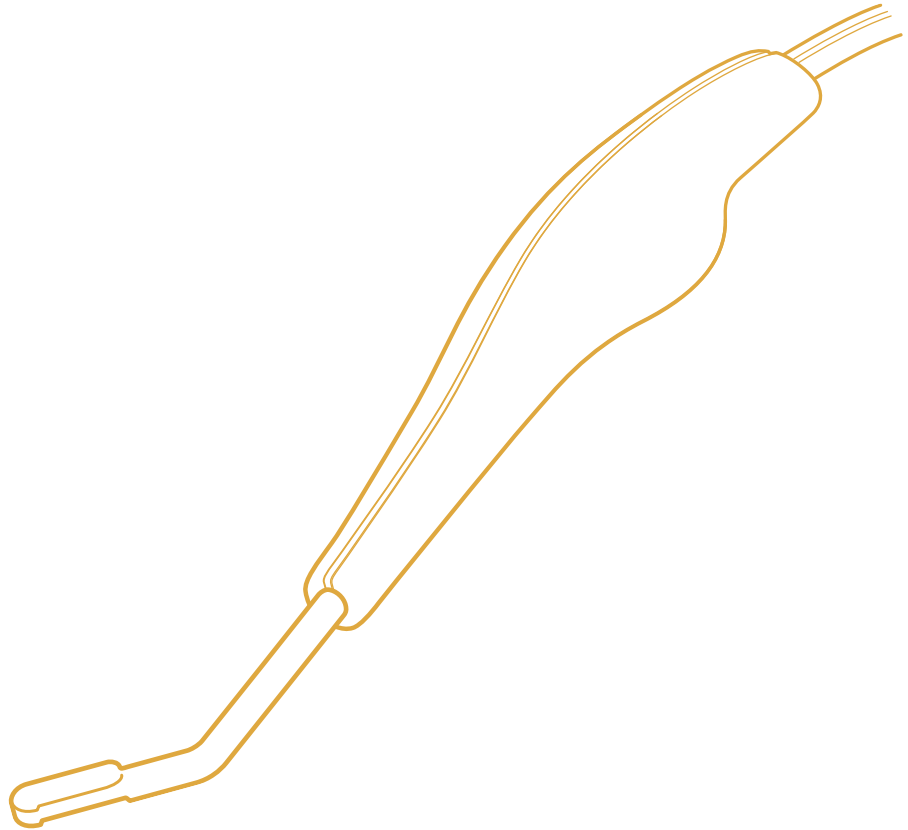


VERSAJET console performance  
and safety check

 **smith&nephew**  
**VERSAJET**◊  
Hydrosurgery System



## 1.0 Purpose

The purpose of this procedure is to provide a performance and safety check for the VERSAJET® power console, model 50700 (120V) and model 50750 (240V).

### Important note

**The VERSAJET console is NOT user serviceable and under no situation should the casing be opened. Any attempt to open the unit by the user will void all warranties and render the user responsible for all subsequent repairs to the unit. Contact your local Smith & Nephew customer care representative or sales representative to resolve all console problems.**

## 2.0 Scope

This procedure is applicable to all VERSAJET consoles as a reference guide to help customers wishing to perform performance checks by themselves. Refer to the Versajet Hydrosurgery system manual for additional information on the correct use of the console and its specifications.

## 3.0 Equipment

<b>Optical Tachometer</b>	Ametek 1726 or equivalent (hospital is responsible for purchase)
<b>Electrical testing equipment</b>	(hospital responsible for purchase)
<b>RPM verification tool (speed stick)</b>	Smith & Nephew (contact your local sales representative)

## 4.0 Performance check procedure

A checklist is provided at the end of this document to record the results of the following checks.

### 4.1 Physical appearance check

- 4.1.1 Make sure console is **unplugged from electrical power**.
- 4.1.2 Check console for visible dents, cracks or missing pieces.
- 4.1.3 Check that fan slots are free from obstructions, dust or foreign materials.
- 4.1.4 Inspect console ventilation slots located on rear and back of the instrument. Remove obstructions, dust or foreign materials using vacuum and or household all purpose cleaner and wipes.
- 4.1.5 Check that the black console lever on the UI (User Interface) rotates freely between 4 and 6 o'clock position.
- 4.1.6 Check that on/off rocker switch moves to each position and remains in place.
- 4.1.7 Check foot switch and attached cord for signs of loose or missing insulation.
- 4.1.8 Check foot switch mechanical operation for engage and disengage by depressing and releasing.
- 4.1.9 Inspect power cord for any frayed or missing insulation, and bent, loose or missing plug blades or earth/ground.

