



SERVICE MANUAL



SCOPE BUDDY®

ENDOSCOPE FLUSHING AID

(For Serial Numbers \geq 201345)

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The logo consists of a solid blue horizontal rectangle on the left, followed by the word "MEDIVATORS" in a bold, blue, sans-serif typeface.

MEDIVATORS



TABLE OF CONTENTS

	PAGE
1 INTRODUCTION	
Using this Manual	5
Product Description	5
Product Specifications	6
2 QUALITY ASSURANCE TEST	
Flow Validation Setup and Tubing Prime	8
Performing a Flow Validation Test	10
3 PUMP REPLACEMENT	
Replacement Instructions	11
4 PARTS LIST	
Illustration	15
Parts List	16
5 WARRANTY	17

Using this Manual

This Service Manual is to be used for servicing the Medivators SCOPE BUDDY Endoscope Flushing Aid having a serial number ≥ 201345 . A SCOPE BUDDY unit having a serial number ≤ 201344 is not serviceable, and should be discarded and replaced with a new unit.

The information contained within this manual allows individual service part component identification, and verifies proper SCOPE BUDDY performance and operation through the Quality Assurance Flow Validation Test. It is important to follow the provided instructions to keep the device in good operating condition, delivering proper fluid flows, and to ensuring long product life.

Contact the manufacturer's representative if you have any questions regarding this product, its use, operation, or servicing.

Product Description

The Medivators SCOPE BUDDY Endoscope Flushing Aid is designed to facilitate the flushing of rinse water and cleaning solutions through the channels of flexible, immersible endoscopes. This device is to be used during the manual pre-cleaning phase of endoscope reprocessing, prior to the endoscope being placed in an automated endoscope reprocessor (AER) for high level disinfection.

The SCOPE BUDDY combines a diaphragm pump, digital timer, and electronic control circuitry to pump fluids through tubing connections to the channels of the endoscope. Three different tubing sets allow connection to most types of endoscopes. The Elevator Wire Channel Hookup allows connection to the Fujinon endoscope's elevator wire channel, or to the Fujinon endoscope's Forward Water Jet. The DSD Extension Line allows connection to the DSD hook-up which attaches to the endoscope. The Universal Cleaning Adapter Extension Line and multi-way adapters allow connection to the Universal Cleaning Adapter Hook-up provided with the endoscope.

The SCOPE BUDDY is designed to be used as a flushing aid only during the manual cleaning process of a flexible endoscope. This device is not an endoscope disinfectant. All endoscopes must be high-level disinfected prior to use on a patient.

Product Specifications

Chassis Dimensions (height - width - depth)	9 1/2" H x 6" W x 8" D (inches) 24.13 H x 15.24 W x 2032 D (cms)
Weight (approx.)	10 lbs. (4.5 kg)
Power Cord and Connector	Medical Grade - 6 feet (2.83 m) 18AWG, # 3 Connector
Electrical Requirements	100 - 250 VAC \pm 10% 47 - 63 HZ 1 Φ
Current Draw	< 1.0 Amperes
Breaker and Protection	1 AMP max. at 90 VAC input, Non-replaceable, internal primary current fuse, inrush limiting, thermal shutdown.
Maximum Fluid Delivery	1 Liter per minute
Maximum Pump Pressure	29 PSI w/Safety Bypass
Cycle Time Range Setting	0 to 99 minutes/59 seconds
Cycle Completion Indicators	Audible and Visual
Electrical Safety Certifications	ETL and cETL Listed Conforms to UL 61010-1 Certified to CAN/CSA C22.2 No. 61010-1
Electromagnetic Interference	FCC Title 47, Part 15, Class A, EN 55011 and EN 50082-1
Environmental Rating	Standard
Designed for Use	Indoor Use Only
Installation / Over Voltage Category	II
Classification	1, Ordinary protection
Pollution Degree	2
Operating Temperature Range	15°C to 35°C
Operating Humidity Range	10 - 75% non-condensing
Storage Temperature Range	-29°C to 57°C
Storage Humidity Range	5 - 90% non-condensing
Warranty Period	One (1) year

The operation and performance of Scope Buddy must be verified anytime a part or component is replaced, after all servicing, and before the first use of the day.

