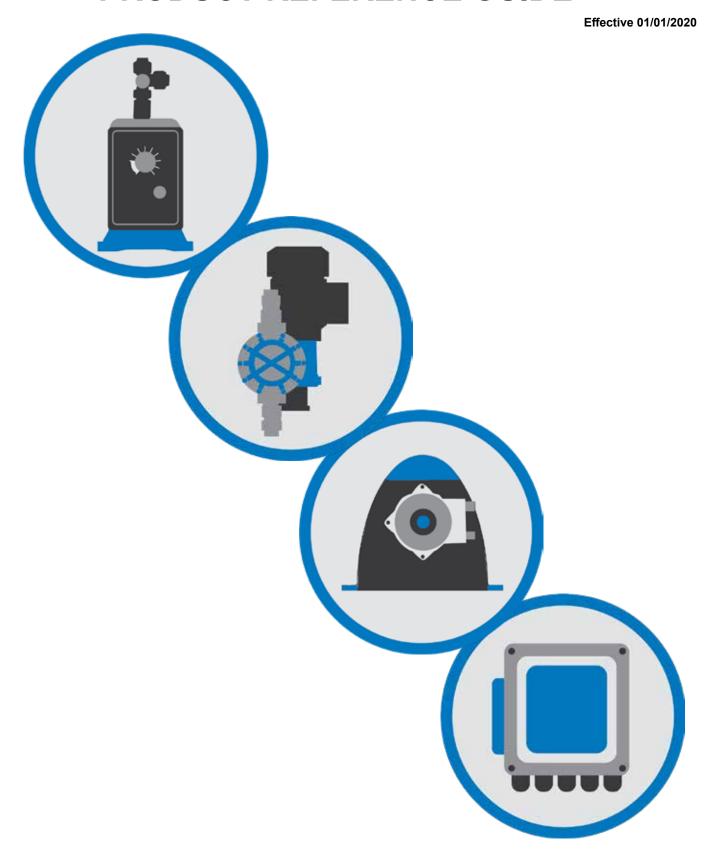


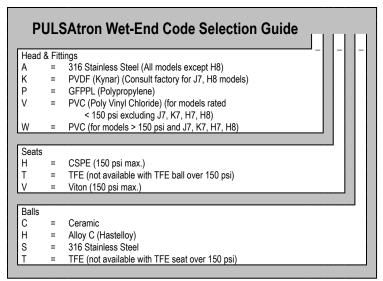
# PRODUCT REFERENCE GUIDE



## **TABLE OF CONTENTS**

| Chemical Compatibility Chart Wet End  | 3<br>4  |
|---|---|
| Connection Codes  | 4   |
| Series MP Series E Plus Series HV Series E Series E-DC Series A Plus Series T7 Series C Plus Series C | 5<br>6<br>7<br>8<br>9<br>10<br>11<br>12<br>13 |
| Series MD   | 14  |
| Series XP<br>Series XPV   | 15<br>15                                      |
| Prime Performance<br>Series 100   | 16<br>16                                      |
| Dolphin Series<br>VSP Series<br>2400T, and 2400T Plus   | 17<br>17<br>17                                |
| MicroVision   | 18  |
| MicroTrac   | 19  |
| MicroVision Boiler  | 19  |
| MicroVision Timer   | 20  |

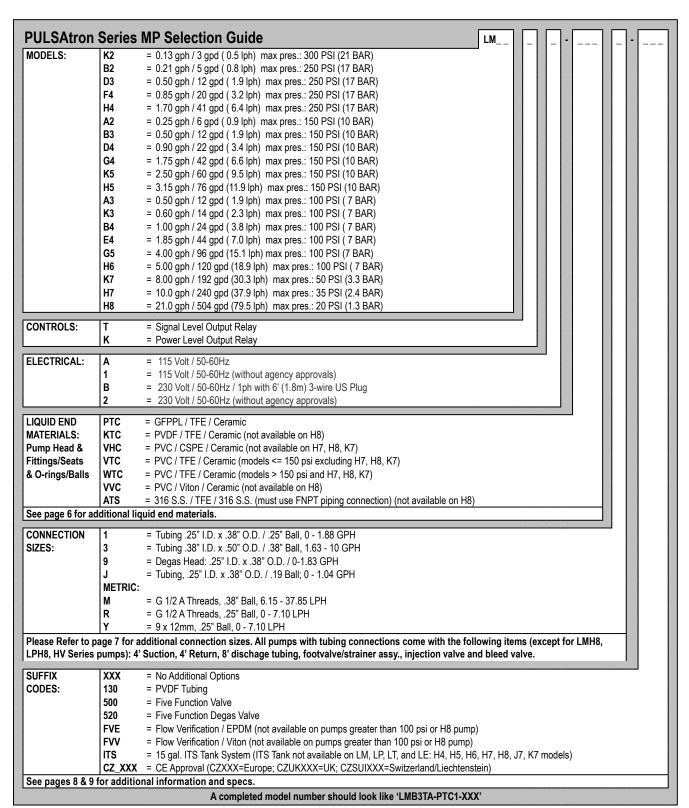
| Chemical Compatibility Chart              |                 |                 |                 |              |               |            |
|---|-----------------|-----------------|-----------------|--------------|---------------|------------|
|   | (Best)          | (Common)        | (Alternate)     | (Compatible  | e selections) |            |
| Chemical                                  | Liquid End Code | Liquid End Code | Liquid End Code | Head/Valve   | Seat          | Check Ball |
| ACETIC ACID, 5 - 10%                      | ктс             | PHC             | PTC             | K, P,        | T, H          | C, T, H    |
| ALUMINUM SULFATE                          | KTC             | PVC             | VVC             | K, V / W, P  | T, H, V       | C, T, H    |
| AMMONIA, 10%                              | KTC             | PVC             | VVC             | K, V / W, P, | A T, H, V,    | C, T, S, H |
| BROMINE                                   | KTC             | KVC             | KTT             | К            | T, V          | C, T, H    |
| CALCIUM HYPOCHLORITE                      | KTC             | VHC             | KTT             | K, V / W     | T, H          | C, T, H    |
| CITRIC ACID, 10 - 20%                     | KTC             | VVC             | VHC             | K, V / W, P  | T, H, V       | C, T, S, H |
| DEAE - Steamline Treatment (DIETHYLAMINE) | ATS             | PTS             | PTH             | P, A         | Т             | S, H       |
| ETHYLENE GLYCOL                           | KTC             | PHC             | PVC             | K, V/W, P, A | T, H, V       | C, T, S, H |
| FERRIC CHLORIDE                           | KTC             | PHC             | PVC             | K, V / W, P  | T, H, V       | C, T       |
| FERRIC SULFATE                            | KTC             | PHC             | PVC             | K, V / W, P  | T, H, V       | C, T, H    |
| FLUOSILICIC ACID                          | KTT             | PTT             | PHT             | K, V / W, P  | T, V          | T, H       |
| HYDROCHLORIC ACID, 0 - 37%                | KTC             | PTC             | PVC             | K, V / W, P  | T, V          | C, T, H    |
| HYDROCHLORIC ACID, 37 - 100%              | KTT             | PTT             | PVT             | K, P,        | T, V          | T, H       |
| HYDROFLUOSILICIC ACID, 20%                | KTT             | PTT             | PVT             | K, V / W, P  | T, H, V       | T, H       |
| HYDROGEN PEROXIDE, 0 - 30%                | KTC             | PHC             | PVC             | K, V / W, P  | T, H, V       | C, T, S, H |
| LACTIC ACID                               | KTC             | PTC             | PVC             | K, V / W, P, | A T, H, V     | C, T, S    |
| NITRIC ACID, 0 - 20%                      | KTC             | PTC             | PVC             | K, V / W, P, | A T, H, V     | C, T, S, H |
| PHOSPHORIC ACID, 0 - 100%                 | KTC             | PTC             | PHC             | K, V / W, P, | A T, H, V     | C, T, S, H |
| POTASSIUM CHLORIDE                        | KTC             | PTC             | PHC             | K, V / W, P  | T, H, V       | C, T, H    |
| POTASSIUM PERMANGANATE                    | KTC             | PTC             | PHC             | K, V / W, P, | A T, H, V     | C, T, S, H |
| SODIUM BI-CARBONATE                       | KTC             | PTC             | PHC             | K, V / W, P, | A T, H, V     | C, T, S, H |
| SODIUM BI-SULFATE                         | KTC             | PTC             | PHC             | K, V / W, P, | A T, H, V     | C, T, S    |
| SODIUM BI-SULFITE                         | KTC             | PTC             | PVC             | K, V / W, P, | A T, H, V     | C, T, S    |
| SODIUM CARBONATE                          | KTC             | PTC             | PVC             | K, V / W, P, | A T, H, V     | C, T, S, H |
| SODIUM HYDROXIDE, 0 - 50%                 | KTC             | PHC             | PTC             | K, V / W, P, | A T, H        | C, T, S, H |
| SODIUM HYPOCHLORITE                       | KTC             | VVC             | VTC             | K, V/W       | T, H, V       | C, T, H    |
| SODIUM NITRATE                            | KTC             | PTC             | PVC             | K, V / W, P, | A T, H, V     | C, T, S, H |
| SODIUM SILICATE                           | KTC             | PHC             | PTC             | K, V / W, P, | A T, H, V     | C, T, S, H |
| SODIUM SULFATE                            | KTC             | PHC             | PTC             | K, V / W, P, | A T, H, V     | C, T, S, H |
| SODIUM SULFIDE                            | KTC             | PHC             | PTC             | K, V / W, P, | A T, H, V     | C, T, S,   |
| SULFURIC ACID, 0 - 10%                    | KTC             | PTC             | PVC             | K, V / W, P  | T, V          | C, T       |
| SULFURIC ACID, 10 - 75%                   | KTC             | PTC             | PVC             | K, V / W, P  | T, V          | C, T       |
| SULFURIC ACID, 95 - 100%                  | KTC             | KTC             | KVC             | К            | T, V          | C, T       |

