

iMAG 4700 Series

FLANGED MAGMETER



iMAG 4700



iMAG 4700 200/300



iMAG 4700p



iMAG 4700r
(Remote Display)

THE RIGHT METER FOR
Water & Wastewater Treatment
Municipal
Pump skids
Pump stations
Packaged plants
Filtration systems
Reclaimed water
Hydraulic fracturing

Features

- Easy setup
- Minimal straight pipe
- Mounted or remote display
- Tamper-evident seal
- Certified to NSF/ANSI standard 61
- IP68 rated
- No moving parts
- Telemetry ready for wireless meter reading. Solutions available now by our sister company **SIGNALFIRE** WIRELESS TELEMETRY

The **iMAG-Series** is the most economical flanged electromagnetic flowmeter on the market. With electrodes designed to discourage fouling, it is available in 2" to 12" pipe in municipal or industrial water, waste and reclaimed water, pump stations, and packaged plant applications. Minimal straight pipe requirements allow iMAG-Series meters to be used in piping configurations where there is little space between the meter and an elbow.

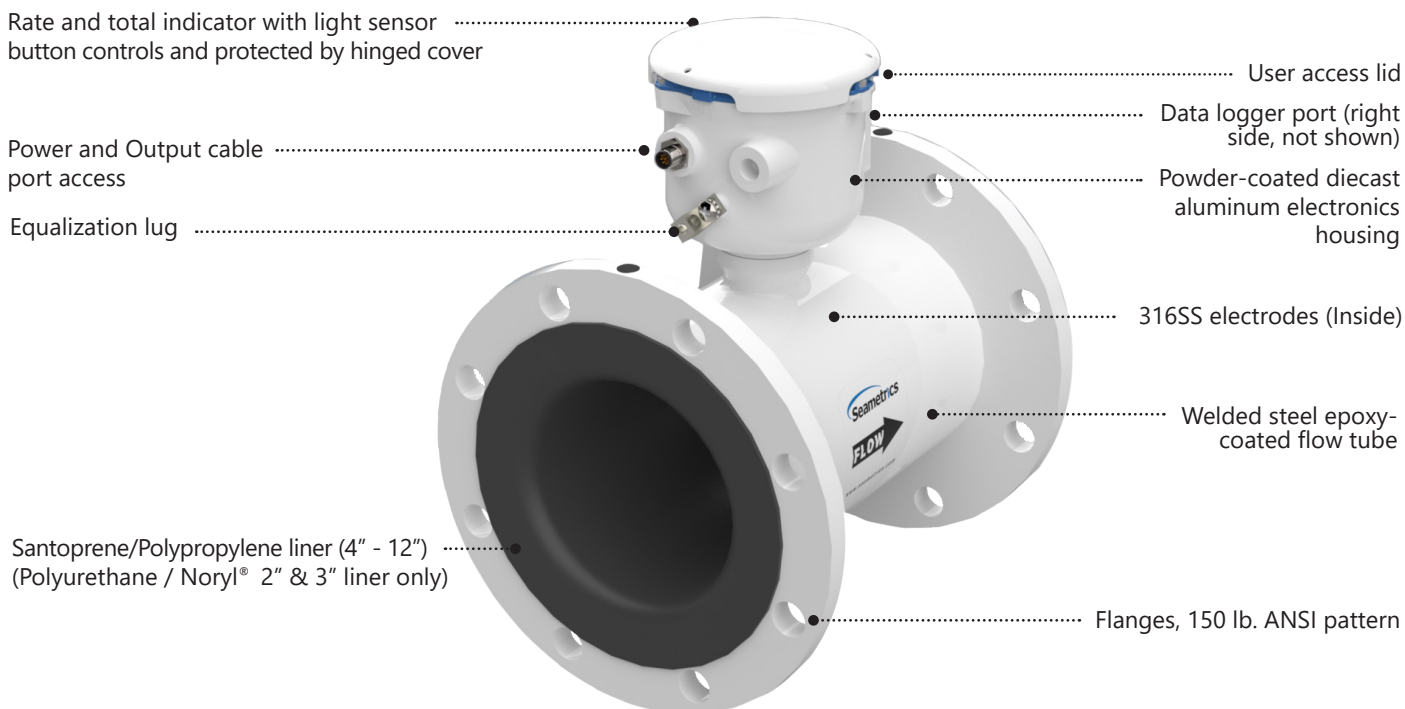
iMAG-Series meters are CE certified, certified to NSF/ANSI standard 61 and are rated IP68 for applications where the meter may be operated under water to a depth of at least 10 feet (3 meters) continuously.

