Multiple Gate Nozzles (MGN)

- 45% Glass Filled Amodel
- 20% Copper Filled Resin
- 45% Glass Filled Ryton
- 33% Glass Filled Nylon

Where Innovation Flows

Proudly Made in the USA
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## Multiple Gate Nozzles (MGN)

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Multiple Gate Nozzle - (MGN)

**Balanced Fill**

**Minimal Residence Time**

**Temperature Control**

**Temperature Control Each Gate**

- **DIRECT FEED MGN**
- **IN-LINE MGN**
- **MANIFOLD FEED MGN SYSTEM**

- **“D” Diameter** (From 1.00” to 8.00”)
- **No. of Probes** (From 1 to 12)

- **Number of Probes from 1 to 12**
- **“D” Diameter from 1.0” to 8.0”**

- **Thermocouple Control**
- **Hardened Probe**
- **Carbide Tip**
- **OPTIONAL HI-PRO**

(800) 499-OSCO • www.oscosystems.com
Design Versatility

MGN Series 20 Hybrid

Inline

Various Standard Probe “XT” Lengths

Field Serviceable

OPTIONAL MGN LOCATING RING (BY DESIGN)

MGN BODY HEATER
HEATER RETAINER SCREWS
MGN CAP RETAINER SCREWS
MGN CAP
TCH PROBE HEATER
MGN PROBE
MGN MAIN BODY
MGN PROBE SEAL

(800) 499-OSCO • www.oscosystems.com

Resin Types

45% Glass Filled Amodel

20% Copper Filled Resin

45% Glass Filled Ryton

33% Glass Filled Nylon

SMALL MOLD BASE

Proudly Made in the U.S.A.

STANDARD COMPONENTS IN STOCK
Multiple Gate Nozzle System, “MGN” SERIES 1000

NOZZLE DESCRIPTION: The "MGN" 1000 Series Multiple Gate Nozzle features up to four individually controlled probes positioned on a 1.000” “D” Diameter. The "MGN" Nozzle offers design flexibility with three standard “A” length dimensions, a 1/2” or 3/4” spherical radius for direct feed applications, or a pocket for an SR-716 seal ring for use with a manifold.

NOTE: Maximum number of probes for a Series 1000 MGN is four (4).

HOW TO ORDER

Specify:
- Nozzle Catalog Number
- “D” Diameter
- Number of Probes
- Application Pocket
- 1/2” or 3/4” Radius for Direct Feed Application
- Seal Ring Pocket for Manifold Application
- Resin to be Processed

Note: The information given here should be used as a guide. A variation in growth of any nozzle from the formulation is possible due to cooling conditions or mold configuration. It is advisable to allow a margin of safety. For some very critical applications, an empirical factor may have to be obtained.
Multiple Gate Nozzle System, “MGN” SERIES 1500

NOZZLE DESCRIPTION: The “MGN” 1500 Series Multiple Gate Nozzle features up to six individually controlled probes positioned on a 1.500” “D” Diameter. The “MGN” Nozzle offers design flexibility with three standard “A” length dimensions, a 1/2” or 3/4” spherical radius for direct feed applications, or a pocket for an SR-716 seal ring for use with a manifold.

NOTE: Maximum number of probes for a Series 1500 MGN is six (6).

**HOW TO ORDER**

<table>
<thead>
<tr>
<th>CATALOG NUMBER</th>
<th>NOZZLE “A” DIM.</th>
<th>ASSEMBLY INCLUDES</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGN-1530</td>
<td>3.000</td>
<td>PROBE PART NUMBER</td>
</tr>
<tr>
<td>MGN-1535</td>
<td>3.500</td>
<td>PROBE-MGN-300</td>
</tr>
<tr>
<td>MGN-1540</td>
<td>4.000</td>
<td>PROBE-MGN-350</td>
</tr>
</tbody>
</table>

Specify:
- Nozzle Catalog Number
- “D” Diameter
- Number of Probes
- Application Pocket
- 1/2” or 3/4” Radius for Direct feed Application
- Seal Ring Pocket for Manifold Application
- Resin to be Processed

*Note: The information given here should be used as a guide. A variation in growth of any nozzle from the formulation is possible due to cooling conditions or mold configuration. It is advisable to allow a margin of safety. For some very critical applications, an empirical factor may have to be obtained.

NOTE: For sizes other than shown, please contact Osco Tech Service.
**Multiple Gate Nozzle System, “MGN” SERIES 1700**

**NOZZLE DESCRIPTION:** The “MGN” 1700 Series Multiple Gate Nozzle features up to six individually controlled probes positioned on a 1.750 "D" Diameter. The “MGN” Nozzle offers design flexibility with three standard "A" length dimensions, a 1/2" or 3/4" spherical radius for direct feed applications, or a pocket for an SR-916 seal ring for use with a manifold.

