Introduction

The CadRam decorative resin system is based around a range of high-quality, colour-stable and pigmented lead-free resins that are machine dispensed to create incredibly detailed and cost effective works of decorative glass art. With a wide range of outline relief colours, the system also incorporates an infill colouring system that creates an infinite palette of colours offering real ‘life’ to any design.

Features and Benefits

Computer controlled plotting:
- High speed plotting up to 100mm/second
- Accurate to within 0.01mm

Mixable pigment system:
- Limitless colour options
- Ability to blend and mix colour

Bespoke servo-controlled pump system
- Quick change of colours
- Reduced air inclusion in mix
- Greater accuracy of speed and flow

Full system manufactured and supplied from single source
- Consistent quality of machine build
- Ability to develop custom size machinery
- Shorter lead times
Applications
Although the resins are primarily designed to be applied to flat glass surfaces, they can also be used on any non-porous surface, such as ceramic tiles and even on metal surfaces. The wide range of compatible products and the speed and accuracy of the resin dispensers, make it ideal for many decorative surface applications, including:

- Glazed doors and fanlights
- Windows
- Shower screens
- Mirrors
- Ceiling light panels
- Glazed partitions
- Advertising signs

Performance
CadRam resins have been used in the glass industry worldwide for over 10 years in climates as varied as those in the Ukraine, India and New Zealand with no reported failures.

CadRam products have also been extensively tested in UVA 10 year performance guarantee and weathering cabinets. The results were excellent (data available on request) - allowing customers to give a 10 year performance guarantee.
Outline Colour System
The unique CadRam resin formula requires two components to be mixed at the time of dispensing to create a UV and weather-stable product that cures (touch dry) in under two hours. The standard range of colours are: black, grey, white, plus three metallic finishes - antique (a copper look), silver and gold. For 2015 we have 2 new colours with Bright Gold and Mother of Pearl. Bespoke colours can also be supplied, subject to volume.

Crystal Clear Resin System
To create this unique look on glass, the CadRam Crystal Clear resin system is dispensed in the same way as our standard outline products. The glass-like optical qualities of the Crystal Clear resin creates a 'cut glass' look which is equally suitable for traditional, Victorian-look glass and modern styles. Crystal can be combined with infill pigments to create an infinite range of coloured or transparent outlines.
Infill Resin System

By mixing and adding the range of 12 standard pigments to the 2-part clear base infill resin, it is possible to create infinite colours and shades. With our Satin infill base, it is possible to also create a translucent, satin finish for colour. This complete freedom of colour availability, makes CadRam a unique option for the decorative glass market. In addition to these standard pigments, 9 fluorescent colours are available that glow under UV light conditions making these colours ideal for signage or decorative glass design in clubs, restaurants and other commercial applications.

add colour...

Once dry, coloured resin infill is applied by hand.

’cracked ice’ effect

Using our special additive to the infill it is possible to create stunning cracked ice effects in the colour.

blending colour

It is possible to mix colours and blend them together to create beautiful artistic effects.
ArtPlot v5.0
Intuitive Control Software

The latest version of ArtPlot has been developed with touch screen compatibility and a whole host of new features to create a machine control interface that is both intuitive for the user and designed to speed-up production time.

Key Features
• Touchscreen compatible
• Direct .dxf import
• Save files as .ipf including all settings - ideal for repeat designs
• Stack design - plot multiple designs
• Windows 8 compatible
• Pump control direct from the software
• Online and offline support
• Internet linked diagnostics
• Pre-loaded with over 1500 designs

Machinery support is via a library of online tutorials and how-to videos which are available offline and live support during UK office hours with remote access to the ArtPlot software (internet connected computer needed). Regular software and design library updates are available through our dealer network intranet site www.mycadram.com
**Key Features**

- Fast accurate plotting up to 70mm/second
- Lightweight aluminium construction
- Increased levels of control through intelligent pumps
- Elimination of air bubbles via an innovative mixing system
- Quick-change pumps allowing rapid change of colour
- Intuitive software allowing flexibility and speed of operation
- UK designed and manufactured
Standard Machine Sizes

We offer the highly versatile HDDS equipment in a range of sizes to suit most requirements and, as we manufacture all machinery in our own factory, we can manufacture custom sized machinery up to 2.7 metres in length and 1.5 metres wide.

