IT IS UNSAFE TO START USING THIS DEVISE
WITHOUT FIRST READING AND UNDERSTANDING
THIS MANUAL IN ITS ENTIRETY

OPERATOR MANUAL

FOR

BIPRO MM1P-W/D
BICARBONATE MIXER
FOR
HEMODIALYSIS

IMPORTANT DOCUMENT
PLEASE SAFEGUARD

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USER ASSISTANCE INFORMATION

ASSISTANCE IS AVAILABLE: Monday through Friday (excluding holidays)
8:00 am to 4:00 pm Central time.

Call: 913-438-9700

Emergency assistance is available after normal operating hours,

Call: 913-269-5681

If the phone fails to answer please leave a message, include the contact name and a phone number that will be answered before business hours.

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WARNINGS, CAUTIONS & RECOMMENDATIONS

WARNING: It is unsafe to operate the Bicarbonate system without first reading and understanding the Operator's Instruction Manual.

WARNING: Misuse, improper operation, and/or improper monitoring of the system could result in serious injury, death, or serious reactions to patients undergoing hemodialysis treatment.

CAUTION: When used as a medical devise, Federal law restricts this devise to sale by or on the order of a physician.

NOTE: Where water is mentioned, it must be AAMI standard quality water.

NOTE: Once the BiPro SDS MM1PD system has been delivered to you, it is the responsibility of the Medical Director to ensure that the system is used, monitored, and maintained in such a manner so as to satisfy all applicable standards.

RECOMMENDATIONS:

Disinfection of this system prior to use and on a recurring schedule is required.
Disinfection chemicals and quantities are to be determined by the Medical Director. Disinfection scheduling is to be determined by the Medical Director of the facility or facility policy.

Common disinfectants approved for use with this equipment are: chlorine bleach in a 100:1, ratio, Renlin in a 100:1 ratio. Test with approved facility testing methodology for the presence or absence of disinfectant.

Precipitate removal can be accomplished with vinegar, Citru-Clean or acetic acid used in a 20:1 ratio. Precipitate removal should be accomplished on a minimum of a monthly basis.

Times and quantities may be altered to accommodate lengthy or difficult loops. All changes are to be approved by the Medical Director.

Filter changes for the 0.2-micron air filters are to be accomplished on a annual basis.

Solenoids should be dissembled rinsed and evaluated on a semi-annual basis.

THESE PROCEDURES ARE INTENDED TO BE GUIDELINES FOR USE IN ESTABLISHING YOUR FACILITIES PROCEDURES

GENERAL DESCRIPTION

The BiPro MM1PD Bicarbonate system consists on one 100-gallon tank, one March TE7R mixing pump, one Fill/Mix Controller, one solenoid, four float switches and multiple ball valves.

The user choses a fill amount by flipping the appropriate switch and pressing the fill button, the fill solenoid allows the water to fill to the chosen level and shut off. The user turns on the mix pump directs the water through the mixing eductor and adds the bicarbonate powder, mixes for at least 10 minutes and test for efficacy. The mixed & tested Bicarbonate can then be dispensed into jugs.

The specific instructions for this and other procedures are included in this manual.

BICARBONATE CONCENTRATE MIXING PROCEDURES

PURPOSE: TO PROPERLY PREPARE BICARBONATE CONCENTRATE.

EQUIPMENT REQUIRED:

1) MEDICAL SOLUTIONS BICARB MIXING SYSTEM
2) APPROPRIATE BICARB POWDER PACKAGES
3) APPROPRIATE CONCENTRATE TESTING METHODOLOGY (EG. SPECIFIC GRAVITY, CONDUCTIVITY)
4) AAMI STANDARD PURIFIED WATER USED TO PREPARE CONCENTRATE FOR HEMODIALYSIS

PROCEDURE: START WITH;

SPRAY TANK VALVE	**(#1) CLOSED**
FILL/MIX VALVE	**(#2) OPEN**
JUG FILL VALVE	**(#3) CLOSED**
PRIME/BACKWASH VALVE	**(#4) CLOSED** (VERTICAL)
DRAIN TANK VALVE	**(#5) CLOSED**
LOOP RETURN VALVE	**(#6) CLOSED** (VERTICAL)
TRANSFER VALVE	**(#7) CLOSED**
LOOP PUMP	**TURNED OFF**

1) RAISE WAND SWITCH TO THE DESIRED FILL LEVEL, (LOCK IN PLACE)
PRESS FILL - ON, THIS WILL FILL THE MIXING TANK TO THE REQUESTED VOLUME.

