

41st Anniversary
Edition

AquFlow

The Gold Standard in Metering Pump Technology

AquFlow

Metering Pumps & Systems

The Legendary Brand in Metering Pumps

Offering the widest range
of material selection as well
as flow rates up to 1,750 GPH
(Simplex), 3,500 GPH (Duplex)



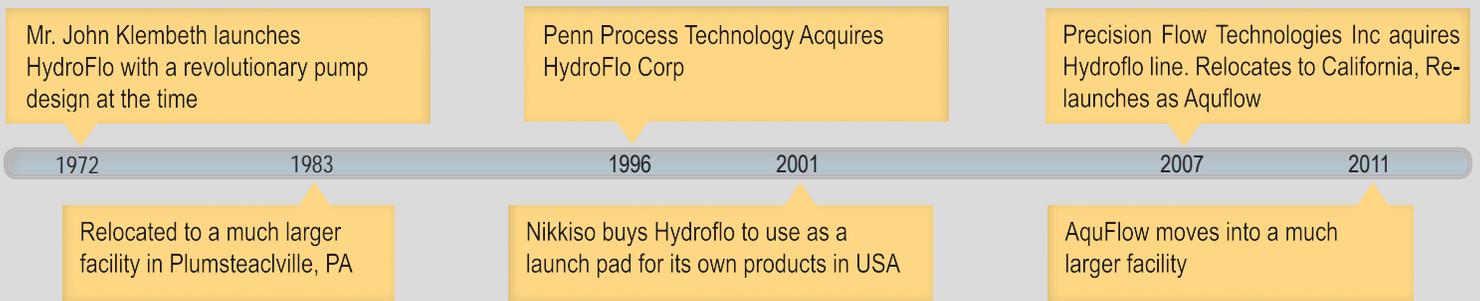
COMPANY PROFILE

Originally founded in 1972 as Hydroflo to manufacture premium chemical metering pumps, this company was acquired by Precision Flow in 2007 and relaunched as Aquflow. With continued development and refinement we currently have the most extensive range of flow capacities, pressure and corrosion resistant materials of construction under one brand. Over the last 40 years we have gained a well-deserved reputation for making high quality pumps that outlast and outperform most competitive models.



The pumps are made in a State of the Art facility in Irvine, California, USA. The manufacturing process we have in place emphasizes flexibility and agility to accommodate market requirements rapidly. Hence our fast deliveries delight customers who may have their process down for the lack of a pump. Aquflow test and qualification equipment ensures that our pumps comply with the highest standards of the industry such as API 675. Our location near major ports help us ship the products expeditiously and cost effectively throughout the world.

HISTORY TIMELINE

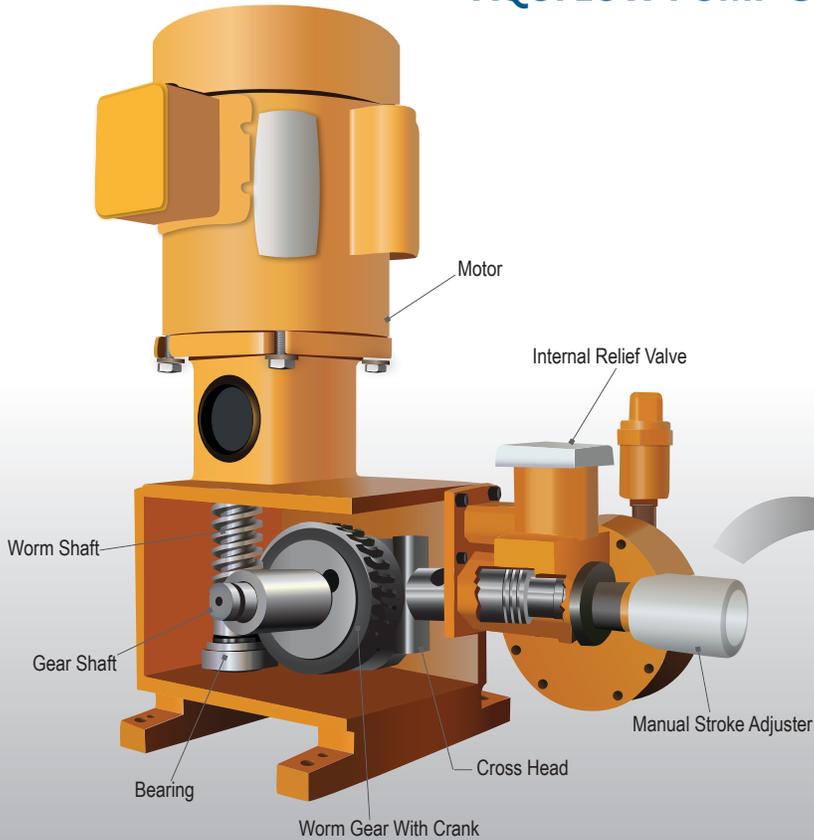


WHO WE ARE	HOW IT BENEFITS OUR CUSTOMERS
USA based midsized manufacturer	Expect us to be lean, agile and flexible to survive
Privately Owned Company	We answer to our customers, not shareholders
Industry Veterans with a Passion for Pumps	We take personal pride in every pump we build
40 years of handling the most difficult chemicals	We have ready solutions for most problems
WHAT WE MAKE	HOW IT BENEFITS OUR CUSTOMERS
Extensive range of hydraulic diaphragm pumps	All dosing pump sizes and pressures in one place
Efficiently designed hydraulic oil channels	Quick Start Up, No Air locking, Accurate & Dependable
Robust Durable design perfected over 4 decades	Pumps that run for decades with minimal maintenance
Ability to adjust flow while pump is running	Overall ease and simplicity of Installation and Operation
All replaceable and service parts located intuitively	Quick & Easy to Maintain and Service

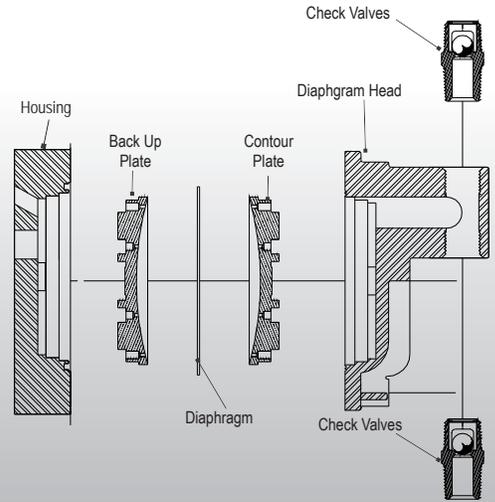
API - 675

This standard is written by the American Petroleum Institute for controlled volume (metering/dosing) pumps. It requires the hydraulically balanced diaphragm pumps to meet certain minimum requirements for life, uninterrupted operation, servicability, accuracy and repeatability among other things. All AquFlow hydraulic diaphragm pumps comply with these standards. Documentation and test reports in accordance with the standards can be furnished for an additional charge when requested in advance.

AQUFLOW PUMP CUTAWAY



LIQUID END CROSS SECTION



HYDRAULICALLY BALANCED DIAPHRAGM - MORE ACCURATE, LONGER LASTING, MINIMUM MAINTENANCE

There are several metering pump designs that are available today. Hydraulic diaphragm is the most evolved version which offers several advantages over other types. Following are some points to consider while choosing between different types based on your application.

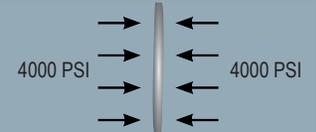
Piston Plunger

- Metallic piston in contact with process fluid
- Piston/Plunger packing exposed to process fluid
- Contamination with grease/lubricant

Solenoid Diaphragm

- Unbalanced diaphragm stem failure
- Works only for light duty low pressure applications
- Low durability design

Hydraulic Balanced Diaphragm



UnBalanced Diaphragm



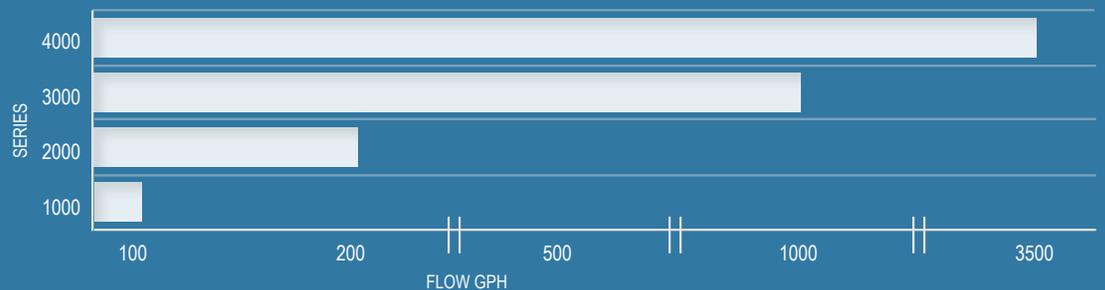
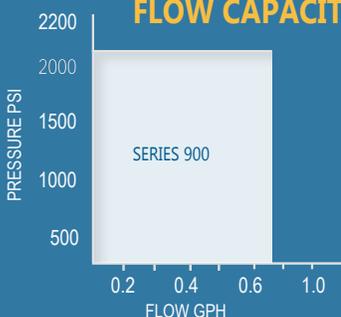
Mechanical Diaphragm

