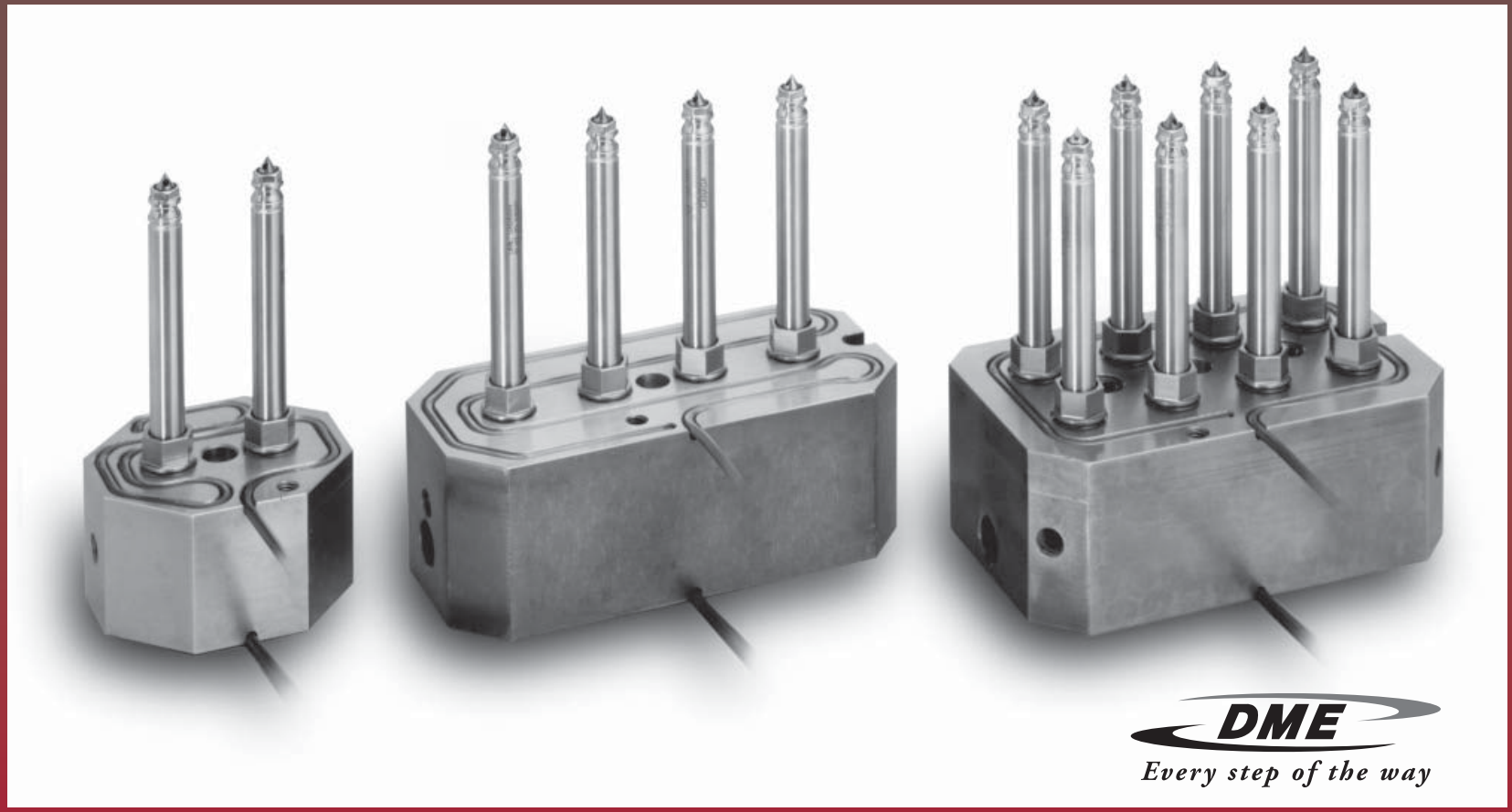
DESIGN & ASSEMBLY GUIDE

DME Stellar® 5000 Hot Runner Systems *Rectangular MNAs*



DME
Every step of the way

TABLE OF CONTENTS

IMPORTANT SAFETY INFORMATION

A hot runner system includes electrical elements and may contain molten plastic at elevated temperature and pressure. To avoid injury, exercise caution by reading these instructions before servicing or operating the system.

These instructions must be passed on to the end user where they should be read before using this product. Failure to do so may result in serious injury or death.

⚠ DANGER

Failure to comply may result in serious injury or death:

ELECTRICAL HAZARDS
Improper voltages or grounding can result in electrical shock. Use only with proper voltage and a proper earth ground. To avoid electrical shock, do not operate product when wet. Do not operate this equipment with covers or panels removed. To avoid electrical shock, turn off main power disconnect and lockout/tag out before servicing this device. Do not connect temperature sensors to electrical power. It will damage the product and it can cause fire, severe injuries or even death.

If green ground wire present, wire must be connected to ground. Do not rebend rigid leads. Rebending leads might result in damage to circuit. Product might absorb moisture when cool. Use low Voltage or power to drive out residual moisture before applying full power. Failure to do so may cause damage to this product.

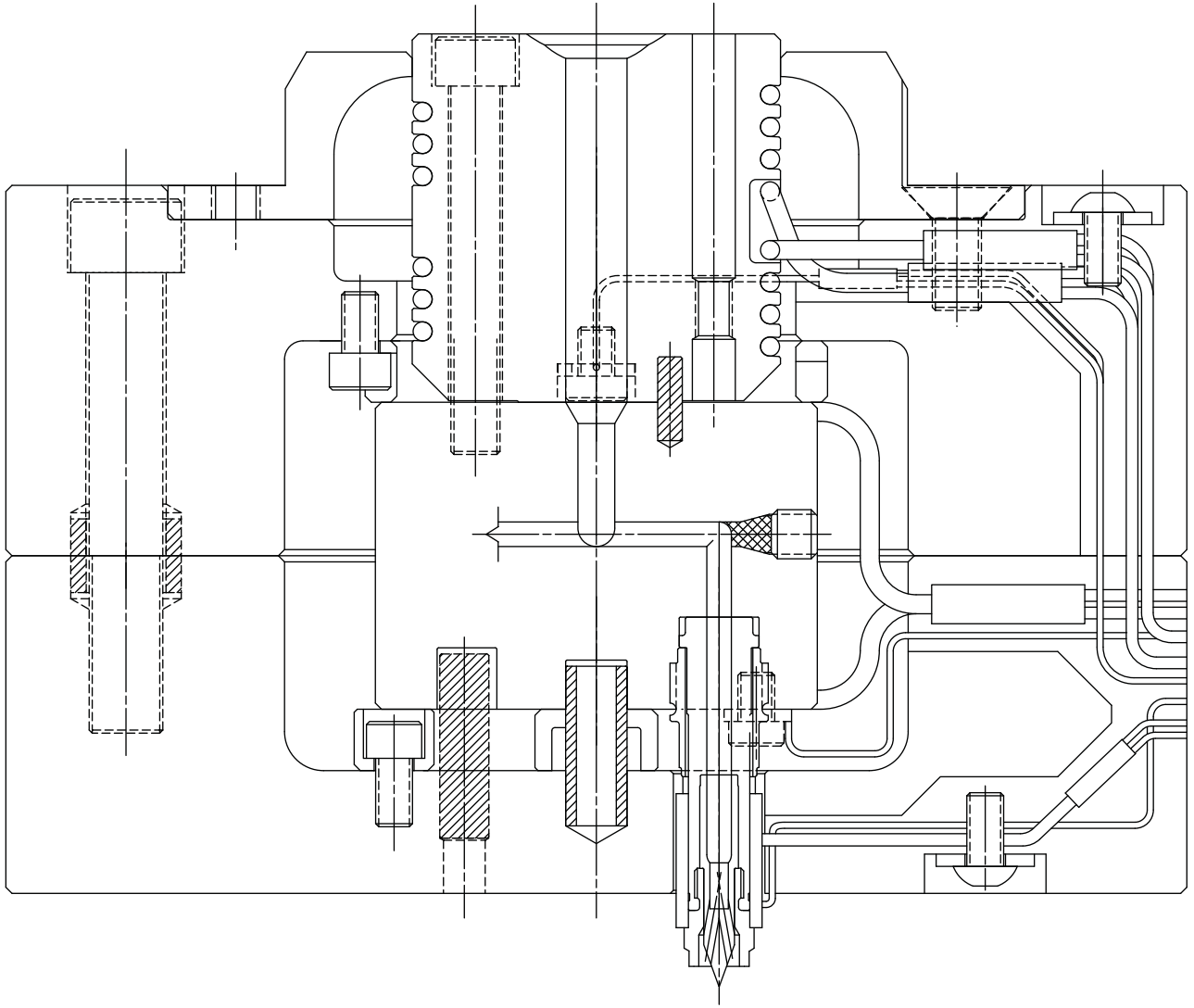
⚠ WARNING

Failure to comply may result in serious injury or death:

STORED ENERGY AND HIGH TEMPERATURE HAZARDS
This product maintains molten plastic at high pressure. Use caution when operating and servicing the system. Physical contact with molten plastic may result in severe burns. Proper protective equipment, including eye protection, must be worn.This product has heated surfaces. Use caution when operating and servicing the system to avoid severe burns. Proper protective equipment should be worn.

General Assembly – Section View

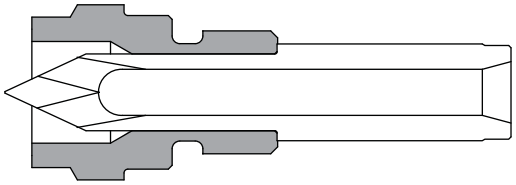
Fig. 1-1



Gating Style Selection

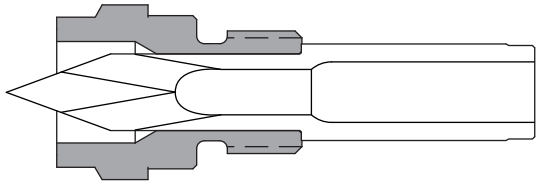
Standard Point Gate Tip Sub-Assembly, SXG5110

- For use with unfilled resins up to 290°C (550°F)
- Fits Gate Details shown in Fig. 1-2



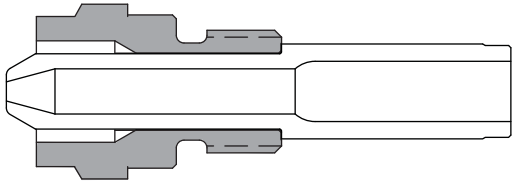
High Performance Point Gate Tip Sub-Assembly, SXG5020

- For use with unfilled and filled resins up to 330°C (625°F)
- Fits Gate Details shown in Fig. 1-2



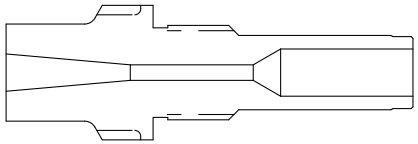
High Performance Thru Hole Tip Sub-Assembly, SXG5201

- For use with unfilled and filled resins up to 330°C (625°F)
- Fits Gate Details shown in Fig. 1-2



Sprue Gate Tip, SXT1040

- For use with unfilled and filled resins up to 330°C (625°F)
- Fits Gate Details shown in Fig. 1-3



Gating Style Selection – Item Numbers

TIP Sub-Assembly Item Number	Description	TIP Item Number	TIP CTE (10 -6/degC)	Retainer Item Number	Gating Style	Applicable Stellar System
SXG5110	Standard Point Gate Tip Sub-Assembly	SXT4010	17.5	SXF5100	Point Gate	Standard
SXG5020	High Performance Point Gate Tip Sub-Assembly	SXT5010	5.5	SXF5000	Point Gate	High Performance
SXG5201	High Performance Thru Hole Tip Sub-Assembly	SXT5200	5.5	SXF5000	Thru Hole Gate	High Performance
SXT1040	Sprue Gate	SXT1040	12.8	N/A	Sprue Gate	Standard

Design Procedure

1. Select the proper gating style.
2. Select the appropriate rectangular manifold configuration. See pages 8 and 9.
3. Calculate the nozzle plate thickness. See pages 10-11 (metric) or pages 74-75 (inch).
4. Follow the machining guidelines for the nozzle plate and the manifold retainer plate for the manifold size required. See pages 12-73 (metric) or pages 76-137 (inch).
5. Add the wire channel paths, assembly bolts, alignment dowels, water lines, guide/leader pins, etc., as needed. For wire channel design, see page 73 (metric) or page 137 (inch).

Gate Details for use with Hardened Steel (50 HRC minimum)

Fig. 1-2 Gate Details for Standard Point Gate and High Performance Point Gate and Thru Hole Tips (SXG5110, SXG5020, SXG5201); For gating onto a flat surface or into a recess (“dimple”).

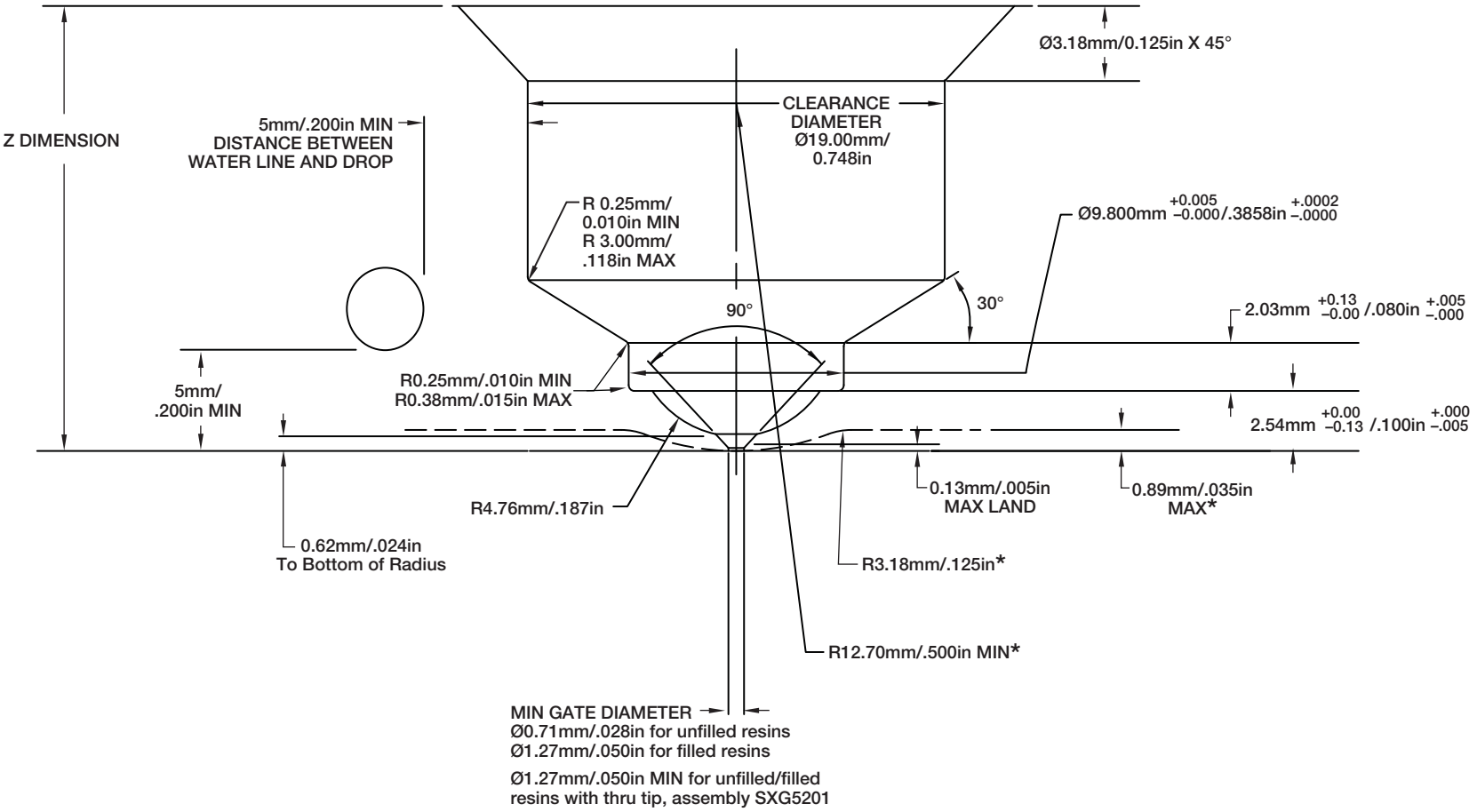
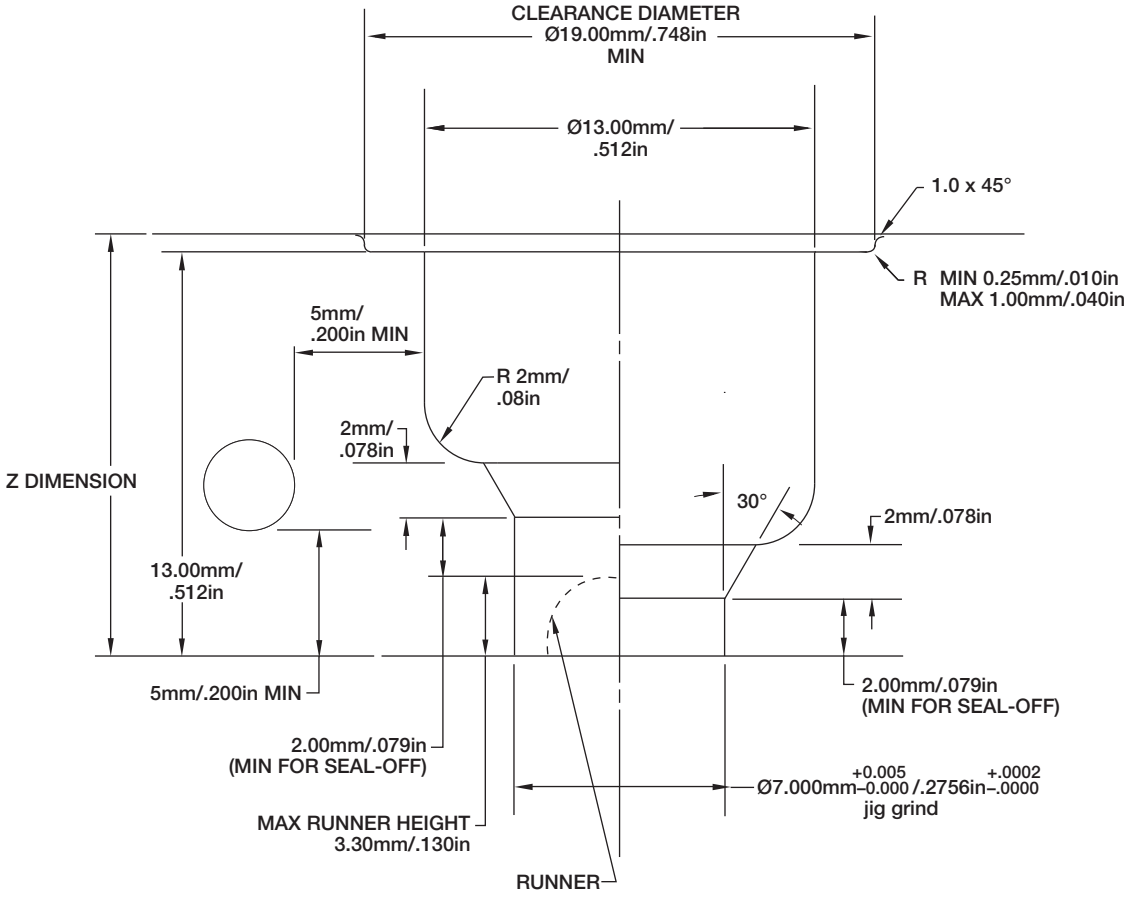


Fig. 1-3 Gate Details for Sprue Gate Tips, SXT1040



Shown with Runner **Shown without Runner**

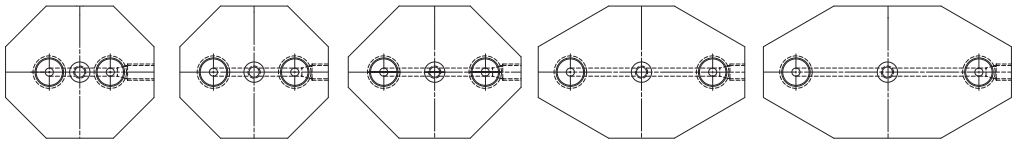
NOTES for Figures 1-2 and 1-3:

1. If gate detail does not properly fit the application, contact DME for assistance about gate detail options.
2. Position gate detail within ±0.013mm/.0005in from nominal.
3. The gate diameter can be opened by the customer to suit the application. (The land must be re-machined to the maximum dimension after increasing the gate diameter.)
4. Water lines are required in “A” plate for proper gate cooling.
5. Position water lines as close as possible but not closer than the minimum distance shown to provide a safe steel condition.
6. For faster color changes, remove (“decone”) the resin from the front of each point gate tip prior to changing colors.

Manifold Options – Rectangular MNAs

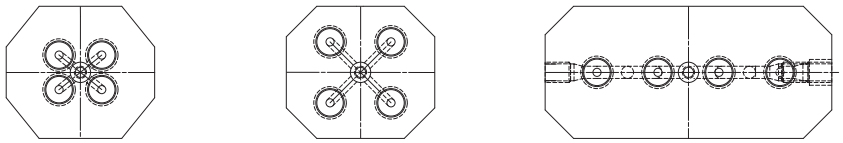
NOTE: Position gate detail within ±0.013mm/.0005in from nominal.

2 Drop



30mm pitch | 40mm pitch | 50mm pitch | 70mm pitch | 90mm pitch

4 Drop

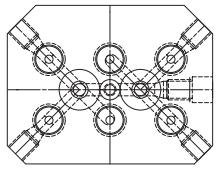


17x21mm pitch | 30x30mm pitch | 30mm pitch

Rectangular MNA Item Numbers

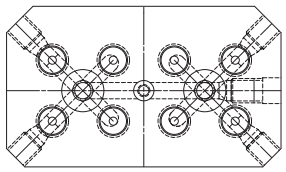
Manifold and Components Sub-Assembly Item No.	Description	Dimensions (Length x Width)	
		Millimeters	Inches
SRC3002	2-Drop 30	73.02 x 65.00	2.875 x 2.559
SRC4002	2-Drop 40	83.00 x 65.00	3.268 x 2.559
SRC5002	2-Drop 50	92,00 x 65.00	3.622 x 2.559
SRC7002	2-Drop 70	101.60 x 65.00	4.00 x 2.559
SRC9002	2-Drop 90	122.00 x 65.00	4.803 x 2.559
SRC0004	4-Drop 17x21	79.02 x 65.00	3.111 x 2.559
SRC3304	4-Drop 30x30	73.02 x 65.00	2.875 x 2.559
SRC3004	4-Drop Inline	141.00 x 65.00	5.551 x 2.559
SRC3306	6-Drop 30	101.00 x 78.00	3.976 x 3.071
SRC3308	8-Drop 30	135.00 x 79.00	5.315 x 3.110
SRC3312	12-Drop 30	135.00 x 105.00	5.315 x 4.134
SRC3316	16-Drop 30	135.00 x 135.00	5.315 x 5.315

6 Drop



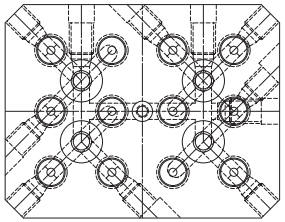
30mm pitch

8 Drop



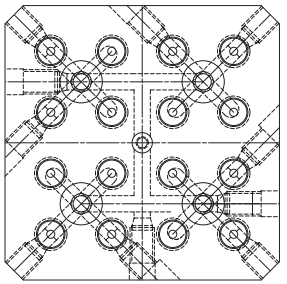
30mm pitch

12 Drop



30mm pitch

16 Drop

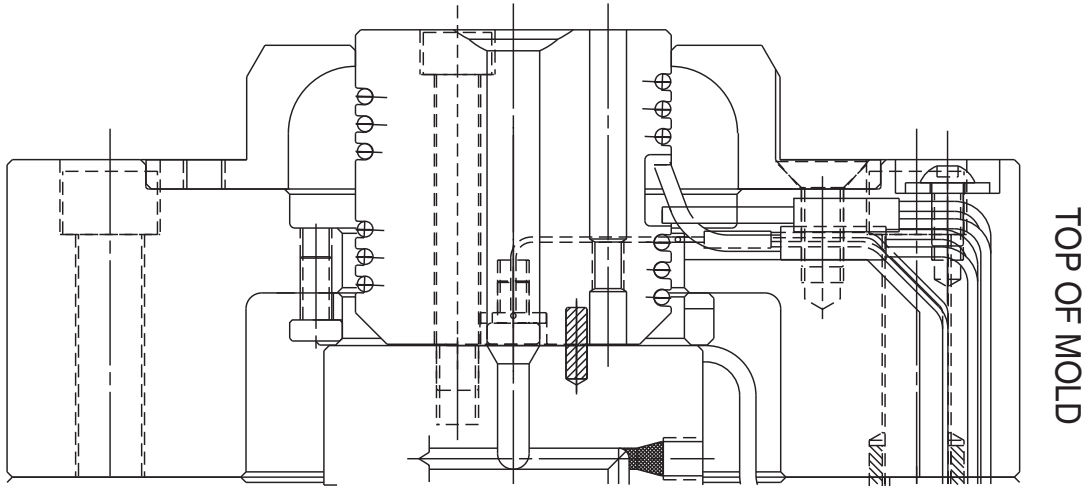


30mm pitch

Heated and Unheated MEN Options

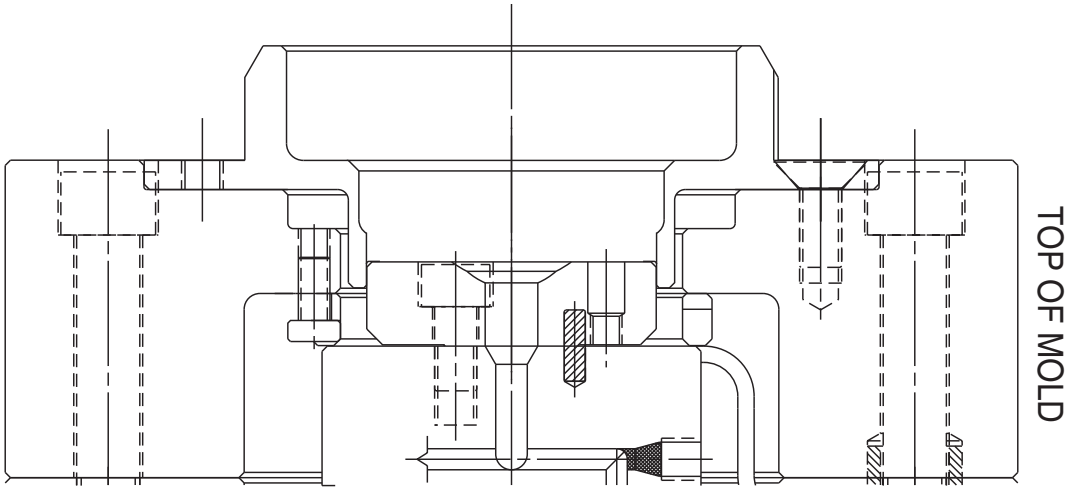
Heated MEN Design

Preferred for most applications.



Unheated MEN Design

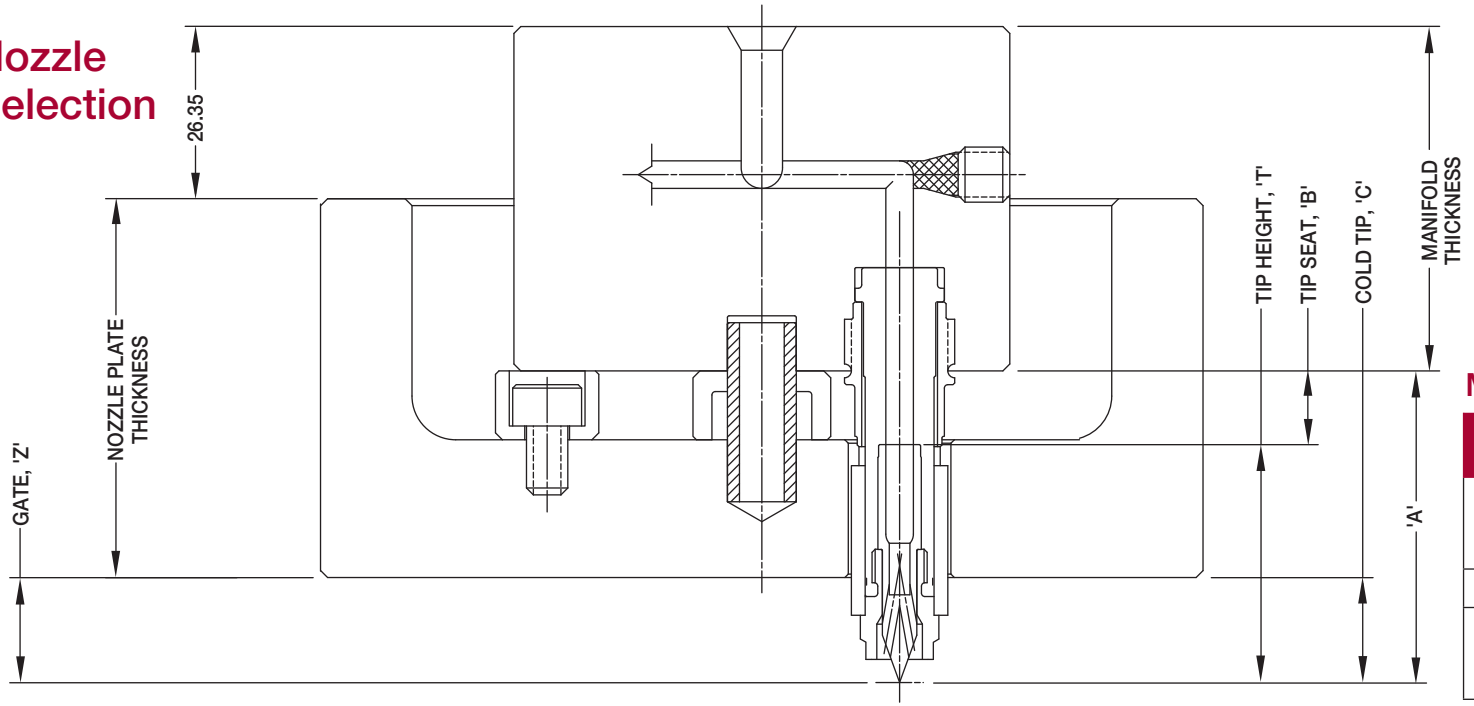
For use with commodity resins only; i.e., PE, PP, PS.



NOTE: See Fig. 1-1 for nozzle plate section view.

Metric Dimensions

Nozzle Selection



Manifold Thickness

Configuration	Manifold Thickness
All 2-Drops, 4-Drop 17x21, 4-Drop 30x30	40.00
6-Drop	45.00
4-drop Inline, 8-, 12-, and 16-Drop	50.00

Tip Information for Gating Styles

TIP Sub-Assembly Item No.	Gating Style	TIP CTE (10-6/degC)	"T" "T" = "A" - "B"	Applicable Stellar System
SXG5110	Standard Point Gate Tip Sub-Assembly	17.5	34.40	Standard
SXG5020	High Performance Point Gate Tip Sub-Assembly	5.5	34.40	High Performance
SXG5201	High Performance Thru Hole Tip Sub-Assembly	5.5	34.40	High Performance
SXT1040	Sprue Gate	12.8	34.40	Standard

"A" and "B" Chart for Gating Styles

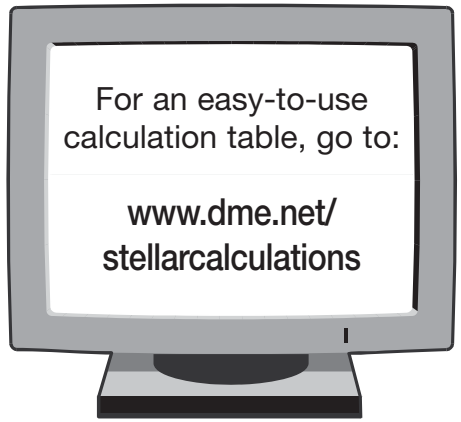
Nozzle Sub-Assembly Item No.	Point Gate "A"	Sprue Gate "A"	"B"	Notes
SXY0065 SXY0965	65.10	N/A	30.70	Standard coil heater; High performance heater
SXY0085 SXY0985	85.10	N/A	50.70	Standard coil heater; High performance heater
SXY0105 SXY0905	105.10	N/A	70.70	Standard coil heater; High performance heater
SXY0125 SXY0925	125.10	N/A	90.70	Standard coil heater; High performance heater
SXY0145 SXY0945	145.10	N/A	110.70	Standard coil heater; High performance heater
SXY8065	N/A	65.10	30.70	Standard coil heater with snap ring
SXY8085	N/A	85.10	50.70	Standard coil heater with snap ring
SXY8105	N/A	105.10	70.70	Standard coil heater with snap ring
SXY8125	N/A	125.10	90.70	Standard coil heater with snap ring
SXY8145	N/A	145.10	110.70	Standard coil heater with snap ring

NOTE: All units are in mm.

Metric Calculations

Equations

1. "Z" = "C" + Expansion
   NOTE: The minimum "Z" dimension is 13.00 for the point gate and sprue gate.
   The maximum "Z" dimension is 115.00 for the point gate and sprue gate.
2. Nozzle Plate Thickness = (MT – 26.35) + "A" – "C," thickness ≥ 43.65, 48.65 or 53.65
   (check nozzle plate machining detail).
3. Expansion = Delta T (°C) x [0.0000115 x (Manifold Thickness + "B") + CTE tip x "T"] –
   0.09 + 0.0002875 x [T mold (°C) – 20]
   NOTE: Valid for point gate tips. For sprue gate tips use the point gate nozzle plate thickness.
4. Upper Support Ring Gap = (Delta T (°C) x 0.0000115 x Manifold Thickness) – 0.03
   Where: CTE tip is the coefficient of thermal expansion of the tip
   Delta T(°C) = T melt – T mold (expressed in °C)
   Delta T(°C) = Delta T (°F) / 1.8
   "Z," "C," "B," "T," Upper Support Ring Gap, Expansion and Nozzle Plate Thickness
   are all expressed in mm.



Procedure and Notes

1. Calculate expansion
2. Calculate "C"
3. Calculate plate thickness
4. Calculate upper support ring gap

The calculations may need to be repeated in order to maintain the nozzle plate thickness requirement.
NOTE: Start with the smallest "A" dimension and increase "A" dimension as needed. This approach will generate a design with the minimum stack height.

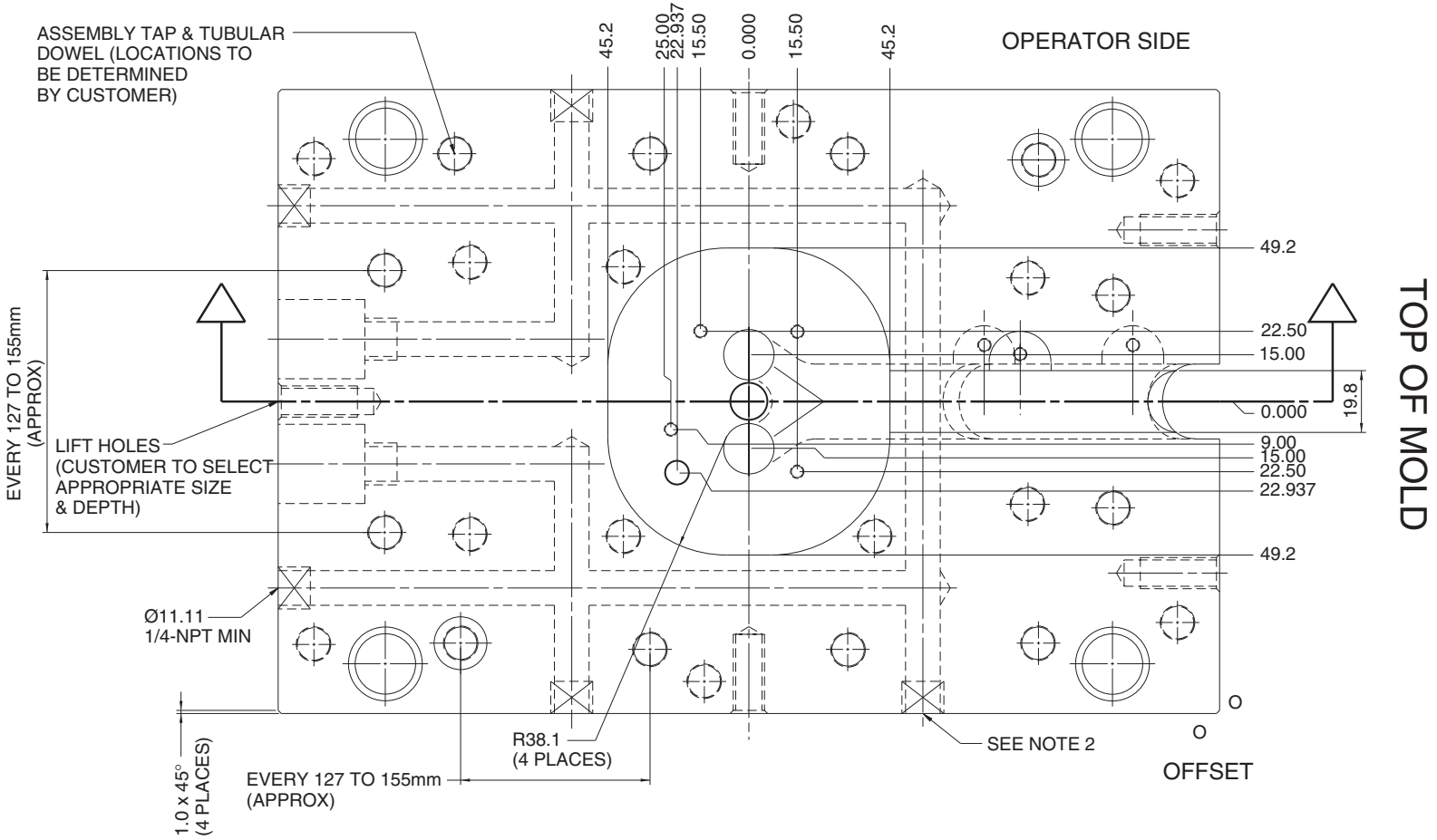
Design Suggestions

The most difficult area of design will be the layout of the wire channels in the nozzle plate. Please evaluate the wire channel depth and path carefully. Three possible scenarios (1 = simplest; 2 = more difficult; 3 = most difficult):

1. If the nozzle plate thickness is >54.65 with a 40.00 thick manifold [59.65 with a 45.00 and 64.65 with a 50.00 thick manifold), the wire channel will be 19.0 deep throughout its path.
2. If the nozzle plate thickness is 49.00 to 54.65 with a 40.00 thick manifold [54.00 to 59.65 with a 45.00 and 59.00 to 64.65 with a 50.00 thick manifold], the wire channel will be 19.0 deep throughout its path, but the wire channel cannot cross under the support pad taps because the screws will protrude into the wire channel.
3. If the nozzle plate thickness is 43.65 to <49.00 with a 40.00 thick manifold [48.65 to <54.00 with a 45.00 thick and 53.65 to <59.00 with a 50 thick manifold], the wire channel will be 12.7 deep underneath the manifold clearance pocket. The wire channel can be 19.0 deep only outside of the pocket. Also, the wire channel cannot cross under the support pad taps because the screws will protrude into the wire channel.

In order to avoid scenarios 2 and 3, choose the next longer "A" dimension, which will increase the stack height by approximately 20.00mm.

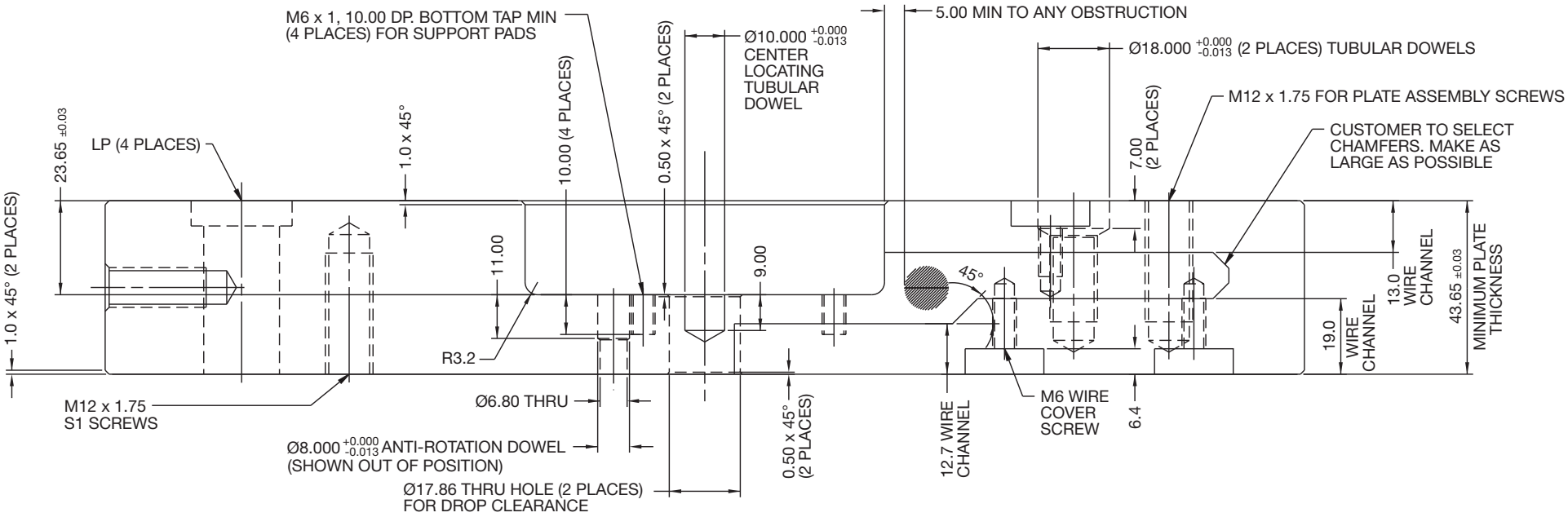
2-Drop (30 Pitch) – Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 200mm x 302mm mold shown.
2. If plate thickness is between 43.65 and 46.81, water line between heater channels must be made smaller to ensure 5.00 minimum condition.
3. For inch dimensions, see pages 74-137.

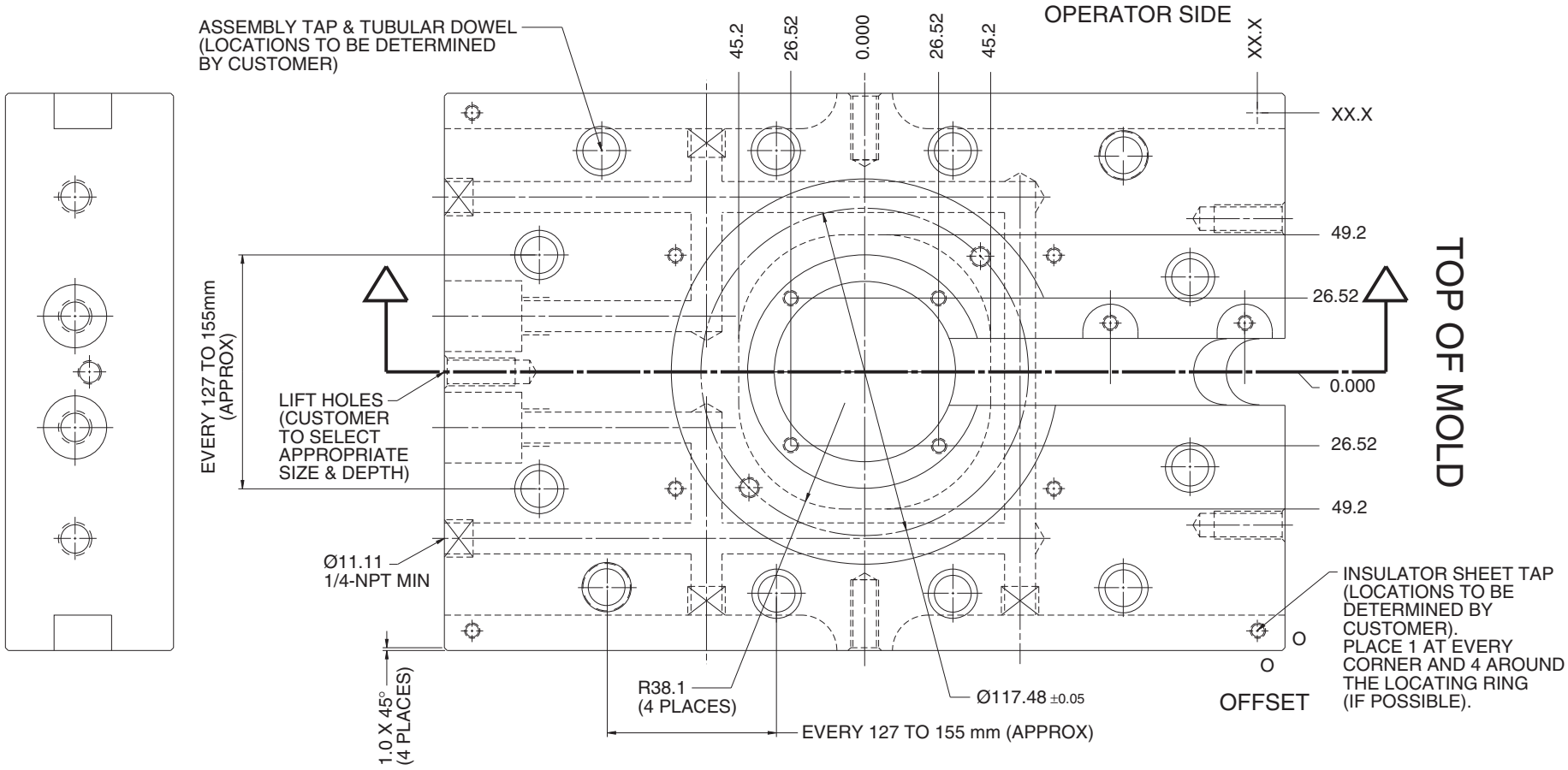
2-Drop (30 Pitch) – Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 19.0 deep except when plate thickness does not provide 6.35mm steel support underneath pocket. In that case, wire channel depth to be 12.7 deep, under the pocket and then chamfered (45°) to 19.0 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If plate thickness is between 43.65 and 46.81, water line between heater channels must be made smaller to ensure 5.00 minimum condition.
3. If the manifold is to be positioned 90% to that shown, please refer to MRC3002 manifold heater channel machining drawing on page 61 for the channel location. The four M6 taps and dowel must be rotated 90° also.
4. For inch dimensions, see pages 74-137.

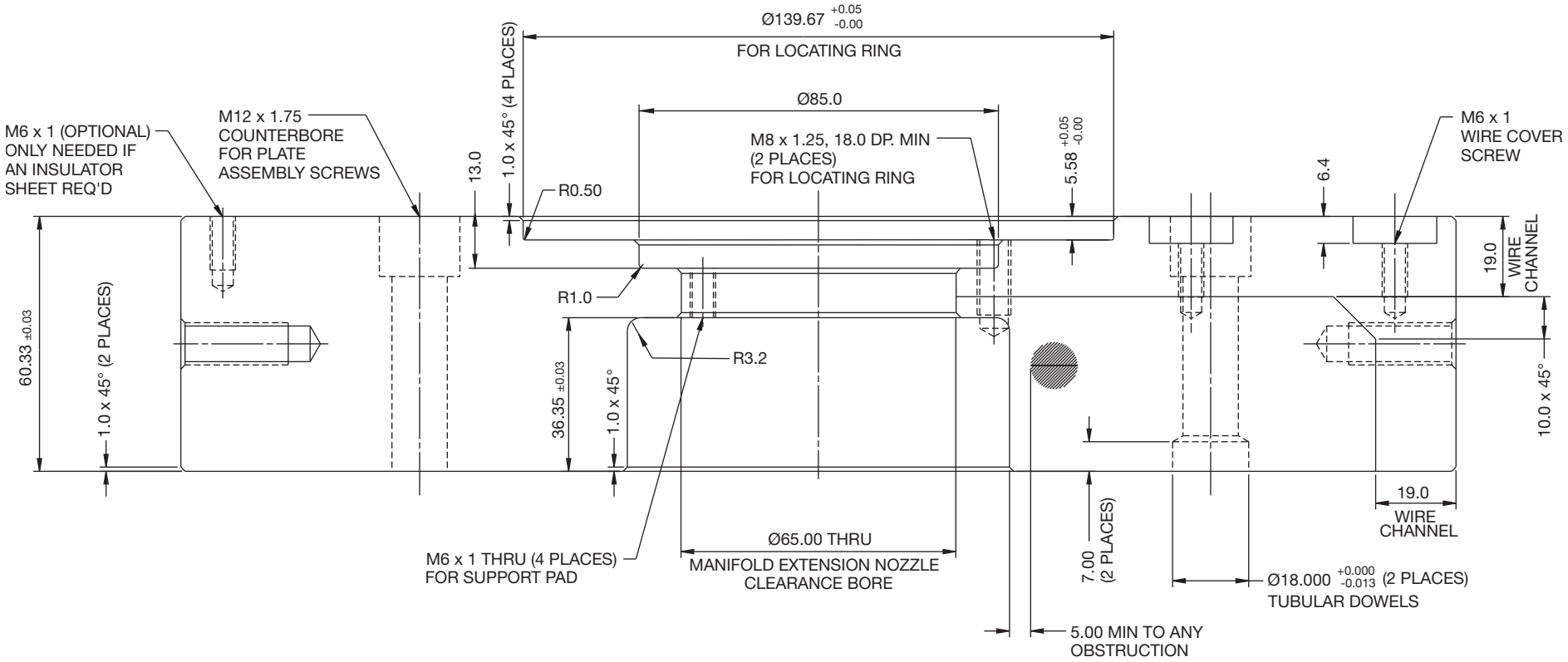
2-Drop (30 Pitch) – Manifold Retainer Plate Machining Detail



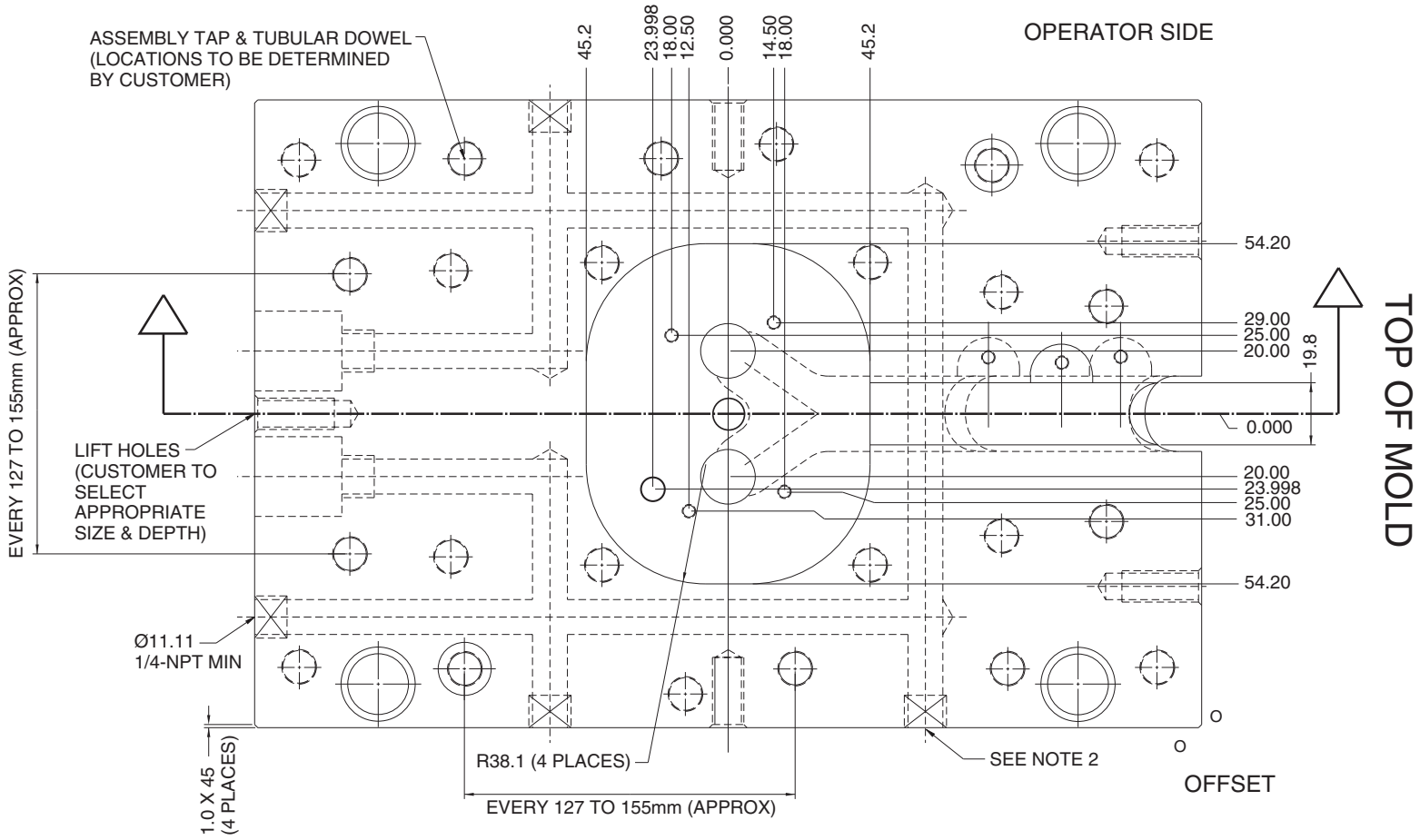
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 200mm x 302mm mold shown.
2. For inch dimensions, see pages 74-137.

2-Drop (30 Pitch) – Manifold Retainer Plate Machining Detail (continued)



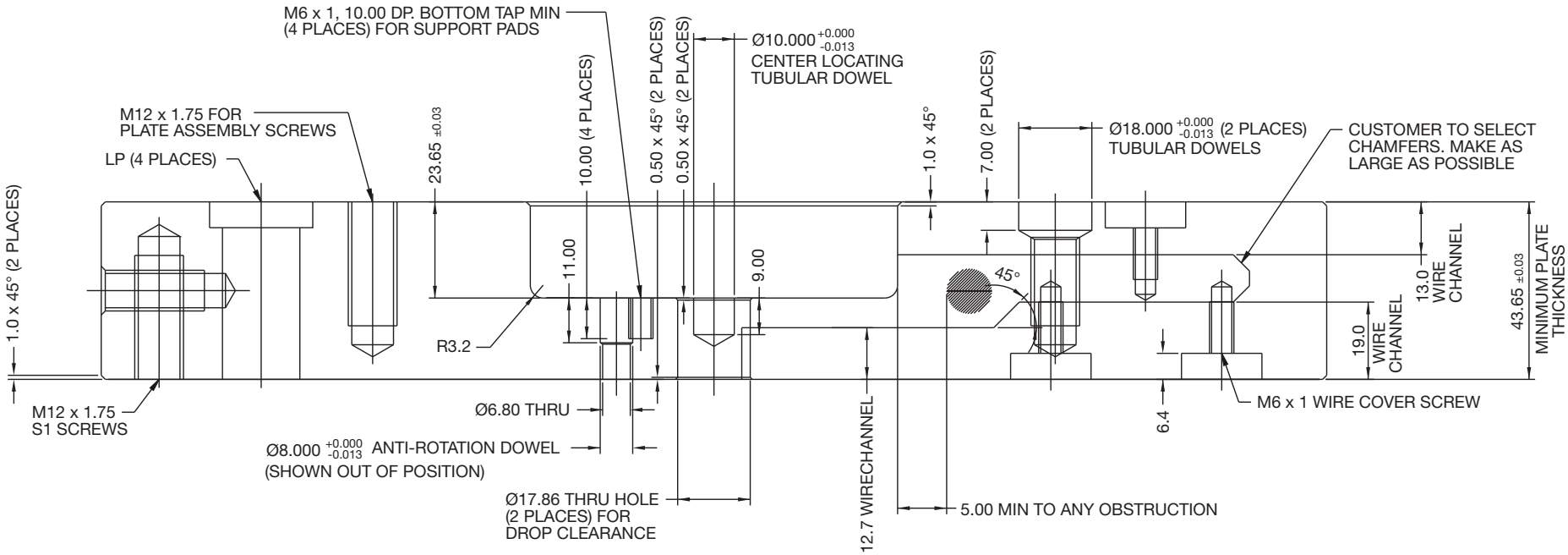
2-Drop (40 Pitch) – Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 200mm x 302mm mold shown.
2. If plate thickness is between 43.65 and 46.81, water line between heater channels must be made smaller to ensure 5.00 minimum condition.
3. For inch dimensions, see pages 74-137.

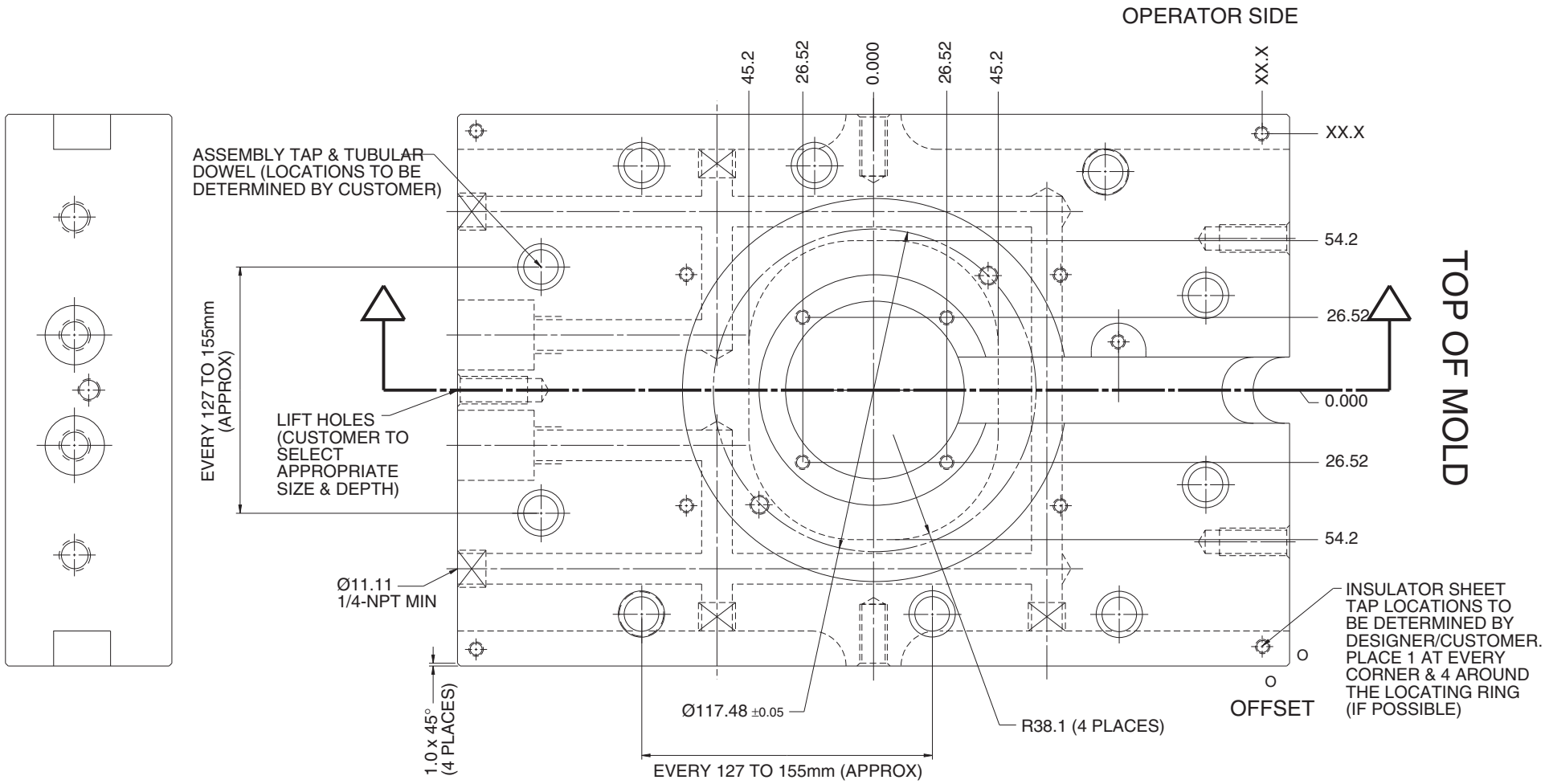
2-Drop (40 Pitch) – Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 19.0 deep except when plate thickness does not provide 6.35mm steel support underneath pocket. In that case, wire channel depth to be 12.7 deep, under the pocket and then chamfered (45°) to 19.0 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If plate thickness is between 43.65 and 46.81, water line between heater channels must be made smaller to ensure 5.00 minimum condition.
3. If the manifold is to be positioned 90% to that shown, please refer to MRC4002 manifold heater channel machining drawing on page 62 for the channel location. The four M6 taps and dowel must be rotated 90° also.
4. For inch dimensions, see pages 74-137.

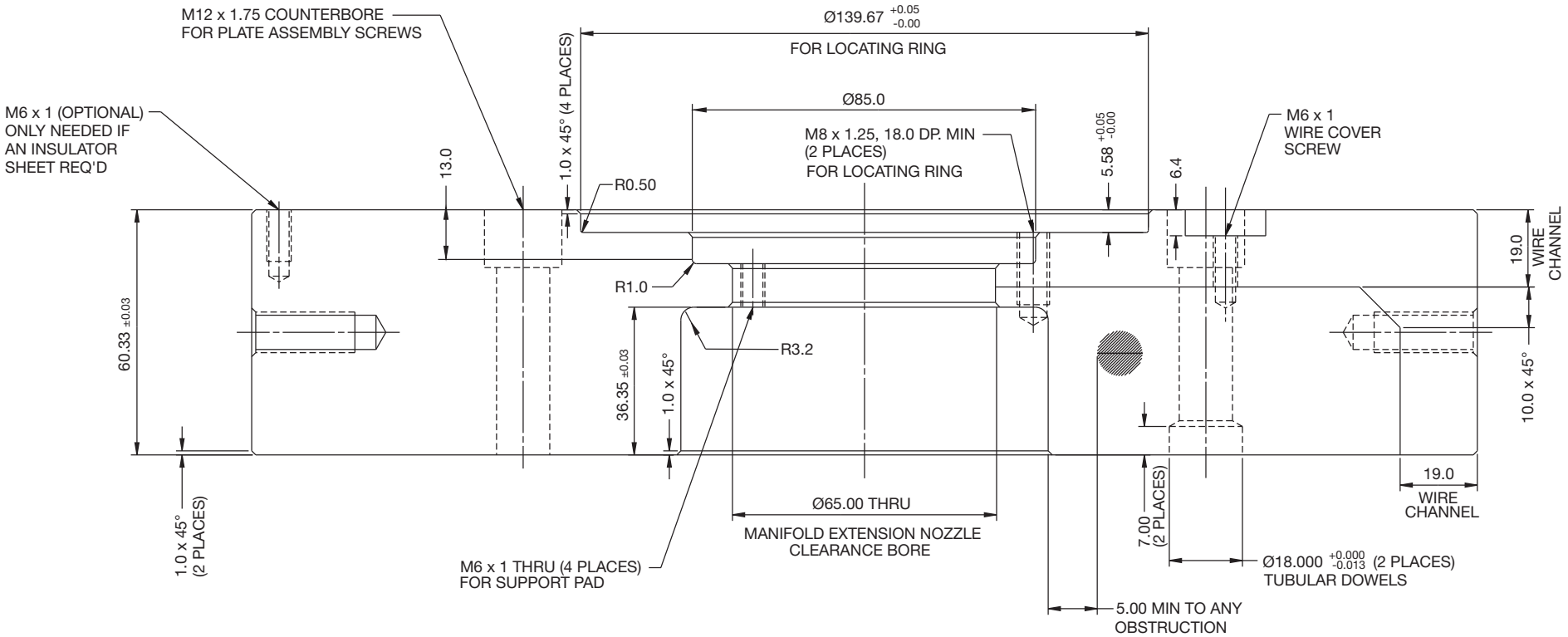
2-Drop (40 Pitch) – Manifold Retainer Plate Machining Detail



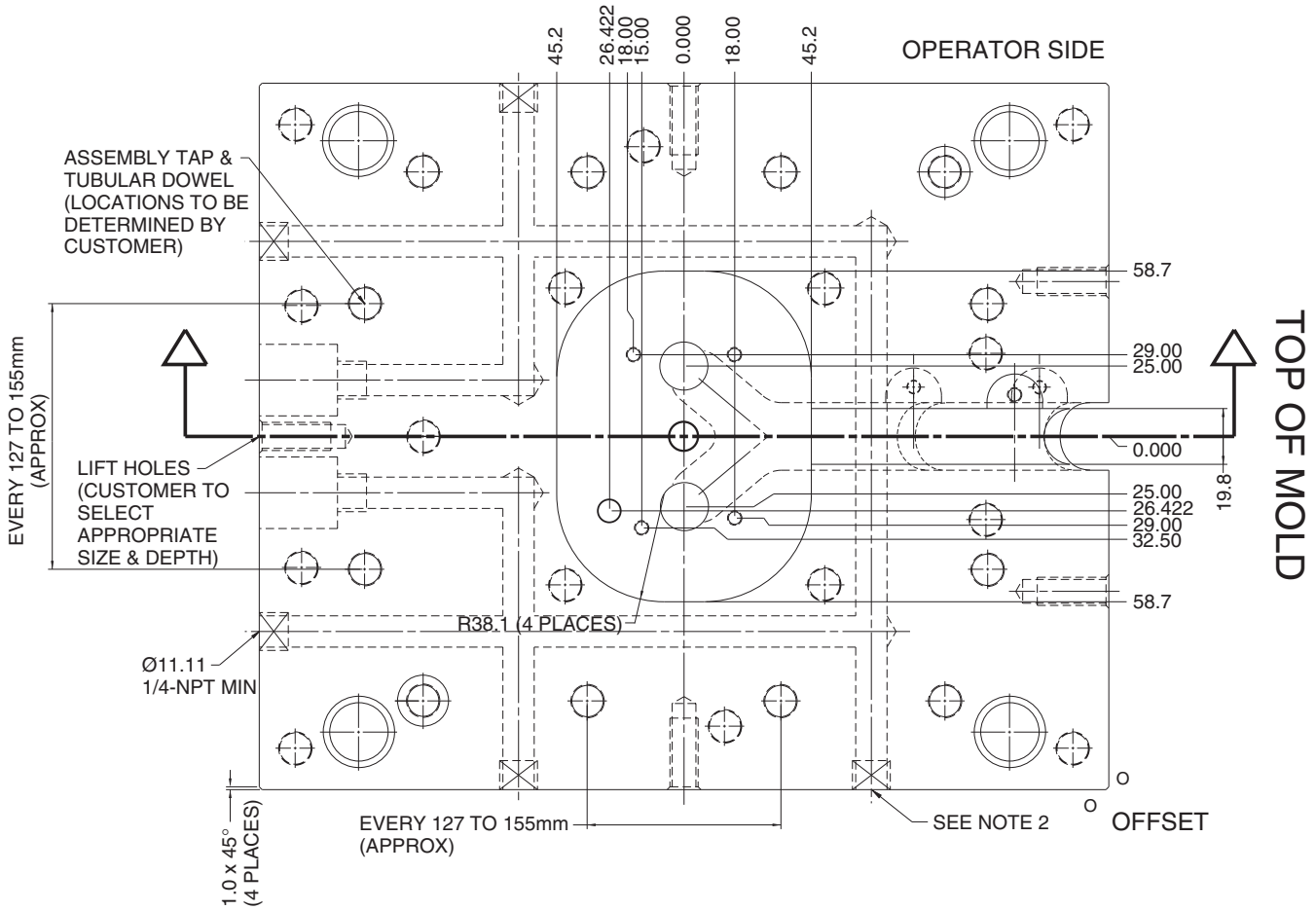
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 200mm x 302mm mold shown.
2. For inch dimensions, see pages 74-137.

2-Drop (40 Pitch) – Manifold Retainer Plate Machining Detail (continued)



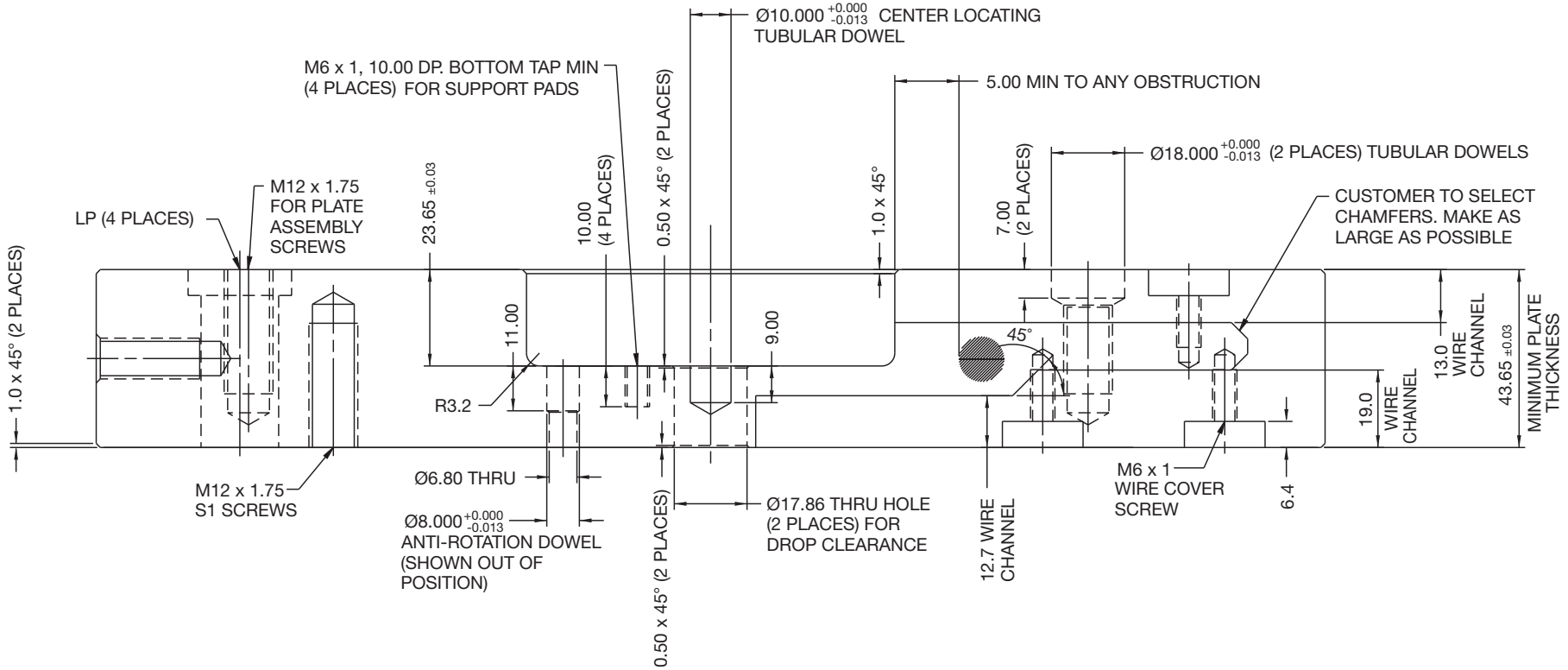
2-Drop (50 Pitch) – Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 200mm x 302mm mold shown.
2. If plate thickness is between 43.65 and 46.81, water line between heater channels must be made smaller to ensure 5.00 minimum condition.
3. For inch dimensions, see pages 74-137.

