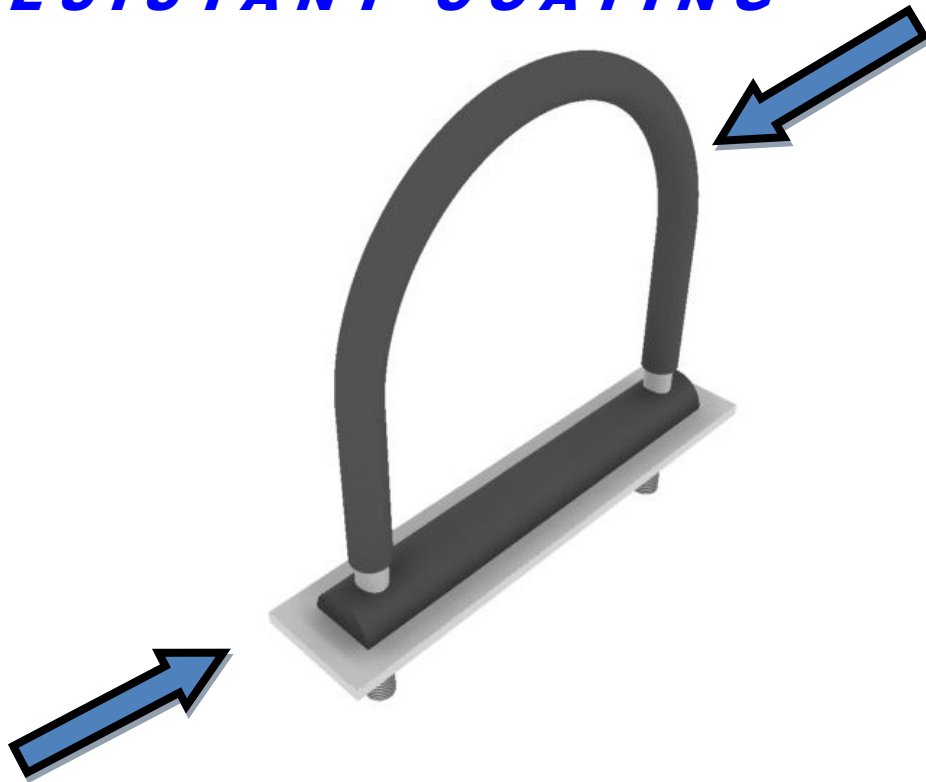
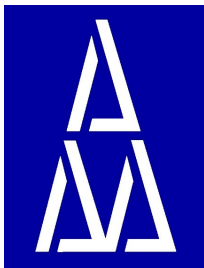


***CORROSION RESISTANT
PIPE SUPPORT SYSTEM***

***TRI*BOLT™ U-BOLTS WITH
TRI*COAT™ CORROSION
RESISTANT COATING***



***TRI*GUARD™ DURABLE
THERMOPLASTIC SUPPORTS***



AAA Technology & Specialties Co., Inc.

6219 Brittmoore Road - Houston, Texas 77041-5114 USA

Tel: 1-713-849-3366 - Fax: 1-713-849-3654

URL: www.aaatech.com - E-Mail: info@aaatech.com

Serving Industry with Quality Pipe Supports Since 1971

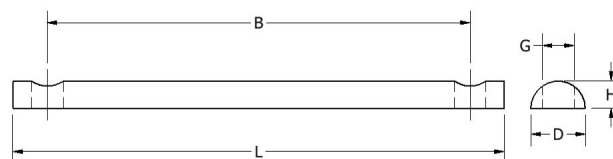
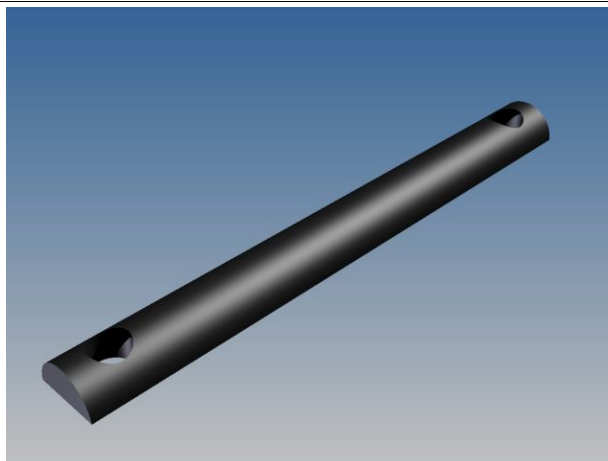
CORROSION RESISTANT PRODUCTS

