

Do Not Run Pumps Dry. Must have a flooded suction environment.

Note: Testing performed in a controlled laboratory environment. Actual performance may vary (+) or (-) 10% from the information shown.



Performance, Electrical Data

| 24 VDC | | | | | | | | |
|--------|-------|------------|-------|------|-------|--------|-------|------|
| FLOW | | TOTAL HEAD | | | | POWER | | |
| GPM | LPM | FEET | PSI | BAR | METER | WATTS | VOLTS | AMPS |
| 22.08 | 83.59 | 7.25 | 3.14 | 0.22 | 2.21 | 199.60 | 24.01 | 8.31 |
| 20.54 | 77.74 | 11.00 | 4.77 | 0.33 | 3.35 | 200.34 | 24.01 | 8.35 |
| 19.25 | 72.88 | 14.85 | 6.44 | 0.44 | 4.53 | 200.89 | 24.01 | 8.37 |
| 18.24 | 69.06 | 20.14 | 8.73 | 0.60 | 6.14 | 202.14 | 24.01 | 8.42 |
| 17.45 | 66.05 | 21.78 | 9.44 | 0.65 | 6.64 | 202.53 | 24.01 | 8.44 |
| 16.02 | 60.65 | 26.43 | 11.46 | 0.79 | 8.06 | 201.73 | 24.01 | 8.40 |
| 14.93 | 56.53 | 29.72 | 12.89 | 0.89 | 9.06 | 201.17 | 24.01 | 8.38 |
| 14.28 | 54.04 | 30.19 | 13.09 | 0.90 | 9.20 | 199.69 | 24.01 | 8.32 |
| 12.96 | 49.06 | 33.94 | 14.71 | 1.01 | 10.35 | 197.34 | 24.01 | 8.22 |
| 12.12 | 45.86 | 37.01 | 16.05 | 1.11 | 11.28 | 194.97 | 24.01 | 8.12 |
| 11.00 | 41.64 | 40.70 | 17.64 | 1.22 | 12.41 | 191.01 | 24.01 | 7.96 |
| 9.90 | 37.49 | 44.60 | 19.33 | 1.33 | 13.60 | 186.36 | 24.01 | 7.76 |
| 8.96 | 33.90 | 45.46 | 19.71 | 1.36 | 13.86 | 181.53 | 24.01 | 7.56 |
| 7.91 | 29.93 | 50.31 | 21.81 | 1.50 | 15.34 | 176.30 | 24.01 | 7.34 |
| 7.05 | 26.67 | 52.93 | 22.95 | 1.58 | 16.14 | 170.64 | 24.01 | 7.11 |
| 5.59 | 21.17 | 54.99 | 23.84 | 1.64 | 16.77 | 161.74 | 24.01 | 6.74 |
| 4.58 | 17.33 | 57.28 | 24.83 | 1.71 | 17.46 | 155.16 | 24.01 | 6.46 |
| 3.67 | 13.89 | 60.30 | 26.14 | 1.80 | 18.39 | 148.94 | 24.01 | 6.20 |
| 2.65 | 10.02 | 63.77 | 27.64 | 1.91 | 19.44 | 140.61 | 24.01 | 5.86 |
| 1.61 | 6.08 | 66.28 | 28.73 | 1.98 | 20.21 | 130.28 | 24.01 | 5.43 |
| 0.72 | 2.74 | 69.40 | 30.09 | 2.08 | 21.16 | 121.43 | 24.01 | 5.06 |
| 0.00 | 0.00 | 71.49 | 30.99 | 2.14 | 21.80 | 115.44 | 24.01 | 4.81 |

