GENERAL

This manual should be used by suitably trained machine operators. It is a quick guide to the general operating conditions of the machine.

To ensure that the operating conditions for the printing machine remain safe at all times, all personnel must follow generally accepted safety procedures in addition to specific safety precautions laid down in this manual.

WARNING notices draw the attention of operators to possible hazards which may cause loss of life, serious injury or ill health.

CAUTION notices alert personnel to the possibility of damage occurring to the machine material.

The following label illustrated below, may be fitted to the machine, this signifies that the user should refer to the operator manual before attempting to carry out work on the equipment.

HAZARDOUS MATERIALS

Hazardous materials, as defined by NFPA 497 (National Fire Protection Association), are not recommended by DEK for use on this machine. If one or more hazardous materials are used, decontamination must be carried out in accordance with SEMI S12 or equivalent local regulations.
WARNING AND CAUTIONS

The warnings and caution notices below are fitted to the machine and shown in the relevant procedures within this manual.

Some of the warning symbols below may not be applicable to your machine.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Symbol]</td>
<td><strong>WARNING</strong> STRONG MAGNETIC FIELD. A STRONG MAGNETIC FIELD EXISTS IN THE VICINITY OF THE CAMERA LINEAR MOTORS. THESE MAY REPRESENT A SERIOUS HAZARD TO PEOPLE FITTED WITH A PACEMAKER.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td><strong>WARNING</strong> MOVING PARTS. MOVING PARTS ARE PRESENT IN THE VICINITY OF THIS WARNING LABEL, THESE PARTS HAVE THE POTENTIAL TO CAUSE INJURY.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td><strong>WARNING</strong> BOARD CLAMPS. EXTREME CARE MUST BE EXERCISED WHEN WORKING IN THE TOOLING AREA OF THE MACHINE TO AVOID INJURY. THE FOILS ON THE FRONT AND REAR BOARD CLAMPS ARE VERY SHARP.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td><strong>WARNING</strong> RECOMMENDED SOLVENTS. ANY SOLVENTS USED MUST COMPLY WITH LOCAL ENVIRONMENTAL GUIDELINES. DEK RECOMMEND USING SOLVENTS THAT ARE ENVIRONMENTALLY FRIENDLY, IE CFC FREE AND WATER BASED. SOLVENTS USED MUST HAVE FAST EVAPORATION RATES AND FLASHPOINT SPECIFICATIONS GREATER THAN 39°C.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td><strong>WARNING</strong> PROTECTIVE CLOTHING. APPROVED PROTECTIVE CLOTHING SHOULD BE WORN BY SOLDER PASTE AND SOLVENT HANDLERS AT ALL TIMES TO ELIMINATE FUME INHALATION, EYE CONTACT, SKIN CONTACT AND INGESTION.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td><strong>WARNING</strong> SOLDER PASTE AND SOLVENTS. WHEN USING OR HANDLING ANY SOLDER PASTE OR SOLVENT FORMULATION THE MANUFACTURERS’ RECOMMENDED SAFETY PRECAUTIONS MUST BE STRICTLY ADHERED TO.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td><strong>WARNING</strong> SOLVENT SOLUTION. DO NOT MIX SOLVENT SOLUTIONS. FLUSH THE SOLVENT TANK THOROUGHLY WHEN CHANGING TO A DIFFERENT SOLVENT SOLUTION.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td><strong>WARNING</strong> MACHINE COVERS. IN ORDER TO PROTECT PERSONNEL AND TO PREVENT DAMAGE TO THE MACHINE, COVERS ARE FITTED TO THE MACHINE FRAME. THESE PANELS MUST ONLY BE REMOVED BY SUITABLY QUALIFIED PERSONNEL.</td>
</tr>
<tr>
<td>![Symbol]</td>
<td><strong>CAUTION</strong> Toxic chemicals may be present. Skin contact may be hazardous to your health. Wear safety gloves.</td>
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</tbody>
</table>

SAFETY
MACHINE OVERVIEW

Item Description
1 Tricolour Beacon
2 Two Button Control
3 System Button
4 Mains Isolator
5 Internal Light
6 Emergency Stop Button
7 Monitor
E STOP OPERATION

With the machine powered up, activating the red Emergency Stop button (E Stop) causes the machine to stop in a controlled manner.

To activate:
press the E Stop button, electrical power to the machine is suspended.

To reset:
turn the E Stop button clockwise until it unlatches.

PRINTHEAD COVER

Raising the printhead cover suspends operation of the machine to allow the operator safe access to the tooling area.

TRI COLOUR BEACON

The beacon indicates the operational status of the machine:

<table>
<thead>
<tr>
<th>Beacon Colour</th>
<th>Operational Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>System power is down</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Error message displayed</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Paste cartridge is low</strong></td>
</tr>
<tr>
<td></td>
<td><strong>ProFlow is low</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Paper roll is empty</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Solvent tank level is low</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Vortex cleaning cassette expired</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Machine is not operational</strong></td>
</tr>
<tr>
<td>Red</td>
<td><strong>Machine is not in a ready state</strong></td>
</tr>
<tr>
<td>Yellow</td>
<td><strong>Machine is initializing</strong></td>
</tr>
<tr>
<td>Green</td>
<td><strong>Machine is in set up</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Machine is in maintenance</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Machine requires operator attention</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Paste cartridge is low</strong></td>
</tr>
<tr>
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</tr>
<tr>
<td></td>
<td><strong>Machine is operational</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Machine is waiting in a ready state</strong></td>
</tr>
</tbody>
</table>
System Initialisation

Press the System button on the outer cover to initialise the machine,
OR...
Select Diagnostics - to enter the machine's diagnostic functions,
OR...
If the current product file needs to be changed, select Load Product to load another product file.
4. Enter the Operator's name

5. Log On

To log on enter your user name and select Log On. To log off, select Log Off. To return to the Ready page select Exit.
For Squeegees refer to page 10

For ProFlow refer to page 13

For Ball Placement refer to page 16
Select the buttons in the sequence shown and follow the on screen prompts.
MACHINE SET UP - SQUEEGEES

Product Changeover

- Product Name: DEK86
- Print Direction: Reverse
- Screen Image: Edge
- Tooling Type: Magnetic

Commands:
- Load Product
- Tooling
- Load Screen
- Fiducials
- Alignment
- Add Paste
- Auto Dispense
- Back
Select the buttons in the sequence shown and follow the on screen prompts.
MACHINE SET UP - PROFLOW

2. Load Product

3. Tooling

4. Load Screen

5. Fiducials

6. Alignment

7. Back

Product Changeover

Product Name: DEK08

Product ID: Default Board

Screen Image: Edge

Tooling Type: Magnetic

Commands:
- Load Screen
- Change Profile
- Lock Profile
- Erase Profile
- Paste Knead
- Clean 1
- Clean 2

Language: Interactiv Help

MACHINE SET UP - PROFLOW
Select the buttons in the sequence shown and follow the on screen prompts.
MACHINE SET UP - BALL PLACEMENT

Current Product: DEK04

Current Products:
- DEK04
- DEK05
- DEK06

Status:
- Ready
- Set up
- Product
- Maintenance
- Adjust
- DEK

Batch Limit:
- 200

Cycle Time:
- 9.6 sec

Temperature:
- 23°C

Humidity:
- 60%

Print Screen:
- Board View
- Large View
- Shut Down

Changeover:
- Operator QC
- Calc

Language:
- Interactive Help
- Load Files

Commands:
- Clear Board Count
To log on enter your user name and select Log On.
To log off, select Log Off.
To return to the Ready page select Exit.