## 4.2 System diagnostics check

4.2.1 Make sure console is plugged into an electrical outlet.

4.2.2 Turn the main power switch to the “on” position and verify that the switch is illuminated and green in color (verify the lamp extinguishes with the switch in the “off” position).

4.2.3 Verify console defaults to power level “1” when unit is turned on using front power switch.

4.2.4 Verify the unit power level value changes when arrows are depressed – there are a total of ten different power settings.

4.2.5 Verify that the “door” error lamp is:

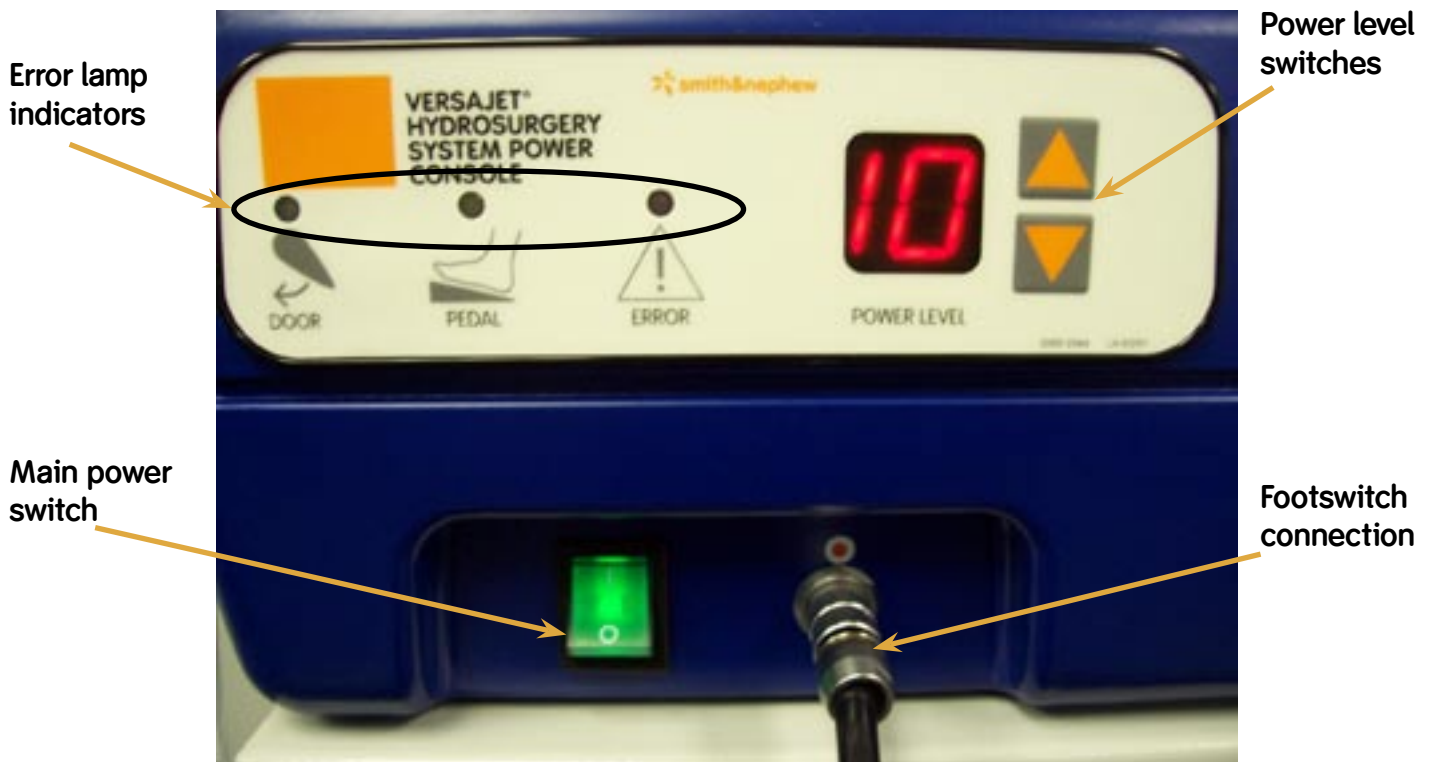
- Illuminated when the lever is open (4 o'clock)
- Off when user interface knob is in the closed position (6 o'clock)

4.2.6 Verify the “pedal” error lamp is:

- Illuminated when the footswitch connector is not plugged into the front of the console.
- Off when footswitch connector is inserted.

