Shimmed Cavity VRTM Test Panel Tool

Data Sheet

XM-5101: Option One

The entry level option of the test panel tool range. 500 x 500 mm vacuum clamped (VRTM) test panel tool with fixed cavity thickness, adjustable with optional inserted shim plates.

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Key Features

> The lower mould is machined with a fixed cavity thickness which can be reduced by fitting shim plates, with a cavity range of 0.5 mm to 15 mm.

> The upper face consists of 19 mm heat toughened plate glass in a supporting steel framework to maintain accuracy. This allows full observation of the injection process.

> The mould is clamped using vacuum only (VRTM) and is limited to use at low injection pressures up to 0.5 bar positive.

> Injection is via a peripheral injection gate with a central vent or vice versa.

> The mould can be specified with water heating channels or integral electrical heating with the appropriate insulation.

> The glass upper face is hinged and supported on gas struts for ease of operation.

> An air ejector system is included with standard specification.

Specifications	
Type	VRTM
Clamping Method	Peripheral vacuum
Construction	Aluminium base Glass top
Maximum Pressure	0.5 bar (G)
Standard Temperature	Unheated
Maximum Temperature	**Electrical:** 80°C **Water:** 80°C

Cavity Upper Face	
Glass Specification	19 mm heat toughened
Glass Flatness Tolerance	±0.5 mm

Cavity Lower Tool Block	
Cavity Dimensions	500 x 500 mm (nominal)
Cavity Adjustment	Insertable shim plates
Cavity Depth Range	0.5 — 15 mm ***shim dependant**
Cavity Depth Tolerance	Dependant on shim set up

Ports		
Injection Port	1 x peripheral injection port	***or vice versa, these are switchable**
Vent Port	1 x central vent	

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Fluid Heating Options

Maximum Heating Temperature	80°C
Heating Zones	Cavity lower tool block
Heating Capacity	**Water operation:** 3 kW
Power Requirement	400V 50 Hz 16A 3P+N+E

Electrical Heating — Standard Option

Maximum Heating Temperature	80°C
Heated Zones	Cavity lower tool block
Power Requirement	230V 50 Hz 16A 1P+N+E

Electrical Heating — Advanced Option

Maximum Heating Temperature	80°C
Heated Zones	Cavity lower tool block
Power Requirement	230V 50 Hz 16A 1P+N+E
Datalogging	USB port as standard Logged to CSV format
Additional Inputs (advanced only)	**Option A:** 3 x In-mould pressure sensor (IMPS) **Option B:** 3 x Thermocouple (T/C) ***both options can be specified together or separately**

Standard Options

Insulation Blanket	Protective insulation required for moulds operating above 50°C
Universal Sensor Positions	Up to 4 IMPS **and/or** T/C ports
Shims	1 — 10 mm, stackable ***see associated parts section**

Standard Features (included with all options)

Catch Pot	2 litre inline catch pot with 1 x GEKA fitting for vacuum connection
Ejection	1 x air ejector

Design Life

Design Life	10 years

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Specification Sheet — Test Panel Tool: Option One

Available Options	Notes	Option Number
Shimmed Cavity VRTM Test Panel Tool — 500 x 500 mm		XM-5101
Sensor Mounting Detail Options		
Sensor Mounting Detail — One Port	One machined hole to accept IMPS or thermocouple Includes blanking plug	21
Sensor Mounting Detail — Two Port	Two machined holes to accept IMPS or thermocouple Includes blanking plug	22
Sensor Mounting Detail — Three Port	Three machined holes to accept IMPS or thermocouple Includes blanking plug	23
Sensor Mounting Detail — Four Port	Four machined holes to accept IMPS or thermocouple Includes blanking plug	24
Heating Options		
Water Heating Temperature Control Unit		08
Electrical Heating: Standard Control		09
Electrical Heating: Advanced Control		10
Insulation Jacket	If the tool is to be used above 50°C	11
Data Logging	Of cavity plate heating and sensor readings Only available for electrical heating: advanced control	30

Associated Products

Shims	Option Number
1 mm (±0.1 mm)	02
2 mm (±0.15 mm)	03
3 mm (±0.2 mm)	04
4 mm (±0.24 mm)	05
5 mm (±0.25 mm)	06
10 mm (±0.36 mm)	07

Sensors and Inserts	Part Number
IMPS and Insert: 0 to 10 bar pressure sensor — 180°C maximum temperature rating	XA-0500-04
K-Type Thermocouple and Insert	XA-0600-02

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