2) THE FILL WILL STOP WHEN WATER REACHES DESIRED LEVEL
ROTATE MIX PUMP SWITCH: MIMNUM 10 MINUTES OF MIX TIME (PUMP WILL COME ON)

3) SLOWLY ADD THE APPROPRIATE AMOUNT OF BICARB POWDER TO THE TANK.
AFTER POWDER IS ADDED ALLOW TO CONTINUE MIXING FOR 1 MINUTE. VERIFY DESIRED QUANTITY OF BICARB IS CORRECT.

4) ALLOW THE SOLUTION TO MIX FOR 10 (TEN) MINUTES. **THE PUMP WILL TURN OFF**, WHEN THE MIXING TIME IS COMPLETED.

5) TEST THE MIXED SOLUTION WITH THE FACILITY APPROVED TESTING METHODOLOGY TEST AT THE **TANK SAMPLE PORT** (FRONT OF THE TANK, CLEAR THE VALVE BEFORE TESTING).

6) IF THE SOLUTION PASSES THE SELECTED TEST, PROCEED TO STEP NUMBER **8.**

7) IF THE SOLUTION DOES NOT PASS THE SELECTED TEST, AFFIRM QUANTITY OF WATER AND POWDER ARE CORRECT (IF NOT TAKE CORRECTIVE ACTION).
CONTINUE TO MIX THE SOLUTION IN 5 (FIVE) MINUTE INTERVALS, AND REPEAT TESTING.

8) **TURN LOOP RETURN VALVE (#6) TO THE RIGHT** (TO DRAIN)
TURN THE PRIME/BACKWASH VALVE (#4) TO THE RIGHT, TO **PRIME** (HORIZONTAL)
ROTATE PUMP TIMER SWITCH TO TURN ON MIXING PUMP.
The mixed bicarb will purge the loop of rinse water and air.

9) ALLOW 3 TO 5 MINUTES FOR THE BICARB TO PURGE THE LOOP AND TEST AT THE LOOP RETURN SAMPLE PORT FOR THE PRESENCE OF BICARB.

10) ONCE BICARB HAS DISPLACED THE RINSE WATER
TURN LOOP RETURN VALVE (#6)) TO THE LEFT (TO RECIRCULATE)
TURN THE PRIME/BACKWASH VALVE (#4) TO THE VERTICAL OFF POSITION
ROTATE OFF THE MIX PUMP
SWITCH ON THE LOOP PUMP,

YOU ARE NOW IN NORMAL OPERATION FOR THE DAY

END OF DAY PROCEDURE

PURPOSE: TO PROPERLY RINSE THE BICARB MIXING SYSTEM.

EQUIPMENT REQUIRED:

1) MEDICAL SOLUTIONS BICARB MIXING SYSTEM
2) AAMI STANDARD PURIFIED WATER

PROCEDURE: START WITH;

SPRAY TANK VALVE	**(#1) CLOSED**
FILL/MIX VALVE	**(#2) OPEN**
JUG FILL VALVE	**(#3) CLOSED**
PRIME/BACKWASH VALVE	**(#4) CLOSED** (VERTICAL)
DRAIN TANK VALVE	**(#5) OPEN**
LOOP RETURN VALVE	**(#6) CLOSED** (VERTICAL)
TRANSFER VALVE	**(#7) CLOSED**

1) ADJUST THE WAND TO FILL TO 50 GALLON LEVEL, **PRESS FILL, FILL ON**

2) AFTER 30 SECONDS **OPEN** THE **SPRAY VALVE (#1)**
IF NOT CONNECTED TO A HOSE, PLACE A 5-GAL BUCKET UNDER THE TRANSFER VALVE # 7
OPEN TRANSFER VALVE (#7) ALLOW TO FLUSH FOR 30 SECONDS, THEN CLOSE.
CLOSE THE **FILL/MIX VALVE (#2).**
PLACE A 5-GAL BUCKET UNDER THE JUG FILL VALVE (# 3)
OPEN THE **JUG FILL SAMPLE PORT (#3). RINSE FREE OF BICARBONATE**

3) ALLOW THE INCOMING WATER TO CONTINUE TO SPRAY AND RUN TO DRAIN
AFTER ONE MINUTE, CLOSE SPRAY TANK VALVE (1)

4) **TURN LOOP RETURN VALVE (#6) TO THE RIGHT** (TO DRAIN)
TURN PRIME/BACKWASH VALVE (#4). TO LEFT, BACKWASH (HORIZONTAL) WATER WILL NOW BACKWASH BOTH THE MIX AND LOOP PUMPS. ALLOW TO FLUSH FOR ONE MINUTE.

