



## INDUSTRIAL STATIC & FAN INSTALLATION MANUAL

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AUSTRALIAS LEADING MIST  
SYSTEM MANUFACTURER

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# INDUSTRIAL PUMP MODULE LAYOUT

**PUMP MODULE DIMENSIONS**  
655mm Long  
520mm Deep  
420mm High  
(Including filters/  
switches etc)



# IMPORTANT; PLANNING THE INSTALLATION WILL SAVE YOU TIME IN THE LONG RUN

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- DETERMINE IF YOU ARE INSTALLING MISTING FANS OR MIST LINES. IN MOST CASES, THERE WILL BE A DESIGN FOR THE SYSTEM SHOWING THE LOCATION OF MIST FANS/LINES AND SUPPLY LINES.
- MISTING LINES CAN BE FIXED TO FASCIA BOARDS, WALLS, UNDER CEILINGS AND ON STAINLESS STEEL SUPPORT CABLES ABOVE THE AREA TO BE COOLED.
- FANS ARE INSTALLED ON WALLS, POLES OR OTHER BUILDING STRUCTURES.
- DETERMINE THE LOCATION OF MISTING LINES AND SUPPORT CABLES (IF REQUIRED)
- IF USING AN S/S CABLE, MAKE SURE THE TWO FIXED POINTS ARE STRONG ENOUGH TO HOLD THE WEIGHT OF THE TUBE AND CABLE AS WELL AS THE TENSION THAT IS APPLIED.
- FIND A SUITABLE LOCATION FOR THE PUMP MODULE KEEPING IN MIND THE NEED FOR WATER, POWER AND CONTROL SYSTEMS.
- CHOOSE A PATH FOR THE HIGH-PRESSURE NYLON TUBE TO RUN BETWEEN THE PUMP AND MISTING LINES OR FAN LOCATIONS. TRY TO KEEP THE RUNS AS DIRECT AS POSSIBLE WHILE AESTHETICALLY PLEASING. DO NOT RUN NYLON TUBES ACROSS ROOFS AND PREFERABLY NOT IN ROOF CAVITIES.
- HAVE SUITABLE SCREWS AVAILABLE TO FIX THE TUBE SADDLES AND STAINLESS STEEL CABLE.
- WHEN ASSEMBLING MIST AND SUPPLY LINES ENSURE DEBRIS CANT ENTER THE TUBES AS IT COULD CAUSE A NOZZLE BLOCKAGE WHEN THE SYSTEM IS STARTED.

### MISTING NOZZLE LINES

THERE ARE TWO MISTING LINES MATERIALS AVAILABLE FOR INSTALLATION. OUR MOST POPULAR ALFRESCO COOLING SYSTEMS ARE THE QUICK FIT RANGE WHICH COMPRISES OF PRE-CUT AND MACHINED LENGTHS OF STAINLESS STEEL TUBE AND QUICK-FIT FITTINGS. ALTERNATIVELY, PUSH LOCK FITTINGS CAN ALSO BE USED WITH HIGH-PRESSURE NYLON. BOTH SYSTEMS ARE EXTREMELY EASY TO USE WITH SIMILAR INSTALLATION TIMES.

### MISTING LINE / FAN LOCATION CONSIDERATIONS

YOU SHOULD HAVE A PLAN OR IDEA OF WHERE MIST LINES ARE TO BE RUN. MIST LINES SHOULD NOT BE INSTALLED LOWER THAN 2.7M OFF THE FLOOR. THE MIST IS EXTREMELY FINE SO FACTOR THIS IN WHEN INSTALLING IN OPEN SPACES WHERE WIND MAY AFFECT IT. AN EXAMPLE WOULD BE MIST LINES INSTALLED ON THE EDGE OF GUTTERS AND EXPOSED TO THE WIND WHICH CAN TAKE THE MIST UP AND OVER THE ROOF.

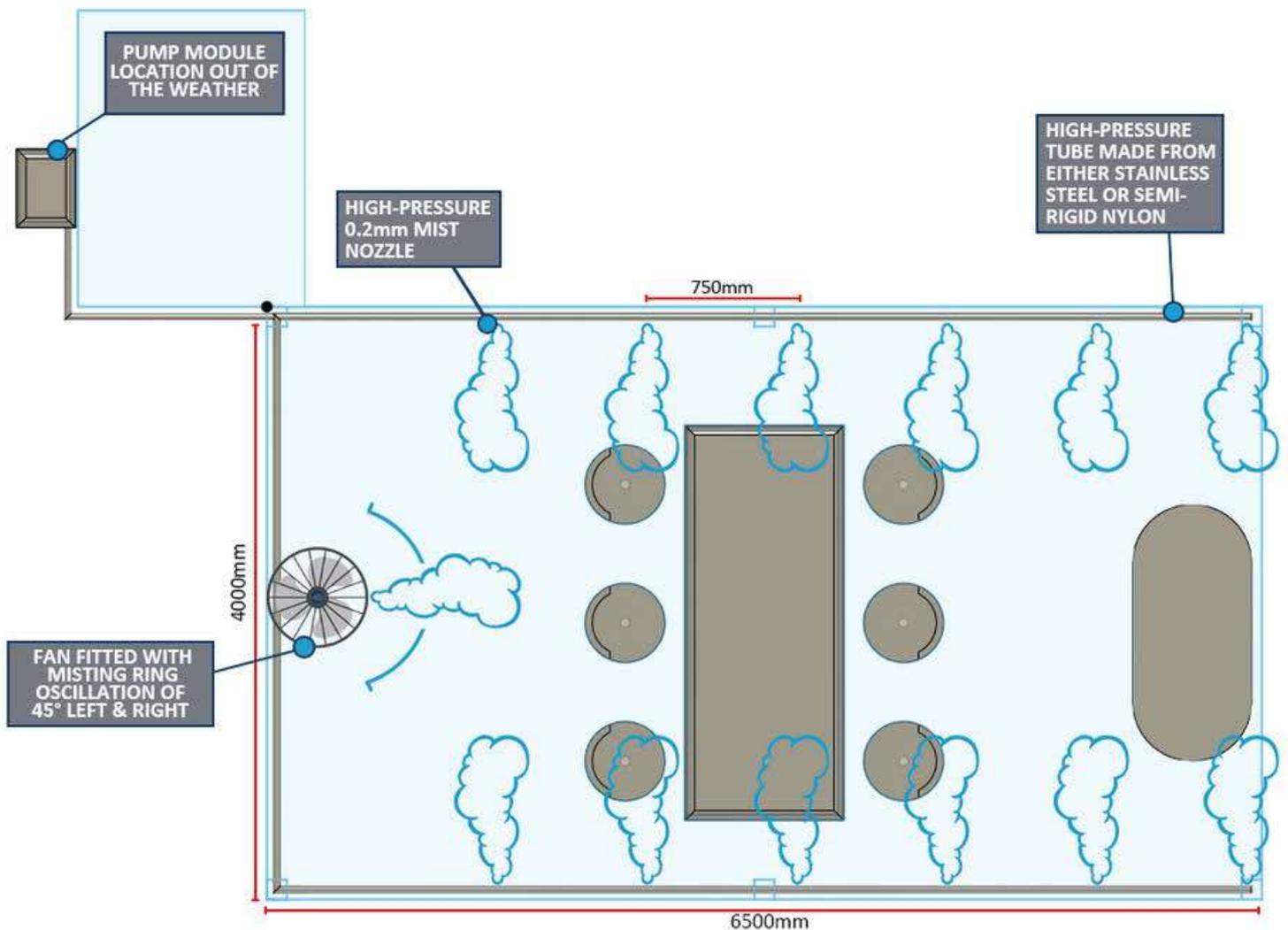
IF INSTALLING MIST FANS YOU SHOULD KEEP AT LEAST A 4-METER HORIZONTAL SEPARATION BETWEEN THE FAN FACE AND SEATING OR STRUCTURES. ANY CLOSER AND THE MIST MAY CREATE WETTING OF SURFACES, STRUCTURES AND PEOPLE. DONT POSITION FANS TO BLOW INTO A PREVAILING WIND. MOST OF THE TIME THE WIND WILL COME FROM THE SAME DIRECTION. HAVE THE WIND COMING FROM BEHIND THE FAN WILL ALLOW THE MIST TO TRAVEL FURTHER AND WORK MORE EFFICIENTLY.