- Unbalanced diaphragm - frequent replacements
- Not suitable for high pressure
- Less accurate due to rolling diaphragm

Other Hydraulic Diaphragm Advantages

- Run by hydraulic oil which is non compressible
- Balanced pressure on both sides to increase life
- Virtually maintenance free for years
- Built in safety features - Internal relief valve

FLOW CAPACITY RANGE - FROM VERY LOW TO VERY HIGH



AquFlow Ultra - LowCapacity Pumps



Features

- Flow capacities up to 123 GPH (Duplex)
- Pressure Up to 4,000 PSI
- Unibody Design – Less Parts
- Metering accuracy +/- 1%
- Easy capacity controls – manual/auto
- Built in safety – Internal relief valve
- Available in duplex to double flow capacity
- Ability to handle difficult liquids like slurries, off-gasing, and high viscosities

Specifications

Flow capacity adjustment – 0-100%
While the pump is running or stopped

Turndown Ratio

Stroke length – 10:1
Stroke frequency – 10:1
Combined – 100:1

Metering Accuracy

Steady state - +/- 1 %
Linearity - +/- 1 %
Combined – +/- 1 %

Maximum process fluid temperature

Custom engineered metallic liquid end: 500F
Metallic liquid end/PTFE diaphragm: 250F (121C)
Plastic Head: 140F (60C)
Plunger stroke length: 0.75
Hydraulic oil capacity: 2qts (simplex) 3qts (Duplex)

Displacement per stroke – by plunger size

3/8" - 0.08257 cu. in. (1.353 ml)
9/16" - 0.18595 cu. in. (3.047 ml)
3/4" - 0.33073 cu. in. (5.419 ml)
7/8" - 0.450246 cu. in. (7.378 ml)
1-1/8" - 0.78649 cu. in. (12.888 ml)
1-5/8" - 1.5537 cu. in. (25.461 ml)

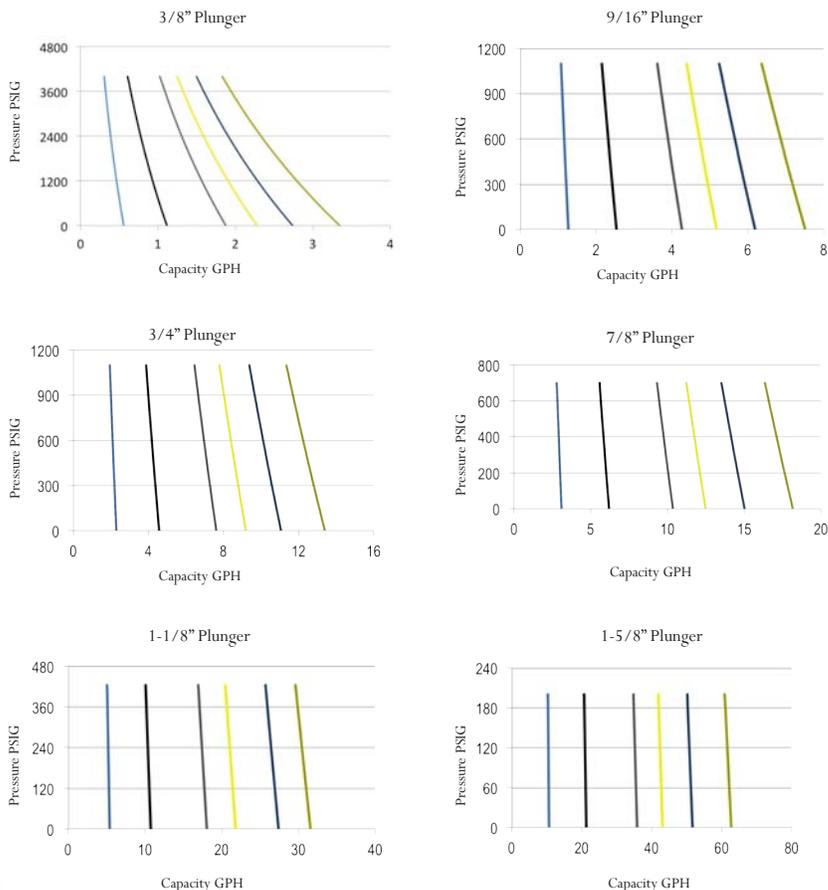
Liquid End Material Options

316SS, Alloy 20, Hastelloy C,
PVC, PVDF, and PTFE

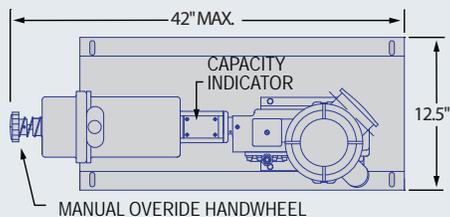
AquFlow Model Number	Capacity GPH (LPH)	Pressure PSIG (bars)	Speed (SPM)	Plunger Diameter	Connection (NPT)
CA4T 3829-0X013	0.55 (2.1)	4,000 (275)	29	3/8"	1/4"
CA4T 3858-0X013	1.10 (4.2)		58		
CA4T 3897-0X013	1.85 (7.0)		97		
CA4T 3812-0X013	2.25 (8.5)		117		
CA4T 3814-0X013	2.70 (10.2)		140		
CA4T 3817-0X013	3.28 (12.4)		170		
CJ4T 5629-0X014	1.25 (4.7)	1,100 (75)	29	9/16"	3/8"
CJ4T 5658-0X014	2.50 (9.5)		58		
CJ4T 5697-0X014	4.20 (15.9)		97		
CJ4T 5612-0X014	5.10 (19.3)		117		
CJ4T 5614-0X014	6.09 (23.1)		140		
CJ4T 5617-0X014	7.40 (28.0)		170		
CJ4T 7529-0X014	2.25 (8.5)	1,100 (75)	29	3/4"	3/8"
CJ4T 7558-0X014	4.50 (17.1)		58		
CJ4T 7597-0X014	7.50 (28.4)		97		
CJ4T 7512-0X014	9.05 (34.3)		117		
CJ4T 7514-0X014	10.8 (40.9)		140		
CJ4T 7517-0X014	13.1 (49.6)		170		
CJ4T 8729-0X014	3.05 (11.5)	700 (48)	29	7/8"	3/8"
CJ4T 8758-0X014	6.10 (23.0)		58		
CJ4T 8797-0X014	10.2 (38.6)		97		
CJ4T 8712-0X014	12.5 (47.3)		117		
CJ4T 8714-0X014	14.7 (55.6)		140		
CJ4T 8717-0X014	17.9 (67.8)		170		
CJ4T 11329-0X014	5.33 (20.2)	700 (48)	29	1-1/8"	3/8"
CJ4T 11358-0X014	10.6 (40.1)		58		
CJ4T 11397-0X014	17.8 (67.4)		97		
CJ4T 11312-0X014	22.0 (83.3)		117		
CJ4T 11314-0X014	25.7 (97.3)		140		
CJ4T 11317-0X014	31.1 (117.7)		170		
CJ4T 16229-0X018	10.5 (39.7)	200 (13)	29	1-5/8"	1/2"
CJ4T 16258-0X018	21.0 (79.5)		58		
CJ4T 16297-0X018	35.3 (133.6)		97		
CJ4T 16212-0X018	42.5 (160.9)		117		
CJ4T 16214-0X018	50.8 (192.3)		140		
CJ4T 16217-0X018	61.7 (233.5)		170		

X = 4 FOR 316SS, 5 FOR ALLOY 20, 6 FOR HAST. C, 8 FOR PVC, AND A FOR PVDF

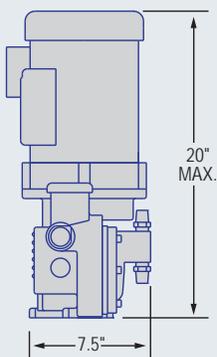
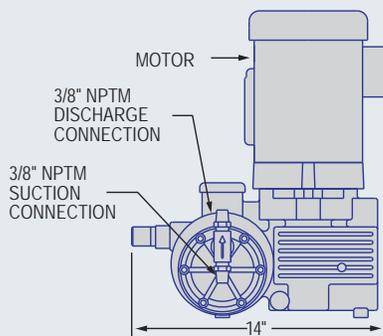
PERFORMANCE CURVE - TYPICAL



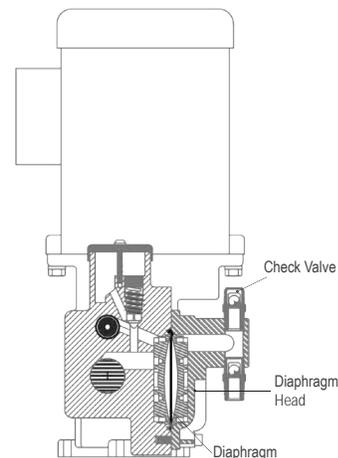
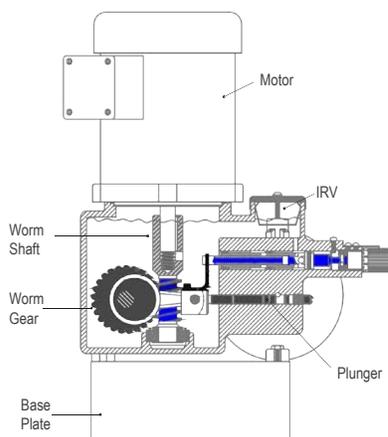
DIMENSIONS



Series 1000 with ECCA



CROSS SECTION



S1000 Options

Capacity Control Options: Dual Axis with both stroke length and stroke speed adjustable

Stroke Length Controls: Manual - Standard on all pumps
 Electric – Electric stepper motor. Capable of 4-20mA input
 Pneumatic – Runs on 30 PSI air for hazardous environment

Stroke Speed Controls: Variable Frequency Drive (VFD) - AC / Variable Speed Drive (SCR) - DC

Liquid Handling Options

Tubular: For liquids with suspended solids/slurries that may clog. Good for high viscosity liquids also.