4) AFTER ONE (1) MINUTE,
TURN PRIME/BACKWASH VALVE (#4). TO RIGHT, TO **PRIME** (HORIZONTAL)

5) ALLOW 3 TO 5 MINUTES FOR THE RINSE WATER TO PURGE THE LOOP OF BICARBONATE SOLUTION

6) **TURN LOOP RETURN VALVE (#6) TO THE LEFT** (TO RECIRCULATE) **FLUSH AND CHECK ALL STATION PORTS FOR ABSENCE OF BICARBONATE.** WHEN NONE IS DETECTED, PROCEED.

7) **OPEN FILL/MIX VALVE (#2)**
CLOSE DRAIN TANK VALVE (#5)
OPEN TANK SAMPLE PORT , TEST OUT FLOW UNTIL NEGATIVE FOR BICARBONATE.
WHEN SATISFIED NONE REMAINS, PROCEED.

8) PRESS **EMERGENCY FILL** TO STOP FILING

10) IF YOU DO NOT WANT TO RECIRCULATE WATER:
OPEN DRAIN VALVE (#5)
CLOSE PRIME LOOP VALVE (#6) (VERTICAL**)**

11) IF YOU DO WANT TO RECIRCULATE WATER THROUGH THE LOOP **TURN ON LOOP PUMP**.

CHEMICAL DISINFECT PROCEDURES

PURPOSE: TO PROPERLY DISINFECT SYSTEM

EQUIPMENT REQUIRED:
1) MEDICAL SOLUTIONS BICARB MIXING SYSTEM
2) APPROPRIATE DISINFECTANT
3) APPROPRIATE CONCENTRATE TESTING METHODOLOGY
4) AAMI STANDARD PURIFIED WATER

PROCEDURE: START WITH;

SPRAY TANK VALVE	**(#1) CLOSED**
FILL/MIX VALVE	**(#2) OPEN**
JUG FILL VALVE	**(#3) CLOSED**
PRIME/BACKWASH VALVE (#4) CLOSED (VERTICAL)	
DRAIN TANK VALVE (#5) CLOSED	
LOOP RETURN VALVE	**(#6) CLOSED** (VERTICAL)
TRANSFER VALVE	**(#7) CLOSED**

1) RAISE WAND SWITCH TO 25 GALLON FILL LEVEL, (LOCK IN PLACE)
PRESS FILL ON, THIS WILL FILL THE MIXING TANK TO THE REQUESTED VOLUME.

2) THE FILL WILL STOP WHEN WATER REACHES DESIRED LEVEL **ROTATE FILL MIX SWITCH: MIMNUM 10 MINUTES.**

3) ADD THE APPROPRIATE AMOUNT OF DISINFECTANT TO THE TANK.
CLOSE THE LID: DO NOT OPEN THE LID AGAIN UNTIL THE COMPLEATION OF THE RINSE PROCEDURE.

4) ALLOW THE SOLUTION TO MIX FOR 1 (ONE) MINUTE.

5) TEST THE MIXED SOLUTION WITH THE APPROPRIATE TESTING METHODOLOGY AT THE **TANK SAMPLE PORT** (FRONT OF THE TANK, CLEAR THE VALVE BEFORE TESTING).

6) IF THE SOLUTION PASSES THE SELECTED TEST, PROCEED TO STEP NUMBER 8.

7) IF THE SOLUTION DOES NOT PASS THE SELECTED TEST, AFFIRM QUANTITY OF WATER AND DISINFECTANT IS CORRECT AND CONTINUE TO MIX THE SOLUTION IN 1 (ONE) MINUTE INTERVALS, AND REPEAT TESTING.

8) **TURN LOOP RETURN VALVE (#6) TO THE RIGHT** (TO DRAIN)
TURN THE PRIME/BACKWASH VALVE (#4) TO THE RIGHT TO **PRIME** (HORIZONTAL)
OPEN THE SPRAY VALVE (#1)
ROTATE PUMP TIMER SWITCH TO TURN ON MIXING PUMP.
The mixed disinfectant will purge the loop of rinse water and air while spraying the interior of the tank.