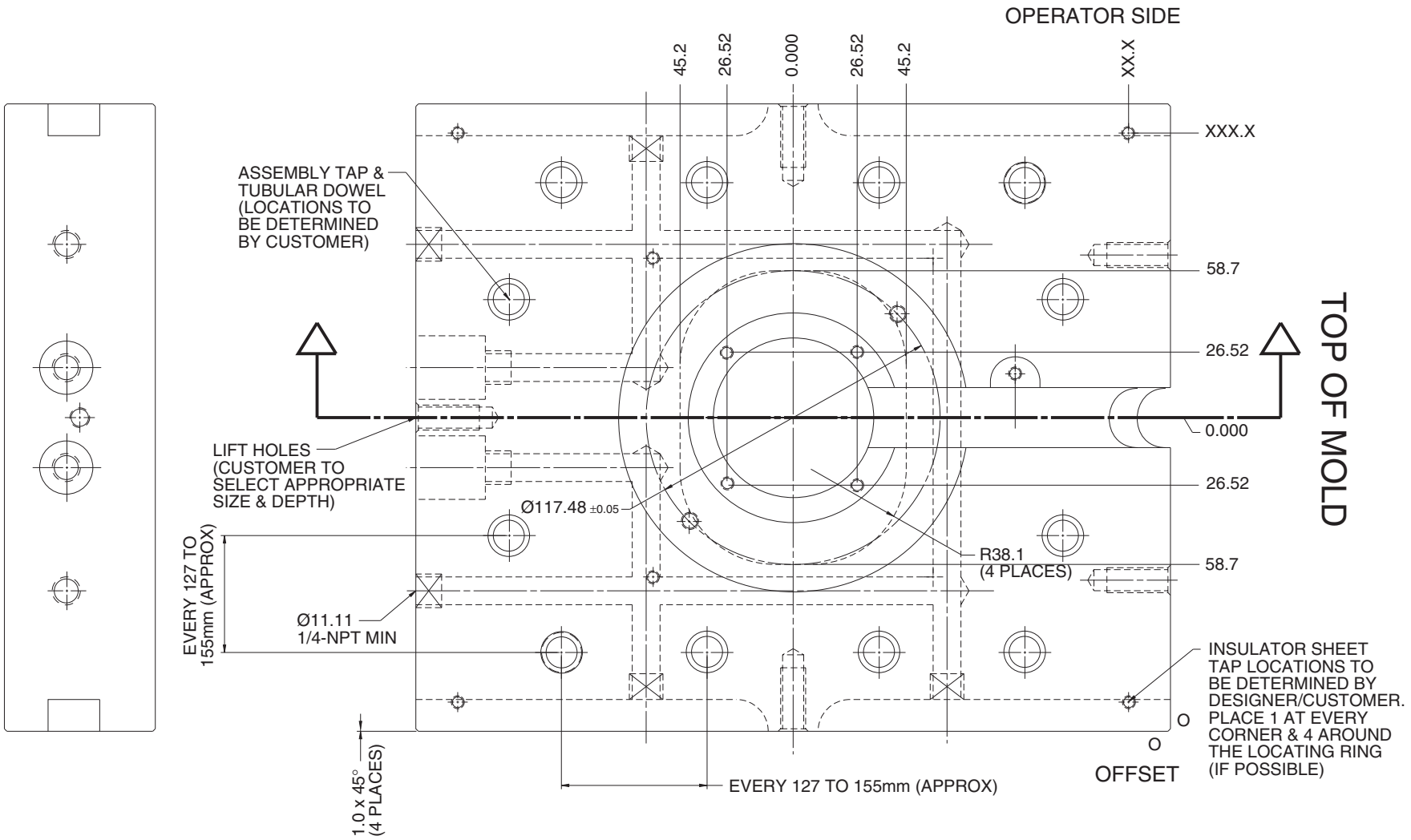
2-Drop (50 Pitch) – Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 19.0 deep except when plate thickness does not provide 6.35mm steel support underneath pocket. In that case, wire channel depth to be 12.7 deep, under the pocket and then chamfered (45°) to 19.0 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If plate thickness is between 43.65 and 46.81, water line between heater channels must be made smaller to ensure 5.00 minimum condition.
3. If the manifold is to be positioned 90% to that shown, please refer to MRC5002 manifold heater channel machining drawing on page 63 for the channel location. The four M6 taps and dowel must be rotated 90° also.
4. For inch dimensions, see pages 74-137.

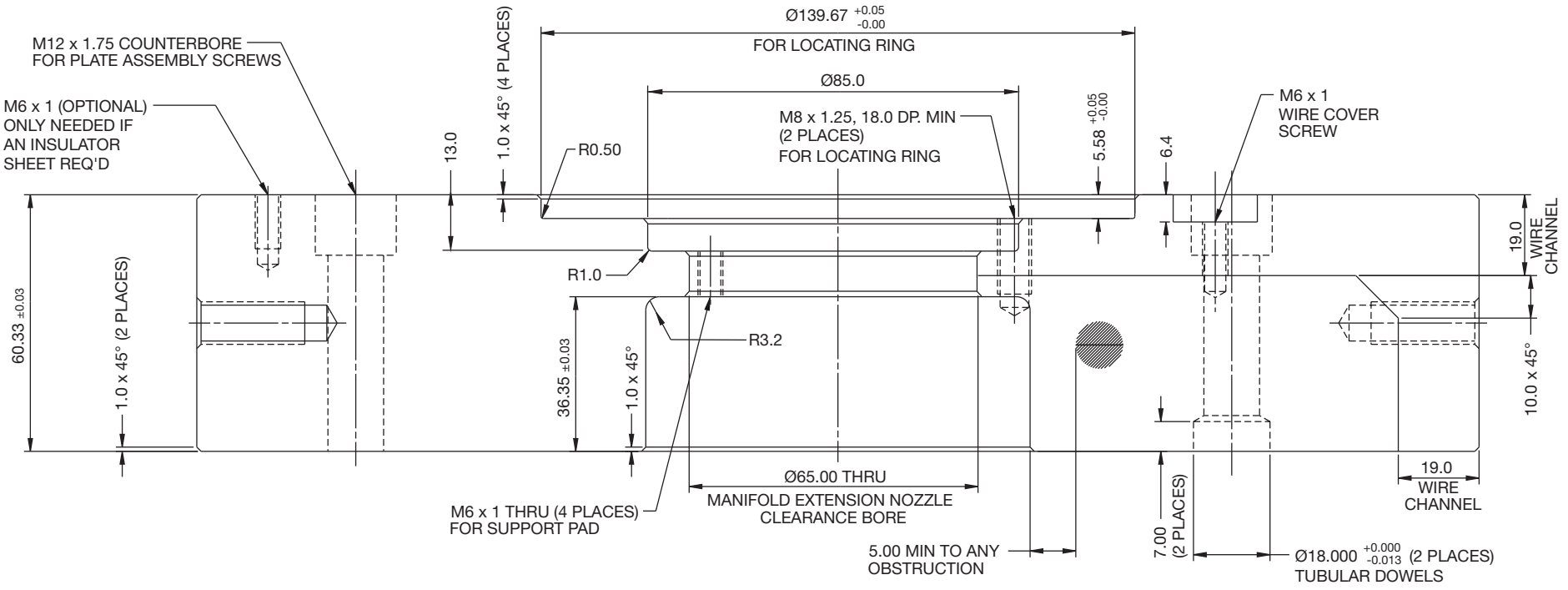
2-Drop (50 Pitch) – Manifold Retainer Plate Machining Detail



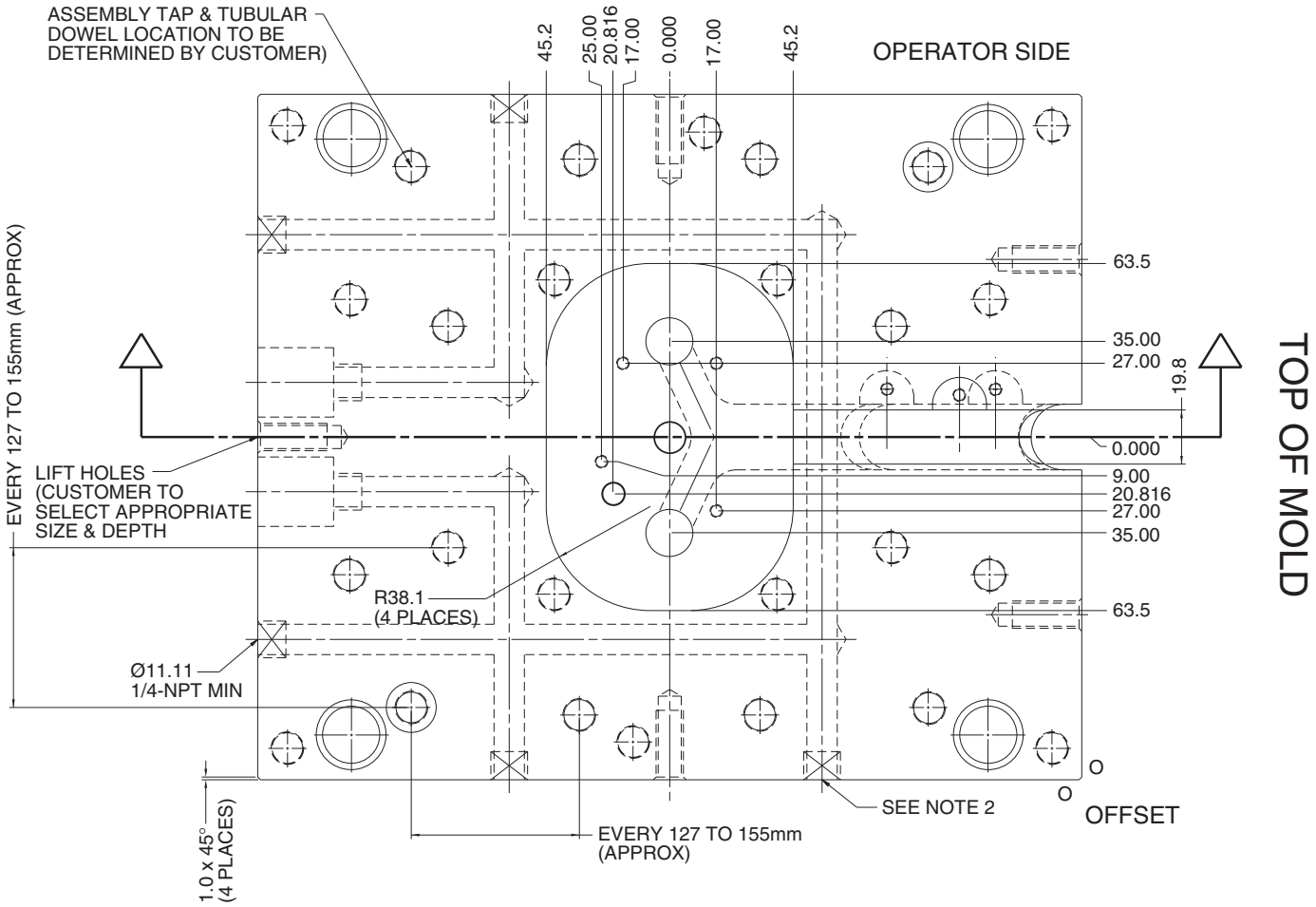
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 200mm x 302mm mold shown.
2. For inch dimensions, see pages 74-137.

2-Drop (50 Pitch) – Manifold Retainer Plate Machining Detail (continued)



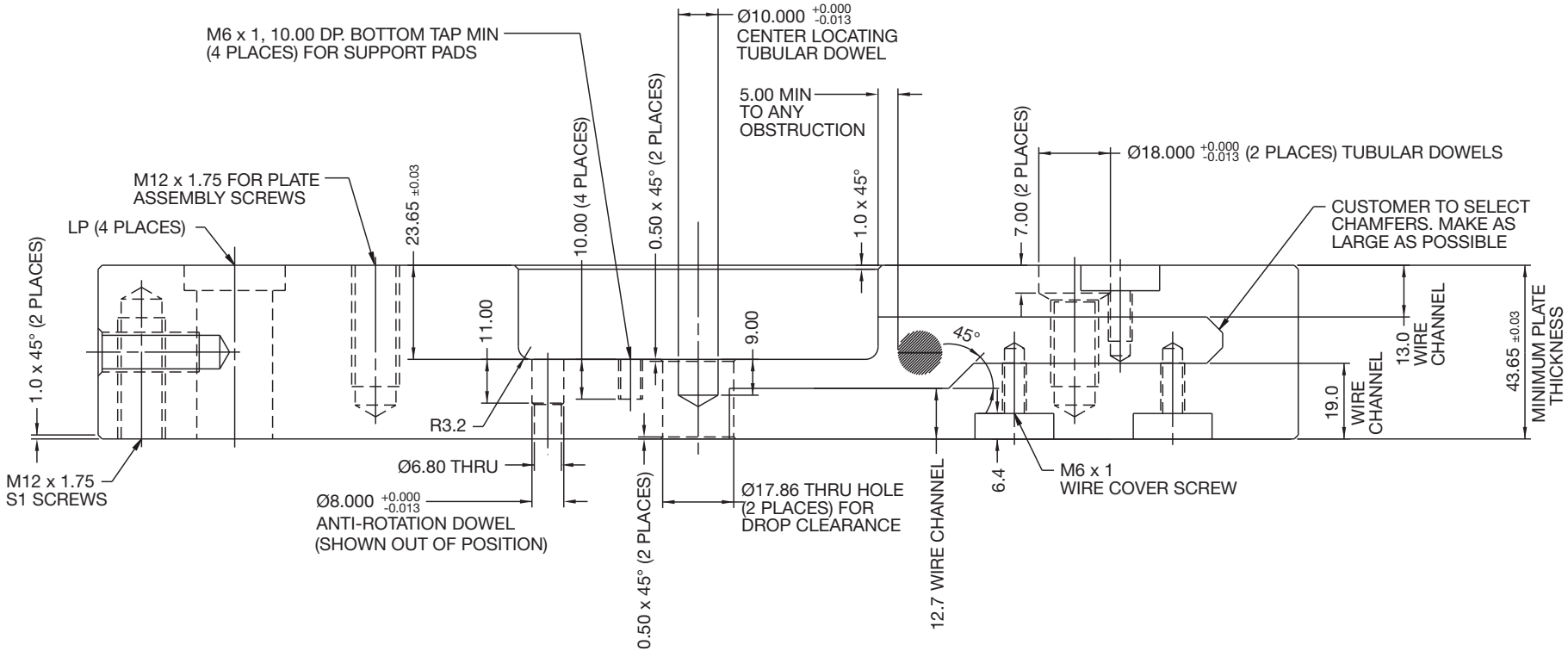
2-Drop (70 Pitch) – Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 200mm x 302mm mold shown.
2. If plate thickness is between 43.65 and 46.81, water line between heater channels must be made smaller to ensure 5.00 minimum condition.
3. For inch dimensions, see pages 74-137.

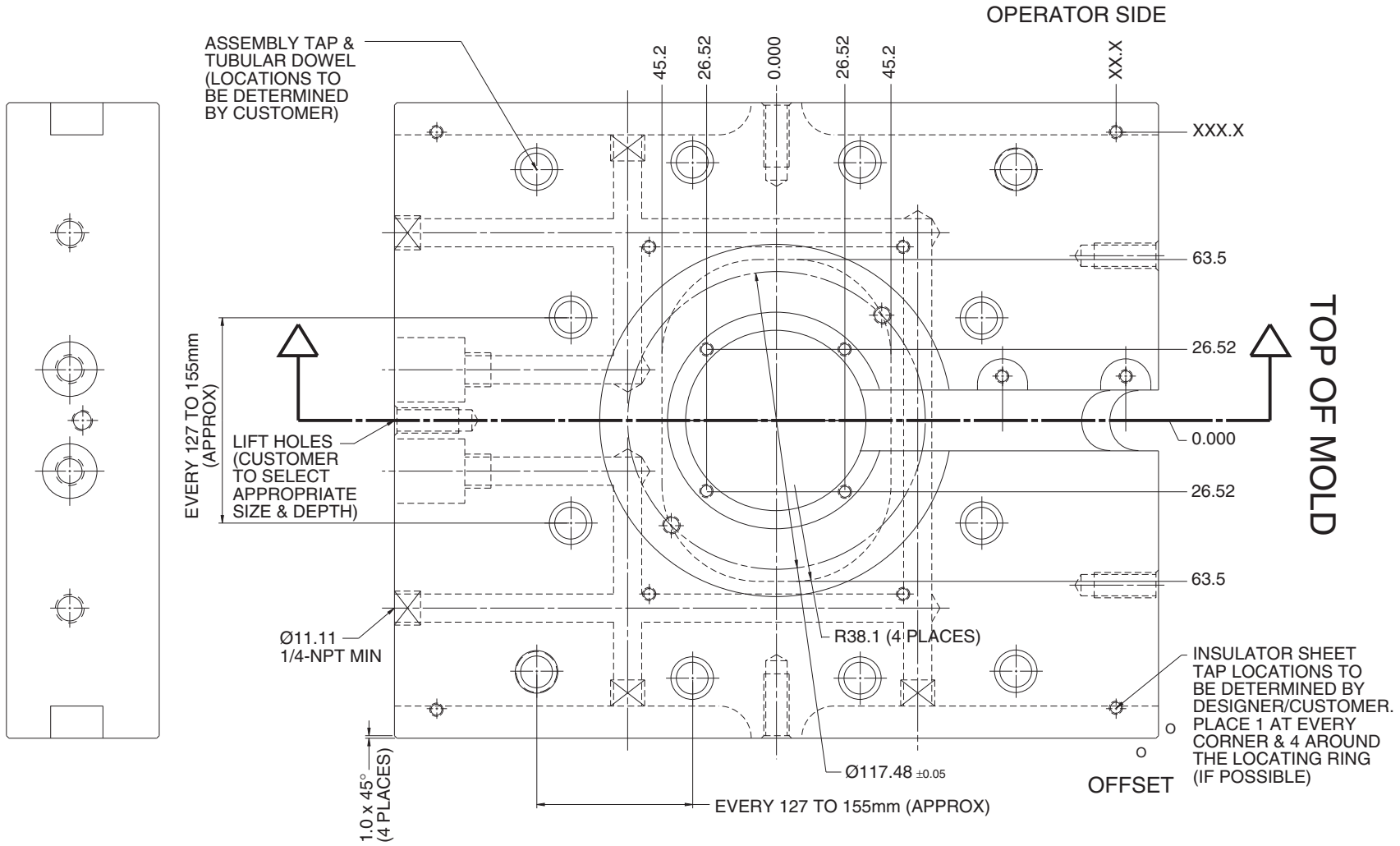
2-Drop (70 Pitch) – Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 19.0 deep except when plate thickness does not provide 6.35mm steel support underneath pocket. In that case, wire channel depth to be 12.7 deep, under the pocket and then chamfered (45°) to 19.0 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If plate thickness is between 43.65 and 46.81, water line between heater channels must be made smaller to ensure 5.00 minimum condition.
3. If the manifold is to be positioned 90% to that shown, please refer to MRC7002 manifold heater channel machining drawing on page 64 for the channel location. The four M6 taps and dowel must be rotated 90° also.
4. For inch dimensions, see pages 74-137.

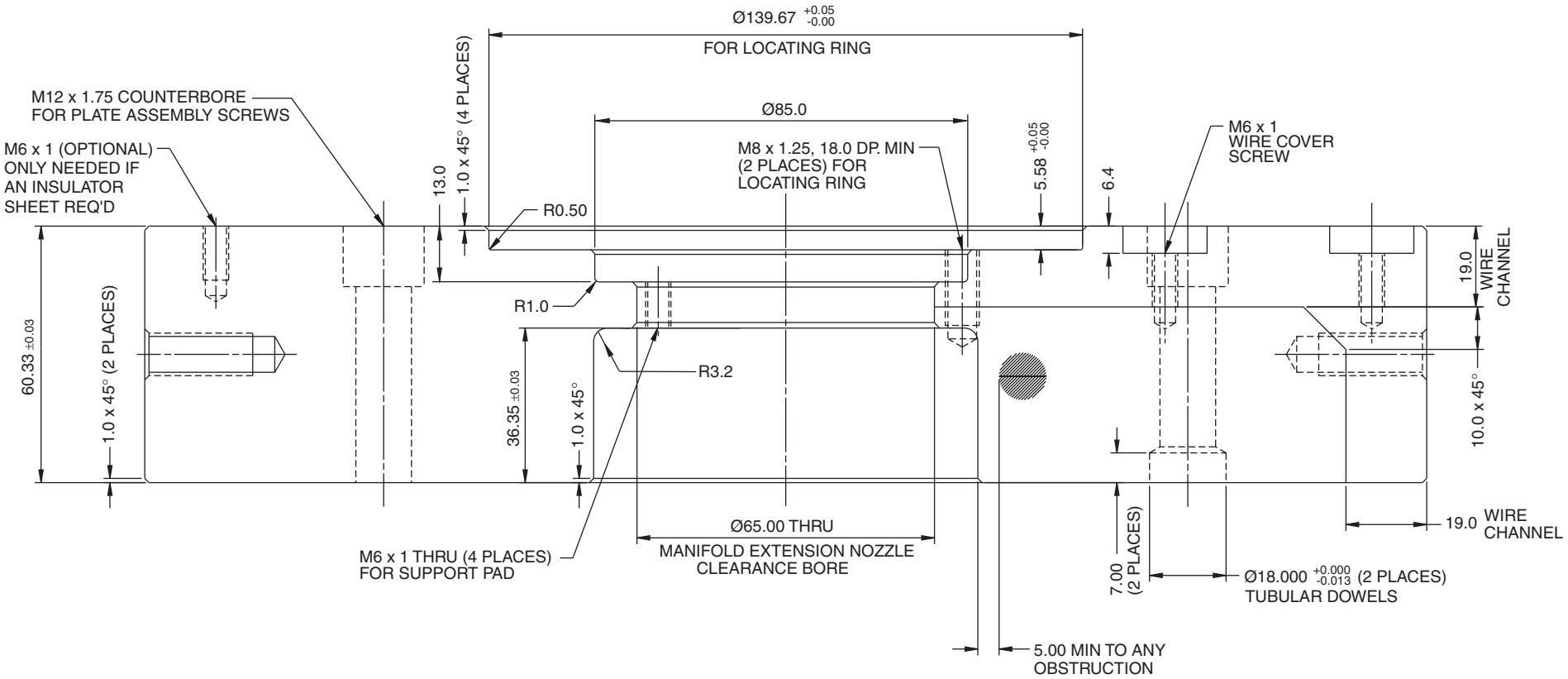
2-Drop (70 Pitch) – Manifold Retainer Plate Machining Detail



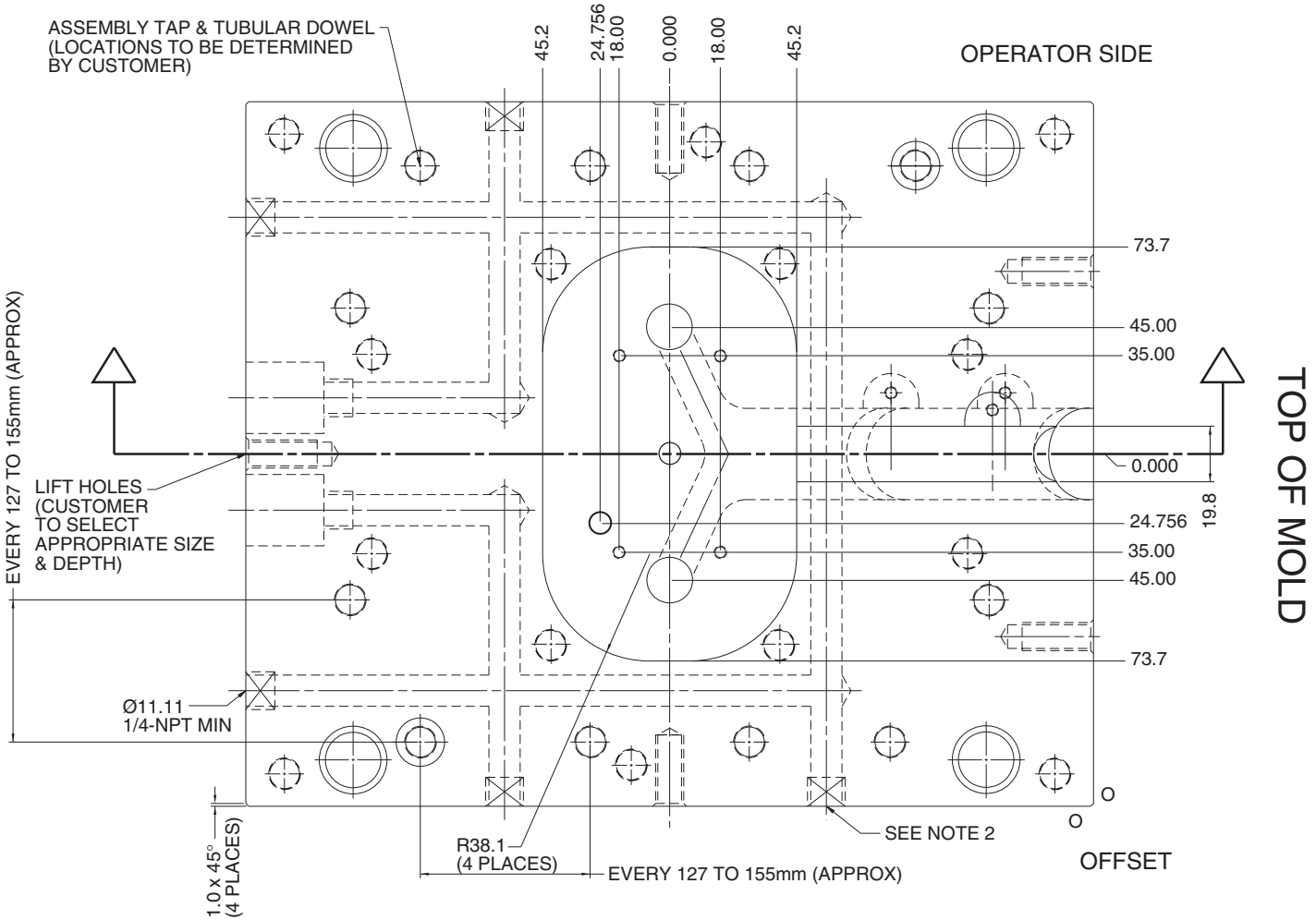
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 200mm x 302mm mold shown.
2. For inch dimensions, see pages 74-137.

2-Drop (70 Pitch) – Manifold Retainer Plate Machining Detail (continued)



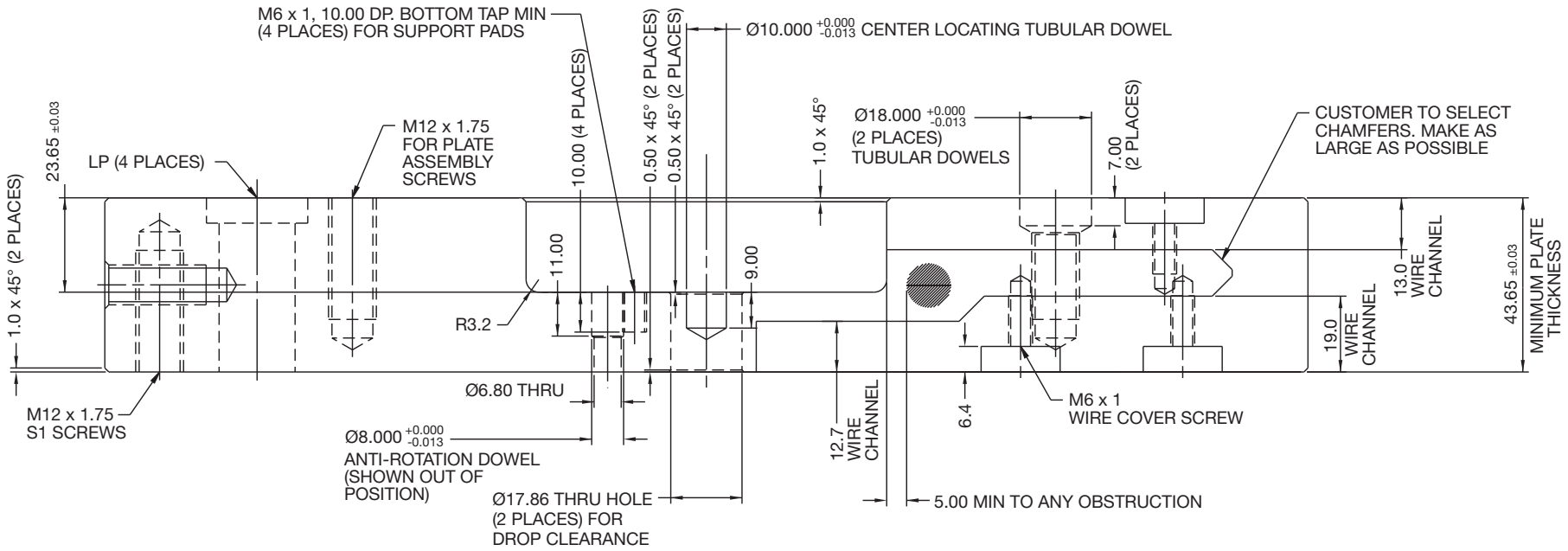
2-Drop (90 Pitch) – Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 200mm x 302mm mold shown.
2. If plate thickness is between 43.65 and 46.81, water line between heater channels must be made smaller to ensure 5.00 minimum condition.
3. For inch dimensions, see pages 74-137.

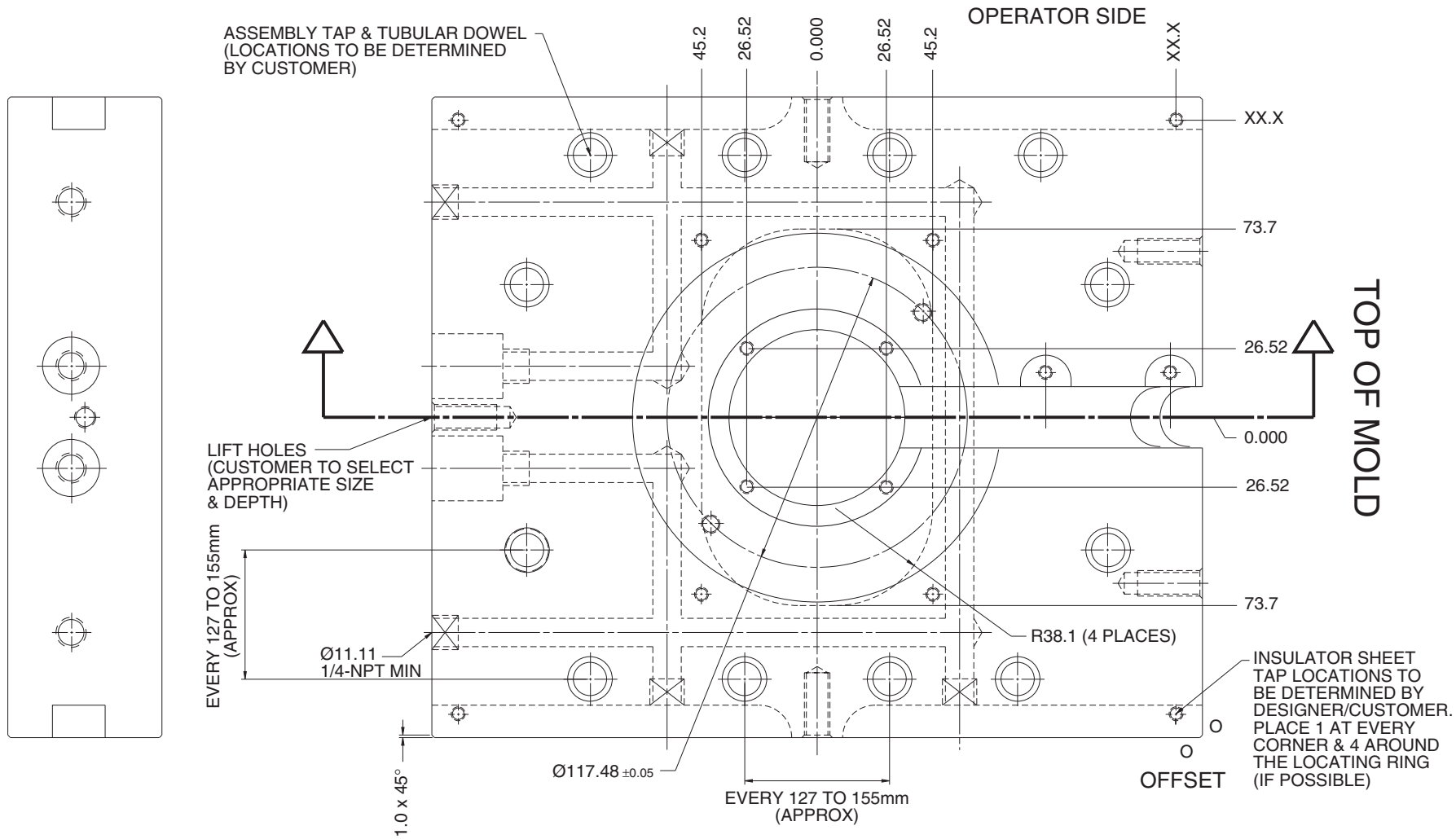
2-Drop (90 Pitch) – Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 19.0 deep except when plate thickness does not provide 6.35mm steel support underneath pocket. In that case, wire channel depth to be 12.7 deep, under the pocket and then chamfered (45°) to 19.0 deep outside the pocket.
   CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If plate thickness is between 43.65 and 46.81, water line between heater channels must be made smaller to ensure 5.00 minimum condition.
3. If the manifold is to be positioned 90% to that shown, please refer to MRC9002 manifold heater channel machining drawing on page 65 for the channel location. The four M6 taps and dowel must be rotated 90° also.
4. For inch dimensions, see pages 74-137.

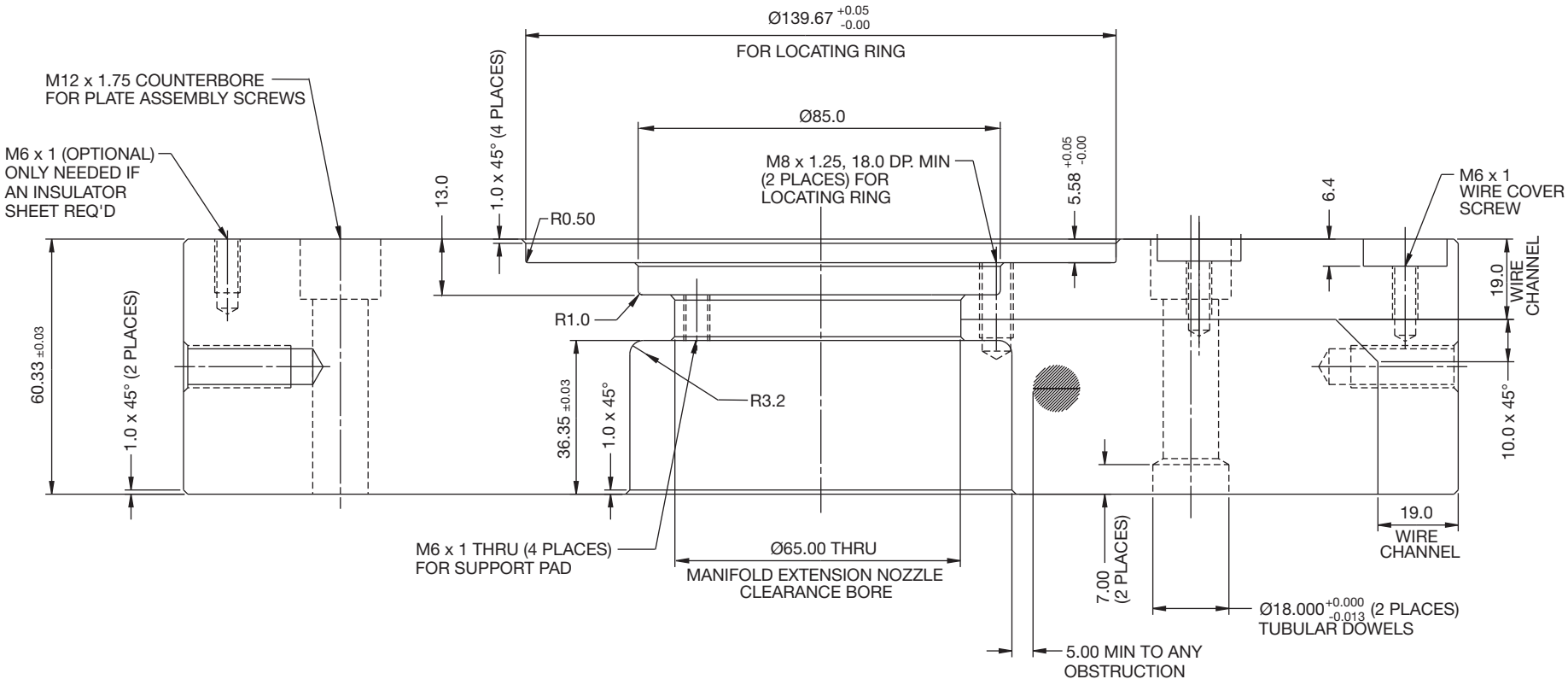
2-Drop (90 Pitch) – Manifold Retainer Plate Machining Detail



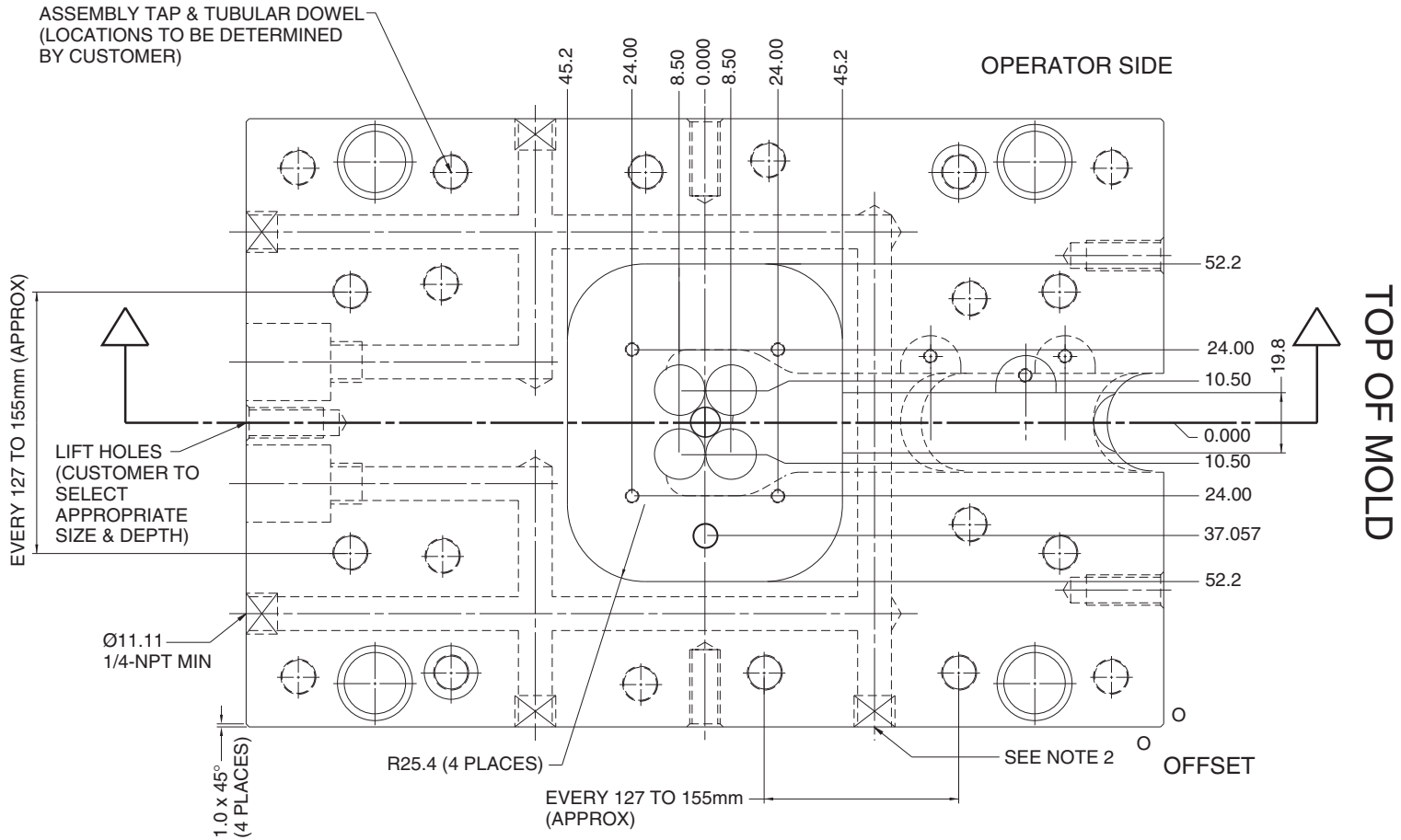
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 200mm x 302mm mold shown.
2. For inch dimensions, see pages 74-137.

2-Drop (90 Pitch) – Manifold Retainer Plate Machining Detail (continued)



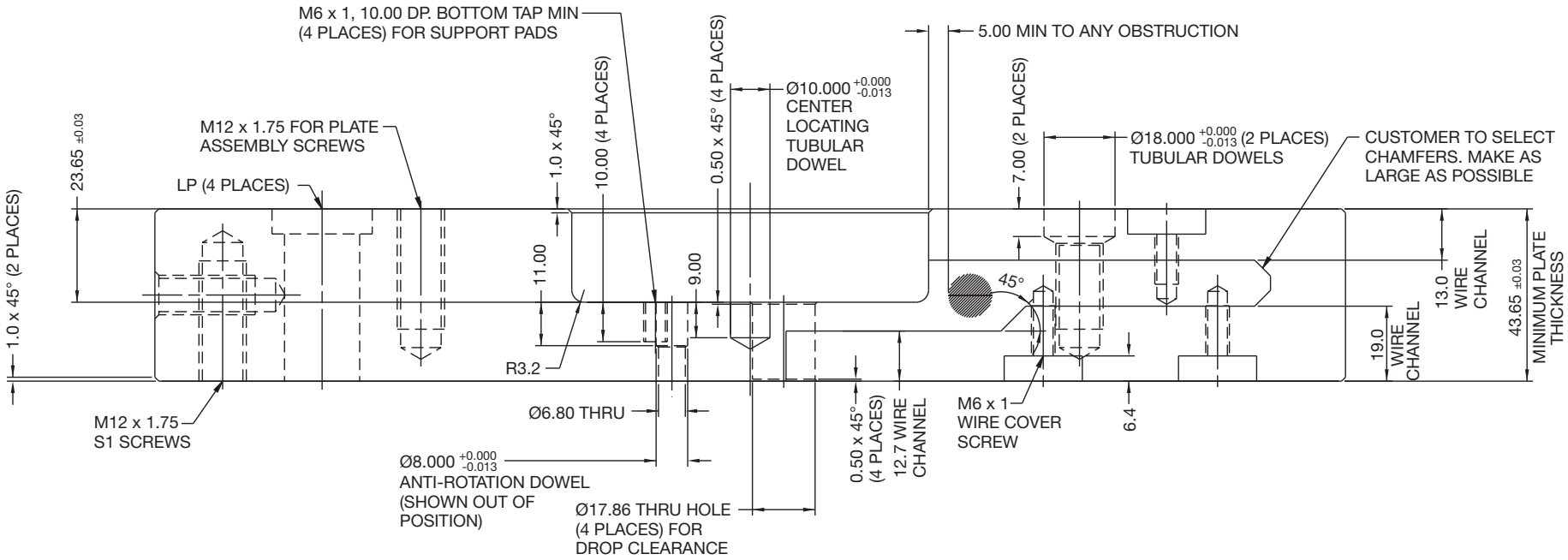
4 Drop (17x21 Pitch) — Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 200mm x 302mm mold shown.
2. If plate thickness is between 43.65 and 46.81, water line between heater channels must be made smaller to ensure 5.00 minimum condition.
3. For inch dimensions, see pages 74-137.

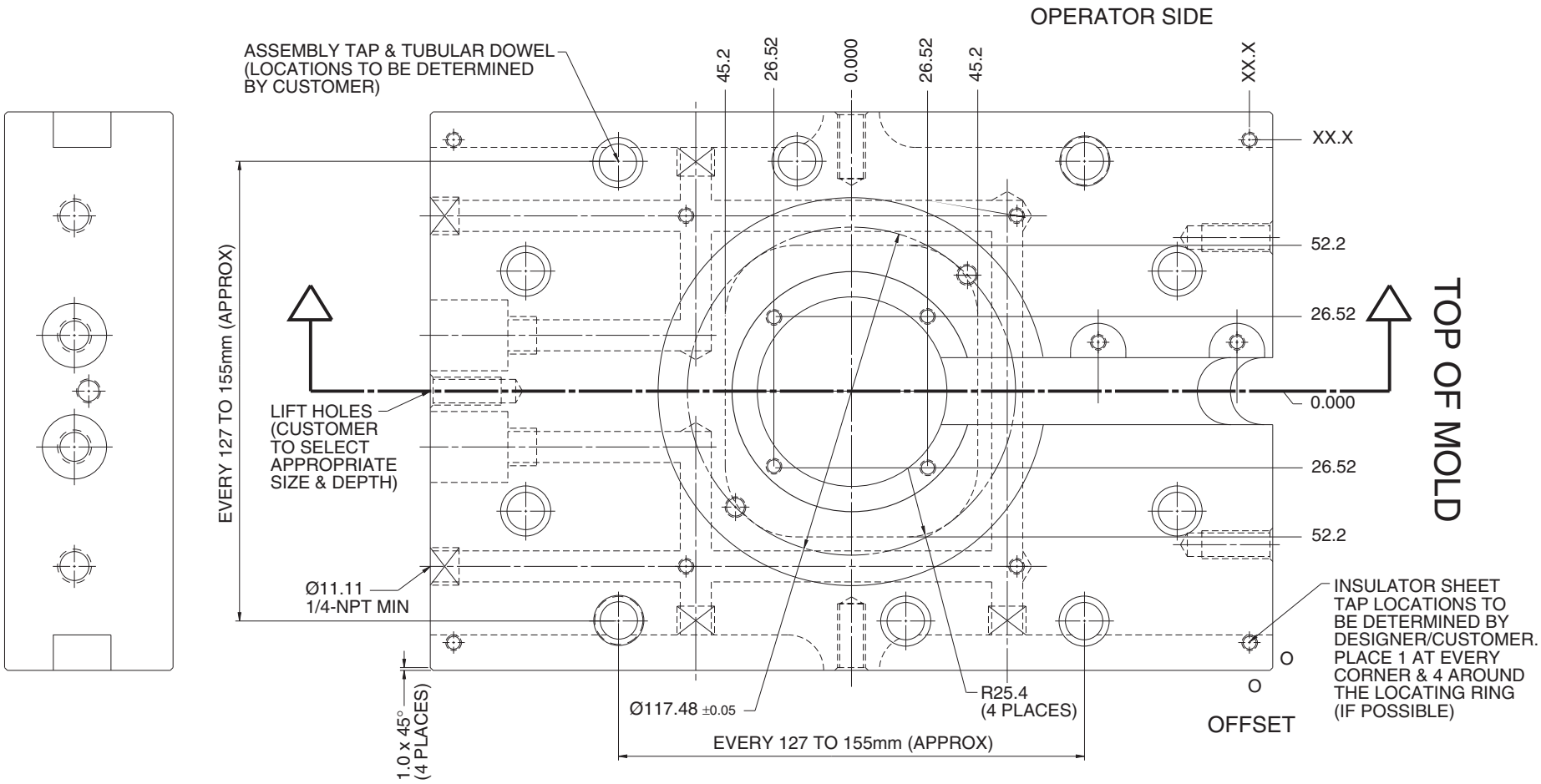
4 Drop (17x21 Pitch) — Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 19.0 deep except when plate thickness does not provide 6.35mm steel support underneath pocket. In that case, wire channel depth to be 12.7 deep, under the pocket and then chamfered (45°) to 19.0 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If plate thickness is between 43.65 and 46.81, water line between heater channels must be made smaller to ensure 5.00 minimum condition.
3. If the manifold is to be positioned 90% to that shown, please refer to MRC0004 manifold heater channel machining drawing on page 66 for the channel location. The four M6 taps and dowel must be rotated 90° also.
4. For inch dimensions, see pages 74-137.

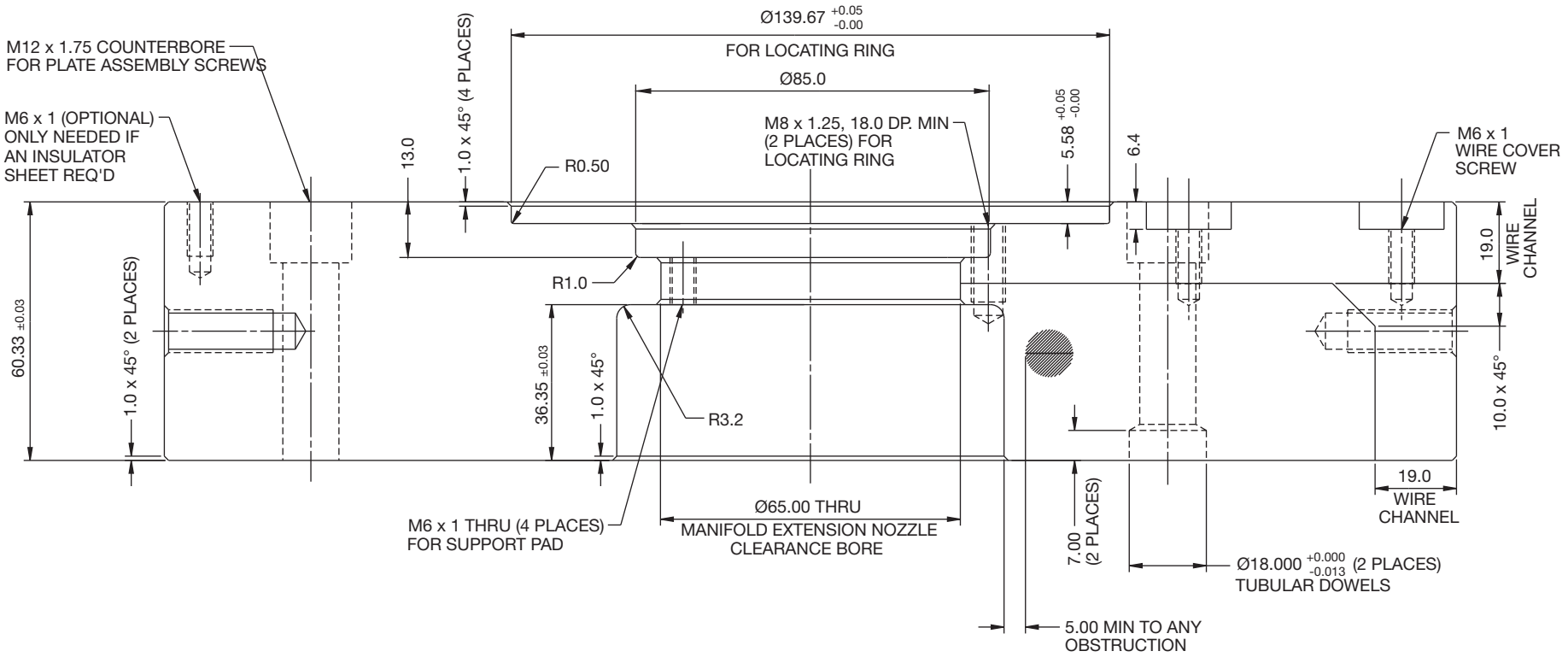
4 Drop (17x21 Pitch) — Manifold Retainer Plate Machining Detail



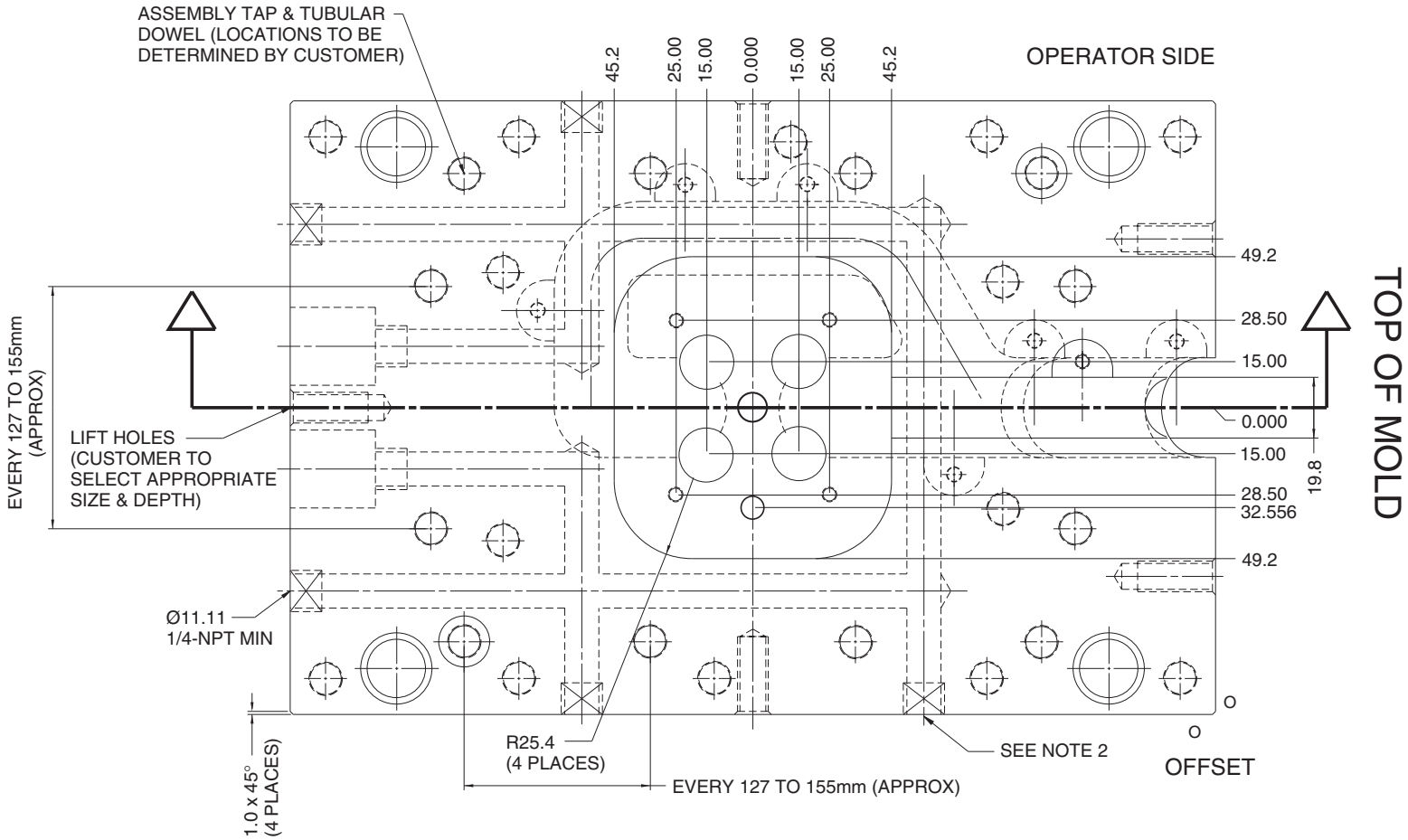
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 200mm x 302mm mold shown.
2. For inch dimensions, see pages 74-137.

4 Drop (17x21 Pitch) — Manifold Retainer Plate Machining Detail (continued)



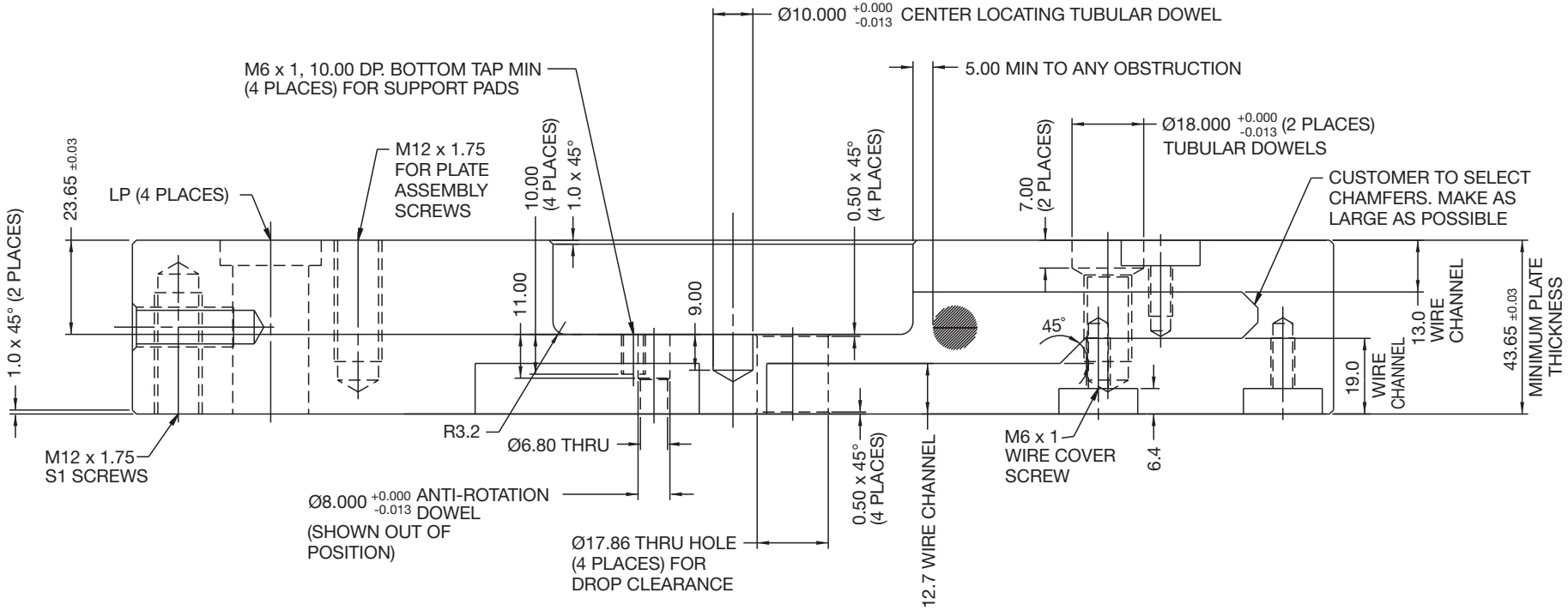
4 Drop (30x30 Pitch) — Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 200mm x 302mm mold shown.
2. If plate thickness is between 43.65 and 46.81, water line between heater channels must be made smaller to ensure 5.00 minimum condition.
3. For inch dimensions, see pages 74-137.

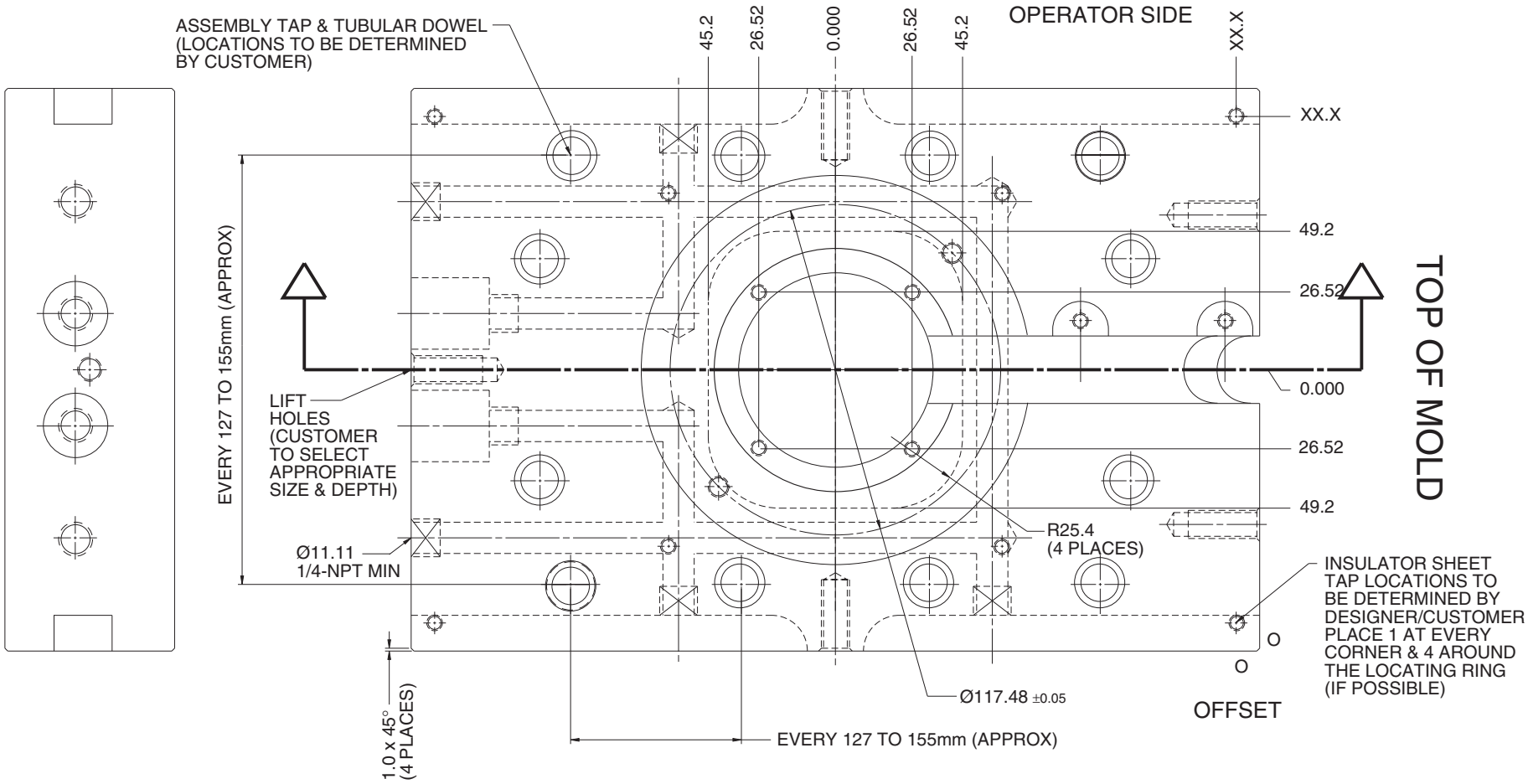
4 Drop (30x30 Pitch) — Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 19.0 deep except when plate thickness does not provide 6.35mm steel support underneath pocket. In that case, wire channel depth to be 12.7 deep, under the pocket and then chamfered (45°) to 19.0 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If plate thickness is between 43.65 and 46.81, water line between heater channels must be made smaller to ensure 5.00 minimum condition.
3. If the manifold is to be positioned 90% to that shown, please refer to MRC3304 manifold heater channel machining drawing on page 67 for the channel location. The four M6 taps and dowel must be rotated 90° also.
4. For inch dimensions, see pages 74-137.

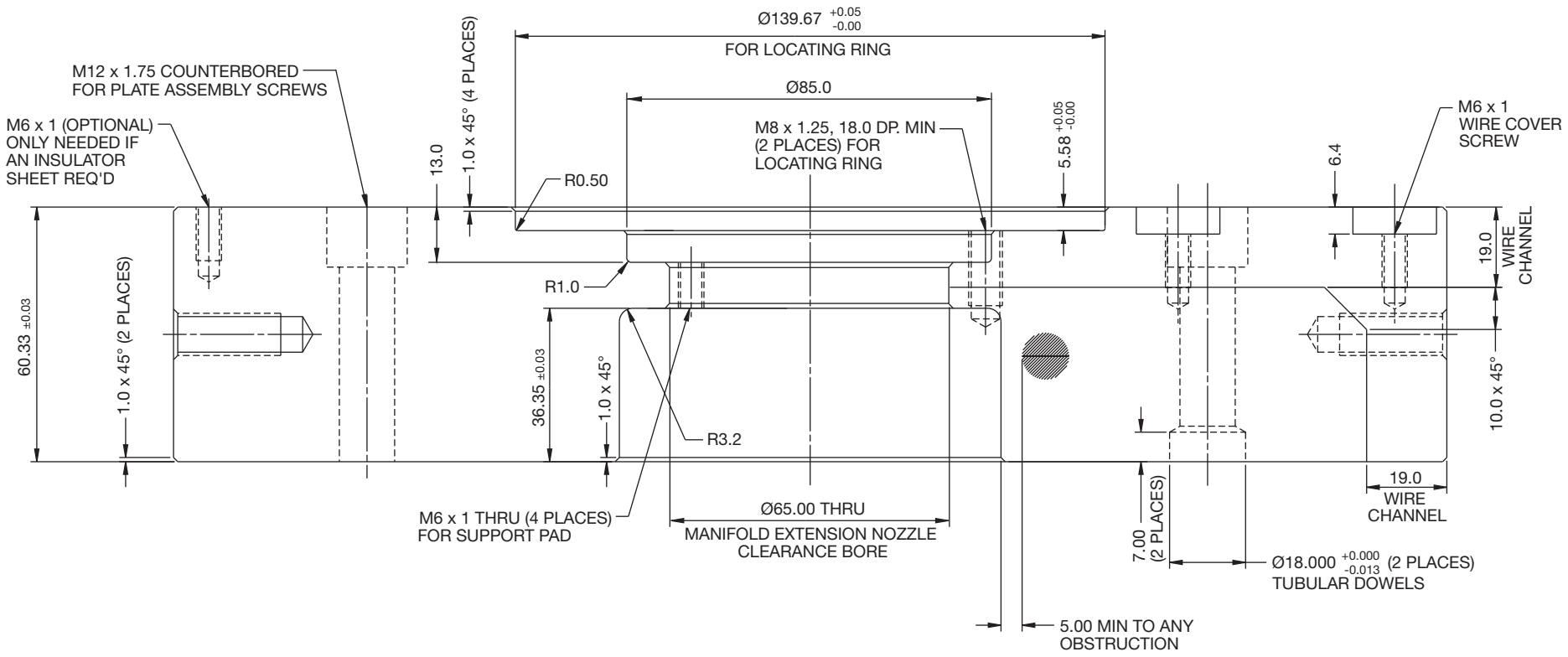
4 Drop (30x30 Pitch) — Manifold Retainer Plate Machining Detail



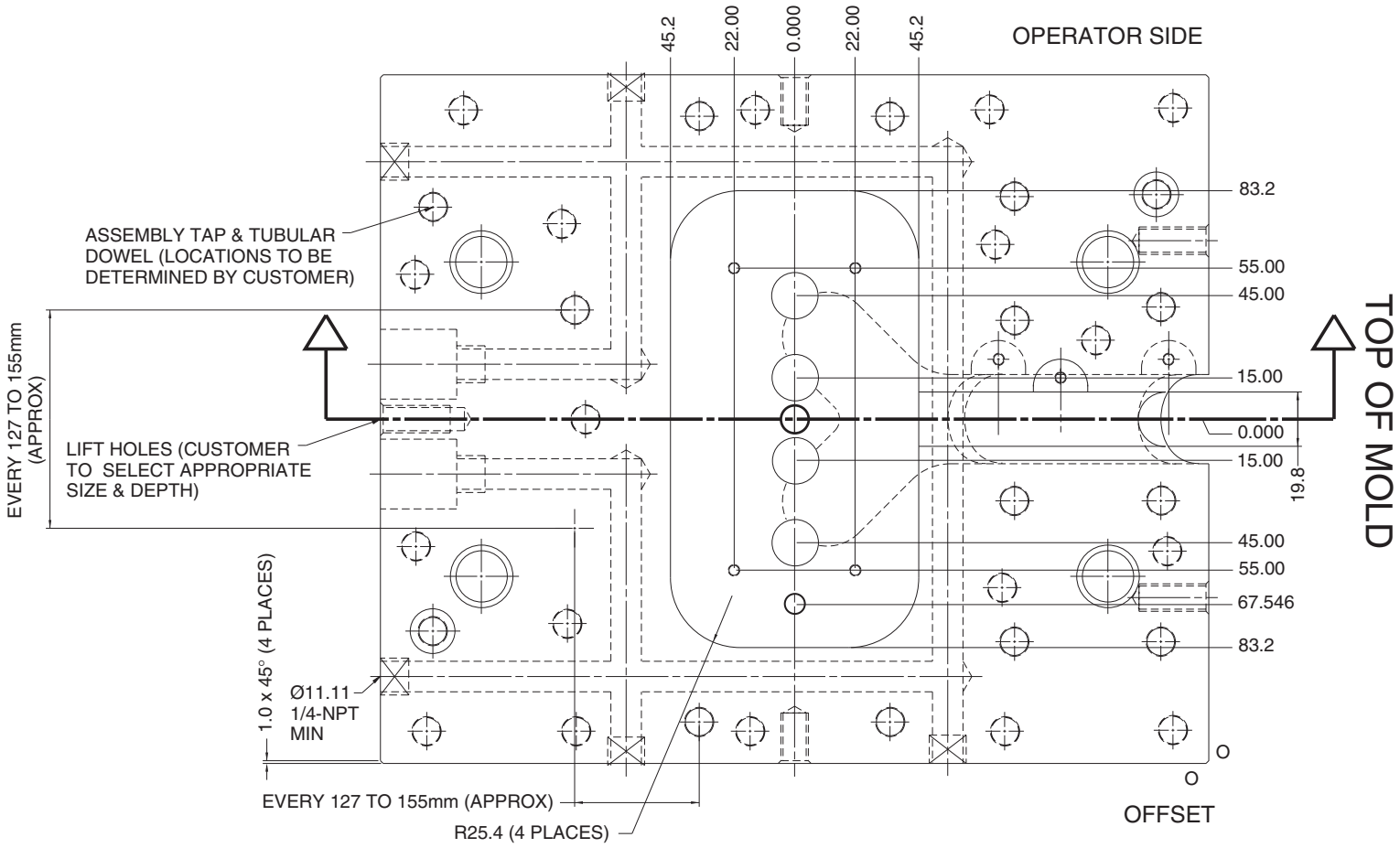
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 200mm x 302mm mold shown.
2. For inch dimensions, see pages 74-137.

4 Drop (30x30 Pitch) — Manifold Retainer Plate Machining Detail (continued)



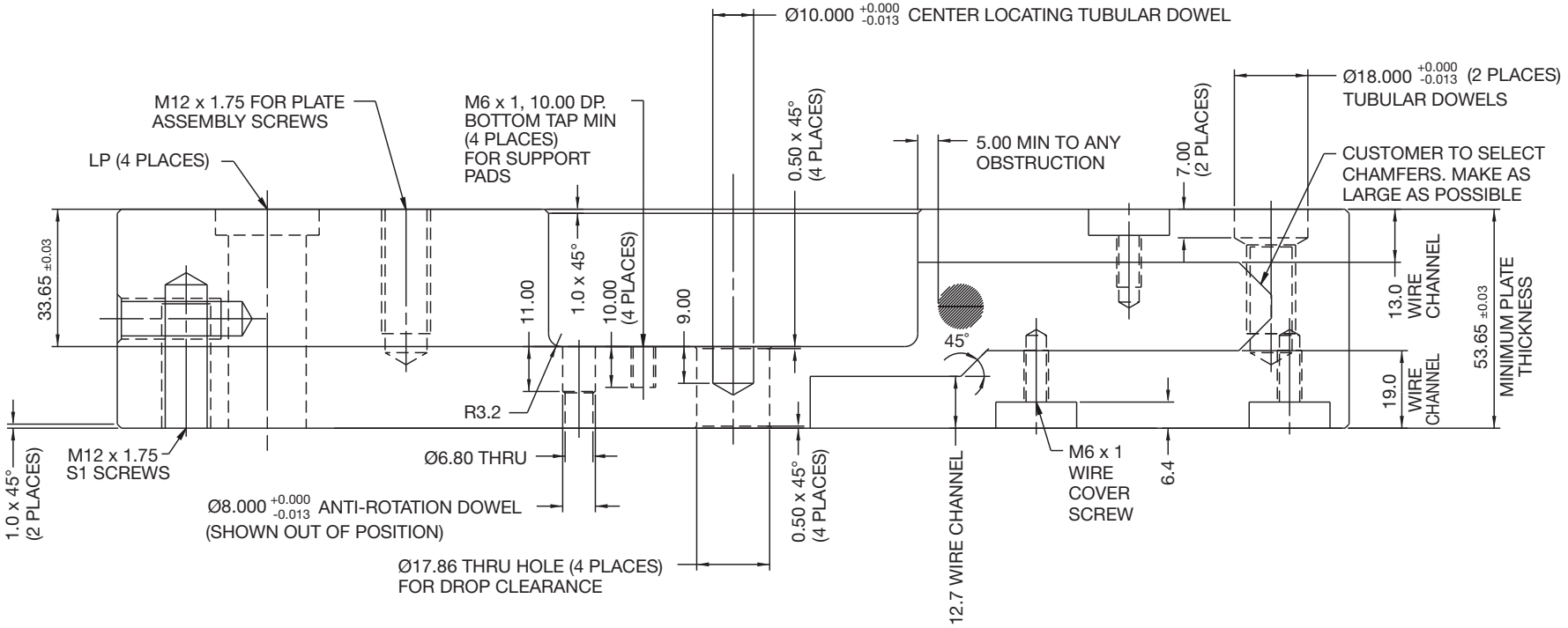
4 Drop (30 Pitch In-Line) — Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 251mm x 302mm mold shown.
2. For inch dimensions, see pages 74-137.