Degassing Valve: Some challenging liquids can cause air locking due to off gassing. Our pump head with degassing valve ensures accurate and consistent pumping by letting out gas bubbles from the pump head.

Double Ball Check Valve: To make doubly sure you have positive valve shut off.

Tungsten Carbide Valve Balls: For abrasive liquids.

Leak Detection Options

There are two types of leak detection options available with AquFlow pumps.

Conductive: Conductivity probe between 2 diaphragms to sense any break/rupture.

Vacuum: Uses a vacuum switch between 2 diaphragms to sense rupture/ failure.

Other Options

Liquid Connections – NPT / FLANGE/ TRICLAMP

Motor Options: Enclosure: TEFC, TENV, Explosion Proof, Washdown
 Power Supply: Single Phase (150/230 V, 110/220 V), 3 Phase (203-460 V, 220/380 V) DC
 12, 24, 90, 180.



Features

- Flow capacities up to 180 GPH (Duplex)
- Pressure Up to 1,800 PSI
- Modular design in aluminum housing
- Metering accuracy +/- 1%
- Easy capacity controls – manual/auto
- Built in safety – Internal relief valve
- Available in duplex to double flow capacity
- Ability to handle difficult liquids like slurries, off-gasing, and high viscosities

Specifications

Flow capacity adjustment – 0-100%
While the pump is running or stopped

Turndown Ratio

Stroke length – 20:1
Stroke frequency – 20:1
Combined – 100:1

Metering Accuracy

Steady state - +/- 1 %
Linearity - +/- 1%
Combined - +/- 1%

Maximum process fluid temperature

Custom engineered metallic liquid end: 500F
Metallic liquid end/PTFE diaphragm: 250F (121C)
Plastic Head: 140F (60C)
Plunger stroke length: 1-1/2"
Hydraulic oil capacity: 4 qts (Simplex & Duplex)

Displacement per stroke – by plunger size

3/4" - 0.6976 cu. in. (11.43 ml)
1" - 1.1334 cu. in. (18.57 ml)
1-1/4" - 1.8757 cu. in. (30.74 ml)
1-1/2" - 2.0797 cu. in. (34.08 ml)

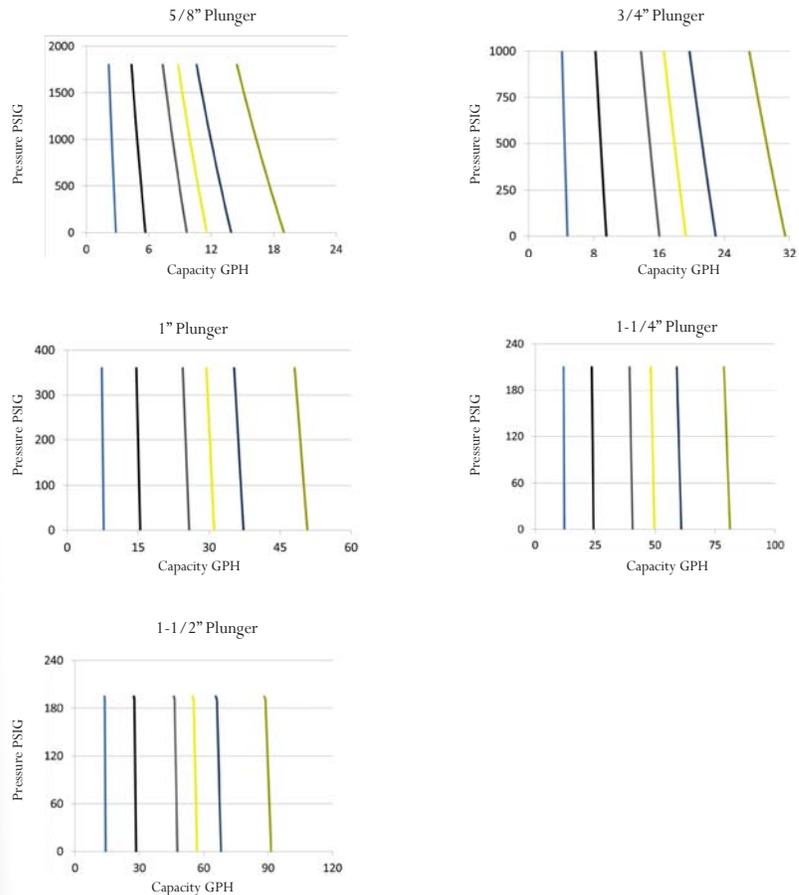
Liquid End Material Options

316SS, Alloy 20, Hastelloy C,
PVC, PVDF, and PTFE

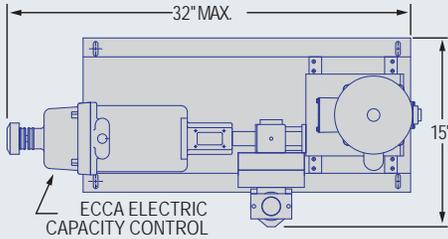
AquFlow Model Number	Capacity GPH (LPH)	Pressure PSIG (bars)	Speed (SPM)	Plunger Diameter	Connection (NPT)
CD3T 0529-0X014	2.8 (10.6)	1,800 (124)	29	5/8"	3/8" M
CD3T 0558-0X014	5.6 (21.2)		58		
CD3T 0597-0X014	9.5 (36.0)		97		
CD3T 0512-0X014	11.4 (43.2)		117		
CD3T 0514-0X014	13.7 (51.9)		140		
CD3T 0519-0X014	18.7 (70.8)		190		
CD3T 0629-0X014	4.7 (17.8)	1,000 (69)	29	3/4"	3/8" M
CD3T 0658-0X014	9.4 (35.6)		58		
CD3T 0697-0X014	15.8 (59.8)		97		
CD3T 0612-0X014	19.0 (71.9)		117		
CD3T 0614-0X014	22.6 (85.6)		140		
CD3T 0619-0X015	31.0 (117.3)		190		
CD3T 0829-0X014	7.60 (28.8)	360 (25)	29	1"	3/8" M
CD3T 0858-0X014	15.2 (57.5)		58		
CD3T 0897-0X014	25.4 (96.1)		97		
CD3T 0812-0X015	30.6 (115.8)		117		3/8" F
CD3T 0814-0X015	36.7 (138.9)		140		
CD3T 0819-0X015	50.0 (189.3)		190		
CD3T 1029-0X014	12.0 (45.4)	210 (14)	29	1-1/4"	3/8" M
CD3T 1058-0X014	24.0 (90.8)		58		
CD3T 1097-0X018	40.0 (151.4)		97		
CD3T 1012-0X018	49.0 (185.5)		117		1/2" F
CD3T 1014-0X018	60.0 (227.1)		140		
CD3T 1019-0X018	80.0 (302.8)		190		
CD3T 1229-0X014	14.0 (53.0)	195 (13)	29	1-1/2"	3/8" M/F
CD3T 1258-0X015	28.0 (106.0)		58		
CD3T 1297-0X018	47.0 (177.9)		97		
CD3T 1212-0X018	56.0 (212.0)		117		1/2" F
CD3T 1214-0X018	67.0 (253.6)		140		
CD3T 1219-0X018	90.0 (340.6)		190		

X = 4 FOR 316SS, 5 FOR ALLOY 20, 6 FOR HAST. C, 8 FOR PVC, AND A FOR PVDF

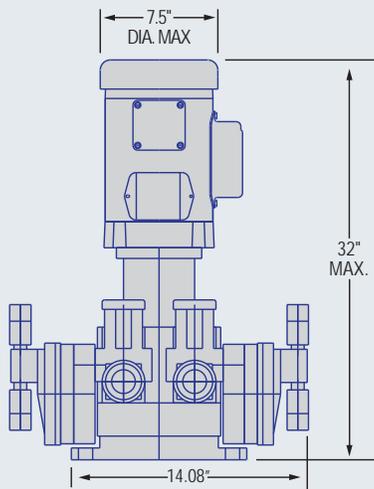
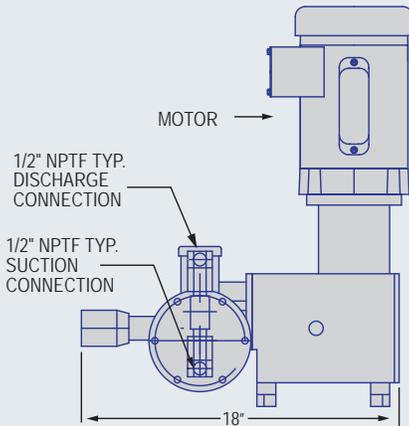
PERFORMANCE CURVE - TYPICAL