# IMPORTANT; PLANNING THE INSTALLATION WILL SAVE YOU TIME IN THE LONG RUN

KEEP THE SUPPLY LINE RUN AS SHORT AS POSSIBLE BETWEEN THE PUMP MODULE AND FURTHEST MIST LINE. WITH A HIGH FLOW SYSTEM, FRICTION LOSS WILL NEED TO BE CONSIDERED WHEN SUPPLYING/INSTALLING THE NYLON SUPPLY LINES.

CONSIDER ACCESS TO THE MIST LINES SHOULD THERE BE A BLOCKED NOZZLE, LEAKING OR BROKEN PIPE. IT IS A GOOD RULE TO NEVER INSTALL YOUR PUMP IN A ROOF CAVITY OR RUN YOUR TUBING THROUGH AREAS THAT HAVE LIMITED TO NO ACCESS.

CONSIDER RUNNING SUPPLY LINES AT A LOWER LEVEL THAT CAN BE EASILY ACCESSED IF EVER REQUIRED.



### SPECIAL CONSIDERATIONS

WHEN FIXING TO FASCIAS AND GUTTERS SPECIAL CONSIDERATION SHOULD BE GIVEN TO THE FOLLOWING;

- MIST WILL THROW OUT FROM THE NOZZLE ABOUT 3 METERS.
- NOZZLES SHOULD BE INSTALLED POINTING UP SLIGHTLY. POINTING NOZZLES DIRECTLY DOWN WILL NOT GIVE THE MIST TIME TO EVAPORATE SUFFICIENTLY AND COULD CAUSE PERSON OR SURFACE WETTING.
- WIND WILL AFFECT MIST WHEN INSTALLED OUTSIDE. THIS CAN BE A PROBLEM WHEN THE MIST IS BLOWN BACK AGAINST SURFACES OR UP AND OVER ROOFS. IF POSSIBLE TRY TO INSTALL UNDER ROOFS TO ALLOW THE MIST SOME PROTECTION FROM THE WIND.
- IF INSTALLING ON A WALL UNDER A VERANDA MAKE SURE YOU HAVE AT LEAST 300MM CLEARANCE BETWEEN THE MIST NOZZLES AND ROOF.
- MIST SHOULD NEARLY BE EVAPORATED ABOVE HEAD HEIGHT. DO NOT INSTALL MIST LINES ANY LOWER THAN 2.7M OFF THE FLOOR.
- MAKE SURE THE MIST LINES ARE OUT OF REACH IN PUBLIC AREAS.

### SELECT THE POSITION OF THE MIST LINE CONSIDERING THE ABOVE POINTS.

WHEN FIXING TO FASCIAS AND GUTTERS NYLON INSERT TUBE SADDLES SHOULD BE USED. THE SADDLES SHOULD BE FIXED AT 1M SPACINGS FOR SUPPLY LINES AND 750MM INTERVALS, OR AGAINST A NOZZLE UNION, IN MIST LINES. USE TECK SCREWS TO FIX TO METAL OR WOOD. MASONRY SHOULD BE DRILLED, PLUGGED AND SCREWED AS REQUIRED. IT IS EASIER TO MAKE UP 3 METER SECTIONS OF MIST LINES ON THE GROUND. ALIGN ALL OF THE NOZZLES BEFORE TIGHTENING THE GRUB SCREWS. FIT SADDLES TO THE SECTION AND FIX IN PLACE.

CONTINUE THIS PROCESS UNTIL ALL MIST LINES ARE IN PLACE.

THE LAST FITTING IN THE MIST LINE WILL BE A SINGLE NOZZLE BLANK END. LEAVE THE NOZZLE OUT OF THIS FITTING UNTIL THE LINES HAVE BEEN FLUSHED OUT. ONCE THE MIST LINES HAVE BEEN INSTALLED YOU CAN RUN THE DISTRIBUTION LINE BACK TO THE PUMP MODULE.

CHOOSE THE SHORTEST, NEATEST PATH BETWEEN THE MIST LINE AND PUMP, AVOIDING SHARP BENDS AND OBJECTS. USE TUBE SADDLES EVERY 1 METER AND NEVER ALLOW THE MIST OR SUPPLY LINE TO SAG OR VIBRATE.

NEVER CUT NYLON OR STAINLESS STEEL TUBE USING A HACKSAW AS THE FILINGS WILL END UP IN THE TUBE AND WORK THEIR WAY INTO THE NOZZLES CAUSING BLOCKAGES. BE SURE TO KEEP THE INSIDE OF THE TUBING CLEAN FROM EXCESS DIRT. IF DIRT ENTERS THE TUBING IT WILL NEED TO BE FLUSHED OUT.

## NEVER CUT NYLON TUBE USING A HACKSAW

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DISTRIBUTION LINES BETWEEN THE PUMP MODULE AND STAINLESS STEEL MISTING LINES (ATOMIZATION LINES) ARE NORMALLY SEMI-RIGID HIGH-PRESSURE NYLON TUBE WHICH IS SUPPLIED IN 25-METER OR 100-METER ROLLS. NYLON TUBE IS SPECIALLY MANUFACTURED FOR OZMIST TO WITHSTAND PRESSURES OF OVER 17,000KPA. NORMAL PLUMBING PIPE SUCH AS AUSPEX IS RATED AT JUST 1,378 KPA.

WHEN RUNNING THE NYLON TUBE DISTRIBUTION LINE IT IS IMPORTANT TO CHOOSE THE SHORTEST, NEATEST PATH BETWEEN MISTING LINES AND THE PUMP MODULE TO LIMIT PRESSURE LOSS DUE TO PIPE FRICTION.

IT IS IMPORTANT NOT TO ALLOW THE TUBE TO COME INTO CONTACT WITH SHARP EDGES WHERE A CHAFING OF THE TUBING CAN OCCUR., RESULTING IN DAMAGED LINES THAT MAY LEAK.

THE DISTRIBUTION LINE IS NORMALLY SADDLED TO THE BUILDING FRAME USING THE SUPPLIED NYLON INSERT TUBE SADDLES. MAKING SURE TO HAVE YOUR LINES SET IN PLACE BEFORE TIGHTENING SADDLE.

IT IS IMPORTANT TO USE SUFFICIENT TUBE SADDLES SO THAT THE TUBE WILL NOT VIBRATE OR SAG.

DO NOT ATTACH THE TUBING TO STEAM PIPES OR CLOSE PROXIMITY AS THE HEAT TRANSMITTED WILL DAMAGE THE NYLON TUBING.