The Quality Assurance Test verifies correct Scope Buddy operation, and identifies if an acceptable amount of fluid is being delivered in the specified time. The detailed Quality Assurance Test instructions must be followed to ensure the device is operating properly and delivering the correct volume of fluid.

The SCOPE BUDDY Quality Assurance Test is performed using the Flow Verification Tube, Fluid Intake Line, the Universal Cleaning Adapter Extension Line, the SCOPE BUDDY device, and a graduated cylinder. To perform the test, SCOPE BUDDY is preset to pump for a specific period of time and then after pumping, the dispensed fluid is measured to identify if it is within an acceptable volume range.

WARNING: Failure to perform the quality test can result in the device not delivering the proper amount of fluid through the channels of an endoscope.

Note: A 200cc graduated cylinder is required to perform this test.

Flow Validation Setup and Tubing Prime

1. Plug the unit in and turn it on by pressing the power switch located on the side of the unit. The timer display will now illuminate. See *Figure 1*.

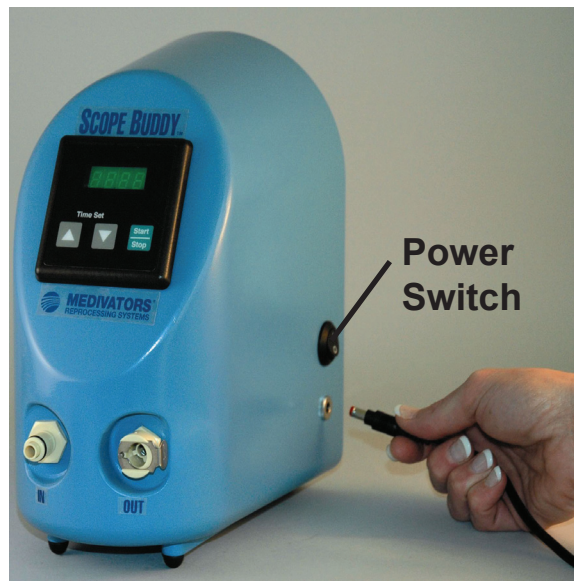


Figure 1

2. Locate the Fluid Intake Line and attach it to the front panel tubing connection port labeled “IN.” Place the screened end into the sink or container of clean water. Verify the screened end is fully submerged into the water. See *Figure 2*.



