

INTEGRITY^{series}™

Tuned for performance, stability and longevity.

Designed for the circulation and transfer of fluids, GRI's Integrity Series Pumps offer a flexible, safe and robust solution to moving fluid in critical high-tech OEM applications.

Equipped with an integrated brushless DC variable speed motor, with ranges of 12-24, 36 and 48 volts, these seal-less, motor integrated centrifugal pumps incorporate the components into a compact, lightweight design. Fewer parts promote long life, quiet operation, and low power consumption.

Unlike its competition, GRI manufactures the pump's brushless DC motors, along with the majority of the components, in-house. Our vertical integration provides the ability to customize a pump's motor to an OEM's specific flow and pressure performance requirements.

Integrity Series Pumps are designed and manufactured specifically for OEM customization. If you don't immediately find a pump that meets your exact requirements, our dedicated Pump Team is ready to work with you in developing a solution specific to your application.



INTG1 Brushless-DC Magnetic Drive

12-24, 36 VDC
Maximum System Pressure: 50 PSI
Maximum Flow: 3.0 GPM; 12.0 LPM
Maximum Head: 22.0 feet; 10.0 PSI



INTG3 Brushless-DC Magnetic Drive

12-24 VDC
Maximum System Pressure: 75 PSI
Maximum Flow: 8.85 GPM; 33.5 LPM
Maximum Head: 37.0 FT; 16.00 PSI



INTG5 Brushless-DC Magnetic Drive

12-24, 36, 48 VDC
Maximum System Pressure: 75 PSI
Maximum Flow: 10.0 GPM; 37.9 LPM
Maximum Head: 80.0 feet; 35.0 PSI



INTG7 Brushless-DC Magnetic Drive

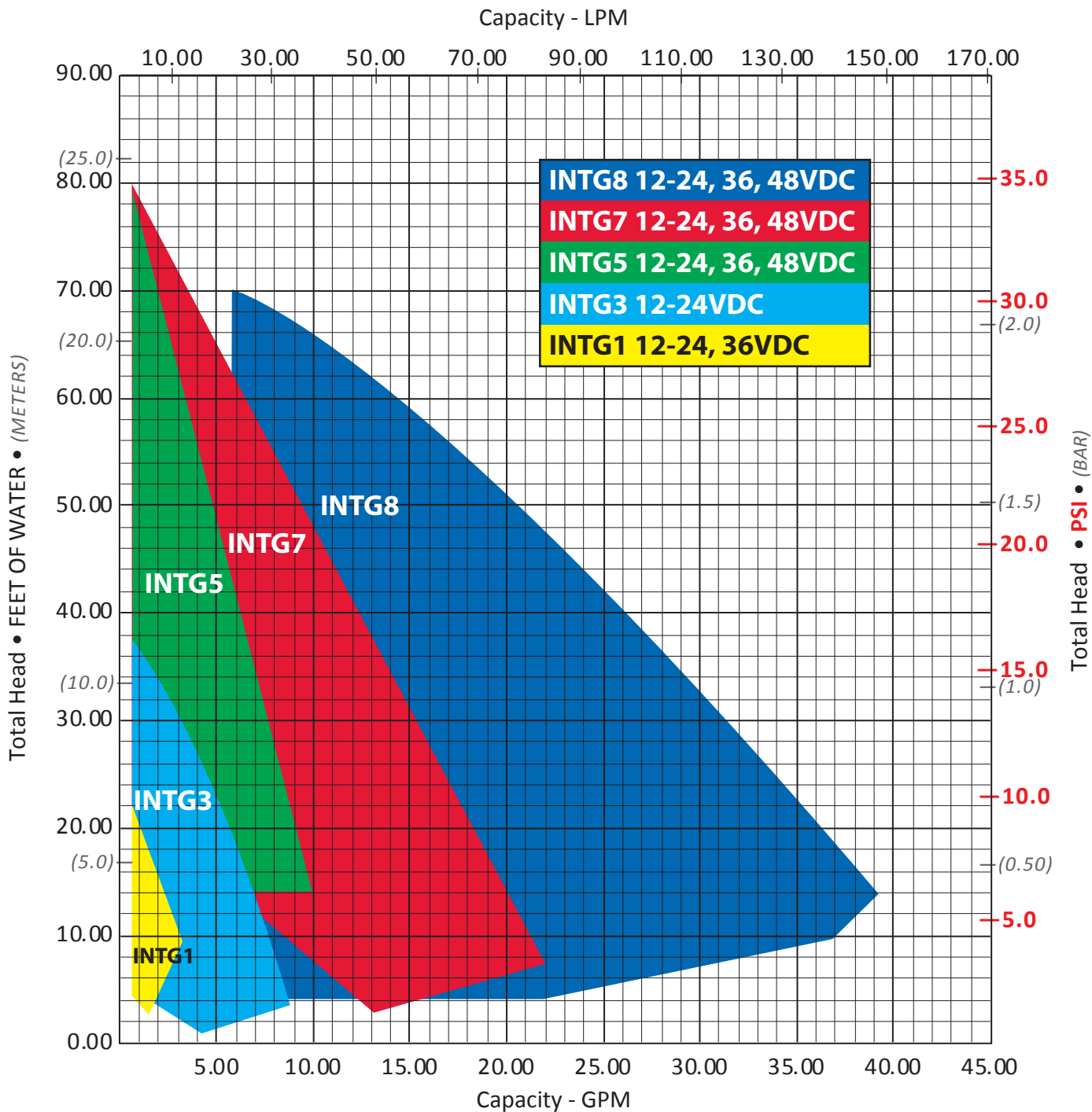
12-24, 36, 48 VDC
Maximum System Pressure: 75 PSI
Maximum Flow: 22.0 GPM; 83.0 LPM
Maximum Head: 80.0 feet; 35.0 PSI



