



First choice when
quality counts.™

Triumph™

Electric-Powered Low Pressure Pump

- **Low operating costs**
- **Quiet and clean, no dirty exhaust air; no icing**
- **Durable design - minimal maintenance**
- **Approved for hazardous locations**

Graco's electric-powered Triumph is a high quality reciprocating pump for automotive and high end manufacturing paint circulation systems.

Efficient electric power means lower operating costs and quiet operation. The Triumph operates from world-wide input power: 100-240 VAC single-phase, 50/60 Hz or 240-480 VAC three-phase, 50/60 Hz. Its brushless motor and permanently lubricated drive require little maintenance. This durable reciprocating drive is rated for 15,000,000 cycles of life.

**Energy-efficient
electric pump is
versatile, quiet
and clean**

Typical Fluids Handled

- Solventborne paints
- Waterborne paints
- Acid-catalyzed varnishes
- Enamels
- Lacquers

Typical Applications

- Automotive assembly boothside
- Automotive feeder plants
- Industrial facilities

Agency-Approved for Hazardous Environments

- Handles flammable liquids
- Cenelec Group II B
- FM/CSA Class I, Div. 1,
Groups C and D
- Temperature class T5 (100°C)



COMPONENTS

Technical Specifications

Ambient temperature range -40° to 104° F (-40° to 40° C)

Maximum operating temperature 185° F (85° C)

(Motor automatically slows down to cool down, then returns to speed)

Voltage

Models: 239-482, 239-483, 239-484, 239-485, 239-486, 239-487 100-240 VAC, single-phase

Models: 239-488, 239-489, 239-490, 239-491, 239-492, 239-493 240-480 VAC, three-phase

Cycles

Models: 239-482, 239-483, 239-484, 239-485, 239-486, 239-487 50/60 Hz, single-phase

Models: 239-488, 239-489, 239-490, 239-491, 239-492, 239-493 50/60 Hz, three-phase

Maximum current draw 15 amps rms

Power output at 2500 rpm

77°F (25°C) ambient 2.7 HP (2 kW) out

104°F (40°C) ambient 1.7 HP (1.3 kW) out

Torque 8.5 N.m (75 in-lb) continuous

Power supply inlet 1/2 npt(f)

Maximum working pressure

Large cylinder: 239-482, 239-485, 239-488, 239-491 200 psi (1.4 MPa, 14 bar)

Medium cylinder: 239-483, 239-486, 239-489, 239-492 250 psi (1.7 MPa, 17 bar)

Small cylinder: 239-484, 239-487, 239-490, 239-493 350 psi (2.4 MPa, 24 bar)

Fluid flow at 32 cpm (recommended maximum cycle rate)

Large cylinder: 239-482, 239-485, 239-488, 239-491 10 gpm (38 lpm)

Medium cylinder: 239-483, 239-486, 239-489, 239-492 8 gpm (30 lpm)

Small cylinder: 239-484, 239-487, 239-490, 239-493 5 gpm (19 lpm)

Fluid inlet 1-1/2 npt(f)

Fluid outlet 1 npt(f)

Overall length 51 in. (130 cm)

Instruction manuals

Electric reciprocator (239-658, 239-659) 308-255

Triumph motor (239-338, 239-339) 308-254

Triumph pumps and connection kits (CS: 236-704, SST: 236-717) 308-366

Pump lowers 308-793

Sound Pressure Levels (dBa)

Measured at 1 meter from unit with fluid pressure at 200 psi (1.4 MPa, 14 bar)