TRI•GUARD™ DURABLE THERMOPLASTIC SUPPORTS

Corrosion between pipe supports and pipe at metal to metal contact points is a common problem in the process and offshore industries. When TRI•GUARD™ thermoplastic bars are placed under pipes, they eliminate metal to metal contact and the resultant corrosion. With TRI•GUARD™, water drains away from the pipe and the TRI•GUARD™ contact point due to the TRI•GUARD™ shape and no longer pools on the bottom side of the pipe. TRI•GUARD™ prevents electrical conductivity between the pipe and the pipe support member. TRI•GUARD™ can be used at operating temperatures up to 225°F (107°C) and under all pipe diameters up to 60". TRI•GUARD™ is UV resistant which translates to longer product life.

For higher temperature applications, custom TRI•GUARD™ supports can be made of a special material, however corrosion is generally not an issue on higher temperature piping systems.

For pipe supports requiring lateral restraint (i.e. a guide), please see our TRI•BOLT™ product line of coated U-bolts.



Nominal Pipe Dia. (IN)	Bar Length "L" (IN)	Hole C-C Length "B" (IN)	Bar Hole Diam "G" (IN)	Bar Size "D" (IN)	Bar Height "H" (IN)
3/4	3	1 1/2	0.375	0.75	0.313
1	3	1 5/8	0.5	1	0.438
1 1/2	4	2 3/8	0.5	1	0.438
2	4.5	2 13/16	0.5	1	0.438
3	6	4 9/16	0.625	1	0.438
4	7	5 1/16	0.625	1	0.438
6	9	7 3/8	0.688	1	0.438
8	11	9 3/8	0.688	1	0.438
10	13.5	11 5/8	0.875	1.5	0.688
12	16	13 3/4	1	1.5	0.688
14	17	15	1	1.5	0.688
16	19	17	1	1.5	0.688
18	21.5	19 1/8	1.125	1.5	0.688
20	23.5	21 1/8	1.125	1.5	0.688
24	27.5	25 1/8	1.125	1.5	0.688
30	33.5	31 1/8	1.125	1.5	0.688
36	39.5	37 1/8	1.125	1.5	0.688
42	45.5	43 1/8	1.125	2.0	0.945
48	51.5	49 1/8	1.125	2.0	0.945
54	57.5	55 1/8	1.125	2.0	0.945
60	63.5	61 1/8	1.125	2.0	0.945

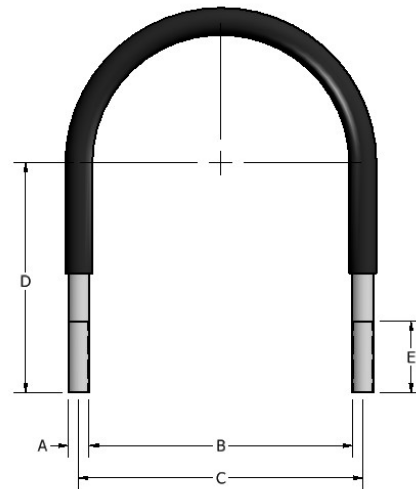
Nominal Pipe Dia. (mm)	Bar Length "L" (mm)	Hole C-C Length "B" (mm)	Bar Hole Diam "G" (mm)	Bar Size "D" (mm)	Bar Height "H" (mm)
20	75	38	10	19	8
25	75	41	12	25	11
40	100	59	12	25	11
50	115	70	12	25	11
80	150	114	15	25	11
100	175	127	15	25	11
150	225	184	17	25	11
200	275	234	17	25	11
250	340	290	22	38	18
300	400	344	25	38	18
350	425	375	25	38	18
400	475	425	25	38	18
450	540	478	28	38	18
500	590	528	28	38	18
600	690	628	28	38	18
750	840	778	28	38	18
900	990	928	28	38	18
1050	1140	1078	28	50	24
1200	1290	1228	28	50	24
1350	1440	1378	28	50	24
1500	1590	1528	28	50	24



