



Flex-Weld 10MC Series

Multi-Purpose Exhaust Expansion Joints



Certification Number
03-HS369752/1-PDA

ABS

Advantages:

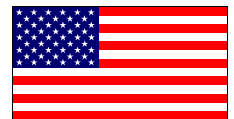
- ◆ ABS Approved
- ◆ Longer Life than OEM
- ◆ No Minimum Order
- ◆ Custom Lengths Available
- ◆ Standard or Custom End Configurations Available
- ◆ Volume Discounts

APPLICATIONS:

- ◆ Generator Sets
- ◆ Marine Propulsion
- ◆ OEM Engines
- ◆ Gas Turbine Exhaust
- ◆ Power Units
- ◆ Auxiliary System Piping

MARKETS SERVED:

- ◆ Marine
- ◆ Construction
- ◆ Oil Platform
- ◆ Power Generation
- ◆ Railroad
- ◆ Ship Building



**100%
American Made**



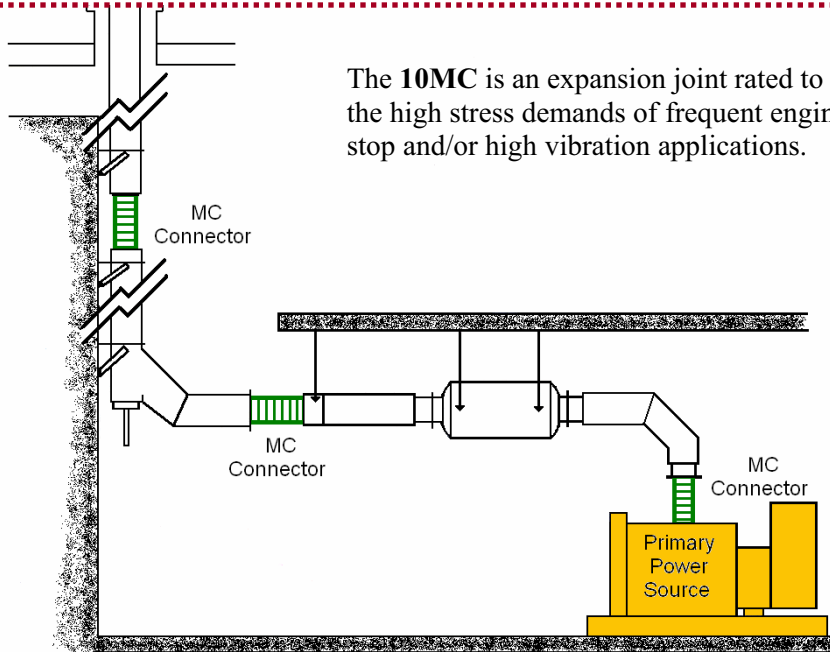


10MC SERIES



10MC Features:

- Movement rated at 10,000 cycles plus.
- Available in Short or Long series.
- Variety of end fittings available including ; fixed flange , Sch Std weld ends, fixed by floating flange, and many custom configurations.
- Piping system design & layout assistance available upon request.



The **10MC** is an expansion joint rated to accept the high stress demands of frequent engine start/stop and/or high vibration applications.



3 Easy Steps for Selecting an ABS Approved Exhaust Connector

STEP 1 – DETERMINE THE NECESSARY INFORMATION

Size: _____

Overall Length: _____

Maximum Lateral Movement: _____

Maximum Axial Movement: _____

System Temperature: Min. _____ Max. _____

Pressure Rating: 36 PSI at 70°F or 18 PSI at 1000°F . Please contact factory for other ratings.

Stainless Steel Liner: _____



10MC SERIES



STEP 2 –DEVELOP THE INFORMATION

1. Start with the “S” series graph on the following page.
2. Plot the point on the graph where the maximum axial movement would intersect with the maximum lateral movement. (See dotted line example)
3. Find the combined movement sloped line that matches your I.D. (example 5” I.D.)
4. If the plotted point is below the sloped line, select the “S” series. If the plotted point is above the sloped line, replot the movements in the “L” series graph.
5. If the plotted point is above the sloped line in the “L” series graph, contact the factory for further assistance.

NOTE: Selection “S” or “L” series may also depend upon OAL or force to actuate constraints.