DIMENSIONS

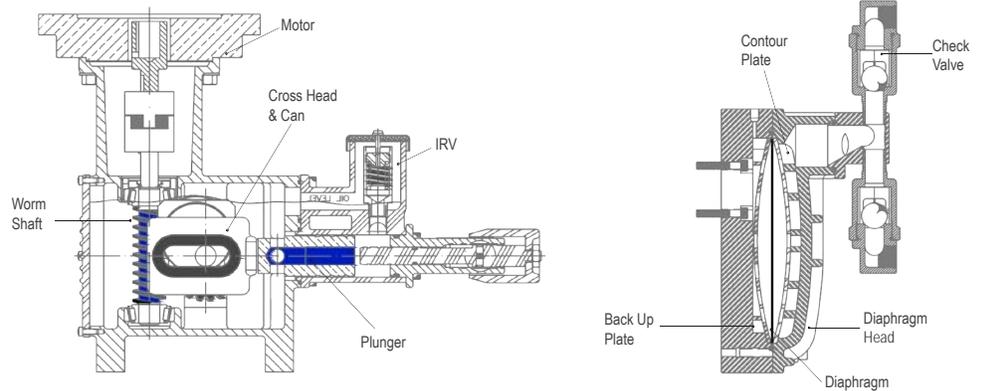


Series 2000 with ECCA



Series 2000 Duplex

CROSS SECTION



S2000 Options

Capacity Control Options: Dual Axis with both stroke length and stroke speed adjustable

Stroke Length Controls: Manual - Standard on all pumps
 Electric – Electric stepper motor. Capable of 4-20mA input
 Pneumatic – Runs on 30 PSI air for hazardous environment

Stroke Speed Controls: Variable Frequency Drive (VFD) - AC / Variable Speed Drive (SCR) - DC

Liquid Handling Options

Tubular: For liquids with suspended solids/slurries that may clog. Good for high viscosity liquids also.

Degassing Valve: Some challenging liquids can cause air locking due to off gassing. Our pump head with degassing valve ensures accurate and consistent pumping by letting out gas bubbles from the pump head.

Double Ball Check Valve: To make doubly sure you have positive valve shut off.

Tungsten Carbide Valve Balls: For abrasive liquids.

Leak Detection Options

There are two types of leak detection options available with AquFlow pumps.

Conductive: Conductivity probe between 2 diaphragms to sense any break/rupture.

Vacuum: Uses a vacuum switch between 2 diaphragms to sense rupture/ failure.

Other Options

Liquid Connections – NPT / FLANGE/ TRICLAMP

Motor Options: Enclosure: TEFC, TENV, Explosion Proof, Washdown
 Power Supply: Single Phase (150/230 V, 110/220 V), 3 Phase (203-460 V, 220/380 V) DC 12, 24, 90, 180.



Features

- Flow capacities up to 920 GPH (Duplex)
- Pressure Up to 700 PSI
- Modular design in aluminum housing
- Metering accuracy +/- 1%
- Easy capacity controls – manual/auto
- Built in safety – Internal relief valve
- Available in duplex to double flow capacity
- Ability to handle difficult liquids like slurries, off-gasing, and high viscosities

Specifications

Flow capacity adjustment – 0-100%
While the pump is running or stopped

Turndown Ratio

Stroke length – 40:1
Stroke frequency – 10:1
Combined – 100:1

Metering Accuracy

Steady state - +/- 1 %
Linearity - +/- 1 %
Combined - +/- 1 %

Maximum process fluid temperature

Custom engineered metallic liquid end: 500F
Metallic liquid end/PTFE diaphragm: 250F (121C)
Plastic Head: 140F (60C)
Plunger stroke length: 3"
Hydraulic oil capacity: 12 qts

Displacement per stroke – by plunger size

- 1" - 2.3469 cu. in. (38.46 ml)
- 1-1/4" - 3.6738 cu. in. (60.20 ml)
- 1-1/2" - 5.2906 cu. in. (86.70 ml)
- 1-3/4" - 7.2063 cu. in. (118.09 ml)
- 2" - 9.4102 cu. in. (154.21 ml)
- 2-1/4" - 11.9023 cu. in. (195.04 ml)
- 2-1/2" - 14.1561 cu. in. (231.98 ml)

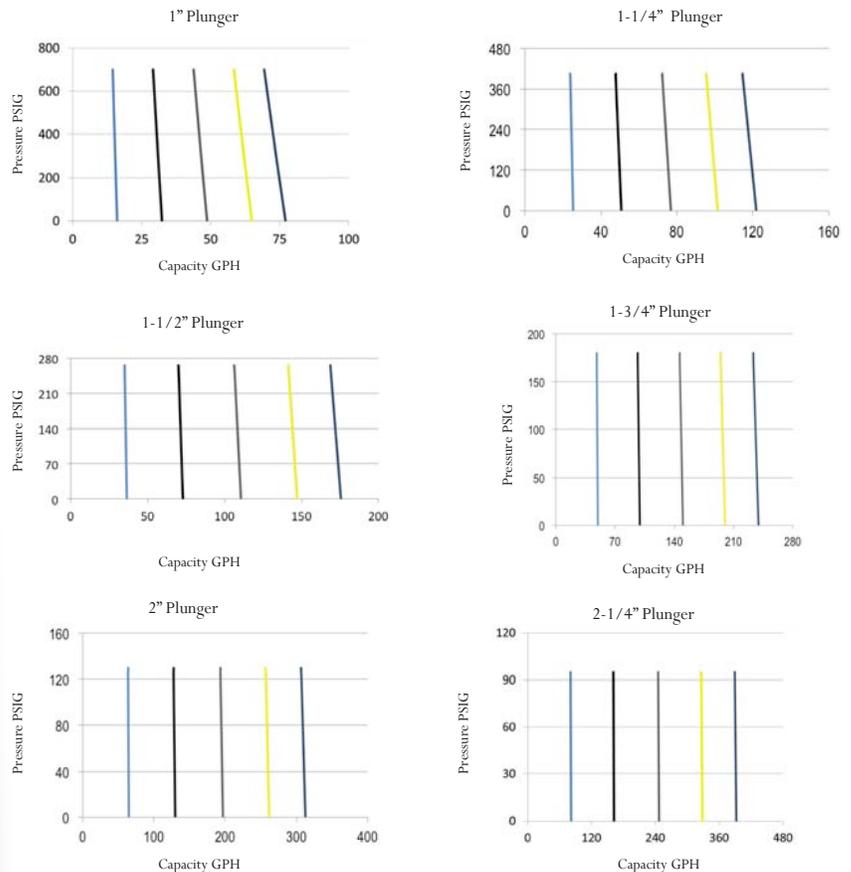
Liquid End Material Options

316SS, Alloy 20, Hastelloy C,
PVC, PVDF, and PTFE

AquFlow Model Number	Capacity GPH (LPH)	Pressure PSIG (bars)	Speed (SPM)	Plunger Diameter	Connection (NPT)
CNIT 0844-0X018	24.1 (60.2)	700 (48)	44	1"	1/2"
CNIT 0858-0X018	31.9 (120.7)		58		
CNIT 0888-0X018	48.0 (181.7)		88		
CNIT 0812-0X018	64.0 (242.3)		117		
CNIT 0814-0X018	76.0 (287.7)		140		
CNIT 1044-0X018	7.8 (94.6)	405 (28)	44	1-1/4"	1/2"
CNIT 1058-0X018	50.0 (189.3)		58		
CNIT 1088-0X018	75.7 (286.5)		88		
CNIT 1012-0X018	100 (378.5)		117		
CNIT 1014-0X018	120 (454.2)		140		
CNIT 1244-0X018	54.4 (135.9)	265 (18)	44	1-1/2"	1/2"
CNIT 1258-0X018	71.8 (271.8)		58		
CNIT 1288-0X018	109 (412.6)		88		
CNIT 1212-0X018	145 (548.9)		117		
CNIT 1214-0X01A	173 (654.9)		140		
CNIT 1444-0X018	74 (185.1)	180 (12)	44	1-3/4"	1/2"
CNIT 1458-0X018	97.8 (370.2)		58		
CNIT 1488-0X018	148 (560.2)		88		
CNIT 1412-0X01A	197 (745.7)		117		
CNIT 1414-0X01A	236 (893.4)		140		
CNIT 1644-0X018	96.8 (241.9)	130 (9)	44	2"	1-1/2"
CNIT 1658-0X018	128 (484.5)		58		
CNIT 1688-0X01A	194 (724.4)		88		
CNIT 1612-0X01B	258 (976.6)		117		
CNIT 1614-0X01B	308 (1,165.9)		140		
CNIT 1844-0X018	122.4 (305.9)	95 (6)	44	2-1/4"	1-1/2"
CNIT 1858-0X018	161 (609.5)		58		
CNIT 1888-0X01A	245 (927.4)		88		
CNIT 1812-0X01B	326 (1,234.0)		117		
CNIT 1814-0X01C	389 (1,472.5)		140		
CNIT 2044-0X018	145 (359.6)	75 (5)	44	2-1/2"	1-1/2"
CNIT 2058-0X01A	191 (723.0)		58		
CNIT 2088-0X01B	291 (1,101.5)		88		
CNIT 2012-0X01C	387 (1,465.0)		117		
CNIT 2014-0X01C	463 (1,752.6)		140		

