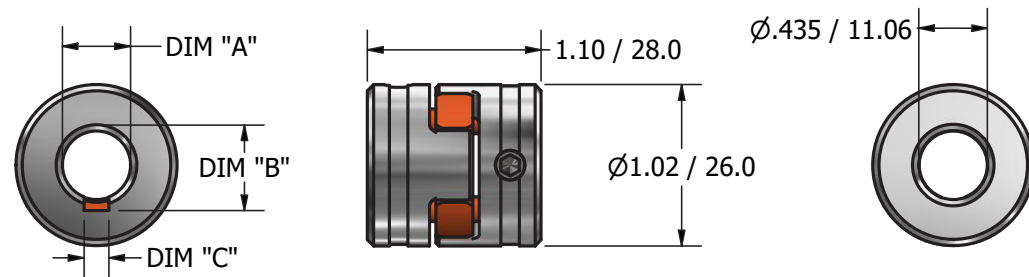
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J3A101, Western Area
Xuefu Huigu Industrial Park
Tianjin, China 300402
00.86.22.86996885

KTR A15 COUPLING SET



Technical Information	
Coupling Materials	Cast Aluminum / Polyurethane T-PUR
Weight	Approx. 0.07 lbs. (0.03kg)
Procon Pump Types	Series 1, 2, 3, 4, 5

Operating Range	
Max Flow Rate@250PSI (17.5 Bar)	330 GPH (1000 LPH)



Coupling Component List		
Part 1	Part 2	Part 3
Drive Coupling (Motor)	Spider Grommet	Driven Coupling (Pump)

Set Part Number	DIM "A"	DIM "B"	DIM "C"
3865	ø 0.433" / 11mm	0.5039" / 12.8mm	0.1574" / 4mm
3861-1	ø 0.551" / 14mm	0.6417" / 16.3mm	0.1968" / 5mm

RoHS



Standex
Food Service Equipment Group

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9044 v4

Tennessee, USA
869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@proconpump.com

Mountmellick, Ireland
Irishtown, Mountmellick, CO.
Laois, Republic of Ireland
00353.57.86.24350
sales@standex.ie

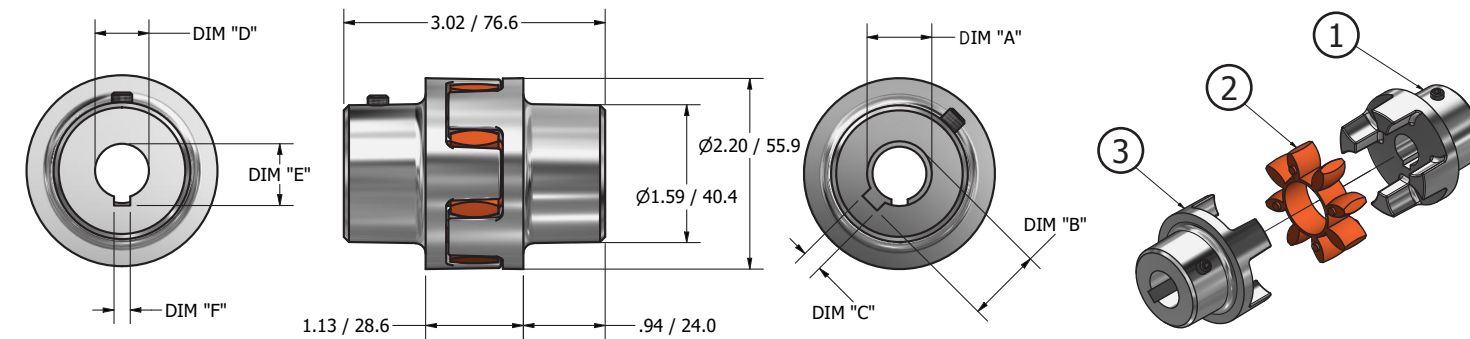
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J3A101, Western Area
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Tianjin, China 300402
00.86.22.86996885

KTR A24 COUPLING SET



Technical Information	
Coupling Materials	Cast Aluminum / Polyurethane T-PUR
Weight	Approx. 0.7 lbs. (0.3kg)
Procon Pump Types	Series 1, 2, 3, 4, 5, 6

Operating Range	
Max Flow Rate@250PSI (17.5 Bar)	660 GPH (2000 LPH)



Coupling Component List		
Part 1	Part 2	Part 3
Drive Coupling (Motor)	Spider Grommet	Driven Coupling (Pump)

Set Part Number	Pump Type	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"	DIM "F"
3880-1	Series 1, 2, 3, 4, 5	ø 0.433" / 11mm	0.5039" / 12.8mm	0.1574" / 4mm	ø 0.4374" / 11.11mm	0.49" / 12.5mm	0.09" / 2.4mm
3880-2	Series 1, 2, 3, 4, 5	ø 0.551" / 14mm	0.6417" / 16.3mm	0.1968" / 5mm	ø 0.4374" / 11.11mm	0.49" / 12.5mm	0.09" / 2.4mm
3880-3	Series 1, 2, 3, 4, 5	ø 0.748" / 19mm	0.8582" / 21.8mm	0.2362" / 6mm	ø 0.4374" / 11.11mm	0.49" / 12.5mm	0.09" / 2.4mm
3881	Series 6	ø 0.624" / 15.85mm	0.7125" / 18.1mm	0.187" / 4.75mm	ø 0.9449" / 24mm	1.0748" / 27.3mm	0.3149" / 8mm
3881-1	Series 6	ø 0.624" / 15.85mm	0.7125" / 18.1mm	0.187" / 4.75mm	ø 0.624" / 15.85mm	0.71" / 18.1mm	0.19" / 4.8mm
3881-2	Series 6	ø 0.624" / 15.85mm	0.7125" / 18.1mm	0.187" / 4.75mm	ø 0.748" / 19mm	0.8582" / 21.8mm	0.2362" / 6mm
3881-3	Series 6	ø 0.624" / 15.85mm	0.7125" / 18.1mm	0.187" / 4.75mm	ø 0.551" / 14mm	0.6417" / 16.3mm	0.1968" / 5mm

RoHS



Standex
Food Service Equipment Group

www.proconpump.com

9045 v3

Tennessee, USA
869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@proconpump.com

Mountmellick, Ireland
Irishtown, Mountmellick, CO.
Laois, Republic of Ireland
00353.57.86.24350
sales@standex.ie