INTG8 Brushless-DC Magnetic Drive

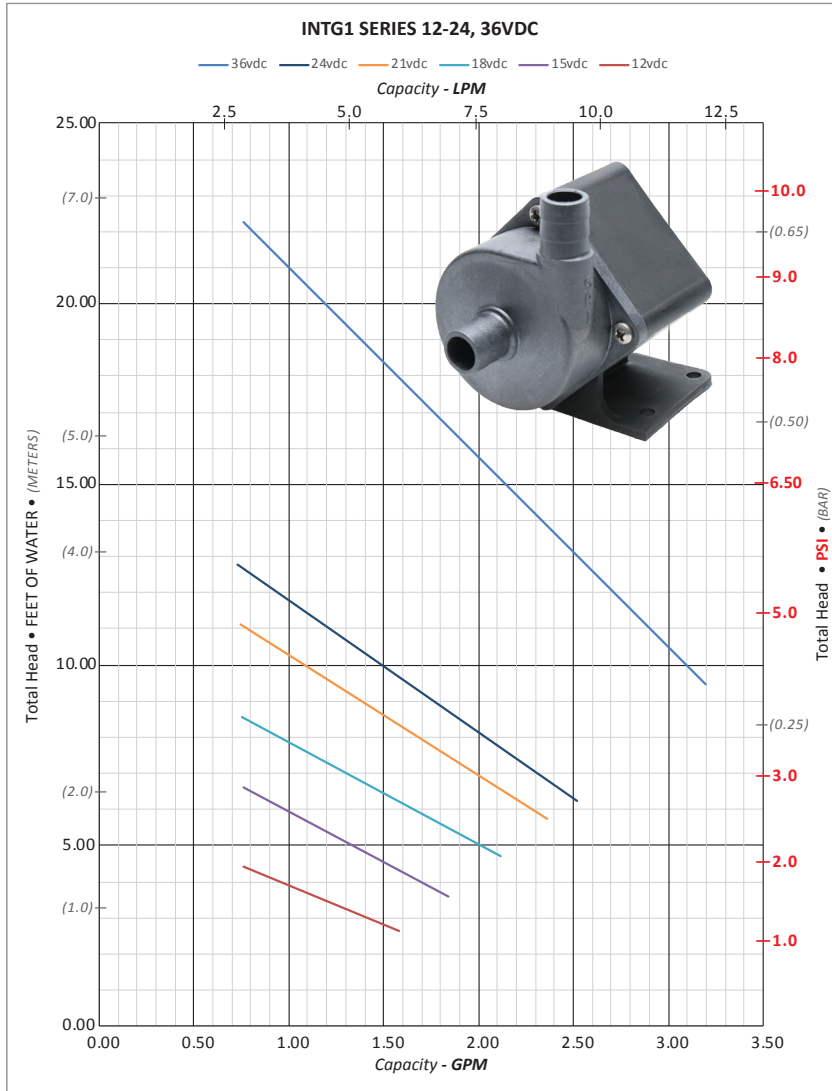
12-24, 36, 48 VDC
Maximum System Pressure: 75 PSI
Maximum Flow: 39.0 GPM; 145.0 LPM
Maximum Head: 70.0 feet; 30.0 PSI

Integrated Magnetic Drive Circulation Pumps Series Comparison



To protect the control board, each Integrity Series pump will be issued with a Maximum Power limit (Watts).
 To stay within this limit, the recommended fuse size (Amps) will be based on the voltage supplied. (Watts = Voltage X Amps)

INTG1 Series • Maximum flow per voltage						
Voltage	Flow (GPM)	Flow (L)	Ttl. Hd. (Ft)	Ttl. Hd. (PSI)	Ttl. Hd. (BAR)	Ttl. Hd. (M)
36vdc	3.20	12.10	9.49	4.11	0.28	2.89
24vdc	2.52	9.55	6.26	2.71	0.19	1.91
21vdc	2.36	8.92	5.76	2.50	0.17	1.76
18vdc	2.12	8.02	4.73	2.05	0.14	1.44
15vdc	1.84	6.98	3.58	1.55	0.11	1.09
12vdc	1.58	5.98	2.65	1.15	0.08	0.81



Note: Testing performed in a controlled laboratory environment. Actual performance may vary (+) or (-) 10% from the information shown.
Do Not Run Pumps Dry. Pumps must be in a continuous flooded suction environment.

Specifications

Maximum System Pressure: 50 psi
Approximate Weight: .8 LBS (362.9 grams)
Ports: 1/2" MHB, 3/8" MPT OEM Customization Available

Materials In Contact With Solution

Body: PPS	Impeller Shaft: Stainless Steel or Ceramic
Impeller: PPS	Housing: PPS
Static O-Ring: EPDM, FKM	

Motor Specifications

Motor: Integrated, Brushless DC
Supply Voltage: 12-24, 36 VDC
Electronics Maximum Power: 18 Watts To protect the control board, each Integrity Series pump will be issued with a Maximum Power limit (Watts). To stay within this limit, the recommended fuse size (Amps) will be based on the voltage supplied. (Watts = Voltage X Amps)

Control Options

- **Direct Supply Voltage:** Speed of the pump determined by the voltage supplied
- **Analog:** 0-5v DC signal
- **Tachometer:** Feedback option available

Maximum Fluid Rating Chart

Controller Position	Maximum Fluid Temp Rating
Separate from pump	Not Applicable
Within pump's housing	149°F (65°C)
Various factors influence the recommended maximum temperature rating. These factors play a role in determining the pump's life and applied warranties. In some applications, a higher maximum fluid temperature rating may be warranted.	Factors influencing maximum temperature rating include, but are not limited to: <ul style="list-style-type: none"> • Starting temperature of fluid in system • Ambient temperature • Required performance, application's specifications • Run time

Optional Agency Approvals

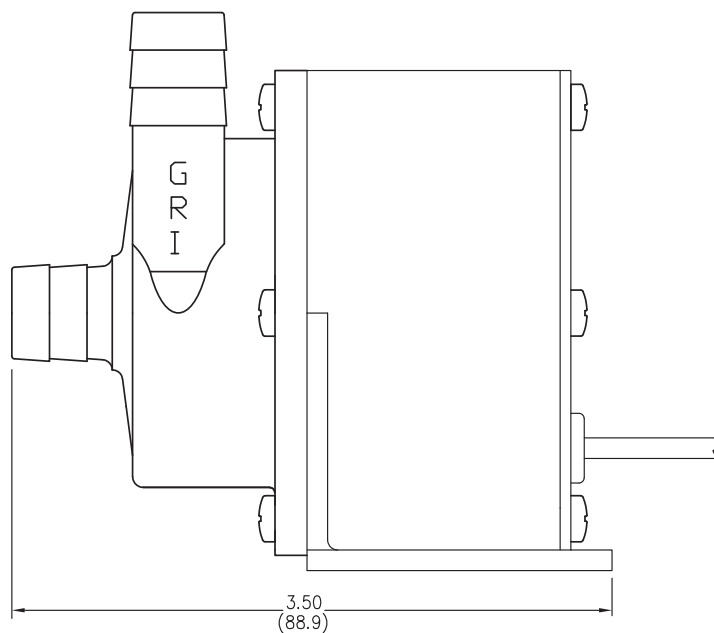
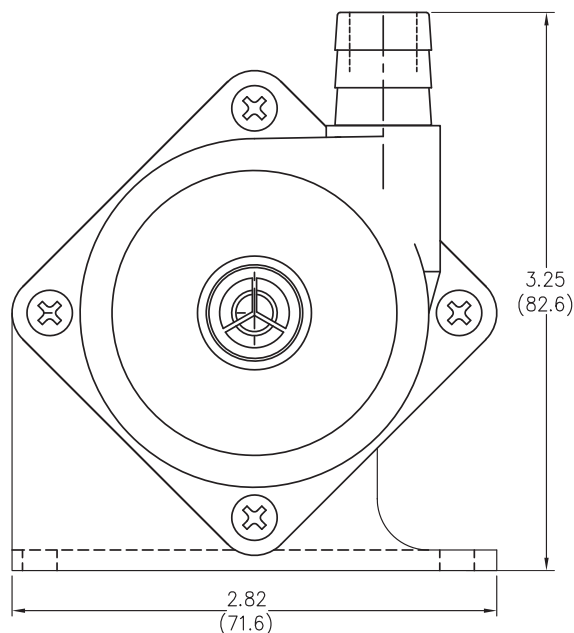
- UL778:** Motor-Operated Water Pumps
- NSF 61:** Potable Water (1/2" only)
- NSF 169:** Food Grade
- NSF372:** Lead Content (1/2" only)

RoHS/REACH

Many GRI pumps are RoHS & REACH compliant. For declarations by specific model numbers, please contact GRI.