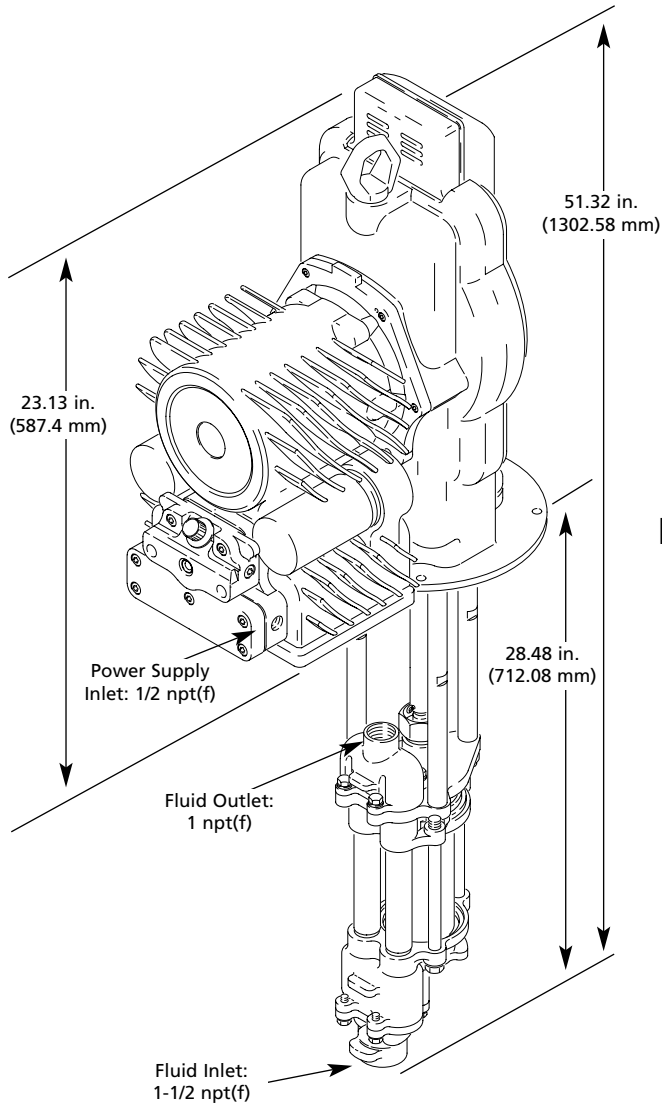
Motor	Motor Torque Control Setting / Cycles per Minute		
	9 / 15 cpm	9 / 24 cpm	9.5 / 32 cpm
Triumph	66.4 dB(A)	70.8 dB(A)	74.5 dB(A)

Sound Power Levels (dBa)

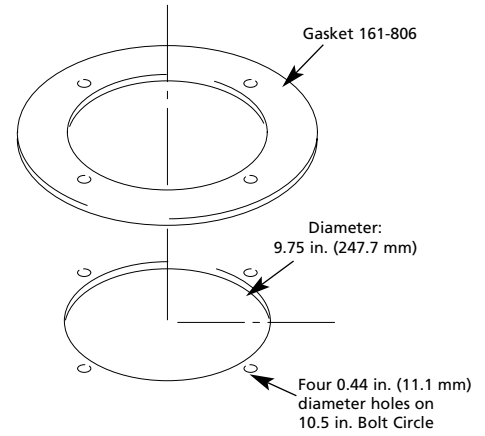
Tested in accordance with ISO 9614-2 at fluid pressure at 200 psi (1.4 MPa, 14 bar)

Motor	Motor Torque Control Setting / Cycles per Minute		
	9 / 15 cpm	9 / 24 cpm	9.5 / 32 cpm
Triumph	75.0 dB(A)	79.2 dB(A)	82.8 dB(A)

