

Form B03

## Scheduled Maintenance Work Order

CLOSE

Quantum Medical Solutions sdn bhd  
transcending boundaries, transforming life

Format Ref - QMS/TSD-022 Rev 01

Work Order No.	PWO365635	Schedule Month	June 2018
Work Order Date	01/06/2018	Completed Date	26/6/18
Clinic Name	Klinik Pergigian Di Klinik Kesihatan Tan	Clinic Code	JHR521
BE No.	JHR010230	Distict	KOTA TINGGI
BE Category	STERILIZING UNITS, STEAM	WO Assigned to	Husni
Ownership	<input checked="" type="checkbox"/> Existing Equipment	<input type="checkbox"/> Purchase	<input type="checkbox"/> New
BE Condition	<input checked="" type="checkbox"/> Active	<input type="checkbox"/> BER Proposed	
Work Order Type	<input type="checkbox"/> Preventive Maintenance (PM)	<input type="checkbox"/> Third Party Calibration (TPC)	
	<input type="checkbox"/> Routine Inspection (RI)	<input type="checkbox"/> Statutory Certification (SC)	

Reschedule Date

NA

## 3E Third Party Calibration / Statutory Certification Details

Company Name		Cal / Cert Date	NA
Contact Number		Cal / Cert Expiry Date	

## Action Taken

☒ PM / RI job done as per checklist. Unit tested functioning good & ready to use.

Manufacturer : NA

☐ Corrective Maintenance / ☐ Breakdown

Modal : NA

BE Sticker Availability : ☒ Yes / ☐ NA

Serial No : NA

Remarks: NA

## Schedule Maintenance Execution Details

SI No	QMS Engineer / Technician Name	Date	Start Time	End Time
1	Husni	26/6/18	14:00	16:00

## Customer Remarks

NA

## Engineer / Technician Signature

Name

Date: 26/6/18  
HUSNI B. MAMAT  
Biomedical Engineer  
Quantum Medical Solutions S/B

## Customer Signature

Name

Designation

Date

Seal

DR. AMIRUL FADLI AZIZIE ANUAR  
MDC NO: 6788  
PEGAWAI PERGIGIAN  
KLINIK PERGIGIAN KOTA TINGGI

For Internal Use

MUHD RAMADHAN B. TAMAR JAYA  
Biomedical Engineer  
Technical Service Department  
Quantum Medical Solutions Sdn. Bhd.  
Tel: +60 12-398 1697

First Verification

QMS Circle Incharge

Final Verification

QMS State Incharge



# KEMENTERIAN KESIHATAN MALAYSIA

MEET Planned Preventive Maintenance Checklist  
Sterilizing units, Steam  
BE CODE: 13-746

CHECKLIST NO: CL-148-000  
REV.001

## PART 1 ASSET DETAILS

WORK ORDER NO ▶ *pw 365635* ASSET NO ▶ *JHR 010230*  
MANUFACTURER ▶ GENERAL MODEL ▶ GENERAL  
FREQUENCY ▶ 3 MONTHLY ( ) 6 MONTHLY ( / ) 12 MONTHLY ( ) PPM HOURS ▶ 1 HOUR

## PART 2 SPECIAL PRECAUTION

If there is evidence of body fluid contamination, submit the device for cleaning and decontamination before inspecting it.

Wear appropriate Personnel Protection Equipment (PPE) during work.

Wear grounded electrostatic wristband when handling PCB or electronic components.

Refer to the safety procedure for additional precautions and guidance as per manufacturer guidelines.

Make sure the test equipment used are duly calibrated.

