

DATA SHEET

The LMI® Series Pumps supplied by Topline are electromagnetically driven diaphragm metering pumps, with only a single moving part, the liquifram armature assembly. The Electromagnetic Power Unit (EPU) installed within the LMI® P, B & C Series Pumps eliminate traditional problems associated with motor and reduction gear type units. LMI® Series Pumps The LMI® Series Pumps offer the benefit of inherent pressure limitation, as the design of the pump does not incorporate a mechanical linkage. When the back-pressure exceeds the strength of the EPU, the unit stops pulsing and no damage will occur to the pump. Rugged and durable construction with totally enclosed corrosion-resistant housings of glass-reinforced polypropylene, conforming to IP65 protection standard.

Benefits

- Corrosion resistant housing of glass fibre reinforced polypropylene.
- Solid state encapsulated electronics
- Large stock levels of pump models
- Large stock levels of listed pumps.
- orders despatched the same day.
- In-house pump repair service
- Over 20 years' experience using LMI® Metering Pumps in swimming pool applications.

Pump models from Stock

- P+055 3.6 litres an hour (Speed only)
- P155 3.6 litres an hour (Speed and Stroke)
- P+065 7.6 litres an hour (Speed only)
- P165 7.7 litres an hour (Speed and Stroke)
- B145 26 litres an Hour (Speed and Stroke)

General Specification

- | | |
|--------------|---|
| Head: | Acrylic (Visual Flow Confirmation) |
| Fittings: | PVDF |
| Control: | Adjustable Stroke Length and Speed on P1 series, adjustable speed on P+ series. |
| Voltage: | 230V/1Ph/50Hz |
| Accessories: | Injection/Anti-Siphon Valve
Foot Valve Assembly
4-Function Valve for;
- Anti-Siphon
- Back Pressure (1.4 bar)
- Priming
- Pressure Relief |

