PULSAFEEDER®

METERING PUMPS AND CONTROL SYSTEMS

List Price Schedule

Effective 06/01/08

PULSAFEEDER
27101 Airport Road, Punta Gorda, FL 33982
Phone: 941-575-3800 Fax: 941-575-4085
800-333-6677 800-456-4085
www.pulsafeeder.com www. pulsatron.com

IDEX FLUID & METERING

Agriculture
Chemical Processing
Fuels & Energy
Sanitary
Water

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DUE TO CONTINUOUS IMPROVEMENT OF OUR PRODUCTS, WE RESERVE THE RIGHT TO UPDATE THE INFORMATION CONTAINED IN THIS CATALOG WITHOUT NOTICE.

IMPORTANT INFORMATION

WHEN PLACING AN ORDER

1) Fax, mail or telephone orders directly to the Customer Service Department:

Pulsafeeder Incorporated—A Unit of IDEX Corporation
Standard Product Operations Main Office & Manufacturing Facility
27101 Airport Road, Punta Gorda, Florida, USA 33982-2462 E-Mail: pulsaspo.cs@idexcorp.com
Telephone: 800-333-6677 or 941-575-3800 Fax: 800-456-4085 or 941-575-4085
www.pulsatron.com

2) Please have the following information available when placing an order:

Account Name	Special Tags or Marks (if needed)
Billing Zip Code	Item(s) Being Ordered
Purchase Order Number	Quantity of Each Item
Ship To Address	

3) Orders are immediately entered into the computer upon receipt. Our ability to change in house orders is limited. Please be certain your orders are complete when placed.

4) For assistance or to order a "special" pump model not available in the price schedule, please contact our Technical Support Department.

5) Orders are assigned standard lead times based on the size of the order and the time required to manufacture the particular products. Requests to expedite orders may be routed through our Customer Service Department.

6) Repairs and returns are coordinated through our Customer Service Department. All orders returned must have factory authorization and are subject to a 25% restocking charge.

7) Other Locations:

PULSAFEEDER (Knight UK Limited)
15 Brunel Centre Newton Road
Crawley, West Sussex, England, RH10 9YU
Tel: +44 80022102210
Fax: +44 80044104410

Latin America (Office Only)
Hegel 153-602, Colonia Polanco,
11560 Mexico, D.F., Mexico
Tel: 52-555-255-1357
Fax: 52-555-255-1356

Far East (Office Only)
Room 3403, South Tower, Hong Kong Plaza
No 283 Huai Hai Zhong Road
Shanghai 200021, China
Tel: 86-2163906367
Fax: 86-2163863338

IDEX India Private Ltd.
202 Matharu Arcade
32, Subhash Road, Vile Parie (East),
Mumbai-400 057, India
Tel: 91-22-66976631
Fax: 91-22-66976633

- Prices are subject to change without notice and are effective when order is accepted and acknowledged at point of shipment.
- When ordering, specify your P.O. number, model number, quantity, price, shipping and/or billing address and order date.
- **Standard terms are NET 30 days from date of invoice for approved accounts on open account.**
- **WE ACCEPT VISA AND MASTERCARD.**
- **TWO PERCENT DISCOUNT AVAILABLE FOR PAYMENT WITHIN 10 DAYS OF INVOICE DATE FOR ACCOUNTS THAT ARE CURRENT.**
- **PAYMENT BY CREDIT CARD WILL NOT RECEIVE AN ADDITIONAL DISCOUNT.**
- All prices are F.O.B. Punta Gorda, FL or factory warehouse location.
- Custom product sales are final.
- Charges for export documentation apply.
- Expediting fees may apply.
- Fees for changes to or cancellation of orders may apply.
- **Minimum factory order of $50.**
- Possession of price schedule does not guarantee right to purchase direct from factory.

PULSAtron® Feature Selection Guide

Pulsafeeder offers one of the most flexible electronic metering pumps in the world. The product can be configured to meet a large variety of applications and needs. The next few pages will guide you in structuring a complete and correct model number.

The first step in selecting the right model for your application is to select the correct Series. Each Series offers a variety of features that distinguish it from other Series. Within each Series are selections of models that offer different flow/pressure envelopes to choose from.

The following descriptions will help you understand the different features and then the chart at the bottom of the page will let you select the appropriate models that have the features you need.

4-20mA	Control the pump stroke frequence based on a current input signal from an external device. At 4mA input, the pump will not stroke. At 20mA input, the pump will stroke 100%
20-4mA	Same as 4-20 except that at 20mA input, the pump will not stroke and at 4mA input, the pump strokes at 100%.
External Pace / Water Meter	Allows the pump stroke to be controlled by an external dry contact closure, such as is provided by a Water Meter. For each closure, the pump will stroke one time. Some models provide the ability to multiply or divide the pulses.
Stop Function	A dry contact input that will stop the pump on closure and allow the pump to operate when open.
Touch Pad	Electronic 'touch pad' control with internationally recognized symbols.
Digital Display	Pump parameters are displayed on an LCD or LED type display.
Signal Relay	Provides a 24V DC signal output from the pump based on user specified conditions.
Power Relay	Provides AC power output from the pump based on user specified conditions.
Alarm Display	Flashing display or LED indicator that will display an alarm condition on the front panel of the pump.
Timed Sequences	Ability to pre-program operation for repetitive metering.
Programmable Timer	Timer that can be programmed with up to 8 on/off cycles per day during a 7-day week.
Hall Effect	Hall Effect Water Meter input.
Conductivity Control	Includes a conductivity controller built into the pump.
Bleed Relay	Separate relay used to control a solenoid that will "Bleed" a cooling tower as part of a control system.
Timer Control	User defined timer functions that control when the pump will operate. Used in Cooling Tower control systems.
Flow Control	Optional Flow Switch turns pump on when flow is active.

	Flow Capacity		Pressure		Turn Down Ratio	4-20 mA	20-4 mA	External Pace And Stop Function	External Pace Or Stop Function	Touch Pad	Digital Display	Signal/Power Relay	Alarm Signals	Timed Sequences	Programmable Timer	Hall Effect Input	Conductivity Control	Bleed Relay	Timer Control	Flow Control
Series	**GPH**	**LPH**	**PSIG**	**BAR**																
MP	0.13 to 21	0.50 to 79.5	20 to 300	1.3 to 21	1000:1	S	S	S		S	S	S	S	S						
E Plus	0.13 to 25	0.50 to 94.6	30 to 300	2.0 to 21	100:1	O		O												
HV	0.50 to 10	1.9 to 37.9	80 to 100	5.6 to 17	100:1	O														
E	0.13 to 25	0.50 to 94.6	20 to 300	1.3 to 21	100:1															
E-DC	0.25 to 1.85	0.90 to 7.0	100 to 150	7 to 10	100:1															
D	0.25 to 2	0.90 to 7.6	50 to 250	3.3 to 17	100:1			S		S	S									S
A Plus	0.25 to 2	0.90 to 7.6	50 to 250	3.3 to 17	100:1				O											
C Plus	0.25 to 1.25	0.90 to 4.7	80	5.6	100:1				O											
C	0.25 to 1.25	0.90 to 4.7	80	5.6	10:1				O											
CW	0.25 to 1.25	0.90 to 4.7	100 to 150	7 to 10	100:1			S		S	S					S	S	S	S	S
CL	0.25 to 1.25	0.90 to 4.7	100 to 150	7 to 10	100:1					S	S						S	S	S	S
WT	0.25 to 1.25	0.90 to 4.7	100 to 150	7 to 10	100:1			S		S	S					S		S		S
ET	0.21 to 2	0.80 to 79.5	20 to 250	1.3 to 17	100:1			S						S						
T7	0.50 to 2	1.9 to 7.6	100	7	10:1										S					

S = Standard Features **O = Optional Features**

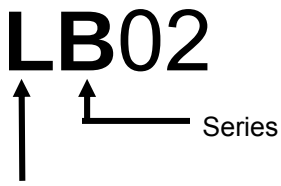
PULSAtron® Model Selection Guide

Once you have selected the appropriate Series, you must configure the model so that it is built with the features you desire. The Configuration Guide associated with each Series will present the most popular selections. Select one code from each category to build up a complete model string.

To help you better understand the model string, in the following pages, we will explain what each of the digits represent and provide you some additional charts to help you select options not found in the Configuration Guides.

Model Selection:

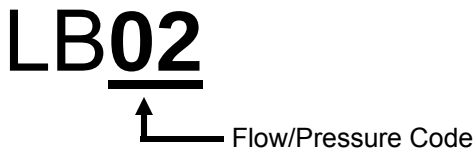
The first four digits represent the Series and Flow/Pressure Selection.



The first digit will always start with the letter 'L'.

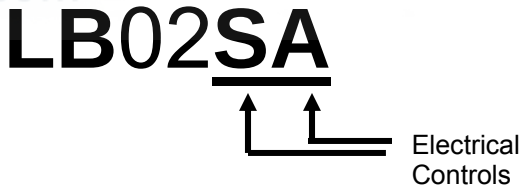
All PULSAtron models begin with this letter. The second letter designates the Series (e.g. Series MP, Series E+, Series A+, etc.). Each series has a different set of features that are available in terms of control and flow/pressure capacity. The next two digits represent the flow/pressure capacity of the pump.

Series Code Designator	
Series MP	M
Series E Plus	P
Series HV	V
Series E	E
Series E-DC	S
Series D	F
Series A Plus	B
Series C Plus	D
Series C & T7	C
Series CW	W
Series CL	L
Series WT	Q
Series ET	T



Digits 3 & 4 represent the Flow/Pressure Code.

This code represents the specific flow/pressure rating for the model and can be found in the specification for each Series.



Digits 5 & 6 represent the Controls and Electrical selections.

These selections are explained for each model in the Configuration Guide.

PULSAtron® Selection Guide cont'd.

Selecting the Wet-End Code & Connection Type:

Digits 7-10 in the string represent the wet-end code. It is the group of four digits set apart by the dash lines.

LB02SA-**PTC1**

These four digits represent your wet-end code and connection type.

The four digits in the wet-end code represent the Head Material, Seats & O-Rings, Ball Material and Connection type. Using the above example, the code breads down as follows:

P - Head Material, including fittings. In this example, the P represents GFPPL.
T - Seat & O-Ring Material. In this example, the T represents TFE.
C - Types of Balls used in the valves. In this example, the C represents Ceramic.
1 - Connection type. In this example, the 1 represents tubing connections for 3/8" OD tubing.

In the configuration Guide, we have listed the most popular Wet-End codes. If you don't find the materials or connection selection to meet your needs, refer to the following selection guides to configure the proper Wet-End Code.

Selecting the Wet-End Code:

The wet-end code represents the materials of construction that will be in contact with the chemical you are pumping. It is critical that the materials selected are compatible. If you do not find the wet-end code to meet your application in the configuration guides, you can use the Wet-End Code Selection Guide to determine the correct Head Material, Seats & O-Rings and Balls. If you do not know what materials are compatible with the chemicals you are pumping, refer to the chemical compatibility chart below. We have identified the proper wet-end code for the chemicals in the list. If your chemical is not found in the list, please contact your chemical supplier or visit www.pulsatron.com for a complete listing.

PULSAtron Wet-End Code Selection Guide

List Adder			
	Head & Fittings		
$ 204	**A**	=	316 Stainless Steel (All models except H8)
$ 50	**K**	=	PVDF (Kynar) (not available for J7, H8 models)
N/C	**P**	=	GFPPL (Polypropylene)
N/C	**V**	=	PVC (Poly Vinyl Chloride) (for models rated < 150 psi excluding K7, H7, H8)
N/C	**W**	=	PVC (for models > 150 psi and K7, H7, H8)
	Seats		
N/C	**H**	=	Hypalon (150 psi max.)
$ 12	**T**	=	TFE (not available with TFE ball over 150 psi)
$ 7	**V**	=	Viton (150 psi max.)
	Balls		
N/C	**C**	=	Ceramic
$ 63	**H**	=	Alloy C (Hastelloy)
$ 12	**S**	=	316 Stainless Steel
N/C	**T**	=	TFE (not available with TFE seat over 150 psi)

Chemical Compatibility Chart

Chemical	Liquid End Code
ACETIC ACID, 5 - 10%	PHC
ALUMINUM SULFATE	VHC
AMMONIA, 10%	PHC
BROMINE	KTC
CALCIUM HYPOCHLORITE	VVC
CITRIC ACID, 10 - 20%	PHC
DEAE - Steamline Treatment	ATS
ETHYLENE GLYCOL	PTC
FERRIC CHLORIDE	VTC
FERRIC SULFATE	PTC
FLUOSILICIC ACID	PTT
HYDROCHLORIC ACID, 0 - 37%	PTC
HYDROCHLORIC ACID, 37 - 100%	KTT
HYDROFLUOSILICIC ACID, 20%	PTT
HYDROGEN PEROXIDE, 0 - 30%	VVC
LACTIC ACID	PTC
NITRIC ACID, 0 - 20%	PVC
PHOSPHORIC ACID, 0 - 100%	KTC
POTASSIUM CHLORIDE	PTC
POTASSIUM PERMANGANATE	PTC
SODIUM BI-CARBONATE	PTC
SODIUM BI-SULFATE	PTC
SODIUM BI-SULFITE	PTC
SODIUM CARBONATE	PTC
SODIUM HYDROXIDE, 0 - 50%	PHC
SODIUM HYPOCHLORITE	VVC
SODIUM NITRATE	PTC
SODIUM SILICATE	PHC
SODIUM SULFATE	PHC
SODIUM SULFIDE	PHC
SULFURIC ACID, 0 - 10%	PTC
SULFURIC ACID, 10 - 75%	PTC
SULFURIC ACID, 95 - 100%	KTC

This is an abbreviated version using most common chemicals. Refer to the Chemical Resistance Guide (EMP-030) for a more detailed listing.

Selecting the Connection Code:

Selecting the proper connection code is probably the most difficult part of choosing a PULSAtron pump. Because of the flexibility built into this product line to meet a large variety of applications, the connection codes are determined by alot more factors than just the size of the tubing. Connection code is probably the wrong name for this selection because you are selecting more than just the tubing size. This code also determines the type of valves used in the pump. The valve type is determined by factors such as flow rate of the pump, ball type selected and viscosity of the fluid you will be pumping.

Flow Rate:

The pump you select is rated to pump a certain number of gallons per hour (GPH). When selecting the connection code, please note the GPH limitations and select a connection that fits within the parameters of the pump model that you selected.

Ball Type:

If the material selected for the balls used in the check valves is TFE, you will probably need to use a spring-loaded connection. This is due to the fact that the weight of the balls will not allow them to seat properly without the spring. See the connection chart for a list of spring loaded connection types.

Viscosity:

Viscosity of the fluid you are pumping impacts the connection. The higher viscosity fluids (>3000 cps) require larger connection types and spring-loaded valves. Medium viscosity fluids (1000 to 3000 cps) can be pumped without the spring-loaded valves but you must use SS balls with these connections in order for the balls to seat properly in the valve.

Connection Codes

List Adder	Code	Connect Type	Suction	Discharge	Spring	GPH Flow Limitations	Viscosity	Other Factors
N/C	2	Piping	.25" FNPT	.25" FNPT		0 - 1.88	< 3000 cps	No Bleed Valve
N/C	4	Piping	.25" FNPT	.25" FNPT		1.63 - 10	< 3000 cps	No Bleed Valve
$ 80	6	Piping	.25" FNPT	.25" FNPT	Yes	Up to 10	> 3000 cps	No Bleed Valve
$ 135	8	Piping	.50" FNPT	.50" FNPT	Yes	Up to 25	> 3000 cps	No Bleed Valve
$ 71	C	Piping	.50" FNPT	.50" FNPT		25	< 3000 cps	No Bleed Valve
$ 100	G	Piping	.25" FNPT	.25" FNPT	Yes	0 - 1.88	< 3000 cps	No Bleed Valve
$ 135	I	Piping	.50" MNPT	.50" MNPT	Yes	Up to 10	> 3000 cps	No Bleed Valve
$ 80	L	Piping	.50" MNPT	.50" MNPT		0 - 1.88	< 3000 cps	No Bleed Valve
$ 80	X	Piping	.50" MNPT	.50" MNPT		1.63 - 10	< 3000 cps	No Bleed Valve
N/C	1	Tubing	.25" x .38"	.25" x .38"		0 - 1.88	< 3000 cps	
N/C	3	Tubing	.38" x .50"	.38" x .50"		1.63 - 10	< 3000 cps	
$ 80	5	Tubing	.50" x .75"	.38" x .50"	Yes	Up to 10	> 3000 cps	
$ 135	7	Tubing	.50" x .75"	.50" FNPT	Yes	Up to 25	> 3000 cps	No Bleed Valve
$ 99	9	Tubing	.19" x .31"	.25" x .38"	Yes	0 - 1.88	< 3000 cps	Degas Head/No Bleed Valve
N/C	A	Tubing	.38" x .50"	.38" x .50"		0 - 1.88	< 3000 cps	
N/C	B	Tubing	.50" x .75"	.50" x .75"		25	< 3000 cps	No Bleed Valve
$ 100	D	Tubing	.25" x .38"	.25" x .38"	Yes	0 - 1.88	< 3000 cps	
$ 100	E	Tubing	.38" x .50"	.38" x .50"	Yes	0 - 1.88	< 3000 cps	
$ 100	F	Tubing	.38" x .50"	.38" x .50"	Yes	1.63 - 10	< 3000 cps	Not Available In PVDF
N/C	H	Tubing	.25" x .38"	.25" x .38"		1.63 - 10	< 3000 cps	
N/C	J	Tubing	.19" x .31"	.25" x .38"		0 - 1.04	< 3000 cps	
$ 135	K	Tubing	.50" x .75"	.50" x .75"	Yes	1.88 - 25 (<50 psi)	> 3000 cps	No Bleed Valve
Metric Connections						**LPH Flow Limitations**		
N/C	M	Piping	G 1/2 A	G 1/2 A		6.15 - 37.85	< 3000 cps	
N/C	R	Piping	G 1/2 A	G 1/2 A		0 - 7.10	< 3000 cps	
N/C	N	Tubing	4 x 10 mm	4 x 10 mm		0 - 7.10	< 3000 cps	
N/C	P	Tubing	4 x 6 mm	4 x 6 mm		0 - 3.94	< 3000 cps	
N/C	Q	Tubing	10 x 14 mm	10 x 14 mm		6.15 - 37.85	< 3000 cps	
N/C	S	Tubing	6 x 10 mm	6 x 10 mm		> 18.93	< 3000 cps	
$ 99	T	Tubing	6 x 10 mm	6 x 10 mm		0 - 7.10	< 3000 cps	Degas Head/No Bleed Valve
N/C	U	Tubing	6 x 10 mm	6 x 10 mm		0 - 7.10	< 3000 cps	
N/C	V	Tubing	12 x 19 mm	12 x 19 mm		> 29.96	< 3000 cps	No Bleed Valve
N/C	W	Tubing	10 x 16 mm	10 x 16 mm		6.15 - 37.85	< 3000 cps	
N/C	Y	Tubing	6 x 12 mm	6 x 12 mm		0 - 7.10	< 3000 cps	

Pumps ranging from 0.25 gph (0.9 lph) to 0.90 gph (3.4 lph) with the stainless steel ball option ("S" in the 9th digit of the model number) must select a connection code with a spring.

- **Pumps less than or equal to .25 gph (0.9 lph) require a connection code with a spring and must use a ceramic ball in place of stainless steel.**
- **Stainless steel head assemblies are only available in piping connections.**

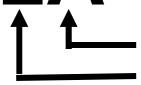
PULSAtron® Selection Guide cont'd.

Sensor/Flow Options (Models D, CL, CW & WT Only):

The Series D, CL, CW and WT have optional features that are covered by two additional digits in the Model Selection.

Series D:

LF02SA-PTC1-**1A**

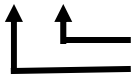


Flow Switch Option
Electronic Connection Option

These selections are explained for each model in the Configuration Guide.

Series CL, CW & WT:

LW02SA-PTC1-**2A**



Flow Switch/Assembly Option
Sensor Option

These selections are explained for each model in the Configuration Guide.

Suffix Code:

LW02SA-PTC1-**XXX** ← Suffix Code

The last three digits of the model string are referred to as the Suffix Code. It is through the suffix code that the pump can be customized with optional features or customer specific features, e.g. private labeling. If your company has specific features that will be ordered on every pump, contact customer service with a description of what you want customized. We will then assign a unique suffix code that can be used as the last three digits in the model string when you place an order.

CZXXX = CE Approval

This suffix code tells us that you require CE Approval on the pump you are ordering. This suffix code is five digits and can be used in conjunction with other suffix codes by replacing the XXX after the CZ with another suffix code. For instance, if you require CE Approval and a Five Function Valve (shown below), the suffix code would be CZ500.

Standard Suffix Code Descriptions:

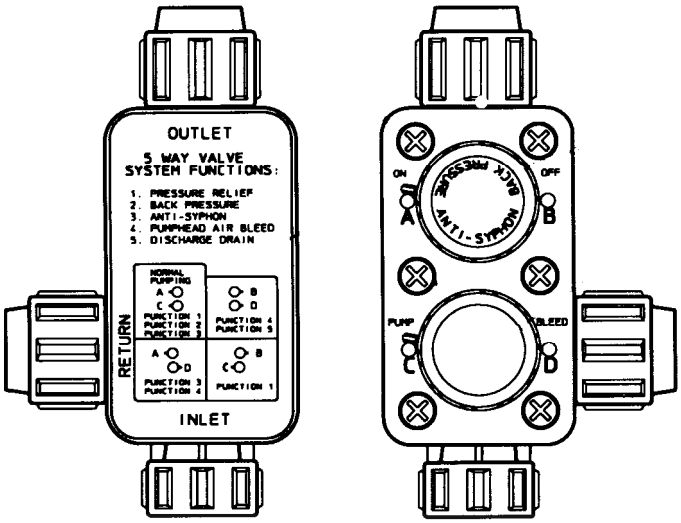
On the following pages are additional features that can be added to your PULSAtron pump through the use of the Suffix Code. Anytime you order a pump with one of these codes, it will be configured with that option.

130 = PVDF Tubing

This suffix code will replace the standard pump tubing with PVDF Tubing.

500 = Five Function Valve

The five function valve is easily installed, no tools required. The valve operates with all PULSAtron models up to 240 GPD. The five function valve is packed with features that increase safety, enhance performance and generally improves the convenience of operation.



REAR VIEW FRONT VIEW

FEATURES

- Pressure Relief – Allows for relief of excessive pressure in discharge line to protect connections and tubing.
- Back Pressure – Maintains output reproducibility and allows metering into atmospheric discharge.
- Anti-Siphon – Prevents siphoning through the pump when point of injection is lower than the pump or into the suction line of another pump. Rated at total vacuum.
- Air Bleed – Used during priming to manually remove air from the pump head.
- Discharge Drain – Depressurize pump discharge line without loosening tubing or fittings. Protects the operator from chemical exposure.

SPECIFICATIONS

Material Of Construction:

Valve Body	Glass-filled Polypropylene (GFPPL) Polyvinylidene Flouride (PVDF)
Diaphragm	TFE faced Hypalon
O-Rings	TFE
Hardware	18-8 Stainless Steel (Recessed)

Maximum Operating Pressure: 300 PSI/21 BAR (except PVC)

Maximum Flow: 10 GPH (37.85 LPH)

Maximum Viscosity: 1000 CPS

Pressure Relief Settings: (nominal cracking pressure)

275 PSI (17 BAR) - red
175 PSI (12 BAR) - green
125 PSI (8.6 BAR) - blue
50 PSI (2.8 BAR) - black (PVC only)

Note: Pressure relief will occur at no more than 50% above maximum rating of pump.

OPERATION

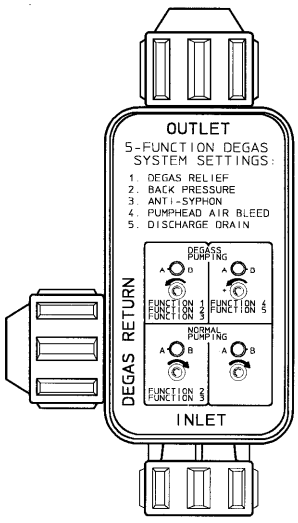
The functions are selected by setting two dual position selector knobs. The label on the back panel of the valve identifies each function with selector knob positions.

The five function valve is compatible with most PULSAtron pumps. Connected to the existing discharge valve the five function valve is capable of handling a large output flow as well as viscous liquids. A return port located on the side body provides flow of chemical back to the solution tank when in the air bleed or drain discharge mode.

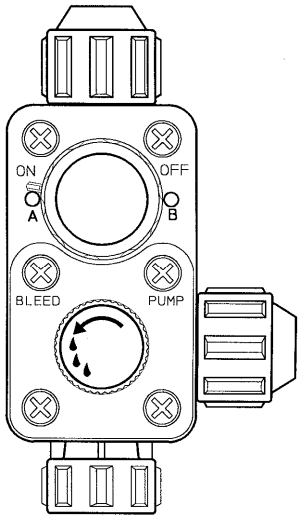
PULSAtron® Selection Guide cont'd.

520 = DG/5FV Five Function Valve with De-Gas

With the DG/5FV you don't have to give up the accuracy and control of a solenoid metering pump in order to pump gaseous solutions. Available in a variety of materials and popular sizes, the DG/5FV is ready to tackle most applications. Not only does the DG/5FV provide degassing, it is packed with features that increase safety, enhance performance and generally improves the convenience of operation.



REAR VIEW



FRONT VIEW

FEATURES

- De-Gas – Bypass gasses and fluid during normal pump operation. Allows for the constant removal of gases that would otherwise "air bind" the pump.
- Back Pressure – Maintains output reproducibility and allows metering into atmospheric discharge.
- Anti-Siphon – Prevents siphoning through the pump when point of injection is lower than the pump or into the suction line of another pump. Rated at total vacuum.
- Air Bleed – Used during priming to manually remove air from the pump head.
- Discharge Drain – Depressurize pump discharge line without loosening tubing or fittings. Protects the operator from chemical exposure.

SPECIFICATIONS

Material Of Construction:

Valve Body	Polyvinylidene Flouride (PVDF)
Diaphragm	TFE faced Hypalon
O-Rings	Viton or Hypalon
Hardware	18-8 Stainless Steel (Recessed)

Maximum Flow: 10 GPH (37.85 LPH)

Minimum Flow: 3 GPD (.47LPH)

Maximum Viscosity: 1000 CPS

MAX Pressure Ratings: Up to 250 psi (17 BAR)

Note: Degas/bypass volume is adjustable, typically 1-10% of pump output.

Connections: ¼" (0.635 cm) Male NPT
½" (1.27 cm) OD tubing
3/8" (0.95 cm) OD tubing

All ports (input, output & bypass) on the selected valve will be the same.

OPERATION

The functions are selected by setting two dual position selector knobs. The label on the back panel of the DG/5FV identifies each function with selector knob positions.

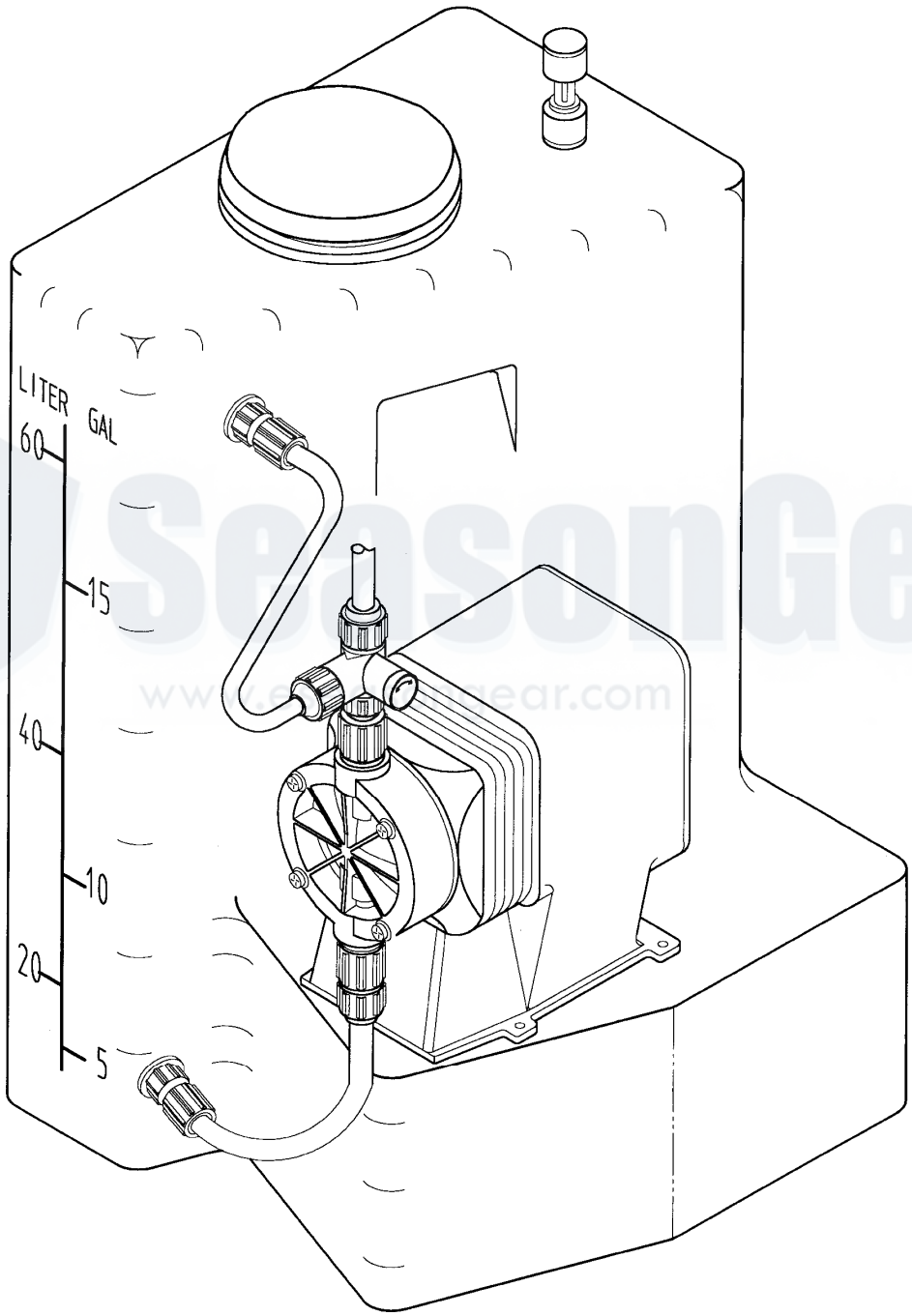
The DG/5FV is compatible with most PULSAtron pumps. Connected to the existing discharge valve the GG/5FV is capable of handling a large output flow as well as viscous liquids. A return port located on the side body provides flow of chemical back to the solution tank when in the degas, air bleed or drain discharge mode.

ITS = Integrated Tank System

The ITS System is a completely integrated tank system constructed of high density UV resistant polyethylene (PE) with a 15 gallon capacity. This tank system is translucent with 5 gallon increments and the tank's low level indicator allows visual monitoring of chemicals without opening the tank. The tight fitting child-proof lid keeps the chemical free of contaminants and protects the surrounding area from chemical fumes.

The ITS System also allows for easy access to the liquid end and control panel of the mounted pump.

A system consists of a chemical tank with lid and bulkhead fittings; a liquid level indicator float assembly; and feeder mounting hardware.



ITS Tank not available on LM, LP, LT, and LE: H4, H5, H6, H7, J7, H8, K7 models) If you require a different type or size tank, please refer to our accessory price book.

PULSAtron® Series MP

Key Features

- ***Automatic Control,*** 4-20mA and 20-4mA current signals can be ratioed from 100% to 2% of incoming signal.
- ***Manual Control*** allows for a combined 1000:1 turndown resulting in accurate metering for critical applications.
- **Flow Verification** option is available on select sizes.
- ***Relay Output*** for computer interface or AC power allows for external control.
- ***Six-button Touch Pad Control*** with internationally recognized symbols for simplified programming.
- ***Simple Prompts*** in plain language allow for easy-to-understand instructions for programming. **Available in three languages.**
- ***Alarm Signals*** for signal loss, full count, circuit failure, pulse overflow and pulse rate high. Liquid low level indicator capability is standard.
- ***Timed Sequences*** can be set for selected intervals and rate for repetitive metering.
- ***Pulse Signals*** can be multiplied or divided by 1 to 999 allowing for pumps to handle peak requirements.
- ***LCD,*** 3 line backlit multi-lingual display allows for easy reading and user-friendly programming.
- **Calibrated Flow Rate** display with total volume pumped last day, month and since last reset.

Pressure and Flow Rate Capacity

MODEL		LMK2	LMB2	LMA2	LMD3	LMB3	LMA3	LMK3	LMF4	LMD4	LMB4	LMH4	LMG4	LME4	LMK5	LMH5	LMH6	LMK7	LMH7	LMH8
Capacity nominal (max.)	GPH	0.13	0.21	0.25	0.50	0.50	0.50	0.60	0.85	0.90	1.00	1.70	1.75	1.85	2.50	3.15	5.00	8.00	10.00	21.00
	GPD	3	5	6	12	12	12	14	20	22	24	41	42	44	60	76	120	192	240	504
	LPH	0.5	0.8	0.9	1.9	1.9	1.9	2.3	3.2	3.4	3.8	6.4	6.6	7.0	9.5	11.9	18.9	30.3	37.9	79.5
Pressure (max.)	PSIG	300	250	150	250	150	100	100	250	150	100	250	150	100	150	150	100	50	35	20
	BAR	21	17	10	17	10	7	7	17	10	7	17	10	7	10	10	7	3.3	2.4	1.3
Connections	Tubing	1/4" ID X 3/8" OD 3/8" ID X 1/2" OD 3/16" ID X 5/16" OD													3/8" ID X 1/2" OD 1/2" ID X 3/4" OD (LPH8 ONLY) FLOW VERIFICATION (See Note)					
	Piping	1/4" FNPT													1/4" FNPT 1/2" FNPT					
Reproducibility		+/- 2% at maximum capacity																		
Viscosity Max CPS		For viscosity up to 3000 CPS, select connection size 3, 4, B or C with 316SS ball material. Flow rate will determine connection/ball size. Greater than 3000 CPS require spring loaded ball checks. See Selection Guide for proper connection.																		
Controls		6-Station Membrane Switch																		
Status Display		16-Position LCD Dot Matrix Backlight																		
LED Indicator Lights, Panel Mount		Power On - Green, Pulsing - Green Flashing, Stop - Red																		
Stroke Frequency		125 Strokes Per Minute (SPM) maximum																		
External Stroke Frequency Control (Automatic)		4-20 mADC, 20-4 mADC External Pacing																		
Output Relay (Signal Level Option)		24 VDC, 10 mA																		
Output Relay (Power Option)		250 VAC, 50/60 HZ, 0.5A																		
Stroke Frequency Turn-Down Ratio		100:1																		
Stroke Length Turn-Down Ratio		10:1																		
Power Input		115 VAC/50-60 HZ/1 ph 230 VAC/50-60 HZ/1 ph																		
Average Current		1.0 Amps @ 115 VAC, 0.5 Amps @ 230 VAC																		
Peak Input Power		300 Watts																		
Average Input		130 Watts																		

Note: Flow Verification: Available on K3, B4 and E4 with connection code 1; H6, K7 and H7 with connection code H; 1/4" ID x 3/8" OD only.

PULSAtron Series MP Selection Guide

LM_ _ _ _ - _ _ _ - _ - _ _ _

MODELS:	$ 845	**K2**	= 0.13 gph / 3 gpd (0.5 lph) max pres.: 300 PSI (21 BAR)
	$ 845	**B2**	= 0.21 gph / 5 gpd (0.8 lph) max pres.: 250 PSI (17 BAR)
	$ 920	**D3**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 250 PSI (17 BAR)
	$ 1,185	**F4**	= 0.85 gph / 20 gpd (3.2 lph) max pres.: 250 PSI (17 BAR)
	$ 1,473	**H4**	= 1.70 gph / 41 gpd (6.4 lph) max pres.: 250 PSI (17 BAR)
	$ 841	**A2**	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 150 PSI (10 BAR)
	$ 869	**B3**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 150 PSI (10 BAR)
	$ 959	**D4**	= 0.90 gph / 22 gpd (3.4 lph) max pres.: 150 PSI (10 BAR)
	$ 1,239	**G4**	= 1.75 gph / 42 gpd (6.6 lph) max pres.: 150 PSI (10 BAR)
	$ 1,239	**K5**	= 2.50 gph / 60 gpd (9.5 lph) max pres.: 150 PSI (10 BAR)
	$ 1,502	**H5**	= 3.15 gph / 76 gpd (11.9 lph) max pres.: 150 PSI (10 BAR)
	$ 824	**A3**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 100 PSI (7 BAR)
	$ 824	**K3**	= 0.60 gph / 14 gpd (2.3 lph) max pres.: 100 PSI (7 BAR)
	$ 874	**B4**	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 100 PSI (7 BAR)
	$ 984	**E4**	= 1.85 gph / 44 gpd (7.0 lph) max pres.: 100 PSI (7 BAR)
	$ 1,345	**H6**	= 5.00 gph / 120 gpd (18.9 lph) max pres.: 100 PSI (7 BAR)
	$ 1,440	**K7**	= 8.00 gph / 192 gpd (30.3 lph) max pres.: 50 PSI (3.3 BAR)
	$ 1,465	**H7**	= 10.0 gph / 240 gpd (37.9 lph) max pres.: 35 PSI (2.4 BAR)
	$ 2,078	**H8**	= 21.0 gph / 504 gpd (79.5 lph) max pres.: 20 PSI (1.3 BAR)

CONTROLS:	N/C	**T**	= Signal Level Output Relay
	$ 39	**K**	= Power Level Output Relay

ELECTRICAL:	N/C	**A**	= 115 Volt / 50-60Hz
	N/C	**1**	= 115 Volt / 50-60Hz (without agency approvals)
	$ 20	**B**	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	$ 20	**2**	= 230 Volt / 50-60Hz (without agency approvals)

LIQUID END MATERIALS:	$ 12	**PTC**	= GFPPL / TFE / Ceramic
	$ 63	**KTC**	= PVDF / TFE / Ceramic (not available on H8)
Pump Head &	N/C	**VHC**	= PVC / Hypalon / Ceramic (not available on H7, H8, K7)
Fittings/Seats	$ 12	**VTC**	= PVC / TFE / Ceramic (models <= 150 psi excluding H7, H8, K7)
& O-rings/Balls	$ 12	**WTC**	= PVC / TFE / Ceramic (models > 150 psi and H7, H8, K7)
	$ 7	**VVC**	= PVC / Viton / Ceramic (not available on H8)
	$ 228	**ATS**	= 316 S.S. / TFE / 316 S.S. (must use FNPT piping connection) (not available on H8)

See page 6 for additional liquid end materials.

