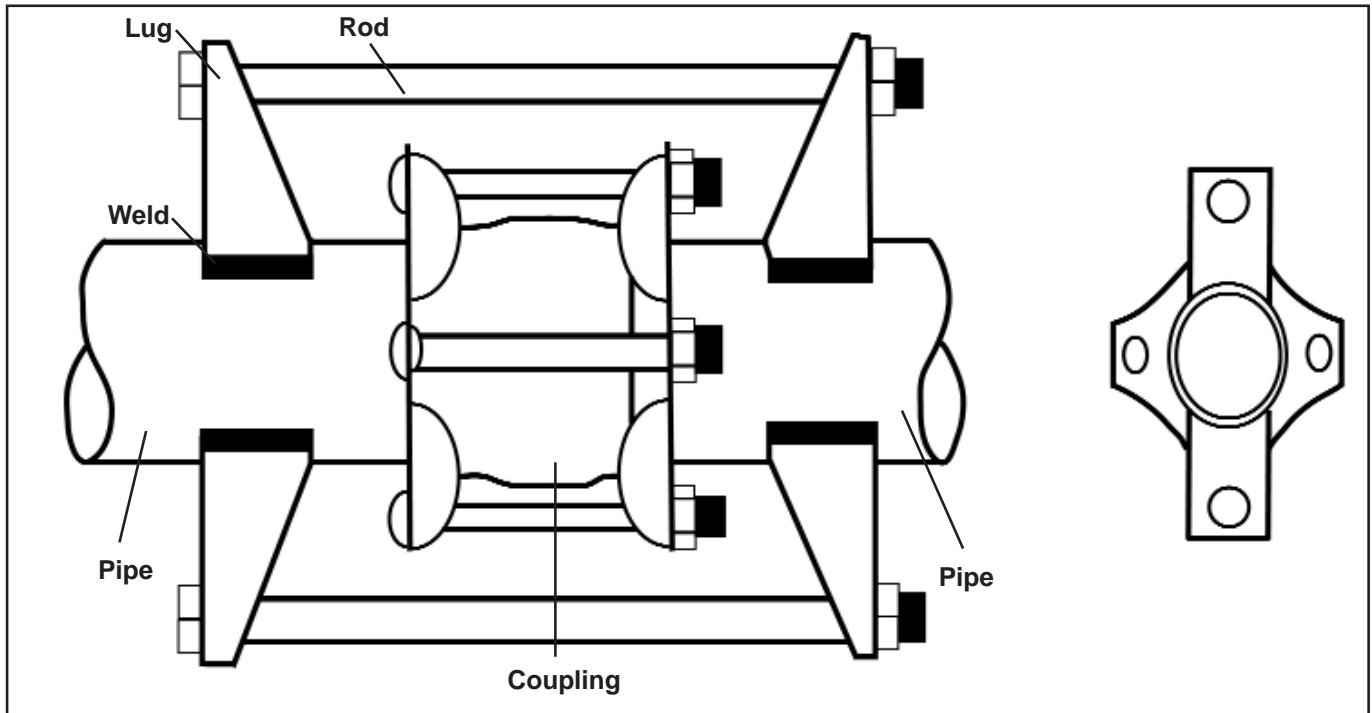




Rod & Lug Harness Device



The Smith-Blair Rod and Lug Harness Device is designed to restrain pipes where pullout might occur. Used in conjunction with Standard Seal Only Couplings, these devices will provide positive axial restraint against pullout. Each set consists of two lugs, one tie rod and one nut.

The devices can be used on two inch and larger IPS Steel Pipe. See chart on the back of this brochure for the recommended minimum number of sets.



Features:

- Available in light duty and heavy duty styles.
- Color coded: Grey for light duty
Red for heavy duty.
- Available conductive both ends or conductive on one end and insulating on the other end.