9) ALLOW 3 TO 5 MINUTES FOR THE DISINFECTANT TO PURGE THE LOOP, TEST AT THE LOOP SAMPLE PORT FOR THE PRESENCE OF DISINFECTANT. **TURN OFF THE SPRAY VALVE #1.**

10) ONCE DISINFECTANT HAS DISPLACED THE BICARB IN THE LOOP
PLACE A 5-GAL BUCKET UNDER THE TRANSFER VALVE # 7
OPEN TRANSFER VALVE (#7) ALLOW TO FLUSH FOR 5 SECONDS, THEN CLOSE
TURN LOOP RETURN VALVE (#6) TO THE LEFT (TO RECIRCULATE)
PLACE A 5-GAL BUCKET UNDER THE **JUG FILL VALVE # 3**
OPEN JUG FILL VALVE (#3) ALLOW TO FLUSH FOR 5 SECONDS THE CLOSE.
ROTATE THE PUMP SWITCH TO OFF
TURN PRIME/BACKWASH VALVE (#4). TO VERTICAL OFF POSITION
SWITCH ON THE LOOP PUMP, ALLOW TO RUN WHILE OPENING THE INDIVIDUAL BICARB PORTS AT EACH WALL STATION TO EXPOSE TO DISINFECTANT.

11) **WHEN COMPLETED, TURN OFF THE LOOP PUMP.**
OPEN DRAIN VALVE (#5). ALLOW TO DRAIN AND WAIT FOR THE ALLOTTED CONTACT TIME.

NEVER LEAVE DISINFECTANT IN THE SYSTEM PROCEED TO RINSING THE SYSTEM.

RINSING THE SYSTEM

PURPOSE: TO PROPERLY RINSE THE BICARB MIXING SYSTEM.

EQUIPMENT REQUIRED:

1) MEDICAL SOLUTIONS BICARB MIXING SYSTEM
2) AAMI STANDARD PURIFIED WATER

PROCEDURE: START WITH; SPRAY TANK VALVE (#1) CLOSED

FILL/MIX VALVE	**(#2) OPEN**
JUG FILL VALVE	**(#3) CLOSED**
PRIME/BACKWASH VALVE	**(#4) CLOSED** (VERTICAL)
DRAIN TANK VALVE	**(#5) OPEN**
LOOP RETURN VALVE	**(#6) CLOSED** (VERTICAL)
TRANSFER VALVE	**(#7) CLOSED**

1) WITH THE WAND SWITCH RAISED TO THE 25 GALLON FILL LEVEL, **PRESS FILL, FILL ON**
AFTER 30 SECONDS **OPEN** THE **SPRAY VALVE (#1)**
PLACE A 5-GAL BUCKET UNDER THE TRANSFER VALVE # 7
OPEN TRANSFER VALVE (#7) ALLOW TO FLUSH UNTIL NO DISINFECTANT IS DETECTED THEN CLOSE
PLACE A 5-GAL BUCKET UNDER THE JUG FILL VALVE # 3
OPEN THE **JUG FILL SAMPLE PORT (#3)**
ALLOW TO FLUSH UNTIL NO DISINFECTANT IS DETECTED THEN CLOSE

2) **CLOSE** THE **FILL/MIX VALVE (#2).**
ALLOW THE INCOMING WATER TO CONTINUE TO SPRAY AND RUN TO DRAIN
AFTER TWO MINUTES, CLOSE SPRAY TANK VALVE (1)

3) **TURN LOOP RETURN VALVE (#6) TO THE RIGHT** (TO DRAIN)
TURN PRIME/BACKWASH VALVE (#4). TO LEFT, BACKWASH (HORIZONTAL) WATER WILL NOW BACKWASH BOTH THE MIX AND LOOP PUMPS. ALLOW TO FLUSH FOR TWO MINUTES.

4) AFTER ONE (1) MINUTE,
TURN PRIME/BACKWASH VALVE (#4). TO RIGHT, TO **PRIME** (HORIZONTAL)

5) ALLOW 3 TO 5 MINUTES FOR THE RINSE WATER TO PURGE THE LOOP
BEGIN TESTING AT THE LOOP SAMPLE PORT FOR THE ABSENCE OF DISINFECTANT. WHEN NO DISINFECTANT IS DETECTED, PROCEED.

