

TS-1802, Rev: 03



Data Sheet: **ACFR 121/17-FA-TT**

Mechanical Specifications	Metric		Imperial	
Overall Diameter of Conductor	14	mm	0.551	in
Nominal Aluminum Cross-sectional Area*	121.3	mm ²	239.4	kcmil
Nominal Diameter of Composite Core (from CFCC data sheet)	5.3	mm	0.209	in
Nominal Cross-sectional Area of Core	17.2	mm ²	33.9	kcmil
Nominal Cross-sectional Area of the Conductor	138.5	mm ²	273.3	kcmil
Ultimate Tensile Strength of Conductor	43.8	kN	9.8	kips
Rated Strength of Core	36.8	kN	8.3	kips
Core Nominal Mass per unit length	27	kg/km	18.1	lb/kft
Aluminum Nominal Mass per unit length*	335	kg/km	225.1	lb/kft
Conductor Nominal Mass per unit length	362	kg/km	243.3	lb/kft
Maximum Allowable Operating Temperature	180	°C	356	°F
Coefficient of Linear Expansion Above Thermal Kneepoint	1.00E-06	/°C	5.56E-07	/°F
Coefficient of Linear Expansion Below Thermal Kneepoint	1.78E-05	/°C	9.87E-06	/°F
Final Modulus of Elasticity Above Thermal Kneepoint	122	GPa	17.7	Msi
Final Modulus of Elasticity Below Thermal Kneepoint	63.32	GPa	9.2	Msi
Electrical Specifications				
Nominal Resistivity of Aluminium at 20°C, DC 63% IACS	0.2306	ohm/km	0.3711	ohm/mile
Current carrying capacity at maximum operating temperature@180 °C	665	Amps	665	Amps
Emergency operating temperature	200	°C	392	°F

Note : Current Carrying Capacity is Calculated as per the following Assumptions

Wind Velocity (m/sec)	0.61
Solar Absorption Co-efficient	0.5
Emissivity	0.5
Ambient Temperature (°C)	40
Solar Radiation (Watt/Sq.m)	1033

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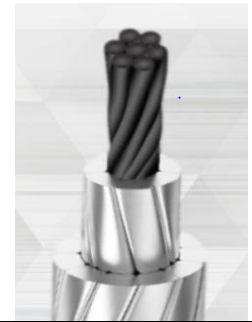
Data Sheet: **ACFR 99/17-T3-RR**

Mechanical Specifications	Metric		Imperial	
	Overall Diameter of Conductor	14.15	mm	0.557
Nominal Aluminum Cross-sectional Area*	99.74	mm ²	196.8	kcmil
Nominal Diameter of Composite Core (from CFCC data sheet)	5.3	mm	0.209	in
Nominal Cross-sectional Area of Core	17.2	mm ²	33.9	kcmil
Nominal Cross-sectional Area of the Conductor	116.94	mm ²	230.8	kcmil
Ultimate Tensile Strength of Conductor	38.5	kN	8.7	kips
Rated Strength of Core	36.8	kN	8.3	kips
Core Nominal Mass per unit length	27	kg/km	18.1	lb/kft
Aluminum Nominal Mass per unit length*	275	kg/km	184.8	lb/kft
Conductor Nominal Mass per unit length	302	kg/km	202.9	lb/kft
Maximum Allowable Operating Temperature	180	°C	356	°F
Coefficient of Linear Expansion Above Thermal Kneepoint	1.00E-06	/°C	5.56E-07	/°F
Coefficient of Linear Expansion Below Thermal Kneepoint	1.69E-05	/°C	9.39E-06	/°F
Final Modulus of Elasticity Above Thermal Kneepoint	122	GPa	17.7	Msi
Final Modulus of Elasticity Below Thermal Kneepoint	64.86	GPa	9.4	Msi
Electrical Specifications				
Nominal Resistivity of Aluminium at 20°C, DC 63% IACS	0.2943	ohm/km	0.4737	ohm/mile
Current carrying capacity at maximum operating temperature@180 °C	591	Amps	591	Amps
Emergency operating temperature	200	°C	392	°F

Note: Current Carrying Capacity is Calculated as per the following Assumptions

Wind Velocity (m/sec)	0.61
Solar Absorption Co-efficient	0.5
Emissivity	0.5
Ambient Temperature (°C)	40
Solar Radiation (Watt/Sq.m)	1033

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Data Sheet: **ACFR 149/17-FA-TT**

