

ACS - Aluminum Clad Steel Strand

Bare overhead conductor for standard-based line selection

ACS - Aluminum Clad Steel Strand is prepared for preliminary product selection and quotation review. This product is used for overhead line routes where conductor material, stranding, rated strength and DC resistance must be reviewed against the selected project standard. Final selection should consider span length, mechanical loading, route environment and local utility requirements.



VOLTAGE

Not voltage-rated; selected by conductor standard and line design

CONDUCTOR

Steel or reinforced conductor route, according to standard

TYPICAL USE

Overhead transmission and distribution lines

STANDARDS

ASTM B416; ASTM B415

DATA SCOPE

6 technical table(s) included for preliminary selection

SELECTION NOTE

Confirm standard route, conductor size, stranding, strength and line design.

For quotation review, provide cable type, standard, size, quantity and project destination.

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Application & Selection Summary

Typical applications

- Overhead transmission and distribution lines
- utility feeder routes
- substation or busbar connections
- replacement projects requiring standard-based bare conductor selection.

Selection logic

- Review the required standard route first.
- Compare conductor area, stranding, rated strength, DC resistance and overall diameter.
- For higher tension or long spans, compare with reinforced or alloy conductor alternatives.

Construction Overview

Item	Website-ready content
Product route	Concentric-lay stranded bare conductor. Material and reinforcement depend on the selected product type and standard route.
Voltage	Reviewed according to selected product standard
Conductor	Steel or reinforced conductor route, according to standard
Standards	ASTM B416; ASTM B415
Confirmation	Final structure, dimensions and packing should follow selected standard, quotation review and order specification.

Readable Data Index

Data route	Size / rating range	Construction	Diameter / OD	Resistance / weight / rating
ACS - Aluminum Clad Steel Strand - Technical Table 1	50.32 - 15.78	See table	See table	1.6990 - 5.4150
ACS - Aluminum Clad Steel Strand - Technical Table 2	117.40 - 23.16	See table	See table	0.7426 - 3.6970
ACS - Aluminum Clad Steel Strand - Technical Table 3	318.70 - 99.96	See table	See table	0.2698 - 0.8601
ACS - Aluminum Clad Steel Strand - Technical Table 4	620.70 - 194.70	See table	See table	0.1404 - 0.4443

Data boundary: these tables support website launch, quotation review and preliminary product selection. For project execution, final dimensions, electrical performance, packing and compliance documents should be confirmed against the selected project standard and order specification.

ACS - Aluminum Clad Steel Strand - Technical Table 1

Reference table for preliminary selection and quotation review.

Construction	Wire Dia. (mm)	Strand Dia. (mm)	Breaking Load (kN)	Weight (kg/km)	Resistance at 20°C (Ω/km)	Cross Section (mm²)
3 No. 5	4.620	9.96	5.547	334.1	1.6990	50.32
3 No. 6	4.115	8.86	4.663	265.0	2.1420	39.90
3 No. 7	3.665	7.90	3.910	210.1	2.7010	31.65
3 No. 8	3.264	7.04	3.269	166.7	3.4060	25.10
3 No. 9	2.906	6.27	2.592	132.2	4.2940	19.90
3 No. 10	2.588	5.59	2.056	104.8	5.4150	15.78

ACS - Aluminum Clad Steel Strand - Technical Table 2

Reference table for preliminary selection and quotation review.

Construction	Wire Dia. (mm)	Strand Dia. (mm)	Breaking Load (kN)	Weight (kg/km)	Resistance at 20°C (Ω/km)	Cross Section (mm²)
7 No. 5	4.620	13.90	12.260	781.1	0.7426	117.40
7 No. 6	4.115	12.30	10.310	619.5	0.9198	93.10
7 No. 7	3.665	11.00	8.645	491.1	1.1600	73.87
7 No. 8	3.264	9.78	7.226	389.6	1.4630	58.56
7 No. 9	2.906	8.71	5.729	308.9	1.8440	46.44
7 No. 10	2.588	7.77	4.545	245.1	2.3250	36.83
7 No. 11	2.304	6.91	3.604	194.4	2.9320	29.21
7 No. 12	2.052	6.15	2.858	154.2	3.6970	23.16

ACS - Aluminum Clad Steel Strand - Technical Table 3

Reference table for preliminary selection and quotation review.

Construction	Wire Dia. (mm)	Strand Dia. (mm)	Breaking Load (kN)	Weight (kg/km)	Resistance at 20°C (Ω/km)	Cross Section (mm²)
19 No. 5	4.620	23.10	33.270	2129.0	0.2698	318.70
19 No. 6	4.115	20.60	27.990	1688.0	0.3402	252.70
19 No. 7	3.665	18.30	23.460	1339.0	0.4290	200.40
19 No. 8	3.264	16.30	19.610	1062.0	0.5409	158.90
19 No. 9	2.906	14.50	15.550	842.0	0.6821	126.10
19 No. 10	2.588	12.90	12.330	667.7	0.8601	99.96

ACS - Aluminum Clad Steel Strand - Technical Table 4

Reference table for preliminary selection and quotation review.

Construction	Wire Dia. (mm)	Strand Dia. (mm)	Breaking Load (kN)	Weight (kg/km)	Resistance at 20°C (Ω/km)	Cross Section (mm²)
37 No. 5	4.620	32.26	64.770	4169.0	0.1404	620.70
37 No. 6	4.115	28.70	54.500	3307.0	0.1757	492.20
37 No. 7	3.665	25.70	45.690	2623.0	0.2216	390.30
37 No. 8	3.264	22.80	38.190	2080.0	0.2794	309.50
37 No. 9	2.906	20.30	30.290	1649.0	0.3523	245.50
37 No. 10	2.588	18.10	24.020	1308.0	0.4443	194.70

ACS - Aluminum Clad Steel Strand - Technical Table 5

Reference table for preliminary selection and quotation review.

AWG	Wire Diameter (mm)	Breaking Strength (MPa)	Breaking Load (kN)	Weight (kg/km)	Resistance at 20°C (Ω/km)	Cross Section (mm²)
No. 4	5.189	1070	2.305	139.3	4.009	21.15
No. 5	4.620	1140	1.946	110.5	5.056	16.77
No. 6	4.115	1210	1.637	87.6	6.375	13.30
No. 7	3.665	1280	1.372	69.5	8.038	10.55
No. 8	3.264	1340	1.147	55.1	10.130	8.37
No. 9	2.906	1340	0.909	43.7	12.780	6.63
No. 10	2.588	1340	0.721	34.7	16.120	5.26
No. 11	2.304	1340	0.572	27.5	20.320	4.17
No. 12	2.052	1340	0.454	21.8	25.630	3.31

ACS - Aluminum Clad Steel Strand - Technical Table 6

Reference table for preliminary selection and quotation review.

Designation	Stranding	Overall Diameter (mm)	Breaking Load (kN)	Weight (kg/km)	Approx. Resistance (Ω /km)	on Route
6MP	7×12 AWG	6.15	28	155	3.71	Guy / Messenger
8MP	7×11 AWG	6.91	36	195	2.92	Guy / Messenger
10MP	7×10 AWG	7.77	44	246	2.33	Guy / Messenger
12.5MP	7×9 AWG	8.71	56	307	1.84	Guy / Messenger
14MP	7×0.121 in	9.22	63	345	1.64	Guy / Messenger
16MP	7×8 AWG	9.80	71	387	1.48	Guy / Messenger
20MP	7×0.148 in	11.28	89	517	1.12	Guy / Messenger