



Comprehensive Energy Audit For Manokotak Natives Limited Corporation Building



Prepared For
Manokotak Natives Limited

March 8, 2018

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**Alaska Native Tribal Health Consortium
4500 Diplomacy Drive
Anchorage, AK 99508**

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PREFACE

The purpose of this report is to provide guidance in reducing facility operating costs and enhance the sustainability of this community. The report assesses the current energy usage of the facility, provide options for reducing the amount of energy used, and evaluate the cost vs. benefit of each option.

Discussions of site specific concerns, financing options, general facility information, and an Energy Efficiency Action Plan are also included in this report.

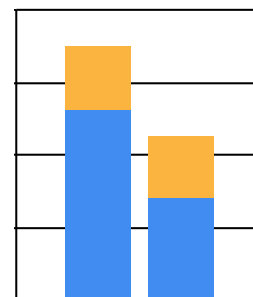
ACKNOWLEDGMENTS

The Rural Energy Initiative gratefully acknowledges the assistance of Manokotak Natives Limited Administrator Teresa Ayojiak.

OVERVIEW

This report was prepared for Manokotak Natives Limited. The scope of the audit focused on the Manokotak Natives Limited Office and includes an analysis of building occupancy schedules, building shell, heating systems, heating and ventilations systems, domestic hot water, lighting, and other electrical loads. The Manokotak Natives Limited Office is a wood-framed building built on an elevated pile foundation and is approximately 792 square feet in area. The building serves as office space for the Manokotak Natives Limited corporation.

Annual Energy Costs by Fuel Type



ENERGY BASELINE

Based on unsubsidized electricity and fuel oil prices in effect at the time of the audit, the total predicted energy costs are \$7,007 per year. This includes \$5,242 for unsubsidized electricity and \$1,765 for #1 fuel oil.

The State of Alaska Power Cost Equalization (PCE) program provides a subsidy to rural communities across the state to lower electricity costs and make energy affordable in rural Alaska. In Manokotak the cost of electricity without PCE is \$0.57/kWh and the cost of electricity with PCE is \$0.27/kWh. With the PCE subsidy, the electric utility cost to the City of Manokotak is \$2,759 and the cost to the State of Alaska is \$2,483.

Table 1 lists the predicted annual energy usage before and after the proposed retrofits for the Manokotak Natives Limited Office.

Table 1: Predicted Annual Energy Use for the Manokotak Natives Limited Office

Predicted Annual Fuel Use				
Fuel Use	Existing Building	With Proposed Retrofits	Total Energy Savings	Total Cost Savings (Subsidized)
Electricity	9,196 kWh	4,910 kWh	4,286 kWh	\$1,157
#2 Oil	441 gallons	436 gallons	5 gallons	\$20

PROPOSED ENERGY EFFICIENCY MEASURES (EEM)

Table 2 below summarizes the energy efficiency measures analyzed for the Manokotak Natives Limited Office. Listed are the estimates of the annual savings, installed costs, and two different financial measures of investment return. All costs assume that local labor will be used with no additional cost associated for travel or administrative tasks.

Table 2: Priority List – Energy Efficiency Measures

Priority	Feature	Improvement Description	Annual Energy Savings	Installed Cost	Savings to Investment Ratio, SIR ¹	Simple Payback (Years) ²	CO ₂ Savings
High	Lighting: Outdoor Lighting	Replace with new direct-wire, LED equivalent light bulbs and add new Daylight Sensor	\$325	\$106	25.06	0.3	1,452.7
High	Other Electrical: Desktop Printers	Connect printers to power strips and turn off power strips during the evenings when not in use.	\$54	\$20	22.20	0.4	245.9
High	Other Electrical: Coffeemaker	Unplug coffeemaker during the evenings when not in use.	\$74	\$34	13.46	0.5	336.4
Medium	Heating Systems	Replace furnace with new, more efficient model. Add insulating blanket around hot water heater.	\$1,536	\$8,151	2.70	5.3	7,156.6
Medium	Lighting: Occupied Lighting	Replace with new direct-wire, LED equivalent light bulbs.	\$45	\$457	1.58	10.2	211.6
Medium	Floor Insulation	Add additional R-21 fiberglass batts insulation.	\$130	\$2,237	1.34	17.2	703.1
Low	Lighting: Bathroom Lighting	Replace with new direct-wire, LED equivalent light bulbs.	\$1	\$32	0.96	20.2	4.5
Low	Ceiling Insulation	Add additional R-30 fiberglass batts insulation.	\$149	\$3,723	0.92	24.9	807.5
Low	Air Tightening	Add weather stripping and door sweeps around the main entrance to prevent air leakage.	\$15	\$300	0.46	19.9	81.6
Low	Lighting: 24-hour Lighting	Replace with new direct-wire, LED equivalent light bulbs.	\$108	\$1,475	0.40	13.6	512.7
Low	Wall Insulation	Add additional R-13 fiberglass batts insulation.	\$35	\$2,340	0.35	66.6	189.8
TOTAL			\$2,473	\$18,875	1.82	7.6	11,702