| 21 VDC | | | | | | | | |
|--------|-------|------------|-------|------|-------|--------|-------|------|
| FLOW | | TOTAL HEAD | | | | POWER | | |
| GPM | LPM | FEET | PSI | BAR | METER | WATTS | VOLTS | AMPS |
| 19.81 | 75.00 | 5.76 | 2.50 | 0.17 | 1.76 | 149.49 | 21.00 | 7.12 |
| 18.33 | 69.37 | 10.30 | 4.47 | 0.31 | 3.14 | 151.18 | 21.00 | 7.20 |
| 17.22 | 65.18 | 14.21 | 6.16 | 0.42 | 4.33 | 152.15 | 21.00 | 7.24 |
| 15.90 | 60.18 | 16.53 | 7.17 | 0.49 | 5.04 | 152.43 | 21.00 | 7.26 |
| 14.94 | 56.55 | 20.42 | 8.85 | 0.61 | 6.23 | 152.12 | 21.00 | 7.24 |
| 14.16 | 53.61 | 22.39 | 9.70 | 0.67 | 6.82 | 151.53 | 21.00 | 7.21 |
| 12.96 | 49.08 | 26.23 | 11.37 | 0.78 | 8.00 | 150.26 | 21.01 | 7.15 |
| 11.91 | 45.09 | 28.54 | 12.37 | 0.85 | 8.70 | 149.45 | 21.00 | 7.12 |
| 11.27 | 42.67 | 30.23 | 13.10 | 0.90 | 9.22 | 146.45 | 21.01 | 6.97 |
| 9.74 | 36.89 | 33.56 | 14.55 | 1.00 | 10.23 | 143.53 | 21.01 | 6.83 |
| 8.77 | 33.20 | 36.82 | 15.96 | 1.10 | 11.23 | 139.46 | 21.01 | 6.64 |
| 7.86 | 29.74 | 37.71 | 16.35 | 1.13 | 11.50 | 135.91 | 21.00 | 6.47 |
| 6.96 | 26.36 | 40.74 | 17.66 | 1.22 | 12.42 | 132.07 | 21.00 | 6.29 |
| 6.01 | 22.74 | 43.07 | 18.67 | 1.29 | 13.13 | 127.47 | 21.00 | 6.07 |
| 4.91 | 18.59 | 46.43 | 20.13 | 1.39 | 14.16 | 118.60 | 21.00 | 5.65 |
| 3.96 | 14.98 | 47.05 | 20.40 | 1.41 | 14.34 | 114.25 | 21.01 | 5.44 |
| 2.95 | 11.18 | 50.47 | 21.88 | 1.51 | 15.39 | 108.11 | 21.00 | 5.15 |
| 1.95 | 7.37 | 53.72 | 23.29 | 1.61 | 16.38 | 100.01 | 21.00 | 4.76 |
| 0.76 | 2.86 | 56.67 | 24.57 | 1.69 | 17.28 | 90.22 | 21.00 | 4.30 |
| 0.00 | 0.00 | 58.74 | 25.47 | 1.76 | 17.91 | 84.41 | 21.00 | 4.02 |

Note: Testing performed in a controlled laboratory environment. Actual performance may vary (+) or (-) 10% from the information shown.



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Performance, Electrical Data

| 18 VDC | | | | | | | | |
|--------|-------|------------|-------|------|-------|--------|-------|------|
| FLOW | | TOTAL HEAD | | | | POWER | | |
| GPM | LPM | FEET | PSI | BAR | METER | WATTS | VOLTS | AMPS |
| 17.73 | 67.13 | 4.73 | 2.05 | 0.14 | 1.44 | 106.84 | 18.00 | 5.93 |
| 16.65 | 63.04 | 8.42 | 3.65 | 0.25 | 2.57 | 107.65 | 18.00 | 5.98 |
| 16.05 | 60.75 | 9.45 | 4.10 | 0.28 | 2.88 | 108.13 | 18.00 | 6.01 |
| 14.80 | 56.04 | 12.10 | 5.25 | 0.36 | 3.69 | 108.72 | 18.00 | 6.04 |
| 14.03 | 53.10 | 14.87 | 6.45 | 0.44 | 4.53 | 108.74 | 18.00 | 6.04 |
| 13.17 | 49.85 | 17.24 | 7.47 | 0.52 | 5.25 | 108.50 | 18.00 | 6.03 |
| 11.79 | 44.63 | 20.14 | 8.73 | 0.60 | 6.14 | 107.65 | 18.00 | 5.98 |
| 11.06 | 41.85 | 22.34 | 9.69 | 0.67 | 6.81 | 106.32 | 18.00 | 5.91 |
| 10.13 | 38.33 | 25.66 | 11.12 | 0.77 | 7.82 | 104.35 | 18.00 | 5.80 |
| 8.55 | 32.38 | 27.31 | 11.84 | 0.82 | 8.33 | 102.07 | 18.00 | 5.67 |
| 7.92 | 29.96 | 28.74 | 12.46 | 0.86 | 8.76 | 98.88 | 18.00 | 5.49 |
| 6.91 | 26.16 | 32.33 | 14.02 | 0.97 | 9.86 | 95.39 | 18.00 | 5.30 |
| 6.09 | 23.04 | 33.49 | 14.52 | 1.00 | 10.21 | 92.17 | 18.00 | 5.12 |
| 5.26 | 19.93 | 34.66 | 15.03 | 1.04 | 10.57 | 90.33 | 18.00 | 5.02 |
| 4.12 | 15.60 | 37.04 | 16.06 | 1.11 | 11.29 | 82.95 | 18.00 | 4.61 |
| 3.25 | 12.28 | 38.26 | 16.59 | 1.14 | 11.66 | 79.57 | 18.00 | 4.42 |
| 2.23 | 8.44 | 40.10 | 17.38 | 1.20 | 12.22 | 73.70 | 18.00 | 4.09 |
| 1.21 | 4.59 | 44.04 | 19.09 | 1.32 | 13.43 | 66.95 | 18.00 | 3.72 |
| 0.76 | 2.86 | 44.40 | 19.25 | 1.33 | 13.54 | 63.98 | 18.00 | 3.55 |
| 0.00 | 0.00 | 46.50 | 20.16 | 1.39 | 14.18 | 59.36 | 18.00 | 3.30 |

