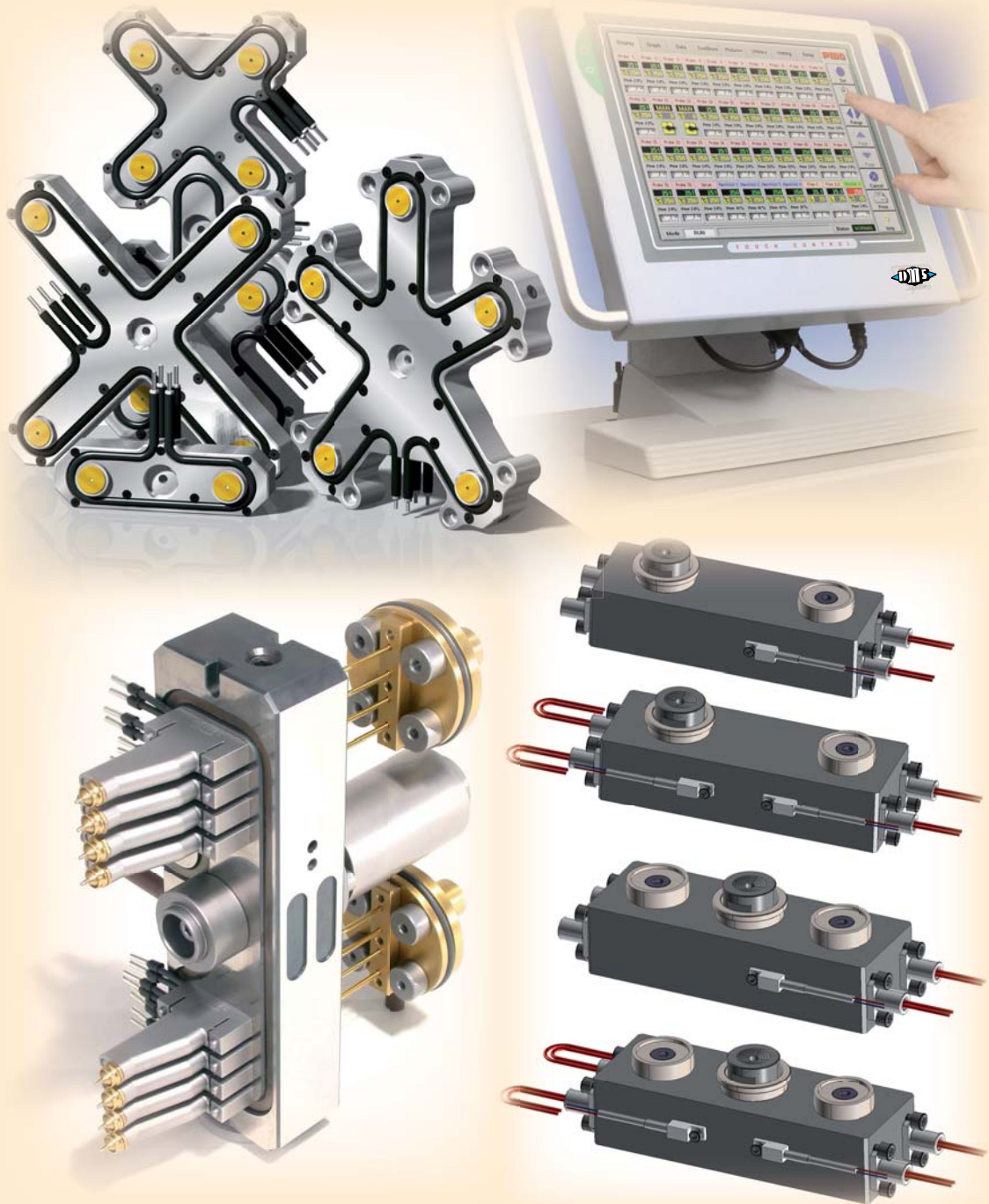


DMS - Diemould
Hot Runner Solutions
Catalogue



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	Heatlock Hot Runner Components catalogue.	Request.



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The Complete Solution

Why should you be specifying DMS-Diemould ?

We are unique in offering a complete solution within the UK. Our experience in supplying the mould making industry has helped us develop a skill base with short lines of communication and control over all aspects of the process from specification, design, manufacture, assembly to commissioning and support which means that we can offer you one of the best solutions available.... in the shortest time, at surprisingly reasonable prices.

Initial requirement

Although the principle of runnerless moulding is simple, every application is different. This necessitates a multitude of different options - hence the large range of solutions shown in this catalogue and our 3 hot runner partners catalogues.

DMS personnel help to simplify the process of choosing the correct hot runner system by offering a short list of options obtained from precise information about your specific application.

The information required is listed on the sheet 'Hot Runner Enquiry', a copy of this can be found in section 3. At this point we ask questions about the component, the polymer to be moulded and the moulding machine. If necessary we have the ability to obtain a mould flow analysis to assist in identifying the most suitable system.

When you have an idea of what you wish to achieve, please fax us this sheet or phone one of our technical engineers and together we shall agree on a proposal that is best suited for your application. This might be just the hot runner system or a complete hot top manufactured to bolt straight on to your cavity plate.

We will always where possible use standard components, this keeps the costs low and the delivery times short.



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Hot Runner Partners

Heatlock

HEATLOCK

The Heatlock range of nozzles is best known for the unique yellow ceramic insulation ring that offers substantially reduced heat loss, and enhances temperature control.

Since 1982 when DMS-Diemould became one of Heatlock's first distributors the range has been developed considerably due to the exchange of ideas between the two companies leading to many new products. Today DMS-Diemould is Heatlock's largest customer with a substantial amount of the nozzle range being held in stock.

Heatlock offer a range of nozzles and manifolds suitable for many of today's polymers, and are generally specified and fitted by the toolmaker with little input from DMS-Diemould.

Visit them at www.dms-diemould.co.uk and click on "DMS Partners".





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Hot Runner Enquiry Form

fax back to 01494 452898

Name :

Job Title :

Company :

Address :

Telephone :

Fax :

E-Mail :

Gating Directly On To The Part :

- no special requirements
- on cosmetic face (A face) please indicate area

Gating On To A Runner : Yes / No

Moulding Details :

Part Name / No :

Length / Width / Depth :

Av Wall Thickness :

Max Flow Length From Gate :

No. Gates Per Part :

No. Cavities :

Polymer :

Grade :

Material Manufacturer :

Filler Type : None / glass fibre / glass bead / talc / other (please specify)

Flame Retardent : Yes / No

Colour Change : Yes / No

Hot Runner Requirements :

No. Of Nozzles :

Nozzle Length Required :

Controllers Required : Yes / No

Please sketch and dimension your preferences for the drop layout or cold runners.