The display can be meter mounted or remote, and both rate and total indication are standard. Rate and total units and pulse scaling can be set via the front panel touch key pad by the user. Bidirectional flow reading is standard with totals available in forward, reverse, net flow, batch forward flow, and batch reverse flow. Built-in data logging is available as an option for secure flow logging.

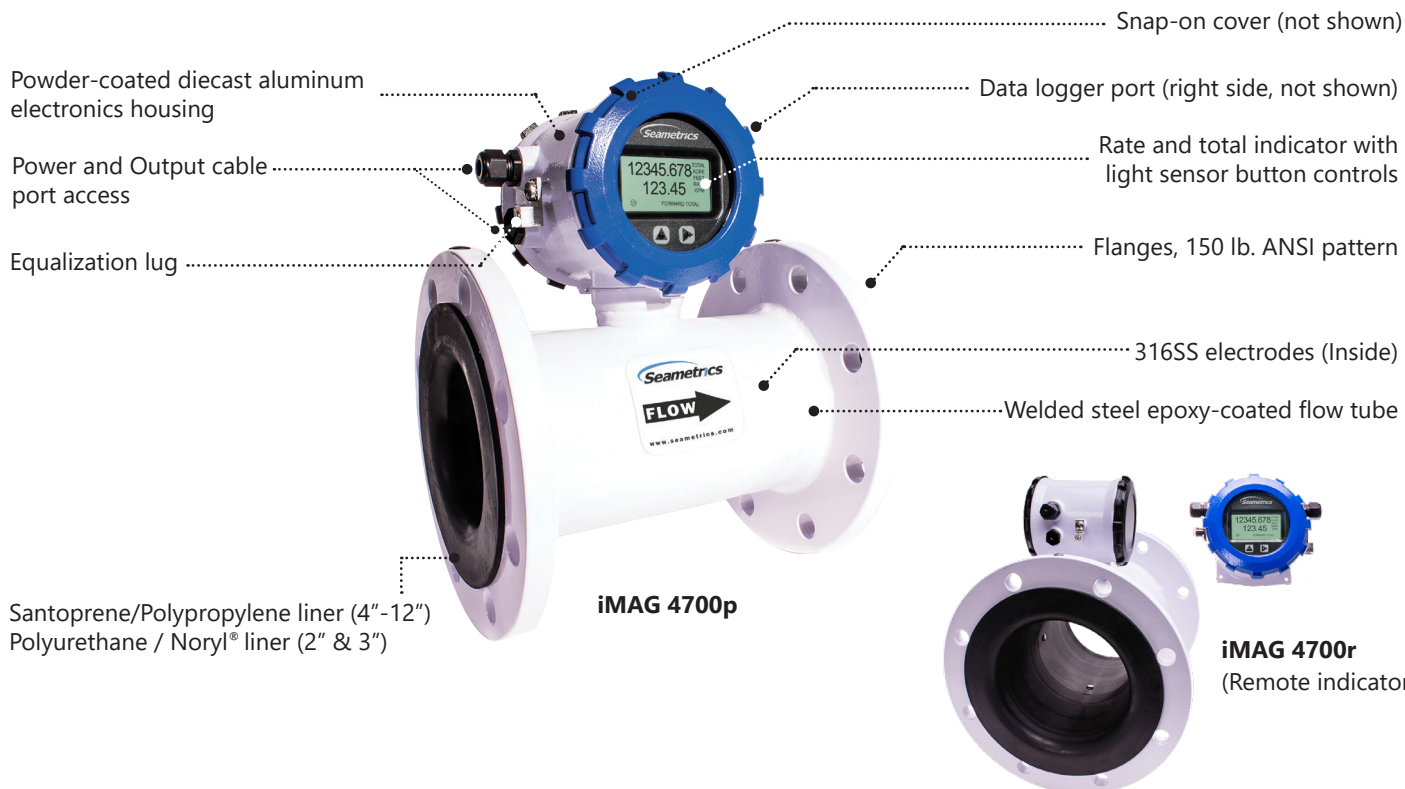
The iMAG 4700 is also available in either AC or DC powered versions, with battery backup. Pulse output is standard on all models, while 4-20mA passive current loop is also standard on the iMAG 4700p. 4-20mA loop is optional on the iMAG 4700 and iMAG 4700r externally powered meters and Modbus® protocol outputs are optional on all models although battery life will be reduced if ordered on battery powered units. A power/output cable allows outputs for use with a variety of Seametrics displays and other controls for remote reading and telemetry applications.