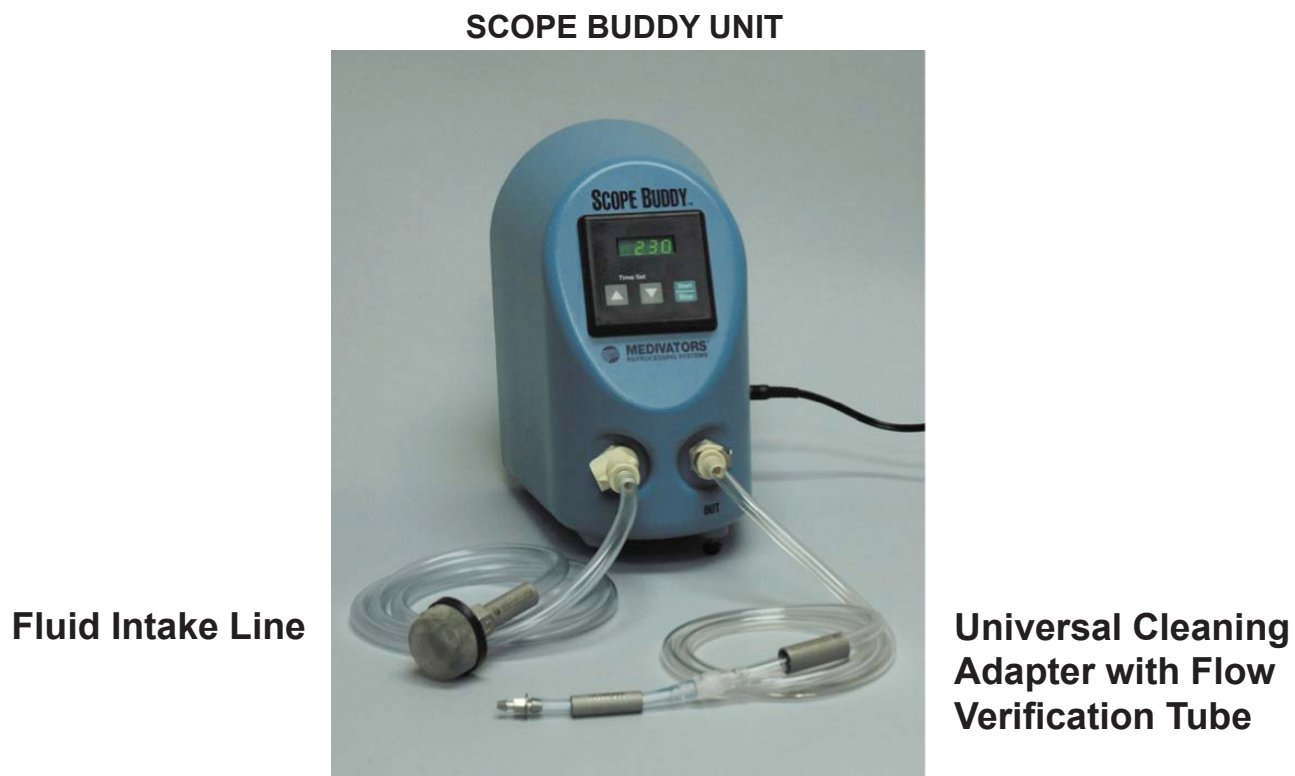
Figure 2

3. Locate the Universal Cleaning Adapter Extension Line and attach it to the front panel tubing connection port labeled “OUT.” See *Figure 3*.



Figure 3

4. Locate the Flow Verification Tube and attach the plastic Luer connector to the remaining end of the Universal Cleaning Adapter Extension Line. Place the open end of the Flow Verification Tube into the sink. See *Figure 4*.



Fluid Intake Line

**Universal Cleaning
Adapter with Flow
Verification Tube**

Figure 4 *Universal Cleaning Adapter with Flow Verification Tube*

5. Using the SCOPE BUDDY front panel arrow keys, set the timer display to one (1) minute.
6. To prime the device, select the “**START/STOP**” button to begin fluid delivery. Watch until all air has been purged through the device and a steady column of water is exiting the flow verification tube.
7. Press “**START/STOP**” button to halt fluid flow.

Performing a Flow Validation Test

1. Place the open end of the pre-primed Flow Verification Tube into an empty graduated cylinder.
2. Using the SCOPE BUDDY front panel arrow keys, set the timer display to ten (10) seconds.
3. Press the “**START/STOP**” button to begin the test and the timer display will now begin counting down. Water will begin flowing into the graduated cylinder.
4. Once the timer counts down to zero, fluid flow will stop and a five-second audible tone will be heard. During this time, the timer display will flash all zeros and then remain with a zero display providing an indication that the cycle is complete.
5. Remove the Flow Verification Tube from the graduated cylinder and read the volume of fluid dispensed into the cylinder. Be sure to read the graduated cylinder directly from the side to avoid parallax, and also read the cylinder from the bottom of the water meniscus. The dispensed volume should be greater than or equal to 100 ml's.
6. If the dispensed volume is above or equal to 100 ml's, then SCOPE BUDDY is ready for use. If the dispensed volume is below 100 ml's, then contact your local distributor or Medivators Technical Support. Do not use SCOPE BUDDY if the dispensed volume is below 100 ml's.

WARNING: Do not use SCOPE BUDDY if it fails the Quality Assurance Test. Doing so can result in endoscopes which are not flushed with the correct volume of detergent or rinse water solutions.



Follow these step-by-step instructions to replace the SCOPE BUDDY pump. SCOPE BUDDY servicing is to be carried out by a qualified technician. The Quality Assurance Test, as detailed in Section 2, must be performed immediately following any SCOPE BUDDY service work to verify proper system operation, and that SCOPE BUDDY is delivering the correct volume of fluid over time. If SCOPE BUDDY does not operate correctly or deliver the correct volume of fluid during the Quality Assurance Test, then contact your local Medivators representative or distributor for further assistance.

Note: Do not use SCOPE BUDDY if it fails the Quality Assurance Test.

