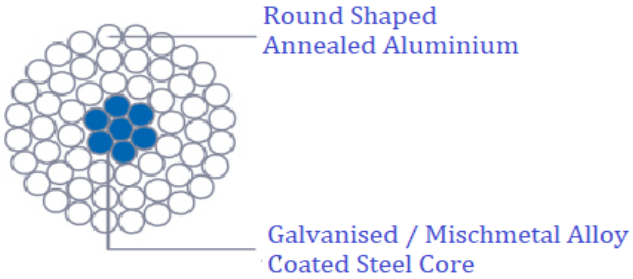
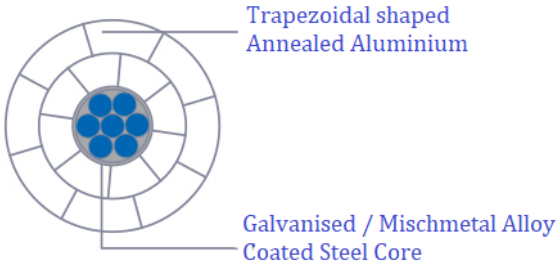
Aluminium Conductor Steel Supported (ACSS)

ACSS conductor consists of fully annealed strands of aluminium around a stranded steel core. In appearance, ACSS conductors are essentially identical to standard ACSR conductors. ACSS is typically available in "Standard Round Strand" construction or "Trapezoidal Aluminium Wire" construction with equal area or equal diameter to conventional round wire construction. The steel core may be of High Strength (HS), Extra High Strength (EHS), Ultra High Strength (UHS) steel, mischmetal or aluminium Clad Steel core.





APPLICATION

Sterlite® Aluminium Conductor Steel Supported (ACSS)
ACSS conductors can be used as a low loss solution, as part of efficient transmission networks. These conductors are suitable for lines that transmit very high or fluctuating loads.

Ideal for Reconductoring & New Lines.

- Increase capacity of lines while maintaining Electrical clearance.
- Can be Deployed in Existing Structures or can reduce strain on structures, increasing life.
- 100% more capacity building towards future demands.

BENEFITS

- Improved self-damping characteristics and high degree of resistance to vibration fatigue.
- Can operate continuously at high temperatures up to 250°C with appropriate steel core coating v/s 100°C for standard ACSR, hence can carry twice as much current as ACSR conductor.
- Less susceptible to Aeolian vibration fatigue due to very low mechanical load on the annealed aluminium wire.
- Requires conventional installation techniques.
- Allows for lower overall transmission cost.

EMPOWERING HUMANITY BY ADDRESSING THE TOUGHEST CHALLENGES OF ENERGY DELIVERY

TECHNICAL SPECIFICATIONS

PROPERTIES	UNIT	ACSS/R HAWK	ACSS/R DRAKE	ACSS/R CURLEW	ACSS/TW HAWK	ACSS/TW DRAKE	ACSS/TW CURLEW
Appropriate System Voltage	kV	132 kV	220 kV	220 kV / above	132 kV	220 kV	220 kV / above
Equivalent ACSR		PANTHER	ZEBRA	MOOSE	PANTHER	ZEBRA	MOOSE
Reference Standards		ASTM B 856			ASTM B 857		
Conductor diameter	mm	21.77	28.13	31.62	20.07	25.65	28.70
Weight	kg/km	976	1629.0	1981	975	1623.	1973
Ultimate tensile strength	KN	88.0	145.0	155	88.0	144.5	155
DC resistance at 20°C temperature	Ohm/km	0.1161	0.0696	0.0536	0.116	0.0695	0.0534
Current carrying capacity at maximum operating temperature (250)	A	1212	1701	1986	1181	1651	1953

Note: The Catalogue conductor Parameter are informative and can be customized as per Project Requirements.

Assumptions: Ampacity is calculated based on, 45°C ambient temperature, 0.56 m/s wind velocity, 0.8 as coefficient of solar absorption, 0.45 as coefficient of emissivity and 1045 W/sq.m coefficient for solar radiation, 0 m Elevation.

Non-Specular (NS) Dull Finish Conductor can be available on special requirement.

Disclaimer:

** Parameters mentioned in the document are indicative and can vary subject to different standards*

** Customizations are available on select products. Please indicate your interest by reaching out to the sales team*

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