



MASON INDUSTRIES, Inc.

MERCER RUBBER Co.

350 Rabro Drive • Hauppauge, NY 11788

Mason- 631/348-0282 • Info@Mason-Ind.com

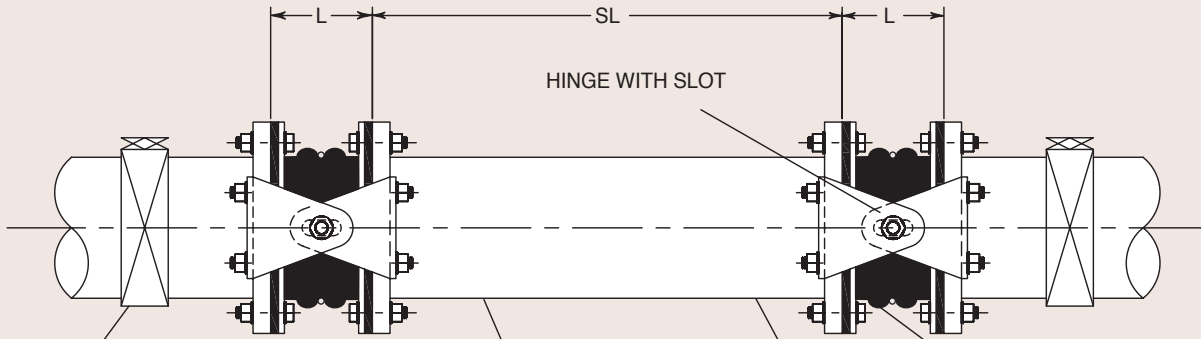
Mercer- 631/582-1524 • Info@Mercer-Rubber.com

FAX 631/348-0279



Safeflex SFDEJ-HE Hinged Expansion Joints

FORM A-24375-4



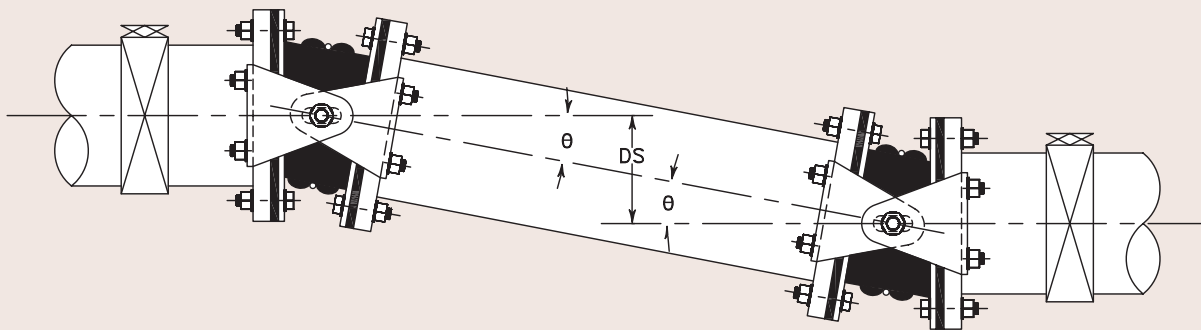
ENDS MUST BE ANCHORED TO STRUCTURE TO ACCEPT PIPE THRUST

PIPE LENGTH DEPENDS ON FIELD CONDITIONS AND REQUIRED DIFFERENTIAL SETTLEMENT

PIPE SECTION BY MERCER OR OTHERS

MASON INDUSTRIES INC. SAFEFLEX SFDEJ

NEUTRAL POSITION



SETTLEMENT POSITION

SAFEFLEX SFDEJ-HE

Pipe Size (in)	Allowable Angular θ Displacement	Tan θ	Length L (in)
1 1/2	30°	0.58	7
2	30°	0.58	7
2 1/2	30°	0.58	7
3	30°	0.58	7
4	29°	0.55	7
5	24°	0.45	7
6	20°	0.36	7
8	15°	0.27	8
10	13°	0.23	8
12	11°	0.19	8
14	10°	0.18	10

The hinged configuration may be used with Mercer Series 450 and 500 expansion joints as well. Contact Mercer for more information

CALCULATIONS

The minimum spool length (SL) based on a specified differential settlement (DS) would be:

$$SL = \left(\frac{DS}{\text{TAN } \theta} \right) - L$$

Example:

For a required DS of 12" on an 10" pipe line DS = 12", L = 8", TAN θ = .23

$$SL = \left(\frac{12''}{.23} \right) - 8'' = 52.2'' - 8'' = 44.2''$$

The allowable differential settlement based on a given spool length would be:

$$DS = (SL + L) \text{TAN } \theta$$

Example:

For a spool length of 24" on an 4" pipe line SL = 24", L = 7", TAN θ = .55

$$DS = (24'' + 7'') .55 = (31'') .55 = 17.1''$$

*Check with factory to verify calculations, generally maximum differential settlement not to exceed 12".

SPECIFICATION

Offset shall be accomplished by the angular motion of a double sphere expansion joint bolted to each end of an intermediate steel pipe. Bracket each expansion joint with hinged steel connections. Hinges shall have a pin in a slot on both sides.

The piping on each end of the assembly must be securely anchored to accept a thrust of 1.5 times the operating pressure multiplied by the projected area of the pipe.

Specifications for the expansion joints shall be as Mason Industries Safeflex SFDEJ. The complete hinged assembly, Safeflex SFDEJ-HE at manufactured by Mason Industries Inc.



MASON INDUSTRIES, Inc.
MERCER RUBBER Co.

350 Rabro Drive, Hauppauge, NY 11788 • Mail to: PO Box 410, Smithtown, NY 11787
Mason Tel: 631/348-0282 • Mercer Tel: 631/582-1524 • FAX 631/348-0279
Mason Email: Info@Mason-Ind.com • Mercer Email: Info@Mercer-Rubber.com