Mechanical Specifications	Metric		Imperial	
	Overall Diameter of Conductor	15.3	mm	0.602
Nominal Aluminium Cross-sectional Area*	148.77	mm ²	293.6	kcmil
Nominal Diameter of Composite Core (from CFCC data sheet)	5.3	mm	0.209	in
Nominal Cross-sectional Area of Core	17.22	mm ²	34.0	kcmil
Nominal Cross-sectional Area of the Conductor	165.99	mm ²	327.6	kcmil
Ultimate Tensile Strength of Conductor	45	kN	10.1	kips
Rated Strength of Core	36.8	kN	8.3	kips
Core Nominal Mass per unit length	27	kg/km	18.1	lb/kft
Aluminium Nominal Mass per unit length*	411	kg/km	276.2	lb/kft
Conductor Nominal Mass per unit length	438	kg/km	294.3	lb/kft
Maximum Allowable Operating Temperature	180	°C	356	°F
Coefficient of Linear Expansion Above Thermal Kneepoint	1.00E-06	/°C	5.56E-07	/°F
Coefficient of Linear Expansion Below Thermal Kneepoint	1.85E-05	/°C	1.03E-05	/°F
Final Modulus of Elasticity Above Thermal Kneepoint	122	GPa	17.7	Msi
Final Modulus of Elasticity Below Thermal Kneepoint	61.95	GPa	9.0	Msi
Electrical Specifications				
Nominal Resistivity of Aluminium at 20°C, DC 63% IACS	0.1879	ohm/km	0.3024	ohm/mile
Current carrying capacity at maximum operating temperature@180 °C	757	Amps	757	Amps
Emergency operating temperature	200	°C	392	°F

Note : Current Carrying Capacity is Calculated as per the following Assumptions

Wind Velocity (m/sec)	0.61
Solar Absorption Co-efficient	0.5
Emissivity	0.5
Ambient Temperature (°C)	40
Solar Radiation (Watt/Sq.m)	1033

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Data Sheet: **ACFR 121/28-T3-RR**

Mechanical Specifications	Metric		Imperial	
	Overall Diameter of Conductor	15.89	mm	0.626
Nominal Aluminum Cross-sectional Area*	121.41	mm ²	239.6	kcmil
Nominal Diameter of Composite Core (from CFCC data sheet)	6.8	mm	0.268	in
Nominal Cross-sectional Area of Core	28.33	mm ²	55.9	kcmil
Nominal Cross-sectional Area of the Conductor	149.74	mm ²	295.5	kcmil
Ultimate Tensile Strength of Conductor	71.8	kN	16.1	kips
Rated Strength of Core	60.3	kN	13.6	kips
Core Nominal Mass per unit length	44	kg/km	29.6	lb/kft
Aluminum Nominal Mass per unit length*	336	kg/km	225.8	lb/kft
Conductor Nominal Mass per unit length	380	kg/km	255.4	lb/kft
Maximum Allowable Operating Temperature	180	°C	356	°F
Coefficient of Linear Expansion Above Thermal Kneepoint	1.00E-06	/°C	5.56E-07	/°F
Coefficient of Linear Expansion Below Thermal Kneepoint	1.55E-05	/°C	8.61E-06	/°F
Final Modulus of Elasticity Above Thermal Kneepoint	122	GPa	17.7	Msi
Final Modulus of Elasticity Below Thermal Kneepoint	67.68	GPa	9.8	Msi
Electrical Specifications				
Nominal Resistivity of Aluminium at 20°C, DC 63% IACS	0.2420	ohm/km	0.3895	ohm/mile
Current carrying capacity at maximum operating temperature@180 °C	675	Amps	675	Amps
Emergency operating temperature	200	°C	392	°F

Note : Current Carrying Capacity is Calculated as per the following Assumptions

Wind Velocity (m/sec)	0.61
Solar Absorption Co-efficient	0.5
Emissivity	0.5
Ambient Temperature (°C)	40
Solar Radiation (Watt/Sq.m)	1033

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Data Sheet: **ACFR 182/28-FA-TT**

Mechanical Specifications	Metric		Imperial	
Overall Diameter of Conductor	17.1	mm	0.673	In
Nominal Aluminium Cross-sectional Area*	181.79	mm ²	358.8	kcmil
Nominal Diameter of Composite Core (from CFCC data sheet)	6.8	mm	0.268	in
Nominal Cross-sectional Area of Core	28.2	mm ²	55.7	kcmil
Nominal Cross-sectional Area of the Conductor	209.99	mm ²	414.4	kcmil
Ultimate Tensile Strength of Conductor	70.77	KN	15.9	kips
Rated Strength of Core	60.3	KN	13.6	kips
Core Nominal Mass per unit length	44	kg/km	29.6	lb/kft
Aluminium Nominal Mass per unit length*	502	kg/km	337.3	lb/kft
Conductor Nominal Mass per unit length	546	kg/km	366.9	lb/kft
Maximum Allowable Operating Temperature	180	oC	356	oF
Coefficient of Linear Expansion Above Thermal Kneepoint	1.00E-06	/oC	5.56E-07	/oF
Coefficient of Linear Expansion Below Thermal Kneepoint	1.74E-05	/oC	9.67E-06	/oF
Final Modulus of Elasticity Above Thermal Kneepoint	122	Gpa	17.7	Msi
Final Modulus of Elasticity Below Thermal Kneepoint	64.0	Gpa	9.3	Msi
Electrical Specifications				
Nominal Resistivity of Aluminium at 20°C, DC 63% IACS	0.15387	ohm/km	0.2476	ohm/mile
Current carrying capacity at maximum operating temperature@180 °C	865	Amps	865	Amps
Emergency operating temperature	200	°C	392	°F