Tianjin, China
J3A101, Western Area
Xuefu Huigu Industrial Park
Tianjin, China 300402
00.86.22.86996885



Features and Benefits

- Patented design for pump with thermostatic relief valve (U.S. Patent No. 9,976,550)
- Valve can be set to 250 psi (17.5 Bar), removed from pump and be fitted to another pump without having to reset pressure
- Thermal Valve prevents water and internal body temperature from exceeding 160°F (71°C)
- Prevents tubing from overheating and potential burst
- No damage once normal operating conditions are resumed
- Passed 7 days continuous run blocked discharge (hot) test without any degradation in flow at 200 psi (14Bar)
- Retrofits to existing stainless pumps

General Applications¹

- Carbonation
- Espresso/Coffee
- Welding
- Cold Carb Circulation
- Reverse Osmosis
- Beer Chillers
- Pesticide Systems
- Solar Applications

Suggested Pump Pairings

Stainless Steel Housing Series
3 & 5 Rotary Vane Pumps

¹ Consult with manufacturer for information on other applications

Technical Information

Material		Construction	
Spring	Stainless Steel	Stainless Steel	Nitrile O-ring
Valve	ULTEM	Pump Dimensions with Valve	
Piston	ULTEM	Length	2.8 in (71 mm)
Body	Stainless Steel	Diameter, nut	.9 in (23 mm)
Temperature Control	Paraffin	Weight	.19 lbs (.09 kg)



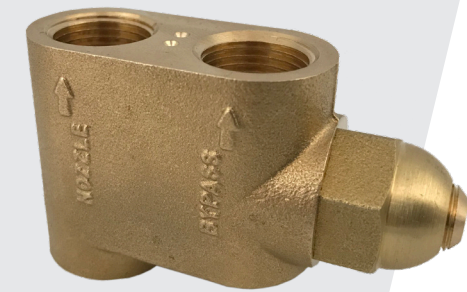
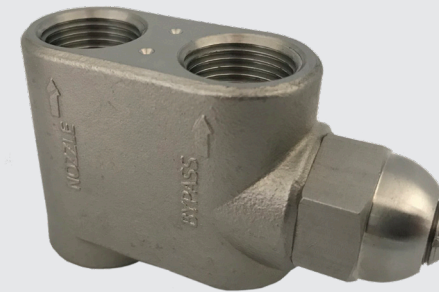
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9012 v7

Tennessee, USA
869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@proconpump.com

Mountmellick, Ireland
Irishstown, Mountmellick, CO.
Laois, Republic of Ireland
00353.57.86.24350
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J3A101, Western Area
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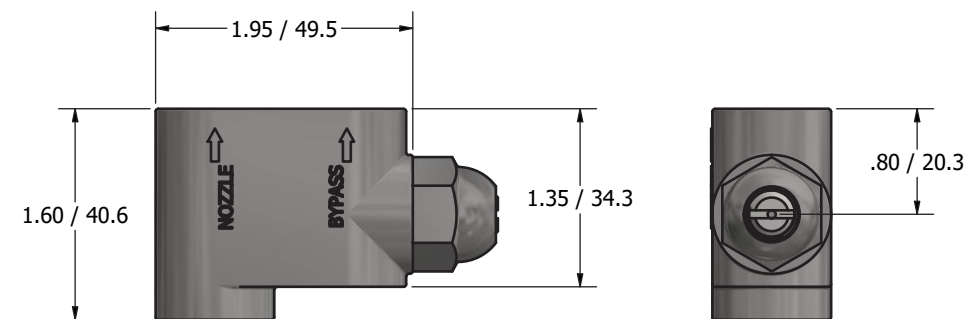
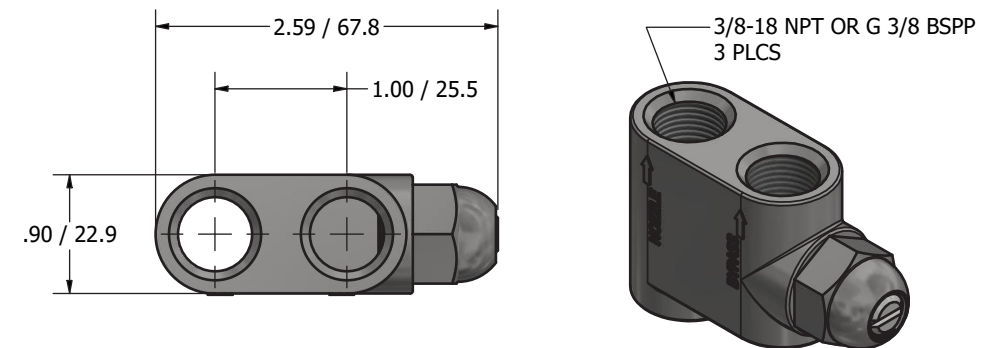
Technical Information (Options)

Pump Housing Material	Brass 1.5%-2.5% Lead / 304 Stainless Steel
Elastomers	Nitrile, Ethylene Propylene (EPDM), Fluorocarbon, or Neoprene
Valves	Stainless steel, Brass, or Plastic High temp ultem
Ports	G 3/8" or NPT 3/8"
Weight	Approx. 0.7 lbs. (0.3kg)
Unit Weight	0.9kg (2 lbs.)

Operating Range

Max Flow Rate	265GPH (800 LPH)
Max Discharge Pressure	250 PSI (17 BAR)
Fluid Temperature	-40°C to +205°C (-40°F to +400°F)
Fluid Acidity	Brass housing > 6 pH / Stainless steel housing > 2 pH ¹

