AG3000 SERIES
FLANGED MAGMETER

Seametrics
Precision Flow Measurement
An ONICON Brand

AG3000

AG3000p

AG3000-300

AG3000r
(Remote Display)

5-YEAR WARRANTY
LONGEST IN THE IRRIGATION INDUSTRY
REGISTER FOR A FREE BATTERY REPLACEMENT AT seametrics.com

RIGHT METER FOR

Irrigation
Chemigation
Agricultural automation
Well usage monitoring
Dairy lagoons

Features

- Easy setup
- Minimal straight pipe
- Mounted or remote rate & total
- Tamper-evident seal
- IP68 rated
- Telemetry ready—for wireless meter reading
- No Moving Parts

Contact Your Supplier

The **AG3000** Series is a spool-type electromagnetic flowmeter for use in irrigation applications in 3" to 12" pipe. With no moving parts, these meters provide unobstructed flow and are resistant to wear from debris found in ground or surface water. Little maintenance is required because there are no bearings to wear out or propellers to stop turning. Minimal straight pipe requirements allow AG3000 meters to be used in piping configurations where there is little space between the meter and an elbow.

The standard AG3000 is battery powered with an available pulse output. Both rate and total indication are displayed. Bidirectional flow reading is standard with totals available in forward, reverse, net flow, batch forward flow, and batch reverse flow. Batch totals can be reset. Built-in data logging is available as an option for secure flow logging.

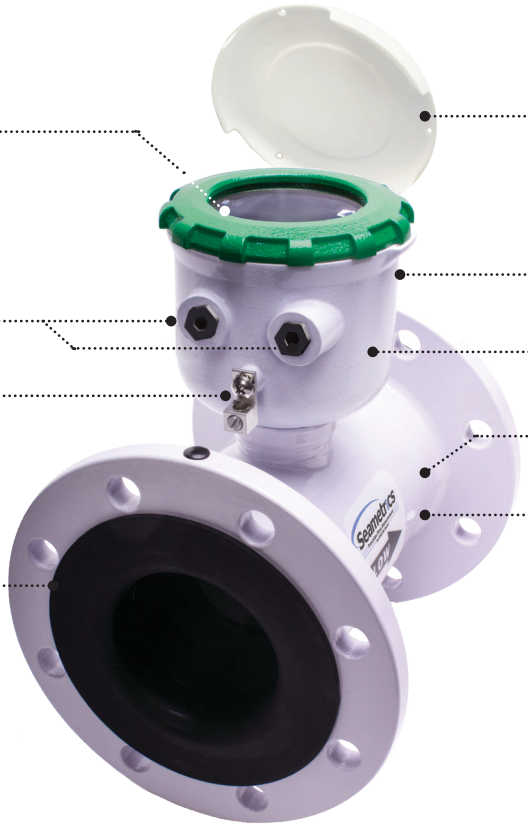
The AG3000 is also available in either AC or DC powered versions, with battery backup. Pulse output is standard on all models and 4-20mA passive current loop is standard on the AG3000p. In addition, 4-20mA loop, HART protocol, high speed digital, and Modbus® protocol outputs are optional on the externally powered units, depending on model. A power/output cable allows outputs for use with a variety of Seametrics and other displays and controls for remote reading and telemetry applications.

Rate and total units, pulse scaling, and various other settings are set via the front panel touch-key pad by the user. The remote display model (AG3000r) provides remote access for controlling the meter and viewing readings.