Note : Current Carrying Capacity is Calculated as per the following Assumptions

Wind Velocity (m/sec)	0.61
Solar Absorption Co-efficient	0.5
Emissivity	0.5
Ambient Temperature (°C)	40
Solar Radiation (Watt/Sq.m)	1033

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Data Sheet: **ACFR 213/28-FA-TT**

Mechanical Specifications	Metric		Imperial	
	Overall Diameter of Conductor	18.29	mm	0.720
Nominal Aluminium Cross-sectional Area*	212.73	mm ²	419.8	kcmil
Nominal Diameter of Composite Core (from CFCC data sheet)	6.8	mm	0.268	in
Nominal Cross-sectional Area of Core	28.2	mm ²	55.7	kcmil
Nominal Cross-sectional Area of the Conductor	240.93	mm ²	475.5	kcmil
Ultimate Tensile Strength of Conductor	72.6	kN	16.3	kips
Rated Strength of Core	60.3	kN	13.6	kips
Core Nominal Mass per unit length	44	kg/km	29.6	lb/kft
Aluminium Nominal Mass per unit length*	588	kg/km	395.1	lb/kft
Conductor Nominal Mass per unit length	632	kg/km	424.7	lb/kft
Maximum Allowable Operating Temperature	180	°C	356	°F
Coefficient of Linear Expansion Above Thermal Kneepoint	1.00E-06	/°C	5.56E-07	/°F
Coefficient of Linear Expansion Below Thermal Kneepoint	1.80E-05	/°C	1.00E-05	/°F
Final Modulus of Elasticity Above Thermal Kneepoint	122	GPa	17.7	Msi
Final Modulus of Elasticity Below Thermal Kneepoint	62.85	GPa	9.1	Msi
Electrical Specifications				
Nominal Resistivity of Aluminium at 20°C, DC 63% IACS	0.1315	ohm/km	0.2116	ohm/mile
Current carrying capacity at maximum operating temperature@180 °C	955	Amps	955	Amps
Emergency operating temperature	200	°C	392	°F

Note : Current Carrying Capacity is Calculated as per the following Assumptions

Wind Velocity (m/sec)	0.61
Solar Absorption Co-efficient	0.5
Emissivity	0.5
Ambient Temperature (°C)	40
Solar Radiation (Watt/Sq.m)	1033

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Data Sheet: **ACFR 220/28-T1-TT**

Mechanical Specifications	Metric		Imperial	
	Overall Diameter of Conductor	18.32	mm	0.721
Nominal Aluminium Cross-sectional Area*	219.6	mm ²	433.4	kcmil
Nominal Diameter of Composite Core (from CFCC data sheet)	6.8	mm	0.268	in
Nominal Cross-sectional Area of Core	28.2	mm ²	55.7	kcmil
Nominal Cross-sectional Area of the Conductor	247.8	mm ²	489.0	kcmil
Ultimate Tensile Strength of Conductor	70	KN	15.7	kips
Rated Strength of Core	60.3	KN	13.6	kips
Core Nominal Mass per unit length	44	kg/km	29.6	lb/kft
Aluminium Nominal Mass per unit length*	605.5	kg/km	406.9	lb/kft
Conductor Nominal Mass per unit length	649.5	kg/km	436.5	lb/kft
Maximum Allowable Operating Temperature	150	oC	302	oF
Coefficient of Linear Expansion Above Thermal Kneepoint	1.00E-06	/oC	5.56E-07	/oF
Coefficient of Linear Expansion Below Thermal Kneepoint	1.81E-05	/oC	1.01E-05	/oF
Final Modulus of Elasticity Above Thermal Kneepoint	122	Gpa	17.7	Msi
Final Modulus of Elasticity Below Thermal Kneepoint	62.62	Gpa	9.1	Msi
Electrical Specifications				
Nominal Resistivity of Aluminium at 20°C, DC 63% IACS	0.1335	ohm/km	0.2148	0.1335
Current carrying capacity at maximum operating temperature@150 °C	854	Amps	854	Amps
Emergency operating temperature	180	°C	356	°F

Note : Current Carrying Capacity is Calculated as per the following Assumptions

Wind Velocity (m/sec)	0.61
Solar Absorption Co-efficient	0.5
Emissivity	0.5
Ambient Temperature (°C)	40
Solar Radiation (Watt/Sq.m)	1033

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Data Sheet: **ACFR 244/37-T3-TT**