Material Specifications

Lugs:	AISI C-1010 hot rolled steel or ASTM A283 Gr. C
Lug Insulator:	Super tough nylon Tensile @ 23°C: 7,500 Lb/in ² Elongation @ 23°C: 60%
Rod:	AISI 1045 Steel, 76,000 PSI Min. <i>Light Duty:</i> 3/4" - 10NC 2A cut thread <i>Heavy Duty:</i> 7/8" - 9NC 2A cut thread
Nut:	ASTM A-563 Grade A
Finish:	Shop coat primer or fusion bonded epoxy coating.

Material Specifications are subject to change.



Rod & Lug Harness Device

Light Duty Minimum Safe Number of Sets

Pipe		Working Pressure*											
Size	OD	25	50	75	100	150	200	250	300	350	400	450	500
2	2.375	2	2	2	2	2	2	2	2	2	2	2	2
3	3.500	2	2	2	2	2	2	2	2	2	2	2	2
4	4.500	2	2	2	2	2	2	2	2	2	2	2	2
6	6.625	2	2	2	2	2	2	2	3	3	3	4	4
8	8.625	2	2	2	2	2	3	3	4	5	5	6	6
10	10.75	2	2	2	2	3	5	5	6	7	8	9	10
12	12.75	2	2	2	3	4	7	7	8	9	11	12	13
14	14.00	2	2	3	4	5	8	8	10	11	13	14	16
16	16.00	2	3	4	5	7	11	11	13	15	17	19	21
20	20.00	2	4	5	7	10	16	16	19	22	26	29	32
24	24.00	3	5	7	10	14	23	23	28	32	37	41	46

*Maximum test pressure is 1.5 times the working pressure.

Heavy Duty Minimum Safe Number of Sets*

Pipe		Working Pressure											
Size	OD	25	50	75	100	150	200	250	300	350	400	450	500
2	2.375	2	2	2	2	2	2	2	2	2	2	2	2
3	3.500	2	2	2	2	2	2	2	2	2	2	2	2
4	4.500	2	2	2	2	2	2	2	2	2	2	2	2
6	6.625	2	2	2	2	2	2	2	2	2	2	2	2
8	8.625	2	2	2	2	2	2	2	2	3	3	3	3
10	10.75	2	2	2	2	2	2	3	3	4	4	5	5
12	12.75	2	2	2	2	2	3	4	4	5	6	6	7
14	14.00	2	2	2	2	3	4	4	5	6	7	7	8
16	16.00	2	2	2	3	4	5	6	7	8	3	10	11
20	20.00	2	2	3	4	5	7	8	10	11	13	15	16
24	24.00	2	3	4	5	7	10	12	14	16	19	21	23

*Maximum test pressure is 1.5 times the working pressure.

Light Duty

Description	Catalog Number	Tie Rod & Nut Size	Lug Wall Thickness
Insulated	133A18	3/4 x 18	.229
Conductive	132A18	3/4 x 18	.229
Insulated	133A24	3/4 x 24	.229
Conductive	132A24	3/4 x 24	.229
Insulated	133A30	3/4 x 30	.229
Conductive	132A30	3/4 x 30	.229
Insulated	133A38	3/4 x 38	.229
Conductive	132A38	3/4 x 38	.229

Heavy Duty

Description	Catalog Number	Tie Rod & Nut Size	Lug Wall Thickness
Insulated	133B24	7/8 x 24	.375
Conductive	132B24	7/8 x 24	.375
Insulated	133B30	7/8 x 30	.375
Conductive	132B30	7/8 x 30	.375
Insulated	133B44	7/8 x 44	.375
Conductive	132B44	7/8 x 44	.375

Lugs and Bushings

Description	Catalog Number	Lug Wall Thickness
Light Duty - Insulated	131A	.229
Light Duty - Conductive	132A	.229
Heavy Duty - Insulated	131B	.375
Heavy Duty - Conductive	132B	.375

Installation Instructions

1. Determining proper preparation and weld specification is the responsibility of the end user. Consult your construction standards.
2. Tie rod must be long enough to ensure welds are a minimum of 6-inches from the coupling end. Even at this distance, the coupling should be protected from heat by wrapping with wet rags, etc...
3. Use at least two sets (see chart above), space lugs evenly about circumference and align lugs on opposite pipes.