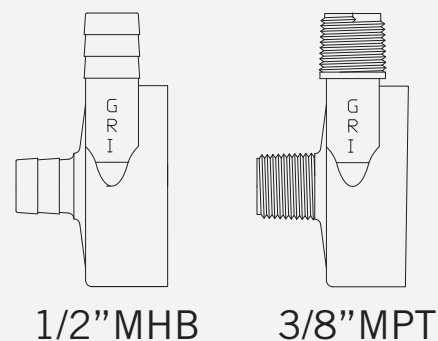
IP (Ingress Protection)

- IP6X:** No ingress of dust.
- IP66:** No ingress of dust, protection against powerful water jets.
- IP67:** No ingress of dust, protection against temporary water immersion.
- IP68:** No ingress of dust, protection against continuous water immersion.



INTG1 Series Typical Dimensional Drawing.
 Many other OEM port options and configurations are available. Please contact GRI to discuss.

Port Options

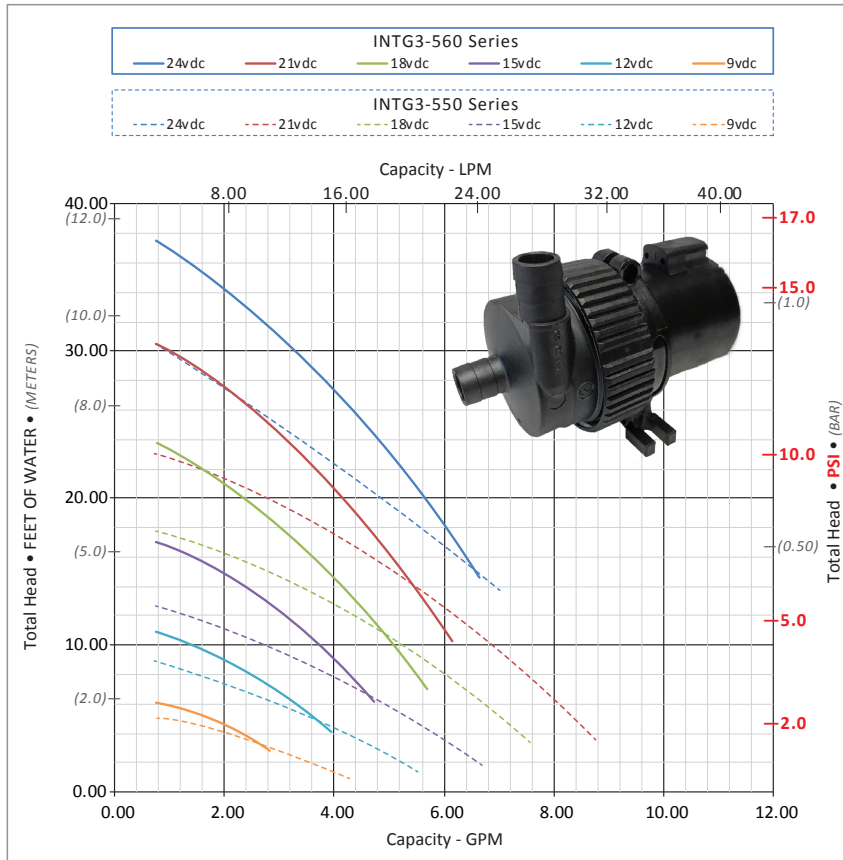


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INTG1 SERIES MODELS				Ports Inches	Max Flow GPM (LPM)	Max Head Ft. (PSI) (m)	Voltage (VDC)
EPDM O-Ring		FKM O-Ring					
2 wire: (+), (-)	3 wire: (+), (-), Speed Control	2 wire: (+), (-)	3 wire: (+), (-), Speed Control				
INTG1S-280	INTG1S-380	INTG1S-281	INTG1S-381	1/2" MHB	2.50 (9.50)	12.80 (5.5) (3.90)	12-24
INTG1S-284	INTG1S-384	INTG1S-285	INTG1S-385	3/8" MPT			

Connectors: MHB = Male Hose Barb; MPT = Male Pipe Thread | **O-Ring Material:** EPDM = Ethylene Propylene Diene Monomer, FKM = Fluoroelastomer.

Max Flow Per INTG3 Model Series							
Series	Voltage	Flow (GPM)	Flow (L)	Ttl. Hd. (Ft)	Ttl. Hd. (PSI)	Ttl. Hd. (BAR)	Ttl. Hd. (M)
INTG3-550 Series	21 VDC	8.85	33.50	2.36	1.02	0.07	0.72
INTG3-560 Series	24 VDC	6.70	25.40	14.87	6.45	0.44	4.53
INTG3 AC Series	115/230 VAC	8.00	30.5	9.67	4.2	.29	2.95



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

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

Specifications

Maximum System Pressure: 75 psi

Approximate Weight: .8 LBS (362.9 grams)

Ports: 1/2", 3/4" MHB, 3/8" MPT / OEM Customization Available

Materials In Contact With Solution

Body: PPS	Housing: PPS	Static O-Ring: EPDM, FKM
Impeller: PPS	Pump Shaft: Ceramic	

Motor Specifications

Motor: Integrated, Brushless DC

Supply Voltage:

- 12-24 VDC
- 115, 230 VAC (auto sensing technology), Optional with OEM quantities.

Electronics Maximum Power: 60 Watts

To protect the control board, each Integrity Series pump will be issued with a Maximum Power limit (Watts). To stay within this limit, the recommended fuse size (Amps) will be based on the voltage supplied.
(Watts = Voltage X Amps)

Control Options

- **Direct Supply Voltage:** Speed of the pump determined by the voltage supplied
- **Analog:** 0-5v DC signal
- **Digital:** PWM
- **Tachometer:** Feedback option available

Maximum Fluid Rating Chart

Controller Position	Maximum Fluid Temp Rating
Separate from pump	225°F (107°C)
Within pump's housing	149°F (65°C)
Various factors influence the recommended maximum temperature rating. These factors play a role in determining the pump's life and applied warranties. In some applications, a higher maximum fluid temperature rating may be warranted.	Factors influencing maximum temperature rating include, but are not limited to: <ul style="list-style-type: none"> • Starting temperature of fluid in system • Ambient temperature • Required performance, application's specifications • Run time