Mechanical Specifications	Metric		Imperial	
Overall Diameter of Conductor	19.6	mm	0.772	in
Nominal Aluminium Cross-sectional Area*	244.2	mm ²	481.9	kcmil
Nominal Diameter of Composite Core (from CFCC data sheet)	7.8	mm	0.307	in
Nominal Cross-sectional Area of Core	37.2	mm ²	73.4	kcmil
Nominal Cross-sectional Area of the Conductor	281.4	mm ²	555.4	kcmil
Ultimate Tensile Strength of Conductor	104.7	kN	23.5	kips
Rated Strength of Core	79.5	kN	17.9	kips
Core Nominal Mass per unit length	60	kg/km	40.3	lb/kft
Aluminium Nominal Mass per unit length*	673	kg/km	452.3	lb/kft
Conductor Nominal Mass per unit length	733	kg/km	492.6	lb/kft
Maximum Allowable Operating Temperature	180	°C	356	°F
Coefficient of Linear Expansion Above Thermal Kneepoint	1.00E-06	/°C	5.56E-07	/°F
Coefficient of Linear Expansion Below Thermal Kneepoint	1.73E-05	/°C	9.62E-06	/°F
Final Modulus of Elasticity Above Thermal Kneepoint	126	GPa	18.3	Msi
Final Modulus of Elasticity Below Thermal Kneepoint	64.39	GPa	9.3	Msi
Electrical Specifications				
Nominal Resistivity of Aluminium at 20°C, DC 63% IACS	0.1200	ohm/km	0.1931	ohm/mile
Current carrying capacity at maximum operating temperature@180 °C	1022	Amps	1022	Amps
Emergency operating temperature	200	°C	392	°F

Note : Current Carrying Capacity is Calculated as per the following Assumptions

Wind Velocity (m/sec)	0.61
Solar Absorption Co-efficient	0.5
Emissivity	0.5
Ambient Temperature (°C)	40
Solar Radiation (Watt/Sq.m)	1033

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Data Sheet: **ACFR 267/37-FA-TT**

Mechanical Specifications	Metric		Imperial	
	Overall Diameter of Conductor	20.75	mm	0.817
Nominal Aluminium Cross-sectional Area*	267.2	mm ²	527.2	kcmil
Nominal Diameter of Composite Core (from CFCC data sheet)	7.8	mm	0.307	in
Nominal Cross-sectional Area of Core	37.2	mm ²	73.4	kcmil
Nominal Cross-sectional Area of the Conductor	304.3	mm ²	600.6	kcmil
Ultimate Tensile Strength of Conductor	94.8	kN	21.3	kips
Rated Strength of Core	79.5	kN	17.9	kips
Core Nominal Mass per unit length	60	kg/km	40.3	lb/kft
Aluminium Nominal Mass per unit length*	738	kg/km	495.9	lb/kft
Conductor Nominal Mass per unit length	798	kg/km	536.3	lb/kft
Maximum Allowable Operating Temperature	180	°C	356	°F
Coefficient of Linear Expansion Above Thermal Kneepoint	1.00E-06	/°C	5.56E-07	/°F
Coefficient of Linear Expansion Below Thermal Kneepoint	1.77E-05	/°C	9.84E-06	/°F
Final Modulus of Elasticity Above Thermal Kneepoint	126	GPa	18.3	Msi
Final Modulus of Elasticity Below Thermal Kneepoint	63.67	GPa	9.2	Msi
Electrical Specifications				
Nominal Resistivity of Aluminium at 20°C, DC 63% IACS	0.1047	ohm/km	0.1685	ohm/mile
Current carrying capacity at maximum operating temperature@180 °C	1112	Amps	1112	Amps
Emergency operating temperature	200	°C	392	°F

Note : Current Carrying Capacity is Calculated as per the following Assumptions

Wind Velocity (m/sec)	0.61
Solar Absorption Co-efficient	0.5
Emissivity	0.5
Ambient Temperature (°C)	40
Solar Radiation (Watt/Sq.m)	1033

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Data Sheet: **ACFR 281/37-FA-TT**

Mechanical Specifications	Metric		Imperial	
Overall Diameter of Conductor	21	mm	0.827	In
Nominal Aluminium Cross-sectional Area*	280.66	mm ²	553.9	kcmil
Nominal Diameter of Composite Core (from CFCC data sheet)	7.8	mm	0.307	in
Nominal Cross-sectional Area of Core	37.17	mm ²	73.4	kcmil
Nominal Cross-sectional Area of the Conductor	317.83	mm ²	627.3	kcmil
Ultimate Tensile Strength of Conductor	95.66	KN	21.5	kips
Rated Strength of Core	79.5	KN	17.9	kips
Core Nominal Mass per unit length	60	kg/km	40.3	lb/kft
Aluminium Nominal Mass per unit length*	775	kg/km	520.8	lb/kft
Conductor Nominal Mass per unit length	835	kg/km	561.1	lb/kft
Maximum Allowable Operating Temperature	180	oC	356	oF
Coefficient of Linear Expansion Above Thermal Kneepoint	1.00E-06	/oC	5.56E-07	/oF
Coefficient of Linear Expansion Below Thermal Kneepoint	1.79E-05	/oC	9.95E-06	/oF
Final Modulus of Elasticity Above Thermal Kneepoint	126	Gpa	18.3	Msi
Final Modulus of Elasticity Below Thermal Kneepoint	63.3	Gpa	9.2	Msi
Electrical Specifications				
Nominal Resistivity of Aluminium at 20°C, DC 63% IACS	0.0996	ohm/km	0.1603	ohm/mile
Current carrying capacity at maximum operating temperature@180 °C	1144	Amps	1144	Amps
Emergency operating temperature	200	°C	392	°F