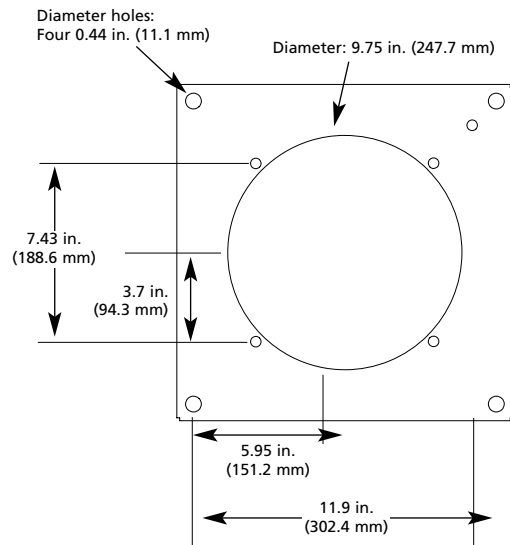
Dimension Drawings



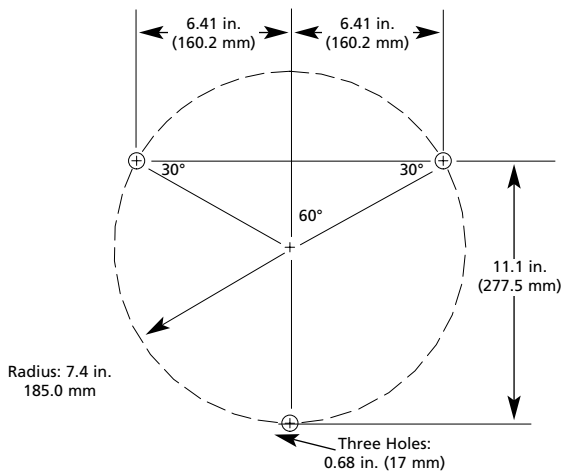
Pump Mounting Hole Diagram



Pump Stand Bolt Pattern



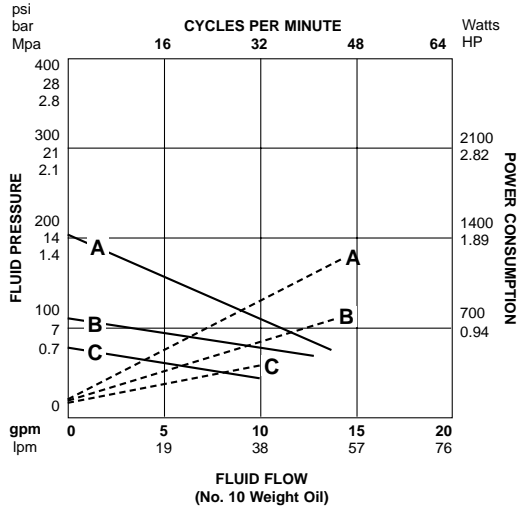
Surge Stand Bolt Pattern



Performance Charts for Triumph Pumps

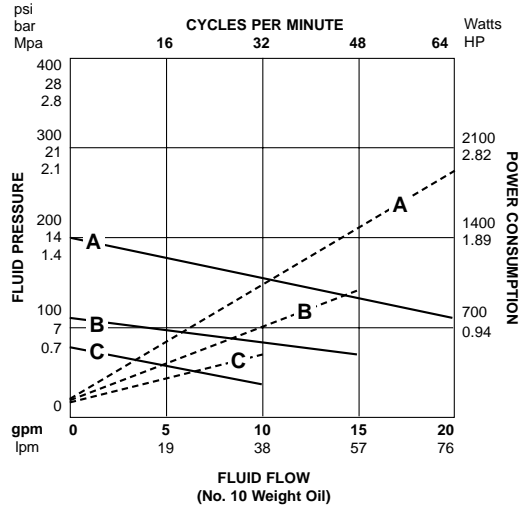
Operating at 120 VAC input

