

[The Atom: Variable Speed Simplex Micro Booster Pump]

The Atom Series features a micro VFD controlled stainless steel pump, braided stainless steel flex hose and CPVC fittings all packaged in a diminutive 18" x 25" x 30" package.

- » Multiple Input Voltages 115/230/1; 208/460/3
- » Threaded Suction and Discharge Connections
- » Factory Tested And Pre-Set to Site Conditions
- » Silent Check Valve with Resilient Seat
- » Proven Ashcroft Pressure Transmitter and Gauge
- » Variable Speed Drive Control—No PRV's
- » 304 SS Pump with TEFC IP-55 Motor
- » CPVC Fittings Allows For Warmer Water (140*F)

» Simple "Plug & Play" Operation

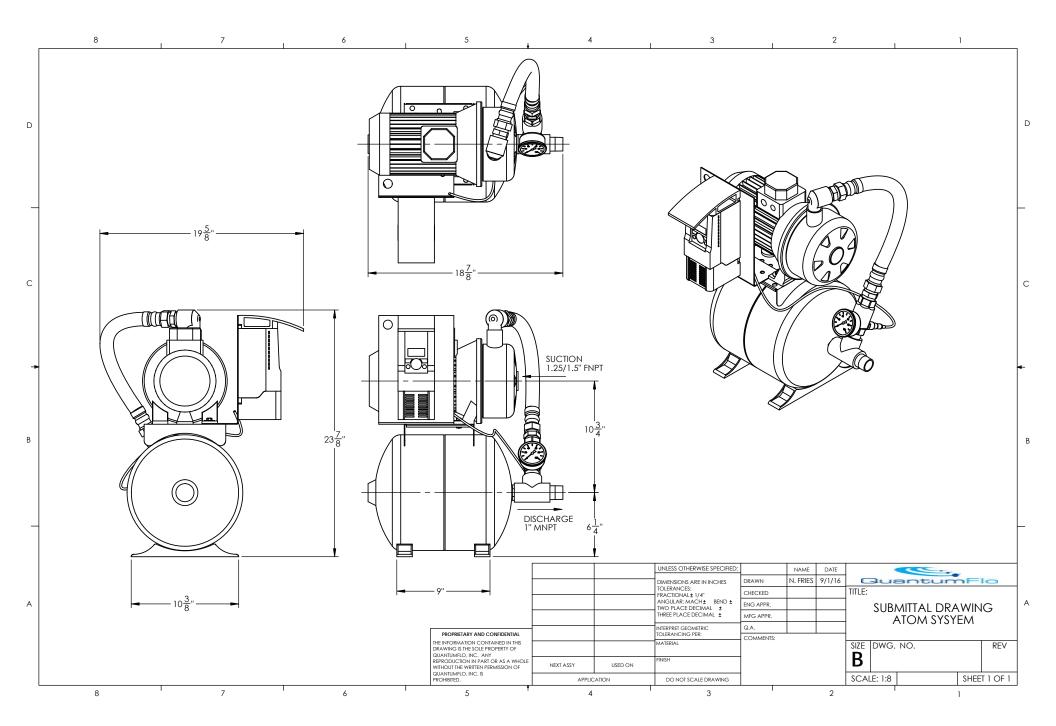




QuantumFlo, Inc.

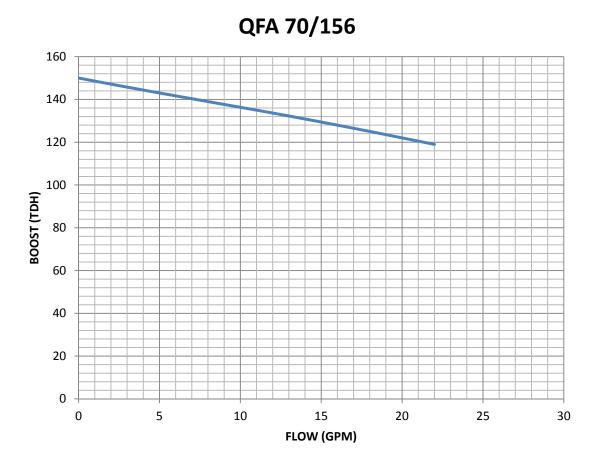
210 Springview Commerce Dr. Bldg. #150, DeBary, FL 32713