CONNECTION SIZES:	N/C	**1**	= Tubing .25" I.D. x .38" O.D. / .25" Ball, 0 - 1.88 GPH
	N/C	**3**	= Tubing .38" I.D. x .50" O.D. / .38" Ball, 1.63 - 10 GPH
	$ 99	**9**	= Degas Head: (S) 5/16", (D) 3/8", 0-1.83 GPH
	N/C	**J**	= Tubing, Suc: .19" I.D. x .31" O.D.; Dis: .25" I.D. x .38" O.D.,; .19 Ball; 0 - 1.04 GPH
		METRIC:	
	N/C	**M**	= G 1/2 A Threads, .38" Ball, 6.15 - 37.85 LPH
	N/C	**R**	= G 1/2 A Threads, .25" Ball, 0 - 7.10 LPH
	N/C	**Y**	= 6 x 12mm, .25" Ball, 0 - 7.10 LPH

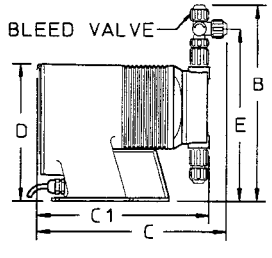
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer

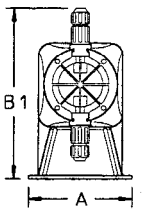
SUFFIX CODES:	N/C	**XXX**	= No Additional Options
	$ 107	**130**	= PVDF Tubing
	$ 67	**500**	= Five Function Valve
	$ 155	**520**	= Five Function Degas Valve
	$ 398	**FVE**	= Flow Verification / EPDM
	$ 398	**FVV**	= Flow Verification / Viton
	$ 183	**ITS**	= 15 gal. ITS Tank System (ITS Tank not available on LM, LP, LT, and LE: H4, H5, H6, H7, H8, J7, K7 models)
	N/C	**CZXXX**	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LMB3TA-PTC1-XXX'

Dimensions





Series MP Dimensions (inches)

Model No.	A	B	B1	C	C1	D	E	Shpg Wt	Model No.	A	B	B1	C	C1	D	E	Shpg Wt
LMA2	5.4	10.3	-	10.8	-	7.5	8.9	13	LMH4	6.2	10.9	-	11.2	-	8.2	9.5	21
LMA3	5.4	10.6	-	10.7	-	7.5	9.2	13	LMH5	6.2	11.3	-	11.2	-	8.2	9.9	21
LMB2	5.4	10.3	-	10.8	-	7.5	8.9	13	LMH6	6.2	11.3	-	11.2	-	8.2	9.9	21
LMB3	5.4	10.6	-	10.7	-	7.5	9.2	13	LMH7	6.1	11.7	-	11.2	-	8.2	10.3	21
LMB4	5.4	10.6	-	10.7	-	7.5	9.2	13	LMH8*	6.1	-	10.9	-	10.6	8.2	-	25
LMD3	5.4	10.6	-	11.2	-	7.5	9.2	15	LMK2	5.4	10.3	-	10.8	-	7.5	8.9	13
LMD4	5.4	10.6	-	11.2	-	7.5	9.2	15	LMK3	5.4	10.6	-	10.7	-	7.5	9.2	13
LME4	5.4	10.6	-	11.2	-	7.5	9.2	15	LMK5	5.4	10.9	-	11.7	-	7.5	9.5	18
LMF4	5.4	10.6	-	11.7	-	7.5	9.2	18	LMK7	6.1	11.7	-	11.2	-	8.2	10.3	21
LMG4	5.4	10.6	-	11.7	-	7.5	9.2	18									

NOTE: Inches X 2.54 = cm / * the LMH8 is designed without a bleed valve available

PULSAtron® Series E PLUS

Key Features

- **Automatic Control,** available with 4-20 mADC direct or external pacing, with stop function.
- **Manual Control** by on-line adjustable stroke rate and stroke length.
- **Auto-Off-Manual** switch.
- **Highly Reliable** timing circuit.
- **Circuit Protection** against voltage and current upsets.
- **Panel Mounted Fuse.**
- **Solenoid Protection** by thermal overload with auto re-set.
- **Water Resistant,** for outdoor and indoor applications.
- **Indicator Lights,** panel mounted.
- **Guided Ball Check Valve Systems,** to reduce back flow and enhance outstanding priming characteristics.
- **Safe & Easy Priming** with durable leak-free **bleed valve assembly** (standard).

Pressure and Flow Rate Capacity

MODEL		LPK2	LPB2	LPA2	LPD3	LPB3	LPA3	LPK3	LPF4	LPD4	LPB4	LPH4	LPG4	LPE4	LPK5	LPH5	LPH6	LPK7	LPH7	LPH8
Capacity	GPH	0.13	0.21	0.25	0.5	0.50	0.50	0.60	0.85	0.90	1.00	1.70	1.75	1.85	2.50	3.15	5.00	8.00	10.00	25.00
nominal	GPD	3	5	6	12	12	12	14	20	22	24	41	42	44	60	76	120	192	240	600
(max.)	LPH	0.5	0.8	0.9	1.9	1.9	1.9	2.3	3.2	3.4	3.8	6.4	6.6	7	9.5	11.9	18.9	30.3	37.9	94.6
Pressure	PSIG	300	250	150	250	150	100	100	250	150	100	250	150	100	150	150	100	50	35	30
(max.)	BAR	21	17	10	17	10	7	7	17	10	7	17	10	7	10	10	7	3.3	2.4	2
Connections	Tubing	1/4" ID X 3/8" OD 3/8" ID X 1/2" OD 3/16" ID X 5/16" OD													3/8" ID X 1/2" OD 1/2" ID X 3/4" OD (LPH8 ONLY) FLOW VERIFICATION (See Note)					
	Piping	1/4" FNPT													1/4" FNPT 1/2" FNPT					
Reproducibiilty		+/- 2% at maximum capacity																		
Viscosity Max CPS		For viscosity up to 3000 CPS, select connection size 3, 4, B or C with 316SS ball material. Flow rate will determine connection/ball size. Greater than 3000 CPS require spring loaded ball checks. See Selection Guide for proper connection.																		
Stroke Frequency		125 Strokes Per Minute (SPM) maximum																		
Stroke Frequency		10:1																		
Stroke Length Turn-		10:1																		
Power Input		115 VAC/50-60 HZ/1 ph 230 VAC/50-60 HZ/1 ph																		
Average Current		1.0 Amps @ 115 VAC, 0.5 Amps @ 230 VAC																		
Peak Input Power		300 Watts																		
Average Input		130 Watts																		

PULSAtron Series E Plus Selection Guide

LP_ _ _ _ - _ _ _ - _ _ _

MODELS:	$ 555	**K2**	= 0.13 gph / 3 gpd (0.5 lph) max pres.: 300 PSI (21 BAR)
	$ 555	**B2**	= 0.21 gph / 5 gpd (0.8 lph) max pres.: 250 PSI (17 BAR)
	$ 639	**D3**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 250 PSI (17 BAR)
	$ 922	**F4**	= 0.85 gph / 20 gpd (3.2 lph) max pres.: 250 PSI (17 BAR)
	$1,231	**H4**	= 1.70 gph / 41 gpd (6.4 lph) max pres.: 250 PSI (17 BAR)
	$ 530	**A2**	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 150 PSI (10 BAR)
	$ 583	**B3**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 150 PSI (10 BAR)
	$ 682	**D4**	= 0.90 gph / 22 gpd (3.4 lph) max pres.: 150 PSI (10 BAR)
	$ 979	**G4**	= 1.75 gph / 42 gpd (6.6 lph) max pres.: 150 PSI (10 BAR)
	$ 979	**K5**	= 2.50 gph / 60 gpd (9.5 lph) max pres.: 150 PSI (10 BAR)
	$1,258	**H5**	= 3.15 gph / 76 gpd (11.9 lph) max pres.: 150 PSI (10 BAR)
	$ 534	**A3**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 100 PSI (7 BAR)
	$ 534	**K3**	= 0.60 gph / 14 gpd (2.3 lph) max pres.: 100 PSI (7 BAR)
	$ 592	**B4**	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 100 PSI (7 BAR)
	$ 709	**E4**	= 1.85 gph / 44 gpd (7.0 lph) max pres.: 100 PSI (7 BAR)
	$ 953	**H6**	= 5.00 gph / 120 gpd (18.9 lph) max pres.: 100 PSI (7 BAR)
	$1,054	**K7**	= 8.00 gph / 192 gpd (30.3 lph) max pres.: 50 PSI (3.3 BAR)
	$1,080	**H7**	= 10.0 gph / 240 gpd (37.9 lph) max pres.: 35 PSI (5.6 BAR)
	$1,597	**H8**	= 25.0 gph / 600 gpd (94.6 lph) max pres.: 30 PSI (2 BAR)

CONTROLS:	N/C	**S**	= Manual On/Off
	$ 241	**M**	= 4-20mADC Direct, w/ Stop
	$ 100	**E**	= External/Remote Pacing, w/ Stop

ELECTRICAL:	N/C	**A**	= 115 Volt / 50-60Hz
	N/C	**1**	= 115 Volt / 50-60Hz (without agency approvals)
	$ 20	**B**	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	$ 20	**2**	= 230 Volt / 50-60Hz (without agency approvals)

LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	$ 12	**PTC**	= GFPPL / TFE / Ceramic
	$ 12	**PTT**	= GFPPL / TFE / TFE
	$ 63	**KTC**	= PVDF / TFE / Ceramic (not available on H8)
	N/C	**VHC**	= PVC / Hypalon / Ceramic (not available on H7, H8, K7)
	$ 12	**VTC**	= PVC / TFE / Ceramic (models <= 150 psi excluding H7, H8, K7)
	$ 12	**WTC**	= PVC / TFE / Ceramic (models > 150 psi and H7, H8, K7)
	$ 228	**ATS**	= 316 S.S. / TFE / 316 S.S. (must use FNPT piping connection) (not available on H8)

See page 6 for additional liquid end materials.

CONNECTION SIZES:	N/C	**1**	= Tubing .25" I.D. x .38" O.D. / .25" Ball, 0 - 1.88 GPH
	N/C	**3**	= Tubing .38" I.D. x .50" O.D. / .38" Ball, 1.63 - 10 GPH
	N/C	**4**	= Piping .25" FNPT / .38" Ball, 1.63 - 10 GPH
	N/C	**B**	= Tubing .50" I.D. x .75" O.D. / .50" Ball, 20.83 GPH only
		METRIC:	
	N/C	**M**	= G 1/2 A Threads, .38" Ball, 6.15 - 37.85 LPH
	N/C	**R**	= G 1/2 A Threads, .25" Ball, 0 - 7.10 LPH
	N/C	**Y**	= 6 x 12mm, .25" Ball, 0 - 7.10 LPH

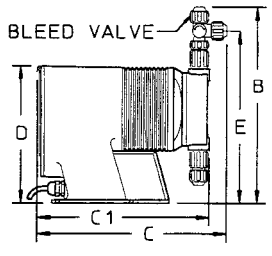
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer

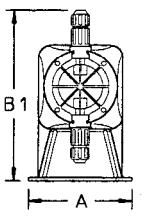
SUFFIX CODES:	N/C	**XXX**	= No Additional Options
	$ 107	**130**	= PVDF Tubing
	$ 67	**500**	= Five Function Valve
	$ 155	**520**	= Five Function Degas Valve
	$ 183	**ITS**	= 15 gal. ITS Tank System (ITS Tank not available on LM, LP, LT, and LE: H4, H5, H6, H7, H8, J7, K7 models)
	N/C	**CZXXX**	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LPB3SA-PTC1-XXX'

Dimensions





Series E Plus Dimensions (inches)

Model No.	A	B	B1	C	C1	D	E	Shpg Wt	Model No.	A	B	B1	C	C1	D	E	Shpg Wt
LPA2	5.4	10.3	-	10.8	-	7.5	8.9	13	LPH4	6.2	10.9	-	11.2	-	8.2	9.5	21
LPA3	5.4	10.6	-	10.7	-	7.5	9.2	13	LPH5	6.2	11.3	-	11.2	-	8.2	9.9	21
LPB2	5.4	10.3	-	10.8	-	7.5	8.9	13	LPH6	6.2	11.3	-	11.9	-	8.2	9.9	21
LPB3	5.4	10.6	-	10.7	-	7.5	9.2	13	LPH7	6.1	11.7	-	11.9	-	8.2	10.3	21
LPB4	5.4	10.6	-	10.7	-	7.5	9.2	13	LPH8*	6.1	-	10.9	-	11.3	8.2	-	26
LPD3	5.4	10.6	-	11.2	-	7.5	9.2	15	LPK2	5.4	10.3	-	10.8	-	7.5	8.9	13
LPD4	5.4	10.6	-	11.2	-	7.5	9.2	15	LPK3	5.4	10.6	-	10.7	-	7.5	9.2	13
LPE4	5.4	10.6	-	11.2	-	7.5	9.2	15	LPK5	5.4	10.9	-	11.7	-	7.5	9.5	18
LPF4	5.4	10.6	-	11.7	-	7.5	9.2	18	LPK7	6.1	11.7	-	11.2	-	8.2	10.3	21
LPG4	5.4	10.6	-	11.7	-	7.5	9.2	18									

NOTE: Inches X 2.54 = cm /* the LPH8 is designed without a bleed valve available

PULSAtron® Series HV

Key Features

- **Automatic Control,** available with 4-20 mADC direct or external pacing, with stop function.
- **Manual Control** by on-line adjustable stroke rate and stroke length.
- **Agency approved** for demanding **OUTDOOR** and in-door applications.
- **Auto-Off-Manual** switch.
- **Highly Reliable** timing circuit.
- **Circuit Protection** against voltage and current upsets.
- **Panel Mounted Fuse.**
- **Solenoid Protection** by thermal overload with auto re-set.
- **Water Resistant,** for outdoor and indoor applications.
- **Indicator Lights,** panel mounted.
- **Guided Ball Check Valve Systems,** to reduce back flow and enhance outstanding priming characteristics.
- **Viscosities to 20,000 CPS**.

Pressure and Flow Rate Capacity

MODEL		LVB3	LVF4	LVG4	LVG5	LVH7
Capacity	GPH	0.50	1.00	2.00	4.00	10.00
nominal	GPD	12	24	48	96	240
(max.)	LPH	1.9	3.8	7.6	15.1	37.9
Pressure	PSIG	150	150	110	110	80
(max.)	BAR	10	10	7	7	5.6
Connections:	Tubing	(S) .50" I.D. X .75" O.D. .38" I.D. X .50" OD (LVB3 & F4 only) (S & D) .50" I.D. X .75" O.D. (LVG4,G5 & H7 only)				
Reproducibiilty		+/- 2% at maximum capacity				
Viscosity Max CPS		20,000 CPS				
Stroke Frequency		125 Strokes Per Minute (SPM) maximum				
Stroke Frequency		10:1				
Stroke Length Turn-		10:1				
Power Input		115 VAC/50-60 HZ/1 ph 230 VAC/50-60 HZ/1 ph				
Average Current		1.0 Amps @ 115 VAC, 0.5 Amps @ 230 VAC				
Peak Input Power		300 Watts				
Average Input Power		130 Watts				

PULSAtron Series HV Selection Guide

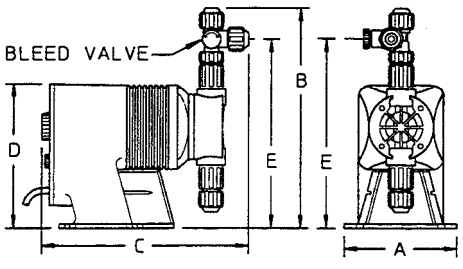
LV _ _ _ _ - _ _ _ - _ - _ _ _

MODELS:	$ 571	**B3**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 150 PSI (10 BAR)
	$ 716	**F4**	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 150 PSI (10 BAR)
	$ 869	**G4**	= 2.00 gph / 48 gpd (7.6 lph) max pres.: 110 PSI (7 BAR)
	$ 887	**G5**	= 4.00 gph / 96 gpd (15.1 lph) max pres.: 110 PSI (7 BAR)
	$ 1,099	**H7**	= 10.0 gph / 240 gpd (37.9 lph) max pres.: 80 PSI (5.6 BAR)
CONTROLS:	N/C	**S**	= Manual On/Off
	$ 252	**M**	= 4-20mADC Direct, w/ Stop
	$ 100	**E**	= External/Remote Pacing, w/ Stop
ELECTRICAL:	N/C	**A**	= 115 Volt / 50-60Hz
	N/C	**1**	= 115 Volt / 50-60Hz (without agency approvals)
	$ 20	**B**	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	$ 20	**2**	= 230 Volt / 50-60Hz (without agency approvals)
LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	$ 24	**WTS**	= PVC / TFE / 316 Stainless Steel - LVH7 only
	$ 12	**VTT**	= PVC / TFE / TFE - LVB3 & F4 only
	$ 24	**VTS**	= PVC / TFE / 316 Stainless Steel - LVG5 & G4
			No other liquid end materials available.
CONNECTION SIZES:	$ 80	**5**	= Tubing (S) .50" I.D. x .75" O.D. / .38" I.D. x .50" O.D. - LVB3 & F4 only
	$ 135	**K**	= Tubing .50" I.D. x .75" o.d. - LVG4, G5 & H7 only
No other connection sizes available. Pumps come with 4' suction tubing and 8' discharge tubing. No bleed valve available.			
SUFFIX CODES	N/C	**XXX**	= No Additional Options
	N/C	**CZXXX**	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LVB3SA-VTT5-XXX'

Dimensions



Series HV Dimensions (inches)					
Model No.	A	B	C	D	Shipping Weight
LVB3	5.4	9.3	9.5	7.5	13
LVF4	5.4	10.8	10.8	7.5	18
LVG4	5.4	9.5	10.6	7.5	18
LVG5	5.4	10.8	10.8	7.5	18
LVH7	6.1	11.5	11	8.2	25

NOTE: Inches X 2.54 = cm

PULSAtron® Series E

Key Features

- **Manual Control** by on-line adjustable stroke rate and stroke length.
- **Agency approved** for demanding **OUTDOOR** and indoor applications.
- **Highly Reliable** timing circuit.
- **Water Resistant** excellent for **OUTDOOR** and indoor applications.
- **Internally Dampened To Reduce Noise,** very acceptable for household installations.
- **Guided Ball Check Valve Systems,** to reduce back flow and enhance outstanding priming characteristics.
- **Premium Standard Wetted Component Materials.**
- **Few Moving Parts** and **Wall Mountable.**
- **Safe & Easy Priming** with durable leak-free **bleed valve assembly** (standard).

Pressure and Flow Rate Capacity

MODEL		LEK2	LE12	LE02	LE33	LE13	LE03	LEK3	LEF4	LE34	LE14	LEH4	LEG4	LE44	LEK5	LEH5	LEH6	LEK7	LEH7	LEJ7	LEH8
Capacity nominal (max.)	GPH	0.13	0.21	0.25	0.50	0.50	0.50	0.60	0.85	0.90	1.00	1.70	1.75	1.85	2.50	3.15	5.00	8.00	10.00	10.00	25.00
	GPD	3	5	6	12	12	12	14	20	22	24	41	42	44	60	76	120	192	240	240	600
	LPH	0.5	0.8	0.9	1.9	1.9	1.9	2.3	3.2	3.4	3.8	6.4	6.6	7	9.5	11.9	18.9	30.3	37.9	37.9	94.6
Pressure (max.)	PSIG	300	250	150	250	150	100	100	250	150	100	250	150	100	150	150	100	50	35	80	30
	BAR	21	17	10	17	10	7	7	17	10	7	17	10	7	10	10	7	3.3	2.4	5.5	2
Connections	Tubing	1/4" ID X 3/8" OD 3/8" ID X 1/2" OD 3/16" ID X 5/16" OD													3/8" ID X 1/2" OD 1/2" ID X 3/4" OD (LPH8 ONLY)						
	Piping	1/4" FNPT													1/4" FNPT 1/2" FNPT						
Reproducibiilty		+/- 3% at maximum capacity																			
Viscosity Max CPS		For viscosity up to 3000 CPS, select connection size 3, 4, B or C with 316SS ball material. Flow rate will determine connection/ball size. Greater than 3000 CPS require spring loaded ball checks. See Selection Guide for proper connection.																			
Stroke Frequency		125 Strokes Per Minute (SPM) maximum																			
Stroke Frequency		10:1																			
Stroke Length Turn-		10:1																			
Power Input		115 VAC/50-60 HZ/1 ph																			
		230 VAC/50-60 HZ/1 ph																			
Average Current		1.0 Amps @ 115 VAC, 0.5 Amps @ 230 VAC																			
Peak Input Power		300 Watts																			
Average Input		130 Watts																			

PULSAtron Series E Selection Guide

LE_ _ | S | _ - _ _ _ | _ - _ _ _

MODELS:	$ 520	**K2**	= 0.13 gph / 3 gpd (0.5 lph) max pres.: 300 PSI (21 BAR)
	$ 506	**12**	= 0.21 gph 5 gpd (0.8 lph) max pres.: 250 PSI (17 BAR)
	$ 571	**33**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 250 PSI (17 BAR)
	$ 817	**F4**	= 0.85 gph / 20 gpd (3.2 lph) max pres.: 250 PSI (17 BAR)
	$ 1,092	**H4**	= 1.70 gph / 41 gpd (6.4 lph) max pres.: 250 PSI (17 BAR)
	$ 419	**02**	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 150 PSI (10 BAR)
	$ 478	**13**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 150 PSI (10 BAR)
	$ 601	**34**	= 0.90 gph / 22 gpd (3.4 lph) max pres.: 150 PSI (10 BAR)
	$ 869	**G4**	= 1.75 gph / 42 gpd (6.6 lph) max pres.: 150 PSI (10 BAR)
	$ 917	**K5**	= 2.50 gph / 60 gpd (9.5 lph) max pres.: 150 PSI (10 BAR)
	$ 1,178	**H5**	= 3.15 gph / 76 gpd (11.9 lph) max pres.: 150 PSI (10 BAR)
	$ 435	**03**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 100 PSI (7 BAR)
	$ 499	**K3**	= 0.60 gph / 14 gpd (2.3 lph) max pres.: 100 PSI (7 BAR)
	$ 486	**14**	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 100 PSI (7 BAR)
	$ 628	**44**	= 1.85 gph / 44 gpd (7.0 lph) max pres.: 100 PSI (7 BAR)
	$ 889	**H6**	= 5.00 gph / 120 gpd (18.9 lph) max pres.: 100 PSI (7 BAR)
	$ 987	**K7**	= 8.00 gph / 192 gpd (30.3 lph) max pres.: 50 PSI (3.3 BAR)
	$ 1,013	**H7**	= 10.0 gph / 240 gpd (37.9 lph) max pres.: 35 PSI (2.4 BAR)
	$ 1,065	**J7**	= 10.0 gph / 240 gpd (37.9 lph) max pres.: 80 PSI (5.5 BAR)
	$ 1,494	**H8**	= 25.0 gph / 600 gpd (94.6 lph) max pres.: 30 PSI (2 BAR)

CONTROLS:	N/C	**S**	= No Options Available

ELECTRICAL:	N/C	**A**	= 115 Volt / 50-60Hz
	N/C	**1**	= 115 Volt / 50-60Hz (without agency approvals)
	$ 20	**B**	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	$ 20	**2**	= 230 Volt / 50-60Hz (without agency approvals)

LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	N/C	**PHC**	= GFPPL / Hypalon / Ceramic
	$ 12	**PTC**	= GFPPL / TFE / Ceramic
	$ 63	**KTC**	= PVDF / TFE / Ceramic (not available on J7 or H8)
	N/C	**VHC**	= PVC / Hypalon / Ceramic (not available on H7, H8, K7)
	$ 12	**VTC**	= PVC / TFE / Ceramic (models <= 150 psi excluding H7, H8, K7)
	$ 12	**WTC**	= PVC / TFE / Ceramic (models > 150 psi and H7, H8, K7)
	$ 228	**ATS**	= 316 S.S. / TFE / 316 S.S. (must use FNPT piping connection) (not available on J7 or H8)

See page 6 for additional liquid end materials.

CONNECTION SIZES:	N/C	**1**	= Tubing .25" I.D. x .38" O.D. / .25" Ball, 0 - 1.88 GPH
	N/C	**3**	= Tubing .38" I.D. x .50" O.D. / .38" Ball, 1.63 - 10 GPH
		METRIC:	
	N/C	**M**	= G 1/2 A Threads, .38" Ball, 6.15 - 37.85 LPH
	N/C	**P**	= 4 x 6mm, .25" Ball, 0 - 3.94 LPH

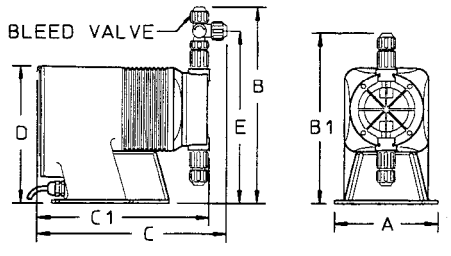
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer

SUFFIX CODES:	N/C	**XXX**	= No Additional Options
	$ 107	**130**	= PVDF Tubing
	$ 67	**500**	= Five Function Valve
	$ 155	**520**	= Five Function Degas Valve
	$ 183	**ITS**	= 15 gal. ITS Tank System (ITS Tank not available on LM, LP, LT, and LE: H4, H5, H6, H7, H8, J7, K7 models)
	N/C	**CZXXX**	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LE33SA-PTC1-XXX'

Dimensions



Series E Dimensions (inches)

Model No.	A	B	B1	C	C1	D	E	Shpg Wt	Model No.	A	B	B1	C	C1	D	E	Shpg Wt
LE02	5	9.6	-	9.5	-	6.4	8.2	7	LEH4	6.2	10.9	-	11.2	-	8.2	9.5	18
LE03	5	9.8	-	9.5	-	6.4	8.4	7	LEH5	6.2	11.3	-	11.2	-	8.2	9.9	18
LE12	5	9.6	-	9.5	-	6.4	8.2	7	LEH6	6.2	11.3	-	11.2	-	8.2	9.9	18
LE13	5	9.8	-	9.5	-	6.4	8.4	7	LEH7	6.1	11.7	-	11.2	-	8.2	10.3	18
LE14	5	9.8	-	9.5	-	6.4	8.4	7	LEH8*	6.1	-	10.9	-	10.6	8.2	-	23
LE33	5.4	10.6	-	11.2	-	7.5	9.2	12	LEK2	5.4	10.3	-	10.8	-	7.5	8.9	10
LE34	5.4	10.6	-	11.2	-	7.5	9.2	12	LEK3	5.4	10.6	-	10.7	-	7.5	9.2	10
LE44	5.4	10.6	-	11.2	-	7.5	9.2	12	LEK5	5.4	10.9	-	11.7	-	7.5	9.5	15
LEF4	5.4	10.6	-	11.7	-	7.5	9.2	15	LEK7	6.1	11.7	-	11.2	-	8.2	10.3	18
LEG4	5.4	10.6	-	11.7	-	7.5	9.2	15	LEJ7	6.1	10.0	-	10.7	-	-	-	18

NOTE: Inches X 2.54 = cm

* the LEH8 is designed without a bleed valve available

PULSAtron® Series E-DC

Key Features

- ***Powered by 12 Volt DC.***.
- ***Manual Control*** by on-line adjustable stroke rate and stroke length.
- ***Agency approved*** for demanding ***OUTDOOR*** and in-door applications.
- ***Highly Reliable*** timing circuit.
- ***Water Resistant*** excellent for ***OUTDOOR*** and indoor applications.
- ***Internally Dampened To Reduce Noise,*** very accept-able for household installations.
- ***Guided Ball Check Valve Systems,*** to reduce back flow and enhance outstanding priming characteristics.
- ***Premium Standard Wetted Component Materials.***
- ***Few Moving Parts*** and ***Wall Mountable.***
- ***Safe & Easy Priming*** with durable leak-free **bleed valve assembly** (standard).

Pressure and Flow Rate Capacity

MODEL		LS02	LS13	LS14	LS44
Capacity	GPH	0.25	0.50	1.00	1.85
nominal	GPD	6	12	24	44
(max.)	LPH	0.9	1.9	3.8	7.0
Pressure	PSIG	150	150	100	100
(max.)	BAR	10	10	7	7
Connections:	Tubing	1/4" ID X 3/8" OD 3/8" ID X 1/2" OD			
	Piping	1/4" FNPT			
Reproducibiilty		+/- 3% at maximum capacity			
Viscosity Max CPS	LS02, 13	300 CPS			
	LS14, 44	1000 CPS			
Stroke Frequency		125 Strokes Per Minute (SPM) maximum			
Stroke Frequency Turn-Down Ratio		10:1			
Stroke Length Turn-Down Ratio		10:1			
Power Input		12.6 VDC Nominal Range 11.8 - 14.0 VDC			
Average Current Draw	LS02, 13, 14	4.0 Amps			
	LS44	8.0 Amps			
Peak Input Power	LS02, 13, 14	138.6 Watts			
	LS44	189 Watts			
Average Input Power @ max SPM	LS02, 13, 14	50.4 Watts			
	LS44	100.8 Watts			

PULSAtron Series E-DC Selection Guide

LS_ _ | S | 4 | - | _ _ _ | _ | - | _ _ _

MODELS:	$ 462	**02**	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 150 PSI (10 BAR)
	$ 462	**13**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 150 PSI (10 BAR)
	$ 489	**14**	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 100 PSI (7 BAR)
	$ 621	**44**	= 1.85 gph / 44 gpd (7.0 lph) max pres.: 100 PSI (7 BAR)
CONTROLS:	N/C	**S**	= No Options Available
ELECTRICAL:	N/C	**4**	= 12V DC
LIQUID END MATERIALS:	N/C	**PHC**	= GFPPL / Hypalon / Ceramic
	$ 12	**PTC**	= GFPPL / TFE / Ceramic
Pump Head &	$ 7	**PVC**	= GFPPL / Viton / Ceramic
Fittings/Seats	$ 12	**VTC**	= PVC / TFE / Ceramic
& O-rings/Balls			

See page 6 for additional liquid end materials.

CONNECTION SIZES:	N/C	**1**	= Tubing .25"" I.D. x .38"" O.D. / .25"" Ball, 0 - 1.88 GPH
	N/C	**J**	= Tubing (S) .19"" I.D. x .31"" O.D.; (D) .25"" I.D. x .38"" O.D.; 19"" Ball, 0 - 1.04 GPH
		METRIC:	
	N/C	**M**	= G 1/2 A Threads, .38"" Ball, 6.15 - 37.85 LPH
	N/C	**R**	G 1/2 A Threads, .25"" Ball, 0 - 7.10 LPH

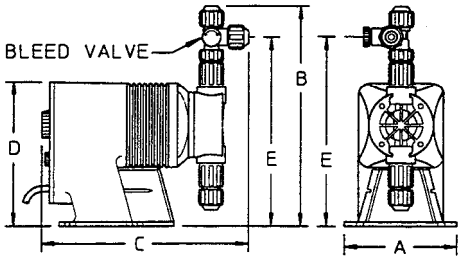
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer

SUFFIX CODES:	N/C	**XXX**	= No Additional Options
	$ 107	**130**	= PVDF Tubing
	$ 67	**500**	= Five Function Valve
	$ 155	**520**	= Five Function Degas Valve
	$ 183	**ITS**	= 15 gal. ITS Tank System
	N/C	**CZXXX**	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LS02S4-PTC1-XXX'

Dimensions



Series E-DC Dimensions (inches)						
Model No.	A	B	C	D	E	Shipping Weight
LS02	5.0	9.6	9.6	6.5	8.2	10
LS13	5.0	9.9	9.5	6.5	8.5	10
LS14	5.0	9.9	9.5	6.5	8.5	10
LS44	5.0	10.6	11.4	7.5	9.2	15

NOTE: Inches X 2.54 = cm

PULSAtron® Series D

Key Features

- ***Completely Digital.*** The Series D is easy to set-up with scrolling menus that appear on the easy to read 16 digit LCD backlit display.
- ***Flow Control Option.*** Create a flow control system. Pump will stop if you lose flow.
- ***Hall Effect water meter input.***
- ***Four-button Touch Pad Control*** with internationally recognized symbols for simplified programming.
- ***Water Resistant*** excellent for ***OUTDOOR*** and indoor applications.
- ***Internally Dampened To Reduce Noise,*** very acceptable for household installations.
- ***Guided Ball Check Valve Systems,*** to reduce back flow and enhance outstanding priming characteristics.
- ***Safe & Easy Priming*** with durable leak-free **bleed valve assembly** (standard).

OPTIONS

Add a flow switch to the Series D to create a Flow Control System. Available in 3/4" and 1" for easy installation in most systems.

Pressure and Flow Rate Capacity

MODEL		LF02	LFC3	LF03	LF04	LF64	LFC4
Capacity	GPH	0.25	0.42	0.50	1.00	1.25	2.00
nominal	GPD	6	10	12	24	30	48
(max.)	LPH	1.6	0.9	1.9	3.8	4.7	7.6
Pressure	PSIG	150	250	150	100	100	50
(max.)	BAR	10	17	10	7	7	3.3
Connections:	Tubing	1/4" ID X 3/8" OD 3/8" ID X 1/2" OD 3/16" ID X 5/16" OD					
	Piping	1/4" FNPT					
Reproducibiilty		+/- 3% at maximum capacity					
Viscosity Max CPS		1000					
Stroke Frequency		125 Strokes Per Minute (SPM) maximum					
Stroke Frequency		100:1					
Status Display		16-Position LCD Dot Matrix Backlight					
Power Input		115 VAC/50-60 HZ/1 ph 230 VAC/50-60 HZ/1 ph					
Average Current		0.6 Amps @ 115 VAC, 0.3 Amps @ 230 VAC					
Peak Input Power		130 Watts					
Average Input Power		50 Watts					

PULSAtron Series D Selection Guide

LF_ _ | S | _ - _ _ _ | _ - _ | _ - _ _ _

MODELS:	$ 516	**C3**	= 0.42 gph / 10 gpd (1.6 lph) max pres.: 250 PSI (17 BAR)
	$ 516	**02**	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 150 PSI (10 BAR)
	$ 516	**03**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 150 PSI (10 BAR)
	$ 516	**04**	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 100 PSI (7 BAR)
	$ 516	**64**	= 1.25 gph / 30 gpd (4.7 lph) max pres.: 100 PSI (7 BAR)
	$ 516	**C4**	= 2.00 gph / 48 gpd (7.6 lph) max pres.: 50 PSI (3.3 BAR)
CONTROLS:	N/C	**S**	= No Options Available
ELECTRICAL:	N/C	**A**	= 115 Volt / 50-60Hz
	N/C	**1**	= 115 Volt / 50-60Hz (without agency approvals)
	$ 20	**B**	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	$ 20	**2**	= 230 Volt / 50-60Hz (without agency approvals)
LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	N/C	**PHC**	= GFPPL / Hypalon / Ceramic
	$ 12	**PTC**	= GFPPL / TFE / Ceramic
	$ 7	**PVC**	= GFPPL / Viton / Ceramic
	$ 63	**KTC**	= PVDF / TFE / Ceramic
	N/C	**VHC**	= PVC / Hypalon / Ceramic
	$ 12	**VTC**	= PVC / TFE / Ceramic (models <= 150 psi)
	$ 12	**WTC**	= PVC / TFE / Ceramic (models > 150 psi)

See page 6 for additional liquid end materials.

CONNECTION SIZES:	N/C	**1**	= Tubing .25" I.D. x .38" O.D. / .25" Ball, 0 - 1.88 GPH
	N/C	**3**	= Tubing .38" I.D. x .50" O.D. / .38" Ball, 1.63 - 10 GPH
	$ 99	**9**	= Degas Head: (S) 5/16", (D) 3/8", 0-1.83 GPH
	N/C	**J**	= Tubing, Suc: .19" I.D. x .31" O.D.; Dis: .25" I.D. x .38" O.D.,; .19 Ball; 0 - 1.04 GPH
		METRIC:	
	N/C	**R**	= G 1/2 A Threads, .25" Ball, 0 - 7.10 LPH
	N/C	**Y**	= 6 x 12mm, .25" Ball, 0 - 7.10 LPH

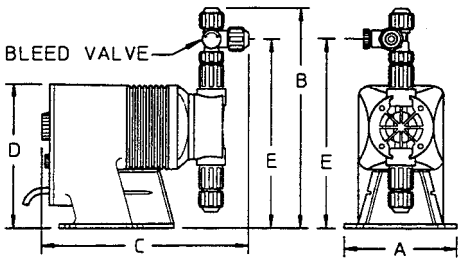
Please Refer to page 7 for additional connection sizes. **All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer**

CONNECTION ELECTRONIC OPTIONS:	N/C	**X**	= Liquid Tight Connector for Hardwiring Options
	$ 50	**1**	= Water Tight DIN Connector with Sealing Cap
FLOW:	N/C	**X**	= No Flow
	$ 120	**A**	= Flow Switch 3/4"" with 8.5 ft. cable
	$ 147	**B**	= Flow Switch 3/4"" with 25 ft. cable
	$ 165	**C**	= Flow Switch 1"" with 8.5 ft. cable
	$ 199	**D**	= Flow Switch 1"" with 25 ft. cable
	$ 12	**E**	= 25 ft. - 22g, four conductor cable
SUFFIX CODES:	N/C	**XXX**	= No Additional Options
	$ 107	**130**	= PVDF Tubing
	$ 67	**500**	= Five Function Valve
	$ 155	**520**	= Five Function Degas Valve
	$ 183	**ITS**	= 15 gal. ITS Tank System
	N/C	**CZXXX**	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LFO3SA-PTC1-XA-XXX'

Dimensions



Series D Dimensions (inches)						
Model No.	A	B	C	D	E	Shipping Weight
LF02	5.0	9.6	9.5	6.5	8.2	10
LFC3	5.0	9.9	9.5	6.5	8.5	10
LF03	5.0	9.9	9.5	6.5	8.5	10
LF04	5.0	9.9	9.5	6.5	8.5	10
LF64	5.0	9.9	9.5	6.5	8.5	10
LFC4	5.0	9.9	9.5	6.5	8.5	10

NOTE: Inches X 2.54 = cm

PULSAtron® Series A PLUS

Key Features

- ***Manual Control*** by on-line adjustable stroke rate and stroke length.
- ***Agency approved*** for demanding ***OUTDOOR*** and indoor applications.
- ***Highly Reliable*** timing circuit.
- ***Water Resistant*** excellent for ***OUTDOOR*** and indoor applications.
- ***Internally Dampened To Reduce Noise,*** very acceptable for household installations.
- ***Guided Ball Check Valve Systems,*** to reduce back flow and enhance outstanding priming characteristics.
- ***Premium Standard Wetted Component Materials.***
- ***Few Moving Parts*** and ***Wall Mountable.***
- ***Safe & Easy Priming*** with durable leak-free **bleed valve assembly** (standard).
- ***Optional Control:*** External pace with auto/manual selection.

