

Tuned for performance, stability and longevity.







### Welcome to Gorman-Rupp Industries, home of "The Pump People!"

Thank you for considering Gorman-Rupp Industries and our Integrity Series Circulation Pumps.

**Since 1953,** GRI has served OEMs worldwide with custom-engineered pumps. When an off-the-shelf pump will not satisfy your pumping requirements, count on GRI Pumps to design a pump specific to your OEM application.

**Quality begins at home.** Located 10 miles south of Gorman-Rupp's corporate headquarters, the Gorman-Rupp Industries (GRI) division continues the legacy and unmatched quality that Gorman-Rupp has been known for since its founding by J.C. Gorman and Herb Rupp in 1933.

**Made in the U.S.A.** GRI designs and manufactures all products in our Bellville, Ohio, 98,000 square foot facility. Our vertical manufacturing combined with 92% of our suppliers residing in the U.S. allows GRI to proudly claim, "Made in the U.S.A!"

Our Pump Teams welcome the opportunity to discuss and answer any questions regarding your fluid pump opportunity. You can contact GRI through a phone call, email, or our website.

**Call:** 419-886-3001 (We answer the phone!)

**Email:** grisales@gripumps.com

**Online:** www.GRIpumps.com/contact



### MARKETS AND APPLICATIONS

GRI collaborates with OEM engineers who are unable to fulfill their unique pump specifications with an off-the-shelf solution and require a custom-engineered pump specific to their application.



#### **Alternative Energy**

Prepared for the technological challenges with energy efficient pumping solutions.



#### **Appliances**

Long lasting, highly efficient, chemically resistant fluid circulation and metering pumps.



#### Chillers & Coolers

Leak-free, long-life, quiet operation and low power consumption.



#### Food & Beverage

Efficient, quiet, long-lasting, compact, NSF and FDA compliant pumps and components.



#### **General Industrial**

Designed to handle harsh fluids and chemicals in demanding highpressure applications.



#### HVAC

Compact, quiet, leak-free, and energy efficient designs.



#### **Laboratory & Analytical Instrumentation**

Accurate, leak-free, chemically resistant OEM pumps.



#### Medical

Custom OEM pumps with accurate, chemically resistant, contamination-free designs.



#### **Printing & Image Reproduction**

Long lasting, leak-free, and accurate metering capabilities.



#### **Server & Electronics Cooling**

Leak-free, long-lasting, efficient pumps trusted around the world to safely pump fluid in critical applications.



#### **Transportation**

Compact, lightweight, long-lasting, hydraulically efficient OEM pumps.





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, 115/230 VAC 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



