Flex-Weld 30MC 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

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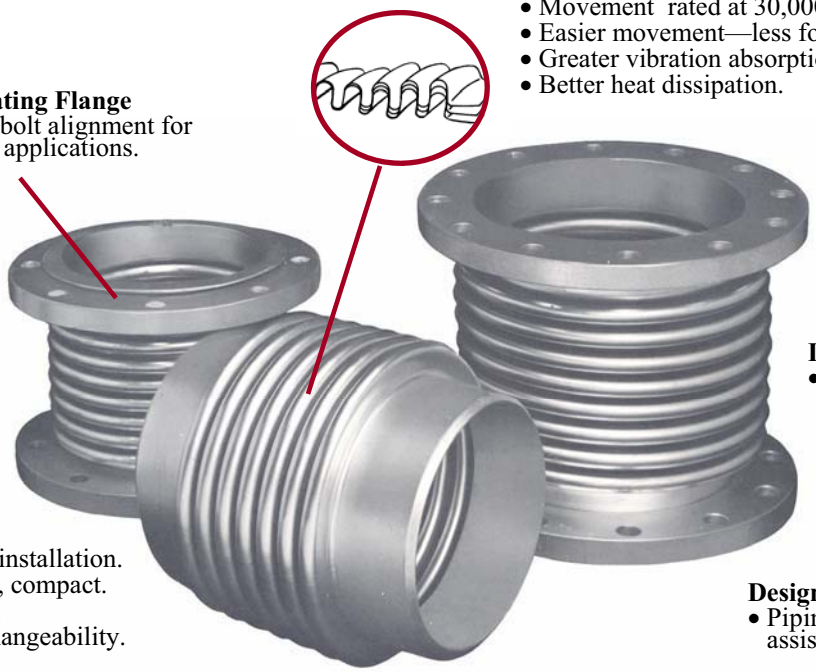
30MC SERIES

30MC FEATURES:

Multi-Ply Bellows Construction
- Movement rated at 30,000 cycles plus.
- Easier movement—less force to actuate.
- Greater vibration absorption.
- Better heat dissipation.

Fixed by Floating Flange
- Quick, easy bolt alignment for replacement applications.



Internal Stainless Steel Liner (Optional)
- Provides insulating effect to reduce the temperature on the bellows and increase service life.

Shorter OAL
- Easy, quick installation.
- Lightweight, compact.
- Saves space.
- High interchangeability.

Design Assistance
- Piping system design and layout assistance available upon request.


ABS

CERTIFICATE OF
Design Assessment

This is to Certify that a representative of this Bureau did, at the request of
Flex-Weld, Inc. - Woodstock

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: _____

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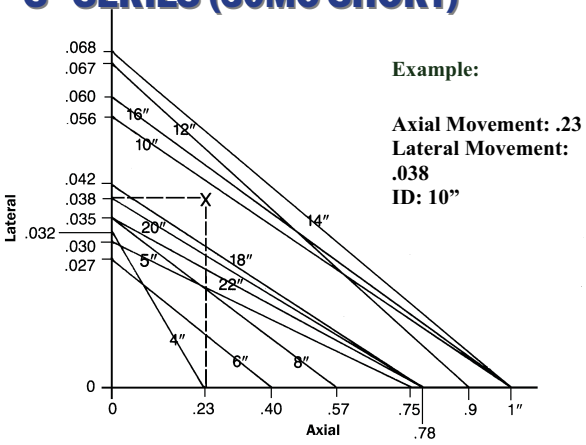
STEP 2 –DEVELOP THE INFORMATION

COMBINED MOVEMENT SELECTION GRAPHS:

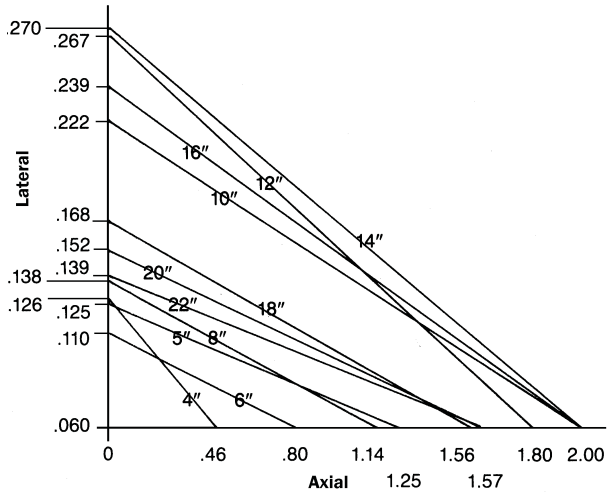
1. Start with the “S” series graph.
2. Plot the point on the graph where the maximum axial movement would intersect with the maximum lateral movement. (See dotted line example)
3. Find the combined movement sloped line that matches your I.D. (example 10” I.D.)
4. If the plotted point is below the sloped line, select the “S” series. If the plotted point is above the sloped line, replot the movements in the “M” or “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” ,“M” or “L” series may also depend upon OAL or force to actuate constraints.

