

Low Resistance ALSS Rail Specification Sheet



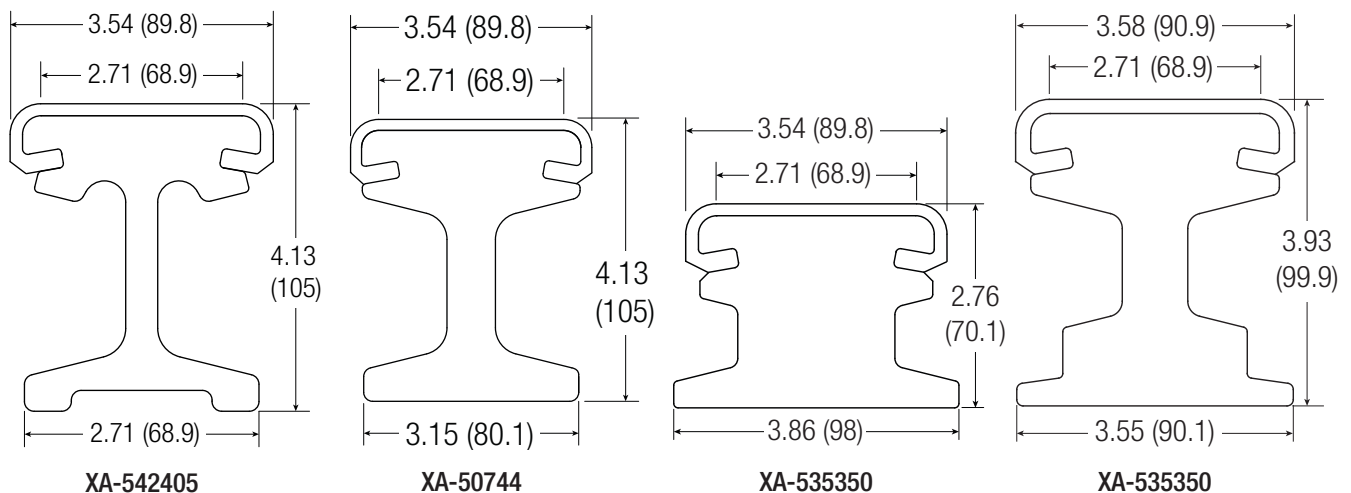
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Technical Specifications

Rail Characteristics

- The "Welded Cap Rail" conductor body is extruded to a defined profile using a 6000 Series aluminum alloy. This material yields an optimal combination of electrical conductivity, mechanical strength, and corrosion resistance.
- The patented wrap-around stainless steel cap provides excellent wear resistance and protects the aluminum conductor.
- Continuous welding along the edge of the stainless steel cap ensures a smooth collector shoe contact surface and efficient electrical transfer from rail to train.
- A high temperature, oxide inhibiting grease is applied between the stainless steel and the aluminum to minimize interface resistance.

Part Number	Reference	Nominal Current +/- 10%	Resistance @ 20°C	
			μΩ/m	μΩ/ft
XA-542405	Sao Paulo Line 17	3800	9.01	2.95
XA-50744	BC Transit Canada Line	4500	6.99	2.13
XA-535350	Sao Paulo Line 15	4500	6.66	2.03
XA-564357	BART Profile	5400	6.56	2.00
XA-546325	NYCT 150lb	6000	4.59	1.40
XA-545401	LIRR/MNRR 150lb	6000	4.33	1.32
XA-568500	85C Profile	6000	4.92	1.50
XA-568594	84C Profile	6000	4.32	1.32



Features

Conductors

- Weight: 64% less than steel rail; 50% less than steel/aluminum composite rail
- Resistance: 63% less than steel rail; 36% less than steel/aluminum composite rail

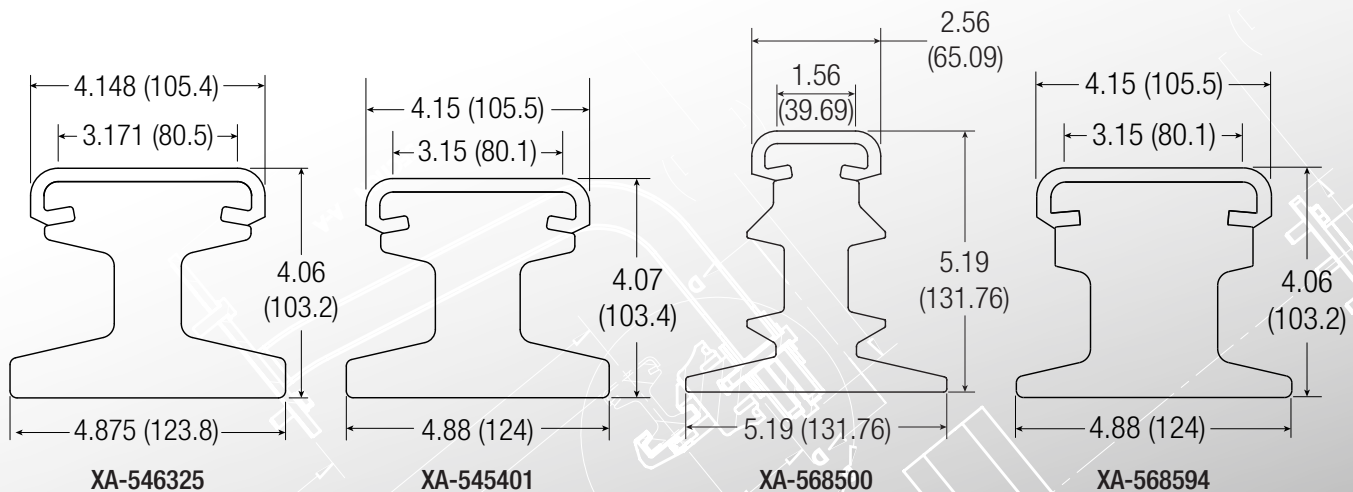
Aluminum

- 6101-T6 or 6063-T6 alloy
- 32ksi tensile strength

Stainless Steel

- 300 series or 400 series with HRAP finish

Mass		AL Area		Cap Thickness		Notes
kg/m	lb/yd	mm ²	in ²	mm	in	
14.30	28.90	3451	5.35	4	0.16	Lower Amperage International Systems
17.15	34.60	4445	6.89	4	0.16	Lower Amperage International Systems
17.68	35.60	4677	7.25	4	0.16	Low Profile Applications
18.88	38.07	4839	7.50	4.5	0.18	Replacement for K-Rail
25.39	51.19	6735	10.44	6	0.236	Replacement for 150LB Steel Rail
27.00	54.50	7193	11.15	6.35	0.25	Replacement for 150LB Steel Rail
23.51	47.43	6645	10.3	6.35	0.25	Replacement for 85C Composite Rail
28.00	56.46	7561	11.72	6.35	0.25	Replacement for 84C Composite Rail



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