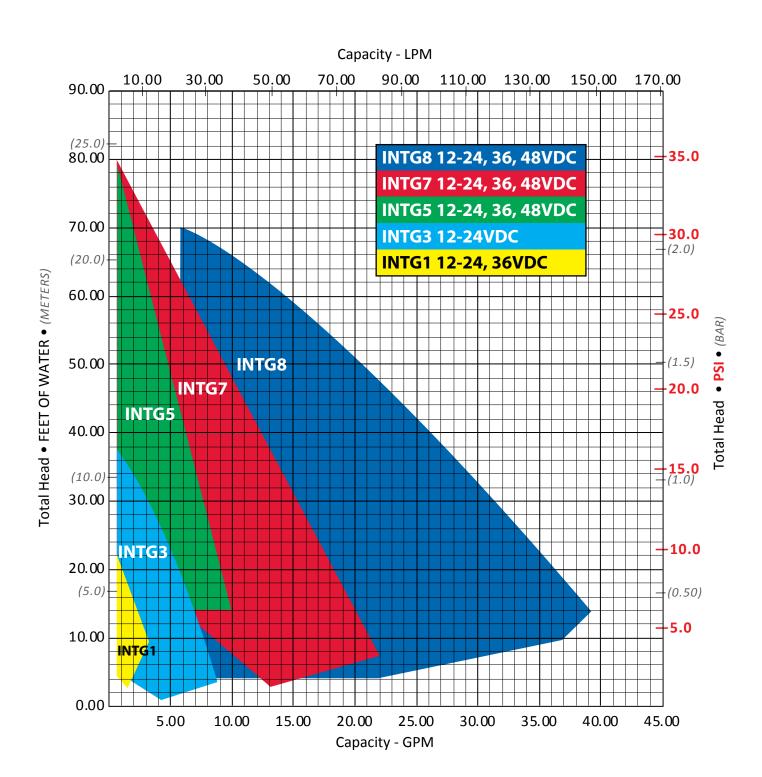
**INTG8 Brushless-DC Magnetic Drive** 

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

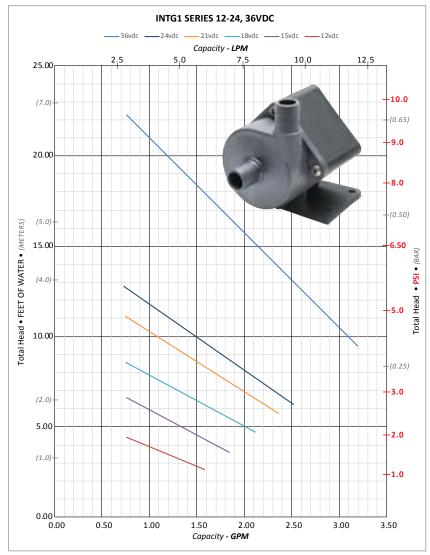


To protect the control board, each Integrity Series pump will be issued with a Maximum Power limit (Watts).

To stay within this limit, the recommended fuse size (Amps) will be based on the voltage supplied. (Watts = Voltage X Amps)



INTG1 Series • Maxim	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	

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**

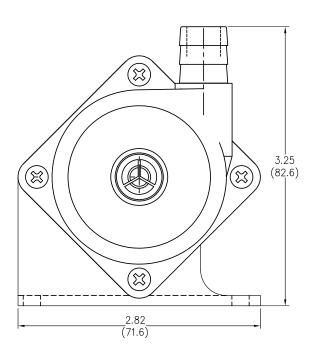
- **Direct Supply Voltage:** Speed of the pump determined by the voltage supplied
- Analog: 0-5v DC signal
- Tachometer: Feedback option available

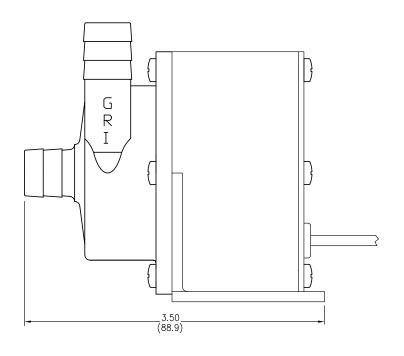
Maximum Fluid Rating Chart				
Controller Position	Maximum Fluid Temp Rating			
Separate from pump	Not Available			
Within pump's housing	149°F (65°C)			
Various factors influence the recommended maximum temperature rating. These factors play a role in determining the pump's life and applied warranties. In some applications, a higher maximum fluid temperature rating may be warranted.	Factors influencing maximum temperature rating include, but are not limited to:  • Starting temperature of fluid in system  • Ambient temperature  • Required performance, application's specifications  • Run time			

Optional Agency Approvals	RoHS/REACH
UL778: Motor-Operated Water Pumps NSF 61: Potable Water (1/2" only) NSF 169: Food Grade	Many GRI pumps are RoHS & REACH compliant. For declarations by specific model
NSF372: Lead Content (1/2" only)	numbers, please contact GRI.
IP (Ingress Protection)	

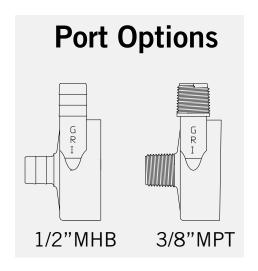
**IP68:** No ingress of dust, protection against continuous water immersion.







