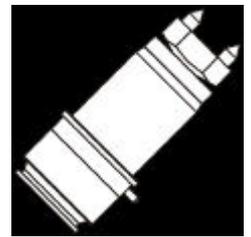


# Precision MT45D Multi-Tip Bushes



## Exclusive New Design

The new MT45D Multi-Tip bush is designed to run small moulded parts where close pitching (cavity centre distance) is required.

Up to four cavities can be gated from one bush, providing exceptional cost-effectiveness and permitting very compact mould construction for small multi-cavity parts.

Advanced heat transfer technology provides exceptional performance, while the special tip design allows for easy on-site servicing.

## Features & Benefits

- Multiple Tips enables up to four parts per bush to be gated.
- Close pitch means small parts can be gated.
- A Compact design means moulds can be kept small.
- Wear resistant tips means less downtime due to tip repair.
- Replaceable heater, thermocouple and tips.
- Easy serviceability means less downtime, more profit.

Hot Runner Systems By Fast Heat

Unit 7,  
Alder Close,  
Eastbourne,  
East Sussex,  
BN23 6QF.

T: 01323 647375  
F: 01323 410355  
E: [tech-support@fastheatuk.com](mailto:tech-support@fastheatuk.com)  
I: [fastheatuk.com](http://fastheatuk.com)



■ Coil Heating

■ 3 Tip Styles

■ Compact Size

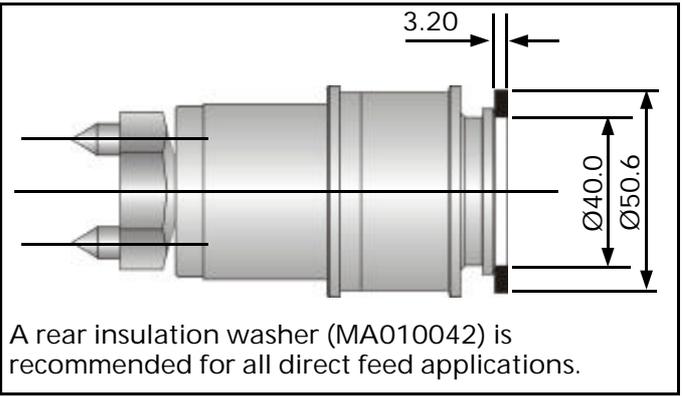
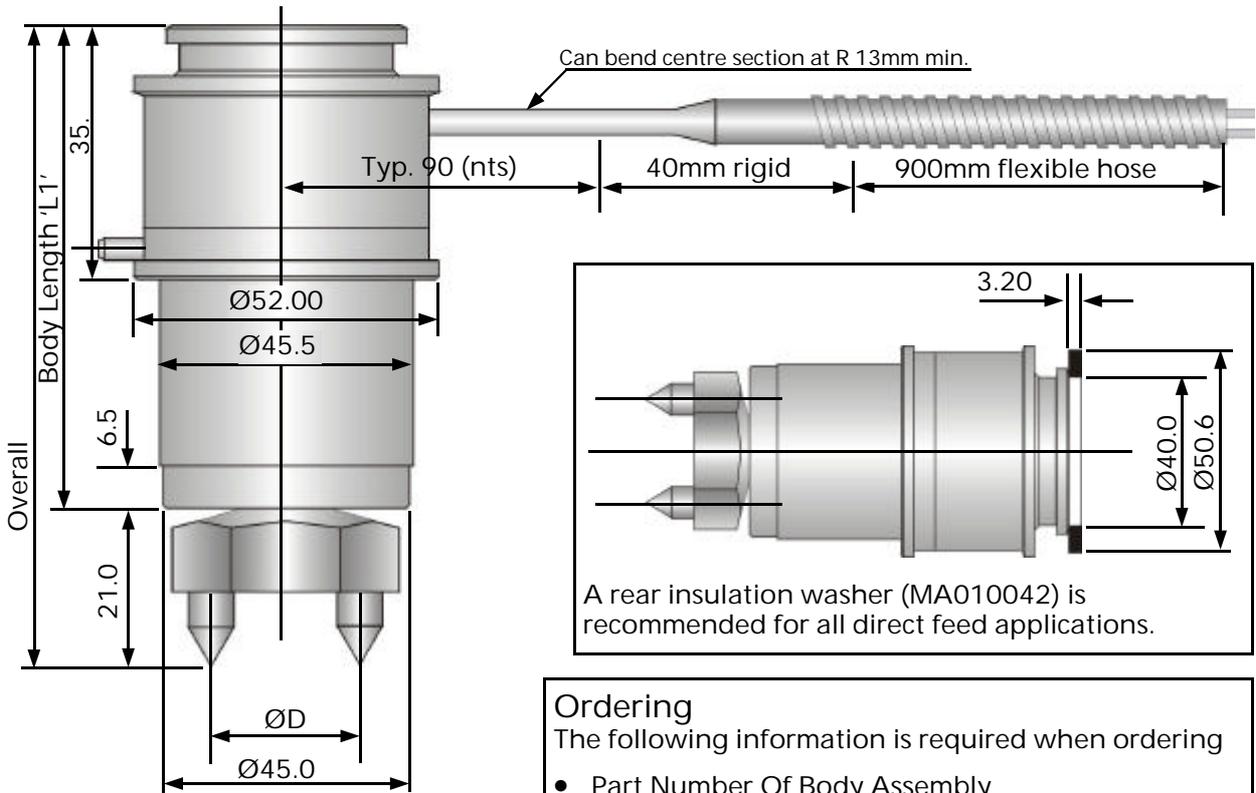
■ Replaceable Tips