WARNING: Failure to perform the Quality Assurance Test can result in the device not delivering the proper amount of fluid through the channels of an endoscope.

SCOPE BUDDY Replacement Instructions

1. Turn SCOPE BUDDY off by pressing the power switch located on the side of the unit, and then disconnect the power cord from the AC wall outlet and the SCOPE BUDDY unit.
2. Remove the five (5) screws from the back of the unit. See Figure 5.



Figure 5

3. Lay the SCOPE BUDDY on the back plate and then lift/tip the blue housing forward. See *Figure 6*.

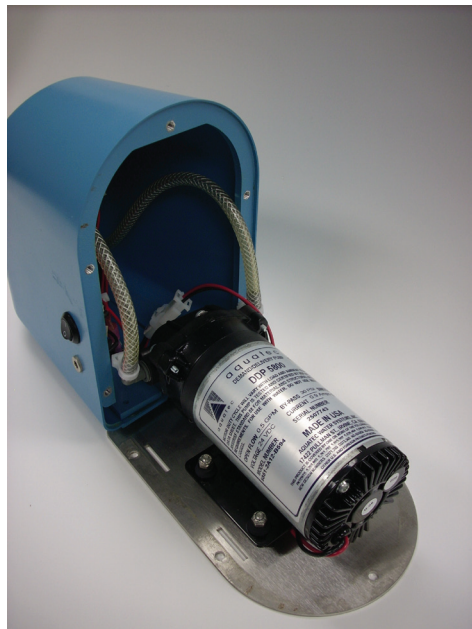


Figure 6

4. Follow the red and black wires from the back of the pump motor to the connector labeled “PMP” and then disconnect the plug. See *Figure 7*.

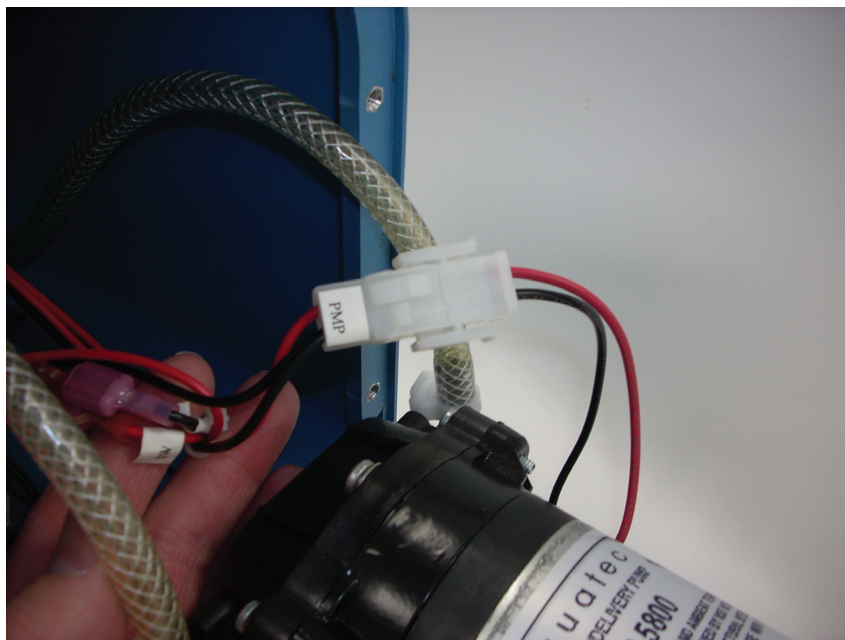


Figure 7

5. Remove the two elbow connections from each side of the pump head. See *Figure 8*. Press the retaining collar portion inwards towards the pump while gently pulling the elbow away from the pump.



Figure 8

6. Using a 3/8" wrench, remove the four (4) nuts that hold the pump to the back plate. See *Figure 9*.



Figure 9

7. Remove pump from back plate.

8. Using a 5/16" wrench, remove the two (2) screws that retain the mounting bracket to the original pump, and then reattach the same bracket to the new pump. See *Figure 10*.

