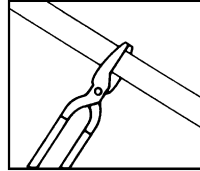
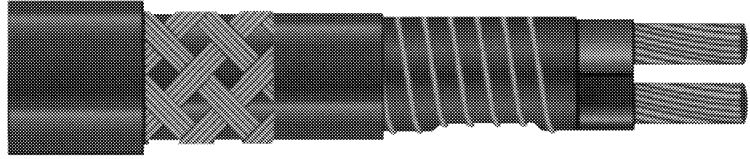


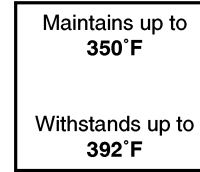
CWM

PDS CWM

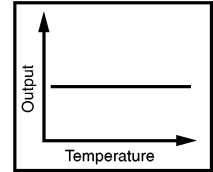
Constant Wattage Medium Temperature Heating Cable



Cut To Length in Field



Medium Temperature



Constant Wattage Output

- Uniform Thermal Output
- Accurate, Easy to Control and Monitor
- Low Energy Cost
- No Inrush at Any Ambient
- Industrial/Process and Commercial/Construction Applications
- Flexible to Most Any Configuration
- Fluoropolymer Jacket
- Maximum Exposure Temperature Power Off 392°F, 200°C
- Steam Cleanable on Process Equipment up to 190 PSIG (Power Off)
- 4, 8 and 12 Watts per Foot
- 120, 208-277 and 480 Volts Available From Stock



OGDEN

Description

Ogden CWM heating cable is a proven, reliable solution for industrial process temperature maintenance and freeze protection. CWM features a parallel heating core that produces uniform thermal output over its entire length. Using a single power point, you can easily configure and install a heat tracing system as short as several feet or as long as 780 feet right in the field. System design only requires that you match the CWM cable thermal output to the heat loss of your piping system.

CWM is flexible at most ambient temperatures and can be wrapped around piping and complex fittings. It is rugged, easy to monitor and maintain temperature, and has zero inrush at start-up. With 392°F (200°C) fluoro-polymer electrical insulation over-jacketing, CWM has outstanding electrical and thermal properties, and is well-suited for most chemically hostile environments. An extensive range of Wattages and Voltages are available immediately from Ogden stock.

Approvals*

UL Listed for ordinary areas (4 & 8 W/Ft., 120V & 208-277V)

CSA Certified for ordinary and Class I, Div. 2, Groups A, B, C and D; Class II, Div. 2, Groups F and G. Rated Temperature Class T3.**

* Depends on specific model.

** Exception: Cable surface temperature shall not exceed 190°C in Class II, Div. 2, Group F; 165°C in Class II, Div. 2, Group G.

Features

- Durable, fluoropolymer jacket ensures long service life and can be used in some hostile environments.
- Flexible, easy to install on most equipment and delivers long-term reliable performance.
- Eliminates the need for oversized wiring or switchgear.
- Accurate temperature, reliable electric heat that can be consistently controlled and easily monitored.
- Safe and rugged.
- Parallel circuitry allows cut-to-length.
- High performance, rated to withstand up to 392°F saturated steam (190 PSIG) temperature (power off).
- Low profile, uses standard size thermal insulation on piping and process equipment.

Applications

Industrial / Process

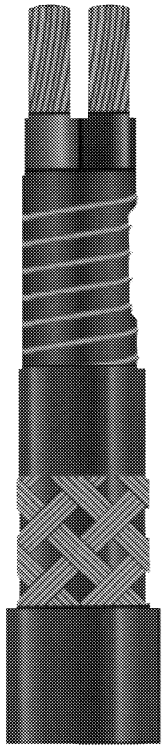
- Petrochemical
- Oil Refineries/Drilling Rigs
- Food Processing
- Transfer Piping & Vessels
- Power Plants
- Chemical Processing

Commercial / Construction

- Freeze Protection
- Frost Heave Protection
- Winterized Cooling Water Lines

CWM - Constant Wattage Medium Temp. Heating Cable

Construction



- 12 AWG Copper Buss Wires Provide reliable, consistent electrical current.
- FEP Insulation Jacket..... Electrically insulates buss wires.
- Pairing Jacket Secures two buss wires together and provides wrapping surface for Nichrome wire.
- Module Point Connects Nichrome wire to alternating buss-wires at a periodic distance.
- Nichrome Wire Heating component of the cable.
- FEP Insulation Rugged outer sheath protects heating cable, assures longer service life and provides protection against environmental application hazards.
- Tinned Copper Braid Plated copper braid increases robust construction, provides ground path, and provides additional protection in any location. Suffix -C in catalog ordering number.
- FEP Overjacket (Optional) Fluoropolymer overjacket, over the braid, provides protection from most aqueous and chemically corrosive solutions. Suffix -CT of catalog ordering number.

