



# AMERICAN CONDUIT

By Sapa

## RIGID ALUMINUM CONDUIT

LIGHTER WEIGHT. FASTER INSTALLATION. BETTER VALUE.

[www.americanconduit.com](http://www.americanconduit.com)

# Why Rigid Aluminum Conduit?

## Costs Less Than Steel

- Cost Per Foot Savings of 10-20% Versus Rigid Steel

## Lower Installation Cost

- Labor Savings of 35-75% Versus Rigid Steel
- 1/3 the Weight of Rigid Steel Conduit
- Less Chance of a Workers Compensation Injury
- Easy Field Fabrication

## Explosion Proof

- Replaces Rigid Steel in Virtually All Locations
- Non-Sparking
- Aluminum Conduit Meets All National Electrical Codes – Article 500 Hazardous Area Requirements
- No Toxic Fumes

## Superior Attractive Appearance

- Corrosion Resistant Oxide Film
- No Rust or Unsightly Discoloration or Streaking

## Non-Magnetic

- Protection for Sensitive Environments
- Power Savings Over the Life of the Installation



# Why Buy From American Conduit by Sapa?



**Quality** – QC Systems that Surpass Industry Standards

**Cost** – We Extrude and Thread In-House

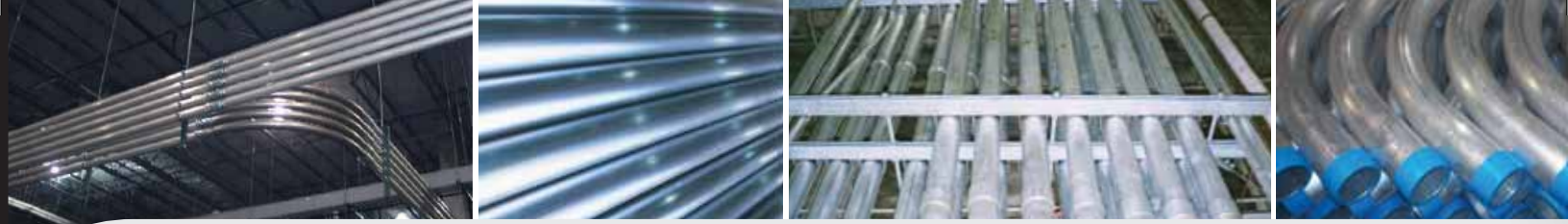
**Experience** – Over 35 Years Manufacturing

**Nationwide Distribution** – 33 Representative Organizations, 20 with Stocking warehouses

**Support** – Training Programs and Personnel

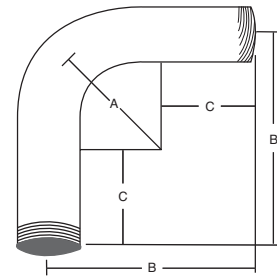
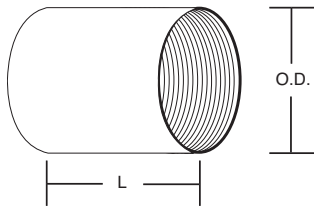
**Service** – Dedicated Customer Service Department

**Technology** – Design and Product Solutions Supported by Sapa's North American Technical Center



## TOLERANCES AND SPECIFICATIONS

Size	Nominal Pipe Size O.D. X Wall	Outside Diameter		Wall Thickness Minimum	Length +/- 1/4 Without Coupling	Couplings		Conduit Weight / Packaging		
		Min.	Max.			Min. Length	Nominal Wt./10 Pcs.	Wt/ Cft.	Pcs/Bndl (Interior Bndl)	Wt. Of Master Bundle
1/2"	.840" X .109"	.809"	.855"	.095"	9' 11-1/4"	1.562"	.61 #	28.1 #	250 (10)	703 #
3/4"	1.050" X .113"	1.019"	1.065"	.099"	9' 11-1/4"	1.625"	.91 #	37.4 #	251 (10)	935 #
1"	1.315" X .133"	1.284"	1.330"	.116"	9' 11"	2.000"	1.25 #	54.5 #	200 (10)	1090 #
1-1/4"	1.660" X .140"	1.629"	1.675"	.122"	9' 11"	2.062"	1.89 #	71.6 #	100 (5)	716 #
1-1/2"	1.900" X .145"	1.869"	1.916"	.127"	9' 11"	2.062"	2.33 #	88.7 #	100 (5)	887 #
2"	2.375" X .154"	2.351"	2.399"	.135"	9' 11"	2.125"	3.46 #	118.5 #	45 (5)	533 #
2-1/2"	2.875" X .203"	2.846"	2.904"	.178"	9' 10-1/2"	3.125"	6.83 #	187.5 #	30 (0)	562 #
3"	3.500" X .216"	3.465"	3.535"	.189"	9' 10-1/2"	3.250"	9.14 #	246.3 #	20 (0)	492 #
3-1/2"	4.000" X .226"	3.960"	4.040"	.198"	9' 10-1/4"	3.375"	10.80 #	295.6 #	20 (0)	591 #
4"	4.500" X .237"	4.455"	4.545"	.207"	9' 10-1/4"	3.500"	14.20 #	350.2 #	20 (0)	700 #
5"	5.563" X .258"	5.507"	5.619"	.226"	9' 10"	3.750"	24.20 #	478.9 #	8 (0)	383 #
6"	6.625" X .280"	6.559"	6.691"	.245"	9' 10"	4.000"	32.1 #	630.4 #	6 (0)	378 #