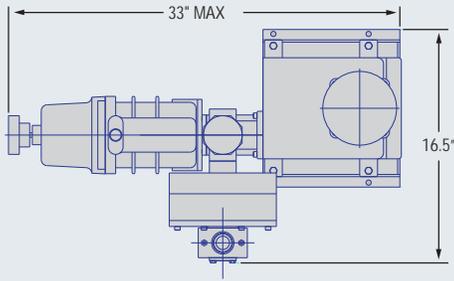
X = 4 FOR 316SS, 5 FOR ALLOY 20, 6 FOR HAST. C, 8 FOR PVC, AND 4 FOR PVDF

PERFORMANCE CURVE - TYPICAL

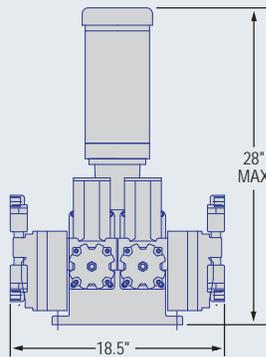
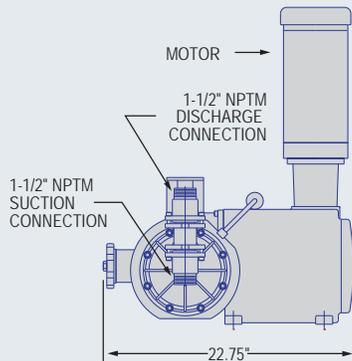


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DIMENSIONS



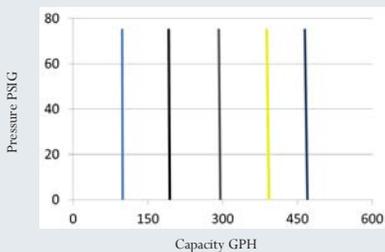
Series 3000 with ECCA



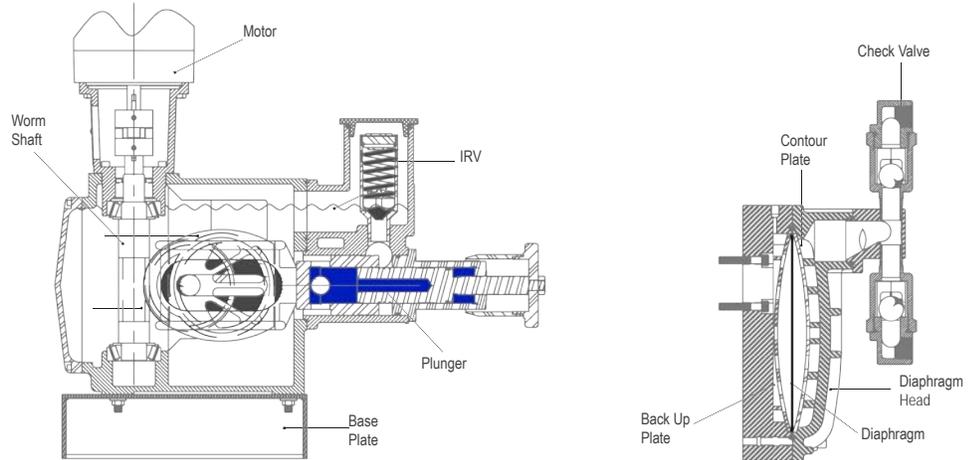
Series 3000 Duplex

Continued from page 8

2-1/2" Plunger



CROSS SECTION



S3000 Options

Capacity Control Options: Dual Axis with both stroke length and stroke speed adjustable

Stroke Length Controls: Manual - Standard on all pumps
Electric – Electric stepper motor. Capable of 4-20mA input
Pneumatic – Runs on 30 PSI air for hazardous environment

Stroke Speed Controls: Variable Frequency Drive (VFD) - AC / Variable Speed Drive (SCR) - DC

Liquid Handling Options

Tubular: For liquids with suspended solids/slurries that may clog. Good for high viscosity liquids also.

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There are two types of leak detection options available with AquFlow pumps.

Conductive: Conductivity probe between 2 diaphragms to sense any break/rupture.

Vacuum: Uses a vacuum switch between 2 diaphragms to sense rupture/ failure.

Other Options

Liquid Connections – NPT / FLANGE/ TRICLAMP

Motor Options: Enclosure: TEFC, TENV, Explosion Proof, Washdown
Power Supply: Single Phase (150/230 V, 110/220 V), 3 Phase (203-460 V, 220/380 V) DC 12, 24, 90, 180.



Features

- Flow capacities up to 3530 GPH (Duplex)
- Pressure Up to 3,500 PSI
- Modular design in aluminum housing
- Metering accuracy +/- 1%
- Easy capacity controls – manual/auto
- Built in safety – Internal relief valve
- Available in duplex to double flow capacity
- Ability to handle difficult liquids like slurries, off-gasing, and high viscosities

Specifications

Flow capacity adjustment – 0-100%
While the pump is running or stopped

Turndown Ratio

Stroke length – 50:1
Stroke frequency – 10:1
Combined – 100:1

Metering Accuracy

Steady state - +/- 1 %
Linearity - +/- 1%
Combined - +/- 1%

Maximum process fluid temperature

Custom engineered metallic liquid end: 500F
Metallic liquid end/PTFE diaphragm: 250F (121C)
Plastic Head: 140F (60C)
Plunger stroke length: 4.01"
Hydraulic oil capacity: 52 qts

Displacement per stroke – by plunger size

7/8" - 2.2698 in (37.19 ml)
1-1/8" - 3.8013 in (62.29 ml)
1-9/16" - 7.6453 in (125.29 ml)
2-1/2" - 19.63 in (321.77 ml)
3" - 28.1989 in (462.12 ml)
4" - 50.34 (824.99 ml)

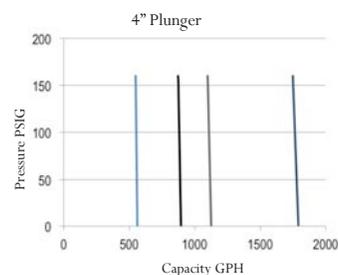
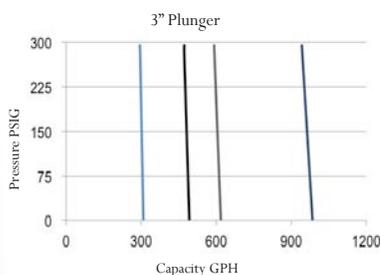
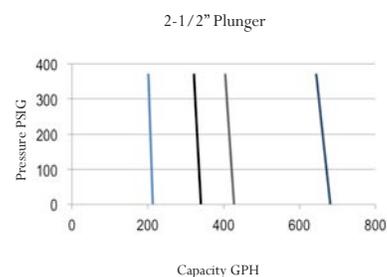
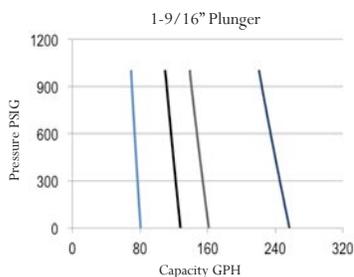
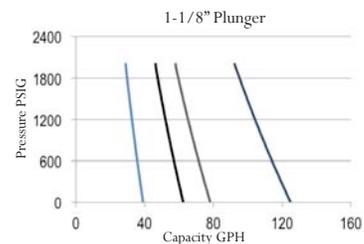
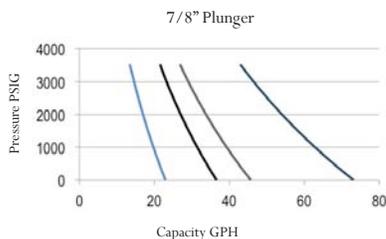
Liquid End Material Options