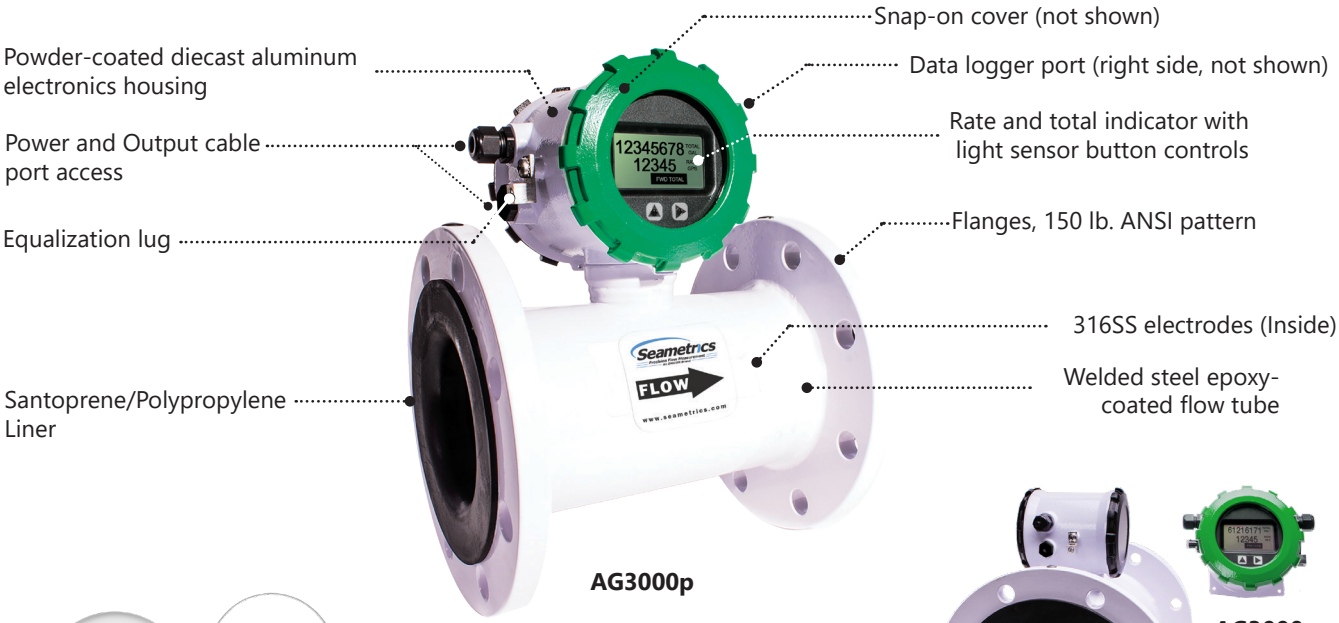
The AG3000 Series is CE certified and IP68 for burial, or applications where the meter may be under water for prolonged periods of time. All meters are provided with a security seal to protect against unauthorized access. The seal can be broken by an authorized agent, to change units of measure, pulse rate, replace the battery pack, or field install a power/output cable. The cable is field installed where external power is available and/or an output is needed.

ISO 9001:2008 Certified Company
Proudly Made in the USA

Features



AG3000



AG3000p

Snap on cover and lanyard for AG3000p and AG3000r

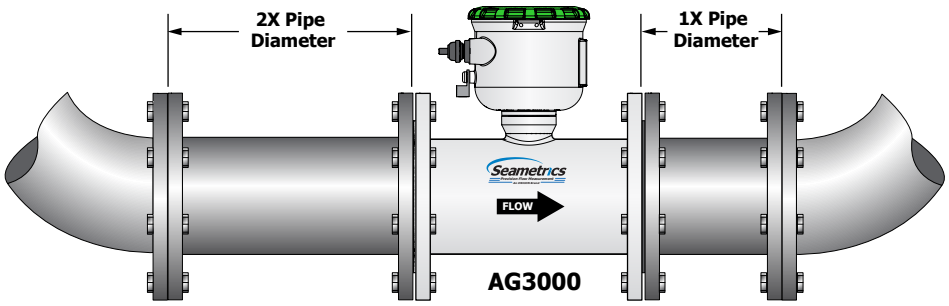
AG3000r
(Remote indicator)

Features

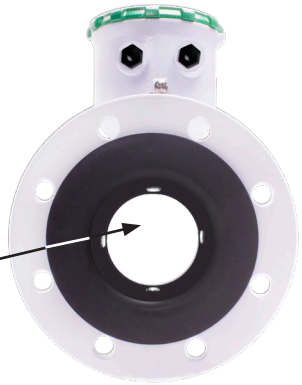
- Built-in Data Logger *(Optional)*
- Bidirectional Flow Reading *(Standard)*
- Pulse Scaled Output *(Standard)*
- 4-20mA Output *(Optional*)*
- HART Protocol Output *(Optional*)*
- Modbus® Protocol Output *(Optional*)*
- High Speed Digital Output *(Optional*)*
- Battery Power *(AG3000 battery model only)*
- External DC Power *(Optional*)*
- Integrated AC Power Supply *(Optional*)*
- Remote Display *(AG3000r)*

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.



