



SEBA Developments. Unit 1. Keighley Industrial Park, Royd Ings Avenue, Keighley. BD21 4DZ

G.B.

Tel: +(44) (0)1535 687799 Fax: +(44) (0)1535 687798 E-mail: info@seba.co.uk Web Site: www.seba.co.uk

SET -UP AND OPERATING INSTRUCTIONS

FOR ROTA-DIP UNIT RD3D MARK 21

450 Watt , 230 / 240 Volts

CUSTOMER	WETEC
CUSTOMERS ORDER NUMBER	WB-100416
SEBA DEVELOPMENTS ORDER NO	208854

These instructions are provided to ensure the user of the correct RD3D set-up and how to operate and maintain the equipment to provide optimum performance during use.

Please contact your agent or SEBA Developments should this equipment fail to operate correctly.

OPERATING INSTRUCTIONS FOR RD3D Mark 21

SUPPLY : Connect to 230/240 Volts ac (Model also available in 115V +/- 15%)

50 – 60 Hz Electrical supply rated at 10 amps

This unit is supplied with a three pinned plug and is a sealed unit.

Ensure that the brushes are removed before loading the pot into the unit. Locate pot shaft in unit bearing, lower into position and rotate freely until it is felt to drop now. Drive peg should now be located in the slot and resistance is felt against further manual rotation.

Check alignment of brush holders to brass slip rings as seen through the side aperture of the case before fitting brushes and hatch plate.

Fill the solder pot using liquid silver, solder chips or flakes to a level 1-2mm below the edge of the pot casting.

The motor may now be switched on and providing the socket at the rear has a plug fitted, the pot should now rotate. The control knob lock should be operated (press down) to prevent accidental knob rotation.

NOTE: The d.c. Motor drive is safeguarded by the set point in the temperature controller so the pot will not rotate if the motor has overheated. If the pot does not rotate or stops rotating, turn the mains switch off and on again, allowing time to cool down.

The motor interrupt switch must always be fitted with its plug (fitted with a link) to complete the motor circuit.

Using the 4 levelling bolts underneath the case to level the surface of the solder relative to the drop tray.

The dross blade may need adjusting to ensure maximum removal of dross from the solder surface.

A tray is fitted so that any dross that falls into the tray may be swept round to the exit chute, which leads down to the customer's collection box. Avoid adjustment of the dross blade which may prohibit rotation of the pot.

Where examination of the element is required, disconnect from the mains supply. Access may then be gained by removing the thermocouple from the pocket and then dross blade assembly from the tray, the pot assembly may now be lifted clear.

Operating instructions for RD3D Rotadip (continued)

Should examination of the brushes be required, access is via the hatch cover on the side of the case.

NOTE: Disconnect from the mains power supply before removing the hatch cover or brushes.

When carrying out IEE Safety checks prior to use, it is advisable to run the unit at 100 - 150°C for approximately 30 minutes to dispel moisture from the element insulation as this can give a false reading on insulation of the earth tests.

If an R.C.B. is installed in the power circuit it may be necessary to disconnect the machine during this warm up period.

If the element has failed and the cross blade and pocket have frozen in the solder, then the fixing screws holding these items will have to be removed before the pot is lifted clear

Procedure for changing the element inside the pot is as follows :

Turn pot assembly base upside down and remove the element wires from the terminal block.
Slacken the nut holding the insulating disc and remove this and the surrounding case.
Loosen the nut holding the element clamp plate and then remove the stem completely.
Change the faulty element and re-assemble in reverse order. Handle the ceramic section of the element with care.

Before loading the pot back into the case, remove both bushes from their holders as indicated on the label attached to the brush cover plate.

Should it be necessary to examine the Rotadip further, it will require the removal of the L shaped control panel. Always isolate from the mains supply before doing this. DO NOT adjust the controls on the motor output driver controller as these have been factory set to match the motor performance required across the permissible speed range.

CAUTION: If the Rotadip units are to be built into existing handling gear or incorporated in soldering machine, care must be taken to ensure that there is sufficient ventilation to protect internal components from exposure to ambient temperatures above 50°C. This is particularly relevant to high temperature (HT) Rotadip units.

It may be necessary to incorporate forced air flow into the soldering machine to protect the Rotadip unit.

Once the unit has been located in its working position and levelled, it should be securely fastened to the working surface using the two brackets supplied.

