



REDEFINE THE WAY OF LIFE



**WATER HEATER / PEMANAS AIR**

## **USER MANUAL / PANDUAN PENGGUNA**

|               |                                   |
|---------------|-----------------------------------|
| MODEL / MODEL | CASCA DIGITAL (CAD651D / CAD650N) |
|---------------|-----------------------------------|

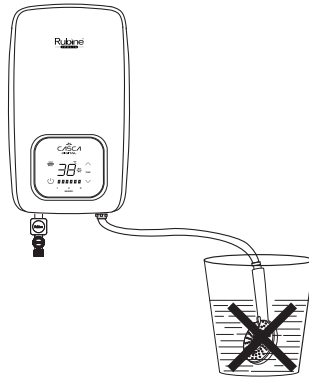
Please read this manual thoroughly and understand the content before use.  
*Sila baca panduan ini dengan teliti dan memahami isi kandungannya sebelum penggunaan.*



## **SAFETY PRECAUTION LANGKAH-LANGKAH KESELAMATAN**

1. Do not install reverse INLET & OUTLET and Stop Valve of heater.  
*Jangan memasang "INLET & OUTLET" dan Injap Hentian pemanas dalam keadaan Songsang.*
2. Do not install the heater where there is consistent spray directly over the unit.  
*Jangan memasang pemanas air dimana terdapat semburan konsisten terus ke atas unit.*
3. Do not connect the OUTLET to any tap or fitting that is not recommended by the manufacturer.  
*Jangan sambungkan "OUTLET" pada mana-mana paip atau pemasangan yang tidak disyorkan oleh pengeluar.*
4. Do not block the heater OUTLET in any way.  
*Jangan menghalang "OUTLET" pemanas dalam apa jua cara.*
5. Do not attempt to repair the heater without qualified technician.  
*Jangan cuba untuk membaiki pemanas tanpa juruteknik yang berkelayakan.*
6. This appliance is not intended for use by person (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been supervised or given instruction concerning use of the appliance by a person responsible for their safety.  
*Perkakas ini tidak digalakkan untuk digunakan oleh orang (termasuk kanak-kanak) kurang upaya dari segi fizikal, deria atau mental, atau kurang berpengalaman atau pengetahuan, kecuali mereka diawasi atau diberi arahan mengenai penggunaan perkakas ini oleh orang yang bertanggungjawab keatas keselamatan mereka.*
7. Children should be supervised to ensure that they do not play with the appliance.  
*Kanak-kanak hendaklah diselia untuk memastikan mereka tidak bermain dengan perkakas ini.*
8. Engage qualified electrician for installation.  
*Gunakan juruelektrik yang berkelayakan untuk pemasangan.*
9. Test water temperature with hand before using the shower.  
*Uji suhu air dengan menggunakan tangan sebelum menggunakan pemanas air.*
10. Check the RCCB once a month (please refer to the Test Run of Heater) and consult professional for repair if there is any malfunction.  
*Pastikan RCCB diperiksa setiap bulan (sila rujuk Pengujian Pemanas) dan hubungi juruteknik untuk sebarang pembaikan.*
11. Metallic / chrome flexible hose and conductive control valve shall not be used.  
*Saluran getah logam / krom dan injap kawalan konduktif tidak boleh digunakan.*

12. Use only new hoses to connect the appliance to the water supply. The old hose-sets should not be reused.  
*Gunakan hos yang baru untuk menyambungkan perkakas kepada bekalan air. Hos yang lama tidak boleh digunakan semula.*
13. This appliance is not to be used for portable water supply.  
*Alat ini tidak boleh digunakan untuk bekalan air mudah alih.*
14. Do not leave the hand shower idle in the pail. (refer below)  
*Jangan meninggalkan alat pancuran terbiar di dalam baldi. (rujuk dibawah)*



### **WARNING!**

Metallic / chromed hose and conductive control valve shall not be used.

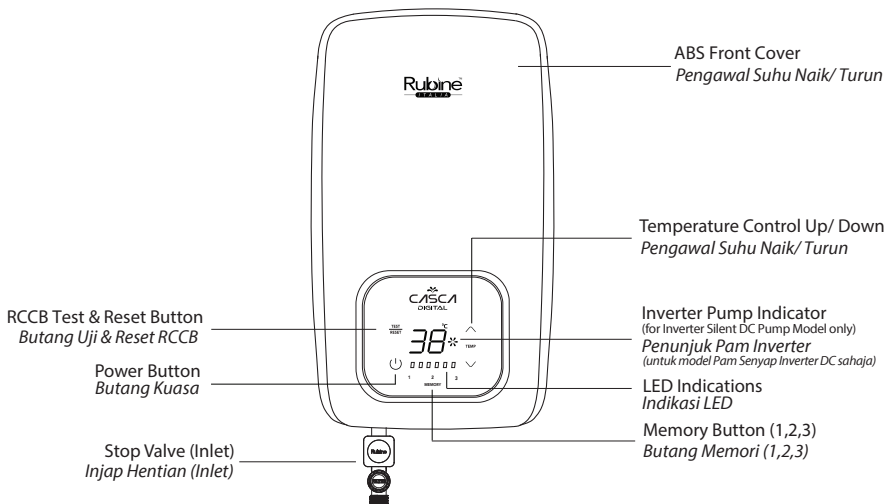
Plug, socket and undersize cable shall not be used.