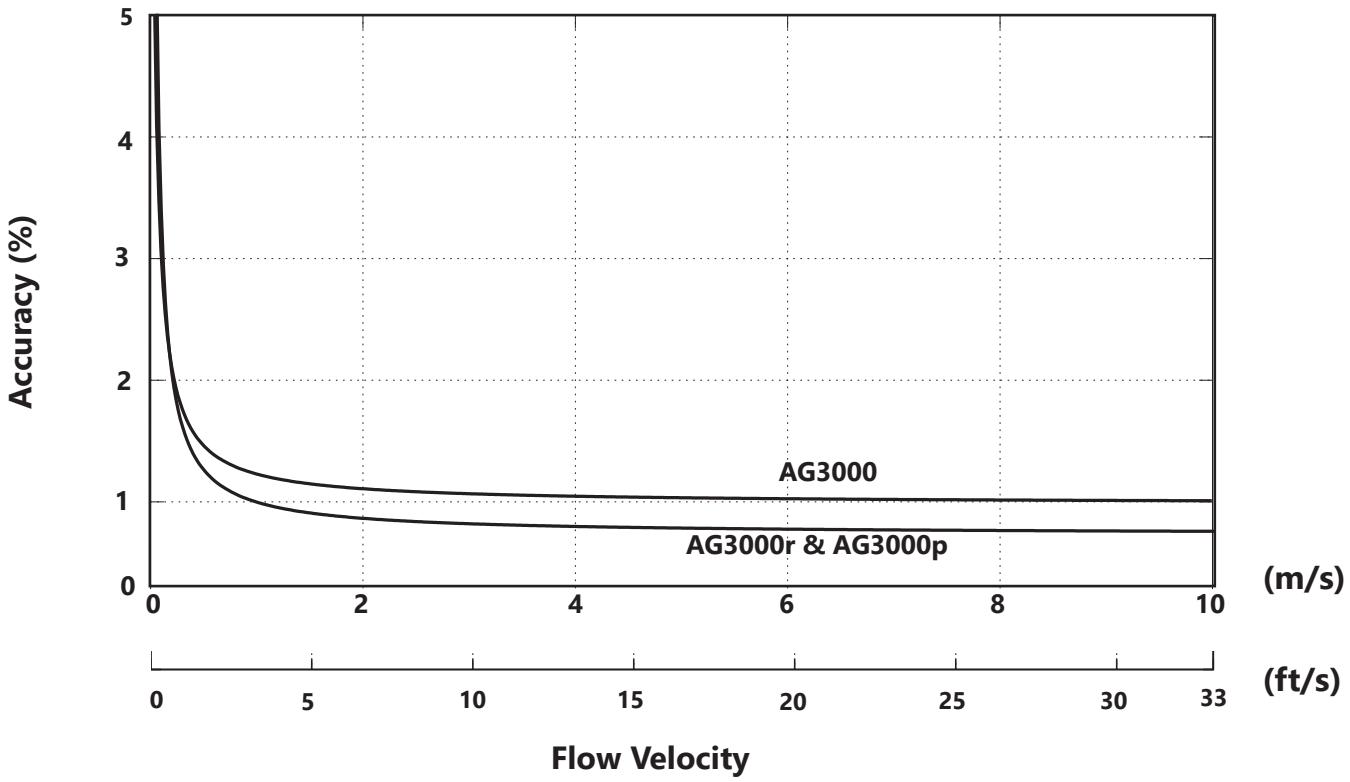
No moving parts to break or foul!