SEBA DEVELOPMENTS
SOLDERING AND BRAZING
CODE OF PRACTICE AND SAFETY

Soldering and Brazing are both processes that are widely used in industry for joining metals.

Like all manufacturing processes there are a number of points that should be taken into consideration to ensure the success of the method and safety of operating personnel.

CODE OF PRACTICE FOR SOUND JOINING.

1. The parts to be assembled must be free from surface contamination such as grease, oil, rust, paint and some plating.
2. The joint area should be fluxed before heating. Flux is a material that blankets the metal during heating, to prevent surface oxidation. It also contains chemicals which will clean the metal of slight contamination in order to ensure a good bond when joining alloy flows. There are a host of different fluxes available to suit various metal and joining alloys. Flux residues must normally be removed after the joint is made, some dissolve in water and others need chemical or mechanical removal.
3. The correct joining alloy to be used will depend upon the strength required, metals being joined and final usage of the piece.
4. Heating the piece part is necessary in order to melt the joint alloy. There is a very wide selection of heating methods and the correct one to select will depend upon the piece part, the production rate required, the type of labour required and the method of handling etc. SEBA Developments specialise in design and manufacture of equipment for soldering and brazing and their engineers are always available to help and advice you.

SAFETY OF OPERATING PERSONNEL

Soldering and brazing involves heat, chemical based fluxes and various metal alloys for joining. Care should be taken then using this equipment. Suitable safety equipment should be worn to prevent burns.

Make sure that the equipment is suitably placed and that it is earthed.

1. EARTHING

Make sure equipment is suitable and robustly earthed.

2. HEATING EQUIPMENT

Element heated devices e.g. Soldering irons, Hotplates, Solder pots.

Heat is produced by an electric current and the device is therefore HOT. Care must therefore be taken to prevent burns. In the case of solder pot, two additional hazards are present.

1. Molten metal is present, therefore parts should be dry and flux limited prior to dipping since steam will be formed immediately and excess causes metal sputter.
2. The smaller pots particularly must be secured to a work bench to prevent them being knocked over.

JOINTING ALLOYS

Soft solders normally contain tin and lead whilst some silver solders and brazing brasses contain zinc and/or cadmium. All these metals will tend to oxidise and volatilise if overheated and the fume must not be inhaled. Therefore areas where soldering and brazing are being undertaken should be provide with air extraction.

FLUXES

Soft soldering fluxes can be non-corrosive or corrosive. The chemicals involved vary considerably but non- corrosive is usually based on resin and alcohol. The fumes are not pleasant but are fairly harmless. Corrosive fluxes however are based on acids and the fumes should not be inhaled. Many such fluxes contain zinc chloride and the fumes contain hydrochloric acid. Fume extraction in which air is drawn away from the operator is very desirable.

For silver soldering the fluxes for the lower temperature alloys are based on sodium, potassium and lithium fluorides and whilst these are non-fuming at the prescribed working temperature any overheating causes fumes to occur and air extraction is therefore recommended.

SUMMARY

Soldering and brazing equipment is not dangerous if used correctly and the normal safeguards taken by maintenance engineers when servicing units have electricity present. The alloy and fluxes used in jointing process require heat and good ventilation is strongly recommended. Guarding may be necessary to protect the operator from (a) burns from hot parts (b) high frequency burns (c) mechanical hazards associated with handling the equipment.

SEBA Developments will be glad to discuss all aspects of safety with users and guards can be quoted and supplied. SEBA engineers are also always available to discuss your projects and they can advise on the heating equipment to use