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



	INTG1 SER						
	EPDM O-Ring FKM O-Ring		FKM O-Ring		Max Flow GPM (LPM)	Max Head Ft. (PSI) (m)	<b>Voltage</b> (VDC)
2 wire: (+), (-)	3 wire:(+), (-), Speed Control	2 wire: (+), (-)	3 wire: (+), (-), Speed Control		CI III (LI III)	(i oi) (iii)	(100)
INTG1S-280	INTG1S-380	INTG1S-281	INTG1S-381	1/2" MHB	2 50 (0 50)	12.80	10.04
INTG1S-284	INTG1S-384	INTG1S-285	INTG1S-385	3/8" MPT	2.50 (9.50)	(5.5) (3.90)	12-24
Connectors: MHI	B = Male Hose Barb: MPT = Male F	Pipe Thread   <b>O-R</b>	ling Material: EPDM = Ethylene Pro	pylene Diene Monom	er. FKM = Fluoroelas	tomer.	



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:		
Impeller: PPS	Pump Shaft: Ceramic	EPDM, FKM		

			EDDIA EVA
Impeller: PPS	Pump Shaft: Co		EPDM, FKM
Motor Specifications			
Motor: Integrated, Brus	hless DC	Contro	l Options
Supply Voltage:  • 12-24 VDC  • 115, 230 VAC (auto s technology), Optiona quantities.	<ul> <li>Direct Supply Voltage:         Speed of the pump determined by the voltage supplied         Analog: 0-5v DC signal         Digital: PWM     </li> </ul>		
Electronics Maximum P To protect the control be tegrity Series pump will a Maximum Power limit within this limit, the rec fuse size (Amps) will be voltage supplied. (Watts = Voltage X Amps	• Tacl	tai: rww hometer: Feedback on available	

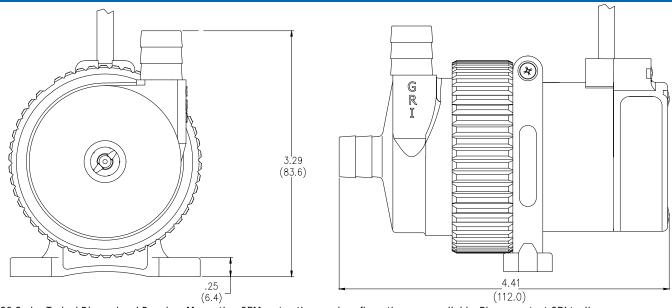
Maximum Fluid Rating Chart				
Controller Position	Maximum Fluid Temp Rating			
Separate from pump	221°F (105°C)			
Within pump's housing	149°F (65°C)			
Various factors influence the recommended maximum temperature rating. These factors play a role in determining the pump's life and applied warranties. In some applications, a higher maximum fluid temperature rating may be warranted.	Factors influencing maximum temperature rating include, but are not limited to:  • Starting temperature of fluid in system  • Ambient temperature  • Required performance, application's specifications  • Run time			

	- Kull tillic			
Optional Agency Approvals	RoHS/REACH			
UL778: Motor-Operated Water Pumps NSF 61: Potable Water NSF372: Lead Content	Many GRI pumps are RoHS & REACH compliant. For declarations by specific model numbers, please contact GRI.			
IP (Ingress Protection)				
IP68: No ingress of dust, protection against continuous water immer				

