

# HHV 'Identicoat' VMD SYSTEMS



## FINGERMARK DEVELOPMENT FOR FORENSIC SCIENCE

The HHV Ltd Identicoat 500 and Identicoat 750 systems are specially designed for the development of fingermarks in Police forensic laboratories.

Identicoat systems are available in two variants. The Identicoat 500 is a compact and economical system designed for research applications and for use in smaller Police labs.

Identicoat 750 is a full-size system designed for the rapid processing of evidence in regional or national Police forensic laboratories.

Both systems utilise the proven VMD (Vacuum Metal Deposition) technique which was developed for the detection of fingermarks on difficult substrates such as plastic bags and sheeting.

Both systems feature a full-colour touch-screen control system. The touch screen has screens with 'soft buttons' for selection and control of the metal deposition sources. Monitoring of the process is visual and is aided by conveniently-positioned chamber viewports and a chamber lighting system. Control of the vacuum system is automatic and the systems are provided with comprehensive interlocks for operator, process and system safety. Identicoat systems carry the CE mark.

All Identicoat systems are fitted with USB and Ethernet ports for data logging, remote diagnostics and fault finding.



Identicoat 500



Identicoat 750

### Features and benefits

- Uses proven VMD process for development of fingermarks on 'difficult' plastics evidence
- Identicoat 500 provides a high-performance vacuum system and large evidence chamber on a small, economical footprint
- Touch screen control for simplicity
- Remote access for support and trouble shooting

# Identicoat 500

COMPACT AND ECONOMICAL WITH LARGE CHAMBER SIZE

## Small on footprint, large on capacity.

The HHV Ltd Identicoat 500 boasts the features of a full-size VMD system in a compact package.

With an overall footprint of just 88cm wide x 70cm deep, the compact Identicoat 500 requires little floor space in busy labs.

The generously-sized chamber accommodates a slide-out, completely removable evidence holder which can accept flexible plastics sheet evidence up to 72cm x 56cm.

Evidence is attached by small magnets or by wire. An optional rotary drive allows the processing of cylindrical evidence such as drinks bottles or cans.

Chamber liners are provided to protect the interior of the chamber.

## Easy VMD process:

Selection and operation of the metal deposition sources is through an industrial PLC with full-colour touch screen system. The process can be observed through the chamber window. The integrated chamber lighting is also controlled from the touch screen. The metal deposition sources are compatible with all metals presently used in VMD processes.

## Vacuum control:

Identicoat 500 features an automatic vacuum system with options for a conventional diffusion pump or a turbo pump. All Identicoat 500 systems include a liquid nitrogen trap for enhanced pumping of the water vapour which evolves from plastics under vacuum.

The vacuum system is controlled automatically by a rugged industrial PLC with touch-screen and full error checking.

Personnel and evidence are protected by a comprehensive range of vacuum and safety interlocks.

## Economical operation:

The Identicoat 500 provides VMD on a small, affordable platform. With low electrical power consumption, minimal cooling water and no requirement for compressed air, the system is equally economical in terms of running costs.



Identicoat 500 with the evidence holder in position inside the chamber. The simple, touch-screen control system is shown on the console.



Chamber interior with the sample holder in place, showing the metal deposition sources and the chamber lighting system.

# Identicoat 750

FULL-SIZE VMD SYSTEMS FOR REGIONAL AND NATIONAL CRIME LABS

## The full-size VMD system for regional and national users.

Identicoat 750 is the fast-cycle VMD system for major forensics facilities. The system is designed to process evidence with minimal cycle times.

The large 750mm diameter chamber incorporates a slide-out evidence holder with 4-position facility to enable flexible sheet plastics evidence to be attached easily with small magnets or wire.

The evidence holder accommodates flat, flexible materials with dimensions up to 120cm x 84cm. A motor drive is provided through the rear of the chamber for the processing of cylindrical evidence.

## Straightforward VMD process:

Operators select and operate the metal deposition sources through a touch screen system. A large chamber view port provides visual monitoring of the process. The integrated chamber lighting system is also controlled from the screen.

Three banks of metal deposition sources are provided, with source selection through the system touch screen. The sources can evaporate all metals currently used in the VMD process including Au, Zn and Ag.

## High-capacity vacuum system:

ID750 is fitted with high-capacity vacuum system. A 3000l/s (ISO) diffusion pump, a mechanical booster plus rotary pump set, and a cryo-cooled 'cold finger' provide rapid pumpdown to working vacuum. The vacuum system is controlled automatically by a rugged industrial PLC.

A typical process cycle with vacuum pumpdown, evaporation of Au and Zn and chamber venting to atmosphere can be completed in less than 10 minutes.

The chamber is provided with a set of removable liners to prevent deposition onto the interior surfaces.

Identicoat 750 is provided with comprehensive interlocks to protect personnel, evidence and the system itself.