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Hot Top Enquiry Form (to be used in conjunction with Hot Runner Enquiry Form)

Please fax back to 01494 452898

Kit Size Required :

Register Ring Diameter :

Feed Bush Radius :

Projected Nozzle Length Required :

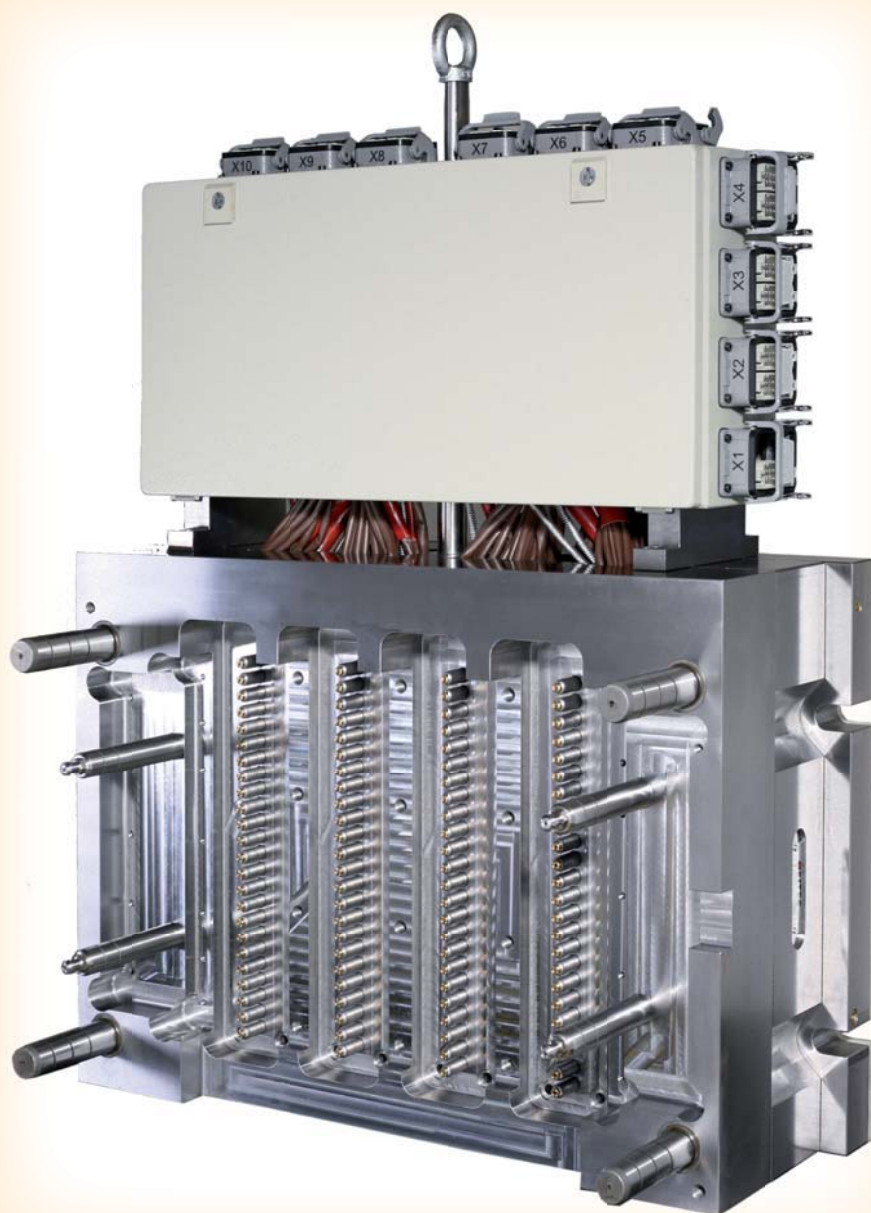
Electrical Connector Details :

Wiring Configuration Required :

Comments :



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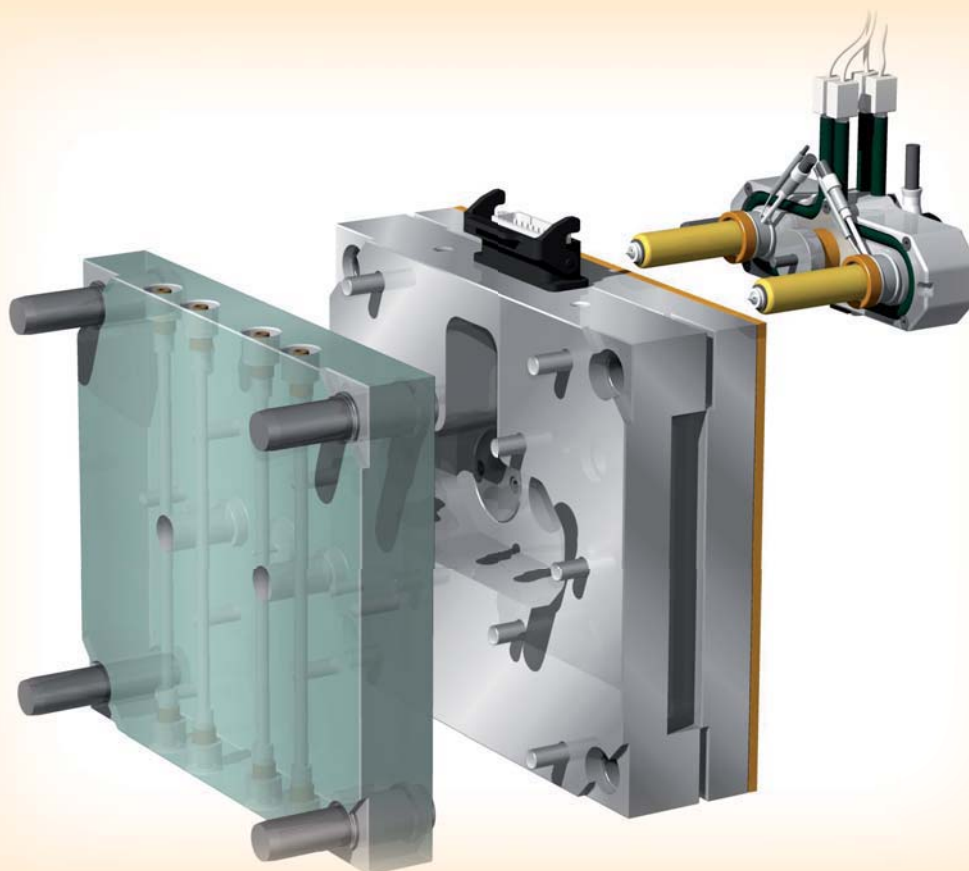
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Hot Top Solutions

In addition to Manifold Systems DMS-Diemould can also offer Heatlock Hot Half Solutions.