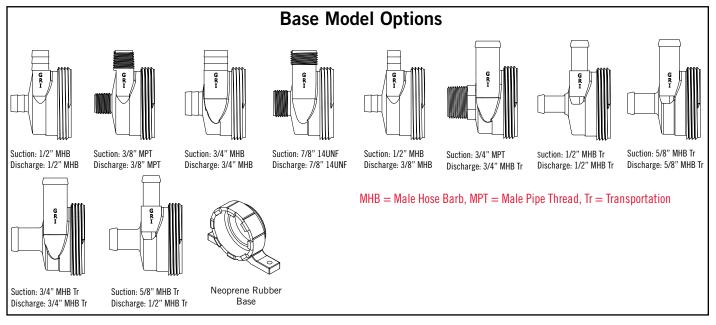
### INTG 3

### GRIpumps.com





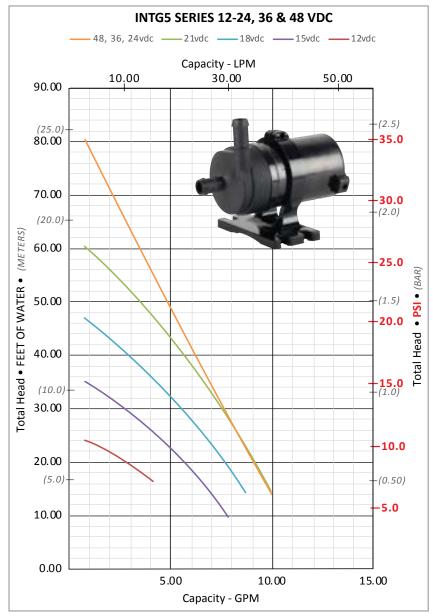
INTG3 Series Typical Dimensional Drawing. Many other OEM port options and configurations are available. Please contact GRI to discuss.



INTG3 SERIES MODELS							
EI	PDM O-Ring	F	KM O-Ring		Max Flow	Max Head Ft.	
2 wire: DC (+), (-) AC (Line), (Neutral)	<b>3 wire:</b> (+), (-), Speed Control	2 wire: DC (+), (-) AC (Line), (Neutral)	<b>3 wire:</b> (+), (-), Speed Control	Voltage	GPM (LPM)	(PSI) (m)	Ports Inches
INTG3-550	INTG3-552	INTG3-551	INTG3-553		8.85 (33.5)	32.00 (13.9) (17.7)	3/4 MHB
INTG3-560	INTG3-562	INTG3-561	INTG3-563	12-24 VDC	6.70	37.00	1/2 MHB
INTG3-564	INTG3-566	INTG3-565	INTG3-567		(25.4)	(16.0) (11.3)	3/8 MPT
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 Ma	aterial: EPDM = Ethylene Propylen	e Diene Monomer, f	FKM = Fluoroelastor	ner.	



INTG5 Series • Maxin	INTG5 Series • Maximum flow per voltage							
Voltage	Flow (GPM)	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

**Supply Voltage: 12-24, 36, 48 VDC** 

### **Electronics Maximum Power:** 250 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

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	221°F (105°C)						
Within pump's housing	Not available						
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**

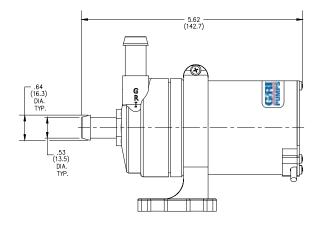
Contact GRI

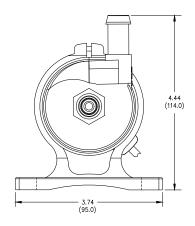
#### RoHS/REACH

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

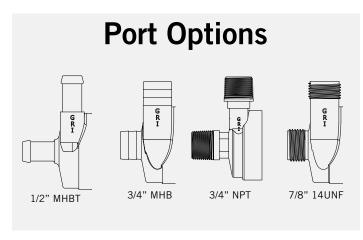
#### **IP (Ingress Protection)**

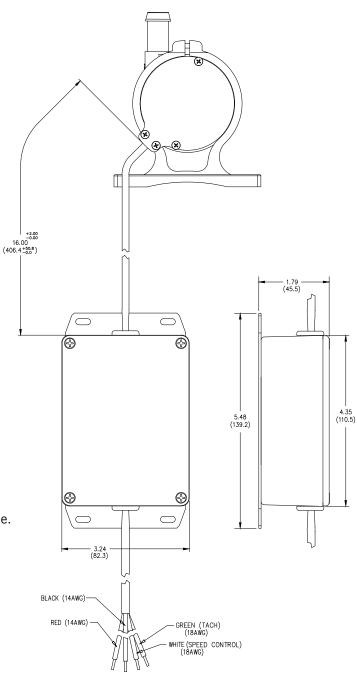
IP68: No ingress of dust, protection against continuous water immersion. (Pump only)