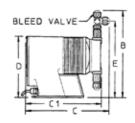


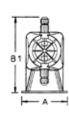
CSPE is generic formulation of Hypalon, a registered trademark of E.I. DuPont Co. Viton is a registered trademark of E.I. DuPont Company.

|      | Connection Codes |              |             |        |                                 |                                 |                                 |                           |  |  |  |  |
|------|------------------|--------------|-------------|--------|---------------------------------|---------------------------------|---------------------------------|---------------------------|--|--|--|--|
| Code | Connect<br>Type  | Suction      | Discharge   | Spring | GPH Flow<br>Limitations-125 SPM | GPH Flow<br>Limitations-250 SPM | Viscosity                       | Other Factors             |  |  |  |  |
| 2    | Piping           | .25" FNPT    | .25" FNPT   |        | 0 - 1.88                        | 0-3.76                          | 1000 up to 3000 cps w/ SS balls | No Bleed Valve            |  |  |  |  |
| 4    | Piping           | .25" FNPT    | .25" FNPT   |        | 1.63 - 10                       | 3.26-20                         | 1000 up to 3000 cps w/ SS balls | No Bleed Valve            |  |  |  |  |
| 6    | Piping           | .25" FNPT    | .25" FNPT   | Yes    | Up to 10                        | NA                              | less than 10,000 cps            | No Bleed Valve            |  |  |  |  |
| 8    | Piping           | .50" FNPT    | .50" FNPT   | Yes    | Up to 25                        | NA                              | less than 10,000 cps            | No Bleed Valve            |  |  |  |  |
| С    | Piping           | .50" FNPT    | .50" FNPT   |        | 25                              | 50                              | 1000 up to 3000 cps w/ SS balls | No Bleed Valve            |  |  |  |  |
| G    | Piping           | .25" FNPT    | .25" FNPT   | Yes    | 0 - 1.88                        | 0-3.76                          | 1000 up to 3000 cps w/ SS balls | No Bleed Valve            |  |  |  |  |
|      | Piping           | .50" MNPT    | .50" MNPT   | Yes    | Up to 10                        | NA                              | less than 10,000 cps            | No Bleed Valve            |  |  |  |  |
| L    | Piping           | .50" MNPT    | .50" MNPT   |        | 0 - 1.88                        | 0-3.76                          | 1000 up to 3000 cps w/ SS balls | No Bleed Valve            |  |  |  |  |
| Х    | Piping           | .50" MNPT    | .50" MNPT   |        | 1.63 - 10                       | 3.26-20                         | 1000 up to 3000 cps w/ SS balls | No Bleed Valve            |  |  |  |  |
| 1    | Tubing           | .25" x .38"  | .25" x .38" |        | 0 - 1.88                        | 0-3.76                          | 1000 up to 3000 cps w/ SS balls |                           |  |  |  |  |
| 3    | Tubing           | .38" x .50"  | .38" x .50" |        | 1.63 - 10                       | 3.26-20                         | 1000 up to 3000 cps w/ SS balls |                           |  |  |  |  |
| 5    | Tubing           | .50" x .75"  | .38" x .50" | Yes    | Up to 10                        | NA                              | less than 10,000 cps            |                           |  |  |  |  |
| 7    | Tubing           | .50" x .75"  | .50" FNPT   | Yes    | Up to 25                        | NA                              | less than 10,000 cps            | No Bleed Valve            |  |  |  |  |
| 9    | Tubing           | .25" x .38"  | .25" x .38" | Yes    | 0 - 1.88                        | 0-3.76                          | 1000 up to 3000 cps w/ SS balls | Degas Head/No Bleed Valve |  |  |  |  |
| Α    | Tubing           | .38" x .50"  | .38" x .50" |        | 0 - 1.88                        | 0-3.76                          | 1000 up to 3000 cps w/ SS balls |                           |  |  |  |  |
| В    | Tubing           | .50" x .75"  | .50" x .75" |        | 25                              | 50                              | 1000 up to 3000 cps w/ SS balls | No Bleed Valve            |  |  |  |  |
| D    | Tubing           | .25" x .38"  | .25" x .38" | Yes    | 0 - 1.88                        | 0-3.76                          | 1000 up to 3000 cps w/ SS balls |                           |  |  |  |  |
| E    | Tubing           | .38" x .50"  | .38" x .50" | Yes    | 0 - 1.88                        | 0-3.76                          | 1000 up to 3000 cps w/ SS balls |                           |  |  |  |  |
| F    | Tubing           | .38" x .50"  | .38" x .50" | Yes    | 1.63 - 10                       | 3.26-20                         | 1000 up to 3000 cps w/ SS balls | Not Available In PVDF     |  |  |  |  |
| H    | Tubing           | .25" x .38"  | .25" x .38" |        | 1.63 - 10                       | 3.26-20                         | 1000 up to 3000 cps w/ SS balls |                           |  |  |  |  |
| J    | Tubing           | .25" x .38"  | .25" x .38" |        | 0 - 1.04                        | 0-2.08                          | 1000 up to 3000 cps w/ SS balls |                           |  |  |  |  |
| K    | Tubing           | .50" x .75"  | .50" x .75" | Yes    | 1.88 - 25 (<50 psi)             | NA                              | less than 10,000 cps            | No Bleed Valve            |  |  |  |  |
|      | Metri            | c Connection |             |        |                                 | LPH Flow Limitations            |                                 |                           |  |  |  |  |
| M    | Piping           | G 1/2 A      | G 1/2 A     |        | 6.15 - 37.85                    | 12.3-75.7                       | 1000 up to 3000 cps w/ SS balls |                           |  |  |  |  |
| R    | Piping           | G 1/2 A      | G 1/2 A     |        | 0 - 7.10                        | 0-14.2                          | 1000 up to 3000 cps w/ SS balls |                           |  |  |  |  |
| P    | Tubing           | 4 x 6 mm     | 4 x 6 mm    |        | 0 - 3.94                        | 0-7.88                          | 1000 up to 3000 cps w/ SS balls |                           |  |  |  |  |
| S    | Tubing           | 6 x 8 mm     | 6 x 8 mm    |        | > 18.93                         | > 37.86                         | 1000 up to 3000 cps w/ SS balls |                           |  |  |  |  |
| T    | Tubing           | 6 x 8 mm     | 6 x 8 mm    |        | 0 - 7.10                        | 0-14.2                          | 1000 up to 3000 cps w/ SS balls | Degas Head/No Bleed Valve |  |  |  |  |
| U    | Tubing           | 6 x 8 mm     | 6 x 8 mm    |        | 0 - 7.10                        | 0-14.2                          | 1000 up to 3000 cps w/ SS balls |                           |  |  |  |  |
| V    | Tubing           | 12 x 19 mm   | 12 x 19 mm  |        | > 29.96                         | >59.92                          | 1000 up to 3000 cps w/ SS balls | No Bleed Valve            |  |  |  |  |
| W    | Tubing           | 8 x 12 mm    | 8 x 12 mm   |        | 3.94 - 37.85                    | 7.88-75.7                       | 1000 up to 3000 cps w/ SS balls |                           |  |  |  |  |
| Y    | Tubing           | 9 x 12 mm    | 9 x 12 mm   |        | 0 - 7.10                        | 0-14.2                          | 1000 up to 3000 cps w/ SS balls |                           |  |  |  |  |
|      |                  |              |             |        |                                 |                                 |                                 |                           |  |  |  |  |