### RIGID ALUMINUM COUPLINGS

Size	Standard Packaging	Nom. Wt/100 Pcs.	O.D. In Inches	Length In Inches
1/2"	100	6 #	1-9/16"	1-9/16"
3/4"	50	9 #	1-21/64"	1-5/8"
1"	50	12 #	9-9/16"	2"
1-1/4"	50	18 #	1-61/64"	2-1/16"
1-1/2"	50	23 #	2-7/32"	2-1/16"
2"	50	33 #	2-3/4"	2-1/8"
2-1/2"	25	69 #	3-9/32"	3-1/8"
3"	25	92 #	3-15/16"	3-1/4"
3-1/2"	10	105 #	4-7/16"	3-3/8"
4"	10	142 #	5"	3-1/2"
5"	5	234 #	6-19/64"	3-3/4"
6"	BULK	318 #	7-25/64"	4"

### RIGID ALUMINUM ELBOWS (Standard Radius Only)

Size	Standard Packaging	Nom. Wt/100 Pcs.	Radius (A)	Leg Length (B)	Straight Length (C)
1/2"	50	26 #	4"	6-1/2"	2-1/2"
3/4"	50	38 #	4-1/2"	7-1/4"	2-3/4"
1"	25	64 #	5-3/4"	8-3/8"	2-7/8"
1-1/4"	20	100 #	7-1/4"	10-1/4"	3"
1-1/2"	10	140 #	8-1/4"	11-7/8"	3-5/8"
2"	10	236 #	9-1/2"	14"	4-1/2"
2-1/2"	10	400 #	10-1/2"	15-3/4"	5-1/4"
3"	10	644 #	13"	18-3/4"	5-3/4"
3-1/2"	5	844 #	15"	21-3/4"	6-3/4"
4"	5	1055 #	16"	23"	7"
5"	BULK	2350 #	24"	36"	11"
6"	BULK	3700 #	30"	42-1/2"	12-1/2"



## COMPOSITION OF ALUMINUM ALLOY

The obvious choice for code approved, UL listed, lightweight, lower cost rigid metal conduit, **ALUMINUM!**

	Percentage Limits per Industry Standards	Aluminum Conduit, Typical Percentages		Percentage Limits per Industry Standards	Aluminum Conduit, Typical Percentages
<b>Copper</b>	0.10 max *	0.02	<b>Chromium</b>	0.10 max.	0.0
<b>Silicon</b>	0.20 to 0.6	0.40	<b>Titanium</b>	0.10 max.	0.01
<b>Iron</b>	0.35 max.	0.20	<b>Zinc</b>	0.10 max.	0.0
<b>Magenesium</b>	0.45 to 0.9	0.70	<b>Others</b>	0.15 max.	Trace
<b>Manganese</b>	.010 max.	0.01	<b>Aluminum</b>	Remainder	Remainder

\*Maximum limit set by the Aluminum Association. Alloys with up to 0.40% copper are acceptable to Underwriters Laboratories, Inc. for use in rigid aluminum conduit; typical conduit uses only 0.02, or 95% less, Sapa conduit is around 0.004%, which is just a trace and considered to be copper free.

## SPECIFICATION DATA

**Alloy:** 6063 Aluminum Alloy, T-1 Temper. (Former designation T-42)

### Specification Compliance:

Federal Specification WW-C-540c.  
 Underwriters' Laboratories UL 6A, latest revision  
 American National Standards Institute (ANSI) C80.5  
 Canadian Standard Association CSA C 22.2 No.45

**Thread Protectors:** Rigid Aluminum Conduit is shipped with color coded thread protectors, which shield threads, and simplifies size selection.