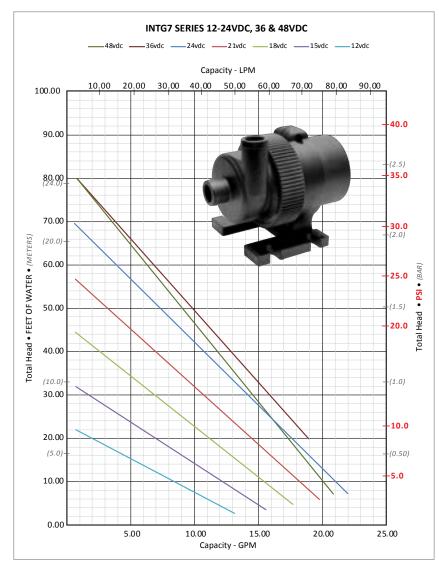
INTG5 Series Typical Dimensional Drawing. Many other OEM port options and configurations are available. Please contact GRI to discuss.







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:						
Impeller: PPS	Pump Shaft: Ceramic	EPDM, FKM					

#### **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**

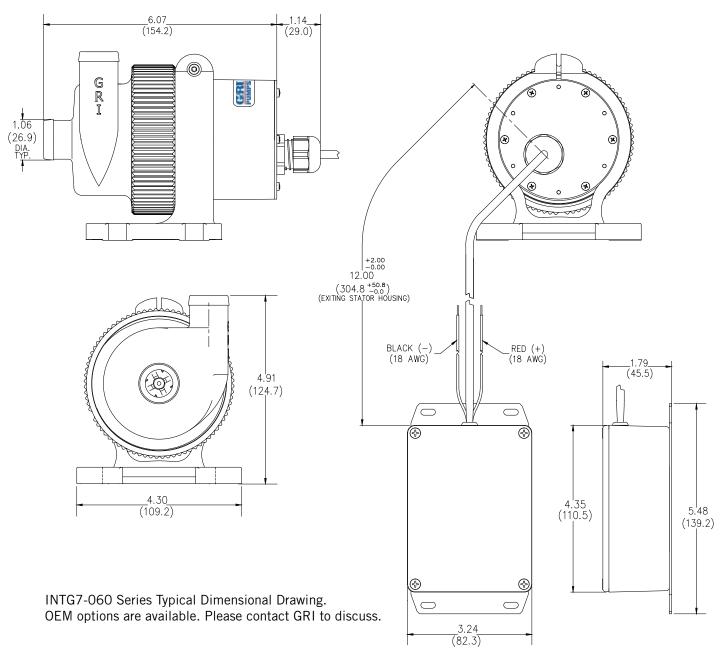
- Direct Supply Voltage: Speed of the pump determined by the voltage supplied
- Analog: 0-5v DC Signal
- Digital: PWM
- CAN-Bus: Option available
- Tachometer: Feedback option available

Maximum Fluid Rating Chart							
Controller Position	Maximum Fluid Temp Rating						
Separate from pump	221°F (105°C)						
Within pump's housing	Not available						
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	RoHS/REACH
Contact GRI	Many GRI pumps are RoHS & REACH compliant. For declarations by specific model numbers, please contact GRI.
IP (Ingress Protection)	numbers, please contact G