Optional Agency Approvals

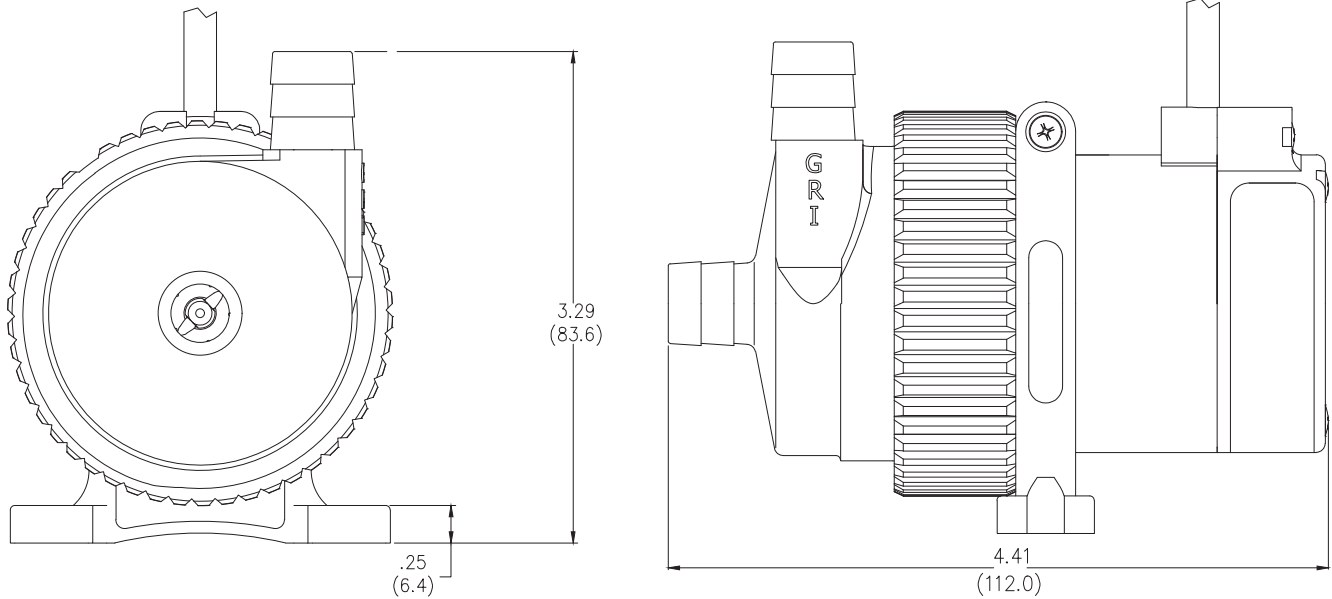
UL778: Motor-Operated Water Pumps
NSF 61: Potable Water
NSF372: Lead Content

RoHS/REACH

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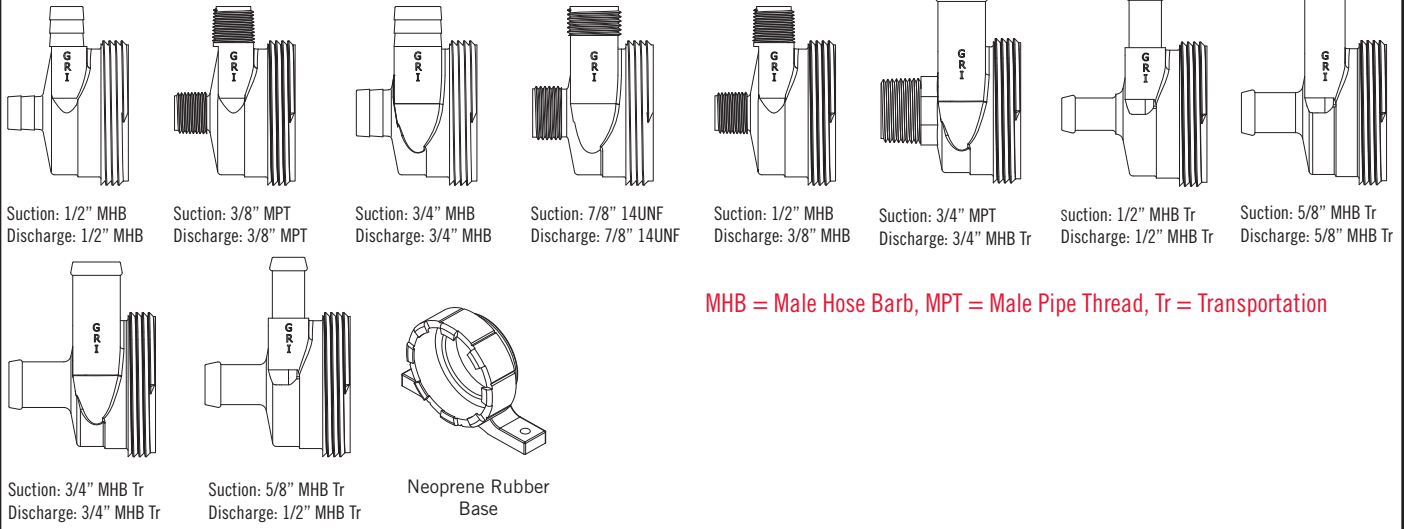
IP (Ingress Protection)

- IP6X:** No ingress of dust.
- IP66:** No ingress of dust, protection against powerful water jets.
- IP67:** No ingress of dust, protection against temporary water immersion.
- IP68:** No ingress of dust, protection against continuous water immersion.



INTG3 Series Typical Dimensional Drawing. Many other OEM port options and configurations are available. Please contact GRI to discuss.

Base Model Options



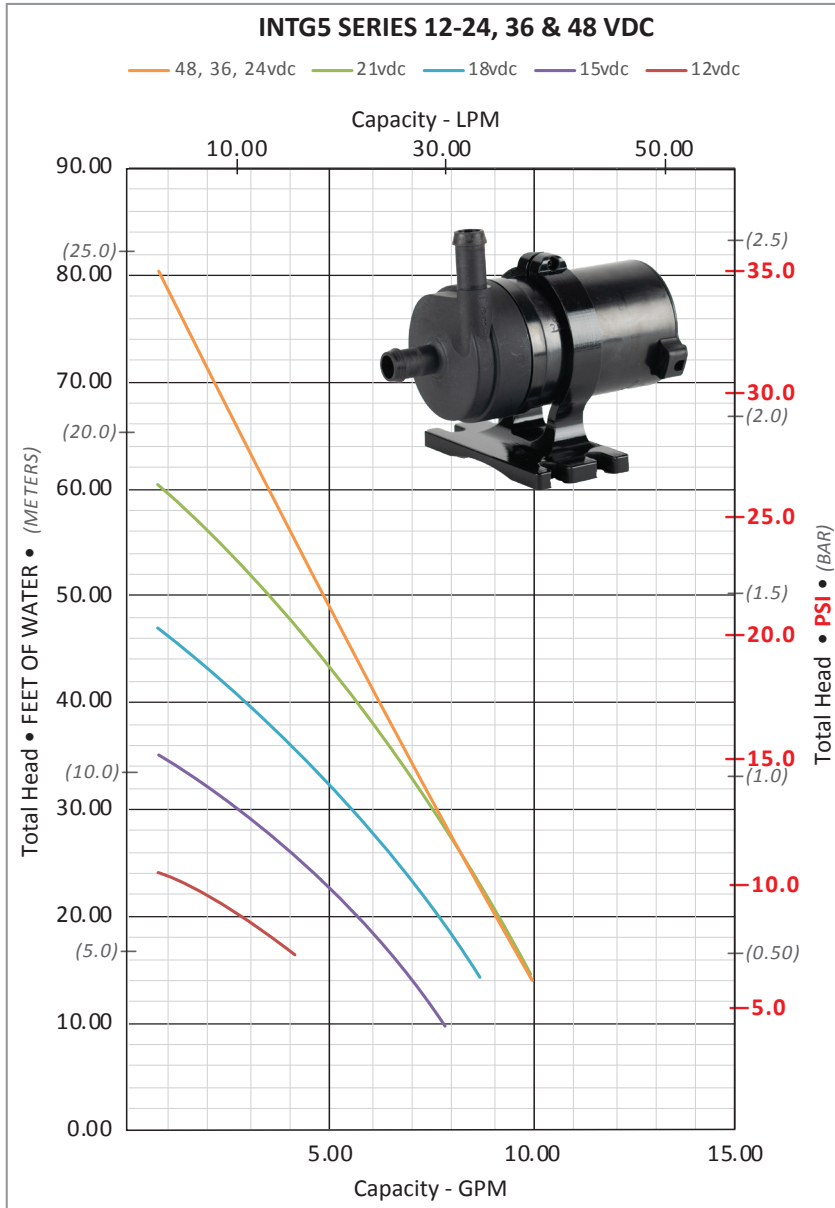
MHB = Male Hose Barb, MPT = Male Pipe Thread, Tr = Transportation