## PART 3 TEST APPARATUS

Tick (✓) where appropriate

NO	ASSET NO	DESCRIPTION	SERIAL NO	CALIBRATION DUE ON
	<i>NA</i>	DIGITAL TEMPERATURE METER	<i>NA</i>	
		DIGITAL PRESSURE METER		
	<i>TEE8A</i>	<i>EST</i>	<i>3216071</i>	<i>24.8.18</i>

## PART 4 QUALITATIVE TASKS

Tick (✓) where appropriate

	PASS	FAIL	NA		PASS	FAIL	NA
1 Chassis - verify physical integrity, cleanliness and condition	(✓)	( )	( )	10 Over pressure cut of valve - Verify physical integrity	(✓)	( )	( )
2 Power Cord - verify proper insulation and integrity	(✓)	( )	( )	11 Door lock - Verify physical integrity	(✓)	( )	( )
3 Strain Relief - verify physical integrity at both ends of line cord	(✓)	( )	( )	12 Door gasket Verify physical integrity	(✓)	( )	( )
4 Fittings/ Connectors - check all fittings/connectors	(✓)	( )	( )	13 Check water tank leak	(✓)	( )	( )
5 Controls/Switches - verify proper operation of controls	(✓)	( )	( )	14 Check drain valve -Physical integrity	(✓)	( )	( )
6 Indicators/ Displays - verify proper illumination and operation	(✓)	( )	( )	15 Check label	(✓)	( )	( )
7 Check fuse, circuit breaker	(✓)	( )	( )	16 Check demineralisation and sensor (if available)	(✓)	( )	( )
8 Heater - verify physical Integrity	(✓)	( )	( )	17 Check automatic water filling (if available)	(✓)	( )	( )
9 Chamber - verify physical integrity (scaling, rusting, pitting or impurities)	(✓)	( )	( )	18 Replace Bacteria/Air Sterilization Filter	(✓)	( )	( )

## PART 5 PREVENTIVE MAINTENANCE TASKS

Tick (✓) where appropriate

	DONE	NOT DONE	NA		DONE	NOT DONE	NA
1 Clean exterior and interior of the equipment	(✓)	( )	( )	4 Lubricate all moving parts	(✓)	( )	( )
2 Check / replace gasket ***	(✓)	( )	( )				
3 Check/ clean solenoids	(✓)	( )	( )				

Notes:

\* For all Parts, NA is defined as NOT APPLICABLE

\*\* If you have ticked 'NOT DONE', then justify in Part 8

\*\*\* Choose Whichever Applicable



# KEMENTERIAN KESIHATAN MALAYSIA

MEET Planned Preventive Maintenance Checklist  
Sterilizing units, Steam  
BE CODE 13-746

CHECKLIST NO. CL-148-600 REV 001

WORK Order No

PWO 365635

## PART 6 SERVICE CHECKLIST

No	Description	Checked	Service/ Clean	Replaced	Not Applicable	No	Description	Checked	Service/ Clean	Replaced	Not Applicable
1	Fuses	(✓)	( )	( )	( )	16	Discharge Valve	(✓)	( )	( )	( )
2	Main Control Board	(✓)	( )	( )	( )	17	Infill Valve	(✓)	( )	( )	( )
3	Control Board	(✓)	( )	( )	( )	18	Heating Element	(✓)	( )	( )	( )
4	Fan Running Rear & Side	(✓)	( )	( )	( )	19	Heat Exchanger/Cooling system (if applicable)	(✓)	( )	( )	( )
5	Water Reservoir Float Switch/Water Level Sensor	(✓)	( )	( )	( )	20	Vacuum Pump	(✓)	( )	( )	( )
6	Water Reservoir	(✓)	( )	( )	( )	21	Door Gasket	(✓)	( )	( )	( )
7	Electric Door Lock	(✓)	( )	( )	( )	22	Chamber Guard Seal (if applicable)	(✓)	( )	( )	( )
8	Pressure Door Lock	(✓)	( )	( )	( )	23	Solid State Relay	(✓)	( )	( )	( )
9	Discharge Door Lock	(✓)	( )	( )	( )	24	Thermostat Assembly	(✓)	( )	( )	( )
10	Pressure Transducer	(✓)	( )	( )	( )	25	Temperature Sensor	(✓)	( )	( )	( )
11	Pressure Gauge	(✓)	( )	( )	( )	26	Thermal Printer (if applicable)	( )	( )	( )	(✓)
12	Safety Valve	(✓)	( )	( )	( )	27	Vacuum Pump (if applicable)	(✓)	( )	( )	( )
13	Air Valve/Steam Solenoid Valve	(✓)	( )	( )	( )	28	Filters / strainer	( )	( )	( )	(✓)
14	Air Valve/Steam Solenoid Valve	(✓)	( )	( )	( )						
15	Air Valve/Steam Solenoid Valve	(✓)	( )	( )	( )						

