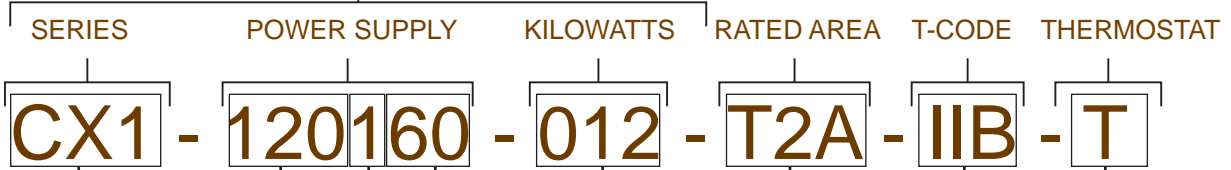




Model Coding

BASE MODEL



SERIES	
	CX1
	CF1

VOLTAGE			
120V	120	380V	380
208V	208	400V	400
220V	220	415V	415
230V	230	480V	480
240V	240	600V	600
277V	277		

PHASE	
1 Phase	1

FREQUENCY	
50 Hertz	50
60 Hertz	60

KILOWATTS			
007	0.75kW	025	2.50kW
008	0.83kW	027	2.69kW
009	0.90kW	030	3.01kW
011	1.13kW	033	3.33kW
012	1.20kW	036	3.60kW
013	1.25kW	048	4.80kW
014	1.35kW	053	5.28kW
018	1.80kW	057	5.68kW
023	2.26kW	076	7.60kW

BUILT-IN THERMOSTAT	
YES	T
NO	-

GROUPING	
GROUP C & D	IIB
① GROUP A, B, C, & D	IIC

TEMPERATURE CODE	
280°C	T2A
② 200°C	T3

Note:

① Requires x-Max® housing.

② CX1 Only available in 3.6 kW units with 49" long cabinet.

CF1 ProVector® Explosion-proof Heaters

For hazardous locations heating, rely on the Ruffneck™ CF1 heater for the most dependable, trouble-free service available. CCI Thermal manufactures explosion-proof air heaters to satisfy the demanding requirements of the oil and gas drilling industry. The harsh operating conditions of this application require the utmost in heater reliability.

The unique design features and rugged, quality construction details that have made Ruffneck™ heaters the choice of the oil and gas industry are also appreciated by other heavy-duty industries throughout the world. The CF1 ProVector® explosion-proof heater offers the following outstanding features and benefits:



FEATURE

- sloped-top cabinet
- no exposed copper or brass
- high-velocity airflow
- 14-gauge steel cabinet, available with stainless steel construction
- one of the shortest cabinet lengths available
- optional built-in thermostat
- incoloy 840 heating elements
- radial-embossed aluminum plate fins
- galvanized steel mounting brackets
- approvals for groups IIA, IIB & IIC. IP55 moisture ingress protection

BENEFIT

- prevents objects from being set on top which restricts airflow
- corrosion resistant, suitable for H₂S environments
- heats up area faster with better heat distribution
- rugged reliability and unsurpassed corrosion resistance available with stainless steel construction
- smaller profile utilizes less wall and floor space
- reduced field installation costs
- longer life expectancy
- reduced fin warping for better heat transfer capabilities
- quick installation
- industry first approvals for built-in thermostat with group A, B, C, D, IIA, IIB, IIC ratings

CF1 ProVector® General Specifications

Nominal kW		0.75–2.69 & 3.03	3.03 & 3.33–4.03	4.76–6.39
Net weight	(lbs.)	58	84	96
	(kg)	27	38	44
Shipping weight	(lbs.)	66	93	109
	(kg)	30	42	50