- 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.
- TFE balls in the check valve, you will probably need to use a spring-loaded connection.
- 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.
- Degassing head available on PULSAtron pumps with volumes <44GPD & pressures <150PSI.</li>

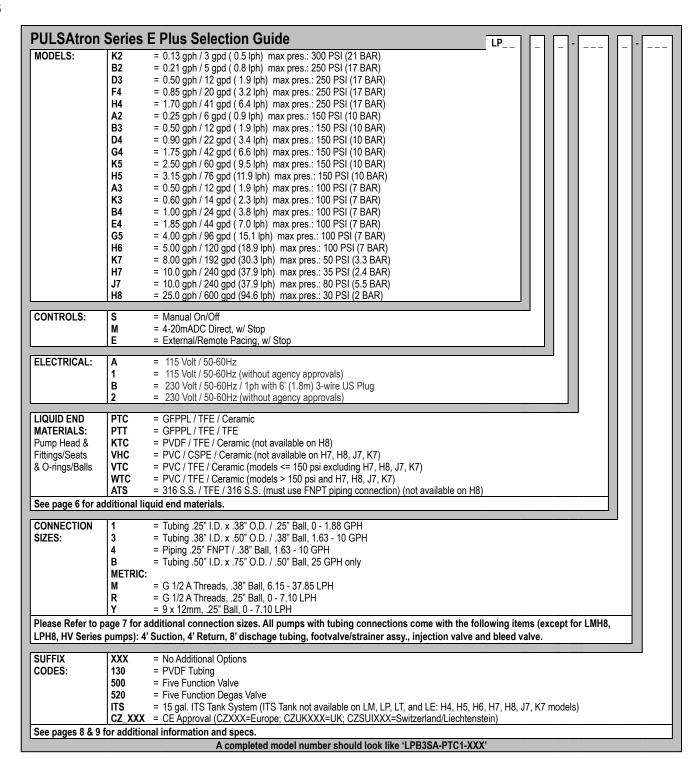


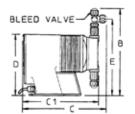




|           | Series MP Dimensions (inches) |      |    |      |    |     |     |         |           |     |      |      |      |      |     |      |         |
|-----------|-------------------------------|------|----|------|----|-----|-----|---------|-----------|-----|------|------|------|------|-----|------|---------|
| Model No. | Α                             | В    | B1 | С    | C1 | D   | Е   | Shpg Wt | Model No. | Α   | В    | B1   | С    | C1   | D   | Е    | 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 | 1  | 7.5 | 9.2 | 13      | LMH5      | 6.2 | 11.3 | -    | 11.2 | -    | 8.2 | 9.9  | 21      |
| LMB2      | 5.4                           | 10.3 | -  | 10.8 | 1  | 7.5 | 8.9 | 13      | LMH6      | 6.2 | 11.3 | -    | 11.2 | -    | 8.2 | 9.9  | 21      |
| LMB3      | 5.4                           | 10.6 | •  | 10.7 | ı  | 7.5 | 9.2 | 13      | LMH7      | 6.1 | 11.7 | -    | 11.2 | -    | 8.2 | 10.3 | 21      |
| LMB4      | 5.4                           | 10.6 | -  | 10.7 | ı  | 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 | 1  | 7.5 | 9.2 | 15      | LMK3      | 5.4 | 10.6 | -    | 10.7 | -    | 7.5 | 9.2  | 13      |
| LME4      | 5.4                           | 10.6 | -  | 11.2 | 1  | 7.5 | 9.2 | 15      | LMK5      | 5.4 | 10.9 | -    | 11.7 | -    | 7.5 | 9.5  | 18      |
| LMF4      | 5.4                           | 10.6 | ·  | 11.7 | ı  | 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