## MANUFACTURER'S ID/PART #

Conduit Size	Part #	Coupling Size	Part#	90° Elbow Size	Part #	45° Elbow Size	Part #
1/2"	1-012-10-00	1/2"	2-012	1/2"	3-012	1/2"	3-012-45
3/4"	1-034-10-00	3/4"	2-034	3/4"	3-034	3/4"	3-034-45
1 "	1-100-10-00	1"	2-100	1"	3-100	1"	3-100-45
1-1/4"	1-114-10-00	1-1/4"	2-114	1-1/4"	3-114	1-1/4"	3-114-45
1-1/2"	1-112-10-00	1-1/2"	2-112	1-1/2"	3-112	1-1/2"	3-112-45
2"	1-200-10-00	2"	2-200	2"	3-200	2"	3-200-45
2-1/2"	1-212-10-00	2-1/2"	2-212	2-1/2"	3-212	2-1/2"	3-212-45
3"	1-300-10-00	3"	2-300	3"	3-300	3"	3-300-45
3-1/2"	1-312-10-00	3-1/2"	2-312	3-1/2"	3-312	3-1/2"	3-312-45
4"	1-400-10-00	4"	2-400	4"	3-400	4"	3-400-45
5"	1-500-10-00	5"	2-500	5"	3-500	5"	3-500-45
6"	1-600-10-00	6"	2-600	6"	3-600	6"	3-600-45



## ALUMINUM CONDUIT WEIGHT CHART

Feet	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"	5"	6"
100	28	37	55	72	89	119	188	246	296	350	479	630
200	56	75	109	143	177	237	375	493	591	700	958	1261
300	84	112	164	215	266	356	563	739	887	1051	1437	1891
400	112	150	218	286	355	474	750	985	1182	1401	1916	2522
500	141	187	273	358	444	593	938	1232	1478	1751	2395	3152
600	169	224	327	430	532	711	1125	1478	1774	2101	2873	3782
700	197	262	382	501	621	830	1313	1724	2069	2451	3352	4413
800	225	299	436	573	710	948	1500	1970	2365	2802	3831	5043
900	253	337	491	644	798	1067	1688	2217	2660	3152	4310	5674
1000	281	374	545	716	887	1185	1875	2463	2956	3502	4789	6304
1100	309	411	600	788	976	1304	2063	2709	3252	3852	5268	6934
1200	337	449	654	859	1064	1422	2250	2956	3547	4202	5747	7565
1300	365	486	709	931	1153	1541	2438	3202	3843	4553	6226	8195
1400	393	524	763	1002	1242	1659	2625	3448	4138	4903	6705	8826
1500	422	561	818	1074	1331	1778	2813	3695	4434	5253	7184	9456
1600	450	598	872	1146	1419	1896	3000	3941	4730	5603	7662	10086
1700	478	636	927	1217	1508	2015	3188	4187	5025	5953	8141	10717
1800	506	673	981	1289	1597	2133	3375	4433	5321	6304	8620	11347
1900	534	711	1036	1360	1685	2252	3563	4680	5616	6654	9099	11978
2000	562	748	1090	1432	1774	2370	3750	4926	5912	7004	9578	12608
2500	703	935	1363	1790	2218	2963	4688	6158	7390	8755	11973	15760
3000	843	1122	1635	2148	2661	3555	5625	7389	8868	10506	14367	18912
3500	984	1309	1908	2506	3105	4148	6563	8621	10346	12257	16762	22064
4000	1124	1496	2180	2864	3548	4740	7500	9852	11824	14008	19156	25216
4500	1265	1683	2453	3222	3992	5333	8438	11084	13302	15759	21551	28368
5000	1405	1870	2725	3580	4435	5925	9375	12315	14780	17510	23945	31520
6000	1686	2244	3270	4296	5322	7110	11250	14778	17736	21012	28734	37824
7000	1967	2618	3815	5012	6209	8295	13125	17241	20692	24514	33523	44128
8000	2248	2992	4360	5728	7096	9480	15000	19704	23648	28016	38312	50432
9000	2529	3366	4905	6444	7983	10665	16875	22167	26604	31518	43101	56736
10000	2810	3740	5450	7160	8870	11850	18750	24630	29560	35020	47890	63040
15000	4215	5610	8175	10740	13305	17775	28125	36945	44340	52530	71835	94560
20000	5620	7480	10900	14320	17740	23700	37500	49260	59120	70040	95780	126080
25000	7025	9350	13625	17900	22175	29625	46875	61575	73900	87550	119725	157600
30000	8430	11220	16350	21480	26610	35550	56250	73890	88680	105060	143670	189120
35000	9835	13090	19075	25060	31045	41475	65625	86205	103460	122570	167615	220640
40000	11240	14960	21800	28640	35480	47400	75000	98520	118240	140080	191560	252160

## RECOMMENDED INSTALLATION PRACTICES

**Cutting** – A hacksaw is recommended for trade sizes 1 1/4" and smaller. Power cut-off equipment is recommended for larger trade sizes.