Note : Current Carrying Capacity is Calculated as per the following Assumptions

Wind Velocity (m/sec)	0.61
Solar Absorption Co-efficient	0.5
Emissivity	0.5
Ambient Temperature (°C)	40
Solar Radiation (Watt/Sq.m)	1033

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Data Sheet: **ACFR 312/37-FA-TT**

Mechanical Specifications	Metric		Imperial	
Overall Diameter of Conductor	22.36	mm	0.880	in
Nominal Aluminium Cross-sectional Area*	311.51	mm ²	614.8	kcmil
Nominal Diameter of Composite Core (from CFCC data sheet)	7.8	mm	0.307	in
Nominal Cross-sectional Area of Core	37.2	mm ²	73.4	kcmil
Nominal Cross-sectional Area of the Conductor	348.71	mm ²	688.2	kcmil
Ultimate Tensile Strength of Conductor	97.4	kN	21.9	kips
Rated Strength of Core	79.5	kN	17.9	kips
Core Nominal Mass per unit length	60	kg/km	40.3	lb/kft
Aluminium Nominal Mass per unit length*	860	kg/km	577.9	lb/kft
Conductor Nominal Mass per unit length	920	kg/km	618.2	lb/kft
Maximum Allowable Operating Temperature	180	°C	356	°F
Coefficient of Linear Expansion Above Thermal Kneepoint	1.00E-06	/°C	5.56E-07	/°F
Coefficient of Linear Expansion Below Thermal Kneepoint	1.83E-05	/°C	1.02E-05	/°F
Final Modulus of Elasticity Above Thermal Kneepoint	126	GPa	18.3	Msi
Final Modulus of Elasticity Below Thermal Kneepoint	62.57	GPa	9.1	Msi
Electrical Specifications				
Nominal Resistivity of Aluminium at 20°C, DC 63% IACS	0.0897	ohm/km	0.1444	ohm/mile
Current carrying capacity at maximum operating temperature@180 °C	1230	Amps	1230	Amps
Emergency operating temperature	200	°C	392	°F

Note : Current Carrying Capacity is Calculated as per the following Assumptions

Wind Velocity (m/sec)	0.61
Solar Absorption Co-efficient	0.5
Emissivity	0.5
Ambient Temperature (°C)	40
Solar Radiation (Watt/Sq.m)	1033

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Data Sheet: **ACFR 325/37-FA-TT**

Mechanical Specifications	Metric		Imperial	
	Overall Diameter of Conductor	22.42	mm	0.883
Nominal Aluminium Cross-sectional Area*	325.2	mm ²	641.8	kcmil
Nominal Diameter of Composite Core (from CFCC data sheet)	7.8	mm	0.307	in
Nominal Cross-sectional Area of Core	37.2	mm ²	73.4	kcmil
Nominal Cross-sectional Area of the Conductor	362.4	mm ²	715.2	kcmil
Ultimate Tensile Strength of Conductor	98.2	KN	22.1	kips
Rated Strength of Core	79.5	KN	17.9	kips
Core Nominal Mass per unit length	60	kg/km	40.3	lb/kft
Aluminium Nominal Mass per unit length*	898	kg/km	603.5	lb/kft
Conductor Nominal Mass per unit length	958	kg/km	643.8	lb/kft
Maximum Allowable Operating Temperature	180	oC	356	oF
Coefficient of Linear Expansion Above Thermal Kneepoint	1.00E-06	/oC	5.56E-07	/oF
Coefficient of Linear Expansion Below Thermal Kneepoint	1.85E-05	/oC	1.03E-05	/oF
Final Modulus of Elasticity Above Thermal Kneepoint	126	Gpa	18.3	Msi
Final Modulus of Elasticity Below Thermal Kneepoint	62.29	Gpa	9.0	Msi
Electrical Specifications				
Nominal Resistivity of Aluminium at 20°C, DC 63% IACS	0.086	ohm/km	0.1384	ohm/mile
Current carrying capacity at maximum operating temperature@180 °C	1256	Amps	1256	Amps
Emergency operating temperature	200	°C	392	°F

Note : Current Carrying Capacity is Calculated as per the following Assumptions

Wind Velocity (m/sec)	0.61
Solar Absorption Co-efficient	0.5
Emissivity	0.5
Ambient Temperature (°C)	40
Solar Radiation (Watt/Sq.m)	1033

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Data Sheet: **ACFR 302/37-FA-RR**