CORROSION RESISTANT PRODUCTS

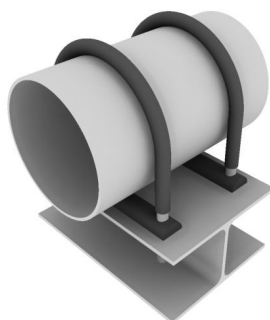
**TRI•BOLT™ with TRI•COAT™
U-BOLTS FOR SERVICE IN CORROSIVE ENVIRONMENTS**

TRI•BOLT™ corrosion resistant restraints prevent the pipe from moving upwards as well as laterally. When it is necessary to limit lateral movement of a pipe, TRI•BOLT™ is the right selection for loads that are not excessive. For higher lateral load capacities, use pairs of TRI•BOLTS™ as shown in the illustration at the bottom of this page. The TRI•COAT™ protective layer is bonded to the U-bolt surface thermally. The TRI•COAT™ protective layer prevents electrical conductivity between the pipe and the u-bolt member. TRI•COAT™ is UV resistant which translates to longer product life. TRI•BOLTS™ can be used at operating temperatures up to 225° F (107°C) and can be provided in carbon steel with a HDG finish, 304 SS or 316 SS.



Nominal Pipe Dia. (IN)	U-Bolt Bar Diam "A" (IN)	U-Bolt Inside "B" (IN)	U-Bolt Leg C-C "C" (IN)	Tangent Length "D" (IN)	Thread Length "E" (IN)
3/4	1/4	1 1/8	1 1/2	2 5/8	2 1/8
1	1/4	1 3/8	1 5/8	2 3/4	2 1/8
1 1/2	3/8	2	2 3/8	3	2 1/2
2	3/8	2 7/16	2 13/16	3 1/4	2 1/2
3	1/2	3 9/16	4 9/16	4	3
4	1/2	4 9/16	5 1/16	4 1/2	3
6	5/8	6 3/4	7 3/8	6 1/8	3 3/4
8	5/8	8 3/4	9 3/8	7 1/8	3 3/4
10	3/4	10 7/8	11 5/8	8 3/8	4
12	7/8	12 7/8	13 3/4	9 5/8	4 1/4
14	7/8	14 1/8	15	10 1/4	4 1/4
16	7/8	16 1/8	17	11 1/4	4 1/4
18	1	18 1/8	19 1/8	12 5/8	4 3/4
20	1	20 1/8	21 1/8	13 5/8	4 3/4
24	1	24 1/8	25 1/8	15 5/8	4 3/4
30	1	30 1/8	31 1/8	18 5/8	4 3/4
36	1	36 1/8	37 1/8	21 5/8	4 3/4
42	1	42 1/8	43 1/8	24 5/8	4 3/4
48	1	48 1/8	49 1/8	27 5/8	4 3/4
54	1	54 1/8	55 1/8	30 5/8	4 3/4
60	1	60 1/8	61 1/8	33 5/8	4 3/4

