ArthroCare® Corporation

Output test using an Electrosurgical Analyzer

The ArthroCare Quantum System power output (Watts RMS) can also be verified by using an Electrosurgical Analyzer (i.e. Dynatech 454).

WARNING: THIS OUTPUT TEST PROCEDURE MUST BE FOLLOWED AS STATED USING ONLY THE ELECTRONIC EQUIPMENT LISTED IN THIS PROCEDURE. EXTREME CAUTION SHOULD BE TAKEN, AS LETHAL HIGH VOLTAGE IS PRESENT DURING THIS TEST. ONLY QUALIFIED SERVICE ENGINEER/TECHNICIAN SHOULD PERFORM THIS TEST. ANY DEVIATION FROM THIS PROCEDURE OR FAILURE TO COMPLY WITH THE CONTENTS MAY RESULT IN COMPLICATIONS WITH THE EQUIPMENT, AND/OR SAFETY HAZARDS TO THE USER OR PATIENT. AS WELL AS, THE WARRANTY ON THE INSTRUMENT TO BE VOIDED.

The following equipment is required to perform the power output test on the ArthroCare Quantum System.

- Electrosurgical Analyzer (Dynatech 454 or equivalent)
- ArthroCare adapter cable (P/N 33101) or Wand with Patient Cable

Step 1 – Set the Electrosurgical Analyzer to the following parameters:

1. Select Manual mode
2. Select Output generator test
3. Set internal load to 250 ohms or 300 ohms which ever setting is available on the Electrosurgical Analyzer

Step 2 - Set up the ArthroCare Quantum System as stated in the User's Manual. Attach the ArthroCare adapter cable to the controller. When using the adapter cable connect the **Yellow** lead to the "Active" input on the ESU and the **Blue** lead to the "Dispersive" or "Return" input on the ESU. When using the Wand with Patient Cable connect the "Active" input from the ESU to the tip of the Wand and the "Dispersive" or "Return" to the shield of the Wand.

Step 3 - Choose the setpoint (1-9) for ablation mode and press the foot pedal. Verify the readings with the table on the following page.

Step 4 - Choose the setpoint (1-2) for Coag mode and press the foot pedal. Verify the readings with the table on the following page.

Note: If any of the power level readings are not within the listed specifications, please contact the ArthroCare Customer Service Department immediately.

Power Output for System Quantum Controller

Load = 250 Ohms
Units of measure = RMS watts

Ablation

Setting	Range (+/- 20%)	Typical
1	28 – 42	35
2	45 – 67	56
3	66 – 98	82
4	90 – 134	112
5	119 – 179	149
6	152 – 228	190
7	188 – 282	235
8	230 – 344	287
9	274 – 400 (Max)	343

Load = 250 Ohms
Units of measure = RMS watts

Coag

Setting	Range (+/- 20%)	Typical
1	12 – 18	15
2	27 – 41	34

Load = 300 Ohms
Units of measure = RMS watts

Ablation

Setting	Range (+/- 20%)	Typical
1	23 – 35	29
2	37 – 55	46
3	54 – 82	68
4	76 – 114	95
5	100 – 150	125
6	128 – 192	160
7	158 – 236	197
8	192 – 288	240
9	230 - 344	287

Load = 300 Ohms
Units of measure = RMS watts

Coag

Setting	Range (+/- 20%)	Typical
1	10 – 14	12
2	23 – 35	29