**fast**  **heat**

# Precision MT45D Multi-Tip Bushes

PRECISION MT45D BUSHINGS

## Body Dimensions (mm)

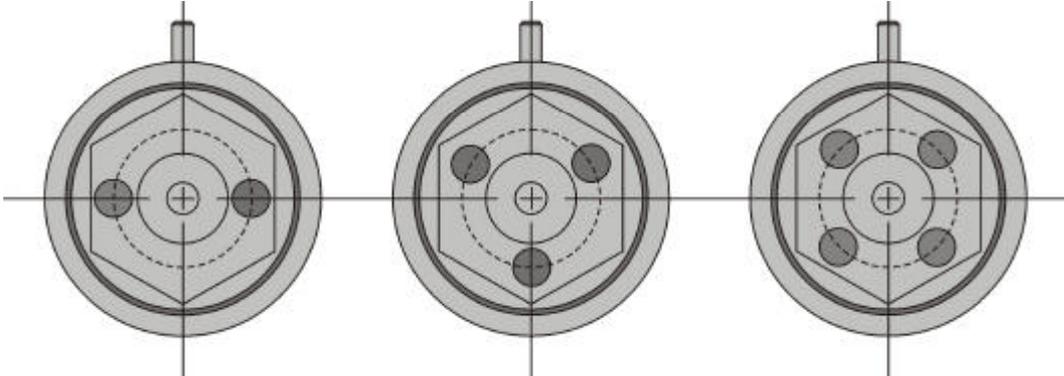


Tips have M16 x 1.0 threads and should be torqued down to 30 lb.ft (41Nm). Always use high temperature anti-seize compound on threads.

**Ordering**  
The following information is required when ordering

- Part Number Of Body Assembly
- Part Number Of Bush Tip: -  
Specify number of gate tips required  
Specify gate tip pcd required—see below
- Specify heater lead exit position

**Important**  
Note the location dowel position relative to the tip position. This cannot be changed.  
The heater lead exit can be in any position, but must be specified when ordering.



2 Tips  
Min. PCD = 20mm  
Max. PCD = 32mm

3 Tips  
Min. PCD = 20mm  
Max. PCD = 32mm

4 Tips  
Min. PCD = 20mm  
Max. PCD = 32mm

# Precision MT45D Multi-Tip Bushes

## Precision MT45D—Ordering Chart

Body & Heater Part Numbers

Body Assembly	Len 'L1'	Len. 'L'	Spare Heater	Watts
MT45-077	56.00	77.00	LPH-25-035-F	460
MT45-087	66.00	87.00	LPH-25-045-F	460
MT45-097	76.00	97.00	LPH-25-055-F	460
MT45-117	96.00	117.00	LPH-25-075-G	610
MT45-137	116.00	137.00	LPH-25-095-G	610
MT45-157	136.00	157.00	LPH-25-115-H	690

The MT45D Body Assembly comprises of: -

- Bush Body
- Coil Heater With Integral Thermocouple
- Bush Insulating Ring
- Bush Support Ring

### Optional

For single bush applications, we recommend the fitting of a rear Insulation Washer, Part No: MA010042.

### Tip Part Numbers

Specify the number of Gate Tips required and the gate pitch centre diameter in the mould.