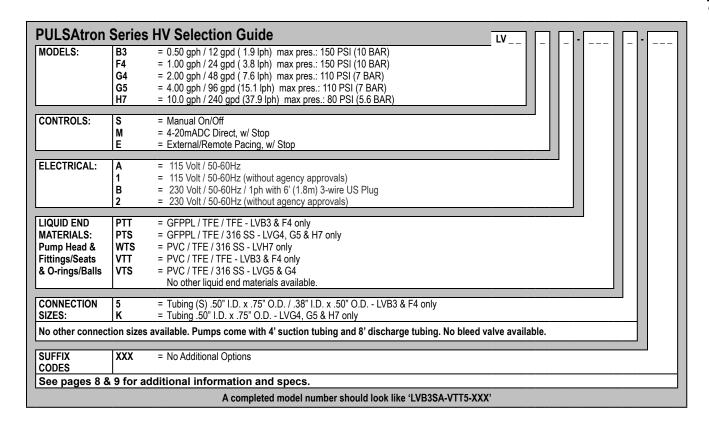


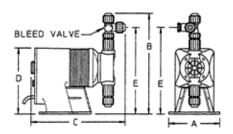




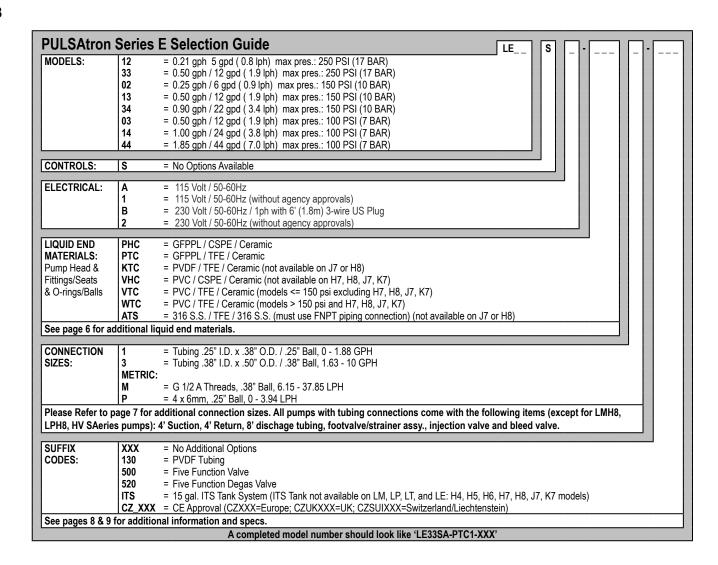
|           | Series E Plus Dimensions (inches) |      |    |      |    |     |     |         |           |     |      |      |      |      |     |      |         |
|-----------|-----------------------------------|------|----|------|----|-----|-----|---------|-----------|-----|------|------|------|------|-----|------|---------|
| Model No. | Α                                 | В    | B1 | С    | C1 | D   | Е   | Shpg Wt | Model No. | Α   | В    | B1   | С    | 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      | LPG5      | 6.2 | 11.3 | -    | 11.2 | -    | 8.2 | 9.9  | 21      |
| LPB3      | 5.4                               | 10.6 | -  | 10.7 | -  | 7.5 | 9.2 | 13      | LPH6      | 6.2 | 11.3 | -    | 11.9 | •    | 8.2 | 9.9  | 21      |
| LPB4      | 5.4                               | 10.6 | -  | 10.7 | -  | 7.5 | 9.2 | 13      | LPH7      | 6.1 | 11.7 |      | 11.9 | •    | 8.2 | 10.3 | 21      |
| LPD3      | 5.4                               | 10.6 | -  | 11.2 | -  | 7.5 | 9.2 | 15      | LPH8*     | 6.1 | ·    | 10.9 | ·    | 11.3 | 8.2 |      | 26      |
| LPD4      | 5.4                               | 10.6 | -  | 11.2 | -  | 7.5 | 9.2 | 15      | LPK2      | 5.4 | 10.3 | -    | 10.8 | -    | 7.5 | 8.9  | 13      |
| LPE4      | 5.4                               | 10.6 | -  | 11.2 | -  | 7.5 | 9.2 | 15      | LPK3      | 5.4 | 10.6 | -    | 10.7 | -    | 7.5 | 9.2  | 13      |
| LPF4      | 5.4                               | 10.6 | -  | 11.7 | -  | 7.5 | 9.2 | 18      | LPK5      | 5.4 | 10.9 | -    | 11.7 | •    | 7.5 | 9.5  | 18      |
| LPG4      | 5.4                               | 10.6 | -  | 11.7 | -  | 7.5 | 9.2 | 18      | LPK7      | 6.1 | 11.7 | -    | 11.2 | -    | 8.2 | 10.3 | 21      |
|           |                                   |      |    |      |    |     |     |         | LPJ7      | 6.1 | 10.0 | -    | 10.7 | -    | -   | -    | 21      |

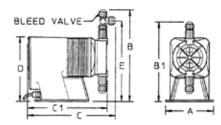
NOTE: Inches X 2.54 = cm /\* the LPH8 is designed without a bleed valve available



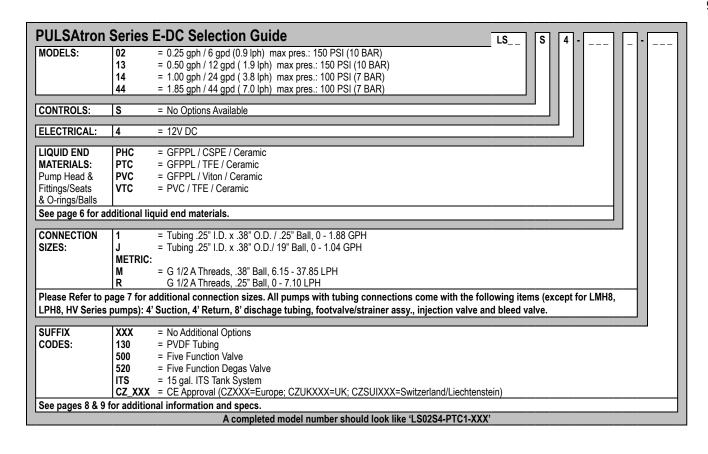


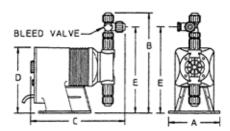
|           | Series HV Dimensions (inches) |      |      |     |                    |  |  |  |  |  |  |
|-----------|-------------------------------|------|------|-----|--------------------|--|--|--|--|--|--|
| Model No. | Α                             | В    | С    | D   | Shipping<br>Weight |  |  |  |  |  |  |
| 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                 |  |  |  |  |  |  |



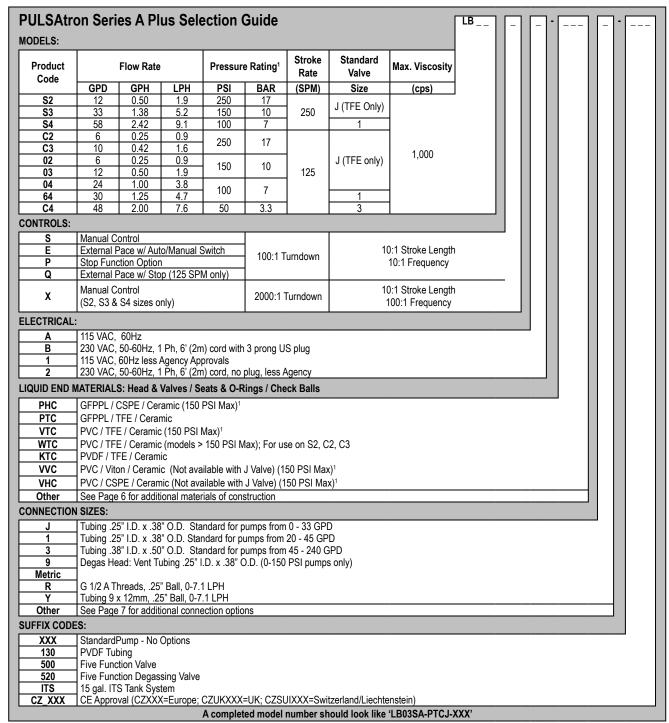


|           | Series E Dimensions (inches) |      |    |      |    |     |     |                    |  |  |  |  |
|-----------|------------------------------|------|----|------|----|-----|-----|--------------------|--|--|--|--|
| Model No. | Α                            | В    | B1 | С    | C1 | D   | E   | Shipping<br>Weight |  |  |  |  |
| LE02      | 5                            | 9.6  | -  | 9.5  | -  | 6.4 | 8.2 | 7                  |  |  |  |  |
| LE03      | 5                            | 9.8  | -  | 9.5  | -  | 6.4 | 8.4 | 7                  |  |  |  |  |
| LE12      | 5                            | 9.6  | -  | 9.5  | -  | 6.4 | 8.2 | 7                  |  |  |  |  |
| LE13      | 5                            | 9.8  | -  | 9.5  | -  | 6.4 | 8.4 | 7                  |  |  |  |  |
| LE14      | 5                            | 9.8  | -  | 9.5  | -  | 6.4 | 8.4 | 7                  |  |  |  |  |
| LE33      | 5.4                          | 10.6 | -  | 11.2 | -  | 7.5 | 9.2 | 12                 |  |  |  |  |
| LE34      | 5.4                          | 10.6 | -  | 11.2 | -  | 7.5 | 9.2 | 12                 |  |  |  |  |
| 1 F44     | 5.4                          | 10.6 |    | 11.2 | -  | 7.5 | 9.2 | 12                 |  |  |  |  |