¹ Consult with manufacturer for extreme operating conditions



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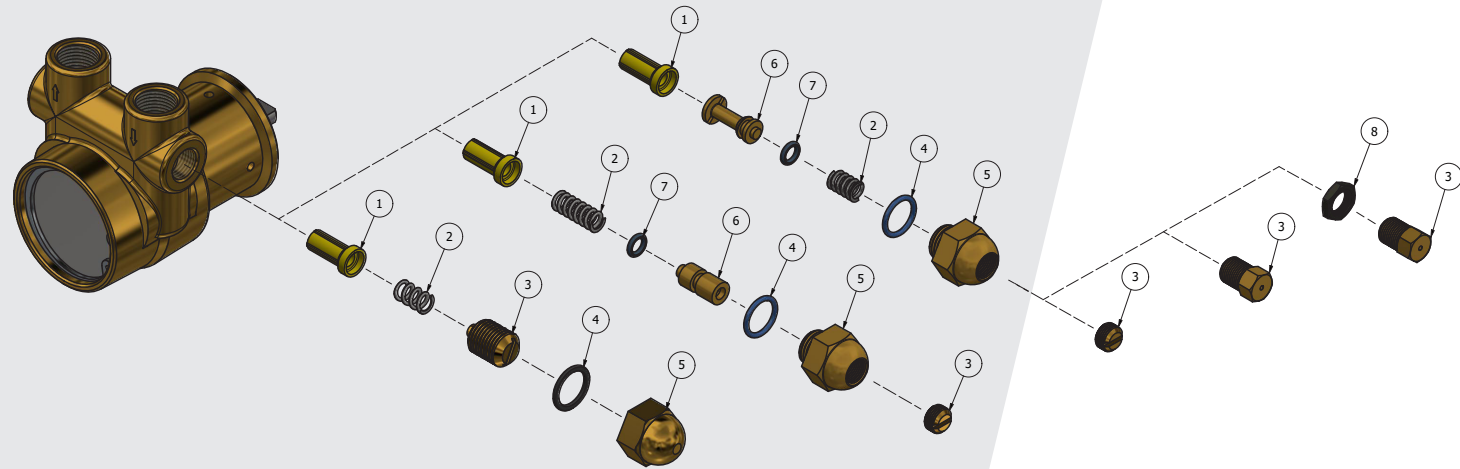
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Tennessee, USA
869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@proconpump.com

Mountmellick, Ireland
Irishstown, Mountmellick, CO.
Laois, Republic of Ireland
00353.57.86.24350
sales@standex.ie

Tianjin, China
J3A101, Western Area
Xuefu Huigu Industrial Park
Tianjin, China 300402
00.86.22.86996885

Brass Housing Series 1,2,4 & 7 (Mini Pro)
Stainless Steel Housing Series 3 & 5



NO	Part Description	Material
1	Valve	Ultem or Acetal or Stainless Steel or Brass
2	Spring	Stainless Steel
3	Adjustment Screw	Stainless Steel or Brass
4	Acorn Nut O-Ring	EPDM or Fluorocarbon or Neoprene
5	Acorn Nut	Stainless Steel or Brass
6	Piston	Stainless Steel or Brass
7	Piston O-Ring	EPDM or Fluorocarbon or Neoprene
8	Jam Nut	Stainless Steel or Brass



9056 v7

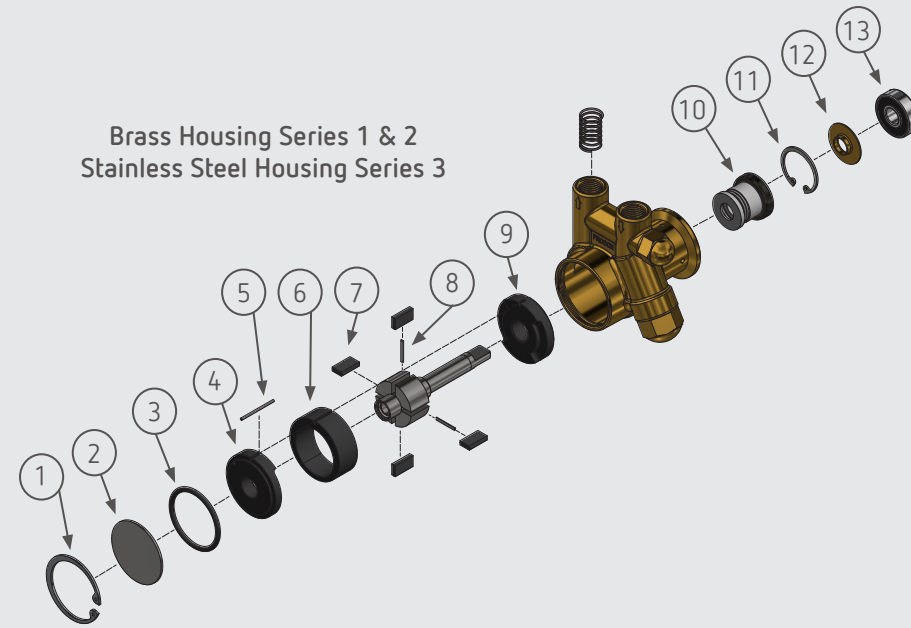
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Tennessee, USA
869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@proconpump.com

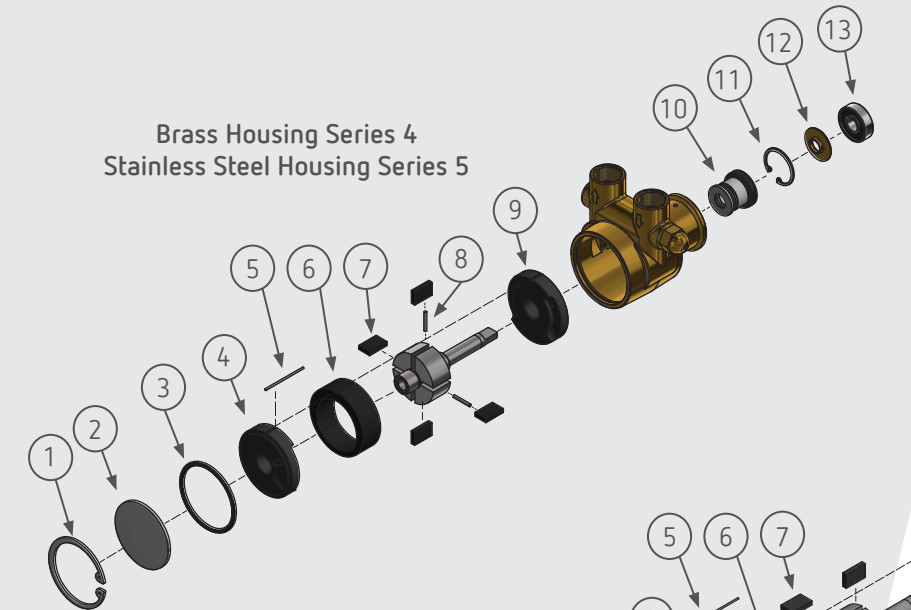
Mountmellick, Ireland
Irishstown, Mountmellick, CO.
Laois, Republic of Ireland
00353.57.86.24350
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Tianjin, China
J3A101, Western Area
Xuefu Huigu Industrial Park
Tianjin, China 300402
00.86.22.86996885