316SS, Alloy 20, Hastelloy C,
PVC, PVDF, and PTFE

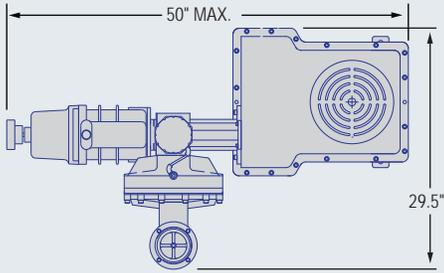
AquFlow Model Number	Capacity GPH (LPH)	Pressure PSIG (bars)	Speed (SPM)	Plunger Diameter	Connection (NPT)
GNIT 0744-0X01A GNIT 0770-0X01A GNIT 0788-0X01A GNIT 0714-0X01A	22.6 (85.5) 36.0 (136.3) 45.0 (170.3) 72.0 (272.5)	3,500 (241)	44 70 88 40	7/8"	1-1/4"
GNIT 0944-0X01A GNIT 0970-0X01A GNIT 0988-0X01A GNIT 0914-0X01A	38.5 (145.7) 61.5 (232.8) 77.0 (291.5) 123 (465.6)	2,000 (138)	44 70 88 140	1-1/8"	1-1/4"
GNIT 1344-0X01A GNIT 1370-0X01A GNIT 1388-0X01A GNIT 1314-0X01A	79.5 (300.9) 126 (477.0) 159 (601.9) 253 (957.7)	1,000 (69)	44 70 88 140	1-9/16"	2-1/2"
GNIT 2044-0X01F GNIT 2070-0X01F GNIT 2088-0X01F GNIT 2014-0X01F	210 (794.9) 335 (1,268.1) 421 (1,593.7) 671 (2,540.0)	370 (26)	44 70 88 140	2-1/2"	2-1/2"
GNIT 2444-0X01A GNIT 2470-0X01A GNIT 2488-0X01A GNIT 2414-0X01A	304 (1,150.8) 485 (1,835.9) 609 (2,305.3) 970 (3,671.8)	295 (20)	44 70 88 140	3"	4"
GNIT 3244-0X01A GNIT 3270-0X01A GNIT 3288-0X01A GNIT 3214-0X01A	554 (2,097.1) 882 (3,338.7) 1,109 (4,198.0) 1,765 (6,681.2)	160 (11)	44 70 88 140	4"	4"

X = 4 FOR 316SS, 5 FOR ALLOY 20, 6 FOR HAST. C, 8 FOR PVC, AND 4 FOR PVDF

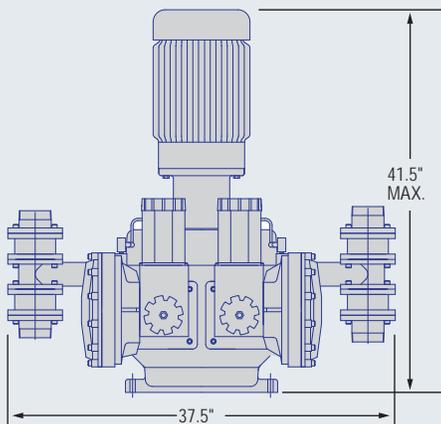
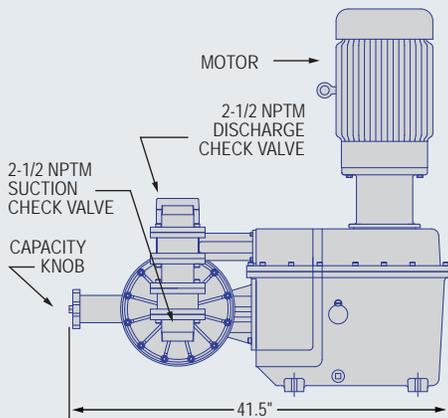
PERFORMANCE CURVE - TYPICAL



DIMENSIONS

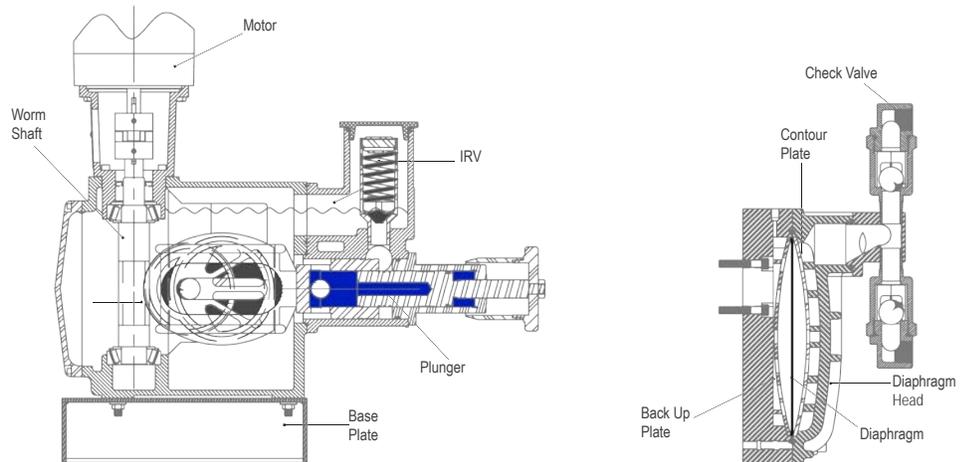


Series 4000 with ECCA



Series 4000 Duplex

CROSS SECTION



S4000 Options

Capacity Control Options: Dual Axis with both stroke length and stroke speed adjustable

Stroke Length Controls: Manual - Standard on all pumps
 Electric – Electric stepper motor. Capable of 4-20mA input
 Pneumatic – Runs on 30 PSI air for hazardous environment

Stroke Speed Controls: Variable Frequency Drive (VFD) - AC / Variable Speed Drive (SCR) - DC

Liquid Handling Options

Tubular: For liquids with suspended solids/slurries that may clog. Good for high viscosity liquids also.

Degassing Valve: Some challenging liquids can cause air locking due to off gassing. Our pump head with degassing valve ensures accurate and consistent pumping by letting out gas bubbles from the pump head.

Double Ball Check Valve: To make doubly sure you have positive valve shut off.

Tungsten Carbide Valve Balls: For abrasive liquids.

Leak Detection Options

There are two types of leak detection options available with AquFlow pumps.

Conductive: Conductivity probe between 2 diaphragms to sense any break/rupture.

Vacuum: Uses a vacuum switch between 2 diaphragms to sense rupture/ failure.

Other Options

Liquid Connections – NPT / FLANGE/ TRICLAMP

Motor Options: Enclosure: TEFC, TENV, Explosion Proof, Washdown
 Power Supply: Single Phase (150/230 V, 110/220 V), 3 Phase (203-460 V, 220/380 V) DC 12, 24, 90, 180.



Features

- Flow capacities up to 6.5 GPH (Duplex)
- Pressure Up to 3,000 PSI
- Modular design in aluminum housing
- Metering accuracy +/- 1%
- Easy capacity controls – manual/auto
- Built in safety – Internal relief valve
- Available in duplex to double flow capacity
- Ability to handle difficult liquids like slurries, off-gassing, and high viscosities

Specifications

Flow capacity adjustment – 0-100%
While the pump is running or stopped

Turndown Ratio

Stroke length – 10:1
Stroke frequency – 10:1
Combined – 100:1

Metering Accuracy

Steady state - +/- 1 %
Linearity - +/- 1%
Combined - +/- 1%

Maximum process fluid temperature

Custom engineered metallic liquid end: 500F
Metallic liquid end/PTFE diaphragm: 250F (121C)
Plastic Head: 140F (60C)
Plunger stroke length: 0.754"
Hydraulic Oil Type F capacity: 1 qts
Gear Oil capacity: 1 qts

Displacement per stroke – by plunger size

3/16" - 0.0207 in (0.33 ml)
1/4" - 0.0368 in (0.60 ml)
3/8" - 0.0828 in (1.35 ml)

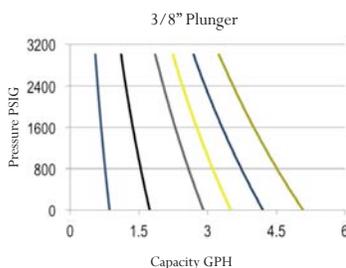
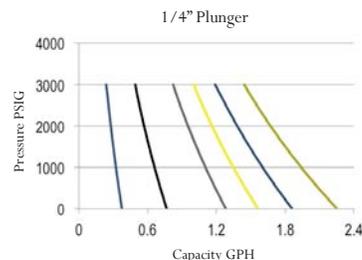
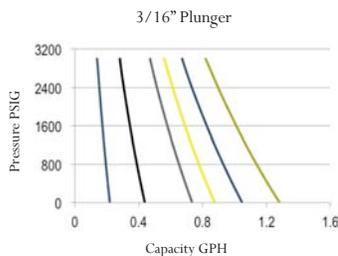
Liquid End Material Options

316SS, Alloy 20, Hastelloy C,
PVC, PVDF, and PTFE

AquFlow Model Number	Capacity GPH (LPH)	Pressure PSIG (bars)	Speed (SPM)	Plunger Diameter	Connection (NPT)
DM3T 1929-0X013	0.14 (0.53)	3,000 (200)	29	3/16"	1/4"
DM3T 1958-0X013	0.28 (1.06)		58		
DM3T 1997-0X013	0.47 (1.78)		97		
DM3T 1912-0X013	0.56 (2.12)		117		
DM3T 1914-0X013	0.67 (2.54)		140		
DM3T 1917-0X013	0.82 (3.10)		170		
DM3T 2529-0X013	0.24 (0.91)	3,000 (200)	29	1/4"	1/4"
DM3T 2558-0X013	0.49 (1.85)		58		
DM3T 2597-0X013	0.82 (3.10)		97		
DM3T 2512-0X013	1.00 (3.79)		117		
DM3T 2514-0X013	1.19 (4.50)		140		
DM3T 2517-0X013	1.44 (5.45)		170		
DM3T 3829-0X013	0.55 (2.08)	3,000 (200)	29	3/8"	1/4"
DM3T 3858-0X013	1.11 (4.20)		58		
DM3T 3897-0X013	1.86 (7.04)		97		
DM3T 3812-0X013	2.24 (8.48)		117		
DM3T 3814-0X013	2.69 (10.18)		140		
DM3T 3817-0X013	3.25 (12.30)		170		

X = 4 FOR 316SS, 5 FOR ALLOY 20, 6 FOR HAST. C, 8 FOR PVC, AND A FOR PVDF

PERFORMANCE CURVE - TYPICAL



ULTRA LOW FLOW SERIES

Designed Specifically For Low Flow Applications
IN Oil & Gas, Pharma, Cosmetics, Food &
Other Industrial Applications.