**Note: lamp “on” signals a system error that will prevent the console from operating**

### Console control / display panel



### 4.3 Console speed check

4.3.1 Turn the knob on the user interface to the “open” position.

4.3.2 Insert the “speed stick” until fully seated into the opening in the user interface (step 1).

4.3.3 Turn the user interface knob to the “closed” position (step 2).



Step 1



Step 2



Step 3



Step 4

4.3.4 Set the console to lowest setting of 1 (Step 3).

4.3.5 Depress and hold the footswitch down to allow the console to cycle its motor/transmission.

4.3.6 Aim the tachometer “optical beam” so that the reflector on the speed stick produces a RPM reading (Step 4).

4.3.7 Measure speed (Spec = 390 +/- 50 RPM).

4.3.8 Set console to highest setting of 10 and repeat the measuring steps.

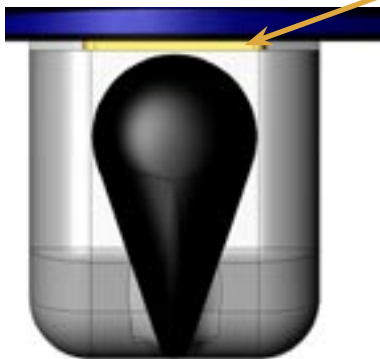
4.3.9 Measure speed (spec = 1210 +/- 100 RPM).

## 5.0 Safety check procedure

- 5.1 Electrical testing check (also see product manual)
- 5.1.1 Ensure the console and test equipment are set to the same input voltage setting prior to conducting electrical testing.
- 5.1.2 Connection to “mains” grounding is accomplished through use of the grounding post located on the back of the console (see following diagram)
- 5.1.3 The steel plate behind the knob on the top of the user interface is the proper location to establish a connection with the “patient applied part” (see following diagram).



Attach test lead here



User interface - (Patient applied part)



Ground plug

**Product description:** model 50700 and 50750 – VERSAJET® console  
**Classification:** class I / type BF equipment  
**Requirements:** IEC 60601-1

Test	Equipment Condition	Limit at 120 V -50700	Limit at 240V -50750
Ground integrity	Normal	0.2 Ohms	0.2 Ohms
Earth leakage	Normal	< 250 µ Amp	< 500 µ Amp
Earth leakage	Single fault	< 500 µ Amp	< 1000 µ Amp
Enclosure leakage	Normal	< 50 µ Amp	< 100 µ Amp
Enclosure leakage	Single fault	< 250 µ Amp	< 500 µ Amp
Patient leakage	Normal	< 50 µ Amp	< 100 µ Amp
Patient leakage	Single fault	< 250 µ Amp	< 500 µ Amp
Input VAC applied to patient applied part	Single fault	< 2500 µ Amp	< 5000 µ Amp

**Notes:**

- For earth leakage current, single-fault condition shall mean the interruption of either power supply conductor, one at a time.
- For enclosure leakage current or patient leakage current, single-fault condition shall mean the interruption of either power supply conductor or the protective earth conductor, one at a time.
- For patient leakage current, single-fault condition shall also mean application of rated mains voltage to the patient applied part relative to the protective earth conductor.

**Important note**

The VERSAJET console is NOT user serviceable and under no situation should the casing be opened. Any attempt to open the unit by the user will void all warranties and render the user responsible for all subsequent repairs to the unit. Contact your local Smith & Nephew customer care representative or sales representative to resolve all console problems.