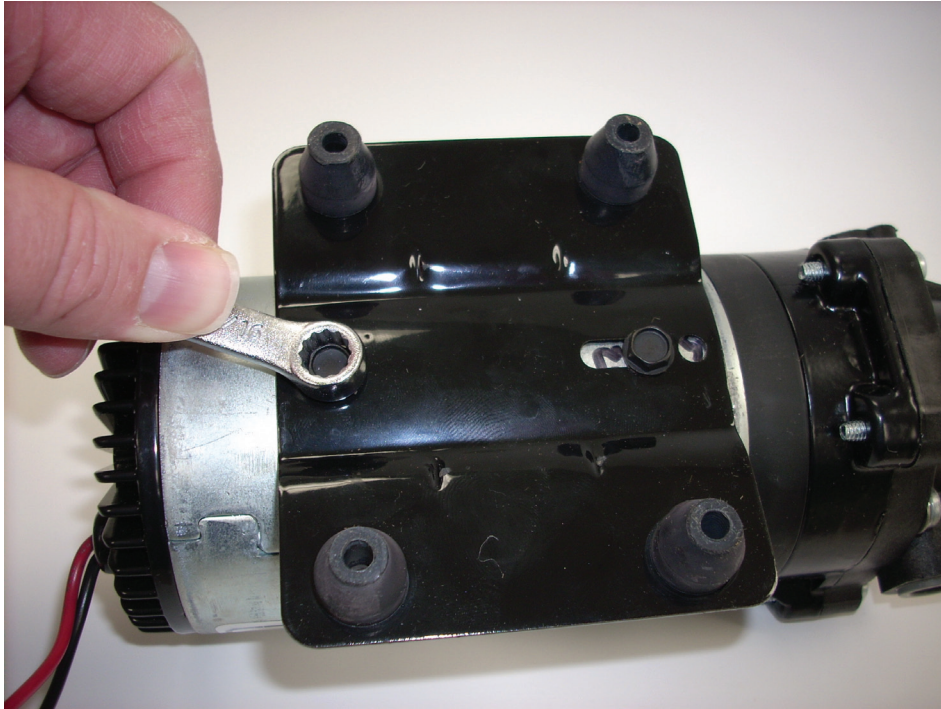
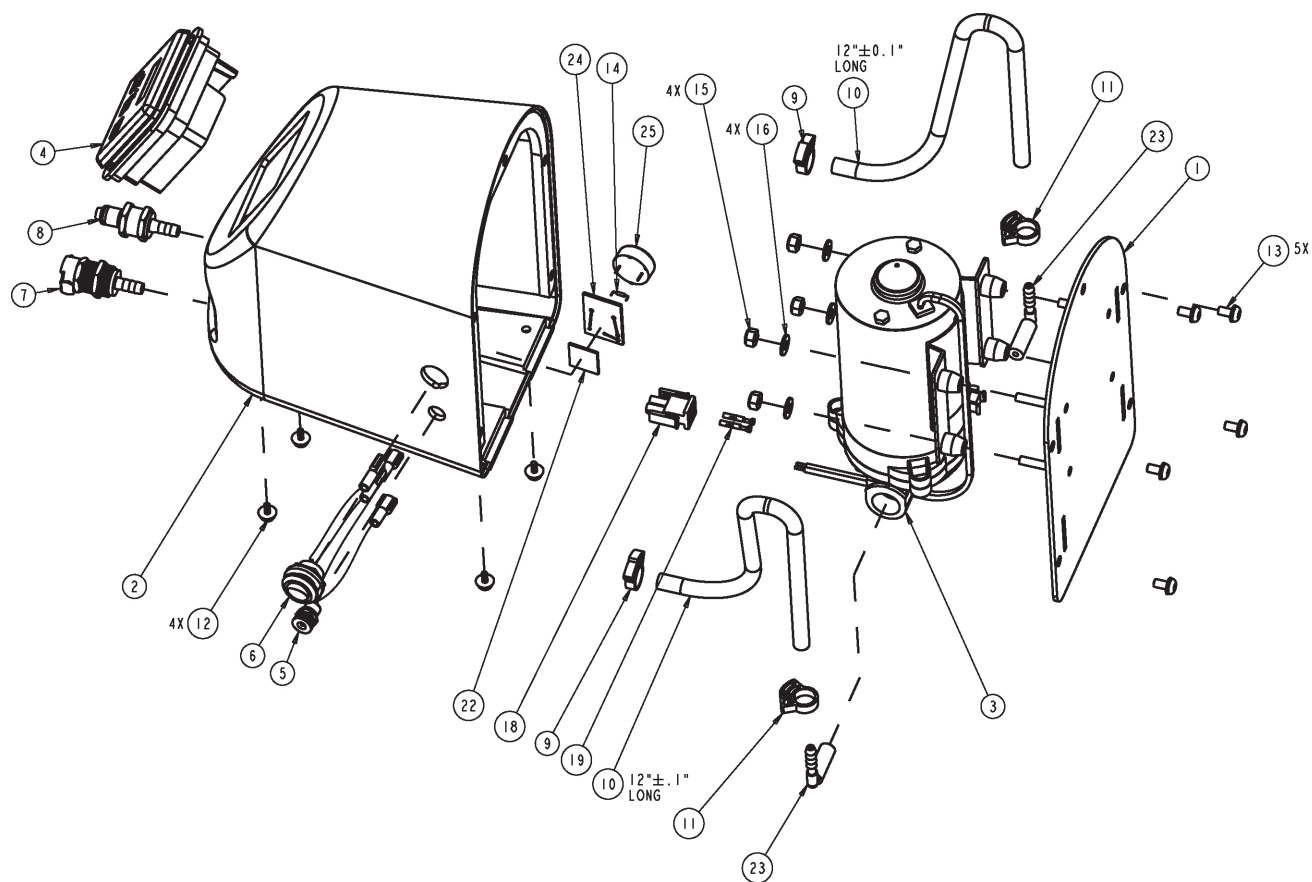