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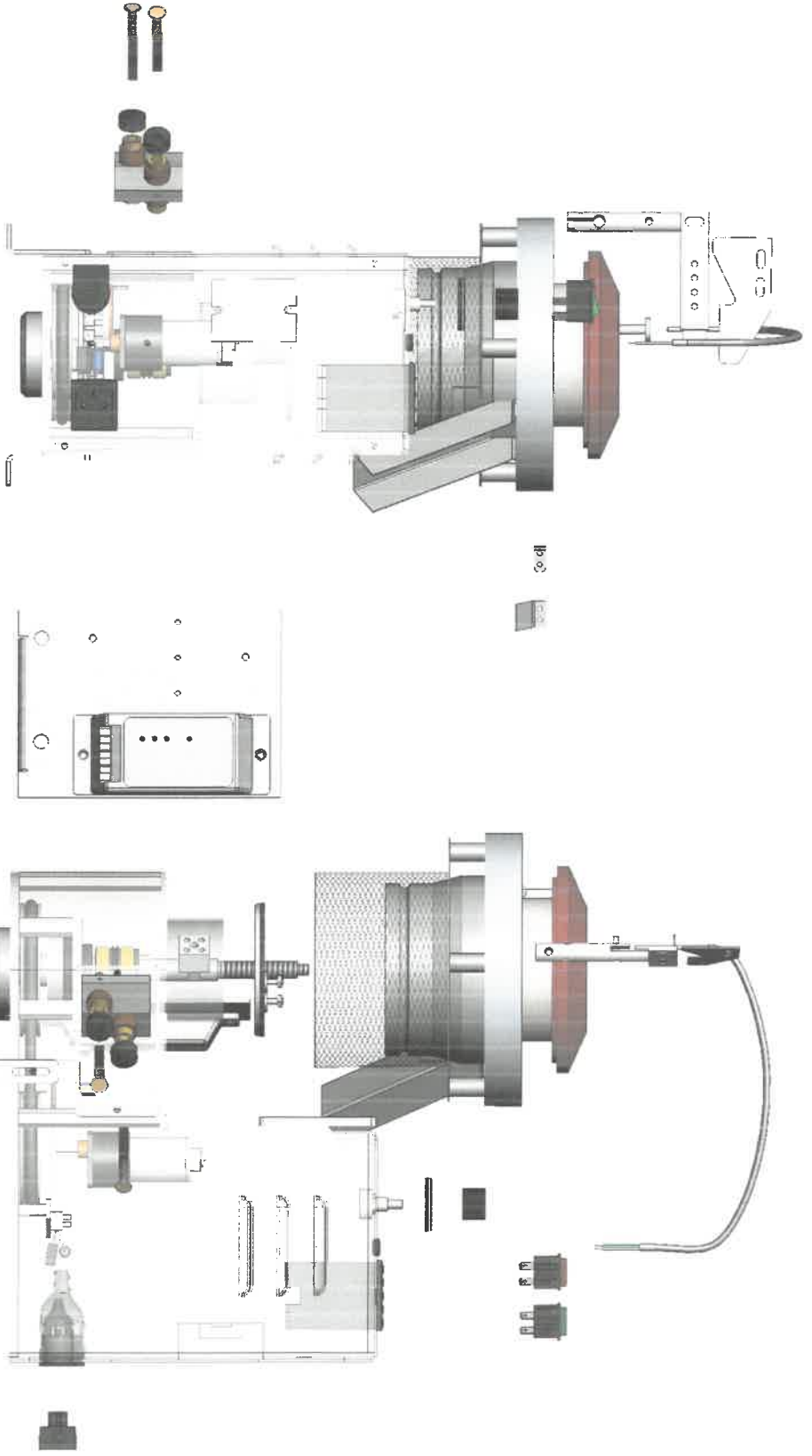
DIGITAL CONTROLLER OPERATING INSTRUCTIONS



- To increase temperature of the controller press the right hand button until the green indicator reads the desired set point.
- To decrease the temperature press the second button from the right until the green indicator reads the desired set point.
- The White indicator indicates the actual temperature.
- The Green indicator indicates set point.
- These are the only two buttons you need to use, the other buttons are used to set the programming which is set at SEBA for optimum use and are locked.
- Removing the locks and changing the programming will result in the controller not working correctly and may invalidate the warranty.

Further details regarding Temperature Controllers can be found at the OMRON website:

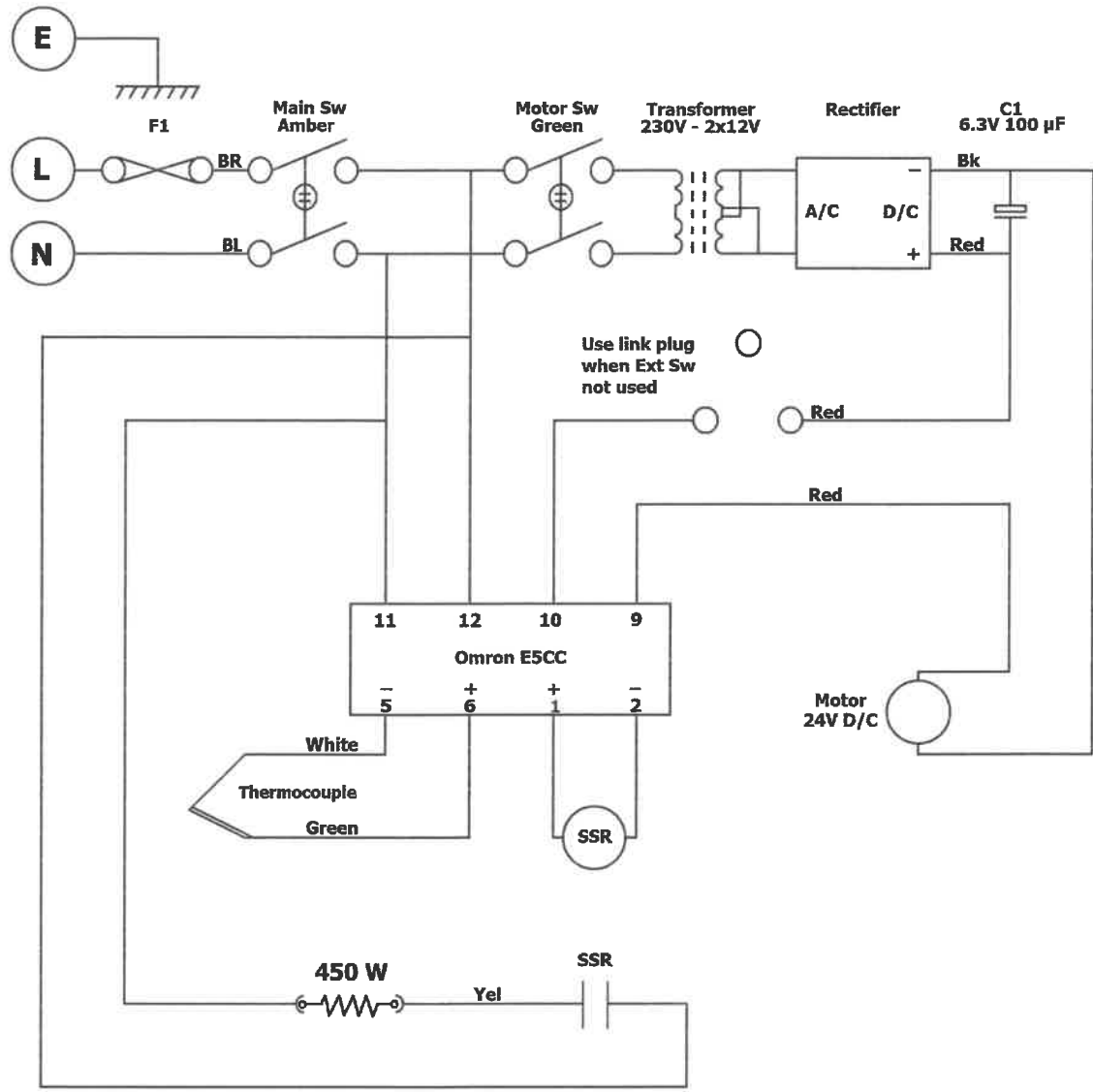
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 Unit 1 Keighley Industrial Park
 Royd Ings Avenue