WHEN CHANGING THE DIRECTION OF THE TUBE, DO NOT BEND THE TUBE TOO SHARPLY. THIS COULD CAUSE THE TUBE TO KINK AND BREAK. IF IT IS NOT POSSIBLE TO LEAVE A RADIUS BEND IN THE TUBE USE A PUSH LOCK ELBOW.

WHEN CUTTING THE TUBE IT IS IMPORTANT TO USE TUBE CUTTERS. NEVER CUT NYLON TUBE USING A HACKSAW AS THE FILINGS WILL END UP IN THE TUBE AND WORK THEIR WAY INTO THE NOZZLES CAUSING BLOCKAGES.

BE SURE TO KEEP THE INSIDE OF THE TUBING CLEAN FROM EXCESS DIRT. IF DIRT ENTERS THE TUBING IT WILL NEED TO BE FLUSHED OUT PRIOR TO ALL OF THE NOZZLES ARE INSTALLED.

THE PUMP MODULE SHOULD BE INSTALLED AS EXPLAINED ABOVE.

### CHOOSING FAN LOCATION

THERE ARE SEVERAL FACTORS THAT WILL DICTATE WHERE THE BEST POSITION FOR THE FANS WILL BE FITTED.

MOST IMPORTANTLY THE FAN SHOULD NOT BE LOCATED WHERE UN-EVAPORATED MIST WILL MAKE CONTACT WITH ANY SURFACE OR PEOPLE. YOU SHOULD KEEP A HORIZONTAL DISTANCE OF AT LEAST 4 METERS.

FANS SHOULD BE MOUNTED AT LEAST 2.7 METERS FROM THE BOTTOM OF THE FAN TO THE FLOOR.

OZMIST INDUSTRIAL FANS WILL THROW MIST AROUND 10 METERS FROM THE MISTING RING WHEN THE FAN IS RUNNING ON FAN SPEED 3. THE DISTANCE OF THROW WILL SHORTEN WHEN THE FAN IS RUN ON A LOWER SPEED.

### MOUNTING FAN BRACKETS

WHEN FIXING FAN BRACKETS TO CONCRETE OR BRICK WALLS APPROPRIATELY SIZED DYNA BOLTS SHOULD BE USED.

WHEN FIXING TO TIMBER MAKE SURE THAT THE TIMBER AND SCREWS ARE STURDY ENOUGH TO TAKE THE WEIGHT OF THE FAN AND RING.

FAN MOUNTING BRACKETS SHOULD NOT BE FITTED DIRECTLY TO HORIZONTAL C-SECTION WALL PURLINS AS THEY WILL TWIST. TO AVOID TWISTING, NOTCH OUT THE SIDES OF A SECTION OF PURLIN LONG ENOUGH TO SPAN BETWEEN THE PURLIN ABOVE AND BELOW THE FINAL FAN HEIGHT. SCREW THIS SECTION IN PLACE ON BOTH PURLINS. THE FAN BRACKET IS THEN FIXED TO THIS VERTICAL PURLIN.

WHEN FIXING THE WALL BRACKET TO STEEL IT IS ADVISABLE TO DRILL AND BOLT USING SPRING WASHERS RATHER THAN USING TECH SCREWS.

### ASSEMBLY OF INDUSTRIAL FANS

~~REMOVE FANS FROM BOXES AND~~ ASSEMBLE AS PER INSTRUCTIONS INCLUDED IN THE CARTONS.

CABLE TIE THE MISTING RING TO THE FRONT OF THE FAN GUARD USING THE CABLE TIES SUPPLIED WITH THE KIT. THE CABLE TIES SHOULD BE FITTED AT EVERY SECOND SPIGOT AROUND THE RING. A HYDRAULIC CONNECTION HOSE SCREWS TO THE THREAD ON THE STAINLESS STEEL RING. MAKE SURE TO FIT A WHITE NYLON WASHER FROM THE ZIP LOCK BACK IN BEFORE TIGHTENING. A STAINLESS STEEL BALL VALVE AND BRASS THREAD JOIN TO THE OTHER END OF THE CONNECTION HOSE. AGAIN, USE A WHITE WASHER BETWEEN THE THREAD AND NUT. THE SUPPLY LINE CONNECTS TO A PUSH LOCK 1/4" MALE X TUBE UNION AT THIS POINT.

### KTW2460 FANS

~~THE KTW2460 F~~ANS COME PRE ASSEMBLED WITH THE MISTING RING FITTED. A SINGLE PIECE WALL BRACKET IS FIXED TO THE WALL AND THE FAN FITS TO IT. WHEN YOU HAVE THE ORIENTATION SET, TIGHTEN THE ALLEN KEY GRUB SCREW TO LOCK IN PLACE.

ONCE THE MIST LINES HAVE BEEN INSTALLED YOU CAN RUN THE DISTRIBUTION LINE BACK TO THE PUMP MODULE.

CHOOSE THE SHORTEST, NEATEST PATH BETWEEN THE MIST LINE AND PUMP, AVOIDING SHARP BENDS AND OBJECTS. USE TUBE SADDLES EVERY 1 METER AND NEVER ALLOW THE MIST OR SUPPLY LINE TO SAG OR VIBRATE.

NEVER CUT NYLON OR STAINLESS STEEL TUBE USING A HACKSAW AS THE FILINGS WILL END UP IN THE TUBE AND WORK THEIR WAY INTO THE NOZZLES CAUSING BLOCKAGES. BE SURE TO KEEP THE INSIDE OF THE TUBING CLEAN FROM EXCESS DIRT. IF DIRT ENTERS THE TUBING IT WILL NEED TO BE FLUSHED OUT.



# THE PUMP MODULE MUST BE INSTALLED UNDERCOVER IN A POSITION THAT OFFERS ADEQUATE VENTILATION

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THE PUMP MODULE MUST BE INSTALLED UNDER COVER IN A POSITION THAT OFFERS ADEQUATE VENTILATION. PUMP MODULES SHOULD NOT BE INSTALLED IN EXCESSIVELY DUSTY OR DIRTY AREAS. THE INTERNAL ELECTRICAL COMPONENTS INSIDE THE CABINET WILL BE AFFECTED BY DUST BUILD UP.

### WATER SUPPLY

THE PUMP MODULE NEEDS AN ADEQUATE WATER SUPPLY TO RUN EFFICIENTLY. WITH THE PUMP MODULE RUNNING ALL NOZZLES CONNECTED, THERE MUST BE A MINIMUM OF 20PSI (OR 135KPA) INLET WATER PRESSURE AND A MAXIMUM OF 50PSI (OR 345KPA).

INSUFFICIENT WATER PRESSURE WILL CAUSE THE INTERNAL LOW-PRESSURE SWITCH TO STOP THE PUMP ERRATICALLY UNTIL THE WATER FLOW IS RESTORED. IF THIS 'CHATTERING' CONTINUES IT WILL TRIP THE POWER SUPPLY TO THE PUMP AND CAN CAUSE DAMAGE TO THE ELECTRICAL CONTACTOR.

TAKE INTO ACCOUNT OTHER APPLIANCES USING WATER. THE MOST COMMON IS SPRINKLER SYSTEMS, DISHWASHERS AND WASHING MACHINES. PRESSURE CAN ALSO BE AFFECTED DURING PEAK USAGE HOURS USUALLY MID-AFTERNOONS.

### MOUNTING SURFACE

THE MODULE SHOULD BE INSTALLED ONTO A FLAT, LEVEL AND SEALED SURFACE. VEGETATION SHOULD BE KEPT CLEAR OF THE MODULE.