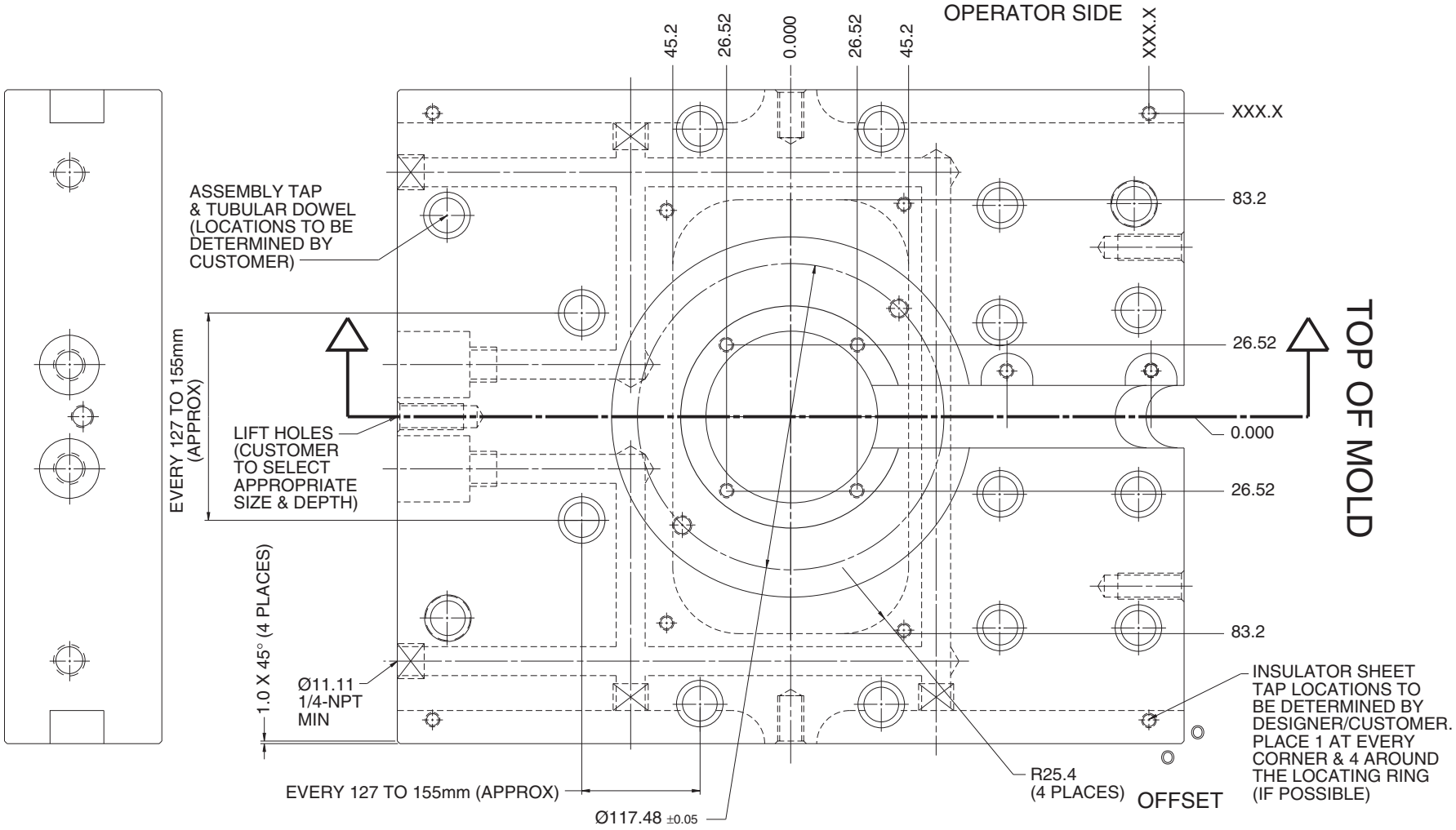
4 Drop (30 Pitch In-Line) — Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 19.0 deep except when plate thickness does not provide 6.35mm steel support underneath pocket. In that case, wire channel depth to be 12.7 deep, under the pocket and then chamfered (45°) to 19.0 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If the manifold is to be positioned 90° to that shown, please refer to MRC3004 manifold heater channel machining drawing on page 68 for the channel location. The four M6 taps and dowel must be rotated 90° also.
3. For inch dimensions, see pages 74-137.

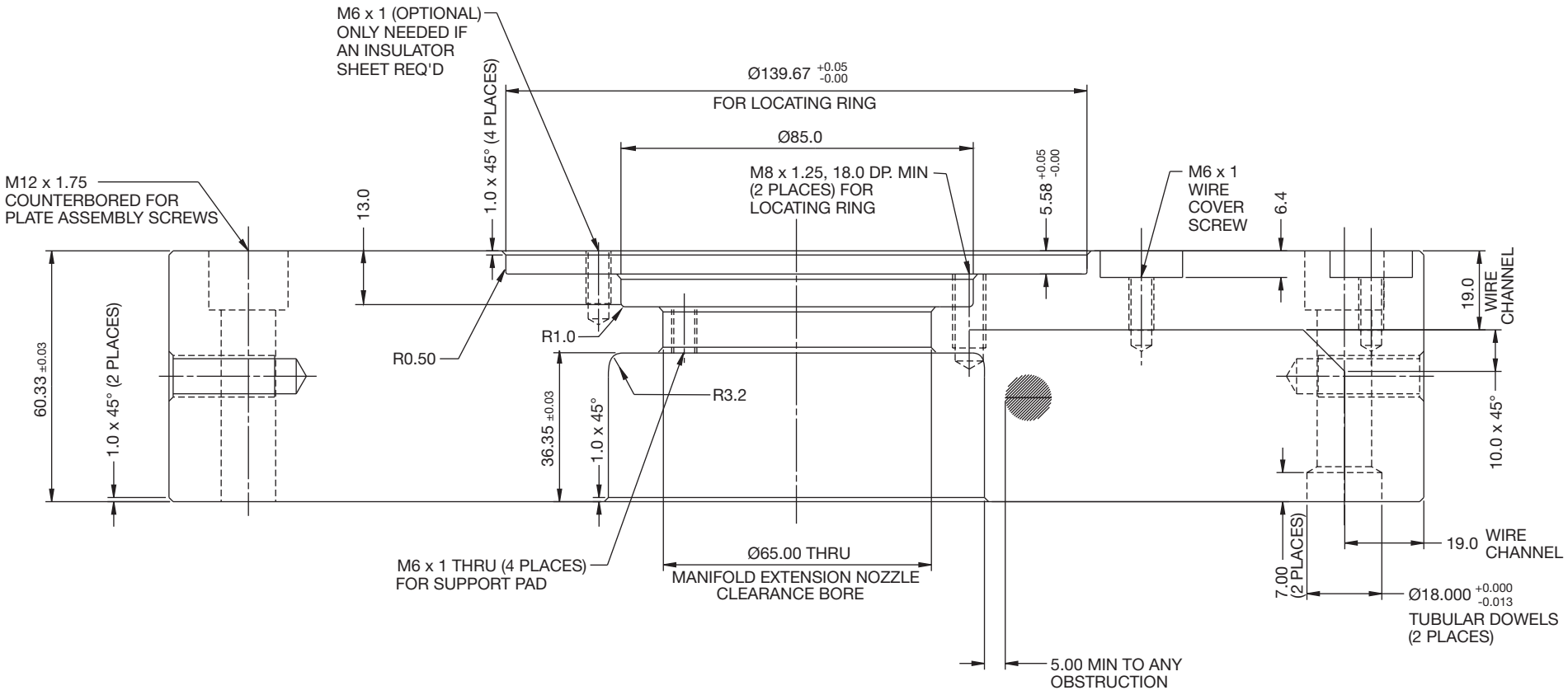
4 Drop (30 Pitch In-Line) — Manifold Retainer Plate Machining Detail



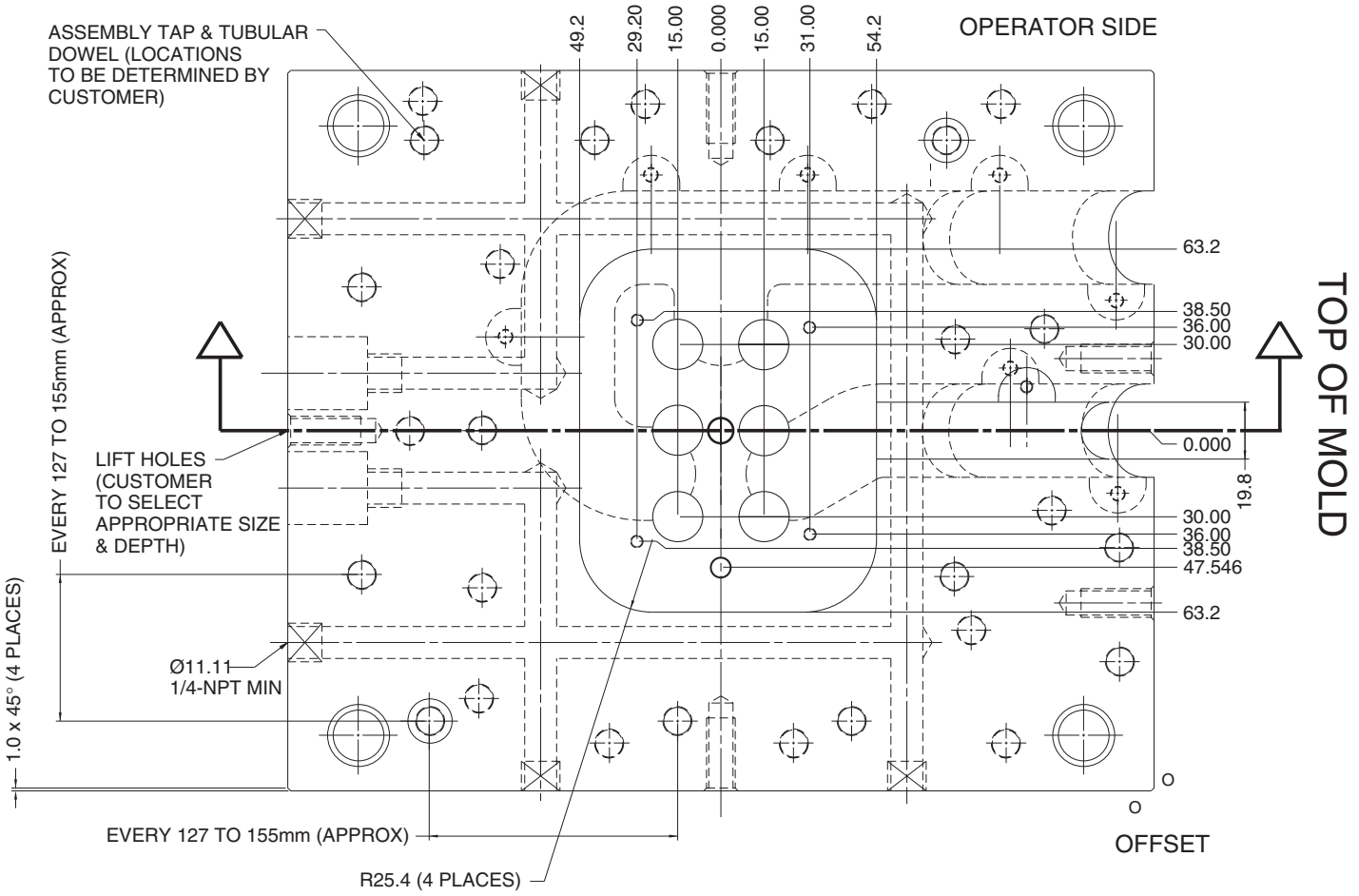
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 251mm x 302mm mold shown.
2. For inch dimensions, see pages 74-137.

4 Drop (30 Pitch In-Line) — Manifold Retainer Plate Machining Detail (continued)



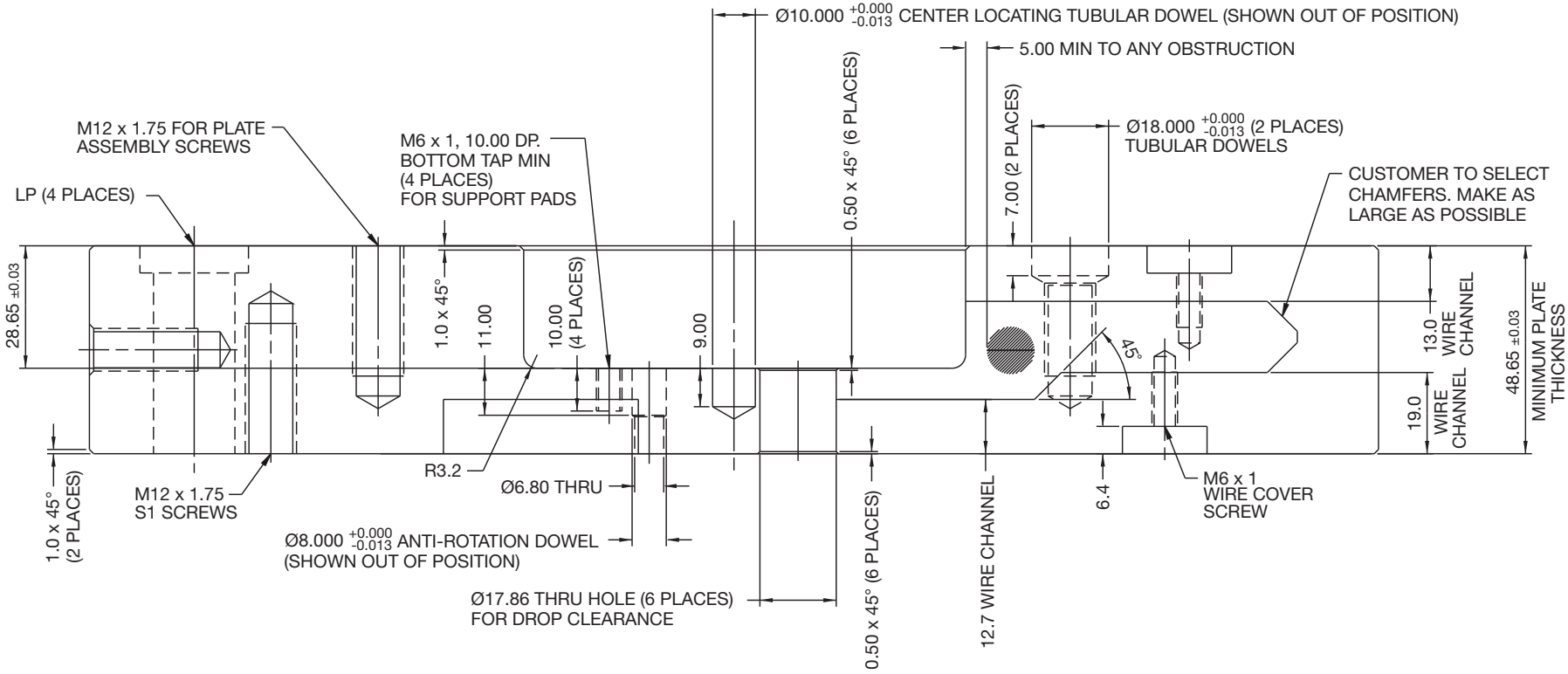
6 Drop (30 Pitch) — Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 251mm x 302mm mold shown.
2. For inch dimensions, see pages 74-137.

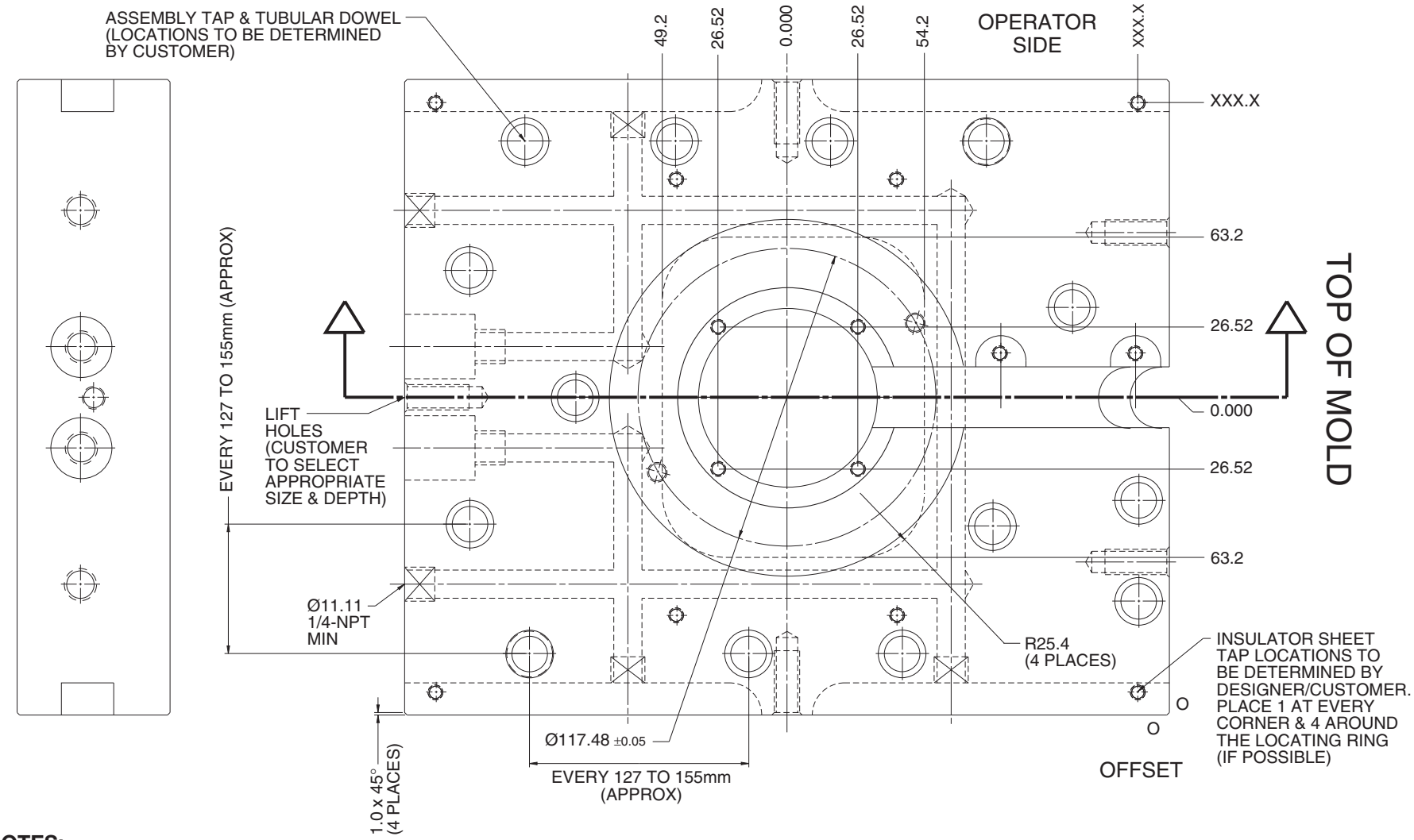
6 Drop (30 Pitch) — Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 19.0 deep except when plate thickness does not provide 6.35mm steel support underneath pocket. In that case, wire channel depth to be 12.7 deep, under the pocket and then chamfered (45°) to 19.0 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If the manifold is to be positioned 90° to that shown, please refer to MRC3306 manifold heater channel machining drawing on page 69 for the channel location. The four M6 taps and dowel must be rotated 90° also.
3. For inch dimensions, see pages 74-137.

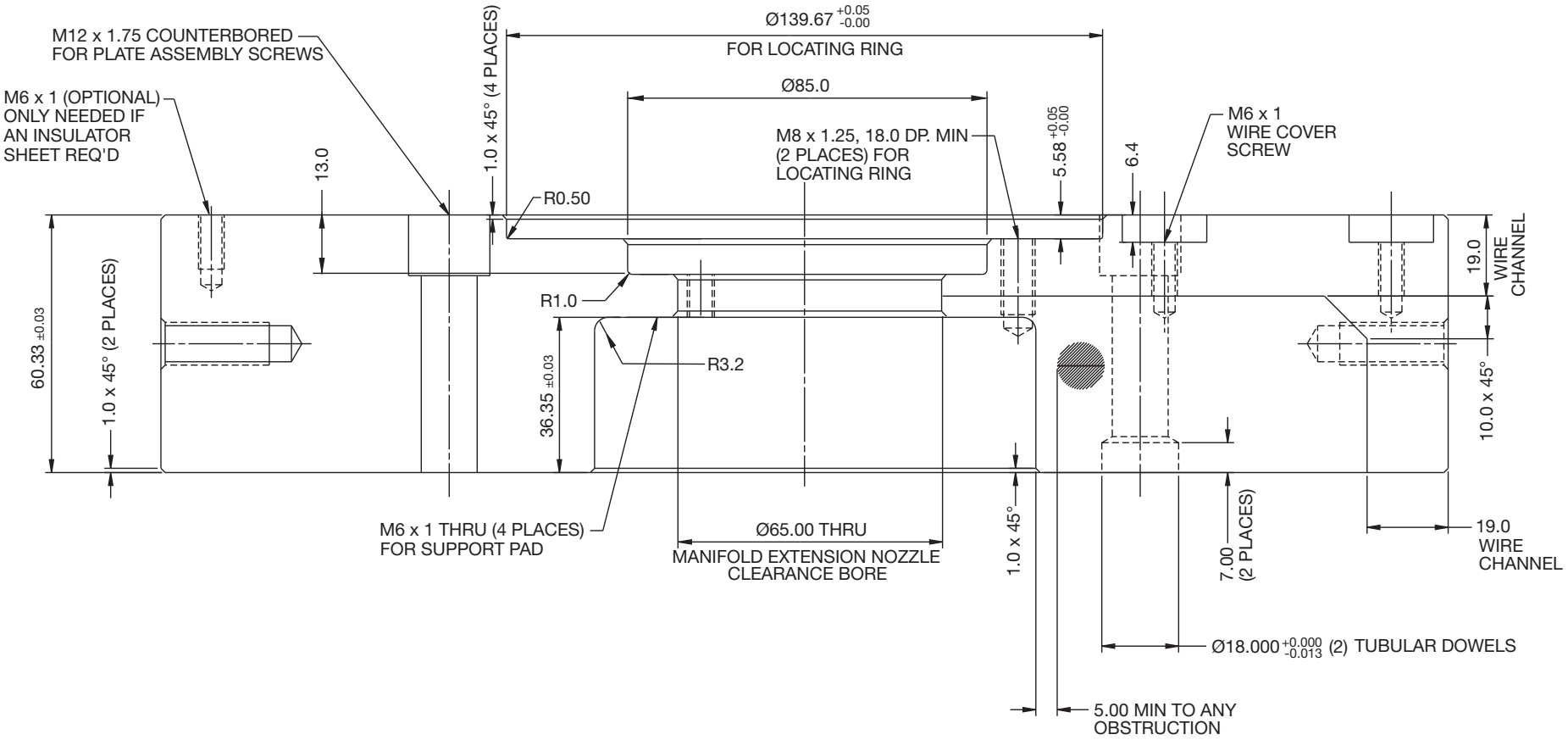
6 Drop (30 Pitch) — Manifold Retainer Plate Machining Detail



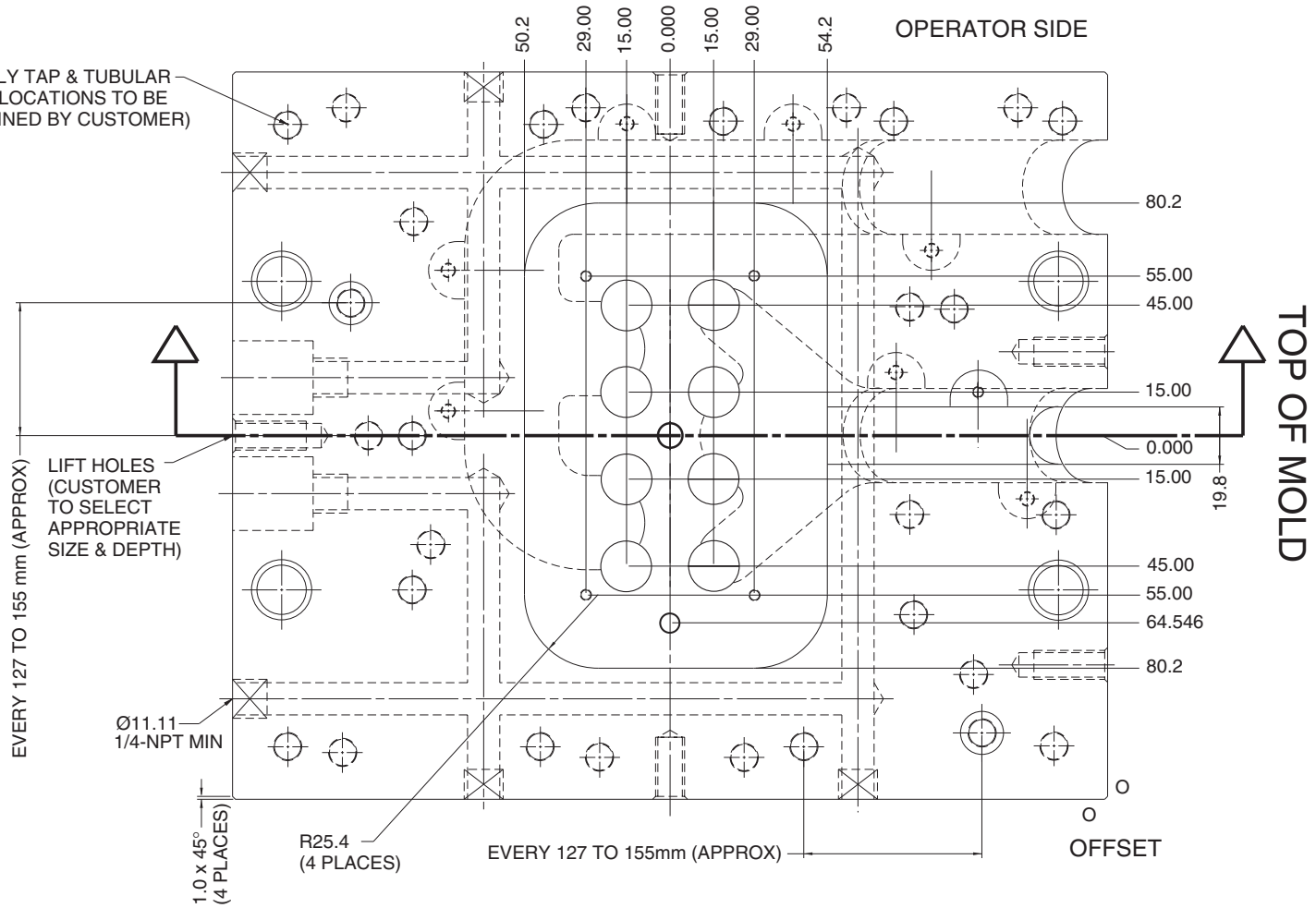
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 251mm x 302mm mold shown.
2. For inch dimensions, see pages 74-137.

6 Drop (30 Pitch) — Manifold Retainer Plate Machining Detail (continued)



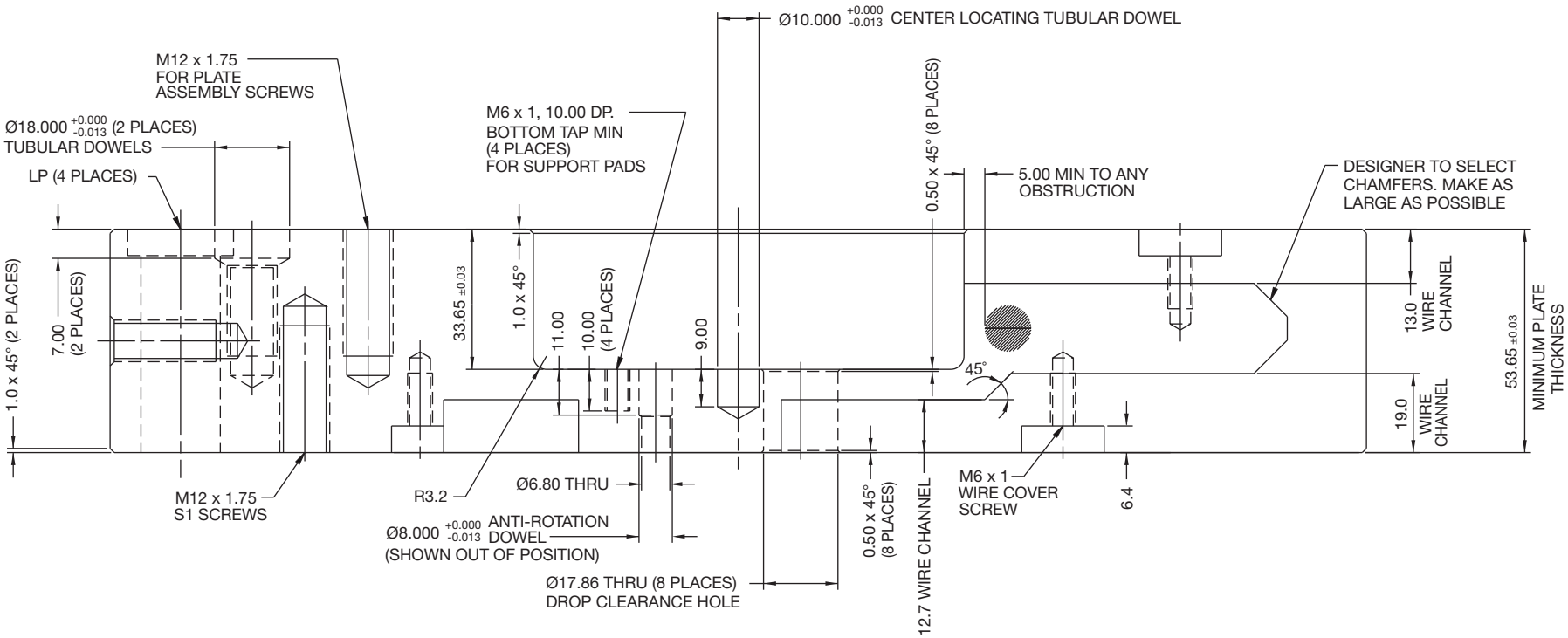
8 Drop (30 Pitch) — Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 251mm x 302mm mold shown.
2. For inch dimensions, see pages 74-137.

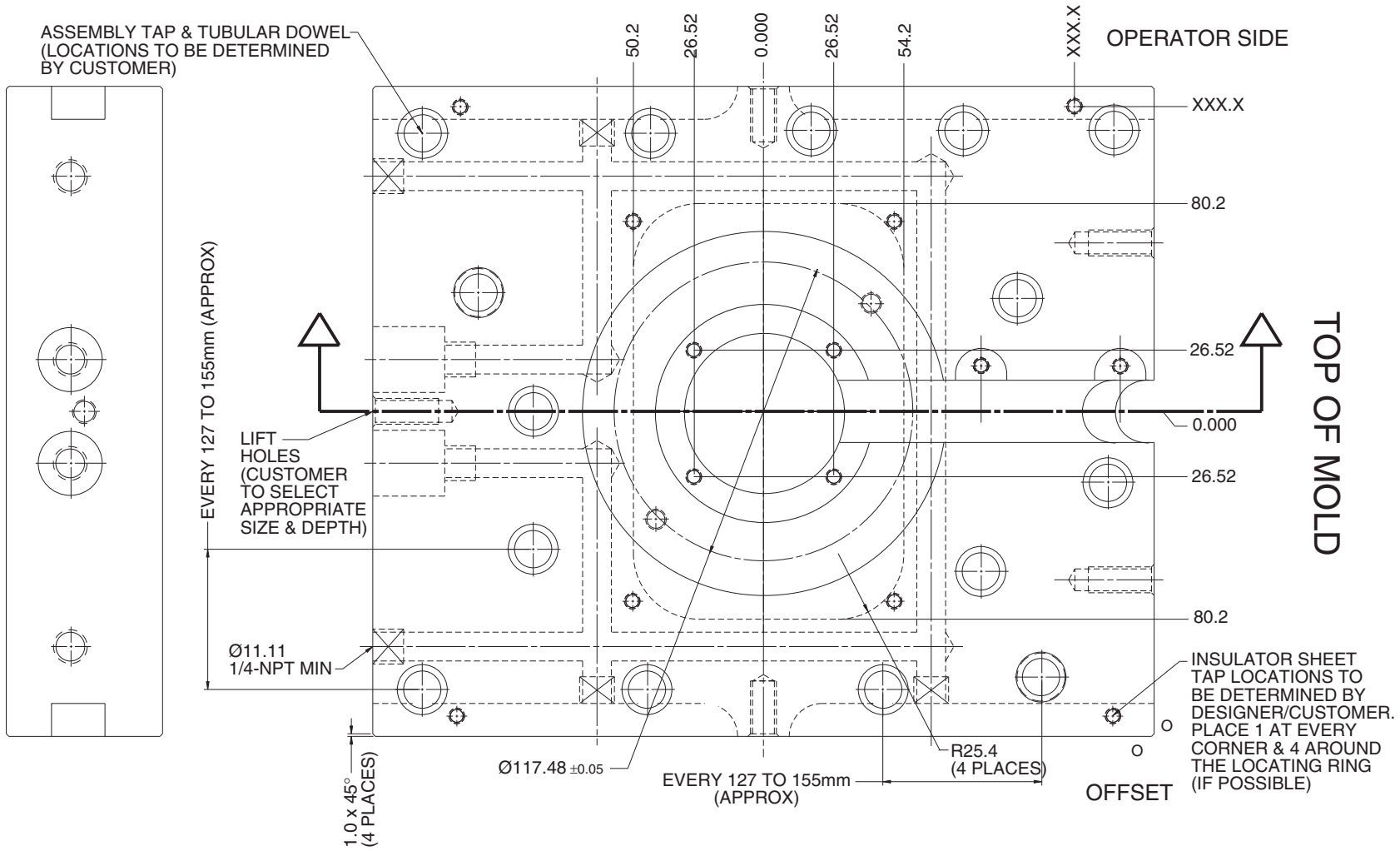
8 Drop (30 Pitch) — Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 19.0 deep except when plate thickness does not provide 6.35mm steel support underneath pocket. In that case, wire channel depth to be 12.7 deep, under the pocket and then chamfered (45°) to 19.0 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If the manifold is to be positioned 90° to that shown, please refer to MRC3308 manifold heater channel machining drawing on page 70 for the channel location. The four M6 taps and dowel must be rotated 90° also.
3. For inch dimensions, see pages 74-137.

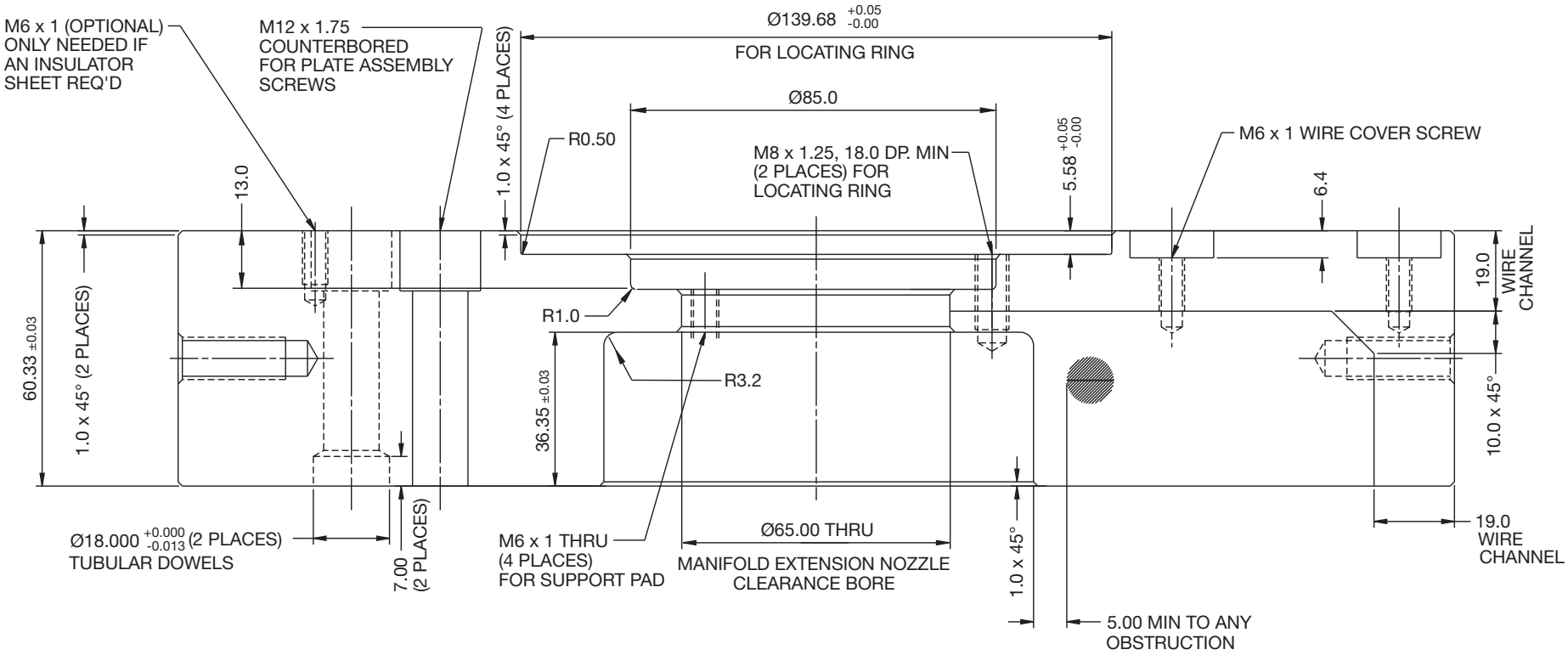
8 Drop (30 Pitch) — Manifold Retainer Plate Machining Detail



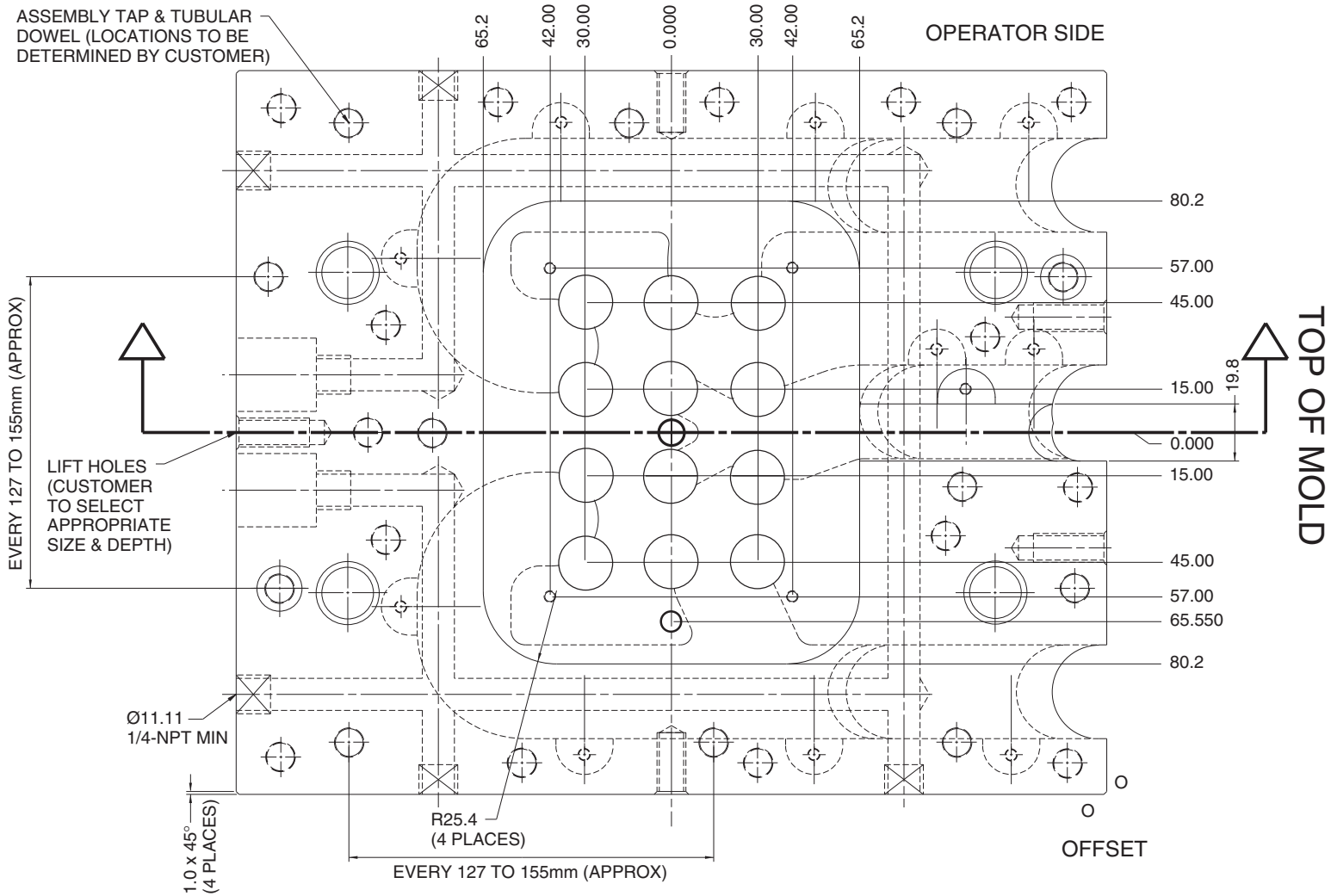
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 251mm x 302mm mold shown.
2. For inch dimensions, see pages 74-137.

8 Drop (30 Pitch) — Manifold Retainer Plate Machining Detail (continued)



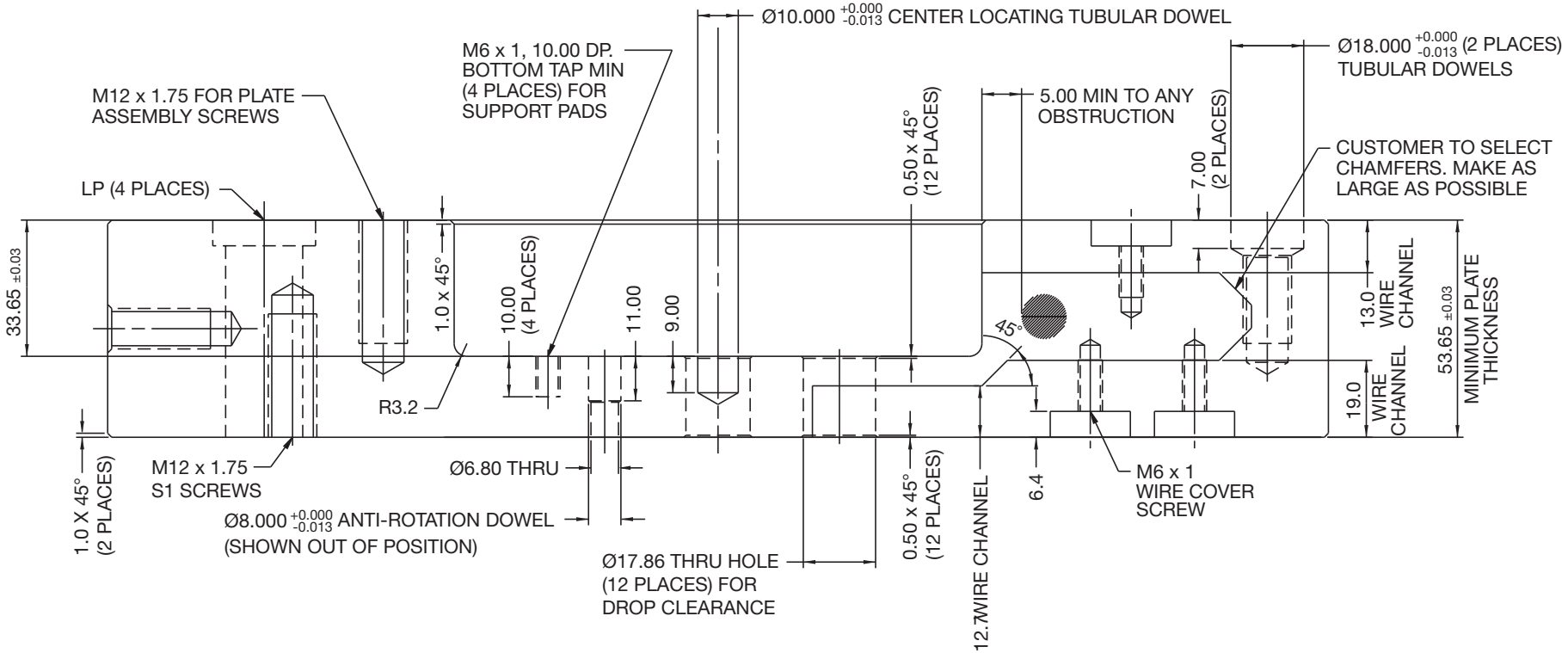
12 Drop (30 Pitch) — Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 251mm x 302mm mold shown.
2. For inch dimensions, see pages 74-137.

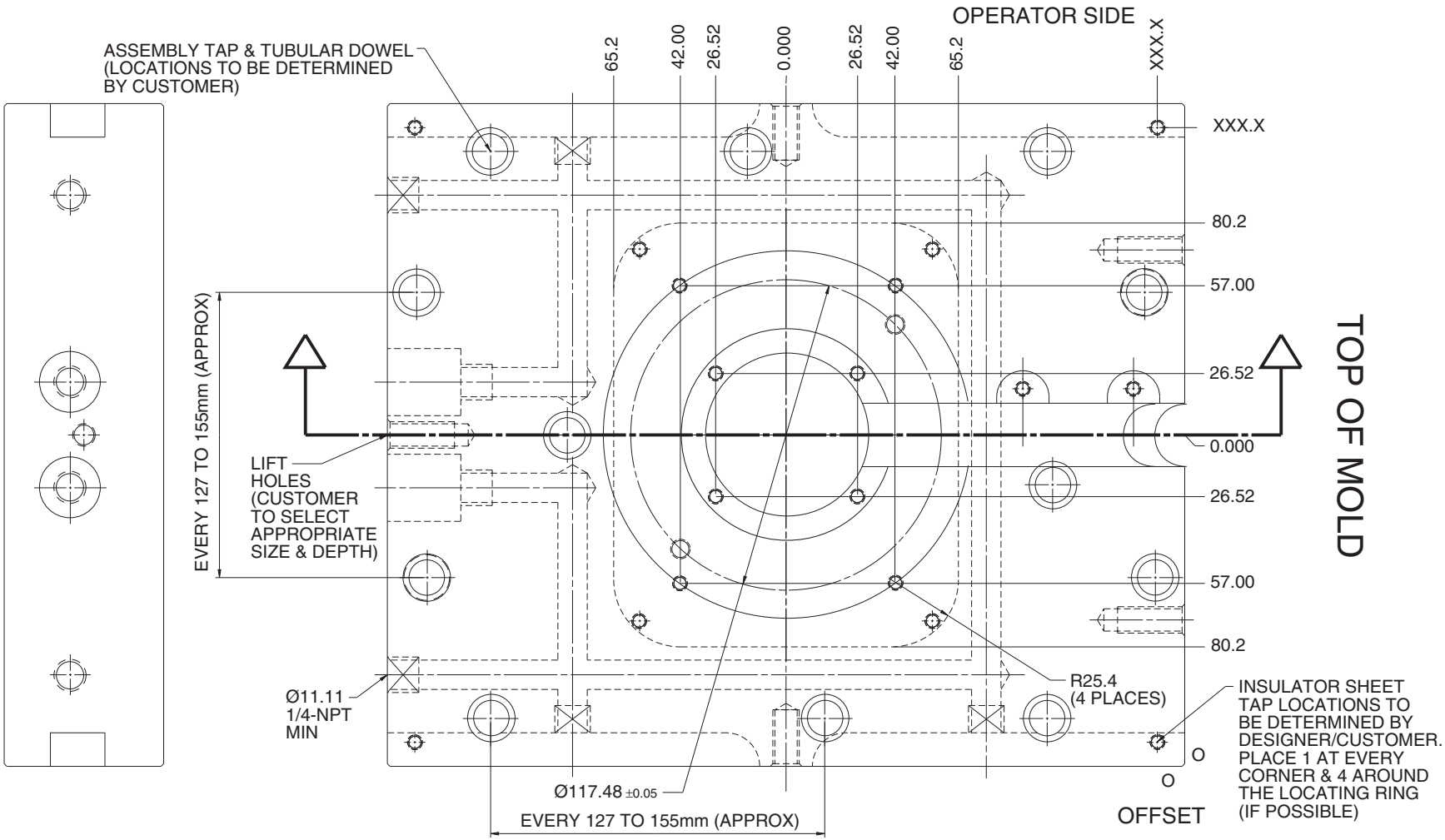
12 Drop (30 Pitch) — Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 19.0 deep except when plate thickness does not provide 6.35mm steel support underneath pocket. In that case, wire channel depth to be 12.7 deep, under the pocket and then chamfered (45°) to 19.0 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If the manifold is to be positioned 90° to that shown, please refer to MRC3312 manifold heater channel machining drawing on page 71 for the channel location. The four M6 taps and dowel must be rotated 90° also.
3. For inch dimensions, see pages 74-137.

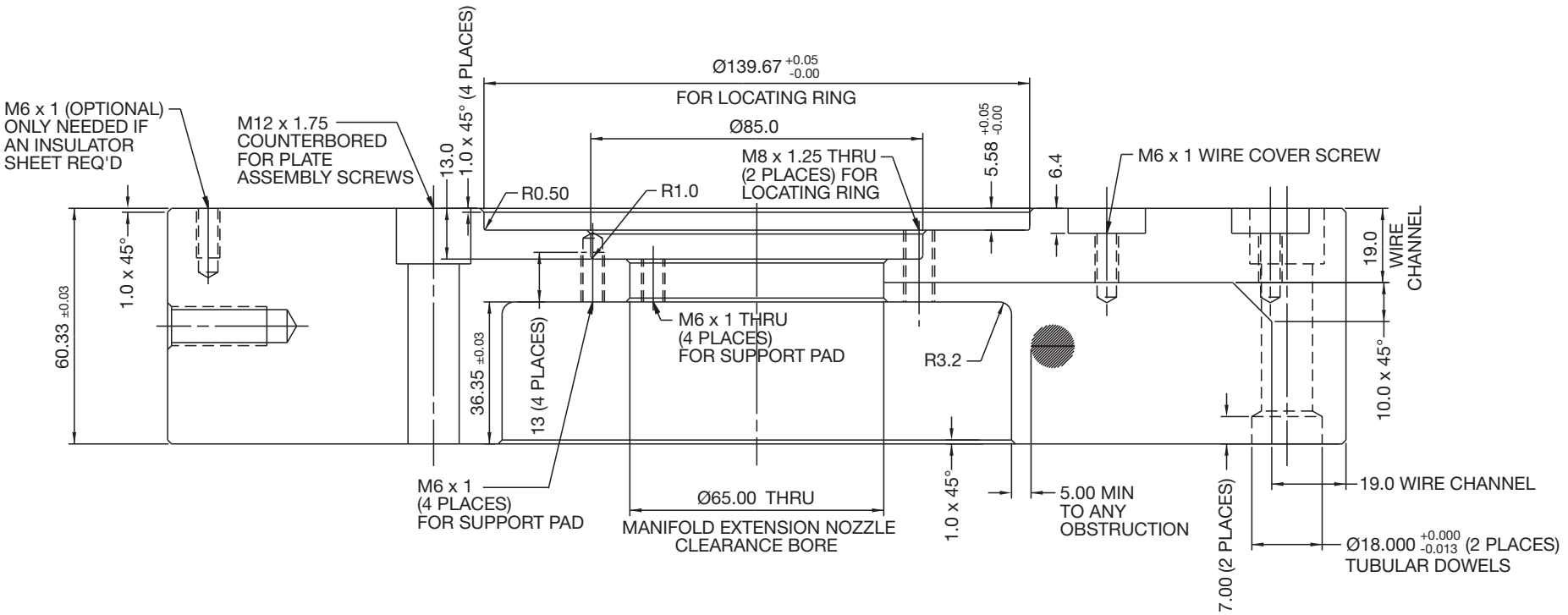
12 Drop (30 Pitch) — Manifold Retainer Plate Machining Detail



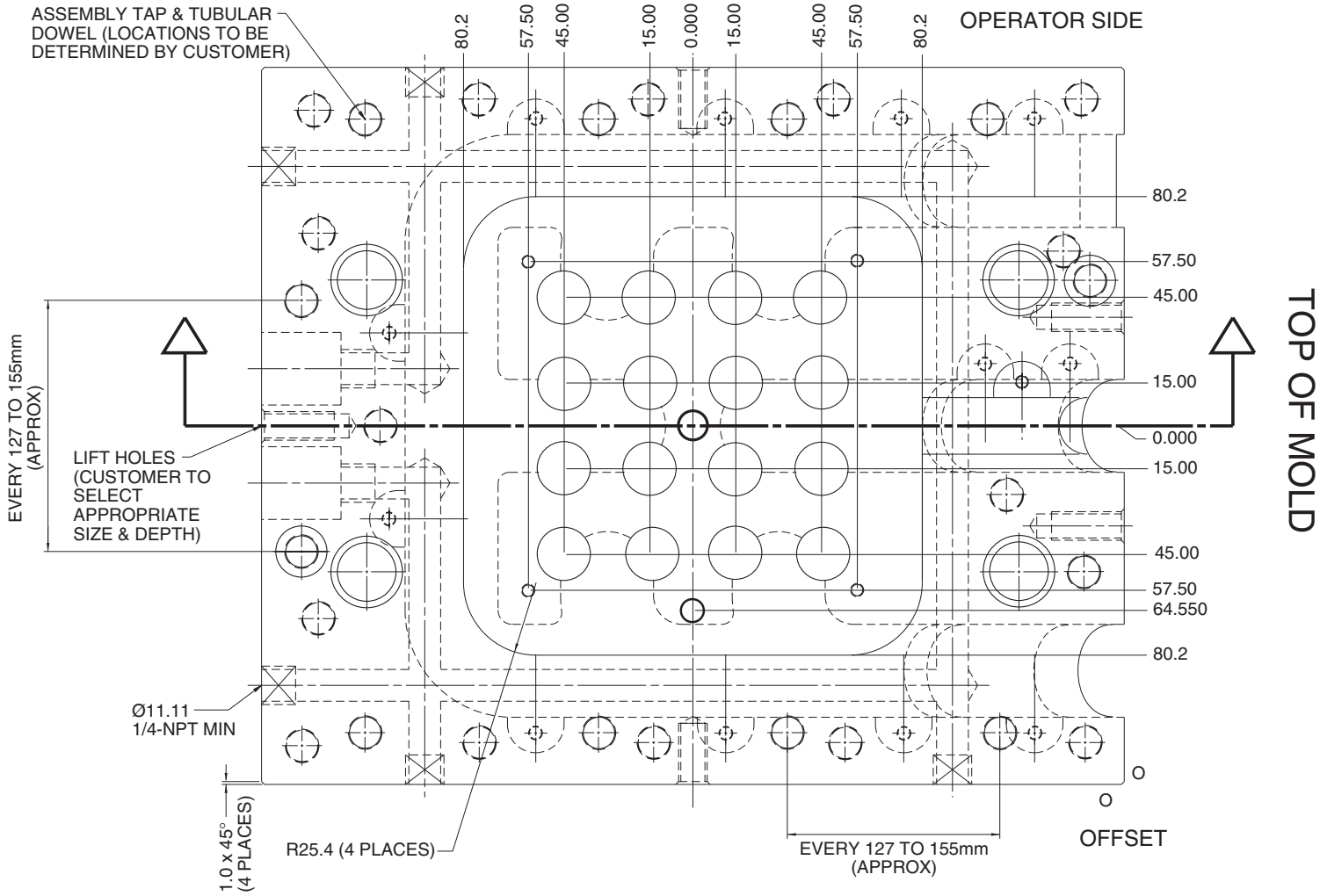
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 251mm x 302mm mold shown.
2. For inch dimensions, see pages 74-137.

12 Drop (30 Pitch) — Manifold Retainer Plate Machining Detail (continued)



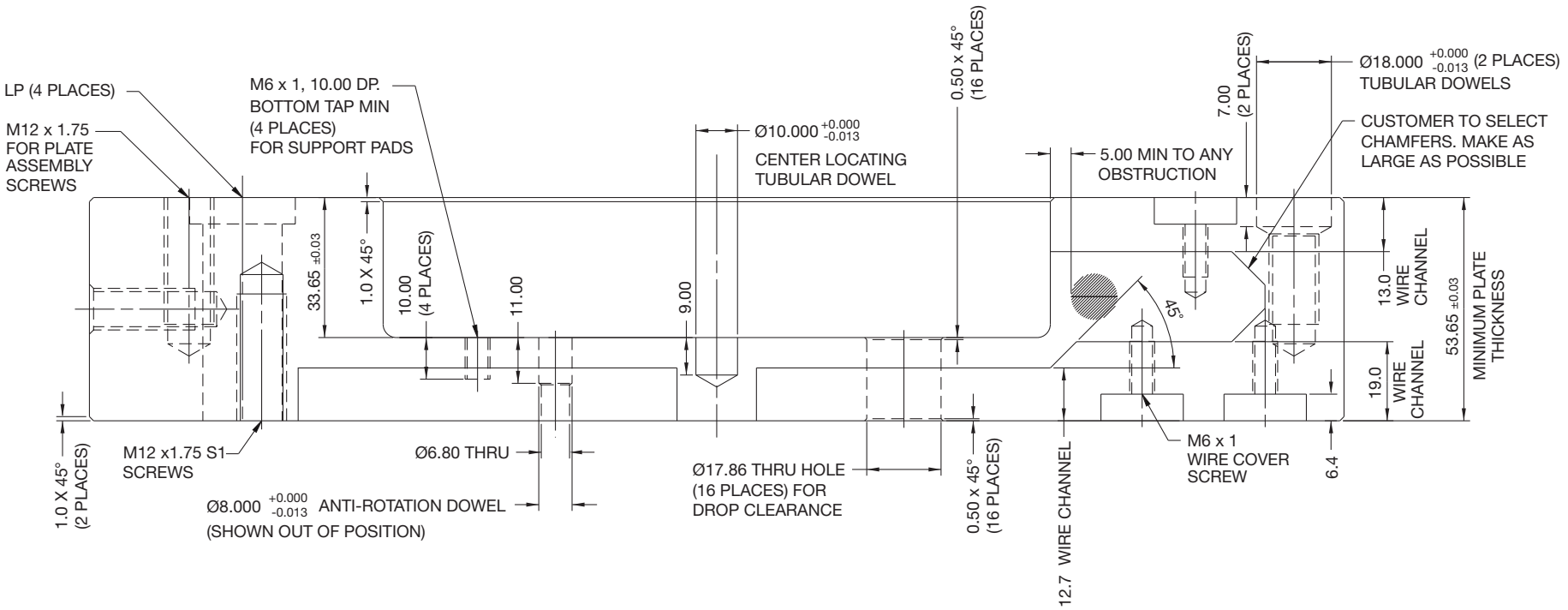
16 Drop (30 Pitch) — Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 251mm x 302mm mold shown.
2. For inch dimensions, see pages 74-137.

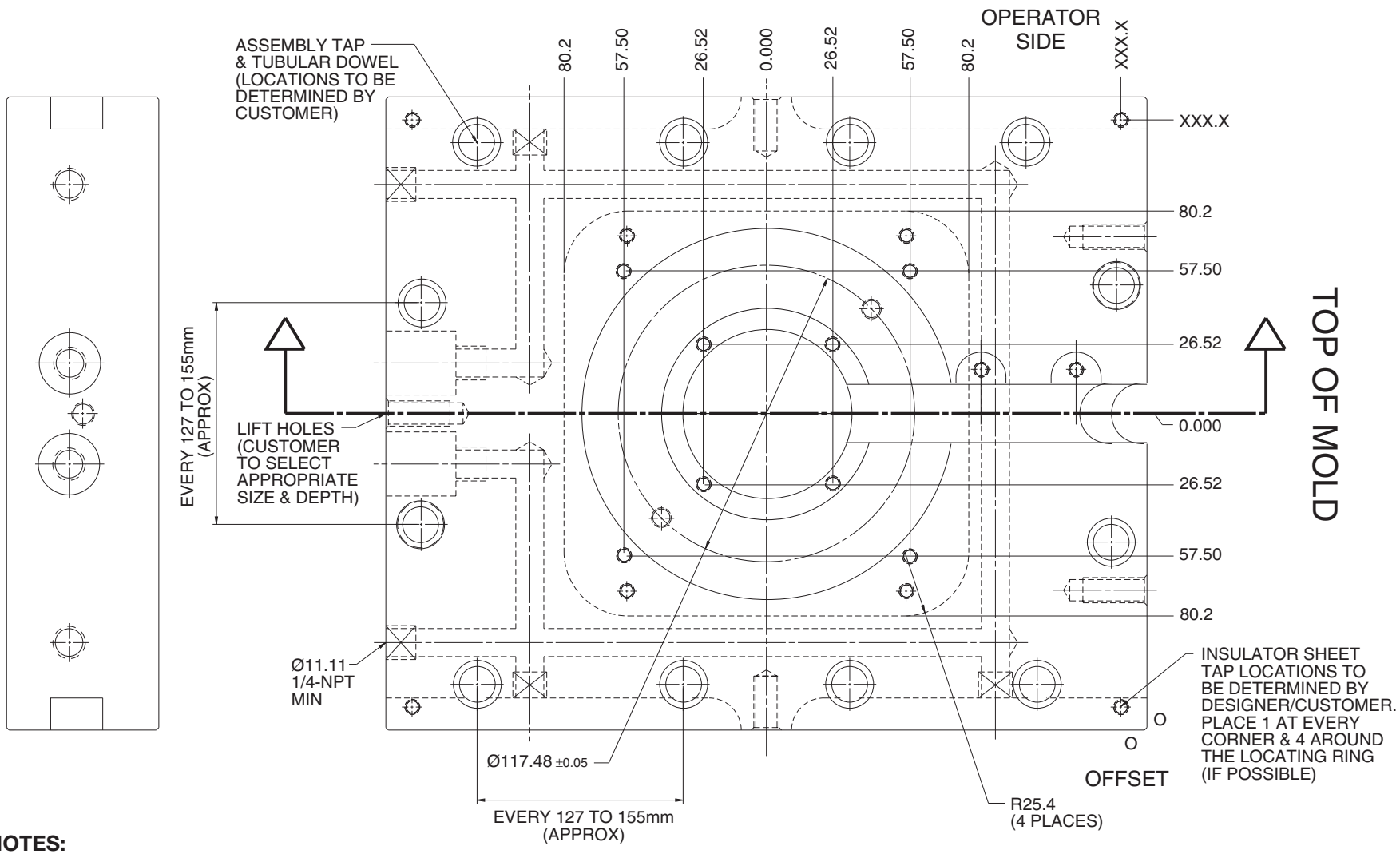
16 Drop (30 Pitch) — Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 19.0 deep except when plate thickness does not provide 6.35mm steel support underneath pocket. In that case, wire channel depth to be 12.7 deep, under the pocket and then chamfered (45°) to 19.0 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If the manifold is to be positioned 90° to that shown, please refer to MRC3316 manifold heater channel machining drawing on page 72 for the channel location. The four M6 taps and dowel must be rotated 90° also.
3. For inch dimensions, see pages 74-137.

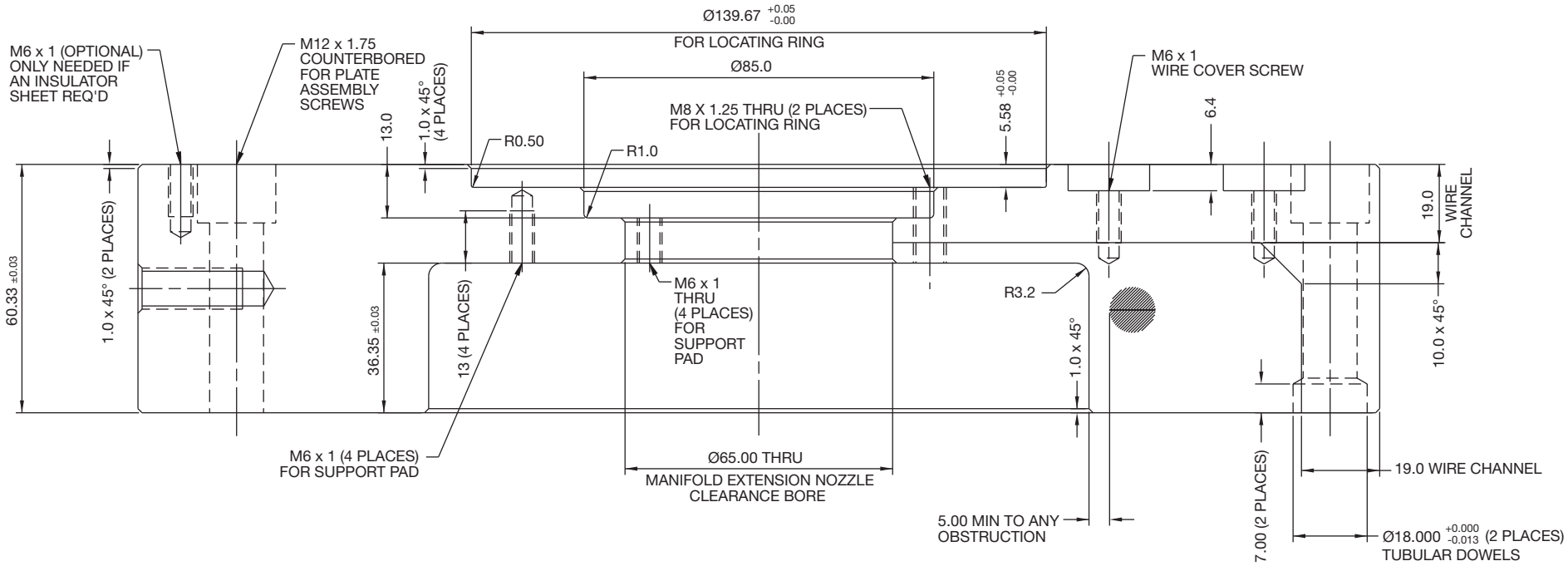
16 Drop (30 Pitch) — Manifold Retainer Plate Machining Detail



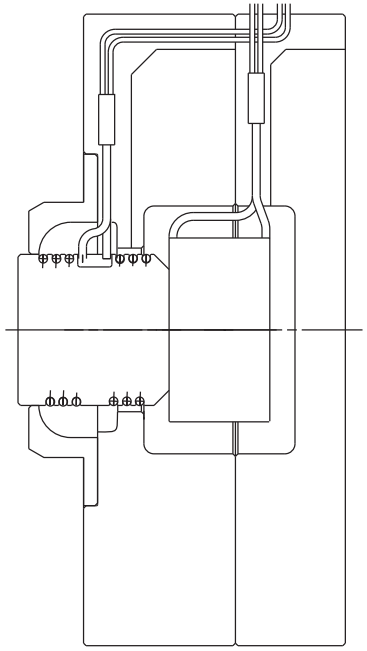
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 251mm x 302mm mold shown.
2. For inch dimensions, see pages 74-137.