## PART 7 Technician Remarks





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WORK ORDER NO

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## PART 8 QUANTITATIVE TASKS

Tick (✓) where appropriate

No	Description	Units / UOM	Set Values	Measured Values	Limit/Tolerance	PASS	FAIL	NA
1	Temperature reading	°C	134	134	134-137 121-124	✓	( )	( )
2	Pressure reading	bar	2.06	2.02	2.03-2.32 1.03-1.23	✓	( )	( )
3	Electrical Supply Voltage	V	210	refer to EST	Refer to nameplate	✓	( )	( )
4	Electrical Power	kW		refer to EST	Refer to nameplate	✓	( )	✓

## PART 9 ELECTRICAL SAFETY TEST

ELECTRICAL SAFETY TEST, (attach report)

(In accordance to IEC 60601)



PASS



FAIL



NA

## PART 10 NOTES

NA



CORRECTIVE MAINTENANCE REQUIRED



FUNCTIONING



NOT FUNCTIONING

WORK ORDER NO

NA

NEXT PPM DATE

12/18

PPM has been performed in accordance to the checklist and the equipment is functioning to the intended purpose.

COMPLETED BY:

NOOR ARIYANA BINTI LATIP  
Biomedical Engineer

WITNESSED BY USER:

DATE:

Quantum Medical Solutions Sdn. Bhd.  
012-3962428

DATE:

#### Test Setup

Operator ID :  
 Calibration Tech : MOHANA  
 Calibration Date : 24/08/2018  
 Firmware Version : 2.08.01  
 Serial Number : 3218071  
 Date & Time : 26/06/2018 & 2:42pm  
 JOB Name :

#### DUT Information

Equipment Number : JHR010230  
 Serial Number :  
 Manufacturer :  
 Model :  
 Location : KP TANJUNG SEDILI  
 Other :

#### Template Information

Template Name : STERILIZING UNITS  
 Pause after Power ON NO  
 Power ON delay: 2  
 Test Speed: NORMAL  
 Halt on Test Failure: YES  
 Include Time: YES  
 Insulation Resistance \ 500V  
 Multi Enclosure Test : NO

Standard :  
 Pause before Power OFF:  
 Power OFF delay:  
 Test Mode:  
 Multi PE Test:  
 Multi Resstore:  
 Reverse Polarity:  
 Classification:

IEC62353-Direct  
 NO  
 0  
 AUTO  
 NO  
 WORST/LAST  
 YES  
 I

#### PLC Configuration-Applied part setup

AP Name AP Type AP Num

#### ESA615 Test Results

Test Name	Value	High Limits	Low Limits	Status
Protective Earth Resistance	0.259 Ohm		0.3 -	P
Insulation Resistance				P
Mains to Protective Earth	89.1 MOhm	-	-	P
Mains Voltage				P
Live to Neutral	241.2 V	-	-	P
Neutral to Earth	8.4 V	-	-	P
Live to Earth	257.3 V	-	-	P
Equipment Current	1.0 A	-	-	P
Direct Equipment Leakage				P
Open Earth	46.7 uA		500 -	P
Open Earth- Reversed Mains	68.6 uA		500 -	P

  
 Signature