Pressure and Flow Rate Capacity

MODEL		LBC2	LB02	LBC3	LB03	LB04	LB64	LBC4
Capacity	GPH	0.25	0.25	0.42	0.50	1.00	1.25	2.00
nominal	GPD	6	6	10	12	24	30	48
(max.)	LPH	0.9	0.9	1.6	1.9	3.8	4.7	7.6
Pressure	PSIG	250	150	250	150	100	100	50
(max.)	BAR	17	10	17	10	7	7	3.3
Connections:	Tubing	1/4" ID X 3/8" OD 3/8" ID X 1/2" OD 3/16" ID X 5/16" OD						
	Piping	1/4" FNPT						
Reproducibiilty		+/- 3% at maximum capacity						
Viscosity Max CPS		1000						
Stroke Frequency		125 Strokes Per Minute (SPM) maximum						
Stroke Frequency		10:1						
Stroke Length Turn-		10:1						
Power Input		115 VAC/50-60 HZ/1 ph 230 VAC/50-60 HZ/1 ph						
Average Current		0.6 Amps @ 115 VAC, 0.3 Amps @ 230 VAC						
Peak Input Power		130 Watts						
Average Input Power		50 Watts						

PULSAtron Series A Plus Selection Guide

LB_ _ _ _ - _ _ _ - _ _ _

MODELS:	$ 413	**C2**	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 250 PSI (17 BAR)
	$ 413	**C3**	= 0.42 gph / 10 gpd (1.6 lph) max pres.: 250 PSI (17 BAR)
	$ 413	**02**	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 150 PSI (10 BAR)
	$ 413	**03**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 150 PSI (10 BAR)
	$ 413	**04**	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 100 PSI (7 BAR)
	$ 413	**64**	= 1.25 gph / 30 gpd (4.7 lph) max pres.: 100 PSI (7 BAR)
	$ 413	**C4**	= 2.00 gph / 48 gpd (7.6 lph) max pres.: 50 PSI (3.3 BAR)

CONTROLS:	N/C	**S**	= Manual
	$ 90	**E**	= External Pacing w/ Auto/Manual Switch
	$ 90	**G**	= External Pacing w/ Prime Button
	$ 80	**P**	= Stop Function Option

ELECTRICAL:	N/C	**A**	= 115 Volt / 50-60Hz
	N/C	**1**	= 115 Volt / 50-60Hz (without agency approvals)
	$ 20	**B**	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	$ 20	**2**	= 230 Volt / 50-60Hz (without agency approvals)

LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	N/C	**PHC**	= GFPPL / Hypalon / Ceramic
	$ 12	**PTC**	= GFPPL / TFE / Ceramic
	$ 7	**PVC**	= GFPPL / Viton / Ceramic
	$ 63	**KTC**	= PVDF / TFE / Ceramic
	N/C	**VHC**	= PVC / Hypalon / Ceramic
	$ 12	**VTC**	= PVC / TFE / Ceramic (models <= 150 psi)
	$ 12	**WTC**	= PVC / TFE / Ceramic (models > 150 psi)

See page 6 for additional liquid end materials.

CONNECTION SIZES:	N/C	**1**	= Tubing .25" I.D. x .38" O.D. / .25" Ball, 0 - 1.88 GPH
	N/C	**3**	= Tubing .38" I.D. x .50" O.D. / .38" Ball, 1.63 - 10 GPH
	$ 99	**9**	= Degas Head: (S) 5/16", (D) 3/8", 0-1.83 GPH
	N/C	**J**	= Tubing, Suc: .19" I.D. x .31" O.D.; Dis: .25" I.D. x .38" O.D.,; .19 Ball; 0 - 1.04 GPH
		METRIC:	
	N/C	**R**	= G 1/2 A Threads, .25" Ball, 0 - 7.10 LPH
	N/C	**Y**	= 6 x 12mm, .25" Ball, 0 - 7.10 LPH

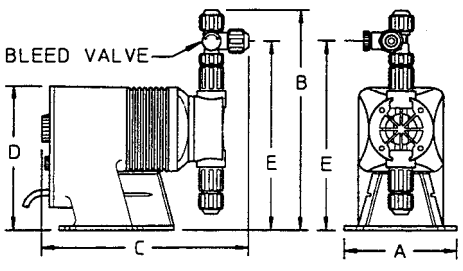
Please Refer to page 7 for additional connection sizes. **All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer**

SUFFIX CODES:	N/C	**XXX**	= No Additional Options
	$ 107	**130**	= PVDF Tubing
	$ 67	**500**	= Five Function Valve
	$ 155	**520**	= Five Function Degas Valve
	$ 183	**ITS**	= 15 gal. ITS Tank System
	N/C	**CZXXX**	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LB03SA-PTC1-XXX'

Dimensions



Series A PLUS Dimensions (inches)						
Model No.	A	B	C	D	E	Shipping Weight
LB02	5.0	9.6	9.5	6.5	8.2	10
LBC2	5.0	9.9	9.5	6.5	8.5	10
LBC3	5.0	9.9	9.5	6.5	8.5	10
LB03	5.0	9.9	9.5	6.5	8.5	10
LB04	5.0	9.9	9.5	6.5	8.5	10
LB64	5.0	9.9	9.5	6.5	8.5	10
LBC4	5.0	9.9	9.5	6.5	8.5	10

NOTE: Inches X 2.54 = cm

PULSAtron® Series C PLUS

Key Features

- ***Manual Control*** by on-line adjustable stroke rate and stroke length.
- ***Agency approved*** for demanding ***OUTDOOR*** and indoor applications.
- ***Highly Reliable*** timing circuit.
- ***Water Resistant*** excellent for ***OUTDOOR*** and indoor applications.
- ***Internally Dampened To Reduce Noise,*** very acceptable for household installations.
- ***Guided Ball Check Valve Systems,*** to reduce back flow and enhance outstanding priming characteristics.
- ***Premium Standard Wetted Component Materials.***
- ***Few Moving Parts*** and ***Wall Mountable.***
- ***Safe & Easy Priming*** with durable leak-free **bleed valve assembly** (standard).
- ***Optional Control:*** External pace with auto/manual selection.

Pressure and Flow Rate Capacity

MODEL		LD02	LD03	LD04	LD54
Capacity	GPH	0.25	0.50	1.00	1.25
nominal	GPD	6	12	24	30
(max.)	LPH	0.9	1.9	3.8	4.7
Pressure	PSIG	80	80	80	80
(max.)	BAR	5.6	5.6	5.6	5.6
Connections:	Tubing	1/4" ID X 3/8" OD 3/8" ID X 1/2" OD 3/16" ID X 5/16" OD			
	Piping	1/4" FNPT			
Reproducibiilty		+/- 3% at maximum capacity			
Viscosity Max CPS		1000 CPS			
Stroke Frequency		125 Strokes Per Minute (SPM) maximum			
Stroke Frequency		10:1			
Stroke Length Turn-		10:1			
Power Input		115 VAC/50-60 HZ/1 ph 230 VAC/50-60 HZ/1 ph			
Average Current		0.6 Amps @ 115 VAC, 0.3 Amps @ 230 VAC			
Peak Input Power		130 Watts			
Average Input Power		50 Watts			

PULSAtron Series C Plus Selection Guide

LD_ _ _ _ - _ _ _ - _ _ _

MODELS:	$ 378	**02**	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 80 PSI (5.6 BAR)
	$ 378	**03**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 80 PSI (5.6 BAR)
	$ 378	**04**	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 80 PSI (5.6 BAR)
	$ 378	**54**	= 1.25 gph / 30 gpd (4.7 lph) max pres.: 80 PSI (5.6 BAR)
CONTROLS:	N/C	**S**	= Manual
	$ 90	**E**	= External Pacing w/ Auto/Manual Switch
	$ 90	**G**	= External Pacing w/ Prime Button
	$ 80	**P**	= Stop Function Option
ELECTRICAL:	N/C	**A**	= 115 Volt / 50-60Hz
	N/C	**1**	= 115 Volt / 50-60Hz (without agency approvals)
	$ 20	**B**	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	$ 20	**2**	= 230 Volt / 50-60Hz (without agency approvals)
LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	N/C	**PHC**	= GFPPL / Hypalon / Ceramic
	$ 12	**PTC**	= GFPPL / TFE / Ceramic
	$ 63	**KTC**	= PVDF / TFE / Ceramic
	N/C	**VHC**	= PVC / Hypalon / Ceramic
	$ 12	**VTC**	= PVC / TFE / Ceramic

See page 6 for additional liquid end materials.

CONNECTION SIZES:	N/C	**1**	= Tubing .25"" I.D. x .38"" O.D. / .25"" Ball, 0 - 1.88 GPH
	N/C	**A**	= Tubing .38"" I.D. x .50"" O.D. / .25"" Ball, 0 - 1.88 GPH
	N/C	**J**	= Tubing, Suc: .19""I.D. x .31""O.D.; Dis: .25""I.D. x .38""O.D.; .19 Ball; 0 - 1.04 GPH
		METRIC:	
	N/C	**R**	= G 1/2 A Threads, .25"" Ball, 0 - 7.10 LPH
	N/C	**Y**	= 6 x 12mm, .25"" Ball, 0 - 7.10 LPH

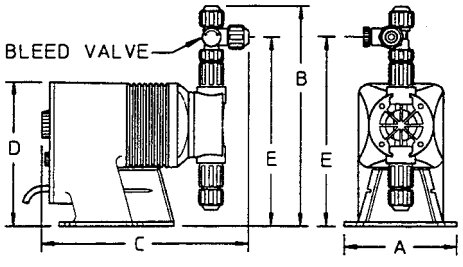
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer

SUFFIX CODES:	N/C	**XXX**	= No Additional Options
	$ 107	**130**	= PVDF Tubing
	$ 67	**500**	= Five Function Valve
	$ 155	**520**	= Five Function Degas Valve
	$ 183	**ITS**	= 15 gal. ITS Tank System
	N/C	**CZXXX**	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LD03SA-PTC1-XXX'

Dimensions



Series C PLUS Dimensions (inches)						
Model No.	A	B	C	D	E	Shipping Weight
LD02	5.0	9.6	9.5	6.5	8.2	10
LD03	5.0	9.9	9.5	6.5	8.5	10
LD04	5.0	9.9	9.5	6.5	8.5	10
LD54	5.0	9.9	9.5	6.5	8.5	10

NOTE: Inches X 2.54 = cm

PULSAtron® Series C

Key Features

- ***Automatic Control*** by external pacing with prime switch (optional).
- ***Manual Control*** by on-line adjustable stroke length (fixed stroke rate).
- ***Liquid Low Level Option*** available to prevent loss of prime.
- ***Agency approved*** for demanding ***OUTDOOR*** and indoor applications.
- ***Highly Reliable*** timing circuit.
- ***Water Resistant*** excellent for ***OUTDOOR*** and indoor applications.
- ***Internally Dampened To Reduce Noise,*** very acceptable for household installations.
- ***Guided Ball Check Valve Systems,*** to reduce back flow and enhance outstanding priming characteristics.
- ***Premium Standard Wetted Component Materials.***
- ***Few Moving Parts*** and ***Wall Mountable.***
- ***Safe & Easy Priming*** with durable leak-free **bleed valve assembly** (standard).

Pressure and Flow Rate Capacity

MODEL		LC02	LC03	LC04	LC54
Capacity	GPH	0.25	0.50	1.00	1.25
nominal	GPD	6	12	24	30
(max.)	LPH	0.9	1.9	3.8	4.7
Pressure	PSIG	80	80	80	80
(max.)	BAR	5.6	5.6	5.6	5.6
Connections:	Tubing	1/4" ID X 3/8" OD 3/8" ID X 1/2" OD 3/16" ID X 5/16" OD			
	Piping	1/4" FNPT			
Reproducibiilty		+/- 3% at maximum capacity			
Viscosity Max CPS		1000 CPS			
Stroke Frequency		125 Strokes Per Minute (SPM) maximum			
Stroke Length Turn-		5:1			
Power Input		115 VAC/50-60 HZ/1 ph 230 VAC/50-60 HZ/1 ph			
Average Current		0.6 Amps @ 115 VAC, 0.3 Amps @ 230 VAC			
Peak Input Power		130 Watts			
Average Input Power		50 Watts			

PULSAtron Series C Selection Guide

LC_ _ _ _ - _ _ _ - _ _ _

MODELS:	$ 337	**02**	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 80 PSI (5.6 BAR)
	$ 337	**03**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 80 PSI (5.6 BAR)
	$ 337	**04**	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 80 PSI (5.6 BAR)
	$ 337	**54**	= 1.25 gph / 30 gpd (4.7 lph) max pres.: 80 PSI (5.6 BAR)
CONTROLS:	N/C	**S**	= Manual
	$ 90	**E**	= External Pacing w/ Auto/Manual Switch
	$ 90	**G**	= External Pacing w/ Prime Button
	$ 80	**P**	= Stop Function Option
ELECTRICAL:	N/C	**A**	= 115 Volt / 50-60Hz
	N/C	**1**	= 115 Volt / 50-60Hz (without agency approvals)
	$ 20	**B**	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	$ 20	**2**	= 230 Volt / 50-60Hz (without agency approvals)
LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	N/C	**PHC**	= GFPPL / Hypalon / Ceramic
	$ 12	**PTC**	= GFPPL / TFE / Ceramic
	N/C	**VHC**	= PVC / Hypalon / Ceramic
	$ 12	**VTC**	= PVC / TFE / Ceramic
	$ 7	**VVC**	= PVC / Viton / Ceramic

See page 6 for additional liquid end materials.

CONNECTION SIZES:	N/C	**1**	= Tubing .25"" I.D. x .38"" O.D. / .25"" Ball, 0 - 1.88 GPH
	N/C	**A**	= Tubing .38"" I.D. x .50"" O.D. / .25"" Ball, 0 - 1.88 GPH
	N/C	**J**	= Tubing, Suc: .19""I.D. x .31""O.D.; Dis: .25""I.D. x .38""O.D.; .19 Ball; 0 - 1.04 GPH
		METRIC:	
	N/C	**P**	= 4 x 6mm, .25"" Ball, 0 - 3.94 LPH
	N/C	**U**	= 6 x 10mm, .25"" Ball, 0 - 7.10 LPH

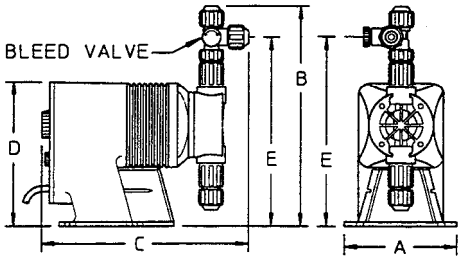
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer

SUFFIX CODES:	N/C	**XXX**	= No Additional Options
	$ 107	**130**	= PVDF Tubing
	$ 67	**500**	= Five Function Valve
	$ 155	**520**	= Five Function Degas Valve
	$ 183	**ITS**	= 15 gal. ITS Tank System
	N/C	**CZXXX**	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LC03SA-PTC1-XXX'

Dimensions



Series C Dimensions (inches)						
Model No.	A	B	C	D	E	Shipping Weight
LC02	5.0	9.6	9.5	6.5	8.2	10
LC03	5.0	9.9	9.5	6.5	8.5	10
LC04	5.0	9.9	9.5	6.5	8.5	10
LC54	5.0	9.9	9.5	6.5	8.5	10

NOTE: Inches X 2.54 = cm

PULSAtron® PLUS Series CW

Conductivity Control with Water Meter Feed

The Series CW was designed to control conductivity and feed inhibitor in an open-air cooling tower. Chemical feed is initiated and controlled by input from a water meter. The Series CW combines everything you need to control conductivity and feed inhibitor into one unique, compact package to create a simple and cost effective metering and control system.

Principal of Operation

The Series CW includes a solenoid actuated metering pump, conductivity sensor, bleed relay and a dry contact input for water meter control. At set-up, the operator sets the conductivity set point, differential (or dead-band), the pump stroke frequency and run time. When conductivity reaches the set point, the system activates the bleed relay.

As make-up water passes through the water meter, it generates a series of pulses based on the volume of flow. The pump counts the pulses until the total reaches the Count set point. The pump runs at the frequency and run-time specified at set-up and the count is reset.

Features

- 120VAC or 250VAC @ 50/60 HZ, 5A max
- 4-electrode conductivity input
- 0-6000 mS/cm ± 1%, temperature compensated
- Relay rated to 5A at 240VAC
- Isolated dry contact flow switch input
- Isolated dry contact water meter input
- 4 Digit LED, 9 key membrane keypad
- Single-button function keys
- Set, Differential, Calibration, Pulse Timer, and Count functions
- Stroke rate adjusts 0-100% in 1% increments, turndown ratio 100:1

Pressure and Flow Rate Capacity

MODEL		LW02	LW03	LW04	LW64
Capacity	GPH	0.25	0.50	1.00	1.25
nominal	GPD	6	12	24	30
(max.)	LPH	0.9	1.9	3.8	4.7
Pressure	PSIG	150	150	100	100
(max.)	BAR	10	10	7	7

PULSAtron Series CW Selection Guide

LW_ _ _ _ - _ _ _ - _ - _ _ - _ - _ _ _

MODELS:	$ 1,049	**02**	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 150 PSI (10 BAR)
	$ 1,049	**03**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 150 PSI (10 BAR)
	$ 1,049	**04**	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 100 PSI (7 BAR)
	$ 1,049	**64**	= 1.25 gph / 30 gpd (4.7 lph) max pres.: 100 PSI (7 BAR)
CONTROLS:	N/C	**R**	= Rising Set Point (standard)
	N/C	**F**	= Falling Set Point
ELECTRICAL:	N/C	**A**	= 115 Volt / 50-60Hz
	N/C	**1**	= 115 Volt / 50-60Hz (without agency approvals)
	$ 20	**B**	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	$ 20	**2**	= 230 Volt / 50-60Hz (without agency approvals)
LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	N/C	**PHC**	= GFPPL / Hypalon / Ceramic
	$ 12	**PTC**	= GFPPL / TFE / Ceramic
	$ 7	**PVC**	= GFPPL / Viton / Ceramic
	$ 63	**KTC**	= PVDF / TFE / Ceramic
	N/C	**VHC**	= PVC / Hypalon / Ceramic
	$ 12	**VTC**	= PVC / TFE / Ceramic

See page 6 for additional liquid end materials.

CONNECTION SIZES:	N/C	**1**	= Tubing .25" I.D. x .38" O.D. / .25" Ball, 0 - 1.88 GPH
	$ 99	**9**	= Degas Head: (S) 5/16", (D) 3/8", 0-1.83 GPH
	N/C	**J**	= Tubing, Suc: .19" I.D. x .31" O.D.; Dis: .25" I.D. x .38" O.D.,; .19 Ball; 0 - 1.04 GPH
		METRIC:	
	N/C	**R**	= G 1/2 A Threads, .25" Ball, 0 - 7.10 LPH
	N/C	**Y**	= 6 x 12mm, .25" Ball, 0 - 7.10 LPH

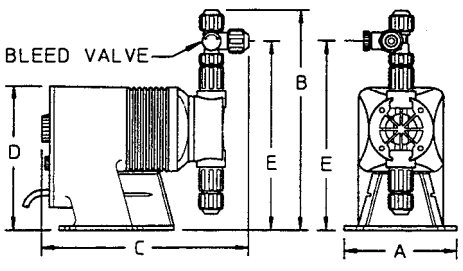
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer

SENSOR:	N/C	**2**	= Stainless Steel with 8.5 ft. cable
	$ 26	**3**	= Stainless Steel with 25 ft. cable
	$ 133	**4**	= Carbon Graphite with 8.5 ft. cable
	$ 161	**5**	= Carbon Graphite with 25 ft. cable
FLOW:	N/C	**X**	= No Flow
	$ 119	**A**	= Flow Switch 3/4"" with 8.5 ft. cable and 3"" nipple
	$ 147	**B**	= Flow Switch 3/4"" with 25 ft. cable and 3"" nipple
	$ 200	**C**	= Flow Assembly with 8.5 ft. cable
	$ 227	**D**	= Flow Assembly with 25 ft. cable
SUFFX CODES:	N/C	**XXX**	= No Additional Options
	$ 107	**130**	= PVDF Tubing
	$ 67	**500**	= Five Function Valve
	$ 155	**520**	= Five Function Degas Valve
	N/C	**CZXXX**	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LWO3SA-PTC1-2A-XXX'

Dimensions



Series CW Dimensions (inches						
Model No.	A	B	C	D	E	Shipping Weight (lbs.)
LW02	5.0	9.6	9.5	6.5	8.2	13
LW03	5.0	9.9	9.5	6.5	8.5	13
LW04	5.0	9.9	9.5	6.5	8.5	13
LW64	5.0	9.9	9.5	6.5	8.5	13

NOTE: Inches X 2.54 = cm

PULSAtron® PLUS Series CL

Conductivity Control with Limit Timer

The Series CL was designed to control conductivity and feed inhibitor in an open-air cooling tower. The Series CL combines everything you need to control conductivity and feed inhibitor into one unique, compact package to create a simple and cost effective metering and control system.

Principle of Operation

The Series CL includes a conductivity sensor, bleed relay and a user programmable limit timer. When conductivity reaches the user specified level, the system activates the bleed relay and begins pumping inhibitor. The 'feed & bleed ' cycle will continue until the conductivity returns to the desired level. The programmable limit timer allows the user to specify a maximum pumping time for the feed cycle. If the limit time expires before the conductivity level returns to the set range, the pump stops feeding while the bleed continues. Once the conductivity level is reached and the system stops bleeding, the feed limit timer is automatically reset for the next bleed cycle.

Features

- 120VAC or 250VAC @ 50/60 HZ, 5A max
- 4-electrode conductivity input
- 0-6000 mS/cm ± 1%, temperature compensated
- Relay rated to 5A at 240VAC
- Isolated dry contact flow switch input
- 4 Digit LED, 9 key membrane keypad
- Single-button function keys
- Set, Differential, Calibration, Pulse Timer, and Count functions
- Stroke rate adjusts 0-100% in 1% increments, turndown ratio 100:1

Pressure and Flow Rate Capacity

MODEL		LL02	LL03	LL04	LL64
Capacity	GPH	0.25	0.50	1.00	1.25
nominal	GPD	6	12	24	30
(max.)	LPH	0.9	1.9	3.8	4.7
Pressure	PSIG	150	150	100	100
(max.)	BAR	10	10	7	7

PULSAtron Series CL Selection Guide

LL_ _ _ _ - _ _ _ - _ - _ _ - _ - _ _ _

MODELS:	$ 983	**02**	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 150 PSI (10 BAR)
	$ 983	**03**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 150 PSI (10 BAR)
	$ 983	**04**	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 100 PSI (7 BAR)
	$ 983	**64**	= 1.25 gph / 30 gpd (4.7 lph) max pres.: 100 PSI (7 BAR)
CONTROLS:	N/C	**R**	= Rising Set Point (standard)
	N/C	**F**	= Falling Set Point
ELECTRICAL:	N/C	**A**	= 115 Volt / 50-60Hz
	N/C	**1**	= 115 Volt / 50-60Hz (without agency approvals)
	$ 20	**B**	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	$ 20	**2**	= 230 Volt / 50-60Hz (without agency approvals)
LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	N/C	**PHC**	= GFPPL / Hypalon / Ceramic
	$ 12	**PTC**	= GFPPL / TFE / Ceramic
	$ 7	**PVC**	= GFPPL / Viton / Ceramic
	$ 63	**KTC**	= PVDF / TFE / Ceramic
	N/C	**VHC**	= PVC / Hypalon / Ceramic
	$ 12	**VTC**	= PVC / TFE / Ceramic

See page 6 for additional liquid end materials.

CONNECTION SIZES:	N/C	**1**	= Tubing .25" I.D. x .38" O.D. / .25" Ball, 0 - 1.88 GPH
	$ 99	**9**	= Degas Head: (S) 5/16", (D) 3/8", 0-1.83 GPH
	N/C	**J**	= Tubing, Suc: .19" I.D. x .31" O.D.; Dis: .25" I.D. x .38" O.D.,; .19 Ball; 0 - 1.04 GPH
		METRIC:	
	N/C	**R**	= G 1/2 A Threads, .25" Ball, 0 - 7.10 LPH
	N/C	**Y**	= 6 x 12mm, .25" Ball, 0 - 7.10 LPH

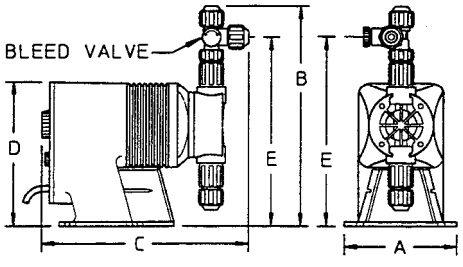
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer

SENSOR:	N/C	**2**	= Stainless Steel with 8.5 ft. cable
	$ 26	**3**	= Stainless Steel with 25 ft. cable
	$ 133	**4**	= Carbon Graphite with 8.5 ft. cable
	$ 161	**5**	= Carbon Graphite with 25 ft. cable
FLOW:	N/C	**X**	= No Flow
	$ 119	**A**	= Flow Switch 3/4"" with 8.5 ft. cable and 3"" nipple
	$ 147	**B**	= Flow Switch 3/4"" with 25 ft. cable and 3"" nipple
	$ 200	**C**	= Flow Assembly with 8.5 ft. cable
	$ 227	**D**	= Flow Assembly with 25 ft. cable
SUFFX CODES:	N/C	**XXX**	= No Additional Options
	$ 107	**130**	= PVDF Tubing
	$ 67	**500**	= Five Function Valve
	$ 155	**520**	= Five Function Degas Valve
	N/C	**CZXXX**	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LLO3RA-PTC1-2A-XXX'

Dimensions



Series CL Dimensions (inches						
Model No.	A	B	C	D	E	Shipping Weight (lbs.)
LL02	5.0	9.6	9.5	6.5	8.2	13
LL03	5.0	9.9	9.5	6.5	8.5	13
LL04	5.0	9.9	9.5	6.5	8.5	13
LL64	5.0	9.9	9.5	6.5	8.5	13

NOTE: Inches X 2.54 = cm

PULSAtron® PLUS Series WT

Water Meter Feed & Bleed Control

The Series WT was designed to control the feed and bleed cycle in an open-air cooling tower. The feed and bleed cycle is initiated and controlled by input from a water meter. The Series WT combines everything you need to bleed off the tower and feed inhibitor into one unique, compact package to create a simple and cost effective metering and control system.

Principal of Operation

The Series WT includes a water meter input with programmable pulse timers that control the feed and bleed relays. When the water level in the cooling tower drops, the make-up water is turned on creating flow through the water meter. As make-up water passes through the water meter, it generates a series of pulses based on the volume of flow.

The Series WT has two pulse counters with independent set points that monitors output of the water meter. One controls the pump and one controls the bleed relay. When the count exceeds the set point, the counter is reset and the control function is activated for the run-time specified at set-up.

Features

- 120VAC or 250VAC @ 50/60 HZ, 5A max
- Relay rated to 5A at 240VAC
- Isolated dry contact flow switch input
- Isolated dry contact water meter input
- 4 Digit LED, 9 key membrane keypad
- Single-button function keys
- Pump and bleed timers, pump and bleed counters
- Stroke rate adjusts 0-100% in 1% increments, turndown ratio 100:1

Pressure and Flow Rate Capacity

MODEL		LQ02	LQ03	LQ04	LQ64
Capacity	GPH	0.25	0.50	1.00	1.25
nominal	GPD	6	12	24	30
(max.)	LPH	0.9	1.9	3.8	4.7
Pressure	PSIG	150	150	100	100
(max.)	BAR	10	10	7	7

PULSAtron Series WT Selection Guide

LQ_ _ | X | _ | - | _ _ _ | _ | - | X | _ | - | _ _ _

MODELS:	$ 804	**02**	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 150 PSI (10 BAR)
	$ 804	**03**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 150 PSI (10 BAR)
	$ 804	**04**	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 100 PSI (7 BAR)
	$ 804	**64**	= 1.25 gph / 30 gpd (4.7 lph) max pres.: 100 PSI (7 BAR)
CONTROLS:	N/C	**X**	= No options Available
ELECTRICAL:	N/C	**A**	= 115 Volt / 50-60Hz
	N/C	**1**	= 115 Volt / 50-60Hz (without agency approvals)
	$ 20	**B**	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	$ 20	**2**	= 230 Volt / 50-60Hz (without agency approvals)
LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	N/C	**PHC**	= GFPPL / Hypalon / Ceramic
	$ 12	**PTC**	= GFPPL / TFE / Ceramic
	$ 7	**PVC**	= GFPPL / Viton / Ceramic
	$ 63	**KTC**	= PVDF / TFE / Ceramic
	N/C	**VHC**	= PVC / Hypalon / Ceramic
	$ 12	**VTC**	= PVC / TFE / Ceramic

See page 6 for additional liquid end materials.

CONNECTION SIZES:	N/C	**1**	= Tubing .25" I.D. x .38" O.D. / .25" Ball, 0 - 1.88 GPH
	$ 99	**9**	= Degas Head: (S) 5/16", (D) 3/8", 0-1.83 GPH
	N/C	**J**	= Tubing, Suc: .19" I.D. x .31" O.D.; Dis: .25" I.D. x .38" O.D.,; .19 Ball; 0 - 1.04 GPH
		METRIC:	
	N/C	**R**	= G 1/2 A Threads, .25" Ball, 0 - 7.10 LPH
	N/C	**Y**	= 6 x 12mm, .25" Ball, 0 - 7.10 LPH

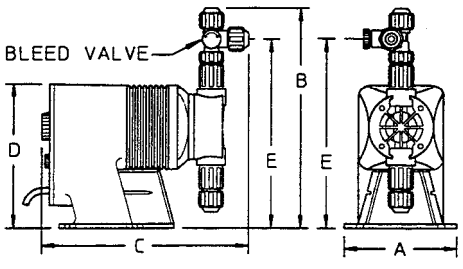
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer

SENSOR:	N/C	**X**	= No Options Available
FLOW:	N/C	**X**	= No Flow
	$ 119	**A**	= Flow Switch 3/4"" with 8.5 ft. cable and 3"" nipple
	$ 147	**B**	= Flow Switch 3/4"" with 25 ft. cable and 3"" nipple
	$ 200	**C**	= Flow Assembly with 8.5 ft. cable
	$ 227	**E**	= Flow Assembly with 25 ft. cable
SUFFX CODES:	N/C	**XXX**	= No Additional Options
	$ 107	**130**	= PVDF Tubing
	$ 67	**500**	= Five Function Valve
	$ 155	**520**	= Five Function Degas Valve
	N/C	**CZXXX**	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LQO3XA-PTC1-XA-XXX'

Dimensions



Series WT Dimensions (inches)						
Model No.	A	B	C	D	E	Shipping Weight (lbs.)
LQ02	5.0	9.6	9.5	6.5	8.2	13
LQ03	5.0	9.9	9.5	6.5	8.5	13
LQ04	5.0	9.9	9.5	6.5	8.5	13
LQ64	5.0	9.9	9.5	6.5	8.5	13

Note: Inches x 2.54 = cm

PULSAtron® PLUS Series ET

Feed Control with Water Meter Input

The Series ET was designed to feed chemical in response to a water meter input. Typical applications include inhibitor feed for an open air-cooling tower. The Series ET provides everything you need in one unique, compact package to create a simple and cost effective metering system.

Principal of Operation

The Series ET counts pulses from a water meter. When the count exceeds a set value (either 1 or 10), the pump starts. The pump will continue to run for an adjustable time period. There are two time ranges – either 2 to 200 seconds or 12 seconds to 20 minutes. The setting is made by selecting a time base value (200 seconds or 20 minutes) and then setting the time base percentage from 1 to 100%.

Other control features include a standby mode, continuous 'ON' mode and the ability to adjust the stroke length from 0 – 100%.

The pump includes both input and output water meter connections at the front panel. The output connection provides an isolated dry contact output of the water meter contact to operate additional pumps or timers off the same water meter.

Features

- Isolated from Earth Ground
- 120VAC or 250VAC @ 50/60 HZ, 5A max
- Isolated Dry Contact (Water Meter)
- Isolated Dry Contact (Water Meter)
- Mode Select Knob, Stroke Length, Stroke Rate
- Standby, On, 200 sec/count, 200 sec/10 count, 20 min/count and 20 min/10 count
- Stroke rate and stroke length adjust 0-100% in 1% increments. Frequency turndown ratio 100:1.
- Agency approved for demanding ***OUTDOOR*** and indoor applications

Pressure and Flow Rate Capacity

MODEL		LTB2	LTA2	LTB3	LTA3	LTF4	LTD4	LTB4	LTH4	LTG4	LTE4	LTH5	LTH6	LTH7	LTH8
Capacity	GPH	0.21	0.25	0.50	0.50	0.85	0.90	1.00	1.70	1.75	1.85	3.15	5.00	10.00	21
nominal	GPD	5	6	12	12	20	22	24	41	42	44	76	120	240	504
(max.)	LPH	0.8	0.9	1.9	1.9	3.2	3.4	3.8	6.4	6.6	7.0	11.9	18.9	37.9	79.5
Pressure	PSIG	250	150	150	100	250	150	100	250	150	100	150	100	35	20
(max.)	BAR	17	10	10	7	17	10	7	17	10	7	10	7	2.4	1.3

PULSAtron Series ET Selection Guide

LT_ _ | S | _ | - | _ _ _ | _ | - | _ _ _

MODELS:	$ 681	**B2**	= 0.21 gph / 5 gpd (0.8 lph) max pres.: 250 PSI (17 BAR)
	$ 1,048	**F4**	= 0.85 gph / 20 gpd (3.2 lph) max pres.: 250 PSI (17 BAR)
	$ 1,380	**H4**	= 1.70 gph / 41 gpd (6.4 lph) max pres.: 250 PSI (17 BAR)
	$ 655	**A2**	= 0.25 gph / 6 gpd (0.9 lph) max pres.: 150 PSI (10 BAR)
	$ 710	**B3**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 150 PSI (10 BAR)
	$ 812	**D4**	= 0.90 gph / 22 gpd (3.4 lph) max pres.: 150 PSI (10 BAR)
	$ 1,120	**G4**	= 1.75 gph / 42 gpd (6.6 lph) max pres.: 150 PSI (10 BAR)
	$ 1,408	**H5**	= 3.15 gph / 76 gpd (11.9 lph) max pres.: 150 PSI (10 BAR)
	$ 658	**A3**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 100 PSI (7 BAR)
	$ 716	**B4**	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 100 PSI (7 BAR)
	$ 837	**E4**	= 1.85 gph / 44 gpd (7.0 lph) max pres.: 100 PSI (7 BAR)
	$ 1,093	**H6**	= 5.00 gph / 120 gpd (18.9 lph) max pres.: 100 PSI (7 BAR)
	$ 1,227	**H7**	= 10.0 gph / 240 gpd (37.9 lph) max pres.: 35 PSI (2.4 BAR)
	$ 1,658	**H8**	= 21.0 gph / 504 gpd (79.5 lph) max pres.: 20 PSI (1.3 BAR)
CONTROLS:	N/C	**S**	= Manual On/Off
ELECTRICAL:	N/C	**A**	= 115 Volt / 50-60Hz
	N/C	**1**	= 115 Volt / 50-60Hz (without agency approvals)
	$ 20	**B**	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	$ 20	**2**	= 230 Volt / 50-60Hz (without agency approvals)
LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	$ 12	**PTC**	= GFPPL / TFE / Ceramic
	$ 12	**PTT**	= GFPPL / TFE / TFE
	$ 63	**KTC**	= PVDF / TFE / Ceramic
	N/C	**VHC**	= PVC / Hypalon / Ceramic
	$ 12	**VTC**	= PVC / TFE / Ceramic (models <= 150 psi excluding H7, H8, K7)
	$ 12	**WTC**	= PVC / TFE / Ceramic (models > 150 psi and H7, H8, K7)
	$ 228	**ATS**	= 316 S.S. / TFE / 316 S.S. (must use FNPT piping connection)

See page 6 for additional liquid end materials.