Office 386-753-9702
Fax 386-753-9703
www.quantumflo.com



CENTRIFUGAL PUMPS CDX

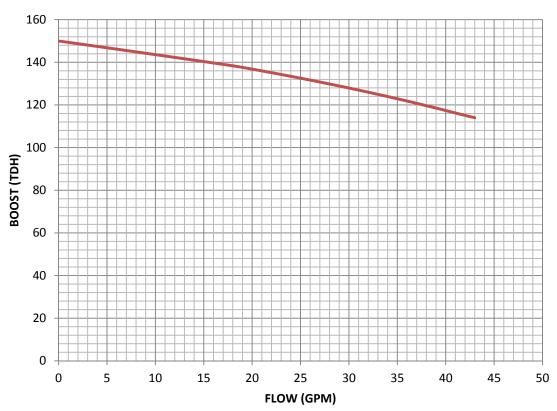
PERFORMANCE CURVE



CENTRIFUGAL PUMPS CDX

PERFORMANCE CURVE

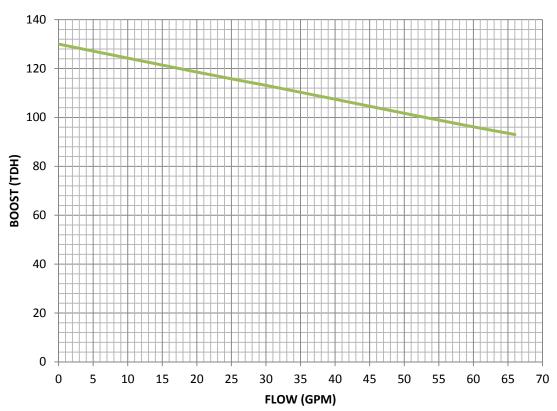
QFA 120/206



CENTRIFUGAL PUMPS CDX

PERFORMANCE CURVE

QFA 200/306



CENTRIFUGAL PUMPS

TECHNICAL DATA

PUMP

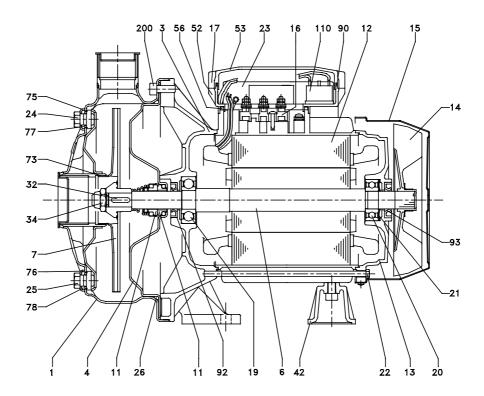
Liquid Handled	Type of Liquid		Clean Water		
Liquiu nanuieu	Max Temperatur	e [°F]	140		
Maximum Working Pressure	[PSI]		116		
	Impeller		Closed Centrifugal Type		
Construction	Shaft Seal Type		Mechanical Seal		
	Bearing		Sealed Ball Bearing		
Pipe Connection	Suction [inch]		1-1/4" NPT (70,120) 1-1/2" NPT (200)		
ripe connection	Discharge [inch]		1" NPT		
	Casing		AISI 304 SS		
	Impeller		AISI 304 SS		
Material	Casing Cover		AISI 304 SS		
iviateriai	Shaft Seal		Ceramic/Carbon/NBR		
	Shaft		AISI 303 SS		
	Bracket		Aluminum		
Applicable Standard of Test			ISO 9906 grade 2		

MOTOR

Туре			Electric - TEFC Three Phase					
No. of Poles				2				
Synchronous Spee	d [R	PM]		3600				
Insulation Class				F				
Protection Degree				IP 55				
Frequency		[Hz]		60				
Voltage [V]				230/460 ± 10%				
Casing Material				Aluminum				
Base Material/Mo	tor Suppor	t		Aluminum				
Three Phase	kW	HP		Ball Be	aring	Full Load	Current (A)	
230/460 V 60 Hz	KVV	ПР	Pu	mp Side	Fan Side	230V	460V	
CDX 70/156	1.1	1.5	6	203 ZZ	6202 ZZ	4.5	2.6	
CDX 120/206	1.5	2	6	204 ZZ	6203 ZZ	6.9	4.0	
CDX 200/306	2.2	3	6	5204 ZZ 6203 ZZ 8.2 4.7				