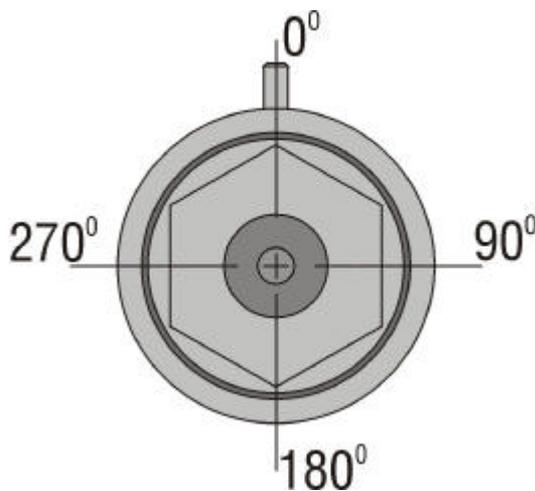
For example:

2 tips on 20.00 pcd = MT45D-Tip x 2 x 20.00

4 tips on 25.40 pcd = MT45D-Tip x 4 x 25.40

### Heater Lead Exit

Specify this as an angle, looking on the tip face of the bush. Refer to drawing below.



### Polymer & Shot Selection Guide

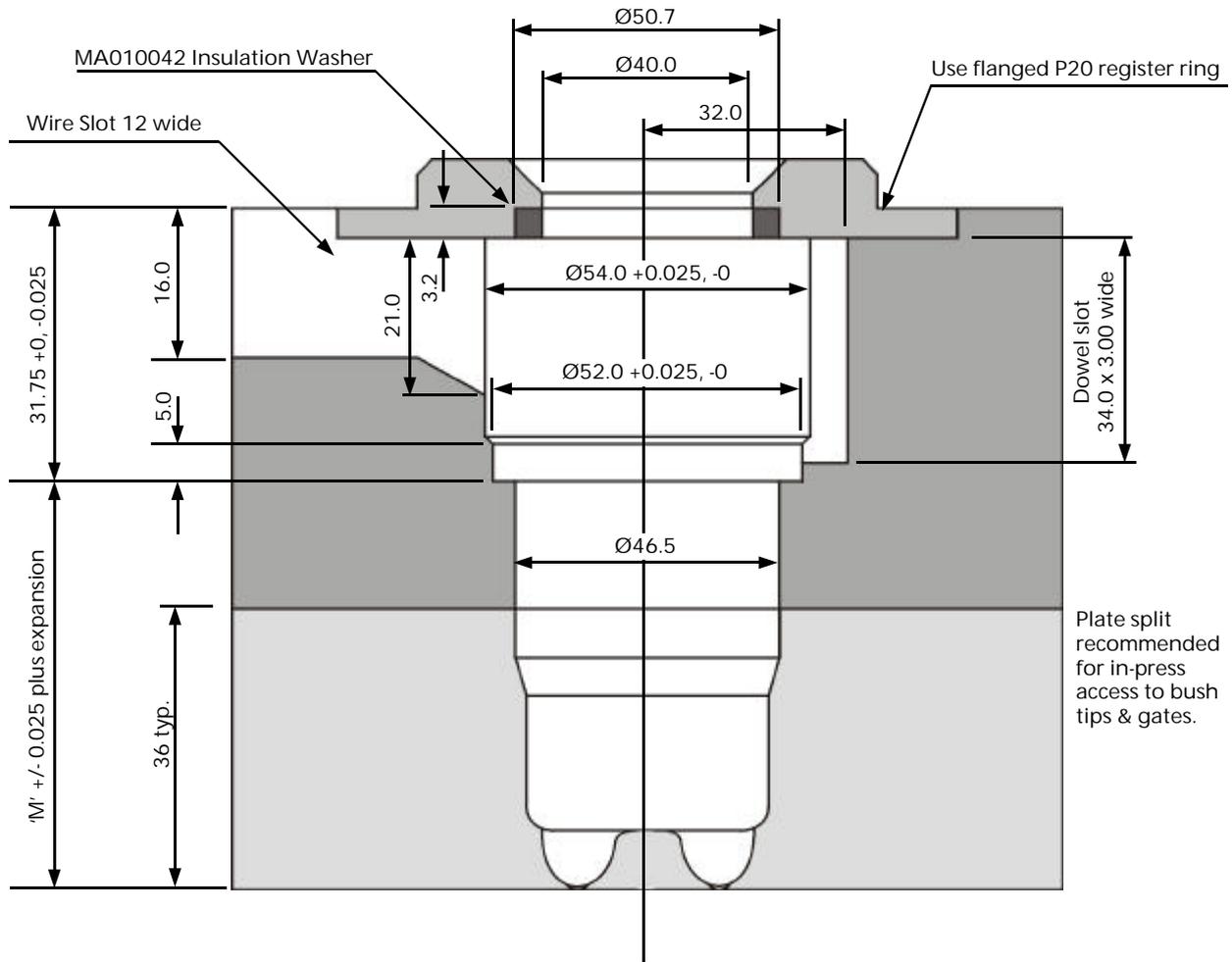
Polymer	Rating	Shot (gm)
ABS	Good	150
Acetal	App Dependant	75
EVA	Good	200
Nylon	App Dependant	150
Pe-LD	Excellent	200
Pe-HD	Excellent	150
Pp	Excellent	250
Ps	Excellent	250
SAN	App Dependant	200
SB	Good	200
TPE	App Dependant	150
TPR	App Dependant	200