### ACCESS

THE PUMP MODULE SHOULD BE SITUATED IN AN ACCESSIBLE LOCATION WHERE THE PUMP CAN BE EASILY INSPECTED AND PERIODICAL WORK CAN BE TAKEN OUT EG REPLACING CARTRIDGE FILTERS AND CHANGING OIL.

### DRAINAGE

BOTH COMMERCIAL AND INDUSTRIAL PUMP MODULES HAVE A HIGH-PRESSURE SOLENOID VALVE THAT RELIEVES PUMP HEAD PRESSURE UPON SHUT DOWN. THIS WILL RELEASE ANY HEAD PRESSURE THROUGH A DRAINAGE HOSE AWAY FROM THE PUMP MODULE, MAKE SURE THAT THIS HOSE IS LOCATED IN A SUITABLE POSITION.

### WATER QUALITY

ULTRA FINE MIST NOZZLES EMPLOYED IN THE OZMIST SYSTEM DEPENDENT OF CLEAN WATER FOR THEIR CONTINUED, TROUBLE-FREE OPERATION.

-COMMERCIAL PUMP MODULES ARE FITTED WITH A SINGLE 10UM CARTRIDGE FILTER LOCATED INTERNALLY.

-INDUSTRIAL PUMP MODULES ARE FITTED WITH DUAL EXTERNAL CARTRIDGE FILTERS COMPRISING OF 1 X 10UM FILTER AND 1 X 5UM FILTER.

FILTER LIFE WILL ULTIMATELY DEPEND ON THE QUALITY OF THE WATER SUPPLIED.

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## SPECIAL TOOLS REQUIRED: STAINLESS STEEL WIRE CUTTERS

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·SELECT THE TWO STRAINING POINTS FROM WHICH YOU REQUIRE YOUR DISTRIBUTION LINE OR MISTING LINE TO SPAN.

·ROLL OUT THE STAINLESS STEEL CABLE AND CUT 1 METER LONGER USING THE CABLE CUTTER.

·THE OTHER END OF THE STAINLESS STEEL CABLE IS NOW READY TO BE FIXED. A RATCHET STRAINER MUST BE INSTALLED AT THIS END SO THAT THE CABLE CAN BE TENSIONED.

·AT THE OTHER END PULL A SHORT PIECE OF CABLE AROUND THE STRAINING POINT. FEED ONE END THROUGH THE RATCHET STRAINER AND THEN BOTH ENDS THROUGH CABLE U- BOLTS. AGAIN, TIGHTEN THE CABLE U-BOLTS

·THE END OF THE STAINLESS STEEL CABLE THAT RUNS BETWEEN THE STRAINING POINTS CAN NOW FEED THROUGH THE HOLE IN THE DRUM IN THE CENTRE OF THE RATCHET STRAINER.



·FEED THE CABLE THROUGH THE DRUM AND PULL THE CABLE TAUGHT. LEAVE A SUFFICIENT AMOUNT OF CABLE THROUGH THE DRUM OF THE RATCHET STRAINER TO ALLOW THE STRAINED CABLE TO WIND OVER IT ON THE DRUM A FEW TIMES. CUT OFF ANY EXCESS.

·USING A SHIFTER TURN THE SQUARE EDGE OF THE DRUM CENTRE IN A CLOCKWISE DIRECTION, TIGHTENING THE CABLE. THE DESIGN OF THE RATCHET STRAINER WILL NOT ALLOW THE DRUM TO SPIN BACKWARDS.

·THE WEIGHT OF THE MISTING LINES MAY CAUSE THE STAINLESS STEEL CABLE TO SAG. TO OVERCOME SAGGING IT IS NECESSARY TO SUPPORT THE MISTING LINE ALONG ITS LENGTH.

·NOW THAT THE STAINLESS STEEL CABLE HAS BEEN FITTED THE ATOMIZATION LINES OR DISTRIBUTION LINES CAN BE INSTALLED.

·IT IS ADVISABLE TO FIT STAINLESS STEEL BALL VALVES AT THE START OF EACH MISTING LINE TO ALLOW FOR THE ISOLATION OF A SINGLE LINE SHOULD THE NEED ARISE.

- THERE IS A COMPREHENSIVE RANGE OF QUICK FIT FITTINGS AVAILABLE.
- CHOOSE THE REQUIRED FITTING AND UNDO THE 3MM ALLEN KEY GRUB SCREW MAKING SURE IT IS FULLY UNDONE. IF IT'S NOT UNDONE COMPLETELY IT MAY STOP THE TUBE FROM INSERTING FULLY.
- TWIST THE FITTING ONTO THE END OF THE STAINLESS STEEL TUBE. OCCASIONALLY LUBRICATION OF THE END OF THE TUBE MAY BE NECESSARY.
- NEVER HIT THE FITTING ONTO THE TUBE AS YOU WILL TEAR THE INTERNAL O RING AND THE FITTING WILL LEAK.
- ONCE THE TUBE IS FULLY INSERTED, TWIST THE FITTING/NOZZLE TO LINE UP WITH OTHER FITTINGS IN THE LINE. TIGHTEN THE GRUB SCREW FULLY.
- WHEN THE TUBE IS INSERTED TO THE CORRECT DEPTH THE GRUB SCREW WILL LOCK INTO THE GROOVE ON THE TUBE. THE GRUB SCREW IS THERE TO SIMPLY KEEP THE FITTING FROM SLIDING OFF THE TUBE, OVER-TIGHTENING THE GRUB SCREW WILL DAMAGE THE TUBE AND CAN CAUSE LEAKS.
- PRE ASSEMBLING SECTIONS OF TUBES AND FITTINGS ON THE GROUND CAN MAKE INSTALLATION QUICKER.
- NYLON INSERT WRAP AROUND TUBE SADDLES ARE SUPPLIED TO SECURE THE TUBE TO THE BUILDING STRUCTURE. IF INSTALLING THE MIST LINE TO PURLINS, FASCIAS, ETC. WRAP THE SADDLE AROUND THE TUBE AND SCREW TO THE STRUCTURE MAKING SURE THE TUBE DOES NOT COME INTO CONTACT WITH THE BUILDING.
- HAND SCREW NOZZLES INTO THE NOZZLE UNIONS.

### **Quick Fit Static Line Components for Stainless.**



## PUSH-LOCK TUBE SYSTEMS

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- PUSH LOCK FITTINGS ARE EXTREMELY EASY TO USE.
- ONLY USE NYLON TUBE CUTTERS TO CUT THE TUBE. NEVER USE A HACKSAW.
- CUT THE NYLON TUBE TO LENGTH. PUSH THE FITTING OVER THE END OF THE TUBE AND PUSH UNTIL THE TUBE IS FULLY INSERTED. KEEP IN MIND THAT THERE IS AN INTERNAL O RING THAT IS 5MM SHORT OF THE END OF THE FITTING AND THIS IS SOMETIMES MISTAKEN FOR THE END OF THE FITTING. YOU MUST PUSH THE TUBE PAST THE O RING OR THE FITTING WILL BLOW OFF UNDER PRESSURE.
- NEVER HIT THE FITTING ONTO THE TUBE AS YOU WILL TEAR THE INTERNAL O RING AND THE FITTING WILL LEAK.
- ONCE THE TUBE IS FULLY INSERTED, HOLD THE END COLLAR AND TWIST THE FITTING AROUND THE TUBE. FINALLY, PULL BACK ON THE FITTING. THIS HELPS TO LOCK THE JAWS ONTO THE TUBE.
- PRE ASSEMBLING SECTIONS OF TUBES AND FITTINGS ON THE GROUND CAN MAKE INSTALLATION QUICKER.
- NYLON INSERT WRAP AROUND TUBE SADDLES ARE SUPPLIED TO SECURE THE TUBE TO THE BUILDING STRUCTURE. IF INSTALLING THE MIST LINE TO PURLINS, FASCIAS, ETC. WRAP THE SADDLE AROUND THE TUBE AND SCREW TO THE STRUCTURE MAKING SURE THE TUBE DOES NOT COME INTO CONTACT WITH THE BUILDING.
- HAND SCREW NOZZLES INTO THE NOZZLE UNIONS.