For models: 239-482, 239-485

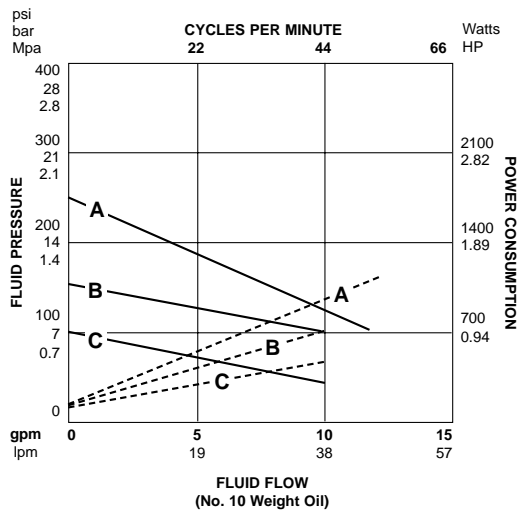


Operating at 240 VAC input

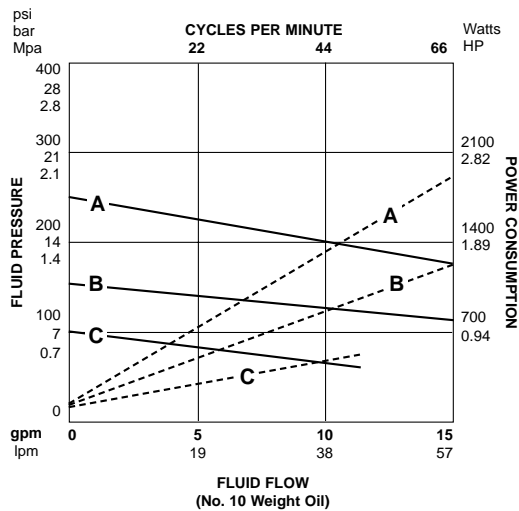
For models: 239-482, 239-485, 239-488, 239-491



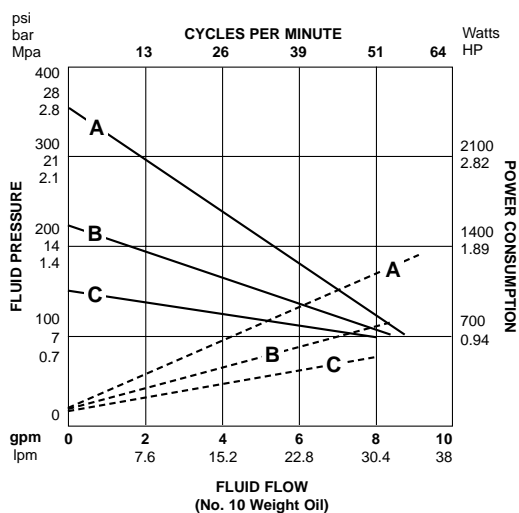
For models: 239-483, 239-486



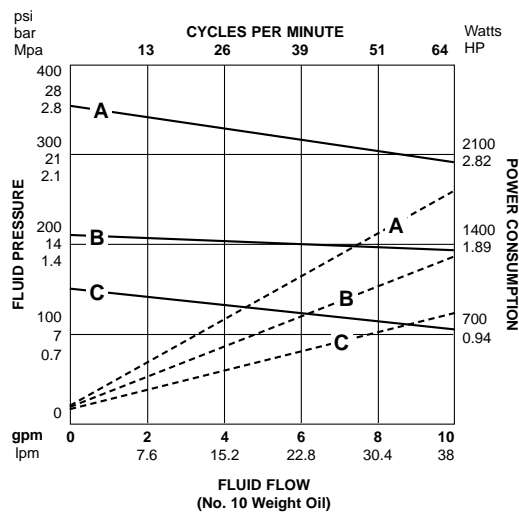
For models: 239-483, 239-486, 239-489, 239-492