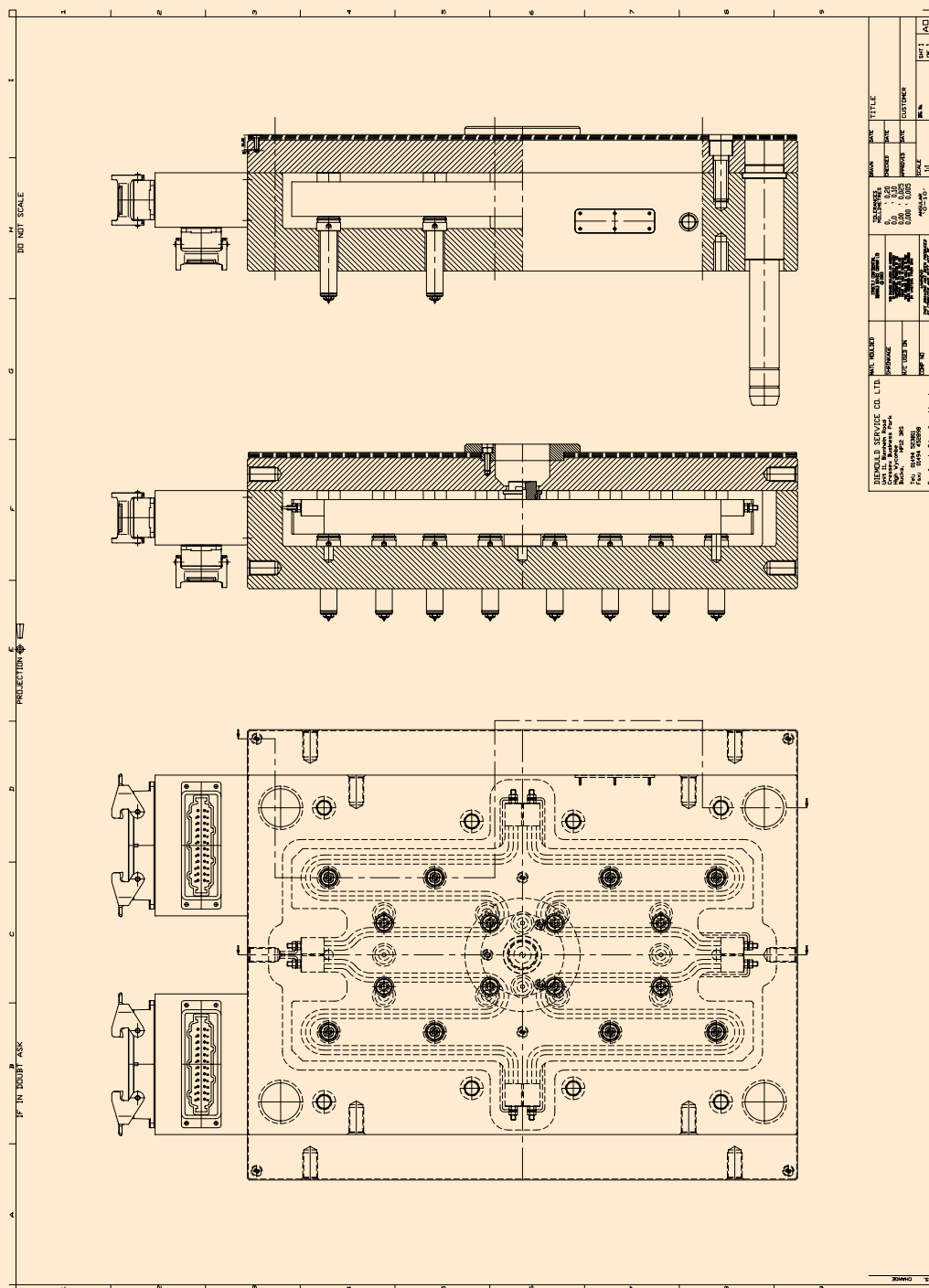
All Hot Half are supplied with a project folder which includes vital information about the hot half including spares information, wiring diagrams, and a full set of system drawings.

For all your Hot Runners requirements please contact Diemould Service.





Example of a 16 drop through feed system.

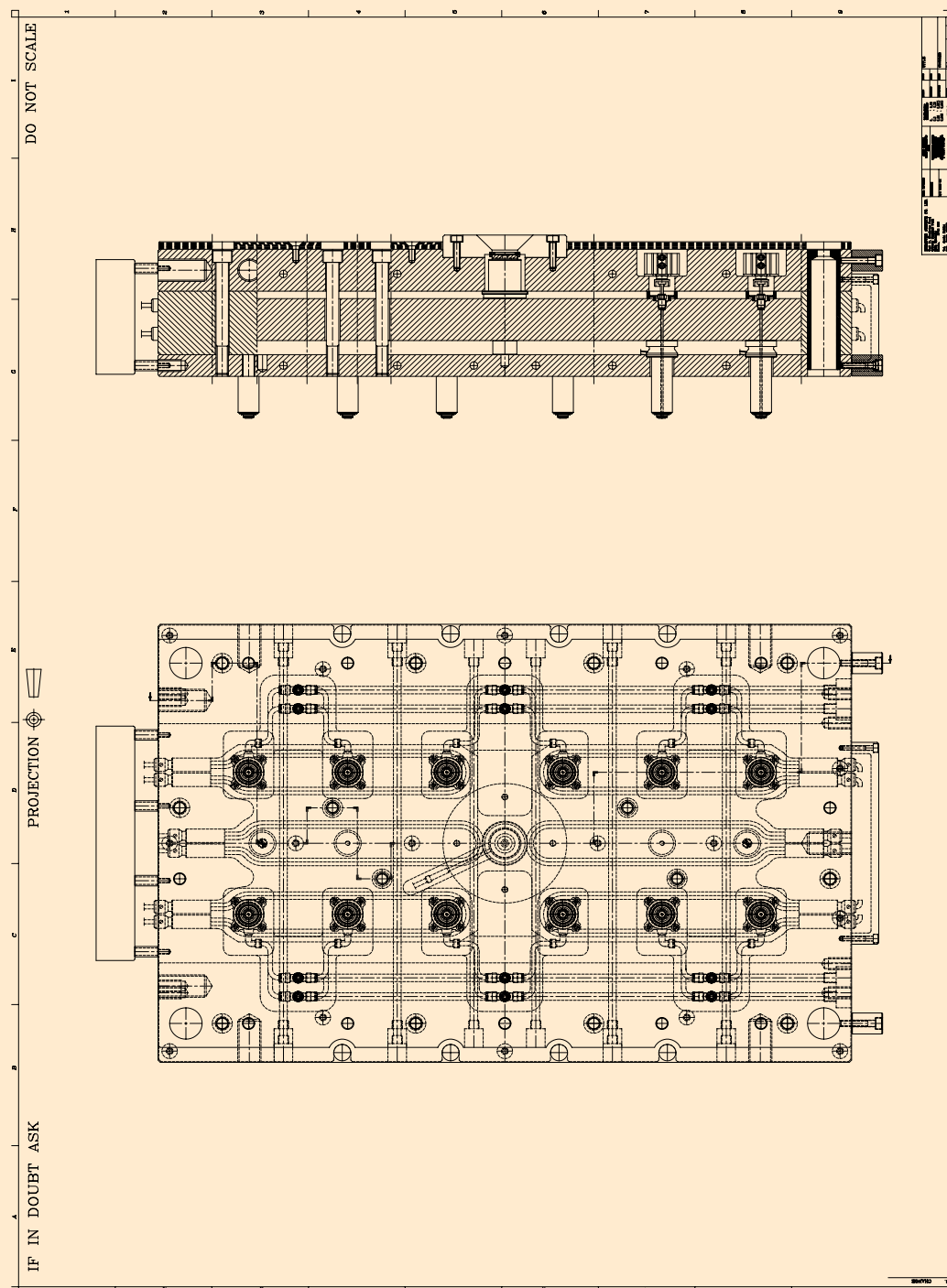




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DMS-Diemould Bespoke Hot Top

Example of a 12 drop valve gate system.