Specifications

Pipe Sizes		3", 4", 6", 8", 10", 12"					
Flanges		150 lb. ANSI Pattern					
Pressure		150 psi (10.3 bar) line pressure					
Temperature	**Operating**	10˚ to 130˚ F (-12˚ to 54˚ C)					
	Storage	-40˚ to 158˚ F (-40˚ to 70˚ C)					
Accuracy		±0.75% of reading on AG3000p and AG3000r (±1.0% AG3000), ±0.025% of full-scale flow from low flow cutoff to maximum flow rate of 10 m/sec					
Low Flow Cutoff		0.5% of maximum flow rate					
Material	**Body** *(3" only)*	Ductile cast iron, powder coated					
	Body *(4"-12")*	Welded steel, epoxy-coated					
	Liner *(3" only)*	Noryl®					
	Liner *(4"-12")*	Santoprene flange/Polypropylene liner body					
	Electronics Housing	Powder-coated diecast aluminum					
	Electrodes	316 stainless steel					
	O-ring (3" only)	EPDM					
Display	**Type**	128x64 dot-matrix LCD					
	Digits	5 Digit Rate			8 Digit Total		
	Units *Please Note: All AG3000 meters are factory set for gallons per minute (GPM) rate and acre feet total. If other units are required, they can be set in the field.*	Rate Volume Units		Rate Time Units	Total Volume Units		
		Gallons Liters Barrels(42 gal) Cubic Feet Cubic Meters	Million Gallons[2] Mega Liters[2] Imperial Gallons Million Imperial Gallons[2]	Second Minute Hour Day	Gallons Gallons x 10 Gallons x 100 Gallons x 1000 Million Gallons Liters Kilo Liters Mega Liters	Barrels (42 gal) Cubic Meters Cubic Meters x 1000 Cubic Feet Cubic Feet x 1000 Second Foot Day Million Cubic Feet	Acre Feet Acre Inches Imperial Gallons Imperial Gallons x 1000 Million Imperial Gallons Fluid Ounces
	Bidirectional[1]	Forward Total, Reverse Total, Net Total, Batch Forward Total, Batch Reverse Total (Batch totals can be reset)					
Power	**DC Power**	9-36 Vdc @ 250 mA max, 30 mA average					
	Battery Backup **(Not for use as primary power)**	DC powered units: Two lithium 3.6V 'D' batteries, replaceable. AC powered units: One 9V alkaline battery, replaceable.					
	AC Power *(AG3000r and AG3000p only)*	85-264Vac, 50/60Hz, 0.12A					
	Battery *(AG3000 only)*	One lithium 7.2V 'D' size battery pack, replaceable.					
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					
	HART/4-20mA	HART protocol over 4-20mA line					
	High Speed Digital Output *(AG3000 & AG3000p only)*	Isolated, open collector, 24 Vdc					
	Serial Communications	Isolated, asynchronous serial RS485 (Reconfigurable for RS232 or 3.3V CMOS), Modbus® RTU protocol (factory selectable)					
Cable	**Power/Output Cable**	20ft (6m) standard length polyurethane jacketed cable—for power and outputs (lengths up to 200' available).					
	Remote Display Cable *(AG3000r)*	20ft (6m) standard length polyurethane jacketed cable—for connection between meter and remote display (lengths up to 200' available).					
Conductivity		>20 microSiemens/cm					
Empty Pipe Detection		Hardware/software, conductivity-based					
Regulatory		CE (EN 61326)					
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.