### Technical Specifications

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
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<tbody>
<tr>
<td><strong>Bed Height</strong></td>
<td>Standard Bed Height: 90mm +/- 20mm</td>
</tr>
<tr>
<td><strong>Working Height</strong></td>
<td>Gantry Height Above Table: Maximum 50mm</td>
</tr>
<tr>
<td><strong>Speed</strong></td>
<td>Plotting Speed: Up to 100 mm/sec</td>
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<tr>
<td></td>
<td>Dispensing Speed: Up to 70 mm/sec</td>
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<tr>
<td><strong>Precision</strong></td>
<td>Positioning Resolution: Up to 0.40mm</td>
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<tr>
<td></td>
<td>Addressable Resolution: Up to 0.40mm</td>
</tr>
<tr>
<td></td>
<td>Repeatability: Up to 0.20mm</td>
</tr>
<tr>
<td><strong>Dispensing System</strong></td>
<td>CadRamMk6 Pumps: Two component servo motor driven pumps. Delivery (bead width) controlled by computer. Gantry mounted open outline resin canisters supply static mixer dispensing tip via aluminium mixing head.</td>
</tr>
<tr>
<td><strong>Transport System</strong></td>
<td>X Drive System: Dual guidance rails with dynamic positioning belt driven by an under-table mounted servo motor.</td>
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<tr>
<td></td>
<td>Y Drive System: Dual guidance rails with dynamic positioning belt driven by gantry-mounted servo motor</td>
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<tr>
<td></td>
<td>Z Drive System: Dual guidance rails with ball-screw driven by a servo motor.</td>
</tr>
<tr>
<td><strong>Software</strong></td>
<td>CADRAM Artplot® V5: Accepts HPGL (.plt) plot file</td>
</tr>
<tr>
<td><strong>Power Requirements</strong></td>
<td>Power Supply: 230V, 110V, 60Hz and 24V - 28V DC</td>
</tr>
<tr>
<td></td>
<td>Power Consumption: 50 - 150 Watts</td>
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<tr>
<td><strong>Environment</strong></td>
<td>Operating Temperatures: +5°C to +40°C</td>
</tr>
</tbody>
</table>

### HDDS Mini
- **Footprint:** 1407 x 960mm
- **Bed Size:** 1280 x 740mm
- **Plot Size:** 1050 x 605mm

### HDDS 1812
- **Footprint:** 2322 x 1500mm
- **Bed Size:** 2195 x 1295mm
- **Plot Size:** 1965 x 1165mm

### HDDS 2212
- **Footprint:** 2627 x 1500mm
- **Bed Size:** 2500 x 1295mm
- **Plot Size:** 2270 x 1165mm

We offer the highly versatile HDDS equipment in a range of sizes to suit most requirements and, as we manufacture all machinery in our own factory, we can manufacture custom sized machinery up to 2.7 metres in length and 1.5 metres wide.
HDDS 2515
Footprint: 2932 x 1800mm
Bed Size: 2800 x 1600mm
Plot Size: 2575 x 1465mm

HDDS 2712
Footprint: 3182 x 1530mm
Bed Size: 3050 x 1330mm
Plot Size: 2825 x 1195mm

HDDS 2715
Footprint: 3182 x 1830mm
Bed Size: 3050 x 1330mm
Plot Size: 2825 x 1495mm
Application Machinery Options

**Pump Sets**

- **100:1 Gearing Ratio**
  - **3mm**
    - Full 3mm pump assembly with quick change cable. Ideal for use with clear resins, pearl, bright gold and metallic outlines.
  - **5mm**
    - Full 5mm pump assembly with quick change cable. Ideal for use with plain colours and for wider line widths.

**3mm Pump Set (CRI)**

- 30:1 Gearing Ratio
  - Full 3mm pump assembly including fixing plate for use on CRI machinery.

**Double Head Applicator**

An ideal enhancement for any larger volume producer allowing 2 identical plots at the same time with an special pump and dispenser: Easy change system for switching between standard and double head plotting. Available for 2712, 2212 and 1812 machines only.

**Machinery Cladding**

CadRam branded steel cladding for 3 sides of the machine. Ideal for discreet storage under the machine.