For models: 239-484, 239-487

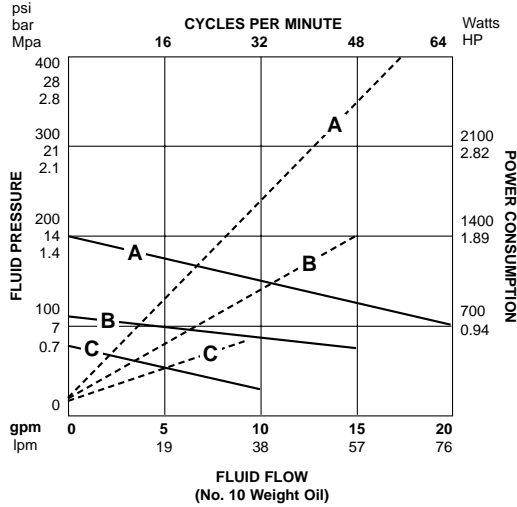


For models: 239-484, 239-487, 239-490, 239-493



Operating at 480 VAC input

For models: 239-488, 239-491



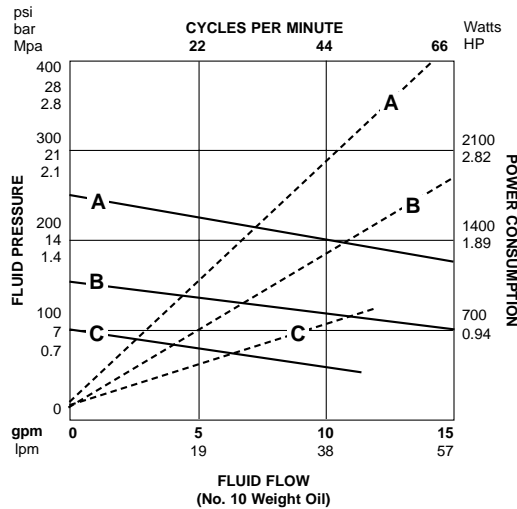
KEY for all Performance Charts

- A** Motor Torque Control set to 10.
- B** Motor Torque Control set to 7.
- C** Motor Torque Control set to 5.

To find Outlet Pressure (psi/MPa/bar) at a specific delivery (gpm or lpm) and torque control setting:

1. Located desired delivery along bottom of chart.
2. Read vertical line up to intersection with selected fluid outlet pressure curve. Curve slopes from left to right. Follow left to scale and read outlet pressure.

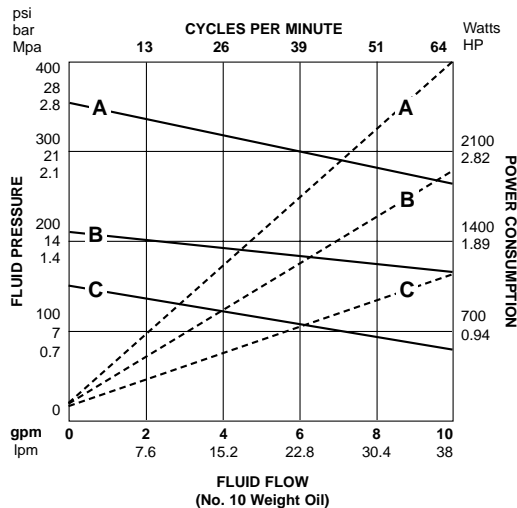
For models: 239-489, 239-492



To find Pump Power Consumption (watts or horsepower) at a specific delivery (gpm or lpm) and torque control setting:

1. Located desired delivery along bottom of chart.
2. Read vertical line up to intersection with selected power consumption curve. Curve slopes from right to left. Follow right to scale and read power consumption.

For models: 239-490, 239-493



Ordering Information for Triumph (100-240 VAC)

Order Number includes motor and pump lower assembly.

Order Nos.	239-482	239-483	239-484	239-485	239-486	239-487
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SERVICE KIT INFORMATION

Pump Lower

Part No.	239-838	239-837	239-836	239-835	239-834	239-833
Construction	SST	SST	SST	CS	CS	CS

Standard Seal Repair Kits

Part No.	220-587	220-588	220-589	220-587	220-588	220-589
Construction	UHMWPE	UHMWPE	UHMWPE	UHMWPE	UHMWPE	UHMWPE

Optional Seal Repair Kits available:

Part No.	224-936	224-935	224-934	224-936	224-935	224-934
Construction	Teflon	Teflon	Teflon	Teflon	Teflon	Teflon

Lower Throat Packing Repair Kits (applies to all models)

239-872 UHMWPE/Leather

239-866 Teflon

239-868 Leather

SERVICE PARTS INFORMATION

Pump Lower Nos.

