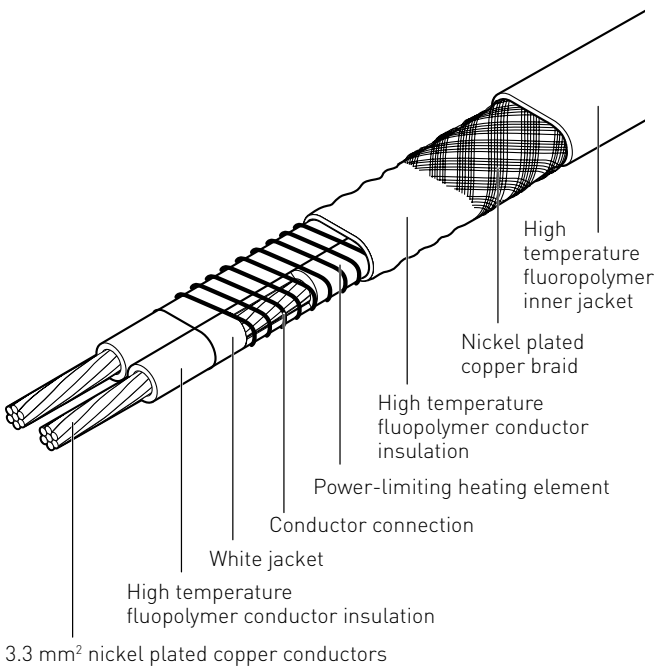




HIGH-TEMPERATURE POWER-LIMITING HEATING CABLE

HEATING CABLE CONSTRUCTION



ACC is a family of power limiting heating cables designed for pipe and equipment heat-tracing in industrial applications.

ACC can be used for frost protection and process temperature maintenance requiring high power output and/or high temperature exposure. ACC can provide process temperature maintenance up to 230°C (depending on cable type) and can withstand routine steam purges and temperature exposure to 260°C with power off.

Power-limiting cables are parallel heaters formed by a coiled resistor alloy heating element wrapped around two parallel conductors. The distance between conductor contact points forms the heating zone length. This parallel construction allows it to be cut-to-length and terminated on-site. The power output of ACC heating cables decreases with increasing temperature. ACC heating cables can be overlapped once. The relatively flat power temperature curve of ACC ensures a low start-up current and high output at elevated temperatures. ACC cables are approved for use in hazardous areas. Approvals are listed below.

APPLICATION

Area classification	Hazardous, Zone 1, Zone 2 (Gas), Zone 21, Zone 22 (Dust) Ordinary
Traced surface type	Carbon steel Stainless steel Painted or unpainted metal
Chemical resistance	Organics and corrosives For aggressive organics and corrosives consult your local SANTO representative

SUPPLY VOLTAGE

ACC2:208-277Vac
ACC4:400-480Vac

APPROVALS

The ACC heating cables are approved for use in hazardous areas by Baseefa Ltd.

The ACC heating cables are approved by DNV for use on ships and mobile off-shore units.

EAC (Russia, Kazakhstan, Belarus)
For other countries contact your local SANTO representative.