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Controllers & Connectors

A complete range of hot runner controllers complements our hot runner range.

Whether your requirements are to control a single zone or 240 zones then we have a solution for you.

Over the next few pages you will see our off the shelf solutions along with the made to order controllers. However if you have specific requirements, we would recommend that you call us so that we may quote you for your controller of choice.

Standard controllers are available from stock, whilst specific requirements can be satisfied with modified or custom solutions.





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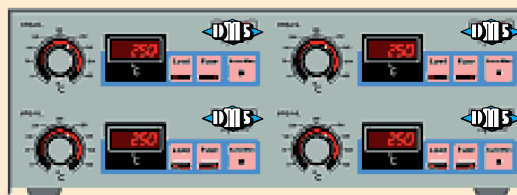
HRS HL & LC controllers. 1,2 & 4 zone.

The HRS HL & LC series of hot runner controllers offer the latest in soft-start microprocessor control but in a cost effective package. Available in 1,2 or 4 zone versions, these controllers are ideal for running small hot runner systems or hot sprue applications up to 6A per zone.

The mains voltage controller can control automatically in closed loop mode or, if the T/C fails, in open loop mode with manual power setting. Control performance is achieved using the power of a 16 bit CPU running the highly successful HR software program, used throughout our range of controllers, out performing conventional PID algorithm systems with little or no run-up overshoot.



Spare fuses use only
 > HRS-F-06 <



The controllers are supplied complete with a 2 metre loom, tool connectors and a moulded 13 Amp plug.

Supply voltage : 208-240v single phase 50/60Hz.

Supply Amps : 13 Amps total (7A on HRS1HL & LC).

Triac rating : 15 Amps max at 240v AC.

Zone rating : maximum of 6 Amps per zone (not to exceed 13 Amps per controller).

T/C input : Iron / Constantine (Fe/Con) type J

Always replace ruptured fuses with HRC (High Rupture Current) load fuses.

LED indicators on the front panel aid the operator :

- > "Fuse" is lit if the controller detects a power output fuse has ruptured.
- > "Load" is lit when power is supplied to the zone.

HL units have a 4 character alpha numeric display that has 4 functions :

- > To display the actual measured temperature in auto mode.
- > To display the set temperature while the setting dial is being turned.
- > To display the percentage power in manual mode.
- > To display any errors that may occur, for example T/C open circuit etc...

LC units also have 7 deviation LEDs that have 2 functions - to display actual temperature & show error messages.

The temperature is read by means of the 7 LEDs which show temperature above / below set point in 5° increments. Temperature is set by turning the control dial to the required temperature, at which point the 0 deviation light becomes the set temperature and the temperature is read by means of adding or subtracting the deviation LEDs from the set temperature.

Error messages :

- > +5 & -5 LEDs flashing simultaneously indicate open T/C.
- > +10 & -10 LEDs flashing simultaneously indicate reversed T/C, faulty T/C or faulty wiring.
- > +15 & -15 LEDs flashing simultaneously indicate over temperature (Max 400°C).

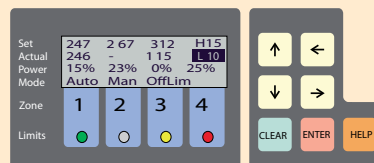


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HRS controllers. 2,4 & 8 zone.

The HRS series of controllers offers an easy solution for small hot runner systems. By using our proven micro-processor control, this range of highly successful controllers gives superb performance and offers many useful features:

- Closed and Open loop control
- Display of Set and Actual temperatures, applied power and operating mode
- Out-of-limits warning with alarm status LEDs
- High-power 4 channel version available
- Self-tuning heating control program
- Fault messages for T/C failure, fuse failure and zone error
- Disconnecting heavy-duty tool looms & connectors
- On-screen help pages
- Wipe clean facia with LCD display and status indicators
- Compact, robust metal case design with integral cooling fan



Front panel detail

- HRS2, HRS4 supply voltage: 220 - 260v AC single phase, 50/60Hz
- HRS4HP, HRS8 supply voltage: 380 - 440v AC three phase, 50/60Hz
- Heater control: Burst fired, zero voltage crossover
- Control method: Open or closed loop with HR software
- Max. heater current: 10A per zone, 16A - HRS4HP only
- Overload protection: High speed semiconductor fuse
- Control range: 0 - 400C
- Thermocouple: Type 'J' FE/Con. Type 'K' optional
- Temperature scale: Celsius
- Control processor: 16 bit, 3 MIPS single chip controller
- LEDs: Tri colour limits indication
- Display: 16 character × 4 line alphanumeric
- Tool connection looms: Disconnecting 2M with tool connector



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HRS controllers. 6 & 12 zone.

The HRS-6 and -12 series of controllers offers new interface for a 6 or 12-zone controller with 15A rated zones. By retaining our proven micro-processor control, this range of highly successful controllers gives superb performance and offers many useful features:

6/12 zone Hot Runner Controller

- 15A output on all zones
- Microprocessor temperature control
- 40 x 4 line character display panel(s)
- Simple rotate and click setting dial
- T/C fault, Fuse fault and load LED's
- 3 x limit display LED's by zone
- Individual display of Set, Actual and Power
- Closed loop or open loop modes
- Upper and lower limit setting by zone
- Detachable 24 pin 3m connecting cable(s)
- Robust metal case with stacking feature
- Accepts type J or type K thermocouple
- 32A - 3 phase supply with current trip
- Low cost solution for 6, 12 or 18 zones
- Optional trolley base available

- Supply voltage: 380 - 440v AC three phase, 50/60Hz
- Heater control: Burst fired, zero voltage crossover
- Control method: Open or closed loop with HR software
- Max. heater current: 15A per zone
- Overload protection: High speed semiconductor fuse
- Control range: 0 - 400C
- Thermocouple: Type 'J' FE/Con or Type 'K'
- Temperature scale: Celsius or Fahrenheit
- Control processor: 16 bit, 3 MIPS single chip controller
- LEDs: Normal temperature plus upper and lower limits visual indication, plus Scan, Load and T/C leds
- Display: 40 character x 4 line alphanumeric
- Tool connection looms: Disconnecting 2M with tool connector





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A - Series controllers



A - Series

The new A series of modular HRC controllers offer an economical solution for hot runner systems up to 10 zones. Incorporating the highly successful SM modular control card, the A series offers many useful features.

- Closed / open loop control up to 10 zones
- 15A output with optional upgrades to 25A
- Compatible with all popular mains voltage Hot Runner Systems
- SM cards easily accessed via a side panel
- Disconnecting 3 metre looms as standard
- Small footprint leaves more space for other ancillaries
- Fitted with mains isolator and RCCB trip for heater protection
- Wipe clean console with LCD display & status indicators
- Display of set, actual temperatures, % power and faults
- Setting of temperature or power by zone, range or group
- Process limit setting with alarm option
- Tool store can save up to 10 complete settings
- Probes and manifolds can be marked separately
- Wiring diagnostics software find faults fast
- Printer output of status, diagnostics and tool store
- Optional floor standing trolley and printer support
- Setting the controller is done via the display console. User friendly software with simple menus, keeps you in touch with what is happening inside the tool.
- Graphs display the temperatures of a zone over the last 5 minutes to 60 minutes and tool diagnostics automatically check and offer solutions to faulty wiring and other faults.