Approvals	CE Ex
Enclosure	Cast or extruded aluminum supplied with either a bolt-on cover or two screwed-on covers. Suitable for either a Defender or XT thermostat. Available with IP55 moisture ingress protection.
Mounting brackets	Two 14-gauge (0.075 in. / 1.90 mm) galvanized steel brackets for standard cabinet. Stainless steel brackets provided with optional stainless steel cabinet.
Heating elements	Two incoloy 840 sheathed elements.
Cabinet material	14 gauge (0.075 in. / 1.90mm) epoxy coated steel with galvanized rear panel. Optional 14 gauge 304 stainless steel cabinet and mounting hardware available.
Temperature code rating	Temperature Code T2 – 300°C (572°F), T3 – 200°C (392°F) or T4 – 135°C (275°F).
Hazardous location classifications	Without built-in thermostat
	With built-in thermostat
Temperature limitations	Operational: –45°C to 40°C (–49°F to 104°F)
	Storage: –45°C to 80°C (–49°F to 176°F). optional up to 149°C (300°F) available

Performance Data for CF1 ProVector®

Model	Unit Wattage (kW)	Unit Output (BTU/hr)	Cabinet Length (mm)	Unit Voltage (volts)	Unit Current (amps)	Phase	Temperature Coding
CF1-220150-010-T4-IIB	1.00	3412	796	220	4.60	1	T4
CF1-220150-015-T3-IIB	1.50	5118	796	220	6.90	1	T3
CF1-220150-030-T2-IIB	3.00	10236	796	220	13.8	1	T2
CF1-220150-040-T3-IIB	4.00	13648	1256	220	18.3	1	T3
CF1-220150-064-T2-IIB*	6.40	21837	1511	220	29.0	1	T2
CF1-230150-011-T4-IIB	1.10	3760	796	230	4.80	1	T4
CF1-230150-017-T3-IIB	1.70	5640	796	230	7.20	1	T3
CF1-230150-030-T3-IIB	3.00	10236	1256	230	13.0	1	T3
CF1-230150-033-T2-IIB	3.30	11312	796	230	14.4	1	T2
CF1-230150-044-T2-IIB	4.40	15041	1256	230	19.2	1	T2
CF1-230150-070-T2-IIB*	7.00	23815	1511	230	30.3	1	T2
CF1-240150-012-T4-IIB	1.20	4101	796	240	5.00	1	T4
CF1-240150-018-T3-IIB	1.80	6131	796	240	7.50	1	T3
CF1-240150-036-T2-IIB	3.60	12304	796	240	15.0	1	T2
CF1-240150-030-T3-IIB	3.00	10236	1256	240	12.5	1	T3
CF1-240150-048-T2-IIB	4.80	16364	1256	240	20.0	1	T2
CF1-240150-076-T2-IIB*	7.60	25947	1511	240	31.7	1	T2
CF1-380150-0075-T4-IIB	0.75	2559	796	380	2.00	1	T4
CF1-380150-011-T4-IIB	1.10	3753	796	380	3.00	1	T4
CF1-380150-023-T3-IIB	2.30	7848	796	380	5.90	1	T3
CF1-380150-030-T3-IIB	3.00	10236	1256	380	7.90	1	T3
CF1-380150-048-T2-IIB	4.80	16378	1511	380	12.5	1	T2
CF1-400150-0083-T4-IIB	0.83	2832	796	400	2.10	1	T4
CF1-400150-013-T4-IIB	1.30	4436	796	400	3.10	1	T4
CF1-400150-025-T3-IIB	2.50	8530	796	400	6.30	1	T3
CF1-400150-033-T3-IIB	3.30	11260	1256	400	8.30	1	T3
CF1-400150-053-T2-IIB	5.30	18084	1511	400	13.2	1	T2
CF1-415150-0090-T4-IIB	0.90	3071	796	415	2.20	1	T4
CF1-415150-014-T4-IIB	1.40	4777	796	415	3.20	1	T4
CF1-415150-027-T2-IIB	2.70	9212	796	415	6.50	1	T2
CF1-415150-036-T3-IIB	3.60	12283	1256	415	8.70	1	T3
CF1-415150-057-T2-IIB	5.70	19448	1511	415	13.7	1	T2

* An optional built-in thermostat is not available as it exceeds current capacity.