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INTG3 SERIES MODELS				Voltage	Max Flow GPM (LPM)	Max Head Ft. (PSI) (m)	Ports Inches
EPDM O-Ring		FKM O-Ring					
2 wire: DC (+), (-) AC (Line), (Neutral)	3 wire: (+), (-), Speed Control	2 wire: DC (+), (-) AC (Line), (Neutral)	3 wire: (+), (-), Speed Control				
INTG3-550	INTG3-552	INTG3-551	INTG3-553	12-24 VDC	8.85 (33.5)	32.00 (13.9) (17.7)	3/4 MHB
INTG3-560	INTG3-562	INTG3-561	INTG3-563		6.70 (25.4)	37.00 (16.0) (11.3)	1/2 MHB 3/8 MPT
INTG3-564	INTG3-566	INTG3-565	INTG3-567				
INTG3-860 AC	—	INTG3-861 AC	—	115 VAC 230 VAC	8.00 (30.5)	45.00 (19.5) (13.7)	1/2 MHB

Connectors: MHB = Male Hose Barb; MPT = Male Pipe Thread | O-Ring Material: EPDM = Ethylene Propylene Diene Monomer, FKM = Fluoroelastomer.

INTG5 Series • Maximum flow per voltage						
Voltage	Flow (GPM)	Flow (L)	Ttl. Hd. (Ft)	Ttl. Hd. (PSI)	Ttl. Hd. (BAR)	Ttl. Hd. (M)
24 36 48vdc	10.00	37.85	14.41	6.25	0.43	4.39
21vdc	9.97	37.73	14.48	6.28	0.43	4.41
18vdc	8.80	33.31	13.93	6.04	0.42	4.25
15vdc	7.87	29.79	9.63	4.18	0.29	2.94
12vdc	4.13	15.63	16.33	7.08	0.49	4.98



Note: Testing performed in a controlled laboratory environment. Actual performance may vary (+) or (-) 10% from the information shown.
Do Not Run Pumps Dry. Pumps must be in a continuous flooded suction environment.

Specifications
Maximum System Pressure: 75 psi
Approximate Weight (w/ external box): 3.2 LBS (1451.5 grams)
Ports: 1/2" MHBT, 3/4" MHB, 3/4" MPT, 7/8"-14 UNF OEM Customization Available

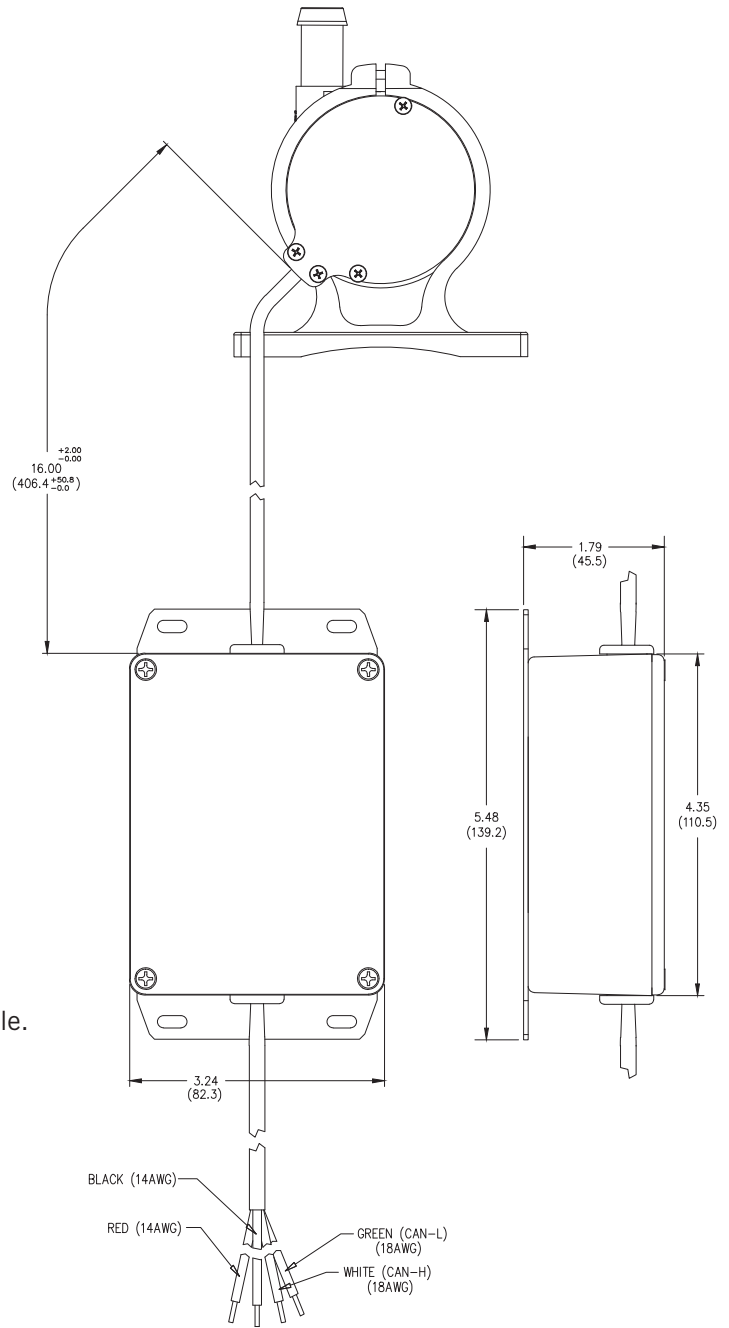
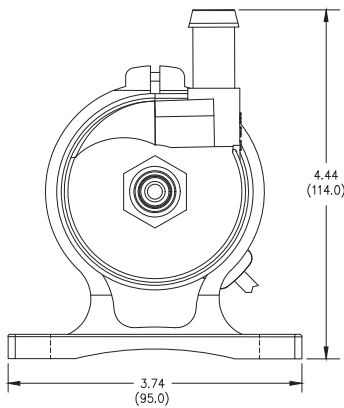
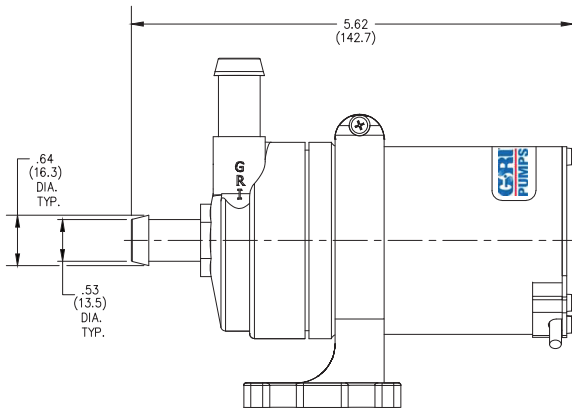
Motor specifications	
Motor: Integrated, Brushless DC	Control Options <ul style="list-style-type: none"> • Direct Supply Voltage: Speed of the pump determined by the voltage supplied • Analog: 0-5v DC Signal • Digital: PWM • CAN-Bus: Option available • Tachometer: Feedback option available
Supply Voltage: 12-24, 36, 48 VDC	
Electronics Maximum Power: 250 Watts <i>To protect the control board, each Integrity Series pump will be issued with a Maximum Power limit (Watts). To stay within this limit, the recommended fuse size (Amps) will be based on the voltage supplied. (Watts = Voltage X Amps)</i>	