16 Drop (30 Pitch) — Manifold Retainer Plate Machining Detail (continued)

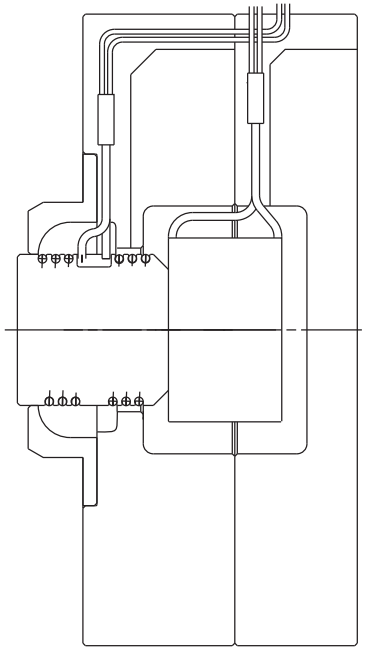


Rectangular Multi-Nozzle Assemblies – Manifold Heater Layout



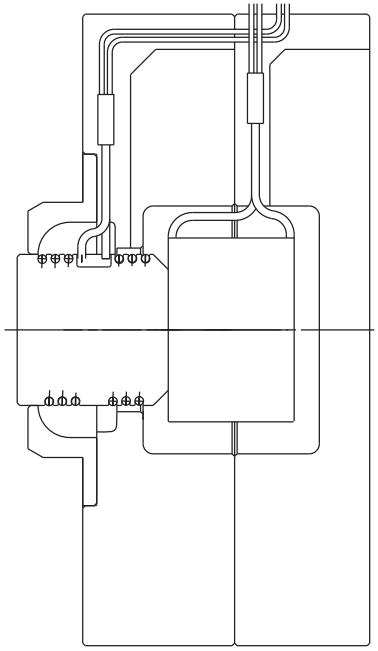
Manifold Thickness – 40mm

MRC3002 MRC9002
MRC4002 MRC0004
MRC5002 MRC3302
MRC7002



Manifold Thickness – 45mm

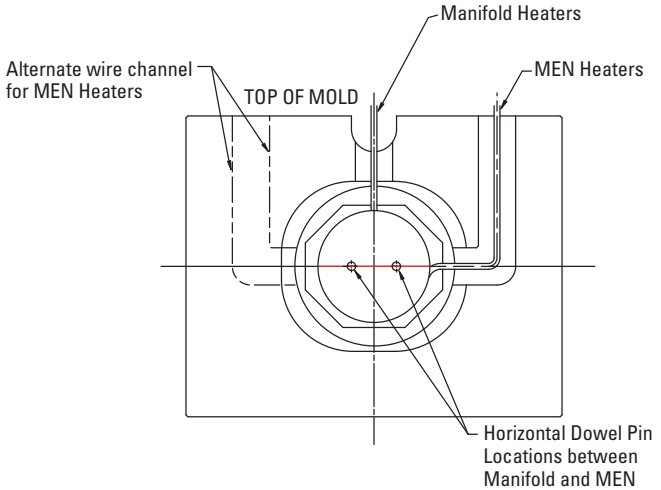
MRC3306

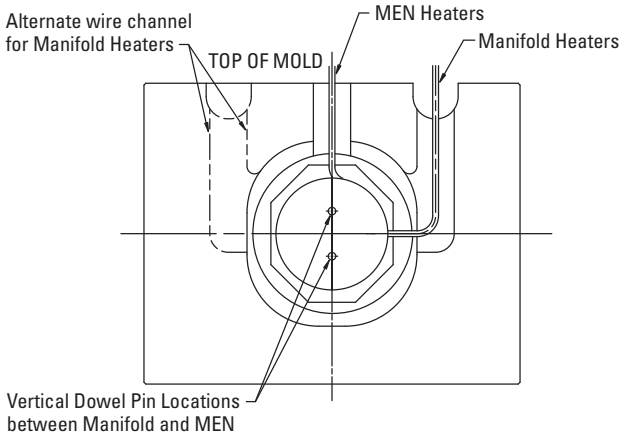


Manifold Thickness – 50mm

MRC3004
MRC3308
MRC3312
MRC3316

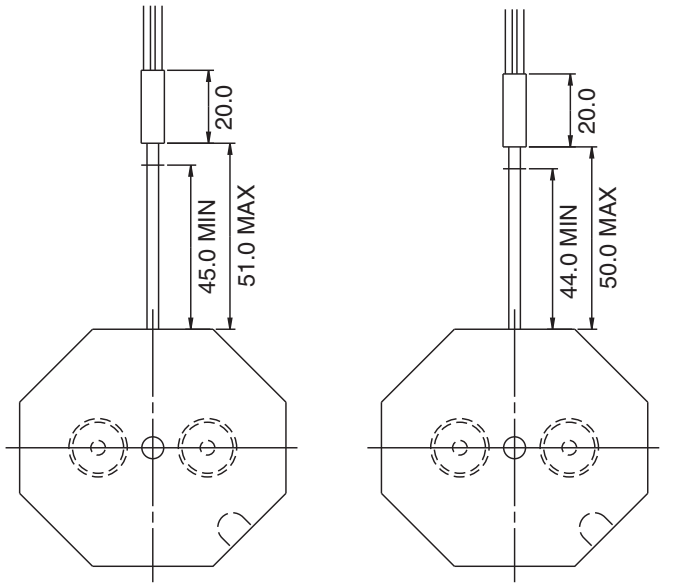
MEN Heater Wire Channels



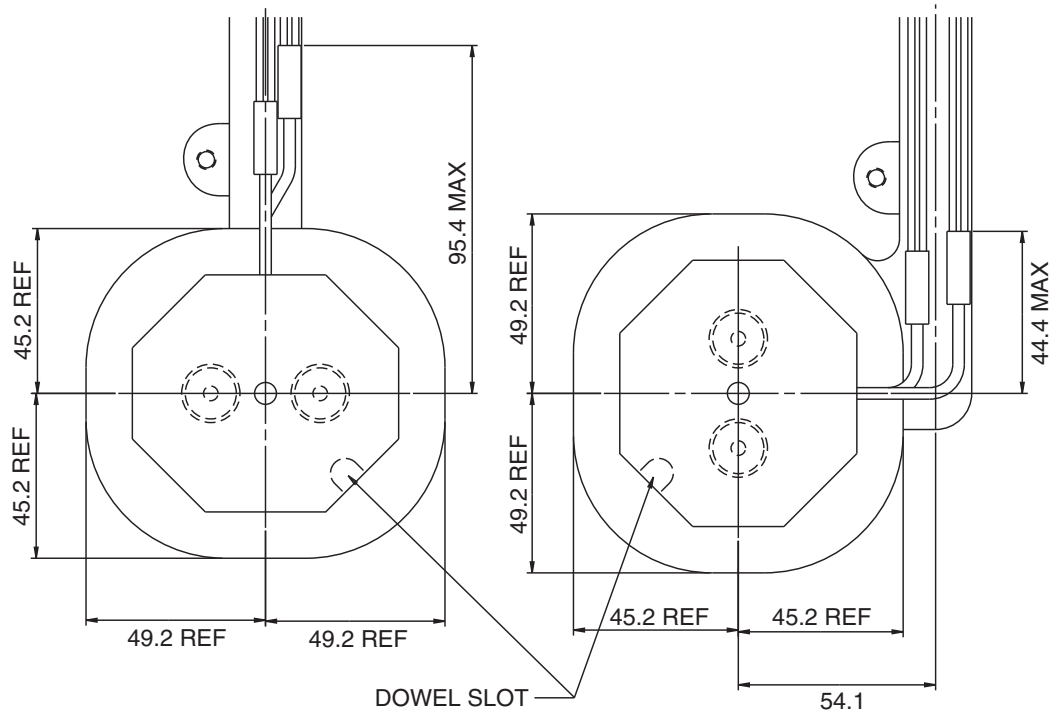


NOTE: MEN and manifold heater leads can be bent into wire channels.

MRC3002

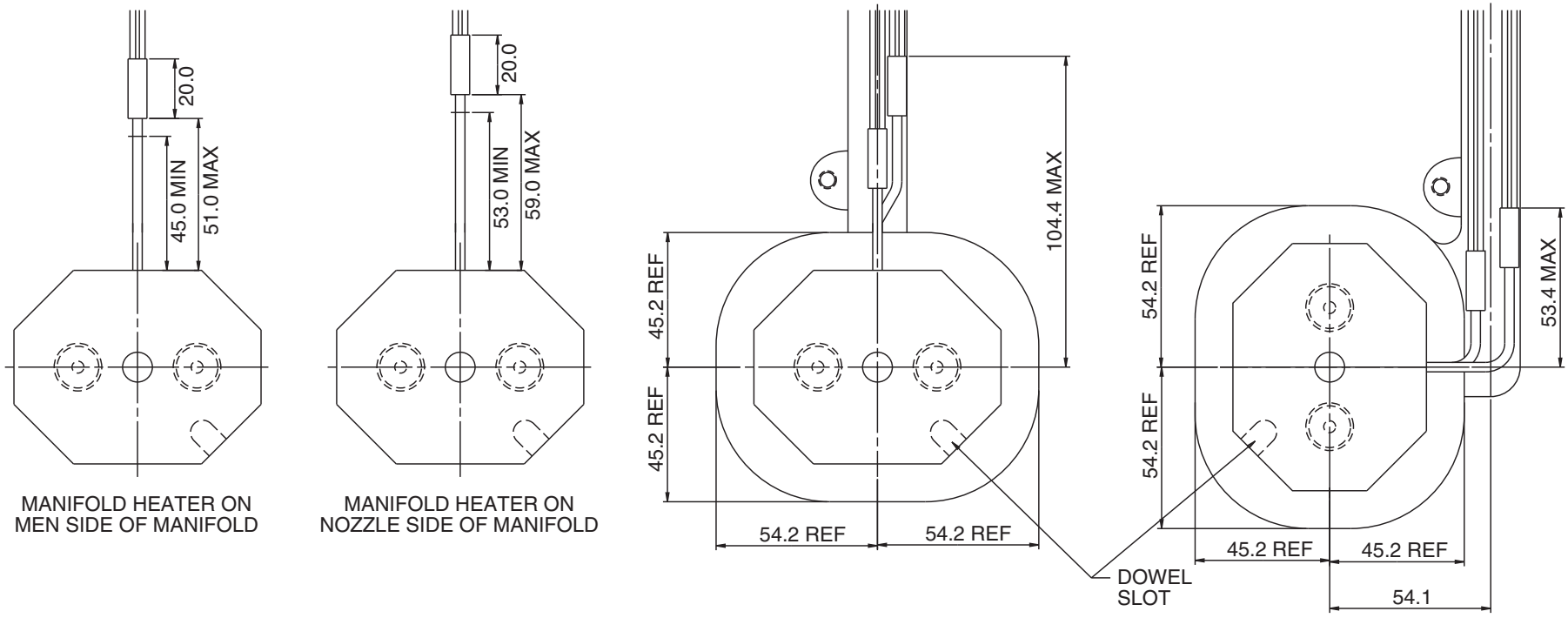


Manifold Heaters Straight
Before Bending into Wire Slot



Manifold Heaters Bent into Wire Slot

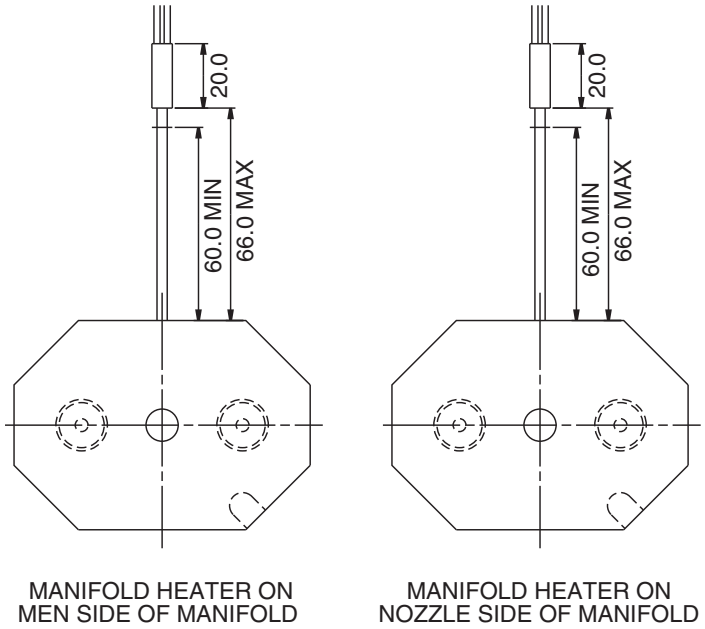
MRC4002



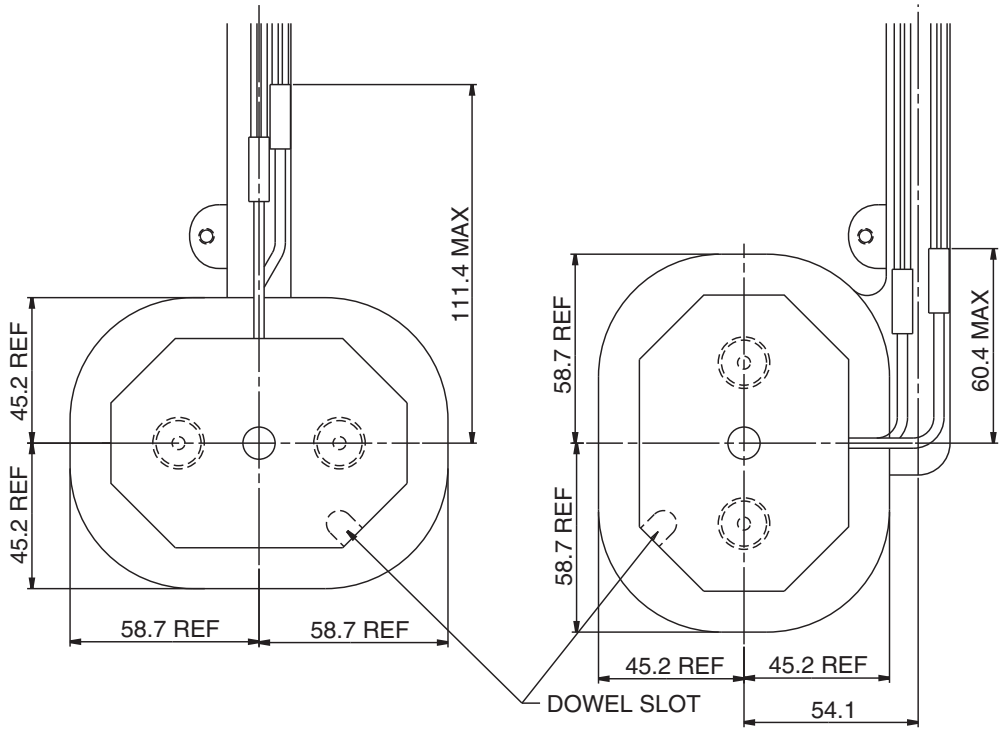
Manifold Heaters Straight
Before Bending into Wire Slot

Manifold Heaters Bent into Wire Slot

MRC5002

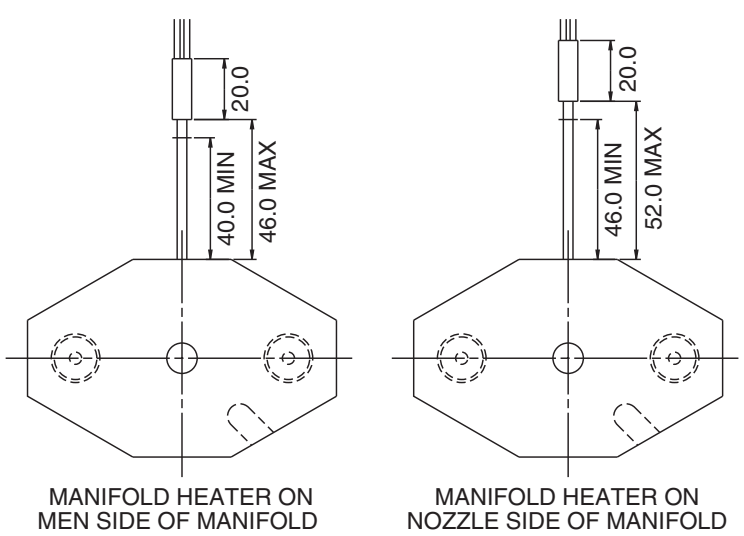


Manifold Heaters Straight
Before Bending into Wire Slot

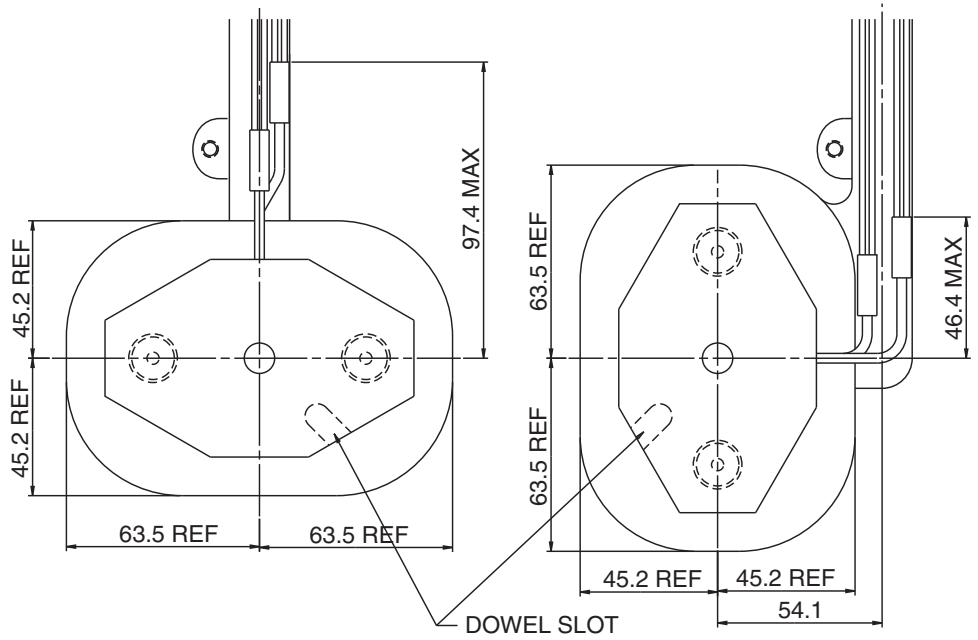


Manifold Heaters Bent into Wire Slot

MRC7002

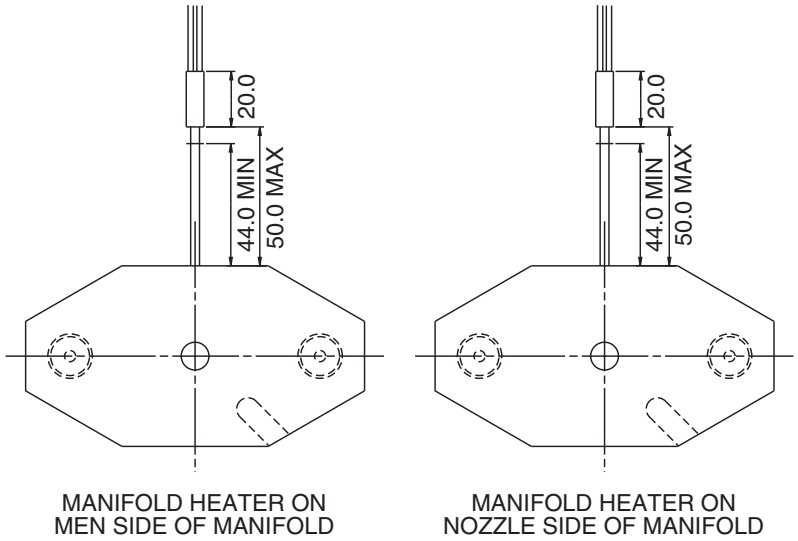


Manifold Heaters Straight
Before Bending into Wire Slot

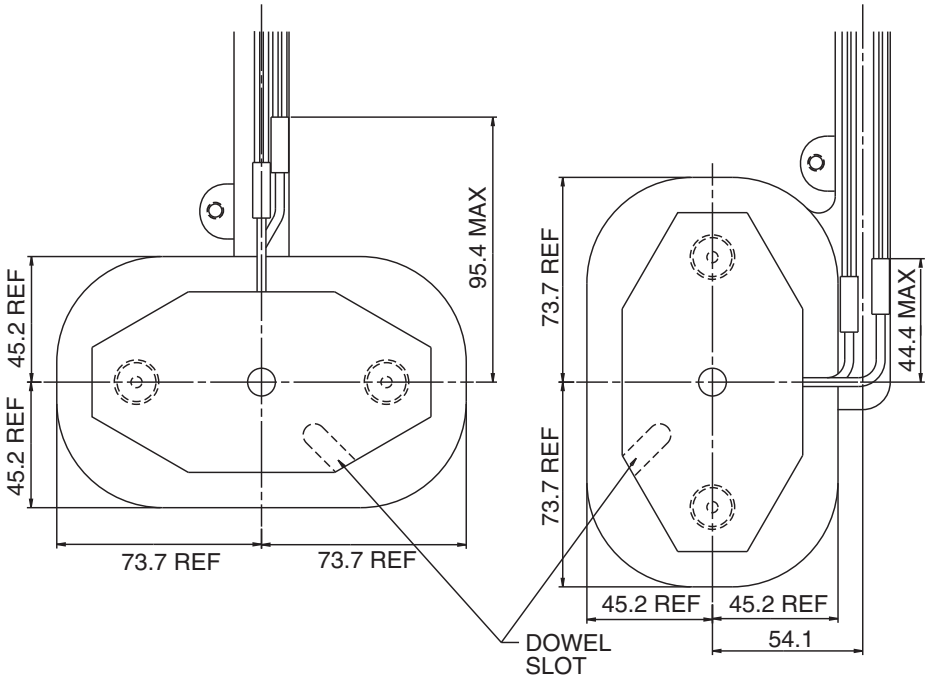


Manifold Heaters Bent into Wire Slot

MRC9002

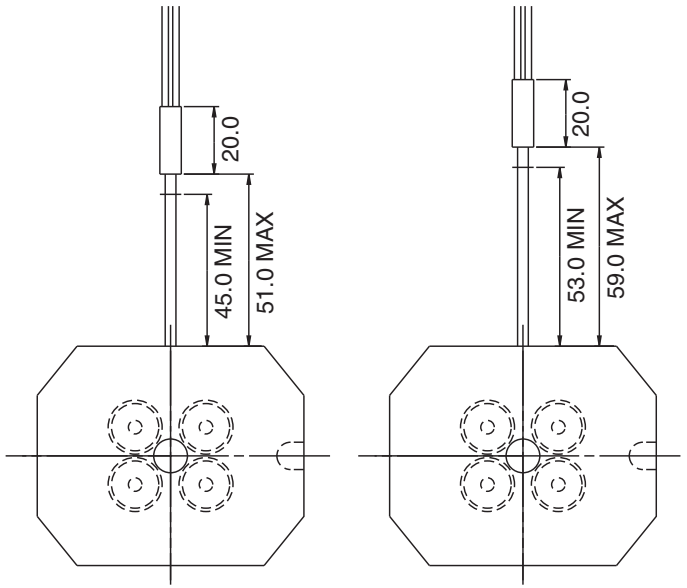


Manifold Heaters Straight
Before Bending into Wire Slot

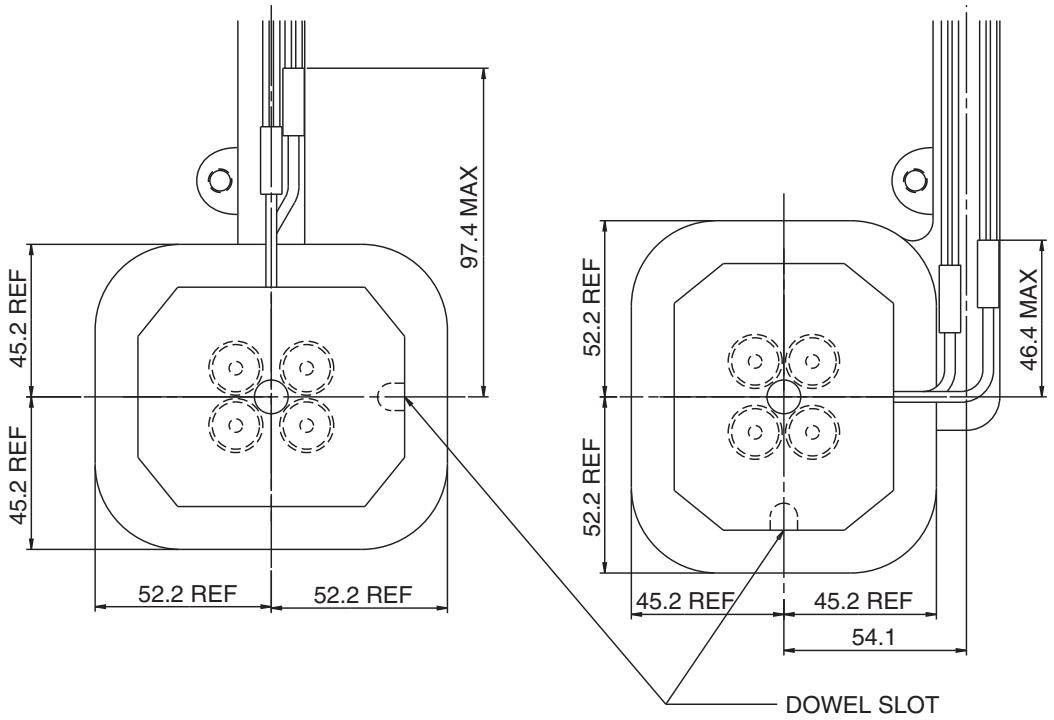


Manifold Heaters Bent into Wire Slot

MRC0004

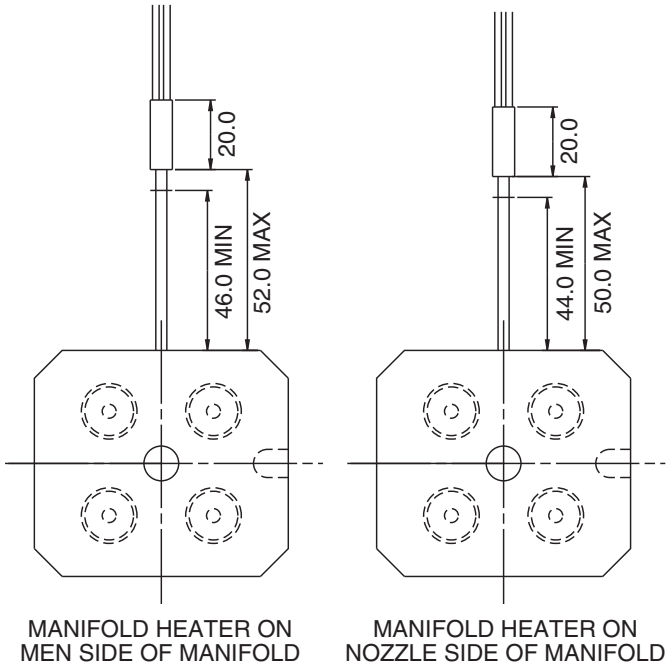


Manifold Heaters Straight
Before Bending into Wire Slot

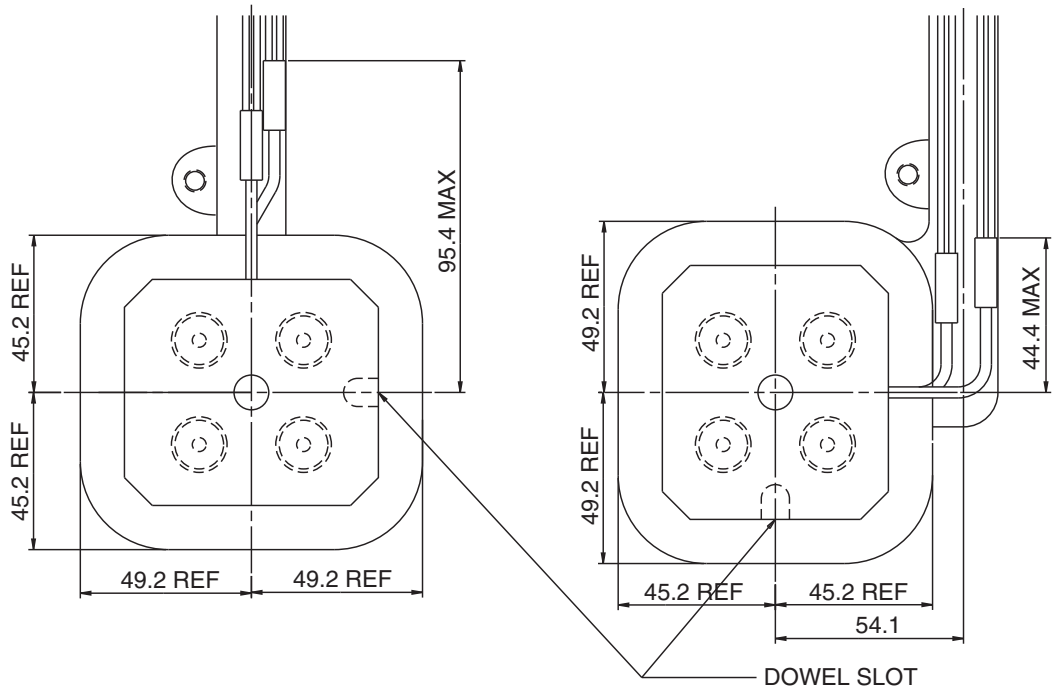


Manifold Heaters Bent into Wire Slot

MRC3304

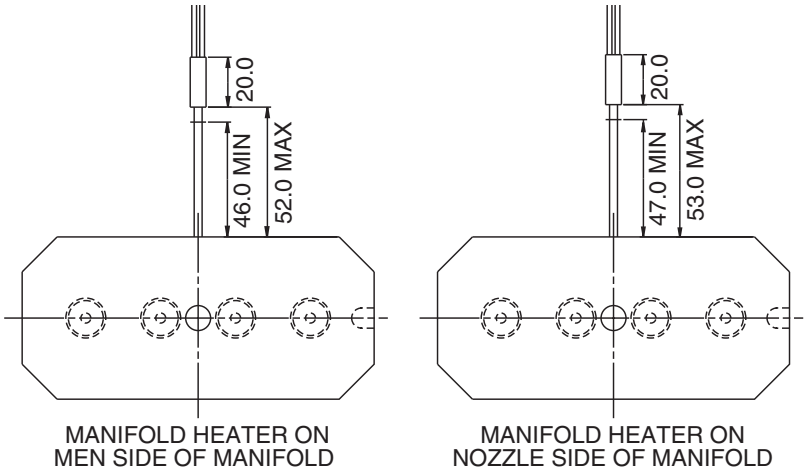


Manifold Heaters Straight
Before Bending into Wire Slot

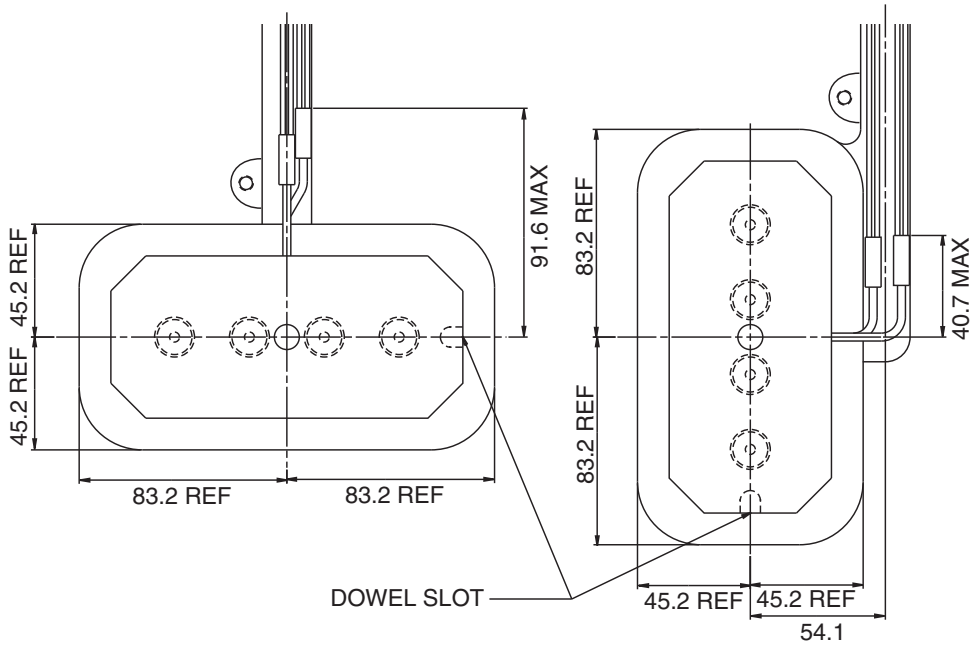


Manifold Heaters Bent into Wire Slot

MRC3004

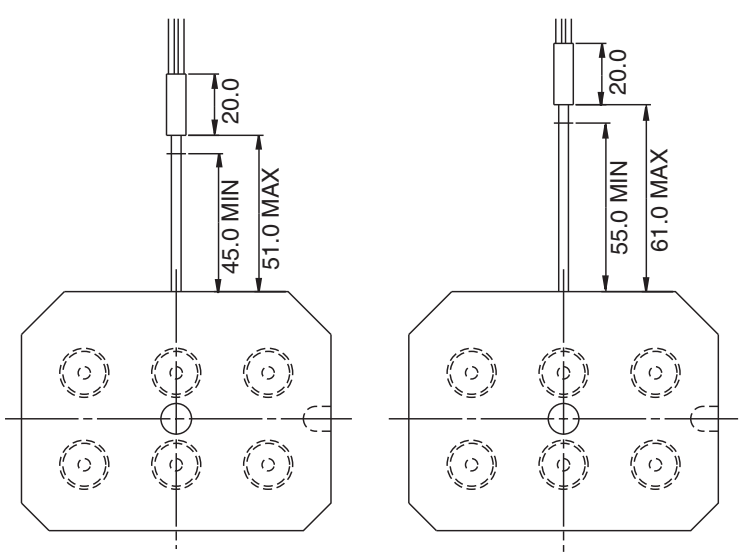


Manifold Heaters Straight Before Bending into Wire Slot

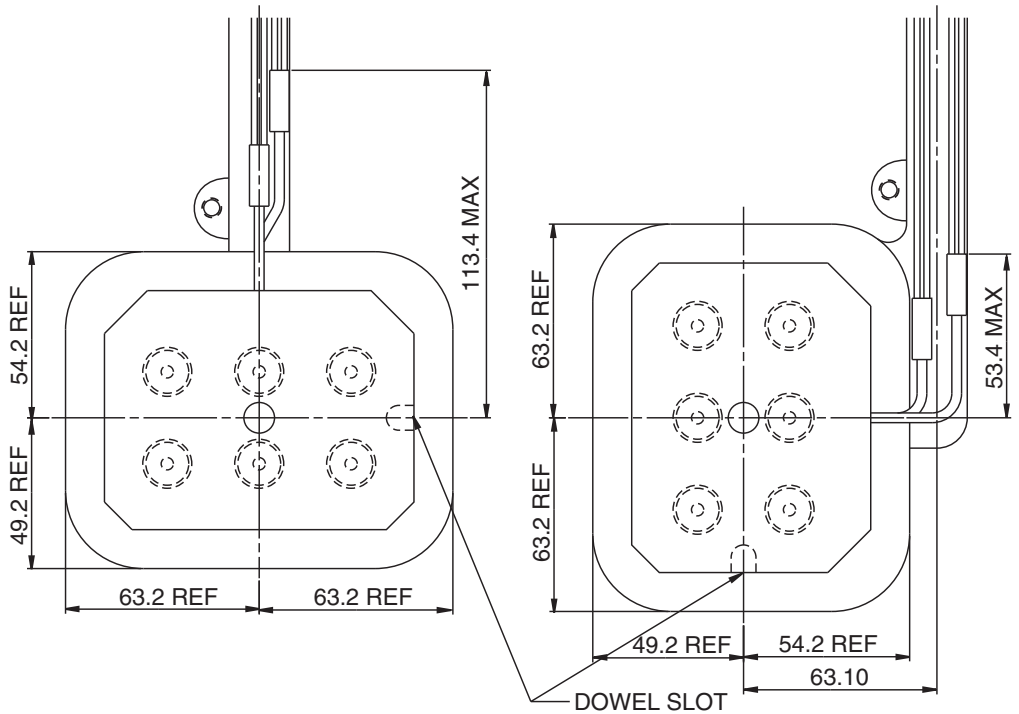


Manifold Heaters Bent into Wire Slot

MRC3306

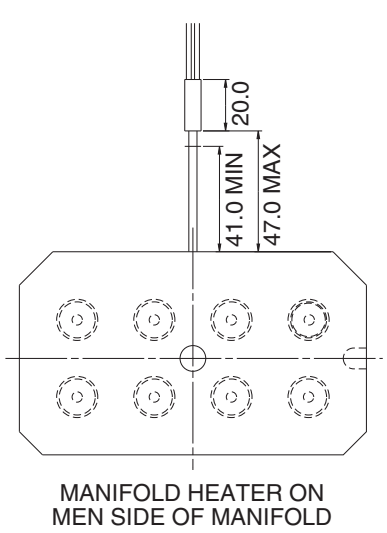


Manifold Heaters Straight
Before Bending into Wire Slot

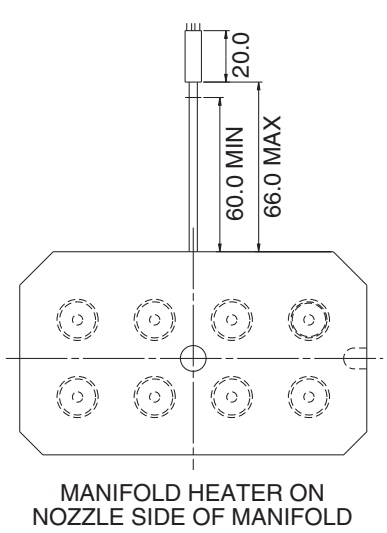


Manifold Heaters Bent into Wire Slot

MRC3308

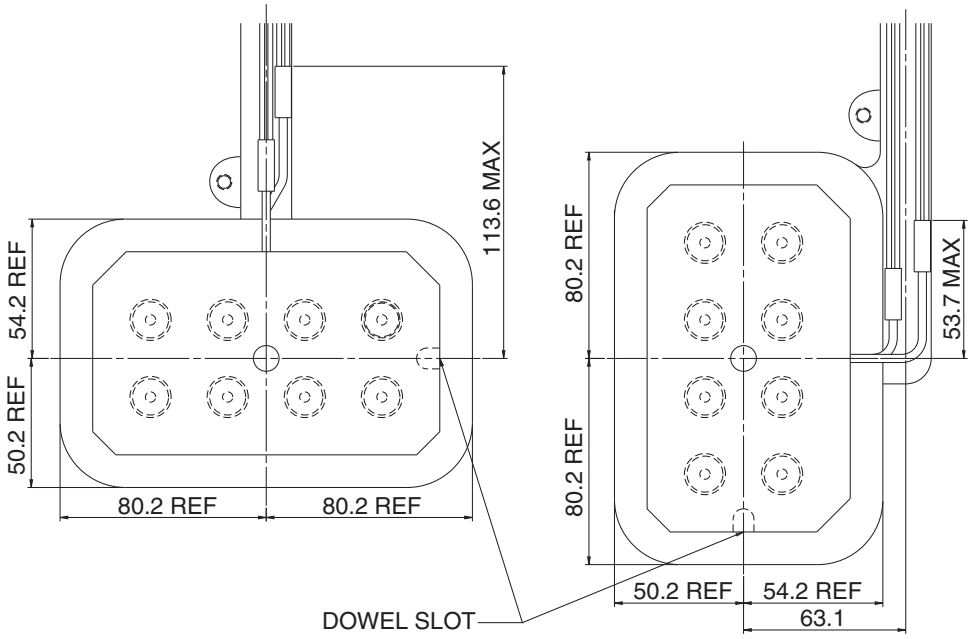


MANIFOLD HEATER ON
MEN SIDE OF MANIFOLD



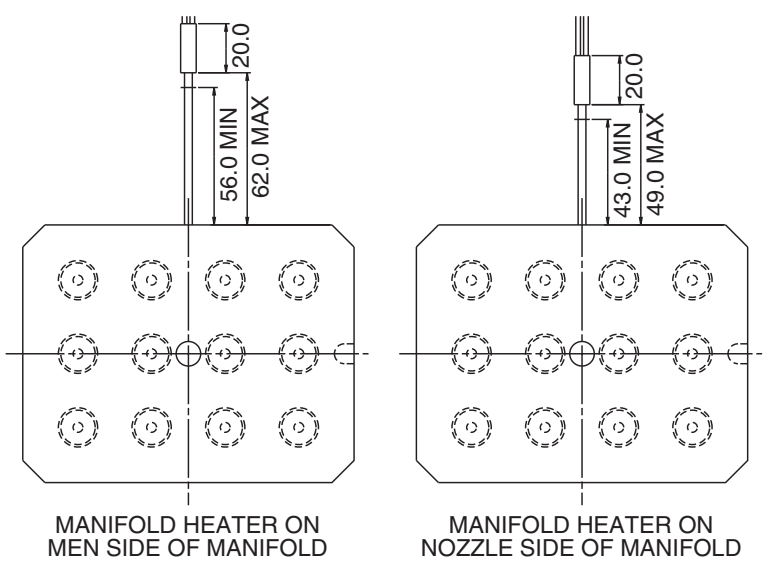
MANIFOLD HEATER ON
NOZZLE SIDE OF MANIFOLD

Manifold Heaters Straight
Before Bending into Wire Slot

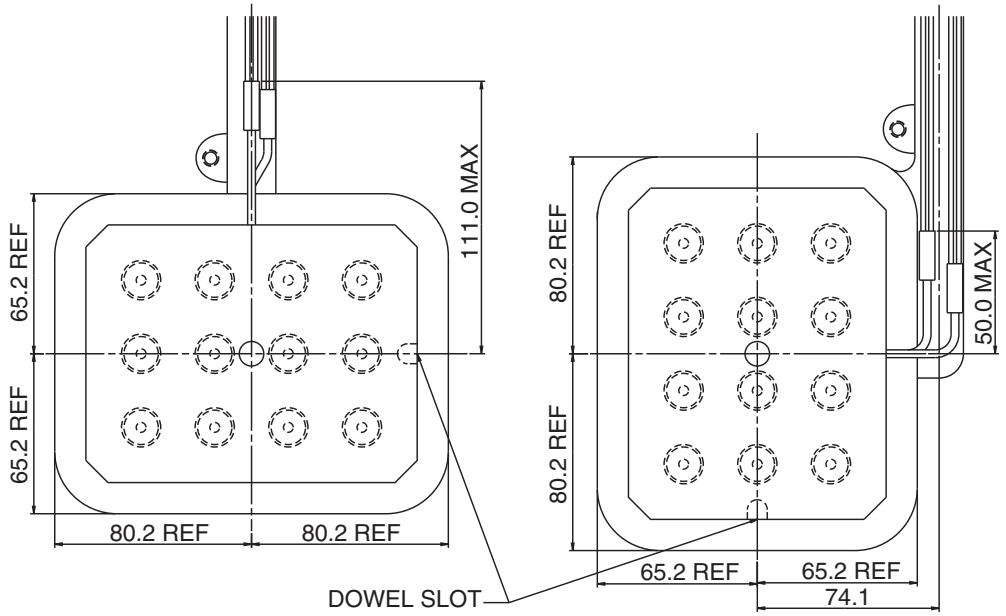


Manifold Heaters Bent into Wire Slot

MRC3312

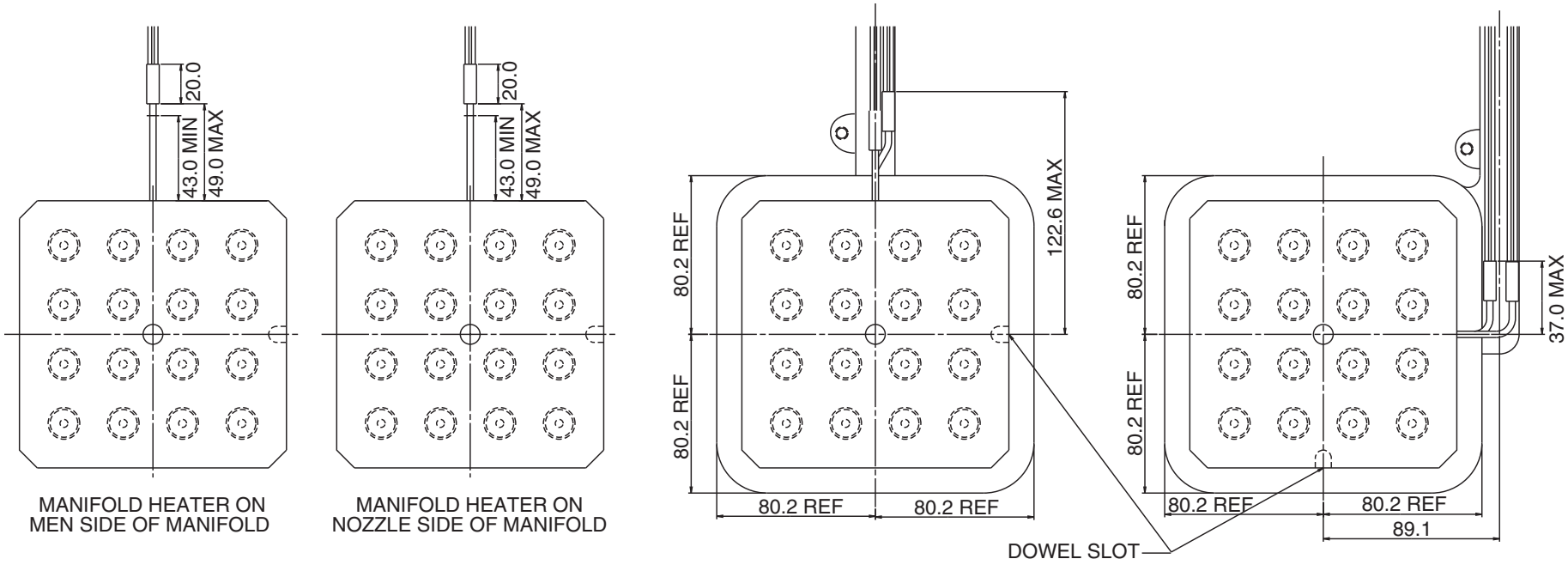


Manifold Heaters Straight
Before Bending into Wire Slot



Manifold Heaters Bent into Wire Slot

MRC3316

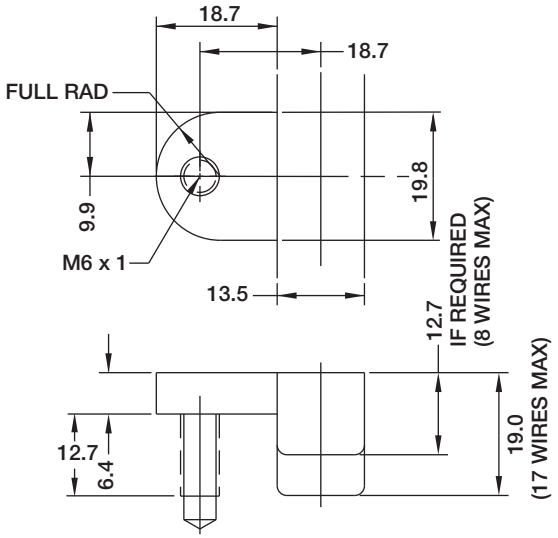


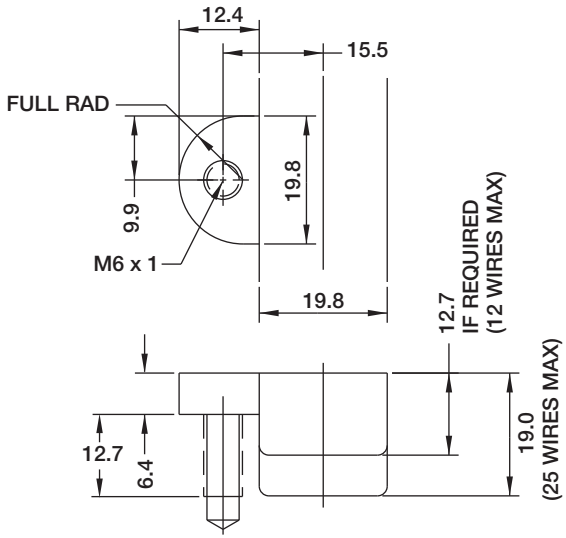
Manifold Heaters Straight Before Bending into Wire Slot

Manifold Heaters Bent into Wire Slot

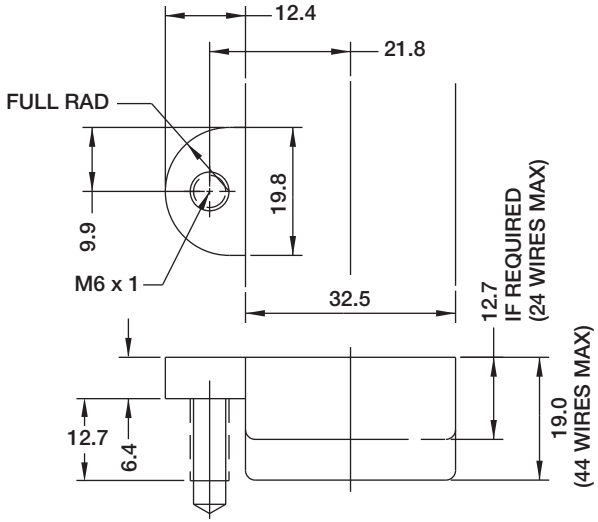
Wire Cover Pocket Machining Details

WC0001

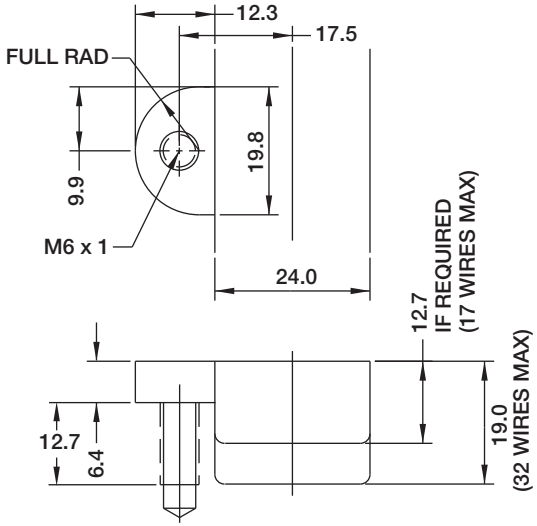




WC0002



WC0003

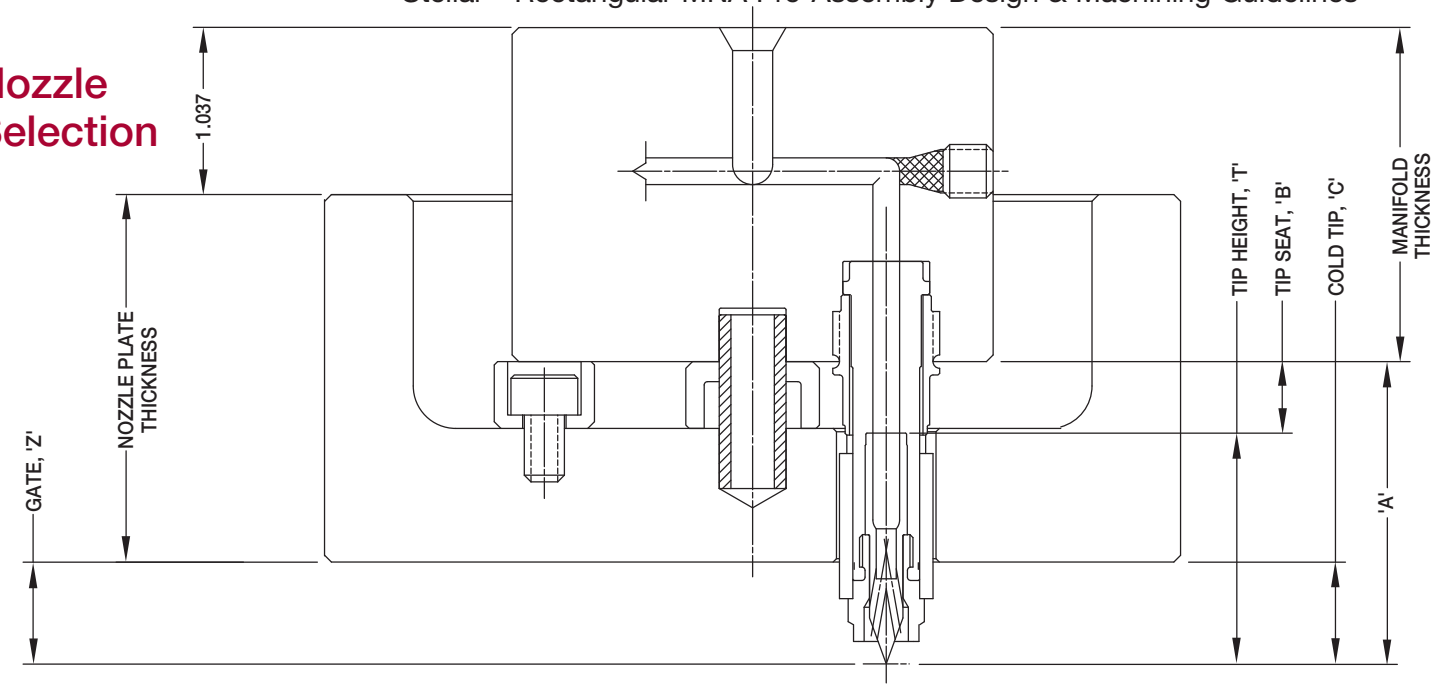


NOTES:

1. Use M6 x 12mm long BHCS and torque to 16 N.m (11.7 ft-lbs) for each wire cover.
2. To facilitate assembly use 75% of the maximum number of wires.
   Nozzle heater = 2 wires;
   Manifold heaters = 4 wires (total);
   MEN heaters = 4 wires (total);
   Nozzle thermocouple = 1 wire;
   Manifold thermocouple = 1 wire;
   MEN thermocouple = 1 wire.
3. Radius all wire channels to suit.
4. For inch dimensions, see pages 74-137.

Inch Dimensions

Nozzle Selection



Manifold Thickness

Configuration	Manifold Thickness
All 2-Drops, 4-Drop 17x21, 4-Drop 30x30	1.575
6-Drop	1.772
4-drop Inline, 8-, 12-, and 16-Drop	1.969

Tip Information for Gating Styles

TIP Sub-Assembly Item No.	Gating Style	TIP CTE (10-6/degF)	"T" "T" = "A" - "B" (inch)	Applicable Stellar System
SXG5110	Standard Point Gate Tip Sub-Assembly	9.72	1.3543	Standard
SXG5020	High Performance Point Gate Tip Sub-Assembly	3.06	1.3543	High Performance
SXG5201	High Performance Thru Hole Tip Sub-Assembly	3.06	1.3543	High Performance
SXT1040	Sprue Gate	7.11	1.3543	Standard

"A" and "B" Chart for Gating Styles

Nozzle Sub-Assembly Item No.	Point Gate "A"	Sprue Gate "A"	"B"	Notes
SXY0065 SXY0965	2.563	N/A	1.209	Standard coil heater; High performance heater
SXY0085 SXY0985	3.350	N/A	1.996	Standard coil heater; High performance heater
SXY0105 SXY0905	4.138	N/A	2.783	Standard coil heater; High performance heater
SXY0125 SXY0925	4.925	N/A	3.570	Standard coil heater; High performance heater
SXY0145 SXY0945	5.712	N/A	4.358	Standard coil heater; High performance heater
SXY8065	N/A	2.563	1.209	Standard coil heater with snap ring
SXY8085	N/A	3.350	1.996	Standard coil heater with snap ring
SXY8105	N/A	4.138	2.783	Standard coil heater with snap ring
SXY8125	N/A	4.925	3.570	Standard coil heater with snap ring
SXY8145	N/A	5.712	4.358	Standard coil heater with snap ring

NOTE: All units are in inches.

Inch Calculations

Equations

1. "Z" = "C" + Expansion
   NOTE: The minimum "Z" dimension is 0.512 for the point gate and sprue gate.
   The maximum "Z" dimension is 4.528 for the point gate and sprue gate.
2. Nozzle Plate Thickness = (MT – 1.037) + "A" – "C," thickness ≥ 1.719, 1.915 or 2.112
   (check nozzle plate machining detail).
3. Expansion = Delta T (°F) x [0.00000639 x (Manifold Thickness + "B") + CTE tip x "T"] – 0.0035 +
   0.00000639 x [T mold (°F) – 68]
   NOTE: Valid for point gate tips. For sprue gate tips use the point gate nozzle plate thickness.
4. Upper Support Ring Gap = (Delta T (°F) x 0.00000639 x Manifold Thickness) – 0.0011811
   Where: CTE tip is the coefficient of thermal expansion of the tip
   Delta T(°F) = T melt – T mold (expressed in °F)
   Delta T(°F) = Delta T (°C) / 1.8
   "Z," "C," "B," "T," Upper Support Ring Gap, Expansion and Nozzle Plate Thickness are all expressed in inches.

Procedure and Notes

1. Calculate expansion
2. Calculate "C"
3. Calculate plate thickness
4. Calculate upper support ring gap

The calculations may need to be repeated in order to maintain the nozzle plate thickness requirement.
NOTE: Start with the smallest "A" dimension and increase "A" dimension as needed. This approach will generate a design with the minimum stack height.

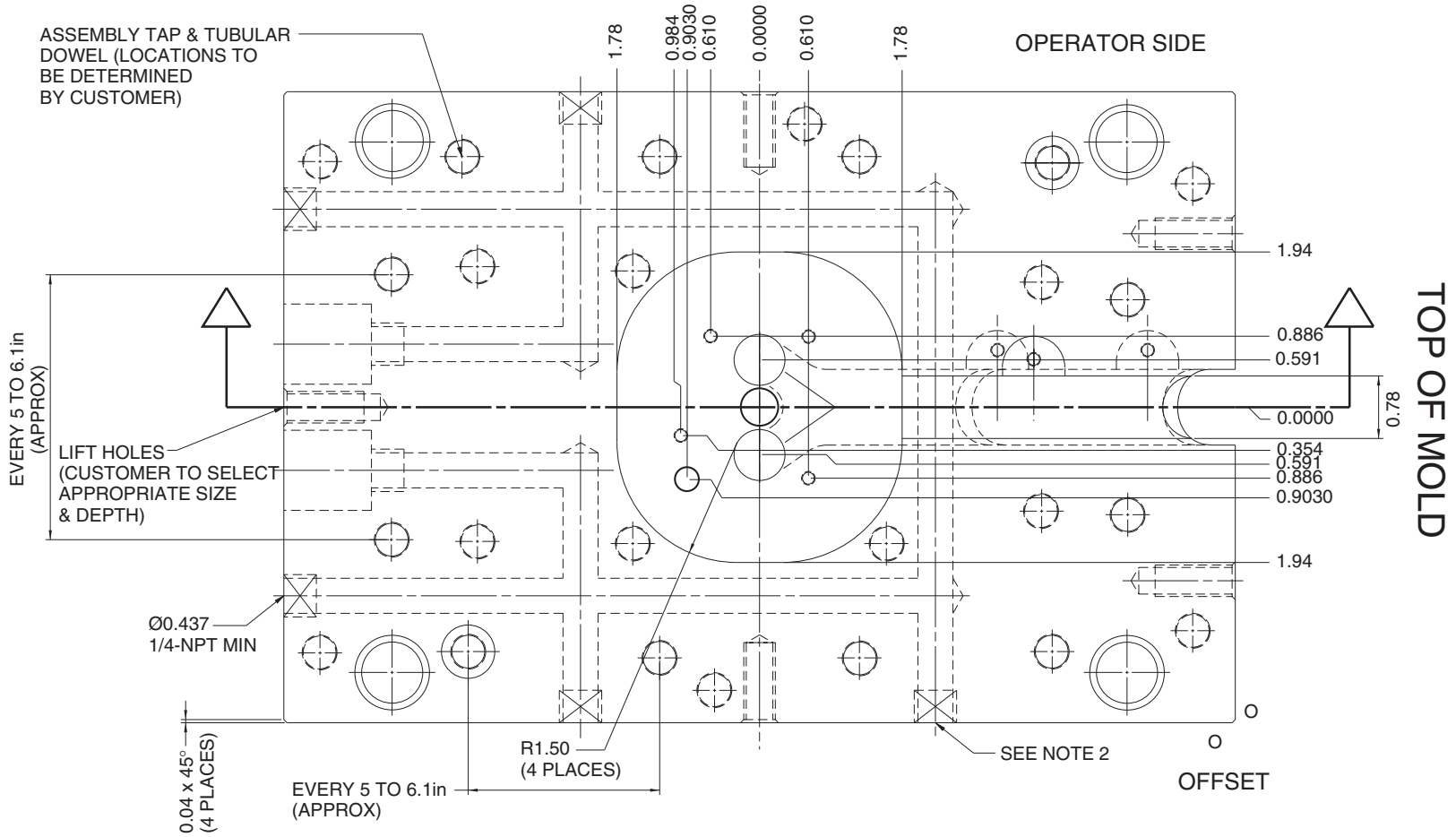
Design Suggestions

The most difficult area of design will be the layout of the wire channels in the nozzle plate. Please evaluate the wire channel depth and path carefully. Three possible scenarios (1 = simplest; 2 = more difficult; 3 = most difficult):

1. If the nozzle plate thickness is >2.152 with a 1.575 thick manifold [2.348 with a 1.772 and 2.545 with a 1.969 thick manifold], the wire channel will be 0.75 deep throughout its path.
2. If the nozzle plate thickness is 1.929 to 2.152 with a 1.575 thick manifold [2.126 to 2.348 with a 1.772 and 2.323 to 2.545 with a 1.969 thick manifold], the wire channel will be 0.75 deep throughout its path, but the wire channel cannot cross under the support pad taps because the screws will protrude into the wire channel.
3. If the nozzle plate thickness is 1.719 to <1.929 with a 1.575 thick manifold [1.915 to <2.126 with a 1.772 thick and 2.112 to <2.323 with a 1.969 thick manifold], the wire channel will be .50 deep underneath the manifold clearance pocket. The wire channel can be 0.75 deep only outside of the pocket. Also, the wire channel cannot cross under the support pad taps because the screws will protrude into the wire channel.

In order to avoid scenarios 2 and 3, choose the next longer "A" dimension, which will increase the stack height by approximately 0.787in.

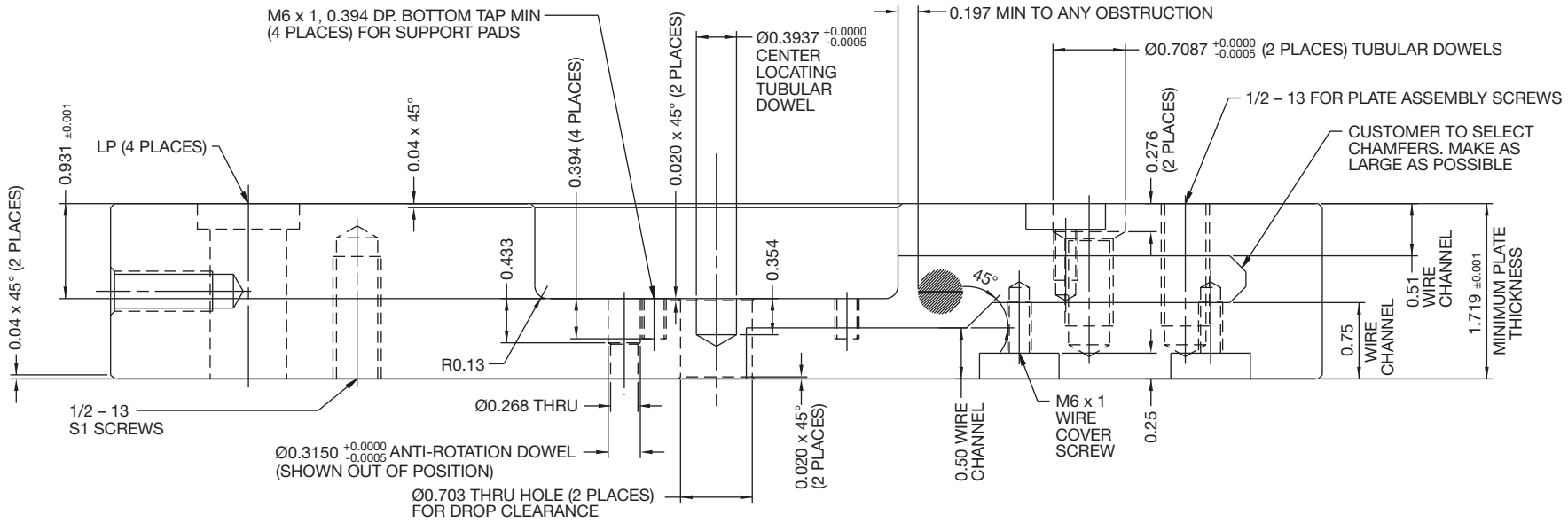
2-Drop (30 Pitch) – Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 7-7/8" x 11-7/8" mold shown.
2. If plate thickness is between 1.719 and 1.843, water line between heater channels must be made smaller to ensure 0.197 minimum condition.
3. For metric dimensions, see pages 10-73.

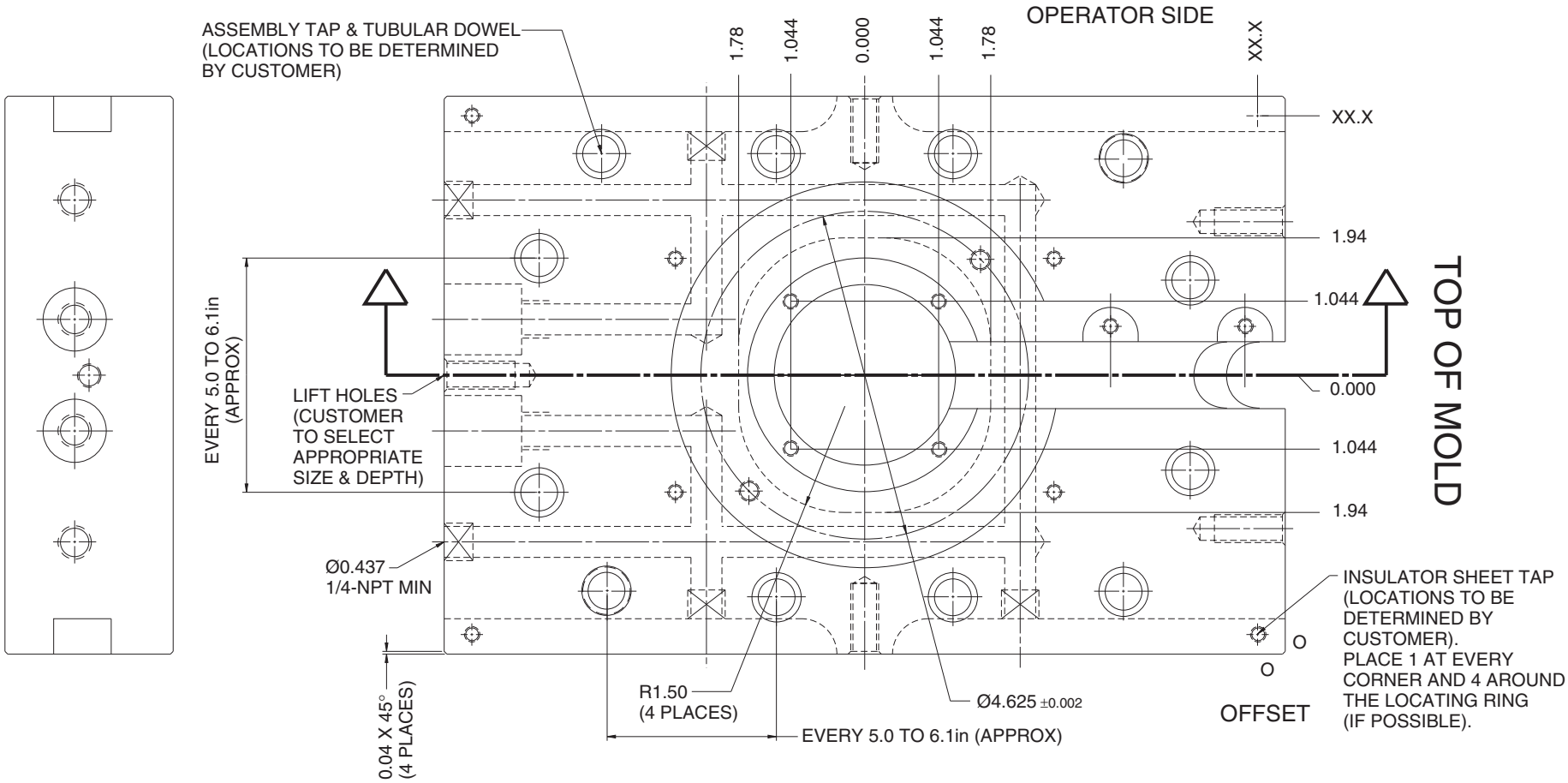
2-Drop (30 Pitch) – Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 0.75 deep except when plate thickness does not provide 0.250in steel support underneath pocket. In that case, wire channel depth to be 0.50 deep, under the pocket and then chamfered (45°) to 0.75 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If plate thickness is between 1.719 and 1.843, water line between heater channels must be made smaller to ensure 0.197 minimum condition.
3. If the manifold is to be positioned 90% to that shown, please refer to MRC3002 manifold heater channel machining drawing on page 125 for the channel location. The four M6 taps and dowel must be rotated 90° also.
4. For metric dimensions, see pages 10-73.

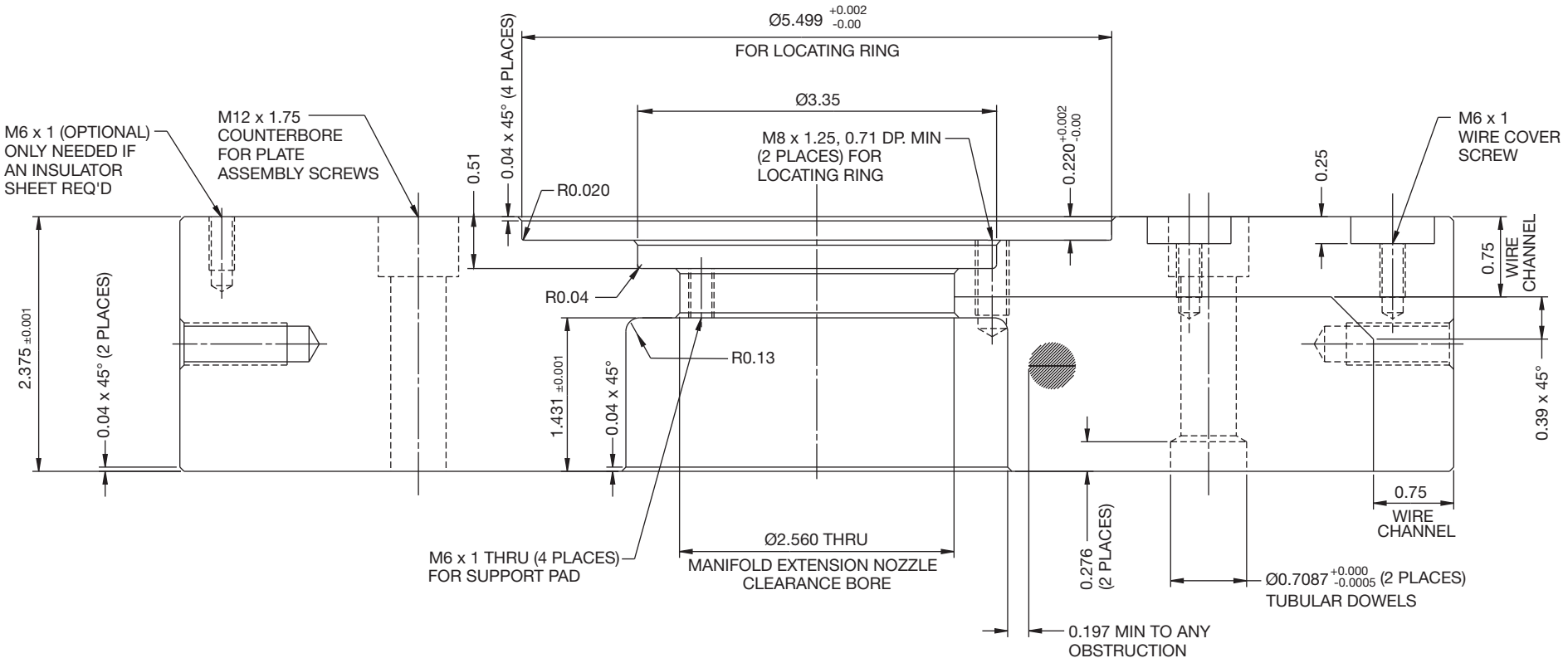
2-Drop (30 Pitch) – Manifold Retainer Plate Machining Detail



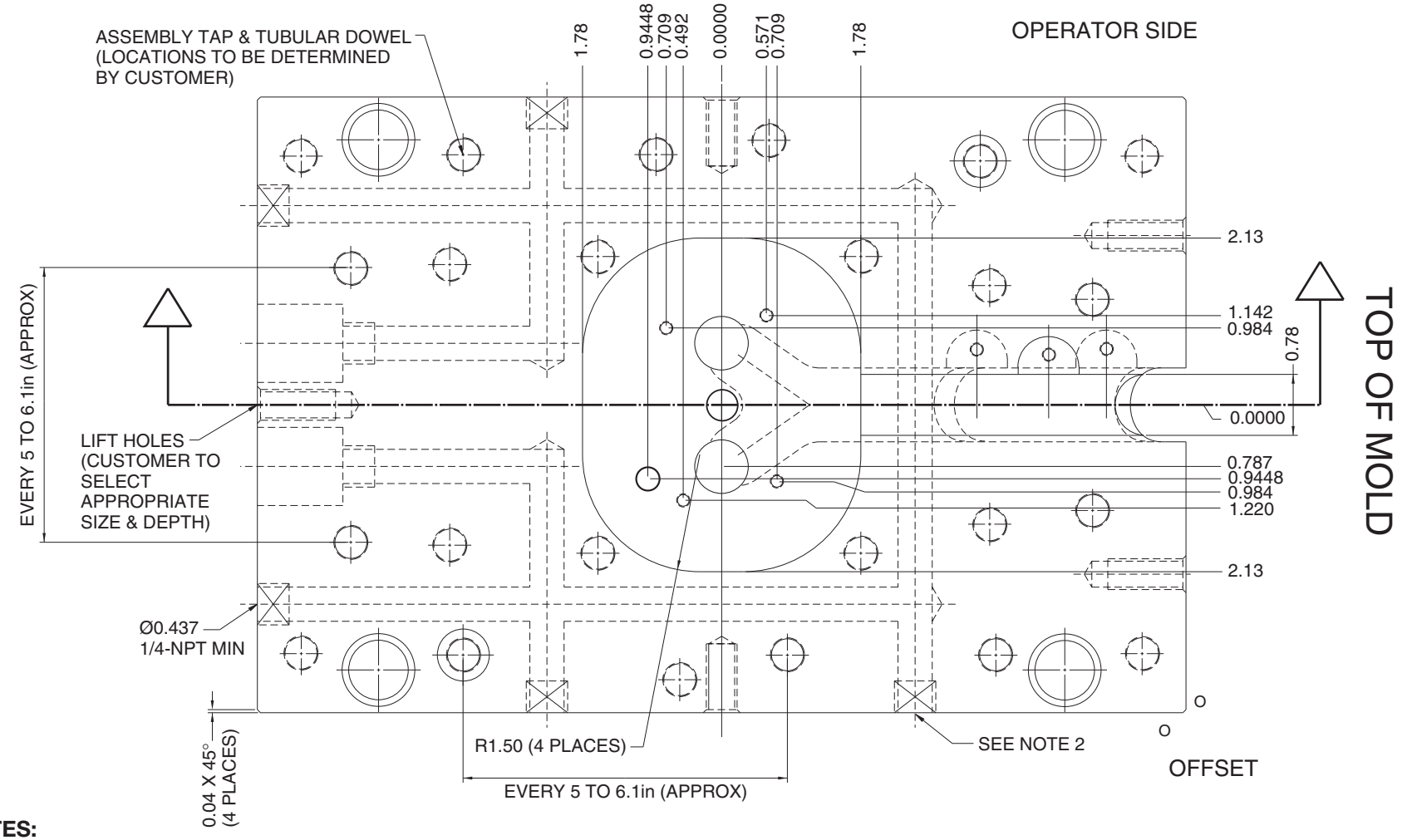
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 7-7/8" x 11-7/8" mold shown.
2. For metric dimensions, see pages 10-73.