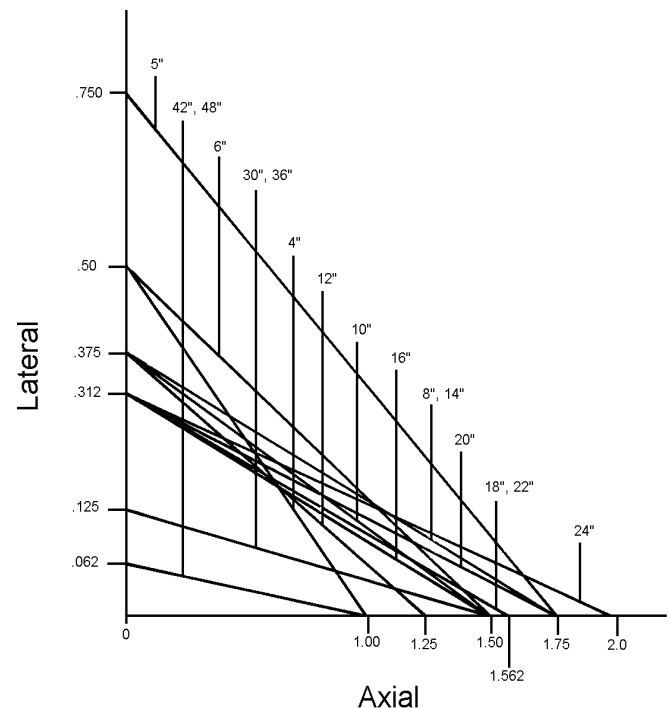
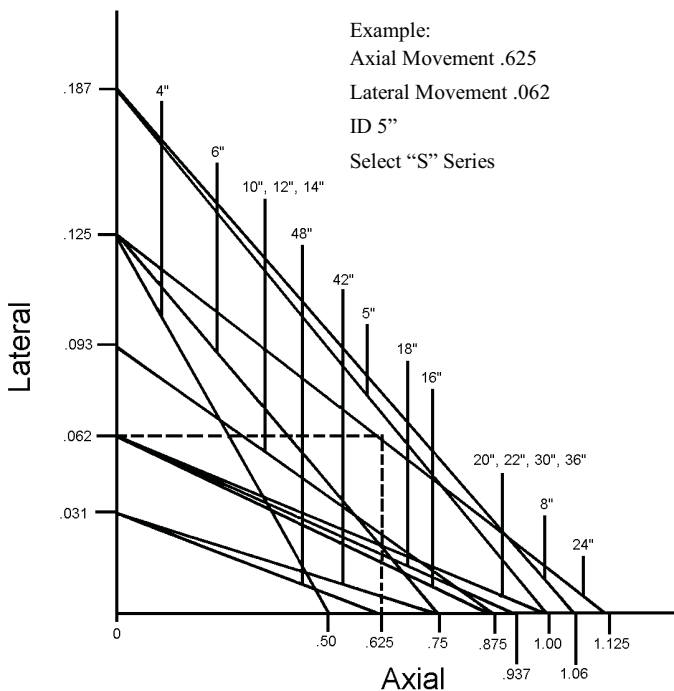
THERMAL EXPANSION CHART

Use the table below to determine pipe growth in longer pipe systems.

| Pipe Expansion (In. / Ft) | | |
|---------------------------|--------------|-----------------|
| Temperature (°F) | Carbon Steel | Stainless Steel |
| 500 | .037 | .051 |
| 600 | .047 | .064 |
| 700 | .055 | .078 |
| 800 | .067 | .091 |
| 900 | .077 | .104 |
| 1000 | .088 | .117 |

“S” SERIES (10MC SHORT)

“L” SERIES (10MC LONG)