Materials in contact with solution	
Body: PPS	Housing: PPS
Impeller: PPS	Pump Shaft: Ceramic

Maximum Fluid Rating Chart	
Controller Position	Maximum Fluid Temp Rating
Separate from pump	225°F (107°C)
Within pump's housing	149°F (65°C)
Various factors influence the recommended maximum temperature rating. These factors play a role in determining the pump's life and applied warranties. In some applications, a higher maximum fluid temperature rating may be warranted.	Factors influencing maximum temperature rating include, but are not limited to: <ul style="list-style-type: none"> • Starting temperature of fluid in system • Ambient temperature • Required performance, application's specifications • Run time

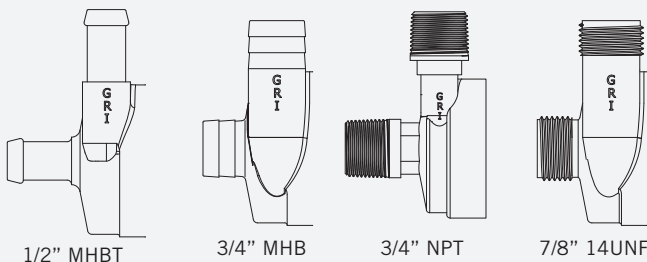
Optional Agency Approvals
Contact GRI
RoHS/REACH
Many GRI pumps are RoHS & REACH compliant. For declarations by specific model numbers, please contact GRI.

IP (Ingress Protection)
IP6X: No ingress of dust. (Pump & driver)
IP66: No ingress of dust, protection against powerful water jets. (Pump only)
IP67: No ingress of dust, protection against temporary water immersion. (Pump only)
IP68: No ingress of dust, protection against continuous water immersion. (Pump only)



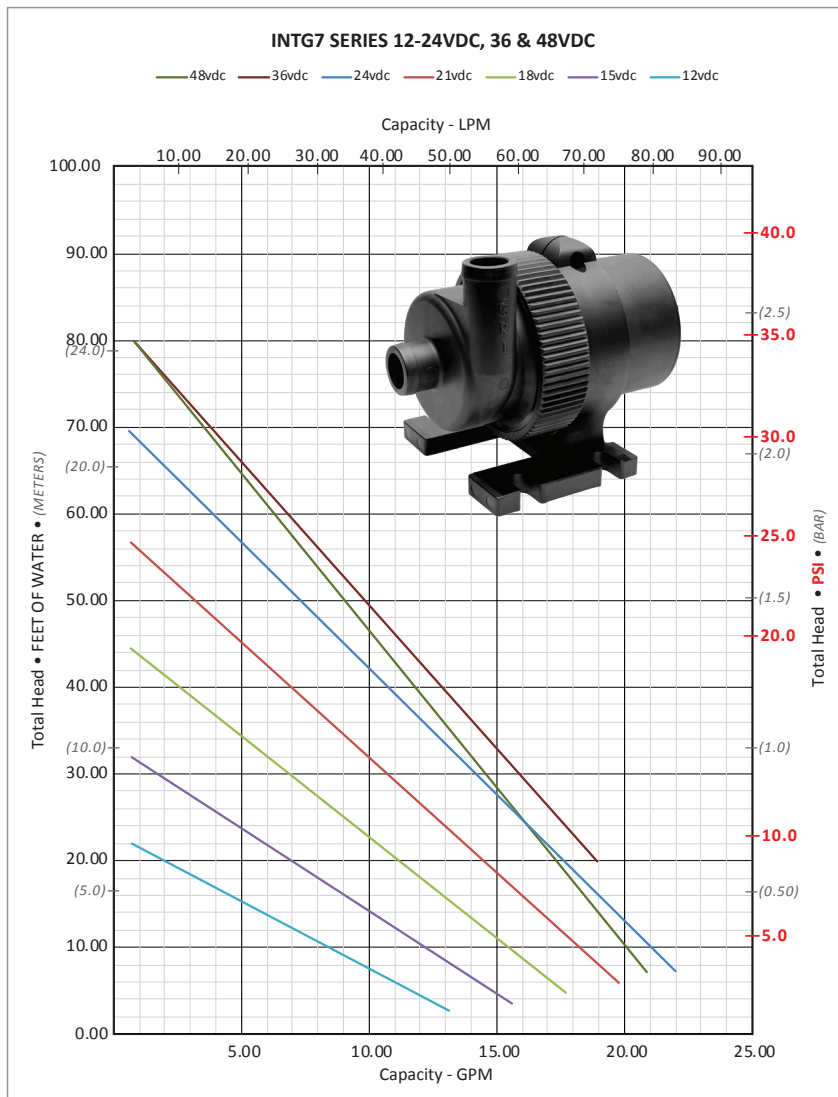
INTG5 Series Typical Dimensional Drawing.
 Many other OEM port options and configurations are available.
 Please contact GRI to discuss.

Port Options



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INTG7 Series • Maximum flow per voltage						
Voltage	Flow (GPM)	Flow (L)	Ttl. Hd. (Ft)	Ttl. Hd. (PSI)	Ttl. Hd. (BAR)	Ttl. Hd. (M)
48vdc	21.99	83.25	7.52	3.26	0.22	2.29
36vdc	18.98	71.85	19.80	8.58	0.59	6.04
24vdc	22.08	83.59	7.25	3.14	2.21	5.50
21vdc	19.81	75.00	5.76	2.50	1.76	4.14
18vdc	17.73	67.13	4.73	2.05	1.44	2.94
15vdc	15.58	58.96	3.55	1.54	1.08	7.01
12vdc	13.16	49.83	2.49	1.08	0.76	1.24



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

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

Specifications

Maximum System Pressure: 75 psi

Approximate Weight (w/ external box): 4.3 lbs (1950.45 grams)

Ports: 1" MHB

Materials In Contact With Solution

Body: PPS	Housing: PPS	Static O-Ring: EPDM, FKM
Impeller: PPS	Pump Shaft: Ceramic	

Motor Specifications

Motor: Integrated, Brushless DC

Supply Voltage: 12-24, 36, 48 VDC

Electronics Maximum Power: 300 Watts

To protect the control board, each Integrity Series pump will be issued with a Maximum Power limit (Watts). To stay within this limit, the recommended fuse size (Amps) will be based on the voltage supplied. (Watts = Voltage X Amps)

Control Options

- **Direct Supply Voltage:** Speed of the pump determined by the voltage supplied
- **Analog:** 0-5v DC Signal
- **Digital:** PWM
- **CAN-Bus:** Option available
- **Tachometer:** Feedback option available

Maximum Fluid Rating Chart

Controller Position	Maximum Fluid Temp Rating
Separate from pump	225°F (107°C)
Within pump's housing	Not Applicable

Various factors influence the recommended maximum temperature rating. These factors play a role in determining the pump's life and applied warranties. In some applications, a higher maximum fluid temperature rating may be warranted.