## Push Lock Static Line Components for Nylon.



## BEFORE STARTING - OIL

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### OIL CHANGES

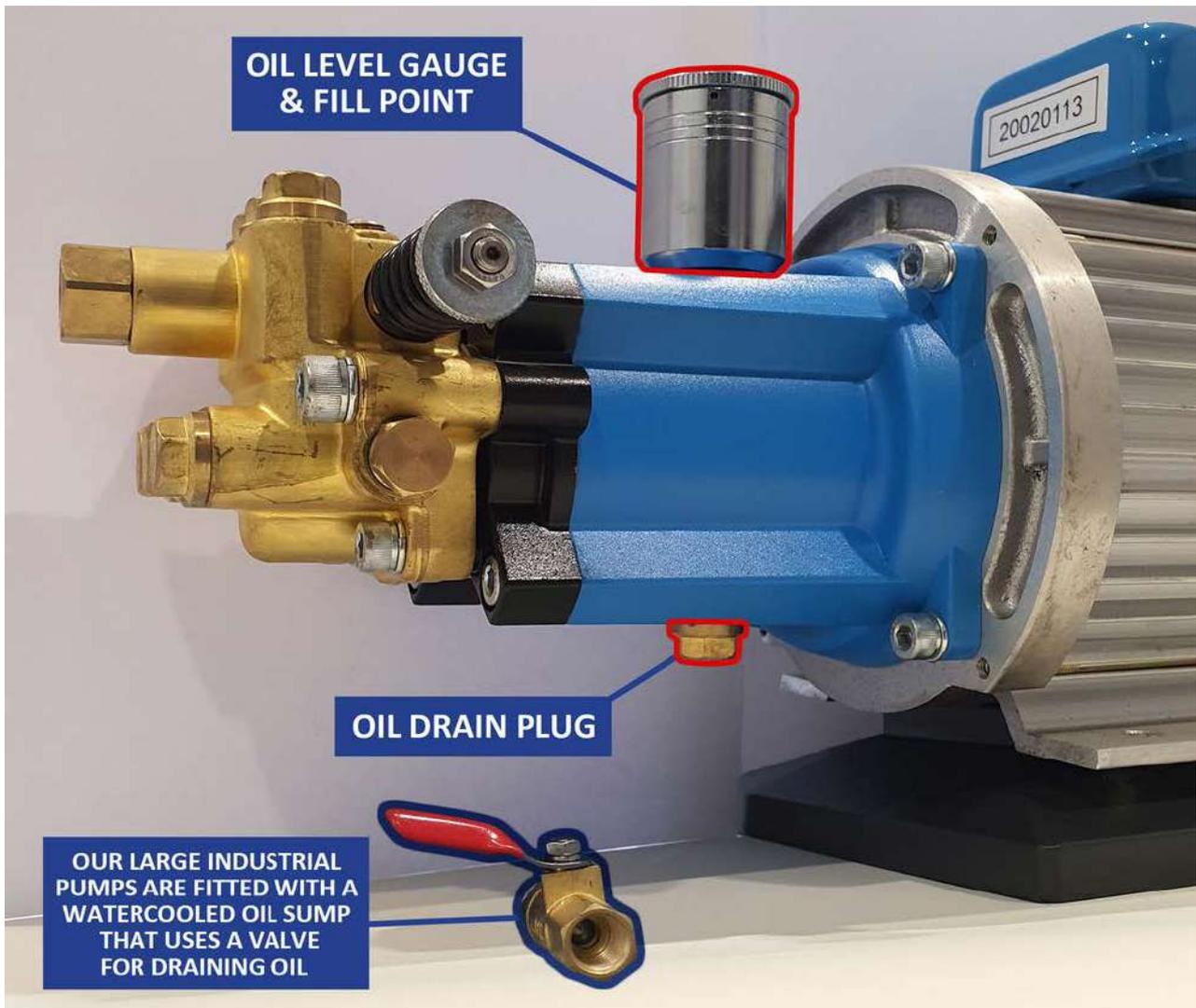
·BEFORE STARTING MAKE SURE YOU HAVE AT LEAST 300ML OF FULLY SYNTHETIC 10W-40 OIL.

·LIFT THE PUMP, THE DRAIN PORT IS ON THE UNDERSIDE OF THE BLUE SECTION OF THE PUMP. FIT A CONTAINER UNDER THE PUMP HEAD AND REMOVE THE PLUG. THE LARGEST PUMPS IN OUR RANGE ARE FITTED WITH A DRAIN VALVE INSTEAD OF A PLUG, THIS MAKES ROOM FOR THE WATER-COOLED JACKET THAT IS FITTED OVER THE OIL SUMP.

DON'T FORGET TO REMOVE THE FILL CAP FROM THE TOP OF THE PUMP.

·WHEN THE OLD OIL HAS ALL DRAINED, REPLACE THE DRAIN PLUG OR CLOSE THE VALVE.

·VERY SLOWLY, POUR THE NEW OIL INTO THE OIL CYLINDER STOPPING FREQUENTLY TO LET THE OIL RUN THROUGH THE CRANKCASE. FILL UNTIL THE OIL REACHES HALFWAY UP THE CYLINDER. REFIT THE CAP AND SCREW ON TIGHTLY.



## FLUSHING AND COMMISSIONING THE SYSTEM

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### FLUSHING THE SYSTEM

THE PUMP SHOULD BE CONNECTED TO BOTH THE INLET WATER SUPPLY AND THE DISTRIBUTION LINES. DISTRIBUTION LINES SHOULD BE CONNECTED TO THE MISTING LINES.

·IN LARGE SYSTEMS FLUSH ONE LINE AT A TIME, STARTING AT THE FURTHERMOST LINE FROM THE PUMP MODULE. ONCE EACH LINE HAS FLUSHED, STOP THE PUMP, CLOSE THE BALL VALVE TO THAT LINE THEN FIT THE NOZZLE INTO THE END FITTING BEFORE MOVING ON TO THE NEXT MISTING LINE.

·CONTINUE THIS PROCESS, WORKING TOWARDS THE PUMP MODULE. BY DOING THIS THE WATER WILL BE FORCED THROUGH THE COMPLETE SYSTEM, EVENTUALLY RUNNING WATER THROUGH ALL OF THE LINES AND FLUSHING THE SYSTEM COMPLETELY.

·MAKE SURE TO CHECK THE LINES THOROUGHLY FOR LEAKS AS YOU MOVE ALONG.

·WHEN ALL OF THE LINES HAVE BEEN FLUSHED AND NOZZLES FITTED THE BALL VALVES CAN BE OPENED. SWITCH THE PUMP ON AND MIST WILL BE PRODUCED BY THE NOZZLES AND THE PRESSURE IN THE LINES INCREASES. THE PUMP MODULE CAN NOW BE LEFT TURNED ON.