CENTRIFUGAL PUMPS

CONSTRUCTION



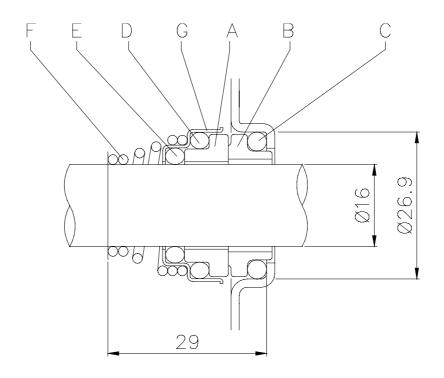
N°	PART NAME	MATERIAL	Q.TY	N°	PART NAME	MATERIAL	Q.TY
1	Casing	AISI 304	1	25	Drain plug	AISI 303	1
3	Motor bracket	Aluminium	1	26	O-ring [3]	NBR	1
4	Casing cover	AISI 304	1	32	Key	AISI 304	1
6	Shaft with rotor	AISI 303 (Part in contact with liquid)	1	34	Impeller nut	AISI 304	1
7	Impeller	AISI 304	1	42	Motor support	Aluminium	1
11	Mechanical seal [3] - [4]	Carbon/Ceramic/NBR	1	52	Terminal box [1]	Polypropilene	1
12	Motor frame with stator	-	1	53	Terminal box cover [1]	Polypropilene	1
13	Motor cover	Aluminium	1	56	Box gasket	NBR	1
14	Fan	Polypropilene	1	73	Casing ring [3] [5]	NBR	1
15	Fan cover	Fe P04 Zinked	1	75	Washer	AISI 304	1
16	Terminal board	-	1	76	Washer	AISI 304	1
17	Terminal box cover [2]	Aluminium	1	77	O-ring [3]	NBR	1
19	Pump side ball bearing	-	1	78	O-ring [3]	NBR	1
20	Fan side ball bearing	-	1	90	Cover gasket [1]	NBR	1
21	Adjusting ring	Steel C70	1	92	Lip seal	-	1
22	Tie rod	Fe 420 Zinked	4	93	Lip seal	-	1
23	Capacitor [1]		1	110	Protector [1]		1
24	Priming plug	AISI 303	1	200	Screw	Stainless steel A2 UNI7323	8

- [1] Only for single phase
 [2] Only for three phase
 [3] VITON[®] for CDXH

- [4] Special version, see page 301[5] AISI 304 for CDX 70

CENTRIFUGAL PUMPS

CONSTRUCTION



REF	PART NAME		MATERIAL							
		Standard version	Hot water version	Optional						
		(CDX)	(CDXH)							
Α	Rotary seal ring	Ceramic	Ceramic	Silicon carbide						
В	Stationary seal ring	Carbon graphite	Carbon graphite	Silicon carbide						
С	O Ring	NBR	VITON [®]	VITON [®]						
D	O Ring	NBR	VITON [®]	VITON [®]						
Е	O Ring	NBR	VITON [®]	VITON [®]						
F	Self driving spring	AISI 316	AISI 316	AISI 316						
G	Frame	AISI 304	AISI 304	AISI 316						



Contents

Description	Page
M-Max Series Adjustable Frequency AC Drive	
Catalog Number Selection	V6-T36-9
Product Selection	V6-T36-9
Accessories	V6-T36-10
Technical Data and Specifications	V6-T36-11
Dimensions	V6-T36-13

Product Description

Eaton's M-Max™ Series Sensorless Vector Adjustable Frequency AC Drives are the next generation of drives specifically engineered for today's machinery applications. These microprocessor-based drives have standard features that can be programmed to tailor the drive's performance to suit a wide variety of application requirements. The M-Max product line uses a 32-bit microprocessor and insulated gate bipolar transistors (IGBTs) that provide quiet motor operation, high motor efficiency, and smooth lowspeed performance. The size and simplicity of the M-Max make it ideal for hassle-free installation. Models rated at 575 volts, three-phase, 50/60 Hz are available in sizes ranging from 1 to 7-1/2 hp. Models rated at 480 volts, three-phase, 50/60 Hz are available in sizes ranging from 1/2 to 10 hp. Models rated at 240 volts, single- or three-phase, 50/60 Hz are available in sizes ranging from 1/4 to 3 hp. Models rated at 115 volts, single-phase, 50/60 Hz are available in the 1/4 to 1-1/2 hp size range.