Lowest Flow Hydraulic Diaphragm Metering
Pump On the Market Made In Compliance API
675.

AQUFLOW PUMPS WORK BEST WITH AQUFLOW ACCESSORIES

Calibration Columns: Help calibrate the pump accurately
0-10 liters in PVC, Stainless Steel etc.

Back Pressure Valves: Maintain steady shut off pressure for valves
3/8" to 2" in PVC, Stainless Steel, Alloy 20, PVDF, Hast. C

Safety Relief Valves: For additional layer of safety from over pressurization
3/8" to 2" in PVC, Stainless Steel, Alloy 20, PVDF, Hast. C

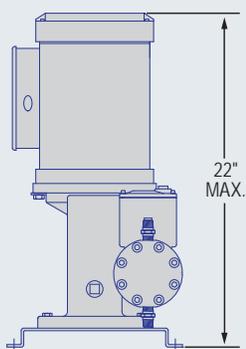
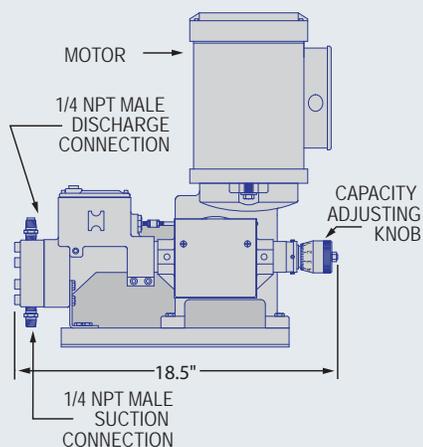
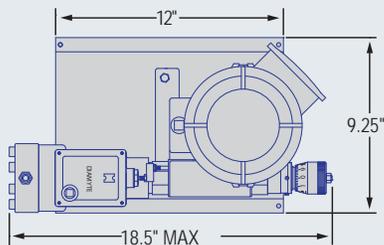
Pressure Gauge with Isolator: To visually see the functioning of the pump

Pulsation Dampeners: To get a pulse less steady flow
0-10 liters in PVC, Stainless Steel, Alloy 20, PVDF, Hast. C.

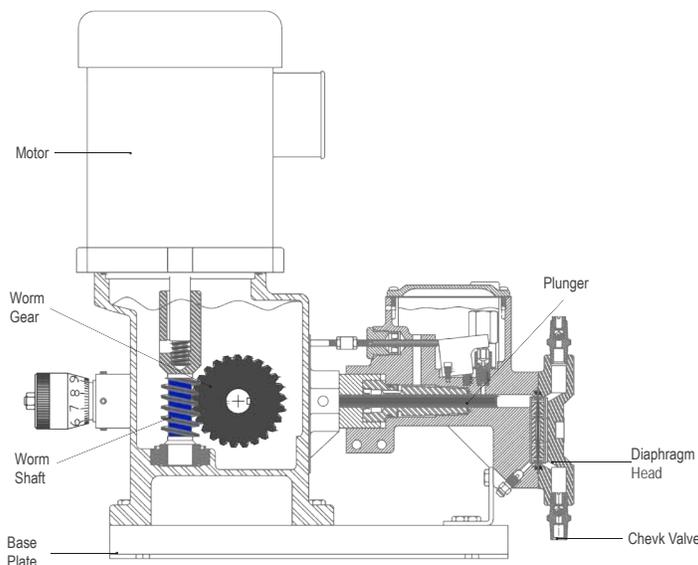
Strainers: To keep the debris away from check valves



DIMENSIONS



CROSS SECTION



S900 Options

Capacity Control Options: Dual Axis with both stroke length and stroke speed adjustable

Stroke Length Controls: Manual - Standard on all pumps
 Electric – Electric stepper motor. Capable of 4-20mA input
 Pneumatic – Runs on 30 PSI air for hazardous environment

Stroke Speed Controls: Variable Frequency Drive (VFD) - AC / Variable Speed Drive (SCR) - DC

Liquid Handling Options

Degassing Valve: Some challenging liquids can cause air locking due to off gassing. Our pump head with degassing valve ensures accurate and consistent pumping by letting out gas bubbles from the pump head.

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Other Options

Liquid Connections – NPT / FLANGE/ TRICLAMP

Motor Options: Enclosure: TEFC, TENV, Explosion Proof, Washdown
 Power Supply: Single Phase (150/230 V, 110/220 V), 3 Phase (203-460 V, 220/380 V) DC
 12, 24, 90, 180.

AQUFLOW - MARKETS & APPLICATIONS

WATER AND WASTEWATER TREATMENT

Sodium / Calcium hypochlorite for disinfection
 Sulfuric acid and sodium silicate
 Alum or sodium aluminate as a coagulant aid
 Injection of phosphate for red water control
 Lime slurries in softening and pH control
 Injection of polymers for primary coagulation
 Activated carbon slurries for taste and odor control
 Bromine for disinfection
 Sulfuric acid - to stop delignification of cooling tower lumber
 Ammonium sulphate or aqua ammonia - chloramines
 Copper sulfate for algae control in cooling tower
 Fluorine compounds for dental cavity control
 Sodium hypochlorite - caustic and cyanide removal
 Lime slurries for pH control (corrosion control)
 Ferric chloride and alum injection for coagulation
 Copper sulfate injection for algae control
 Activated carbon/diatomaceous earth slurries - odor control
 Caustic soda for metal removal, pH control
 Anionic and cationic polymer injection for phosphate removal

AGRICULTURE

Fertigation - Adding Fertilizers
 Chemigation - Pesticide, Insecticide to protect crop
 Fumigation - for crop protection
 Acid Pumping - pH balance for water
 Chlorine - Disinfection of water

OIL & GAS

Injecting Corrosion Inhibitors
 Adjust pH of sour gas or crude oil to reduce corrosion
 Injecting sludge inhibitors for fuel oils
 Pumping additives for bacteria control
 Caustic soda to crude oils or soured gasoline for rerun
 Chemical desalting of crude (crude oil emulsions)
 Metal deactivators (antioxidants) to eliminate gum
 Antiknock additives and alcohol to gasoline
 Metering acid for polymerization, etc.
 Introducing lubricants to gas lines
 Anti-icing additives for Jet fuels
 Gasoline color additives

CHEMICAL PROCESSING

Ethers
 Aromatics (Toluene, Paraxylene, Benzene, Orthoxylene)
 Ethylene Glycols - plastics, textiles, paints, adhesives, etc.
 Vinyl Monomers
 Methanol, used in MTBE
 Sodium Tetraborate solutions
 Alumina catalyst solution

FOOD & DAIRY - Flavors, Additives, Preservatives, Colors

PET FOOD - Preservatives, Additives, Flavors, Hormones

SOFT DRINKS, BEVERAGES - Water Purification, Additives, Flavors

BREWERIES, DISTILLARIES - Water, Additives, Aging Chemicals etc.

PAINTS & DYES - Dyes, Pigments, Inks etc.

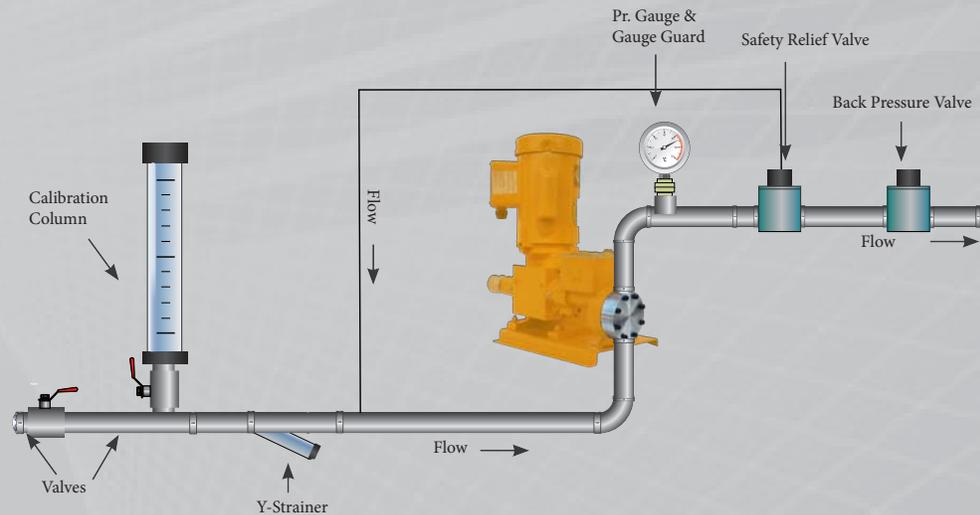
MINING - pH control of the ore, dust control, neutralizing, extraction etc.