The user is advised to test RCCB at least once a month.

## **1. WATER HEATER PARTS IDENTIFICATION**

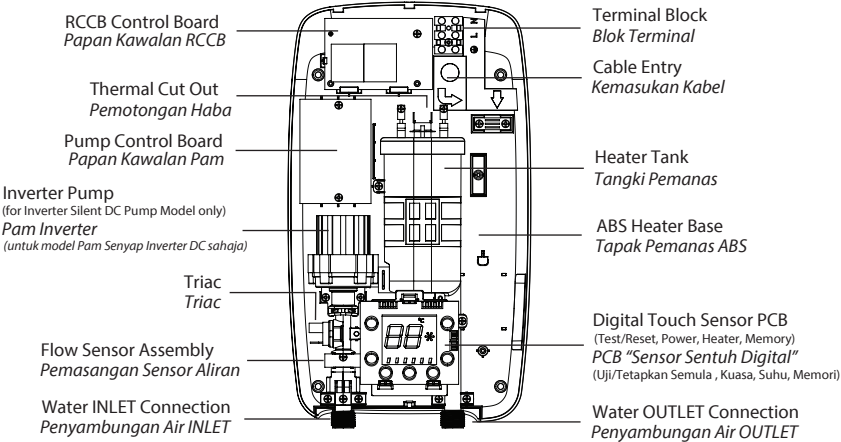
### ***Pengenalan Bahagian – Bahagian Pemanas Air***

#### **EXTERNAL PARTS IDENTIFICATION *Pengenalan Bahagian Luar***



# INTERNAL PARTS IDENTIFICATION

## PENGENALAN BAHAGIAN DALAM

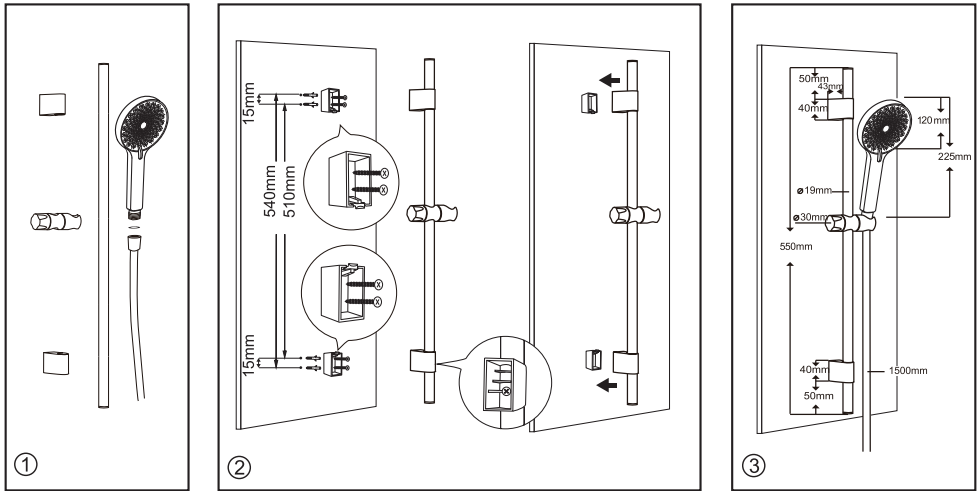


# SHOWER SET ACCESSORIES IDENTIFICATION

## PENGENALAN AKSESORI PANCURAN

### 1. BLACK ACCESSORIES

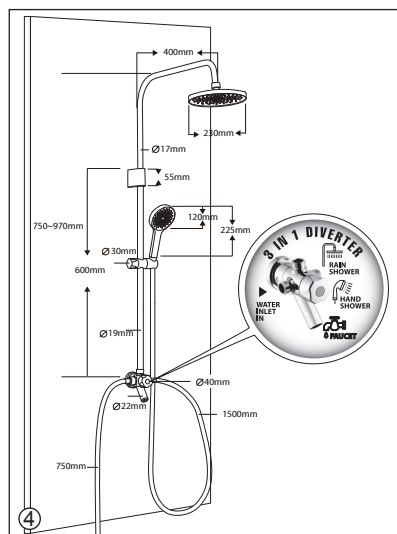
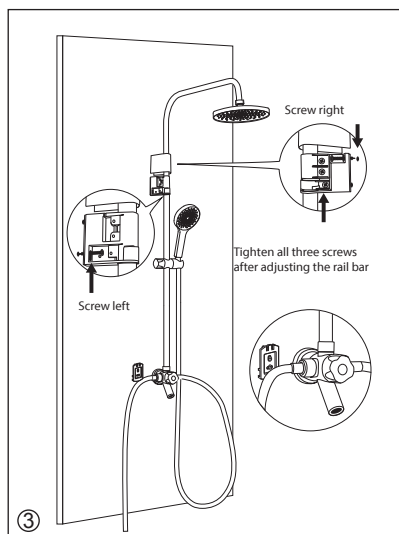
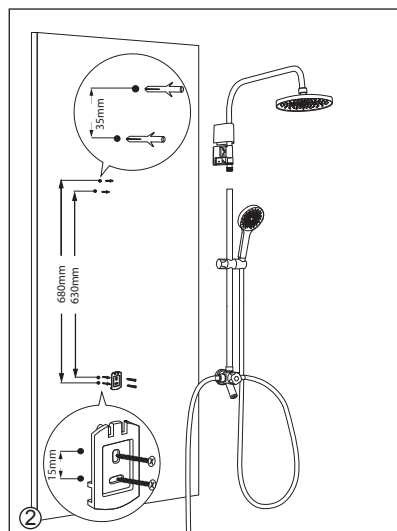
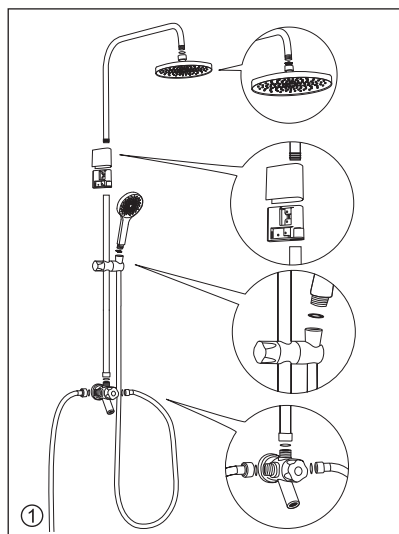
#### AKSESORI HITAM