Contact Your Supplier

Features



iMAG 4700



Features



Built-in Data Logger (*Optional*)

Bidirectional Flow Reading (*Standard*)

Pulse Scaled Output (*Standard*)

4-20mA Output (*Optional**)

Modbus® Protocol Output (*Optional**)

High Speed Digital Output (*Optional**)

Battery Power (*iMAG 4700 battery model only*)

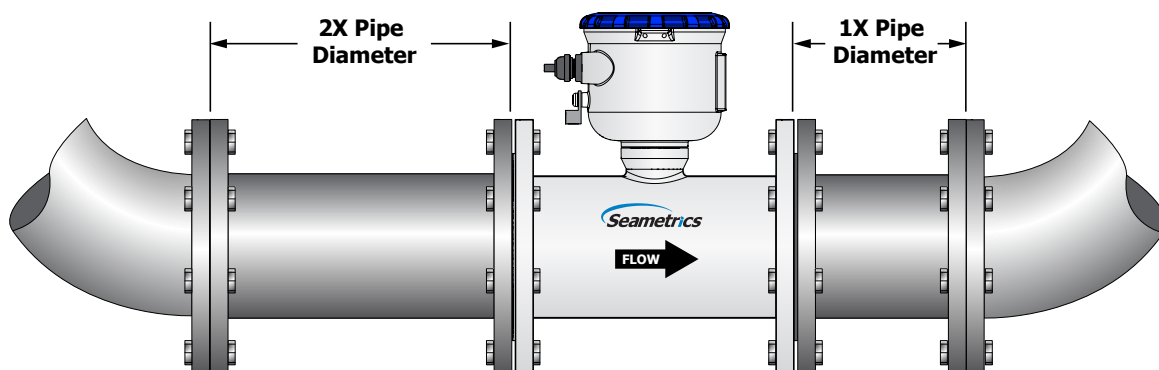
External DC Power (*Optional**)

Integrated AC Power Supply (*Optional**)

Remote Display (*iMAG 4700r*)

Quickly and easily change Total Volume Units, Flow Rate Units, Pulse Output Scaling, and many other settings using the two light sensor button controls on the display panel.

** Some optional items only available on some configurations. See last page for further details.*



Minimal straight pipe requirements to ease installation in tight quarters.