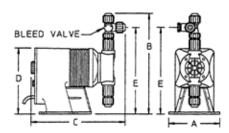




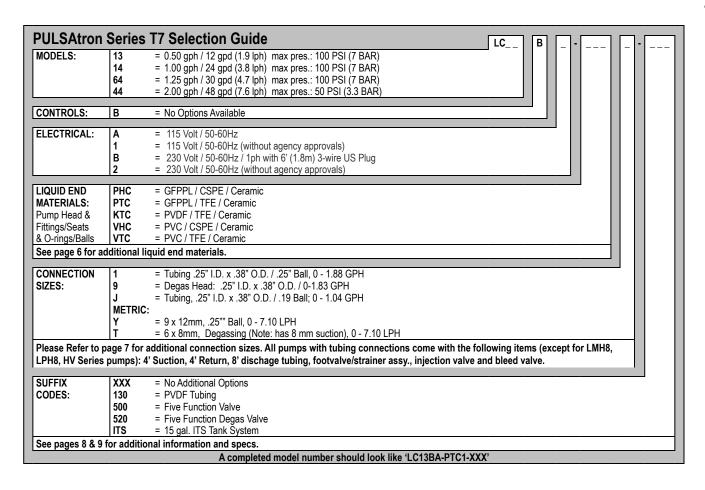
|                                     | Series E-DC Dimensions (inches) |      |      |     |     |    |  |  |  |  |  |
|-------------------------------------|---------------------------------|------|------|-----|-----|----|--|--|--|--|--|
| Model No. A B C D E Shipping Weight |                                 |      |      |     |     |    |  |  |  |  |  |
| 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 |  |  |  |  |  |

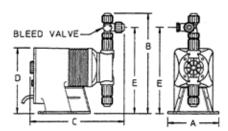


Note 1:Pumps with rated pressure above 150 PSI will be de-rated to 150 PSI Max. when selecting these valve options.

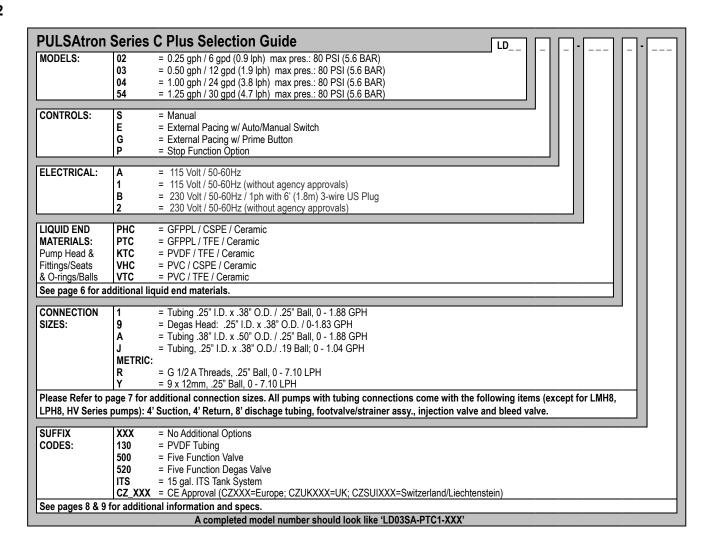


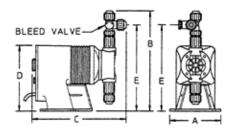
|           | Series A PLUS Dimensions (inches) |     |     |     |     |                    |  |  |  |  |  |  |
|-----------|-----------------------------------|-----|-----|-----|-----|--------------------|--|--|--|--|--|--|
| Model No. | Α                                 | В   | С   | D   | E   | Shipping<br>Weight |  |  |  |  |  |  |
| LB02 / S2 | 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 / S3 | 5.0                               | 9.9 | 9.5 | 6.5 | 8.5 | 10                 |  |  |  |  |  |  |
| LB04 /S4  | 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                 |  |  |  |  |  |  |



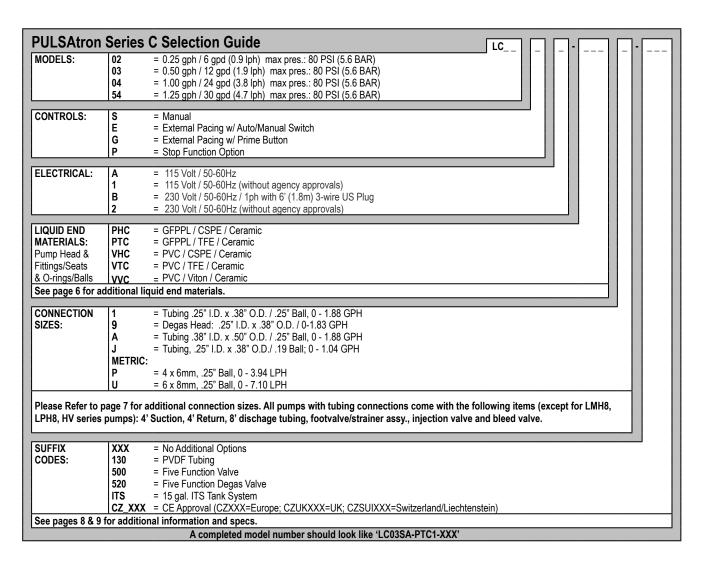


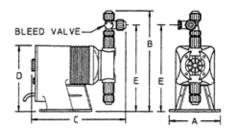
|           | Series T7 Dimensions (inches |      |      |     |     |                    |  |  |  |  |  |
|-----------|------------------------------|------|------|-----|-----|--------------------|--|--|--|--|--|
| Model No. | Α                            | В    | С    | D   | E   | Shipping<br>Weight |  |  |  |  |  |
| 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               |  |  |  |  |  |



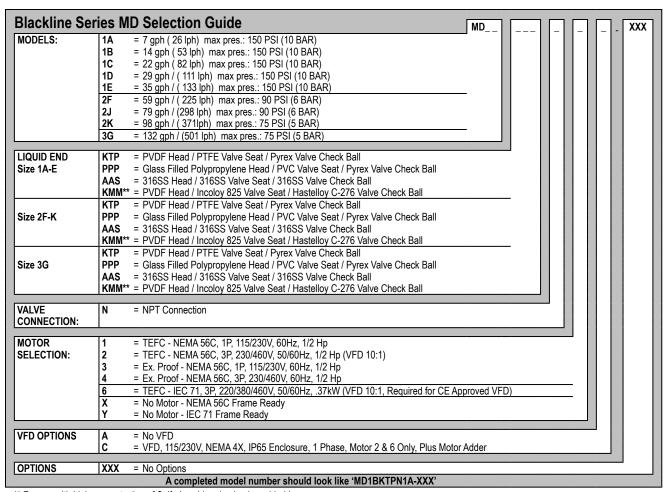


|                                     | Series C PLUS Dimensions (inches) |     |     |     |     |    |  |  |  |  |  |
|-------------------------------------|-----------------------------------|-----|-----|-----|-----|----|--|--|--|--|--|
| Model No. A B C D E Shipping Weight |                                   |     |     |     |     |    |  |  |  |  |  |
| 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 |  |  |  |  |  |