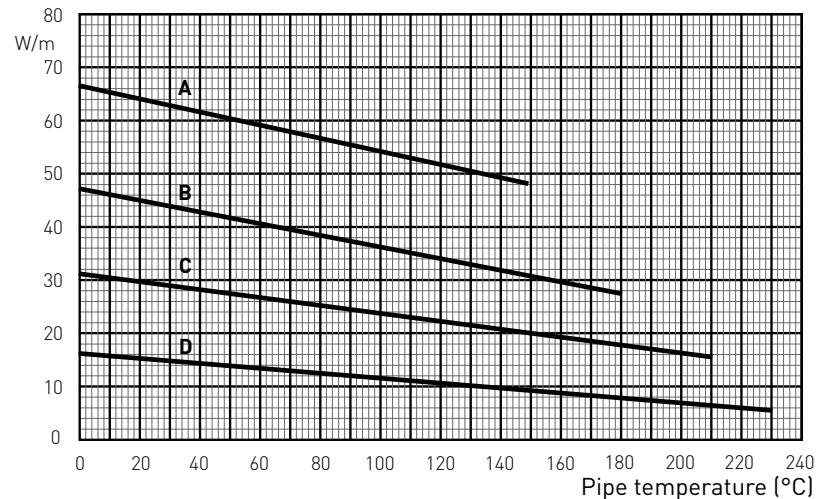
SPECIFICATIONS

	Cable	208 V	230 V	254 V	277 V	400 V	480 V
Maximum maintain or continuous exposure temperature (power on)	5ACC2-CT	235°C	230°C	225°C	225°C	-	-
	10ACC2-CT	220°C	210°C	200°C	195°C	-	-
	15ACC2-CT	200°C	180°C	145°C	105°C	-	-
	20ACC2-CT	150°C	150°C	-	-	-	-
	5ACC4-CT	-	-	-	-	230°C	230°C
	10ACC4-CT	-	-	-	-	215°C	205°C
	15ACC4-CT	-	-	-	-	195°C	160°C
	20ACC4-CT	-	-	-	-	150°C	150°C
Maximum continuous exposure temperature (power off)	260°C						
Temperature classification	To be established using the principles of stabilized design or the use of a temperature limiting device.						
Minimum installation temperature	-60°C						
Minimum bend radius	at -60°C: 20 mm at +20°C: 20 mm						
Minimum clearance	15mm						

THERMAL OUTPUT RATING

Nominal power output rating on insulated steel pipes at 240 V and 480 V (power output of ACC4 at 400 V will be lower)

- A** 20ACC-CT
- B** 15ACC-CT
- C** 10ACC-CT
- D** 5ACC-CT



To choose the correct heating cable for your application use the TraceCalc design software.

ADJUSTMENT FACTORS

		5ACC2-CT	10ACC2-CT	15ACC2-CT	20ACC2-CT
254 V	Power output	1.20	1.19	1.19	Not allowed
	Circuit length	1.05	1.04	1.04	Not allowed
277 V	Power output	1.30	1.28	1.26	Not allowed
	Circuit length	1.13	1.11	1.09	Not allowed
		5ACC4-CT	10ACC4-CT	15ACC4-CT	20ACC4-CT
400 V	Power output	0.72	0.73	0.74	0.75
	Circuit length	0.86	0.87	0.89	0.90
Nominal power output (W/m at 10°C)		5ACC _x -CT	10ACC _x -CT	15ACC _x -CT	20ACC _x -CT
ACC2 at 230 V		15	30	45	61
ACC2 at 240 V/ACC4 at 480 V		16	33	49	65
ACC4 at 400 V		12	24	36	49

PRODUCT DIMENSIONS (NOMINAL) AND WEIGHT

		7.5	7.5	7.5	7.5
Thickness (mm)					
Width (mm)		10.7	10.7	10.7	10.7
Nominal cold lead/ heating zone length (m)		1.2 [ACC2]	0.9 [ACC2]	0.6 [ACC2]	0.5 [ACC2]
		2.4 [ACC4]	1.7 [ACC4]	1.3 [ACC4]	1.1 [ACC4]
Weight (g/m)		180	180	180	180

MAXIMUM CIRCUIT LENGTH BASED ON TYPE 'C' CIRCUIT BREAKERS ACCORDING TO EN 60898

ACC2 at 230 V		5ACC2-CT	10ACC2-CT	15ACC2-CT	20ACC2-CT
Electrical protection sizing	Start-up temperature	Maximum heating cable length per circuit (m) at 230 Vac			
16 A	-20°C	195	100	70	50
	+10°C	215	110	75	55
25 A	-20°C	220*	155*	105	80
	+10°C	220*	155*	115	85
32 A	-20°C	220*	155*	130*	100
	+10°C	220*	155*	130*	110*
40 A	-20°C	220*	155*	130*	110*
	+10°C	220*	155*	130*	110*
ACC4 at 480 V and 400 V		5ACC4-CT	10ACC4-CT	15ACC4-CT	20ACC4-CT
Electrical protection sizing	Start-up temperature	Maximum heating cable length per circuit (m) at 480 Vac and (at 400 Vac)			
16 A	-20°C	390 (335)	195 (170)	130 (115)	100 (90)
	+10°C	425 (365)	210 (185)	140 (125)	105 (95)
25 A	-20°C	450* (450)	310 (265)	205 (185)	155 (140)
	+10°C	450* (450)	320* (290)	220 (195)	165 (150)
32 A	-20°C	450* (450)	320* (320)	260* (235)	200 (180)
	+10°C	450* (450)	320* (320)	260* (250)	210 (190)
40 A	-20°C	450* (450)	320* (320)	260* (260)	225* (225)
	+10°C	450* (450)	320* (320)	260* (260)	225* (225)

ORDERING DETAILS

Part description	5ACC2-CT	10ACC2-CT	15ACC2-CT	20ACC2-CT
Part No.	2000-021	2000-022	2000-023	2000-024
Part description	5ACC4-CT	10ACC4-CT	15ACC4-CT	20ACC4-CT
Part No.	2000-025	2000-026	2000-027	2000-028

COMPONENTS

SANTO offers a full range of components for power connections, splices and end seals.

These components must be used to ensure proper functioning of the product and compliance with electrical requirements.