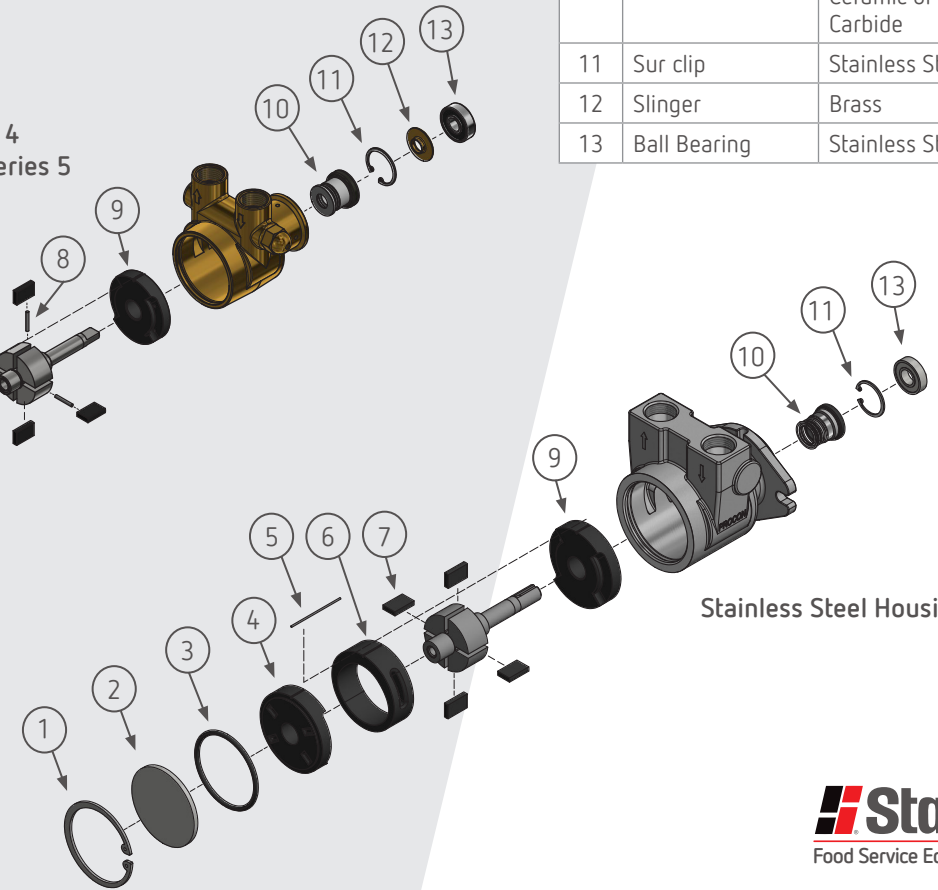
Brass Housing Series 1 & 2
Stainless Steel Housing Series 3



Brass Housing Series 4
Stainless Steel Housing Series 5



Stainless Steel Housing Series 6



NO	Part Description	Material
1	Sur Clip	Stainless Steel
2	Name Plate	Stainless Steel
3	O-Ring	EPDM or Fluorocarbon or Neoprene
4	Front Bearing	Carbon Graphite
5	Alignment Pin	Stainless Steel
6	Liner	Carbon Graphite
7	Vane	Carbon Graphite
8	Vane Pin	Stainless Steel
9	Rear Bearing	Carbon Graphite
10	Mechanical Seal	Nitrile or EPDM or Fluorocarbon or Neoprene, Stainless Steel, Carbon Graphite, Ceramic or Silicon Carbide
11	Sur clip	Stainless Steel
12	Slinger	Brass
13	Ball Bearing	Stainless Steel, Nitrile

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9055 v4



Tennessee, USA
869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@proconpump.com

Mountmellick, Ireland
Irishstown, Mountmellick, CO.
Laois, Republic of Ireland
00353.57.86.24350
sales@standex.ie

Tianjin, China
J3A101, Western Area
Xuefu Huigu Industrial Park
Tianjin, China 300402
00.86.22.86996885

INSTALLATION

Your PROCON pump is a precision-built piece of equipment. Handle it carefully. PROCON pumps should be installed only by qualified technicians.

NOTICE When you install your pump, follow these guidelines:

- Do not hammer or mishandle your pump.
- Keep all foreign materials out of your pump.
- Never vise or grip the round body portion of the pump housing. Grip only the square inlet/outlet bosses when you install fittings. Always support the pump when you install fittings to avoid bending the V-band clamp even if the pump is already mounted to the motor.
- Make sure the power is off before working with an electric motor. If possible, lock out the power at a disconnect.
- Make sure you have an adequate, well-lit work space and use the correct tools.
- Do not use any components that are damaged or deformed. You should not have to force any parts together. If you receive parts that are damaged or deformed, call your PROCON factory representative.

We test every PROCON pump at the factory for pressure and flow. If the pump has a relief valve, we set it to your specifications.

CAUTION Do not tamper with the relief valve on your pump. If you think the relief valve needs to be reset, contact your PROCON factory representative.

We make every effort to ensure that your pump is of the highest quality. To get the most out of your pump, read and follow these instructions carefully.

Before you install your pump, you must carefully unpack the pump and examine and prepare it to be installed. Follow these steps for all types of motors.

NOTICE

Do not exchange one pump model for another. Pumps are carefully engineered to meet specific requirements and flow rates.

All pumps within a series have the same housing. They make look alike, but they perform differently. Check the model number to make sure you have the correct pump before you install it.

Using the wrong pump may damage your pump, system, or electric motor.

1. Take the pump out of the shipping container

- Do not remove the shipping plugs from the port until the fittings are ready to be installed. This will keep debris out of the pump.
- If the pump has a shaft coupling, remove the coupling and discard the foam shipping strip. Reinsert the coupling.
- Be careful when handling the pump. If you mishandle the pump, especially the shaft end, you can disrupt or damage internal clearances and impair performance of your pump.

2. Examine the mounting surfaces

- Carefully remove any burrs or raised metal which may have occurred during unpacking and handling to make sure the pump will sit and be aligned properly.

3. Ready to Mount

- Now you are ready to mount the pump to a motor. PROCON Rotary Vane Pumps work with two types of electric motors. Follow the steps for the type of motor you are using.

