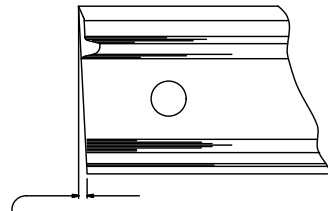


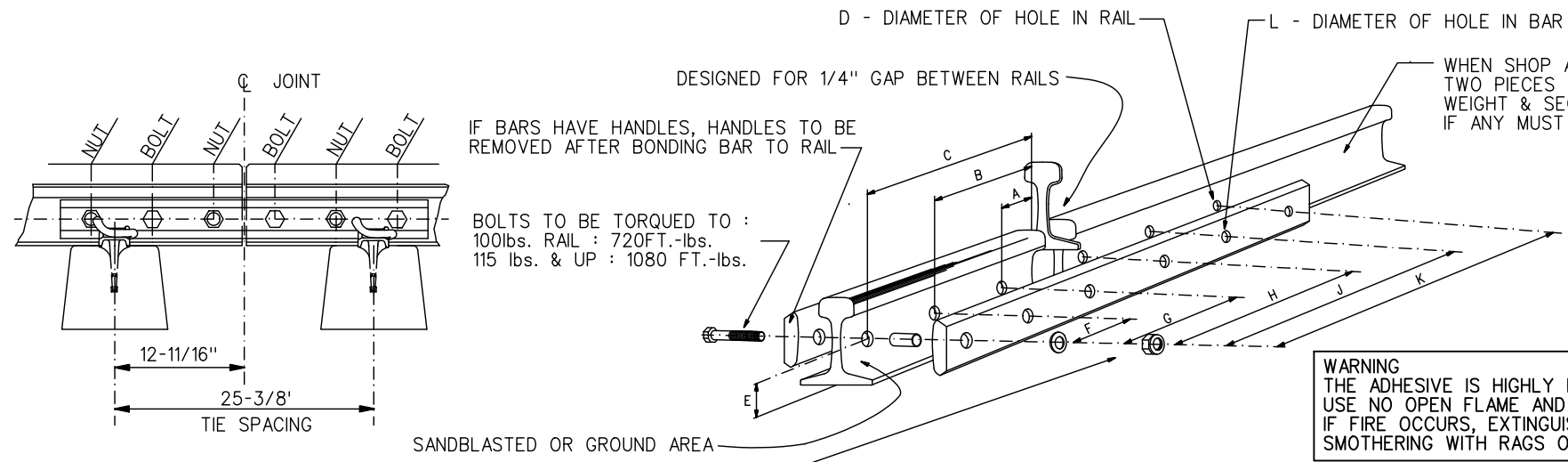
WEIGHT	DRILLING DATA FOR RAILS						DRILLING DATA FOR BARS						
	A ± 1/32	B ± 1/32	C ± 1/32	D ± 1/16 0	E ± 1/32	SPACING	F ± 1/32	G ± 1/32	H ± 1/32	J ± 1/32	K ± 1/32	L ± 1/16 0	SPACING
100 lb.	2-11/16	8-3/16	13-11/16	1-3/16	2-3/4	2-11/16; 5-1/2; 5-1/2	5-1/2	11	16-5/8	22-1/8	27-5/8	1-1/8	5-1/2; 5-1/2; 5-5/8; 5-1/2; 5-1/2
115 lb.	3-1/2	9-1/2	15-1/2	1-3/16	2-7/8	3-1/2 ; 6 ; 6	6	12	19-1/4	25-1/4	31-1/4	1-1/4	6 ; 6 ; 7-1/4 ; 6 ; 6
132 lb.	3-1/2	9-1/2	15-1/2	1-5/16	3-3/32	3-1/2 ; 6 ; 6	6	12	19-1/4	25-1/4	31-1/4	1-1/4	6 ; 6 ; 7-1/4 ; 6 ; 6
136 lb.	3-1/2	9-1/2	15-1/2	1-5/16	3-3/32	3-1/2 ; 6 ; 6	6	12	19-1/4	25-1/4	31-1/4	1-1/4	6 ; 6 ; 7-1/4 ; 6 ; 6



1/32" MAX. VARIATION IN THE HORIZONTAL AND VERTICAL END SQUARENESS.

ALL BURRS CAUSED BY DRILLING SHALL BE CAREFULLY REMOVED. UNDRILLED RAIL ENDS TO HAVE BURRS AND FINS REMOVED.

FINISHING OF RAIL ENDS

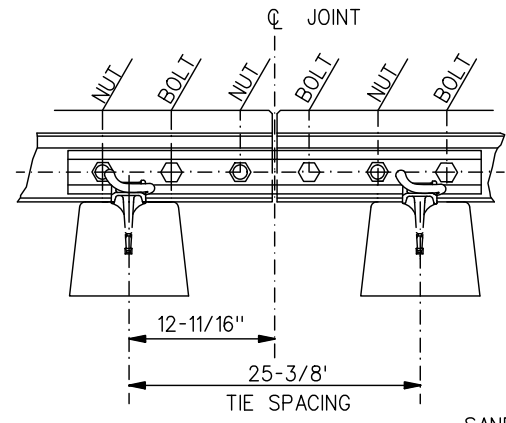


IF BARS HAVE HANDLES, HANDLES TO BE REMOVED AFTER BONDING BAR TO RAIL

BOLTS TO BE TORQUED TO :
100lbs. RAIL : 720FT.-lbs.
115 lbs. & UP : 1080 FT.-lbs.