Factors influencing maximum temperature rating include, but are not limited to:

- Starting temperature of fluid in system
- Ambient temperature
- Required performance, application's specifications
- Run time

Optional Agency Approvals

Contact GRI

RoHS/REACH

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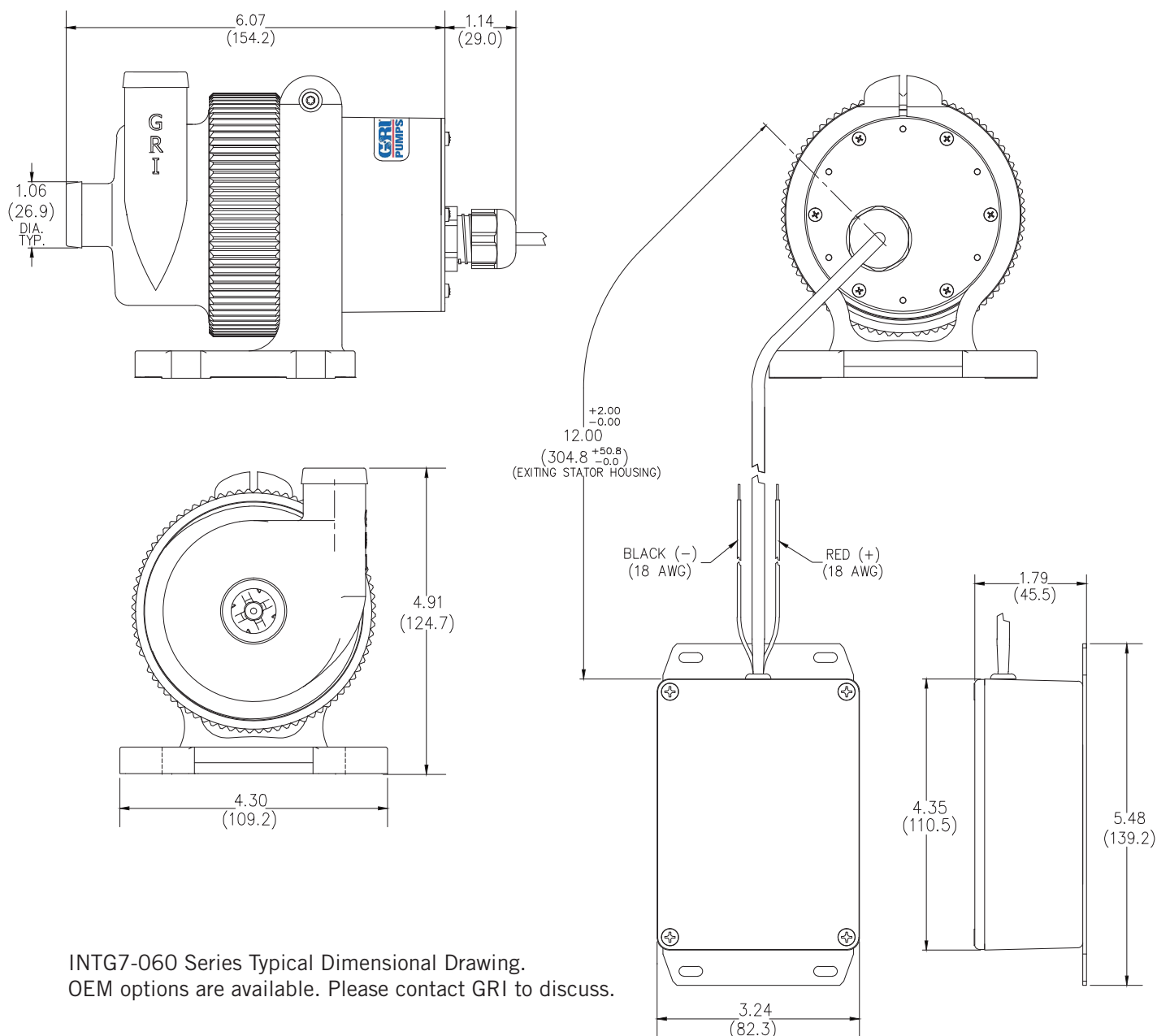
IP (Ingress Protection)

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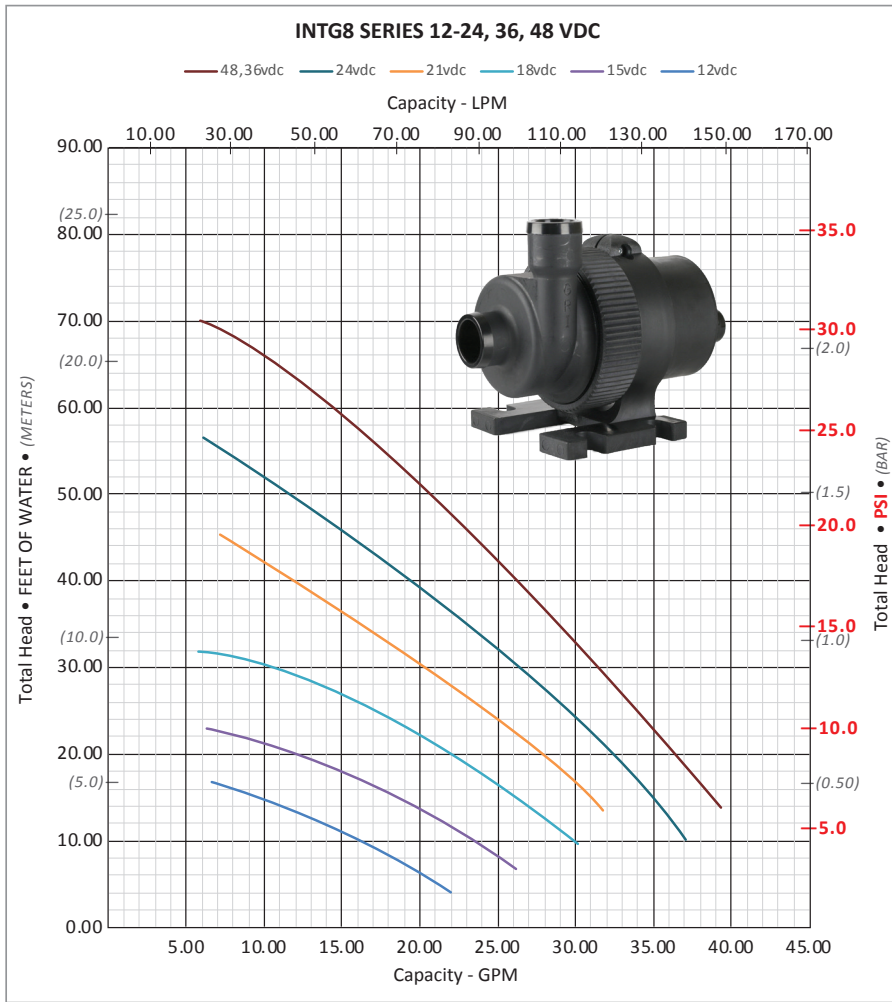
INTG7-060 Series Typical Dimensional Drawing.
OEM options are available. Please contact GRI to discuss.