**NOTE:** Maximum number of probes for a Series 1700 MGN is six (6).

**HOW TO ORDER**

**Specify:**
- Nozzle Catalog Number
- "D" Diameter
- Number of Probes
- Application Pocket
  - 1/2" or 3/4" Radius for Direct Feed Application
  - Seal Ring Pocket for Manifold Application
- Resin to be Processed

**CATALOG NUMBER** | **NOZZLE "A" DIM.** | **ASSEMBLY INCLUDES**
--- | --- | ---

**NOTE:** For sizes other than shown, please contact Osco Tech Service.

**OSCO inc.**

**RUNNERLESS MOLDING SYSTEMS**

**Multiple Gate Nozzle System, “MGN” SERIES 1700**

**NOTE:** The information given here should be used as a guide. A variation in growth of any nozzle from the formulation is possible due to cooling conditions or mold configuration. It is advisable to allow a margin of safety. For some very critical applications, an empirical factor may have to be obtained.
Multiple Gate Nozzle System, “MGN” SERIES 2000

NOZZLE DESCRIPTION: The “MGN” 2000 Series Multiple Gate Nozzle features up to eight individually controlled probes positioned on a 2.000” “D” Diameter. The “MGN” Nozzle offers design flexibility with three standard “A” length dimensions, a 1/2” or 3/4” spherical radius for direct feed applications, or a pocket for an SR-916 seal ring for use with a manifold.

NOTE: Maximum number of probes for a Series 2000 MGN is eight (8).

HOW TO ORDER

Specify:

- Nozzle Catalog Number
- “D” Diameter
- Number of Probes
- Application Pocket
- 1/2" or 3/4" Radius for Direct feed Application
- Seal Ring Pocket for Manifold Application
- Resin to be Processed

<table>
<thead>
<tr>
<th>CATALOG NUMBER</th>
<th>NOZZLE &quot;A&quot; DIM.</th>
<th>ASSEMBLY INCLUDES</th>
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</thead>
<tbody>
<tr>
<td>MGN-2030</td>
<td>3.000</td>
<td>PROBE-MGN-300</td>
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<tr>
<td>MGN-2035</td>
<td>3.500</td>
<td>PROBE-MGN-350</td>
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<tr>
<td>MGN-2040</td>
<td>4.000</td>
<td>PROBE-MGN-400</td>
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*Note: The information given here should be used as a guide. A variation in growth of any nozzle from the formulation is possible due to cooling conditions or mold configuration. It is advisable to allow a margin of safety. For some very critical applications, an empirical factor may have to be obtained.

OSCO inc.
RUNNERLESS MOLDING SYSTEMS
MGN - BORING

Multiple Gate Nozzle System, “MGN” SERIES / MACHINING DETAILS

Plan View from Machine Nozzle Perspective

Gate Well Details

Standard Gate Detail

Enlarged View

How to Order

<table>
<thead>
<tr>
<th>NOZZLE &quot;A&quot; DIM.</th>
<th>NOZZLE XT DIM.</th>
<th>GATE WELL DEPTH</th>
<th>PROBE BORE DIA.</th>
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<tr>
<td>3.000</td>
<td>.427</td>
<td>.437</td>
<td>Ø.500</td>
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<td>3.500</td>
<td>.927</td>
<td>.937</td>
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GATE "O" DIA. *

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<th>MIN.</th>
<th>MAX.</th>
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OSCO INC. MGN NOZZLE ASSEMBLY BORING INFORMATION

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<th>DIA.</th>
<th>DIA.</th>
<th>DIA.</th>
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<th>DIA.</th>
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<th>A &gt; 3</th>
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<td>.900</td>
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<td>1.500</td>
<td>2.751</td>
<td>3.125</td>
<td>.750</td>
<td>.900</td>
<td>.575</td>
<td>6</td>
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<tr>
<td>1.750</td>
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<td>3.375</td>
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* Note: The information given here should be used as a guide. A variation in growth of any nozzle from the formulation is possible due to cooling conditions or mold configuration. It is advisable to allow a margin of safety. For some very critical applications, an empirical factor may have to be obtained.

NOTE: For sizes other than shown, please contact Osco Tech Service.
**Multiple Gate Nozzle System, “MGN” SERIES Build Your Own**

**NOZZLE DESCRIPTION:** Standard components such as the hardened probe, thermocouple controlled probe heater, and probe seals can be designed into a customized main body with a "D" diameter to suit the applications. "D" diameter to suit the applications. "D" diameters range from 1.000" to 8.000". The number of gates can be as high as 12. Available in three (3) standard lengths.