Accessories

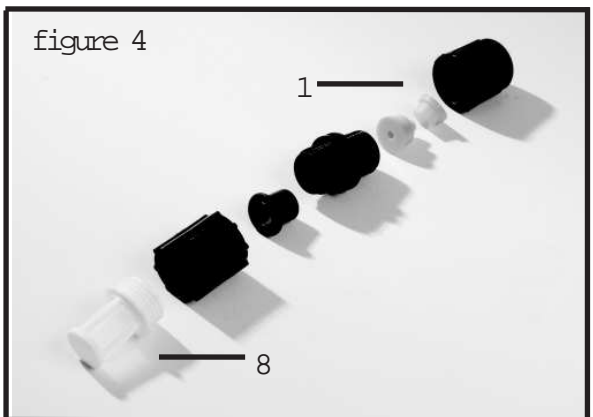
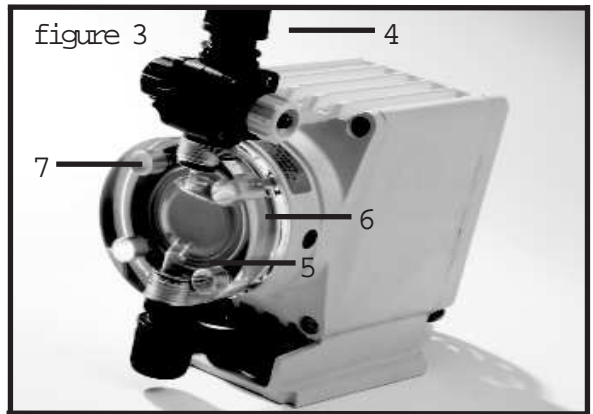
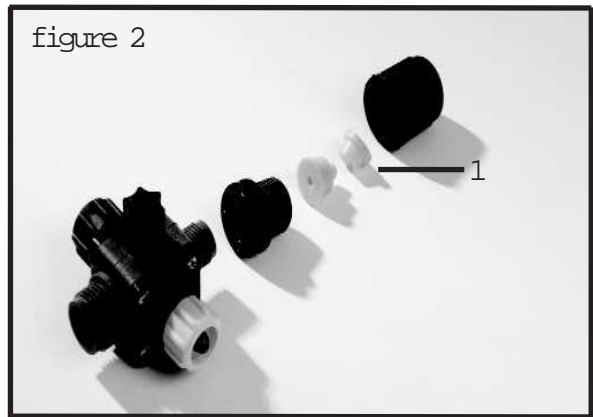
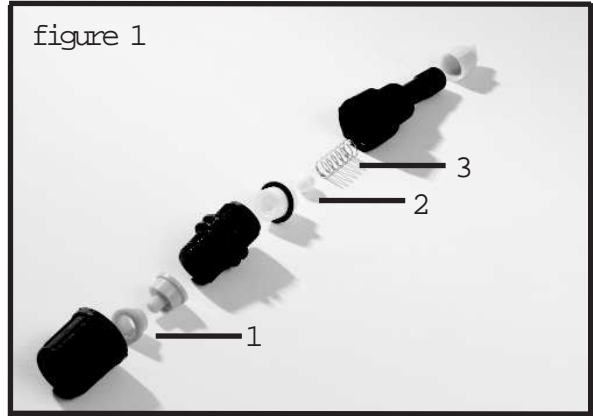
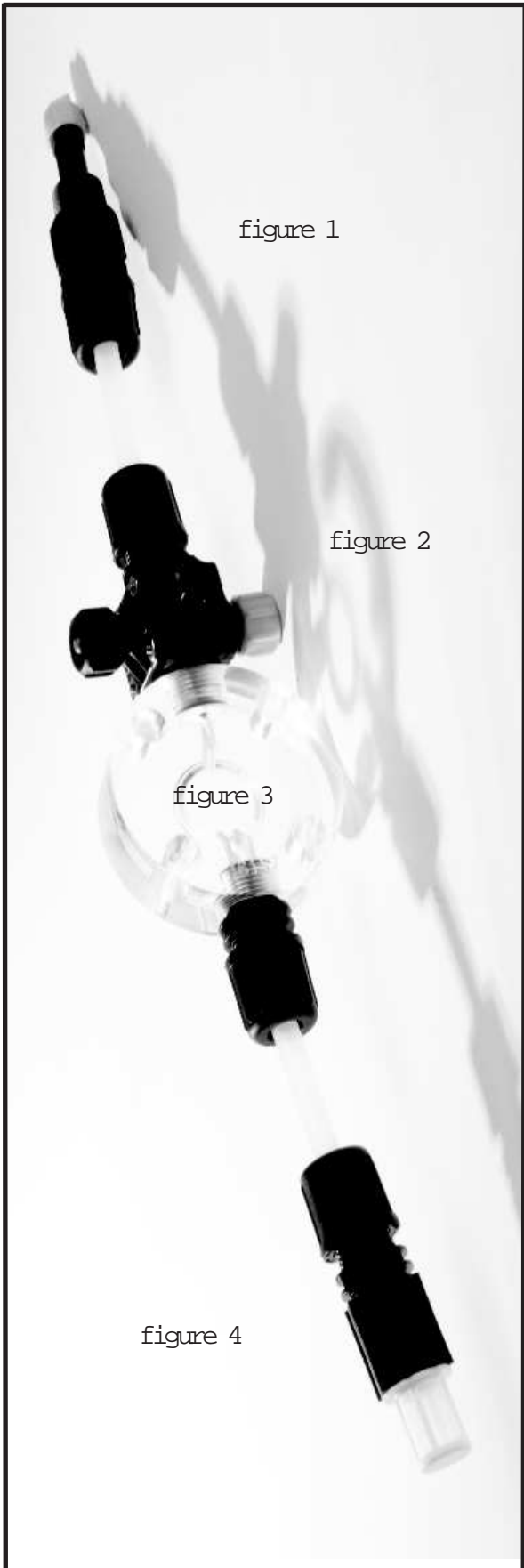
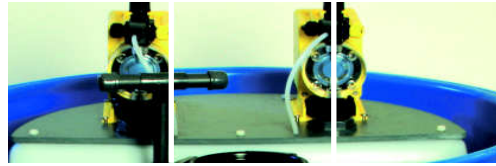
Topline also provides a comprehensive range of dosing accessories to enable the safe, accurate and effective treatment of your pool water. Our range includes:

- LMI dosing pumps and spares
- Day tanks and bunds
- Rodding injector
- Quil Injector
- Manual transfer pumps
- Electric Agitators
- Manual Agitators
- Mixing baskets

Milton Roy Pumps, Spares

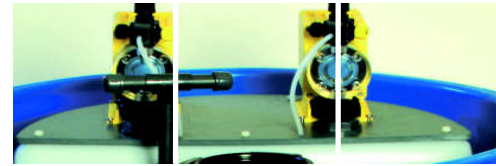
and Accessories

all the advice and equipment you need for reliable pool treatment



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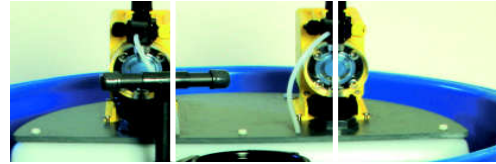
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Item	Description	Pump	Part Number
1	Connection Kit 3/8"	All Pumps	T77383
1	Connection Kit 1/2"	All Pumps	T77384
2	Ceramic ball	All Pumps	T10338
3	Injector Spring	All Pumps	T37341
4	Four Function Valve	P and B Series	T77386
5	Diaphragm 390 Head	P_55	T30917
5	Diaphragm 360 Head	P_65	T31420
5	Diaphragm 310 Head	B145	T31419
5	Diaphragm 920NX Head	P+55	T48187
5	Diaphragm 930NX Head	P+65	T48188
6	Pump Head 390	P_55	T36157
6	Pump Head 360	P_65	T36158
6	Pump Head 310	B145	T36159
6	Pump Head 920NX	P+55	T48425
6	Pump Head 930NX	P+65	T48428
7	Pump Head Screws	P and B Series	T10340
7	Pump Head Screws	P+ Series	T48702
8	Foot Valve Screen	All Pumps	T10123
Fig 1	Injector (ex connection kit)	All Pumps	T48728
Fig 3	Dosing Pump 3.7 Litres / Hour	P155-390S2	T5035
Fig 3	Dosing Pump 7.6 Litres / Hour	P165-360S2	T5036
Fig 3	Dosing Pump 24 Litres / Hour	B145-310S2	T5037
Fig 3	Dosing Pump 3.7 Litres / Hour	P+055-920NX	T5801
Fig 3	Dosing Pump 7.6 Litres / Hour	P+065-930NX	T5800
Fig 4	Foot Valve (ex connection kit)	All Pumps	T48721

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Topline provides a comprehensive range of dosing accessories to enable the safe, accurate and effective treatment of your pool water. Our range includes:

- LMI dosing pumps and spares
- Day tanks and bunds
- Strainer Baskets
- Injection assemblies (quill and rodding injectors)
- Manual transfer pumps
- CO₂ dosing sets
- Agitators (Manual and Electric)
- Dosing hose
- Bulk storage tanks

For effective automated dosing, the equipment used should be suitable for the water conditions being controlled, and sized correctly to ensure the chemical dosing meets demand.

Before despatch, Topline will size, mount and assemble all pumps and accessories to the tanks, to ensure the equipment is supplied correctly fitted. This includes supplying tank stiffening plates and rigid down tubes for the foot valves. At this stage we also fit the identification warning labels.

CO₂ Dosing

PH correction via the Topline CO₂ dosing system

CO₂ (Carbon Dioxide) is a gas which, when added to water, produces Carbonic Acid. This is then used to correct the pH of the water. It also provides a natural carbonate buffer that helps maintain the alkalinity levels of the water in soft water areas.

NB CO₂ may not be suitable for use in areas with naturally hard source water.