# VERSAJET<sup>◇</sup> Console performance and safety checklist

Steps	Physical Appearance Check	Yes	No	Comments
	<i>Caution: unit is unplugged and placed on bench for this step</i>			
1	Check Console for visible Dents, Cracks, Missing pieces	<input type="checkbox"/>	<input type="checkbox"/>	_____
2	Check that ventilation slots are free from Obstructions, Dust or Foreign Materials	<input type="checkbox"/>	<input type="checkbox"/>	_____
3	Check that labels and markings are intact and legible with no smudges	<input type="checkbox"/>	<input type="checkbox"/>	_____
4	Check that Console Knob on UI (User Interface) rotates freely between 4 and 6 o'clock position	<input type="checkbox"/>	<input type="checkbox"/>	_____
5	Check that On/Off Rocker switch moves to each position and remains in place	<input type="checkbox"/>	<input type="checkbox"/>	_____
6	Check Foot Switch and attached cord for signs of turn or missing insulation	<input type="checkbox"/>	<input type="checkbox"/>	_____
7	Check Foot Switch Mechanical Operation for Engage and Disengage by depressing and releasing	<input type="checkbox"/>	<input type="checkbox"/>	_____
8	Inspect Power Cord for any frayed or missing insulation and bent , loose or missing plug blades or earth/ground	<input type="checkbox"/>	<input type="checkbox"/>	_____
	<b>System Diagnostics Check</b>	<b>Yes</b>	<b>No</b>	<b>Comments</b>
	<i>Note: unit is plugged in and placed on bench for this step</i>			
9	Adjust main power switch to ON and OFF positions	<input type="checkbox"/>	<input type="checkbox"/>	_____
10	Verify console defaults to power level "1" when unit is turned on main front power switch.	<input type="checkbox"/>	<input type="checkbox"/>	_____
11	Verify the unit power level value changes when arrows are depressed – there are 10 settings	<input type="checkbox"/>	<input type="checkbox"/>	_____
12	Verify that the "Door" error lamp is "on" when door is at 4 o'clock position	<input type="checkbox"/>	<input type="checkbox"/>	_____
13	Verify that the "Door" error lamp is "off" when door is at 6 o'clock position	<input type="checkbox"/>	<input type="checkbox"/>	_____
14	Verify the "Pedal" error lamp is "on" when the foot switch is not plugged in	<input type="checkbox"/>	<input type="checkbox"/>	_____
15	Verify the "Pedal" error lamp is "off" when the foot switch is plugged in	<input type="checkbox"/>	<input type="checkbox"/>	_____
	<b>Console Speed Check</b>	<b>Yes</b>	<b>No</b>	<b>Comments</b>
	<i>Note: unit is plugged in and placed on bench for this step</i>			
	<i>A hand held tachometer is needed for this step</i>			
16	Turn main power switch switch to On Position	<input type="checkbox"/>	<input type="checkbox"/>	_____
17	Turn knob on User Interface to "Open" position	<input type="checkbox"/>	<input type="checkbox"/>	_____
18	Insert the "Speed Stick" in the User Interface until fully seated	<input type="checkbox"/>	<input type="checkbox"/>	_____
19	Set Console to its Lowest setting (1)	<input type="checkbox"/>	<input type="checkbox"/>	_____
20	Depress Footpedal allowing motor and transmission to cycle	<input type="checkbox"/>	<input type="checkbox"/>	_____
21	Measure Speed per Console Speed Check Instructions	<input type="checkbox"/>	<input type="checkbox"/>	_____
22	Set Console to its Highest setting (10)	<input type="checkbox"/>	<input type="checkbox"/>	_____
23	Depress Footpedal allowing motor and transmission to cycle	<input type="checkbox"/>	<input type="checkbox"/>	_____
24	Measure Speed per Console Speed Check Instructions	<input type="checkbox"/>	<input type="checkbox"/>	_____
	<b>Electrical Equipment Safety Check</b>	<b>Yes</b>	<b>No</b>	<b>Comments</b>
	<i>Note: unit is plugged in and placed on bench for this step</i>			
	<i>A meter capable of measuring micro amps is required</i>			
25	Turn main power switch to On Position	<input type="checkbox"/>	<input type="checkbox"/>	_____
26	Attach test leads to Ground Plug and UI (User Interface) as per electrical testing instructions	<input type="checkbox"/>	<input type="checkbox"/>	_____
27	Take readings as per electrical testing instructions to check if leakage is occurring	<input type="checkbox"/>	<input type="checkbox"/>	_____
28	Disconnect test leads, and turn main power switch to off position	<input type="checkbox"/>	<input type="checkbox"/>	_____
29	Unplug power cord from outlet and from back of console	<input type="checkbox"/>	<input type="checkbox"/>	_____
	<b>Summary of results</b>	<b>Yes</b>	<b>No</b>	<b>Comments</b>
30	Overall Physical Appearance showed no anomalies and unit is clean	<input type="checkbox"/>	<input type="checkbox"/>	_____
31	Basic Functional Setup indicates functions evaluated are operational	<input type="checkbox"/>	<input type="checkbox"/>	_____
32	Console Speed verification meets spec as defined in Hospital Test Protocol	<input type="checkbox"/>	<input type="checkbox"/>	_____
33	Electrical Equipment Safety Testing indicates readings meet requirements	<input type="checkbox"/>	<input type="checkbox"/>	_____