| 15 VDC | | | | | | | | |
|--------|-------|------------|-------|------|-------|-------|-------|------|
| FLOW | | TOTAL HEAD | | | | POWER | | |
| GPM | LPM | FEET | PSI | BAR | METER | WATTS | VOLTS | AMPS |
| 15.58 | 58.96 | 3.55 | 1.54 | 0.11 | 1.08 | 70.65 | 15.00 | 4.71 |
| 14.36 | 54.36 | 7.00 | 3.03 | 0.21 | 2.13 | 71.67 | 15.00 | 4.78 |
| 13.63 | 51.61 | 8.49 | 3.68 | 0.25 | 2.59 | 71.99 | 15.00 | 4.80 |
| 12.60 | 47.69 | 10.77 | 4.67 | 0.32 | 3.28 | 72.33 | 15.00 | 4.82 |
| 11.62 | 44.00 | 12.74 | 5.52 | 0.38 | 3.88 | 72.15 | 15.00 | 4.81 |
| 10.55 | 39.92 | 14.76 | 6.40 | 0.44 | 4.50 | 71.67 | 15.00 | 4.78 |
| 9.47 | 35.84 | 17.04 | 7.39 | 0.51 | 5.20 | 70.61 | 15.00 | 4.71 |
| 8.55 | 32.38 | 19.15 | 8.30 | 0.57 | 5.84 | 68.95 | 15.00 | 4.60 |
| 7.34 | 27.79 | 20.84 | 9.04 | 0.62 | 6.35 | 66.69 | 15.00 | 4.44 |
| 6.51 | 24.66 | 23.19 | 10.06 | 0.69 | 7.07 | 64.44 | 15.00 | 4.30 |
| 5.43 | 20.55 | 24.17 | 10.48 | 0.72 | 7.37 | 62.56 | 15.00 | 4.17 |
| 4.34 | 16.43 | 25.89 | 11.22 | 0.77 | 7.89 | 58.99 | 15.00 | 3.93 |
| 3.42 | 12.93 | 28.33 | 12.28 | 0.85 | 8.64 | 53.90 | 15.00 | 3.59 |
| 2.44 | 9.24 | 29.81 | 12.92 | 0.89 | 9.09 | 50.94 | 15.00 | 3.40 |
| 1.40 | 5.31 | 31.29 | 13.57 | 0.94 | 9.54 | 45.97 | 15.00 | 3.06 |
| 0.74 | 2.80 | 31.92 | 13.84 | 0.95 | 9.73 | 42.43 | 15.00 | 2.83 |
| 0.00 | 0.00 | 34.36 | 14.90 | 1.03 | 10.48 | 38.73 | 15.00 | 2.58 |