MOUNTING STYLES

PROCON Rotary Vane Pumps can be mounted to two types of electric motors, a carbonator style motor (NEMA 48YZ frame) and a C-frame motor (NEMA 56C frame).

Pump applications that require a motor of up to 0.75 horsepower, open drip proof construction and single phase power can be close-coupled to NEMA 48YZ frame, carbonator style motors. Use a V-band clamp to secure the mounting. You do not need to use any additional couplings or adapters.

Pump applications that require a motor greater than 0.75 horsepower, TEFC construction or 3 phase power can be mounted to NEMA 56C frame motors. You will need an aluminum C-face adapter and shaft coupling to mount your pump to a NEMA 56C frame motor. The adapter and coupling are available from PROCON.

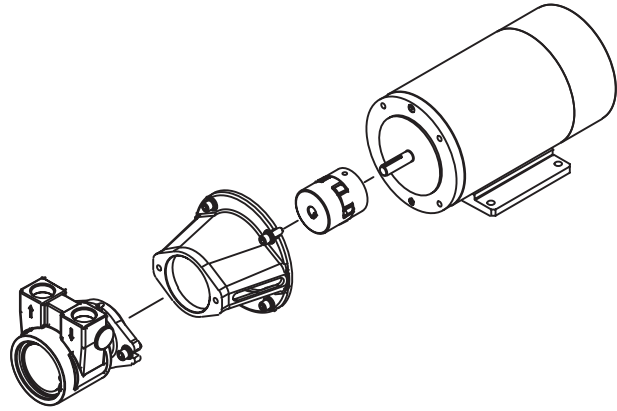
Besides PROCON, motors are available from your local electric motor distributor. NEMA 48YZ and NEMA 56C frame motors are available in 50 and 60 hertz as well as high and low voltage. NEMA 56C frames are available in single and 3 phase models as well as open drop proof, TEFC, and explosion proof versions from 0.25 to 3 horsepower. NEMA 48YZ frames are limited to single phase, open drop construction from 0.25 to 0.75 horsepower.

Mag Drive Vane, Micro Vane and Gear Pumps are factory installed pump & motor assembly. Do not remove or change motors without factory's permission as they are specific to the application. This also voids the warranty.

MOUNTING ON A 56C FRAME MOTOR

NOTE You should have these parts:

- bolt-on pump
- motor adapter
- 3-piece drive shaft coupling
- 56C frame motor



PROCON bolt-on style pump mounted to a 56C frame motor with coupling

Correctly assembling the coupling and the adapter, and mounting the pump is a trial and error process. You may have to try several times before you get it right. Follow these steps after you have examined your pump.

1. Mount the drive shaft coupling

- Make sure motor is electrically disconnected and cannot accidentally turn on.
- Mount the half of the coupling for the motor onto the motor shaft and tighten the set screw.
- Insert the elastomer piece onto the motor piece.
- Mount the half of the coupling for the pump onto the pump shaft, but do not tighten the set screw
- Make sure the coupling slides easily onto the pump and the motor shaft, do not force it.
- Make sure the shaft does not protrude into the space occupied by the elastomer piece. Series 6 pumps require a shaft key.

2. Mount the motor adapter

- Use four 3/8 inch dia. by 1 inch long bolts (16 threads/inch) and lock washers.
- Rotate the pump to orient the inlet/outlet ports.

3. Trial mount the pump onto the motor adapter while engaging the coupling pieces

4. Check to make sure the coupling is properly engaged

5. Tighten the set screw on the pump

6. Check your assembly

- The elastomer coupling piece should have about 1/16 inch of play between the two metal pieces.
- If it does not, repeat steps 1-5 until corrected.

7. Fasten the pump to the adapter

- Use three 1/4 inch dia. by 3/4 inch bolts (20 threads/inch) and lock washers. For series 6 pumps, use two 3/8 inch dia. by 1 inch bolts (16 threads/inch).

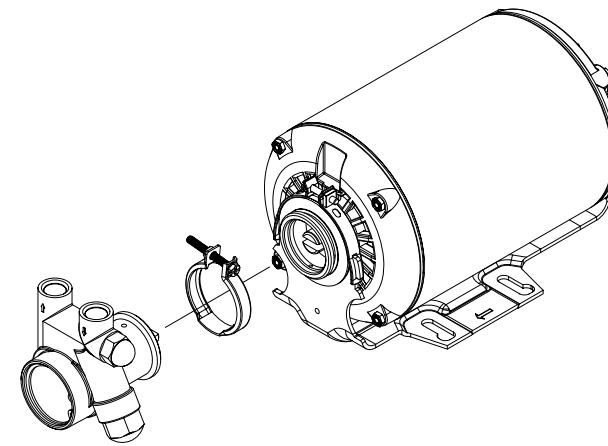
8. Make sure the motor rotates correctly

- Must correspond to the arrows on the nameplate.

MOUNTING ON A 48YZ FRAME MOTOR

NOTE You should have these parts:

- clamp-on pump
- V-band clamp
- 48YZ frame motor



PROCON clamp-on style pump mounted to a carbonator motor with clamp

After you have examined your pump for damages, follow these steps.

1. Make sure motor is electrically disconnected and cannot accidentally turn on

2. Slip the V-band onto the motor ring flange

3. Mount the pump to the motor by inserting the tank (shaft) of the pump into the slot on the motor

4. Rotate the pump to orient the inlet/outlet ports as desired

5. Make sure the ring flanges on the pump and on the motor are properly engaged and flush against one another

6. Make sure the clamp is fully seated around the entire circumference of the pump and motor flanges

7. Tighten the V-band clamp using 15 to 30 inch-pounds of torque

NOTE

Do not over tighten the clamp. The V-band clamp is designed to support the pump and fittings only.

Loads caused by rigid plumbing or heavy attachments may result in misalignment.

Use mounting holes on motor flange to mount motors for Rotary Vane and Mag Drive Pumps.

To mount Micro Vane and Gear Pumps use four holes on the pump adapter. Refer to the individual sell sheet for details.

INSTALLING THE PLUMBING

When you finish mounting your pump on a motor, you must install the plumbing for the pump. Follow these steps after you have mounted your pump.