Heating Cable System Design

1. Calculate Heat Loss

Using the Ogden Design Guide for Heat Tracing (PJ304) calculate the heat loss of the system. To calculate the heat loss you will need to know pipe diameter, insulation type and thickness, minimum ambient temperature and the pipe maintenance temperature.

2. Select Cable Rating

After calculating the heat loss in the pipe and adjusting for any application deviations, you may determine which cable rating to choose.

Temperature Make sure that the maintenance temperature does not exceed the CWM maximum maintenance temperature rating. Do not overlap cable.

Jacket Material Overjacket (-CT) is recommended for environments where exposure to corrosives and moisture is likely.

Rating Selection Select the cable whose wattage output exceeds the heat loss of the system. For example, if the heat loss is 7.2 W/Ft., select CWM8.

If necessary, adjust the cable rating for the supply Voltage. Cable ratings are based on nominal voltages of 120, 240 or 480 Volts. If the Voltage is different from any of these, derate the cable according to the following table.

Constant Wattage Medium Temp. Heating Cable - CWM

Output Wattage at Alternate Voltages

Cable Rating	120 Volts	208 Volts	220 Volts	240 Volts	277 Volts	480 Volts
CWM12-1C	12.0	-	-	-	-	-
CWM8-1C	8.0	-	-	-	-	-
CWM4-1C	4.0	-	-	-	-	-
CWM12-2C	3.0	9.0	10.1	12.0	-	-
CWM8-2C	2.0	6.0	6.7	8.0	-	-
CWM4-2C	-	3.0	3.4	4.0	-	-
CWM12-4C	-	2.3	2.5	3.0	4.0	12.0

3. Determine Total Cable Length

In addition to the system piping, in-line equipment such as valves, flanges and pipe supports require additional heat tracing to maintain the system operating temperatures. Refer to the Ogden Design Guide (PJ304). Guidelines for tracing tanks and vessels are also given in the Ogden Design Guide (PJ304).

Specifications

Model Number	Output (W/Ft.)	Nominal Voltage (Vac)	Circuit Load (Amps/Ft.)	Maximum Circuit Length (Ft.)	Module Length (Ft.)
CWM4-1C(T)	4	120	0.033	350	2.5
CWM8-1C(T)	8	120	0.067	240	2.5
CWM12-1C(T)	12	120	0.100	200	2.5
CWM4-2C(T)	4	240	0.017	700	2.5
CWM8-2C(T)	8	240	0.033	480	2.5
CWM12-2C(T)	12	240	0.050	400	2.5
CWM12-4C(T)	12	480	0.025	780	2.5

4. Select Accessories

Ogden has a complete line of accessories specifically designed for use with the CWM cable. Use only Ogden accessories to ensure the performance of the heat trace system. When ordering accessories, specify quantity, model number and PCN (Product Code Number).

	Model	Description	PCN
Power Connection	RTPC	DL Series power connection set kit.	See DL Accessories
	RTST	DL Series splice and tee set kit.	See DL Accessories
	RTES	DL Series end seal kit.	See DL Accessories
Fiberglass Tape	FT-1	Tape to affix cable to pipe, 180' roll x 1/2", install on 12" centers.	382520
	FT-2	Tape to affix cable to pipe, 66' roll x 1/2", install on 12" centers	383611
Aluminum Tape	AT-1	Tape to aid heat transfer, 180 foot roll. Apply over cable along entire length of circuit.	383355

CWM - Constant Wattage Medium Temp. Heating Cable

5. Determine Installation Methods/Tape Requirements

Pipe maintenance temperatures can vary significantly depending on whether aluminum or fiberglass tape is used. Aluminum tape improves heat transfer and permits cables to maintain higher temperatures than when cable is applied to bare metal pipe. Do not overlap the cable.

Maximum Maintenance Temperatures (°F)

Output (W/Ft.)	3	4	6	6.7	8	9	10.1	10.6	12
w/o AT-1	340	325	293	282	262	246	229	222	200
w/AT-1	350	344	332	328	320	314	307	304	296

Ordering Information

Output (W/Ft.)	Voltage (Vac)	Model Number	PCN	Output (W/Ft.)	Voltage (Vac)	Model Number	PCN
4	120	CWM4-1C	392040	12	120	CWM12-1C	392227
		CWM4-1CT	392075			CWM12-1CT	392251
	208-277	CWM4-2C	392059		208-277	CWM12-2C	392235
		CWM4-2CT	392083			CWM12-2CT	392260
8	120	CWM8-1C	392139				
		CWM8-1CT	392163				
	208-277	CWM8-2C	392147				
		CWM8-2CT	392171				

To Order: Specify length, Model Number, PCN and Installation Accessories.

Model Numbers

CWM

8

-

2

C

T

Overcoat Options

T = Fluoropolymer corrosion resistant overjacket over braid for hostile/corrosive environments.

Braid

C = Standard tinned-copper metallic braid for ground path.

Voltage

1 = 120 Volts
2 = 208-277 Volts
4 = 480 Volts

Output (watts)

4, 8 or 12 Watts per Foot

CWM

Constant Wattage, Medium Temperature Heating Cable