Please photocopy this page when performing the checklist so that you will always have a blank copy

If any of the Summary Results are "NO" this could be an indication of a need for Service or Repair

Please contact your Smith & Nephew Customer Care Representative immediately and have this report available at time of call

**UK**

Smith & Nephew Healthcare Ltd  
Healthcare House  
Goulton Street Hull  
HU3 4DJ  
Tel: 01482 222200

**AUSTRALIA**

Smith & Nephew Pty Ltd  
315 Ferntree Gully Road  
Mount Waverley  
Victoria 3149  
Tel: (03) 8540 1360

**AUSTRIA**

Smith & Nephew GmbH  
Concorde Business  
Park D2/ Top 11, 2320  
Schwechat  
Tel: 17079102

**BELGIUM**

Smith & Nephew  
SA-NVAv du Four à  
Briques 3b1140 Bruxelles  
Kareelovenlaan 3b  
– 1140 Brussels  
Tel: (02) 7022911

**CANADA**

Smith & Nephew Inc  
4707 Levy Street St  
Laurant QC H4R 2P9  
Tel: 1 514 956 1010

**CHINA**

Smith & Nephew Ltd  
19F Harbour Ring Hiang  
Pu Centre No 98 Liu He  
Road Shanghai 200041  
Tel: 86 21 63503100

**DENMARK**

Smith & Nephew  
A/SNaerum Hovedgade  
22850 Naerum  
Tel: 45 45 80 61 00

**EASTERN EUROPE**

Smith & Nephew  
Service GmbH  
Max-Planck Strasse 1-3  
D-34253Lohfelden  
Tel: 49 561 9514 0

**FRANCE**

Smith & Nephew SAS  
Espace Novaxis25  
Boulevard Alexandre Oyon,  
72019 Le Mans Cedex 2  
Tel: 33 (0)2 43 83 23 23

**FINLAND**

Smith & Nephew OyAyritie  
12 C01510 Vantaa  
Tel (0) 10 218 7300

**GERMANY**

Smith & Nephew GmbH  
Medical Division  
Max-Planck-Str 1-3D-  
34253 Lohfelden  
Tel: 561 95140

**GREECE**

Costas A Papaelinas  
(Hellas) SA26th km  
Paeonias – Makopoulou  
AvePO Box 182 19400  
Koropi  
Tel: 662 6201-7

**HONG KONG**

Smith & Nephew Ltd  
Unit 813-816 8/F Delta  
House 3 On Yiu Street  
Shatin N.T.  
Tel: (852) 2648 7700

**INDIA**

Smith & Nephew  
Healthcare Ltd323-B  
Chintamani Plaza  
Andheri-Kurla Road  
Andheri (East)  
Mumbai 400 099  
Tel: +91 (22) 4005 5090

**INDONESIA**

PT Smith & Nephew  
Healthcare PT Enseval  
Putera Megatrading  
TbkJI Pulo Lentut No  
10Kawasan Industri Pulo  
GadungJakarta 13920  
Indonesia  
Tel: +62 21 4682 2422

**IRELAND**

Smith & Nephew Ltd  
Carraig Court, George's  
Avenue Blackrock Co  
Dublin  
Tel: 01 217 0444

**ITALY**

Smith & Nephew S.r.l  
Via De Capitani 2A  
20041 Agrate Brianza  
Milano  
Tel: +39 039 60941