**Computer Stand**

Sturdy aluminium computer stand with screen holder and shelf for keyboard and mouse. CadRam branded.
Application Machinery Spares

Pump and Dispensing Assembly

1. Hoppers
   - Set of 2.
2a. 3mm Pump
   - Set of 2.
2b. 5mm Pump
   - Set of 2.
3. Connectors
   - For connecting tube to pump or mixing head.
   - 3E 4mm ELBOW (Pack of 2)
   - 3S 4mm STRAIGHT (Pack of 2)
4. Static Mixers
   - Pack of 10.
5. Tips
   - 1mm: Green, 1.5mm: Grey, 2mm: White (Pack of 10).
6. Mixing Head
   - Single. With straight connectors.
7. PTFE Tube
   - 5 metre length.
8. Pump Motor
   - Single. 15V with encoder.
9. Pump Cable
   - Single.
Resin System Products

Outline Resins

Outline - Part A
5 litres, 2.5 litres or 1 litre.
Antique Copper, Black, Bright Gold, Clear, Gold, Grey Pewter, Mother of Pearl, Silver, White.

Outline - Part B
Available in 5 litres, 2.5 litres or 1 litre.
Black, Bright Gold, Clear, Mother of Pearl, Grey Pewter, White.
Metallic B for use with ‘Part A’ Copper, Silver, Gold.

Infill Resins

We offer a range of infill resins for colouring and adding texture to decorative glass designs. The products are a two-component system with a 50:50 mix ratio and can then be pigmented to create the desired colour.

Infill - Part A
5 litres, 1.25 litres or 500ml

Infill - Part B
5 litres, 1.25 litres or 500ml

Stipple Effect - Part A
1.25 litres

Stipple A should be mixed with clear infill B to create a textured effect similar to Stippolyte glass—offering a level of obscurity and contrast to the infilled area. The effect created is the same whether applied to clear glass or satin glass. Stipple Infill can also be combined with our range of Pigments to create coloured texture.

Satin Infill - Part B
1.25 litres or 500ml

Satin Infill should be mixed with clear Infill A, to create a finish similar to satin etched glass. When combined with transparent pigments, the Satin Infill creates a translucent effect.
Pre-mixed Infill

Infill - Part B Pre-mix
1.25 litre, ready-mixed Part B Infill, pigmented to closely match the most popular Stained Glass Art Film colours.

Canary Yellow SF1
Dark Yellow SF2
Amber SF4
 vermilion SF21

Deep Red SF23
Cerise SF17
Green Pepper SF14
Spring Green SF16

Dark Green SF8
Royal Green SF9
Medium Olive SF11
Sage Blue SF13

Dark Blue SF6
Purple SF19
Smoke SF60
Peach SF70

Rusty Brown SF10
White SF32

Gold Glitter - Infill A
500ml or 125ml
Our new high concentration Gold Glitter Infill needs to be mixed in 50:50 ratio with Clear Infill B.

Pigments

Pigment
HD Pigment
Fluorescent Pigment
500ml or 125ml
500ml or 125ml
500ml or 125ml

Pigment
Black
Blue
Brown
Red
Yellow

HD Pigment
Black
Blue
Brown
Red
Violet
Yellow

Fluorescent Pigment
Blue
Green
Lemon
Orange
Pink
Red
Tango
Yellow
White

Matched Pigment
New for 2015 we are pleased to announce the introduction of a range of 25 opaque pigments matched perfectly to the range of DoorColour™ colours. It is now possible to have decorative glass matched to the colour of the PVC or GRP door.

Citrine
CSP001
Sunshine
CSP002
Florida
CSP003
Bolero
CSP004

Mulberry
CSP006
Very Berry
CSP007

Emerald
CSP008
California
CSP009

Chartwell
CSP010
Shade
CSP011

Chartwell
CSP012
Cotswold
CSP013

Military Grey
CSP014
Victory Blue
CSP015

250ml. For internal application only. Apply before infill to create stunning 'cracked ice' effects in the colour.

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Resin System Products

Accessories & Consumables

Open Mixing Pots
Calibrated (Pack of 50).

Closed Mixing Pots
Calibrated (Pack of 25).

Pipeettes
3ml (Pack of 50),
1ml (Pack of 50).

Flushing Fluid
1 Litre. For removal of resin
and cleaning of pumps.

Static Mixers
Pack of 10.

Tips
1mm - Green, 1.5mm - Grey,
2mm - White. (Pack of 10).

CRI Static Mixers
Pack of 10.

Metal Tips
1mm - Green, 1.5mm - Grey,
2mm - White. (Pack of 10).
Leur lock not included.

Economy Application Bottle
60ml. An alternative to mixing pot
and pipette. (Pack of 10).

Metal Tip Application Bottle
60ml bottle with cap. (Pack of 10).
Tips not included.

Tube
5 metres.