### COMMISSIONING THE SYSTEM

·WITH ALL OF THE BALL VALVES OPEN AND THE PUMP ON THE OPERATING PRESSURE NEEDS TO BE SET AT 1,000PSI.

·IF THE PRESSURE IS ABOVE OR BELOW 1,000PSI THE UNLOADER VALVE WILL NEED TO BE ADJUSTED.

·TURN THE PUMP OFF. UNDO THE SIDE LATCHES AND OPEN THE LID. THE UNLOADER VALVE IS THE BLACK SPRING LOCATED ON THE BRASS PUMP HEAD AT THE RIGHT END OF THE MODULE.

·IF THE PRESSURE IS BELOW 1,000PSI TURN THE KNURLED NUT/SPRING IN A CLOCKWISE DIRECTION X 1/4 TURN.

·IF THE PRESSURE IS ABOVE 1,000PSI TURN THE KNURLED NUT/SPRING IN AN ANTI-CLOCKWISE DIRECTION X 1/4 TURN.

·RESTART THE PUMP AND CHECK THE PRESSURE AT THE GAUGE.

### COMMISSIONING THE FANS

THE PUMP SHOULD BE CONNECTED TO A POWER AND WATER SUPPLY AS WELL AS SUPPLY AND MIST LINES.

TURN ALL BALL VALVES EXCEPT ONE-OFF. REMOVE THE TOP MIST NOZZLE IN THIS FAN MIST RING. TURN ON THE PUMP AND WAIT FOR THE WATER TO RUN THROUGH THE NOZZLE HOLE. IN AREAS WHERE WATER DAMAGE COULD OCCUR IT IS ADVISABLE TO USE A BUCKET TO CATCH THE WATER WHEN THE PUMP IS TURNED ON.

RUN WATER THROUGH THIS RING FOR AT LEAST 2 MINUTES. TURN THE PUMP OFF, REFIT THE NOZZLE AND OPEN THE VALVE AGAIN.

MOVE TO THE SECOND RING, REMOVE THE TOP NOZZLE AND TURN THE PUMP ON. CONTINUE THIS PROCESS THROUGH ALL OF THE FANS.

MAKE SURE THE FANS ARE TURNED TO HELP DISSIPATE THE MIST WHILE TESTING AND COMMISSIONING.

### COMMISSIONING THE PUMP MODULE

NOW THAT THE MIST LINES OR MIST FANS ARE RUNNING LOOK AT THE HIGH-PRESSURE GAUGE ON THE PUMP MODULE. THIS GAUGE SHOULD READ 1000 PSI OR 70 BAR.

IF THE PRESSURE IS OUTSIDE OF 1000PSI YOU WILL NEED TO REMOVE THE COVER FROM THE PUMP MODULE. THIS WILL EXPOSE THE PUMP UNIT. REFER TO THE PUMP MODULE INTRODUCTION PAGES FOR THE PUMP THAT YOU HAVE.

IF THE PRESSURE IS ABOVE OR BELOW THIS LEVEL THEN THE BLACK UNLOADER VALVE SPRING ON THE FRONT OF THE BRASS PUMP HEAD WILL NEED TO BE ADJUSTED.

- IF THE PRESSURE IS TOO LOW THE HANDLE NEEDS TO BE TURNED IN A CLOCKWISE DIRECTION.
- IF THE PRESSURE IS TOO HIGH THEN THE HANDLE NEEDS TO BE TURNED IN AN ANTI-CLOCKWISE DIRECTION.

MAKE ALL ADJUSTMENTS IN SMALL INCREMENTS WITH THE PUMP MODULE SWITCHED OFF. TURN THE PUMP BACK ON AFTER ADJUSTMENT AND CHECK PRESSURES AGAIN. CHECK ALL TUBING JOINTS ARE FREE FROM LEAKS.

FOR OPTIMUM PERFORMANCE OF THE SYSTEM, IT IS IMPORTANT THAT THE MIST FROM THE NOZZLE HAS THE CORRECT SPRAY PATTERN. THE MIST SHOULD BE 50MM WIDE 50MM FROM THE FACE OF THE MISTING NOZZLE.

LEAVE THE PUMP RUNNING FOR AT LEAST 30 MINUTES AFTER THE INSTALLATION TO ENSURE THAT IT IS RUNNING CORRECTLY. TURN THE PUMP ON AND OFF A FEW TIMES TO MAKE SURE FITTINGS ARE NOT GOING TO PULL APART UNDER START-UP PRESSURE.

## OIL CHANGE AFTER FIRST 50 HOURS THEN 250 HOUR INTERVALS

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### FILTER CARTRIDGES

FILTER CARTRIDGE LIFE WILL DEPEND ON THE QUALITY OF THE WATER RUNNING THROUGH THEM.

REGARDLESS OF THE CONDITION OF THE CARTRIDGE, THEY SHOULD BE CHANGED AT LEAST AT THE START OF EVERY SUMMER. DIRTY FILTERS WILL RESTRICT WATER FLOW TO THE PUMP. CHECKING THE PRESSURE ON THE LOW-PRESSURE GAUGE PERIODICALLY WILL HELP DETERMINE THE FILTERS CONDITION.

BLOCKED FILTER CARTRIDGES ARE A MAJOR CAUSE OF PUMP SHUT DOWN. SHOULD YOUR PUMP MODULE SHUT DOWN FOR NO APPARENT REASON THE FIRST THING TO LOOK AT IS THE LOW PRES-SURE WATER GAUGE ON THE END OF THE PUMP MODULE. IF THE READING IS BELOW 20PSI YOU SHOULD REPLACE THE CARTRIDGES.

TO REPLACE THE CARTRIDGE PLACE THE SUPPLIED PLASTIC SPANNER OVER THE FILTER HOUSING AND UNDO. YOU WILL NEED A 5 MICRON AND 10 MICRON 250MM SEDIMENT CARTRIDGE FOR OUR INDUSTRIAL PUMPS AND A SINGLE 10 MICRON CARTRIDGE FOR OUR COMMERCIAL PUMPS.

ON OUR INDUSTRIAL PUMP MODULES THE FILTERS NEED TO BE IN A SPECIFIC ORDER FOR THE FILTRATION TO WORK EFFECTIVLY. THE 10 MICRON FILTER WILL ALWAYS BE CLOSEST TO THE WATER INLET.

### OIL CHANGES

·BEFORE STARTING MAKE SURE YOU HAVE AT LEAST 300ML OF FULLY SYNTHETIC 10W-40 OIL.

SEE THE ABOVE SECTION FOR DETAILS ON THE OIL CHANGE PROCESS.

### NOZZLE BLOCKAGES

OCCASIONALLY MISTING NOZZLES WILL BLOCK. NOZZLES CAN BE EASILY REMOVED AND IN MOST CASES CLEANED OR REPLACED. TO CLEAN SUBMERGE NOZZLES IN CLR CLEAR, WASH AND REPLACE.

BE CAREFUL NOT TO LOSE ANY OF THE THREE PARTS THAT ARE CONTAINED IN EACH MISTING NOZZLE BODY.

THE CORRECT SPRAY PATTERN OF OUR NOZZLES IS A SPHERICAL SHAPE THAT IS 50MM ACROSS AT 50MM BELOW THE NOZZLE FACE. AN INCORRECT PATTERN CAN MEAN THAT DRIPPING WILL OCCUR AND THE NOZZLE SHOULD BE CLEANED OR REPLACED.