**JAPAN**

Smith & Nephew  
Wound Management KK  
Shiba-Nikkei-Yuaku  
Bld1-10-13 Shiba Minato-ku,  
Tokyo 105-0014  
Tel: +81 3 5443 5721

**KOREA**

Smith & Nephew Ltd  
ASEM Tower 13F 159-1  
Samsung-dong  
Gangnam-gu,  
Seoul Korea (135-7 98  
Tel: +82 2 6001 7575

**MALAYSIA**

Smith & Nephew  
Healthcare Sdn BhdMenara  
Merais  
No 1 Jalan 19/346300  
Petaling Jaya Selangor  
Darul Ehsan Malaysia  
Tel: +60 3 7958 7103

**MALTA**

VJ Salamone Ltd  
PO Box 55  
Valletta  
Malta

**MEXICO**

Smith & Nephew SA de CV  
San Francisco Cuautalpan  
No 101 Fracc Alce Blanco  
Naucalpan De Juarez  
Estado de Mexico  
CP 53370  
Tel: 5359 5252

**MIDDLE EAST**

Smith & Nephew Fze PO  
Box 9359 Dubai World  
Trade Centre Level 19  
Dubai United Arab Emirates  
Tel: 4 331 7000

**NETHERLANDS**

Smith & Nephew BV  
Kruisweg 6592132 NG  
Hoofddorp  
Tel: 0031 020 6543999

**NEW ZEALAND**

Smith & Nephew Ltd  
PO Box 442  
621 Rosebank Road  
Avondale Auckland  
Tel: 64 9 828 4059

**NORWAY**

Smith & Nephew A/S  
PO Box 224 Nye  
Vakasvei 64 1379 Nesbru  
Tel: 66842020

**PAKISTAN**

Smith & Nephew  
Pakistan (Private) Ltd  
A/69 SITE Manghopir Road  
SITE PO Box 3659  
Karachi 75700  
Tel: 21 2561176

**PORTUGAL**

Smith & Nephew  
LdaGalerias Alto da BarraAv  
das Descobertas  
N59 Piso 3Alto da Barra  
2780-053 OEIRAS  
Tel: 21 446 06 50

**SINGAPORE**

Smith & Nephew Pte Ltd1  
Jalan Kilang Timor # 08-  
03/05 Pacific Tech Centre  
159303  
Tel: +65 6 270 0552

**SOUTH AFRICA**

Smith & Nephew Ltd  
PO Box 92  
Pinetown Natal 3600  
Tel: 031 7108111

**SPAIN**

Smith & Nephew SA  
Fructuos Gelabert  
2y4 08970 – Sant Juan  
Despi Barcelona  
Tel: 373 7301

**SWITZERLAND**

Smith & Nephew AGGiutz  
Biotzheim Str 1GH-4502  
Solothurn  
Tel: 32 624 5660

**TAIWAN**

Smith & Nephew Ltd 8F-4  
79 Hsin Tai 5th Road  
Sec 1 Hsichi Taipei County  
Tel: 886 2 2698 9711

**THAILAND**

Smith & Nephew Ltd  
344/3 Soi Rongrien Yepun  
Rama IX Road Kwang  
Bangapi Khet Huay Kwang  
Bangkok 10320  
Tel: +66 2 719 622127

**UNITED STATES**

Smith & Nephew Inc  
Wound Management  
Division  
11775 Starkey Road  
PO Box 1970  
Largo FL33779-1970  
Tel: +1 727 392 1261

**TURKEY**

Interfarma KS  
Mithatpasa C No 24/7  
Yenisehir Ankara

**VENEZUELA**

Eurociencia CA  
Laboratorios Ball  
CAMarcas Asociadas SA,  
Calte Santa Ana Edificio  
Centro PenafielPiso  
3 Urb Boleita Sur Caracas  
Tel: 2 234 8802

Made in USA for/Fabriqué on USA pour:  
Smith & Nephew, Inc, 11775 Starkey Road,  
Largo, FL 33773 USA (727) 932-1261

[www.smith-nephew.com/wound](http://www.smith-nephew.com/wound)  
[www.versajet.info](http://www.versajet.info)

EU Authorised Representative/Représentatif Autorisé:  
Smith & Nephew Medical Ltd., 101 Hessle Road, Hull, HU3 2BN UK

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