## 2. RAIN SHOWER SET - 3 IN 1 DIVERTER (For selected model only)

### SET PANCURAN MANDIAN HUJAN



## MULTIPLE USAGE OF FAUCET

**3-in-1 Diverter**  
For selected models only



Easy access of warm  
and normal temperature  
water outlet



Warm water for  
hand wash clothes



Warm shower for  
baby bathtub



Warm shower for your  
pet made easy with  
faucet instead of handheld  
hand shower head.

## 2. GENERAL INFORMATION MAKLUMAT UMUM

### INSTALLATION PEMASANGAN



**CAUTION:  
AWAS:  
THIS APPLIANCE MUST BE EARTHED  
PERKAKAS INI MESTI DIBUMIKAN**

1. All the plumbing work should be completed before proceeding to electrical wiring connection. (Table 1)  
*Semua pemasangan paip perlu diselesaikan sebelum memulakan kerja-kerja penyambungan wayar elektrik. (Jadual 1)*
2. Installation must be carried out by qualified electrician with close reference to this manual and in compliance with the local regulations.  
*Pemasangan mestilah dilakukan oleh juruteknik yang berkeelayakan dengan merujuk kepada panduan ini dan mengikut akta-akta tempatan.*
3. The unit works at minimum water flow rate of 2 litre/min, which then would trigger the built-in pump (only for pump model), boosting a stronger shower spray.  
*Unit ini berfungsi pada kadar aliran air minima 2 liter/min, yang mengaktifkan pam dan kemudiannya meningkat pancuran semburan.*
4. The built-in electronic Residual Current Circuit Breaker (RCCB) would cut-off the power supply to heater in the event of current leakage of as low as 15mA.  
*"Residual Current Circuit Breaker (RCCB)" akan memutuskan bekalan kuasa sekiranya berlaku kebocoran arus serendah 15mA.*
5. The Thermal Cut-Off would automatically shut off the power supply shall there is any abnormal rise of showering temperature.  
*Pemotongan haba akan berfungsi secara automatik dengan memutuskan bekalan kuasa jika terdapat kenaikan suhu yang tidak normal.*
6. The unit only operates when there is sufficient water flow to trigger the flow switch.  
*Unit hanya akan beroperasi apabila terdapat aliran air yang cukup untuk mengaktifkan suis aliran.*