6) **TURN LOOP RETURN VALVE (#6) TO THE LEFT** (TO RECIRCULATE) **FLUSH AND CHECK ALL STATION PORTS FOR ABSENCE OF DISINFECTANT.** WHEN NO DISINFECTANT IS DETECTED, PROCEED.

7) **TURN PRIME/BACKWASH VALVE (#4). TO VERTICAL OFF POSITION**

8) **TURN LOOP RETURN VALVE (#6) TO VERTICAL OFF POSITION**

9) **OPEN SPRAY VALVE (#1)** ALLOW TO FLOW FOR ONE MINUTE

10) **OPEN FILL/MIX VALVE (#2)**
CLOSE DRAIN TANK VALVE (#5) ALLOW THE TANK TO BEGIN FILLING
OPEN TANK SAMPLE PORT , BEGIN TESTING OUT FLOW UNTIL NEGATIVE FOR DISINFECTANT.
WHEN SATISFIED NO DISINFECTANT REMAINS, PROCEED.

11) PRESS **EMERGENCY FILL** TO STOP FILING

12) IF YOU DO NOT WANT TO RECIRCULATE WATER:
OPEN DRAIN VALVE (#5)
CLOSE PRIME LOOP VALVE (#6) (VERTICAL**)**

13) IF YOU DO WANT TO RECIRCULATE WATER THROUGH THE LOOP **TURN ON LOOP PUMP**.

PRECIPITATE REMOVAL PROCEDURE

PURPOSE: TO PROPERLY REMOVE PRECIPITATE FROM THE SYSTEM

EQUIPMENT REQUIRED:
1) MEDICAL SOLUTIONS BICARB MIXING SYSTEM
2) APPROPRIATE LOW pH SOLUTION
3) APPROPRIATE TESTING METHODOLOGY 4) AAMI STANDARD PURIFIED WATER

PROCEDURE: START WITH; SPRAY TANK VALVE	**(#1) CLOSED**
FILL/MIX VALVE	**(#2) OPEN**
JUG FILL VALVE	**(#3) CLOSED**
PRIME/BACKWASH VALVE	**(#4) CLOSED** (VERTICAL)
DRAIN TANK VALVE	**(#5) CLOSED**
LOOP RETURN VALVE	**(#6) CLOSED** (VERTICAL)
TRANSFER VALVE	**(#7) CLOSED**

1) RAISE WAND SWITCH TO 25 GALLON FILL LEVEL, (LOCK IN PLACE)
PRESS FILL - ON, THIS WILL FILL THE MIXING TANK TO THE REQUESTED VOLUME.

2) THE FILL WILL STOP WHEN WATER REACHES DESIRED LEVEL **ROTATE MIX PUMP SWITCH: MIMNUM 10 MINUTES.**

3) ADD THE APPROPRIATE AMOUNT OF LOW pH SOLUTION TO THE TANK.
CLOSE THE LID: DO NOT OPEN THE LID AGAIN UNTIL THE COMPLEATION OF THE RINSE PROCEDURE.

4) ALLOW THE SOLUTION TO MIX FOR 1 (ONE) MINUTE.

5) TEST THE MIXED SOLUTION WITH THE APPROPRIATE TESTING METHODOLOGY AT THE **TANK SAMPLE PORT** (FRONT OF THE TANK, CLEAR THE VALVE BEFORE TESTING).

6) IF THE SOLUTION PASSES THE SELECTED TEST, PROCEED TO STEP NUMBER 8.

7) IF THE SOLUTION DOES NOT PASS THE SELECTED TEST, AFFIRM QUANTITY OF WATER AND DISINFECTANT IS CORRECT AND CONTINUE TO MIX THE SOLUTION IN 1 (ONE) MINUTE INTERVALS, AND REPEAT TESTING.

8) **TURN LOOP RETURN VALVE (#6) TO THE RIGHT** (TO DRAIN)
TURN THE PRIME/BACKWASH VALVE (#4) TO THE RIGHT TO **PRIME** (HORIZONTAL)
OPEN THE SPRAY VALVE (#1)
ROTATE PUMP TIMER SWITCH TO TURN ON MIXING PUMP.
The mixed solution will purge the loop of rinse water and air while spraying the interior of the tank.