## TROUBLESHOOTING

<p>PUMP WILL NOT START</p>	<ul style="list-style-type: none"><li>-THE SWITCH IS NOT TURNED ON. THE SWITCH WILL GLOW RED WHEN THE PUMP HAS POWER</li><li>-CHECK THE POWER SUPPLY AT THE CIRCUIT BOARD</li><li>-CHECK THAT THERE IS SUFFICIENT WATER SUPPLY TO THE PUMP</li><li>-POWER SUPPLY CIRCUIT COULD BE OVERLOADED</li></ul>
<p>WATER SUPPLY HAS DROPPED OUTSIDE THE RANGE REQUIRED BY THE LOW-PRESSURE SWITCH</p>	<ul style="list-style-type: none"><li>-WATER SUPPLY TO THE PUMP MAY BE INADEQUATE. CHECK SUPPLY LINE INLET WATER PRESSURE</li><li>-CHECK THE CONDITION OF WATER FILTERS. FILTER CARTRIDGES MAY BE BLOCKED AND NEED REPLACING.</li><li>-A FLUCTUATING WATER SUPPLY WILL CAUSE THE PUMP TO 'CHATTER' AS THE LOW-PRESSURE INLET VALVE STOPS AND STARTS. THIS CAN CAUSE THE OVERLOAD TO TRIP.</li></ul>
<p>WATER FILTER CARTRIDGE IS LEAKING WATER</p>	<ul style="list-style-type: none"><li>-O-RING BETWEEN THE HOUSING AND THE BASE IS NOT SEALED. REMOVE THE HOUSING AND ASSESS FOR CRACKS AND CHECK THE O-RING FOR DAMAGE. RESET O-RING AND RE-INSTALL CAREFULLY.</li></ul>
<p>PUMP CANNOT REACH OPERATING PRESSURE</p>	<ul style="list-style-type: none"><li>-ADJUST THE UN-LOADER VALVE SPRING ON THE SIDE OF THE PUMP HEAD, AS PER PREVIOUS INSTRUCTIONS.</li><li>-CHECK THE INCOMING WATER PRESSURE ON THE LOW-PRESSURE GAUGE.</li><li>-INTERNAL SEALS ARE DAMAGED AND NEED TO BE REPLACED AND PUMP NEEDS SERVICING.</li><li>-INTERNAL CHECK VALVE IS STUCK OPEN AND NEEDS TO BE CLEANED OR REPLACED.</li><li>-TOO MANY NOZZLES IN THE SYSTEM.</li><li>-CHECK THAT THERE ARE NOT LEAKS IN THE PIPEWORK BETWEEN THE PUMP AND END OF THE SYSTEM.</li></ul>

## CONTACT DETAILS

# INFO@OZMIST.COM.AU - 1300 306 478

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OZMIST

### LIMITED WARRANTY AGAINST DEFECTS POLICY

THIS DOCUMENT SETS THE LIMITED WARRANTY AGAINST DEFECTS FOR CERTAIN PRODUCTS MANUFACTURED BY OZ MIST PTY LTD ACN 096 811 488 (REFERRED TO IN THESE TERMS AND CONDITIONS AS 'OZMIST', 'WE', 'US', OR 'OUR'). A PERSON OR ORGANISATION WHO HAS PURCHASED AN OZMIST PRODUCT WILL BE REFERRED TO IN THIS DOCUMENT AS 'YOU' OR 'YOUR'.

OZMIST WARRANTS THAT THE PRODUCTS THAT IT SELLS DIRECTLY TO YOU ARE FREE FROM DEFECTS IN WORKMANSHIP. OUR PRODUCTS ARE PUT THROUGH TESTS AND INSPECTIONS BEFORE THEY ARE SOLD TO YOU. IF WITHIN THE WARRANTY PERIOD DEFINED BELOW, YOU BELIEVE A PRODUCT YOU HAVE PURCHASED FROM US DOES NOT COMPLY WITH THIS WARRANTY, THEN YOU MUST FOLLOW THE PROCESS SET OUT IN THIS WARRANTY DOCUMENT.

#### 1. AUSTRALIAN CONSUMER LAW DISCLAIMER

OUR GOODS AND SERVICES COME WITH GUARANTEES THAT CANNOT BE EXCLUDED UNDER THE AUSTRALIAN CONSUMER LAW. YOU ARE ENTITLED TO A REPLACEMENT OR REFUND FOR A MAJOR FAILURE AND COMPENSATION FOR ANY OTHER REASONABLY FORESEEABLE LOSS OR DAMAGE. YOU ARE ALSO ENTITLED TO HAVE THE GOODS REPAIRED OR REPLACED IF THE GOODS FAIL TO BE OF ACCEPTABLE QUALITY AND THE FAILURE DOES NOT AMOUNT TO A MAJOR FAILURE. THIS WARRANTY IS IN ADDITION TO YOUR RIGHTS UNDER THE AUSTRALIAN CONSUMER LAW.

#### 2. WHAT THE WARRANTY COVERS

THIS WARRANTY APPLIES:

1. TO ANY OZMIST PRODUCTS, INCLUDING PARTS OF A PRODUCT, EXCEPT AS EXCLUDED IN CLAUSE 3 (PRODUCT); AND
2. FOR 1 YEAR FROM THE DATE YOU PURCHASED THE PRODUCT FROM US (WARRANTY PERIOD).

#### 3. EXCLUSIONS

THIS WARRANTY DOES NOT COVER ANY LABOUR TAKEN TO ASSESS OR CONSUMABLES, INCLUDING BUT NOT LIMITED TO NOZZLES, PUMPS, INTERNAL SEALS, WATER FILTERS, NYLON TUBES AND SIMILAR COMPONENTS OF A PRODUCT. THIS WARRANTY ALSO DOES NOT COVER ANY DEFECT WHICH IS A RESULT OF YOUR OR ANOTHER PARTYS FAULT, INCLUDING BUT NOT LIMITED TO:

- FAILURE TO PROPERLY INSTALL THE PRODUCT IN ACCORDANCE WITH OUR INSTRUCTION MANUALS;
- FAILURE TO USE THE PRODUCTS IN ACCORDANCE WITH OUR INSTRUCTION MANUALS;
- EXPOSURE TO CONDITIONS DUE TO THE MANNER IN WHICH THE PRODUCT IS INSTALLED, USED OR STORED;
- POWER SUPPLY ISSUES THAT AFFECT THE INSTALLATION OR USE OF THE PRODUCT;
- FAILURE TO STORE THE PRODUCT IN A SECURE FACILITY;
- MODIFICATION OR MISUSE OF THE PRODUCT;
- REGULAR WEAR AND TEAR;

## CONTACT DETAILS

# INFO@OZMIST.COM.AU - 1300 306 478

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### 4. HOW TO MAKE A CLAIM UNDER THIS WARRANTY

#### 1. MAKING A CLAIM

IF WITHIN THE WARRANTY PERIOD, YOU BELIEVE THAT A PRODUCT YOU PURCHASED IS FAULTY, YOU MUST IMMEDIATELY STOP USING THE PRODUCT AND PLEASE CONTACT US BY USING THE EMAIL ADDRESS PROVIDED IN THE HEADER OF THIS WARRANTY DOCUMENT WITH FULL DETAILS OF THE FAULT (INCLUDING IMAGES).