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K5 - Series



K10 - Series



Touch Screen

The new K series controller is a modular design, based on a double height Eurocard format with two rear bus connectors, one for data, one for power. Four card types are available starting with the six zone 5A rated card, suitable for controlling probes. For heavier loads there is a choice of three zone 15A or two zone 20A cards, suitable for medium manifold zones, and the single zone 30A card for larger manifolds. All cards are available with or without online current measurement. The design of the bus addressing system allows for mixing of card types in any order, at the build stage. Using the 6 zone card offers maximum zone density, compared to previous designs.

At present there are three cabinet types available, the smallest is the K5 with 5 card slots. Next up is the K10 with 10 card slots. The larger cabinets are the K20/30/40, all of which follow the same pattern but each one is a little taller, and each accommodates up to another 10 card slots.

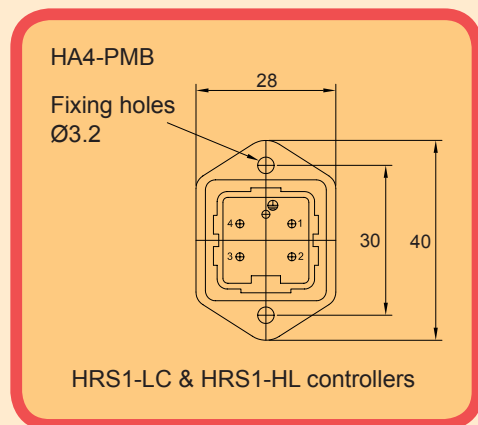
The typical capacity for each controller within the K-Series is:

- K5 - 24 probes with 2-3 manifold heaters
- K10 - 48 probes with 4 manifold heaters
- K20 - 96 probes with 8 manifold heaters
- K30 - 144 probes with 12 manifold heaters
- K40 - 192 probes with 16 manifold heaters

The K10, K20, K30 and the K40 all use the new TSA console which can be mounted either directly onto the cabinet or at a convenient remote or local position. The TSA console uses the same Touch Screen Software that has become so popular with operators everywhere.

The cabinet construction is designed as a sub chassis and outer case. The whole controller interior is attached to a removable connector panel on the left side. This makes it feasible to mount the sub assembly, as a cassette, into the side of a machine cabinet if required. The case has hinged doors front and rear. The front door is interlocked with key, the rear door requires a special tool/key for entry. Cards are extracted from the front. Cooling is performed by a bank of 80mm radial fans and double filter system in the front and rear doors, forcing air directly across the board heat sinks. Case sealing is to IP54. The base features die cast feet with 80mm castors, with locks on the front two. The cabinet can be supplied with a Touch screen mounted on top, or as a floor standing separate connected to a remote Touch screen via a serial cable, or mounted to the machine on "L" brackets with quick remove latches.

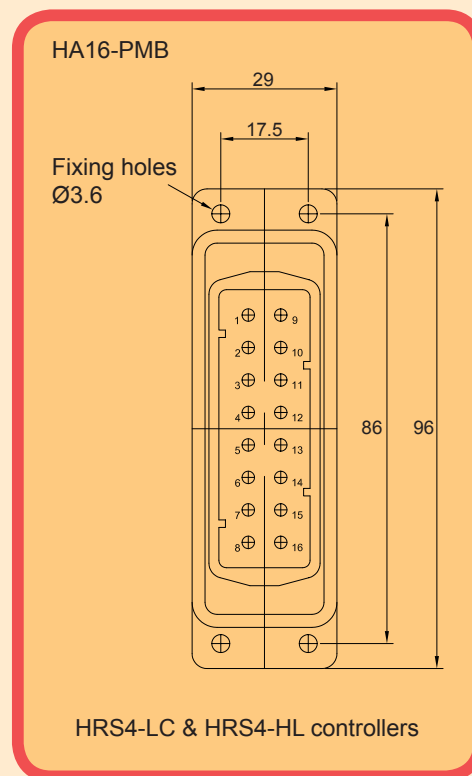
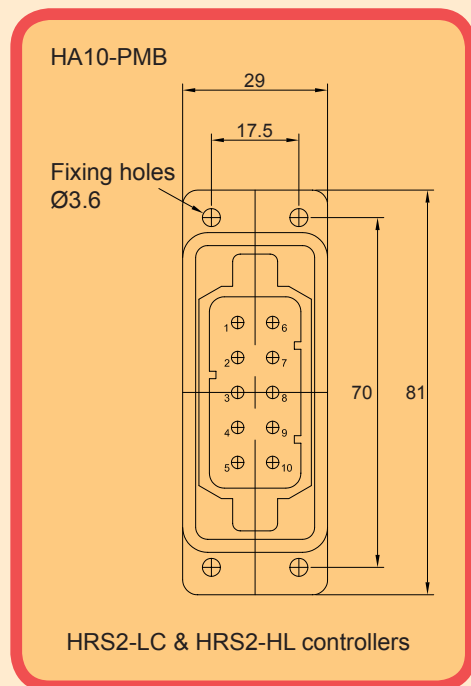
Connector block fixing details.



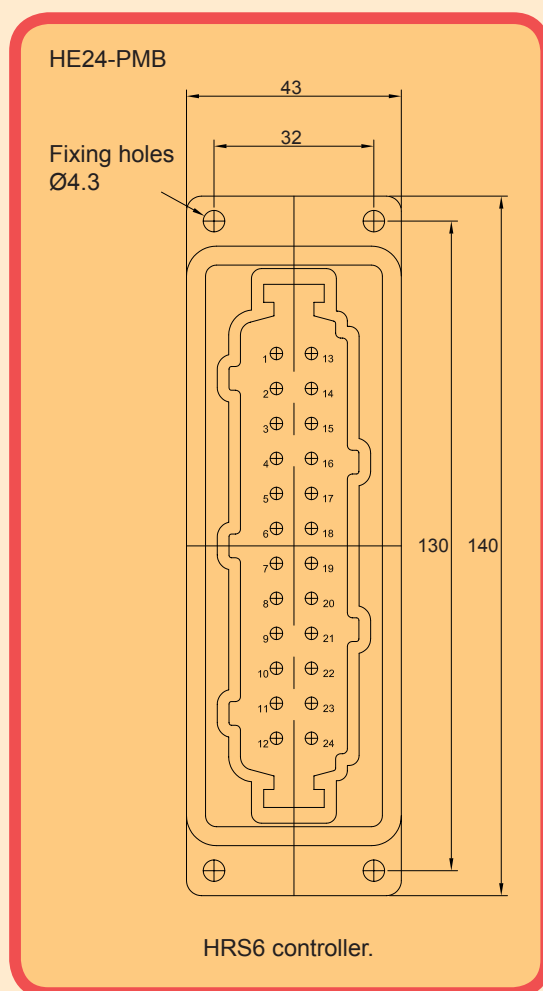
Tool connectors are fitted to the outside of a mould tool and are required to connect the controller to the hot runner system.