2-Drop (30 Pitch) – Manifold Retainer Plate Machining Detail (continued)



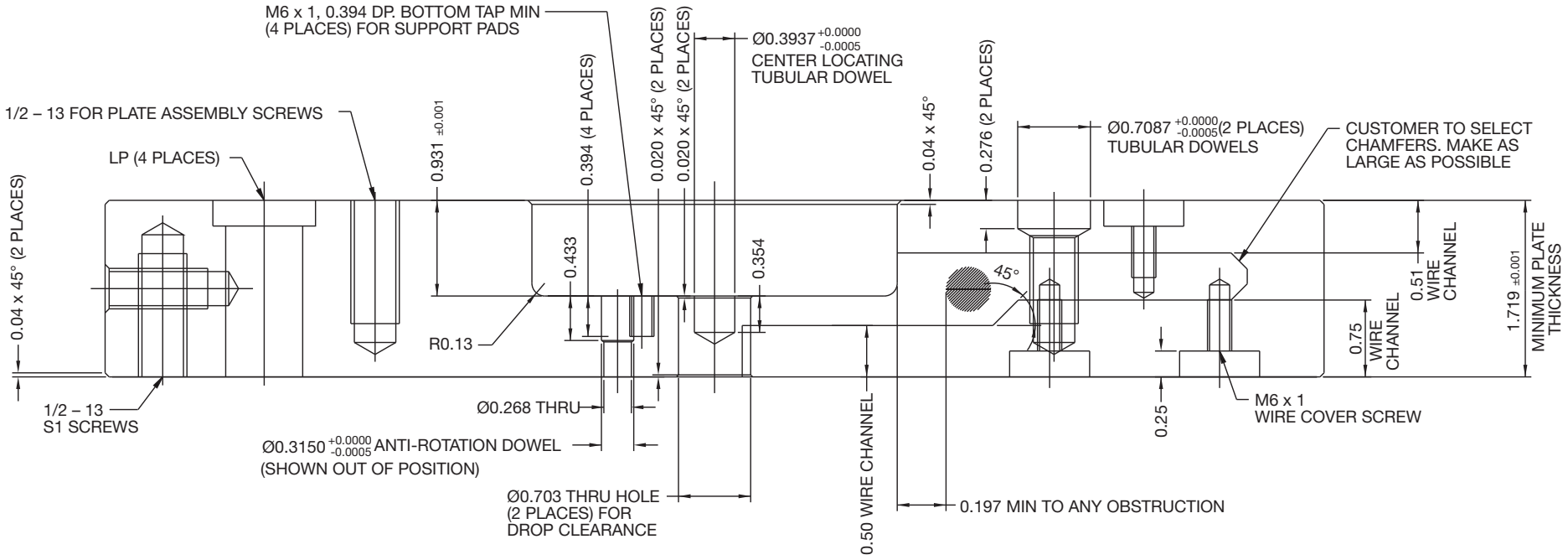
2-Drop (40 Pitch) – Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 7-7/8" x 11-7/8" mold shown.
2. If plate thickness is between 1.719 and 1.843, water line between heater channels must be made smaller to ensure 0.197 minimum condition.
3. For metric dimensions, see pages 10-73.

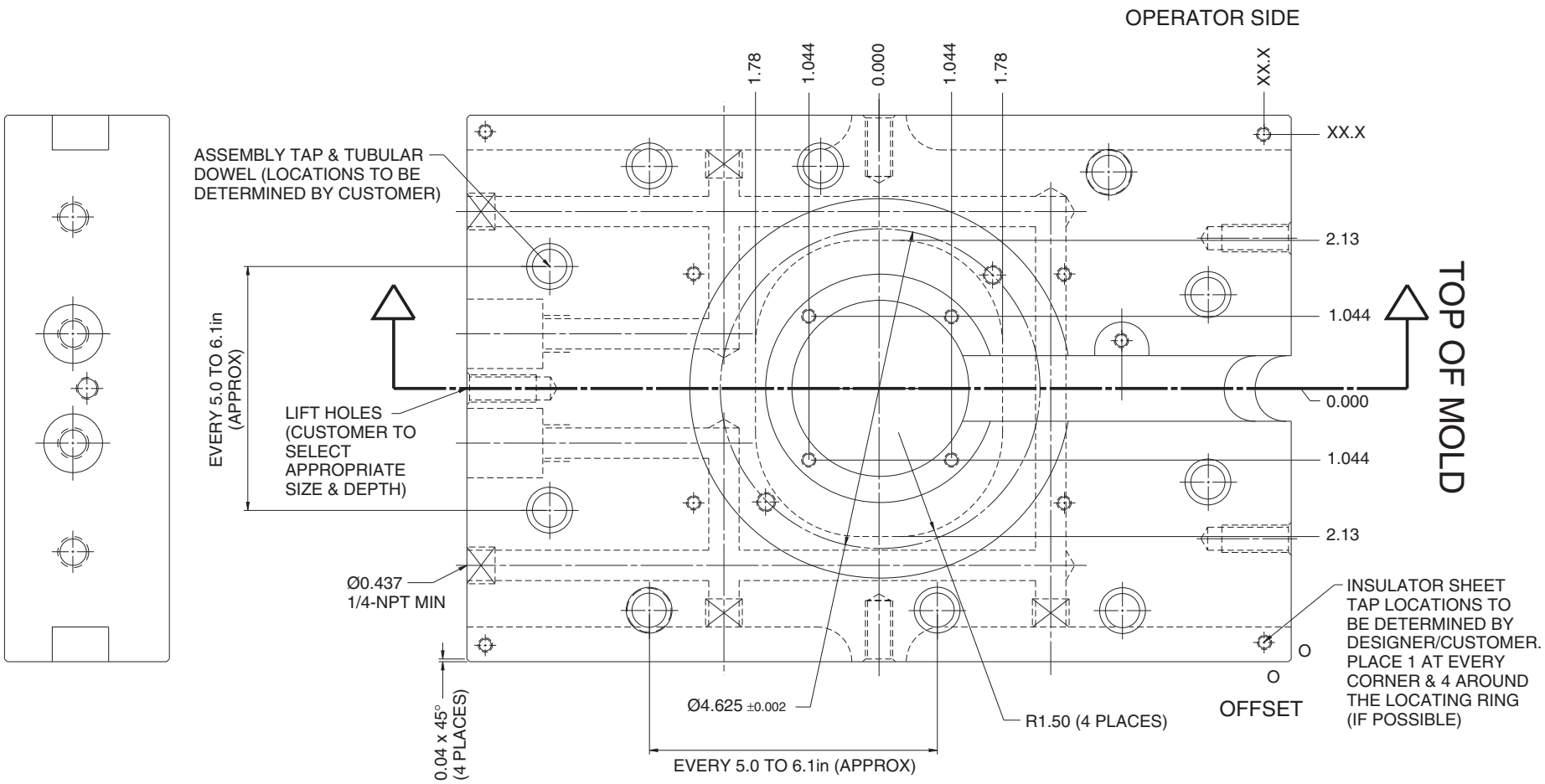
2-Drop (40 Pitch) – Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 0.75 deep except when plate thickness does not provide 0.250in steel support underneath pocket. In that case, wire channel depth to be 0.50 deep, under the pocket and then chamfered (45°) to 0.75 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If plate thickness is between 1.719 and 1.843, water line between heater channels must be made smaller to ensure 0.197 minimum condition.
3. If the manifold is to be positioned 90% to that shown, please refer to MRC4002 manifold heater channel machining drawing on page 126 for the channel location. The four M6 taps and dowel must be rotated 90° also.
4. For metric dimensions, see pages 10-73.

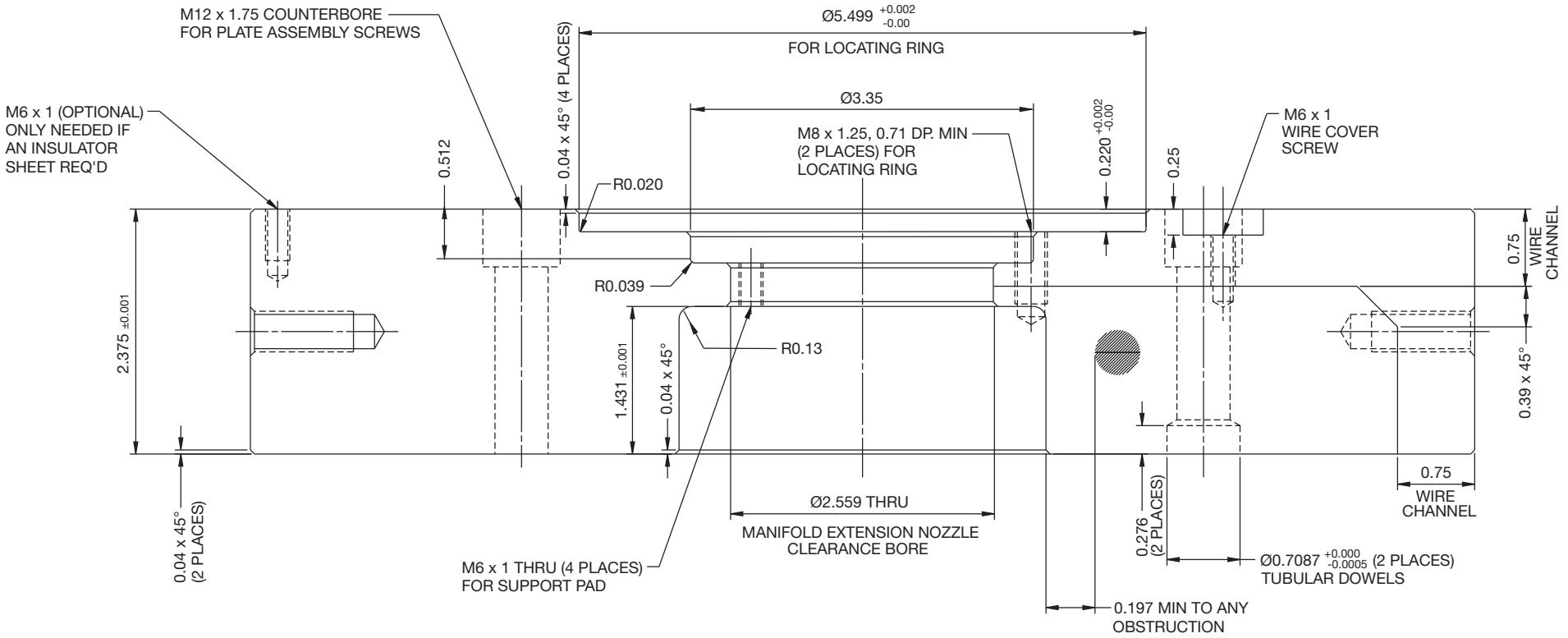
2-Drop (40 Pitch) – Manifold Retainer Plate Machining Detail



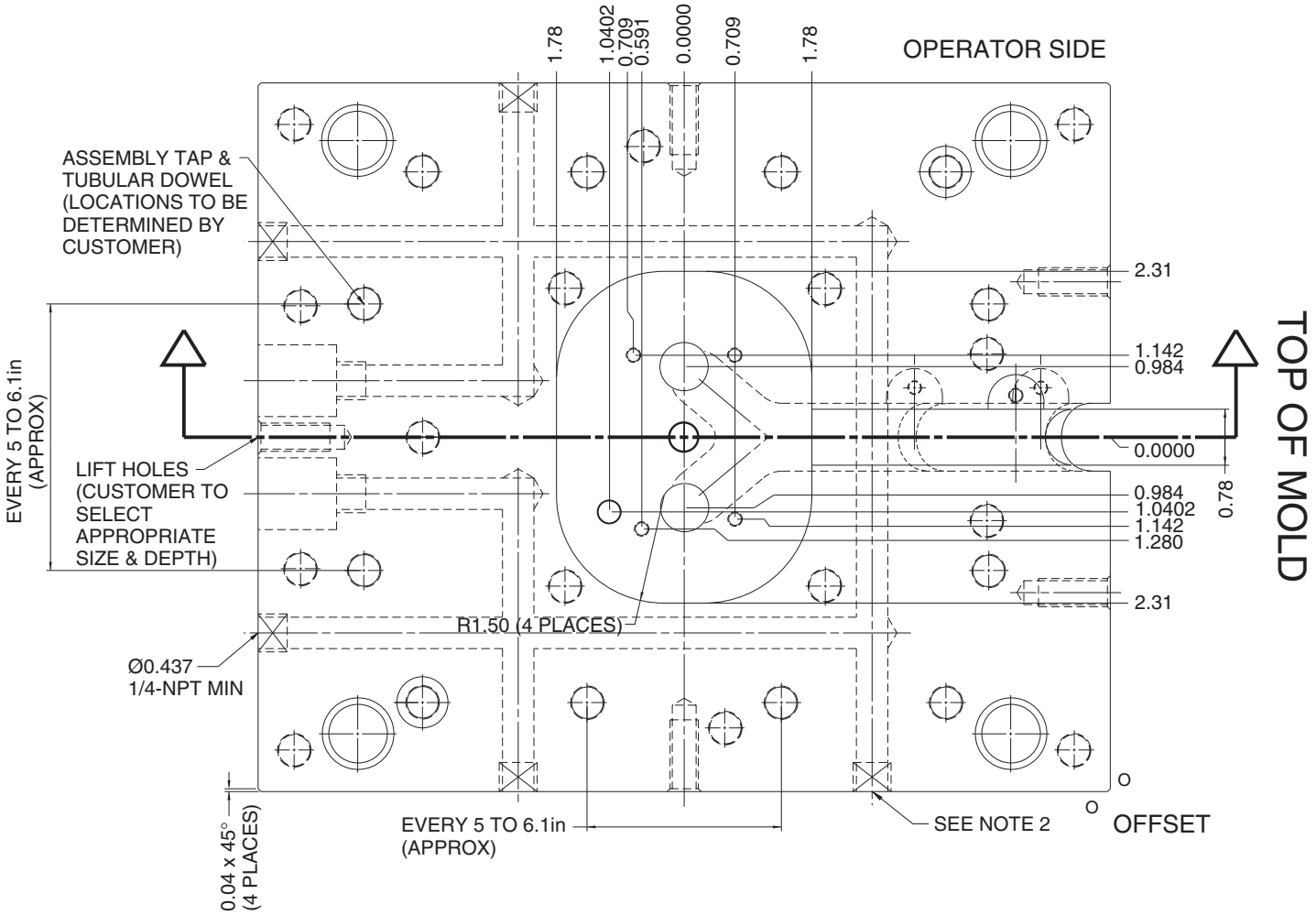
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 7-7/8" x 11-7/8" mold shown.
2. For metric dimensions, see pages 10-73.

2-Drop (40 Pitch) – Manifold Retainer Plate Machining Detail (continued)



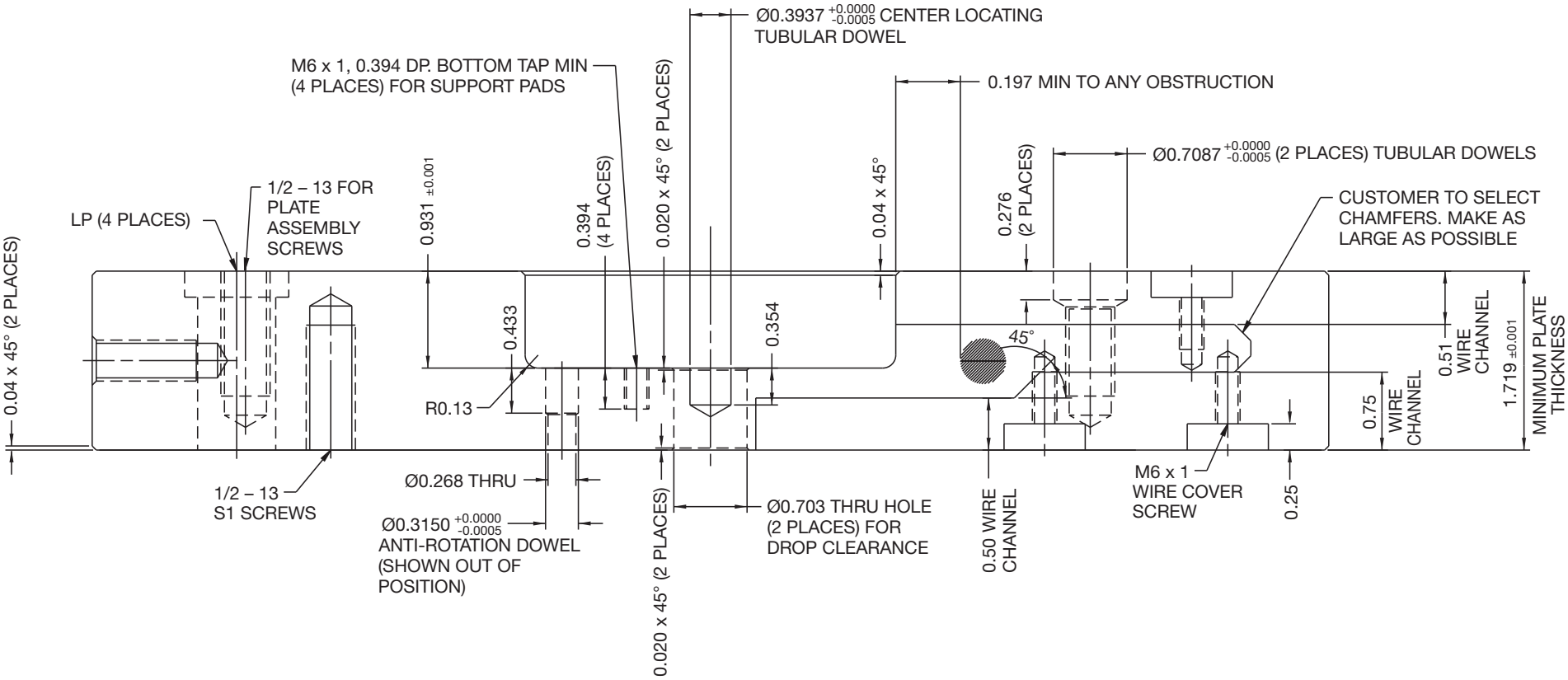
2-Drop (50 Pitch) – Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 7-7/8" x 11-7/8" mold shown.
2. If plate thickness is between 1.719 and 1.843, water line between heater channels must be made smaller to ensure 0.197 minimum condition.
3. For metric dimensions, see pages 10-73.

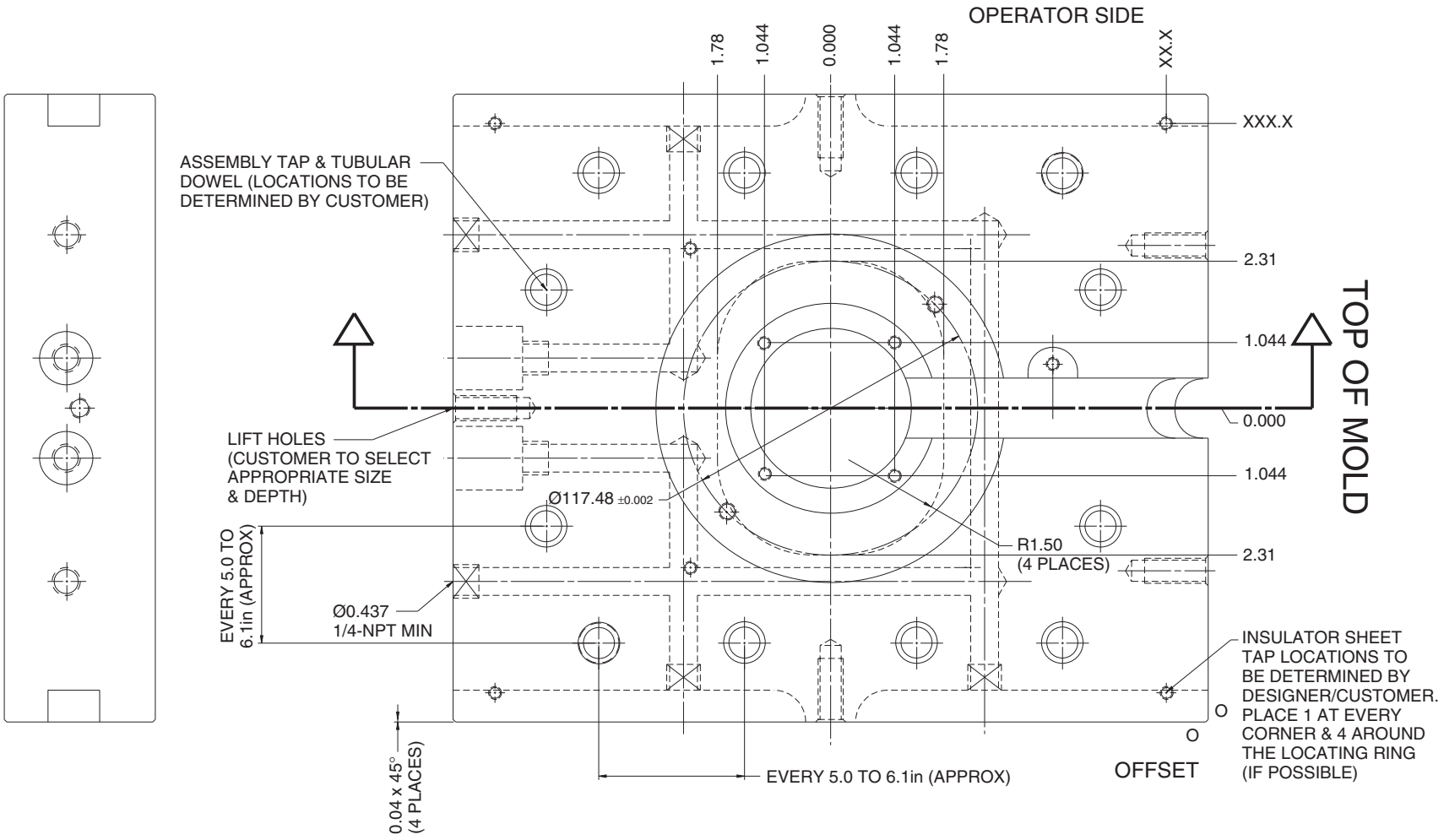
2-Drop (50 Pitch) – Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 0.75 deep except when plate thickness does not provide 0.250in steel support underneath pocket. In that case, wire channel depth to be 0.50 deep, under the pocket and then chamfered (45°) to 0.75 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If plate thickness is between 1.719 and 1.843, water line between heater channels must be made smaller to ensure 0.197 minimum condition.
3. If the manifold is to be positioned 90% to that shown, please refer to MRC5002 manifold heater channel machining drawing on page 127 for the channel location. The four M6 taps and dowel must be rotated 90° also.
4. For metric dimensions, see pages 10-73.

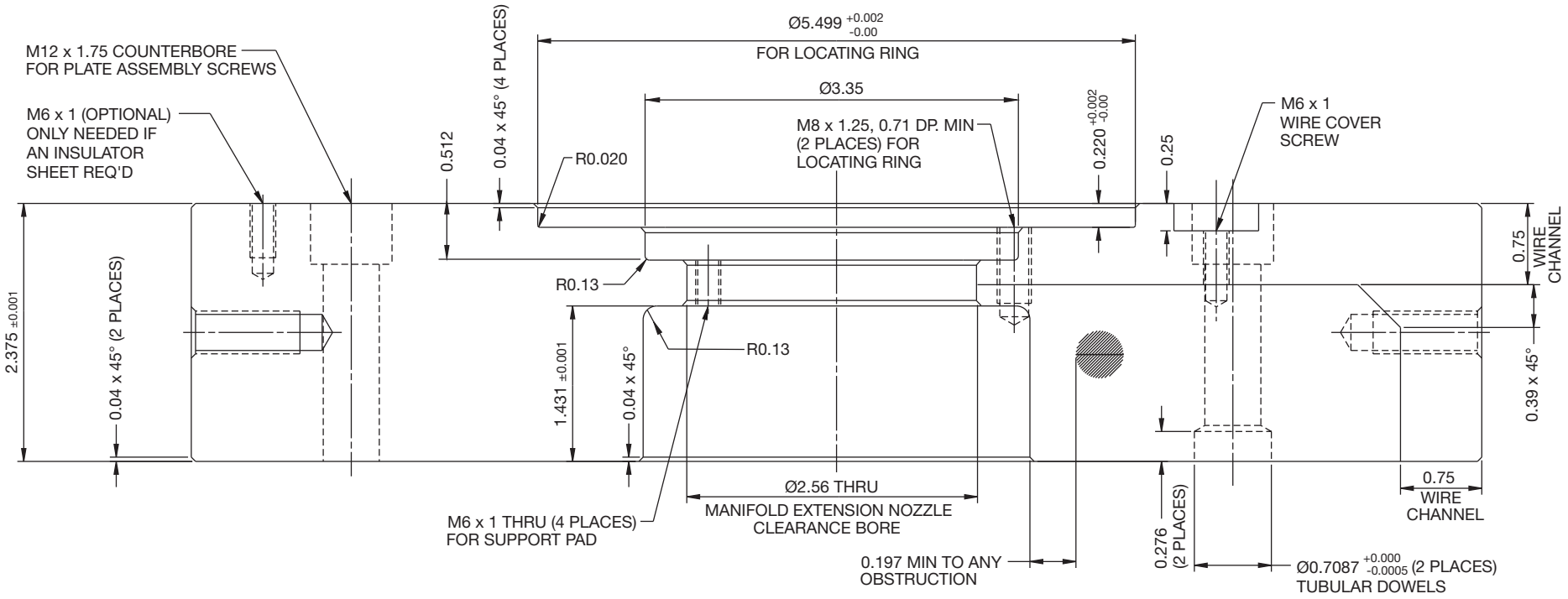
2-Drop (50 Pitch) – Manifold Retainer Plate Machining Detail



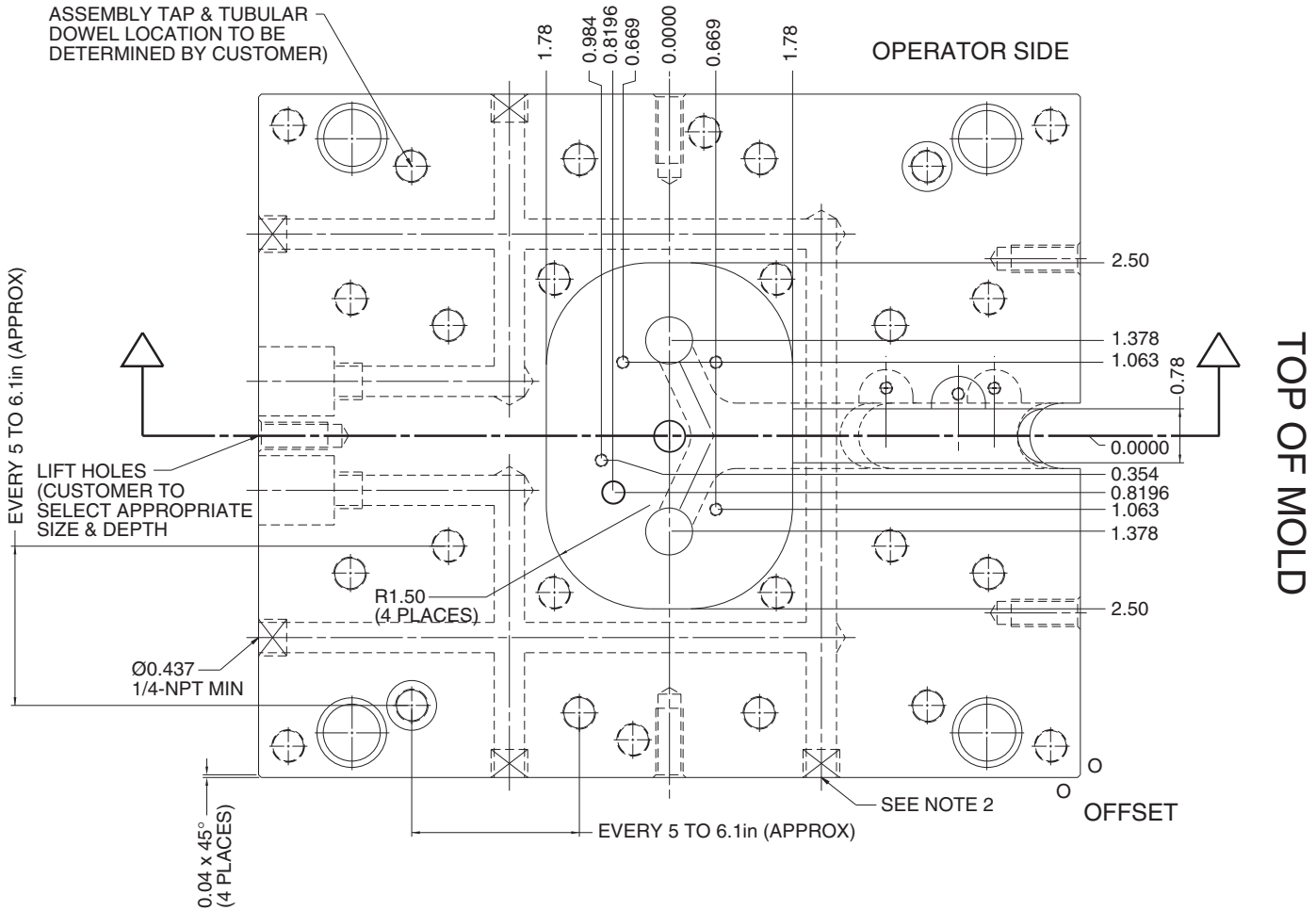
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 7-7/8" x 11-7/8" mold shown.
2. For metric dimensions, see pages 10-73.

2-Drop (50 Pitch) – Manifold Retainer Plate Machining Detail (continued)



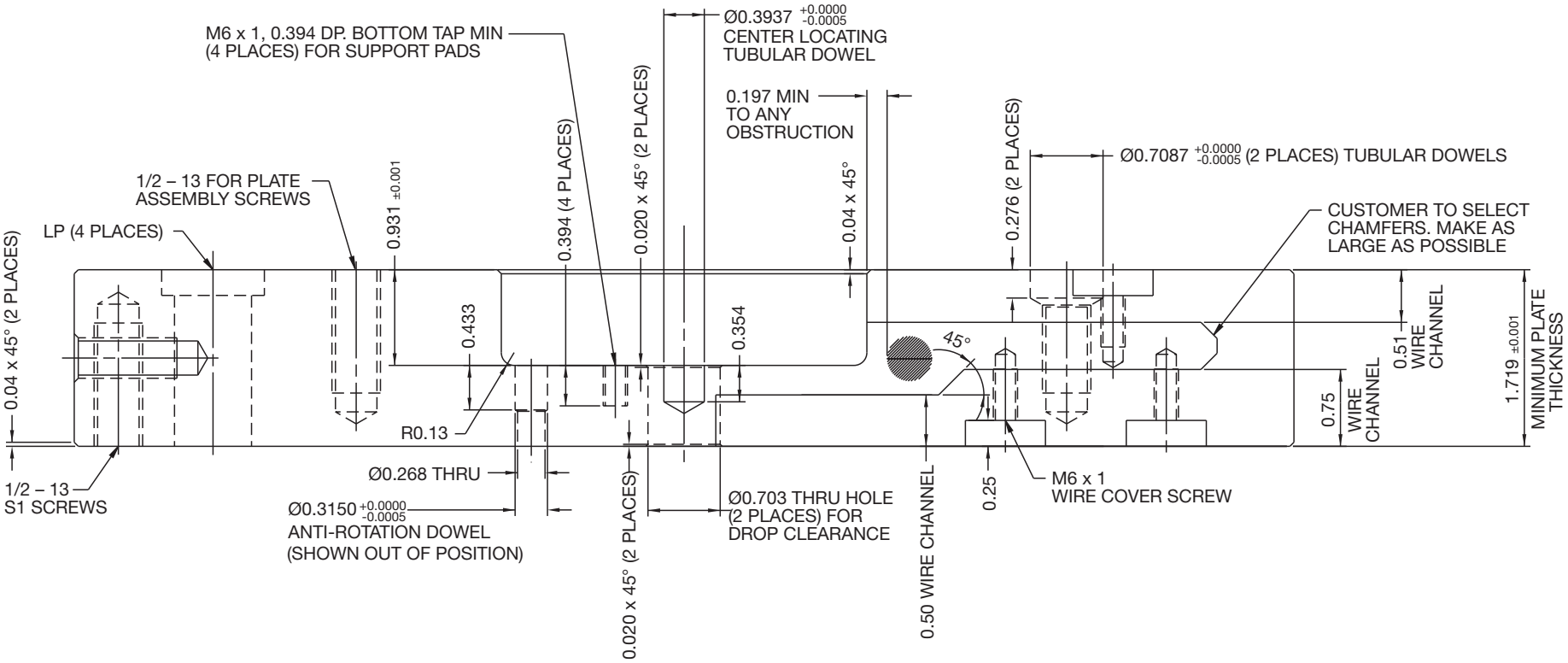
2-Drop (70 Pitch) – Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 7-7/8" x 11-7/8" mold shown.
2. If plate thickness is between 1.719 and 1.843, water line between heater channels must be made smaller to ensure 0.197 minimum condition.
3. For metric dimensions, see pages 10-73.

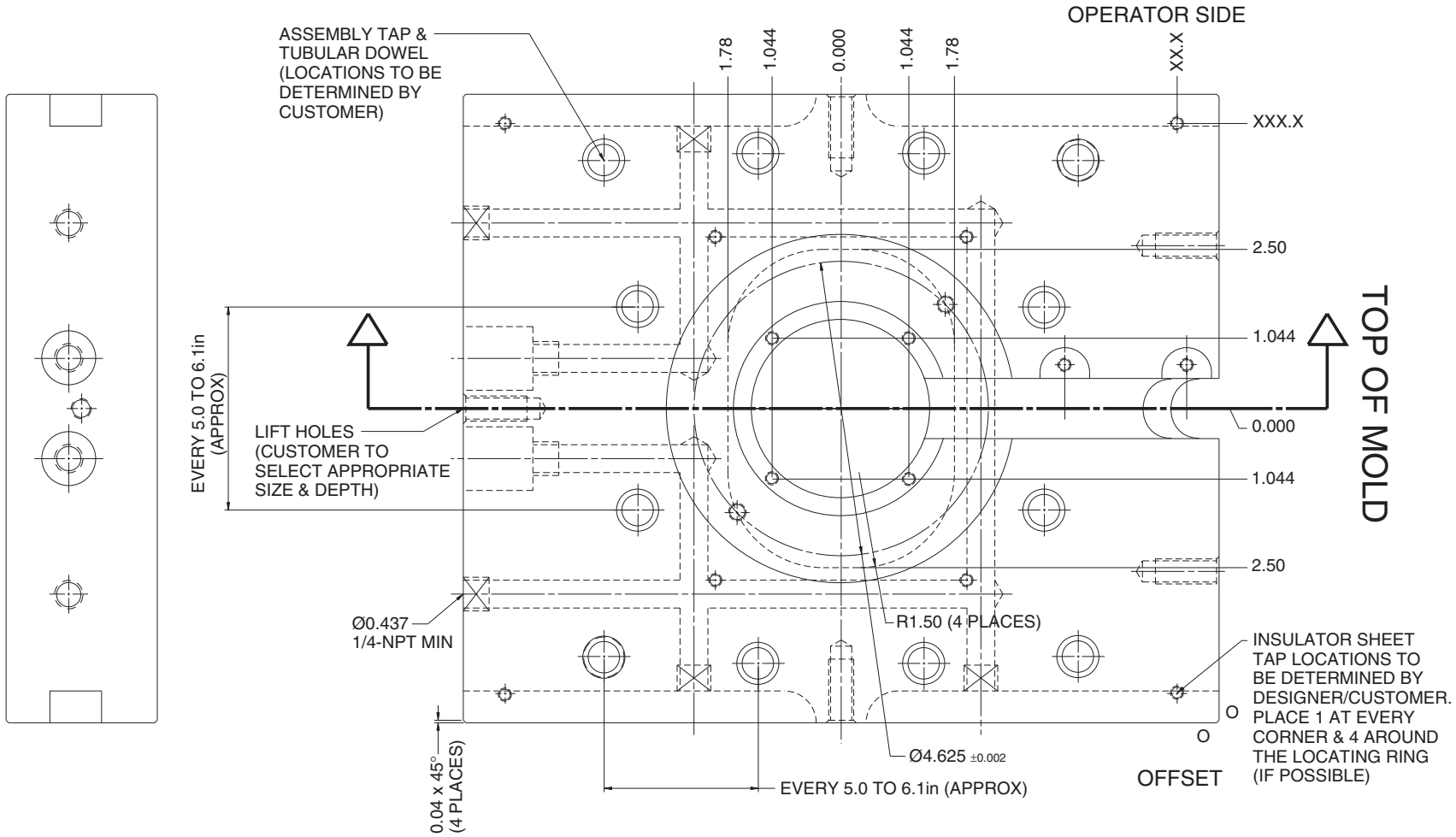
2-Drop (70 Pitch) – Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 0.75 deep except when plate thickness does not provide 0.250in steel support underneath pocket. In that case, wire channel depth to be 0.50 deep, under the pocket and then chamfered (45°) to 0.75 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If plate thickness is between 1.719 and 1.843, water line between heater channels must be made smaller to ensure 0.197 minimum condition.
3. If the manifold is to be positioned 90% to that shown, please refer to MRC7002 manifold heater channel machining drawing on page 128 for the channel location. The four M6 taps and dowel must be rotated 90° also.
4. For metric dimensions, see pages 10-73.

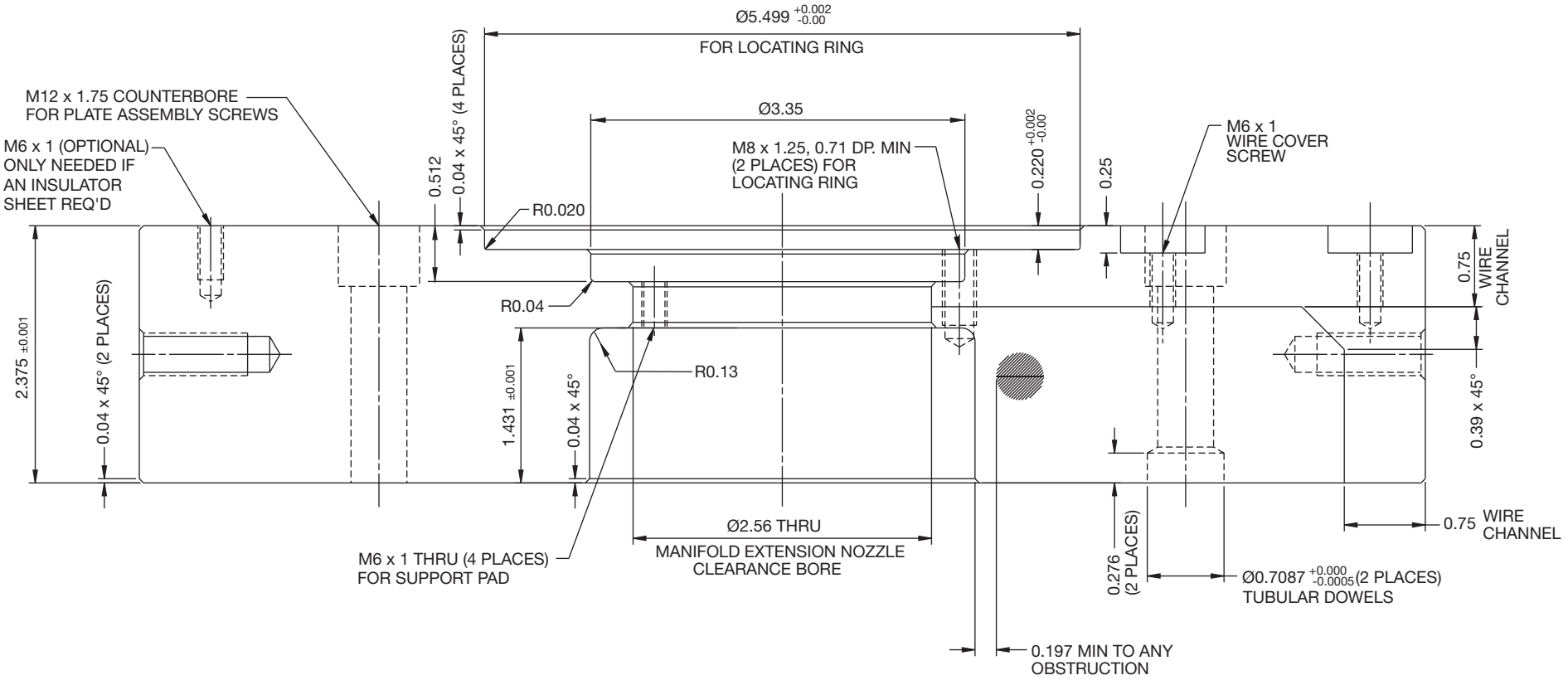
2-Drop (70 Pitch) – Manifold Retainer Plate Machining Detail



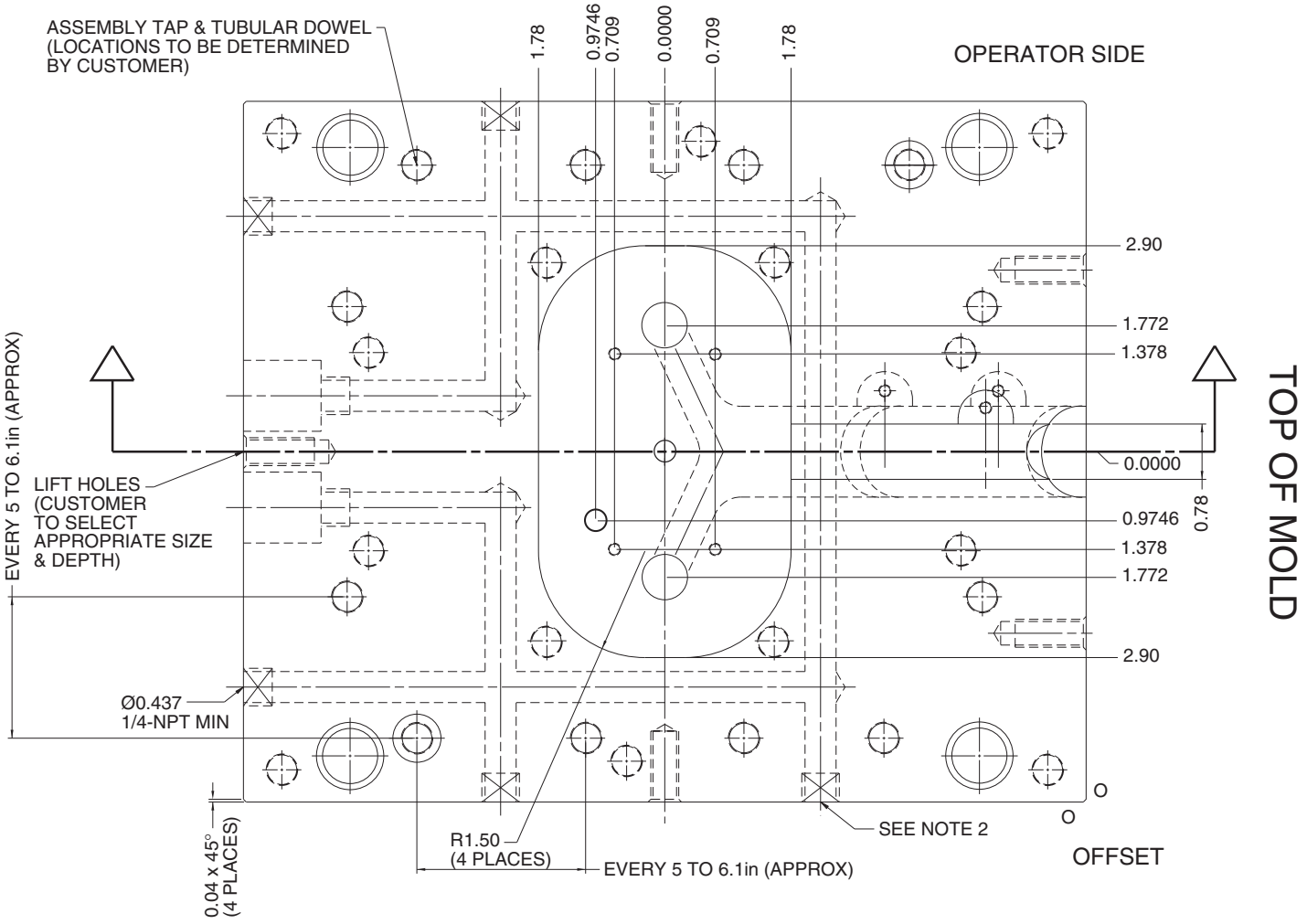
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 7-7/8" x 11-7/8" mold shown.
2. For metric dimensions, see pages 10-73.

2-Drop (70 Pitch) – Manifold Retainer Plate Machining Detail (continued)



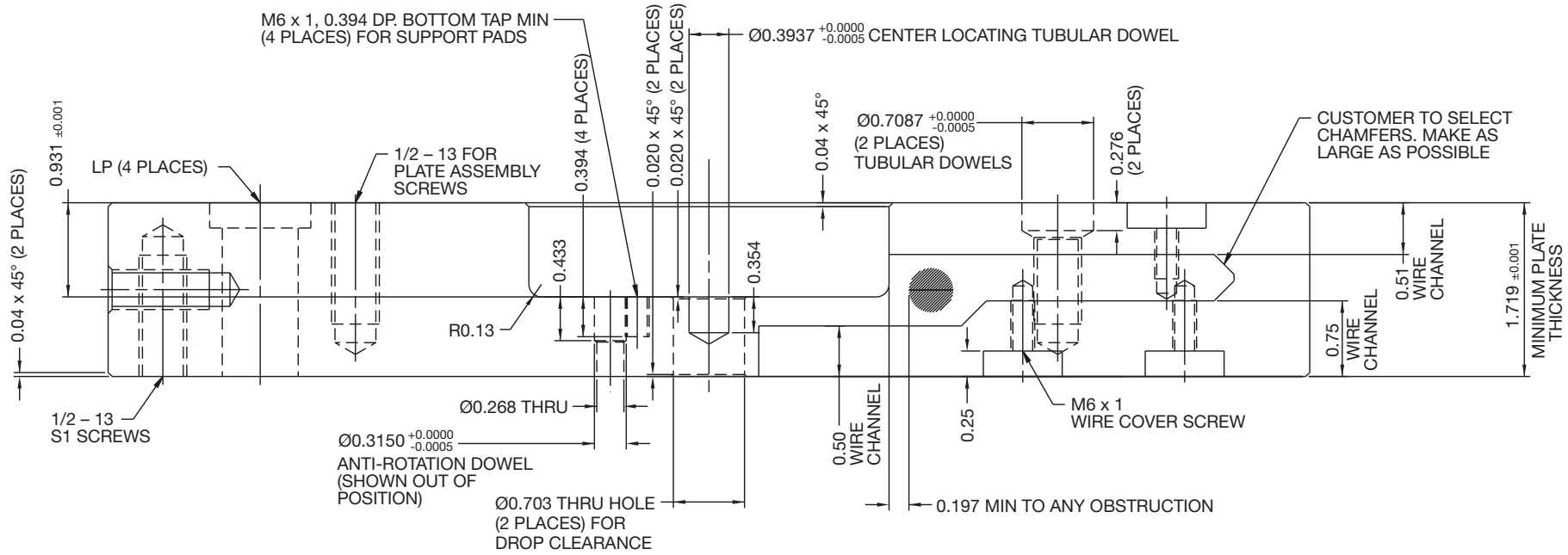
2-Drop (90 Pitch) – Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 7-7/8" x 11-7/8" mold shown.
2. If plate thickness is between 1.719 and 1.843, water line between heater channels must be made smaller to ensure 0.197 minimum condition.
3. For metric dimensions, see pages 10-73.

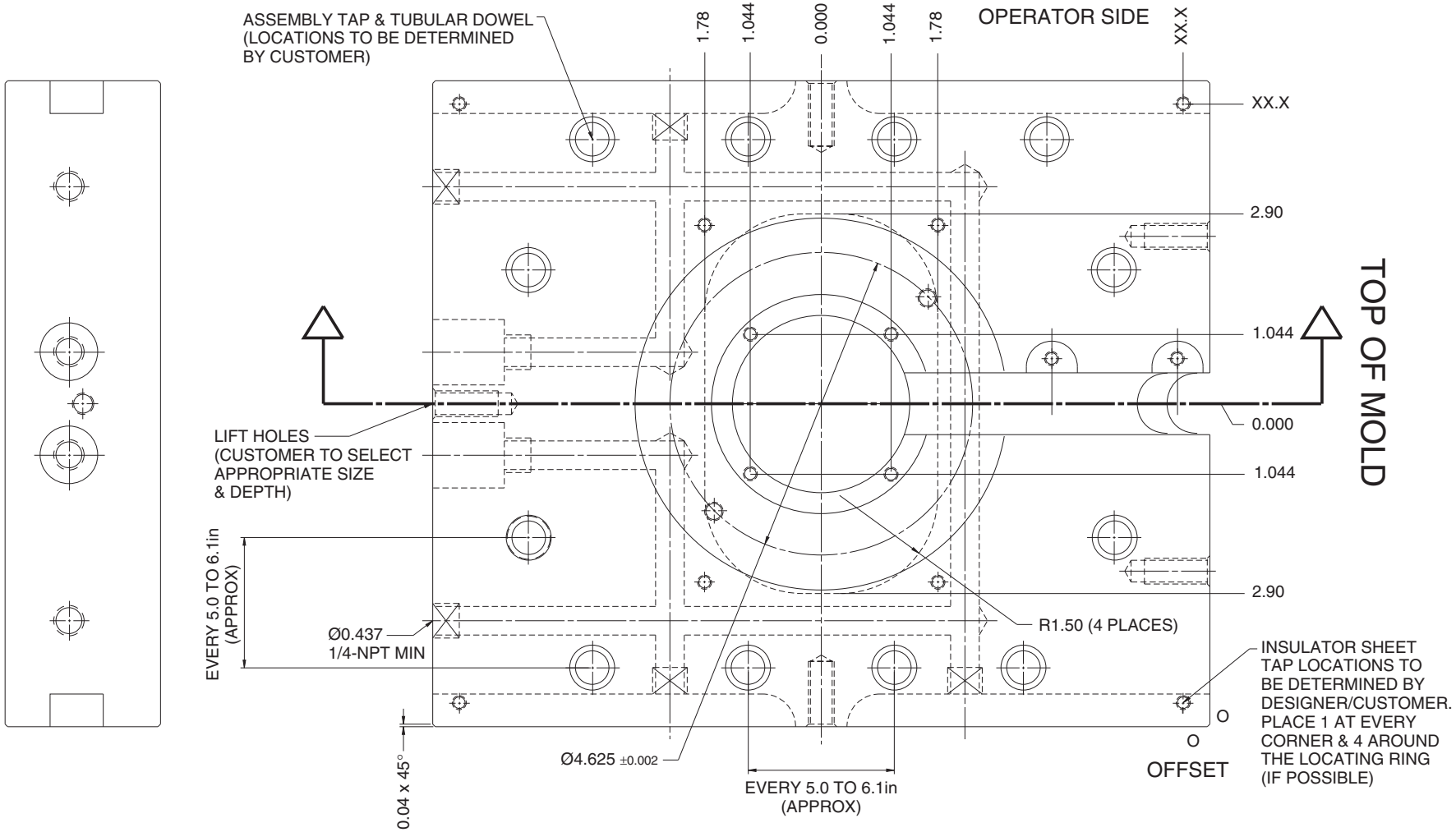
2-Drop (90 Pitch) – Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 0.75 deep except when plate thickness does not provide 0.250in steel support underneath pocket. In that case, wire channel depth to be 0.50 deep, under the pocket and then chamfered (45°) to 0.75 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If plate thickness is between 1.719 and 1.843, water line between heater channels must be made smaller to ensure 0.197 minimum condition.
3. If the manifold is to be positioned 90% to that shown, please refer to MRC9002 manifold heater channel machining drawing on page 129 for the channel location. The four M6 taps and dowel must be rotated 90° also.
4. For metric dimensions, see pages 10-73.

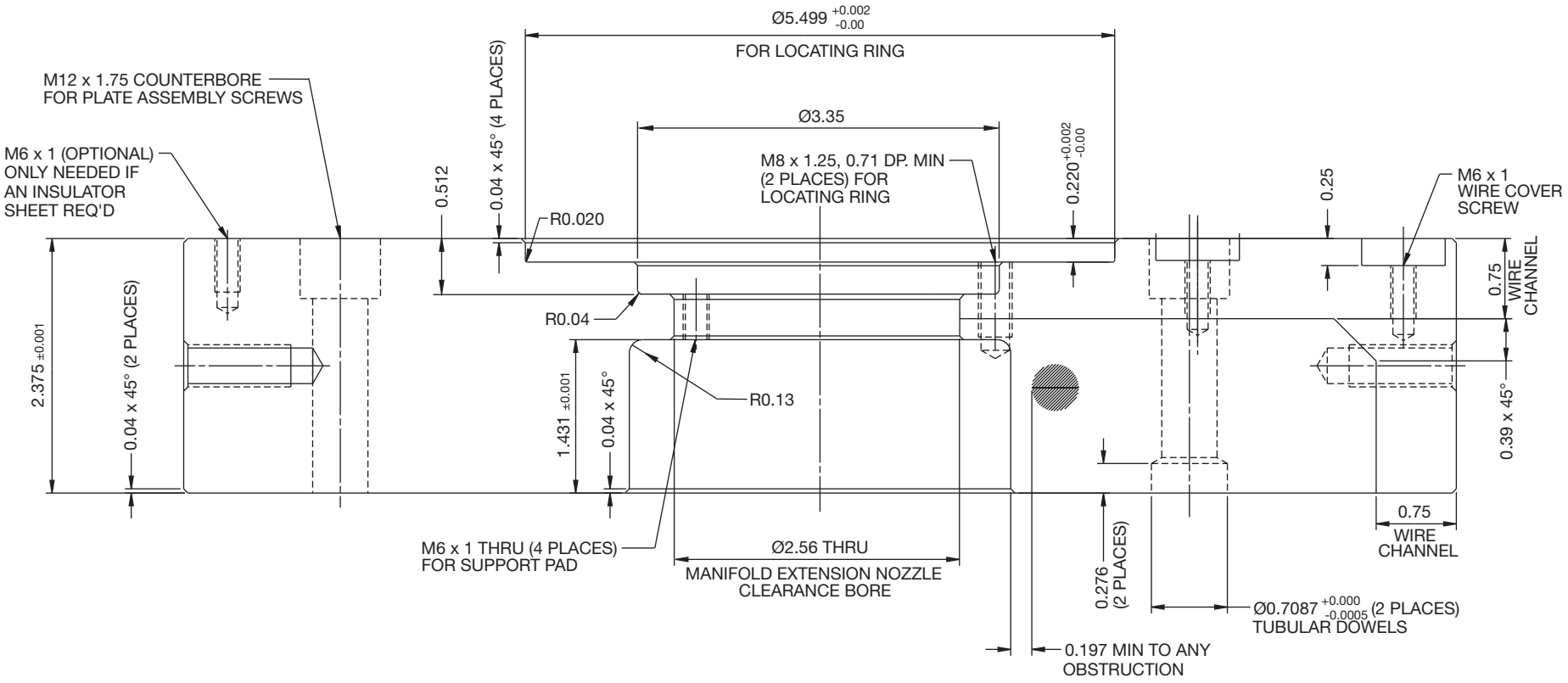
2-Drop (90 Pitch) – Manifold Retainer Plate Machining Detail



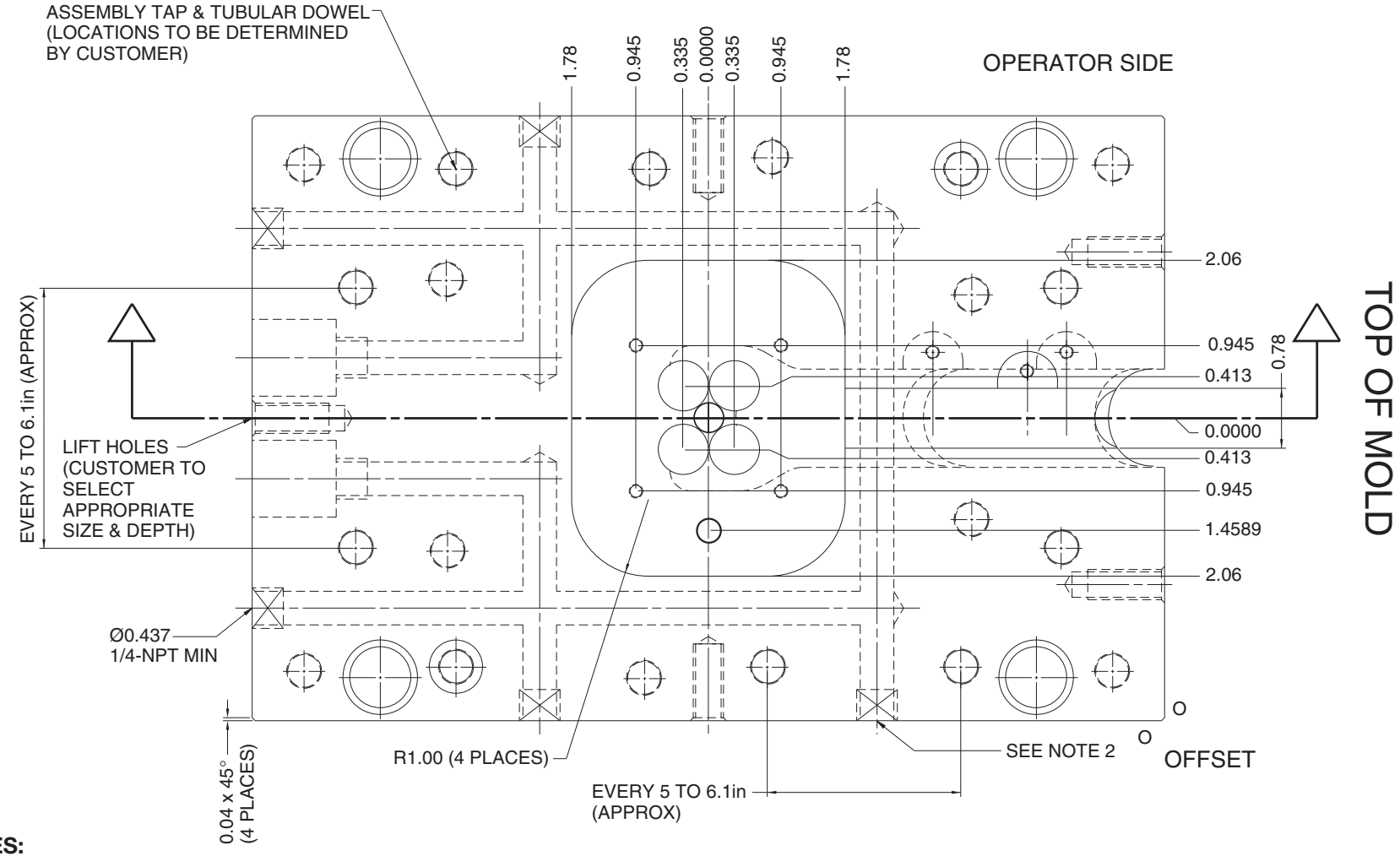
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 7-7/8" x 11-7/8" mold shown.
2. For metric dimensions, see pages 10-73.

2-Drop (90 Pitch) – Manifold Retainer Plate Machining Detail (continued)



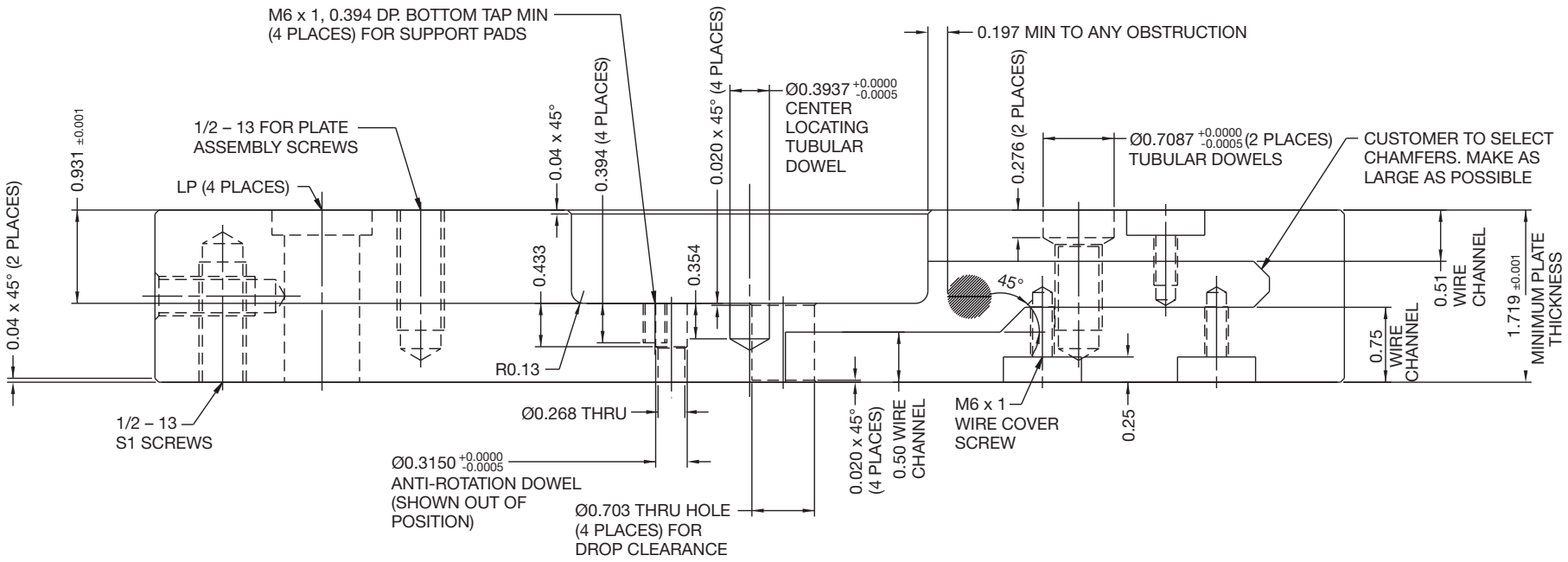
4 Drop (17x21 Pitch) — Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 7-7/8" x 11-7/8" mold shown.
2. If plate thickness is between 1.719 and 1.843, water line between heater channels must be made smaller to ensure 0.197 minimum condition.
3. For metric dimensions, see pages 10-73.

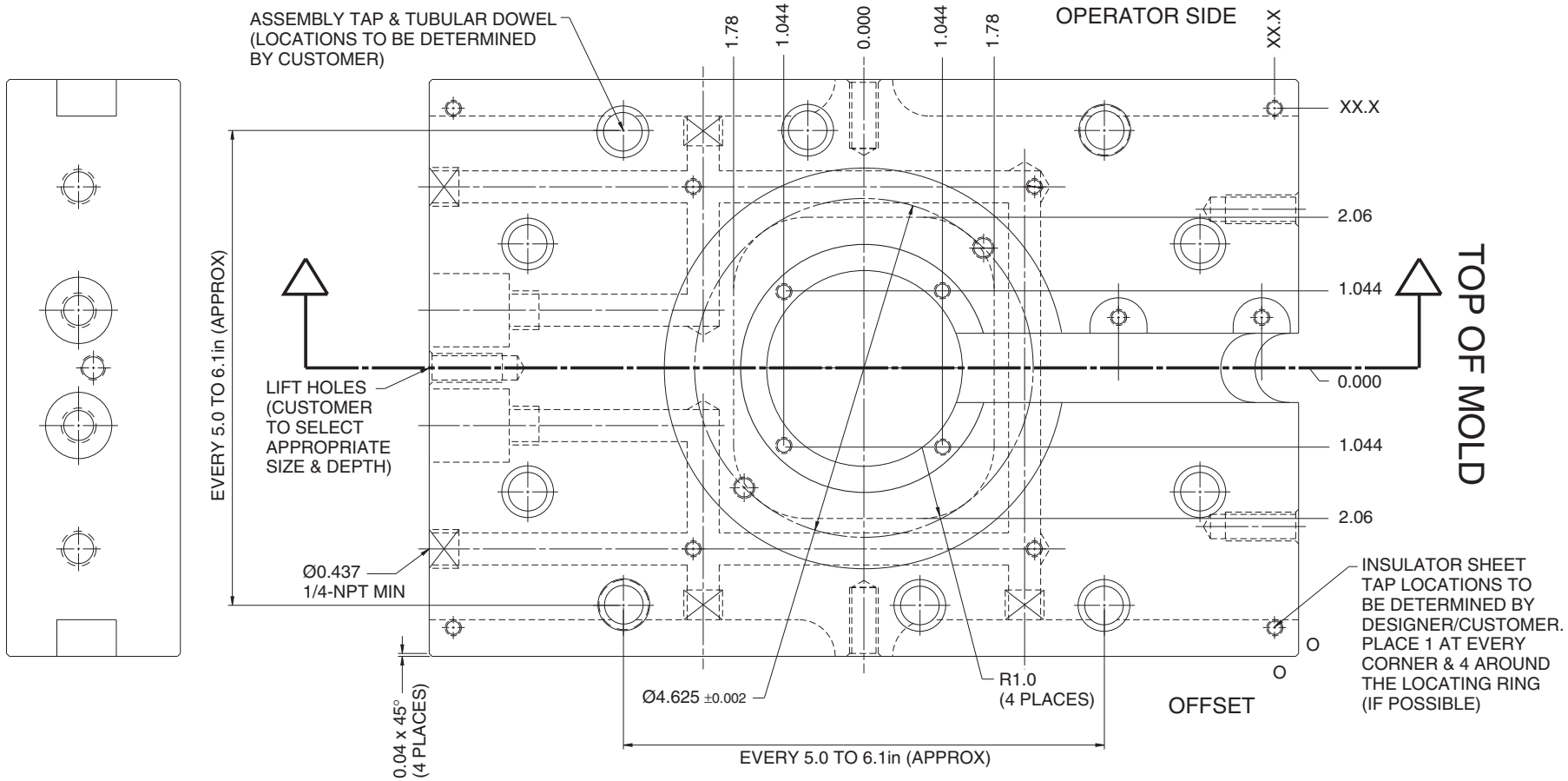
4 Drop (17x21 Pitch) — Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 0.75 deep except when plate thickness does not provide 0.250in steel support underneath pocket. In that case, wire channel depth to be 0.50 deep, under the pocket and then chamfered (45°) to 0.75 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If plate thickness is between 1.719 and 1.843, water line between heater channels must be made smaller to ensure 0.197 minimum condition.
3. If the manifold is to be positioned 90% to that shown, please refer to MRC0004 manifold heater channel machining drawing on page 130 for the channel location. The four M6 taps and dowel must be rotated 90° also.
4. For metric dimensions, see pages 10-73.