The standard drive includes a digital display, and operating and programming keys on a visually appealing, efficient application programming interface. The display provides drive monitoring, as well as adjustment and diagnostic information. The keys are used for digital adjustment and programming of the drive, as well as for operator control. Separate terminal blocks for control and power wiring are provided for customer connections

Features

- Ease of use—preset application macros, startup wizard, diagnostic capabilities
- Compact, space-saving design
- Rugged and reliable— 150% for one minute, 50C rated, conformal coated hoards
- DIN rail and screw mountable
- Side-by-side installation
- Industry leading efficiency delivers energy savings to the customer

- Integrated EMC filters make the unit suitable for commercial and industrial networks
- Available in the enclosure class IP20 as standard, options for IP21 and NEMA® 1
- Brake chopper as standard in three-phase, applications of frames 2 (FS2) and larger
- Temperature-controlled fan
- RS-485/Modbus® as standard
- PID controller as standard
- · Several fieldbus options

Standards and Certifications

Product

 Complies with EN61800-3 (2004)

Safety 1

- 61800-5-1
- EN60204-1
- CE
- UL
- cUL
- IEC
- RoHS compliant



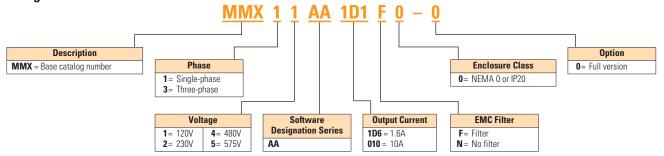
EMC (At Default Settings)

 EMC Category C2, C3, and C4 (Level H): With an internal RFI filter option

Note

See unit nameplate for more detailed approvals.

Catalog Number Selection



Product Selection

M-Max

M-Max Basic Controller



hp ①	Volts ②	100% Continuous Current I _N (A)	Nominal Input Current (A)	Frame Size	Catalog Number
/4	100-120V single-phase in	1.7	9.2	FS2	MMX11AA1D7N0-0 3
/2	230V three-phase out	2.4	11.6		MMX11AA2D4N0-0 ^③
/4		2.8	12.4		MMX11AA2D8N0-0 3
		3.7	15		MMX11AA3D7N0-0 3
-1/2		4.8	16.5	FS3	MMX11AA4D8N0-0 ³
4	200-240V single-phase in	1.7	4.2	FS1	MMX12AA1D7F0-0
2	230V three-phase out	2.4	5.7		MMX12AA2D4F0-0
4		2.8	6.6		MMX12AA2D8F0-0
		3.7	8.3	FS2	MMX12AA3D7F0-0
1/2		4.8	11.2		MMX12AA4D8F0-0
		7	14.1		MMX12AA7D0F0-0
		9.6	15.8	FS3	MMX12AA9D6F0-0
4	200-240V three-phase in	1.7	2.7	FS1	MMX32AA1D7N0-0 3
2	230V three-phase out	2.4	3.5		MMX32AA2D4N0-0 ③
4		2.8	3.8		MMX32AA2D8N0-0 ③
		3.7	4.3	FS2	MMX32AA3D7N0-0 3
1/2		4.8	6.8		MMX32AA4D8N0-0 ③
		7	8.4		MMX32AA7D0N0-0 3
		11	13.4	FS3	MMX32AA011N0-0 3
2	380-480V three-phase in	1.3	2.2	FS1	MMX34AA1D3F0-0
4	460V three-phase out	1.9	2.8		MMX34AA1D9F0-0
		2.4	3.2		MMX34AA2D4F0-0
1/2		3.3	4	FS2	MMX34AA3D3F0-0
		4.3	5.6		MMX34AA4D3F0-0
		5.6	7.3		MMX34AA5D6F0-0
		7.6	9.6	FS3	MMX34AA7D6F0-0
		9	11.5		MMX34AA9D0F0-0
1/2		12	14.9		MMX34AA012F0-0
)		14	18.7		MMX34AA014F0-0
	575V three-phase in	1.7	2.0	FS3	MMX35AA1D7N0-0 3
	575V three-phase out	2.7	3.6		MMX35AA2D7N0-0 ③
		3.9	5.0		MMX35AA3D9N0-0 ③
		6.1	7.6		MMX35AA6D1N0-0 ③
1/2		9.0	10.4	 -	MMX35AA9D0N0-0 3