**NOTE:** Contact OSCO for maximum number of probes and "D" diameter suitability to your application.

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**PLAN VIEW FROM MACHINE NOZZLE PERSPECTIVE**

*IT IS RECOMMENDED TO RETAIN MGN UNITS WITH SIX (6) OR MORE PROBES OR A "D" DIAMETER OF 2.000 AND LARGER BY USING A MOLD CLAMP PLATE*

**NOTE:** Virtually any "D" diameter is possible between 1.00" and 4.00". Contact OSCO applications for "D" greater than 4.00".

---

**HOW TO ORDER**

<table>
<thead>
<tr>
<th>NOZZLE &quot;A&quot; DIM.</th>
<th>NOZZLE X.T. DIM.</th>
<th>GATE WELL DEPTH *.000</th>
<th>PROBE BORE DIA.</th>
<th>GATE &quot;O&quot;</th>
<th>OSCO INC. MGN NOZZLE ASSEMBLY BORING INFORMATION</th>
<th>MAXIMUM NUMBER OF GATE PROBES</th>
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<tr>
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*Note: The information given here should be used as a guide. A variation in growth of any nozzle from the formulation is possible due to cooling conditions or mold configuration. It is advisable to allow a margin of safety. For some very critical applications, an empirical factor may have to be obtained.

**NOTE:** For sizes other than shown, please contact Osco Tech Service.
Inline Multiple Gate Nozzle System, “IMGN” SERIES

NOZZLE DESCRIPTION: OSCO’s “IMGN” Inline Multiple Gate Nozzle utilizes standard probes, probe heaters, and probe seals oriented into an “Inline” gating pattern. Available with 4 or 8 gate probes, the IMGN offers balance, minimal residence time and probe length flexibility.

NOTE: Contact OSCO for suitability to your application.

* Note: The information given here should be used as a guide. A variation in growth of any nozzle from the formulation is possible due to cooling conditions or mold configuration. It is advisable to allow a margin of safety. For some very critical applications, an empirical factor may have to be obtained.
Multiple Gate Nozzle System, “MGN HYBRID”

**NOZZLE DESCRIPTION:** The “MGN” 20 Series Multiple Gate Hybrid Nozzle couples the MGN performance with the versatility of our 20 Series convertible nozzles and tips. The “MGN” Hybrid Nozzle offers balance, minimal residence time, and the design flexibility with our 20 Series nozzles. The “MGN” Hybrid is the unique solution for various applications.

**HOW TO ORDER**

Specify:
- "D" Diameter
- Number of Drops
- "A" Length of Drops
- Application Pocket
  - 1/2" or 3/4" Radius
- Tip Style
- "O", "T", Optional Extra Stock
- Resin to be Processed

**"A" DIMENSION**

<table>
<thead>
<tr>
<th>&quot;A&quot; Dimension</th>
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<th>2.000</th>
<th>2.500</th>
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**"D" DIMENSION**

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<th>&quot;D&quot; Dimension</th>
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<tr>
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<tr>
<td>1.750</td>
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<td>2.000</td>
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*Note: The information given here should be used as a guide. A variation in growth of any nozzle from the formulation is possible due to cooling conditions or mold configuration. It is advisable to allow a margin of safety. For some very critical applications, an empirical factor may have to be obtained.*

**ABSOLUTE FLOW**

**VARIOUS “O” AND “T” DIMENSIONS AVAILABLE**
- RADIUS FLOW
- HI-FLOW
- EXTRA STOCK OPTIONS AVAILABLE

**FULL BODY**

**VARIOUS “O” & “T” DIMENSIONS AVAILABLE**
- GNT OR GNF NEEDLE OPTIONS
- EXTRA STOCK OPTION AVAILABLE

**BODYLESS**

**GNT OR GNF NEEDLE OPTIONS AVAILABLE**

*FOR MORE INFORMATION ON TIP STYLES PLEASE SEE THE CVT-020 CATALOG SECTION*

**LOCATING RING**

Ø1/4" x .375 DP.

FOR TIMING DOWEL PIN

(Shown out of position)

**MANIFOLD BODY**

2.000 "D" DIMENSION

MANIFOLD EXTENSION NOZZLE

Ø1/4" x .375 DP.

FOR TIMING DOWEL PIN

(Shown out of position)

**CLAMP PLATE**

"O" DIM.

"T" DIM.

**NOTE:** For sizes other than shown, please contact Osco Tech Service.