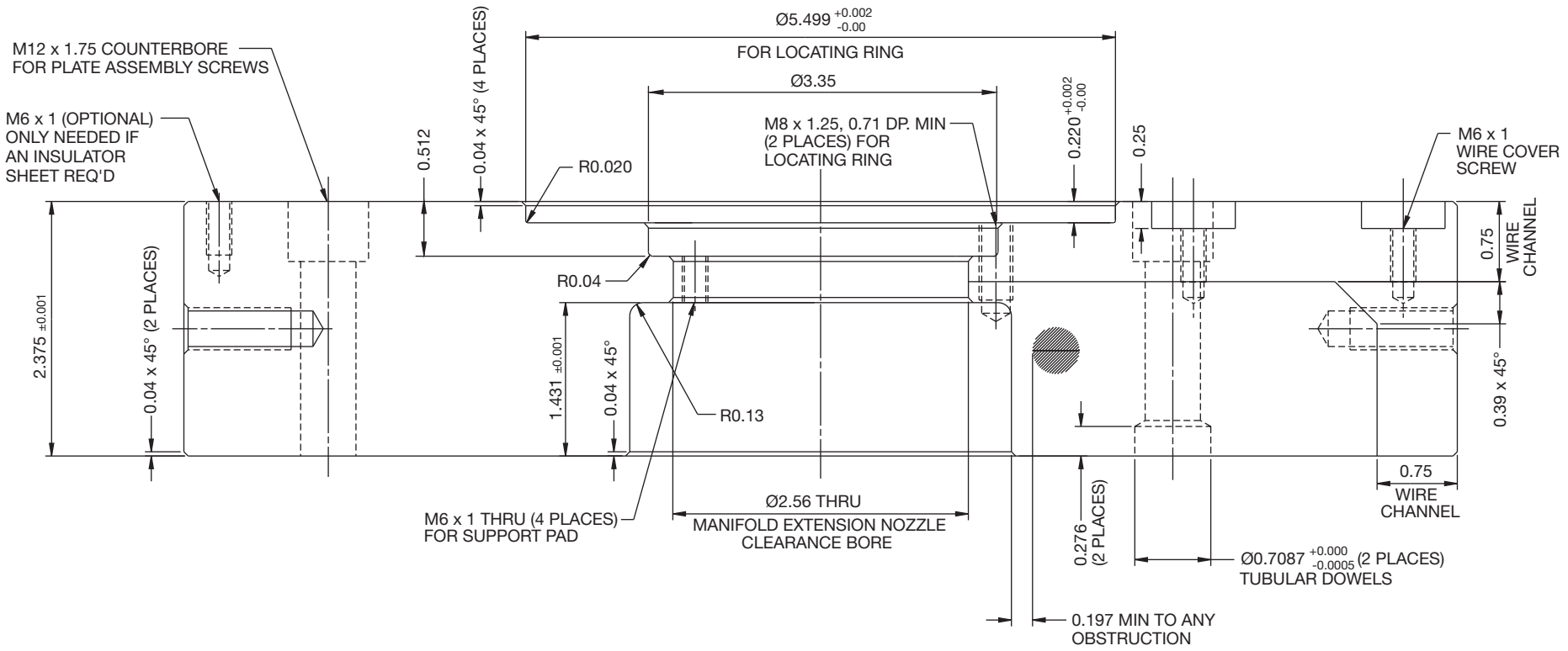
4 Drop (17x21 Pitch) — Manifold Retainer Plate Machining Detail



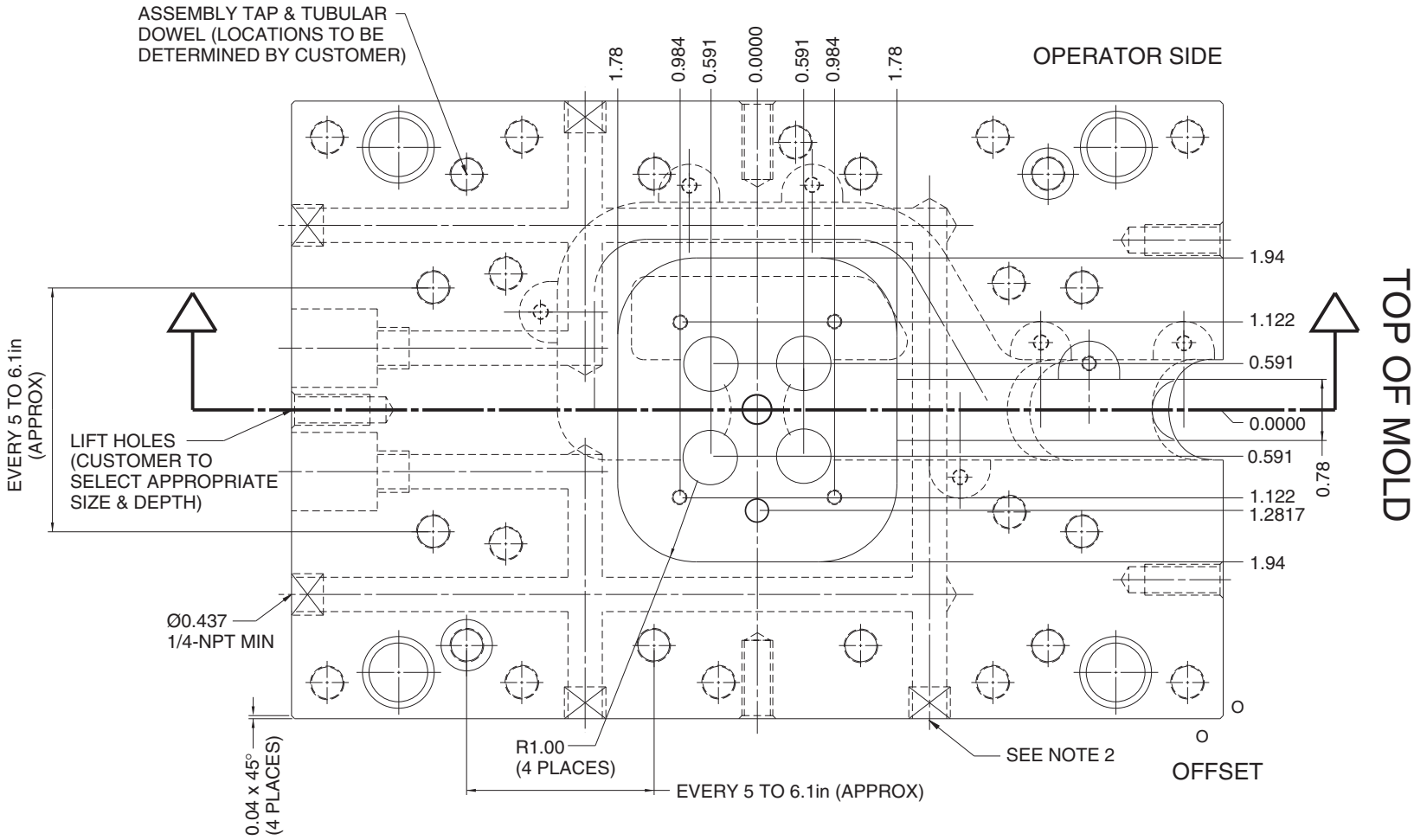
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 7-7/8" x 11-7/8" mold shown.
2. For metric dimensions, see pages 10-73.

4 Drop (17x21 Pitch) — Manifold Retainer Plate Machining Detail (continued)



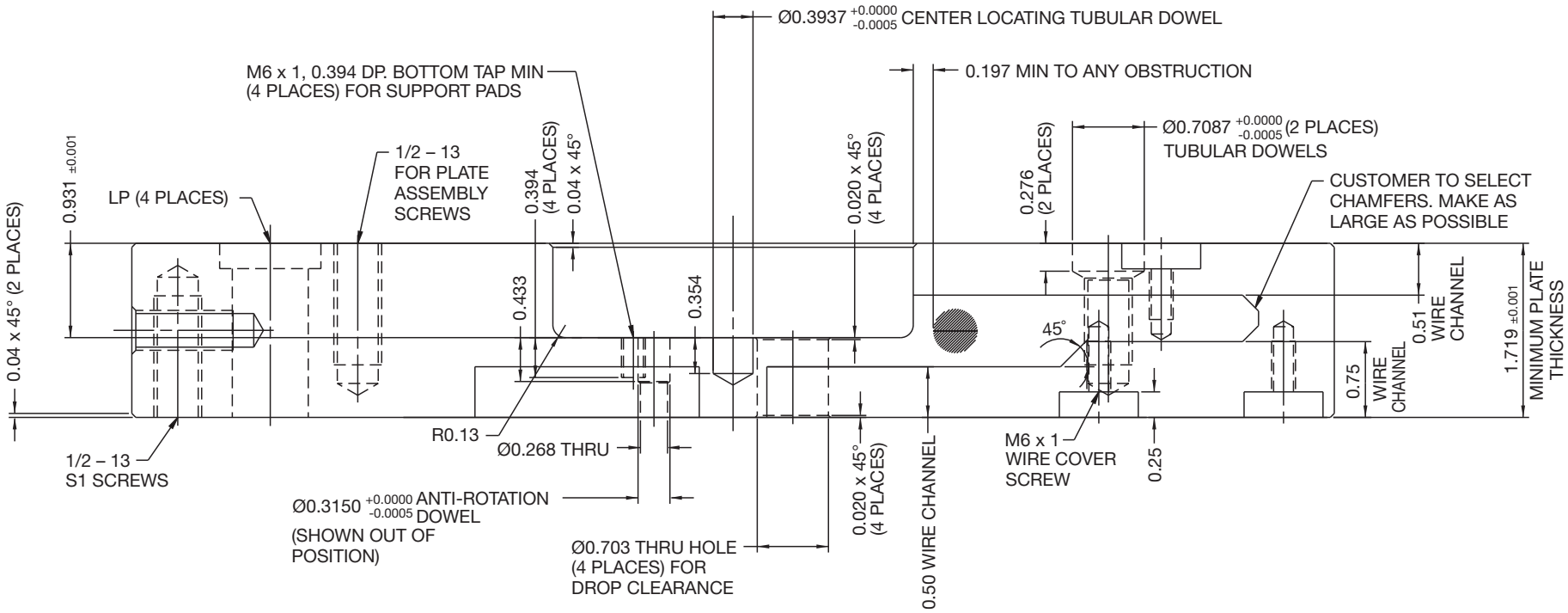
4 Drop (30x30 Pitch) — Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 7-7/8" x 11-7/8" mold shown.
2. If plate thickness is between 1.719 and 1.843, water line between heater channels must be made smaller to ensure 0.197 minimum condition.
3. For metric dimensions, see pages 10-73.

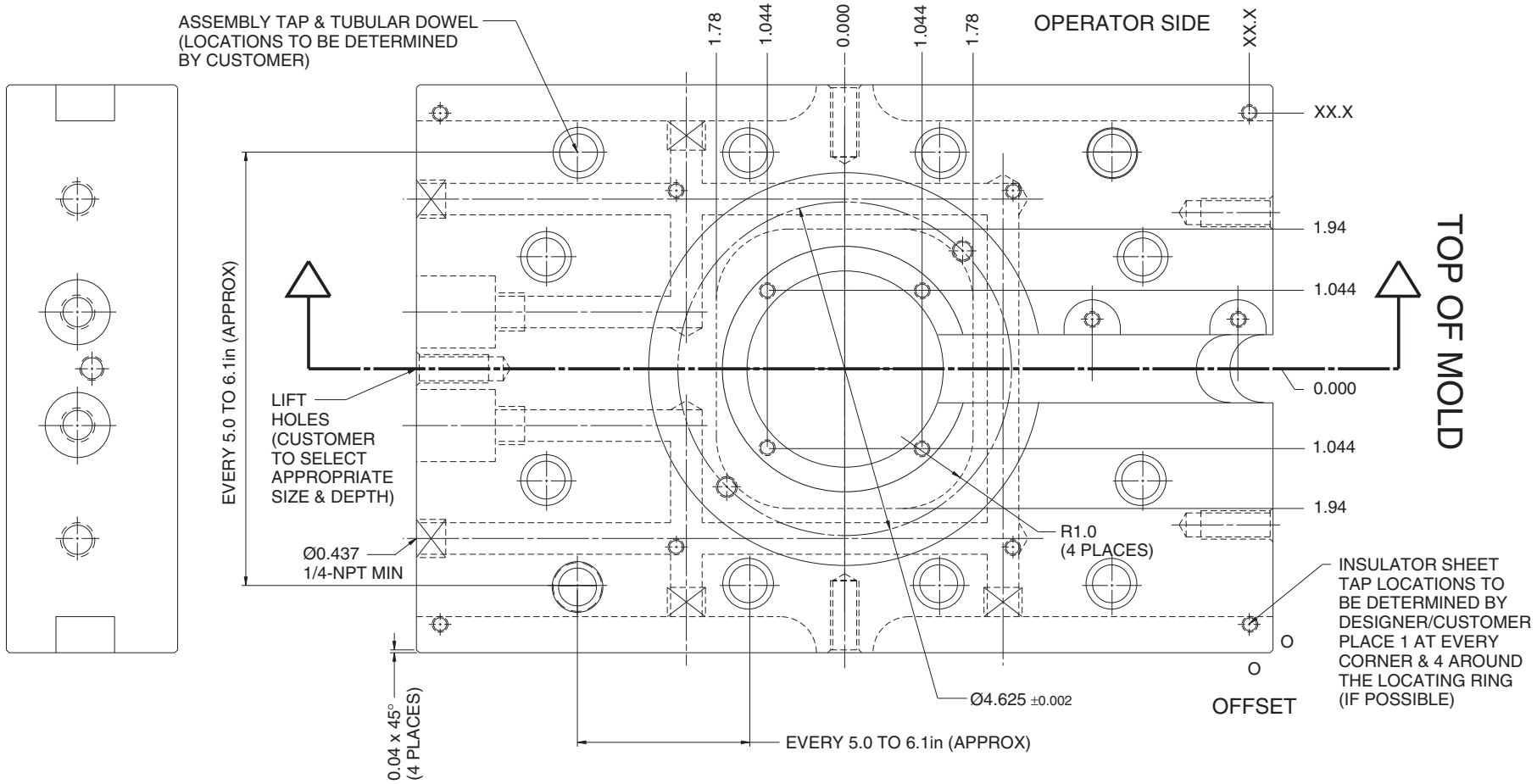
4 Drop (30x30 Pitch) — Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 0.75 deep except when plate thickness does not provide 0.250in steel support underneath pocket. In that case, wire channel depth to be 0.50 deep, under the pocket and then chamfered (45°) to 0.75 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If plate thickness is between 1.719 and 1.843, water line between heater channels must be made smaller to ensure 0.197 minimum condition.
3. If the manifold is to be positioned 90% to that shown, please refer to MRC3304 manifold heater channel machining drawing on page 131 for the channel location. The four M6 taps and dowel must be rotated 90° also.
4. For metric dimensions, see pages 10-73.

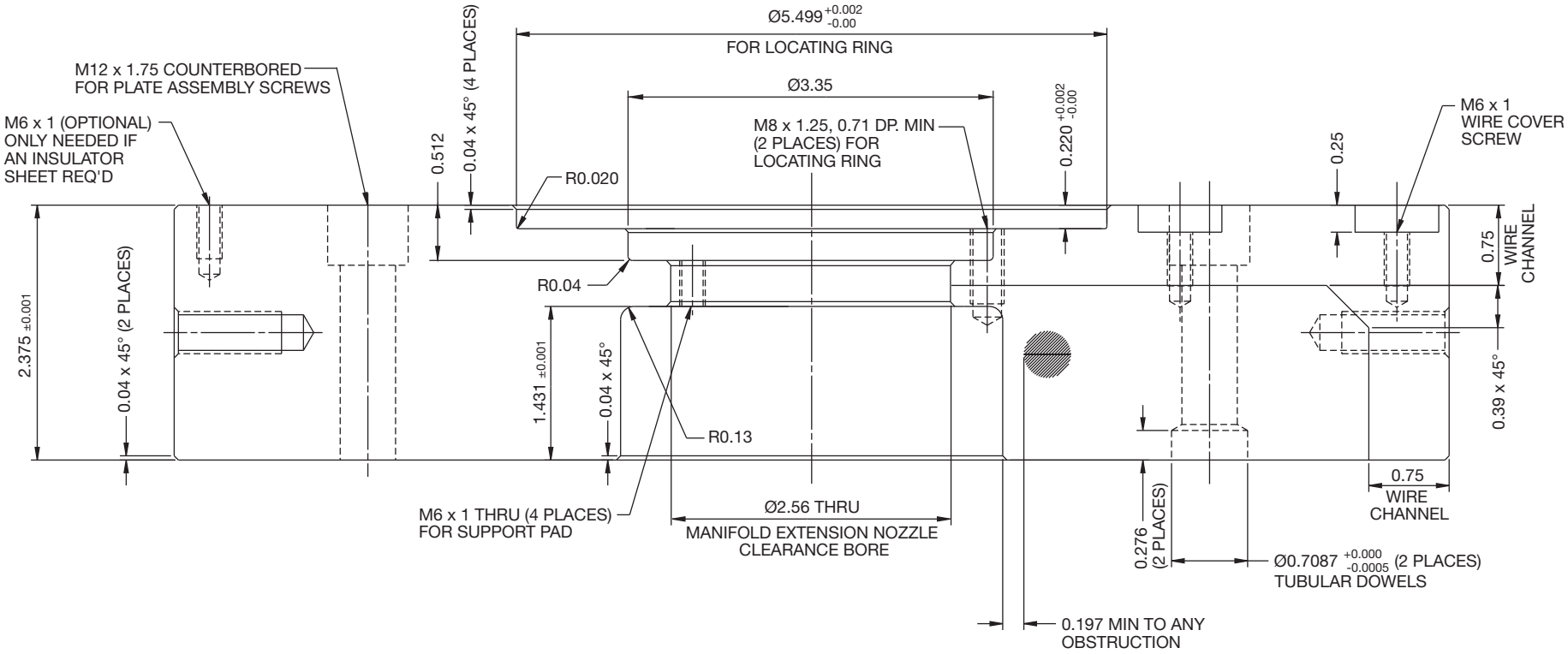
4 Drop (30x30 Pitch) — Manifold Retainer Plate Machining Detail



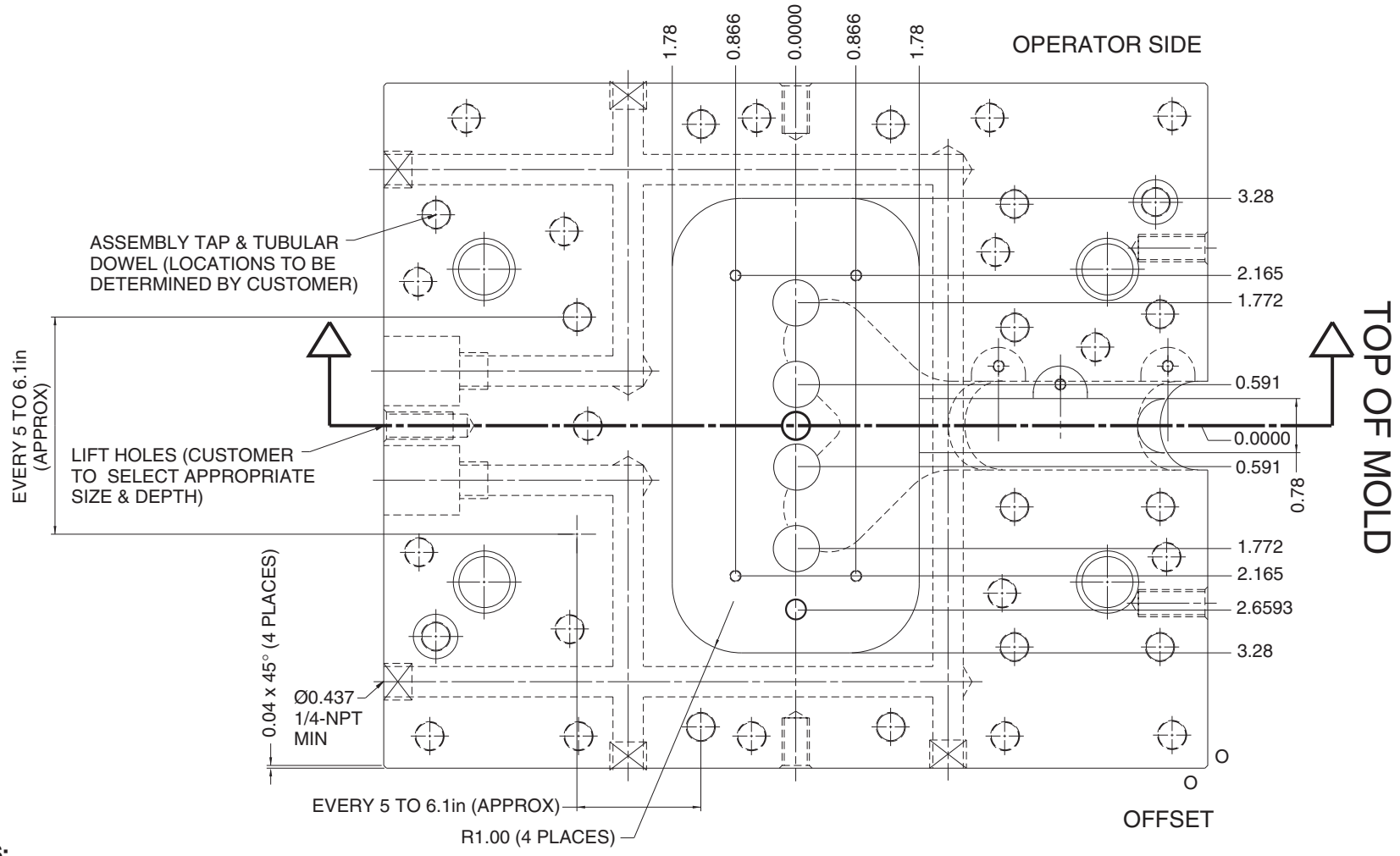
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 7-7/8" x 11-7/8" mold shown.
2. For metric dimensions, see pages 10-73.

4 Drop (30x30 Pitch) — Manifold Retainer Plate Machining Detail (continued)



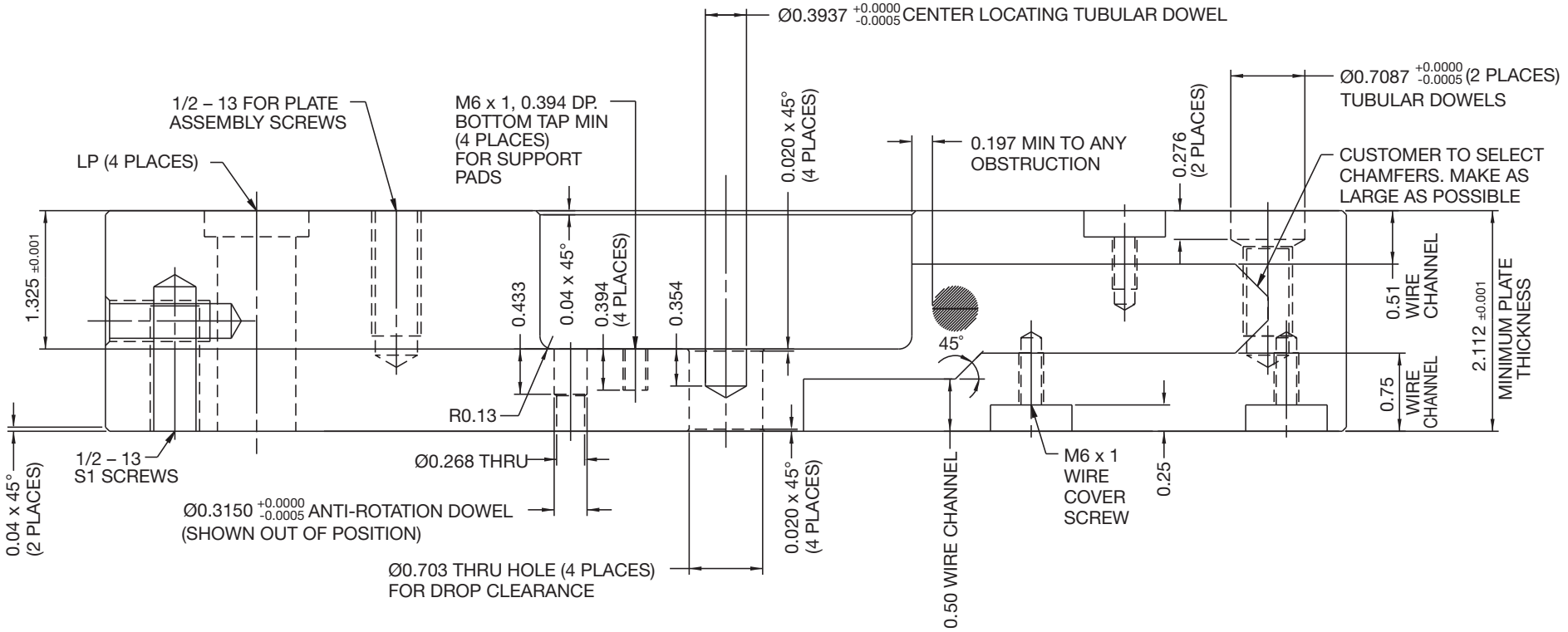
4 Drop (30 Pitch In-Line) — Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 9-7/8" x 11-7/8" mold shown.
2. For metric dimensions, see pages 10-73.

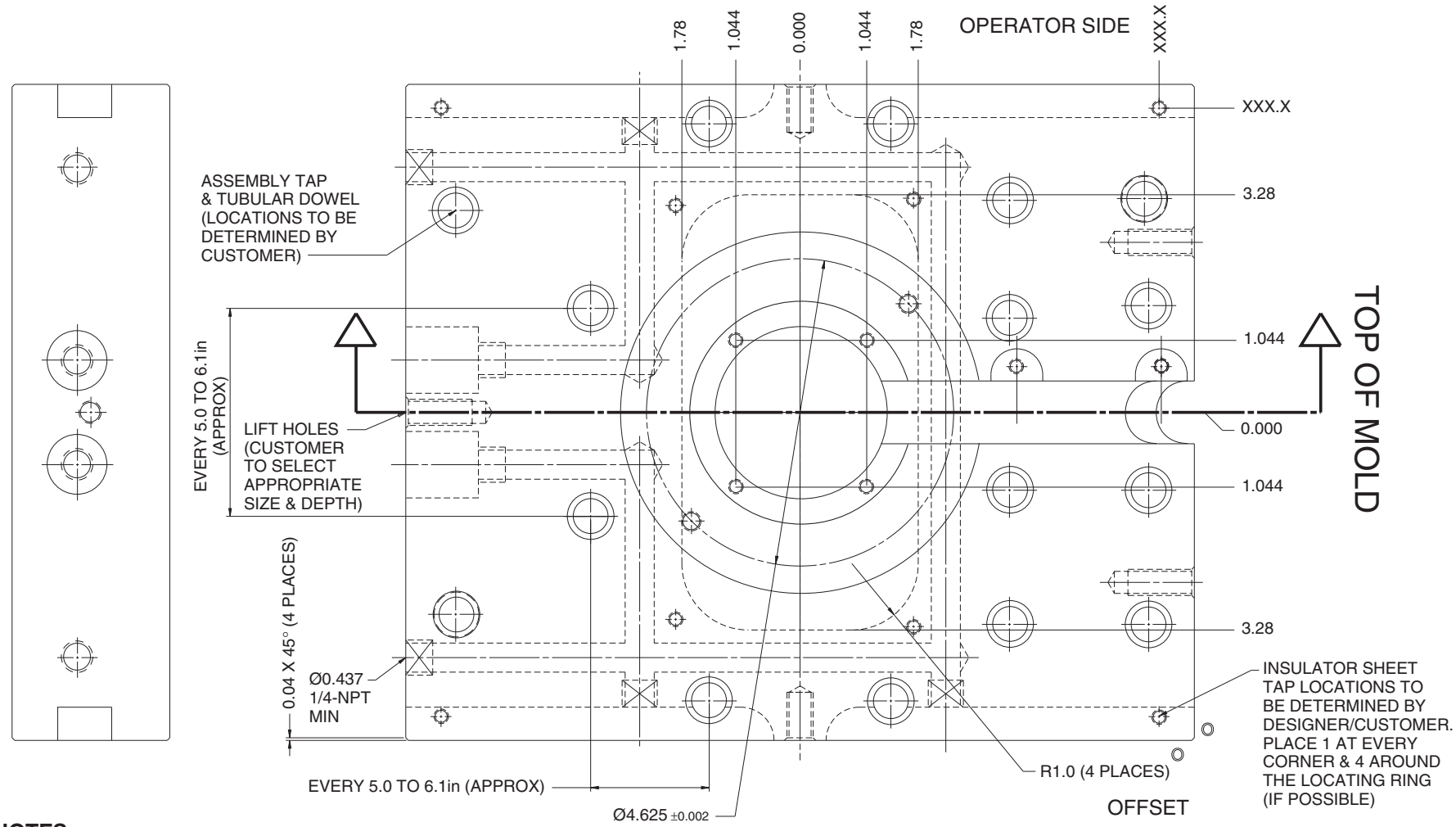
4 Drop (30 Pitch In-Line) — Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 0.75 deep except when plate thickness does not provide 0.250in steel support underneath pocket. In that case, wire channel depth to be 0.50 deep, under the pocket and then chamfered (45°) to 0.75 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If the manifold is to be positioned 90° to that shown, please refer to MRC3004 manifold heater channel machining drawing on page 132 for the channel location. The four M6 taps and dowel must be rotated 90° also.
3. For metric dimensions, see pages 10-73.

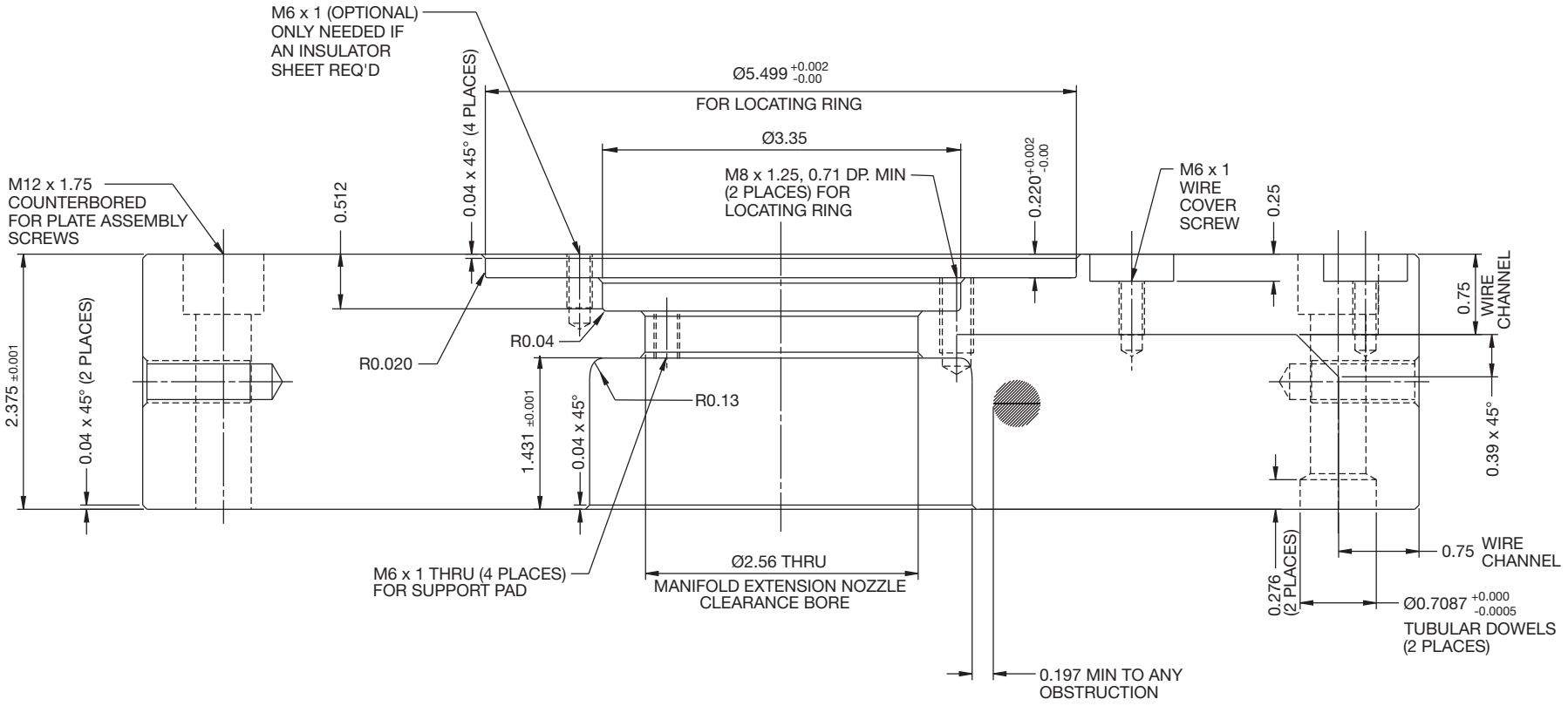
4 Drop (30 Pitch In-Line) — Manifold Retainer Plate Machining Detail



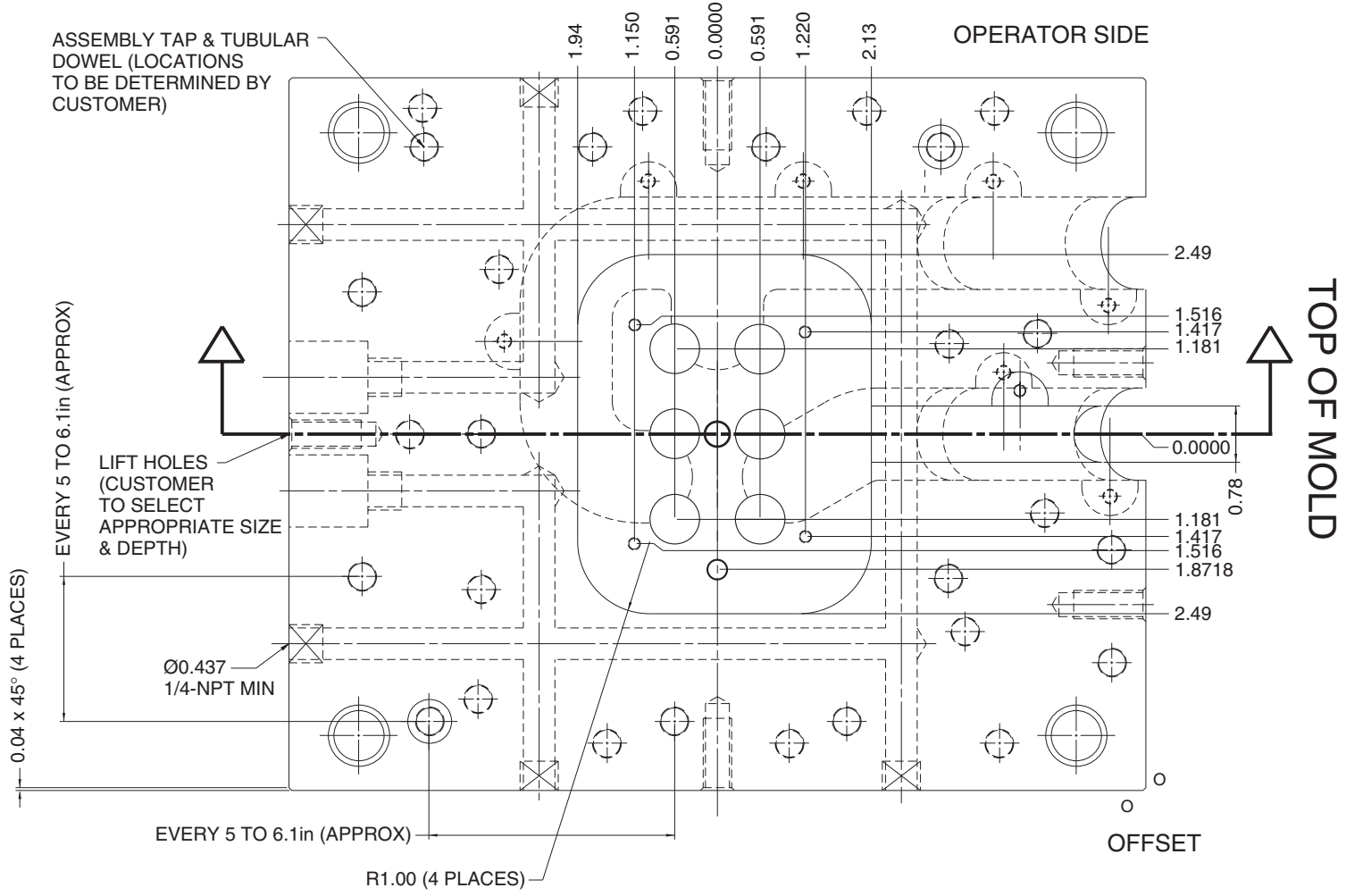
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 9-7/8" x 11-7/8" mold shown.
2. For metric dimensions, see pages 10-73.

4 Drop (30 Pitch In-Line) — Manifold Retainer Plate Machining Detail (continued)



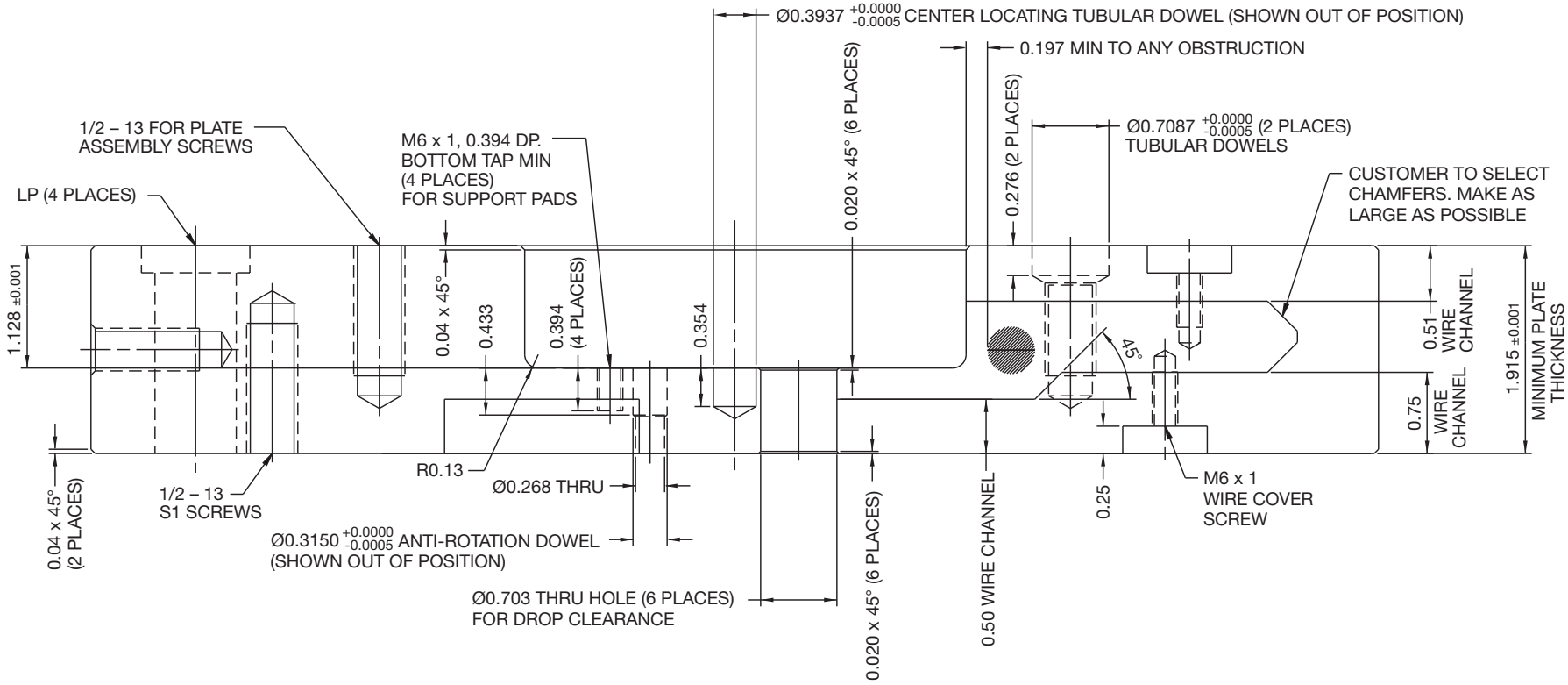
6 Drop (30 Pitch) — Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 9-7/8" x 11-7/8" mold shown.
2. For metric dimensions, see pages 10-73.

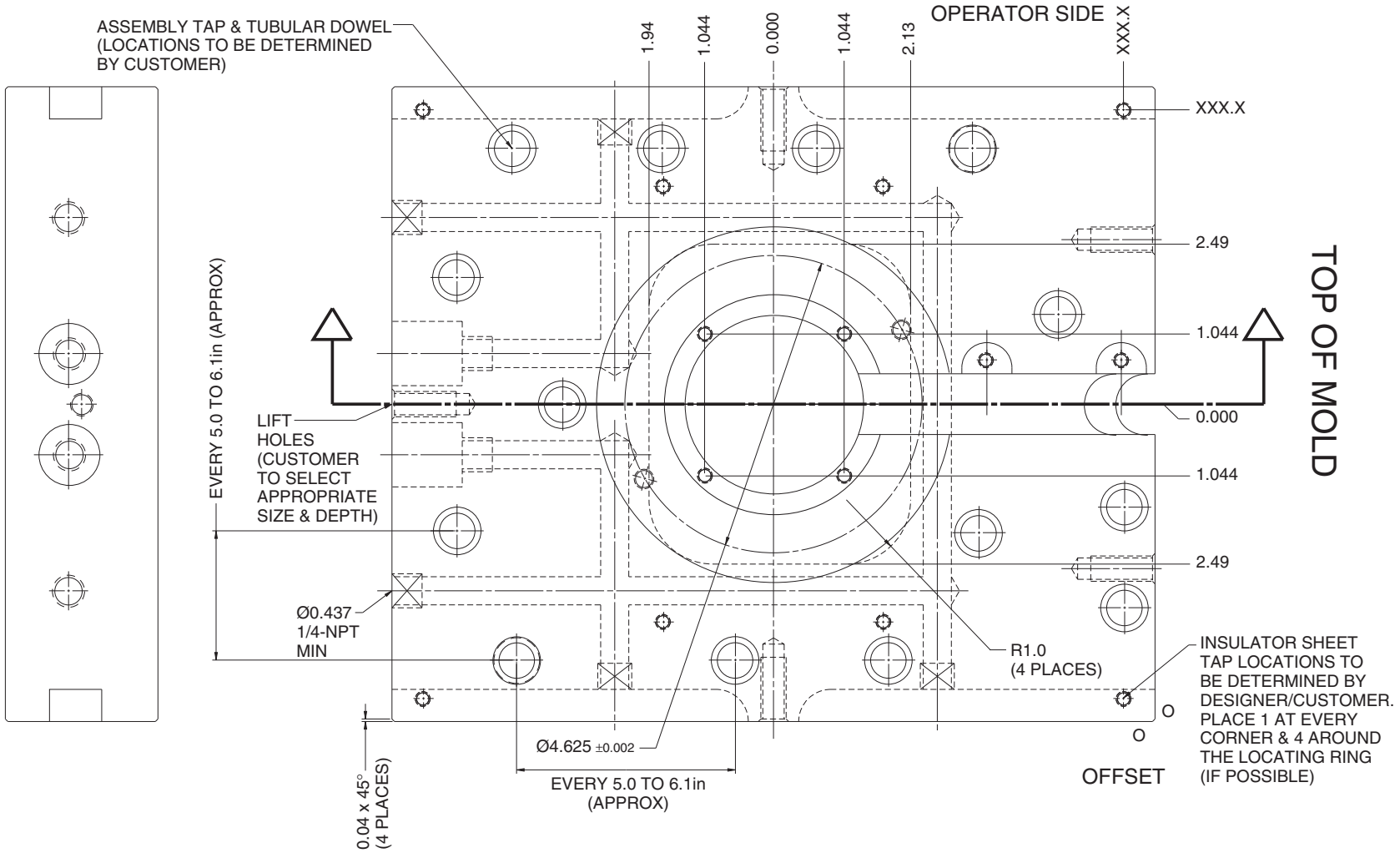
6 Drop (30 Pitch) — Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 0.75 deep except when plate thickness does not provide 0.250in steel support underneath pocket. In that case, wire channel depth to be 0.50 deep, under the pocket and then chamfered (45°) to 0.75 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If the manifold is to be positioned 90° to that shown, please refer to MRC3306 manifold heater channel machining drawing on page 133 for the channel location. The four M6 taps and dowel must be rotated 90° also.
3. For metric dimensions, see pages 10-73.

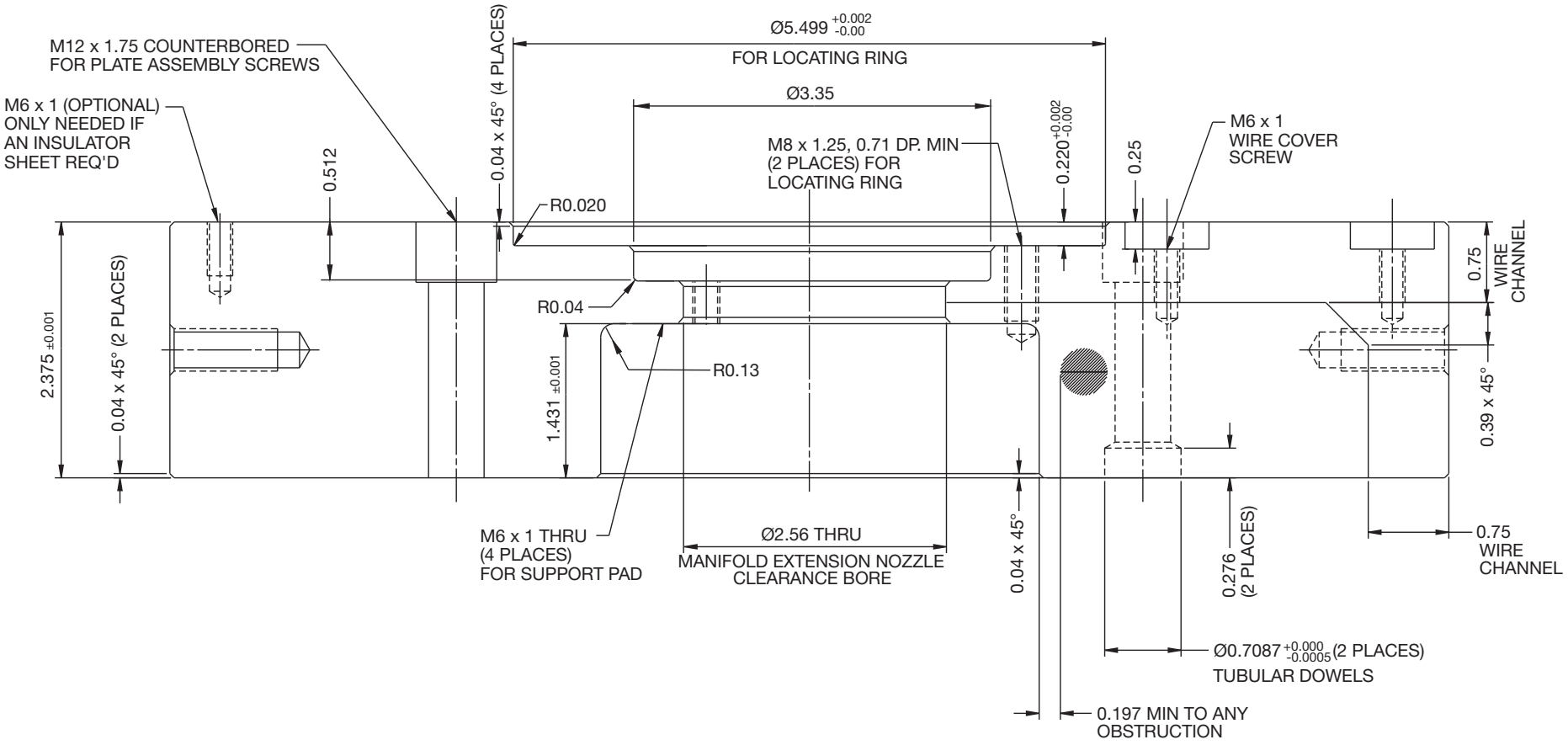
6 Drop (30 Pitch) — Manifold Retainer Plate Machining Detail



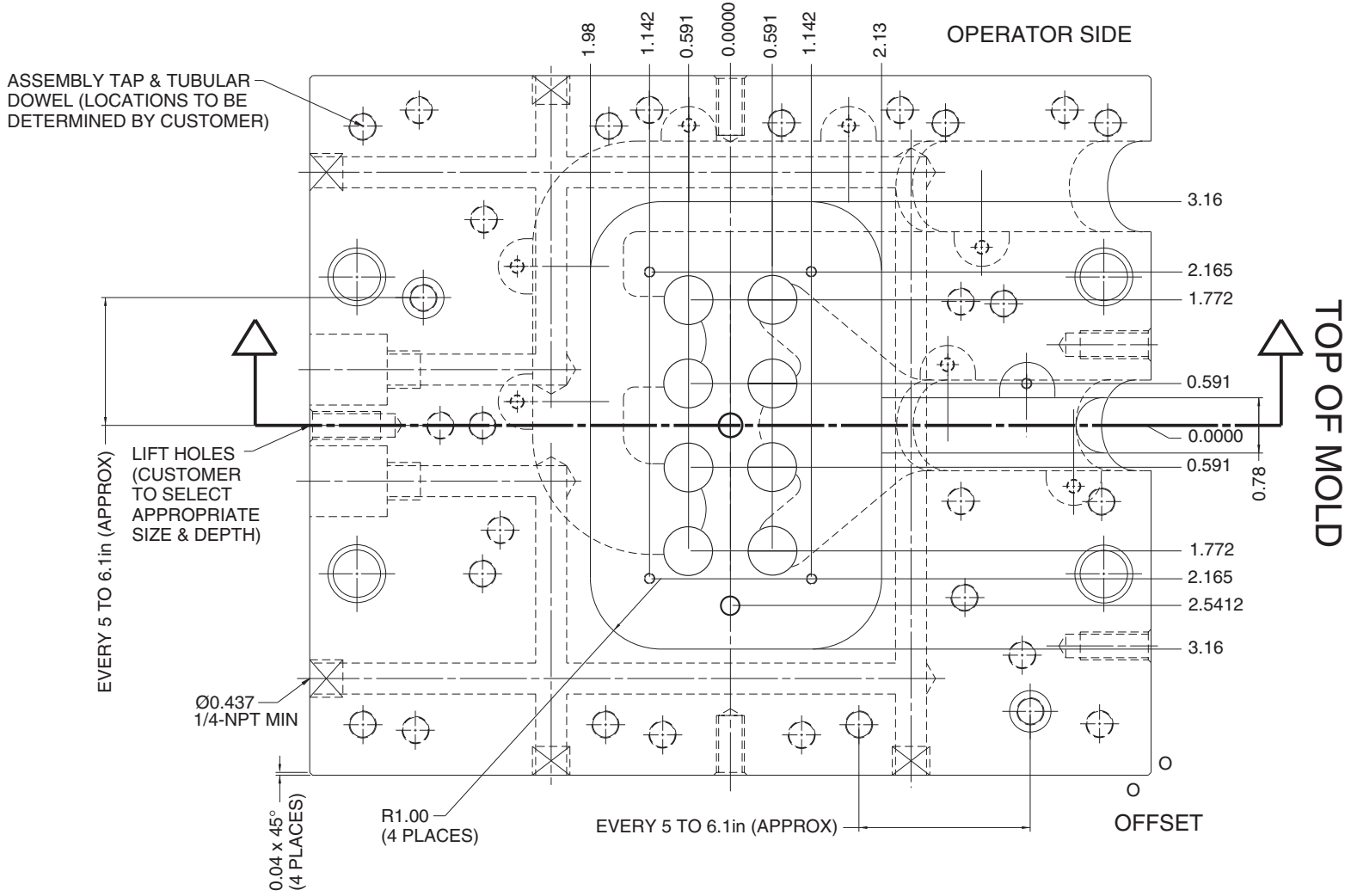
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 9-7/8" x 11-7/8" mold shown.
2. For metric dimensions, see pages 10-73.

6 Drop (30 Pitch) — Manifold Retainer Plate Machining Detail (continued)



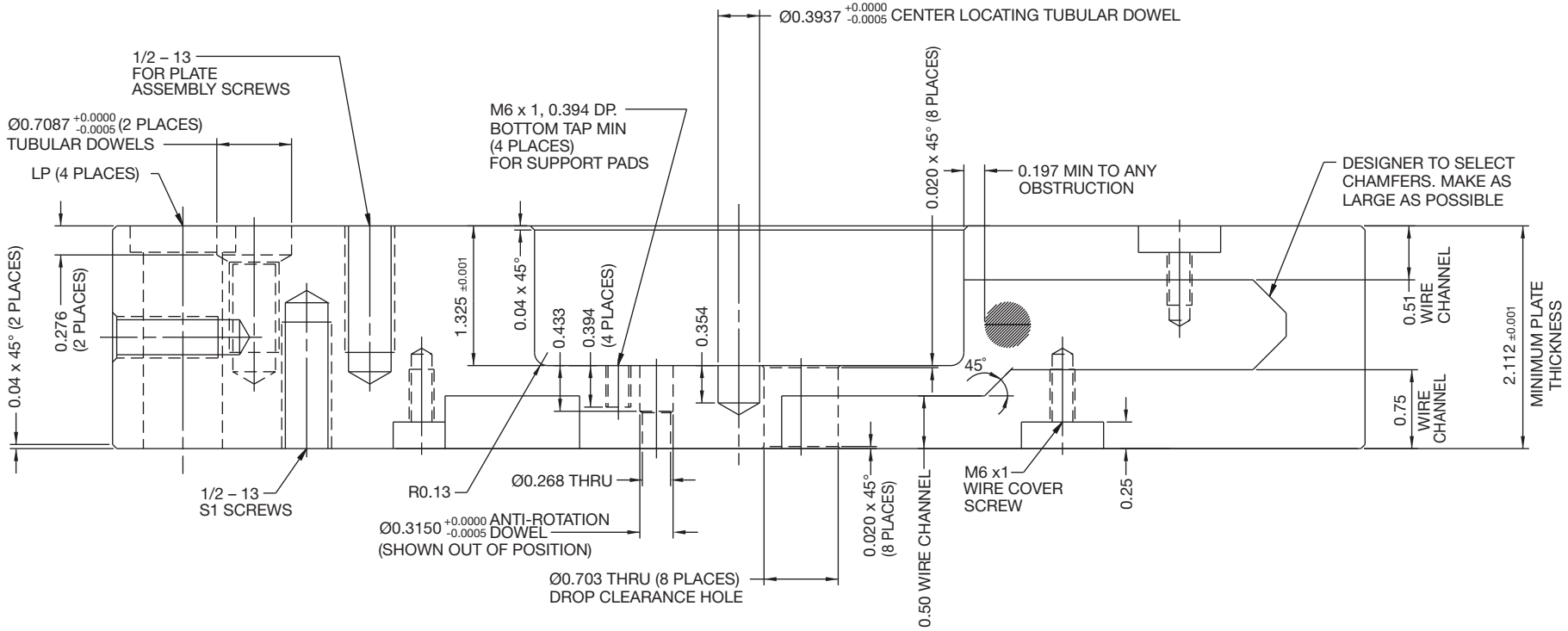
8 Drop (30 Pitch) — Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 9-7/8" x 11-7/8" mold shown.
2. For metric dimensions, see pages 10-73.

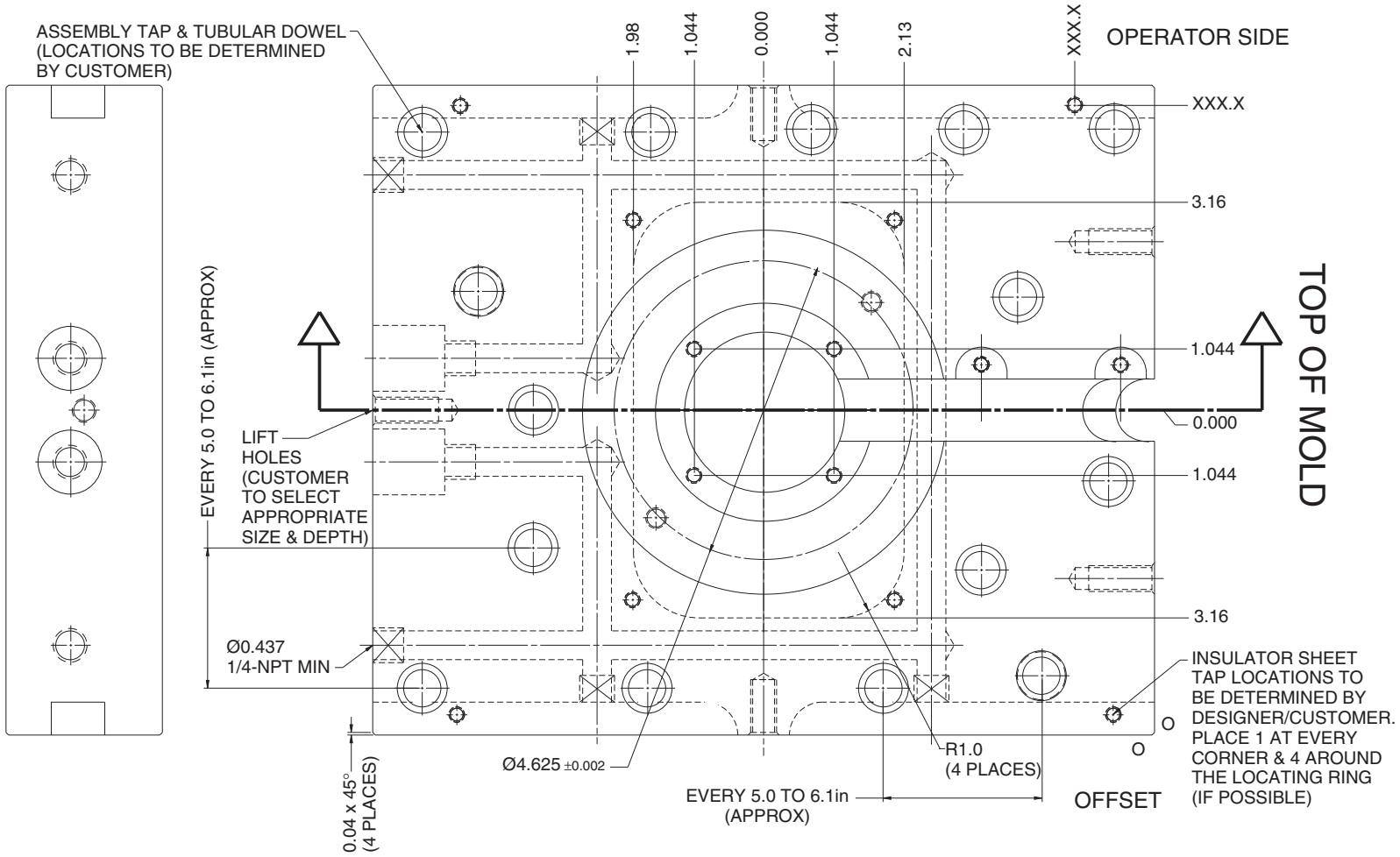
8 Drop (30 Pitch) — Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 0.75 deep except when plate thickness does not provide 0.250in steel support underneath pocket. In that case, wire channel depth to be 0.50 deep, under the pocket and then chamfered (45°) to 0.75 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If the manifold is to be positioned 90° to that shown, please refer to MRC3308 manifold heater channel machining drawing on page 134 for the channel location. The four M6 taps and dowel must be rotated 90° also.
3. For metric dimensions, see pages 10-73.

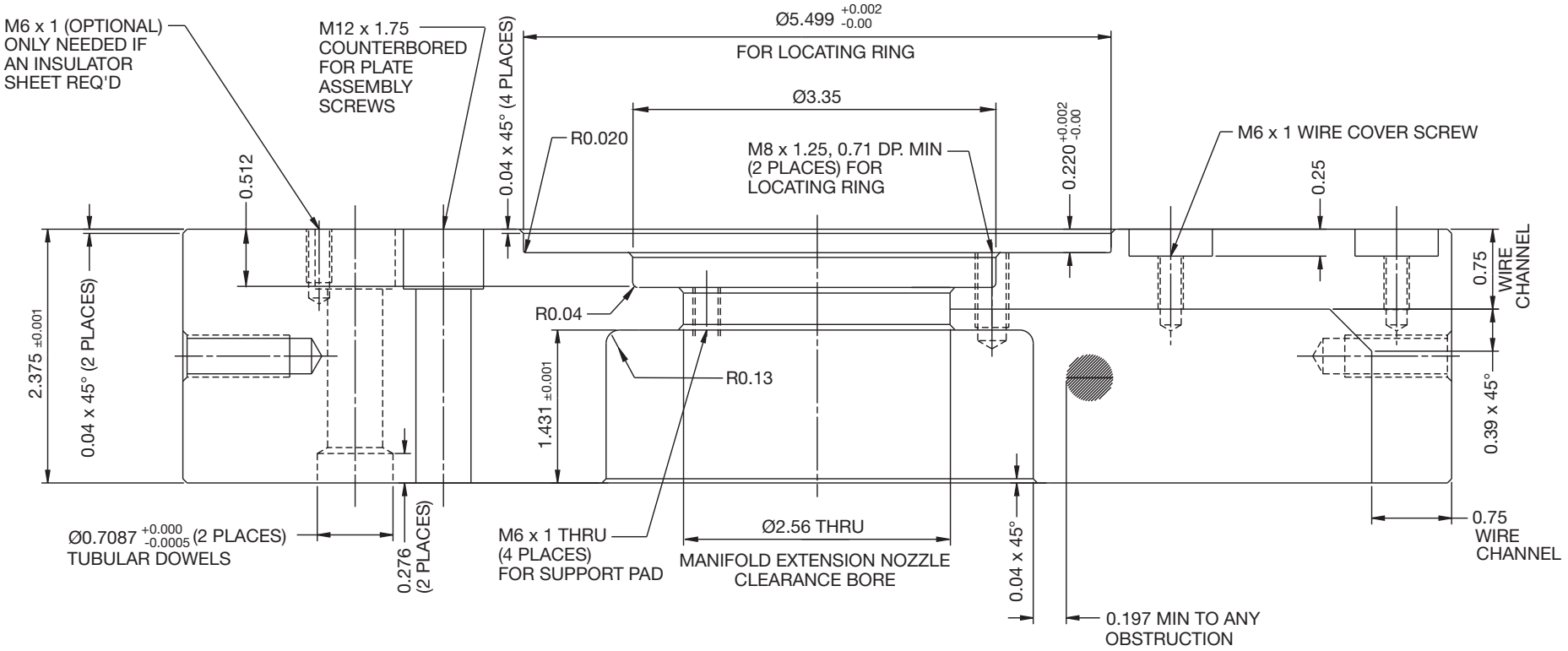
8 Drop (30 Pitch) — Manifold Retainer Plate Machining Detail



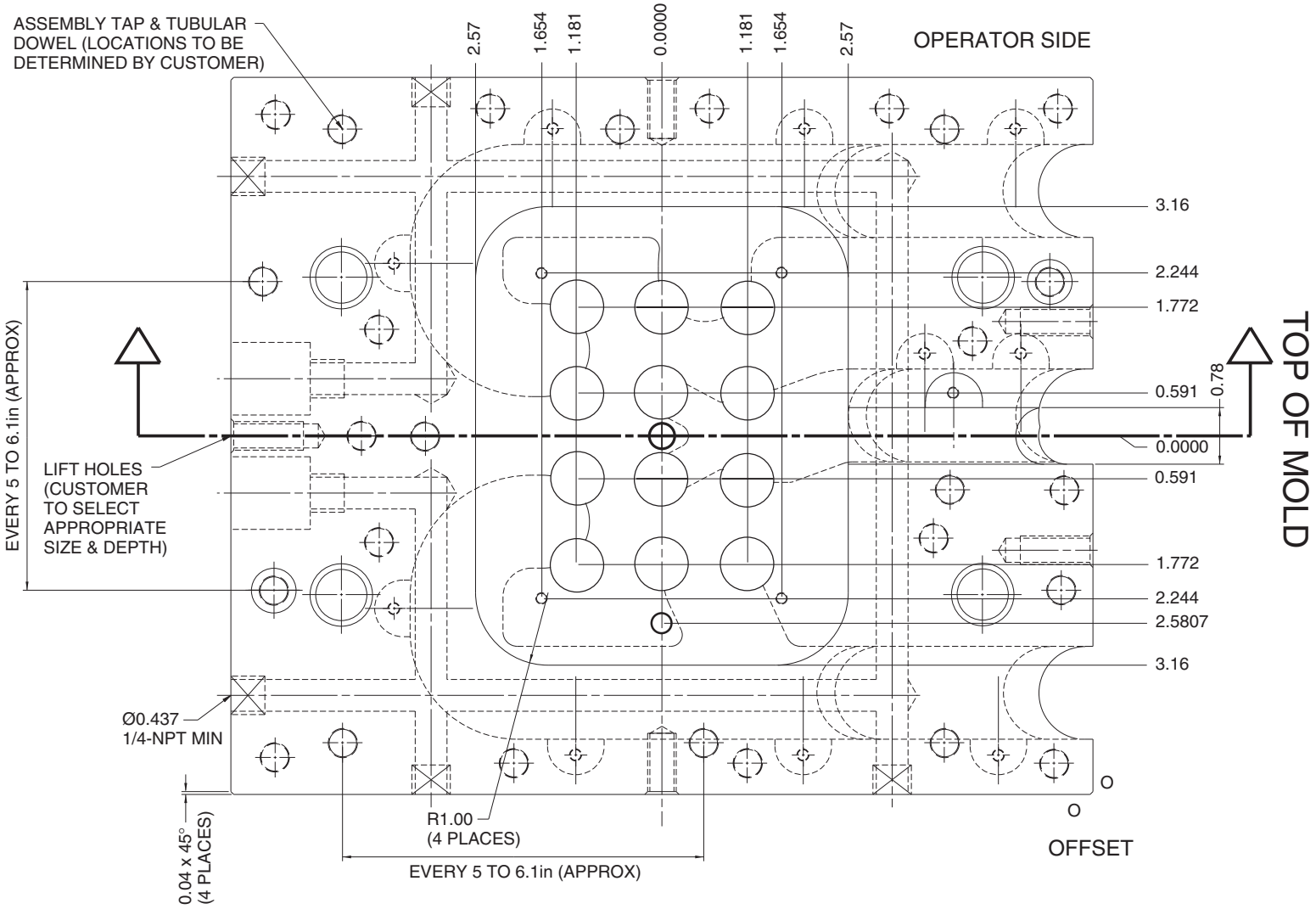
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 9-7/8" x 11-7/8" mold shown.
2. For metric dimensions, see pages 10-73.

8 Drop (30 Pitch) — Manifold Retainer Plate Machining Detail (continued)



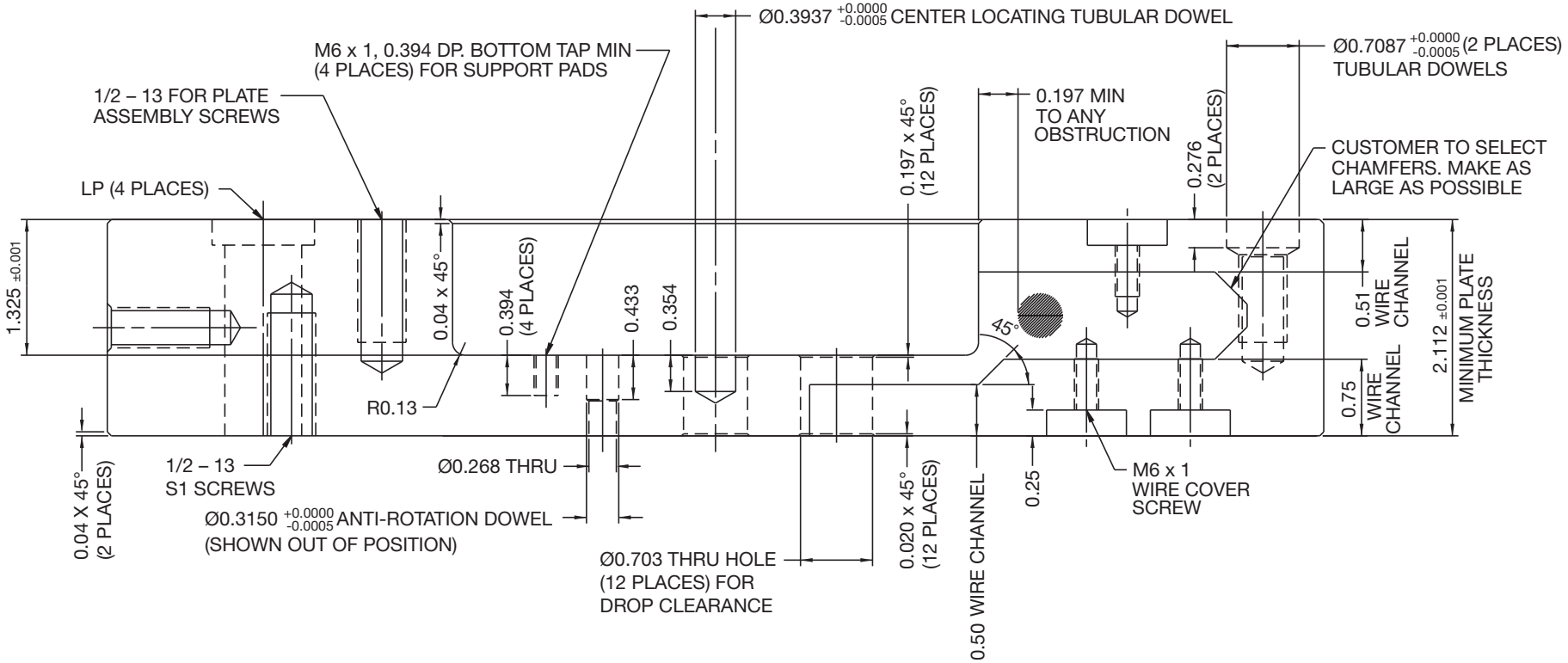
12 Drop (30 Pitch) — Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 9-7/8" x 11-7/8" mold shown.
2. For metric dimensions, see pages 10-73.

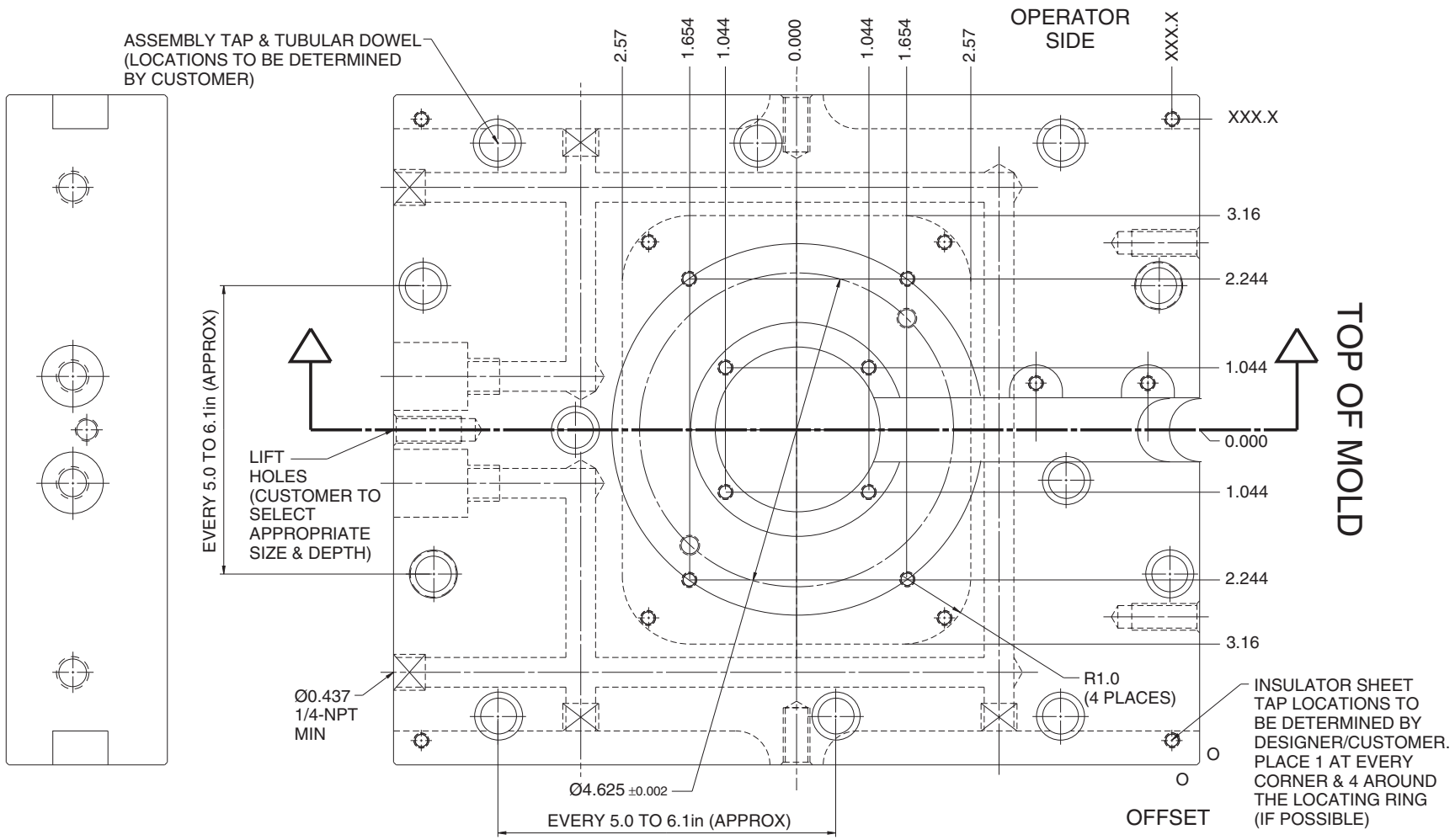
12 Drop (30 Pitch) — Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 0.75 deep except when plate thickness does not provide 0.250in steel support underneath pocket. In that case, wire channel depth to be 0.50 deep, under the pocket and then chamfered (45°) to 0.75 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If the manifold is to be positioned 90° to that shown, please refer to MRC3312 manifold heater channel machining drawing on page 135 for the channel location. The four M6 taps and dowel must be rotated 90° also.
3. For metric dimensions, see pages 10-73.