CONNECTION SIZES:	N/C	**1**	= Tubing .25"" I.D. x .38"" O.D. / .25"" Ball, 0 - 1.88 GPH
	N/C	**3**	= Tubing .38"" I.D. x .50"" O.D. / .38"" Ball, 1.63 - 10 GPH
	N/C	**4**	= Piping .25"" FNPT / .38"" Ball, 1.63 - 10 GPH
	N/C	**B**	= Tubing .50"" I.D. x .75"" O.D. / .50"" Ball, 20.83 GPH only
		METRIC:	
	N/C	**M**	= G 1/2 A Threads, .38" Ball, 6.15 - 37.85 LPH
	N/C	**R**	= G 1/2 A Threads, .25" Ball, 0 - 7.10 LPH
	N/C	**Y**	= 6 x 12mm, .25" Ball, 0 - 7.10 LPH

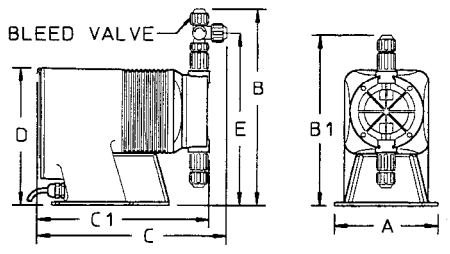
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer

SUFFIX CODES:	N/C	**XXX**	= No Additional Options
	$ 107	**130**	= PVDF Tubing
	$ 67	**500**	= Five Function Valve
	$ 155	**520**	= Five Function Degas Valve
	$ 183	**ITS**	= 15 gal. ITS Tank System (ITS Tank not available on LM, LP, LT, and LE: H4, H5, H6, H7, H8, J7, K7 models)
	N/C	**CZXXX**	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LTA3SA-PTC1-XXX'

Dimensions



Series ET Dimensions (inches)								
Model No.	A	B	B1	C	C1	D	E	Shipping Weight
LTA2	5.4	10.3	-	10.8	-	7.5	8.9	13
LTA3	5.4	10.6	-	10.7	-	7.5	9.2	13
LTB2	5.4	10.3	-	10.8	-	7.5	8.9	13
LTB3	5.4	10.6	-	10.7	-	7.5	9.2	13
LTB4	5.4	10.6	-	10.7	-	7.5	9.2	13
LTD4	5.4	10.6	-	11.2	-	7.5	9.2	15
LTE4	5.4	10.6	-	11.2	-	7.5	9.2	15
LTF4	5.4	10.6	-	11.7	-	7.5	9.2	18
LTG4	5.4	10.6	-	11.7	-	7.5	9.2	18
LTH4	6.1	10.9	-	11.2	-	8.2	9.5	21
LTH5	6.1	11.3	-	11.2	-	8.2	9.9	21
LTH6	6.1	11.3	-	11.2	-	8.2	9.9	21
LTH7	6.1	11.7	-	11.2	-	8.2	10.3	21
LTH8 *	6.1	-	10.9	-	10.6	8.2	-	25

NOTE: Inches X 2.54 = cm

* the LPH8 is designed without a bleed valve available

PULSAtron® PLUS Series T7

Feed Control with 7 Day Timer

The Series T7 was designed to feed chemical products on a timed schedule. Typical applications include the feed of bio-cides in open-air cooling towers. The feed cycle is initiated and controlled by the programmable timer. The Series T7 provides everything you need in one unique, compact pack-age to create a simple and cost effective metering system for timed applications.

Principal of Operation

The Series T7 is controlled by a 7-day programmable timer. The timer is programmable in 1-minute increments with up to 8 on/off cycles per day. Each timed event can be set to run any day of the week on a 7-day cycle.

Other control features include a standby mode, continuous 'ON' mode and the ability to adjust the stroke length from 0 – 100%.

Features

- Isolated from Earth Ground
- 120VAC or 250VAC @ 50/60 HZ, 5A max
- Mode Select Knob, Stroke Length, Stroke Rate
- 12, 22, 30 & 44 GPD @ 100 psi – 7 bar
- Stroke length adjust 0-100% in 1% increments.Turn down ratio 10:1

7-Day Timer

Solid-state 7-day electronic timer for easy adjustment of metering schedules and feed rates. Manual control allows for easy priming and start-up. The timer is programmable in 1 minute increments, with up to 8 events per day.

Pressure and Flow Rate Capacity

MODEL		LC13BA	LC14BA	LC64BA	LC44BA
Capacity	GPH	0.50	1.00	1.25	2.00
nominal	GPD	12	24	30	48
(max.)	LPH	1.9	3.8	4.7	7.6
Pressure	PSIG	100	100	100	50
(max.)	BAR	7	7	7	3.3

PULSAtron Series T7 Selection Guide

LC_ _ | B | _ - _ _ _ | _ - _ _ _

MODELS:	$ 477	**13**	= 0.50 gph / 12 gpd (1.9 lph) max pres.: 100 PSI (7 BAR)
	$ 477	**14**	= 1.00 gph / 24 gpd (3.8 lph) max pres.: 100 PSI (7 BAR)
	$ 477	**64**	= 1.25 gph / 30 gpd (4.7 lph) max pres.: 100 PSI (7 BAR)
	$ 623	**44**	= 2.00 gph / 48 gpd (7.6 lph) max pres.: 50 PSI (3.3 BAR)
CONTROLS:	N/C	**B**	= No Options Available
ELECTRICAL:	N/C	**A**	= 115 Volt / 50-60Hz
	N/C	**1**	= 115 Volt / 50-60Hz (without agency approvals)
	$ 20	**B**	= 230 Volt / 50-60Hz / 1ph with 6' (1.8m) 3-wire US Plug
	$ 20	**2**	= 230 Volt / 50-60Hz (without agency approvals)
LIQUID END MATERIALS: Pump Head & Fittings/Seats & O-rings/Balls	N/C	**PHC**	= GFPPL / Hypalon / Ceramic
	$ 12	**PTC**	= GFPPL / TFE / Ceramic
	$ 63	**KTC**	= PVDF / TFE / Ceramic
	N/C	**VHC**	= PVC / Hypalon / Ceramic
	$ 12	**VTC**	= PVC / TFE / Ceramic

See page 6 for additional liquid end materials.

CONNECTION SIZES:	N/C	**1**	= Tubing .25"" I.D. x .38"" O.D. / .25"" Ball, 0 - 1.88 GPH
	$ 99	**9**	= Degas Head: (S) 5/16"", (D) 3/8"", 0-1.83 GPH
	N/C	**J**	= Tubing, Suc: .19""I.D. x .31""O.D.; Dis: .25""I.D. x .38""O.D.; .19 Ball; 0 - 1.04 GPH
		METRIC:	
	N/C	**Y**	= 6 x 12mm, .25"" Ball, 0 - 7.10 LPH
	N/C	**T**	= 6 x 10mm, Degassing (Note: has 10mm suction), 0 - 7.10 LP

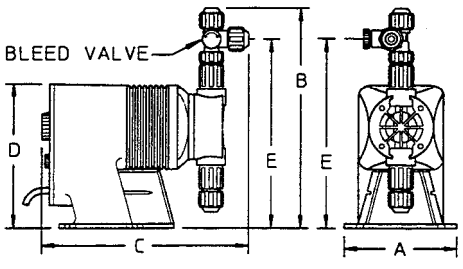
Please Refer to page 7 for additional connection sizes. All pumps with tubing connections come with the following items (except for LMH8, LPH8, LEH8, HV series pumps and pumps >150PSI in PVC): 4' Suction, 4' Return, 8' dischage tubing, footvalve/strainer

SUFFIX CODES:	N/C	**XXX**	= No Additional Options
	$ 107	**130**	= PVDF Tubing
	$ 67	**500**	= Five Function Valve
	$ 155	**520**	= Five Function Degas Valve
	$ 183	**ITS**	= 15 gal. ITS Tank System
	N/C	**CZXXX**	= CE Approval (5 digits used for this suffix code)

See pages 9, 10 & 11 for additional information and specs.

A completed model number should look like 'LC13BA-PTC1-XXX'

Dimensions



Series T7 Dimensions (inches						
Model No.	A	B	C	D	E	Shipping Weight
LC13BA	5.0	9.6	9.5	6.5	8.2	10
LC14BA	5.0	9.9	9.5	6.5	8.5	10
LC64BA	5.0	9.9	9.5	6.5	8.5	10
LC44BA	5.4	10.6	11.3	7.4	9.2	11.8

NOTE: Inches X 2.54 = cm

PULSAtron® KOPkits

Selecting a KOPkit:

All KOPkit model strings begin with the letter K. The remainder of the string can be determined by knowing your pump model.

When you select your KOPkit, you will need to build the model number based on the pump model string that you purchased. The two pieces of information you need are the head size and the wet-end code, which is part of the model string of the pump.

The pump head size is the fourth digit in the pump model number.

LB0**2**SA-PTC1-XXX

The 2 represents your pump head size.

Digits 7-20 in the pump model string represent the wet-end code. It is the group of four digits set apart by the dash lines.

LB02SA-**PTC1**-XXX

These four digits represent your wet-end code.

In the following selection guide, you will break down your wet-end code into the four parts to get your total price for the KOPkit. The four digits in the wet-end code represent the Head Material, Seats & O-Rings, Ball Material and Connection Type. Using the above example, the code breaks down as follows:

P - Head Material, including fittings. In this example, the P represents GFPPL.
T - Seat & O-Ring Material. In this example, the T represents Teflon.
C - Types of Balls used in the valves. In this example, the C represents Ceramic.
1 - Connection type. In this example, the 1 represents tubing connections for 3/8” OD tubing.

The completed KOPkit number for the above example is:

K2PTC1

Note: If you do not find your connection size in the following selection guide, please consult the factory for accurate pricing. Our philosophy with the PULSAtron product line is to make it as flexible as our customers need it to be.

PULSAtron KOPkit Selection Guide

K_ _ _ _ _

HEAD SIZE The digits 2-8 following the K represents the pump head size. This is represented by the fourth digit in the pump model string.	$ 69.90	**2** =
	$ 71.10	**3** =
	$ 83.30	**4** =
	$100.00	**5** =
	$104.00	**6** =
	$113.40	**7** =
	$424.00	**8** =

HEAD MATERIALS	$316.30	**A** = 316 Stainless Steel
	$ 79.40	**K** = PVDF (Kynar)
	N/C	**P** = GFPPL (Polypropylene)
	N/C	**V** = PVC (Poly Vinyl Chloride) (models <= 150 psi excluding H7, H8, K7)
	$ 10.90	**W** = PVC (models > 150 psi and H7, H8, K7)

SEATS/O-RINGS	N/C	**H** = Hypalon
	$ 8.10	**V** = Viton
	$ 11.10	**T** = TFE

BALLS	N/C	**T** = TFE
	N/C	**C** = Ceramic
	$ 12.20	**S** = 316 Stainless Steel
	$ 61.10	**H** = Alloy C (Hastelloy)

CONNECTION TYPE		**Type**	**Suction**	**Discharge**	**Spring**	
	N/C	**1** = Tubing	.25" x .38"	.25" x .38"		
	N/C	**2** = Piping	.25" FNPT	.25" FNPT		
	N/C	**3** = Tubing	.38" x .50"	.38" x .50"		
	N/C	**4** = Piping	.25" FNPT	.25" FNPT		
	$ 93.10	**5** = Tubing	.50" x .75"	.38" x .50"	Yes	
	$ 93.10	**6** = Piping	.25" FNPT	.25" FNPT	Yes	
	$164.20	**7** = Tubing	.50" x .75"	.50" FNPT	Yes	
	$164.20	**8** = Piping	.50" FNPT	.50" FNPT	Yes	
	$ 98.90	**9** = Tubing	.19" x .31"	.25" x .38"	Yes	Degas
	N/C	**A** = Tubing	.38" x .50"	.38" x .50"		
	N/C	**B** = Tubing	.50" x .75"	.50" x .75"		
	$172.10	**C** = Piping	.50" FNPT	.50" FNPT		
	$ 98.90	**D** = Tubing	.25" x .38"	.25" x .38"	Yes	
	$ 98.90	**E** = Tubing	.38" x .50"	.38" x .50"	Yes	
	$ 98.90	**F** = Tubing	.38" x .50"	.38" x .50"	Yes	
	$ 98.90	**G** = Piping	.25" FNPT	.25" FNPT	Yes	
	$164.20	**I** = Piping	.50" MNPT	.50" MNPT	Yes	
	N/C	**J** = Tubing	.19" x .31"	.25" x .38"		
	$164.20	**K** = Tubing	.50" x .75"	.50" x .75"	Yes	
	$ 93.10	**L** = Piping	.50" MNPT	.50" MNPT		
	N/C	**M** = Piping	G 1/2 A	G 1/2 A		
	N/C	**N** = Tubing	4 x 10 mm	4 x 10 mm		
	N/C	**P** = Tubing	4 x 6 mm	4 x 6 mm		
	N/C	**Q** = Tubing	10 x 14 mm	10 x 14 mm		
	N/C	**R** = Piping	G 1/2 A	G 1/2 A		
	N/C	**S** = Tubing	6 x 10 mm	6 x 10 mm		
	$ 98.90	**T** = Tubing	6 x 10 mm	6 x 10 mm		Degas
	N/C	**U** = Tubing	6 x 10 mm	6 x 10 mm		
	N/C	**V** = Tubing	12 x 19 mm	12 x 19 mm		
	N/C	**W** = Tubing	10 x 16 mm	10 x 16 mm		
	N/C	**Y** = Tubing	6 x 12 mm	6 x 12 mm		
	93.1	**X** = Piping	.50" MNPT	.50" MNPT		

PULSAtron® Suction/Discharge Valves

Suction/Discharge Valve Selection Guide

L3 _ _ _ _ _ _ - _ _ _

VALVE TYPE:	$ 23.00	**101**	= Suction Valve
	$ 23.00	**201**	= Discharge Valve
SEATS:	N/C	**H**	= Hypalon
	$ 5.50	**V**	= Viton
	$ 12.10	**T**	= TFE
BALLS:	N/C	**T**	= TFE
	N/C	**C**	= Ceramic
	$ 12.20	**S**	= 316 Stainless Steel
	$ 61.10	**H**	= Alloy C (Hastelloy)
CONNECTION TYPE:	N/C	**1**	= Double Balls when TFE seats selected
	N/C	**2**	= Double Balls when TFE seats selected
	N/C	**3**	= Double Balls when TFE seats selected
	N/C	**4**	= Double Balls when TFE seats selected
	$ 67.70	**5**	= Available for Discharge Only (L3201)
	$ 67.70	**6**	=
	$132.10	**7**	= Available for Suction Only (L3101)
	$132.10	**8**	=
	N/C	**A**	=
	$118.90	**B**	=
	$118.90	**C**	=
	$ 54.10	**D**	= Spring Loaded with SS Balls
	$ 54.10	**E**	= Spring Loaded with SS Balls
	$ 54.10	**F**	= Spring Loaded with SS Balls
	$ 54.10	**G**	= Spring Loaded with SS Balls
	$132.10	**I**	=
	N/C	**J**	=
	$132.10	**K**	=
	$ 67.70	**L**	=
	N/C	**M**	=
	N/C	**N**	=
	N/C	**P**	=
	N/C	**Q**	=
	N/C	**R**	=
	N/C	**S**	=
	N/C	**U**	=
	N/C	**V**	=
	N/C	**W**	=
	N/C	**Y**	=
	$ 67.70	**X**	=
MATERIALS OF CONSTRUCTION:	N/C	**FPP**	= Glass Filled Polypropylene
	N/C	**PVC**	= Poly Vinyl Chloride
	$ 20.30	**PVD**	= Kynar
	$167.40	**316**	= 316 Stainless Steel

LIQUID END COMPONENTS

Item No.	Part No.	Description		List Price
1	L0200200-316	HEAD, PUMP	.750	$ 249.60
1	L0200200-FPP	HEAD, PUMP	.750	$ 32.60
1	L0200900-FPP	HEAD, PUMP HSA #2 HEAD J	.750	$ 32.60
1	L0200900-PVC	HEAD, PUMP HSA #2 HEAD J	.750	$ 40.60
1	L0200200-PVD	HEAD, PUMP HSA #2 HEAD J	.750	$ 52.40
1	L0200300-316	HEAD, PUMP	1.000	$ 262.80
1	L0200300-FPP	HEAD, PUMP	1.000	$ 32.60
1	L0202500-HPV	HEAD, PUMP	1.000	$ 101.20
1	L0200300-PVD	HEAD, PUMP	1.000	$ 52.40
1	L0200300-PVC	HEAD, PUMP	1.000	$ 40.60
1	L0201000-FPP	HEAD, PUMP HSA #3 HEAD J	1.000	$ 32.60
1	L0201000-PVC	HEAD, PUMP HSA #3 HEAD J	1.000	$ 40.60
1	L0201000-PVD	HEAD, PUMP HSA #3 HEAD J	1.000	$ 52.40
1	L0200400-316	HEAD, PUMP	1.250	$ 269.70
1	L0200400-FPP	HEAD, PUMP	1.250	$ 33.80
1	L0200400-PVC	HEAD, PUMP	1.250	$ 43.30
1	L0200400-PVD	HEAD, PUMP	1.250	$ 52.40
1	L0200500-SST	HEAD, PUMP	1.625	$ 300.80
1	L0200500-FPP	HEAD, PUMP	1.625	$ 35.00
1	L0200500-PVC	HEAD, PUMP	1.625	$ 52.40
1	L0200500-PVD	HEAD, PUMP	1.625	$ 70.10
1	L0200600-SST	HEAD, PUMP	2.000	$ 311.60
1	L0200600-FPP	HEAD, PUMP	2.000	$ 48.70
1	L0200600-PVC	HEAD, PUMP	2.000	$ 58.20
1	L0200600-PVD	HEAD, PUMP	2.000	$ 70.10
1	L0200700-316	HEAD, PUMP	2.500	$ 538.20
1	L0200700-FPP	HEAD, PUMP	2.500	$ 54.10
1	L0200700-HPV	HEAD, PUMP	2.500	$ 125.50
1	L0200700-PVD	HEAD, PUMP	2.500	$ 76.90
1	L0200800-PPL	HEAD, PUMP	3.625	$ 257.60
1	L0200800-HPV	HEAD, PUMP	3.625	$ 257.60
2	L0300900-THY	DIAPHRAGM	.750	$ 32.60
2	L0301000-THY	DIAPHRAGM	1.000	$ 33.80
2	L0301100-THY	DIAPHRAGM	1.250	$ 35.00
2	L0301200-THY	DIAPHRAGM	1.625	$ 51.40
2	L0301300-THY	DIAPHRAGM	2.000	$ 52.40
2	L0301400-THY	DIAPHRAGM	2.500	$ 62.00
2	L0301600-THY	DIAPHRAGM	3.625	$ 141.60
18	L1501300-HYP	SUC/DIS VLV O-RING, HYP		$ 6.90
18	L1501300-TFE	SUC/DIS VLV O-RING, TFE		$ 5.50
18	L1501300-VTN	SUC/DIS VLV O-RING, VTN		$ 4.10
24	L1103400-PVC	COUPLING NUT 5/16" OD		$ 6.90
24	L1100300-FPP	COUPLING NUT 3/8" OD		$ 5.50
24	L1100300-PVC	COUPLING NUT 3/8" OD		$ 5.50
24	L1100300-PVD	COUPLING NUT 3/8" OD		$ 16.20
24	L1100400-FPP	COUPLING NUT 1/2" OD		$ 5.50
24	L1100400-PVC	COUPLING NUT 1/2" OD		$ 5.50
24	L1100400-PVD	COUPLING NUT 1/2" OD		$ 16.20
25	L9906700-000	WEIGHT, CERAMIC TUBE		$ 5.50
36	L1501200-TFE	BLEED VLV O-RING, TFE		$ 5.50
60	L1500700-NTR	SECONDARY SEAL, O-RING 2-109		$ 1.30

DRIVE END COMPONENTS

Item No.	Part No.	Description		List Price
3	L2100200-FPP	DEFLECTION PLATE	.750	$ 4.10
3	L2100300-FPP	DEFLECTION PLATE	1.000	$ 5.50
3	L2100400-FPP	DEFLECTION PLATE	1.250	$ 5.50
3	L2100500-FPP	DEFLECTION PLATE	1.625	$ 5.50
3	L2100600-FPP	DEFLECTION PLATE	2.000	$ 5.50
3	L2100700-FPP	DEFLECTION PLATE	2.500	$ 6.90
4	L0400200-FPP	ADAPTER, .750	HSG #2	$ 14.90
4	L0400300-FPP	ADAPTER, 1.000	HSG #2	$ 16.20
4	L0400400-FPP	ADAPTER, 1.250	HSG #2	$ 16.20
4	L0400500-FPP	ADAPTER, 1.625	HSG #2	$ 16.20
4	L0400600-FPP	ADAPTER, 1.250	HSG #3	$ 20.30
4	L0400700-FPP	ADAPTER, 1.625	HSG #3	$ 20.30
4	L0400800-FPP	ADAPTER, 2.000	HSG #3	$ 20.30
4	L0400900-FPP	ADAPTER, 2.500	HSG #3	$ 20.30
4	L0401100-FPP	ADAPTER, .750	HSG #1	$ 14.90
4	L0401200-FPP	ADAPTER, 1.000	HSG #1	$ 14.90
4	L0401300-FPP	ADAPTER, 1.250	HSG #1	$ 14.90
4	L0401400-PPL	ADAPTER, 3.625	HSG #3	$ 163.30
5	L9901200-BRS	SHIM, DIAPHRAGM		$ 2.70
6	L1500400-NTR	EPM/ADAPTER O-RING		$ 5.50
6	L1500600-NTR	EPM/ADAPTER O-RING (ALL H PUMPS)		$ 5.50
7	L9801700-188	#10-32 X 2.62 PAN HEAD, PHILLIPS	LP 2-4	$ 4.10
7	L9801800-188	.25-20 X 2.62 PAN HEAD, PHILLIPS	LP 5-7	$ 4.10
7	L9803400-188	.25-20 X 2.00 PAN HEAD	LP 8	$ 4.10
7	L9803300-188	#10-32 X 2.00 PAN HEAD	316SS	$ 4.10
8	L9801300-188	#10 REG FLAT WASHER	LP 2-4	$ 1.30
8	L9801400-188	.25 REG FLAT WASHER	LP 5-8	$ 1.30
50	L0100100-115	EPM A, B, K2, 3	115V	$ 215.80
50	L0100100-230	EPM A, B, K2, 3	230V	$ 215.80

DRIVE END COMPONENTS

Item No.	Part No.	Description		List Price
50	L0100200-115	EPM D, E, LE33, 34, 44	115V	$ 319.80
50	L0100200-230	EPM D, E, LE33, 34, 44	230V	$ 319.80
50	L0100300-115	EPM F, G, K5	115V	$ 403.40
50	L0100300-230	EPM F, G, K5	230V	$ 403.40
50	L0100400-115	EPM H7, K7	115V	$ 470.80
50	L0100400-230	EPM H7, K7	230V	$ 470.80
50	L0100500-115	EPM LC, LD54 and LB64	115V	$ 153.80
50	L0100500-230	EPM LC, LD54 and LB64	230V	$ 160.60
50	L0100600-115	EPM LE 2, 3, 12, 13, 14	115V	$ 201.10
50	L0100600-230	EPM LE 2, 3, 12, 13, 14	230V	$ 207.90
50	L0100200-012	EPM LS44	12VDC	$ 201.10
50	L0100600-012	EPM LS 2, 13, 14	12VDC	$ 201.10
51	L0500100-080	HOUSING #3	.080 STRK	$ 80.90
51	L0501100-040	HOUSING #2	.040 STRK	$ 64.60
51	L0501100-080	HOUSING #2	.080 STRK	$ 64.60
51	L0500300-040	HOUSING #1	.040 STRK	$ 49.90
51	L0500300-080	HOUSING #1	.080 STRK	$ 49.90
52	L0700101-125	CNTRL BD, A-B-D-E SIZE SLD	115V	$ 109.30
52	L0700102-125	CNTRL BD, A-B-D-E SIZE SLD	230V	$ 150.10
52	L0700201-125	CNTRL BD, EXT/STOP; A, B, D, E	115V	$ 160.60
52	L0700202-125	CNTRL BD, EXT/STOP; A, B, D, E	230V	$ 180.90
52	L0700401-125	CNTRL BD, 4-20MA/STOP; A, B, D, E	115V	$ 196.90
52	L0700402-125	CNTRL BD, 4-20MA/STOP; A, B, D, E	230V	$ 225.40
52	L0700501-150	CNTRL BD, F-G SIZE SLD	115V	$ 153.80
52	L0700502-150	CNTRL BD, F-G SIZE SLD	230V	$ 168.50
52	L0700501-200	CNTRL BD, H-K SIZE SLD	115V	$ 183.60
52	L0700502-200	CNTRL BD, H-K SIZE SLD	230V	$ 196.50
52	L0709401-220	CNTRL BD, LEH8	115V	$ 183.60
52	L0709402-220	CNTRL BD, LEH8	230V	$ 196.80
52	L0709101-220	CNTRL BD, LVH7, LP/LVH8	115V	$ 183.60
52	L0709102-220	CNTRL BD, LVH7, LP/LVH8	230V	$ 196.80
52	L0700801-150	CNTRL BD, EXT/STOP; F, G	115V	$ 183.40
52	L0700802-150	CNTRL BD, EXT/STOP; F, G	230V	$ 199.70
52	L0700801-200	CNTRL BD EXT/STOP H SIZE SLD	115V	$ 246.70
52	L0700802-200	CNTRL BD EXT/STOP H SIZE SLD	230V	$ 263.30
52	L0709301-220	CNTRL BD EXT/STOP LVH7, LP/LV	115V	$ 246.70
52	L0709302-220	CNTRL BD EXT/STOP LVH7, LP/LV	230V	$ 259.70
52	L0700901-150	CNTRL BD, 4-20 MA/STOP; F, G	115V	$ 206.50
52	L0700902-150	CNTRL BD, 4-20 MA/STOP; F, G	230V	$ 228.10
52	L0700901-200	CNTRL BD, 4-20 MA/STOP; H	115V	$ 263.30
52	L0700902-200	CNTRL BD, 4-20MA/STOP; H	230V	$ 272.20
52	L0709201-220	CNTRL BD, 4-20MA/STP, LVH7, LP/LVH8	115V	$ 263.30
52	L0709202-220	CNTRL BD, 4-20MA/STP, LVH7, LP/LVH8	230V	$ 272.20
52	L0701900-150	CNTRL BD, E - DC		$ 151.00
52	L9906500-000	CNTRL BD, 0, 5 SIZE SING FUNC	115V	$ 87.60
52	L9906600-000	CNTRL BD, 0, 5 SIZE SING FUNC	230V	$ 94.50
52	L9906201-000	CNTRL BD, C+, A+	115V	$ 94.50
52	L9906202-000	CNTRL BD, C+, A+	230V	$ 102.50
52	L0702701-125	CNTRL BD, LM A, B, C, D, E/K2, 3 SIGNAL RELAY	115V	$ 456.20
52	L0702702-125	CNTRL BD, LM A, B, C, D, E/K2, 3 SIGNAL RELAY	230V	$ 456.20
52	L0702901-125	CNTRL BD, LM A, B, C, D, E/K2, 3 POWER RELAY	115V	$ 483.00
52	L0702902-125	CNTRL BD, LM A, B, C, D, E/K2, 3 POWER RELAY	230V	$ 483.00
52	L0703801-150	CNTRL BD, LM F, G, K5 SIGNAL RELAY	115V	$ 461.20
52	L0703802-150	CNTRL BD, LM F, G, K5 SIGNAL RELAY	230V	$ 461.20
52	L0703701-150	CNTRL BD, LM F, G, K5 POWER RELAY	115V	$ 488.20
52	L0703702-150	CNTRL BD, LM F, G, K5 POWER RELAY	230V	$ 488.20
52	L0702801-190	CNTRL BD, LM H, K7 Signal Relay	115V	$ 507.30
52	L0702802-190	CNTRL BD, LM H, K7 Signal Relay	230V	$ 507.30
52	L0703001-190	CNTRL BD, LM H, K7 POWER RELAY	115V	$ 534.30
52	L0703002-190	CNTRL BD, LM H, K7 POWER RELAY	230V	$ 534.30
52	L0705006-120	CNTRL BD, EXT, C+, A+	230V	$ 159.30
52	L0705106-120	CNTRL BD, EXT, SERIES C	230V	$ 171.50
52	L0705110-120	CNTRL BD, EXT, C (LC54)	230V	$ 171.50
53	L0601200-000	CNTRL PNL, SERIES MP SIGNAL, H & K7		$ 37.70
53	L0601300-000	CNTRL PNL, SERIES MP SIGNAL		$ 31.30
53	L0601400-000	CNTRL PNL, SERIES MP POWER		$ 33.20
53	L0601500-000	CNTRL PNL, SERIES MP POWER, H & K7		$ 37.70
53	L0601600-000	CNTRL PNL (ALL H & K7 PUMPS)		$ 37.70
54	L1600400-000	DUST COVER, CONT PNL	HSG #3	$ 18.80
54	L1600500-000	DUST COVER, CONT PNL	HSG #2	$ 16.20
55	L2000100-040	SHAFT, ADJ FEMALE .040	HSG #2,3	$ 6.90
55	L2000100-080	SHAFT, ADJ FEMALE .080	HSG #2,3	$ 6.90
55	L2000200-040	SHAFT, ADJ FEMALE .040	HSG #1	$ 5.50

DRIVE END COMPONENTS

Item No.	Part No.	Description		List Price
55	L2000200-080	SHAFT, ADJ FEMALE .080	SG #1	$ 5.50
56	L2000300-PBT	SHAFT, ADJ MALE	G #2,3	$ 5.50
56	L2000400-PBT	SHAFT, ADJ MALE	SG #1	$ 5.50
59	L1500100-EPB	O-RING, HSG #1/CONT PNL		$ 5.50
59	L1500300-NTR	O-RING, HSG #2/CONT PNL		$ 5.50
59	L1500500-NTR	O-RING, HSG #3/CONT PNL		$ 5.50
61	L9900600-000	CONNECTOR, LIQUID TIGHT		$ 12.10
61	L9900700-000	CONNECTOR, STRAIN RELIEF		$ 2.70
62	L9700300-000	CORD, POWER, SERIES C, E	125V	$ 21.50
62	L9700400-000	CORD, POWER, SERIES C, E	230V	$ 23.00
62	L9701200-000	CORD,POWER, SERIES E PLUS	125V	$ 21.50
62	L9701300-000	CORD,POWER, SERIES E PLUS	230V	$ 23.00
63	L9700700-250	CIRCUIT BREAKER, SERIES MP		$ 25.70
63	L9707300-000	FUSE 2 AMP, SERIES E, E PLUS		$ 5.50
63	L9706900-000	BOARD MNTD FUSE, SERIES A+, C+, C, E		$ 10.90
64	L9800200-188	CNTRL PNL SCREW		$ 1.40
65	L1500800-NTR	GROMMET, STROKE LENGTH		$ 4.10
66	L1900800-000	KNOB, STROKE RATE/SWITCH		$ 6.90
70	L9700500-000	LOCKING TAB		$ 6.90
71	L1900100-FPP	KNOB, STROKE LENGTH		$ 6.90
71	L1900300-FPP	KNOB, STROKE LENGTH		$ 6.90
72	L9800200-188	KNOB MOUNTING SCREW		$ 1.40
76	L1500900-NTR	GROMMET STROKE LENGTH		$ 1.30
81	L5000801-115	CNTRL PANEL ASSY, A-B-D-E SIZE SLDS, 115V		$ 148.60
81	L5000801-230	CNTRL PANEL ASSY, A-B-D-E SIZE SLDS, 230V		$ 194.20
81	L5000901-115	CNTRL PANEL ASSY, EXT/STOP, A-B-D-E SIZE SLDS, 115V		$ 203.80
81	L5000901-230	CNTRL PANEL ASSY, EXT/STOP, A-B-D-E SIZE SLDS, 230V		$ 222.70
81	L5001001-115	CNTRL PANEL ASSY, 4-20MA/STOP, A-B-D-E- SIZE SLDS, 115V		$ 243.00
81	L5001001-230	CNTRL PANEL ASSY, 4-20MA/STOP, A-B-D-E SIZE SLDS, 230V		$ 257.60
81	L5000301-230	CNTRL PANEL ASSY, F-G SIZE SLDS, 230V		$ 206.50
81	L5001301-115	CNTRL PANEL ASSY, H SIZE SLD	115V	$ 276.60
81	L5001301-230	CNTRL PANEL ASSY, H SIZE SLD	230V	$ 287.40
81	L5028500-115	CNTRL PANEL ASSY, LEH8	115V	$ 158.70
81	L5028500-230	CNTRL PANEL ASSY, LEH8	230V	$ 204.50
81	L5028201-115	CNTRL PANEL ASSY, LVH7, LP/LVH8	115V	$ 279.60
81	L5028200-230	CNTRL PANEL ASSY, LVH7, LP/LVH8	230V	$ 293.80
81	L5001401-115	CNTRL PANEL ASSY, EXT/STOP, H SIZE SLD, 115V		$ 321.20
81	L5001401-230	CNTRL PANEL ASSY, EXT/STOP, H SIZE SLD, 230V		$ 330.30
81	L5028301-115	CNTRL PANEL ASSY, EXT/STOP, LVH7, LP/LVH8	115V	$ 321.20
81	L5028300-230	CNTRL PANEL ASSY, EXT/STOP, LVH7, LP/LVH8	230V	$ 344.60
81	L5001501-115	CNTRL PANEL ASSY, 4-20MA/STOP, H SIZE SLD, 115V		$ 346.70
81	L5001501-230	CNTRL PANEL ASSY, 4-20MA/STOP, H SIZE SLD, 230V		$ 352.10
81	L5028401-115	CNTRL PANEL ASSY, 4-20MA/STOP, LVH7, LP/LVH8 115V		$ 346.70
81	L5028401-230	CNTRL PANEL ASSY, 4-20MA/STOP, LVH7, LP/LVH8 230V		$ 352.10
81	L5000100-012	CNTRL PANEL ASSY, E-DC SIZE 01, 13, 14		$ 179.50
81	L5000200-012	CNTRL PANEL ASSY, E-DC SIZE 44		$ 179.50
81	L5000100-115	CNTRL PANEL ASSY, SERIES E 0-1/SIZE SLD	115V	$ 109.40
81	L5000100-230	CNTRL PANEL ASSY, SERIES E 0-1/SIZE SLD	230V	$ 132.10
81	L5000200-115	CNTRL PANEL ASSY, 3-4 SIZE SLDS	115V	$ 112.20
81	L5000200-230	CNTRL PANEL ASSY, 3-4 ZISE SLDS	230V	$ 135.00
81	L5002900-115	CNTRL PANEL ASSY SIN-FUNC 0-SIZE SLD, 115V SERIES C		$ 102.50
81	L5002900-230	CNTRL PANEL ASSY SIN-FUNC 0-SIZE SLD, 230V SERIES C		$ 110.80
81	L5003000-115	CNTRL PANEL ASSY SIN-FUNC 5-SIZE SLD, 115V SERIES C		$ 102.50
81	L5003000-230	CNTRL PANEL ASSY SIN-FUNC 5-SIZE SLD, 230V SERIES C		$ 110.80
81	L5011000-115	CNTRL PANEL ASSY EXT PACE SIZE 54, SERIES C	115V	$ 165.50
81	L5013000-115	CNTRL PANEL ASSY EXT PACE SIZE 54, SERIES C	115V	$ 171.70
81	L5003014-115	CNTRL PANEL ASSY, EXT/STOP K5	115V	$ 350.80
81	L5003015-115	CNTRL PANEL ASSY, 4-20MA/STOP K2	115V	$ 243.00

DRIVE END COMPONENTS

Item No.	Part No.	Description		List Price
81	L5003016-115	CNTRL PANEL ASSY, 4-20MA/STOP LPK5	115V	$ 306.20
81	L5003701-115	CNTRL PANEL ASSY, STD K SIZE SLD	115V	$ 299.40
81	L5003701-230	CNTRL PANEL ASSY, STD K SIZE SLD	230V	$ 306.20
81	L5003801-115	CNTRL PANEL ASSY, EXT/STOP K SIZE SLD	115V	$ 391.20
81	L5003801-230	CNTRL PANEL ASSY, EXT/STOP K SIZE SLD	230V	$ 391.20
81	L5003903-115	CNTRL PANEL ASSY, 4-20MA/STOP K7	115V	$ 306.20
81	L5003903-230	CNTRL PANEL ASSY, 4-20MA/STOP K7	230V	$ 330.30
81	L5004100-115	CNTRL PANEL ASSY, SIN-FUNC SIZE 54, 115V SERIES C PLUS		$ 105.30
81	L5004100-230	CNTRL PANEL ASSY, SIN-FUNC SIZE 54, 230V SERIES C PLUS		$ 110.80
81	L5010800-230	CNTRL PANEL ASSY EXT PACE SIZE 02, 03, 04, C3, C4 SERIES A+/C+	230V	$ 195.80
81	L5010900-230	CNTRL PANEL ASSY EXT PACE SIZE 54, 64 SERIES A+/C+	230V	$ 205.50
81	L5005200-115	CNTRL PANEL ASSY, SIZE 02, 03, 04, C3, C4 SERIES A+/C+	115V	$ 109.40
81	L5005300-230	CNTRL PANEL ASSY, SIZE 02, 03, 04, C3, C4 SERIES A+/C+	230V	$ 132.10
81	L5004800-115	CNTRL PANEL ASSY, SIZE 54, 64 SERIES A+/C+	115V	$ 109.40
81	L5004900-230	CNTRL PANEL ASSY, SIZE 54, 64 SERIES A+/C+	230V	$ 132.10
81	L5007501-115	CNTRL PNL ASSY LMK2 SIGNAL RELAY	115V	$ 510.00
81	L5007301-115	CNTRL PNL ASSY LM A,B,C,D,E,K3 SIGNAL RELAY	115V	$ 510.00
81	L5007501-230	CNTRL PNL ASSY LMK2 SIGNAL RELAY	230V	$ 510.00
81	L5007301-230	CNTRL PNL ASSY LM A,B,C,D,E,K3 SIGNAL RELAY	230V	$ 510.00
81	L5007601-115	CNTRL PNL ASSY LMK2 POWER RELAY	115V	$ 537.00
81	L5007401-115	CNTRL PNL ASSY LM A,B,C,D,E,K3 POWER RELAY	115V	$ 537.00
81	L5007601-230	CNTRL PNL ASSY LMK2 POWER RELAY	230V	$ 537.00
81	L5007401-230	CNTRL PNL ASSY LM A,B,C,D,E,K3 POWER RELAY	230V	$ 526.40
81	L5007701-115	CNTRL PNL ASSY LMK5 SIGNAL RELAY	115V	$ 515.20
81	L5007101-115	CNTRL PNL ASSY LM F, G SIGNAL RELAY	115V	$ 515.20
81	L5007701-230	CNTRL PNL ASSY LMK5 SIGNAL RELAY	230V	$ 515.20
81	L5007101-230	CNTRL PNL ASSY LM F, G SIGNAL RELAY	230V	$ 515.20
81	L5007801-115	CNTRL PNL ASSY LMK5 POWER RELAY	115V	$ 542.40
81	L5007201-115	CNTRL PNL ASSY LM F, G POWER RELAY	115V	$ 542.40
81	L5007801-230	CNTRL PNL ASSY LMK5 POWER RELAY	230V	$ 542.40
81	L5007201-230	CNTRL PNL ASSY LM F, G POWER RELAY	230V	$ 542.40
81	L5007901-115	CNTRL PNL ASSY LMK7 SIGNAL RELAY	115V	$ 561.20
81	L5006901-115	CNTRL PNL ASSY LM H SIGNAL RELAY	115V	$ 561.20
81	L5007901-230	CNTRL PNL ASSY LMK7 SIGNAL RELAY	230V	$ 561.20
81	L5006901-230	CNTRL PNL ASSY LM H SIGNAL RELAY	230V	$ 561.20
81	L5008001-115	CNTRL PNL ASSY LMK7 POWER RELAY	115V	$ 588.10
81	L5007001-115	CNTRL PNL ASSY H POWER RELAY	115V	$ 588.10
81	L5008001-230	CNTRL PNL ASSY LMK7 POWER RELAY	230V	$ 588.10
81	L5007001-230	CNTRL PNL ASSY H POWER RELAY	230V	$ 588.10
88	L9804000-000	GROUND LUG NUT		$ 1.30
89	L9800500-STL	GROUND LUG BOLT		$ 1.30
92	L9700800-000	BREAKER COVER		$ 6.90
	L9700200-000	CORD, SIGNAL, 10 FT		$ 20.30
	L9700201-000	CORD, SIGNAL, 20 FT		$ 25.70
	L9700800-000	PROTECTIVE BOOT, CKT BRKER		$ 6.90