Nominal Pipe Dia. (mm)	U-Bolt Bar Diam "A" (mm)	U-Bolt Inside "B" (mm)	U-Bolt Leg C-C "C" (mm)	Tangent Length "D" (mm)	Thread Length "E" (mm)
20	6	29	38	67	54
25	6	35	41	70	54
40	9	51	60	76	64
50	9	62	71	83	64
80	12	90	116	102	76
100	12	116	129	114	76
150	16	171	187	156	95
200	16	222	238	181	95
250	19	276	295	213	102
300	22	327	349	244	108
350	22	359	381	260	108
400	22	410	432	286	108
450	25	460	486	321	121
500	25	511	537	346	121
600	25	613	638	397	121
750	25	765	791	473	121
900	25	918	943	549	121
1050	25	1070	1095	625	121
1200	25	1222	1248	702	121
1350	25	1375	1400	778	121
1500	25	1527	1553	854	121





SPECIFICATIONS for TRI*GUARD™ & TRI*COAT™ for use with TRI*BOLT™

TRI*GUARD™ Properties	Value in Metric Units	Value in Imperial Units	Applicable ASTM
Physical Properties			
Density	1.42 g/cc	0.0513 lb/in ³	D792
Water Absorption	0.25%	0.25%	D570
Moisture Absorption at Equilibrium	0.22%	0.22%	D570
Water Absorption at Saturation	0.9%	0.9%	D570 / ISO 62
Melt Flow	1 g/10 min	1 g/10 min	1.05kg/190°C
Mechanical Properties			
Hardness, Rockwell M	94	94	D785
Hardness, Rockwell R	120	120	D785
Tensile Strength, Ultimate	69 MPa	10000 psi	D638
Elongation at Break	75%	75%	D638
Tensile Modulus	2.8 GPa	406 ksi	D638
Flexure Modulus	2.9 GPa	421 ksi	D790
Flexural Yield Strength	99 MPa	14400 psi	D790
Compressive Yield Strength	124 MPa	18000 psi	D695
Poisson's Ratio	0.35	0.35	
Fatigue Strength	32 MPa	4640 psi	D672
Shear Strength	66 MPa	9570 psi	D732
Izod Impact, Notched	1.23 J/cm	2.3 ft-lb/in	D256
Izod Impact, Unnotched	NB	NB	D256
Izod Impact, Notched Low Temperature	0.96 J/cm	1.8 ft-lb/in	D256
Tensile Impact Strength	358 kJ/m ²	170 ft-lb/in ²	D1822
Coefficient of Friction	0.35	0.35	50 mm/s (2 in/s)
Electrical Properties			
Electrical Resistivity	1e+015 ohm-cm	1e+015 ohm-cm	D257
Dielectric Constant	3.7	3.7	D150
Dielectric Strength	19.7 kV/mm	500kV/in	D149
Dissipation Factor	0.005	0.005	D150
Arc Resistance	220 sec	220 sec	D495
Thermal Properties			
CTE, Linear 20°C	122 µm/m-°C	67.8 µin/in-°F	
CTE, Linear 100°C	149 µm/m-°C	82.8 µin/in-°F	
Thermal Conductivity	0.4 W/m-K	2.78 BTU-in/hr-ft ²	
Melting Point	175 °C	347 °F	D3418
Maximum Service Temperature, Air	125 °C	257 °F	At 1.8 MPa
Deflection Temperature at 0.46 MPa (66 psi)	169 °C	336 °F	D648
Deflection Temperature at 1.8 MPa (264 psi)	125 °C	257 °F	D648
Flammability, UL94	HB	HB	
TRI*COAT™ UV Resistant			
Hardness (Shore A)	80 +/- 5	80 +/- 5	D2240
Tensile	12.27 +/- 1.3 MPa	1779 +/- 177 psi	D412
Elongation (%)	330 +/- 33	330 +/- 33	D412
Tear Strength	48.2 +/- 5 N/mm	275 +/- 28 lb/in	D412
Low Service Temperature	-29 °C	-20 °F	
High Service Temperature	107 °C	225 °F	
Electrical Property Insulation	Excellent	Excellent	