Specifications

Pipe Sizes		2", 3", 4", 6", 8", 10", 12"					
Flanges		150 lb. ANSI Pattern					
Pressure		150 psi (10.3 bar) line pressure					
Temperature	Operating	10° to 140° F (-12° to 60° C)					
	Storage	-40° to 158° F (-40° to 70° C)					
Accuracy		±0.75% of reading on iMAG 4700p and 4700r (±1.0% iMAG 4700), ±0.025% of full-scale flow from low flow cutoff to maxi. flow rate of 10 m/sec					
Low Flow Cutoff		0.5% of maximum flow rate					
Material	Body (2"-12")	Welded steel, epoxy-coated					
	Liner (2" & 3")	Polyurethane/Noryl®					
	Liner (4"-12")	Santoprene flange/Polypropylene liner body					
	Electronics Housing	Powder-coated diecast aluminum					
	Electrodes	316 stainless steel					
Display	Type	128x64 dot-matrix LCD					
	Digits	5 Digit Rate				8 Digit Total	
	Units	Rate Volume Units		Rate Time Units	Total Volume Units		
	<i>Please Note: All iMAG meters are factory set for gallons per minute (GPM) rate and gallons total. If other units are required, they can be set in the field.</i>	Gallons	Million Gallons ²	Second	Gallons	Barrels (42 gal)	Acre Feet
		Liters	Mega Liters ²	Minute	Gallons x 10	Cubic Meters	Acre Inches
		Barrels(42 gal)	Imperial Gallons	Hour	Gallons x 100	Cubic Meters x 1000	Imperial Gallons
		Cubic Feet	Million Imperial Gallons ²	Day	Gallons x 1000	Cubic Feet	Imperial Gallons
Cubic Meters				Million Gallons	Cubic Feet x 100	x 1000	
			Liters	Cubic Feet x 1000	Million Imperial		
			Kilo Liters	Second Foot Day	Gallons		
			Mega Liters	Million Cubic Feet	Fluid Ounces		
Bidirectional ¹		Forward Total, Reverse Total, Net Total, Batch Forward Total, Batch Reverse Total ³					
Power	DC Power	9-36 Vdc @ 250 mA max, 30 mA average					
	Battery Backup (Not for use as primary power)	DC powered units: One lithium 7.2V 'D' size battery pack, replaceable. AC powered units: One 9V alkaline battery, replaceable.					
	AC Power	85-264Vac, 50/60Hz, 0.12A (iMAG 4700r and 4700p only)					
	Battery	One lithium 7.2V 'D' size battery pack, replaceable. (iMAG 4700 only)					
Scaled Pulse Output	Signal	Current sinking pulse, isolated, 36 Vdc at 10 mA max					
	Pulse Rates	User-scalable from 0.1 to 99,999.9 volume units/pulse. Pulse width is one-half of pulse period with minimum pulse width of 2.5 ms, 200 pulses/sec max. For battery option meters, pulse width varies with frequency, 150 pulses/sec max.					
Options	4-20mA Current Loop	Isolated, passive, 24Vdc, 650 Ω maximum current loop					
	High Speed Digital	Isolated, open collector, 24 Vdc (iMAG4700p only)					
	Serial Communications	Isolated, asynchronous serial RS485, Modbus® RTU protocol					
Cable	Power/Output Cable	20ft (6m) standard length polyurethane jacketed cable—for power and outputs (lengths up to 200' available).					
	Remote Display Cable	20ft (6m) standard length polyurethane jacketed cable—for connection between meter and remote display (lengths up to 200' available). (iMAG 4700r)					
Conductivity		>20 microSiemens/cm					
Empty Pipe Detection		Hardware/software, conductivity-based					
Regulatory		CE (EN 61326), 2"-12" certified to NSF/ANSI standard 61 60°C (140°F)					
Environmental		NEMA 6P, IP68 (10ft (3m) depth, continuously)					

Modbus is a registered trademark of Schneider Electric.

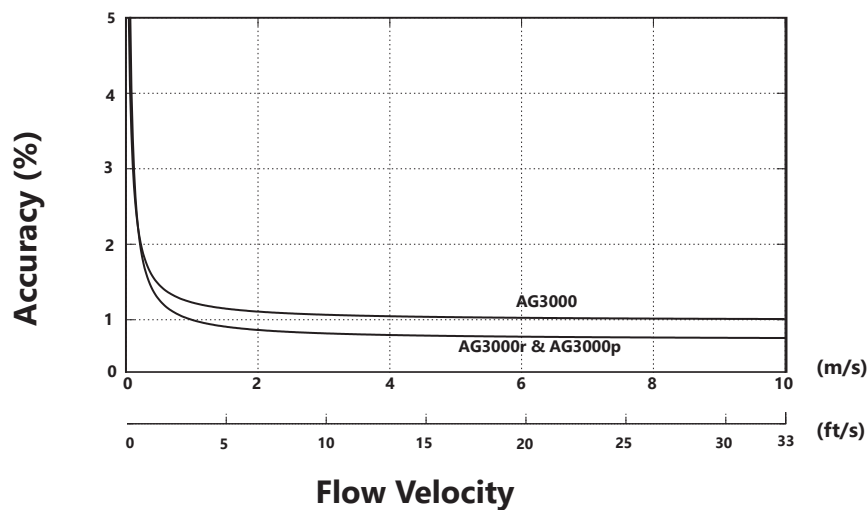
* Specifications subject to change. Please consult our website for the most current data (www.seametrics.com).

¹ If forward and reverse flow data needs to be sent to another device, either the Digital or Modbus output is required.