Notes

- ① Horsepower ratings are based on the use of a 240V, 460V, and 575V NEMA B, four- or six-pole squirrel cage induction motor and are for reference only. Units are to be selected such that the motor current is less than or equal to the MMX rated continuous output current.
- 2 For 208V, 380V, or 415V applications, select the unit such that the motor current is less than or equal to the MMX rated continuous output current.
- For MMX11_, MMX32_, and MMX35_, there are no options for units with filters.



Model G2 Pressure Transducer



LOOK FOR THIS AGENCY MARK ON OUR PRODUCTS

APPLICATONS

The G2 pressure transducer combines performance with value to meet the demanding needs of the original equipment manufacturer in applications found in:

- Off-road Equipment
- Construction Machinery
- Performance Racing
- Railroad/Transportation
- Compressor Control
- HVAC and Refrigeration
- · Agricultural Implements
- Process Automation and Control
- Hydraulic & Pneumatic Sensing
- Pump Monitoring

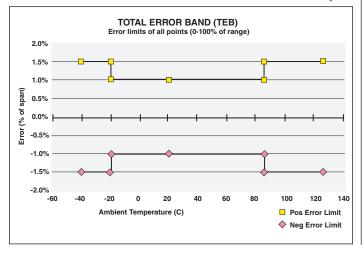
FEATURES

- 1% Total Error Band Accuracy
- Broad Temperature Capability
- All-welded pressure construction
- High EMI/RFI rating
- Ranges 30 psi through 20,000 psi
- IP 67 Ingress rating
- Diagnostic rails

The Ashcroft® Type G2[†] pressure transducer has been specifically designed with the high volume OEM in mind.

A $\pm 1\%$ Total Error Band accuracy is accomplished by marrying a high performance ASIC to a very stable, field proven polysilicon thin film pressure sensor. The sensor is electron beam welded to a pressure fitting of stainless steel, which provides excellent overpressure capability and outstanding durability in the presence of shock and vibration.

The circuitry is held within an internal cage and housed in an enclosure of reinforced Nylon.



PERFORMANCE SPECIFICATIONS

Ref. Condition 21°C ±1°C (72°F ±2°F) **Accuracy:**

Total Error Band includes combined effects of temperature, non-linearity (Terminal Point Method), hysteresis, non repeatabilty, zero offset and span setting errors ±1% of Span: From -20 to 85°C (-4 to 185°F) ±1.5% of Span: From -40 to -20°C (-40 to -4°F)

±1.5% of Span: From 85 to 125°C (185 to 257°F)

Note: Static accuracy ±0.25% of span BFSL (Best Fit Straight Line Method); includes non-linearity,

hysteresis and non-repeatable effects at reference temperature 72°F (21°C)

Stability: Less than ±0.25% span/year Durability: Tested to 50 million cycles

ENVIRONMENTAL SPECIFICATIONS

Temperature:

Humidity: 0 to 100% R.H., no effect

FUNCTIONAL SPECIFICATIONS

Select from over 25 pressure ranges starting at 30 psi and running through 20,000 psi gauge. Compound (vacuum & pressure) ranges are also available, see "To Order" on back.

Overpressure (F.S.)): <u>Proof</u>	<u>Burst</u>
750 psi & below	200% F.S.	1000% F.S.
1500 psi	200% F.S.	500% F.S.
3000 psi	200% F.S.	500% F.S.
5000 psi	150% F.S.	500% F.S.
7500 psi	120% F.S.	500% F.S.
10,000 psi	120% F.S.	240% F.S.
20,000 psi	120% F.S.	240% F.S.
Vibration, Dandom	wibrotion (9)	0 a) over tome

Vibration: Random vibration (20 g) over temperature range (–40° to 125°C). Exceeds typical MIL. STD. requirements