1. Install the inlet and outlet fittings

- Support the pump by using a backup wrench on the square port bosses. Do not put any strain on the V-band clamp.
- Use brass fittings or plastic fittings on a brass pump. Use stainless steel or plastic fittings on a stainless steel pump. Using dissimilar metals can cause corrosion, which may get into the pump and cause damage.
- Use Teflon thread tape to install the fittings. Do not let any thread tape get into the pump and do not over-tighten the fittings

2. Check the inlet line

- Make sure the inlet line is big enough to allow adequate flow to the inlet port of the pump (3/8 inch internal diameter for series 1, 2, and 3; 1/2 inch internal diameter for series 4 and 5; 1 inch internal diameter for the series 6; all elevated temperature applications above 150 degrees Fahrenheit must have oversized inlet piping).
- Make sure the inlet line is clean and properly flushed out. Protect the pump with a 100 mesh or liner strainer or filter.

3. Connect the inlet line to the fitting on the pump

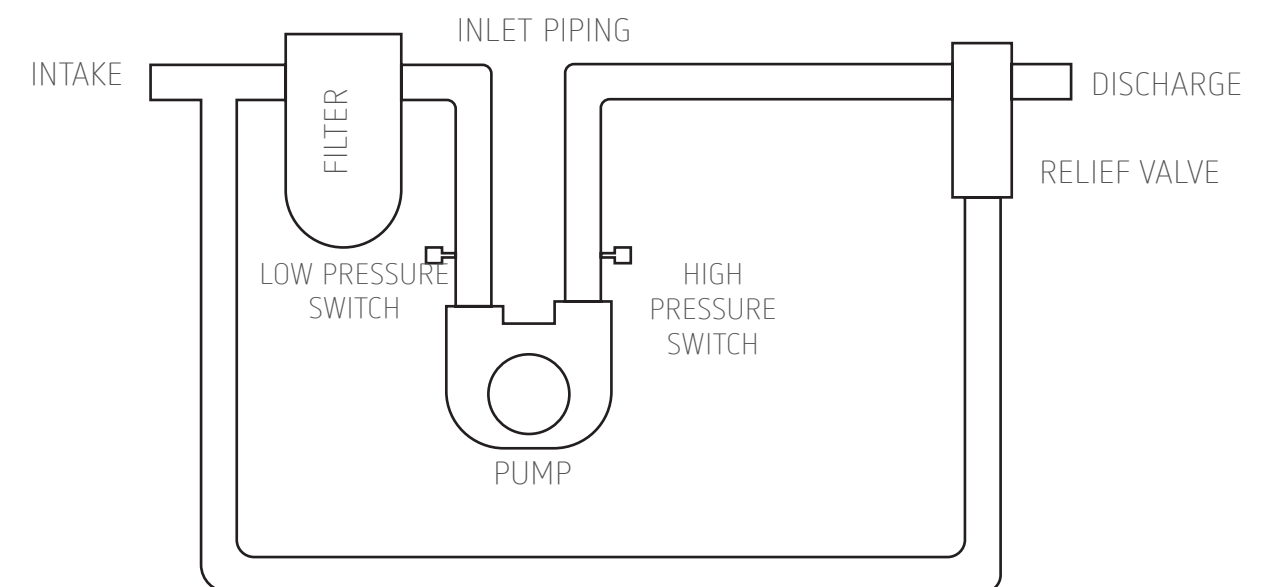
4. Connect the outlet line to the fitting on the pump

PIPING LAYOUT

NOTICE Your pump can be ruined or its service life shortened if it does not meet these operating conditions at all times:

- Pumps must have a fluid supply to the pump inlet greater than the pump's flow rating
- Fluid must be compatible with the pump materials
- Fluid must not contain any particles
- Pump must not operate above its rated discharge pressure
- Fluid flow should not stop suddenly while the pump is running
- Operating pressure should be 50 PSI below PROCON's relief valve setting
- Applications with operating temperatures above 150 degrees Fahrenheit require oversized inlet piping
- If using compressed air to purge the pump of fluid, install a coalescing filter in the air system to prevent contaminated air from entering the pump

We suggest that you use the precautionary measures and piping layout that follow. This layout promotes a long, trouble-free life for your pumps.



Filter

If particles may contaminate the fluid, use a particulate filter that is capable of filtering particles larger than 125 microns. If the particles are abrasive, use a filter that is capable of removing virtually all of the particles.

Make sure there is at least six inches of piping between the pump inlet and any "T-fitting," elbow, or system component to minimize turbulence. The piping should be made from a material that does not corrode or shed particles. A flexible hose of plastic, copper, or stainless steel are good choices, among others. Be sure no joint compound or tape falls into the inlet of the pump.

TROUBLESHOOTING TIPS

WARNING

Before you try to work on the pump or the system, turn the motor off and disconnect the power to the motor.

Problem	Possible Cause	Possible Solution
Pump is working below its capacity	<ul style="list-style-type: none"> Inlet is clogged or restricted Internal strainer is clogged or restricted 	<ul style="list-style-type: none"> Clean the inlet liner, inlet filter, or internal strainer. Do not allow debris to fall into the pump from filter.
	Pump is rotating in the wrong direction	Change motor rotation by properly rewiring it.
	Low motor rpm	Make sure motor is working properly and is wired for the voltage and frequency you are using.
	Inside of the pump is wearing out, caused by a foreign material getting into the pump	<ul style="list-style-type: none"> Send the pump to be rebuilt. To prevent future failures, have an adequate filter on the inlet line.
	Relief valve setting is incorrect	Contact your PROCON representative about having the relief valve reset.
Pump is leaking	Mechanical shaft seal or rubber o-ring is failing	Have the pump rebuilt.
	Relief valve cap or strainer cap is loose	Tighten the cap on the relief valve or strainer.
	Relief valve cap or strainer cap o-ring or gasket are damaged	<ul style="list-style-type: none"> Replace the damaged o-ring or gasket. Contact PROCON for the parts.
	Inlet or outlet port fittings are loose or sealant failed	<ul style="list-style-type: none"> Apply joint compound or tape and reinstall the fittings. Do not allow sealant to fall into the pump.
Pump is noisy	Inlet is clogged or restricted internal strainer is clogged or restricted	<ul style="list-style-type: none"> Clean the inlet line, inlet filter, or internal strainer. Do not allow debris to fall into the pump from filter.
	Acorn nut on the relief valve or strainer cap is loose	Tighten the acorn nut on the relief valve or the strainer cap.
	Gasket or o-ring on the acorn nut or strainer cap is defective	<ul style="list-style-type: none"> Replace the gasket or the o-ring on the acorn nut or the strainer cap. Do not tamper with the relief valve setting. Contact PROCON for parts.
	Coupling, mounting bolt, or V-band clamp is loose	<ul style="list-style-type: none"> Turn off the motor and disconnect the power to the motor. Properly align and tighten the loose component.
	The pump and motor are misaligned	<ul style="list-style-type: none"> Turn off the motor and disconnect the power to the motor. Remove the pump from the motor. Remount the pump onto the motor, making sure you align it properly.

