WELDING INSTRUCTIONS

MFC - Marine Firestop
Collars Welding Guide

Catalog Numbers: MFC16, MFC20, MFC25, MFC32, MFC40, MFC50, MFC60, MFC63, MFC75, MFC90, MFC110, MFC115, MFC125, MFC140, MFC160, MFC169, MFC200, MFC219, MFC225, MFC273, MFC324

MFC16-MFC40

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Opening Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFC16</td>
<td>25 mm (0.98 in)</td>
</tr>
<tr>
<td>MFC20</td>
<td>30 mm (1.2 in)</td>
</tr>
<tr>
<td>MFC25</td>
<td>35 mm (1.4 in)</td>
</tr>
<tr>
<td>MFC32</td>
<td>42 mm (1.7 in)</td>
</tr>
<tr>
<td>MFC40</td>
<td>50 mm (2.0 in)</td>
</tr>
</tbody>
</table>

MFC50-MFC115

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Opening Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFC50</td>
<td>60 mm (2.4 in)</td>
</tr>
<tr>
<td>MFC60</td>
<td>70 mm (2.8 in)</td>
</tr>
<tr>
<td>MFC63</td>
<td>73 mm (2.9 in)</td>
</tr>
<tr>
<td>MFC75</td>
<td>85 mm (3.3 in)</td>
</tr>
<tr>
<td>MFC90</td>
<td>100 mm (3.9 in)</td>
</tr>
<tr>
<td>MFC110</td>
<td>120 mm (4.7 in)</td>
</tr>
<tr>
<td>MFC115</td>
<td>125 mm (4.9 in)</td>
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MFC125-MFC169

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Opening Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFC125</td>
<td>135 mm (5.3 in)</td>
</tr>
<tr>
<td>MFC140</td>
<td>150 mm (5.9 in)</td>
</tr>
<tr>
<td>MFC160</td>
<td>170 mm (6.7 in)</td>
</tr>
<tr>
<td>MFC169</td>
<td>179 mm (7.0 in)</td>
</tr>
</tbody>
</table>

*Not drawn to scale*
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Welding Instructions:

Refer to product installation instructions: ZIS1067, ZIS1082 and/or other appropriate approval or guide.

Weld Preparation:

• Hole size per the table above or as listed in appropriate approval.
• It is recommended practice to clean welded surfaces of all oil, scale, paint and dirt; specifically at designated weld zones

Tack and Weld Sequence:

• Tack each weld area, one place, opposite sides of collar
• Clean tack welds: chip, wire-brush
• Start weld towards tack; tack progressing uphill
• Length of welds to be 12.7 mm (0.5 in) min. - 25.4 mm (1.0 in) max.

Finish:

• Clean welds: wire-brush, sanding, rinse
• Prime & paint for corrosion resistance

Cautionary!

• Keep heat input to a minimum; Intumescent material inside collar will begin expanding between 149°C-177°C (300°F-350°F); a wet rag may be used to limit heat input

Welders Qualified in Accordance with:

AWS D1.1 latest edition
ASME
MIL-STD-248
API 1104
CWB
or equivalent

Welding Methods:

Shielded Metal Arc Welding (SMAW)
Gas Metal Arc Welding (GMAW)
Flux Core Arc Welding (FCAW)
Gas Tungsten Arc Welding (GTAW)

Welding Parameters:

SMAW - Shielded Metal Arc Welding
Electrode: E6010
Filler Wire: 6011 or Equivalent
Size/Diameter: 3/32, 1/8
Polarity: Straight/DCEN
Amp Range: 60-90
Volt Range: 24-32

GMAW - Gas Metal Arc Welding
Filler Wire: ER70S-6 or Equivalent
Shielding Gas: Argon/CO2 Mix 92%/8% or 75%/25%
CFH/Flow: 30-45
Polarity: Reverse/DCEP
Amp Range: 170-210
Volt Range: 18-25

FCAW - G/Flux Core Arc Welding
Filler Wire: E71T-S-9C, Outer Shield 71M
Shielding Gas: CO2 or 75% Argon / 25% CO2 Mix
CFH/Flow: 45-55
Polarity: Reverse/DCEP
Amp Range: 225-275
Volt Range: 29-34

GTAW - Gas Tungsten Arc Welding
Filler Wire: ER70S-6 or Equivalent
Shielding Gas: 100% Argon
CFH/Flow: 15-25
Polarity: Straight/DCEN
Tungsten Type: 2% Thoriated
Tungsten Size: 3/32 - 1/8
Amp Range: 100-150
Volt Range: 12-18

MFC200-MFC324

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Opening Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFC200</td>
<td>210</td>
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<tr>
<td>MFC219</td>
<td>229</td>
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<tr>
<td>MFC225</td>
<td>235</td>
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<td>MFC273</td>
<td>283</td>
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<tr>
<td>MFC324</td>
<td>334</td>
</tr>
</tbody>
</table>

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