Shock: 100gs, 6 ms

Drop Test: Withstands 1 meter on concrete 3 axis

Response Time: Less than 1 msec Warm-up Time: Less than 500 msec typical Position Effect: Less than ±0.01% span, typical

Supply

ELECTRICAL SPECIFICATIONS

Output Signals Available:

Voltage Output	Excitation	Current
0-5 Vdc, 3 wire	9-36 Vdc	5mA
0-10 Vdc, 3 wire	14-36 Vdc	5mA
1-5 Vdc, 3 wire	9-36 Vdc	4mA
1-6 Vdc, 3 wire	9-36 Vdc	4mA
Ratiometric Output:		
0.5-4.5 Vdc, 3 wire	5 Vdc ±0.5 Vdc	3.5mA
Current Output:		
4-20mA, 2 wire	9-36 Vdc	

Reverse Polarity & Miswired Protected: Yes Insulation Breakdown Voltage: 100 Vac

Insulation Resistance: Greater than 100 megohms at 100 Vdc

CE Compliance: Per EN 61326: 1997+ A1: 1998 + A2: 2001, Annex A (Heavy Industrial)





Model G2 Pressure Transducer

PHYSICAL SPECIFICATIONS

Pressure Connection: 304 stainless steel

Sensor Material: 17-4PH SS

Housing: 20% Glass Reinforced Nylon,

Fire retardant to UL94 V1

Available Process Connections (Male):

1/8 NPT, 1/4 BSP, 1/4 NPT, G1/4 B, 1/16-20 UNF-2A

For other connections consult factory

Ingress Rating:

- IP67, NEMA 4X:
- Metri-Pack I50 series*
- Shielded cable
- Flying leads
- IP65, NEMA 4X:
- Hirschman G series**
- Deutsch DT Series DT04-3P
- Deutsch DTM Series DTM04-3P
- · AMP Superseal

ELECTRICAL TERMINATION

- · Shielded Cable: 3' standard, 24 AWG, **PVC Jacket**
- Flying Lead: 3' standard, 18 AWG
- Metri-Pack 150 series*
- · Hirschmann G series**
- *Metri-Pack is a trademark of Delphi Packard Electric Systems
- **Trade Mark of Richard Hirschmann of America, Inc.

DIMENSIONS

1.02

Ø.94

AMP SUPERSEAL DEUTSCH DT04-3P



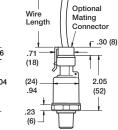
.56

2.11

Ø.94



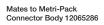
DEUTSCH DTM04-3P



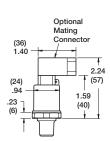
(27)

1.06

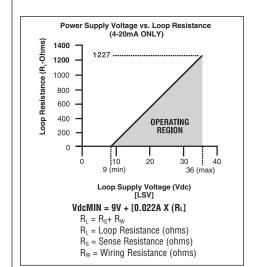
3-PIN METRI-PACK*



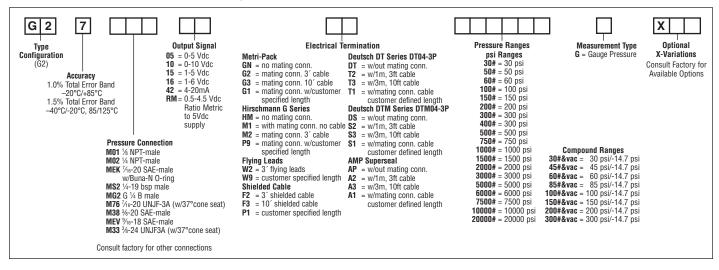




Mates to Hirschmann G4W1F Connector or Similar



How To Order





Type 1008A/AL Stainless Steel **Metric Case Commercial Gauge**



FEATURES

- 63mm (2½") and 100mm (4" case sizes
- Corrosion-resistant stainless steel case/ring
- Dry, field-fillable or liquid-filled versions
- Patented PowerFlex™ movement
- True Zero™ indication, a unique safety
- Two-year warranty on liquid-filled gauges

Ashcroft® Type 1008A gauges are synonymous with durability, flexibility and exceptional quality.

The Type 1008A case and ring assembly is constructed of durable, corrosion-resistant stainless steel. The gauge enclosure is sealed to provide maximum protection in adverse environmental conditions. The core of the Type 1008A is the patented Power*Flex*[™] movement. This movement provides a higher level of resistance to shock, vibration and pulsation than conventional gauge movements.