Figure 10

9. Reassemble the SCOPE BUDDY in reverse order. First mount the new pump onto the back plate, and then route the two (2) wires between the back plate and the motor bracket. Reattach and tighten the nuts so they are snug enough to hold the pump motor in place, but not too tight that the rubber mounts are crushed.
10. Connect the pump power connection to the connector labeled "PMP".
11. Return the back plate into the blue SCOPE BUDDY housing. Verify that the wires and hoses are not pinched.
12. Reattach the five (5) screws that hold the back plate to the blue SCOPE BUDDY housing.
13. Reattach the power cords and turn system power back on.
14. Run SCOPE BUDDY for several minutes using water to verify there are no fluid leaks.
15. Perform the Quality Assurance Test as detailed in Section 2.



Scope Buddy Service Parts List

No.	Part Number	Description	Unit	Qty
1	72233-213	Chassis, Scope Buddy	ea	1
2	78399-658	Cover, Scope Buddy Medivators	ea	1
3	78400-538	Pump Assembly, Service Part	ea	1
4	39500-046	Controller, Scope Buddy	ea	1
5	37590-241	Harness, Power Jack	ea	1
6	37590-242	Harness, Rocker Switch	ea	1
7	47509-454	"OUT" Connector	ea	1
8	47509-456	"IN" Connector	ea	1
9	47509-350	Clamp, Hose, #4, Snapper	ea	2
10	47509-439	Tubing, 3/16" x 3/8" PVC	cm	61
11	37590-390	Clamp, Hose #4, Snapper	ea	2
12	47509-447	Foot, Rubber Isolation	ea	4
13	43580-154	10-32x3/8" SEMS, PPH, SSTL	ea	5
14	34500-074	Resistor 3K 1/4W 5%	ea	1
15	CN03-0000	Nut, 10-32 Nylon Lock	ea	4
16	CW02-0004	Washer, #10 Flat SS	ea	4
	37590-321	Main Wire Harness	ea	1
18	4-1-532	Connector Male	ea	1
19	30597-282	Socket, INIV Mate-N-Lock	ea	2
22	17599-490	Foam Tape, Die Cut 1" x 1"	rl	1
23	47509-546	Elbow Tube/Hose 3/8 x 1/4 HB	ea	2
24	70209-122	PWB Scope Buddy Buzzer	ea	1
25	35548-054	Buzzer 24V Pulse PWB MTG	ea	1
	72233-214	Bracket, Scope Buddy	ea	1
	38010-017	Power Supply, SB IEC Connector	ea	1
	50096-381	Manual, Scope Buddy User	ea	1
	37590-391	Cordset, 120VAC Blk 6 FT	ea	1
	37590-403	Cordset, AUS/NEW ZEALAND	ea	1
	37590-370	Cordset, Europe	ea	1
	50096-814	Scope Buddy Quick Start Chart	ea	1
	78400-207	CD, Scope Buddy Inservice	ea	1
	78399-669	Tubing Kit, Scope Buddy	ea	1