| 12 VDC | | | | | | | | |
|--------|-------|------------|------|------|-------|-------|-------|------|
| FLOW | | TOTAL HEAD | | | | POWER | | |
| GPM | LPM | FEET | PSI | BAR | METER | WATTS | VOLTS | AMPS |
| 13.16 | 49.83 | 2.49 | 1.08 | 0.07 | 0.76 | 42.22 | 12.00 | 3.52 |
| 11.98 | 45.36 | 4.88 | 2.12 | 0.15 | 1.49 | 42.97 | 12.00 | 3.58 |
| 11.05 | 41.82 | 6.52 | 2.83 | 0.19 | 1.99 | 43.14 | 12.00 | 3.59 |
| 10.13 | 38.34 | 8.22 | 3.57 | 0.25 | 2.51 | 43.30 | 12.00 | 3.61 |
| 8.85 | 33.48 | 9.99 | 4.33 | 0.30 | 3.05 | 43.07 | 12.00 | 3.59 |
| 8.19 | 31.01 | 11.60 | 5.03 | 0.35 | 3.54 | 42.38 | 12.00 | 3.53 |
| 6.84 | 25.91 | 13.54 | 5.87 | 0.40 | 4.13 | 41.23 | 12.00 | 3.44 |
| 5.98 | 22.64 | 15.00 | 6.50 | 0.45 | 4.57 | 39.65 | 12.00 | 3.30 |
| 4.47 | 16.90 | 16.95 | 7.35 | 0.51 | 5.17 | 37.15 | 12.00 | 3.10 |
| 3.38 | 12.79 | 18.68 | 8.10 | 0.56 | 5.69 | 33.79 | 12.00 | 2.82 |
| 2.47 | 9.35 | 20.00 | 8.67 | 0.60 | 6.10 | 30.80 | 12.00 | 2.57 |
| 1.46 | 5.53 | 21.60 | 9.36 | 0.65 | 6.59 | 28.33 | 12.00 | 2.36 |
| 0.73 | 2.76 | 21.83 | 9.46 | 0.65 | 6.66 | 25.40 | 12.00 | 2.12 |
| 0.00 | 0.00 | 23.02 | 9.98 | 0.69 | 7.02 | 23.10 | 12.00 | 1.92 |

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Electrical Specifications / Wiring Diagram

| | | |
|----------------------------|--------------------|---|
| 300W/24V INTG7 | | |
| Wire Colors | | |
| Power (V+/V-) | Red/Black | |
| Speed | N/A | |
| Tach | N/A | |
| CAN | | |
| High/Low | N/A | |
| Shield | N/A | |
| Address | N/A | |
| Enable | N/A | |
| Operating Voltage Range | 12-24 V | |
| Current at Nominal Voltage | 8.7 (at 24 V) | |
| Maximum Wattage | 300 W | |
| Speed Control (DC Input) | | Note: The negative of the control signal must be referenced to the negative of the pump supply. Input impedance of speed control is typically 100K Ohms |
| PWM | | |
| Duty Cycle | N/A | |
| Frequency | N/A | |
| Voltage Range | N/A | |
| ANALOG | | |
| Voltage Range (Nominal) | N/A | |
| Voltage Range (Actual) | N/A | Note: this varies with different wattage limits; pumps with lower limits may reach max performance before 4V. |
| Tach Signal (DC Output) | | Note: The tach signal is a square wave; slew rate 40 micro sec/5 volt. Push/pull output. 6 pulses/revolution |
| Frequency | N/A | |
| Voltage Range | N/A | |
| RPM Calculation | N/A | |
| Start-Up Time | < 3 seconds | Note: Pump may take somewhat longer depending on the power supply |
| Max Inrush Current | | |
| At Start-Up | 45.2 A | |
| 50 to 100% Performance | N/A | |
| Recommended Fuse | 10 A (fast-acting) | |