BLEED VALVE ASSEMBLIES

Item No.	Part No.	Description	OD	List Price
11	L3300H01-FPP	FPP/HYP	3/8"	$ 49.90
11	L3300H01-PVC	PVC/HYP	3/8"	$ 49.90
11	L3300H03-FPP	FPP/HYP	1/2"	$ 49.90
11	L3300H03-PVC	PVC/HYP	1/2"	$ 49.90
11	L3300T01-FPP	FPP/TFE	3/8"	$ 49.90
11	L3300T01-PVC	PVC/TFE	3/8"	$ 49.90
11	L3300T01-PVD	PVD/TFE	3/8"	$ 51.40
11	L3300T03-FPP	FPP/TFE	1/2"	$ 49.90
11	L3300T03-PVC	PVC/TFE	1/2"	$ 49.90
11	L3300T03-PVD	PVD/TFE	1/2"	$ 51.40
11	L3300V01-FPP	FPP/VTN	3/8"	$ 49.90
11	L3300V01-PVC	PVC/VTN	3/8"	$ 49.90
11	L3300V01-PVD	PVD/VTN	3/8"	$ 51.40
11	L3300V03-FPP	FPP/VTN	1/2"	$ 49.90
11	L3300V03-PVC	PVC/VTN	1/2"	$ 49.90
11	L3300V03-PVD	PVD/VTN	1/2"	$ 51.40

FOOT VALVE / STRAINER ASSEMBLIES

Item No.	Part No.	Description	ID X OD	List Price
12	J40117	FPP/HYP/C	3/8" X 1/2"	$ 32.60
12	J40203	FPP/HYP/316	3/8" X 1/2"	$ 36.40
12	J40123	FPP/HYP/TFE	3/8" X 1/2"	$ 32.60
12	J60509	FPP/VTN/C	3/8" X 1/2"	$ 38.70
12	J40141	FPP/VTN/316	3/8" X 1/2"	$ 43.30
12	J40125	FPP/VTN/TFE	3/8" X 1/2"	$ 48.70
12	J40212	FPP/FTF/C	3/8" X 1/2"	$ 37.70
12	J40175	FPP/FTF/316	3/8" X 1/2"	$ 51.40
12	J40171	FPP/FTF/TFE	3/8" X 1/2"	$ 37.70
12	J60728	PVD/FTF/C	3/8" X 1/2"	$ 39.20
12	J60729	PVD/HYP/C	3/8" X 1/2"	$ 32.60
12	J60730	PVD/VTN/C	3/8" X 1/2"	$ 38.70
12	J40116	FPP/HYP/C	1/4" X 3/8"	$ 32.60
12	J40156	FPP/HYP/316	1/4" X 3/8"	$ 45.90
12	J40122	FPP/HYP/TFE	1/4" X 3/8"	$ 42.00
12	J60524	FPP/VTN/C	1/4" X 3/8"	$ 38.70
12	J40158	FPP/VTN/316	1/4" X 3/8"	$ 43.30
12	J40124	FPP/VTN/TFE	1/4" X 3/8"	$ 48.70
12	J40211	FPP/FTF/C	1/4" X 3/8"	$ 37.70
12	J40170	FPP/FTF/316	1/4" X 3/8"	$ 51.40
12	J40169	FPP/FTF/TFE	1/4" X 3/8"	$ 37.70
12	J60716	PVD/FTF/C	1/4" X 3/8"	$ 37.70
12	J60717	PVD/HYP/C	1/4" X 3/8"	$ 32.10
12	J60718	PVD/VTN/C	1/4" X 3/8"	$ 38.70
12	J40095	316	.25 NPT	$ 131.60
12	J40195	FPP/HYP/C	.25 NPT	$ 42.00
12	J40187	FPP/VTN/C	.25 NPT	$ 48.70
12	J40179	FPP/FTF/C	.25 NPT	$ 47.10
12	J60503	FPP	.50 NPT	$ 56.70
12	J60561	FPP	1/2 X 3/4"	$ 42.00
12	J60564	FPP/FTF/C	3/16 X 5/16"	$ 47.10
12	J60712	PVD/FTF/C	3/16 X 5/16"	$ 47.10

STAINLESS STEEL VALVE REPAIR KITS

Part No.	Description	List Price
L9904200-316	VALVE REPAIR KIT - ATS2	$ 47.10
L9904600-316	VALVE REPAIR KIT - ATS4	$ 48.70
L9904700-316	VALVE REPAIR KIT - ATS6	$ 60.80
L9904800-316	VALVE REPAIR KIT - ATS8	$ 64.60
L9904900-316	VALVE REPAIR KIT - ATSG	$ 78.50

TUBING

Part No.	Description		List Price
00007	SUCT, 3/8 OD, CLEAR PVC	FT	$ 1.10
00008	DISCH, 1/2 OD, WHITE PE	FT	$ 1.10
00009	DISCH, 1/2 OD, BLACK PE	FT	$ 1.10
00010	DISCH, 3/8 OD, WHITE PE	FT	$ 1.10
00011	DISCH, 3/8 OD, BLACK PE	FT	$ 1.10
J00012	DISCH, 1/2 OD, HI PRES, WHITE	FT	$ 2.60
00013	DISCH, 1/2 OD, HI PRES, BLACK	FT	$ 2.60
J00022	DISCH, 3/8 OD, HI PRES, WHITE	FT	$ 2.60
J00023	SUCT, 1/2 OD, CLEAR PVC	FT	$ 1.10
J00024	DISCH, 3/8 OD, HI PRES, BLACK	FT	$ 2.60
J00032	SUCT/DISCH, 3/4 OD, CLEAR PVC	FT	$ 2.60
L9902900-000	PVDF TUBING, 3/8 OD	FT	$ 5.80
L9903000-000	PVDF TUBING, 1/2 OD	FT	$ 9.90
L9904300-PEB	SUCT, 5/16 OD, PE BLACK	FT	$ 1.10
L9904300-PEW	SUCT, 5/16 OD, PE WHITE	FT	$ 1.10
L9904300-PVC	SUCT, 5/16 OD, CLEAR PVC	FT	$ 1.10
L9904300-PVD	SUCT, 5/16 OD, PVDF WHITE	FT	$ 5.80
L9904500-PEW	DISCH, 1/2 X 5/8, PE WHITE	FT	$ 4.00
l9913200-BRD	PVC CLEAR BRAIDED, 3/4 OD	FT	$ 3.50

INJECTION BACK PRESS VALVE ASSEMBLIES

Item No.	Part No.	Description	ID X OD	List Price
13	J41767	FPP/HYP/C	3/8" X 1/2"	$ 63.30
13	J41863	FPP/HYP/316	3/8" X 1/2"	$ 67.70
13	J41773	FPP/HYP/TFE	3/8" X 1/2"	$ 63.30
13	41716	FPP/VTN/C	3/8" X 1/2"	$ 70.10
13	J41882	FPP/VTN/316	3/8" X 1/2"	$ 74.10
13	J41775	FPP/VTN/TFE	3/8" X 1/2"	$ 70.10
13	J41872	FPP/FTF/C	3/8" X 1/2"	$ 68.80
13	J41879	FPP/FTF/316	3/8" X 1/2"	$ 73.00
13	J41875	FPP/FTF/TFE	3/8" X 1/2"	$ 68.80
13	J41694	PVC/HYP/C	3/8" X 1/2"	$ 55.30
13	41698	PVC/HYP/C 6"	3/8" X 1/2"	$ 54.00
13	41702	PP/VTN/C 6"	3/8" X 1/2"	$ 54.00
13	J41865	PVC/HYP/316	3/8" X 1/2"	$ 59.50
13	J41759	PVC/HYP/TFE	3/8" X 1/2"	$ 55.30
13	J41714	PVC/VTN/C	3/8" X 1/2"	$ 55.30
13	J41095	PVC/VTN/316	3/8" X 1/2"	$ 64.60
13	J41761	PVC/VTN/TFE	3/8" X 1/2"	$ 60.80
13	J41873	PVC/FTF/C	3/8" X 1/2"	$ 59.50
13	J41881	PVC/FTF/316	3/8" X 1/2"	$ 63.30
13	J41877	PVC/FTF/TFE	3/8" X 1/2"	$ 58.20
13	J61073	PVD/FTF/TFE	3/8" X 1/2"	$ 74.10
13	J61021	PVD/FTF/C	3/8" X 1/2"	$ 73.00
13	J41766	FPP/HYP/C	1/4" X 3/8"	$ 63.30
13	J41862	FPP/HYP/316	1/4" X 3/8"	$ 67.70
13	J41772	FPP/HYP/TFE	1/4" X 3/8"	$ 63.30
13	41715	FPP/VTN/C	1/4" X 3/8"	$ 70.10
13	41701	FPP/VTN/C 6"	1/4" X 3/8"	$ 54.00
13	J41866	FPP/VTN/316	1/4" X 3/8"	$ 74.10
13	J41774	FPP/VTN/TFE	1/4" X 3/8"	$ 70.10
13	J61098	FPP/FTF/C	1/4" X 3/8"	$ 67.60
13	J41878	FPP/FTF/316	1/4" X 3/8"	$ 73.00
13	J41874	FPP/FTF/TFE	1/4" X 3/8"	$ 68.80
13	41693	PVC/HYP/C	1/4" X 3/8"	$ 55.30
13	41705	PVC/HYP/C 6"	1/4" X 3/8"	$ 51.80
13	J41864	PVC/HYP/316	1/4" X 3/8"	$ 59.50
13	J41758	PVC/HYP/TFE	1/4" X 3/8"	$ 55.30
13	J61237	PVC/VTN/C	1/4" X 3/8"	$ 59.50
13	J41867	PVC/VTN/316	1/4" X 3/8"	$ 64.60
13	41760	PVC/VTN/TFE	1/4" X 3/8"	$ 60.80
13	J41996	PVC/FTF/C	1/4" X 3/8"	$ 58.30
13	J41880	PVC/FTF/316	1/4" X 3/8"	$ 63.30
13	J41876	PVC/FTF/TFE	1/4" X 3/8"	$ 59.50
13	J61020	PVD/FTF/C	1/4" X 3/8"	$ 73.00
13	J61026	PVD/FTF/TFE	1/4" X 3/8"	$ 73.00
13	J41911	FPP/HYP/C	.25 NPT	$ 63.30
13	J41901	FPP/VTN/C	.25 NPT	$ 70.10
13	J41944	FPP/FTF/C	.25 NPT	$ 67.60
13	J41904	PVC/HYP/C	.25 NPT	$ 55.30
13	J41858	PVC/VTN/C	.25 NPT	$ 60.80
13	J41908	PVC/FTF/C	.25 NPT	$ 59.50
13	J61015	PVD/FTF/C	.25 NPT	$ 73.00
13	J61025	316/FTF/316	.25 NPT	$ 151.00
13	J41969	PVC/HYP/C	1/2 X 3/4"	$ 76.80
13	J61149-10P	FPP/FTF/C	1/2 X 3/4"	$ 74.10
13	J61152-10P	FPP/HYP/C	1/2 X 3/4"	$ 78.50
13	J61160-10P	FPP/FTF/C	.50 NPT	$ 74.10
13	J61157-10P	PVC/FTF/C	.50 NPT	$ 61.20
13	J61156-10P	PVC/TFE/S	.50 NPT	$ 66.30

OTHER

Part No.	Description	List Price
26858	BULKHEAD FITTING - PP 1/2"	$ 16.40
26859	BULKHEAD FITTING - PVC 1/2"	$ 16.40
26860	BULKHEAD FITTING - PVC 3/8"	$ 16.40
26867	BULKHEAD FITTING - PP 3/8"	$ 16.40
L9905000-FPP	J CONVERSION KIT (FPP/TFE/C)	$ 98.40
L9905000-PVC	J CONVERSION KIT (PVC/TFE/C)	$ 98.40
L9905100-FPP	J CONVERSION KIT (FPP/TFE/C)	$ 98.40
L9905100-PVC	J CONVERSION KIT (PVC/TFE/C)	$ 98.40
L9905100-PVD	J CONVERSION KIT (PVD/TFE/C)	$ 167.40
L9906901-000	CONV. KIT (.75" VVC9) DEGAS HEAD	$ 133.60
L9907001-000	CONV. KIT (1.00" VVC9) DEGAS HEAD	$ 133.60
L9907101-000	CONV. KIT (1.25" VVC9) DEGAS HEAD	$ 133.60

Mechanical Pump

OMNI mechanical metering pumps and controllers are the economical standard for a reliable chemical feed pump with virtually no maintenance. For high technology in a simple to understand package an an economical price, add an MPC (metering pump controller) to the OMNI pump to take advantage of complete system integration between metering pump and process. The OMNI offers the following user friendly benefits

- ***Long Life -*** *DC2—DC6 are greased for life, DC7 is oil lubricated.*
- ***Compact and Lightweight -*** Saves space and easy handling.
- ***Controller Ready -*** Add an MPC when automatic pump control is required.
- ***Simple Design -*** Easy to install and operate.
- ***Highly Efficient -*** Quiet and cool, standard fan cooled motor design.
- ***Guided Ball Check Valve Systems,*** to reduce back flow and enhance outstanding priming characteristics.
- ***Premium Standard Wetted Component Materials.***
- ***Few Moving Parts*** and ***Wall Mountable.***
- ***Liquid End Materials–*** PP, PVDF & 316 SS

MPC NO MOTOR OPTION	
Minimal MPC Motor Requirements:	
HP/KW	Defined on order (Pump Dependent)
Voltage	230V nominal
Base Freq	50 or 60Hz (by Mfgr's Motor design)
Type	TEFC
Phases	3 phase
Poles	4 poles, 1500 rpm (50 hz) or 1,800 rpm (60hz) synchronous speed
SF	>=1.05
Turn Down	Minimum 3:1 constant torque
Insulation	Class F or better
Inverter Duty	Not Required

Performance & Selection Table

MODEL		DC2A	DC2B	DC2C	DC3B	DC3C	DC4B	DC4C	DC4D	DC5C	DC5D	DC6C	DC6D
Capacity	GPH	7	13.9	24	32.3	55.5	40.6	61.8	78.9[1]	104.6	137.9	218.7	272.6[1]
60 hz & MPC	LPH	26.4	52.8	90.8	122.4	210	153.6	234	298.8[1]	396	522[1]	828	1032[1]
Capacity	GPH	5.8	11.6	20	26.9	46.2	33.8	51.5	65.8	87.2	114.9	182.3	227.2
50 hz	LPH	22	44	75.7	102	175	128	195	249	330	435	690	860
Pressure	PSIG	150			75		150			90		45	
(max.)	BAR	10.3			5.1		10.3			6.2		3.1	
SPM @	1725	44	88	150	88	150	117	175	223[1]	175	223[1]	175	223[1]
	1425	37	73	125	73	125	97	145	186	146	186	146	186
HP/kW Required		0.25 / 0.18					0.50 / 0.37						
Connection Size		1/4" (F)NPT			1/2" (F)NPT OR (F)BSPT					1" (F)NPT OR (F)BSPT			

[1]This selection uses a high stroking rate, use with caution.
Must have at least 25 psig discharge pressure and water-like viscosity.

OMNI DC2 thru DC6 Selection Guide

DC_ _ _ _ _ - _ _ _ _

MODELS:	$ 1,132	**2A**	= PVDF - 7.0 GPH (26.4 LPH)@60Hz & MPC or 5.8 GPH (22.0 LPH)@50Hz
	$ 1,835	**2A**	= 316SS - 7.0 GPH (26.4 LPH)@60Hz & MPC or 5.8 GPH (22.0 LPH)@50Hz
	$ 1,224	**2B**	= PVDF - 13.9 GPH (52.8 LPH)@60Hz & MPC or 11.6 GPH (44.0 LPH)@50Hz
	$ 2,027	**2B**	= 316SS - 13.9 GPH (52.8 LPH)@60Hz & MPC or 11.6 GPH (44.0 LPH)@50Hz
	$ 1,285	**2C**	= PVDF - 24.0 GPH (90.8 LPH)@60Hz & MPC or 20 GPH (75.7 LPH)@50Hz
	$ 2,129	**2C**	= 316SS - 24.0 GPH (90.8 LPH)@60Hz & MPC or 20 GPH (75.7 LPH)@50Hz
	$ 1,549	**3B**	= PVDF - 32.3 GPH (122.4 LPH)@60Hz & MPC or 26.9 GPH (102.0 LPH)@50Hz
	$ 2,318	**3B**	= 316SS - 32.3 GPH (122.4 LPH)@60Hz & MPC or 26.9 GPH (102.0 LPH)@50Hz
	$ 1,626	**3C**	= PVDF - 55.5 GPH (210 LPH)@60Hz & MPC or 46.2 GPH (175.0 LPH)@50Hz
	$ 2,434	**3C**	= 316SS - 55.5 GPH (210 LPH)@60Hz & MPC or 46.2 GPH (175.0 LPH)@50Hz
	$ 1,666	**4B**	= PVDF - 40.6 GPH (153.6 LPH)@60Hz & MPC or 33.8 GPH (128.0 LPH)@50Hz
	$ 2,581	**4B**	= 316SS - 40.6 GPH (153.6 LPH)@60Hz & MPC or 33.8 GPH (128.0 LPH)@50Hz
	$ 1,750	**4C**	= PVDF - 61.8 GPH (234 LPH)@60Hz & MPC or 51.5 GPH (195.0 LPH)@50Hz
	$ 2,710	**4C**	= 316SS - 61.8 GPH (234 LPH)@60Hz & MPC or 51.5 GPH (195.0 LPH)@50Hz
	$ 1,833	**4D**	= PVDF - 78.9[1]GPH (298.8[1] LPH)@60Hz & MPC or 65.8 GPH (249.0 LPH)@50Hz
	$ 2,839	**4D**	= 316SS - 78.9[1] GPH (298.8[1] LPH)@60Hz & MPC or 65.8 GPH (249.0 LPH)@50Hz
	$ 1,924	**5C**	= PP - 104.6 GPH (396 LPH)@60Hz & MPC or 87.2 GPH (330.0 LPH)@50Hz
	$ 2,452	**5C**	= PVDF - 104.6 GPH (396 LPH)@60Hz & MPC or 87.2 GPH (330.0 LPH)@50Hz
	$ 2,940	**5C**	= 316SS - 104.6 GPH (396 LPH)@60Hz & MPC or 87.2 GPH (330.0 LPH)@50Hz
	$ 2,226	**5D**	= PP - 137.9[1] GPH (522[1] LPH)@60Hz & MPC or 114.9 GPH (435.0 LPH)@50Hz
	$ 2,649	**5D**	= PVDF - 137.9[1] GPH (522[1] LPH)@60Hz & MPC or 114.9 GPH (435.0 LPH)@50Hz
	$ 3,361	**5D**	= 316SS - 137.9[1] GPH (522[1] LPH)@60Hz & MPC or 114.9 GPH (435.0 LPH)@50Hz
	$ 2,447	**6C**	= PP - 218.7 GPH (828 LPH)@60Hz & MPC or 182.3 GPH (690.0 LPH)@50Hz
	$ 3,229	**6C**	= PVDF[2] - 218.7 GPH (828 LPH)@60Hz & MPC or 182.3 GPH (690.0 LPH)@50Hz
	$4,099	**6C**	= 316SS - 218.7 GPH (828 LPH)@60Hz & MPC or 182.3 GPH (690.0 LPH)@50Hz
	$ 2,817	**6D**	= PP - 272.6[1] GPH (1032[1] LPH)@60Hz & MPC or 227.2 GPH (860.0 LPH)@50Hz
	$ 3,520	**6D**	= PVDF[2] - 272.6[1] GPH (1032[1] LPH)@60Hz & MPC or 227.2 GPH (860.0 LPH)@50Hz
	$ 4,328	**6D**	= 316SS - 272.6[1] GPH (1032[1] LPH)@60Hz & MPC or 227.2 GPH (860.0 LPH)@50Hz

[1]Caution: This pump has a high stroke rate & needs at least 25 psig back pressure and water-like viscosity.

[2]These pumps are subject to export restrictions

MOTOR:	$ 205	**1**	= IEC 71 B14 Frame, 1PH 115/230V, 0.37kW (1/2HP), TEFC, Motor [50/60hz]*
	$ 403	**2**	= 56C Frame, 1PH 115/230V, 0.37kW (1/2HP), TEFC, MOTOR (60hz)
	$ 205	**3**	= IEC 71 B14 Frame, 3PH 220/380V (&460V), 0.37kW (1/2HP), TEFC, Motor [50/60hz]*
	$ 403	**4**	= 56C Frame, 3PH 220/380V (&460V), 0.37kW (1/2HP), TEFC, MOTOR (60hz)
	N/C	**5**	= MPC with 56C frame motor - price included in MPC price
	$ (102)	**6**	= MPC NO MOTOR with 56C frame [Always @ 60 hz!] (price subtracted from MPC)
	N/C	**7**	= MPC with 71 frame motor - price included in MPC price
	$ (102)	**8**	= MPC NO MOTOR with 71 frame [Always @ 60 hz!] (price subtracted from MPC)
	N/C	**X**	= NO MOTOR - 56C frame
	N/C	**Y**	= NO MOTOR - IEC 71 B14 frame

*** In the Americas, lead time is 8 weeks for any pump with these motors.**

WET END MATERIALS:	N/C	**P**	= PP Liqud End - PTFE Diaphragm and PTFE O-rings - Ceramic Ball Valves *
	N/C	**F**	= PVDF Liqud End - PTFE Diaphragm and PTFE O-rings - Ceramic Ball Valve
	N/C	**A**	= 316SS Liquid End - PTFE Diaphragm and PTFE O-rings - 316SS Ball Valves

*** Model DC5 have PVC reagent heads with PP valves.**

CONNECTION TYPE	N/C	**P**	= NPT
	N/C	**B**	= Din ISO 228/1 (BSPT) (Not available on DC2 pumps)

Optional MPC Controller

CONTROL:	N/C	BLANK	= No MPC Controller
	$1,554	**M**	= MPC Controller

CONTROLLER INPUT VOLTAGE	N/C	BLANK	= NO MPC CONTROLLER
	N/C	**1**	= 110-115V 50/60Hz ETL (UL & CSA) - Single Phase Only
	N/C	**2**	= 220-230V 50/60Hz CE & ETL (UL & CSA) - Single Phase Only

Contact factory for additional motor options. MPC output is 60Hz even if the input voltage is 50Hz - Select pump based on 60Hz

EXTENDED REMOTE CABLE:	N/C	BLANK	= NO MPC CONTROLLER
	N/C	**X**	= PUMP MOUNTED KEYPAD with standard 1.5m (4.5 feet) of cable
		C	= EXTENDED REMOTE CABLE, KEYPAD MOUNTED OFF THE PUMP *

NOTE: * The MPC remote can be located up to 1000 feet (305m) away from the pump. Order extra cable by adding the line item part number NP530147-000 per foot to the order. The price is USD$2.00 list/foot and will be shipped loose as a line item for field installation. Example: If 62 ft of cable is needed, order 62 pieces of NP530147-000. MPC - PANEL MOUNT: The MPC remote is already a NEMA 4X (IP56) rated Instead of integrating this into a control panel, we suggest mounting the remote ""as is"" on the outside of a panel or next to a panel on the wall. The bracket for wall or panel mounting is the same bracket that comes as standard on the pump. There is no chassis mount available.

LANGUAGE (MPC will be shipped in language chosen)	N/C	BLANK	= NO MPC CONTROLLER
	N/C	**E**	= English
	N/C	**F**	= French
	N/C	**S**	= Spanish
	N/C	**G**	= German

Mechanical Pump

OMNI DC7 Series Selection Guide

DC7_ _ _ _

MODELS	$3,312	**7C** = PP - 412 GPH (1560 LPH)@60Hz & MPC or 343.4 GPH (1300 LPH)@50Hz
	$4,491	**7C** = PVDF[2] - 412 GPH (1560 LPH)@60Hz & MPC or 343.4 GPH (1300 LPH)@50Hz
	$3,391	**7D** = PP - 507[1] GPH (1920[1] LPH)@60Hz & MPC or 423 GPH (1600 LPH)@50Hz
	$4,718	**7D** = PVDF[2] - 507[1] GPH (1920[1] LPH)@60Hz & MPC or 423 GPH (1600 LPH)@50Hz
		Duplex Models
	$6,403	**7J** = PP - 824 GPH (3120 LPH)@60Hz & MPC or 689 GPH (2600 LPH)@50Hz
	$8,669	**7J** = PVDF[2] - 824 GPH (3120 LPH)@60Hz & MPC or 689 GPH (2600 LPH)@50Hz
	$6,660	**7K** = PP - 1014[1] GPH (3840[1] LPH)@60Hz & MPC or 845 GPH (3200 LPH)@50Hz
	$9,067	**7K** = PVDF[2] - 1014[1] GPH (3840[1] LPH)@60Hz & MPC or 845 GPH (3200 LPH)@50Hz

[1]Caution: This pump has a high stroke rate & needs at least 25 psig back pressure and water-like viscosity.
[2]These pumps are subject to export restrictions.

MOTORS	N/C	**1** = 90 IEC FRAME
	N/C	**2** = 100 IEC FRAME
	N/C	**3** = 56C FRAME
	N/C	**4** = 145TC FRAME
WET END MATERIALS:	N/C	**P** = PP Liqud End - PTFE Diaphragm and PTFE O-rings - Ceramic Ball Valves
	N/C	**F** = PVDF Liqud End - PTFE Diaphragm and PTFE O-rings - Ceramic Ball Valve
	N/C	**X** = No Motor Purchased (Pump will come with Main Assy and Motor Frame Kit
	N/C	**M** = Motor Purchased (as line Item) (Pump will come completely assembled)

OMNI DC7 Series Selection Guide

EP C B _

MODELS	N/C	**EP** = MPC VECTOR
ENCLOSURE	N/C	**C** = NEMA 4X (IP56)
RATINGS	$2,205	**B** = 2 HP (1.5kW) 208-240 VAC, 1 Phase, 50/60 Hz
LANGUAGE	N/C	**X** = English
	N/C	**A** = German
	N/C	**B** = French
	N/C	**C** = Spanish

A completed model number should look like "EPCBX"

Motor Selection

List	Part Number	Power (hp / kW)	Volts	Phase	Hz	RPM	Frame	Enclosure
$372	**MD496**	1.5 / 1.1	208-230 / 460	3	60	1725	NEMA 56C	TEFC
$429	**W773127-001 ****	2 / 1.5 (DC7 Duplex)			60		NEMA 145TC	
$606	**NP500622-000**	1.5 / 1.1			60	1140	NEMA 56C	
$373	**NP500619-000**	1.5 / 1.1	220 / 380	3	50/60	1425 / 1725	IEC 90	TEFC
$454	**NP500624-000 ****	2 / 1.5 (DC7 Duplex)						
$408	**NP500621-000**	1.5 / 1.1				940 / 1140		

** Compatible with MPC Vector motor requirements

Performance & Selection Table

MODEL		DC7C	DC7D	DC7J	DC7K
Capacity	GPH	412	507[1]	824	1014[1]
60 hz & MPC	LPH	1560	1920[1]	3120	3840[1]
Capacity	GPH	343	423	687	845
50 hz	LPH	1300	1600	2600	3200
Pressure	PSIG	60			
(max.)	BAR	4.1			
SPM @	1725	175	223 [1]	175	223 [1]
	1425	146	186	146	186
HP/kW Required		1.5 / 1.1		2 / 1.5	
Connection Size		1 1/2" (F)NPT, ANSI 1 1/2" & DIN 40 FLANGE			

[1]This selection uses a high stroking rate, use with caution.
Must have at least 25 psig discharge pressure and water-like viscosity.

OMNI Mechanical Pump

Common Pump Accessories - Omni & Others

Component	Size	Material	Part No.	LIST PRICE
Drip Cover, Motor	56C	Steel, Baldor	NP999119	$ 98.00
Pressure Relief Valves	1/2"	PVC/TFE	NA100001-PVC	$ 230.10
	1/2"	PVDF/TFE	NA100001-PVD	$ 648.50
	1/2"	SS/TFE	NA100001-316	$ 659.70
	1"	PVC/TFE	NA100002-PVC	$ 574.20
	1"	PVDF/TFE	NA100002-PVD	$ 1,069.90
	1"	SS/TFE	NA100002-316	$ 1,068.90
	1.5"	PVC/TFE	NA100003-PVC	$ 1,177.80
	1.5"	PVDF/TFE	NA100003-PVD	$ 2,771.00
Back Pressure Valves	1/2"	PVC/TFE	NA200001-PVC	$ 218.90
	1/2"	PVDF/TFE	NA200001-PVD	$ 633.20
	1/2"	SS/TFE	NA200001-316	$ 627.10
	1"	PVC/TFE	NA200002-PVC	$ 534.50
	1"	PVDF/TFE	NA200002-PVD	$ 1,029.20
	1"	SS/TFE	NA200002-316	$ 983.40
	1.5"	PVC/TFE	NA200003-PVC	$ 1,177.80
	1.5"	PVDF/TFE	NA200003-PVD	$ 2,771.00
Pulsation Dampener	3/8"	PVC/TFE 4 CU IN	NA600001-PVC	$ 634.20
	3/8"	PVD/TFE 4 CU IN	NA600001-PVD	$ 695.30
	3/8"	SS/TFE 4 CU IN	NA600001-316	$ 1,346.80
	3/8"	PVC/TFE 10 CU IN	NA600002-PVC	$ 734.00
	3/8"	PVD/TFE 10 CU IN	NA600002-PVD	$ 774.70
	3/8"	SS/TFE 10 CU IN	NA600002-316	$ 1,755.00
	3/8"	PVC/TFE 36 CU IN	NA600003-PVC	$ 1,125.90
	3/8"	PVD/TFE 36 CU IN	NA600003-PVD	$ 1,147.30
	3/8"	SS/TFE 36 CU IN	NA600003-316	$ 1,943.40
Gauge Isolator w/ 200PSI Gauge	1/4"	CPVC/TFE	NA500001-CPVC	$ 161.90
	1/4"	PVDF/TFE	NA500001-PVD	$ 196.50
	1/4"	316SS/TFE	NA500001-316	$ 456.10
Calibration Column	1/2"	PVC 100mL	NA300001-PVC	$ 97.70
	1/2"	PVC 200mL	NA300002-PVC	$ 112.00
	3/4"	PVC 500mL	NA300003-PVC	$ 131.30
	3/4"	PVC 1000mL	NA300004-PVC	$ 157.80
	1"	PVC 2000mL	NA300005-PVC	$ 243.30
	1"	PVC 4000mL	NA300006-PVC	$ 338.00
	2"	PVC 10,000mL	NA300007-PVC	$ 774.70
	2"	PVC 20,000mL	NA300008-PVC	$ 927.40
	1/2"	Glass/PVD 100mL	NA300009-PVD	$ 746.20
	1/2"	Glass/PVD 200mL	NA300010-PVD	$ 764.50
	3/4"	Glass/PVD 500mL	NA300011-PVD	$ 1,099.40
	3/4"	Glass/PVD 1000mL	NA300012-PVD	$ 1,166.60
	1"	Glass/PVD 2000mL	NA300013-PVD	$ 2,234.50
	1"	Glass/PVD 4000mL	NA300014-PVD	$ 2,342.40
	1/2"	Glass/SS 100mL	NA300015-316	$ 734.00
	1/2"	Glass/SS 200mL	NA300016-316	$ 755.40
	3/4"	Glass/SS 500mL	NA300017-316	$ 1,019.00
	3/4"	Glass/SS 1000mL	NA300018-316	$ 1,094.40
	1"	Glass/SS 2000mL	NA300019-316	$ 2,014.60
	1"	Glass/SS 4000mL	NA300020-316	$ 2,111.30
Y Strainer	1/2"	PVC	40085	$ 177.10
	1/2"	CPVC	NA400001-CPVC	$ 488.60
	1/2"	PVD	NA400001-PVD	$ 2,370.90
	1"	PVC	NA400002-PVC	$ 219.90
	1"	CPVC	NA400002-CPVC	$ 691.20
	1"	PVD	NA400002-PVD	$ 2,958.30

OMNI KOPkit Selection Guide

List Adder	KOPkit Number	Pump Model	Wetted Material	Connection Type
$ 292	NLK020FP	DC2	PVDF	NPT
$ 438	NLK040FP	DC3 or DC4	PVDF	NPT
$ 438	NLK040FB	DC3 or DC4	PVDF	BSPT
$ 612	NLK050FP	DC5	PVDF	NPT
$ 612	NLK050FB	DC5	PVDF	BSPT
$ 781	NLK060FP	DC6	PVDF	NPT
$ 781	NLK060FB	DC6	PVDF	BSPT
$ 501	NLK050PP	DC5	PP	NPT
$ 501	NLK050PB	DC5	PP	BSPT
$ 660	NLK060PP	DC6	PP	NPT
$ 660	NLK060PB	DC6	PP	BSPT
$ 562	NLK070XX	DC7	PVDF & PP	N/A
$ 496	NLK020AP	DC2	316SS	NPT
$ 729	NLK040AP	DC3 or DC4	316SS	NPT
$ 729	NLK040AB	DC3 or DC4	316SS	BSPT
$ 787	NLK050AP	DC5	316SS	NPT
$ 787	NLK050AB	DC5	316SS	BSPT
$ 865	NLK060AP	DC6	316SS	NPT
$ 865	NLK060AB	DC6	316SS	BSPT

CHEM-TECH Series XP Peristaltic

The new Chem-Tech XP Series with peristaltic technology delivers worry-free dosing in a modern design. Each and every component of the XP Series is designed and manufactured for optimum reliability and durability for ***REAL*** Performance.

The electronic timing circuit in the adjustable 'A' Models provides ***reliable*** pump control, without relying on mechanical adjustment components that wear out over time. The intuitive interface and controls provide ***easy*** operation and the peristaltic design is virtually maintenance-free.

Tailor-made for the water conditioning market, the XP Series offer ***affordable*** solutions in both initial cost and operation. A rugged gear train and computer-aided peristaltic design ensure ***long-lasting*** performance.

Key Features

- ***Easy tube change-out.***
- ***Inherently Degassing.***
- ***Extended Tube Life.***
- ***Rugged Gear Train.***
- ***Self Priming.***
- ***Variable Speed*** (optional).
- ***Adjustable Control*** (optional).

Chem-Tech XP Series Selection Guide

XP_ _ _ _ _ _ N _

MODELS:		**Series XP - 100 PSI maximum pressure (6.8 BAR)**	
	$ 398	**XP004**	= 4 GPD (0.6 LPH) @ 30 RPM
	$ 398	**XP007**	= 7 GPD (1.1 LPH) @ 50 RPM
	$ 398	**XP009**	= 9 GPD (1.4 LPH) @ 30 RPM
	$ 398	**XP015**	= 15 GPD (2.4 LPH) @ 50 RPM
	$ 398	**XP023**	= 23 GPD (3.6 LPH) @ 50 RPM
		Series XP - 80 PSI maximum pressure (5.4 BAR)	
	$ 398	**XP030**	= 30 GPD (4.7 LPH) @ 30 RPM
	$ 398	**XP050**	= 50 GPD (7.9 LPH) @ 50 RPM
		Series XP - 25 PSI maximum pressure (1.7 BAR)	
	$ 398	**XP080**	= 80 GPD (12.6 LPH) @ 50 RPM
ELECTRICAL:	N/C	**L**	= 115V, 60Hz
	N/C	**H**	= 230V, 60Hz
DRIVE:	N/C	**F**	= Fixed Rate, On / Off Only
	$ 177	**A**	= Adjustable, On / Off with Current Interrupter Timer
TUBING:	N/C	**N**	= Standard Norprene with 1/4" NPT fittings
SYSTEM:	N/C	**X**	= Pump Only
	$ 171	**1**	= 15 Gallon Tank System
	$ 269	**3**	= 35 Gallon Tank System
	$ 183	**T**	= 15 Gallon ITS System

A completed model should look like "XP030LFNT"

CHEM-TECH Series XPV Peristaltic

The Chem-Tech XPV Series pump combines the best in variable speed peristaltic pump technology with state of the art control electronics, providing you with unparalleled performance, control and value. The XPV represents the leading edge of microprocessor performance management, giving you many choices of input signal types, and onboard timer programs to customize this pump to any application. Of course, this pump is as rugged and reliable as it's fixed speed siblings, the XPF and the XPA.