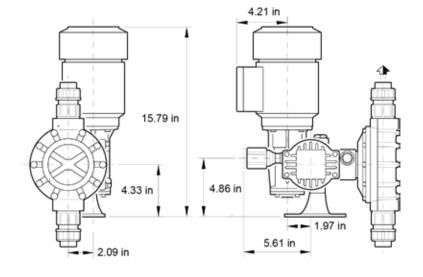




|                                     | Series C Dimensions (inches) |     |     |     |     |    |  |  |  |  |  |
|-------------------------------------|------------------------------|-----|-----|-----|-----|----|--|--|--|--|--|
| Model No. A B C D E Shipping Weight |                              |     |     |     |     |    |  |  |  |  |  |
| 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 |  |  |  |  |  |



<sup>\*\*</sup> For use with high concentration of Sulfuric acid and poly-alum-chloride.



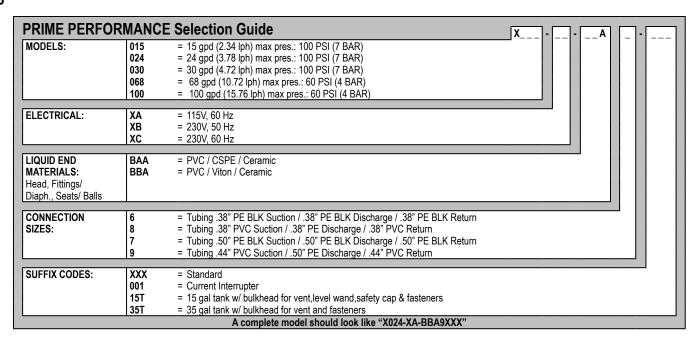
| Series MD Dimensions (inches) |                         |                                 |  |  |  |  |
|-------------------------------|-------------------------|---------------------------------|--|--|--|--|
| Model                         | Weight Plastic<br>(lbs) | Weight Stainless<br>Steel (lbs) |  |  |  |  |
| MD1A (NO MOTOR)               | 21.5                    | 26.0                            |  |  |  |  |
| MD1B (NO MOTOR)               | 21.5                    | 26.0                            |  |  |  |  |
| MD1C (NO MOTOR)               | 21.5                    | 26.0                            |  |  |  |  |
| MD1D (NO MOTOR)               | 21.5                    | 26.0                            |  |  |  |  |
| MD1E (NO MOTOR)               | 21.5                    | 26.0                            |  |  |  |  |
| MD2F (NO MOTOR)               | 26.0                    | 37.0                            |  |  |  |  |
| MD2J (NO MOTOR)               | 26.0                    | 37.0                            |  |  |  |  |
| MD2K (NO MOTOR)               | 26.0                    | 37.0                            |  |  |  |  |
| MD3G (NO MOTOR)               | 29.0                    | 46.0                            |  |  |  |  |
| MD1A W/VFD & MOTOR            | 67.0                    | 71.5                            |  |  |  |  |
| MD1B W/VFD & MOTOR            | 67.0                    | 71.5                            |  |  |  |  |
| MD1C W/VFD & MOTOR            | 67.0                    | 71.5                            |  |  |  |  |
| MD1D W/VFD & MOTOR            | 67.0                    | 71.5                            |  |  |  |  |
| MD1E W/VFD & MOTOR            | 67.0                    | 71.5                            |  |  |  |  |
| MD2F W/VFD & MOTOR            | 71.5                    | 82.5                            |  |  |  |  |
| MD2J W/VFD & MOTOR            | 72.5                    | 83.5                            |  |  |  |  |
| MD2K W/VFD & MOTOR            | 73.5                    | 84.5                            |  |  |  |  |
| MD3G W/VFD & MOTOR            | 74.5                    | 91.5                            |  |  |  |  |