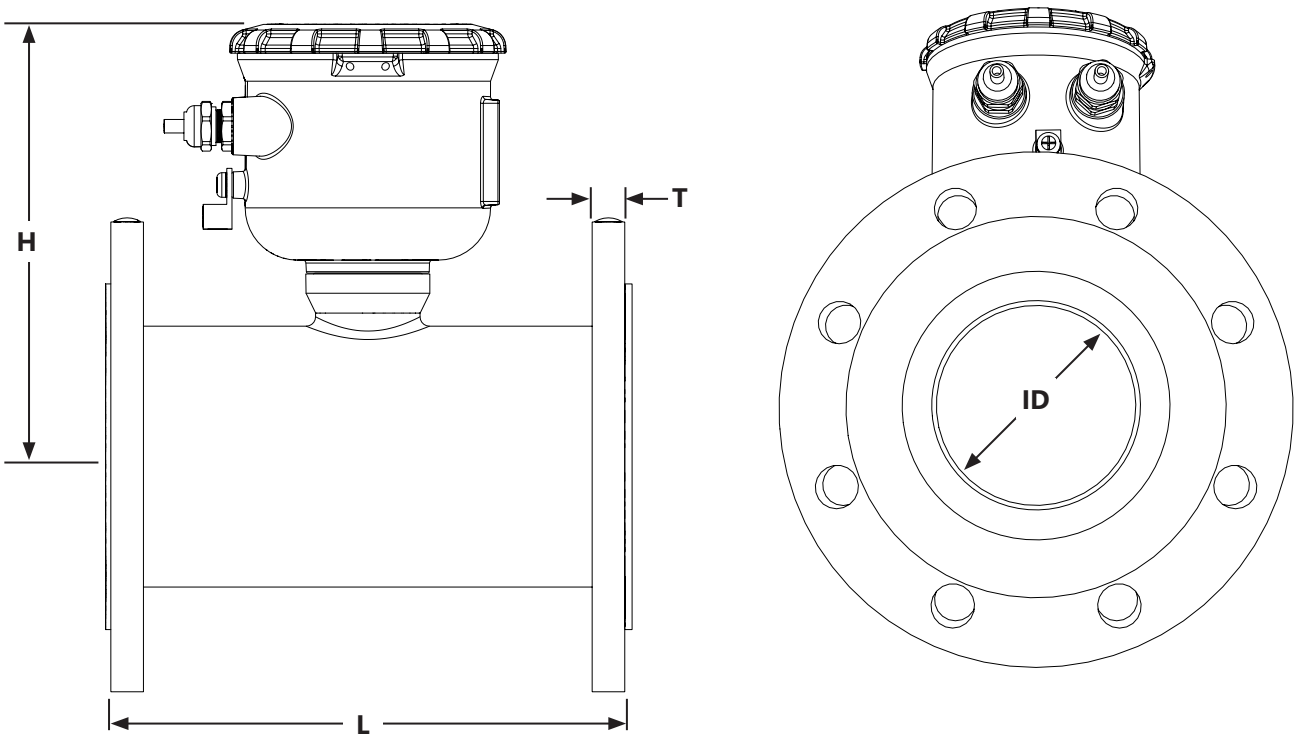
AG3000 Accuracy



Flow Rate (3" - 12")

Pipe Size *(Inches in diameter)*	**3"**	**4"**	**6"**	**8"**	**10"**	**12"**
Max Flow Rate *(Gallons/Minute)*	723	1285	2891	5140	8031	11565
Cut-off (min) Flow Rate *(Gallons/Minute)*	3.62	6.43	14.46	25.70	40.15	57.82
Max Flow Rate *(Liters/Second)*	46	81	182	324	507	730
Cut-off (min) Flow Rate *(Liters/Second)*	0.23	0.41	0.91	1.62	2.54	3.65
Max Flow Velocity *(Meters/Second)*	10	10	10	10	10	10