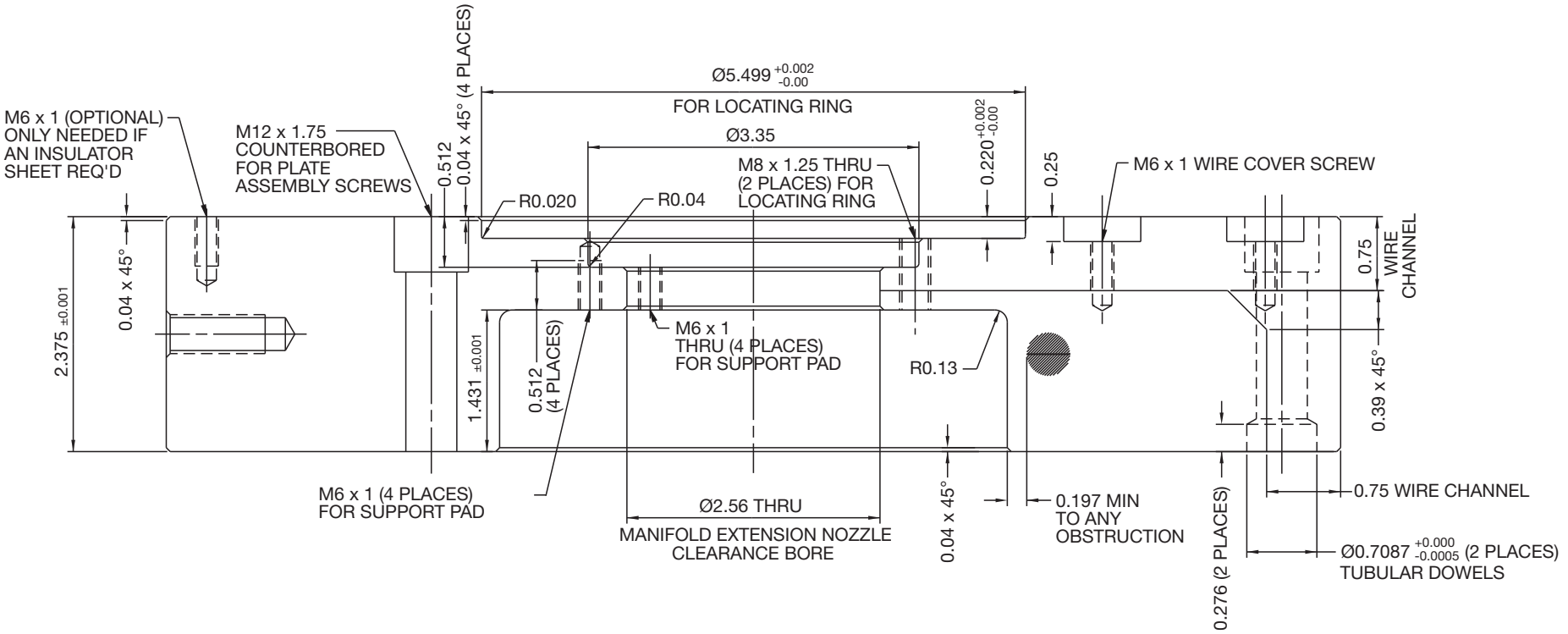
12 Drop (30 Pitch) — Manifold Retainer Plate Machining Detail



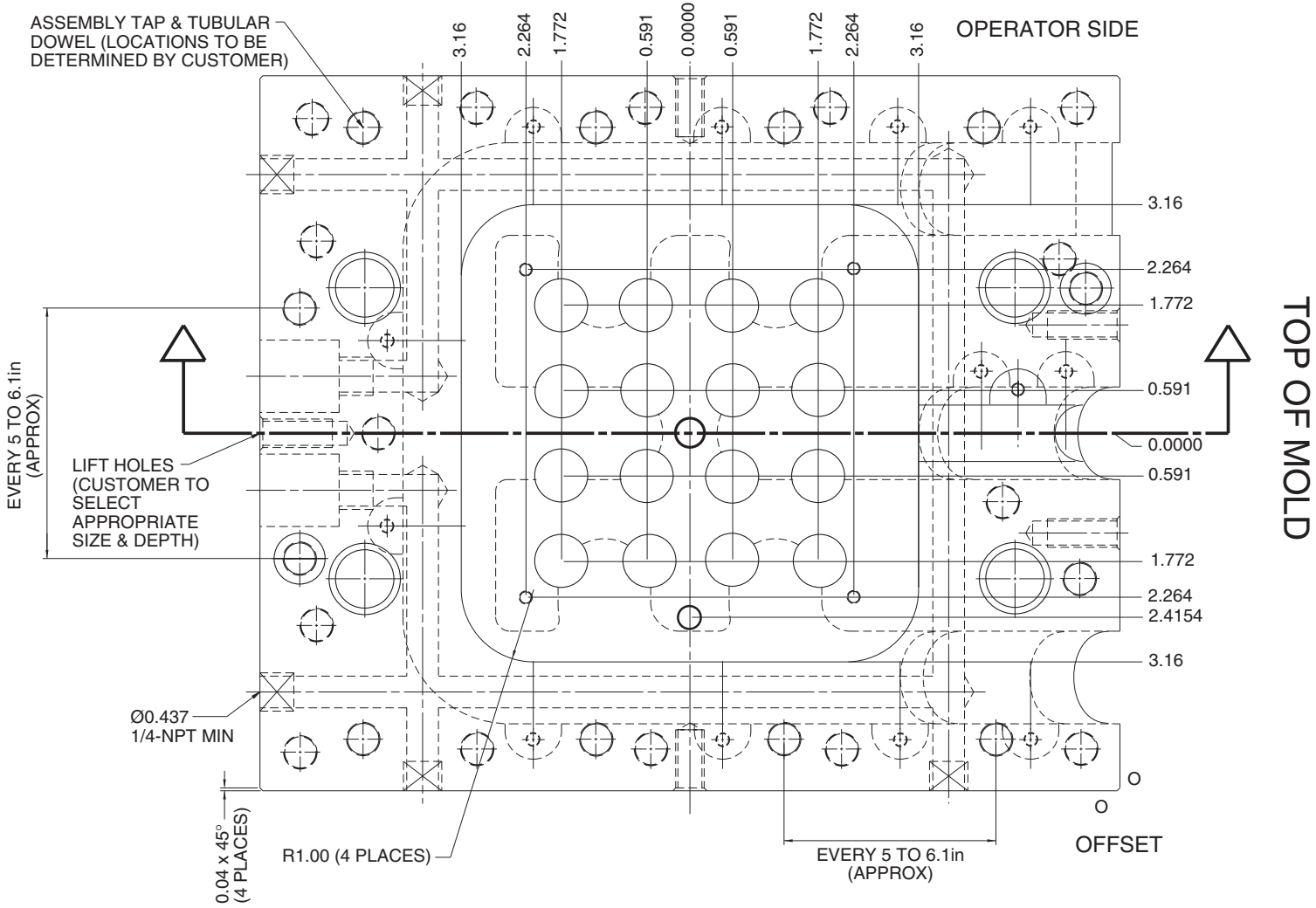
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 9-7/8" x 11-7/8" mold shown.
2. For metric dimensions, see pages 10-73.

12 Drop (30 Pitch) — Manifold Retainer Plate Machining Detail (continued)



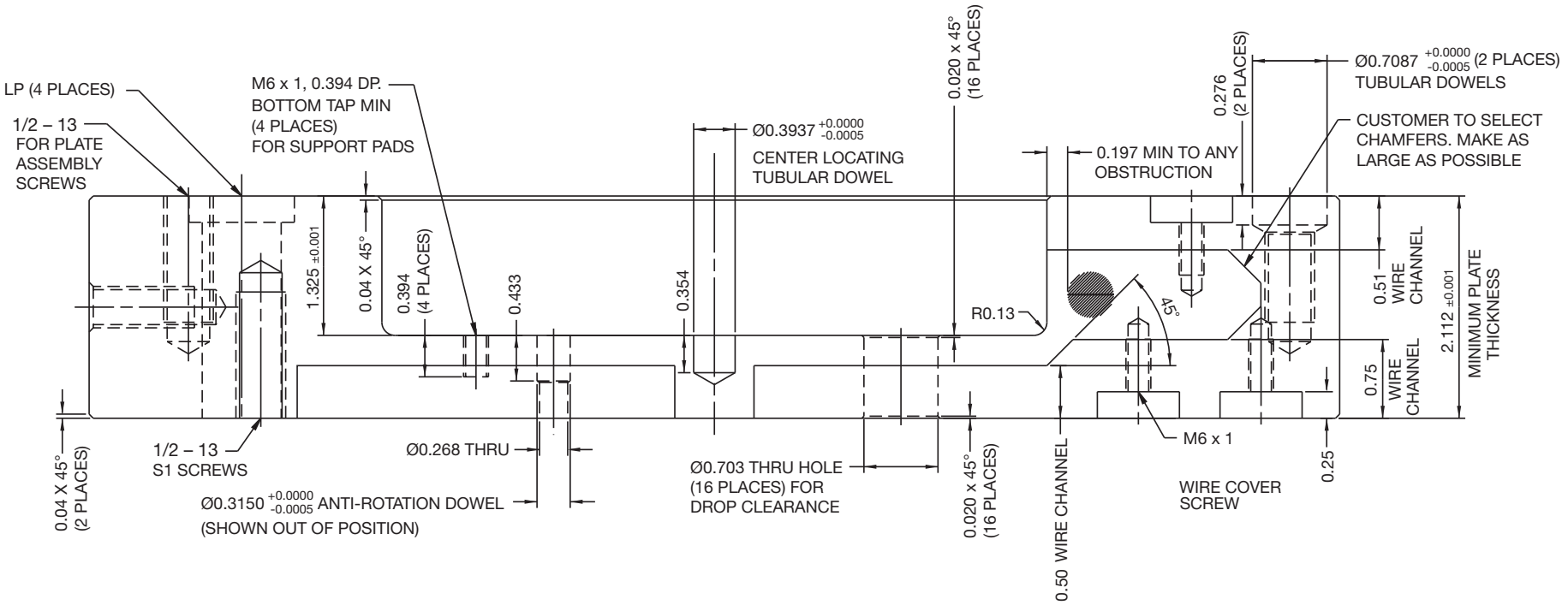
16 Drop (30 Pitch) — Nozzle Plate Machining Detail



NOTES:

1. Wire channel, drop configuration, water lines, leader pins, and assembly screws shown as example only. 9-7/8" x 11-7/8" mold shown.
2. For metric dimensions, see pages 10-73.

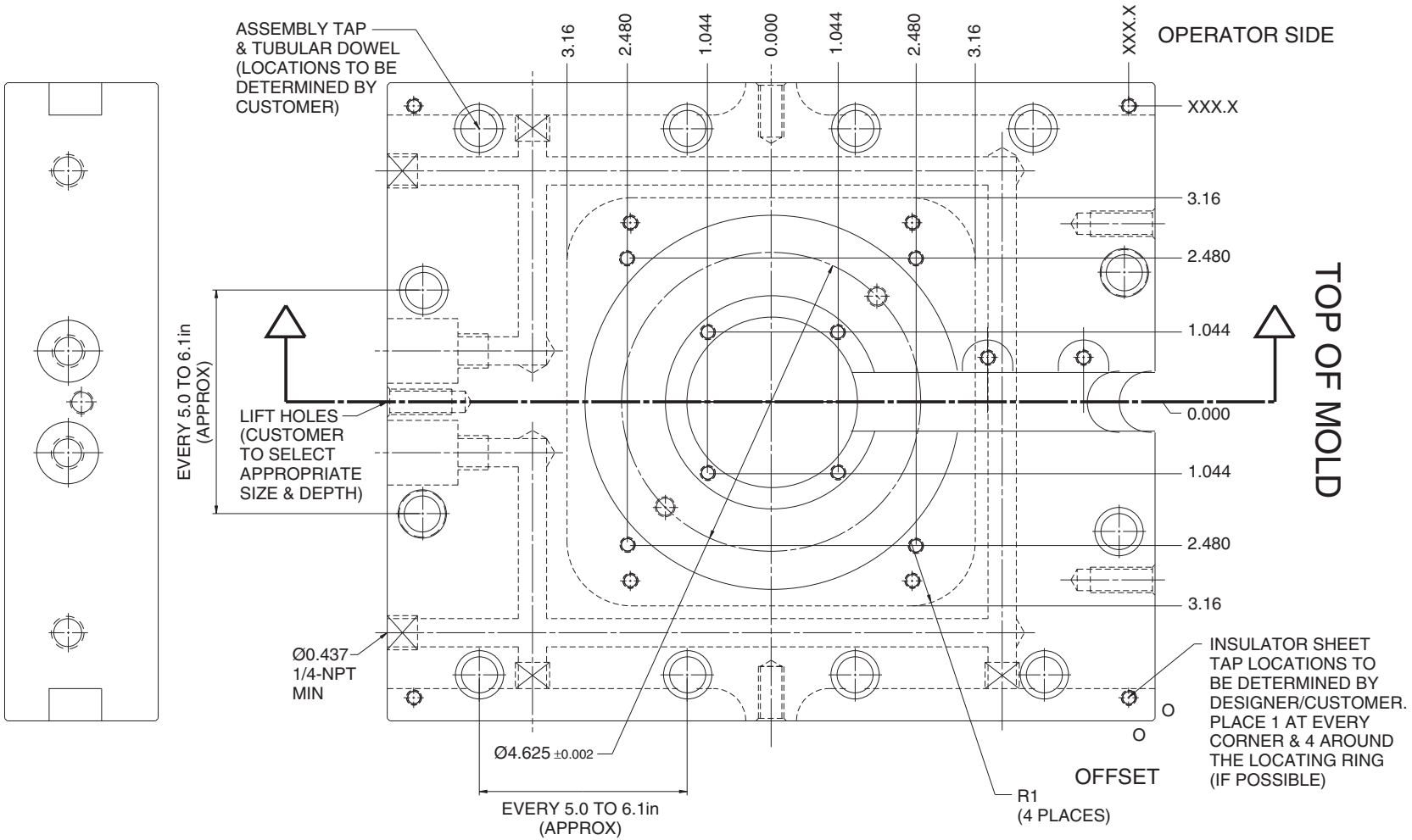
16 Drop (30 Pitch) — Nozzle Plate Machining Detail (continued)



NOTES:

1. Wire channel depth to be 0.75 deep except when plate thickness does not provide 0.250in steel support underneath pocket. In that case, wire channel depth to be 0.50 deep, under the pocket and then chamfered (45°) to 0.75 deep outside the pocket. CAUTION: Avoid wire channel interference with M6 support pad taps.
2. If the manifold is to be positioned 90° to that shown, please refer to MRC3316 manifold heater channel machining drawing on page 136 for the channel location. The four M6 taps and dowel must be rotated 90° also.
3. For metric dimensions, see pages 10-73.

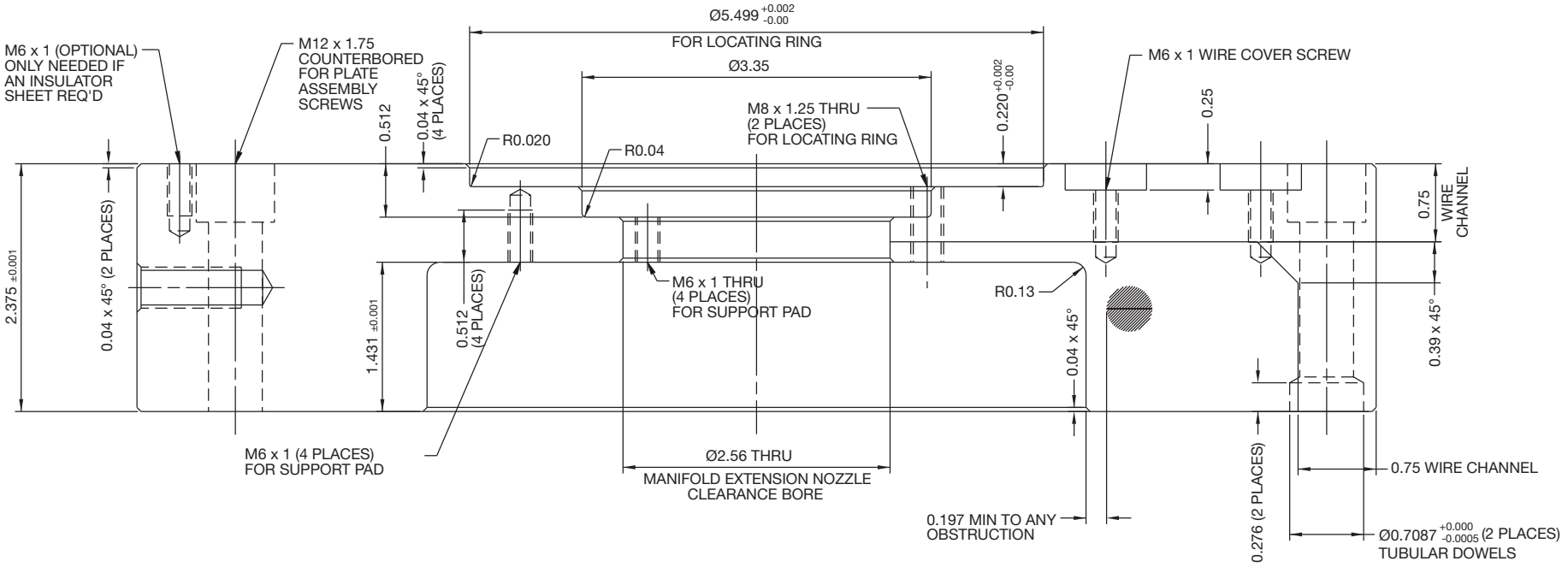
16 Drop (30 Pitch) — Manifold Retainer Plate Machining Detail



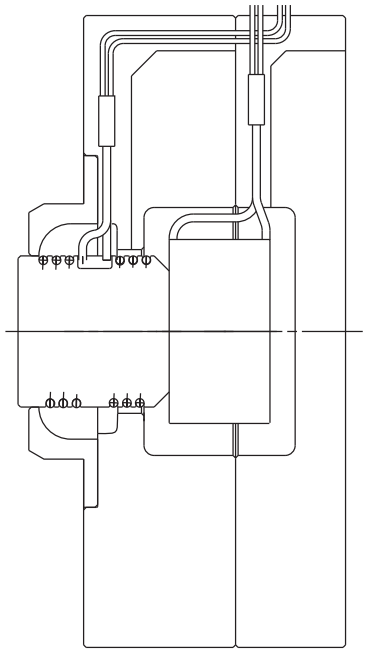
NOTES:

1. Water lines, assembly counterbores and insulator sheet taps shown as example only. 9-7/8" x 11-7/8" mold shown.
2. For metric dimensions, see pages 10-73.

16 Drop (30 Pitch) — Manifold Retainer Plate Machining Detail (continued)

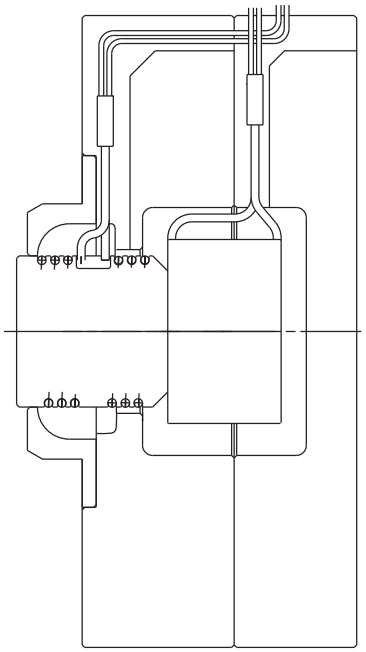


Rectangular Multi-Nozzle Assemblies – Manifold Heater Layout



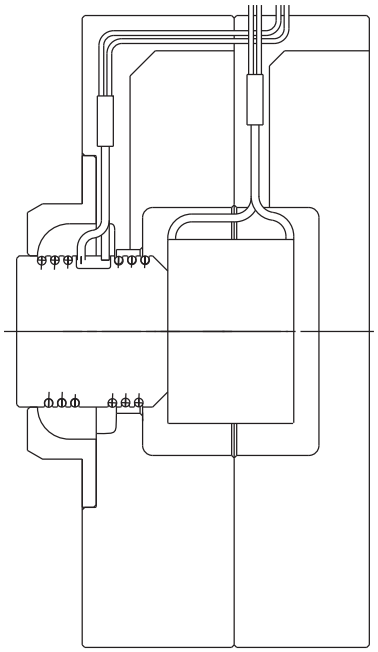
Manifold Thickness – 1.576in

MRC3002 MRC9002
MRC4002 MRC0004
MRC5002 MRC3302
MRC7002



Manifold Thickness – 1.773in

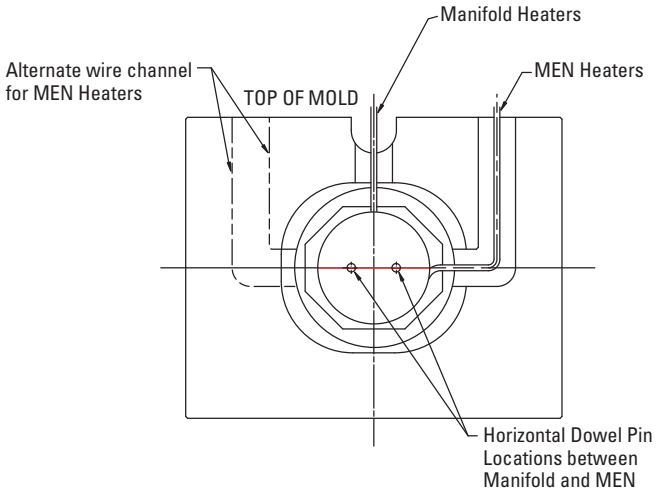
MRC3306

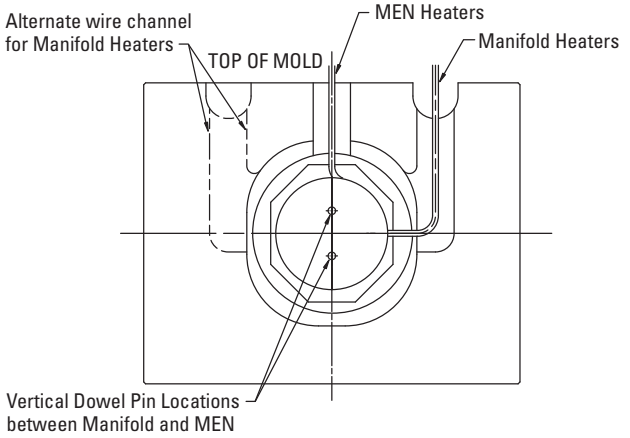


Manifold Thickness – 1.970in

MRC3004
MRC3308
MRC3312
MRC3316

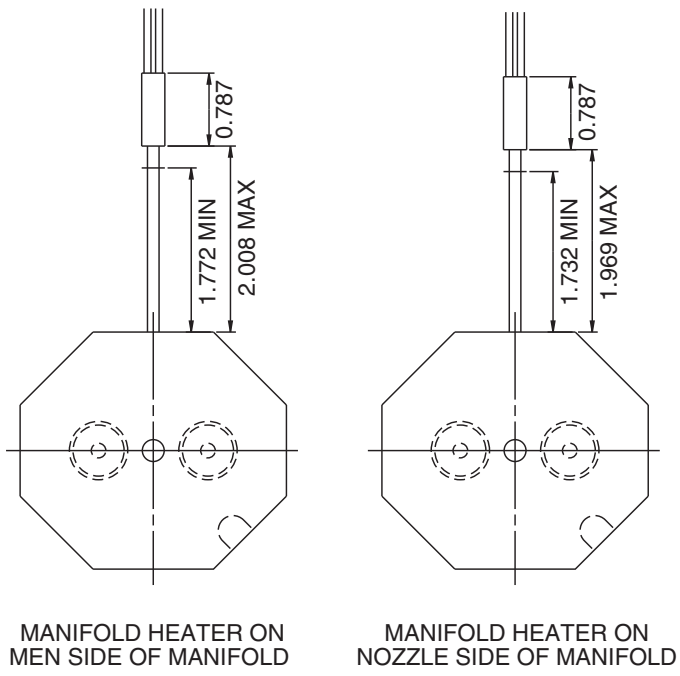
MEN Heater Wire Channels



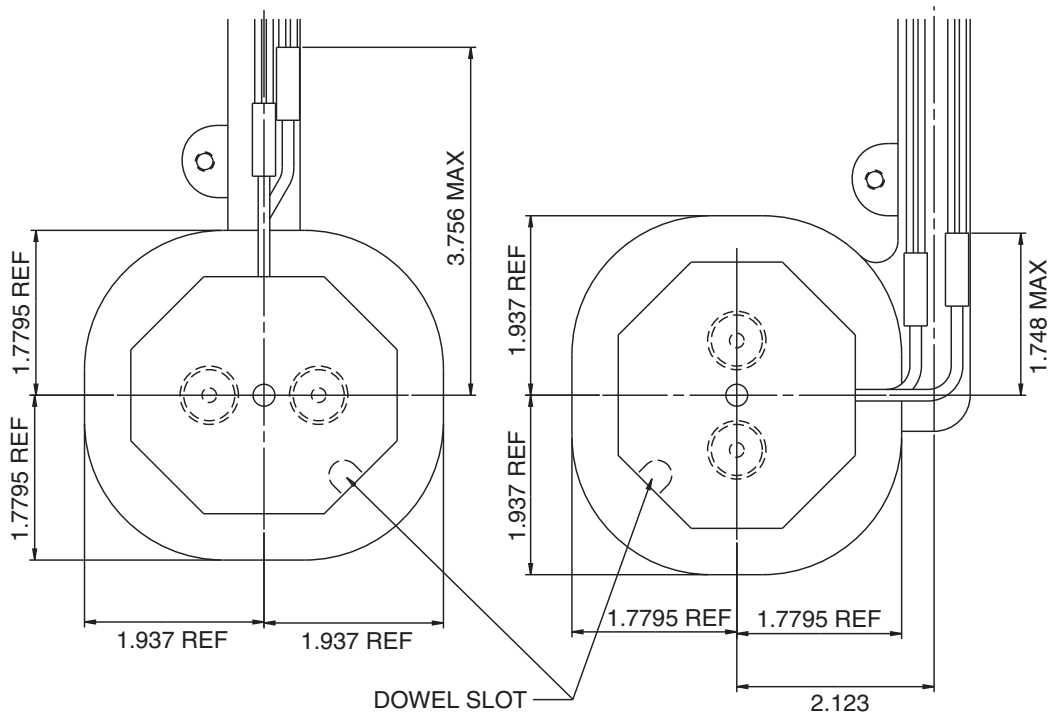


NOTE: MEN and manifold heater leads can be bent into wire channels.

MRC3002

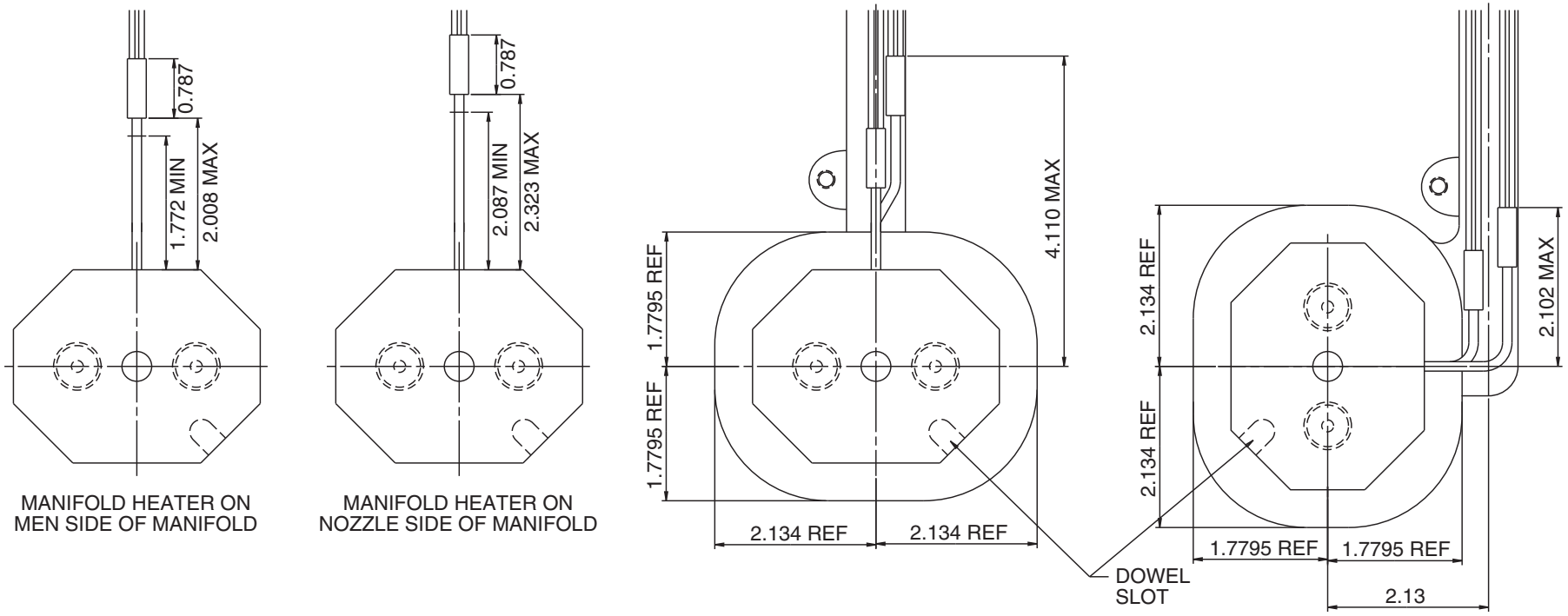


Manifold Heaters Straight Before Bending into Wire Slot



Manifold Heaters Bent into Wire Slot

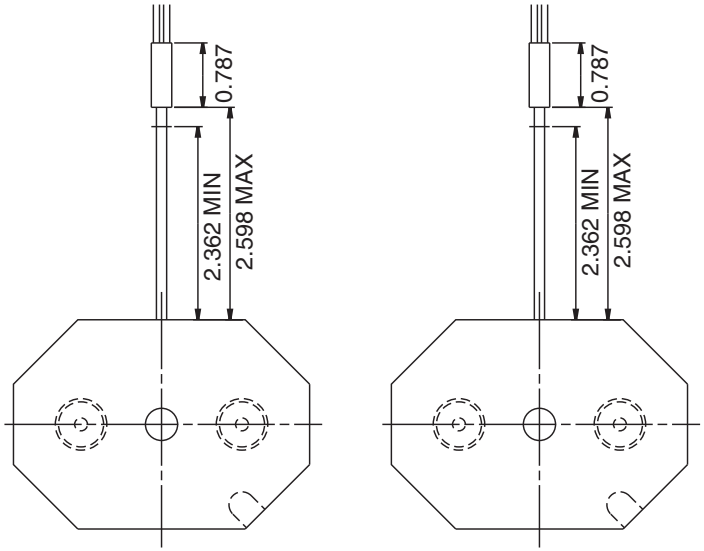
MRC4002



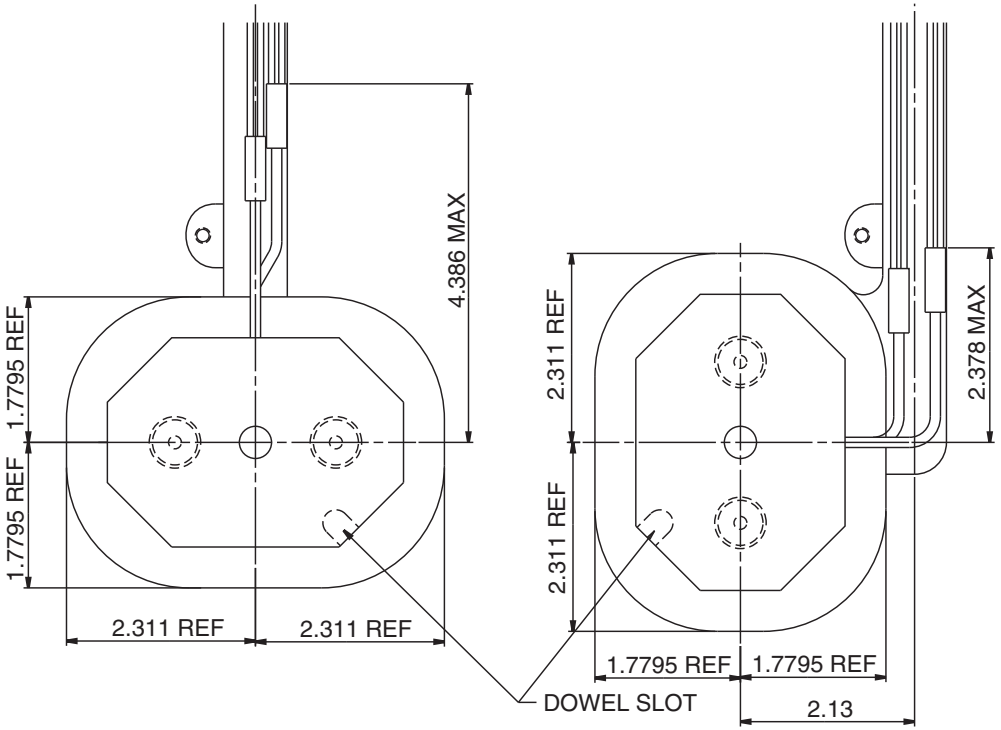
Manifold Heaters Straight
Before Bending into Wire Slot

Manifold Heaters Bent into Wire Slot

MRC5002

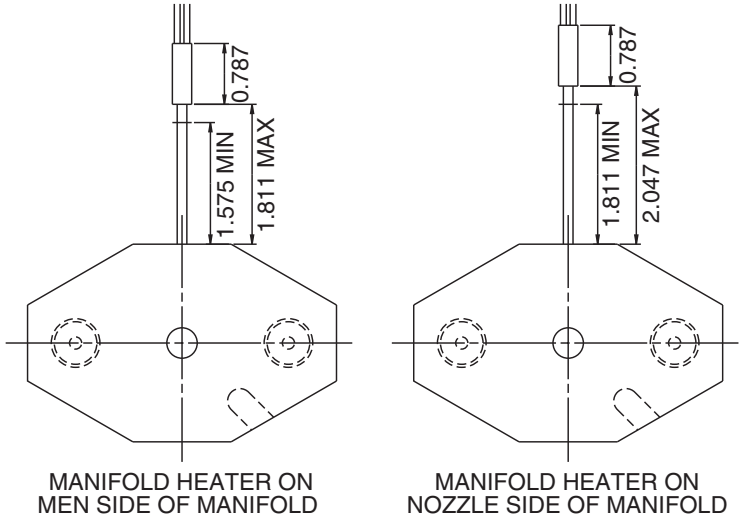


Manifold Heaters Straight
Before Bending into Wire Slot

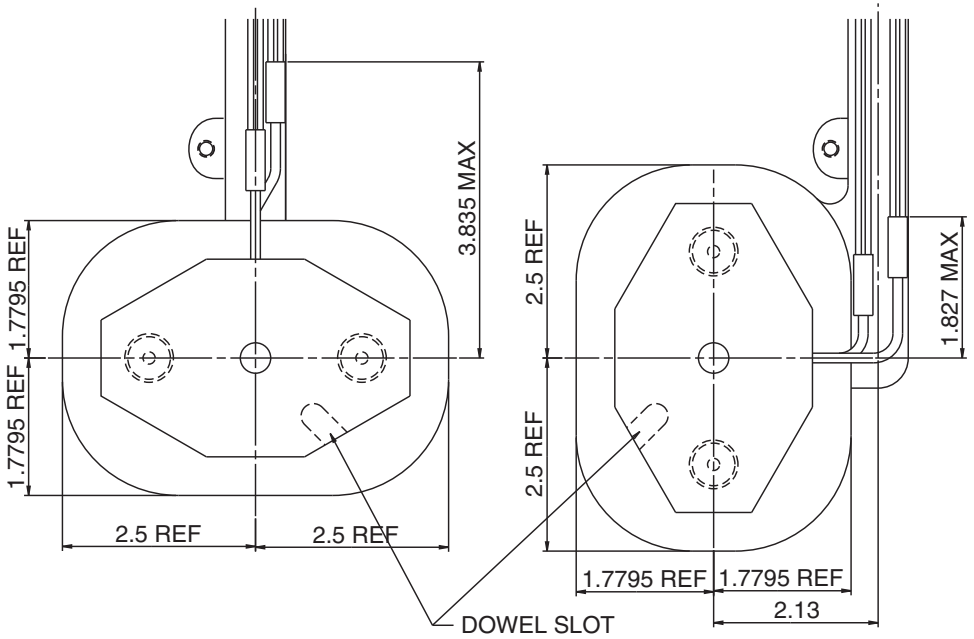


Manifold Heaters Bent into Wire Slot

MRC7002

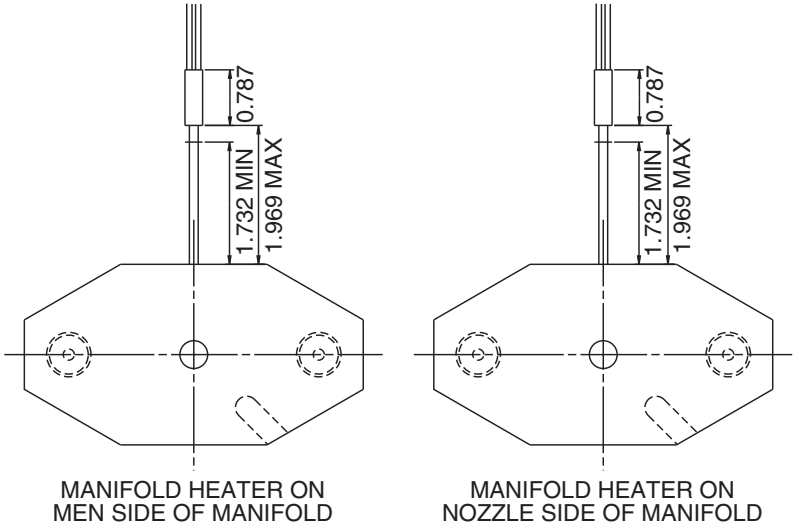


Manifold Heaters Straight
Before Bending into Wire Slot

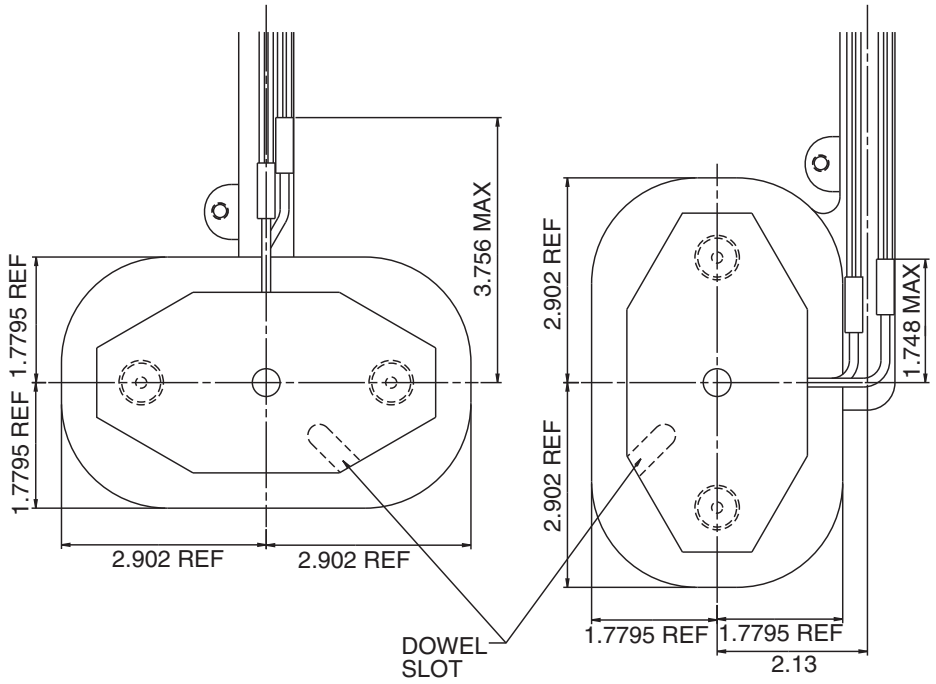


Manifold Heaters Bent into Wire Slot

MRC9002

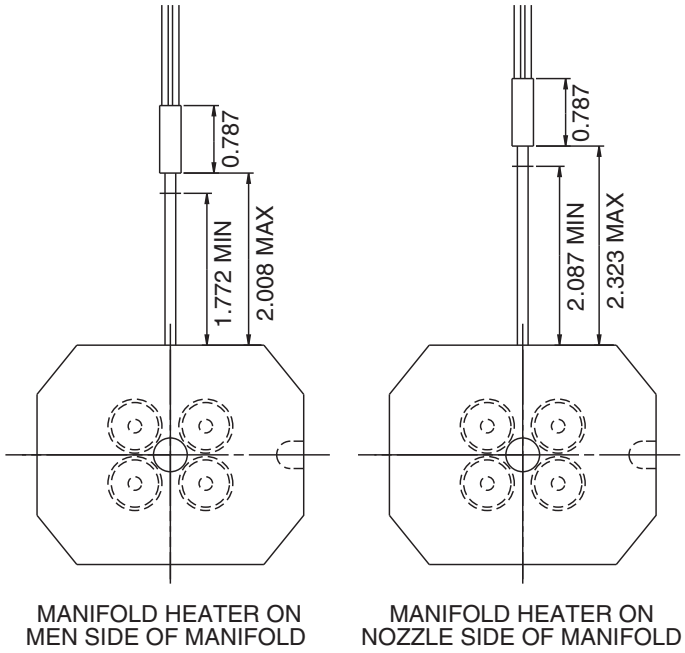


Manifold Heaters Straight
Before Bending into Wire Slot

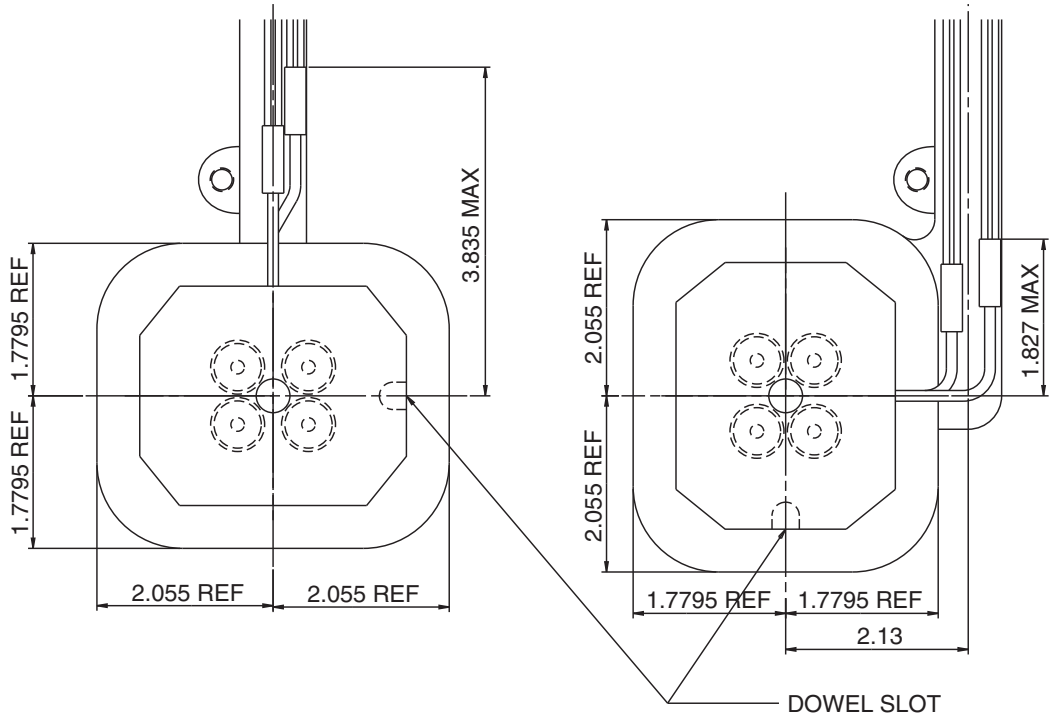


Manifold Heaters Bent into Wire Slot

MRC0004

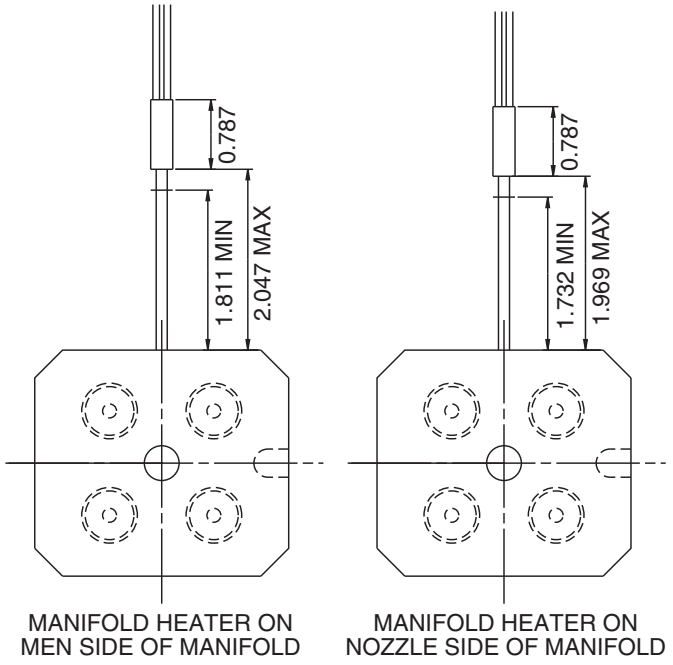


Manifold Heaters Straight
Before Bending into Wire Slot

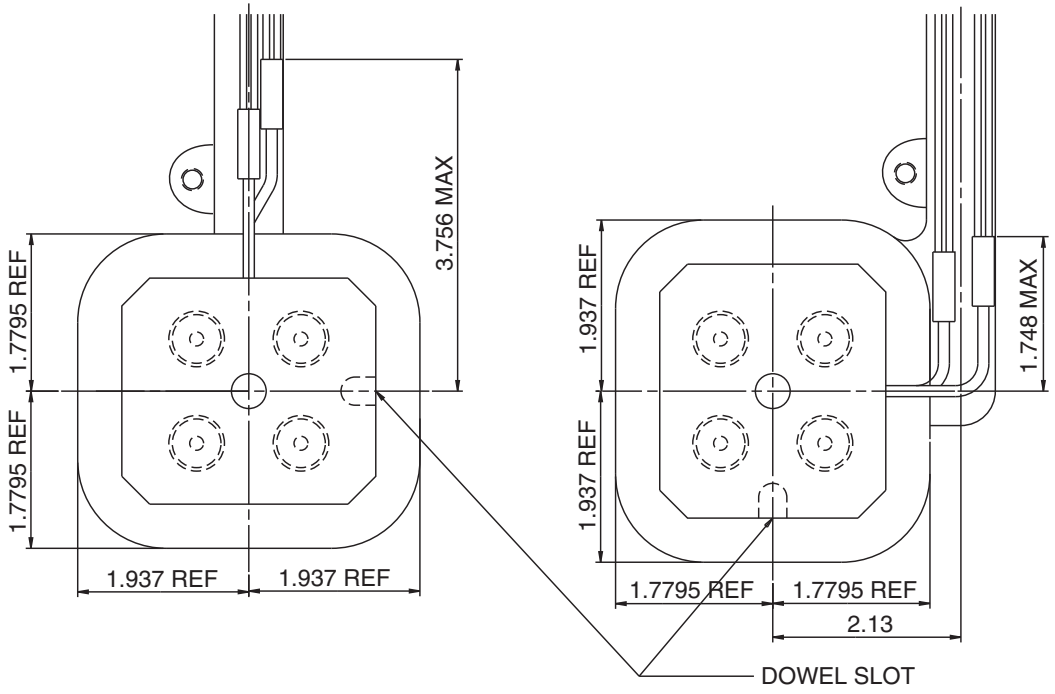


Manifold Heaters Bent into Wire Slot

MRC3304

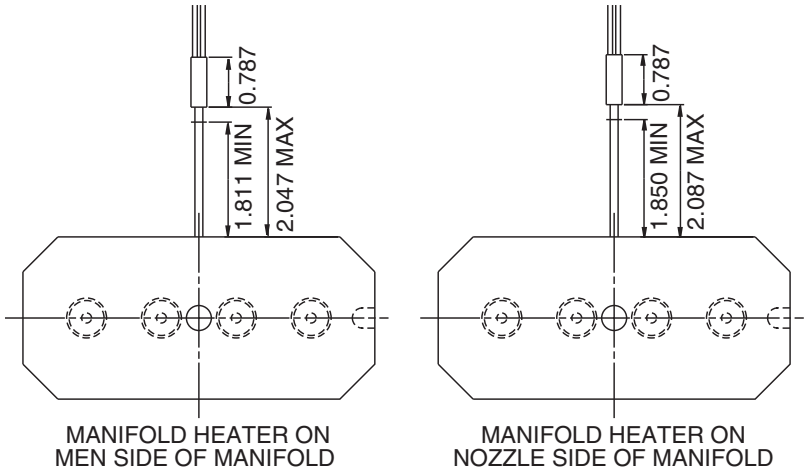


Manifold Heaters Straight
Before Bending into Wire Slot

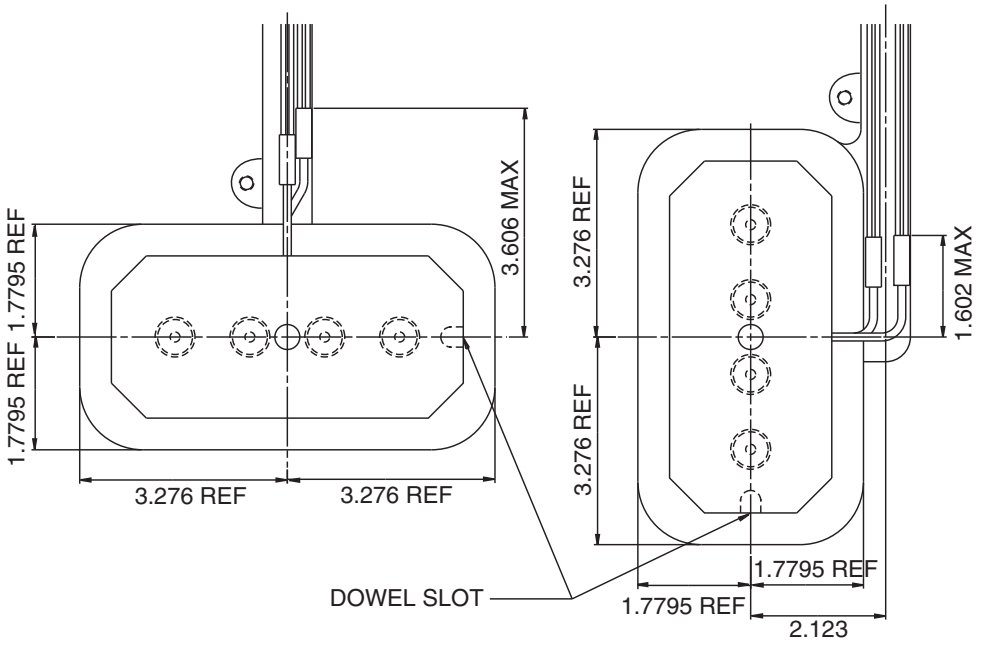


Manifold Heaters Bent into Wire Slot

MRC3004

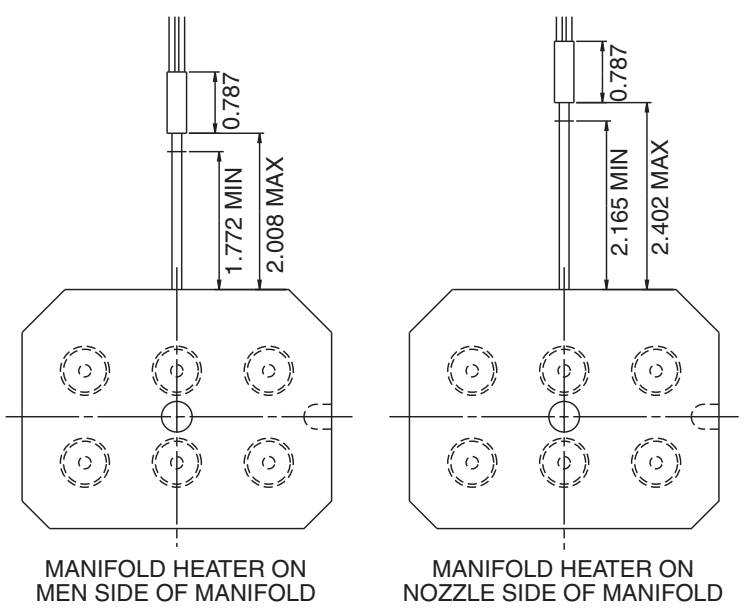


Manifold Heaters Straight
Before Bending into Wire Slot

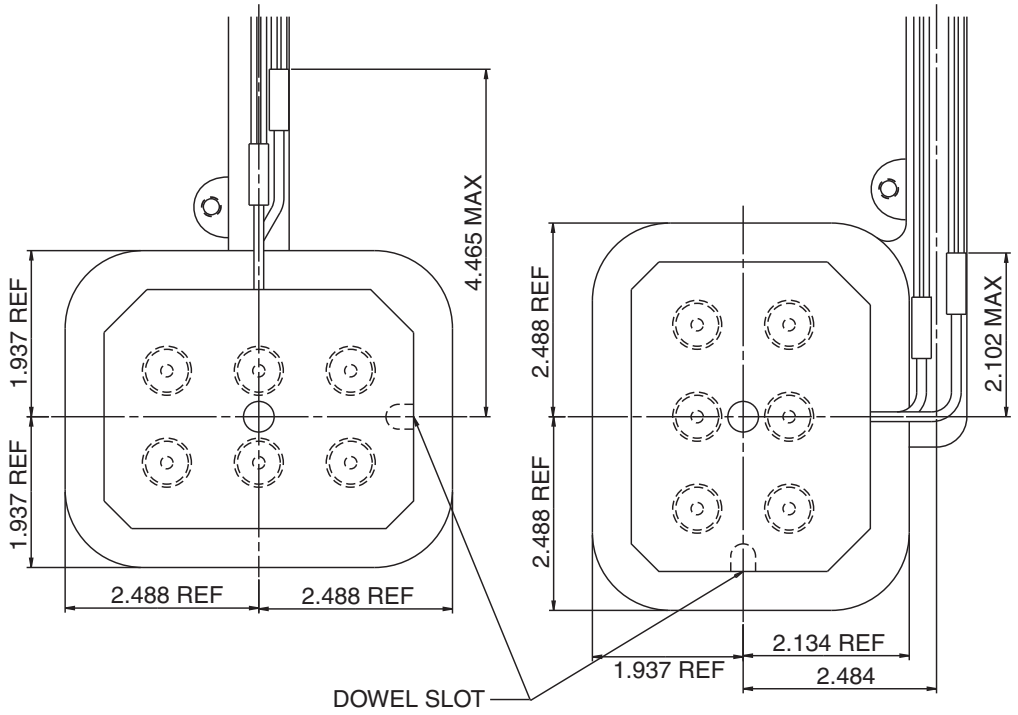


Manifold Heaters Bent into Wire Slot

MRC3306

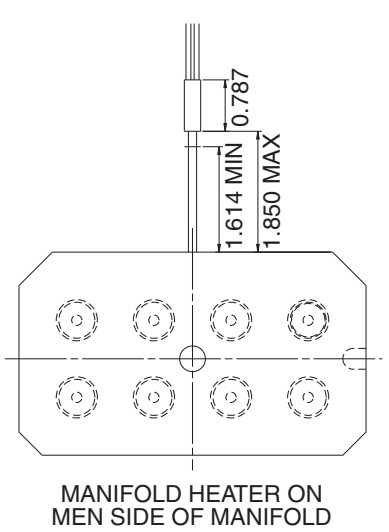


Manifold Heaters Straight
Before Bending into Wire Slot

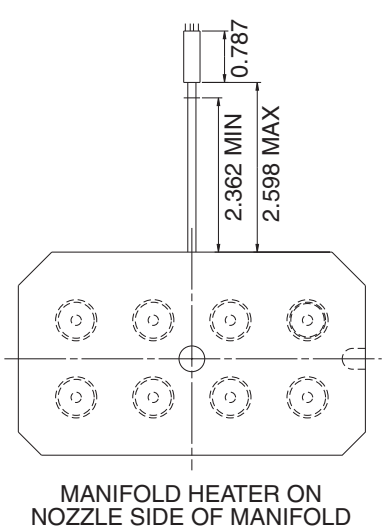


Manifold Heaters Bent into Wire Slot

MRC3308

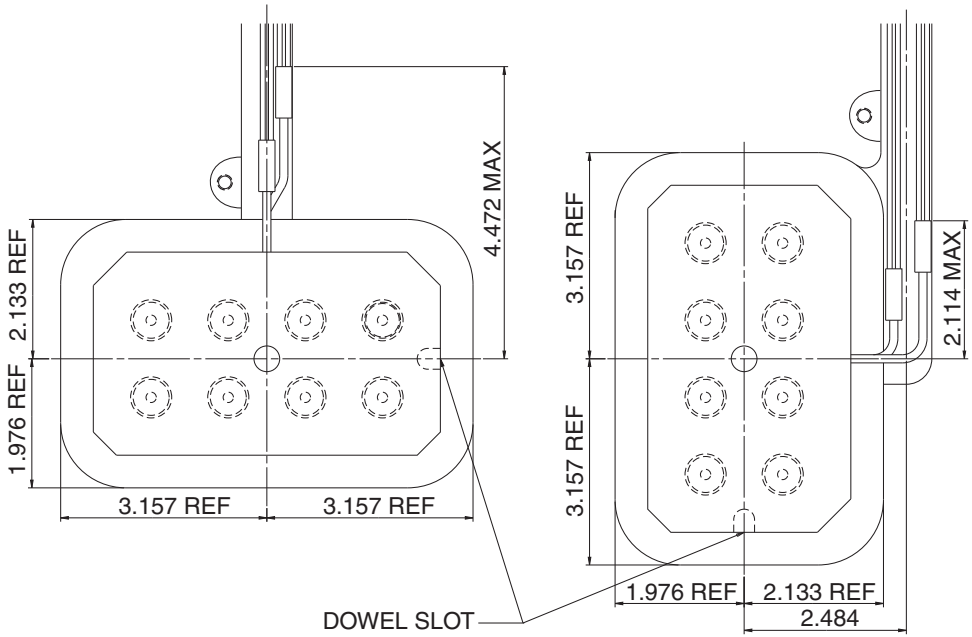


MANIFOLD HEATER ON
MEN SIDE OF MANIFOLD



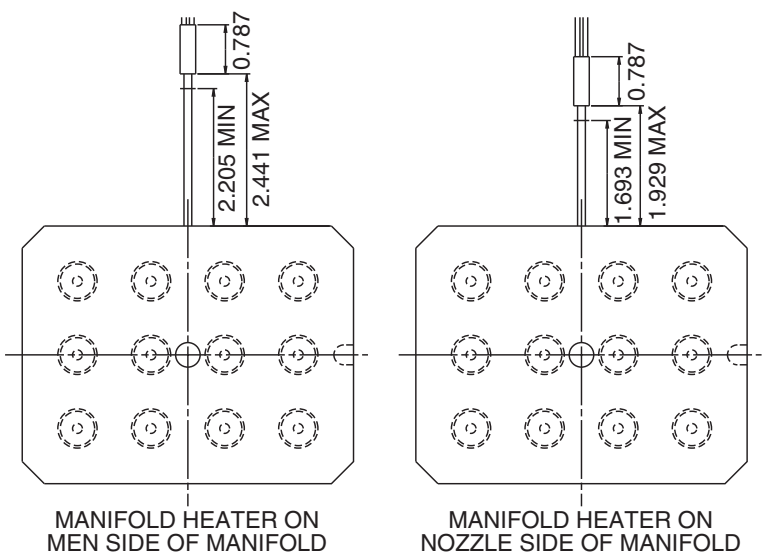
MANIFOLD HEATER ON
NOZZLE SIDE OF MANIFOLD

Manifold Heaters Straight
Before Bending into Wire Slot

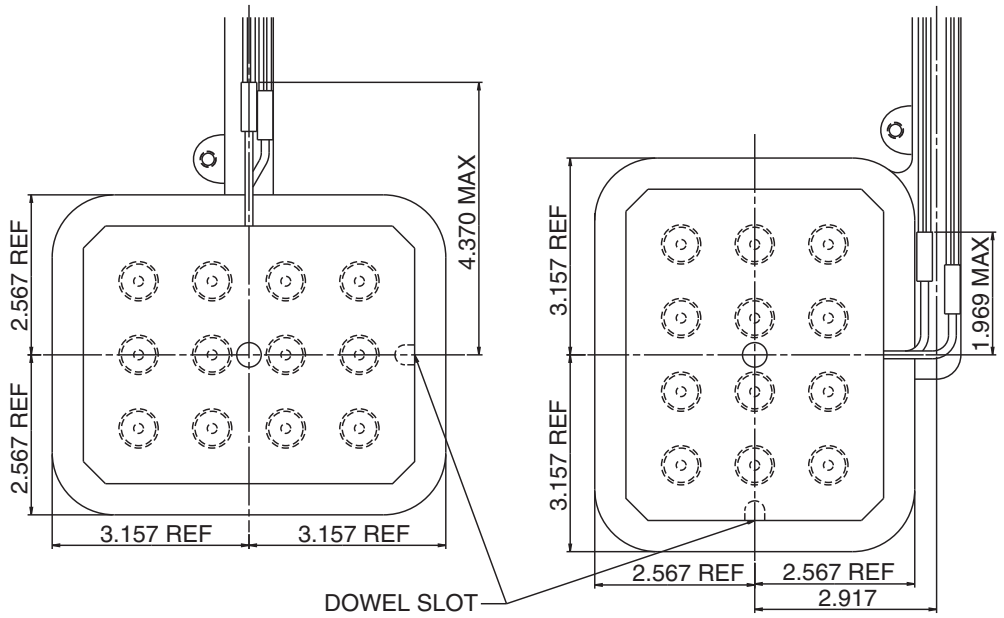


Manifold Heaters Bent into Wire Slot

MRC3312

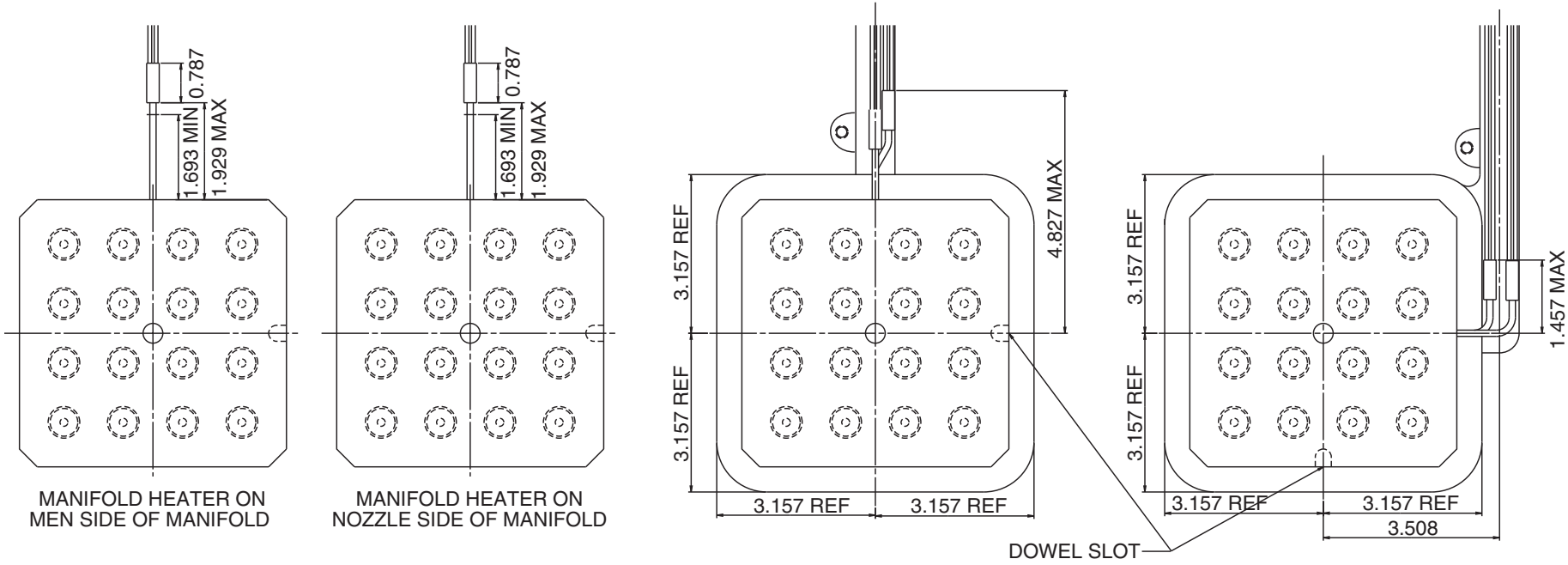


Manifold Heaters Straight Before Bending into Wire Slot



Manifold Heaters Bent into Wire Slot

MRC3316

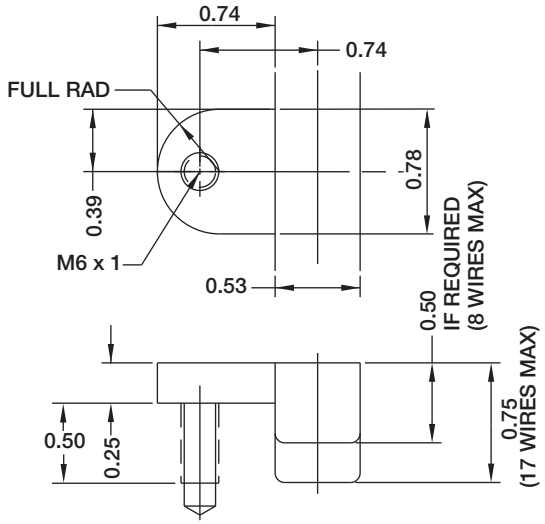


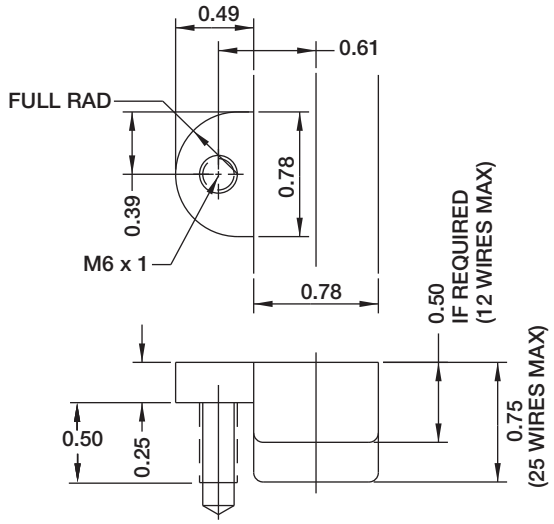
Manifold Heaters Straight
Before Bending into Wire Slot

Manifold Heaters Bent into Wire Slot

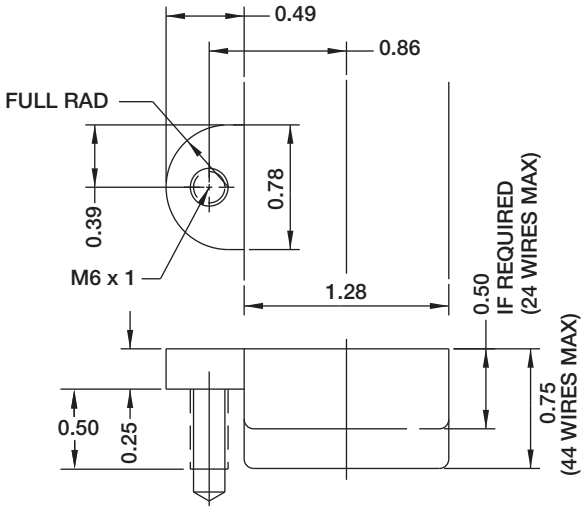
Wire Pocket Machining Details

WC0001

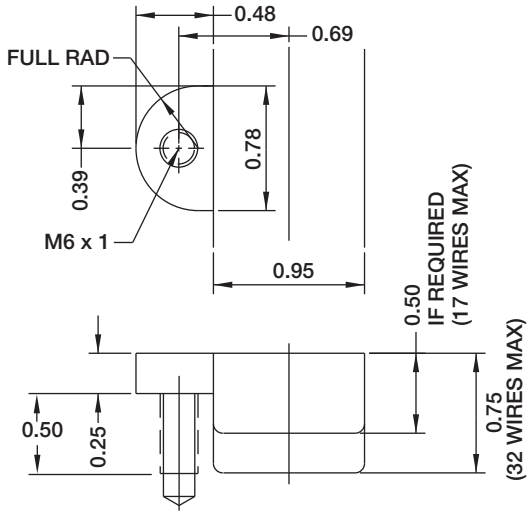




WC0002



WC0003

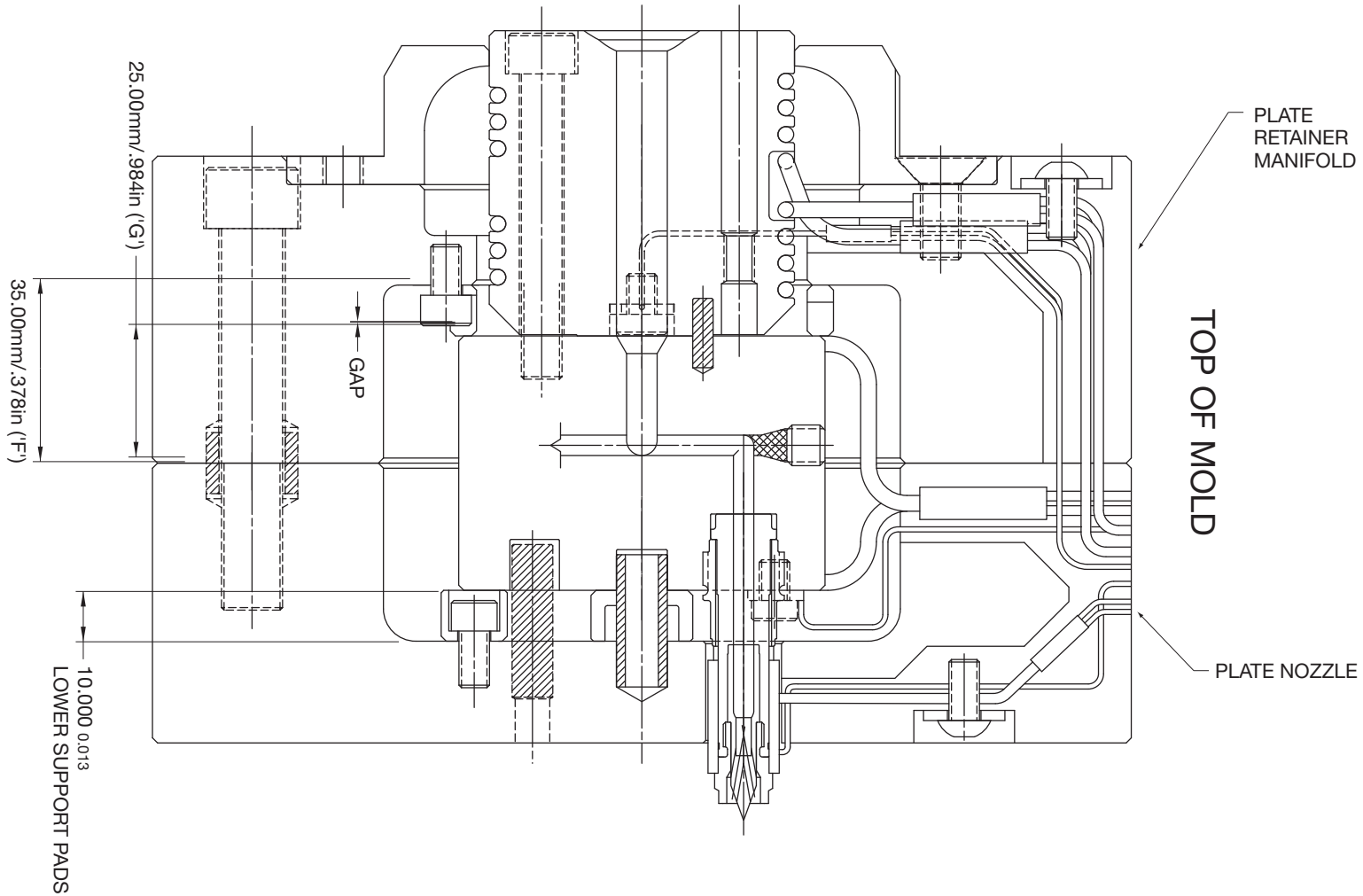


NOTES:

1. Use M6 x 1/4" long BHCS and torque to 16 N.m (11.7 ft-lbs) for each wire cover.
2. To facilitate assembly use 75% of the maximum number of wires.
   Nozzle heater = 2 wires;
   Manifold heaters = 4 wires (total);
   MEN heaters = 4 wires (total);
   Nozzle thermocouple = 1 wire;
   Manifold thermocouple = 1 wire;
   MEN thermocouple = 1 wire.
3. Radius all wire channels to suit.
4. For metric dimensions, see pages 10-73.