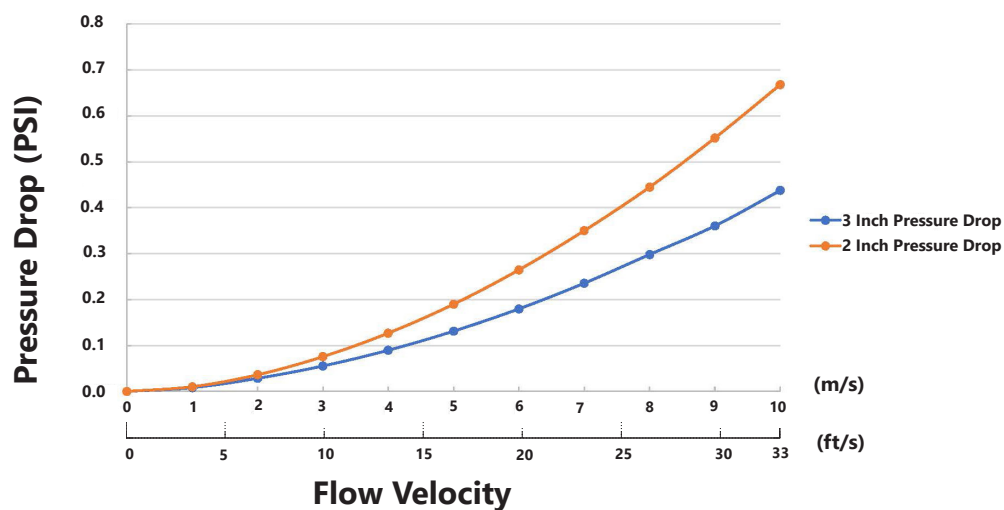
² Rate Time Unit is available in Day only.

³ Forward and reverse flow totals are non-resettable. Batch forward and batch reverse totals can be reset.

iMAG Accuracy



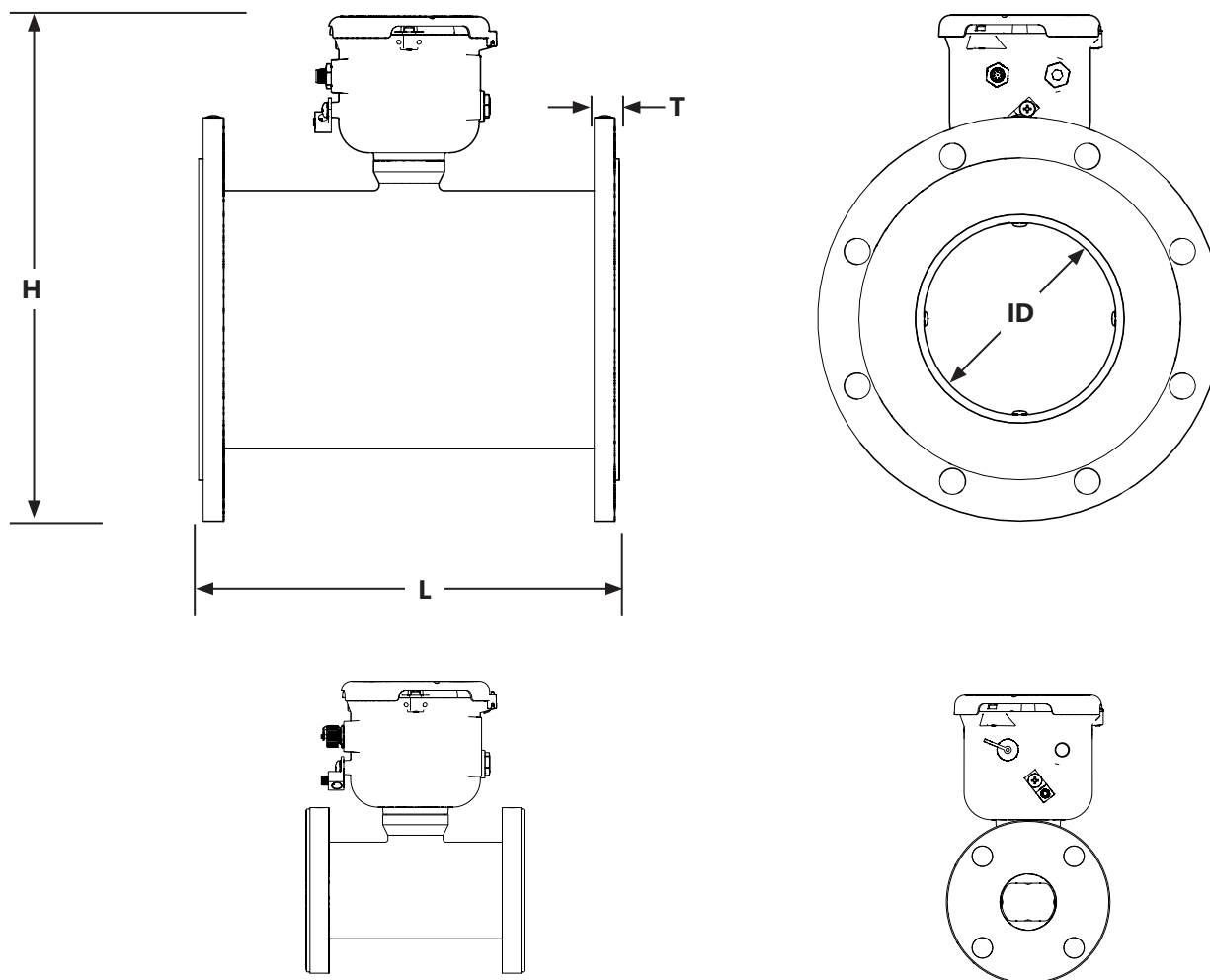
2" & 3" Pressure Drop Curve (No Pressure Drop 4"-12")