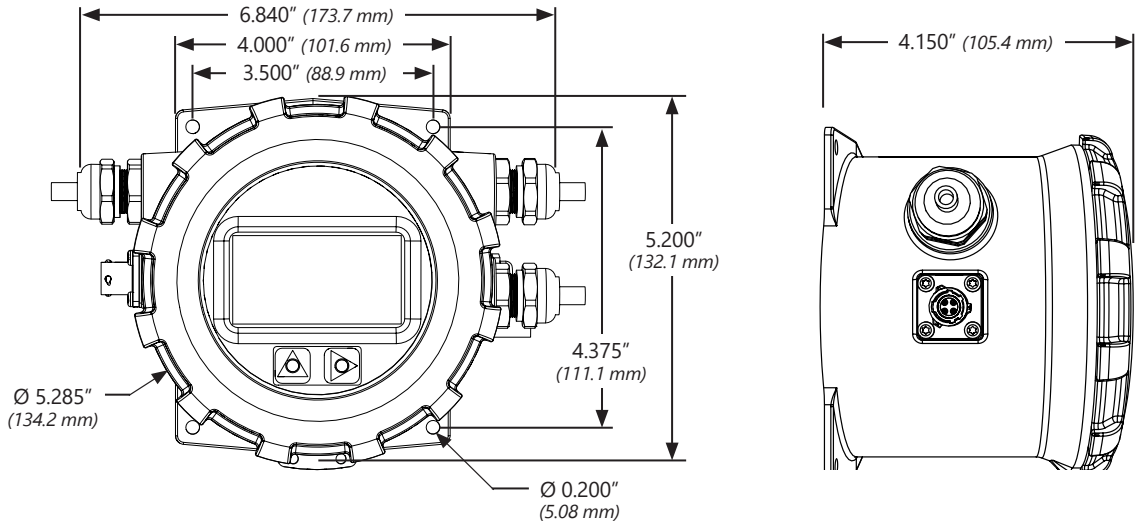
Dimensions - AG3000



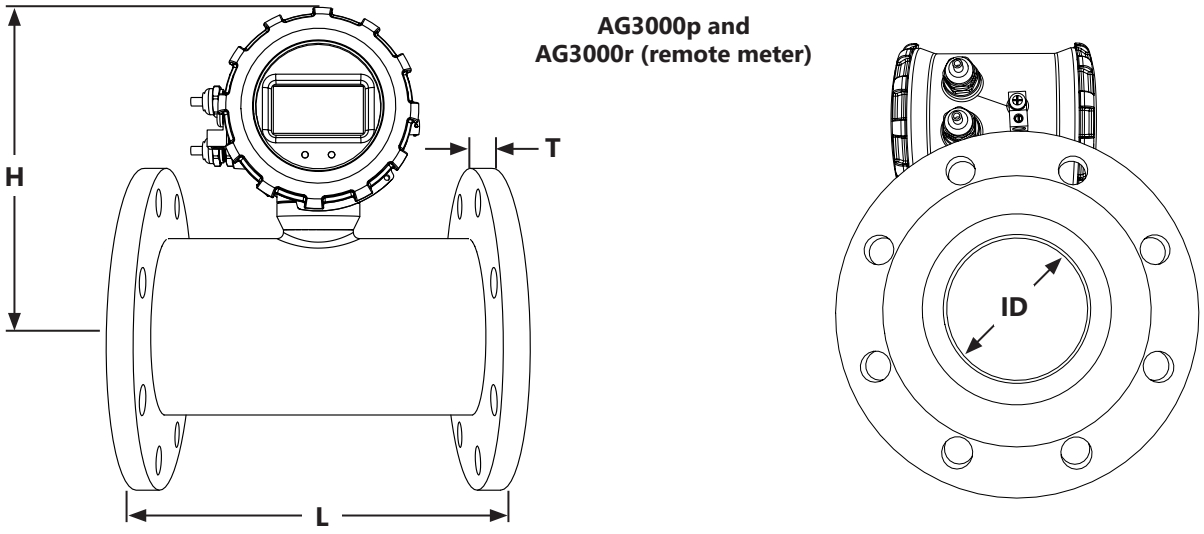
AG3000 Meter Size	L		H		T		ID		Shipping Weight	
	inch	mm	inch	mm	inch	mm	inch	mm	lbs	Kg
3”	12.25	311.15	7.08	179.8	.68	17.25	2.6	66.04	38	17
4”	10.24	260	8.3	211	.62	15.7	3.12	79	33	15
6”	12.27	312	9.1	231	.69	17.5	5.05	128	49	22
8”	14.24	362	10.1	257	.69	17.5	6.44	164	70	32
10”	18.18	462	11.2	284	.69	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.	

Dimensions - AG3000r and AG3000p

AG3000r (remote display)



AG3000p and AG3000r (remote meter)



AG3000 Meter Size	L		H		T		ID		Shipping Weight			
									AG3000p		AG3000r	
	inch	mm	inch	mm	inch	mm	inch	mm	lbs	Kg	lbs	Kg
3″ *	12.25	311.15	7.95	201.9	.68	17.25	2.6	66.04	39	17.5	40	18
4″	10.24	260	8.6	218	.62	15.7	3.12	79	34	15.5	43	19.5
6″	12.27	312	9.4	239	.69	17.5	5.05	128	50	22.5	59	27
8″	14.24	362	10.4	264	.69	17.5	6.44	164	71	32	78	35
10″	18.18	462	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.			