The connectors on the tool must correspond to the connectors that are fitted to the end of the controller loom and the plugs must also be wired to correspond with the controllers wiring configuration.

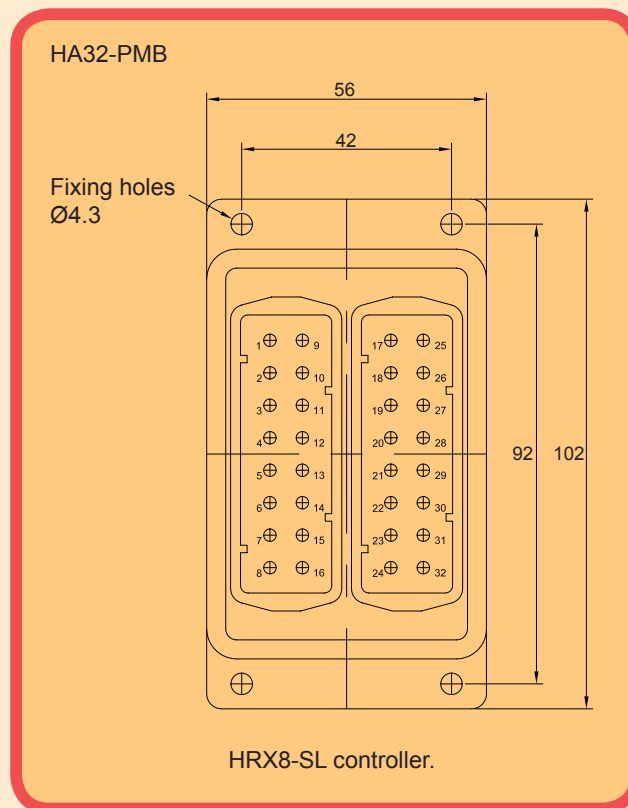
If in doubt ask the controller supplier.



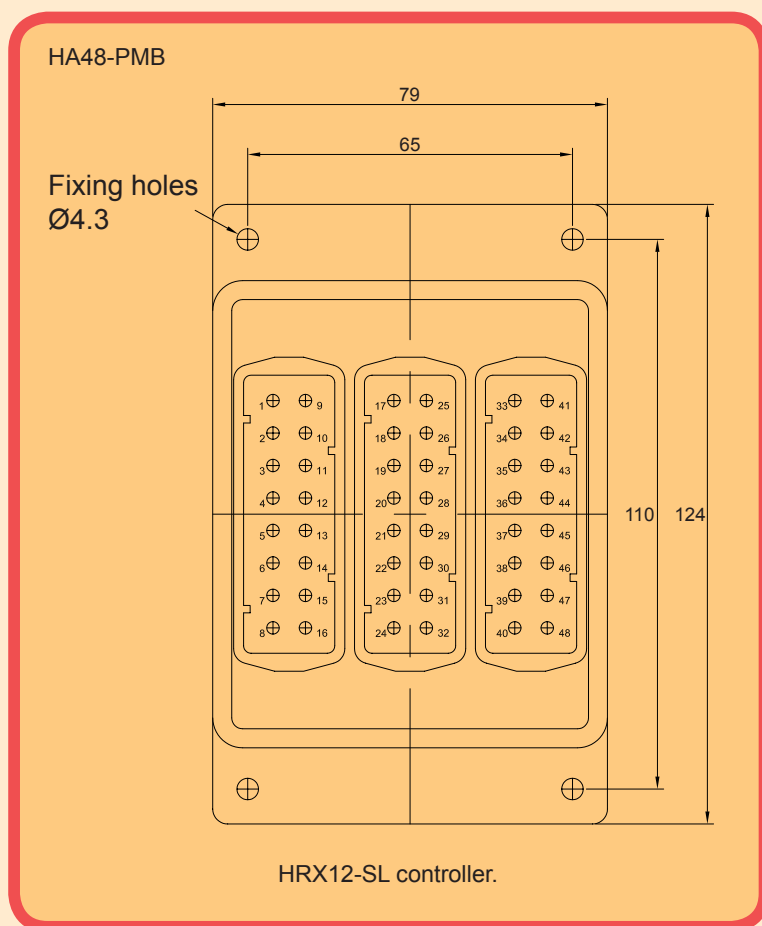
Connector block fixing details.



Connector block fixing details.



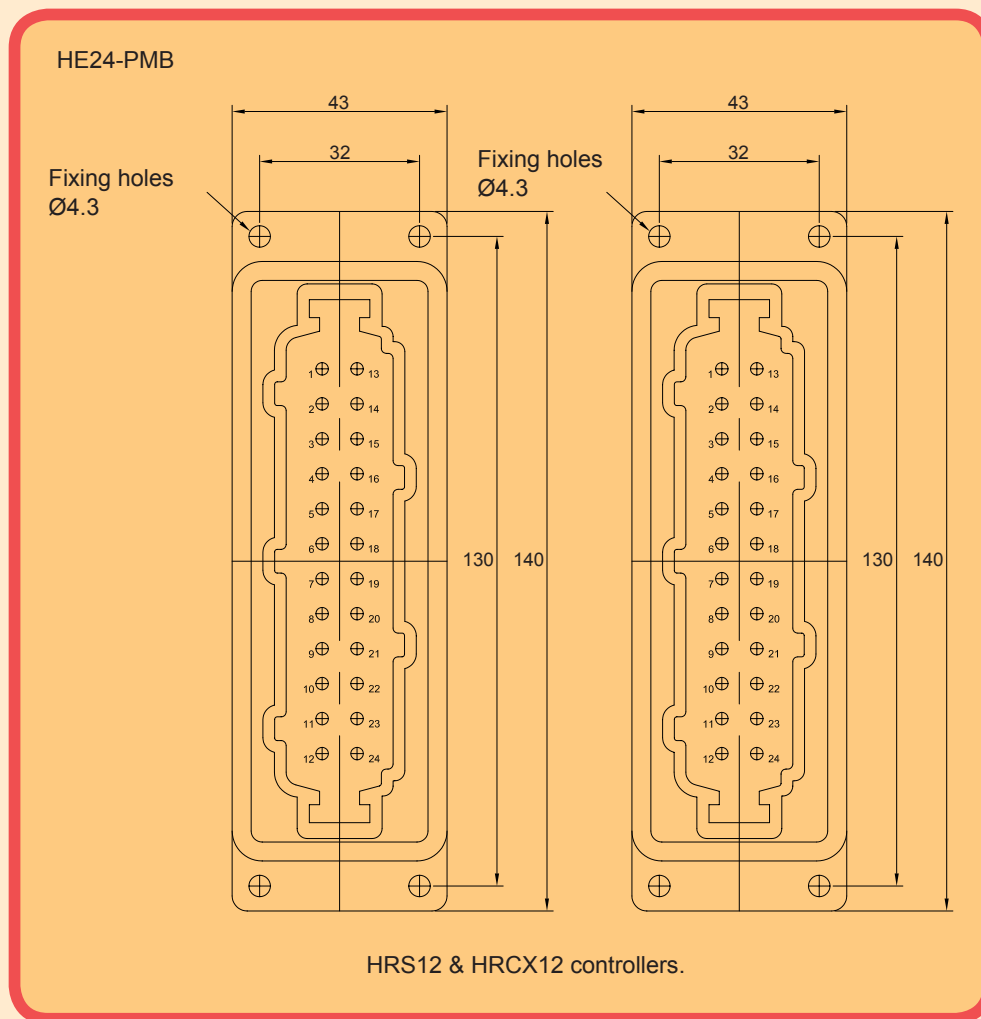
Connector block fixing details.