7. Electrical loading Table 1:  
*Pendawaian elektrik Jadual 1:*

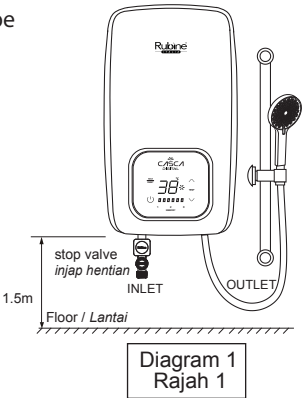
| Voltage<br>(Vac ) | Power<br>(kW) | Amperes<br>(A) | Recommended Conductor Size (csa) |                  |                   | Fuse/<br>MCB(A) | ON/OFF<br>Switch (A) |
|-------------------|---------------|----------------|----------------------------------|------------------|-------------------|-----------------|----------------------|
|                   |               |                | mm <sup>2</sup>                  | Conduit<br>Cable | Flexible<br>Cable |                 |                      |
| 220 -<br>50/60Hz  | 3.5           | 16.0           | 2.5                              | 7/0.67mm         | 50/0.25           | 20              | 20                   |
|                   | 4.5           | 20.5           | 2.5                              | 7/0.67mm         | 56/0.30           | 25              | 25                   |
|                   | 5.5           | 25.0           | 4.0                              | 7/0.85mm         | 56/0.30           | 32              | 32                   |
|                   | 6.0           | 27.3           | 4.0                              | 7/0.85mm         | 56/0.30           | 32              | 32                   |
|                   | 6.5           | 29.6           | 4.0                              | 7/0.85mm         | 84/0.30           | 32              | 32                   |
|                   | 7.5           | 34.1           | 6.0                              | 7/1.04mm         | 84/0.30           | 40              | 40                   |
|                   | 8.0           | 36.4           | 6.0                              | 7/1.04mm         | 84/0.30           | 40              | 40                   |
| 230 -<br>50/60Hz  | 3.5           | 15.2           | 2.5                              | 7/0.67mm         | 50/0.25           | 20              | 20                   |
|                   | 5.5           | 24.0           | 4.0                              | 7/0.85mm         | 56/0.30           | 32              | 32                   |
|                   | 6.6           | 28.7           | 4.0                              | 7/0.85mm         | 56/0.30           | 32              | 32                   |
|                   | 8.8           | 38.3           | 6.0                              | 7/1.04mm         | 84/0.30           | 40              | 40                   |
| 240 -<br>50/60Hz  | 3.6           | 15.0           | 4.0                              | 7/0.85mm         | 56/0.30           | 32              | 32                   |
|                   | 3.8           | 15.8           | 4.0                              | 7/0.85mm         | 56/0.30           | 32              | 32                   |
|                   | 4.25          | 17.7           | 4.0                              | 7/0.85mm         | 56/0.30           | 32              | 32                   |
|                   | 7.7           | 32.1           | 6.0                              | 7/1.04mm         | 84/0.30           | 40              | 40                   |
|                   | 9.0           | 37.5           | 6.0                              | 7/1.04mm         | 84/0.30           | 40              | 40                   |

8. Instantaneous water heater shall be equipped with a 2-pole control switch and own residual current device.  
*Pemanas air segera hendaklah dilengkapi dengan kawalan suis 2-kutub peranti arus berbaki.*
9. Water heaters exceeding 3kW shall be permanently connected to a 20A/30A rated circuit breaker/fuse with an isolator switch and residual current device.  
*Pemanas air yang melebihi 3kW hendaklah disambung secara tetap pada 20A/30A nilai arus pemutus litar/fius dengan suis pengasing dan peranti arus berbaki.*

3. INSTALLATION PROCEDURES

TATACARA PEMASANGAN

1. INLET and OUTLET connection of the heater unit should not be reversed, with stop valve installed on INLET. (Diagram 1)  
*Sambungan unit pemanas "INLET" dan "OUTLET" tidak boleh songsang dan injap hentian mestilah dipasang pada "INLET".*
2. It is recommended that the unit should be mounted 1.5m above the floor to bottom of the heater. (Diagram 1)  
*Pemasangan unit digalakkan mempunyai jarak 1.5m antara lantai dengan bahagian bawah pemanas. (Rajah 1)*



### 3. Mounting position

#### Penetapan tapak pemanas

- Remove screw at the bottom of the heater  
*Keluarkan skru dari bawah pemanas*
- Lift the plastic cover upward (Refer Diagram 2)  
*Buka penutup plastik pemanas dari bahagian bawah. (Rujuk Rajah 2)*
- Mark mounting position on the wall for all 4 screws  
*Tandakan posisi semua 4 skru pada dinding*
- Drill the holes with 5.0mm diameter drill bit  
(Refer Diagram 3)  
*Gerudi lubang dengan menggunakan bit gerudi berdiameter 5.0mm (Rujuk Rajah 3)*
- Install the unit to the wall with plug  
*Pasang unit pada dinding bersama plug*

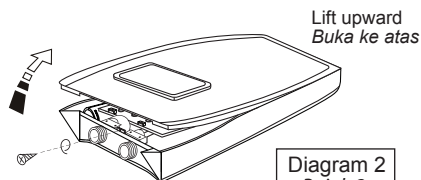


Diagram 2  
Rajah 2

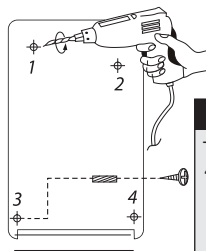


Diagram 3  
Rajah 3

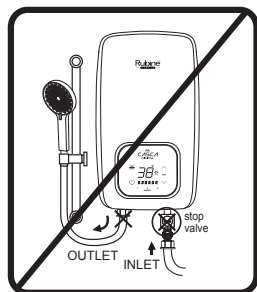
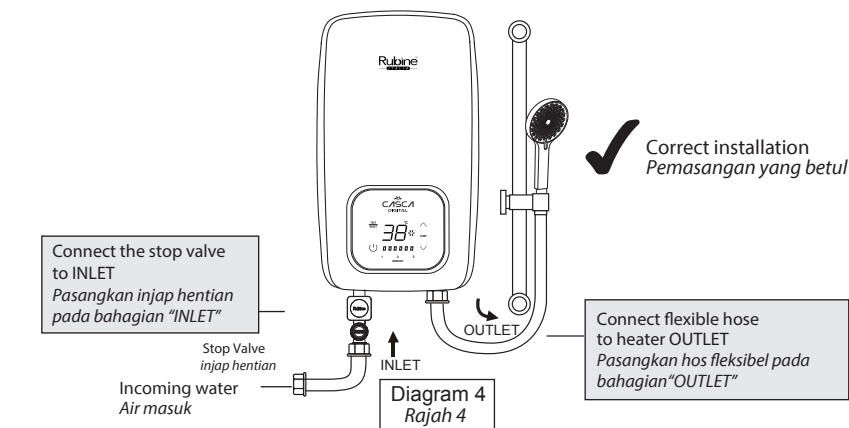
#### WARNING !