#### 2. FURTHER INSPECTION

IF WE DETERMINE THAT YOUR PRODUCT MAY BE DEFECTIVE, WE WILL EITHER;

1. REQUEST THAT YOU SEND YOUR PRODUCT (OR A PART OF A PRODUCT, SUCH AS THE MOTOR) BACK TO US, AT YOUR COST, FOR FURTHER INSPECTION USING OUR OWN TESTING METHODS, INCLUDING ANY REQUESTED ACCESSORIES, DOCUMENTATION OR REGISTRATION SHIPPED WITH THE PRODUCT. OR;
2. IF YOUR PRODUCT IS LOCATED WITHIN A REASONABLE DISTANCE OF OUR BUSINESS ADDRESS PROVIDED IN THE HEADER OF THIS WARRANTY DOCUMENT (PRODUCT LOCATION), WE MAY, AT OUR ABSOLUTE DISCRETION, VISIT THE PRODUCT LOCATION FOR FURTHER INSPECTION OR TO PICK UP THE PRODUCT FOR REPAIRS, WITHIN A REASONABLE TIME NOTIFIED BY US TO YOU. IF WE CHOOSE TO DO THIS, WE WILL COMMUNICATE TO YOU THE DATE/S AND TIME/S WE WILL TRAVEL TO THE PRODUCT LOCATION AND YOU MUST ENSURE THAT YOU OR A REPRESENTATIVE IS AVAILABLE AT THOSE DATES AND TIMES.

#### 3. AFTER INSPECTION

IF WE DETERMINE, IN OUR ABSOLUTE DISCRETION;

1. THAT THE RELEVANT PRODUCT IS FAULTY AND COVERED BY THIS WARRANTY, WE WILL PROVIDE YOU WITH A REPAIR, REPLACEMENT OR REFUND OF THE PRODUCT AT OUR COST. OR;
2. THAT THE RELEVANT PRODUCT IS NOT FAULTY OR IS FAULTY DUE TO YOUR FAULT OR ANY EXCLUSIONS SET OUT IN CLAUSE 3, WE WILL REFUSE YOUR WARRANTY CLAIM.

#### 4. NO OTHER WARRANTIES

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, ALL EXPRESS OR IMPLIED REPRESENTATIONS AND WARRANTIES NOT EXPRESSLY STATED IN THIS WARRANTY DOCUMENT, OR IN ANY WRITTEN TERMS AND CONDITIONS ISSUED BY US, ARE EXCLUDED.

#### 5. LIABILITY

TO THE MAXIMUM EXTENT PERMITTED BY LAW, WE EXCLUDE ANY LIABILITY THAT MAY ARISE AS A RESULT OF YOU PURSUING A WARRANTY CLAIM IN ACCORDANCE WITH THIS WARRANTY DOCUMENT.

#### 6. JURISDICTION

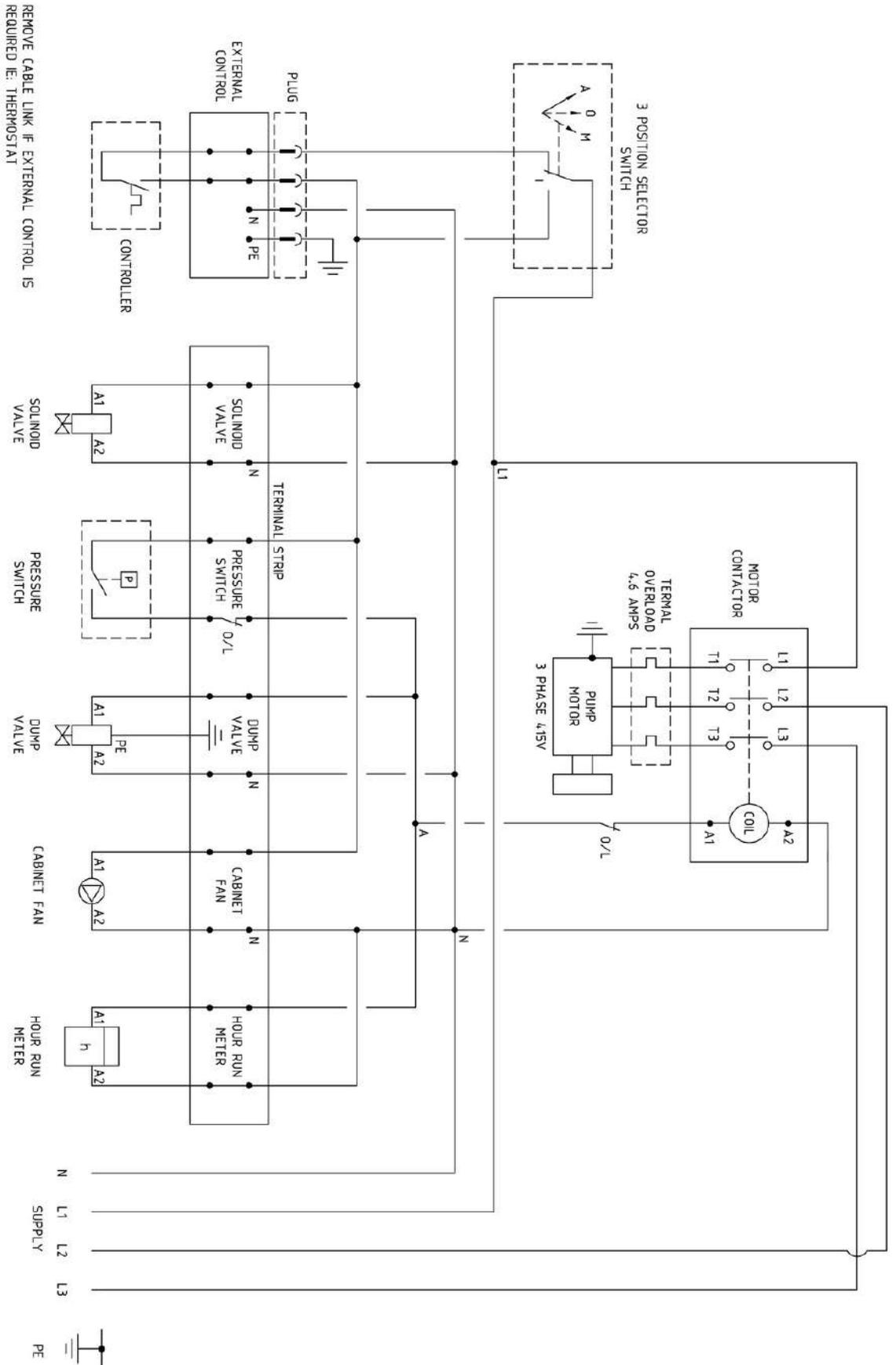
THIS WARRANTY DOCUMENT IS GOVERNED BY THE LAWS OF VICTORIA, AUSTRALIA.





# WIRING DIAGRAM

## OZ THREE PHASE PUMP MODULE



REV.	DESCRIPTION	DATE	BY	CHK.	APPROVED
1	OVERLOAD ADDED TO CLERT COMMENTS				
2	REV 3 PHASE DRAWING	26.04.16	U/S/M	W/P	

DATE:	12.09.16
EDUC:	
PROJECT:	AS BUILT
CLIENT:	OZMIST MIST SYSTEM
JOB No.:	EDC_JOB_17178
MANUFACTURE TO SIGNED ORIGINAL ONLY. RELEVANT AUSTRALIAN STANDARDS.	

SCALE:	N.T.S.
DRAWN TO:	AS 1100
SHEET 1 OF 1 SHEETS	

EDCelectrical	design & construction
100/1000	100/1000
02M-WAN-01-007-B-0004	
REV:	B
SHEET NO.:	A3