10MC SERIES



STEP 3 – 10MC SELECTION CHART

| I.D. * (in.) | O.A.L. (in.) | | | | Total Movement | | Spring Rates | |
|-----------------|--------------|--------------|-------------------------|------------------|----------------|---------------|----------------|------------------|
| | Part Number | Fixed Flange | Fixed x Floating Flange | Sch Std Weld End | Axial (in.) | Lateral (in.) | Axial (lbs/in) | Lateral (lbs/in) |
| 4 | F04010MCS | 7-1/2 | 6-1/2 | 10 | 0.50 | .125 | 202 | 508 |
| | F04010MCL | 11 | 10 | 13-1/2 | 1.00 | .500 | 107 | 76 |
| 5 | F05010MCS | 8-1/4 | 7-3/8 | 10-3/4 | 1.00 | .187 | 285 | 683 |
| | F05010MCL | 11-1/2 | 10-5/8 | 14 | 1.75 | .750 | 171 | 160 |
| 6 | F06010MCS | 8-1/4 | 7-3/8 | 10-3/4 | 0.75 | .125 | 210 | 820 |
| | F06010MCL | 9-5/8 | 8-3/4 | 12-1/8 | 1.50 | .500 | 163 | 382 |
| 8 | F08010MCS | 8 | 7-3/8 | 10-1/2 | 1.06 | .187 | 358 | 2555 |
| | F08010MCL | 11-5/8 | 11 | 14-1/8 | 1.75 | .375 | 199 | 438 |
| 10 | F10010MCS | 8-7/16 | 7-13/16 | 10-15/16 | 0.88 | .093 | 329 | 3060 |
| | F10010MCL | 12-5/16 | 11-11/16 | 14-13/16 | 1.50 | .375 | 183 | 525 |
| 12 | F12010MCS | 8-7/16 | 7-13/16 | 12-15/16 | 0.88 | .093 | 343 | 4335 |
| | F12010MCL | 12-5/16 | 11-11/16 | 16-3/16 | 1.25 | .375 | 190 | 743 |
| 14 | F14010MCS | 8-1/16 | 7-7/16 | 12-9/16 | 0.88 | .093 | 660 | 9897 |
| | F14010MCL | 11-13/16 | 11-3/16 | 16-5/16 | 1.75 | .375 | 367 | 1679 |
| 16 | F16010MCS | 8-1/16 | 7-7/16 | 12-9/16 | 0.88 | .062 | 643 | 13712 |
| | F16010MCL | 11-13/16 | 11-3/16 | 16-5/16 | 1.50 | .312 | 357 | 2371 |
| 18 | F18010MCS | 8-1/16 | 7-1/2 | 12-9/16 | 0.94 | .062 | 743 | 19701 |
| | F18010MCL | 11-13/16 | 11-1/4 | 16-5/16 | 1.56 | .312 | 413 | 3407 |
| 20 | F20010MCS | 8-1/8 | 7-5/8 | 12-5/8 | 1.00 | .062 | 848 | 27349 |
| | F20010MCL | 11-3/4 | 11-1/4 | 16-1/4 | 1.75 | .312 | 471 | 4690 |
| 22 | F22010MCS | 8-1/8 | 7-5/8 | 12-5/8 | 1.00 | .062 | 903 | 34870 |
| | F22010MCL | 11-3/4 | 11-1/4 | 16-1/4 | 1.56 | .312 | 502 | 5979 |
| 24 | F24010MCS | 9 | 8-5/8 | 13-1/2 | 1.13 | .062 | 842 | 31901 |
| | F24010MCL | 12-3/4 | 12-3/8 | 17-1/4 | 2.00 | .312 | 505 | 6000 |
| 30 | F30010MCS | 9 | 8-5/8 | 13-1/2 | 1.00 | .062 | 843 | 22259 |
| | F30010MCL | 12-3/4 | 12-3/8 | 17-1/4 | 1.50 | .125 | 468 | 3816 |
| 36 | F36010MCS | 9 | 8-5/8 | 13-1/2 | 1.00 | .062 | 1072 | 34580 |
| | F36010MCL | 12-3/4 | 12-3/8 | 17-1/4 | 1.50 | .125 | 596 | 5929 |

* Larger diameters available upon request. Consult Factory for details.

ADDITIONAL LITERATURE:

- ◆ Flex-Weld 5-Ply
- ◆ 30MC Exhaust Expansion Joint
- ◆ Fabric Expansion Joints
- ◆ Multi-Ply Expansion Joints
- ◆ Single Externally-Pressurized Expansion Joints
- ◆ Dual, Single Externally-Pressurized Expansion Joints
- ◆ Rubber Expansion Joints
- ◆ Metal Hose
- ◆ Braided Flexible Connectors
- ◆ Pipe Guides
- ◆ Edge Welded Bellows
- ◆ Multi-Ply Bellows Type Pump Connector