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Controller		No. of Zones
HRS1 - HL HRS1 - LC	HA4 - AEH	Single zone controllers
	HA4 - PMB	
	HA4 - M	
	HA4 - F	
HRS2 HRS2 - HL HRS2 - LC	HA10 - AEH	2 zone controllers
	HA10 - PMB	
	HA10 - M	
	HA10 - F	
HRS4 HRS4 - HL HRS4 - LC	HA16 - AEH	4 zone controllers
	HA16 - PMB	
	HA16 - M	
	HA16 - F	
HRS8 HRX8 - SL	HA32 - AEH	8 zone controllers
	HA32 - PMB	
	HA32 - M	
	HA32 - F	
HRX12 - SL	HA48 - AEH	12 zone controller
	HA48 - PMB	
	HA48 - M	
	HA48 - F	
HRS4 - HP	HE16 - AEH	4 zone high power controller
	HE16 - PMB	
	HE16 - M	
	HE16 - F	
HRS6 HRS12 HRCX - 6 HRCX - 12	HE24 - AEH	6 & 12 zone high power controllers
	HE24 - PMB	
	HE24 - M	
	HE24 - F	

Example of how the codes work

HA 16 AEH -
HA style **16** pin **A**ngle **E**nter **H**ood

HA 16 PMB -
HA style **16** pin **P**anel **M**ount **B**ase

HA 16 M -
HA style **16** pin **M**ale insert

HA 16 F -
HA style **16** pin **F**emale insert

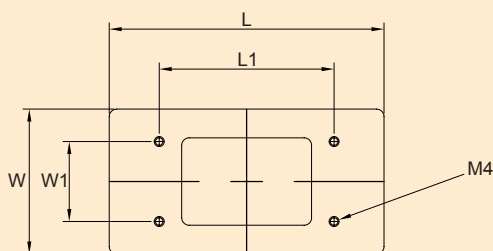
DMS offers a comprehensive range of connectors to satisfy the requirements for all our standard controllers. If you cannot see what you require please call and we will be happy to advise you of your options.

The majority of connectors used in the moulding industry use either the 'HA' or the 'HE' style of bodies. Each connector is housed in a diecast aluminium hood or base that are self latching for ease of connection.

HA : are 16 amp group B connectors with screw terminals.

HE : are 16 amp group C connectors with screw terminals and are physically larger than the HA range of connectors.

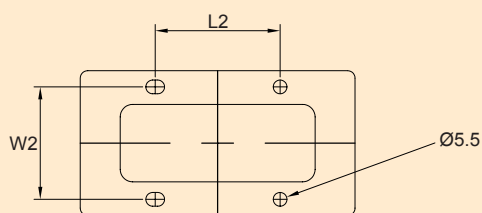
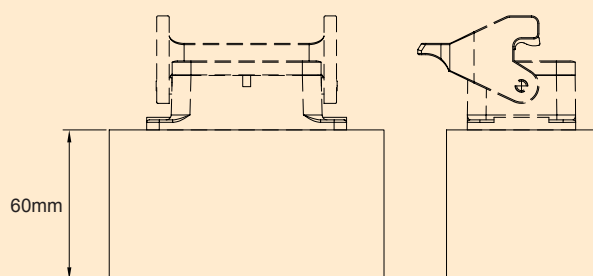
Connector boxes.



Connector boxes are a convenient way of housing your electrical wires and mounting your connector blocks to the tool.

They are surface mounted and have the ability to have additional connector blocks mounted on to them.

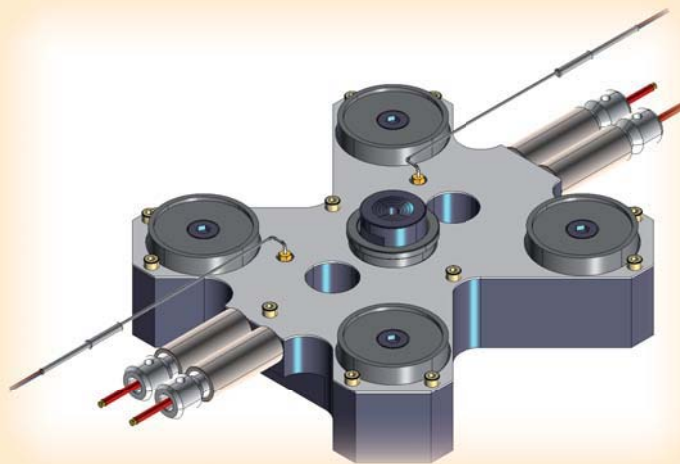
Standard fixing dimensions suit the HE range of connectors. For any other sizes the units may be machined to suit.



Code	L	L1	L2	W	W1	W2
C-LH-CONNB6	110mm	70mm	50mm	60mm	32mm	45mm
C-LH-CONNB10	110mm	83mm	50mm	60mm	32mm	45mm
C-LH-CONNB16	155mm	103mm	95mm	60mm	32mm	45mm
C-LH-CONNB24	155mm	130mm	95mm	60mm	32mm	45mm



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TERMS AND CONDITIONS OF SALE

1) CUSTOMER CONDITIONS DO NOT APPLY.

All quotations are made and all orders are accepted subject to the following conditions. All other terms, conditions or warranties whatsoever are excluded from the contract or any variation thereof unless expressly accepted by a Director of the Supplier in writing.

2) DELIVERY.

Every effort will be made to keep delivery dates. Time for delivery is given as accurately as possible but it is not guaranteed nor is it the essence of the contract. The customer has no right to damages or to cancel the order for failure for any cause to meet any delivery time stated.

3) LIABILITY.

No liability can be accepted for loss caused through delay for reasons beyond our control or by an industrial dispute of any kind (whether involving our employees or not) or by any failure to obtain materials, goods or equipment from a supplier through no fault of our own in due time to observe delivery dates. The supplier's right is reserved to repudiate the contract and/or suspend delivery as long as any payment for goods previously invoiced is in arrears without liability for damage or consequential loss and without prejudice to the Suppliers right to recover all sums owing to it.

4) PRICES.

The prices quoted are subject to fluctuation without prior notice. Goods will be invoiced at prices ruling at the date of despatch notwithstanding any quotation or prior acceptance of order. All prices are unless otherwise stated net exclusive VAT and carriage charges. Post or Carriage and packing will be payable by the Customer in addition to the price of the goods.