Flow Rate (2" - 12")

Pipe Size (Inches in diameter)	2"	3"	4"	6"	8"	10"	12"
Max Flow Rate (Gallons/Minute)	321	722	1285	2891	5140	8031	11565
Cut-off (min) Flow Rate (Gallons/Minute)	2	4.0	6.43	14.46	25.70	40.15	57.82
Max Flow Rate (Liters/Second)	20.25	46	81	182	324	507	730
Cut-off (min) Flow Rate (Liters/Second)	0.13	0.23	0.41	0.91	1.62	2.54	3.65
Max Flow Velocity (Meters/Second)	10	10	10	10	10	10	10

Dimensions - iMAG 4700



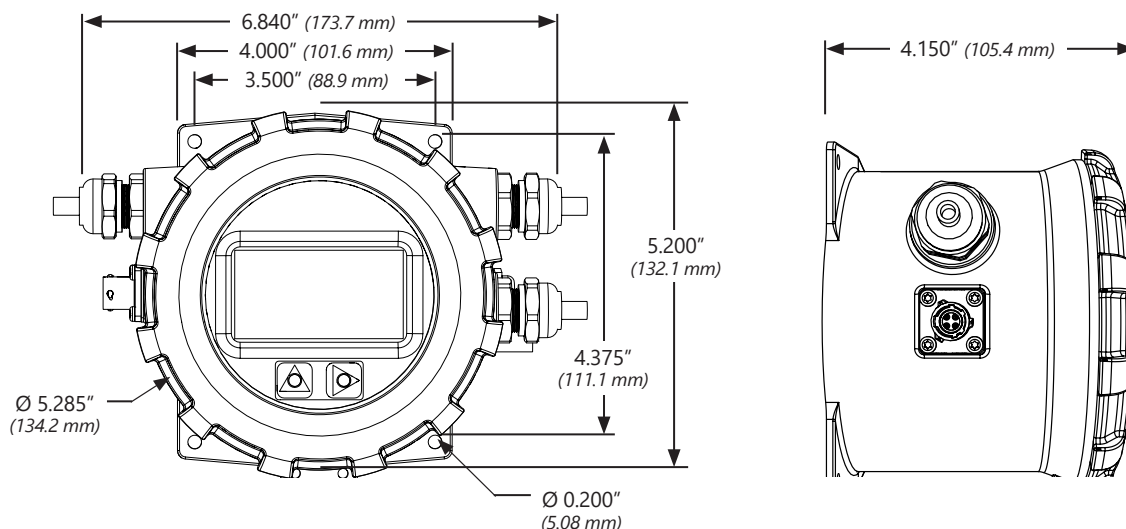
iMAG 4700 Meter Size	L		H		T		ID		Shipping Weight	
	inch	mm	inch	mm	inch	mm	inch	mm	lbs	Kg
2"	7.9	200	7.6	193	.62	15.7	1.76*	45*	25	11.3
3"	7.9	200	8.1	206	.62	15.7	2.68*	68*	30	13.6
4"	10.12	257	8.3	211	.62	15.7	3.12	79	33	15
6"	12.09	307	9.1	231	.69	17.5	5.05	128	49	22
8"	14.14	359	10.1	257	.69	17.5	6.44	164	70	32
10"	18.08	459	11.2	284	.69	17.5	8.61	219	130	59
12"	19.68	500	12.2	310	.81	20.6	10.55	268	170	77
Flanges Standard ANSI 150 lb. drilling									Cable 1 lb.	