Both 63mm and 100mm Type 1008A gauges are available dry, field fillable, glycerin filled or silicone filled. Weld nuts are standard on all back connection gauges, therefore, any back-connection gauge with the addition of a U-clamp accessory kit, can be panel mounted. For limited space constraints, the front-flange mounting kit is offered. Where it is necessary to convert a larger panel opening to a smaller size, the retrofit flange kit is available. Custom dials and metric sockets are also available.

True Zero™ indication, a unique safety feature standard on these gauges, is the accurate indication of zero pressure being applied to the gauge. In addition to the increased safety benefits, this means reduced inspection and manufacturing costs for you and your customer.

PRODUCT SPECIFICATIONS:

Ashcroft® Model No.: 1008A/AL

Size:

63mm (2½"), 100mm (4") 304 stainless steel, dry (1008A) or liquid Case:

filled (1008AL)

Fill Fluid: Glycerin (20° to 150°F ambient;

–7°C to 65°C)

Ring: 304 stainless steel, crimped

Window: Polycarbonate

Dial: Black figures on white background, alu-

minum

Pointer: Black, aluminum

Bourdon Tube: - C-shaped Bronze (vac.-600 psi and

compound)

- Helical Bronze (1000 psi-6000 psi)

- Helical stainless steel (10,000 psi-

15,000 psi)

Movement: Patented PowerFlex™ movement Socket: Brass, with O-ring case seal

Restrictor: Brass throttle plug, 0.013" orifice

(except for vacuum 15 psi ranges)

Connection: 1/4 NPT lower and back

Vac. thru 15,000 psi and compound. Ranges:

Equivalent metric ranges available ASME B40.100. Grade B. ±3-2-3%

Operating Temp.: -40°F to 150°F, -40°C to 65°C

(dry gauge)

OPTIONAL FEATURES:

Accuracy:

Case: Sealed case, field fillable (LJ)

Silicone filled (GV)

(-40°F to 150°F; -40°C to 65°C)

Mounting Hardware: U-clamp (UC), Front flange (FF),

Retrofit flange (RF)

Throttle Plugs, 0.007," 0.020," 0.063" Socket:

JIS, DIN and other connections on

application

Others: Customized dials, Nonstandard ranges,

Special calibration on application FlutterGuard™ (eliminates rapid pointer flutter on most vibration/ pulsation applications - dry gauges only)

COMMONLY USED ON

Hvdraulic systems, machine tools, pressure washers/sprayers, compressors, irrigation equipment, a variety of other applications

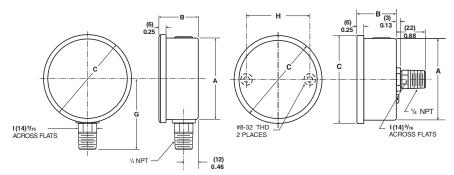
HOW TO ORDER (Typical example)			
63	1008A	L 02L	1000#
Dial Size: 63mm			
Case Type Number: 1008A			
(SS case / bronze tube / brass socket / PowerFlex movement)			
Liquid Filled Case			
Connection Size/Location: ¼ NPT Lower _			
Range: 1000 psi			





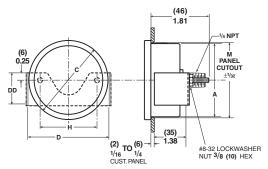
Type 1008A/AL Stainless Steel Metric Case Commercial Gauge