Mechanical Specifications	Metric		Imperial	
	Overall Diameter of Conductor	23.8	mm	0.937
Nominal Aluminium Cross-sectional Area*	301.59	mm ²	595.2	kcmil
Nominal Diameter of Composite Core (from CFCC data sheet)	7.8	mm	0.307	in
Nominal Cross-sectional Area of Core	37.17	mm ²	73.4	kcmil
Nominal Cross-sectional Area of the Conductor	338.76	mm ²	668.6	kcmil
Ultimate Tensile Strength of Conductor	96.9	KN	21.8	kips
Rated Strength of Core	79.5	KN	17.9	kips
Core Nominal Mass per unit length	60	kg/km	40.3	lb/kft
Aluminium Nominal Mass per unit length*	836	kg/km	561.8	lb/kft
Conductor Nominal Mass per unit length	896	kg/km	602.1	lb/kft
Maximum Allowable Operating Temperature	180	oC	356	oF
Coefficient of Linear Expansion Above Thermal Kneepoint	1.00E-06	/oC	5.56E-07	/oF
Coefficient of Linear Expansion Below Thermal Kneepoint	1.82E-05	/oC	1.01E-05	/oF
Final Modulus of Elasticity Above Thermal Kneepoint	126	Gpa	18.3	Msi
Final Modulus of Elasticity Below Thermal Kneepoint	62.79	Gpa	9.1	Msi
Electrical Specifications				
Nominal Resistivity of Aluminium at 20°C, DC 63% IACS	0.09301	ohm/km	0.1497	ohm/mile
Current carrying capacity at maximum operating temperature@180 °C	1231	Amps	1231	Amps
Emergency operating temperature	200	°C	392	°F

Note : Current Carrying Capacity is Calculated as per the following Assumptions

Wind Velocity (m/sec)	0.61
Solar Absorption Co-efficient	0.5
Emissivity	0.5
Ambient Temperature (°C)	40
Solar Radiation (Watt/Sq.m)	1033

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Data Sheet: **ACFR 400/71-HD-TT**

Mechanical Specifications	Metric		Imperial	
	Overall Diameter of Conductor	25.6	mm	1.008
Nominal Aluminium Cross-sectional Area*	400.1	mm ²	789.6	kcmil
Nominal Diameter of Composite Core (from CFCC data sheet)	10.8	mm	0.425	in
Nominal Cross-sectional Area of Core	71.3	mm ²	140.7	kcmil
Nominal Cross-sectional Area of the Conductor	471.4	mm ²	930.3	kcmil
Ultimate Tensile Strength of Conductor	190.8	kN	42.9	kips
Rated Strength of Core	152.4	kN	34.3	kips
Core Nominal Mass per unit length	112	kg/km	75.3	lb/kft
Aluminium Nominal Mass per unit length*	1103	kg/km	741.2	lb/kft
Conductor Nominal Mass per unit length	1215	kg/km	816.5	lb/kft
Maximum Allowable Operating Temperature	75	°C	167	°F
Coefficient of Linear Expansion Above Thermal Kneepoint	1.00E-06	/°C	5.56E-07	/°F
Coefficient of Linear Expansion Below Thermal Kneepoint	1.67E-05	/°C	9.25E-06	/°F
Final Modulus of Elasticity Above Thermal Kneepoint	126	GPa	18.3	Msi
Final Modulus of Elasticity Below Thermal Kneepoint	65.74	GPa	9.5	Msi
Electrical Specifications				
Nominal Resistivity of Aluminium at 20°C, DC 63% IACS	0.0704	ohm/km	0.1133	ohm/mile
Current carrying capacity at maximum operating temperature@75 °C	714	Amps	714	Amps
Emergency operating temperature	100	°C	212	°F

Note : Current Carrying Capacity is Calculated as per the following Assumptions

Wind Velocity (m/sec)	0.61
Solar Absorption Co-efficient	0.5
Emissivity	0.5
Ambient Temperature (°C)	40
Solar Radiation (Watt/Sq.m)	1033

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Data Sheet: **ACFR 470/56-FA-TT**

Mechanical Specifications	Metric		Imperial	
	Overall Diameter of Conductor	27	mm	1.063
Nominal Aluminium Cross-sectional Area*	469.81	mm ²	927.2	kcmil
Nominal Diameter of Composite Core (from CFCC data sheet)	9.6	mm	0.378	in
Nominal Cross-sectional Area of Core	56.3	mm ²	111.1	kcmil
Nominal Cross-sectional Area of the Conductor	526.11	mm ²	1038.3	kcmil
Ultimate Tensile Strength of Conductor	148	kN	33.3	kips
Rated Strength of Core	121	kN	27.2	kips
Core Nominal Mass per unit length	93	kg/km	62.5	lb/kft
Aluminium Nominal Mass per unit length*	1297	kg/km	871.6	lb/kft
Conductor Nominal Mass per unit length	1390	kg/km	934.1	lb/kft
Maximum Allowable Operating Temperature	180	°C	356	°F
Coefficient of Linear Expansion Above Thermal Kneepoint	1.00E-06	/°C	5.56E-07	/°F
Coefficient of Linear Expansion Below Thermal Kneepoint	1.82E-05	/°C	1.01E-05	/°F
Final Modulus of Elasticity Above Thermal Kneepoint	129	GPa	18.7	Msi
Final Modulus of Elasticity Below Thermal Kneepoint	62.92	GPa	9.1	Msi
Electrical Specifications				
Nominal Resistivity of Aluminium at 20°C, DC 63% IACS	0.0595	ohm/km	0.0958	ohm/mile
Current carrying capacity at maximum operating temperature@180 °C	1600	Amps	1600	Amps
Emergency operating temperature	200	°C	392	°F