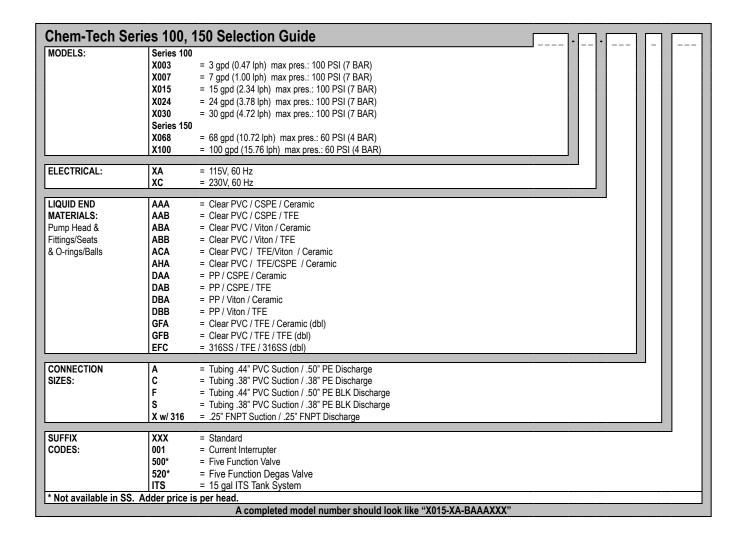
|             | Pump<br>Size   |   |                        | Pressure Rating - PSI (Bar) Single Head Options Duplex |                       |                |              | Speed       |      |   |  |  |  |
|-------------|----------------|---|------------------------|--|-----------------------|----------------|--------------|-------------|------|---|--|--|--|
|             |                | Flow  |                        | Single Head Options                                    |                       |                | Tube<br>Size | (RPM)       |      |   |  |  |  |
|             |                |   | 'H' Tube               | 'L' Tube   | 'F' Tube              | 'L' Tube       | 0.20         | ` ,         |      |   |  |  |  |
|             | XP004          | 4 GPD (0.6 LPH)   | 125 (8.6)              | 80 (5.5)   | 60 (4.1) <sup>1</sup> | 80 (5.5)       | 2            | 30          |      |   |  |  |  |
|             | XP007          | 7 GPD (1.1 LPH)   | 120 (0.0)              | 00 (0.0)   | 00 ()                 | =0 (4.0)       |              | 50          |      |   |  |  |  |
| 40DEL 0     | XP009          | 9 GPD (1.4 LPH)   | 110 (7.6) <sup>1</sup> | 70 (4.8)   | 50 (3.4) <sup>1</sup> | 70 (4.8)       | 3            | 30          |      |   |  |  |  |
| MODELS:     | XP015          | 15 GPD (2.4 LPH)  | - ( - /                | - ( -/   |                       | EO (2.4)       |              | 50<br>30    |      |   |  |  |  |
|             | XP014<br>XP023 | 14 GPD (2.3 LPH)<br>23 GPD (3.6 LPH)  | 100 (5.9) <sup>1</sup> | 50 (3.4)   | 40 (2.8) <sup>1</sup> | 50 (3.4)       | 4            | 50          |      |   |  |  |  |
|             | XP023<br>XP030 | 30 GPD (4.7 LPH)  | 80 (5.5)               |  | ` '                   | 40 (2.8)       |              | 30          |      |   |  |  |  |
|             |                | 50 GPD (4.7 LPH)  | 60 (5.5)               | 40 (2.8)   |                       | 25 (1.7)       | 6            | 50          |      |   |  |  |  |
|             |                | 48 GPD (7.5 LPH)  |                        |  |                       |                |              | 30          |      |   |  |  |  |
|             | XP080          | 80 GPD (12.6 LPH)   |                        | 25 (1.7)   |                       | 20 (1.7)       | 8            | 50          |      |   |  |  |  |
|             | , Al 000       |   |                        |  |                       |                |              |             |      | 1 |  |  |  |
|             | L              | 115V, 60Hz  |                        |  |                       |                |              |             |      |   |  |  |  |
| ELECTRICAL: | H              | 230V, 50/60Hz   |                        |  |                       |                |              |             |      |   |  |  |  |
| ELECTRICAL. | R              | 230V, 50Hzwith Grounded Right Angle European Plug   |                        |  |                       |                |              |             |      |   |  |  |  |
|             | Note: 50H      | Hz pumps will produce 5/  | 6 of the rated f       | low  |                       |                |              |             |      |   |  |  |  |
|             |                | I: .p., 0.,0%0  |                        |  |                       |                |              |             |      |   |  |  |  |
|             | F              | Fixed Rate, On / Off Only Adjustable 20:1 Turndown, On / Off with Current Interrupter Timer   |                        |  |                       |                |              |             |      |   |  |  |  |
|             | A              | Adjustable 20:1 Turndown, On / Off with Current Interrupter Timer    Duplex Head - Fixed Rate, On / Off Only, 'L' Tube  |                        |  |                       |                |              |             |      |   |  |  |  |
|             | G<br>B         | Duplex Head - Fixed Rate, On / Off Only, 12 Tube  Duplex Head - Adjustable, On / Off with Current Interrupter Timer, 'L' Tube   |                        |  |                       |                |              |             |      |   |  |  |  |
|             | 1 1            | Pulse Input, .1 to 1 Second Timer   |                        |  |                       |                |              |             |      |   |  |  |  |
|             | 2              | Pulse Input, .2 to 10 Second Timer  Pulse Input, .2 to 10 Second Timer  |                        |  |                       |                |              |             |      |   |  |  |  |
| DRIVE:      | 3              | Pulse Input, 1 to 60 Second Timer  Pulse Input, 1 to 60 Second Timer  |                        |  |                       |                |              |             |      |   |  |  |  |
|             | 4              | Dry Contact Input - Fixed Rate Pump   |                        |  |                       |                |              |             |      |   |  |  |  |
|             | 5              | Dry Contact Input - Fixed Rate Pump   |                        |  |                       |                |              |             |      |   |  |  |  |
|             | 6              | Flow Switch Activated with 3/4" NPT Flow Switch - Fixed Rate Pump   |                        |  |                       |                |              |             |      |   |  |  |  |
|             | 7              | Flow Switch Activated with 3/4" NPT Flow Switch - Adjustable Rate Pump  |                        |  |                       |                |              |             |      |   |  |  |  |
|             | 8              | 7 Day - 8 Event Electro   |                        |  |                       | ato i amp      |              |             |      |   |  |  |  |
|             |                |   |                        |  |                       |                |              |             |      |   |  |  |  |
|             | L              | Low Pressure Norpren  |                        |  |                       |                |              |             |      |   |  |  |  |
|             | H              | High Pressure Norprer   |                        |  |                       |                |              |             |      |   |  |  |  |
| TUBING:     | 3              | Low Pressure Norpren  |                        |  |                       |                |              |             |      |   |  |  |  |
|             | 4              | High Pressure Norprer   | e with 3/8" Tub        | e Fittings   |                       |                |              |             |      |   |  |  |  |
|             | F              | Fluran, Acid resistant tubing with 1/4" Tube Fittings (Doesnot include strainer & injector accessories) Fluran, Acid resistant tubing with 3/8" Tube Fittings (Doesnot include strainer & injector accessories) |                        |  |                       |                |              |             |      |   |  |  |  |
|             | G              | Fluran, Acid resistant to   | ubing with 3/8"        | Tube Fittings  | (Doesnot in           | clude strainer | & injecto    | or accessor | ies) |   |  |  |  |
|             | X              | Pump Only   |                        |  |                       |                |              |             |      |   |  |  |  |
|             | î              | 15 Gallon Tank System   | 1                      |  |                       |                |              |             |      |   |  |  |  |
|             |                |   |                        |  |                       |                |              |             |      |   |  |  |  |
| SYSTEM:     | 3              | 35 Gallon Tank System   |                        |  |                       |                |              |             |      |   |  |  |  |

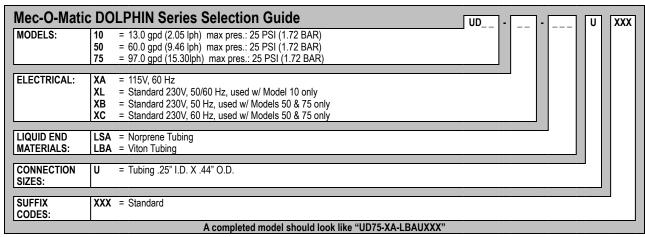
|              | Τ_           |   | Pressure Rating - PSI (Bar) |                |                       |              |            |            |     |  |   |  |   |  |
|--------------|--------------|---|-----------------------------|----------------|-----------------------|--------------|------------|------------|-----|--|---|--|---|--|
|              | Pump         | Flow  | Single Head Options Duplex  |                |                       |              | Tube       | Speed      |     |  |   |  | i |  |
|              | Size         |   | 'H' Tube L' Tube 'F' Tube   |                |                       | 'L' Tube     | Size       | (RPM)      |     |  |   |  |   |  |
| MODELS:      | XP008        | 8 GPD (1.3 LPH)   | 125 (8.6)                   | 80 (5.5)       | 60 (4.1)              | 80 (5.5)     | 2          |            |     |  |   |  |   |  |
| MODELS:      | XP017        | 17 GPD (2.7 LPH)  | 110 (7.6)                   | 70 (4.8)       | 50 (3.4) <sup>1</sup> | 70 (4.8)     | 3          | 65 Max.    |     |  |   |  |   |  |
|              | XP033        | 33 GPD (5.2 LPH)  | 100 (5.9)                   | 50 (3.4)       | 40 (2.8)2             | 50 (3.4)     | 4          |            |     |  |   |  |   |  |
|              | XP055        | 55 GPD (8.7 LPH)  | 80 (5.5)                    | 40 (2.8)       |                       | 40 (2.8)     | 6          | 60 Max.    |     |  |   |  |   |  |
|              | XP100        | 100 GPD (15.8 LPH)  |                             | 25 (1.7)       |                       | 25 (1.7)     | 8          | 00 IVIAX.  |     |  |   |  |   |  |
|              |              | 144514 0011   |                             |                |                       |              |            |            |     |  |   |  |   |  |
| EL ECTRICAL. | :            | 115V, 60Hz  |                             |                |                       |              |            |            |     |  |   |  |   |  |
| ELECTRICAL:  | l H<br>R     | 230V, 60/50Hz<br>230V, 60/50Hz with Grounded Right Angle European Plug  |                             |                |                       |              |            |            |     |  |   |  |   |  |
|              | <u> </u>     | [230 V, 60/30 HZ WILLI GIOL   | inaea Right F               | rigie Europea  | an Flug               |              |            |            |     |  | 1 |  |   |  |
| DRIVE:       | l v          | Variable Input Control with I/O Cable   |                             |                |                       |              |            |            |     |  |   |  |   |  |
| DRIVE:       | G            | Duplex Head - Low Pressure Norprene with 1/4" Tube Fitting  |                             |                |                       |              |            |            |     |  |   |  |   |  |
|              | <del> </del> | I. 5. 11  | '11 4/4" T 1                | E.u.           |                       |              |            |            |     |  |   |  |   |  |
|              | H            | Low Pressure Norprene   |                             |                |                       |              |            |            |     |  |   |  |   |  |
| TUBING:      | 3            | High Pressure Norprene with 1/4" Tube Fittings  |                             |                |                       |              |            |            |     |  |   |  |   |  |
|              | 4            | Low Pressure Norprene with 3/8" Tube Fittings High Pressure Norprene with 3/8" Tube Fittings  |                             |                |                       |              |            |            |     |  |   |  |   |  |
|              | F            | Fluran, Acid resistant tubing with 1/4" Tube Fittings (Doesnot include strainer & injector accessories)   |                             |                |                       |              |            |            |     |  |   |  |   |  |
|              | Ġ            | Fluran, Acid resistant tubing with 1/4 Tube Fittings (Doesnot include strainer & injector accessories)  Fluran, Acid resistant tubing with 3/8" Tube Fittings (Doesnot include strainer & injector accessories) |                             |                |                       |              |            |            |     |  |   |  |   |  |
|              |              | Triaran, Aoia registant tac   | ing with 0/0                | rabe r ittinge | (Docoriot ino         | ado otrainor | a injector | 4000000011 | 30) |  |   |  | ٠ |  |
|              | X            | Pump Only   |                             |                |                       |              |            |            |     |  |   |  |   |  |
|              | 1 4          | 15 Gallon Tank System   |                             |                |                       |              |            |            |     |  |   |  |   |  |
| evetem.      | 1 1          | 10 Gallott fallk Gystelli   |                             |                |                       |              |            |            |     |  |   |  |   |  |
| SYSTEM:      | 3            | 35 Gallon Tank System   |                             |                |                       |              |            |            |     |  |   |  |   |  |