WARNING
THE ADHESIVE IS HIGHLY FLAMMABLE, USE NO OPEN FLAME AND HEAT GENTLY. IF FIRE OCCURS, EXTINGUISH BY SMOTHERING WITH RAGS OR TARP.

CRITICAL CONCRETE TIE SPACING

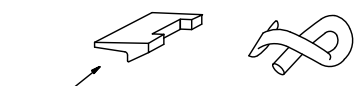


ASSEMBLY OF NUTS AND BOLTS FROM LEFT TO RIGHT, NOT-BOLT-NUT-BOLT-NUT-BOLT, (FOR CLEARANCE OF PANDROL CLIPS).

TYPICAL ASSEMBLY



WOOD TIES
INSULATED TIE PLATE IS NOT INCLUDED IN JOINT KIT AND MUST BE REQUISITIONED WHEN INSTALLING BONDED INSULATED JOINTS AT SUPPORTED JOINTS ON WOOD TIES : SEE GTS-0518



CONCRETE TIES
WHEN INSTALLING BONDED INSULATED JOINTS ON CONCRETE TIES USE : A SPECIAL PANDROL CLIP TYPE e2063 GO "2204" INSULATOR

NOTES

- THE MANUFACTURERS ARE TO ENSURE THAT THE HOLES IN THEIR BARS ARE TO THE DIAMETER STATED - DIMENSION - "L".
- DUE TO THE VARIANCES BETWEEN SUPPLIERS ALL BONDED JOINTS ARE TO BE ASSEMBLED IN ACCORDANCE WITH LATEST ISSUE OF MANUFACTURER'S ENCLOSED KIT INSTRUCTIONS.
- WOOD TIE INSTALLATION : THE JOINT SHOULD PREFERABLY BE SUSPENDED. AT EXISTING INSTALLATIONS WHERE JOINT IS SUPPORTED, INSULATED TIE PLATE WILL BE REQUIRED - SEE NOTE ON ILLUSTRATION.
- CONCRETE TIE INSTALLATION :
a) WHEN INSTALLING A PRE-ASSEMBLED BONDED INSULATED JOINT "RAIL" OR A BONDED INSULATED JOINT "KIT", THE JOINT MUST BE A SUSPENDED JOINT WITH TIE SPACING AS SHOWN ON CRITICAL TIE SPACING DETAIL.
b) FOUR SPECIAL PANDROL CLIPS AND INSULATORS ARE REQUIRED AT EACH BONDED INSULATED JOINT INSTALLATION
- 100 LB. A.R.A.-A. & 115 LB. R.E. RAIL JOINTS FROM PORTEC CAN NOT BE USED ON CONCRETE TIE/PANDROL CLIP ASSEMBLY BECAUSE OF TOE TYPE BAR.

136 LB. R.E. RAIL JOINT (KIT) MAY BE OBTAINED BY USING PORTEC ASSEMBLY - 240-02005-09				115 LB. R.E. RAIL JOINT (KIT) MAY BE OBTAINED BY USING PORTEC ASSEMBLY - 240-07001-15				136 LB. R.E. RAIL JOINT (KIT) MAY BE OBTAINED BY USING ALLEGHENY P/N 201-13637-36002				115 LB. R.E. RAIL JOINT (KIT) MAY BE OBTAINED BY USING ALLEGHENY P/N 201-11525-36002			
ITEM NO.	DESCRIPTION	QTY. KIT	PORTEC REF. NO.	ITEM NO.	DESCRIPTION	QTY. KIT	PORTEC REF. NO.	ITEM NO.	DESCRIPTION	QTY. KIT	ALLEGHENY REF. NO.	ITEM NO.	DESCRIPTION	QTY. KIT	ALLEGHENY REF. NO.
1	BONDED INSULATED JOINT BAR - 36" LG.	2	250-02005-06	1	BONDED INSULATED JOINT BAR - 36" LG.	2	250-07001-08	1	BONDED INSULATED JOINT BAR	2	202-13637-36091	1	BONDED INSULATED JOINT BAR	2	202-11525-36091
2	END POST - 3/16" THICK	1	238-02003-03	2	END POST - 3/16" THICK	1	238-07003-03	2	END POST - 3/16" THICK	1	601-0320	2	END POST - 3/16" THICK	1	601-0308
3	BUSHING 1.118" O.D. X 1.025" I.D. X 3 3/8" LONG	6	339-10600-01	3	BUSHING 1.118" O.D. X 1.025" I.D. X 3 3/8" LONG	6	339-10600-01	3	BUSHING	6	900-0401	3	BUSHING	6	900-0401
4	1" DIA. X 8 UNC HEX. HEAD BOLT X 5-1/4" LG. C/W HEX. NUT	6	346-10000-01	4	1" DIA. X 8 UNC HEX. HEAD BOLT X 5-1/4" LG. C/W HEX. NUT	6	346-10000-01	4	1" DIA. X 8 UNC HEX. HEAD BOLT X 4-3/4" LG. C/W HEX. NUT	6	800-0501	4	1" DIA. X 8 UNC HEX. HEAD BOLT X 4-3/4" LG. C/W HEX. NUT	6	800-0501
5	1" DIA. HARDENED FLAT WASHER	6	351-10000-01	5	1" DIA. HARDENED FLAT WASHER	6	351-10000-01	5	1" DIA. HARDENED FLAT WASHER	6	902-0600	5	1" DIA. HARDENED FLAT WASHER	6	902-0600
6	INSTALLATION KIT (NOT SHOWN)	1	700-00000-09	6	INSTALLATION KIT (NOT SHOWN)	1	700-00000-09	6	INSTALLATION KIT (NOT SHOWN)	1	202-5487	6	INSTALLATION KIT (NOT SHOWN)	1	202-5487