The benefits of using CO₂ are:

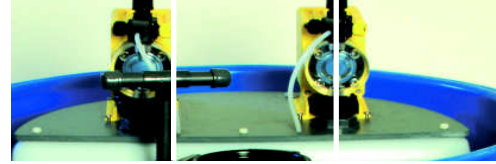
- No acid to handle, removing the risk of mixing hypochlorites and acid
- Ease of use and ease of installation as it requires very little floor space
- Very little maintenance required
- Improved water quality
- Aids alkalinity correction where required

CO₂ is supplied either in cylinders or via bulk delivery and Topline has a system to suit both these methods.



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TANK CAPACITY AND SIZES

Day Tank Litres	Diameter mm	Height mm	Bund to Suit Litres	Diameter mm	Height mm	Part Nos
50	425	500	50	680	285	T5240 & T5008
100	495	700	100	620	900	T5241 & T5009
200	635	785	200	830	940	T5242 & T5010
300	660	1075	300	830	940	T5243 & T5010
500	815	1100	500	970	1240	T5244 & T5011

AGITATORS

Electric Agitator	50 Litre Day Tank	T6002
Electric Agitator	100 Litre Day Tank	T6003
Electric Agitator	200 Litre Day Tank	T6004
Electric Agitator	300 Litre Day Tank	T6005
Manual Agitator	50 Litre Day Tank	T5029
Manual Agitator	100 Litre Day Tank	T5030
Manual Agitator	200 Litre Day Tank	T5031
Manual Agitator	300 Litre Day Tank	T5032

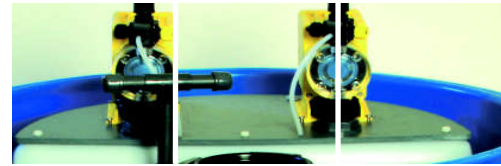
GENERAL

Strainer Basket	50 - 300 Litre Day Tank	T5013
Strainer Basket	500 Litre Day Tank	T5221
Rodding Injector		T5054
Quil Injector 235mm		T5705
Quil Injector 280mm		T5812
Manual Transfer Pump		T5041

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When running a commercial facility, the health and safety of customers and staff is of paramount importance. Topline offers a complete range of safety equipment, test kits and warning labels to ensure this is achieved and maintained at all times. These include: -

- Personal Protective Equipment
- Water Testing Kits and spares
- Warning and safety labels
- Plant room signage

Safety Kits. Topline safety kits are designed to offer maximum protection against the everyday hazards of chemical handling. These include full-face respirators and filters, chemical proof suits, gauntlets, aprons, visors, goggles, ear defenders and an eye wash station. Together with a set of safety labels, these items are packed into a convenient holdall. We recommend that at least two such safety kits are maintained on site - one for everyday use, and the other located outside the plant room for use in emergencies.



Test Kits. Topline also stocks and maintains a full range of water testing kits. It's important that all such equipment is maintained in good condition, as dirty or damaged kits will affect your readings, increasing the risk of poor water quality and making your facility vulnerable to infections.

Warning Labels It is both a legal and a health and safety requirement that all hazards are correctly identified. Topline's comprehensive range of warning and safety labels ensure your facility can meet the requirements of the **new European Regulation for chemical labeling (GHS).**

New GHS Regulation

On January 20, 2009 the regulation (EC) no. 1272/2008, called the GHS or CLP Regulation, entered into force. It regulates the classification, labeling and packaging of substances and mixtures (CLP: Regulation on Classification, Labeling and Packaging of substances and mixtures) and as of 2015 will completely replace the European Dangerous Substances Directive 67/548/EEC as well as the Dangerous Preparations Directive 1999/45/EC. The CLP Regulation is based on the recommendation of the UN, the so-called 'Globally Harmonized System' (UNGHS, or "purple book"), that can be traced back to the sustainability conference in Rio de Janeiro in 1992 (Agenda 21, Chapter 19).

What will change?

Labeling must take place in accordance with the CLP as of December 1, 2010 for substances and as of June 1, 2015 for mixtures.

The new European CLP Regulation is based on the previous system of classification and labeling as it represents a compromise between the established systems in North America and the EU.

