KOMAX “M” SERIES
INLINE STATIC/MOTIONLESS MIXERS

• GUARANTEED PERFORMANCE
• LOW COST

These “in Stock” mixers feature very high mixing efficiency with short mixing length. They are designed for use where additives to the main pipeline flow have already been introduced upstream of the mixer. The simple, three step design procedure shown on the next page allows the rapid choice of line size, number of mixing elements and pressure drop. Available from stock, mixers are supplied with two, three or four mixing elements. All have 150 lb. flanges, and materials of construction are carbon steel, 316 stainless steel, PVC and fiberglass. Dimensions and model numbers for the “M” series are listed below.

HOUSING: CARBON STEEL — A53 Grade B or equal
Schedule 40
STAINLESS STEEL — Type 316 Schedule 40
P.V.C. — Schedule 80
F.R.P. — 150 psi rated filament wound

FLANGES: ANSI B16.5 — 150 lb. Drilling
CARBON STEEL & STAINLESS STEEL — Raised Face
P.V.C. — For Sizes: 3” & Larger — Raised Face
Smaller than 3” — Flat Face
F.R.P. — Flat Face

<table>
<thead>
<tr>
<th>LINE SIZE, NPS</th>
<th>“D”</th>
<th>“L” OVERALL LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>“D”</td>
<td>2 ELE</td>
<td>3 ELE</td>
</tr>
<tr>
<td>3/4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>1 1/2</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>2 1/2</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>6</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>8</td>
<td>22</td>
<td>18</td>
</tr>
<tr>
<td>10</td>
<td>29</td>
<td>22</td>
</tr>
<tr>
<td>12</td>
<td>34</td>
<td>29</td>
</tr>
</tbody>
</table>

ALL DIMENSIONS ARE IN INCHES

“M” SERIES NUMBERING SYSTEM
M TABLE 1 — XXXXX

GIVEN MODEL NUMBER
MATERIAL IDENTIFIER (SEE TABLE 1 FOR CORRECT MATERIAL)
 SERIES IDENTIFIER

COMMON MATERIAL IDENTIFIER TABLE

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>CARBON STEEL</td>
</tr>
<tr>
<td>S</td>
<td>STAINLESS STEEL</td>
</tr>
<tr>
<td>F</td>
<td>FIBERGLASS</td>
</tr>
<tr>
<td>P</td>
<td>PVC</td>
</tr>
<tr>
<td>CP</td>
<td>CPVC</td>
</tr>
</tbody>
</table>

KOMAX SYSTEMS, INC.
15301 Graham St, Huntington Beach, CA 92649
TEL: (310) 830-4320 • (800) 826-0760 • FAX: (310) 830-9826
http://www.komax.com • E-mail: info @komax.com
KOMAX STATIC MIXER DESIGN

Use the following three simple steps to solve most turbulent flow mixing problems.

1. Calculate the Reynolds number Re from \( \text{Re} = 3157QS/\mu D \), and velocity form \( V = 0.408Q/D^2 \) feet/sec.
   where \( Q \) = flow rate in US gpm, \( S \) = specific gravity, \( \mu \) = viscosity in cp, and \( D \) = pipe inside diameter in inches.

2. Enter the first graph at the calculated velocity, and move up to the calculated Reynolds number region. Now, move horizontally to the left and read the required number of elements. Round to the nearest upper number.

3. Enter the next graph at the velocity value and move up to the line corresponding to the number of elements. Move horizontally left to read the basic pressure drop. Correct the specific gravity and viscosity.

---

**EXAMPLE**

**INPUT DATA**
- \( Q = 1000 \) gpm
- \( \mu = 2 \) cp
- \( D = 10" \)
- \( \text{SG} = 1.1 \)

**DESIGN**
- \( V = 4.1 \) ft/sec
- \( \text{Re} = 174,000 \)
- \( n = 3 \)
- \( \Delta P = 2.1 \) psi

---

**EXAMPLE**

**BASIC \( \Delta P \) = 1.8 psi FROM GRAPH**
- \( \text{SG CORRECTION FACTOR} = 1.1 \)
- \( \mu \) CORRECTION FACTOR \( 2.1 = 1.07 \)
- TOTAL \( \Delta P = 1.8 \times 1.1 \times 1.07 = 2.1 \) psi

---

© 1984