Note : Current Carrying Capacity is Calculated as per the following Assumptions

Wind Velocity (m/sec)	0.61
Solar Absorption Co-efficient	0.5
Emissivity	0.5
Ambient Temperature (°C)	40
Solar Radiation (Watt/Sq.m)	1033

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Data Sheet: **ACFR 492/56-FA-TT**

Mechanical Specifications	Metric		Imperial	
Overall Diameter of Conductor	28.14	mm	1.108	in
Nominal Aluminium Cross-sectional Area*	491.84	mm ²	970.7	kcmil
Nominal Diameter of Composite Core (from CFCC data sheet)	9.6	mm	0.378	in
Nominal Cross-sectional Area of Core	56.3	mm ²	111.1	kcmil
Nominal Cross-sectional Area of the Conductor	548.14	mm ²	1081.8	kcmil
Ultimate Tensile Strength of Conductor	149.3	kN	33.6	kips
Rated Strength of Core	121	kN	27.2	kips
Core Nominal Mass per unit length	93	kg/km	62.5	lb/kft
Aluminium Nominal Mass per unit length*	1357	kg/km	911.9	lb/kft
Conductor Nominal Mass per unit length	1450	kg/km	974.4	lb/kft
Maximum Allowable Operating Temperature	180	°C	356	°F
Coefficient of Linear Expansion Above Thermal Kneepoint	1.00E-06	/°C	5.56E-07	/°F
Coefficient of Linear Expansion Below Thermal Kneepoint	1.84E-05	/°C	1.02E-05	/°F
Final Modulus of Elasticity Above Thermal Kneepoint	129	GPa	18.7	Msi
Final Modulus of Elasticity Below Thermal Kneepoint	62.6	GPa	9.1	Msi
Electrical Specifications				
Nominal Resistivity of Aluminium at 20°C, DC 63% IACS	0.0568	ohm/km	0.0914	ohm/mile
Current carrying capacity at maximum operating temperature@180 °C	1659	Amps	1659	Amps
Emergency operating temperature	200	°C	392	°F

Note : Current Carrying Capacity is Calculated as per the following Assumptions

Wind Velocity (m/sec)	0.61
Solar Absorption Co-efficient	0.5
Emissivity	0.5
Ambient Temperature (°C)	40
Solar Radiation (Watt/Sq.m)	1033

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Data Sheet: **ACFR 540/56-FA-TTT**

Mechanical Specifications	Metric		Imperial	
	Overall Diameter of Conductor	29.21	mm	1.150
Nominal Aluminium Cross-sectional Area*	540.4	mm ²	1066.5	kcmil
Nominal Diameter of Composite Core (from CFCC data sheet)	9.6	mm	0.378	in
Nominal Cross-sectional Area of Core	56.3	mm ²	111.1	kcmil
Nominal Cross-sectional Area of the Conductor	596.7	mm ²	1177.6	kcmil
Ultimate Tensile Strength of Conductor	152.1	kN	34.2	kips
Rated Strength of Core	121	kN	27.2	kips
Core Nominal Mass per unit length	93	kg/km	62.5	lb/kft
Aluminium Nominal Mass per unit length*	1495	kg/km	1004.6	lb/kft
Conductor Nominal Mass per unit length	1588	kg/km	1067.1	lb/kft
Maximum Allowable Operating Temperature	180	°C	356	°F
Coefficient of Linear Expansion Above Thermal Kneepoint	1.00E-06	/°C	5.56E-07	/°F
Coefficient of Linear Expansion Below Thermal Kneepoint	1.87E-05	/°C	1.04E-05	/°F
Final Modulus of Elasticity Above Thermal Kneepoint	129	GPa	18.7	Msi
Final Modulus of Elasticity Below Thermal Kneepoint	61.98	GPa	9.0	Msi
Electrical Specifications				
Nominal Resistivity of Aluminium at 20°C, DC 63% IACS	0.0518	ohm/km	0.0834	ohm/mile
Current carrying capacity at maximum operating temperature@180 °C	1757	Amps	1757	Amps
Emergency operating temperature	200	°C	392	°F

Note : Current Carrying Capacity is Calculated as per the following Assumptions

Wind Velocity (m/sec)	0.61
Solar Absorption Co-efficient	0.5
Emissivity	0.5
Ambient Temperature (°C)	40
Solar Radiation (Watt/Sq.m)	1033