3

PRECISION MT45D BUSHINGS

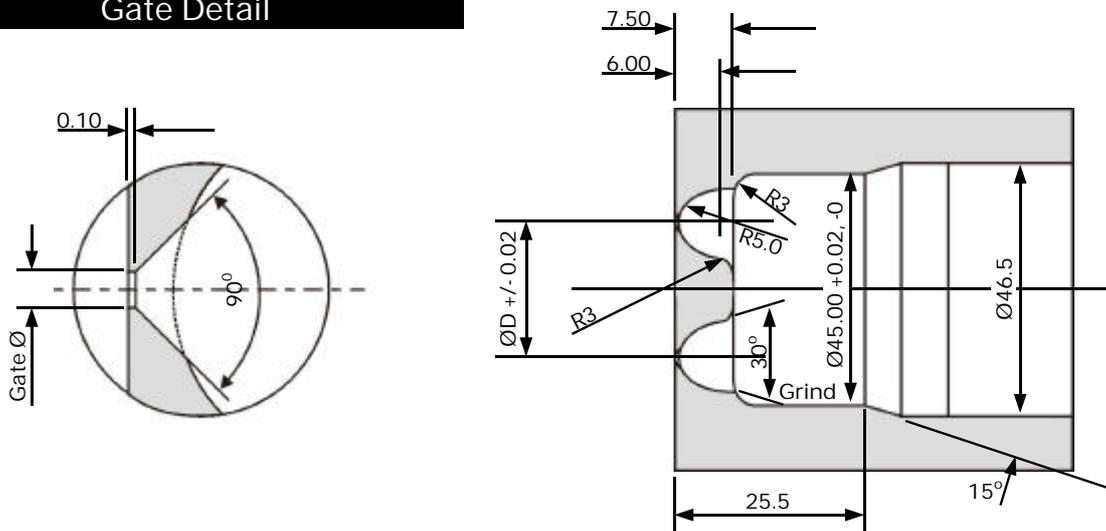
# Precision MT45D Multi-Tip Bushes

## Bore & Gate Dimensions (mm)



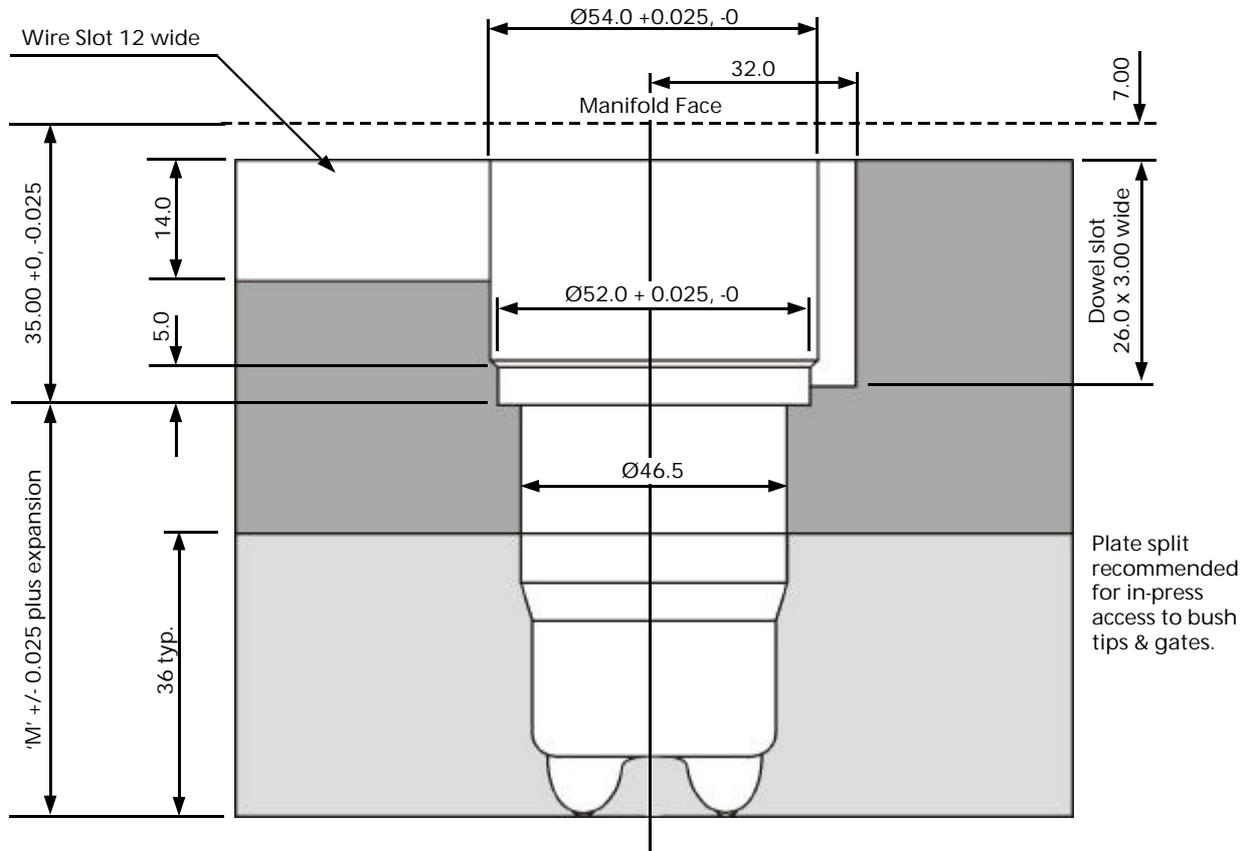
'M' = 'L' - 35.0. The expansion of the bush relative to the mould is calculated by the formula:  