<sup>1</sup>Max flow rate is 15 GPD (2.4 LPH) with Fluran tube.

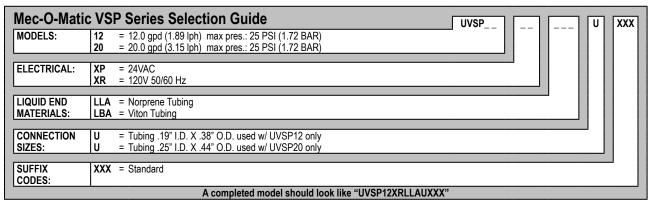
 $<sup>^{2}\,\</sup>mathrm{Max}$  flow rate is 28 GPD (4.4 LPH) with Fluran tube.



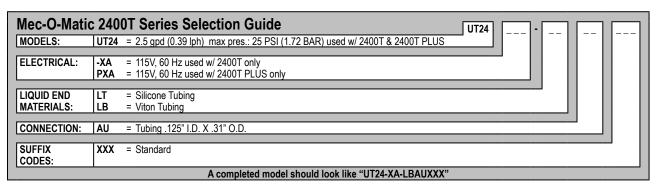




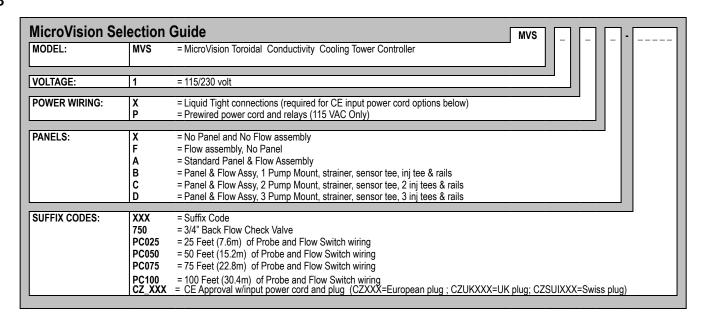
Junction Box option is available on 230V models at no additional charge. Contact the factory for model numbers. Shipping weight for Dolphin Pumps is 7 lbs.

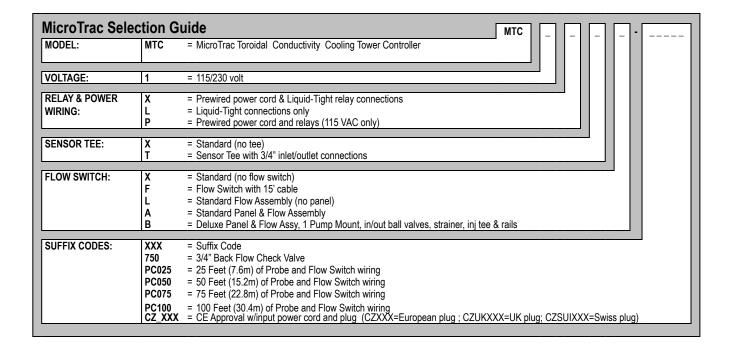


Shipping weight for all VSP pumps is 6 lbs.



- 2400T comes standard with 24 hour mechanical timer. 2400T plus utilizes a 7 day, 8 event programmable timer
- Shipping weight is 7.5 lbs.





| MODEL:               | MVBX       | =MicroVision Boiler Controller   |
|----------------------|------------|--|
| POWER<br>WIRING:     | P          | = Prewired with pigtails (115 VAC only)  |
| WIRING:              | C          | =Conduit connections (115V or 230V)  |
| ENCLOSURE<br>OPTIONS | Н          | =Heavy Duty Enclosure  |
| SYSTEM               | X          | =None  |
| OPTIONS:             | Α          | =1/2" Solenoid valve, one 1" orifice union w/4 plates  |
| ACCEMBLED            | _          | (Timed Sample) 100 PSI Max.  |
| ASSEMBLED            | В          | =1/2" Motorized ball valve one 1/2" flow throttling valve (Timed Sample) 250 PSI Max.        |
|                      | С          | =1/2" Motorized ball valve one 1" orifice union w/4 plates                                   |
|                      |            | (Timed Sample) 250 PSI Max.  |
|                      | D          | = 3/4" Motorized ball vlv, one 3/4" throtting vlv, one 1/2" throttling vlv                   |
|                      | E          | (Continuous Sample) 250 PSI Max. =3/4" Motorized ball valve, two 1" orifice union w/4 plates |
|                      | -          | (Continuous Sample) 250 PSI Max.   |
|                      | F          | =High Pressure Flow Assembly (250 PSI) for cooling tower appliications                       |
| SENSOR               | X          | =No Sensor Provided  |
| OPTIONS:             | Ĥ          | =High Temperature and Pressure, 375 PSI Max (210 PSI for steam) 442° F Max                   |
|                      | R          | = 3/4" Short style sensor and tee, 250 PSI Max (210 PSI for steam) 392° F Max                |
|                      | S          | =1" Contact Electrode, 250 PSI Max (210 PSI for steam) 392° F Max                            |
| CABLE                | 000        | = No Cable Supplied  |
| LENGTH:              | 010        | = 10 Feet of sensor cable  |
|                      | 025<br>050 | =25 Feet of sensor cable<br>=50 Feet of sensor cable   |
|                      | 075        | =75 Feet of sensor cable   |
|                      | 100        | =100 Feet of sensor cable  |
|                      | 150        | =150 Feet of sensor cable  |
| SUFFIX CODES:        | XXX        | =Standard Unit   |
|                      |            | = CE Approval (CZXXX=Europe; CZUKXXX=UK; CZSUIXXX=Switzerland/Liechtenstein)                 |