**IP68:** No ingress of dust, protection against continuous water immersion. (Pump Only)

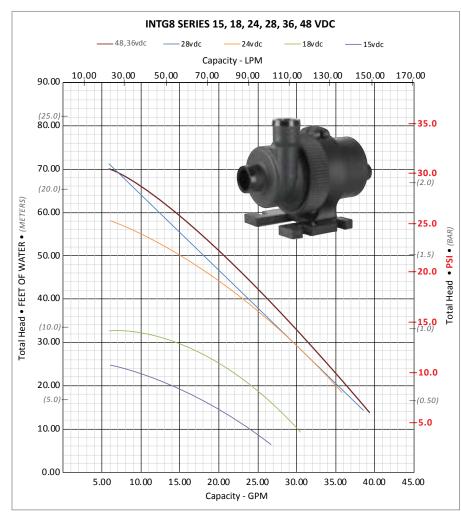




Model (0-RING)	<b>Voltage</b> (VDC)	Speed Control	Lead Wires	Max Flow GPM (LPM)	Max Head Ft. (PSI) (m)	Connections Inlet/ Outlet (Inches)
INTG7-060 (EPDM) INTG7-061 (FKM)	12-24	Direct	2 wires (+), (-)	22.0 (83.3)	70.0 (30.3) (21.3)	1" MHB
INTG7-062 (EPDM) INTG7-063 (FKM)	YA LANALOG		3 wires (+), (-), Speed Control	22.0 (83.3)	70.0 (30.3) (21.3)	1" MHB
INTG7-064 (EPDM) INTG7-065 (FKM)	24	PWM or Analog (0-5v Nominal)	4 wires (+), (-), Speed Control, Tach	20.00 (78.00)	71.0 (30.8) (21.6)	1" MHB
Connectors: MHB = Male Hose Barb   O-Ring Material: EPDM = Ethylene Propylene Diene Monomer, FKM = Fluoroelastomer (Available on request)						



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	
28vdc	39.00	146.0	14.19	6.50	0.42	4.32	
24vdc	36.00	136.0	18.0	7.76	0.54	5.46	
18vdc	31.00	116.0	9.00	3.90	0.27	2.75	
15vdc	27.00	101.0	6.36	2.76	0.19	1.94	



**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:				
Impeller: PPS	Pump Shaft: Ceramic	EPDM, FKM				

### **Motor Specifications**

Motor: Integrated, Brushless

**Supply Voltage: 12-24, 36, 48 VDC** 

### **Electronics Maximum Power:**

390 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: J1939 Contact
- Tachometer: Feedback option available

	Maximum Fluid Rating Chart						
	Controller Position	Maximum Fluid Temp Rating					
	Separate from pump	221°F (105°C)					
	Within pump's housing	Not available					
	Various factors influence the rec- ommended maximum temperature rating. These factors play a role in determining the pump's life and ap- plied warranties. In some applica- tions, a higher maximum fluid tem- perature 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					

#### 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.

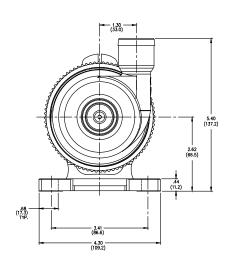
#### **Available Agency Approvals**

**UL778**: Motor-Operated Water Pumps SAE J1455: Contact GRI

#### RoHS/REACH

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





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DISCUSS.

5.03 (127.8)

INTG8 Series Typical Dimensional Drawing.
OEM options are available. Please contact GRI to discuss.

Model	Voltage (VDC)	Speed Control	Lead Wires	<b>Max. Flow</b> GPM (LPM)	<b>Max. Head</b> Feet (PSI)	Connections Inlet/ Outlet (Inches)	0-Ring Material	
INTG8-242	15-28	Direct	2 wires (+), (-)	39.0 (146.0)	77.0 (33.0)	1.25 MHB	EPDM	
INTG8-244	24.0	PWM / Analog (0-5v Nominal)	4 wires (+), (-), Speed Control, Tach	36.0 (136.0)	59.0 (26.0)	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: N	MHB = Male Hose Barb   <b>O-Ring Material:</b> EPDM = Ethylene Propylene Diene Monomer, FKM = Fluoroelastomer (Available on request)							

### **International Sales**



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### **Sales & Marketing Support**



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