PAPER - pH balance of pulp, colors, coatings etc.

FIREPROOFING - Building Structures

BOILER FEED

TYPICAL AQUFLOW PUMP INSTALLATION



AQUFLOW HYDRAULIC METERING PUMP MODEL CODE

AAA: AQUFLOW PUMP SERIES IDENTIFIER

Series 900 - DM4 (Standard), DL4, DL3, etc.
 Series 1000 - CJ4 (Standard), CA4, CJ3, etc.
 Series 2000 - CD3 (Standard), CR3, CQ3, CL3, etc.
 Series 3000 - CNI (Standard), KBI, HFI, CMI etc.
 Series 4000 - GNI (Standard), GMI etc

B: MAIN PUMPING ELEMENT

T = Single PTFE Disc Diaphragm
 W = Double PTFE Disc Diaphragm
 A = Single Hypalon Tube
 B = Single Viton Tube

CC/CCC: PLUNGER DIAMETER

Series 1000	Series 3000
38 = 3/8"	08 = 1"
56 = 9/16"	10 = 1-1/4"
75 = 3/4"	12 = 1-1/2"
87 = 7/8"	14 = 1-3/4"
113 = 1-1/8"	16 = 2"
162 = 1-5/8"	18 = 2-1/4"
	20 = 2-1/2"
Series 2000	Series 4000
05 = 5/8"	07 = 7/8"
06 = 3/4"	09 = 1-1/8"
08 = 1"	13 = 1-9/16"
10 = 1-1/4"	20 = 2-1/2"
12 = 1-1/2"	24 = 3"
	32 = 4"

H: LIQUID CONNECTION

Blank = NPT F = Flange X = Other

DD: STROKES PER MINUTE

29 = 29 SPM
 44 = 44 SPM
 58 = 58 SPM
 88 = 88 SPM
 97 = 97 SPM
 12 = 117 SPM
 14 = 140 SPM
 17 = 170 SPM
 19 = 190 SPM

EE: Liquid End Material

04 = 316 Stainless Steel
 05 = Alloy 20
 06 = Hastelloy C
 08 = PVC
 0A = Kynar (PVDF)

FF: Configuration Code

01 = Simplex Manual Adjustment
 02 = Duplex Manual Adjustment
 03 = Simplex Pneumatic Adjustment
 04 = Duplex Pneumatic Adjustment
 05 = Simplex Electronic (4-20mA)
 06 = Duplex Electronic (4-20mA)

G: Valve Ball Size

3 = 1/4" 8 = 7/8" D = 2"
 4 = 3/8" 9 = 1" E = 2-1/4"
 5 = 1/2" A = 1-1/4" F = 2-1/2"
 6 = 5/8" B = 1-1/2" G = 3"
 7 = 3/4" C = 1-3/4" H = 4"

Cheminjector Systems



CUSTOMIZED RELIABILITY - COMPLETE CHEMICAL FEED SYSTEMS

EVERYTHING YOU NEED FOR ACCURATE CHEMICAL DELIVERY IN YOUR PROCESS

- Tell us your chemical dispensing requirements. We will build a system customized for you.
- We will also provide you with system automation to match your needs and other systems.
- A complete turnkey system that can perform dependably and durably with minimal down time.

FROM CHEMICAL TANK TO INJECTION QUILL – COMPATIBLE ACCESSORIES

- We have pre-matched every component that goes in the system. No incompatibility issues.
- Tested components and controls to ensure optimal performance.
- One responsive team. Comfort in knowing you can call one team known for its responsiveness.

AVAILABILITY OF ALL SERVICE PARTS UNDER ONE ROOF

- We maintain adequate inventory of critical service parts to ensure minimal down time
- Our vendors also support us with similar availabilities for outsourced parts
- Since we maintain complete records for all CI systems built we can always get right parts.

SKID MOUNTED, MOBILE STATIONS, SITE MOUNTED, VEHICLE MOUNTED OPTIONS

- While most assemblies are skid mounted which is then placed at the site there are some systems that are too big for skid mounting. For such systems we provide on site assembly.
- Where mobility is important we have built mobile systems mounted on carts / trailers or even mounted it directly on a vehicle for covering long distances.

STANDARD RANGE OF CHEMINJECTOR PACKAGES

CHEMINJECTOR BASIC ASSEMBLY

- Essential Accessories like Back Pressure Valve, Pressure Relief Valve, Inlet and Discharge Valves, Connecting piping mounted on a simple skid along with the pump and motor.

CHEMINJECTOR STANDARD SYSTEM

- In addition to the Basic Assembly components we add Calibration Column, Inlet Strainer, Pressure Gauge with Isolator, Control Panel with On / Off Switch.

CHEMINJECTOR AUTO SYSTEM

- This includes automation controls which can be communicated with a 4-20mA signal from a computer or a SCADA. Capacity is adjusted with either a VFD or ECCA (Stroke Adjuster).

CHEMINJECTOR AUTO PLUS SYSTEM

- This also includes a feedback loop from a flow meter to ensure the accurate delivery of the chemical. This system also comes with an optional memory for record keeping.

CHEMINJECTOR AUTO PLUS REMOTE CONTROL SYSTEM

- As the name suggests this system has the additional capability to be controlled remotely using a radio signal or over the internet using a computer, tablet or a smart phone.

AQUFLOW WARRANTY – INDUSTRY LEADING UP TO 5 YEARS!

For Hydraulic diaphragm metering pumps Manufactured in the USA!

AquFlow has been manufacturing premium quality hydraulic diaphragm metering pumps for over 40 years since 1972. We have refined the design and perfected the performance over that period to earn a reputation as a maker of long lasting durable pumps that never quit. We have numerous testimonials from our customers who had made the change from competitive pumps to AquFlow never to buy another brand again.

It is with this confidence and AquFlow offers a limited warranty for all its hydraulic diaphragm metering pumps that are manufactured in Irvine, California, USA up to 5 years on all prequalified applications. This is designed to assure the customer that when they buy AquFlow pump they will have one area of their operations that they do not need to worry about anymore. We stand by them every step of the way to ensure the pump delivers performance as and when they expect it to keep their process going and productivity up throughout the life of these pumps.

OTHER PUMP LINES WE CARRY INCLUDE:

Etatron Solenoid Pumps

Etatron America sells a complete line of solenoid and mechanical diaphragm metering pumps, accessories and controls. Founded in 1982 Etatron has expanded their line of complementary products to offer a complete one stop solution for water treatment needs in many markets including swimming pools, cooling towers, boiler feed, chemical processing etc.

Solenoid Pumps: PKX Series – 0-2.6 GPH, DLX Series – 0-5.2 GPH, BT Series – 0-26 GPH – Up to 300 psi

Mechanical Diaphragm Pumps: 0-265 GPH and pressure up to 300 psi. Piston Pumps – 0-134 GPH, 230 psi

Peristaltic Pumps: 0-26 GPH



Back Pressure Valves, Safety Relief Valves, Pulsation Dampeners, Flow Meters/Sensors, Electrodes, Controllers, and complete systems.

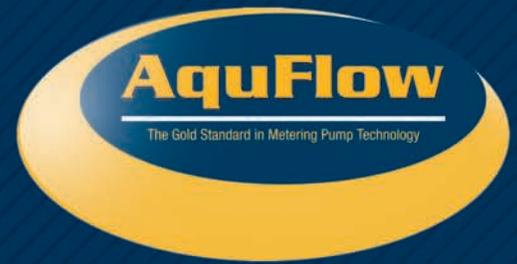
TAPFLO AIR OPERATED DIAPHRAGM PUMPS

Tapflo America sells high end Air Operated Diaphragm pumps made by Tapflo a Sweden based manufacturer. Tapflo has a complete line of AODD pumps made out of corrosion resistant plastics and metals. Their plastic pump housings are machined out of solid block of material which ensure tighter tolerances and hence better sealing surfaces. This ensures longer leak free life in comparison to molded plastic pumps.



Tapflo is also known for their line of sanitary and pharmaceutical pumps. Tapflo makes the only USP Class VI certified line of pharmaceutical pumps. Flow rates over 212 GPM in sizes up to 3" inlet and outlet.

Distributed By:



The Most Complete Line of Metering Pumps

S 900 - 0 to 0.012 GPH, up to 3.0 GPH, 0 to 4000 PSI

S 1000 - 0 to 62 GPH, 0 to 4000 PSI

S 2000 - 0 to 112 GPH, 0 to 1,800 PSI

S 3000 - 0 to 482 GPH, 0 to 700 PSI

S 4000 - 0 to 3,530 GPH, 0 to 3,500 PSI

Corrosion Resistant Materials

316 Stainless Steel, Alloy 20, Hastelloy C
PVC, PVDF, PTFE

ChemInjector Chemical Systems

Complete Customized chemical system
Uninterrupted Consistent Chemical Delivery
Perfectly matched Accessories
Controls that are user friendly and digitized
All Components proven to work well together
Easy to operate, maintain and service
No downtime with parts availability

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