GEAR PUMP TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
NO DISCHARGE	PUMP NOT PRIMED	VERIFY SUCTION LINE IS SUBMERGED OPEN SUCTION VALVE
	WRONG DIRECTION OF ROTATION	REVERSE MOTOR LEADS OR REVERSE* SUCTION AND DISCHARGE PIPING
	VALVES CLOSED	OPEN ALL SUCTION AND DISCHARGE VALVES
	BYPASS VALVE OPEN	ADJUST BYPASS VALVE
	AIRLEAK IN SUCTION LINE	TIGHTEN CONNECTIONS APPLY SEALANT TO ALL THREADS VERIFY SUCTION LINE IS SUBMERGED
	CLOGGED FILTRATION	CLEAN OR REPLACE FILTRATION
	PUMP WORN OR DAMAGED	REBUILD OR REPLACE PUMP
	SUCTION PRESSURE TOO LOW	VERIFY SUCTION LINE IS NOT TOO LONG FULLY OPEN ANY SUCTION VALVES
	EXTERNAL BYPASS VALVE OPEN	CLOSE BYPASS VALVE
	PARTIALLY CLOGGED FILTRATION	CLEAN OR REPLACE FILTRATION
	SPEED TOO LOW	INCREASE CONTROLLER SPEED USE LARGER CAPACITY PUMP
	PUMP WORN OR DAMAGED	REBUILD OR REPLACE PUMP
LOSS OF SUCTION AFTER SATISFACTORY OPERATION	PUMP NOT PRIMED	REPRIME PUMP
	WRONG DIRECTION OF ROTATION	TIGHTEN CONNECTIONS APPLY SEALANT TO ALL THREADS VERIFY SUCTION LINE IS SUBMERGED
	AIR OR VAPOR IN SUCTION LINES	REARRANGE PIPING AS NECESSARY
	INCREASE IN FLUID VISCOSITY	ADJUST BYPASS VALVE REDUCE PUMP SPEED
EXCESSIVE POWER CONSUMPTION	FLUID VISCOSITY TOO HIGH	WARM FLUID TO REDUCE VISCOSITY REDUCE PUMP SPEED INCREASE MOTOR HORSEPOWER
	DIFFERENTIAL PRESSURE TOO HIGH	INCREASE PIPE DIAMETER DECREASE PIPE RUN LENGTH
	GEAR CLEARANCE INSUFFICIENT FOR FLUID VISCOSITY	ADJUST BYPASS VALVE REDUCE PUMP SPEED
	GEAR CLEARANCE INSUFFICIENT FOR FLUID VISCOSITY	CHANGE GEAR CLEARANCES. CONSULT FACTORY
	PLASTIC GEAR CLEARANCE INSUFFICIENT FOR FLUID TEMPERATURE	CHANGE GEAR CLEARANCES. CONSULT FACTORY
	GEARS BINDING OR SEVERELY WORN	REPLACE GEARS
RAPID PUMP WEAR	ABRASIVES IN FLUID	INSTALL SUCTION FILTRATION LIMIT SOLIDS CONCENTRATION REDUCE PUMP SPEED
	CORROSION WEAR	USE MATERIALS OF CONSTRUCTION COMPATIBLE WITH FLUID
	DISCHARGE PRESSURE TOO HIGH	INCREASE PIPE DIAMETER
		DECREASE PIPE RUN LENGTH

GEAR PUMP TROUBLESHOOTING GUIDE		
PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
EXCESSIVE NOISE AND VIBRATION	SUCTION OR DISCHARGE PIPING NOT ANCHORED	ANCHOR PIPING PER HYDRAULIC INSTITUTE STANDARDS
	BASE NOT ISOLATED	ISOLATE MOUNTING BASE
	PUMP CAVITATION	INCREASE NPSH AVAILABLE
EXCESSIVE PRODUCT LEAKAGE	STATIC SEAL FAILURE DUE TO FLUID INCOMPATIBILITY OR THERMAL BREAKDOWN	USE ORINGS COMPATIBLE WITH FLUID AND TEMPERATURE
	STATIC SEAL FAILURE DUE TO IMPROPER INSTALLATION	INSPECT ORINGS FOR TWISTED SEGMENT
		INSPECT ORINGS ARE NOT CUT
		TORQUE HOUSING ASSEMBLY BOLTS
	DYNAMIC SEAL WORN OR DAMAGED	FILTER ABRASIVE MATERIAL FROM FLUID
		REPLACE DYNAMIC SEAL
		PRIME PUMP AVOID DRY RUNNING
PUMP PORT CONNECTIONS NOT SEALED	USE TEFLON TAPE OR OTHER COMPATIBLE PLUMBING SEALANT	

* On direct current motors only. Consult factory for wiring diagram

ORDERING

Must include the following elements in your order number:

- Product classification
- Food grade classification
- Series
- Mounting and drive configuration
- Flow rate
- Elastomer/seal configuration
- Rotation/slinger
- Clearances
- Valve type and configuration
- Pressure range (relief valve spring)

Follow these steps to select the appropriate model number*:

1. Select a product and food grade classification

- The first character position specifies the product category. All PROCON rotary vane model numbers will begin with the digit "1".
- The second character specifies if the pump is NSF listed for use with potable water. If it were not, the second digit would be a "0". For more details, please contact the factory.

2. Select a series number

- The third character specifies the series number. There are six series offered within our rotary vane product line.
- Select a mounting and drive configuration
- The fourth position specifies the mounting and drive configuration. The three most common mounting styles are "A", "B", and "C". Check the Content page to find mounting styles under your choice of pump.

3. Select a flow rate

- The fifth through the seventh character positions represent flow rate of the pump. The flow rates available range from 15 to 660 gallons per hour.