To prevent vibration, all 4 screws must be fully tightened.

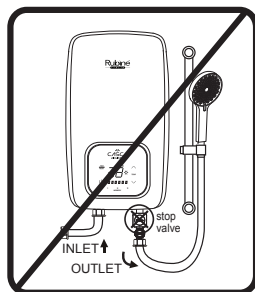
Untuk mengelakkan getaran, semua 4 skru hendaklah diketatkan sepenuhnya.

### 4. Installation of Heater INLET and OUTLET connection. (Diagram 4)

#### Pemasangan "INLET" dan "OUTLET" pemanas. (Rajah 4)



**X** inlet - outlet reversed  
(wrong installation)  
*inlet - outlet songsang  
(pemasangan yang salah)*



**X** stop valve reversed  
(wrong installation)  
*inlet - outlet songsang  
(pemasangan yang salah)*

#### WARNING !

Wrong installation will cause damage to heating element.

Pemasangan yang salah boleh mengakibatkan kerosakan pada elemen pemanas.

## 5. Electrical Connection

### Penyambungan elektrik

#### IMPORTANT NOTE! NOTA PENTING!

SWITCH OFF THE MAIN SUPPLY BEFORE ELECTRICAL WORK  
PADAMKAN SUIS UTAMA SEBELUM MELAKUKAN KERJA-KERJA  
PENDAWAIAAN ELEKTRIK

- Insert electrical cable through the rubber grommet as Diagram 5.  
*Masukkan kabel elektrik melalui grommet getah seperti yang ditunjukkan pada Rajah 5.*
- Connect the cable to the terminal block and fully tighten as below :  
*Sambungkan kabel ke blok terminal dan ketatkan sepenuhnya seperti berikut:*

Ensure all wiring connection is completely **TIGHTENED**!

*Pastikan semua  
penyambungan wayar telah  
diketatkan!*

Electrical cable  
(Recommended conductor  
size 4.0mm<sup>2</sup>)  
*Kabel elektrik (Saiz konduktor  
yang disyorkan 4.0mm<sup>2</sup>)*

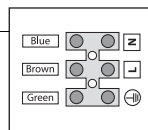
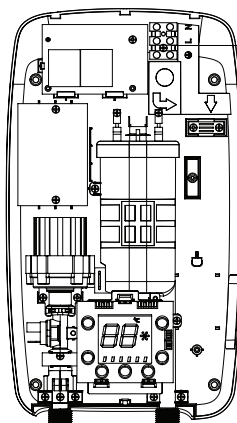


Diagram 5  
Rajah 5

- Restore the cover. (Diagram 6)  
*Pasangkan penutup pemanas. (Rajah 6)*

To install cover:

*Pemasangan penutup:*

- Place bottom part into position & fit in nicely.  
*Posisikan penutup & ketatkan bahagian bawah dahulu.*
- Press firmly the top part until “click” to secure the cover.  
*Tekan bahagian atas penutup sehingga bunyi “klik”.*
- Install screw at bottom to lock in position.  
*Selepas penutup dipasang dengan ketat, pasang skru di bahagian bawah.*

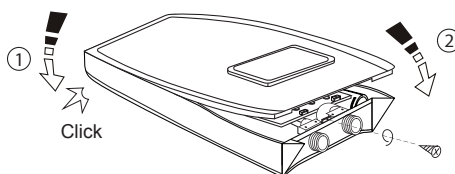
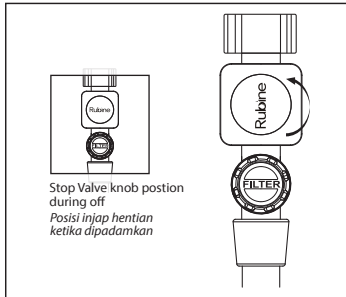


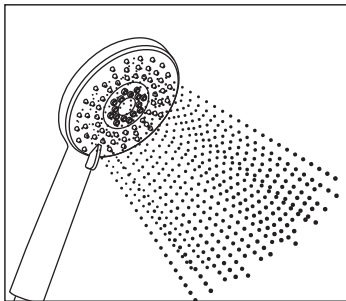
Diagram 6  
Rajah 6

## 4. OPERATION PROCEDURES / TEST RUN OF HEATER

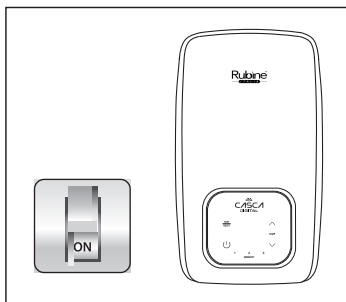
### TATACARA OPERASI / PENGUJIAN PEMANAS