DIMENSIONS

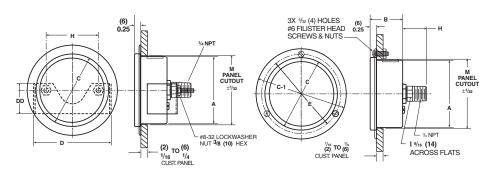


63/100mm 1008A/AL Lower Connection

63/100mm 1008A/AL Back Connection



63/100mm 1008A/AL Back Connection (XUC) U-Clamp



63/100mm 1008A/AL Back Connection (XRF) Front Flange Retrofit

63/100mm 1008A/AL Back Connection (XFF) Front Flange

										LOV	VER	BA	CK	
SIZE/TYPE	A	В	С	CC	D	DD	E	G	Н	M	Weight Dry	t oz / kg Wet	Weight Dry	oz / kg Wet
63mm, 1008A/AL	(63) 2.48	(31) 1.21	(69) 2.71	(86) 3.36	(75) 2.95	(28) 1.12	(75) 2.95	(56) 2.20	(49) 1.94	(65) 2.54	3.88 oz 0.110 kg	7.48 oz 0.212 kg	4.09 oz 0.116 kg	7.69 oz 0.218 kg
100mm, 1008A/AL	(100) 3.94	(31) 1.24	(106) 4.16	(133) 5.22	(107) 4.20	(28) 1.12	(116) 4.57	(74) 2.92	(76) 3.00	(101) 3.97	8.11 oz 0.230 kg	15.80 oz 0.448 kg		14.82 oz 0.420 kg

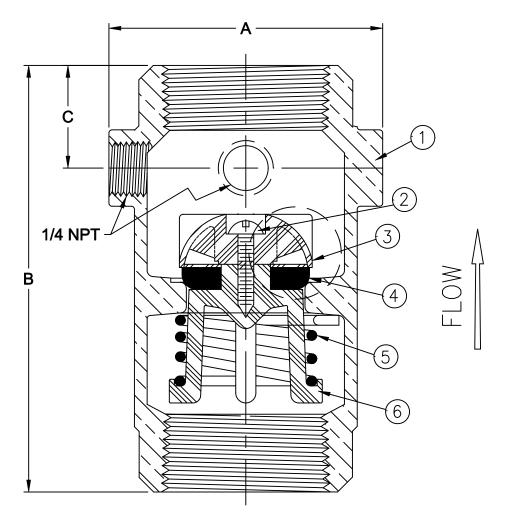
Dimensions in (mm) inches.

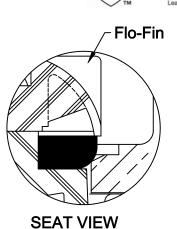
Sizes 1" thru 1-1/2"/ 25mm thru 40mm

Flomatic Corporation

LOW-LEAD

Materials





Temp Max: 180°F Pressure Max: 400 psi

Item #	Qty	Description	Material	ASTM
1	1	Body	Unleaded Bronze	C89833
2	1	Screw	Stainless Steel	18-8
3	1	Dome	Delrin	
4	1	Disc	Buna-n	
5	1	Spring	Stainless Steel	18-8
6	1	Guide	Delrin	

Dimensions

Patent # 4,971,093 & 6,581,633

Siz	Size D. 4.4		А		В		С		Weig	ht
inch	mm	Part #	inch	mm	inch	mm	inch	mm	lbs	kg
1	25	7961E	1-29/32	48	3-3/4	95	15/16	24	1-13/64	.55
1-1/4	32	7963E	2-11/16	68	4-3/16	106	1	25	1-13/16	.82
1-1/2	40	7964E	3	76	4-5/8	117	1-1/8	29	2-11/16	1.22

Flomatic Corporation can accept no responsibility for possible errors in catalogues, brochures and other printed material. Flomatic Corporation reserves the right to alter its products without notices. This also applies to product already agreed. All trademarks in this material are property of the respective companies. All right reserved. ©2011 Flomatic Corporation. The drawings & information on this drawing sheet are the sole & exclusive property of Flomatic Corporation. Any reproduction, distribution, display or use of these drawingsor information in whole or in part without written authorization of Flomatic Corporation is strictly prohibited.



BOOSTER PUMP TANKS

BackStop® Booster Pump Tanks are used in potable water systems to maintain system pressure when the pump is not operating. Pump tanks increase the pump and water system life by reducing system cycling time. The heavy duty diaphragm keeps the water permanently isolated from the pre-charged air cushion.

Model No.	Volume (liter)	Volume (gal.)	Acceptance Vol. (gal.)	Height	Dia.	Sys. Conn.	Wt. (lbs.)
APT18H	18	4.5	3.2	14.8"	12"	3/4"	10
APT24H	22	6	4.2	16.5"	12"	3/4"	11
APT58H	53	14.5	8.5	21"	17"	1"	23
APT80H	78	20	12.6	28"	17"	1"	29



Pump sold separately