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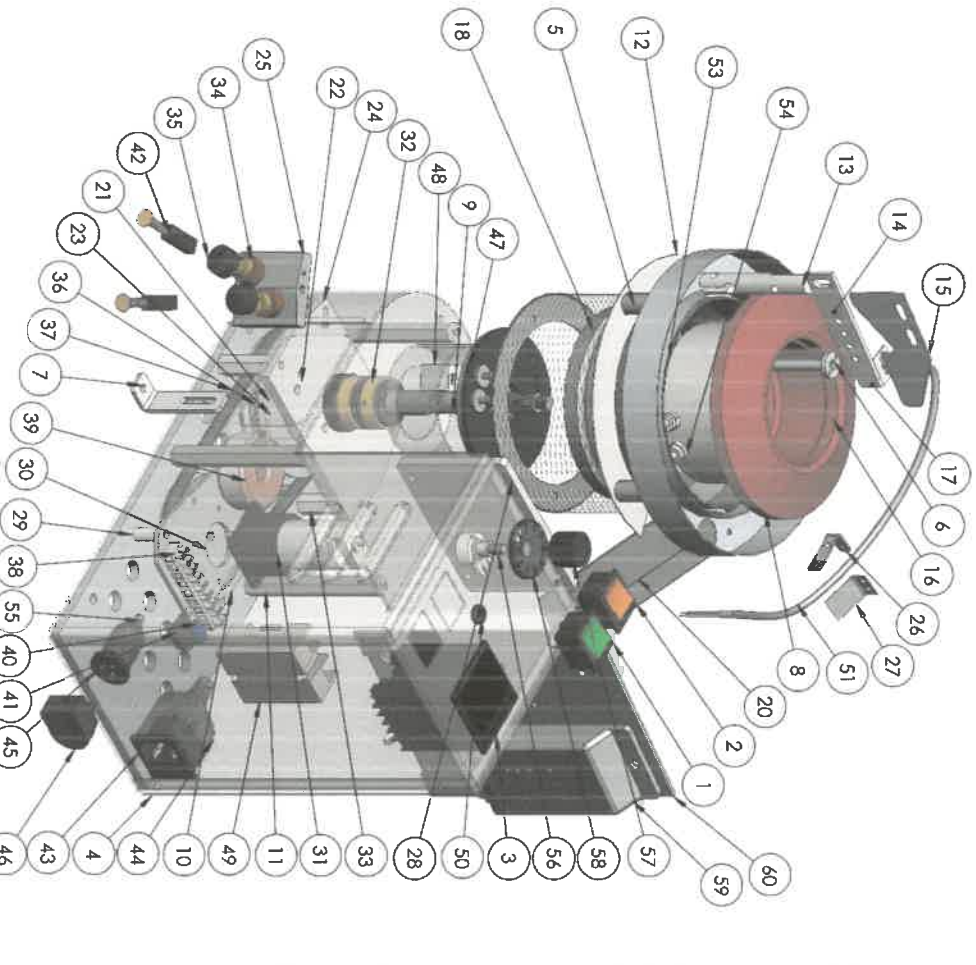
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 DRAWN BY N.L. DRAWING NUMBER
 DATE 03/09/2014 1