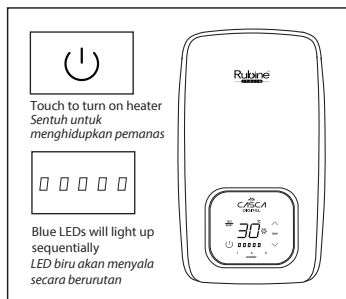
- 1 Turn on stop valve (anti-clockwise).  
*Hidupkan injap hentian (arah lawan jam).*



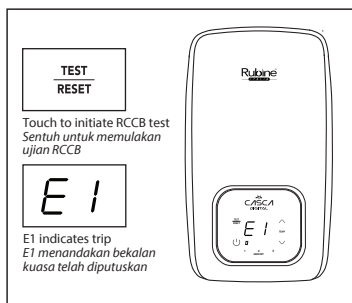
- 2 Make sure water flow starts after stop valve has been turned on.  
*Pastikan pancuran air bermula selepas injap hentian dihidupkan.*



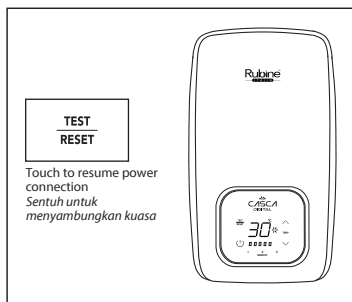
- 3 Switch on the main power supply, the auto check feature will be activated and the blue LEDs will light up sequentially. The first blue LED will light up to indicate the auto check is complete.  
*Hidupkan bekalan kuasa utama, pemeriksaan automatik akan diaktifkan dan LED biru akan menyala secara berurutan. LED biru pertama akan menyala tanda pemeriksaan telah selesai.*



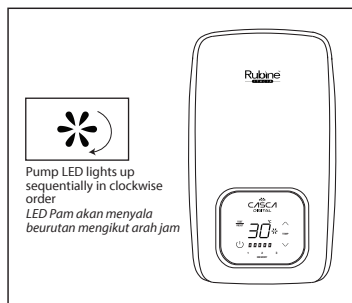
- 4 Touch "⏻" to activate the heater and the water temperature will be displayed. The blue LEDs will light up sequentially to indicate water flow.  
*Sentuh "⏻" untuk menghidupkan pemanas, suhu air akan ditunjukkan. LED biru akan menyala secara berurutan menandakan air mengalir.*



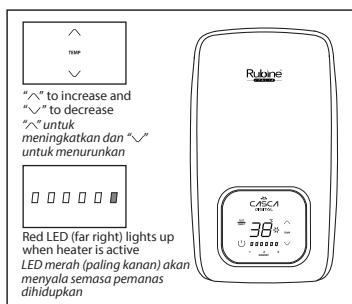
- 5 To initiate the RCCB test, touch "TEST/RESET".  
The unit will trip, and "E 1" will be displayed.  
*Sentuh "TEST/RESET" untuk memulakan ujian RCCB.  
Bekalan kuasa akan diputuskan dan "E 1" akan ditunjukkan.*



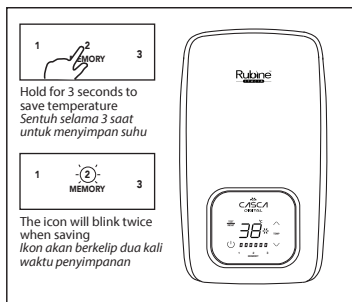
- 6 Touch "TEST/RESET" to resume power connection.  
*Sentuh "TEST/RESET" untuk penyambungan kuasa semula.*



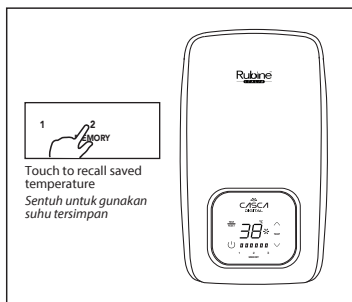
- 7 The heater is now ready for use.  
The pump will activate automatically and the pump icon will light up sequentially when in operation.  
*Pemanas kini sedia untuk digunakan.  
Pam akan dihiduikan secara automatik dan ikon pam akan menyala berurutan semasa operasi.*



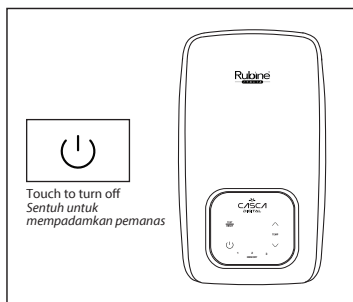
- 8 Touch "<math>\wedge</math>" to increase temperature and "<math>\vee</math>" to decrease it.  
The red LED will light up to indicate heater is activated.  
*Sentuh "<math>\wedge</math>" untuk meningkatkan suhu dan "<math>\vee</math>" untuk menurunkannya. LED merah akan menyala apabila pemanas dihidupkan.*



- 10 To save a preferred temperature for next use, touch any memory icon ("1", "2", or "3") for 3 seconds. The chosen icon will blink twice to indicate saving. The icon will light up once the temperature has been saved.
- Untuk menyimpan suhu pilihan bagi kegunaan seterusnya, sentuh ikon memori ("1", "2" atau "3") selama 3 saat. Ikon terpilih akan berkedip dua kali sebagai isyarat penyimpanan. Ikon akan kekal menyala setelah suhu berjaya disimpan.*



- 11 To recall the saved temperature, touch the same memory icon ("1", "2", or "3") used to save the temperature. Untuk gunakan semula suhu tersimpan, sentuh ikon memori ("1", "2" atau "3") digunakan untuk penyimpanan.