4. Select an elastomer/seal configuration

- The eighth character position specifies the type of elastomer used in the construction of the mechanical shaft seal assembly and o-rings. For most applications Nitrile is appropriate. This seal is appropriate for clean tap water at moderate temperatures. Other options are Fluorocarbon, Ethylene Propylene, and Neoprene. Applications which involve a fluid other than clean tap water at moderate temperatures should be discussed with a PROCON sales engineer.

5. Select a rotation and slinger configuration

- The ninth character specifies the rotation and slinger configuration. The majority of pumps

manufactured by PROCON operate in a clockwise manner when viewed from the nameplate. Pumps which are designed to operate in a counter clockwise manner are also available.

- The slinger is standard in our series 3 and series 5 pumps, and is also available as an option in our series 1, 2, and series 4 pumps. As a general rule, slingers are not necessary. If you desire a brass pump with a slinger, please discuss your requirements with a PROCON sales engineer.

6. Select a clearance

- The tenth character position specifies the internal clearances. For pumps operating with fluid temperatures less than 150 degrees Fahrenheit, standard clearances are appropriate so a "1" would be used in this position. Applications which require pumping a fluid between 150 degrees and 190 degrees Fahrenheit require special clearances (and special seals) so a "2" would be used in this position. Applications requiring elevated temperature capabilities would be discussed with a PROCON sales engineer.

7. Select a valve type and configuration, pressure range and pressure setting

- The eleventh character position specifies the valve type and configuration. The operation of the relief valve is discussed in detail on page 15 and the different valve types are referenced beginning on page 75.
- The twelfth and final character position specifies the pressure range.
- Although not officially part of the model number, the last three digits following the model number specify the desired relief valve setting. This number will be stamped into the housing for identification purposes. A pump with no relief valve is designated by an "X" in the eleventh and twelfth positions.

*Applicable to Rotary Vane Pump. Refer to sell sheets for model numbers of Mag Drive, Micro Vane and Gear Pump or consult the manufacturer

PROCON is a factory direct manufacturing company that provides new pumps and remanufactured pumps with a core exchange. We do not sell remanufactured pumps without a core exchange. We require a minimum order of \$25.

Payment terms

Before we can approve an open credit account for you, you must fill out a credit application. We will verify your payment history from several sources. This process usually takes four to six weeks. If you want open credit, please contact PROCON early to start the process.

Within approved credit limits, you must pay within thirty days after you buy a new pump and within ten days after we rebuild a pump for you.

We offer other options for payment, including

- major credit card
- wire transfer
- cash in advance
- cash on delivery
- confirmed irrevocable letter of credit
- sight draft

Contact your PROCON factory representative for more information.

Sales tax

If you are not obligated to pay sales tax to PROCON, please mail an executed resale form to PROCON, as required by your state. Otherwise, we may have to collect your state's sales tax or delay shipment of your order.

Purchase new pumps

You may buy our pumps, motors, and accessories directly from the factory. Pricing is based on quantity discounts. We build all pumps to order and normally ship small orders within five to nine working days. You can place orders individually or combined as part of a 12-month blanket order in keeping with PROCON's blanket order policy. Contact your PROCON factory representative or PROCON (see back cover) for more information.

PROCON will acknowledge every order in writing. Please carefully review the Acknowledgment Form. The terms and conditions of sale supersede any terms and conditions you may have on your purchase order.

Returning pumps

PROCON may accept unused pumps returned for credit subject to a 15% restocking charge within six months of invoice date, a 40% restocking charge within seven to twelve months of invoice date, and a 70% restocking charge within thirteen to thirty-six months of invoice date. No credit will be given on merchandise after thirty-six months. Returns must be received in good condition. Contact PROCON sales staff prior to returning pumps.

Rebuild used pumps

PROCON offers the alternative of using an Authorized Factory Rebuilt Exchange Center. Rebuilt pump performance is similar to new pump performance. PROCON provides a twelve month limited warranty for rebuilt pumps.

Send only the pumps

When you return pumps for rebuilding, please send only the pumps. Do not send us any gauges, fittings, motors, or couplings. PROCON is not responsible for returning these accessory items to you.

Pack them carefully

Pack the pumps carefully and individually to prevent abrading, rubbing, or hitting during the shipment. Improper packaging can damage the pump housing so seriously that we may be unable to rebuild the pump.

Some pumps cannot be rebuilt

Housings that are too damaged to be rebuilt will be returned to you marked as "damaged beyond rebuilding", as they are not acceptable as a core exchange.

Exchange centers

To help you get the pumps that you need, we have established exchange centers throughout the United States. While we do not own these centers, we work with them to maintain stocks of factory-rebuilt pumps in the more popular models. The centers can offer you immediate exchange on an inoperative pump or a rebuilt pump of a similar model. Series 1, 2, and 3 pumps are usually available. You can deal directly with the factory, if you prefer.

Service life of a pump

Our pumps are designed to provide long, trouble-free service. You need to rebuild or replace your pump if it leaks or does not build pressure or flow. In fact, as long as the pump housing is not damaged, it can be used as a core exchange, and you may purchase a remanufactured pump. The service life of a rebuilt pump is similar to that of a new PROCON pump.

Summary of warranty

PROCON pumps are warranted to be free of defects in workmanship and materials for one year from the date that we ship them to you. PROCON will rebuild or replace the pump free of charge if failure is due to defects in material or workmanship within the warranty period. New pumps manufactured after November 1993 are warranted to be free of defects in workmanship and materials for two years from the date that we ship them to you.

Please read your complete warranty document carefully because it is a legal document and a limited warranty. Final judgment of warranty claims is made by PROCON. We will rebuild or replace inoperative pumps if they are returned intact, freight prepaid, and our inspection substantiates the claim. If anyone other than PROCON personnel opens the pump for any reason, the warranty is void.

Please note that our warranty does not cover damage caused if you operate the pump improperly. For information about specific operating limitations, see the Content page to find piping layouts and installation instructions for your specific pump.

Tennessee, USA

869 Seven Oaks Blvd.
Suite 120
Smyrna, TN 37167
001.615.355.8000
sales@PROCONpump.com

Mountmellick, Ireland

Irishtown, Mountmellick, CO.
Laois, Republic of Ireland
00353.57.86.24350
sales@standex.ie

Tianjin, China

J3A101, Western Area
Xuefu Huigu Industrial Park
Tianjin, China 300402
00.86.22.86996885

www.proconpump.com