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Data Sheet: **ACFR 679/56-FA-TTT**

Mechanical Specifications	Metric		Imperial	
	Overall Diameter of Conductor	31.77	mm	1.251
Nominal Aluminium Cross-sectional Area*	679.29	mm ²	1340.6	kcmil
Nominal Diameter of Composite Core (from CFCC data sheet)	9.6	mm	0.378	in
Nominal Cross-sectional Area of Core	56.3	mm ²	111.1	kcmil
Nominal Cross-sectional Area of the Conductor	735.59	mm ²	1451.7	kcmil
Ultimate Tensile Strength of Conductor	160.2	kN	36.0	kips
Rated Strength of Core	121	kN	27.2	kips
Core Nominal Mass per unit length	93	kg/km	62.5	lb/kft
Aluminium Nominal Mass per unit length*	1875	kg/km	1260.0	lb/kft
Conductor Nominal Mass per unit length	1968	kg/km	1322.5	lb/kft
Maximum Allowable Operating Temperature	180	°C	356	°F
Coefficient of Linear Expansion Above Thermal Kneepoint	1.00E-06	/°C	5.56E-07	/°F
Coefficient of Linear Expansion Below Thermal Kneepoint	1.95E-05	/°C	1.08E-05	/°F
Final Modulus of Elasticity Above Thermal Kneepoint	129	GPa	18.7	Msi
Final Modulus of Elasticity Below Thermal Kneepoint	60.66	GPa	8.8	Msi
Electrical Specifications				
Nominal Resistivity of Aluminium at 20°C, DC 63% IACS	0.0412	ohm/km	0.0663	ohm/mile
Current carrying capacity at maximum operating temperature@180 °C	2020	Amps	2020	Amps
Emergency operating temperature	200	°C	392	°F

Note : Current Carrying Capacity is Calculated as per the following Assumptions

Wind Velocity (m/sec)	0.61
Solar Absorption Co-efficient	0.5
Emissivity	0.5
Ambient Temperature (°C)	40
Solar Radiation (Watt/Sq.m)	1033

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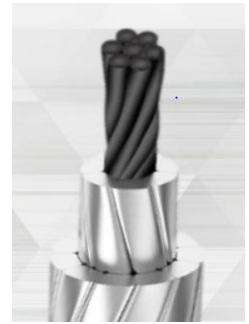
Data Sheet: **ACFR 665/71-FA-TTT**

Mechanical Specifications	Metric		Imperial	
	Overall Diameter of Conductor	31.9	mm	1.256
Nominal Aluminium Cross-sectional Area*	665.16	mm ²	1312.7	kcmil
Nominal Diameter of Composite Core (from CFCC data sheet)	10.8	mm	0.425	in
Nominal Cross-sectional Area of Core	71.3	mm ²	140.7	kcmil
Nominal Cross-sectional Area of the Conductor	736.46	mm ²	1453.4	kcmil
Ultimate Tensile Strength of Conductor	190.7	kN	42.9	kips
Rated Strength of Core	152.4	kN	34.3	kips
Core Nominal Mass per unit length	112	kg/km	75.3	lb/kft
Aluminium Nominal Mass per unit length*	1837	kg/km	1234.5	lb/kft
Conductor Nominal Mass per unit length	1949	kg/km	1309.7	lb/kft
Maximum Allowable Operating Temperature	180	°C	356	°F
Coefficient of Linear Expansion Above Thermal Kneepoint	1.00E-06	/°C	5.56E-07	/°F
Coefficient of Linear Expansion Below Thermal Kneepoint	1.87E-05	/°C	1.04E-05	/°F
Final Modulus of Elasticity Above Thermal Kneepoint	126	GPa	18.3	Msi
Final Modulus of Elasticity Below Thermal Kneepoint	61.87	GPa	9.0	Msi
Electrical Specifications				
Nominal Resistivity of Aluminium at 20°C, DC 63% IACS	0.0421	ohm/km	0.0678	ohm/mile
Current carrying capacity at maximum operating temperature@180 °C	2002	Amps	2002	Amps
Emergency operating temperature	200	°C	392	°F

Note : Current Carrying Capacity is Calculated as per the following Assumptions

Wind Velocity (m/sec)	0.61
Solar Absorption Co-efficient	0.5
Emissivity	0.5
Ambient Temperature (°C)	40
Solar Radiation (Watt/Sq.m)	1033

DESCRIPTION OF ACFR NAME



ACFR 121/17 - FA - TT

Aluminium Shape

- T : 1 layer Trapezoidal
- TT : 2 layer Trapezoidal
- TTT : 3 layer Trapezoidal
- R : 1 layer Round
- RR : 2 layer Round
- RRR : 3 layer Round

Aluminium Material

- FA : Fully annealed (1350-O)
- HD : Hard Drawn (1350-H19)
- T1 : AT1 (AT1/TAL)
- T3 : AT3 (AT3/ZTAL, UTAL)

Aluminium Cross-Sectional Area (mm²) / Core Area (mm²)