5) EXPORT.

These goods are offered on the understanding that they will not be exported from the United Kingdom for resale.

6) PAYMENT.

Payment is due 30 days after the date of the invoice. No disputes arising under the contract nor delays beyond the reasonable control of the Supplier shall interfere with the prompt payment in full by the Customer.

7) INTEREST.

The Company reserves the right to charge interest at 2% per month on overdue accounts.

8) COLLECTION COSTS.

Should it be necessary for the Company to instruct a third party e.g. Solicitor or Collection Agency to collect any outstanding balance on behalf of the Company, then the following Administration Charges will be payable:

On outstanding balance up to £5,000 – 5% of the debt.

Outstanding balance over £5,000 – 3%.

These charges are in addition to any Court and Solicitors fees which may be payable.

9) MINIMUM ORDER VALUE. £15.00.

10) RETURN OF GOODS.

Goods must not be returned to us for credit without obtaining our authorisation in writing. A handling charge of 10% of the purchase price will be made and we reserve the right to charge the Customer additionally for all reasonable costs and expenses incurred by the Supplier in respect of returns.

11) PACKING.

Unless stated otherwise, the Customer shall be charged for packing cases, these being non-returnable. Packing shall provide adequate protection throughout normal conditions of transit of normal duration. Packing is not suitable for long-term storage. Special requirements for packing must be stated on the order and will be chargeable.

12) LAW.

The contract shall be governed and interpreted exclusively according to the law of England and shall be subject to the jurisdiction of the English courts only.

13) TITLE AND RISK.

Title to the goods shall only pass to the Customer when the Customer has paid to the Supplier all the sums due and payable by the Customer under the contract and all other prior agreements between the supplier and the Customer. If the Customer fails to pay such sums the Supplier shall be entitled to repossess the goods of which title has not passed to the Customer. The Customer hereby licenses the Supplier, its officers, employees and agents to enter the premises of the Customer for the purpose of either satisfying itself that the goods are kept separately from other goods or to repossess the goods. Until title of the goods has passed to the Customer pursuant to the terms hereof, it shall possess the goods as a bailee of the supplier on the terms of this contract. Risk shall pass to the Customer so that the Customer is responsible for all loss, damage or deterioration to the goods at the time the goods arrive at the place of delivery if the Supplier delivers the goods by its own transport or if the Supplier arranges transport of the goods. In all other circumstances risk shall pass to the Customer at the time the goods leave the premises of the Supplier.

14) CONSUMER PROTECTION ACT.

In circumstances where the Supplier supplies parts or products to the Customer for incorporation with, or use ancillary to, and composite products to be produced, manufactured, processed or supplied by Customers then:- The Customer shall forthwith on demand produce for inspection by the Supplier copies of all written instructions, information and warnings to be supplied by the Customer in relation to the said composite products, provided nevertheless that such inspection or right to inspect shall not in itself constitute acceptance or approval on the part of the Supplier of such instructions, information or warnings. The Customer shall indemnify, reimburse and compensate the Supplier for all losses and damages (including costs, expenses and charges for legal actions in which the Supplier may be involved) that the Supplier may incur in the event that any claim or claims are made against the Company pursuant to the Act relating to the said composite products of the Customer or products in circumstances of which part of the product supplied by the supplier was either (i) not the defective part of the said composite product or (ii) was only rendered the defective part or became a defective product by reason of instructions or warnings given by the Customer or other supplier of the said composite product or products. For the purpose of this condition the word "defective" shall be interpreted in accordance with the definition contained in the Act.

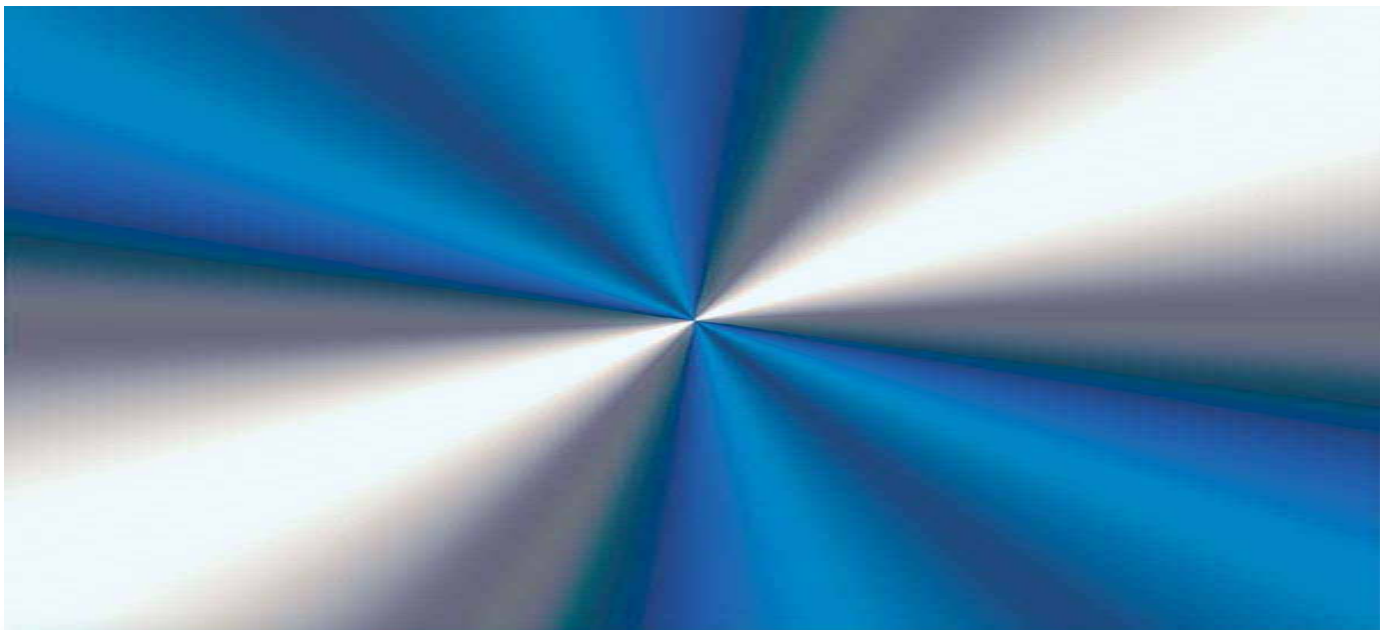
15) INDEMNITY FOR PERSONAL INJURY.

Save where the Supplier is shown to have failed to exercise reasonable care in the manufacture and/or supply of the goods and such failure results in the death or personal injury the Supplier shall not be liable in respect of claims arising by reason of death or personal injury. Further, under no circumstances whatsoever shall the Supplier be liable for consequential loss (including the removal or rectification work required in connection with the installation of repaired or substituted goods), loss of profits, damage to property, waste, expenditure or cost of mitigation.

16) HEALTH & SAFETY AT WORK.

Whilst every reasonable care is taken to ensure that our products are safe, you are requested to pay particular attention to applying the proper health and safety precautions in the use of our products.

Our complete list of Terms and Conditions are listed at www.dms-diemould.co.uk.



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