**Bending** – Standard EMT benders, one size larger than the size of the conduit, should be used on conduit trade sizes 1" and smaller. Conventional equipment is recommended for larger trade sizes.

**Threading** – Sharp dies and conventional cutting oil should be used.

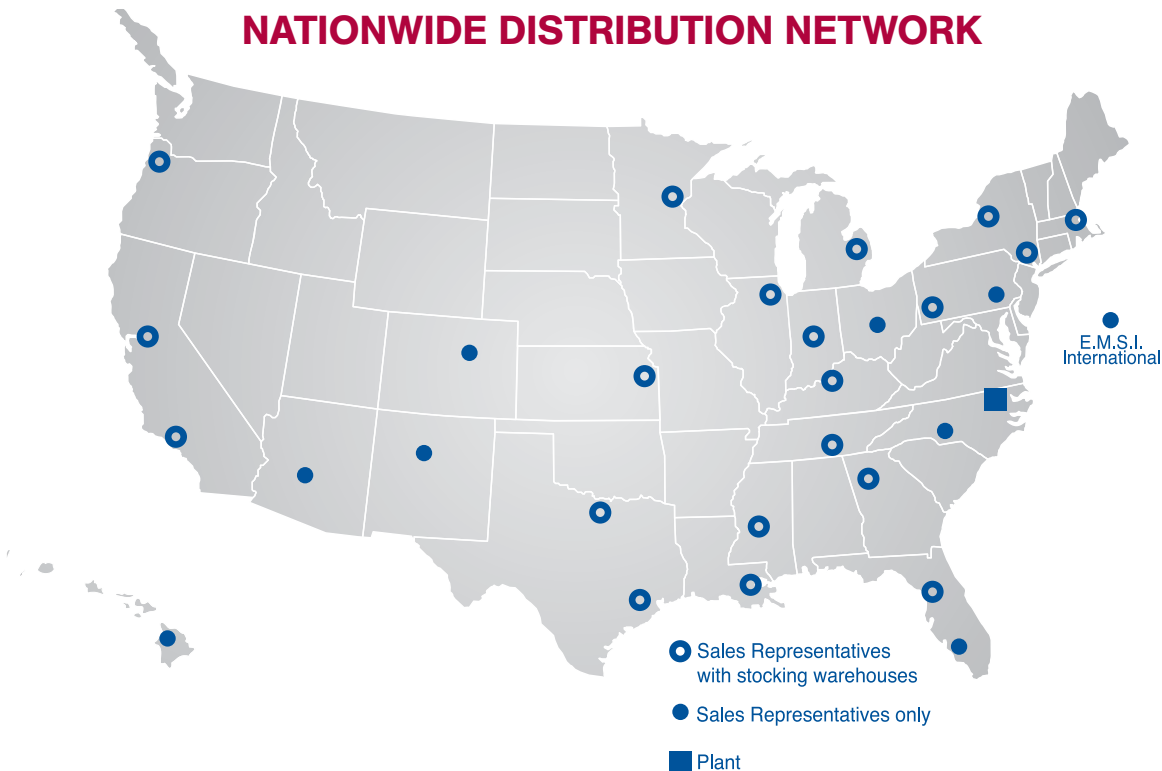
**Fittings** – Aluminum fittings are recommended, but cadmium-plated or galvanized fittings are satisfactory for most installations.

### Fishing and Wire Pulling –

**Small Conduit** – In trade sizes 1 1/2" and smaller and on shorter runs (up to 100 feet), polyethylene fish tapes and round, flexible, speedometer-type steel cables are recommended. Use of flat steel tapes should be avoided.

**Large Conduit** – For larger conduit or longer runs, polypropylene rope is recommended.

**Soil or Concrete Installation** – Underwriters' Laboratories Electrical Construction Equipment Directory (UL Green Book) states that aluminum conduit used in concrete or in contact with soil requires supplemental corrosion protection. Examples are paints and tape wraps approved for the purpose, or PVC coated conduit.



### American Conduit by Sapa

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