9) ALLOW 3 TO 5 MINUTES FOR THE DISINFECTANT TO PURGE THE LOOP TEST AT THE LOOP SAMPLE PORT FOR THE PRESENCE OF THE LOW pH SOLUTION. **TURN OFF THE SPRAY VALVE #1.**

10) ONCE THE SOLUTION HAS DISPLACED THE BICARB IN THE LOOP
PLACE A 5-GAL BUCKET UNDER THE TRANSFER VALVE # 7
OPEN TRANSFER VALVE (#7) ALLOW TO FLUSH FOR 5 SECONDS, THEN CLOSE
TURN LOOP RETURN VALVE (#6) TO THE LEFT (TO RECIRCULATE)
PLACE A 5-GAL BUCKET UNDER THE JUG FILL VALVE #
OPEN JUG FILL VALVE (#3) ALLOW TO FLUSH FOR 5 SECONDS.
ROTATE THE PUMP SWITCH TO OFF
TURN PRIME/BACKWASH VALVE (#4). TO VERTICAL OFF POSITION
SWITCH ON THE LOOP PUMP, ALLOW TO RUN WHILE OPENING THE INDIVIDUAL BICARB PORTS AT EACH WALL STATION TO EXPOSE TO DISINFECTANT.

11) **WHEN COMPLETED, TURN OFF THE LOOP PUMP.**
OPEN DRAIN VALVE (#5). ALLOW TO DRAIN AND WAIT FOR THE ALLOTTED CONTACT TIME.

NEVER LEAVE LOW pH SOLUTION IN THE SYSTEM PAST APPROVED CONTACT TIME. PROCEED TO RINSING THE SYSTEM.

BiPro MM1P-W/D Bicarbonate Mixer

Parts list for MM1 Series

BiPro SDS CB200 Bicarbonate Mixer Parts List:

898-007	3/4" THREADED UNION EPDM PVC SCHEDULE 8
BV-6621-007	3/4" COMPACT BALL VALVE T X T
BV-ASAHI 3 WAY	3 WAY BALL VALVE TYPE 23 1/2" AA2511005
BV-PVC-350E	1/2" 3 WAY BALL VALVE (TOP OF SINGLE MIXERS ALL GRAY)
CV-4529-007	3/4" CHECK VALVE TRUE UNION BALL CHECK
FIL-DCP02000	.2 MICRON AIR FILTER
FS-46515K41	HORIZONTAL FLOAT SWITCH-SIDE MOUNT
FS-50195K94	VERTICAL MOUNTING LEVEL SWITCH
HHC-711	HINGED HATCH COVER
K-BVDA-MM1P	BALL VALVE DRAIN ASSEMBLY, ASSEMBLY INCLUDES: MM1PD DRAIN ASSEMBLY AND (1) CV-4529-015
K-CDA-MM1P	CENTER DRAIN ASSEMBLY FOR MM1P, ASSEMBLY INCLUDES: (1) BV-2122-015 (1)801-015 (1) 809-015 (1) 829.15 (2) 897-015 (1) 898-015
K-LPA-MM1PD	LOOP PUMP ASSEMBLY FOR MM1PD
K-V6-3W	KIT 3 WAY VALVE LOOP RETURN KIT FOR MM1PD UNION TO UNION
M-MXR-BICFM	BICARB FIL/MIX CONTROL BOX ON 100 GALLON MIXER
M-MXR-WD	WAND ASSEMBLE FOR 100 GALLON TANK
M-RA02	REMOTE ALARM W/RESET MUTE FOR BICARBONATE SYSTEM
PMP-IW-55RLT	IWAKI PUMP 55RLT – PUMP WITH WET END KIT
PMP-IW-55RLT-WEK	WET END KIT FOR IWAKI PUMP 55RLT
PMP-M-TE7R	MARCH PUMP TE7R – PUMP WITH WET END KIT

Mixer Parts List (continued)

PMP-M-TE7R-WEK	WET END KIT FOR MARCH PUMP TE7R
SN-17020	1/4" SPIRAL JET SPRAY NOZZLE
SOL-04-SAN-D	SANILITE DIAPHRAGM FOR ZERO DIFFERENTUAL SOLENOID
SOL-7524VNC	SOLENOID 3/4” 24 VOLT Normally/Closed AC (systems 1997- 2019)

Medical Solutions

INTERNATIONAL

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