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INTG7 SERIES MODELS						Ports Inches	Max Flow GPM (LPM)	Max Head Ft. (PSI) (m)	Voltage (VDC)
EPDM O-Ring		FKM O-Ring							
2 wire: (+), (-)	3 wire: (+), (-), 0-5v	4 wire: (+), (-), PWM, Tach	2 wire: (+), (-)	3 wire: (+), (-), 0-5v	4 wire: (+), (-), PWM, Tach				
INTG7-060	INTG7-062		INTG7-061	INTG7-063		1" MHB	22.0 (83.3)	70.0 (30.3) (21.3)	12-24
		INTG7-064			INTG7-065	1" MHB	20.00 (78.00)	71.0 (30.8) (21.6)	24.0

Connectors: MHB = Male Hose Barb; | O-Ring Material: EPDM = Ethylene Propylene Diene Monomer, FKM = Fluoroelastomer.

INTG8 Series • Maximum flow per voltage						
Voltage	Flow (GPM)	Flow (L)	Ttl. Hd. (Ft)	Ttl. Hd. (PSI)	Ttl. Hd. (BAR)	Ttl. Hd. (M)
48 36vdc	39.29	148.74	13.84	6.00	0.41	4.22
24vdc	37.41	141.62	9.95	4.31	0.30	3.03
21vdc	31.77	120.27	13.58	5.89	0.41	4.14
18vdc	30.12	114.00	9.64	4.18	0.29	2.94
15vdc	26.20	99.19	6.70	2.90	0.20	2.04
12vdc	21.97	83.17	4.07	1.76	0.12	1.24



Specifications
Maximum System Pressure: 75 psi
Approximate Weight (w/ external box): 5.1 lbs (2313.32 grams)
Ports: 1.25" MHB

Materials In Contact With Solution		
Body: PPS	Housing: PPS	Static O-Ring: EPDM, FKM
Impeller: PPS	Pump Shaft: Ceramic	

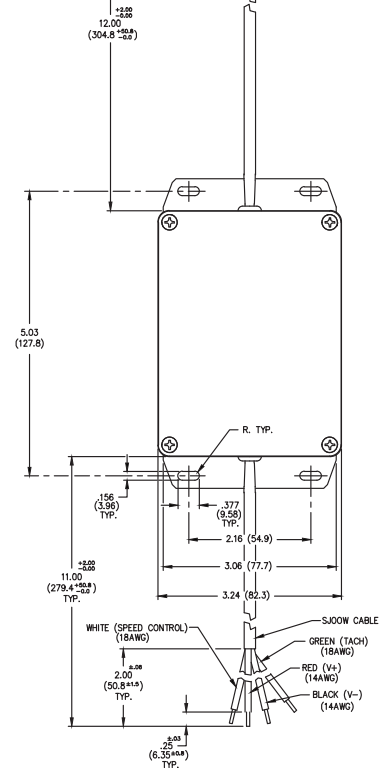
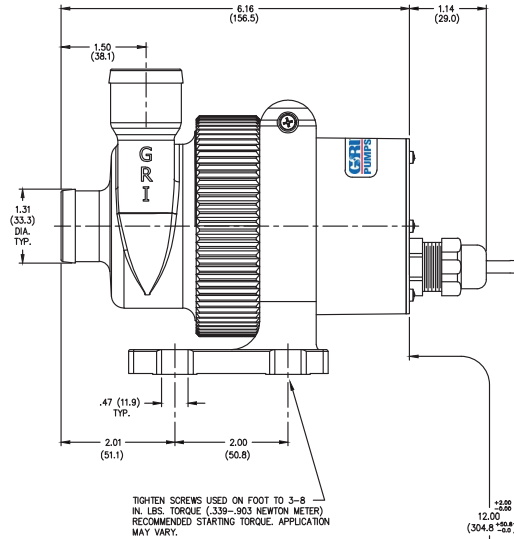
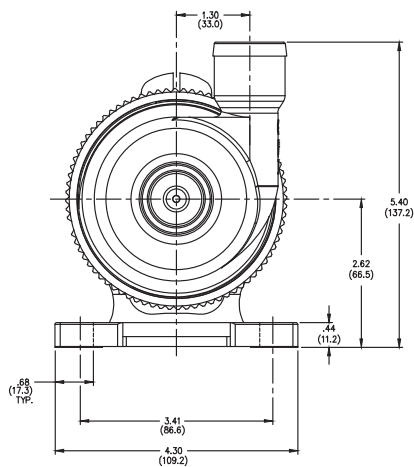
Motor Specifications	
Motor: Integrated, Brushless DC	Control Options
Supply Voltage: 12-24, 36, 48 VDC	<ul style="list-style-type: none"> • Direct Supply Voltage: Speed of the pump determined by the voltage supplied • Analog: 0-5v DC signal • Digital: PWM • CAN-Bus: Option available • Tachometer: Feedback option available
Electronics Maximum Power: 600 Watts	
<p>To protect the control board, each Integrity Series pump will be issued with a Maximum Power limit (Watts). To stay within this limit, the recommended fuse size (Amps) will be based on the voltage supplied. (Watts = Voltage X Amps)</p>	

Maximum Fluid Rating Chart	
Controller Position	Maximum Fluid Temp Rating
Separate from pump	225°F (107°C)
Within pump's housing	Not Applicable
<p>Various factors influence the recommended maximum temperature rating. These factors play a role in determining the pump's life and applied warranties. In some applications, a higher maximum fluid temperature rating may be warranted.</p>	
<p>Factors influencing maximum temperature rating include, but are not limited to:</p> <ul style="list-style-type: none"> • Starting temperature of fluid in system • Ambient temperature • Required performance, application's specifications • Run time 	

Available Agency Approvals
Contact GRI
RoHS/REACH
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INTG8 Series Typical Dimensional Drawing.
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Model	Voltage (VDC)	Speed Control	Lead Wires	Max. Flow GPM (LPM)	Max. Head Feet (PSI)	Connections Inlet/Outlet (Inches)	O-Ring Material
INTG8-242	12-24	Direct	2 wires (+), (-)	34.0 (130.0)	53.7 (23.0)	1.25 MHB	EPDM
INTG8-244	24.0	PWM / Analog (0-5v Nominal)	4 wires (+), (-), Speed Control, Tach	34.0 (130.0)	58.0 (25.0)	1.25 MHB	EPDM
INTG8-482	36, 48	Direct	2 wires (+), (-)	38.0 (146.0)	69.0 (30.0)	1.25 MHB	EPDM
INTG8-484	48.0	PWM / Analog (0-5v Nominal)	4 wires (+), (-), Speed Control, Tach	38.0 (146.0)	75.0 (32.5)	1.25 MHB	EPDM

Connectors: MHB = Male Hose Barb | O-Ring Material: EPDM = Ethylene Propylene Diene Monomer, FKM = Fluoroelastomer (Available on request)