“S” SERIES (30MC SHORT)



“M” SERIES (30MC MEDIUM)

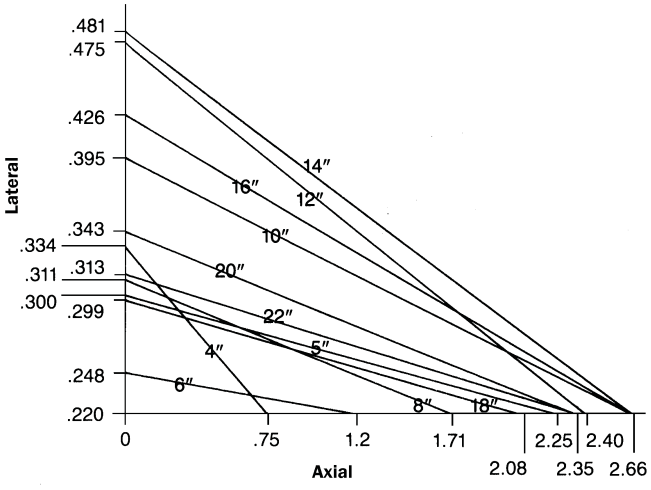


THERMAL EXPANSION CHART

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

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

“L” SERIES (30MC LONG)



30MC SERIES

STEP 3 – 30MC SELECTION CHART

I.D.* (inches)	Part Number	O.A.L. (inches)			Total Movement		Spring Rates	
		Fixed Flange	Fixed x Floating Flange	Sch Std Weld End	Axial (in.)	Lateral (in.)	Axial (lbs/in)	Lateral (lbs/in)
4	F04030MCS F04030MCM F04030MCL	5-9/16 7-11/16 10-1/4	4-9/16 6-11/16 9-1/4	8-1/16 10-3/16 12-3/4	0.23 0.46 0.75	.032 .126 .334	1146 573 352	12279 1536 357
5	F05030MCS F05030MCM F05030MCL	5-13/16 8-1/8 11	4-15/16 7-1/4 10-1/8	8-5/16 10-5/8 13-1/2	0.62 1.12 1.75	.030 .125 .300	614 307 189	6817 852 199
6	F06030MCS F06030MCM F06030MCL	5-1/16 6-7/8 8-3/16	4-3/16 6 7-5/16	7-9/16 9-1/8 10-11/16	0.40 0.80 1.20	.027 .110 .248	788 394 262	34927 4303 1271
8	F08030MCS F08030MCM F08030MCL	5-1/4 7-1/16 8-7/8	4-5/8 6-7/16 8-1/4	7-3/4 9-9/16 11-3/8	0.57 1.14 1.71	.035 .138 .311	932 466 310	52549 6568 1942
10	F10030MCS F10030MCM F10030MCL	6-5/8 9-3/4 11-13/16	6 9-1/8 11-3/16	9-1/8 12-1/4 14-5/16	1.00 2.00 2.66	.056 .222 .395	1070 535 401	29009 3626 1528
12	F12030MCS F12030MCM F12030MCL	6-5/8 9-3/4 11-13/16	6 9-1/8 11-3/16	11-1/8 14-1/4 16-5/16	0.90 1.80 2.40	.067 .267 .475	1097 548 411	39167 4890 2063
14	F14030MCS F14030MCM F14030MCL	6-5/8 9-3/4 11-13/16	6 9-1/8 11-3/16	11-1/8 14-1/4 16-5/16	1.00 2.00 2.66	.068 .270 .481	1094 547 410	46275 5784 2438
16	F16030MCS F16030MCM F16030MCL	6-5/8 9-3/4 11-13/16	6 9-1/8 11-3/16	11-1/8 14-1/4 16-5/16	1.00 2.00 2.66	.060 .239 .426	1327 663 497	70243 8773 3699
18	F18030MCS F18030MCM F18030MCL	6-5/8 9-3/4 11-13/16	6-1/16 9-3/16 11-1/4	11-1/8 14-1/4 16-5/16	0.78 1.56 2.08	.042 .168 .299	1292 646 484	84079 10509 4429
20	F20030MCS F20030MCM F20030MCL	6-5/8 9-3/4 11-13/16	6-1/8 9-1/4 11-5/16	11-1/8 14-1/4 16-5/16	0.78 1.57 2.35	.038 .152 .343	1409 704 469	110273 13774 4078
22	F22030MCS F22030MCM F22030MCL	6-5/8 9-3/4 11-13/16	6-1/8 9-1/4 11-5/16	11-1/8 14-1/4 16-5/16	0.78 1.57 2.35	.035 .157 .313	1492 746 497	138709 17338 5133

Additional Literature: *Larger diameters available upon request. Consult factory for details.

- 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