- 12 Turn off the heater and main power supply when not in use. Padamkan suis pemanas dan bekalan kuasa apabila tidak menggunakannya.

## LED DISPLAY (REFERENCE CODES) PAPARAN DIPIMPIN (KOD RUJUKAN)

- EE** Self Check Error / Pemeriksaan Gagal
- E0** No Earth Line / Wayar bumi tidak sambung
- E1** Tripped RCCB / RCCB bermasalah
- E2** Thermo sensor error / Kesilapan penerima suhu
- E3** Thermo sensor short/ Penderia suhu litar pintas
- E4** Thermostat tripped / Thermostat bermasalah



Pump on / Pam buka



Pump off / Pam tutup

\* For Pump model only / model pam sahaja



## ALARM INDICATION PETUNJUK PENGGERA

### ALARM 1



LIGHT



Continuous beeping

Bunyi berterusan

Heater functions well but alarm beeping continuous  
Unit pemanas berfungsi tetapi penggera berbunyi berterusan

#### WARNING!

Could be Earth wire connection error! Contact professional technician immediately.

Wayar Bumi mungkin bermasalah! Hubungi juruteknik segera.

### ALARM 2



LIGHT



Continuous beeping

(provided with water flow & power on)

Bunyi berterusan (dengan aliran air & aliran kuasa dipasang)

Heater auto cut-off

Unit pemanas tidak berfungsi

#### WARNING!

Could be water tank leakage or internal parts malfunction! Contact professional technician immediately.

Tangki air berkemungkinan bocor atau komponen bermasalah! Hubungi juruteknik segera.

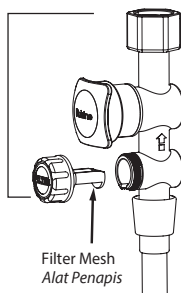
## 5. GENERAL MAINTENANCE PENYELENGGARAN AM



Damp Cloth  
Kain Lembah



Stop Valve  
Injap Hentian



Filter Mesh  
Alat Penapis



CLEAN FILTER  
MESH REGULARLY  
ALAT PENAPIS MESTI  
KERAP DIBERSIHKAN

## CLEAN FILTER REGULARLY BERSIHKAN PENAPIS SECARA TERAP

- Remove the filter mesh from the stop valve (for filter type only) by turning the knob filter anticlockwise and pulling out the knob. Flush it with water to remove any trapped sediments. Install the knob filter back to its original position.
- Keluarkan penapis daripada injap henti (untuk jenis penapis sahaja) dengan memusingkan tombol penapis lawan arah jam dan menarik keluar tombol. Cuci dengan air untuk mengeluarkan sebarang mendapan yang terperangkap. Pasangkan penapis tombol kembali ke pada kedudukan asalnya.