Key Features

- ***Variable Speed***
- ***Fully Scalable 4-20mA Input***
- ***Hall Effect Input***
- ***Contacting Head Water Meter***
- ***Flow Totalization***
- ***Flow Verification***
- ***Cycle Timer***
- ***Daily Timer***
- ***LCD Display***

Chem-Tech Series XPV uses Chem-Tech Large Pump Discount Structure

Chem-Tech XPV Series Selection Guide — XP_ _ _ _ V N _

MODELS:		**Series XP - 100 PSI maximum pressure (6.8 BAR)**	
	$ 699	**XP008**	= 8 GPD (1.3 LPH)
	$ 699	**XP017**	= 17 GPD (2.7 LPH)
	$ 699	**XP033**	= 33 GPD (5.2 LPH)
		Series XP - 80 PSI maximum pressure (5.5 BAR)	
	$ 699	**XP055**	= 55 GPD (8.7 LPH)
		Series XP - 25 PSI maximum pressure (1.7 BAR)	
	$ 699	**XP100**	= 100 GPD (15.8 LPH)
ELECTRICAL:	N/C	**L**	= 115V, 60Hz 1.8A
	N/C	**H**	= 230V, 50/60Hz .9A
DRIVE:	N/C	**V**	= Variable Input Control w/ I/O Cable
TUBING:	N/C	**N**	= Standard Norprene with 1/4" NPT fittings
SYSTEM:	N/C	**X**	= Pump Only
	$ 99	**1**	= 15 Gallon Tank System
	$ 156	**3**	= 35 Gallon Tank System
	$ 106	**T**	= 15 Gallon ITS System

A completed model should look like "XP033LVNX"

XP & XPV SERIES PARTS

Part Number	Description	List Price
KOPkits		
NCKA2LPAP1	KOPkit XP - 004 / 007 / 008	$ 103.10
NCKA3LPAP1	KOPkit XP - 009 / 015 / 017	$ 103.10
NCKA4LPAP1	KOPkit XP - 023 / 033	$ 103.10
NCKA6LPAP1	KOPkit XP - 030 / 050 / 055	$ 103.10
NCKA8LPAP1	KOPkit XP - 080 / 100	$ 103.10
TUBE KITS		
NC90XX2LPA-XXXXX	Kit, Tube Assy - 004 / 007	$ 13.40
NC90XX3LPA-XXXXX	Kit, Tube Assy - 009 / 015	$ 13.40
NC90XX4LPA-XXXXX	Kit, Tube Assy - 023	$ 13.40
NC90XX6LPA-XXXXX	Kit, Tube Assy - 030 / 050	$ 13.40
NC90XX8LPA-XXXXX	Kit, Tube Assy - 080	$ 13.40
ACCESSORIES ASSEMBLY		
J63051	Access. Kit, PVC/VTN, .25N	$ 50.40
J30257	Grease Kit	$ 39.00
PARTS		
J60552	Strainer Assembly w/o Valve	$ 17.70
J63002	Control Panel Cover (Clear)	$ 12.00
J63004	Rain Hood	$ 16.00
J63007	Switch, On-Off	$ 16.00
J63013	Timer Assy	$ 115.00
J63016	Gear Motor, 30RPM / 120V / 50-60Hz	$ 180.00
J63017	Gear Motor, 30RPM / 240V / 50-60Hz	$ 180.00
J63018	Gear Motor, 50RPM / 120V / 50-60Hz	$ 180.00
J63019	Gear Motor, 50RPM / 240V / 50-60Hz	$ 180.00

CHEM-TECH Series CTP Peristaltic

Series CTP Peristaltic Pump Selection Guide

CTP_ _ _ | _ | _ - PAP1 - XXXXX

MODELS:		
		Series CTP-A Simplex - Percentage Timer
	$ 560	**A2H** = 3.5 gpd (0.55 lph) max pres.: 125 PSI (8.6 BAR)
	$ 560	**A2L** = 3.5 gpd (0.55 lph) max pres.: 80 PSI (5.5 BAR)
	$ 560	**A3H** = 8.0 gpd (1.26 lph) max pres.: 110 PSI (7.6 BAR)
	$ 560	**A3L** = 8.0 gpd (1.26 lph) max pres.: 70 PSI (4.8 BAR)
	$ 560	**A4H** = 13.0 gpd (2.05 lph) max pres.: 100PSI (6.9 BAR)
	$ 560	**A4L** = 13.0 gpd (2.05 lph) max pres.: 50 PSI (3.4 BAR)
	$ 560	**A6L** = 30.0 gpd (4.73 lph) max pres.: 40 PSI (2.8 BAR)
	$ 560	**A6H** = 30.0 gpd (4.73 lph) max pres.: 80 PSI (5.5 BAR)
		Series CTP-A Duplex *
	$ 823	**B2L** = 7.0 gpd (1.10 lph) max pres.: 80 PSI (5.5 BAR)
	$ 823	**B3L** = 16.0 gpd (2.52 lph) max pres.: 70 PSI (4.8 BAR)
	$ 823	**B4L** = 26.0 gpd (4.10 lph) max pres.: 50 PSI (3.4 BAR)
	$ 823	**B6L** = 60.0 gpd (9.46 lph) max pres.: 40 PSI (2.8 BAR)
		Series CTP-AE Simplex - 100% Fixed Rate
	$ 457	**A2H** = 3.5 gpd (0.55 lph) max pres.: 125 PSI (8.6 BAR)
	$ 457	**A2L** = 3.5 gpd (0.55 lph) max pres.: 80 PSI (5.5 BAR)
	$ 457	**A3H** = 8.0 gpd (1.26 lph) max pres.: 110 PSI (7.6 BAR)
	$ 457	**A3L** = 8.0 gpd (1.26 lph) max pres.: 70 PSI (4.8 BAR)
	$ 457	**A4H** = 13.0 gpd (2.05 lph) max pres.: 100PSI (6.9 BAR)
	$ 457	**A4L** = 13.0 gpd (2.05 lph) max pres.: 50 PSI (3.4 BAR)
	$ 457	**A6L** = 30.0 gpd (4.73 lph) max pres.: 40 PSI (2.8 BAR)
	$ 457	**A6H** = 30.0 gpd (4.73 lph) max pres.: 80 PSI (5.5 BAR)
		Series CTP-AE Duplex *
	$ 721	**B2L** = 7.0 gpd (1.10 lph) max pres.: 80 PSI (5.5 BAR)
	$ 721	**B3L** = 16.0 gpd (2.52 lph) max pres.: 70 PSI (4.8 BAR)
	$ 721	**B4L** = 26.0 gpd (4.10 lph) max pres.: 50 PSI (3.4 BAR)
	$ 721	**B6L** = 60.0 gpd (9.46 lph) max pres.: 40 PSI (2.8 BAR)
		Series CTP-D Simplex - Variable Speed
	$ 950	**D2H** = 7.0 gpd (1.10 lph) max pres.: 125 PSI (8.6 BAR)
	$ 950	**D3H** = 16.0 gpd (2.52 lph) max pres.: 110 PSI (7.6 BAR)
	$ 950	**D4H** = 26.0 gpd (4.10 lph) max pres.: 100 PSI (6.9 BAR)
	$ 950	**D6H** = 60.0 gpd (9.46 lph) max pres.: 80 PSI (5.5 BAR)
		Series CTP-D Duplex *
	$1,212	**E2H** = 14.0 gpd (2.20 lph) max pres.: 125 PSI (8.6 BAR)
	$1,212	**E3H** = 32.0 gpd (5.04 lph) max pres.: 110 PSI (7.6 BAR)
	$1,212	**E4H** = 52.0 gpd (8.20 lph) max pres.: 100 PSI (6.9 BAR)
	$1,212	**E6H** = 120.0 gpd (18.92 lph) max pres.: 80 PSI (5.5 BAR)

CONTROLS:		
	N/C	**S** = Standard for CTP-A / CTP-D
	N/C	**E** = Standard for CTP-AE
	$ 68	**T** = 7 Day Mechanical Timer (2 hr. increments) with Series CTP-A
	$ 68	**R** = 7 Day Mechanical Timer (2 hr. increments) with Series CTP-AE
	$ 120	**D** = 7 Day - 8 Event Electronic Timer (1 min. increments) with Series CTP-A / CTP-D
	$ 120	**C** = 7 Day - 8 Event Electronic Timer (1 min. increments) with Series CTP-AE

ELECTRICAL:		
	N/C	**A** = 115 Volt, 60 Hz with grounded U.S. plug (Standard)
	N/C	**1** = 115 Volt, 60 Hz (for CTP-D only)
	$ 20	**B** = 230 Volt, 60 Hz with grounded U.S. plug
	$ 20	**R** = 230 Volt, 50 Hz with grounded European right angle plug
	$ 20	**S** = 230 Volt, 50 Hz with grounded European straight plug
	$ 20	**T** = 230 Volt, 50 Hz with Swiss plug
	$ 20	**U** = 230 Volt, 50 Hz with Australian Plug
	$ 20	**3** = 230 Volt, 50 Hz with European power cord and no plug

NOTE: 230 volt 50 Hz is rated at 5/6 of the stated flow rate.

LIQUID END MATERIALS:		
	N/C	**PAP1** = PVC Head and Fittings/ Norprene Tubing

SUFFIX CODES:		
	N/C	**XXXXX** = No Options Available

A completed model should look like "CTPD2HS1-PAP1-XXX"

Notes: * Standard duplex models are of like pressure and flow rate.

CTP SERIES PARTS PRICE SCHEDULE

Part Number	Description	List Price
KOPkits		
NCKA2HPAP1	KOPkit CTP A2HPAP1	$ 103.10
NCKA2LPAP1	KOPkit CTP A2LPAP1	$ 103.10
NCKA2FPAP1	KOPkit CTP A2FPAP1	$ 123.90
NCKA3HPAP1	KOPkit CTP A3HPAP1	$ 103.10
NCKA3LPAP1	KOPkit CTP A3LPAP1	$ 103.10
NCKA3FPAP1	KOPkit CTP A3FPAP1	$ 123.90
NCKA4HPAP1	KOPkit CTP A4HPAP1	$ 103.10
NCKA4LPAP1	KOPkit CTP A4LPAP1	$ 103.10
NCKA4FPAP1	KOPkit CTP A4FPAP1	$ 123.90
NCKA6HPAP1	KOPkit CTP A6HPAP1	$ 103.10
NCKA6LPAP1	KOPkit CTP A6LPAP1	$ 103.10
TUBE KITS		
NC90XX2HPA-XXXXX	Kit, Tube Assy 2HPA	$ 13.40
NC90XX2LPA-XXXXX	Kit, Tube Assy 2LPA	$ 13.40
NC90XX3HPA-XXXXX	Kit, Tube Assy 3HPA	$ 13.40
NC90XX3LPA-XXXXX	Kit, Tube Assy 3LPA	$ 13.40
NC90XX4HPA-XXXXX	Kit, Tube Assy 4HPA	$ 13.40
NC90XX4LPA-XXXXX	Kit, Tube Assy 4LPA	$ 13.40
NC90XX4FPA-XXXXX	Kit, Tube Assy 4FP1	$ 21.50
NC90XX6HPA-XXXXX	Kit, Tube Assy 6HPA	$ 13.40
NC90XX6LPA-XXXXX	Kit, Tube Assy 6LPA	$ 13.40
ACCESSORIES ASSEMBLY		
NC84XXXXPA-XXXXX	Access. Kit, PVC/VTN, .25N	$ 50.40
ROTOR ASSEMBLY		
NC82XX2HP1-XXXXX	Rotor Assy, .785, PRC, O/S	$ 50.40
NC82XX3HP1-XXXXX	Rotor Assy, .785, PRC, O/S	$ 50.40
NC82XX4HP1-XXXXX	Rotor Assy, .785, PRC, O/S	$ 50.40
NC82XX6HP1-XXXXX	Rotor Assy, .785, PRC, O/S	$ 50.40
NC82XX2LP1-XXXXX	Rotor Assy, .785, PRC, O/S	$ 50.40
NC82XX3LP1-XXXXX	Rotor Assy, .785, PRC, O/S	$ 50.40
NC82XX4LP1-XXXXX	Rotor Assy, .785, PRC, O/S	$ 50.40
NC82XX6LP1-XXXXX	Rotor Assy, .785, PRC, O/S	$ 50.40
NC82XX2FP1-XXXXX	Rotor Assy, .785, PRC, O/S	$ 50.40
NC82XX3FP1-XXXXX	Rotor Assy, .785, PRC, O/S	$ 50.40
NC82XX4FP1-XXXXX	Rotor Assy, .785, PRC, O/S	$ 50.40
HEAD / ROTOR KITS		
NC91XA2HP1-XXXXX	Kit, Head / Rotor Assy A2HP1	$ 78.30
NC91XA2LP1-XXXXX	Kit, Head / Rotor Assy A2LP1	$ 78.30

Part Number	Description	List Price
HEAD / ROTOR KITS		
NC91XA2FP1-XXXXX	Kit, Head / Rotor Assy A2FP1	$ 78.30
NC91XA3HP1-XXXXX	Kit, Head / Rotor Assy A3HP1	$ 78.30
NC91XA3LP1-XXXXX	Kit, Head / Rotor Assy A3LP1	$ 78.30
NC91XA3FP1-XXXXX	Kit, Head / Rotor Assy A3FP1	$ 78.30
NC91XA4HP1-XXXXX	Kit, Head / Rotor Assy A4HP1	$ 78.30
NC91XA4LP1-XXXXX	Kit, Head / Rotor Assy A4LP1	$ 78.30
NC91XA6HP1-XXXXX	Kit, Head / Rotor Assy A6HP1	$ 78.30
NC91XA6LP1-XXXXX	Kit, Head / Rotor Assy A6LP1	$ 78.30
PARTS		
* NC010003-115	Motor, Gear Assy, 115/50-60HZ	$ 133.70
* NC010003-230	Motor, Gear Assy, 230/50-60HZ	$ 145.60
NC010004-000	Motor, Gear Assy, CTP-D	$ 155.30
NC050002-000	Cover, Pump Housing	$ 27.60
NC050005-000	Housing Assy, CTP Std	$ 52.80
NC050005-002	Hsing Assy, 100% Fixed Rate	$ 52.80
NC050005-003	Hsing Assy, 100% Fixed Timer	$ 52.80
NC070006-230	Circuit Board AC 230V	$ 204.50
NC110001-PVC	Injection Valve Body, .25 NPT	$ 7.90
NC110002-PVC	Coupling Nut, .25 NPT	$ 2.60
NC110016-000	Sleeve, .25 OD Tube	$ 1.10
NC110018-PVC	Inj. Valve Body Assy, .25 NPT	$ 13.30
NC110020-PVC	Fit, 1/4" NPT, Close Nip Special	$ 19.70
NC150003-NTR	Grommet, Motor Shaft	$ 2.60
NC150005-000	Seal, Toggle Switch	$ 11.90
NC170003-000	Label, AC Panel	$ 7.90
NC170004-000	Label, Earth Ground	$ 4.00
NC170005-000	Label, AC Panel On/Off	$ 10.50
NC190000-000	Knob, #10 Thumb Screw	$ 2.60
NC960002-000	Switch, Toggle On/Off	$ 16.00
NC960003-000	Locking Ring, Toggle Switch	$ 2.60
NC960004-000	Timer, 7-Day/24-Hr, 220V/50Hz	$ 117.90
NC970027-000	Fuse, 3.15 Amp	$ 3.70
J60552	Strainer Assembly w/o Valve	$ 17.70
J61554	Kit, Flapper Valve with Inj.	$ 24.50
D2568	Valve Flapper	$ 10.40

* Motors listed are for simplex pumps manufactured after April, 2004. For duplex pumps or pumps manufactured before April, 2004 please contact factory

Prime Performance

The Chem-Tech Prime Performance pump is available in 15, 24 and 30 GPD at 100 PSI. Selecting the proper pump is easy! Just refer to selection charts one through four to select the proper output, voltage, liquid end materials, etc Fill in the model number with the correct codes as you go, taking note of the base and adder prices

PRIME PERFORMANCE Selection Guide

X_ _ _ - X_ - _ _ A _ - _ _ _

MODELS:	$ 439	**015**	= 15 gpd (2.34 lph) max pres.: 100 PSI (7 BAR)
	$ 439	**024**	= 24 gpd (3.78 lph) max pres.: 100 PSI (7 BAR)
	$ 439	**030**	= 30 gpd (4.72 lph) max pres.: 100 PSI (7 BAR)
	$ 439	**068**	= 68 gpd (10.72 lph) max pres.: 60 PSI (4.2 BAR)
	$ 439	**100**	= 100 gpd (15.75 lph) max pres.: 60 PSI (4.2 BAR)
ELECTRICAL:	N/C	**A**	= 115V, 60 Hz
	$ 20	**B**	= 230V, 50 Hz (not available in 2120)
	$ 20	**C**	= 230V, 60 Hz
LIQUID END MATERIALS: Head, Fittings/ Diaph., Seats/ Balls	N/C	**BAA**	= PVC / Hypalon / Ceramic
	$ 25	**BBA**	= PVC / Viton / Ceramic
CONNECTION SIZES:	N/C	**6**	= Tubing .38" PE BLK Suction / .38" PE BLK Discharge / .38" PE BLK Return
	N/C	**8**	= Tubing .38" PVC Suction / .38" PE Discharge / .38" PVC Return
	N/C	**7**	= Tubing .50" PE BLK Suction / .50" PE BLK Discharge / .50" PE BLK Return
	N/C	**9**	= Tubing .50" PVC Suction / .50" PE Discharge / .50" PVC Return
SUFFIX CODES:	N/C	**XXX**	= Standard
	$ 88	**001**	= Current Interrupter
	$ 171	**15T**	= 15 gal tank w/ bulkhead for vent,level wand,safety cap & fasteners
	$ 269	**35T**	= 35 gal tank w/ bulkhead for vent and fasteners

A complete model should look like "X024-XA-BBA9XXX"

Pumps come with foot valve/strainer/weight, 4' of suction tubing, 4' of return tubing, 8' of discharge tubing, and injecion/ back pressure valve assembly.

KOPkits

PRIME PERFORMANCE KOPkit Selection Guide

KX100 - _ _ A _

PRODUCT DESIGNATOR:	$155.10	**KX100**	= Chem-Tech Kopkit
LIQUID END MATERIALS: Head, Diaph., Seats & Balls	N/C	**BAA**	= PVC / Hypalon / Ceramic
	$ 24.00	**BBA**	= PVC / Viton / Ceramic
CONNECTION :	N/C	**6**	= Tubing .38" Suction / Discharge / Return
	N/C	**8**	= Tubing .38" Suction / Discharge / Return
	N/C	**7**	= Tubing .50" Suction / Discharge / Return
	N/C	**9**	= Tubing .50" Suction / Discharge / Return

CHEM-TECH Series 100, 150, 200

Selecting the proper Chem-Tech pump is easy! Just refer to selection charts one through five to select the proper output, voltage, liquid end materials, etc. Fill in the model number with the correct codes as you go, taking note of the base and adder prices.

Note: Standard Features do not add to the pump price.

Chem-Tech Series 100, 150, 200 Selection Guide

____ - __ - ___ _ - ___

MODELS:		**Series 100**	
	$ 405	**X003**	= 3 gpd (0.47 lph) max pres.: 100 PSI (7 BAR)
	$ 405	**X007**	= 7 gpd (1.00 lph) max pres.: 100 PSI (7 BAR)
	$ 405	**X015**	= 15 gpd (2.34 lph) max pres.: 100 PSI (7 BAR)
	$ 405	**X024**	= 24 gpd (3.78 lph) max pres.: 100 PSI (7 BAR)
	$ 405	**X030**	= 30 gpd (4.72 lph) max pres.: 100 PSI (7 BAR)
		Series 150	
	$ 514	**X068**	= 68 gpd (10.71 lph) max pres.: 60 PSI (4 BAR)
	$ 534	**X100**	= 100 gpd (15.76 lph) max pres.: 60 PSI (4 BAR)
		Series 200	
	$ 783	**X210**	= 10 gpd (1.5 lph) max pres.: 150 PSI (10 BAR)
	$ 783	**X215**	= 15 gpd (2.34 lph) max pres.: 150 PSI (10 BAR)
	$ 783	**X220**	= 20 gpd (3.15 lph) max pres.: 150 PSI (10 BAR)
	$ 915	**X230**	= 30 gpd (4.72 lph) max pres.: 125 PSI (9 BAR)
	$ 915	**X240**	= 40 gpd (6.31 lph) max pres.: 125 PSI (9 BAR)
	$ 973	**X260**	= 60 gpd (9.46 lph) max pres.: 125 PSI (9 BAR)
	$1,007	**X280**	= 80 gpd (12.6 lph) max pres.: 100 PSI (7 BAR)
	$1,052	**2100**	= 100 gpd (15.76 lph) max pres.: 100 PSI (7 BAR)
	$1,096	**2120**	= 120 gpd (18.91 lph) max pres.: 80 PSI (6 BAR)

ELECTRICAL:	N/C	**XA**	= 115V, 60 Hz
	$ 20	**XB**	= 230V, 50 Hz (not available in 2120)
	$ 20	**XC**	= 230V, 60 Hz
	$ 27	**XD**	= 115V, 50/60 Hz, T.E.F.C. (X200 only)
	$ 43	**XL**	= 230V, 50/60 Hz, T.E.F.C. (X200 only)

LIQUID END	N/C	**AAA**	= SAN/PVC / Hypalon / Ceramic
MATERIALS:	N/C	**AAB**	= SAN/PVC / Hypalon / TFE
Pump Head &	$ 27	**ABA**	= SAN/PVC / Viton / Ceramic
Fittings/Seats	$ 27	**ABB**	= SAN/PVC / Viton / TFE
& O-rings/Balls	$ 53	**ACA**	= SAN/PVC / Tef/Viton / Ceramic
	$ 48	**AHA**	= SAN/PVC / Tef/Hypalon / Ceramic
	$ 33	**BAA**	= PVC / Hypalon / Ceramic
	$ 33	**BAB**	= PVC / Hypalon / TFE
	$ 58	**BBA**	= PVC / Viton / Ceramic
	$ 58	**BBB**	= PVC / Viton / TFE
	$ 75	**BHA**	= PVC / Tef/Hyp / Ceramic
	$ 68	**DAA**	= PP / Hypalon / Ceramic
	$ 68	**DAB**	= PP / Hypalon / TFE
	$ 94	**DBA**	= PP / Viton / Ceramic
	$ 94	**DBB**	= PP / Viton / TFE
	$ 162	**GFA**	= PVC / TFE / Ceramic (dbl)
	$ 162	**GFB**	= PVC / TFE / TFE (dbl)
	$ 625	**EFC**	= 316 / TFE / 316 (dbl)

CONNECTION	N/C	**A**	= Tubing .44" PVC Suction / .50" PE Discharge
SIZES:	N/C	**C**	= Tubing .38" PVC Suction / .38" PE Discharge
	N/C	**F**	= Tubing .44" PVC Suction / .50" PE BLK Discharge
	N/C	**S**	= Tubing .38" PVC Suction / .38" PE BLK Discharge
	N/C	**X w/ 316**	= .25" FNPT Suction / .25" FNPT Discharge

SUFFIX	N/C	**XXX**	= Standard
CODES:	$ 88	**001**	= Current Interrupter
	$ 67	**500***	= Five Function Valve
	$ 155	**520***	= Five Function Degas Valve
	$ 183	**ITS**	= 15 gal ITS Tank System

*** Not available in SS. Adder price is per head.**

A completed model number should look like "X015-XA-BAAAXXX"

CHEM-TECH Series 100D and 150D

Note: Standard Features do not add to the pump price.
Remember that liquid end adders must be doubled for duplex pump models.

Chem-Tech Series 100D and 150D Duplex Selection Guide

1 _ _ _ - _ _ - _ _ _ _ - _ _ _

MODELS:		**Series 100D Duplex Pump**	
	$ 644	**144**	= 4.0 gpd (0.63 lph) / 4.0 gpd (0.63 lph) max pres.: 50 PSI (3.5 BAR)
	$ 644	**145**	= 5.0 gpd (0.79 lph) / 4.0 gpd (0.63 lph) max pres.: 50 PSI (3.5 BAR)
	$ 644	**155**	= 5.0 gpd (0.79 lph) / 5.0 gpd (0.79 lph) max pres.: 50 PSI (3.5 BAR)
	$ 644	**244**	= 6.5 gpd (1.03 lph) / 6.5 gpd (1.03 lph) max pres.: 75 PSI (5.25 BAR)
	$ 644	**245**	= 7.5 gpd (1.18 lph) / 6.5 gpd (1.03 lph) max pres.: 75 PSI (5.25 BAR)
	$ 644	**255**	= 7.5 gpd (1.18 lph) / 7.5 gpd (1.18 lph) max pres.: 75 PSI (5.25 BAR)
	$ 644	**264**	= 12.0 gpd (1.89 lph) / 8.0 gpd (1.26 lph) max pres.: 60 PSI (4.2 BAR)
	$ 644	**265**	= 12.0 gpd (1.89 lph) / 9.0 gpd (1.43 lph) max pres.: 60 PSI (4.2 BAR)
	$ 644	**344**	= 14.0 gpd (2.21 lph) / 14.0 gpd (2.21 lph) max pres.: 75 PSI (5.25 BAR)
	$ 644	**345**	= 18.0 gpd (2.84 lph) / 14.0 gpd (2.21 lph) max pres.: 75 PSI (5.25 BAR)
	$ 644	**355**	= 18.0 gpd (2.84 lph) / 18.0 gpd (2.84 lph) max pres.: 75 PSI (5.25 BAR)
	$ 644	**364**	= 25.0 gpd (3.94 lph) / 15.0 gpd (2.37 lph) max pres.: 60 PSI (4.2 BAR)
	$ 644	**365**	= 25.0 gpd (3.94 lph) / 19.0 gpd (3.0 lph) max pres.: 60 PSI (4.2 BAR)
	$ 644	**444**	= 30.0 gpd (4.73 lph) / 30.0 gpd (4.73 lph) max pres.: 75 PSI (5.25 BAR)
	$ 644	**445**	= 30.0 gpd (4.73 lph) / 33.0 gpd (5.20 lph) max pres.: 75 PSI (5.25 BAR)
		Series 150D	
	$ 722	**455**	= 33.0 gpd (5.20 lph) / 33.0 gpd (5.20 lph) max pres.: 75 PSI (5.25 BAR)
	$ 722	**464**	= 69.0 gpd (10.88 lph) / 32.0 gpd (5.05 lph) max pres.: 60 PSI (4.2 BAR)
	$ 722	**465**	= 69.0 gpd (10.88 lph) / 24.0 gpd (5.53 lph) max pres.: 60 PSI (4.2 BAR)
	$ 722	**466**	= 69.0 gpd (10.88 lph) / 69.0 gpd (10.88 lph) max pres.: 60 PSI (4.2 BAR)

ELECTRICAL:	N/C	**XA**	= 115V, 60 Hz
	$ 20	**XB**	= 230V, 50 Hz (not available in 2120)
	$ 20	**XC**	= 230V, 60 Hz
	$ 27	**XD**	= 115V, 50/60 Hz, T.E.F.C. (X200 only)
	$ 43	**XL**	= 230V, 50/60 Hz, T.E.F.C. (X200 only)

LIQUID END	N/C	**AAA**	= SAN/PVC / Hypalon / Ceramic
MATERIALS:	N/C	**AAB**	= SAN/PVC / Hypalon / TFE
Pump Head &	$ 27	**ABA**	= SAN/PVC / Viton / Ceramic
Fittings/Seats	$ 27	**ABB**	= SAN/PVC / Viton / TFE
& O-rings/Balls	$ 53	**ACA**	= SAN/PVC / Tef/Hyp / Ceramic
	$ 48	**AHA**	= SAN/PVC / Tef/Viton / Ceramic
	$ 33	**BAA**	= PVC / Hypalon / Ceramic
	$ 33	**BAB**	= PVC / Hypalon / TFE
	$ 58	**BBA**	= PVC / Viton / Ceramic
	$ 58	**BBB**	= PVC / Viton / TFE
	$ 75	**BHA**	= PVC / Tef/Hyp / Ceramic
	$ 68	**DAA**	= PP / Hypalon / Ceramic
	$ 68	**DAB**	= PP / Hypalon / TFE
	$ 94	**DBA**	= PP / Viton / Ceramic
	$ 94	**DBB**	= PP / Viton / TFE
	$ 162	**GFA**	= PVC / TFE / Ceramic (dbl)
	$ 162	**GFB**	= PVC / TFE / TFE (dbl)
	$ 625	**EFC**	= 316 / TFE / 316 (dbl)

CONNECTION	N/C	**A**	= Tubing .44" PVC Suction / .50" PE Discharge
SIZES:	N/C	**C**	= Tubing .38" PVC Suction / .38" PE Discharge
	N/C	**F**	= Tubing .44" PVC Suction / .50" PE BLK Discharge
	N/C	**S**	= Tubing .38" PVC Suction / .38" PE BLK Discharge
	N/C	**X w/ 316**	= .25" FNPT Suction / .25" FNPT Discharge

SUFFIX	N/C	**XXX**	= Standard
CODES:	$ 88	**001**	= Current Interrupter
	$ 67	**500***	= Five Function Valve
	$ 155	**520***	= Five Function Degas Valve
	$ 183	**ITS**	= 15 gal ITS Tank System

*** Not available in SS. Adder price is per head.**

A completed model number should look like "1445-XA-BAAAXXX"

STANDARD ACCESSORIES

Series 100/150/100D/150D/200: Pumps with tubing connections come with foot valve/strainer/weight, 4' of suction tubing, bleed valve, 4' of return tubing, 8' of discharge tubing, and injection/back pressure valve assembly.
Any pumps with piping connections come with strainer and injection valve only.

CHEM-TECH

Chem-Tech KOPkit Selection Guide

KX100 - _ _ _ _

PRODUCT DESIGNATOR:	$ 97.80	**KX100**	= Chem-Tech Kopkit
LIQUID END MATERIALS: Head, Diaph., Seats & Balls	N/C	**AAA**	= SAN/PVC / Hypalon / Ceramic
	N/C	**AAB**	= SAN/PVC / Hypalon / TFE
	$ 24.80	**ABA**	= SAN/PVC / Viton / Ceramic
	$ 24.80	**ABB**	= SAN/PVC / Hypalon / TFE
	$ 45.70	**ACA**	= SAN/PVC / Tef/Hyp / Ceramic
	$ 40.30	**AHA**	= SAN/PVC / Tef/Viton / Ceramic
	$ 27.30	**BAA**	= PVC / Hypalon / Ceramic
	$ 27.30	**BAB**	= PVC / Hypalon / TFE
	$ 51.30	**BBA**	= PVC / Viton / Ceramic
	$ 51.30	**BBB**	= PVC / Viton / TFE
	$ 66.50	**BHA**	= PVC / Tef/Hyp / Ceramic
	$ 58.70	**DAA**	= PP / Hypalon / Ceramic
	$ 58.70	**DAB**	= PP / Hypalon / TFE
	$ 83.40	**DBA**	= PP / Viton / Ceramic
	$ 83.40	**DBB**	= PP / Viton / TFE
	$143.50	**GFA**	= PVC / TFE / Ceramic (dbl)
	$143.50	**GFB**	= PVC / TFE / TFE (dbl)
	$450.90	**EFC**	= 316 / TFE / 316 (dbl)
CONNECTION :	N/C	**A**	= Tubing .44" PVC Suction / .50" PE Discharge
	N/C	**C**	= Tubing .38" PVC Suction / .38" PE Discharge
	N/C	**F**	= Tubing .44" PVC Suction / .50" PE BLK Discharge
	N/C	**S**	= Tubing .38" PVC Suction / .38" PE BLK Discharge
	N/C	**X w/ 316**	= .25" FNPT Suction / .25" FNPT Discharge

SERIES 100, 150, 100D, 150D AND 200 PARTS PRICE SCHEDULE

PART #	DESCRIPTION	LIST PRICE
00006	Suction Tubing - per foot 7/16" OD	$ 1.10
00007	Suction Tubing - per foot 3/8"	$ 1.10
00008	Discharge Tubing - per foot 1/2" OD	$ 1.10
00009	Discharge Tubing - per foot 1/2" Black	$ 1.10
00010	Discharge Tubing - per foot 3/8"	$ 1.10
00011	Discharge Tubing - per foot 3/8" Black	$ 1.10
20038	1/2" NPT Connection - PVC - fits Suction side of Pump Head and Back Ck. Vlv. Assy. (per connection)	$ 17.70
20039	1/2" NPT Connection - PVC - fits Discharge side of Pump Head and Strainer Assy. (per connection)	$ 17.70
J20560	Ball Check (ceramic)	$ 4.10
21829	Drive Bracket Assy. S100	$ 14.90
21960	Bronze Bushing (right)	$ 13.60
21961	Bronze Bushing (left)	$ 13.60
21962	Bronze Bushing (center)	$ 13.60
21971	Diaphragm Shaft Bushing	$ 6.90
22255	Cam Bearing Assy. S100 - 3, 7, 15, 30 GPD	$ 20.30
22256	Cam Bearing Assy. S100 - 24 GPD	$ 20.30
22257	Cam Bearing Assy. S150 - 68, 100 GPD	$ 20.30
23700	Shaft Collar - .38 Small	$ 9.60
23701	Shaft Collar - .38 Large	$ 9.60
J24269	Oil (quart)	$ 16.20
24450	Current Interrupter - S100 - 115V	$ 87.60
24452	Current Interrupter - S200 - 115V	$ 87.60
24453	Current Interrupter/Plug Receptacle S200 - 115V	$118.90
24454	Current Interrupter/Plug Receptacle/Bottom Plate (Standard) 115V	$118.90
24481	Current Interrupter - S100 - 230V	$ 87.60
24482	Current Interrupter - S200 - 230V	$ 87.60
24820	Cord Assy. - 115V, 60 Hz	$ 8.00
24821	Cord - 230V, 50 or 60 Hz	$ 8.00
J24960	Coupling Nut, PVC 1/2" (Standard)	$ 4.10
24961	Coupling Nut, PP 1/2"	$ 5.50
24963	Coupling Nut, PVC 3/8"	$ 4.10
25180	Motor Cover	$ 17.70
25704	Diaphragm, Hypalon	$ 31.30
25706	Diaphragm, Viton	$ 48.70
25707	Diaphragm, PTFE Coated	$ 52.40
J26780	Injection Fitting, PVC 3/8"	$ 14.90
26781	Injection Fitting, PVC 1/2"	$ 16.30
26858	Bulkhead Fitting (PP-1/2")	$ 16.40
26867	Bulkhead Fitting (PP-3/8")	$ 16.40
J26907	Bulkhead Fitting (PVC-1/2")	$ 39.20
J26908	Bulkhead Fitting (PVC-3/8")	$ 39.20
J26909	Bulkhead Fitting (PVC-5/16")	$ 39.20
J26910	Bulkhead Fitting without strainer (PVC-3/8")	$ 39.20
J26905	Bulkhead Fitting for ITS (PVC-1/4")	$ 39.20
J27903	Gasket, TFE	$ 4.10
27911	Gasket	$ 2.70
28210	Gear Housing Assembly #210	$276.60
28211	Gear Housing Assembly #215	$276.60
28212	Gear Housing Assembly #220	$276.60
28213	Gear Housing Assembly #230	$276.60
28214	Gear Housing Assembly #240	$276.60
28215	Gear Housing Assembly #260	$276.60
28216	Gear Housing Assembly #280	$276.60
28217	Gear Housing Assembly #2-100	$276.60
28218	Gear Housing Assembly #2-120	$276.60
28521	Grommet	$ 1.40
28800	Head, SAN	$ 35.00
J28801	Head, PVC	$ 51.40
28803	Head, Polypropylene	$ 56.70
28896	Head Assy, (SST-TFE-SST-1/4" S/D)	$401.40
28897	Head Assy, (PVC-VT-C-1/2" S/D)	$113.20
28899	Head Assy, (PP-VT-C-1/2" S/D)	$121.30
28902	Head Assy, (PVC-VT-C-3/8" S/D)	$113.20
28903	Head Assy, (SAN-HYP-C-1/2" S/D)	$ 75.70
28904	Head Assy, (SAN-HYP-C-3/8" S/D)	$ 75.70
29020	Head Assy, (PVC-VT-C-1/2" S - 3/8" D)	$113.20
29036	Head Assy, (PP-VT-C-3/8" D)	$121.30
29230	Motor Housing	$ 25.70
29232	Pump Housing (Duplex)	$ 75.70
29313	Main Housing 10, 15, 20, 30, 40, 60, 100 GPD	$102.50
29314	Main Housing 120 GPD only	$102.50
30460	Output Adjustment Knob	$ 6.90
30467	Output Adj Knob Asm S150	$ 12.10
30468	Output Adj Knob Asm S100	$ 12.10
J30496	Housing - S100 - 3, 7, 15, 30 GPD	$ 45.90
J30497	Housing - S100 - 24 GPD	$ 45.90
J30498	Housing - S150, 68, 100 GPD	$ 70.90
J30503	Motor - 115V, 60 Hz, S200	$133.70
J30504	Motor - 230V, 50 Hz, S200	$140.50
J30505	Motor - 230V, 60 Hz, S200	$140.50
J30507	Kit, Bleed, Valve, PVC/HPY/ 3/8	$ 54.10
J30509	Kit, Bleed, Valve, PVC/VTN/ 3/8	$ 54.10
J30510	Kit, Bleed, Valve, PVC/TFE/ 3/8	$ 54.10
J30511	Kit, Bleed, Valve, FPP/HYP/ 3/8	$ 54.10
J30513	Kit, Bleed, Valve, FPP/VTN/ 3/8	$ 54.10