 ('L' mm minus 15) x 0.0000126 x (processing temp. °C minus mould temperature °C)

## Gate Detail



# Precision MT45D Multi-Tip Bushes

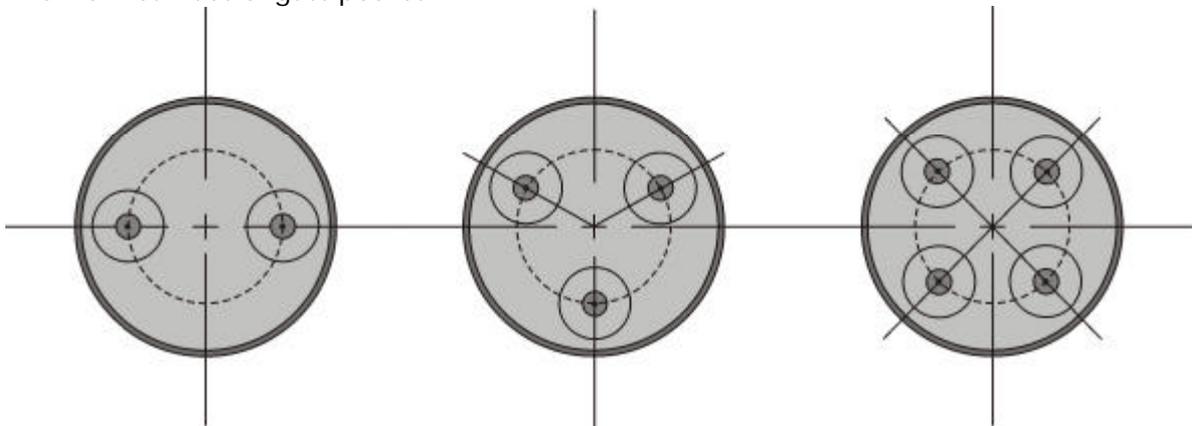
## Bore & Gate Dimensions (mm)