TITLE RD3D+HT+VS+HTVS PARTS
 PART NUMBER SN27437 (RD3D) SN27437 (RD3HT)
 SN27434 (RD3VS) SN27435 (RD3HTVS)
 MATERIAL
 TOLERANCES UNLESS OTHERWISE STATED ARE
 0.5mm AND 1 deg. AND DIMENSIONS ARE IN mm



Model	RD3D
Job No	
Drawn By	GEB
Date	

ITEM NO.	PART NUMBER	QTY.
1	SN28442 2X26mm SWITCH - GREEN	1
2	SN28926 2X26mm SWITCH - AMBER	1
3	2.01 CIMRON CONTROLLER	1
4	SN12841 DRG NO. RD6887.1 CH1 SHUT-2 RODHIT CASE ASSEMBLY	1
5	SN29299 DRG NO. RD6913.5 CH3 TRAY SPACER	4
6	SN25802 DRG NO. RD6267HERMOLOCKPIECE	2
7	SN11780 DRG NO. RD6467.5 safety clamp bracket	2
8	SN25569 DR - NO. RD.913.1 HOLDER FOR RDSHIT CASTING	1
9	SN28091 SN28092 DRG NO. RD6413.8 CH1	1
10	SN25290 DR - NO. RD724.3 CH1 DRIVING PILELY	1
11	SN25072 DRG NO. RD6258 CH1 case support pillar	3
12	SN1659 DRG NO. RD6913.7 CH2 RDSHIT GUARD ASSEMBLY	1
13	SN25114 DRG NO. RDS45.2 SUPP. RI POST	1
14	SN25586 DRG NO. RD6931.5 adjust support plate	1
15	SN11074 DRG NO. RD6913.6 DROSS HEAVE RDSHIT	1
16	SN29453 DRG NO. RD6913.3 CH1 DROSS TRAY RDSHIT	1
17	SN11609 DRG NO. RD7278.7 CH1 THERMOSTAT POCKET SUPPORT	1
18	SN25496 DRG NO. RD6380.3 Insulating plate rdsht	1
19	SN25497 DRG NO. RD6380.4 BACKING PLATE	1
20	SN12723 DRG NO. RD6367.18 dr. ss chdve	1
21	SN28107 DRG NO. RD6467.3 DRIVE SLEEVE	1
22	SN17256 DRG NO. RDS173.12 upper brg housing	1
23	SN17257 DRG NO. RDS173.13 LOWER BRG HOUSING	1
24	SN15465 DRG NO. RDS173.14 CH3 UPPER BEARING FLATE	1
25	SN2112 DRG NO. RDS173.15 CH4 BRUSH POST	1
26	SN11785 DRG NO. RD6931.13 DROSS SCRAPER BRACKET	1
28	SN27501 DRG NO. RD6380.12 HEAT SHIELD	1
29	SN25073 DRG NO. RD6259 motor plate pillar	2
30	SN25601 DRG NO. RD7546.1 CH1 MOTOR MOUNTING PLATE	1
31	SN25618 MOTOR AND GEARBOX UNIT FOR RDS	1
33	SN25077 DRG NO. RD7548.2 Support pillar (brg plate)	4
34	SN11788 BRUSH HOLDER	2
35	SN25307 DRIVEN PULLEY	2
36	SN15892 DRIVE BELT	1
38	SN29028 TERMINAL STRIP 3A	1
39	SN29244 TRANSFORMER T. RODIAL 2VA OUTPUT 2X12VAC	1
40	SN1212 - APA. FC. P.10.0 - E.V. AXIAL 85AC	1
41	SN27003 RECTIFIER BRIDGE 1.9A 200V	1
42	SN27004 RECTIFIER BRIDGE 1.9A 200V	1
43	SN27005 RECTIFIER BRIDGE 1.9A 200V	1
44	SN27006 RECTIFIER BRIDGE 1.9A 200V	1
45	SN27007 RECTIFIER BRIDGE 1.9A 200V	1
46	SN27008 RECTIFIER BRIDGE 1.9A 200V	1
47	SN27009 RECTIFIER BRIDGE 1.9A 200V	1
48	SN27010 RECTIFIER BRIDGE 1.9A 200V	1
49	SN27011 RECTIFIER BRIDGE 1.9A 200V	1
50	SN27012 RECTIFIER BRIDGE 1.9A 200V	1
51	SN27013 RECTIFIER BRIDGE 1.9A 200V	1
52	SN27014 RECTIFIER BRIDGE 1.9A 200V	1
53	SN27015 RECTIFIER BRIDGE 1.9A 200V	1
54	SN12850 DRG NO. 6913.2 OILTER CASING RDSHITS	1
55	SN11801 MICA BAND HEATER W/LOW BROW 240V. HTVS ONLY	1
56	SN11801 INSULATING ROOF FOR 3W CHAS. IS PLUG	1
57	1176 POTENTIOMETER - 10K LINEAR	1
58	0761 KNOB BLACK	1
59	0762 KNOB ACCESSORY KIT	1
60	SN12417 MOTOR SPEED CONTROLLER	1
	SN25598 DRG NO. RD7554.1 CH2 motor controller mounting plate	1



HT=High Temperature
VS=Variable Speed
HT&HTVS=High Temp Variable Speed



Seba Developments
Unit 1 Keighley Industrial Park
Royal Ings Avenue
Keighley
BD21 4JZ
+44(0)1535687799
despn@seba.co.uk

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DRAWN BY: N.L. DRAWING NUMBER: MARK 21
DATE: 03/09/2014

TITLE: RD3D+HT+VS+HTVS PARTS
PART NUMBER: SN30070 (RD3D) SN27437 (RD3HT)
SN27434 (RD3VS) SN27435 (RD3HTVS)
MATERIAL:
TOLERANCES UNLESS OTHERWISE STATED ARE
0.5mm AND 1 deg. AND DIMENSIONS ARE IN mm

E.C Declaration of Conformity

Product Data: RotaDip Rotary Solder Pot

Title: RD3D MARK 21

Type: 450 Watts , 230 Volts

Serial No.: 208854

When installed and operated according to the instructions provided, the product to which this declaration relates is in conformity to the following standards:

- The Supply of Machinery (Safety) Regulations 2006/42/EC
- The B.S.I. Regulations: B.S. 7671:1002 "Requirements for Electrical Installations."
- The Low Voltage Directive 2006/95/EC where applicable to industrial equipment.
- The relevant European Standards dealing with electromagnetic compatibility (both emission and immunity) of equipment operating in an industrial environment as detailed in Directive 2004/108/EC

Authorised Signatory:



Martin Johnson
Managing Director

9 / 2014