## 6. TECHNICAL SPECIFICATIONS

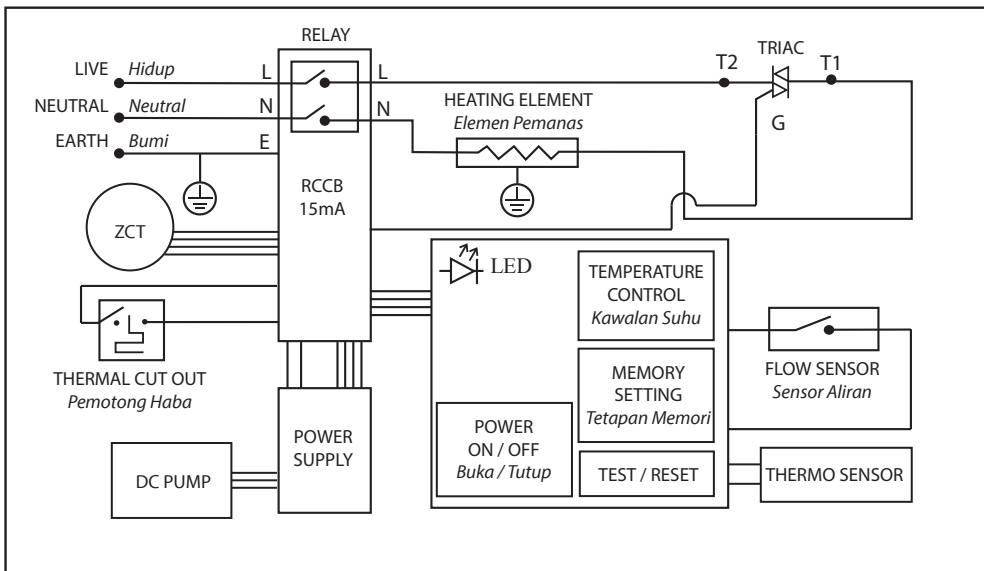
### *SPEKIFIKASI TEKNIKAL*

|                                                   |                                                                                                        |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Electrical loading / <i>Muatan elektrik</i>       | 4.5kW 240V 50/60Hz                                                                                     |
| Other loading / <i>Muatan lain</i>                | Please refer Electrical loading table<br><i>Rujuk jadual pendawaian elektrik</i>                       |
| RCCB sensitivity / <i>Sensitiviti RCCB</i>        | 15 mA                                                                                                  |
| Operating condition / <i>Keadaan berfungsi</i>    | Open system (Open outlet) / <i>Sistem terbuka</i>                                                      |
| Water connection / <i>Sambungan air</i>           | Ø15.0mm (1/2" BSP)                                                                                     |
| Degree of protection / <i>Tahap perlindungan</i>  | IP25                                                                                                   |
| Min water flow rate / <i>Kadar aliran air min</i> | 2 litre / min                                                                                          |
| Min water pressure / <i>Tekanan air min</i>       | 20kPa (0.2 bar / 2.9psi)                                                                               |
| Max water pressure / <i>Tekanan air max</i>       | 400kPa (4 bar / 58psi)                                                                                 |
| Heater dimension (mm) / <i>Ukuran pemanas</i>     | 360 (H) x 210 (W) x 79 (D)                                                                             |
| Heater nett weight / <i>Berat bersih pemanas</i>  | Non pump / <i>Tanpa pam</i> : 1.3kg<br>Inverter Silent DC Pump / <i>Pam Senyap Inverter DC</i> : 1.6kg |

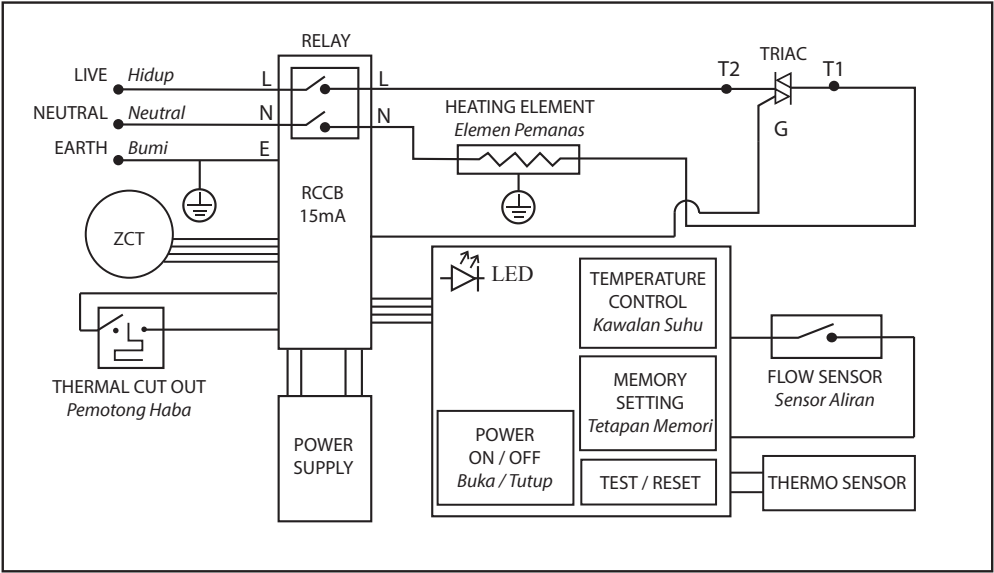
## 7. SCHEMATIC WIRING DIAGRAM

### *RAJAH PENDAWAIAN SKEMATIK*

INVERTER SILENT DC PUMP (CAD651D)  
PAM SENYAP INVERTER DC



NON PUMP (CAD650N)  
TANPA PAM



# Our Warranty

1

Year  
Warranty

on Internal Parts  
pada Bahagian Dalam

7

Years  
Warranty

on Heating Element  
pada Unsur Pemanas

5

Years  
Warranty

on Inverter DC Silent Pump  
pada pam Senyap Inverter DC

10

Years  
Warranty

on Anti-tank Leakage  
pada Pencegahan Tangki Bocor

## 6 mths Warranty Extension

### Online Registration

1. Log on to [www.rubine.com.my](http://www.rubine.com.my)
2. Click on 'Support', followed by 'Product Warranty Registration' to proceed. You're required to sign up as a member.
3. You'll receive a notification of warranty registration confirmation via email.
4. Please keep your online warranty certificate for reference / future warranty claim.

### Pendaftaran Di Laman Web

1. Layari [www.rubine.com.my](http://www.rubine.com.my)
2. Klik pada 'Support', diikuti dengan 'Product Warranty Registration'. Anda dikehendaki mendaftar sebagai ahli Rubine.
3. Anda akan menerima e-mel sijil pengesahan dengan data pendaftaran jaminan.
4. Pastikan anda simpan e-mel sijil pengesahan untuk tuntutan jaminan.

# Customer Care

### AFTER - SALES SERVICE:

Tel : 03-6279 8899

Email : [ftcrm@fiamma.com.my](mailto:ftcrm@fiamma.com.my)

### OPERATION HOURS:

09:00am – 05:00pm

(Monday – Friday, except public holiday)

This specification is subject to change without prior notice,

FIAMMA TRADING SDN. BHD. will not be held responsible for the use of superseded or voided specification.

**[rubine.com.my](http://rubine.com.my)**



**FIAMMA TRADING SDN BHD** 330476-P (A member of Fiamma Holdings Berhad)

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