** Add 8lbs (3.5kg) for remote display. 3″ Only.*

AG3000 SERIES
FLANGED MAGMETER

How to Order Worksheet

AG3000
AG3000p
AG3000r

1	2	3	4	5	6	7
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2 Style: F1 = 150 lb ANSI Pattern

3 Power: D1 = DC 60Hz, D2 = DC 50Hz
A1 = AC 60Hz, A2 = AC 50Hz
BX = Battery

4 Outputs: X = No optional output
L = 4-20mA S = Modbus®
H = HART/4-20mA G = Digital

AG3000 (Integrated Display)

1 Size	2 Style	3 Power	4 Optional Output[2] (The AG3000 comes standard with one pulse output)	5 Options	6 DC Power/Output Cable - 6 conductor (Must select one)
-0300 3″	-F1	-D1	-X *(requires single cable for DC power & output)*	-XX None	-0000 No Cable *(customer will supply)*
-0400 4″		-D2	-L *(requires single cable for DC power & output)*	-01 Data Logger	Single Dual
-0600 6″			-H *(requires single cable for DC power & output)*		-006S -006D 6 meter (20 ft)
-0800 8″			-S *(requires dual cable for DC power & output)*		-015S -015D 15 meter (50 ft)
-1000 10″			-G *(requires dual cable for DC power & output)*		-030S -030D 30 meter (100 ft)
-1200 12″		-BX	-X *(requires single cable for pulse output)*		-045S -045D 45 meter (150 ft)
					-060S -060D 60 meter (200 ft)

AG3000p (Integrated Display)

1 Size	2 Style	3 Power[1]	4 Optional Output[2] (The AG3000p comes standard with 4-20mA and one pulse output)	5 Options	6 DC Power/Output Cable - 8 conductor (Must select one)
-0300 3″	-F1	-D1	-X *(requires single cable for DC power & output)*	-XX None	-0000 No Cable *(customer will supply)*
-0400 4″		-D2	-H *(requires single cable for DC power & output)*	-01 Data Logger	Single Dual
-0600 6″			-S *(requires dual cable for DC power & output)*		-006S -006D 6 meter (20 ft)
-0800 8″			-G *(requires dual cable for DC power & output)*		-015S -015D 15 meter (50 ft)
-1000 10″		-A1	-X *(requires single cable for output)*		-030S -030D 30 meter (100 ft)
-1200 12″		-A2	-H *(requires single cable for output)*		-045S -045D 45 meter (150 ft)
			-S *(requires single cable for output)*		-060S -060D 60 meter (200 ft)
			-G *(requires single cable for output)*		

AG3000r (Remote Display)

1 Size	2 Style	3 Power[1]	4 Optional Output[2] (The AG3000r comes standard with one pulse output)	5 Options	6 DC Power/Output Cable - 6 conductor (Must select one)	7 Remote Display Cable - 6 conductor (Must select one)
-0300 3″	-F1	-D1	-X *(requires single cable for DC power and output)*	-XX None	-0000 No Cable *(customer will supply)*	-006 6 meter (20 ft)
-0400 4″		-D2	-L *(requires single cable for DC power and output)*	-01 Data Logger	Single Dual	-015 15 meter (50 ft)
-0600 6″			-H *(requires single cable for DC power and output)*		-006S -006D 6 meter (20 ft)	-030 30 meter (100 ft)
-0800 8″			-S *(requires dual cable for DC power and output)*		-015S -015D 15 meter (50 ft)	-045 45 meter (150 ft)
-1000 10″		-A1	-X *(requires single cable for output)*		-030S -030D 30 meter (100 ft)	-060 60 meter (200 ft)
-1200 12″		-A2	-L *(requires single cable for output)*		-045S -045D 45 meter (150 ft)	
			-H *(requires single cable for output)*		-060S -060D 60 meter (200 ft)	
			-S *(requires single cable for output)*			

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

Note: All AG3000 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.*

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