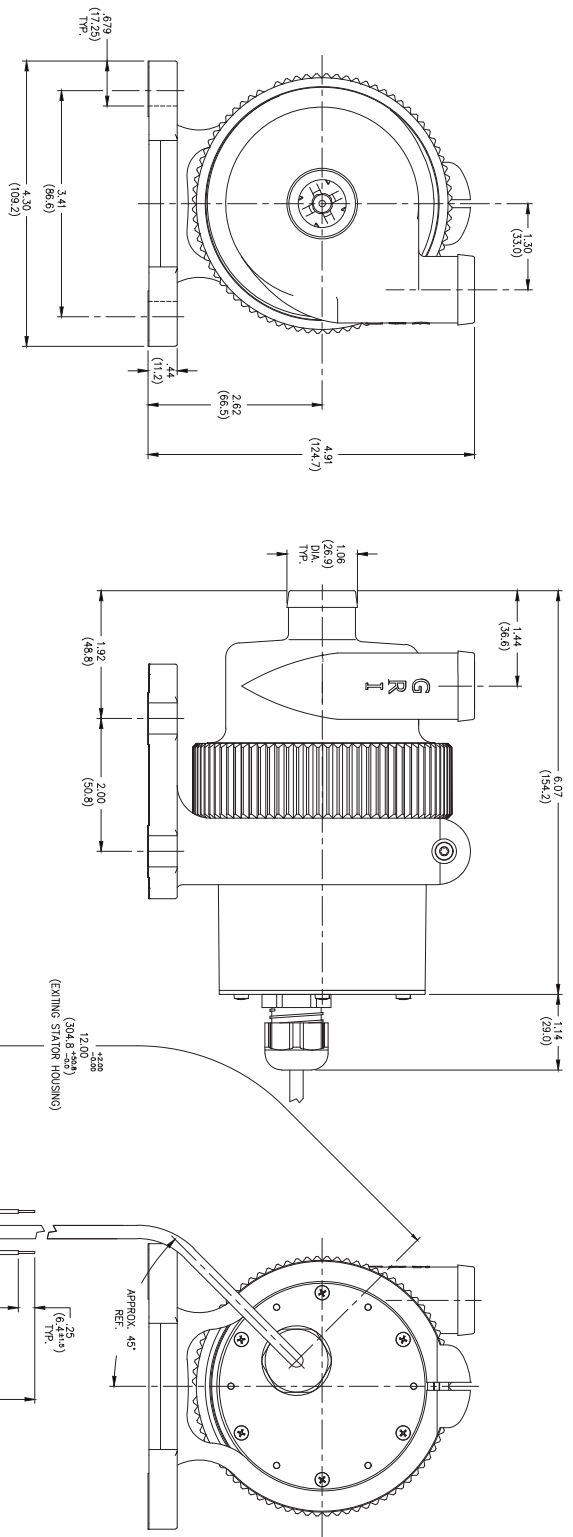
General Specs, Wetted Materials

Do Not Run Pumps Dry. Pumps must be in a continuous flooded suction environment.

| General Specifications | |
|--------------------------------------|-------------------------|
| In-House Stator | 18x2 Turns, 21 AWG |
| Motor Magnets | One-piece Neodymium |
| Suction Port | 1" MHB |
| Discharge Port | 1" MHB |
| Mounting Bracket | PPS material |
| Max Fluid Temp | 225°F (107°C) |
| Max System Pressure | 75 PSI |
| Approximate Weight (w/ external box) | 4.3 lbs (1950.45 grams) |
| Product Test Report | PTR24166 |

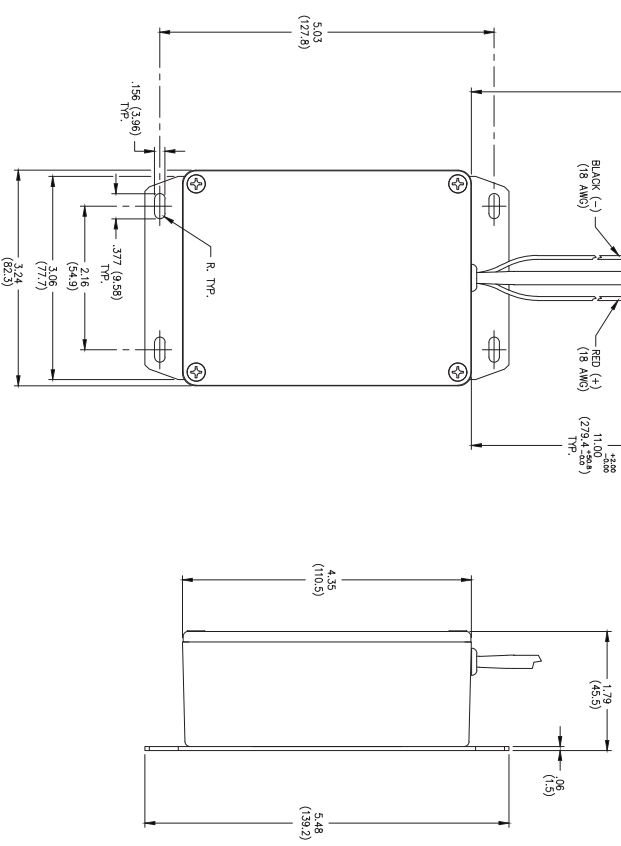
| Wetted Materials | |
|--|---------|
| Pump Body | PPS |
| Pump Adapter | PPS |
| Impeller | PPS |
| Impeller Shaft | Ceramic |
| Static O-Ring | EPDM |
| RoHS/REACH | |
| Many GRI pumps are RoHS & REACH compliant. For declarations by specific model numbers, please contact GRI. | |





INTG7-060 H

Drawing & Dimensions



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