SERIES 100, 150, 100D, 150D AND 200 PARTS PRICE SCHEDULE

PART #	DESCRIPTION	LIST PRICE
J30514	Kit, Bleed, Valve, FPP/TFE/ 3/8	$ 54.10
J30515	Kit, Bleed, Valve, PVC/HPY/ 1/2	$ 54.10
J30517	Kit, Bleed, Valve, PVC/VTN/ 1/2	$ 54.10
J30518	Kit, Bleed, Valve, PVC/TFE/ 1/2	$ 54.10
J30519	Kit, Bleed, Valve, FPP/HYP/ 1/2	$ 54.10
L3300V03-FPP	Kit, Bleed, Valve, FPP/VTN/ 1/2	$ 49.90
J30522	Kit, Bleed, Valve, FPP/TFE/ 1/2	$ 54.10
31081	Locking Lever - S100, 215, 230, 260	$ 4.10
31082	Locking Lever 20, 40, GPD S200	$ 4.10
31083	Locking Lever - S150, 280, 2-100, 2-120	$ 4.10
32520	Motor - 7 SPM, 115V, 60 Hz, 003	$124.10
32521	Motor - 13 SPM, 115V, 60 Hz, 007	$124.10
32522	Motor - 25 SPM, 115V, 60 Hz, 015	$124.10
32523	Motor - 51 SPM, 115V, 60 Hz, 024/030/068	$124.10
32524	Motor - 7 SPM, 230V, 60 Hz, 003	$132.10
32525	Motor - 13 SPM, 230V, 60 Hz, 007	$132.10
32526	Motor - 25 SPM, 230V, 60 Hz, 015	$132.10
32527	Motor - 51 SPM, 230V, 60 Hz, 024/030/068	$132.10
32528	Motor - 7 SPM, 230V, 50 Hz, 003	$132.10
32529	Motor - 13 SPM, 230V, 50 Hz, 007	$132.10
32530	Motor - 25 SPM, 230V, 50 Hz, 015	$132.10
32531	Motor - 51 SPM, 230V, 50 Hz, 024/030/068	$132.10
32532	Motor - 70 SPM, 115V, 60 Hz, 100	$124.10
32533	Motor - 70 SPM, 230V, 50 Hz, 100	$136.10
32535	Motor - 70 SPM, 230V, 60 Hz, 100	$136.10
J34379	Backing Plate	$ 9.50
34405	Plate, Motor Cover	$ 2.70
34423	Back Plate	$ 28.50
34532	Oil Filler Plug w/Cap	$ 1.30
J37073	Screw Motor Cover	$ 1.30
37080	Output Adjust Screw 10, 20, 40 GPD	$ 6.80
37081	Output Adjust Screw 15, 30, 60 GPD	$ 6.80
37083	Output Adjust Screw 80, 100, 120 GPD	$ 6.80
37088	Output Adj Screw - S150	$ 9.30
37089	Output Adj Screw - S100	$ 9.30
37300	Oil Seal	$ 5.50
J37440	Valve Seat, Hypalon	$ 2.60
J37442	Valve Seat, Viton	$ 4.00
37886	Diaphragm Shaft	$ 25.30
38080	Locking Sleeve	$ 4.00
38980	Diaphragm Return Spring	$ 6.80
38981	Coupling Spring	$ 4.00
38984	Valve Spring - top - light	$ 4.00
J38985	Valve Spring	$ 4.00
J60717	Foot Valve & Strainer Assy (PVD-Hyp-C-3/8")	$ 32.60
J60729	Foot Valve & Strainer Assy (PVD-Hyp-C-1/2")	$ 32.60
J60718	Foot Valve & Strainer Assy (PVD-VT-C-3/8")	$ 38.70
J60730	Foot Valve & Strainer Assy (PVD-VT-C-1/2")	$ 38.70
J41540	Valve Housing Discharge, PVC 1/2"	$ 17.50
41541	Valve Housing Discharge, PP 1/2"	$ 19.70
41543	Valve Housing Discharge, PVC 3/8"	$ 17.50
41544	Valve Housing Discharge, PP 3/8"	$ 19.70
J41548	Valve Housing Suction, PVC 1/2"	$ 17.50
J41834	Valve Housing Suction, PP 1/2"	$ 19.70
41551	Valve Housing Suction, PVC 3/8"	$ 17.50
J41835	Valve Housing Suction, PP 3/8"	$ 19.20
41588	Anti-Siphon Valve (PVC-VT-1/2")	$ 55.90
41624	Anti-Siphon Valve (PVC-HY-1/2") (Standard)	$ 54.50
41657	Back Check Valve Assy (PVC-HY-C-3/8")	$ 38.70
J41658	Back Check Valve Assy (PVC-HY-C-1/2")	$ 39.20
41659	Back Check Valve Assy (PP-VT-C-1/2")	$ 58.60
41661	Back Check Valve Assy (PVC-VT-C-1/2")	$ 40.00
41665	Anti-Scale Injector (PVC-HY-1/2")	$ 43.90
41666	Double Ball Ck Vlv Cart Assy (PVC-3/8") Suct	$ 43.90
J41667	Double Ball Ck Vlv Cart Assy (PVC-1/2") Suct	$ 43.90
41668	Double Ball Ck Vlv Cart Assy (PVC-3/8") Disch	$ 43.90
J41669	Double Ball Ck Vlv Cart Assy (PVC-1/2") Disch	$ 43.90
J41694	Back Check Valve Assy (PVC-HYP-C-1/2")	$ 55.30
41695	Back Check Valve Assy (PVC-VT-C-3/8")	$ 40.00
41696	Back Check Valve Assy (PP-VT-C-3/8")	$ 58.60
41705	6" Ck Vlv Inj Assy (PVC-HY-C-3/8")	$ 51.80
41707	6" Ck Vlve Inj Assy (PVC-VT-C-3/8")	$ 51.80
41708	6" Ck Vlv Inj Assy (PVC-VT-C-1/2")	$ 51.80
41709	6" Ck Vlv Inj Assy (PP-VT-C-3/8")	$ 78.60
41710	6" Ck Vlv Inj Assy (PP-VT-C-1/2")	$ 78.60
41720	Anti-Siphon Valve (PVC-HY-1/2" NPT)	$ 87.60
41786	Anti-Siphon Valve (PVC-VT-1/2" NPT)	$ 87.60
41795	Back Check Valve Assy (PVC-HY-C-1/2" x 1/2" NPT)	$ 69.00
J42020	Head Bolt Washer SS .20 x .38	$ 1.30
J42030	Fiber Washer	$ 1.30
42031	Washer, Fiber	$ 1.30
J60030	Head Assy (SAN-HY-C-3/8" D)	$ 74.50
J61222	Kit, 5 Function Valve incl L380DT03-PVC for Series 100/200	$ 87.30
J61271	Kit, 5 Function Valve incl L380FT03-PVC for Series 200	$ 87.30
J61539	Kit, 5 Function Valve incl L380DT02-PVC for Series 100/200	$ 87.30
J61502	Kit, Oil Drain Plug (includes J37002 & J42030)	$ 1.30
J61503	Kit, S200 Back Plate Screws (5 - J37017, 5 - J42030)	$ 6.80
J61504	Kit, S200 Motor Cover Hdwe (2 - J37002, 2 - J42030)	$ 2.60
J61505	Kit, S100 Motor Cover Hdwe (4 - J37032, 2 - J37073)	$ 5.50
J61506	Kit, S100 Cam Bearing Set Screw (2 - 37047)	$ 1.30
J61507	Kit, S100 Motor Mount Hdwe (3 - 37049)	$ 1.30
J61508	Kit, S200 Main Housing Screw (2 - 37021, 2 - J42083, 2 - 42031)	$ 4.00
J61509	Kit, S200 Shaft Coupling Motor (1 - 24966, 1 - 37060)	$ 9.30
J61510	Kit, S200 Shaft Coupling Gear (1 - 24967, 1 - 37061)	$ 9.30
J61511	Kit, Screw Motor Cover (2 - J37073)	$ 2.60
J61512	Kit, Valve Seats Hypalon (4 - J37440)	$ 9.30
J61513	Kit, Ball Checks (4 - J20560)	$ 14.80
J61515	Kit, Valve Seats Viton (4 - J37442)	$ 14.80
J61516	Kit, Head Mounting Bolts (4 - J37005, 4 - J42020)	$ 9.30
J61518	Kit, Gasket TFE (4 - J27903)	$ 11.90
L9906700-000	Sinker	$ 5.50

SPECIAL ADAPTERS

20013	Pressure Relief Valve Adapter	$ 25.30

STAINLESS STEEL PUMP ACCESSORIES

28896	316 SS Head Assy - Double Check Vlv (TFE, SS) 1/4" FPT Conn	$401.40
J41656	316 SS Double Back Ck Vlv Assembly (TFE, SS) 1/4" FPT Conn	$131.60
J40095	316 SS Strainer Assy 1/4" FPT Conn	$131.60
J41640	316 SS Suction Valve 1/4" FPT	$ 94.40
J41641	316 SS Discharge Valve 1/4" FPT	$ 94.40

Series 250

Selecting the proper Chem-Tech pump is easy! Just refer to selection charts one through five to select the proper output, voltage, liquid end materials, etc. Fill in the model number with the correct codes as you go, taking note of the base and adder prices.

Chem-Tech Series 250 Selection Guide

X25_ - _ _ - _ _ _ Q - XXX

MODELS:	$ 772	**3**	= 76.8 gpd (12.11 lph) max pres.: 225 PSI (15.52 BAR)
	$ 772	**4**	= 108 gpd (17.03 lph) max pres.: 160 PSI (11.03 BAR)
ELECTRICAL:	N/C	**XD**	= 115V, 50/60 Hz, T.E.F.C.
	N/C	**XL**	= 230V, 50/60 Hz, T.E.F.C.
LIQUID END MATERIALS:	N/C	**GFA**	= PVC / TFE (dbl) / Ceramic
CONNECTION SIZES:	N/C	**Q**	= 44" PVC Suction / .50" PP Discharge
SUFFIX CODES:	Standard	**XXX**	= Standard

A complete model should look like "X253-XD-GFAQXXX"

IMPORTANT NOTES:

1. KOPkits are not available for this model.
2. Shipping weight is 21 lbs.

STANDARD ACCESSORIES:

Models with tubing connections come with a footvalve/strainer/weight, 4' of suction tubing, 8' of discharge tubing, and an injection valve.
Models with piping connections come with a strainer and an injection valve.

SERIES 250 PARTS PRICE SCHEDULE

PART #	DESCRIPTION	LIST PRICE
00006	Suction Tubing (per foot) 7/16" OD	$ 1.10
J00012	Polypropylene Tubing, 1/2" OD - Discharge (per foot)	$ 2.60
00013	Polypropylene Tubing, 1/2" OD-Discharge (per ft) - Black	$ 2.60
J20560	Ball Check, Ceramic	$ 4.10
23705	Collar - Model 253	$ 24.50
23706	Collar - Model 254	$ 24.50
J24269	Oil (quart)	$ 16.20
24820	Cord Assembly, 115V, 60Hz	$ 8.00
24821	Cord, 230V, 50-60 Hz	$ 8.00
J24960	Coupling Nut - PVC 1/2"	$ 4.10
25681	Diaphragm Assembly - Model 253	$ 44.50
25682	Diaphragm Assembly - Model 254	$ 54.10
J27903	Gasket, TFE	$ 4.10
28220	Gear Housing Assembly - Model 253/254	$ 292.80
J28815	Pump Head, PVC - Model 253	$ 59.50
28816	Pump Head, PVC - Model 254	$ 59.50
J28919	Head Assembly, PVC - Model 253 - 1/2"	$ 202.30
28920	Head Assembly, PVC - Model 254 - 1/2"	$ 202.30
29230	Motor Cover / 253 - 254	$ 25.70
29313	Pump Housing	$ 102.50
30460	Output Adjustment Knob	$ 6.90
31084	Locking Lever	$ 4.10
32545	Motor, 115/230V, 50/60 Hz, TEFC	$ 152.50
34532	Oil Filler Plug with Cap	$ 1.30
37084	Adjustment Screw	$ 6.90
37886	Diaphragm Shaft	$ 25.30
J41658	Back Check Valve Assy (PVC-HY-C-1/2")	$ 39.20
J41667	Double Ball Check Valve Cart Assy (PVC 1/2") Suction	$ 43.90
41668	Double Ball Check Valve Cart Assy (PVC 3/8") Disch	$ 43.90
J41669	Double Ball Check Valve Cart Assy (PVC 1/2") Disch	$ 43.90
J42020	Bolt Washer (4 required) SS	$ 1.30
J60729	Foot Valve & Strainer Assy (PVD-HY-C-1/2")	$ 32.60
J61272	Kit, 5 Function Valve incl L380KT03-PVC for Series X253	$ 88.60
J61516	Kit, Head Mounting Bolts (4 - J37005, 4 - J42020)	$ 9.30
J61518	Kit, Gasket TFE (4 - J27930)	$ 11.90

CHEM-TECH Series 300

Selecting the proper Chem-Tech pump is easy! Just refer to selection charts one through five to select the proper output, voltage, liquid end materials, etc. Fill in the model number with the correct codes as you go, taking note of the base and adder prices.

Note: Standard Features do not add to the pump price.
Remember that liquid end adders must be multiplied by the number of pump heads.
PLEASE ADD A CRATING FEE OF $50.00 NET PER PUMP WHEN SHIPPING AIR OR OCEAN FREIGHT.

Chem-Tech Series 300 Selection Guide

____ - __ - ___ _ - ___

MODELS:	$ 2,340	**X310**	= **SIMPLEX** 500 gpd (78.83 lph) max pres.: 150 PSI (10 BAR)
	$ 3,610	**X320**	= **DUPLEX** 1000 gpd (157.71 lph) max pres.: 150 PSI (10 BAR)
	$ 4,866	**X330**	= **TRIPLEX** 1500 gpd (236.54 lph) max pres.: 150 PSI (10 BAR)
	$ 6,155	**X340**	= **OUADRAPLEX** 2000 gpd (315.42 lph) max pres.: 150 PSI (10 BAR)
	$ 1,935	**313D**	= **SIMPLEX** 210 gpd (33.08 lph) max pres.: 150 PSI (10 BAR)
	$ 1,935	**316D**	= **SIMPLEX** 430 gpd (67.79 lph) max pres.: 150 PSI (10 BAR)
	$ 3,155	**323D**	= **DUPLEX** 420 gpd (66.21 lph) max pres.: 150 PSI (10 BAR)
	$ 3,155	**326D**	= **DUPLEX** 860 gpd (135.63 lph) max pres.: 150 PSI (10 BAR)

ELECTRICAL:		**Series 300 Direct Drive Motor (models ending in D, i.e. 316D)**	
	N/C	**XT**	= 115/230V, 50/60 Hz, T.E.F.C.
		Series 300 Motors (models beginning with an X, i.e. X320)	
	N/C	**XA**	= 115V, 60 Hz, single phase, open
	$ 300	**XB**	= 230V, 50 Hz, single phase, open
	$ 267	**XC**	= 230V, 60 Hz, single phase, open
	$ 253	**XD**	= 115V, 60 Hz, single phase, T.E.F.C.
	$ 285	**XG**	= 220/440V, 50/60 Hz, 3 phase, open
	$ 366	**XH**	= 220/440V, 60 Hz, 3 phase, T.E.F.C.
	$ 515	**XI**	= 220/440V, 50/60 Hz, 3 phase, Explosion Proof
	$ 443	**XJ**	= 115V, 60 Hz, single phase, Explosion Proof
	$ 2,539	**XK**	= 115V, 50/60 Hz, 1/3 HP, TENV DC motor & SCR Controller, 4-(X310 & X320 only)
	$ 366	**XN**	= 220/440V, 50 Hz, 3 phase, T.E.F.C.
	$ (129)	**XX**	= No motor

LIQUID END MATERIALS:	**PER HEAD**		
Pump Head &	N/C	**AHA**	= SAN/PVC / Hypalon / Ceramic
Fittings/Seats	N/C	**AHB**	= SAN/PVC / Hypalon / Ceramic
& O-rings/Balls	$ 100	**ACA**	= SAN/PVC / Viton / TFE
	$ 100	**ACB**	= SAN/PVC / Viton / Ceramic
	$ 106	**BHA**	= PVC / Hypalon / Ceramic
	$ 106	**BHB**	= PVC / Hypalon / TFE
	$ 204	**BCA**	= PVC / Viton / Ceramic
	$ 204	**BCB**	= PVC / Viton / TFE
	$ 161	**DHA**	= PP / Hypalon / Ceramic
	$ 161	**DHB**	= PP / Hypalon / TFE
	$ 259	**DCA**	= PP / Viton / Ceramic
	$ 259	**DCB**	= PP / Viton / TFE
	$ 1,151	**EFC**	= 304 / 304 / 316

*** Diaphragms are all PTFE faced.**

CONNECTION SIZES:	N/C	**A**	= Tubing .44" PVC Suction / .50" PE Discharge
	$ 39	**X w/ PVC**	= Tubing .50" MNPT Suction / .50" MNPT Discharge
	N/C	**X w/ 316**	= Tubing .50" MNPT Suction / .50" MNPT Discharge

SUFFIX CODES:	N/C	**XXX**	= Standard

A completed model number should look like "X330-XD-AHAAXXX"

IMPORTANT NOTE: KOPkits not available for this model.

STANDARD ACCESSORIES:

Models with tubing connections come with a foot valve/strainer/weight, 4' of suction tubing, 8' of discharge tubing, and an injection valve.
Models with piping connections come with a strainer and an injection valve.

SERIES 300 PARTS PRICE SCHEDULE

PART #	DESCRIPTION	PRICE
00006	Suction Tubing (per foot) 7/16" OD - PVC	$ 1.10
00008	Discharge Tubing Polyethylene (per foot) 1/2" OD	$ 1.10
J20560	Ball Check (Ceramic)	$ 4.10
20700	Base-Simplex	$ 120.10
20843	Drive Bearing	$ 52.40
20844	Main Shaft Bearing	$ 32.60
20980	V-Belt	$ 14.90
21407	Head Bolt, 1/4" - 20 x 2,2, Stainless Steel	$ 12.10
21409	Head Bolt, 1/4" - 20 x 10,5, Stainless Steel	$ 20.30
21821	Bracket	$ 55.30
22253	Cam	$ 74.10
23702	Locking Collar	$ 8.00
J23723	Collar, Suction Swivel Assy	$ 40.60
J24960	Coupling Nut, PVC 1/2" (Standard)	$ 4.10
25712	Diaphragm, PTFE Coated	$ 110.80
J26780	Injection Fitting	$ 14.90
J27903	Gasket, TFE	$ 4.10
27906	Gasket, Viton	$ 4.10
28661	Belt Guard	$ 198.30
28805	Head, Acrylic	$ 133.70
J28814	Head, PVC	$ 153.80
28809	SST Head 304	$ 764.90
28813	Polypropylene Head	$ 268.50
28939	Head Assembly, Acrylic (SAN-HY-C) 1/2"	$ 336.00
28940	Head Assembly, PVC (PVC-HY-C)	$ 358.90
29074	Polypropylene Head Assy	$ 392.60
29107	SST Head Assy 304	$ 945.70
29237	Housing Back Plate	$ 64.60
29238	Pump, Housing Simplex	$ 666.50
29297	Pump Housing, Assembly w/Fitting & Tubing (SAN-HY-C)	$ 1,367.90
J30120	Reducer Input Shaft Key	$ 1.30
30121	Main Shaft Key	$ 2.70
30461	Output Adjusting Knob	$ 23.00
32590	Motor (Standard) 1/3 hp, 115V, 60Hz ODP	$ 437.10
32970	Adjusting Screw Lock Nut	$ 26.90
33081	O Ring Seal - Hypalon	$ 6.90
33761	Output Indicator Pin	$ 5.50
35220	Pulley (4-step) - Motor	$ 44.50
35221	Pulley (4-step) - Reducer	$ 44.50
J35918	Speed Reducer 60:1	$ 1,022.20
J36395	Cam Bearing Locking ring	$ 2.70
J37440	Valve Seat, Hypalon	$ 2.60
J37442	Valve Seat, Viton	$ 4.00
37447	Valve Seat, Viton	$ 5.50
37887	Main Shaft	$ 78.50
37888	Output Adjusting Shaft	$ 21.50
37889	Diaphragm Shaft	$ 31.30
38982	Diaphragm Return Spring	$ 12.10
38983	Valve Spring	$ 5.50
39180	Sprocket - Motor	$ 24.50
39181	Sprocket - Reducer	$ 24.50
40087	Strainer Assembly - PP - HY - C - 1/2"	$ 43.30
J41548	Valve Housing PVC 1/2"	$ 17.50
41565	Valve Housing Discharge PVC	$ 33.80
41566	Valve Housing Suction PVC	$ 31.30
41568	Valve Seat, Suction - PVC	$ 94.50
41637	Back Check Valve Assembly (PVC - HY - C - 1/2")	$ 39.20
41638	Back Check Valve Assy (PVC - HY - C - 1/2")	$ 42.00
41677	Valve Seat Suction Assembly	$ 141.60
J61519	Kit, Gasket Hypalon (2 - 27905)	$ 6.90
J61520	Kit, Valve Seat Hypalon (2 - 37446)	$ 9.60
J61521	Kit, Acorn Nut Set (10 - 32960, 10 - 42022)	$ 21.50
J61522	Kit, Output Indicator (2 - 37030, 1 - 34381)	$ 20.30
J61523	Kit, Coupling Chain (1 - 24976, 1 - 33765, 1 - 36400)	$ 29.60
J61526	Kit, Valve Components (2 - 37446, 2 - 27905, 2 - L1000500-ALA)	$ 28.50
J61527	Kit, Suction Swivel Base (1 - 20705, 1 - 37040)	$ 13.60
J61528	Kit, Head Bolt 2,2" (2 - 21407, 2 - 32960, 2 - 42022)	$ 31.30
L1000500-ALA	Ball Check - Ceramic	$ 5.50

CHEM-TECH Series 400

Selecting the proper Chem-Tech pump is easy! Just refer to selection charts one through five to select the proper output, voltage, liquid end materials, etc. Fill in the model number with the correct codes as you go, taking note of the base and adder prices.

Note: Standard Features do not add to the pump price.
Remember that liquid end adders must be multiplied by the number of pump heads.
PLEASE ADD A CRATING FEE OF $50.00 NET PER PUMP WHEN SHIPPING AIR OR OCEAN FREIGHT.

Chem-Tech Series 400 Selection Guide

X_ _ _ - _ _ - _ _ _ _ - XXX

MODELS:		Piston Diameter			
	$ 1,533	**405** = **Simplex**	1/4"	0.5 gph (1.89 lph) max pres.: 800 PSI (55.17 BAR)
	$ 1,994	**406** = **Duplex**	1/4"	1.0 gph (3.76 lph) max pres.: 800 PSI (55.17 BAR)
	$ 1,533	**409** = **Simplex**	3/8"	0.81 gph (3.06 lph) max pres.: 800 PSI (55.17 BAR)
	$ 1,994	**410** = **Duplex**	3/8"	1.72 gph (6.50 lph) max pres.: 800 PSI (55.17 BAR)
	$ 1,533	**413** = **Simplex**	1/4"	1.0 gph (3.78 lph) max pres.: 800 PSI (55.17 BAR)
	$ 1,994	**414** = **Duplex**	1/4"	2.00 gph (7.56 lph) max pres.: 800 PSI (55.17 BAR)
	$ 1,533	**417** = **Simplex**	3/8"	1.62 gph (6.12 lph) max pres.: 800 PSI (55.17 BAR)
	$ 1,994	**418** = **Duplex**	3/8"	3.24 gph (12.25 lph) max pres.: 800 PSI (55.17 BAR)
	$ 1,533	**425** = **Simplex**	1/2"	1.65 gph (6.24 lph) max pres.: 800 PSI (55.17 BAR)
	$ 1,994	**426** = **Duplex**	1/2"	3.3 gph (12.47 lph) max pres.: 800 PSI (55.17 BAR)
	$ 1,533	**429** = **Simplex**	5/8"	3.10 gph (11.72 lph) max pres.: 800 PSI (55.17 BAR)
	$ 1,994	**430** = **Duplex**	5/8"	6.2 gph (23.44 lph) max pres.: 800 PSI (55.17 BAR)
	$ 1,533	**433** = **Simplex**	1/2"	3.3 gph (12.47lph) max pres.: 800 PSI (55.17 BAR)
	$ 1,994	**434** = **Duplex**	1/2"	6.6 gph (24.95 lph) max pres.: 800 PSI (55.17 BAR)
	$ 1,533	**437** = **Simplex**	5/8"	6.6 gph (24.95 lph) max pres.: 800 PSI (55.17 BAR)
	$ 1,994	**438** = **Duplex**	5/8"	12.4 gph (46.87 lph) max pres.: 800 PSI (55.17 BAR)
	$ 1,866	**441** = **Simplex**	1"	8.5 gph (32.13 lph) max pres.: 300 PSI (20.69 BAR)
	$ 2,701	**442** = **Duplex**	1"	17.0 gph (64.25 lph) max pres.: 300 PSI (20.69 BAR)
	$ 1,866	**445** = **Simplex**	1"	17.0 gph (64.25 lph) max pres.: 300 PSI (20.69 BAR)
	$ 2,701	**446** = **Duplex**	1"	34.0 gph (128.52 lph) max pres.: 300 PSI (20.69 BAR)

ELECTRICAL:	N/C	**XT** = 115/230 V, 50/60 Hz, T.E.F.C.

LIQUID END MATERIALS:	PER HEAD <1"	Based on Piston Diameter
Pump Head & Fittings/ Packing & Balls	N/C	**EFA** = 303 SS / TFE / Ceramic
	N/C	**EFC** = 303 SS / TFE / 316 SS
	=1"	
	$ 416	**EFC** = 304 SS / TFE / 316 SS
	$ 416	**EFB** = 304 SS / TFE / TFE

CONNECTION SIZES:				
	N/C	**X** =	< 1"	1/2" FNPT Suction / 1/2" FNPT Discharge
	N/C	**X** =	≥ 1"	1/4" FNPT Suction / 1/4" FNPT Discharge

SUFFIX CODES:	N/C	**XXX** = Standard

A completed model shold look like "X413-XT-EFAXXXX"

Series 500

Selecting the proper Chem-Tech pump is easy! Just refer to selection charts one through five to select the proper output, voltage, liquid end materials, etc. Fill in the model number with the correct codes as you go, taking note of the base and adder prices.

Note: Standard Features do not add to the pump price.
Remember that liquid end adders must be multiplied by the number of pump heads.
PLEASE ADD A CRATING FEE OF $50.00 NET PER PUMP WHEN SHIPPING AIR OR OCEAN FREIGHT.

Chem-Tech Series 500 Selection Guide

X_ _ _ - _ _ - _ _ _ X - XXX

MODELS:		Piston Diameter			
	$ 2,218	**541**	= **Simplex**	1"	6.97 gph (26.38 lph) max pres.: 500 PSI (34.48 BAR)
	$ 2,983	**542**	= **Duplex**	1"	13.95 gph (52.76 lph) max pres.: 500 PSI (34.48 BAR)
	$ 2,218	**545**	= **Simplex**	1"	13.7 gph (51.85 lph) max pres.: 500 PSI (34.48 BAR)
	$ 2,983	**546**	= **Duplex**	1"	27.41 gph (103.71 lph) max pres.: 500 PSI (34.48 BAR)
	$ 2,218	**548**	= **Simplex**	1"	27.65 gph (104.65 lph) max pres.: 500 PSI (34.48 BAR)
	$ 2,983	**572**	= **Duplex**	1"	55.30 gph (209.31 lph) max pres.: 500 PSI (34.48 BAR)
	$ 2,978	**551**	= **Simplex**	1 1/4"	10.89 gph (41.24 lph) max pres.: 300 PSI (20.69 BAR)
	$ 4,504	**552**	= **Duplex**	1 1/4"	21.78 gph (82.48 lph) max pres.: 300 PSI (20.69 BAR)
	$ 2,978	**553**	= **Simplex**	1 1/4"	21.41 gph (81.06 lph) max pres.: 300 PSI (20.69 BAR)
	$ 4,504	**554**	= **Duplex**	1 1/4"	42.82 gph (162.12 lph) max pres.: 300 PSI (20.69 BAR)
	$ 2,978	**559**	= **Simplex**	1 1/4"	43.20 gph (163.54 lph) max pres.: 300 PSI (20.69 BAR)
	$ 4,504	**560**	= **Duplex**	1 1/4"	86.40 gph (327.08 lph) max pres.: 300 PSI (20.69 BAR)
	$ 3,103	**561**	= **Simplex**	1 1/2"	15.69 gph (59.38 lph) max pres.: 200 PSI (13.79 BAR)
	$ 4,758	**562**	= **Duplex**	1 1/2"	31.38 gph (118.77 lph) max pres.: 200 PSI (13.79 BAR)
	$ 3,103	**563**	= **Simplex**	1 1/2"	30.83 gph (116.69 lph) max pres.: 200 PSI (13.79 BAR)
	$ 4,758	**564**	= **Duplex**	1 1/2"	61.66 gph (233.38 lph) max pres.: 200 PSI (13.79 BAR)
	$ 3,103	**569**	= **Simplex**	1 1/2"	62.21 gph (235.46 lph) max pres.: 200 PSI (13.79 BAR)
	$ 4,758	**570**	= **Duplex**	1 1/2"	124.42 gph (470.93 lph) max pres.: 200 PSI (13.79 BAR)

ELECTRICAL:		
	N/C	**XA** = 115V, 60 Hz, single phase, open
	$ 315	**XB** = 230V, 50 Hz, single phase, open
	$ 282	**XC** = 230V, 60 Hz, single phase, open
	$ 268	**XD** = 115V, 60 Hz, single phase, T.E.F.C.
	$ 412	**XG** = 220/440V, 50/60 Hz, 3 phase, open
	$ 576	**XH** = 220/440V, 60 Hz, 3 phase, T.E.F.C.
	$ 658	**XI** = 220/440V, 50/60 Hz, 3 phase, Explosion Proof
	$ 576	**XJ** = 115V, 60 Hz, single phase, Explosion Proof
	$ 658	**XN** = 220/440V, 50 Hz, 3 phase, T.E.F.C.

LIQUID END MATERIALS:	PER HEAD =1"	Based on Piston Diameter
Pump Head &	$ 416	**EFC** = 304 SS / TFE / 316 SS
Fittings/	$ 416	**EFB** = 304 SS / TFE / TFE
Packing & Balls	**=1 1/4"**	
	$ 479	**EFC** = 304 SS / TFE / 316 SS
	$ 479	**EFB** = 304 SS / TFE / TFE
	=1 1/2"	
	$ 559	**EFC** = 304 SS / TFE / 316 SS
	$ 559	**EFB** = 304 SS / TFE / TFE

CONNECTION SIZES:					
	N/C	**X**	=	< 1"	1/4" FNPT Suction / 1/4" FNPT Discharge
	N/C	**X**	=	≥ 1"	1/2" FNPT Suction / 1/2" FNPT Discharge

SUFFIX CODES:		
	N/C	**XXX** = Standard

A completed model number should look like "X545-XJ-EFCXXXX"

SERIES 400 and SERIES 500 PARTS

SERIES 400 PARTS

PART #	DESCRIPTION	LIST PRICE
J20723	Pump Base (Simplex)	$ 102.50
20703	Pump Base (Duplex)	$ 126.90
20845	Main bearing (closed)	$ 54.10
21965	Main Shaft Motor Bushing	$ 10.90
21964	Outboard Bearing	$ 11.80
26810	Grease Relief Fitting	$ 5.50
26811	Grease Fitting	$ 5.50
28200	Gear/Shaft Assy - 30RPM, 115V OPD Simp	$ 190.30
28202	Gear/Shaft Assy - 60 RPM, 115V OPD Simp	$ 190.30
29246	Housing Set Assy S400 Simplex & Duplex	$ 170.00
29249	Housing Set Assy S400 Duplex	$ 170.00
30125	Main Shaft Key	$ 4.10
32632	Motor Assy w/Shaft 60 RPM 115V ODP-Simp	$ 538.20
32634	Motor Assy w/Shaft 30 RPM 115V ODP-Dup	$ 559.80
32645	Motor Assy w/Shaft 60 RPM 115V ODP-Dup	$ 559.80
32646	Motor Assy w/Shaft 30 RPM 115V ODP-Simp	$ 538.20
32648	Shaft Assy, Coupled	$ 186.20
J32749	MTR, 30 RPM 115/230V TEFC	$ 689.30
J32750	MTR, 60 RPM 115/230V TEFC	$ 689.30
J32943	Mounting Nut (4 req)	$ 10.90
32971	Adjustment Screw Lock Nut	$ 16.20
33764	Slide Pin	$ 20.30
36396	Main Shaft Locking Ring	$ 4.10
J37054	Set Screw 1/4" - 20 x 3/4"	$ 5.50
37090	Adjustment Screw	$ 10.90
37305	PVC Seal (2 req)	$ 2.60
37891	Main Shaft (Duplex)	$ 64.60
38221	Slide (Simplex / Duplex)	$ 58.20
38224	Slide Arm Assembly (Simplex)	$ 89.00
38225	Slide Arm Assembly (Duplex)	$ 95.70
38988	Valve Spring (2 req)	$ 4.10
41672	Discharge Check Valve Assy 1/4" FPT	$ 63.30
41674	Suction Check Valve Assy 1/4" FPT	$ 63.30
J61530	Kit, Main Shaft (Simp, TEFC) (1 - 37899, 3 - D4844-31)	$ 79.70
J61531	Kit, Main Bearing Cam (1 - 22263, 1 - 33771)	$ 44.50
J61532	Kit, Housing Set Hdwe (2 - 21407, 2 - 21406, 2 - 42022, 2 - 42035, 4 - 32942)	$ 52.40
L1000400-ALA	Ceramic Ball 1/4" (2 req)	$ 5.50
L1000500-ALA	Ceramic Ball 3/8" (2 req)	$ 5.50
	A-PISTON HEAD ASSEMBLY	
28925	5/8" Bore CRS	$ 315.70
28929	5/8" Bore Stainless Steel	$ 402.20
28930	1/2" Bore Stainless Steel	$ 402.20
28931	3/8" Bore Stainless Steel	$ 402.20
28932	1/4" Bore Stainless Steel	$ 402.20
	B-PISTON	
34180	1/4" Diameter 303 SS	$ 55.30
34182	3/8" Diameter 303 SS	$ 55.30
34184	1/2" Diameter 303 SS	$ 55.30
34186	5/8" Diameter 303 SS	$ 55.30
	C-PACKING NUT	
32972	1/4" Bore	$ 24.50
32973	3/8" Bore	$ 24.50
32974	1/2" Bore	$ 24.50
32975	5/8" Bore	$ 24.50
	D-PACKING SET	
33420	1/4" Bore (Neoprene - Standard)	$ 35.00
33421	3/8" Bore (Neoprene - Standard)	$ 36.30
33422	1/2" Bore (Neoprene - Standard)	$ 36.30
33423	5/8" Bore (Neoprene - Standard)	$ 36.30
33427	1/4" Bore (TFE - Optional)	$ 44.90
33428	3/8" Bore (TFE - Optional)	$ 43.30
33429	1/2" Bore (TFE - Optional)	$ 43.30
33430	5/8" Bore (TFE - Optional)	$ 43.30
	E-GREASE GLAND	
28380	1/4" Bore	$ 17.70
28380	3/8" Bore	$ 17.70
28381	1/2" Bore	$ 17.70
28381	5/8" Bore	$ 17.70

PART #	DESCRIPTION	LIST PRICE
	F-PUMP HEAD	
28821	1/4" Bore Stainless Steel S-Series	$ 276.60
28823	3/8" Bore Stainless Steel S-Series	$ 276.60
28825	1/2" Bore Stainless Steel S-Series	$ 276.60
28826	5/8" Bore CRS	$ 268.50
28827	5/8" Bore Stainless Steel S-Series	$ 276.60
J24960	Coupling Nut (2 req)	$ 4.10
J41667	Double Ball Check Valve Cartridge (Suction)	$ 43.90
J41669	Double Ball Check Valve Cartridge (Discharge)	$ 43.90

SERIES 500 PARTS

20579	SS Ball 7/16" (2 req)	$ 4.10
20580	SS Ball 11/16" (2 req)	$ 6.90
20704	S500 Base (Simplex or Duplex)	$ 152.50
21970	Bronze Bushing	$ 25.70
25004	Delrin Motor Coupling Assy	$ 76.90
29290	Housing Set Assy 115 SPM Simplex-Duplex	$ 170.00
29291	Housing Set Assy 115 SPM Duplex	$ 170.00
29247	Housing Set Assy S500 Simplex-Duplex	$ 170.00
29248	Housing Set Assy S500 Duplex	$ 170.00
32590	Motor 1/3" HP 56 FR, 115V, Open	$ 437.10
33082	O-Ring, Head Cap, VT-1,859 x ,139	$ 5.50
33083	O-Ring, Head Cap, VT-2,359 x ,139	$ 5.50
33767	Pin - Suction Check Valve	$ 10.90
J35913	Speed Reducer, 115 SPM	$1,022.20
J35916	Speed Reducer, 57 SPM	$1,022.20
J35918	Speed Reducer, 29 SPM	$1,022.20
37053	Piston Set Screw	$ 2.60
37306	PVC Seal (2 req)	$ 4.10
38710	Spacer, packing 1"	$ 33.80
38711	Spacer, packing 1-1/4"	$ 33.80
38712	Spacer, packing 1-1/2"	$ 33.80
38986	Spring-Packing Compression 1"	$ 25.70
38987	Spring-Packing Compression 1-1/4" & 1-1/2"	$ 25.70
38989	Valve Spring	$ 8.00
41673	Discharge Check Valve Assy 1/2" FPT	$ 141.60
41675	Suction Check Valve Assy 1/2" FPT	$ 141.60
J61523	Kit, Coupling Chain (1 - 24976, 1 - 33765, 1 - 36400)	$ 29.60
J61531	Kit, Main Bearing Cam (1 - 22263, 1 - 33771)	$ 44.50
J61536	Kit, Coupling Shaft (1 - 24984, 1 - 37059, 1 - 37047)	$ 105.30
J61537	Kit, Main Shaft (1 - 30121, 1 - 37894)	$ 70.10
	G-SERIES 500 PUMP HEAD	
28829	1" Bore Stainless Steel S-SERIES	$ 448.00
28831	1-1/4" Bore Stainless Steel S-SERIES	$ 830.80
28831	1-1/2" Bore Stainless Steel S-SERIES	$ 830.80
	G-SERIES 500 PUMP HEAD CAP	
28841	1" Stainless Steel	$ 133.70
28843	1-1/4" & 1-1/2" Stainless Steel	$ 253.80
	H-SERIES 500 PISTON	
34188	1" Diameter 303 SS	$ 106.70
34189	1-1/4" Diameter 303 SS	$ 157.70
34190	1-1/2" Diameter 303 SS	$ 268.50
	I-SERIES 500 PACKING SET	
33424	1" Bore (Neoprene - Standard)	$ 44.50
33425	1-1/4" Bore (Neoprene - Standard)	$ 58.20
33426	1-1/2" Bore (Neoprene - Standard)	$ 64.60
33431	1" Bore (TFE - Optional)	$ 51.40
33432	1-1/4" Bore (TFE - Optional)	$ 66.30
33433	1-1/2" Bore (TFE - Optional)	$ 74.10
	J-SERIES 500 PISTON HEAD ASSEMBLY	
28934	1" Bore Stainless Steel	$ 681.00
28935	1-1/4" Bore CRS	$ 744.50
28936	1-1/4" Bore Stainless Steel	$1,073.90
28937	1-1/2" Bore CRS	$ 759.40
28938	1-1/2" Bore Stainless Steel	$1,080.50

***Series 400-500 1" parts are interchangeable.**

MEC-O-MATIC DIAPHRAGM PUMPS

STINGRAY Series 100 & 200

Mec-O-Matic STINGRAY 100 and 200 Series Selection Guide — US_ _ _ _ - BCA K XXX

MODELS:		**Series 100**
	$ 421	**105** = 8.0 gpd (1.26 lph) max pres.: 100 PSI (6.90 BAR)
	$ 421	**110** = 12.0 gpd (1.89 lph) max pres.: 100 PSI (6.90 BAR)
	$ 421	**125** = 30.0 gpd (4.73 lph) max pres.: 100 PSI (6.90 BAR)
	$ 448	**150** = 60.0 gpd (9.46 lph) max pres.: 100 PSI (6.90 BAR)
	$ 448	**175** = 90.0 gpd (14.19 lph) max pres.: 60 PSI (4.14 BAR)
		Series 200
	$ 412	**205** = 8.0 gpd (1.26 lph) max pres.: 100 PSI (6.90 BAR)
	$ 412	**210** = 12.0 gpd (1.89 lph) max pres.: 100 PSI (6.90 BAR)
	$ 412	**225** = 30.0 gpd (4.73 lph) max pres.: 100 PSI (6.90 BAR)
	$ 426	**250** = 60.0 gpd (9.46 lph) max pres.: 100 PSI (6.90 BAR)
	$ 426	**275** = 90.0 gpd (14.19 lph) max pres.: 60 PSI (4.14 BAR)
ELECTRICAL:	N/C	**XA** = 115V, 60 Hz
	$ 18	**XL** = 230V, 50/60 Hz
LIQUID END MATERIALS:	N/C	**BCA** = PVC / Viton / Ceramic
CONNECTION SIZES:	N/C	**K** = Tubing .38" PVC Suction / .38" PE Discharge
SUFFIX CODES:	N/C	**XXX** = Standard

A completed model should look like "US110XA-BCAKXXX"

1. Maximum GPD Rating is at Zero PSI.
2. Standard material of construction is: PVC head/fittings, Viton Seats, PTFE faced diaphragm, spring loaded ceramic balls, 4 ft. 3/8" PVC suction tubing, 8 ft. 3/8" polyethelene discharge tubing.
3. KOPkit includes head assembly, diaphragm and head screws.
4. Shipping weight is 8 lbs

STINGRAY Electro Mechanical Series

Mec-O-Matic STINGRAY ELECTRO MECH. Selection Guide — US_ _ _ _ - XA BCA K XXX

MODELS:	$ 545	**105** = 8.0 gpd (1.26 lph) max pres.: 100 PSI (6.90 BAR)
	$ 545	**110** = 12.0 gpd (1.89 lph) max pres.: 100 PSI (6.90 BAR)
	$ 520	**205** = 8.0 gpd (1.26 lph) max pres.: 100 PSI (6.90 BAR)
	$ 520	**210** = 12.0 gpd (1.89 lph) max pres.: 100 PSI (6.90 BAR)
TIMER:	N/C	**D** = 24 Hour Timer
	N/C	**W** = 7 Day Timer
ELECTRICAL:	N/C	**XA** = 115V, 60 Hz
LIQUID END MATERIALS:	N/C	**BCA** = PVC / Viton / Ceramic
CONNECTION SIZES:	N/C	**K** = Tubing .38" PVC Suction / .38" PE Discharge
SUFFIX CODES:	N/C	**XXX** = Standard

A completed model should look like "US110XADXABCAKXXX"

1. Available in 115V 60 cycle only.
2. Maximum GPD Rating is at Zero PSI.
3. Standard material of construction is: PVC head/fittings, Viton Seats, PTFE faced diaphragm, spring loaded ceramic balls, 4 ft. 3/8" PVC suction tubing, 8 ft. 3/8" polyethelene discharge tubing.