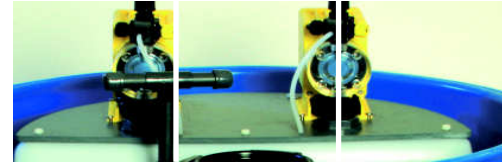
The most noticeable feature is the change in the labeling symbols: instead of the hazard symbols with black printing on orange-yellow rectangles that have been used to date, now nine hazard pictograms with black symbols on a white background with red-rimmed rhombuses are used to provide warnings (Annex V, CLP Regulation).

All leisure operators should audit the labeling of chemical storage tanks and comply with the above European legislation.



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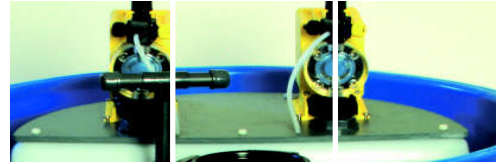
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WARNING LABELS

ALUMINIUM SULPHATE TANK LABEL	T5018
ALUMINIUM SULPHATE DAY TANK ID COLLAR	T5450
BROMINE TANK LABEL	T5153
BROMINE TANK DAY TANK ID COLLAR	T5451
CALCIUM HYPOCHLORITE DAY TANK ID COLLAR (MAXI 500 LITRE DAY TANK)	T5790
CALCIUM HYPOCHLORITE TANK LABEL	T5014
CALCIUM HYPOCHLORITE DAY TANK ID COLLAR	T5452
CO2 STORAGE VESSEL LABEL	T5017
HYDROCHLORIC ACID DAY TANK ID COLLAR (MAXI)	T5788
HYDROCHLORIC ACID TANK COLLAR	T5456
HYDROCHLORIC ACID (WITH BROMINE) TANK LABEL	T5154
HYDROCHLORIC ACID (WITH CHLORINE) TANK LABEL	T5155
PAS TANK LABEL	T5321
PAS DAY TANK ID COLLAR	T5454
PAC TANK LABEL	T5156
PAC DAY TANK ID COLLAR	T5453
SALT TANK LABEL	T5157
SODIUM BISULPHATE DAY TANK ID COLLAR	T5457
SODIUM BISULPHATE DAY TANK ID COLLAR (MAXI 500 LITRE DAY TANK)	T5787
SODIUM BISULPHATE (WITH BROMINE) TANK LABEL	T5158
SODIUM BISULPHATE (WITH CHLORINE) TANK LABEL	T5016
SODIUM CARBONATE TANK LABEL	T5320
SODIUM HYPOCHLORITE TANK LABEL	T5015
SODIUM HYPOCHLORITE DAY TANK ID COLLAR	T5455
SODIUM HYPOCHLORITE DAY TANK ID COLLAR (MAXI)	T5789
SODIUM THIOSULPHATE TANK COLLAR	T5458
SODIUM THIOSULPHATE TANK LABEL	T5459

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INJECTION POINT LABELS

ALUMINIUM SULPHATE INJECTION POINT LABEL	T5023
BROMINE INJECTION POINT LABEL	T5159
CALCIUM HYPOCHLORITE INJECTION POINT LABEL	T5019
CHEMICAL LINE DIRECTION RED	T5726
CHEMICAL LINE DIRECTION YELLOW	T5725
CO2 INJECTION POINT LABEL	T5022
HYDROCHLORIC ACID INJECTION POINT LABEL	T5160
PAS INJECTION POINT LABEL	T5322
PAC INJECTION POINT LABEL	T5161
SAMPLE LINE INPUT	T5024
SAMPLE LINE OUTPUT	T5025
SODIUM BISULPHATE INJECTION POINT LABEL	T5021
SODIUM CARBONATE INJECTOR POINT LABEL	T5323
SODIUM HYPOCHLORITE INJECTION POINT LABEL	T5020

WATER TEST KITS

WATER BALANCE TEST KIT	T5058
STANDARD COMPARATOR TEST KIT	T5226
TDS METER	T5762

SAFETY EQUIPMENT & LABELS

SAFETY KIT COMPLETE (with holdall, excludes Boots)	T5056
- Full Face Respirator	
- Visor and Goggles	
- - Full length Safety Suit	
- PPE Safety Signage	
- Eyewash Station	

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