'M' = 'L' - 35.0. The expansion of the bush relative to the mould is calculated by the formula:  
 ('L' mm minus 15) x 0.0000126 x (processing temp. °C minus mould temperature °C)

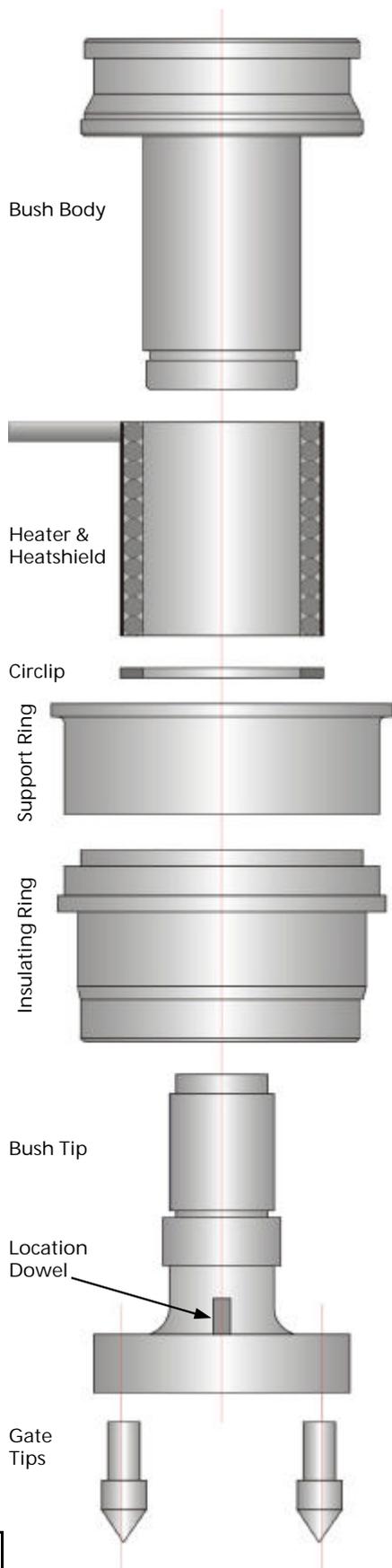
## Gate Detail

View on rear face of gate pocket



# Precision MT45D Multi-Tip Bushes

## Operating / Service Instructions



The MT45 components are identical in diameter, and differ only in length.

The bush features a replaceable heater/thermocouple assembly, and replaceable tips.

### Start Up / Operating Procedures

If the temperature controller does not utilise 'soft start' technology, set the controller to 90°C in automatic or 10% in manual. Allow nozzle to 'soak' for 15 minutes before increasing to processing temperature. This step will help disperse any moisture in the heater, and prolong heater life.

### Bush Disassembly

1. Grip the Body firmly in a vice, using the flats provided on the bush head.
2. Heat the assembly, either with the internal heater, or (better) by means of an external heater band.
3. When the plastic is soft, unscrew the Bush Tip assembly – NOTE the Insulation Ring must also turn until the Bush Tip Location Dowel disengages from it.
4. Now slide off the Insulation Ring and Support Ring.
5. To remove the heater, first remove the Circlip with circlip pliers.
6. Next, spring open the Heatshield with the circlip pliers, and slide off.
7. Now remove the heater by twisting it to open the coil diameter slightly, and sliding it off the Body.
8. To remove the Gate Tips, unscrew their setscrews in the Bush Tip, and drive the Gate Tips out of the Body Tip with a soft drift.

### Bush Re-assembly

1. Re-assemble in reverse order to the above.
2. Fit the Bush Heater in place, ensuring it makes good contact with the Bush Body.
3. Open the Heatshield with circlip pliers and slide over the Heater.
4. Refit the Circlip in front of the heater.
5. Slide the Support Ring and Insulation Ring into place, ensuring the latter is free to rotate.
6. Fit any new Gate Tips into the Bush Tip, drive them fully home with a soft drift, and tighten the set screws.
7. Screw the Bush Tip assembly into the Bush Body, ensuring that the Location Dowel locates correctly into the Insulation Ring, and tighten to 41 Nm.

### Power Requirements

- 240V AC–15 amp fuse.
- Grounding—Fast Heat nozzles utilise the direct contact of the nozzle mould plates, and machine platens to establish a path for grounding.

### Warning

There must be a ground present between the mould 'Hot Half' and the temperature control system or damage may occur to the heater, thermocouple and / or temperature control system.