MEC-O-MATIC

KOPkits

Mec-O-Matic STINGRAY KOPkit Selection Guide

KUSR_ - BCA K

PRODUCT DESIGNATOR:	$119.70	**1** = Series 100
	$105.70	**2** = Series 200
LIQUID END MATERIALS: Head, Diaph., Seats & Balls	N/C	**BCA** = PVC / Viton / Ceramic
CONNECTION :	N/C	**K** = Tubing .38" PVC Suction / .38" PE Discharge

STINGRAY SERIES PARTS PRICE SCHEDULE

PART #	DESCRIPTION	LIST PRICE	PART #	DESCRIPTION	LIST PRICE
41403	Discharge Tubing 8 ft PE 3/8"	$ 9.60	U8800656	Kit, SR Drive Block Conversion	$ 25.70
J41424	Suction tubing 4 ft PVC 3/8"	$ 6.90	U8800701	Head Assembly Series 100	$ 95.70
U0810545	Spring Clutch	$ 4.10	U8800703	Head Assembly Series 200	$ 55.30
U0811279	Pump Head Series 200	$ 13.60	U8800704	Valve Kit Series 200 (viton)	$ 23.00
U0817888	Shoulder Screw 10 - 24 X ,58	$ 1.30	U8800729	Kit, Head Bolt S100 (4 - U0810036, 4 - L9801300-188)	$ 10.90
U0811861	Head Cover Series 100	$ 4.10	U8800730	Kit, Head Bolt S200 (4 - U0813501, 4 - L9801300-188)	$ 10.90
U0812318	Pump Head Series 100	$ 36.40	U8800732	Kit, Foot Pads (4 - U0818379)	$ 4.10
U0814211	Compression Nut	$ 4.10	U8800735	Kit, Spring (2 - U0812915)	$ 5.50
U0818143	Drive Block	$ 8.00	L9900700-000	Strain Relief	$ 2.70
U0818148	Drive Plate	$ 4.10	U0818406	Motor, SR 105/205, 120V, 60Hz	$ 155.20
U0818215	Motor Housing	$ 35.00	U0818407	Motor, SR 105/205, 240V, 50/60Hz	$ 209.20
U0818226	Regulator Housing	$ 21.50	U0818408	Motor, SR 110/210, 120V, 60Hz	$ 155.20
U0818227	Regulator Top Cover	$ 17.70	U0818409	Motor, SR 110/210, 240V, 50/60Hz	$ 209.20
U0818256	Output Adjustment Knob	$ 4.10	U0818410	Motor, SR 125/225, 120V, 60Hz	$ 180.90
U0818257	Wear Plate	$ 8.00	U0818411	Motor, SR 125/225, 240V, 50/60Hz	$ 203.80
U0818258	Adjustment Knob Bushing	$ 4.10	U0818412	Motor, SR 150/250, 120V, 60Hz	$ 194.20
U0818339	Adjustment Plate	$ 6.90	U0818413	Motor, SR 150/250, 240V, 50/60Hz	$ 203.80
U0818340	Adjustment Shaft Assembly	$ 10.90	U0818414	Motor, SR 175/275, 120V, 60Hz	$ 194.20
U8800412	Tubing Assy, 15', 3/8"	$ 18.80	U0818415	Motor, SR 175/275, 240V, 50/60Hz	$ 203.80
U8800456	Foot Valve Strainer 3/8" OD Tubing (viton)	$ 23.00	24820	Power Cord 120V	$ 8.00
U8800470	Diaphragm Kit	$ 39.20	24821	Power Cord 240V	$ 8.00
U8800525	Relief/Release Plunger Kit (viton)	$ 25.70	U0818561	Timer Assy, 24 hr (SR Electro Mech)	$ 62.00
U8800554	Cartridge Valve Kit Series 100 (viton)	$ 39.20	U0818562	Timer Assy, 7 Day (SR Electro Mech)	$ 63.30
U8800606	Injection Fitting	$ 21.50	U0818564	Motor Fan SR 105, 110, 205, 210	$ 4.10

MISCELLANEOUS TUBING

PART NUMBER	DESCRIPTION	LIST PRICE	PART NUMBER	DESCRIPTION	LIST PRICE
U0811307	Tube PE, Transparent, 1/4" OD X 100 ft.	$ 48.50	U0818324	Viton Peri. Tube, 3/8" OD X 9"	$ 28.50
J41447	Tube PE, White, 3/8" OD X 100 ft.	$102.60	U0818654	Nozzle Assembly	$ 87.60
U0818134	Viton Peri. Tube, 7/16" OD X 9"	$ 36.40	U0818994	Tube PE, Black, 1/4" OD X 15 ft.	$ 20.30

MEC-O-MATIC WAREWASH PUMPS

Series T-2000 Misting System

Mec-O-Matic Series T-2000 Selection Guide — US275 | XA | BCXX112

MODELS:	$ 884	**US275** = 6 oz. per minute max pres.: 100 PSI (6.90 BAR)
ELECTRICAL:	N/C	**XA** = 115V, 60 Hz
LIQUID END MATERIALS:	N/C	**BCXX112** = PVC / Viton / Ceramic

1. Standard system includes SR275 pump, 24 hour timer, spray nozzle and tubing in a lockable metal cabinet with an industrial gray finish.
2. Available in 115 volt only.

MEC-O-MATIC PERISTALTIC PUMPS

Dolphin Series

Mec-O-Matic DOLPHIN Series Selection Guide — UD_ _ - _ _ - _ _ _ | U | XXX

MODELS:	$ 387	**10** = 13.0 gpd (2.05 lph) max pres.: 25 PSI (1.72 BAR)
	$ 387	**50** = 60.0 gpd (9.46 lph) max pres.: 25 PSI (1.72 BAR)
	$ 387	**75** = 97.0 gpd (15.30lph) max pres.: 25 PSI (1.72 BAR)
ELECTRICAL:	N/C	**XA** = 115V, 60 Hz
	$ 20	**XL** = Standard 230V, 50/60 Hz, used w/ Model 10 only
	$ 20	**XB** = Standard 230V, 50 Hz, used w/ Models 50 & 75 only
	$ 20	**XC** = Standard 230V, 60 Hz, used w/ Models 50 & 75 only
LIQUID END MATERIALS:	N/C	**LSA** = Norprene Tubing
	$ 30	**LBA** = Viton Tubing
CONNECTION SIZES:	N/C	**U** = Tubing .25" I.D. X .44" O.D.
SUFFIX CODES:	N/C	**XXX** = Standard

A completed model should look like "UD75-XA-LBAUXXX"

Mec-O-Matic DOLPHIN KOPkit Series Selection Guide

KUDXX-LSAU	$ 54.80	= Standard KOPkit for all Dolphin Pumps (includes head& tube assembly

Junction Box option is available on 230V models at no additional charge. Contact the factory for model numbers.
Shipping weight for Dolphin Pumps is 7 lbs.

DOLPHIN SERIES PARTS PRICE SCHEDULE

PART NUMBER	DESCRIPTION	LIST PRICE
J60552	Strainer Assembly w/o valve	$ 17.70
24820	Power Cord 120V	$ 8.00
24821	Power Cord 240V	$ 8.00
U0817630	Lead Assembly	$ 5.50
U0817635	Knob	$ 8.00
U0817923	Switch, Rocker	$ 8.00
U0817942	Screw 10 - 32 X .688", Motor Mount	$ 1.30
U0819142	Box, Front	$ 39.20
U0819143	Box, Back	$ 21.50
U0818180	Potentiometer Assembly	$ 56.70
U0818564	Fan D10 (CW)	$ 4.10
U0818565	Fan D50, D75 (CCW)	$ 4.10
U0812955	Screw 8 - 32 X 1/4", Fan	$ 1.30
L9900700-000	Strain Relief	$ 2.70

PART NUMBER	DESCRIPTION	LIST PRICE
U0818616	Gearmotor Assembly, 120V, 10 RPM - D10	$ 156.60
U0818617	Gearmotor Assembly, 240V, 10 RPM - D10	$ 209.20
U0818618	Gearmotor Assembly, 120V, 50 RPM - D50	$ 194.20
U0818619	Gearmotor Assembly, 240V, 50 RPM - D50	$ 203.80
U0818620	Gearmotor Assembly, 120V, 75 RPM - D75	$ 194.20
U0818621	Gearmotor Assembly, 240V, 75 RPM - D75	$ 203.80
U8800431	Tubing cut 1/4" X 15 ft. PE	$ 20.30
U8800637	Tubing Replacement Kit (7/16"Norprene Crm)	$ 14.90
U8800651	Pump Head Assembly	$ 44.50
U8800712	Injection Fitting	$ 23.00
U8800740	Kit, Timer 120V (1 - U0818183, 1 - U0020522)	$ 68.80
U8800741	Kit, Timer 240V (1 - U0818460, 1 - U0020522)	$ 68.80
U8800742	Kit, Pump Head Bearings (2 - U0817121)	$ 4.10
U8800743	Kit, Collars (2 - U0817123)	$ 12.10
U8800758	Kit, Pump Head Tubing (Viton)	$ 53.90

MEC-O-MATIC PERISTALTIC PUMPS

VSP Series

Mec-O-Matic VSP Series Selection Guide — **UVSP_ _ _ _ _ _ U XXX**

MODELS:	$ 386	**12**	= 12.0 gpd (1.89 lph) max pres.: 25 PSI (1.72 BAR)
	$ 386	**20**	= 20.0 gpd (3.15 lph) max pres.: 25 PSI (1.72 BAR)
ELECTRICAL:	N/C	**XP**	= 24VAC
	$ 18	**XR**	= 120V 50/60 Hz
LIQUID END MATERIALS:	N/C	**LLA**	= Norprene Tubing
	$ 30	**LBA**	= Viton Tubing
CONNECTION SIZES:	N/C	**U**	= Tubing .19" I.D. X .38" O.D. used w/ UVSP12 only
	N/C	**U**	= Tubing .25" I.D. X .44" O.D. used w/ UVSP20 only
SUFFIX CODES:	N/C	**XXX**	= Standard

A completed model should look like "UVSP12XRLLAUXXX"

Shipping weight for all VSP pumps is 6 lbs.

VSP SERIES PARTS PRICE SCHEDULE

PART NUMBER	DESCRIPTION	LIST PRICE
J60552	Strainer w/o Valve	$ 17.70
U0817122	Collar VSP - 12	$ 6.90
U0817123	Collar VSP - 20	$ 6.90
U0817742	Hose Clamps	$ 2.70
U0817923	Switch	$ 8.00
24820	Power Cord 120 V	$ 8.00
U0819142	Front Housing	$ 39.20
U0819143	Rear Assembly	$ 21.50
L9710200-000	Lead Assembly	$ 1.30
U0818083	Hole Plug	$ 1.30
U0818305	Printed Circuit Board 24V	$ 54.10
U0818306	Printed Circuit Board 120V	$ 67.70
U0818320	Power Cord 24V	$ 16.20
U0818463	Fuse 24V, 1/2 Amp	$ 2.70
U0818464	Fuse 120V, 1/8 Amp	$ 2.70
U0818667	Gearmotor Kit	$ 109.40
U7013397	Tube Kit VSP - 20	$ 20.30
U8800431	15" X 1/4" Poly Tubing	$ 20.30
U8800651	Pump Head Kit	$ 44.50
U8800700	Tube Kit VSP - 12	$ 20.30
U8800712	IPF Auto Clean Injection Fitting	$ 23.00
U8800739	Kit, Motor Mount (2 - U0818666, 2 - 32946, 2 - U0811297)	$ 4.10
U8800742	Kit, Pump Head Bearings (2 - U0817121)	$ 4.10
L9900700-000	Strain Relief	$ 2.70

MEC-O-MATIC PERISTALTIC PUMPS
Series 2400T Grease Trap Dispenser

Mec-O-Matic 2400T Series Selection Guide

UT24 ___ - __ _U ___

MODELS:	N/C	**UT24** = 2.5 gpd (0.39 lph) max pres.: 25 PSI (1.72 BAR) used w/ 2400T & 2400T PLUS
		UT24 = 3.0 Oz / 1 Min max pres.: 25 PSI (1.72 BAR) used w/ 2400T-DC only
ELECTRICAL:	$ 464	**-XA** = 115V, 60 Hz used w/ 2400T only
	$ 478	**PXA** = 115V, 60 Hz used w/ 2400T PLUS only
	$ 597	**-AD** = 12V DC used w/ 2400T-DC only
LIQUID END MATERIALS:	N/C	**LT** = Silicone Tubing
	$ 31	**LB** = Viton Tubing
	N/C	**LL** = Norprene Tubing used w/ 2400T-DC only
CONNECTION SIZES:	N/C	**AU** = Tubing .125" I.D. X .31" O.D.
	N/C	**XU** = Tubing .25" I.D. X .44" O.D. used w/ 2400T-DC only
SUFFIX CODES:	N/C	**XXX** = Standard
	$ 78	**109** = Lockabke Latch Cover used w/ 2400T PLUS only

A completed model should look like "UT24-XA-LBAUXXX"

1. 2400T comes standard with 24 hour mechanical timer. 2400T plus and DC utilizes a 7 day, 8 event programmable timer
2. 2400T DC Pump requires 8 "D" cell batteries (not included).
3. Shipping weight is 7.5 lbs.

2400T & T PLUS SERIES PARTS PRICE SCHEDULE

PART NUMBER	DESCRIPTION	LIST PRICE
J60552	Strainer Assembly w/o Valve	$ 17.70
U0814047	Wire Clip	$ 1.30
U0817131	Tubing Assy 5/16" X 9" Silicone	$ 24.50
U0817133	Pump Cover (Backing Plate)	$ 6.90
U0817742	Hose Clamp	$ 2.70
U0817888	Pump Head Screw	$ 1.30
U0817942	Screw 10 - 30 X .688", Motor Mount	$ 1.30
U0817952	Timer (2400T)	$ 48.70
U0818018	Indicator Light	$ 9.60
U0819145	Pump Housing (front-2400T Plus)	$ 39.20
U0819144	Pump Housing (front-2400T)	$ 39.20

PART NUMBER	DESCRIPTION	LIST PRICE
U0819143	Pump Housing (rear)	$ 21.50
U0818061	Toggle Switch	$ 12.10
U0818084	Lead Assembly 4.5" Yellow (2) Timer	$ 2.70
U0818564	Fan	$ 4.10
U0818602	Gearmotor Assembly	$156.60
U0818740	Timer (2400T Plus)	$ 98.40
U8800431	15' X 1/4" PE Tubing	$ 20.30
U8800712	Injection Fitting	$ 23.00
U8800753	Pump Head Assembly Kit (No Tubing)	$ 45.90
U0812955	Hex Screw 8 - 32 X 1/4"	$ 1.30
L9900700-000	Strain Relief	$ 2.70

2400T DC SERIES PARTS PRICE SCHEDULE

PART NUMBER	DESCRIPTION	LIST PRICE
U0812955	Screw 6 - 32 X .25" PHP	$ 1.30
U0817888	Shoulder Screw	$ 1.30
U0818026	Spacer SST (Motor)	$ 4.10
U0818061	Toggle Switch	$ 12.10
U0818666	Screw 8 - 32 X 1.25 FHP	$ 1.30
U0818881	12V DC Motor	$105.30
U0818888	PVC Spacer (Timer)	$ 1.30
U0818895	1/4" X 20' Tubing PE	$ 25.70
U0818897	Housing Assembly w/lock	$137.60
U0818901	Lock Nuts (10-24 NY - Lock)	$ 1.30

PART NUMBER	DESCRIPTION	LIST PRICE
U0818902	Battery Holder Assembly	$ 16.20
U0818903	Low Battery Board Assembly	$ 42.00
U0818904	Ground Wire Connection	$ 2.70
U0819037	12V DC Timer LO AMP	$ 95.70
U8800490	Injection Fitting	$ 20.30
U8800637	7/16" Tubing Kit (Peristaltic)	$ 14.90
U8800651	Pump Head Assembly Kit (No Tubing)	$ 44.50
U8800700	3/8" Tubing Kit	$ 20.30
U8800742	Kit, Pump Head Bearings (2 - U0817121)	$ 4.10

Policies and Procedures

1. Manufacturer's Equipment Warranty

a. Pulsafeeder warrants all pumps and controllers of its manufacture to be free of defects in material or workmanship. Liability under this policy extends for 24 months from date of shipment from the factory. The manufacturer's liability is limited to repair or replacement of any failed equipment or part which is proven defective in material or workmanship upon manufacturer's examination. This warranty does not include removal or installation costs and in no event shall the manufacturer's liability exceed the selling price of such equipment or part.

b. The manufacturer disclaims all liability for damage to its products through improper installation, maintenance, use or attempts to operate such products beyond their functional capacity, intentionally or otherwise, or any other unauthorized repair. The manufacturer is not responsible for consequential or other damages, injuries or expense incurred through the use of its products.

c. The above warranty is in lieu of any other warranty, whether expressed or implied. The manufacturer makes no warranty of fitness or merchantability. No agent of ours is authorized to provide any warranty other than the above.

2. Pulsafeeder's Parts and Accessory Warranty

a. Pulsafeeder, Inc. warrants parts and accessories provided to be free of defects in material or workmanship. Unless otherwise noted below, liability under this policy extends for 90 days from date of shipment from the factory when sold as service parts. (Replaceable elastomeric parts are expendable and are not covered by any warranty either expressed or implied.)

b. This policy is extended to a full 12 months from the date of installation or 18 months from shipment from the factory whichever comes first on the following accessories;
Intelliscan
Digital Glycol Feeders
Analog Timers
Water Meters
Flow Controllers

c. MicroTrac and MicroVision toroidal probes are warranted for 24 months from date of shipment from the factory when purchased in conjunction with the controller.
All other electrodes/probes and sensors are considered maintenance items and such are warranted for six (6) months from the date of shipment when purchased in conjunction with the controller.
Any electrodes/probes and sensors purchased as spare parts are warranted for 90 days from date of shipment.

d. The manufacturer's liability is limited to repair or replacement of any failed equipment or part which is proven defective in material or workmanship upon manufacturer's examination. This warranty does not include removal or installation costs and in no event shall the manufacturer's liability exceed the selling price of such equipment or part.

e. The manufacturer disclaims all liability for damages to its products through improper installation, maintenance, use or attempts to operate such products beyond their functional capacity, intentionally or otherwise, or any unauthorized repair. The manufacturer is not responsible for consequential or other damages, injuries or expense incurred through the use of its products.

f. The above warranty is in lieu of any other warranty, whether expressed or implied. The manufacturer makes no warranty of fitness or merchantability. No agent of ours is authorized to provide any warranty other than the above.

3. Process for All Returned Goods

a. Please contact our Customer Service Department to request a RMA (Return Material Authorization) number prior to returning any goods. The following information will be required:
Billing and ship-to address
Model number and serial number
Contact name and phone number
Reason for return
Purchase order (where applicable)
A packing slip will be provided to the shipper and MUST accompany the product being returned. Packages received without our proper packing list will be refused by the receiver.

b. All material must be returned freight prepaid.

c. All material must be properly packaged to prevent damage in shipment.

d. All products MUST be wiped and flushed clean of any and all chemicals, solvents or buffers and be warranted to be safe for handling. You will be requested to acknowledge the condition of the product being returned on our packing list. Any product received that is deemed to be unsafe for handling or without this acknowledgement will be refused by our receiver.

e. RMA for returning product for credit is effective for 90 days from the date of issue. After 90 days if the product has not been returned to Pulsafeeder the RMA number will be cancelled, and a new request must be made by the customer to continue with the return procedure.

4. Non-Warranty Return Procedure

a. If you are experiencing a concern with your Pulsafeeder product, first consult the distributor, dealer or Regional Sales Manager or the operation and maintenance manual for assistance. If service of your non-warranty unit is necessary, you must request a return material authorization. A RMA form will be issued and must be used as the packing list attached to the outside of the box. Please send the unit freight prepaid with the RMA number visibly displayed on the outside of the carton. All products MUST be wiped and flushed clean of any and all chemicals, solvents or buffers and be warranted to be safe for handling. You will be requested to acknowledge the condition of the product being returned on our packing list. Any product received that is deemed to be unsafe for handling or without this acknowledgement will be refused by our receiver.

b. The charges listed in the following table will apply.

Product	Repair Cost
Pumps and Pump Accessories – within 5 years of sale date	Current List Price x .50 x Part Discount Multiplier
Controllers and Controller Accessories within 5 years of sale date	Current List Price x .50 x Part Discount Multiplier
Any item older than 5 years from date of sale	With purchase order, $50 bench fee to evaluate. The $50 bench fee may be applied towards repair cost of unit or towards a new controller

c. Extended warranty on repair goods will be offered only when the repairs were made by the factory on non-warranty units.
i. Microprocessor Controls – 1 year from date of shipment
ii. Electronic Controls – 6 months from date of shipment (excluding electronic parts)
iii. Standard metering pumps – 3 months from date of shipment

5. Credit for Return of New, Unused Equipment

a. No equipment will be accepted beyond six months after date of shipment from factory for credit.
b. Only new, unused and undamaged standard equipment will be accepted for return to stock.
c. All credits are based on evaluation and acceptance of material as new and unused by Pulsafeeder. You will be requested to acknowledge the condition of the product being returned on our packing list. Any product received that is deemed to be unsafe for handling or without this acknowledgement will be refused by our receiver.
d. A restocking fee of 25% will apply to returned goods. When a PO is provided for a replacement item at the time of the return request the restocking fee will be 15%. Note: any product mounted on a panel or skid will be charged a 50% re-stocking fee.
e. A request for a Returned Material Authorization (RMA) number must be made prior to returning product to Pulsafeeder.
f. All equipment shall be returned with the RMA Packing List form attached to the outside of the box.
g. If any chemical, solvent or buffer has been introduced into the product it must be wiped and flushed clean of any and all substances prior to returning to Pulsafeeder.
h. All material shall be returned freight prepaid.
i. Private label products or Engineered Panel Mount Systems are not returnable.

6. Pricing Errors

a. Pulsafeeder does their very best to avoid errors in billing. You will receive a confirmation of your order within 24 hours of order entry. If upon review the customer feels there is a discrepancy, they should contact Pulsafeeder Customer Service as soon as possible to resolve.
b. Should an invoice be received that the customer believes to have incorrect pricing, they should notify Pulsafeeder Customer Service to investigate.

7. Missing Items

a. If a product is received by the customer with an item missing the customer must notify Pulsafeeder Customer Service within 7 days of receipt of the product by the end user. A replacement item will be sent at no charge as quickly as possible.
b. If a shipment is received by the customer with a line item missing they must notify Pulsafeeder Customer Service within 7 days of receipt of the product by the end user. If the customer had been billed for that item, a credit will be issued against the original Sales Order and a new Sales Order will be created for the replacement product.

8. Damaged Items

a. Should the customer receive an order that was damaged in transit, the customer must notify the carrier directly to initiate a claim on the day of delivery.
b. Should the customer receive a product with damaged components due to improper packaging they should notify Pulsafeeder Customer Service within 7 days of receipt of product by end user. A replacement item will be sent at no charge as quickly as possible.

9. Technical Support Services Available

a. Pulsafeeder's Technical Sales Support team is available *to provide all your sales and support needs. The principle mission of this group is to sell and support our customer base in a timely and effective manner. This includes the ability to provide in-field service training, assistance in start-up of our products and perform field repair of goods when required.*
b. Scope

Pulsafeeder, Inc. factory Field Service Technicians are available throughout the World for field services on all Pulsafeeder products. Services include:

i. Maintenance Training Seminars, including Classroom slide presentations and or Hands-on Training. The seminar will take approximately four to five hours, and if time permits minor repair and or adjustments may be made to the customer's pumps, controllers or accessories.
ii. Pre-start up inspections and start up testing/calibration of pumps, controllers and accessories.
iii. Field repairs of pumps controllers and accessories
iv. Diagnosing and recommending solutions to systems problems.

Fee Schedule **Field Repairs and Start-ups**	**Service Rate** [(1)]
Normal 8 hour day	$98.00/hour
Overtime (in excess of 8 hrs, each day)	$148.00/hour
Sundays, National Holiday	$195.00/hour
Travel time to job site and return	$87.00/hour
Travel expenses (air fare, hotel, car and meals)	Chargeable to customer at cost
Minimum charge	4 hours labor, plus travel time and expenses
End User Training Seminars	
Normal work day	$750.00/day plus expenses (air fare, car rental, hotel and meals at cost)
Sundays, National Holiday	$1495.00/day plus expenses (air fare, car rental, hotel and meals at cost)

(1) *All rates listed in this section are actual hourly and daily rates, not reference rates*

TERMS & CONDITIONS

1 . AGREEMENT. The contract of sale resulting from Seller's documentation together with these terms and conditions ("Contract") constitutes the entire agreement between the parties hereto, except as modified in writing signed by both the Seller and Purchaser. The Seller is Pulsafeeder, Inc. and the Purchaser is identified in the Contract. Any terms in a purchase order, irrespective of their materiality, which are either different from or additional to Seller's conditions of sale, are objected to and are excluded unless the Seller expressly agrees in writing to such terms. Execution of such forms by Seller to accommodate Purchaser's procurement or accounting procedures or to evidence agreed up on change orders shall not be construed as assent to Purchaser's terms. Acceptance of the goods shipped shall constitute assent to Seller's conditions of sale. This Contract shall be binding up on Purchaser and Seller, and on their successors and assigns.

2 . PROPOSAL OR QUOTATION. A proposal shall not become binding up on Seller until it has been executed and returned by Purchaser. An oral quotation shall not be considered an offer: only a written confirmation thereof incorporating Seller's terms and conditions shall constitute an offer.

3 . CREDIT. Credit terms of payment must have the approval of Seller's Credit Department and must be specified in writing on Seller's invoice or in the Contract. If Purchaser's credit is found by Seller to be unsatisfactory . Seller may rescind or terminate this Contract. If at any time during the term of this Contract Purchaser's financial responsibility becomes impaired or unsatisfactory to Seller, Seller reserves the right to stop shipment on notification to Purchaser, project owner and surety with a demand for payment in advance or at time of delivery for future deliveries or to require other security satisfactory to Seller and in the absence thereof, to cancel the unfilled portion of the Contract. Seller will notify Purchaser promptly of its decision to stop shipments and give an advance notice to the extent this is possible. In the absence of credit terms, sales are for cash.

4 . PAYMENT. Specific terms of payment for this order shall be set forth on the reverse side of this Contract or identified and appended hereto. Purchaser agrees to make payment at Seller's location specified in this Contract in lawful money of the United States. Purchaser further agrees to make all payments when due to Seller in accordance with the agreed terms of payment in this Contract without reference to Purchaser's agreement with or payments by the owner and with no right of retention.

5 . INTEREST AND COSTS. Purchaser agrees to pay interest at 1.5% per month (to the extent permitted by law) on all delinquent balances if and when assessed by Seller, and any attorney's fees or court costs arising out of and made necessary in collection of its obligation to Seller created by this Contract.

6 . TAXES. Any federal, state or local tax assessment, fee, duty or charge hereafter imposed on or measured by the products purchased hereunder shall be for Purchaser's account unless Purchaser furnishes Seller an acceptable exemption certificate from such tax, fee, duty or charge prior to shipment.

7 . FORCE MAJEURE. Seller shall make delivery in accordance with the terms of this Contract or within a reasonable time in the absence of any commitment, but Seller shall not be liable for delays or defaults in delivery caused by floods, fires, storms, or other acts of God, by war or act of public enemy (or civil disturbance), strikes, lock outs, shortages of labor or raw materials and supplies (including fuel) or production facilities, transportation service or equipment shortages or failures, action of any governmental authority or other conditions beyond Seller's reasonable control.

8 . CANCELLATION. If Purchaser desires to cancel or change any portion of this Contract, he must make such request in writing to Seller. Seller may, in its sole discretion, accept or reject any such request. If accepted, the Purchaser nonetheless must take delivery and make payment to Seller for all material manufactured and in process of manufacture at time of notice, and all special materials ordered at time of notice and for which Seller must take delivery , unless otherwise agreed by Seller in writing. All such materials must be removed from Seller's premises within 30 days after payment and payment will due at time of notice. Seller also reserves the right to make a cancellation charge in the event of cancellation by the Purchaser of an order p laced in Seller's shipping schedule and acknowledged by Seller.

9 . INSPECTION AND TESTING . Seller's standard specifications and tests apply to all orders. All charges for inspections or tests not regularly furnished are for Purchaser's account and subject to prior negotiation. All inspections shall be conducted at Seller's plant, and failure of Purchaser to avail himself of inspection privileges shall be deemed a waiver of such privileges.

1 0 . PRICES. Prices are subject to change without notice. Orders based on published prices and accepted for scheduled shipment will be invoiced at Seller's applicable price in effect on the scheduled date of shipment, unless otherwise specifically noted on the order acknowledgment. All prices will be in accordance with applicable government regulations. Orders specifying palletizing or special packaging will involve special charges.

1 1 . DELAYS. All orders are accepted subject to Seller's ability to make delivery at the time and in the quantities specified, and Seller shall not be liable for damages for failure to make partial or complete shipment or for any delay in making shipments. Purchaser shall be liable for any added expenses incurred by Seller because of Purchaser's delay in furnishing requested information to Seller, delay resulting from order changes by Purchaser, or delay in unloading shipments at delivery point.

1 2 . SHIPMENT. Seller will select method of shipment and routing when transportation charges are for account of Seller. When shipping instructions are specified by the Purchaser, all costs will be for the account of the Purchaser. The foregoing includes, but is not limited to, carriers charges for notification prior to delivery, demurrage, delay in unloading, diversion, or reconsignment.

1 3 . TITLE. Title to products transfers up on delivery to Purchaser at the F.O.B. point of delivery which will be clearly set forth in the shipment terms of this Contract. On receipt of title, Purchaser is then responsible for proper protection of product, placement, compliance with all regulations and ordinances, and will indemnify Seller against all claims for personal injuries or property damage arising from the storage, use or handling of such products.

1 4 . IN TRANSIT CLAIMS. Claims for damage or shortage in transit must be made against the carrier by the owner of the shipment according to the F.O.B. terms of the Contract. Purchaser has the responsibility to inspect shipments before or during unloading to identify any such damage or shortage and see that appropriate notation is made on the delivery tickets or an inspection report furnished by the local agent of the carrier in order to support a claim.

1 5 . CLAIMS. Notice of Claims against Seller hereunder for any reason, must be made to Seller in writing promptly after discovery and within any applicable warranty period. Failure to give such notice to Seller shall constitute a waiver by Purchaser of any right later to assert such a claim.

1 6 . RETURNS. Returned goods shall be accepted for credit only if in salable condition and only with evidence of Seller's prior written consent. Seller will assess charges for freight both ways and any costs necessary to restore such goods to the regular plant inventory . The amount of credit given will depend further up on the degree of salability of products accepted in opinion of Seller.

1 7 . PATENTS. Seller agrees to defend, and to protect Purchaser against loss or damage arising out of any legal action for patent infringement in connection with the manufacture of its products sold to Purchaser, provided Seller is notified promptly of any such action with complete information and is given an opportunity to defend.

1 8 . WARRANTY : LIMITATION OF LIAB ILITY . Seller warrants title to each individual product sold under this Contract and further warrants for a period of eighteen (18) months from ship date or one (1) year from date of installation, whichever comes first, but only to the extent and limit of the purchase price paid for such individual product, that such product conforms to the specifications set forth in the Contract and is free from defects in material and workmanship under normal service and use for which it was designed. Seller's sole obligation and Purchaser's exclusive remedy under this warranty shall be limited to one of the following, as selected by Seller: delivering to Purchaser a replacement for any product or part thereof determined by Seller to be defective, repairing such product or part, or refunding the purchase price (or an equitable portion thereof) paid for such product or part by Purchaser. SELLER MAKES NO WARRANTY OF FITNESS OR MERCHANTABILITY, AND NO OTHER WARRANTY, WHETHER EXPRESS OR ARISING BY OPERATION OF LAW, COURSE OF DEALING, USAGE OF TRADE OR OTHERWISE IMPLIED SHALL EXIST IN CONNECTION WITH SELLER'S PRODUCTS OR ANY SALE OR USE THERE OF. Purchaser must notify Seller promptly and within the warranty period of any claim under this warranty. Seller's warranty extends only to the first purchaser of a product from Seller or Seller's authorized distributor. All goods not manufactured by Seller are warranted only to the extent of the warranties of the original manufacturer. Seller disclaims any liability arising from tort, including strict liability , and Seller further disclaims any liability (whether arising under this or any other provision of this Contract or otherwise) for any costs (including costs of removal or replacement), liabilities, lost profits, loss of good will or any other general, special, incidental or consequential damages incurred by Purchaser in connection with this Contract or any product purchased there under.

1 9 . LAW . This order shall be governed by and shall be construed by the law of the State of New York .

2 0 . GOVERNMENTAL REGULATIONS. Seller warrants that no code, law, regulation or ordinance of the United States, a state or any other governmental authority or agency or any applicable Executive Order has been violated in the manufacture or sale of the items covered by this Agreement and warrants that the equipment, supplies, and/or articles covered thereby conform with all such requirements.

2 1 . NUCLEAR FINANCIAL PROTECTION. Purchaser agrees to procure and maintain, as available to it, nuclear energy liability insurance, in a form of policy approved by the Nuclear Regulatory Commission, and protection, as available, against liability for nuclear incidents not covered by such insurance through an indemnity agreement, as provided in Section 170 of the Atomic Energy Act of 1954, as amended, or any succeeding comparable statutory provision, and the regulations thereunder. Such financial protection shall be effective prior to the time any equipment purchased from us is used or installed at or in connection with any nuclear facility and shall cover us an insured party . To the extent that such financial protection is not suitable to Purchaser. Purchaser agrees to use its best efforts to cause such financial protection to be obtained by eligible parties. We will cooperate with Purchaser and representatives of the nuclear energy insurance syndicates in complying with all underwriting requirements and with those insurance recommendations which may be mutually agreed up on. Notwithstanding any representations or warranties made by us elsewhere in these conditions of sale, we shall not be responsible for any bodily injury or property damage liability or any other public liability for any nuclear incidents, whether or not in respect of or arising in connection with use or installation of our equipment at any nuclear facility or in connection with any such facility . Purchaser hereby assumes any liability which might otherwise be imposed up on us and agrees to indemnify us and hold harmless from any such liability and costs or expenses in connection therewith.