Assembly Section View

Fig. 2-1



Inspection of the Stellar Manifold and Components

Prior to system assembly, DME strongly suggests that you complete the following inspection and establish the procedures that will facilitate proper system assembly.

1. Ensure that all components provided are the correct part numbers and quantities.
2. Check all the supplied heaters for proper resistance in ohms (Ω) and for insufficient resistance to ground conditions by doing the following:
   - Measure each heater's resistance and determine if they are equivalent. Record on Master Inspection Sheet. (Insufficient resistance to ground is defined as a reading to ground of 20,000 Ω or less.)

Assembly Instructions

(Refer to numbered items in Fig. 2-7 and Table 2-2.)

Nozzle Plate

1. Place tubular dowel (item 6) into center bore in the nozzle plate and the anti-rotation dowel (item 8) into the hole in the nozzle plate.
2. Place (2) tubular dowels (item 18) into bore in the nozzle plate.
3. Grind the (4) lower support pads (item 9) and center support pad (item 7) to 10.000 ± 0.013mm (grind together to ensure even height).
4. Place center support pad (item 7) concentric with the tubular dowel (item 6).
5. Attach the (4) lower support pads (item 9) into the nozzle plate pocket using the support pad screws (item 10).

Manifold

6. Place the (2) MEN locating dowels (item 13) into the manifold.
7. Attach the manifold thermocouple (item 4) on nozzle side using the manifold thermocouple screw (item 5).
8. Insert the manifold assembly (item 1) into the pocket in the nozzle plate and bend the manifold heater and thermocouple wires into channel.
9. Measure "F" (35.00mm nominal—see Fig. 2-1) pocket depth in the manifold retainer plate. Measure "G" (25.00mm nominal) height from the top of the nozzle plate to the top of the manifold. Grind the upper support ring (item 11) to a height that ensures there is a gap present. The size of the gap is determined by the equation on page 11 (metric), page 75 (inch) or on the calculation table.

Assembly Instructions (continued)

(Refer to numbered items in Fig. 2-7 and Table 2-2.)

Manifold Retainer Plate

10. Attach the upper support ring (item 11) to the manifold retainer plate using the support ring screws (item 12).
11. Lower the manifold retainer plate on top of the nozzle plate as shown ensuring the proper orientation of tubular dowels (item 18) and wire channels (the wire channels in both plates should exit at the “top of mold” side).
12. Attach the manifold retainer plate to the nozzle plate with M12 screws (item 17). Torque the screws equally to 135 N.m [100 ft. lbs.].

Manifold Extension Nozzle (MEN)

13. If the MEN is the heated style, attach the MEN thermocouple into slot on manifold side using the MEN thermocouple screw.
14. Attach the MEN to the manifold with (4) M8 screws. Ensure proper orientation with the (2) dowels (item 13). Torque the screws equally to 40 N.m [30 ft. lbs.].
15. If applicable, tag the wires of the MEN thermocouple and heaters then route into the wire channel, bending as necessary.
16. Install wire covers (item 19) as needed to retain the wires in the channel of the manifold retainer plate using the wire cover screws (item 20).

Locating Ring

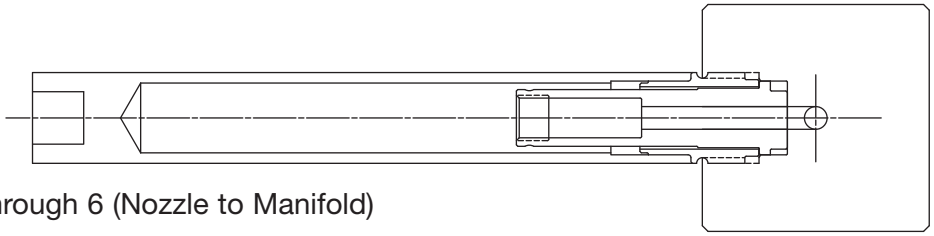
17. Attach the locating ring (item 15) to the manifold retainer plate with (2) M8 flat head cap screws (item 16).

Nozzles

18. Verify gate detail dimensions as shown in Figs. 1-2 through 1-3.
19. Attach nozzles to the manifold following the steps outlined in Fig. 2-2.
20. Place the nozzle heaters, nozzle thermocouples, and snap rings on the nozzle bodies (see Fig. 2-3 through 2-6). Tag and place wires into the wire channels.
21. Tag and place the wires of the manifold thermocouple and manifold heaters into the proper wire channels on the nozzle plate.
22. Install wire covers (item 19) to retain wires in the channels in the nozzle plate using the wire cover screws (item 20).
23. **Optional:** Attach an insulator sheet to the manifold retainer plate. Insulator sheet and mounting screws are not shown and tapped holes are not provided.
24. Connect all wires to electrical connectors in the terminal mounting box. See wiring schematics, Table 2-1.

Nozzle Assembly

Fig. 2-2

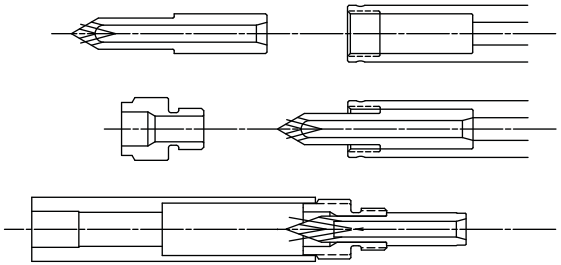


Steps 1 through 6 (Nozzle to Manifold)

1. Safety glasses should be worn when assembling components.
2. Threads and counterbore of manifold must be clean of any plastic.
3. Place nozzle body into manifold.
4. Apply high temperature anti-seize compound to nut threads to prevent galling or seizing. Use Fel-Pro C5-A or equivalent anti-seize compound.
5. Hold nozzle body down by threading nut into manifold.
6. Torque nut to 81 N.m [60 ft-lbs] using nut socket tool (SXW0002).

Point Gate Tip or Thru Hole Tip Sub-Assemblies

Fig. 2-2a



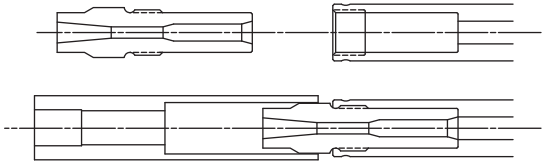
Steps 7 through 11
(Tip Sub-assembly and Retainer to Nozzle)

7. Safety glasses should be worn when assembling components.
8. Threads and counterbore of nozzle must be clean of any plastic.
9. Slide tip into nozzle body.
10. Thread retainer into nozzle body.
11. Place socket tool carefully over retainer so as to not damage tip. Torque retainer to 11.3 N.m [100 in-lbs] using a 10mm deep well 6-point socket tool and torque wrench.

NOTE: For Thru Hole Tip follow same instructions as for Point Gate Tip.

Sprue Gate Tip

Fig. 2-2b



Steps 12 through 15
(Sprue Gate Tip to Nozzle)

12. Safety glasses should be worn when assembling components.
13. Threads and counterbore of nozzle must be clean of any plastic.
14. Thread sprue gate tip into nozzle body.
15. Place socket tool carefully over tip so as to not damage front surface and edge of tip. Torque tip to 14 N.m [125 in- lbs]. For sprue gate tip, use socket tool (SXW0003).

Nozzles with Standard Coil Heater and Point Gate Tip

Tip, Retainer, Heater and Thermocouple Removal Instructions

Fig. 2-3

Fig. 2-3a

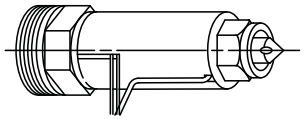


Fig. 2-3b

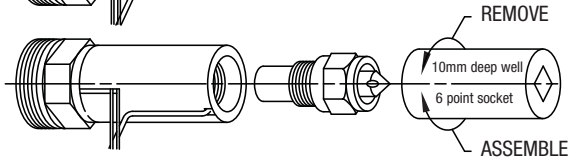


Fig. 2-3c

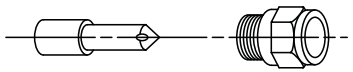


Fig. 2-3d

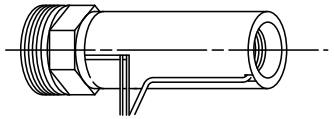


Fig. 2-3e

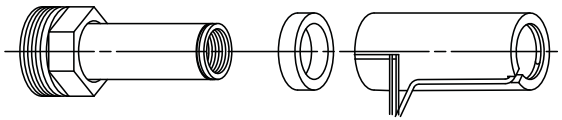


Fig. 2-3f

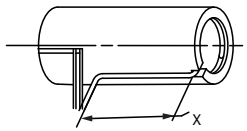


Fig. 2-3g

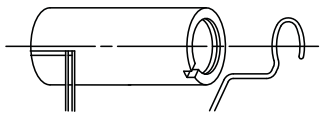


Fig. 2-3h

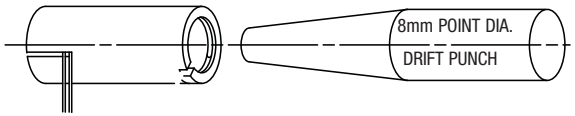
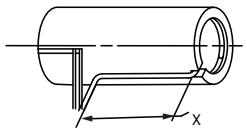


Fig. 2-3i



1. Stellar nozzle sub-assembly with tip sub-assembly (see Fig. 2-3a). Threaded style nozzle with SXF5100 Retainer and SXT4010 tip shown. Same instructions apply to SXT5010 or SXT5200 tips using SXF5000 Retainer.
2. Safety glasses and gloves should be worn when working on the mold.
3. Turn nozzle heater on, and set at 10-38°C (50-100°F) below set point of processing temperature to allow for easier tip removal.
4. Carefully clean plastic material from around tip and retainer.
5. Remove retainer with 10mm deep well 6-point socket turning counterclockwise (see Fig. 2-3b). Socket will fit over the front seal-off area when placed on retainer hex. DO NOT DAMAGE SEAL-OFF AREA.
6. Carefully remove tip from retainer (see Fig. 2-3c). Inspect seal-off area for out of roundness and/or score marks on seal area, and replace retainer if either condition occurs. Inspect tip for any wear and replace if wear has occurred.
7. Clean plastic material from thread and counterbore areas in nozzle body to ensure proper assembly (see Fig. 2-3d).
8. Turn off nozzle heater and disconnect heater and thermocouple leads from connectors on mold. Allow nozzle time to cool down.
9. Remove heater, thermocouple and spacer from nozzle body (see Fig. 2-3e).
10. Measure thermocouple leads "X" (see Fig. 2-3f).
11. Remove thermocouple from heater end cap groove (see Fig. 2-3g).
12. Carefully place new thermocouple into heater end cap groove with lead coming out the slot. Use an 8mm (5/16") point diameter drift punch by hand to spread the thermocouple into the heater end cap groove. This will allow the heater with thermocouple to slide onto nozzle body (see Fig. 2-3h).
13. Bend thermocouple lead 90° along the length of the heater (see Fig. 2-3i). Bend heater and thermocouple leads to the correct "X" length at 90° angle to the heater. Do not rebend rigid leads. Rebending leads can result in damage to circuit.
14. Slide spacer and heater with thermocouple over nozzle body (see Fig. 2-3e).
15. DO NOT LUBRICATE OR USE ANTI-SEIZE ON RETAINER THREADS.
16. Assemble tip into retainer.
17. Thread retainer clockwise into the nozzle body and torque to 11.3 N.m (8.3ft-lbs/100 in-lbs) using a 10mm deep well 6-point socket tool and torque wrench (see Fig. 2-3b).
18. Wire heater and thermocouple leads to connectors on mold. Do not connect thermocouple leads to electric power.
19. Product may absorb moisture when cool. Use low voltage or power to drain out residual moisture before applying full power. Failure to do so may cause damage to this product.

NOTE: Drift Punch not supplied by DME.

Nozzles with Standard Coil Heater and Sprue Gate Tip

Tip, Retainer, Heater and Thermocouple Removal Instructions

Fig. 2-4

Fig. 2-4a

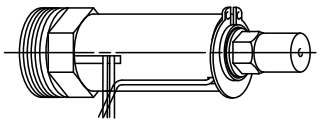


Fig. 2-4b

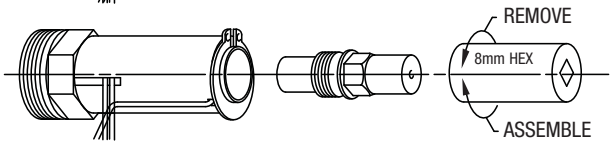


Fig. 2-4c

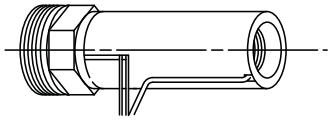


Fig. 2-4d

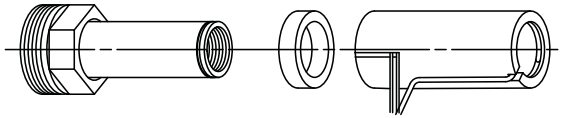


Fig. 2-4e

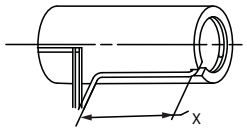


Fig. 2-4f

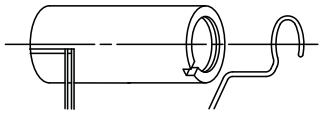


Fig. 2-4g

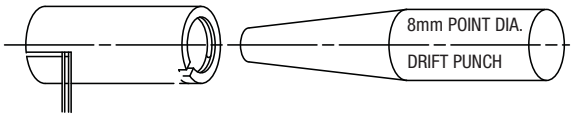
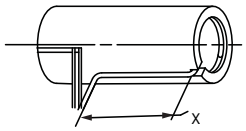


Fig. 2-4h



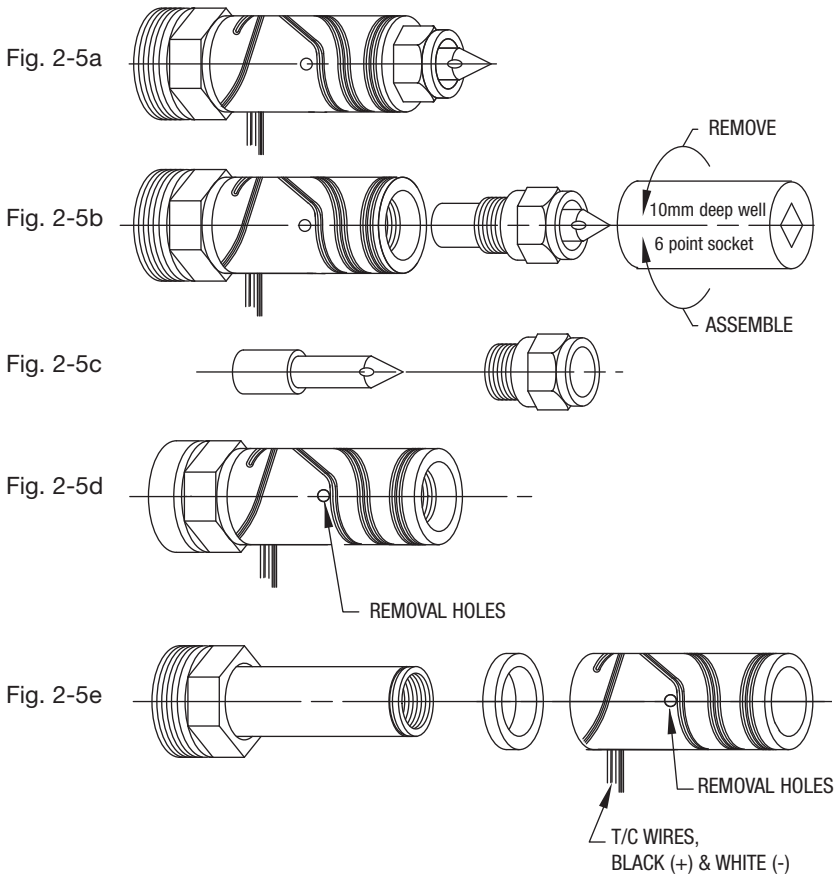
1. Stellar nozzle sub-assembly with tip sub-assembly (see Fig. 2-4a). Threaded style nozzle with sprue gate tip shown.
2. Safety glasses and gloves should be worn when working on the mold.
3. Turn nozzle heater on, and set at 10-38°C (50-100°F) below set point of processing temperature to allow for easier tip removal.
4. Carefully clean plastic material from around tip and retainer.
5. Remove sprue gate tip with a 8mm deep well socket turning counterclockwise. Do not damage 7mm diameter seal-off area or front molding surface (see Fig. 2-4b).
6. Clean plastic material from nozzle and tip threads. Also, clean plastic material from tip counterbore in nozzle body to ensure proper assembly.
7. Turn off nozzle heater and allow to cool down (see Fig. 2-4c).
8. Remove snap ring, heater, thermocouple and spacer from nozzle body (see Fig. 2-4d).
9. Measure thermocouple leads "X" (see Fig. 2-4e).
10. Remove thermocouple from heater end cap groove (see Fig. 2-4f).
11. Carefully place new thermocouple into heater end cap groove with lead coming out the slot. Use an 8mm (5/16") point diameter drift punch by hand to spread the thermocouple into the heater end cap groove. This will allow the heater with thermocouple to slide onto nozzle body (see Fig. 2-4g).
12. Bend thermocouple lead 90° along the length of the heater (see Fig. 2-4h). Bend heater and thermocouple leads to the correct "X" length at 90° angle to the heater. Do not rebend rigid leads. Rebending leads can result in damage to circuit.
13. Slide spacer and heater with thermocouple over nozzle body (see Fig. 2-4d). Add snap ring.
14. DO NOT LUBRICATE OR USE ANTI-SEIZE ON THREADS.
15. Thread tip clockwise into the nozzle body and torque to 14 N.m [10.42 ft-lbs/125 in-lbs] using an 8mm deep well socket tool (see Fig. 2-4b).
16. Wire heater and thermocouple leads to connectors on mold. Do not connect thermocouple leads to electric power.
17. Product may absorb moisture when cool. Use low voltage or power to drain out residual moisture before applying full power. Failure to do so may cause damage to this product.

NOTE: Drift Punch not supplied by DME.

Nozzles with High Performance Heater and Point Gate Tip

Tip, Retainer and Heater Removal Instructions

Fig. 2-5



1. Stellar nozzle sub-assembly with tip sub-assembly (see Fig. 2-5a). Threaded style nozzle with SXF5000 Retainer and SXT5010 Tip shown. Same instructions apply to SXT5200 Tip.
2. Safety glasses and gloves should be worn when working on the mold.
3. Turn nozzle heater on, and set at 10-38°C (50-100°F) below set point of processing temperature to allow for easier tip removal.
4. Carefully clean plastic material from around tip and retainer.
5. Remove retainer with 10mm deep well 6-point socket turning counterclockwise (see Fig. 2-5b). Socket will fit over the front seal-off area when placed on retainer hex. DO NOT DAMAGE SEAL-OFF AREA.
6. Carefully remove tip from retainer (see Fig. 2-5c). Inspect seal-off area for out of roundness and/or score marks on seal area, and replace retainer if either condition occurs. Inspect tip for any wear and replace if wear has occurred.
7. Clean plastic material from thread and counterbore areas in nozzle body to ensure proper assembly (see Fig. 2-5d).
8. Turn off nozzle heater and disconnect heater and thermocouple leads from connectors on mold. Allow nozzle time to cool down.
9. Remove heater and spacer from nozzle body (see Fig. 2-5e).
10. If the heater is hard to remove use the removal holes placed 180° apart on the heater body (see Fig. 2-5d). Do not use the leads to pull the nozzle off.
11. Bend heater and thermocouple leads only if needed to better fit in the wire channel. For most cases, the heater leads will exit into the wire channel. CAUTION: REPEATED BENDING OF THE HEATER AND THERMOCOUPLE LEADS CAN FRACTURE LEAD WIRES.
12. Slide spacer and heater with thermocouple over nozzle body (see Fig. 2-5e).
13. DO NOT LUBRICATE OR USE ANTI-SEIZE ON RETAINER THREADS.
14. Assemble tip into retainer.
15. Thread retainer clockwise into the nozzle body and torque to 11.3 N.m (8.3 ft-lbs/100 in-lbs) using a 10mm deep well 6-point socket tool and torque wrench (see Fig. 2-5b).
16. Wire heater and thermocouple leads to connectors on mold. Do not connect thermocouple leads to electric power.
17. Product may absorb moisture when cool. Use low voltage or power to drain out residual moisture before applying full power. Failure to do so may cause damage to this product.

Nozzle Body (Threaded Style)

Removal Instructions

Fig. 2-6

Fig. 2-6a

Fig. 2-6b

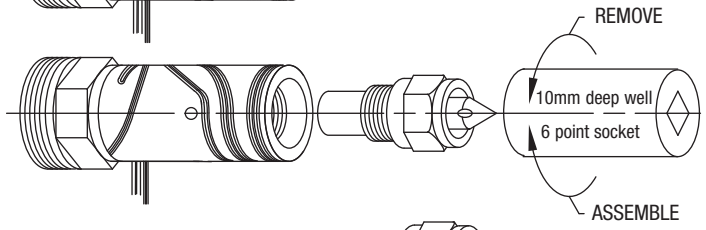


Fig. 2-6c

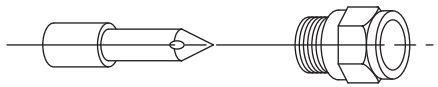


Fig. 2-6d

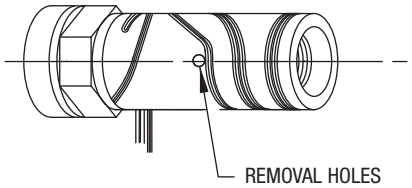


Fig. 2-6e

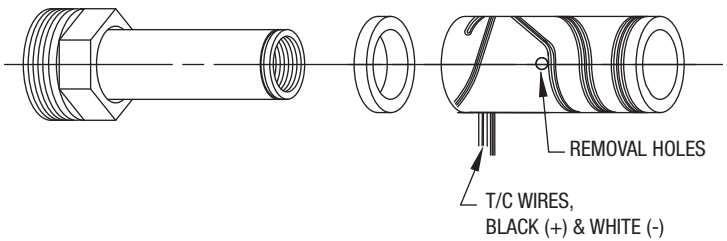
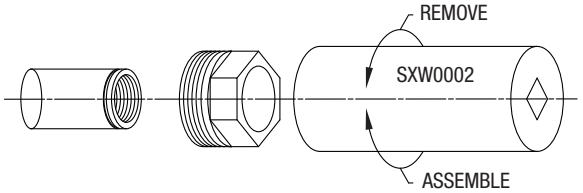


Fig. 2-6f



1. Stellar nozzle sub-assembly with tip sub-assembly (see Fig. 2-6a). Threaded style nozzle with SXF5000 Retainer and SXT5010 Tip shown. Instructions also apply to SXT5200 Tip.
2. Safety glasses and gloves should be worn when working on the mold.
3. Turn nozzle heater on, and set at 10-38°C (50-100°F) below set point of processing temperature to allow for easier tip removal.
4. Carefully clean plastic material from around tip and retainer.
5. Remove retainer with 10mm deep well 6-point socket turning counterclockwise (see Fig. 2-6b). Socket will fit over the front seal-off area when placed on retainer hex. DO NOT DAMAGE SEAL-OFF AREA.
6. Carefully remove tip from retainer (see Fig. 2-6c). Inspect seal-off area for out of roundness and/or score marks on seal area, and replace retainer if either condition occurs. Inspect tip for any wear and replace if wear has occurred.
7. Clean plastic material from thread and counterbore areas in nozzle body to ensure proper assembly (see Fig. 2-6d).
8. Turn off nozzle heater and disconnect heater and thermocouple leads from connectors on mold. Allow nozzle time to cool down.
9. Remove heater, thermocouple and spacer from nozzle body (see Fig. 2-6e).
10. Remove nut counterclockwise with socket tool DME item no. SXW0002 (see Fig. 2-6f).
11. Remove nozzle body from manifold.
12. Clean plastic materal from thread and counterbore areas in manifold to ensure proper assembly.
13. Place nozzle body into manifold.
14. Thread nut clockwise into the manifold and torque to 81 N.m (60 ft-lbs) using nut socket tool and torque (see Fig. 2-6f).
15. Slide spacer and heater with thermocouple over nozzle body (see Fig. 2-6e).
16. DO NOT LUBRICATE OR USE ANTI-SEIZE ON RETAINER THREADS.
17. Assemble tip into retainer.
18. Thread retainer clockwise into the nozzle body and torque to 11.3 N.m (8.3 ft-lbs/100 in-lbs) using a 10mm deep well 6-point socket tool and torque wrench (see Fig. 2-6b).
19. Wire heater and thermocouple leads to connectors on mold. Do not connect thermocouple leads to electric power.
20. Product may absorb moisture when cool. Use low voltage or power to drain out residual moisture before applying full power. Failure to do so may cause damage to this product.

Wiring Schematics

Wiring into the terminal box to be as shown in the table below.

Table 2-1

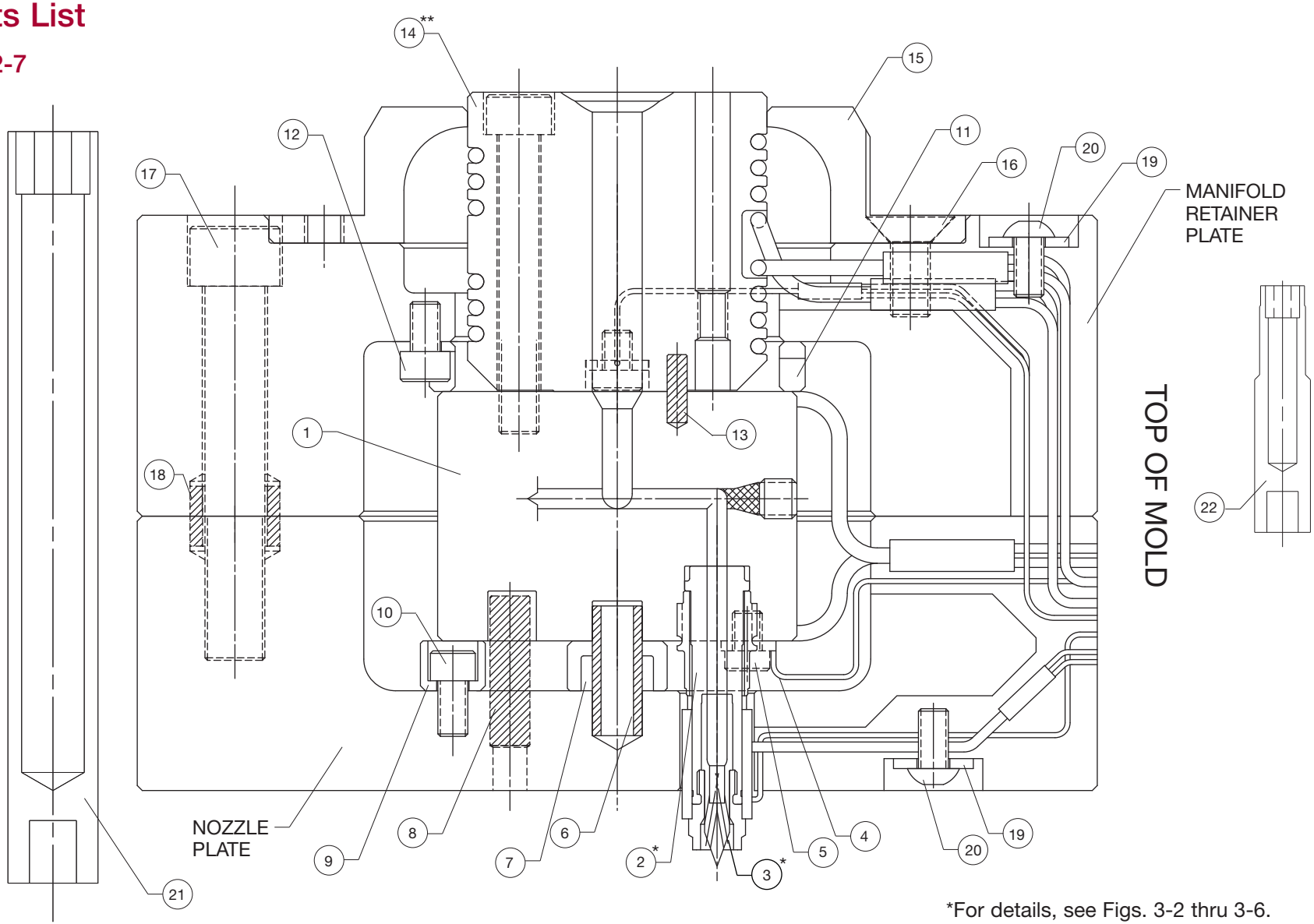
LAYOUT	D-M-E CONTROLLER	ZONE NUMBER																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
2 DROPS	5 ZONE	NOZZLE #1	NOZZLE #2	MANIFOLD	MEN*														
4 DROPS	8 ZONE	NOZZLE #1	NOZZLE #2	NOZZLE #3	NOZZLE #4	MANIFOLD	MEN*												
6 DROPS		NOZZLE #1	NOZZLE #2	NOZZLE #3	NOZZLE #4	NOZZLE #5	NOZZLE #6	MANIFOLD	MEN*										
8 DROPS	12 ZONE	NOZZLE #1	NOZZLE #2	NOZZLE #3	NOZZLE #4	NOZZLE #5	NOZZLE #6	NOZZLE #7	NOZZLE #8	MANIFOLD	MEN*								
12 DROPS	8 ZONE (2)	NOZZLE #1	NOZZLE #2	NOZZLE #3	NOZZLE #4	NOZZLE #5	NOZZLE #6	NOZZLE #7	NOZZLE #8	NOZZLE #9	NOZZLE #10	NOZZLE #11	NOZZLE #12	MANIFOLD	MEN*				
16 DROPS	12 ZONE+ 8 ZONE	NOZZLE #1	NOZZLE #2	NOZZLE #3	NOZZLE #4	NOZZLE #5	NOZZLE #6	NOZZLE #7	NOZZLE #8	NOZZLE #9	NOZZLE #10	NOZZLE #11	NOZZLE #12	NOZZLE #13	NOZZLE #14	NOZZLE #15	NOZZLE #16	MANIFOLD	MEN*

1. Designed to operate on a 230-volt supply.
2. Manifold heaters wired in parallel.
3. MEN heaters wired in parallel.
   * Heated-style MEN only.
4. Thermocouple leads are black and white. White is negative (-); black is positive (+).

J TYPE THERMOCOUPLE STANDARDS			
	STANDARD	+ LEAD (MAGNETIC)	– LEAD
INTERNATIONAL	IEC 584-3	Black	White
	ASTM E230	White	Red
	BS 1843	Yellow	Blue
	DIN 43710	Red	Blue
	JIS C 1610-1981	Red	White
	NFC 42-324	Yellow	Black

Parts List

Fig. 2-7



*For details, see Figs. 3-2 thru 3-6.
**For details, see Figs. 3-7 thru 3-10.

Parts List

Table 2-2

CALL-OUT NO.	DESCRIPTION	QTY	ITEM NO.
1	**2-drop (30-pitch) manifold and components sub-assembly**	1	SRC3002
	2-drop (30-pitch) manifold sub-assembly	1	ARC3002
	Manifold heater (top)	1	MRH0005
	Manifold heater (bottom)	1	MRH0005
	End plugs	1	GXP3004
	Set screws	1	GXK3008
1	**2-drop (40-pitch) manifold and components sub-assembly**	1	SRC4002
	2-drop (40-pitch) manifold sub-assembly	1	ARC4002
	Manifold heater (top)	1	MRH0005
	Manifold heater (bottom)	1	MRH0013
	End plugs	1	GXP3004
	Set screws	1	GXK3008
1	**2-drop (50-pitch) manifold and components sub-assembly**	1	SRC5002
	2-drop (50-pitch) manifold sub-assembly	1	ARC5002
	Manifold heater (top)	1	MRH0006
	Manifold heater (bottom)	1	MRH0013
	End plugs	1	GXP3004
	Set screws	1	GXK3008
1	**2-drop (70-pitch) manifold and components sub-assembly**	1	SRC7002
	2-drop (70-pitch) manifold sub-assembly	1	ARC7002
	Manifold heater (top)	1	MRH0013
	Manifold heater (bottom)	1	MRH0005
	End plugs	1	GXP3004
	Set screws	1	GXK3008
1	**2-drop (90-pitch) manifold and components sub-assembly**	1	SRC9002
	2-drop (90-pitch) manifold sub-assembly	1	ARC9002
	Manifold heater (top)	1	MRH0006
	Manifold heater (bottom)	1	MRH0005
	End plugs	1	GXP3004
	Set screws	1	GXK3008
1	**4-drop (17x21-pitch) manifold and components sub-assembly**	1	SRC0004
	4-drop (17x21-pitch) manifold sub-assembly	1	ARC0004
	Manifold heater (top)	1	MRH0005
	Manifold heater (bottom)	1	MRH0013
1	**4-drop (30x30-pitch) manifold and components sub-assembly**	1	SRC3304
	4-drop (30x30-pitch) manifold sub-assembly	1	ARC3304
	Manifold heater (top)	1	MRH0013
	Manifold heater (bottom)	1	MRH0005
1	**4-drop In-line (30-pitch) manifold and components sub-assembly**	1	SRC3004
	4-drop In-line (30-pitch) manifold sub-assembly	1	ARC3004
	Manifold heater (top)	1	MRH0007
	Manifold heater (bottom)	1	MRH0007
	End plug	1	GXP3006
	End plugs	2	GXP3004
	Set screw	1	GXK3010
	Set screws	2	GXK3008
1	**6-drop (30-pitch) manifold and components sub-assembly**	1	SRC3306
	6-drop (30-pitch) manifold sub-assembly	1	ARC3306
	Manifold heater (top)	1	MRH0014
	Manifold heater (bottom)	1	MRH0013
	End plug	1	GXP3006
	End plugs	4	GXP3004
	Set screw	1	GXK3010
	Set screws	4	GXK3008
1	**8-drop (30-pitch) manifold and components sub-assembly**	1	SRC3308
	8-drop (30-pitch) manifold sub-assembly	1	ARC3308
	Manifold heater (top)	1	MRH0008
	Manifold heater (bottom)	1	MRH0013
	End plug	1	GXP3008
	End plugs	4	GXP3004
	Set screw	1	GXK3012
	Set screws	4	GXK3008
1	**12-drop (30-pitch) manifold and components sub-assembly**	1	SRC3312
	12-drop (30-pitch) manifold sub-assembly	1	ARC3312
	Manifold heater (top)	1	MRH0008
	Manifold heater (bottom)	1	MRH0009
	End plugs	3	GXP3008
	End plugs	8	GXP3004
	Set screws	3	GXK3012
	Set screws	8	GXK3008
1	**16-drop (30-pitch) manifold and components sub-assembly**	1	SRC3316
	16-drop (30-pitch) manifold sub-assembly	1	ARC3316
	Manifold heater (top)	1	MRH0010
	Manifold heater (bottom)	1	MRH0011
	End plugs	3	GXP3008
	End plugs	8	GXP3004
	Set screws	3	GXK3012
	Set screws	8	GXK3008

Parts List (continued)

Table 2-2

CALLOUT NO.	DESCRIPTION	QTY	ITEM NO.
2	**Nozzle sub-assembly (A = 65) (standard heater)**	2-16	SXY0065
	Nozzle body	2-16	SXB4068
	Nozzle heater	2-16	SHH1039
	Nozzle body nut*	2-16	SXE2013
	Nozzle thermocouple	2-16	SXC1001
	Nozzle heater stop*	2-16	SXD6501
2	**Nozzle sub-assembly (A = 85) (standard heater)**	2-16	SXY0085
	Nozzle body	2-16	SXB4088
	Nozzle thermocouple	2-16	SXC1001
	Nozzle heater	2-16	SHH1059
2	**Nozzle sub-assembly (A = 105) (standard heater)**	2-16	SXY0105
	Nozzle body	2-16	SXB4108
	Nozzle thermocouple	2-16	SXC1001
	Nozzle heater	2-16	SHH1079
2	**Nozzle sub-assembly (A = 125) (standard heater)**	2-16	SXY0125
	Nozzle body	2-16	SXB4128
	Nozzle thermocouple	2-16	SXC1001
	Nozzle heater	2-16	SHH1099
2	**Nozzle sub-assembly (A = 145) (standard heater)**	2-16	SXY0145
	Nozzle body	2-16	SXB4148
	Nozzle thermocouple	2-16	SXC1001
	Nozzle heater	2-16	SHH1119

CALLOUT NO.	DESCRIPTION	QTY	ITEM NO.
2	**Nozzle sub-assembly (A = 65) (high performance heater)**	2-16	SXY0965
	Nozzle body	2-16	SXB4068
	Nozzle heater	2-16	SXE1039
2	**Nozzle sub-assembly (A = 85) (high performance heater)**	2-16	SXY0985
	Nozzle body	2-16	SXB4088
	Nozzle heater	2-16	SXE1059
2	**Nozzle sub-assembly (A = 105) (high performance heater)**	2-16	SXY0905
	Nozzle body	2-16	SXB4108
	Nozzle heater	2-16	SXE1079
2	**Nozzle sub-assembly (A = 125) (high performance heater)**	2-16	SXY0925
	Nozzle body	2-16	SXB4128
	Nozzle heater	2-16	SXE1099
2	**Nozzle sub-assembly (A = 145) (high performance heater)**	2-16	SXY0945
	Nozzle body	2-16	SXB4148
	Nozzle heater	2-16	SXE1119

CALLOUT NO.	DESCRIPTION	QTY	ITEM NO.
2	**Nozzle sub-assembly (A = 65) (standard heater)**	2-16	SXY8065
	Nozzle body	2-16	SXB4068
	Nozzle heater	2-16	SHH1039
	Nozzle body nut*	2-16	SXE2013
	Nozzle thermocouple	2-16	SXC1001
	Snap ring*	2-16	SXR1001
2	**Nozzle sub-assembly (A = 85) (standard heater)**	2-16	SXY8085
	Nozzle body	2-16	SXB4088
	Nozzle thermocouple	2-16	SXC1001
	Nozzle heater	2-16	SHH1059
2	**Nozzle sub-assembly (A = 105) (standard heater)**	2-16	SXY8105
	Nozzle body	2-16	SXB4108
	Nozzle thermocouple	2-16	SXC1001
	Nozzle heater	2-16	SHH1079
2	**Nozzle sub-assembly (A = 125) (standard heater)**	2-16	SXY8125
	Nozzle body	2-16	SXB4128
	Nozzle thermocouple	2-16	SXC1001
	Nozzle heater	2-16	SHH1099
2	**Nozzle sub-assembly (A = 145) (standard heater)**	2-16	SXY8145
	Nozzle body	2-16	SXB4148
	Nozzle thermocouple	2-16	SXC1001
	Nozzle heater	2-16	SHH1119

* Common for all Stellar nozzle sub-assemblies in each individual column.

NOTE: Items SXY8065, SXY8085, SXY8105, SXY8125 and SXY8145 for Sprue Gate only.

Parts List (continued)

Table 2-2

CALLOUT NO.	DESCRIPTION	QTY	ITEM NO.
3	Point gate tip sub-assembly - Standard	2-16	SXG5110
3	Point gate tip sub-assembly - High Performance	2-16	SXG5020
3	Thru hole tip sub-assembly - High Performance	2-16	SXG5201
3	Sprue gate tip	2-16	SXT1040
4	Manifold thermocouple	1	SXC2001
5	Manifold thermocouple screw	1	M68 LHCS
6	Tubular dowel	1	PH 10-26
7	Modified center support (2-drop 30-pitch, 4-drop in-line, 6- and 12-drop manifolds)	1	SXS3011
7	Center support (4-drop 17x21)	0	not possible
8	Anti-rotation dowel	1	DP830
9	Lower support pads	4	SXS3030
10	Lower support pad screws	4	M610SHCS
11	Upper support ring	1	SXS3040
	Upper support pads (extra) 12-and 16-drop	4	SXS3030
12	Upper support ring screws	4	M612LHCS
	Upper support pad screws (extra) 12- and 16-drop	4	M610SHCS
13	MEN locating dowels	2	DP412
14	**Heated MEN sub-assembly with 1/2 and 3/4 in. spherical radius**	1	SXX1010
14	**Heated MEN sub-assembly with 15.5mm spherical radius**	1	SXX2010
14	**Unheated MEN sub-assembly with 1/2 and 3/4 in. spherical radius**	1	SXX1210
14	**Unheated MEN sub-assembly with 15.5mm spherical radius**	1	SXX2210
15	Locating ring for heated MEN	1	GXL2001
	Locating ring for unheated MEN	1	SXL1100
16	Locating ring screws	2	M820FHCS
17	Plate assembly screws	Y	M1275 SHCS
18	Tubular dowels	2	PH 18-12
19	Wire covers	X	WC0001, WC0002 & WC0003
20	Wire cover screws	X	M612BHCS
21	Nut socket tool	1	SXW0002
22	Sprue Gate Tip socket tool	1	SXW0003

* Common for all Stellar nozzle sub-assemblies in each individual column.

Procedure

REQUIRED ORDERING INFORMATION:

1. **Number of Nozzles Required:**
   Determine the number of nozzles required.
2. **Gate Pitch Required:**
   Choose the gate pitch required. Record the manifold and components sub-assembly item number from Table 3-1, "Sub-Assembly Parts List'; e.g., for a 2-drop 30-pitch, the item number is SRC3002.
3. **Manifold and Components Sub-Assembly:**
   Select an appropriate gating method. For quick reference see pages 5, 10 (metric), 74 (inch) or 155, "Nozzle Selection" and "Nozzle Body Information."
4. **Nozzle Tip or Nozzle Tip Sub-Assembly:**
   Determine the nozzle body sub-assembly item number required from the calculation sheets. For quick reference see pages 10 (metric), 74 (inch) and 155. Determine nozzle heater type: Coil Heater or High Performance Embedded Heater.
5. **Nozzle Body Sub-Assembly:**
6. **Heated or Unheated MEN:**
   Specify heated or unheated MEN style (Figs. 3-7 and 3-8).
7. **Machine Nozzle Spherical Radius:**
   Specify 1/2in, 3/4in, or 15.5mm

First-Time Customers Will Need:

8. **Sprue Gate Tip Socket Tool** *(see Fig. 3-5)*:
9. **Nut Socket Tool** *(see Fig. 3-6)*:

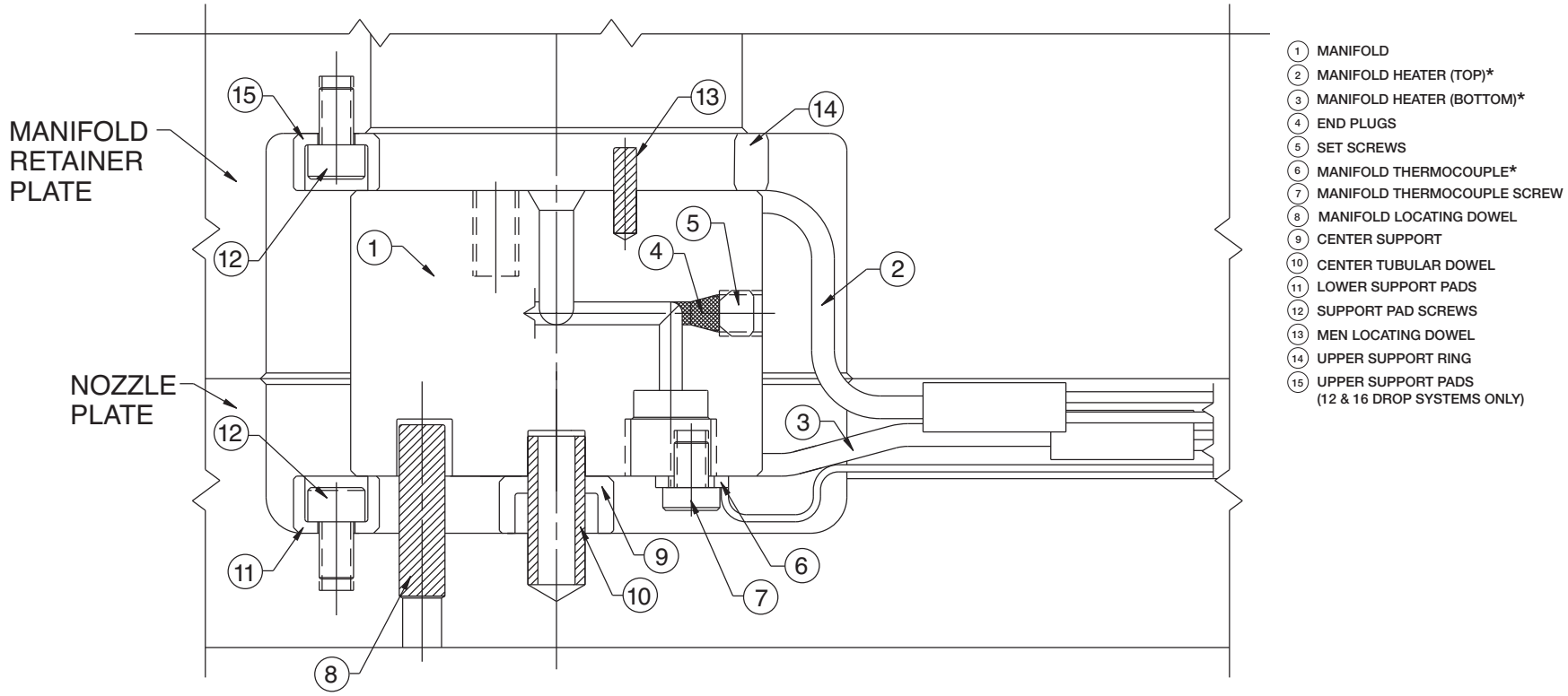
Additional Items:

10. **Locating Ring:**
    (if required, specify GXL2001 for heated MEN or SXL1100 for Unheated MEN)
11. **Power and Thermocouple Connectors:**
    (5-, 8-, and 12-zone options for up to 8-drops) *(2) 8-zone for 12-drops*
    (1) 8-zone and (1) 12-zone for 16-drops
12. **Combination Terminal Mounting Box with Terminal Strip:**
    (5-, 8-, and 12-zone options for up to 8-drops) *(2) 8-zone for 12-drops*
    (1) 8-zone and (1) 12-zone for 16-drops

	Worksheet	Example:
1.		4
2.		In-line
3.		SRC3004
4.		SXT1040
5.		SXY8085
6.		Heated
7.		1/2 in
8.		SXW0003
9.		SXW0002
10.		GXL2001
11.		8-Zone
12.		8-Zone

Manifold and Components Sub-Assembly Section View

Fig. 3-1



***NOTE:** Manifold heater and thermocouple bending performed at assembly.

Sub-Assembly Parts List and Item Numbers

Table 3-1

		2-DROP (30-Pitch)		2-DROP (40-Pitch)		2-DROP (50-Pitch)		2-DROP (70-Pitch)		2-DROP (90-Pitch)		4-DROP (17x21-Pitch)	
	MANIFOLD AND COMPONENTS SUB-ASSEMBLY ITEM NO.	**SRC3002**		**SRC4002**		**SRC5002**		**SRC7002**		**SRC9002**		**SRC0004**	
Manifold and Components Sub-Assembly consists of these items		ITEM NO.	QTY	ITEM NO.	QTY	ITEM NO.	QTY	ITEM NO.	QTY	ITEM NO.	QTY	ITEM NO.	QTY
	Manifold Sub-Assembly	ARC3002	1	ARC4002	1	ARC5002	1	ARC7002	1	ARC9002	1	ARC0004	1
	Manifold Thermocouple	SXC2001	1	SXC2001	1	SXC2001	1	SXC2001	1	SXC2001	1	SXC2001	1
	Manifold Thermocouple Screw (LHCS)	M68LHCS	1	M68LHCS	1	M68LHCS	1	M68LHCS	1	M68LHCS	1	M68LHCS	1
	Manifold Locating Dowel	DP830	1	DP830	1	DP830	1	DP830	1	DP830	1	DP830	1
	Center Support	SXS3011	1	SXS3010	1	SXS3010	1	SXS3010	1	SXS3010	1	–	–
	Center Tubular Dowel	PH 10-26	1	PH 10-26	1	PH 10-26	1	PH 10-26	1	PH 10-26	1	PH 10-26	1
	Upper Support Ring	SXS3040	1	SXS3040	1	SXS3040	1	SXS3040	1	SXS3040	1	SXS3040	1
	Upper Support Screws	M612LHCS	4	M612LHCS	4	M612LHCS	4	M612LHCS	4	M612LHCS	4	M612LHCS	4
	Lower Support Pads	SXS3030	4	SXS3030	4	SXS3030	4	SXS3030	4	SXS3030	4	SXS3030	4
	Lower Support Pad Screws (SHCS)	M610	4	M610	4	M610	4	M610	4	M610	4	M610	4
	MEN Locating Dowels	DP412	2	DP412	2	DP412	2	DP412	2	DP412	2	DP412	2
	MANIFOLD SUB-ASSEMBLY ITEM NO.	**ARC3002**		**ARC4002**		**ARC5002**		**ARC7002**		**ARC9002**		**ARC0004**	
Manifold Sub-Assembly consists of these items		ITEM NO.	QTY	ITEM NO.	QTY	ITEM NO.	QTY	ITEM NO.	QTY	ITEM NO.	QTY	ITEM NO.	QTY
	Manifold	MRC3002	1	MRC4002	1	MRC5002	1	MRC7002	1	MRC9002	1	MRC0004	1
	Manifold Heater Top	MRH0005	1	MRH0005	1	MRH0006	1	MRH0013	1	MRH0006	1	MRH0005	1
	Manifold Heater Bottom	MRH0005	1	MRH0013	1	MRH0006	1	MRH0005	1	MRH0005	1	MRH0013	1

NOTE: All manifold sub-assemblies include end plugs and set screws installed.

Sub-Assembly Parts List and Item Numbers (continued)

Table 3-1 (continued)

		4-DROP (30x30-Pitch)		4-DROP In-line (30-Pitch)		6-DROP (30-Pitch)		8-DROP (30-Pitch)		12-DROP (30-Pitch)		16-DROP (30-Pitch)	
	MANIFOLD AND COMPONENTS SUB-ASSEMBLY ITEM NO.	**SRC3304**		**SRC3004**		**SRC3306**		**SRC3308**		**SRC3312**		**SRC3316**	
Manifold and Components Sub-Assembly consists of these items		ITEM NO.	QTY	ITEM NO.	QTY	ITEM NO.	QTY	ITEM NO.	QTY	ITEM NO.	QTY	ITEM NO.	QTY
	Manifold Sub-Assembly	ARC3304	1	ARC3004	1	ARC3306	1	ARC3308	1	ARC3312	1	ARC3316	1
	Manifold Thermocouple	SXC2001	1	SXC2001	1	SXC2001	1	SXC2001	1	SXC2001	1	SXC2001	1
	Manifold Thermocouple Screw (LHCS)	M68LHCS	1	M68LHCS	1	M68LHCS	1	M68LHCS	1	M68LHCS	1	M68LHCS	1
	Manifold Locating Dowel	DP830	1	DP830	1	DP830	1	DP830	1	DP830	1	DP830	1
	Center Support	SXS3010	1	SXS3011	1	SXS3011	1	SXS3010	1	SXS3011	1	SXS3010	1
	Center Tubular Dowel	PH 10-26	1	PH 10-26	1	PH 10-26	1	PH 10-26	1	PH 10-26	1	PH 10-26	1
	Upper Support Ring*	SXS3040	1	SXS3040	1	SXS3040	1	SXS3040	1	SXS3040	1	SXS3040	1
										SXS3030	4	SXS3030	4
	Upper Support Screws	M612LHCS	4	M612LHCS	4	M612LHCS	4	M612LHCS	4	M612LHCS	4	M612LHCS	4
										M610SHCS	4	M610SHCS	4
	Lower Support Pads	SXS3030	4	SXS3030	4	SXS3030	4	SXS3030	4	SXS3030	4	SXS3030	4
	Lower Support Pad Screws (SHCS)	M610	4	M610	4	M610	4	M610	4	M610	4	M610	4
	MEN Locating Dowels	DP412	2	DP412	2	DP412	2	DP412	2	DP412	2	DP412	2
	MANIFOLD SUB-ASSEMBLY ITEM NO.	**ARC3304**		**ARC3004**		**ARC3306**		**ARC3308**		**ARC3312**		**ARC3316**	
Manifold Sub-Assembly consists of these items		ITEM NO.	QTY	ITEM NO.	QTY	ITEM NO.	QTY	ITEM NO.	QTY	ITEM NO.	QTY	ITEM NO.	QTY
	Manifold	MRC3304	1	MRC3004	1	MRC3306	1	MRC3308	1	MRC3312	1	MRC3316	1
	Manifold Heater (bottom)	MRH0013	1	MRH0007	1	MRH0014	1	MRH0008	1	MRH0008	1	MRH0010	1
	Manifold Heater (bottom)	MRH0005	1	MRH0007	1	MRH0013	1	MRH0013	1	MRH0009	1	MRH0011	1

*Upper support pads are required for 12- and 16-drop systems only. **NOTE:** All manifold sub-assemblies include end plugs and set screws installed.

Nozzle Body Information

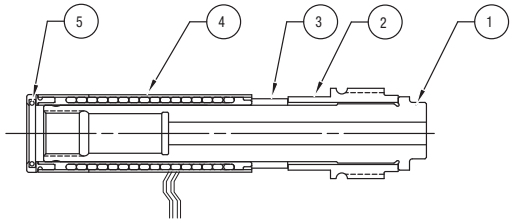
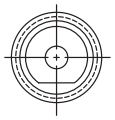


Fig. 3-2



Item Numbers for Threaded Style Standard Heater Nozzle Assemblies

SUB-ASSEMBLY COMPONENT	CALLOUT NO.	SXY0065 ITEM NO.	SXY0085 ITEM NO.	SXY0105 ITEM NO.	SXY0125 ITEM NO.	SXY0145 ITEM NO.
Nozzle Body -SXB4xxx	1	SXB4068	SXB4088	SXB4108	SXB4128	SXB4148
Nut	2	SXE2013	SXE2013	SXE2013	SXE2013	SXE2013
Heater Stop	3	SXD6501	SXD6501	SXD6501	SXD6501	SXD6501
Nozzle Heater	4	SHH1039	SHH1059	SHH1079	SHH1099	SHH1119
Nozzle Thermocouple	5	SXC1001	SXC1001	SXC1001	SXC1001	SXC1001

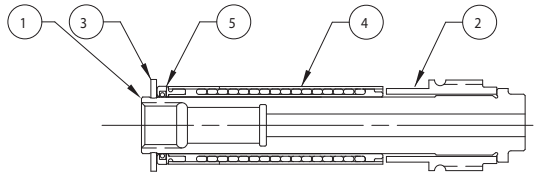
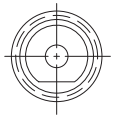


Fig. 3-3



Item Numbers for Threaded Style Standard Heater Nozzle Assemblies SPRUE GATE ONLY

SUB-ASSEMBLY COMPONENT	CALLOUT NO.	SXY8065 ITEM NO.	SXY8085 ITEM NO.	SXY8105 ITEM NO.	SXY8125 ITEM NO.	SXY8145 ITEM NO.
Nozzle Body -SXB4xxx	1	SXB4068	SXB4088	SXB4108	SXB4128	SXB4148
Nut	2	SXE2013	SXE2013	SXE2013	SXE2013	SXE2013
Snap Ring	3	SXR1001	SXR1001	SXR1001	SXR1001	SXR1001
Nozzle Heater	4	SHH1039	SHH1059	SHH1079	SHH1099	SHH1119
Nozzle Thermocouple	5	SXC1001	SXC1001	SXC1001	SXC1001	SXC1001

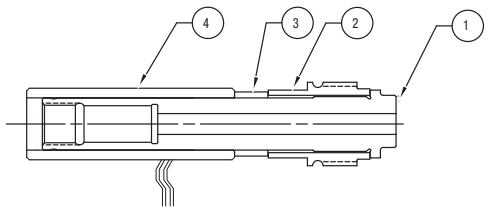


Fig. 3-4

Item Numbers for Threaded Style High Performance Heater Nozzle Assemblies

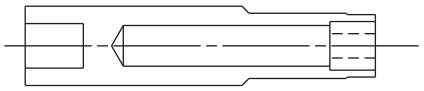
SUB-ASSEMBLY COMPONENT	CALLOUT NO.	SXY0965 ITEM NO.	SXY0985 ITEM NO.	SXY0905 ITEM NO.	SXY0925 ITEM NO.	SXY0945 ITEM NO.
Nozzle Body -SXB4xxx	1	SXB4068	SXB4088	SXB4108	SXB4128	SXB4148
Nut	2	SXE2013	SXE2013	SXE2013	SXE2013	SXE2013
Heater Stop	3	SXD6501	SXD6501	SXD6501	SXD6501	SXD6501
Nozzle Heater	4	SXE1039	SXE1059	SXE1079	SXE1099	SXE1119

NOTES: For high performance heater, thermocouple is embedded in the heater body.
Tip information and Gating Styles are provided on page 5, Section 1.

Assembly Tools

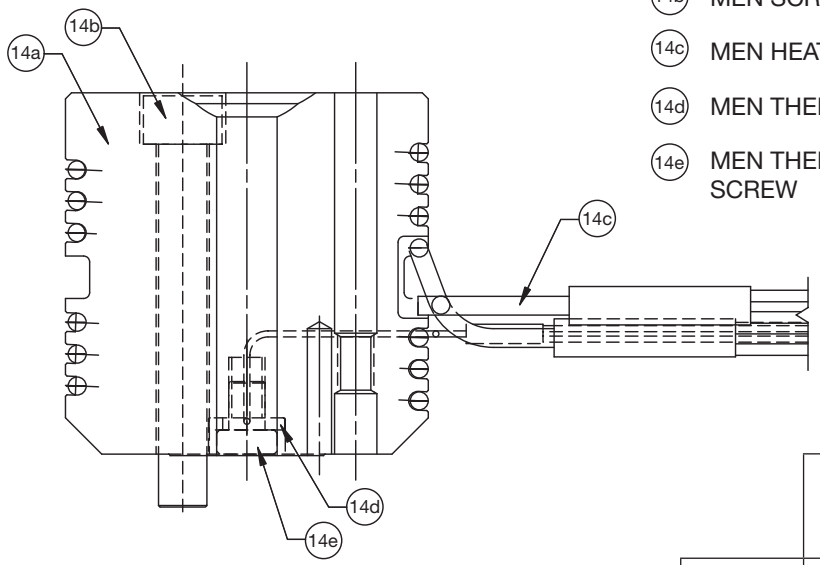
Fig. 3-5 Sprue Gate Tip Socket Tool (SXW0003)

Fig. 3-6 Nut Socket Tool (SXW0002)



Heated MEN Sub-Assembly

Fig. 3-7



14a MEN BODY

14b MEN SCREWS

14c MEN HEATERS

14d MEN THERMOCOUPLE

14e MEN THERMOCOUPLE SCREW

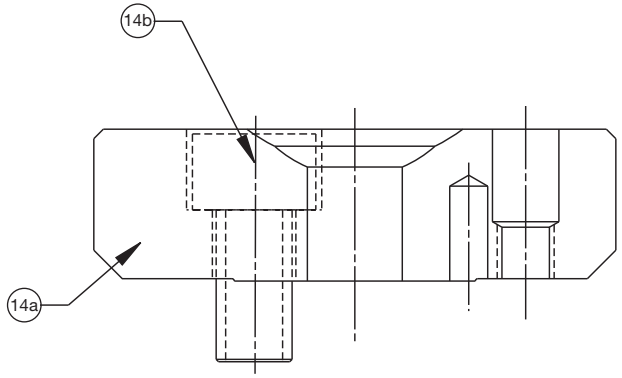
NOTES:

1. Customer to specify machine nozzle spherical radius. Proper MEN sub-assembly will be selected by DME to correspond with manifold sub-assembly.
2. Locating ring is optional and must be ordered separately. Locating ring item no. GXL2001 includes two M820 FHCS.

		COMBINATION 1/2 AND 3/4 INCH SPHERICAL RADIUS		15.5mm SPHERICAL RADIUS	
	HEATED MEN SUB-ASSEMBLY ITEM NO.	SXX1010		SXX2010	
Heated MEN sub-assembly consistis of these items		ITEM NO.	QTY	ITEM NO.	QTY
	MEN Body	SXM1010	1	SXM2010	1
	MEN Screws (SHCS)	M860	4	M860	4
	MEN Heaters	MRH0012	2	MRH0012	2
	MEN Thermocouple	SXC2001	1	SXC2001	1
	MEN Thermocouple Screw (LHCS)	M68LH	1	M68LH	1

Unheated MEN Sub-Assembly

Fig. 3-8



14a MEN BODY

14b MEN SCREWS

NOTES:

1. Customer to specify machine nozzle spherical radius. Proper MEN sub-assembly will be selected by DME to correspond with manifold sub-assembly.
2. Locating ring is optional and must be ordered separately. Locating ring item no. SXL1100 includes two M820 FHCS.

		COMBINATION 1/2 AND 3/4 INCH SPHERICAL RADIUS		15.5mm SPHERICAL RADIUS	
	UNHEATED MEN SUB-ASSEMBLY ITEM NO.	SXX1210		SXX2210	
Unheated MEN sub-assembly consistis of these items		ITEM NO.	QTY	ITEM NO.	QTY
	MEN Body	SXM1210	1	SXM2210	1
	MEN Screws (SHCS)	M816	4	M816	4

Locating Rings

Fig. 3-9
Locating Ring for Heated MEN

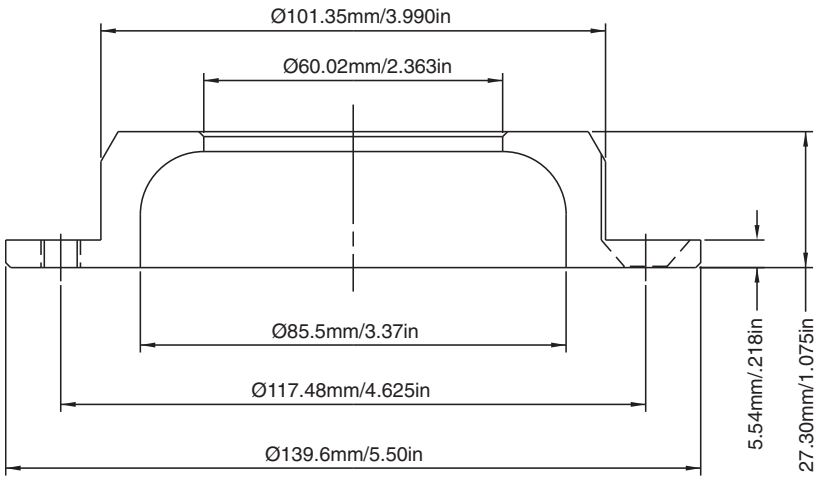
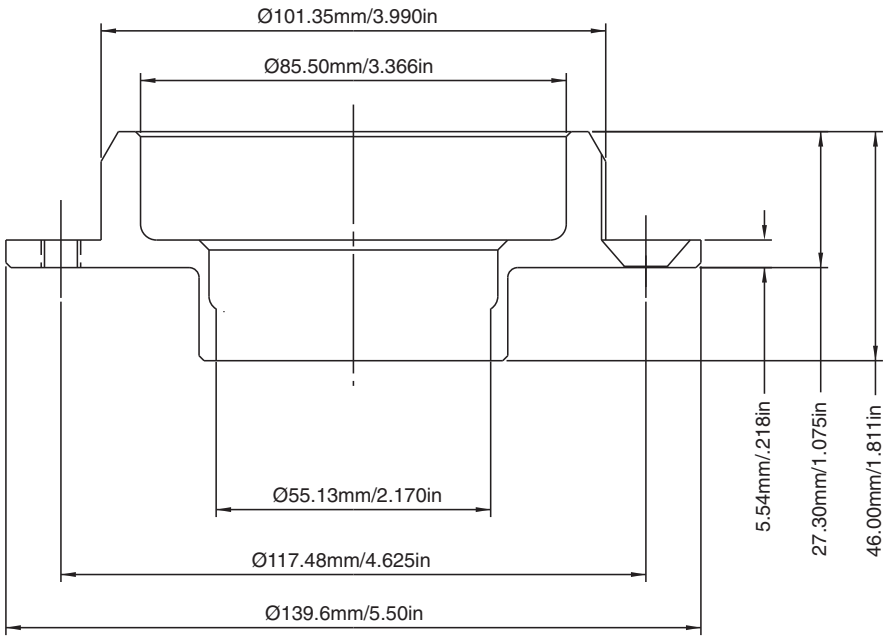


Fig. 3-10
Locating Ring for Unheated MEN



LOCATING RING	ITEM NO.
For Heated MEN	GXL2001
For Unheated MEN	SXL1100

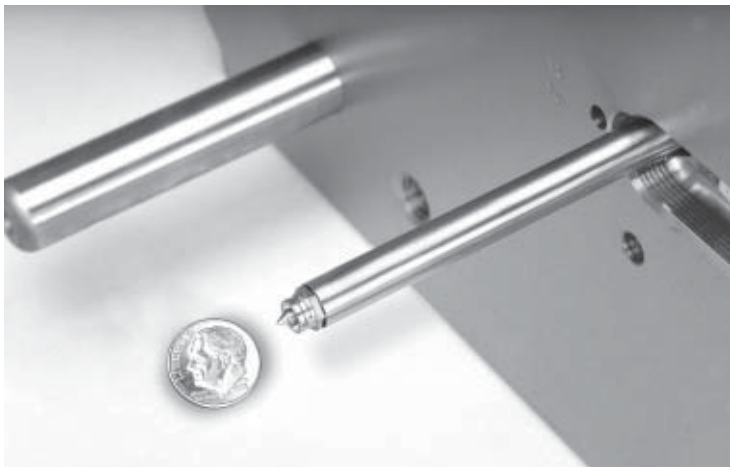
Stellar® Hot Runner Systems – Benefits

Excellent Results with Engineering Thermoplastics

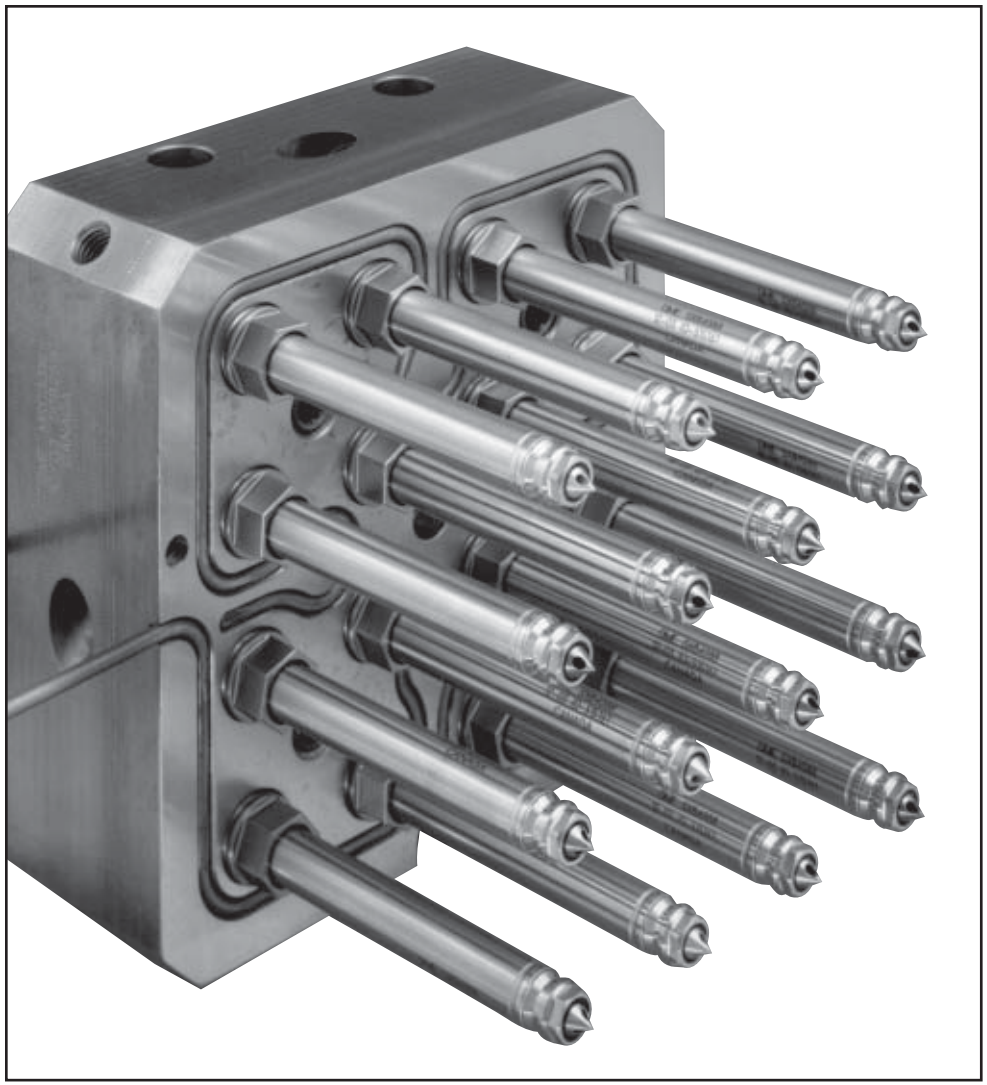
The complexity of today's very small part molding applications demands the added properties of high performance engineered materials. Stellar was designed for outstanding processing of these materials. Challenging amorphous materials such as PET or crystalline materials including PBT and PA are easily processed with the Stellar Hot Runner System. Highly conductive tip designs and precise heat profiling in all nozzle lengths ensure consistent processing temperatures.

Modularity Increases Application Flexibility

The Stellar Hot Runner System from DME is built on a standardized architecture of modular components. Key features include:



- Choice of balanced multi-nozzle assemblies (MNAs) for stand-alone use or under a manifold for higher cavitation molds
- Threaded nozzle connection for standard manifolds and compression nozzle connection for custom manifolds
- Three different "A" dimensions from 65-105mm are available for threaded style nozzles
- Six different "A" dimensions from 55-105mm are available for compression nozzle connection
- Three interchangeable tip styles – Point Gate, Thru Hole Gate and Sprue Gate



World Headquarters
DME Company
29111 Stephenson Highway
Madison Heights, MI 48071
800-626-6653 *toll-free tel*
248-398-6000 *tel*
888-808-4363 *toll-free fax*
www.dme.net *web*
appl_eng@dme.net *e-mail*

DME of Canada
6210 Northwest Drive
Mississauga, Ontario
Canada L4V 1J6
800-387-6600 *toll-free tel*
905-677-6370 *tel*
800-461-9965 *toll-free fax*
dme_canada@dme.net *e-mail*

DME Europe C.V.B.A.
Industriepark Noord
B-2800 Mechelen
Belgium
32-15-215011 *tel*
32-15-218235 *fax*
sales@dmeeu.com *e-mail*

DME
Every step of the way

ST-RECT-DAG 10/10