Notes:

1. Heater is functioning normally; at rated voltage, the current draw is within 10% of the value in this table.
2. Operation at lower voltages than rated will result in reduced output and current draw.
3. Temperature Rating Per Temperature Code: T2: 300°C; T3: 200°C; T4: 135°C
4. IIC Grouping available with optional *x-Max*® housing.
5. Add suffix "T" for optional built-in t-stat.

Performance Data for CF1 ProVector®

Model	Unit Wattage (kW)	Unit Output (BTU/hr)	Cabinet Length (mm)	Unit Voltage (volts)	Unit Current (amps)	Phase	Temperature Coding
CF1-220150-010-T4-IIC	1.00	3412	796	220	4.60	1	T4
CF1-220150-015-T3-IIC	1.50	5118	796	220	6.90	1	T3
CF1-220150-030-T2-IIC	3.00	10236	796	220	13.8	1	T2
CF1-220150-040-T3-IIC	4.00	13648	1256	220	18.3	1	T3
CF1-220150-064-T2-IIC*	6.40	21837	1511	220	29.0	1	T2
CF1-230150-011-T4-IIC	1.10	3760	796	230	4.80	1	T4
CF1-230150-017-T3-IIC	1.70	5640	796	230	7.20	1	T3
CF1-230150-030-T3-IIC	3.00	10236	1256	230	13.0	1	T3
CF1-230150-033-T2-IIC	3.30	11312	796	230	14.4	1	T2
CF1-230150-044-T2-IIC	4.40	15041	1256	230	19.2	1	T2
CF1-230150-070-T2-IIC*	7.00	23815	1511	230	30.3	1	T2
CF1-240150-012-T4-IIC	1.20	4101	796	240	5.00	1	T4
CF1-240150-018-T3-IIC	1.80	6131	796	240	7.50	1	T3
CF1-240150-030-T3-IIC	3.00	10236	1256	240	12.5	1	T3
CF1-240150-036-T2-IIC	3.60	12304	796	240	15.0	1	T2
CF1-240150-048-T2-IIC	4.80	16364	1256	240	20.0	1	T2
CF1-240150-076-T2-IIC*	7.60	25947	1511	240	31.7	1	T2
CF1-380150-0075-T4-IIC	0.75	2559	796	380	2.00	1	T4
CF1-380150-011-T4-IIC	1.10	3753	796	380	3.00	1	T4
CF1-380150-023-T3-IIC	2.30	7848	796	380	5.90	1	T3
CF1-380150-030-T3-IIC	3.00	10236	1256	380	7.90	1	T3
CF1-380150-048-T2-IIC	4.80	16378	1511	380	12.5	1	T2
CF1-400150-0083-T4-IIC	0.83	2832	796	400	2.10	1	T4
CF1-400150-013-T4-IIC	1.30	4436	796	400	3.10	1	T4
CF1-400150-025-T3-IIC	2.50	8530	796	400	6.30	1	T3
CF1-400150-033-T3-IIC	3.30	11260	1256	400	8.30	1	T3
CF1-400150-053-T2-IIC	5.30	18084	1511	400	13.2	1	T2
CF1-415150-009-T4-IIC	0.90	3071	796	415	2.20	1	T4
CF1-415150-014-T4-IIC	1.40	4777	796	415	3.20	1	T4
CF1-415150-027-T2-IIC	2.70	9212	796	415	6.50	1	T2
CF1-415150-036-T3-IIC	3.60	12283	1256	415	8.70	1	T3
CF1-415150-057-T2-IIC	5.70	19448	1511	415	13.7	1	T2

* An optional built-in thermostat is not available as it exceeds current capacity.

Notes:

1. Heater is functioning normally; at rated voltage, the current draw is within 10% of the value in this table.
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4. Add suffix "T" for optional built-in t-stat.