Note: 'L' dimension is total from liner face to liner face

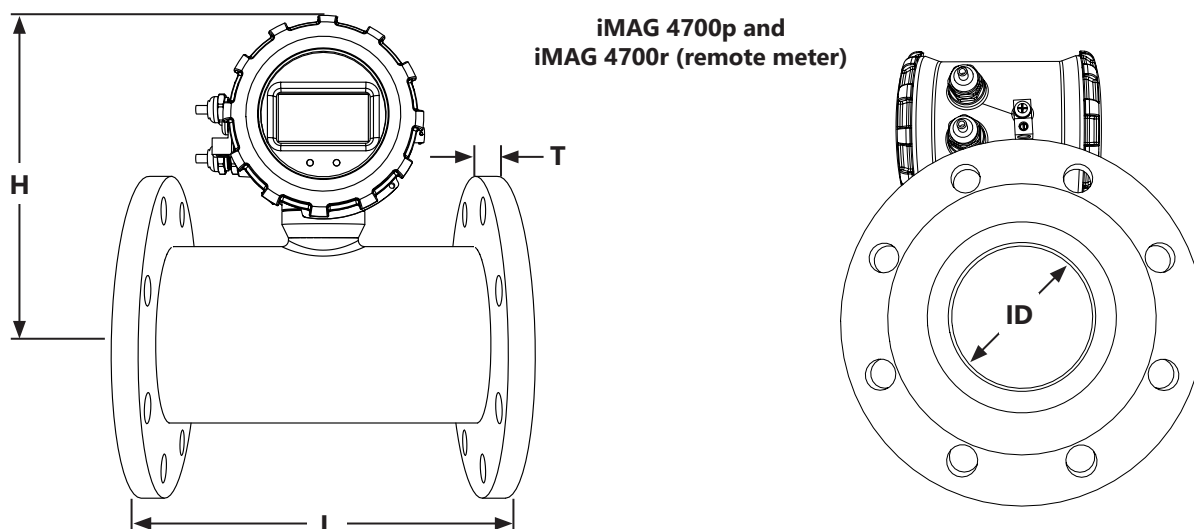
*Average ID

Dimensions - iMAG 4700r and iMAG 4700p

iMAG 4700r (remote display)



**iMAG 4700p and
iMAG 4700r (remote meter)**



iMAG 4700 Meter Size	L		H		T		ID		Shipping Weight			
									iMAG4700p		iMAG4700r	
	inch	mm	inch	mm	inch	mm	inch	mm	lbs	Kg	lbs	Kg
2"	7.9	200	7.6	193	.62	15.75	1.76*	45*	26	12	35	15.9
3"	7.9	200	8.1	205.7	.62	15.75	2.68*	68*	27	12.5	36	16.5
4"	10.12	257	8.6	218	.62	15.75	3.12	79	34	15.5	43	19.5
6"	12.09	307	9.4	239	.69	17.5	5.05	128	50	22.5	59	27
8"	14.14	359	10.4	264	.69	17.5	6.44	164	71	32	78	35
10"	18.08	459	11.5	292	.69	17.5	8.61	219	130	59	135	61
12"	19.68	500	12.5	317	.81	20.6	10.55	268	170	77	175	79
Flanges Standard ANSI 150 lb. drilling									Cable 1 lb.			