Limited Warranty

Medivators Reprocessing Systems, a division of Minntech Corporation (“Medivators”), warrants that the endoscope reprocessor it manufactures (the “Product”) will conform to Medivators’ written specifications and will be free from defects in material and workmanship under normal use and service for a period (the “Warranty Period”) of fifteen (15) months from date of shipment from Medivators or one (1) year from the date of installation, whichever occurs first.

Notwithstanding anything herein to the contrary, the Warranty Period for consumables and accessories supplied by Medivators, including, but not limited to, endoscope hook-ups, filters, printers, printer supplies, test strips, and accessory bags, is ninety (90) days from the date of installation or 120 days from date of shipment, whichever occurs first.

The warranty does not cover, and Medivators will have no warranty obligation whatsoever with respect to, any damage to the Product caused by or associated with: (i) external causes, including without limitation, accident, vandalism, acts-of-God, power failure or electric power surges, (ii) abuse, misuse or neglect of the Product by the customer or use of unauthorized third party filters or other consumables and accessories, (iii) usage not in accordance with product instructions, (iv) the customer’s failure to perform required preventive maintenance, or (iv) servicing or repair not authorized by Medivators.

Limitation of Remedy

The warranty obligation of Medivators hereunder is limited to the repair or replacement (at its option) of the Product or any parts it deems defective. This will be customer’s exclusive remedy for a covered defect.

In order to recover under the warranty, the customer must notify Medivators if in the U.S.A., or country of installation of the defect (describing the problem in reasonable detail) prior to the expiration of the warranty period and within thirty (30) days of discovery of the defect. Upon receiving Medivators’ official “return goods authorization” (RGA), the customer must promptly return the defective part or Product to Medivators (or the service center indicated on the RGA), freight and insurance prepaid. Medivators will not be responsible for any damage during shipment.

Warranty Disclaimer

THE WARRANTY ABOVE IS MEDIVATORS’ ENTIRE WARRANTY OBLIGATION TO PURCHASERS OF THE PRODUCT. IT IN LIEU OF ALL OTHER WARRANTIES OF MEDIVATORS, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND MEDIVATORS DOES NOT REPRESENT OR WARRANT THAT THE PRODUCT WILL MEET CUSTOMER’S REQUIREMENTS. MEDIVATORS’ RESPONSIBILITY FOR DEFECTS IN THE PRODUCT IS LIMITED SOLELY TO REPAIR AND REPLACEMENT AS SET FORTH IN THIS WARRANTY STATEMENT.

TO THE EXTENT PERMITTED BY LAW, MINNTECH CORPORATION SHALL NOT, UNDER ANY CIRCUMSTANCES, BE LIABLE TO CUSTOMER FOR CONSEQUENTIAL, INCIDENTAL, INDIRECT OR SPECIAL DAMAGES OR LOSSES, INCLUDING WITHOUT LIMITATION, DAMAGES ARISING OUT OF OR IN CONNECTION WITH ANY MALFUNCTIONS, DELAYS, LOSS OF PROFIT, INTERRUPTION OF SERVICE, OR LOSS OF BUSINESS OR ANTICIPATORY PROFITS, EVEN IF MINNTECH CORPORATION HAS BEEN APPRISED OF THE LIKELIHOOD OF SUCH DAMAGES OCCURRING.

This Warranty gives customer of the Product specific legal rights, and customers may also have other rights which vary from jurisdiction to jurisdiction.

In no event shall Medivators’ liability exceed the original purchase price of the covered Product.

No representative or agent of Medivators has any authority to bind Medivators to any other representation or warranty with respect to the Product, and the customer accepts the Product subject to all of the terms above.

Medivators Website “Resource Center”

Go to: www.minntech.com/medivators, Select “Resource Center” and “User Library” for detailed user guides and hook up matrices, report forms and logs, and product bulletins

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