132 LB. R.E. RAIL JOINT (KIT) MAY BE OBTAINED BY USING PORTEC ASSEMBLY - 240-02605-22				100 LB. A.R.A.-A. RAIL JOINT (KIT) MAY BE OBTAINED BY USING PORTEC ASSEMBLY - 240-12401-04				132 LB. R.E. RAIL JOINT (KIT) MAY BE OBTAINED BY USING ALLEGHENY P/N 201-13228-36002				100 LB. A.R.A.-A. RAIL JOINT (KIT) MAY BE OBTAINED BY USING ALLEGHENY P/N 201-10020-36002			
ITEM NO.	DESCRIPTION	QTY. KIT	PORTEC REF. NO.	ITEM NO.	DESCRIPTION	QTY. KIT	PORTEC REF. NO.	ITEM NO.	DESCRIPTION	QTY. KIT	ALLEGHENY REF. NO.	ITEM NO.	DESCRIPTION	QTY. KIT	ALLEGHENY REF. NO.
1	BONDED INSULATED JOINT BAR - 36" LG.	2	250-02605-08	1	BONDED INSULATED JOINT BAR	2	250-12401-03	1	BONDED INSULATED JOINT BAR	2	202-13228-36091	1	BONDED INSULATED JOINT BAR	2	202-10020-36091
2	END POST - 3/16" THICK	1	238-02603-03	2	END POST - 3/16" THICK	1	238-12403-03	2	END POST - 3/16" THICK	1	601-0316	2	END POST - 3/16" THICK	1	601-0334
3	BUSHING 1.118" O.D. X 1.025" I.D. X 3 3/8" LONG	6	339-10600-01	3	BUSHING 0.972" O.D. X 0.903" I.D. X 3 1/2" LONG	6	339-08700-01	3	BUSHING	6	900-0401	3	BUSHING	6	900-0401
4	1" DIA. X 8 UNC HEX. HEAD BOLT X 5-1/4" LG. C/W HEX. NUT	6	346-10000-01	4	7/8" DIA. X 9 UNC HEX. HEAD BOLT X 5" LG. C/W HEX. NUT	6	346-08700-01	4	1" DIA. X 8 UNC HEX. HEAD BOLT X 7/8" DIA. X 9 UNC HEX. HEAD BOLT X 4-3/4" LG. C/W HEX. NUT	6	800-0501	4	1" DIA. X 9 UNC HEX. HEAD BOLT X 4-3/4" LG. C/W HEX. NUT	6	800-0501
5	1" DIA. HARDENED FLAT WASHER	6	351-10000-01	5	7/8" DIA. HARDENED FLAT WASHER	6	351-08700-01	5	1" DIA. HARDENED FLAT WASHER	6	902-0600	5	1" DIA. HARDENED FLAT WASHER	6	902-0600
6	INSTALLATION KIT (NOT SHOWN)	1	700-00000-09	6	INSTALLATION KIT (NOT SHOWN)	1	700-00000-09	6	INSTALLATION KIT (NOT SHOWN)	1	202-5487	6	INSTALLATION KIT (NOT SHOWN)	1	202-5487

METRIC CONVERSION: 1 inch=25.4mm, 1 foot=304.8mm

1	18/07/27	ADDED IMPERIAL TO METRIC CONVERSION NOTE
No.	Date	Revision
		By Approved

Standard / ALLEGHENY PORTEC BONDED INSULATED RAIL JOINTS FOR 100, 115, 132 & 136 LB. RAILS

Drawn GEK Checked GWM Approved VP Engineering & Asset Management



Date SEPT 15/2017 Plan Number GTS-1206 Rev 1