Note: 'L' dimension is total from liner face to liner face

How to Order Worksheet

iMAG 4700 iMAG 4700p iMAG 4700r	1	2	3	4	5	6	7	8

2 Style: F1 = 150 lb ANSI Pattern
 4 Power: D1 = DC 60Hz, D2 = DC 50Hz
 A1 = AC 60Hz, A2 = AC 50Hz
 BX = Battery
 5 Outputs: X = No optional output
 L = 4-20mA S = Modbus®
 H = HART/4-20mA G = Digital

iMAG 4700 (Integrated Display)	1	2	3	4	5	6	7
	Size	Style	Gaskets ³	Power	Optional Output ² (The 4700 comes standard with one pulse output)	Options	DC Power/Output Cable (Must select one)
	-0200* 2"	-F1	-X None	-D1	-X (requires 4 conductor cable for DC power & output)	-XX None	-0000 No Cable (Cable required for power/output)
	-0300 3"		-R Non NSF	-D2	-L (requires 8 conductor cable for DC power & output)	-01 Data Logger	4 Conductor 8 Conductor
	-0400 4"		-P NSF		-S (requires 8 conductor cable for DC power & output)		-0064 -0068 6 meter (20 ft)
	-0600 6"						-0154 -0158 15 meter (50 ft)
	-0800 8"						-0304 -0308 30 meter (100 ft)
	-1000 10"			-BX	-X (requires 4 connector cable for pulse output)		-0454 -0458 45 meter (150 ft)
	-1200 12"				-S (requires 8 connector cable for output) ⁴		-0604 -0608 60 meter (200 ft)

iMAG 4700p (Integrated Display)	1	2	3	4	5	6	7
	Size	Style	Gaskets	Power ¹	Optional Output ² (The 4700p comes standard with 4-20mA and one pulse output)	Options	DC Power/Output Cable - 8 conductor (Must select one)
	-0200* 2"	-F1	-X None	-D1	-X (requires single cable for DC power & output)	-XX None	-0000 No Cable (customer will supply)
	-0300 3"		-R Non NSF	-D2	-S (requires dual cable for DC power & output)	-01 Data Logger	Single Dual
	-0400 4"		-P NSF		-G (requires dual cable for DC power & output)		-006S -006D 6 meter (20 ft)
	-0600 6"						-015S -015D 15 meter (50 ft)
	-0800 8"			-A1	-X (requires single cable for output)		-030S -030D 30 meter (100 ft)
	-1000 10"			-A2	-S (requires single cable for output)		-045S -045D 45 meter (150 ft)
	-1200 12"				-G (requires single cable for output)		-060S -060D 60 meter (200 ft)

iMAG 4700r (Remote Display)	1	2	3	4	5	6	7	8
	Size	Style	Gaskets	Power ¹	Optional Output ² (The 4700r comes standard with one pulse output)	Options	DC Power/Output Cable - 6 conductor (Must select one)	Remote Display Cable - 6 conductor (Must select one)
	-0200* 2"	-F1	-X None	-D1	-X (requires single cable for DC power and output)	-XX None	-0000 No Cable (customer will supply)	-006 6 meter (20 ft)
	-0300 3"		-R Non NSF	-D2	-L (requires single cable for DC power and output)	-01 Data Logger	Single Dual	-015 15 meter (50 ft)
	-0400 4"		-P NSF		-S (requires dual cable for DC power and output)		-006S -006D 6 meter (20 ft)	-030 30 meter (100 ft)
	-0600 6"						-015S -015D 15 meter (50 ft)	-045 45 meter (150 ft)
	-0800 8"			-A1	-X (requires single cable for output)		-030S -030D 30 meter (100 ft)	-060 60 meter (200 ft)
	-1000 10"			-A2	-L (requires single cable for output)		-045S -045D 45 meter (150 ft)	
	-1200 12"				-S (requires single cable for output)		-060S -060D 60 meter (200 ft)	

Modbus is a registered trademark of Schneider Electric. Viton is a registered trademark of DuPont Corporation.

Note: All iMAG meters are factory set for gallons per minute (GPM) rate and gallons total. If other units are required, they can be programmed in the field.

¹ AC meters come with a 1.8 meter (6 ft) AC power cable.

² You can choose up to one additional output on powered meters only.

³ If -X is selected, customer must provide full faced gaskets. Failure to install gaskets will void warranty. No charge for non NSF (-R) gaskets.

⁴ Battery life is shortened when using Modbus with battery powered units. Expected battery life is approximately 1 year, based on usage.

User is responsible for reviewing end use application with their supplier for product suitability.