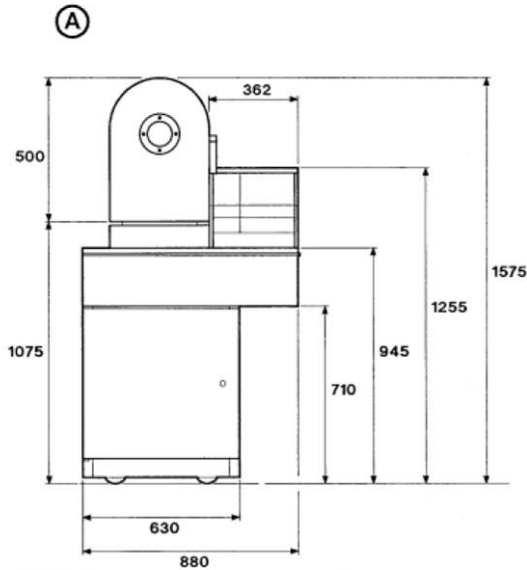
Identicoat 750 evidence holder in the 90-degree position. The holder can be completely inverted for particular evidence.



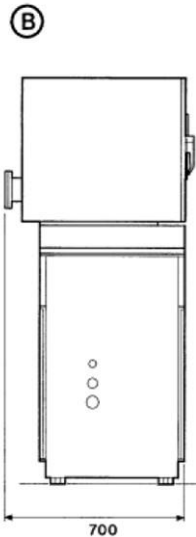
Identicoat 750 chamber interior with the evidence holder in the 'loaded' position. Three banks of metal evaporation sources plus the chamber lighting system are shown in the centre. The cryo 'cold finger' is shown on the right.

# Identicoat VMD SYSTEMS

## TECHNICAL INFORMATION



A Front view  
B Left-hand side view



### HHV Identicoat 500

#### Front view and side view

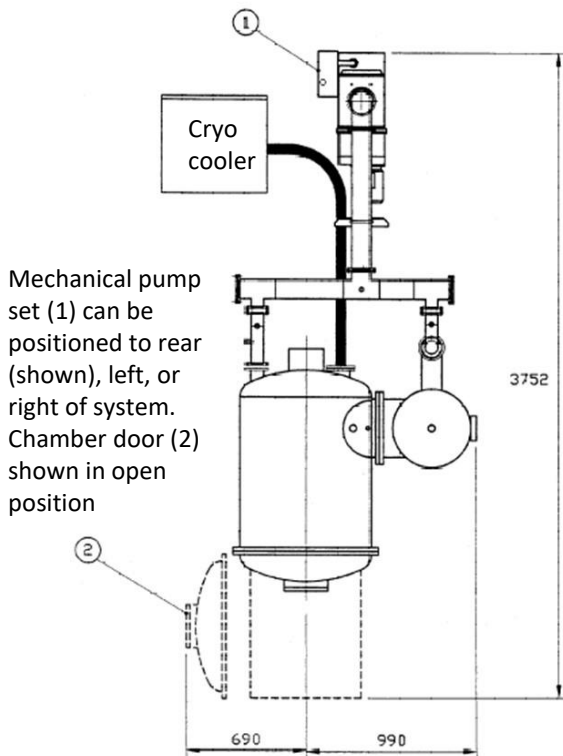
Electrical: 220V/230V 50Hz or 208V 60Hz, 1ph

Power: 3kVA (max)

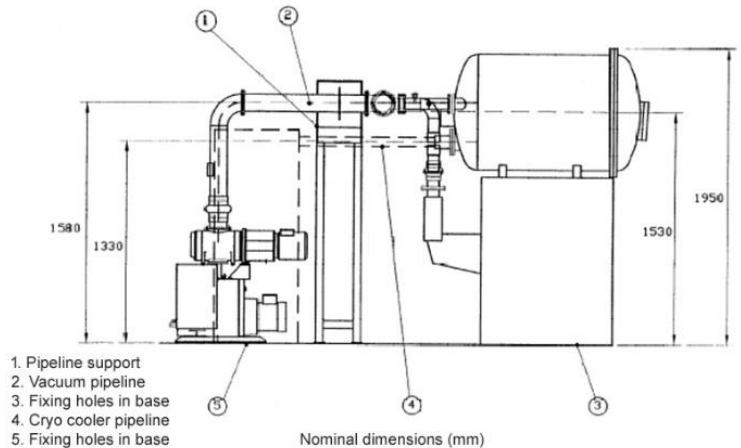
Water: 75l/hour at 15 to 20C

Air: Not required

(all data subject to confirmation)



Mechanical pump set (1) can be positioned to rear (shown), left, or right of system. Chamber door (2) shown in open position



1. Pipeline support
2. Vacuum pipeline
3. Fixing holes in base
4. Cryo cooler pipeline
5. Fixing holes in base

### HHV Identicoat 750

#### Plan view (left), side view (right)

Electrical: 400V 50Hz, 3ph, or 60Hz equiv.

Power: 17kVA (continuous), 24kVA (max)

Water: 770l/h at 20 to 25C

Air: 3 to 4bar (g)

(all data subject to confirmation)

1. Exhaust outlet 1 inch BSP
2. Door open, workholder extended

Figure 1 - Dimensions (mm) : plan view (typical layout)



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