	239-838	239-837	239-836	239-835	239-834	239-833
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Piston Rod	181-898	181-898	181-898	181-898	181-898	181-898
Construction	SST	SST	SST	SST	SST	SST

Cylinder	183-048	183-047	183-049	181-900	183-032	181-899
Construction	SST	SST	SST	CS	CS	CS

Intake Valve: (order separate part numbers)

Ball, inlet Diameter: 1.25 in. (32 mm)	101-968	101-968	101-968	101-968	101-968	101-968
Seat, relieving	239-805	239-805	239-805	239-805	239-805	239-805
Seat, non-relieving	239-865	239-865	239-865	239-865	239-865	239-865

Piston Packing:

UHMWPE	181-793	183-039	181-680	181-793	183-039	181-680
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Outlet Valve:

Ball, outlet Diameter: 1 in. (25 mm)	110-259	110-259	110-259	110-259	110-259	110-259
Construction	SST	SST	SST	SST	SST	SST
Seat, valve	183-095	183-095	183-095	183-095	183-095	183-095
Construction	SST	SST	SST	SST	SST	SST



Ordering Information for Triumph (240-480 VAC)

Order Number includes motor and pump lower assembly.

Order Nos.	239-488	239-489	239-490	239-491	239-492	239-493
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SERVICE KIT INFORMATION

Pump Lower

Part No.	239-838	239-837	239-836	239-835	239-834	239-833
Construction	SST	SST	SST	CS	CS	CS

Standard Seal Repair Kits

Part No.	220-587	220-588	220-589	220-587	220-588	220-589
Construction	UHMWPE	UHMWPE	UHMWPE	UHMWPE	UHMWPE	UHMWPE

Optional Seal Repair Kits available:

Part No.	224-936	224-935	224-934	224-936	224-935	224-934
Construction	Teflon	Teflon	Teflon	Teflon	Teflon	Teflon

Lower Throat Packing Repair Kits (applies to all models)

- 239-872 UHMWPE/Leather
- 239-866 Teflon
- 239-868 Leather

SERVICE PARTS INFORMATION

Pump Lower Nos.

Part No.	239-838	239-837	239-836	239-835	239-834	239-833
Construction	SST	SST	SST	SST	SST	SST

Piston Rod

Part No.	181-898	181-898	181-898	181-898	181-898	181-898
Construction	SST	SST	SST	SST	SST	SST

Cylinder

Part No.	183-048	183-047	183-049	181-900	183-032	181-899
Construction	SST	SST	SST	CS	CS	CS

Intake Valve: (order separate part numbers)

Ball, inlet Diameter: 1.25 in. (32 mm)	101-968	101-968	101-968	101-968	101-968	101-968
Seat, relieving	239-805	239-805	239-805	239-805	239-805	239-805
Seat, non-relieving	239-865	239-865	239-865	239-865	239-865	239-865

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UHMWPE	181-793	183-039	181-680	181-793	183-039	181-680
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Outlet Valve:

Ball, outlet Diameter: 1 in. (25 mm)	110-259	110-259	110-259	110-259	110-259	110-259
Construction	SST	SST	SST	SST	SST	SST
Seat, valve	183-095	183-095	183-095	183-095	183-095	183-095
Construction	SST	SST	SST	SST	SST	SST

Teflon® is a registered trademark of Du Pont.

UHMWPE = Ultra High Molecular Weight Polyethylene

Accessories

220-581 Floor Stand

237-569 Grounding Wire and Clamp

Length: 25 ft. (7.6 m)

12 gauge (1.5 mm²)

Spare Parts

110-293 Lithium Base Grease

Use to lubricate bearings and gears.

192-366 Teflon Bar

111-389 Cam Follower

110-335 Packing Nut Wrench

For tightening the packing nut.

Graco-Approved Hydraulic Fluid

169-236 5 Gallon (20 Liter)

207-428 1 Gallon (3.8 Liter)

220-157 Medium Volume Surge Tank

218-742 Surge Tank Stand Kit