FACILITY DESCRIPTION

Building Occupancy Schedules

The building is occupied from 9:00 AM – 6:00 PM for five days per week during standard office hours for use by the corporation.

Building Shell

The building is constructed with 2x4 wood-framed lumber construction that is built on an elevated pile foundation. The roof has 2x6 lumber construction with attic space available.

There are six total windows in the building. Each window has double-pane glass with wood framing. Three of the windows are approximately 48" x 48" in dimension. Two of the windows are approximately 35" x 58" in dimension. One of the windows is approximately 36" x 48" in dimension.

There is one entrance into the facility. The main entrance has a single insulated metal door with no windows.

Heating Systems

Gama Air Furnace

Nameplate Information:	Armstrong LUF80B84/95D12-3A. Beckett AFG Burner. 0.65 gallons per hour max input.
Fuel Type:	#2 Oil
Input Rating:	89,700 BTU/hr
Steady State Efficiency:	78 %
Idle Loss:	1.5 %
Heat Distribution Type:	Air
Notes:	Very poor condition. Exterior is highly corroded. Plant was originally 80% efficient.

Electric Hot Water Heater

Nameplate Information:	Reliance 606. 1650W, 19 gallon capacity.
Fuel Type:	Electricity
Input Rating:	0 BTU/hr
Steady State Efficiency:	95 %
Idle Loss:	0 %
Heat Distribution Type:	Water
Boiler Operation:	All Year

Space Heating Distribution Systems

The space heat for the building is distributed through a forced air system that transports heated air to each room through a vent system. The heating unit is in the direct center of the building and air is exchanged with the surrounding offices to allow for proper heating.

Domestic Hot Water System

There is a small restroom that is used for office personnel during the work day. Hot water is provided to the restroom by an electric hot water heater with a 19 gallon storage capacity.

Lighting

Table 3: Lighting Information in the Manokotak Natives Limited Office

Room	Bulb Type	Fixtures	Bulbs per Fixture	Annual Usage (kWh)
Offices	Fluorescent T8 4ft.	6	2	1,795

Offices	Fluorescent T8 4ft.	6	2	741
Bathroom	CFL Spiral 15 Watt	2	1	9
Outdoor	Incandescent 100 Watt	1	1	877

There are six fixtures in the office that are kept on constantly to deter potential theft and criminal behavior. The exterior light is on continuously and has no sensor to adjust for daylight.

Other Electrical Loads

There is a variety of office equipment and phones that are used during the day that use a small amount of energy throughout the year.

Major Equipment

Table 4: Major Electrical Equipment in the Manokotak Natives Limited Office

Equipment	Rating (Watts)	Annual Usage (kWh)
Desktop Computers (3)	~ 90 each	733
Desktop Printers (3)	~70 each	159
Coffee Pot	1,596 each	346
Microwave	~1,100	172
Plug-in Fan	70	32
Water Line Heat Tape	38	1
Refrigerator	37	320

PROJECT FINANCING

The total estimated cost of the recommended EEM's \$18,875. The payback for the implemented EEM's is approximately 7.6 years. ANTHC is willing to assist the community with acquiring funds to complete the scope of work recommended in this energy audit.

There are several options for financing energy efficiency projects within the State of Alaska. These include the use of grants, loans, and other funding opportunities. Below is some information on potential funding opportunities.

Energy Efficiency Revolving Loan Program – This is a loan administered by the Alaska Housing Finance Corporation (AHFC) for use by any applicant who is also the owner of the building where the work will take place. It provides a loan for permanent energy-efficiency projects with a completion window of one year.

Sustainable Energy Transmission and Supply Program – This is a loan administered by the Alaska Energy Authority (AEA) for a government, business, or other organized body of people. It provides a loan for energy-efficiency or power transmission or distribution projects.

USDA-RD Communities Facilities Direct Loan & Grant Program - This is a loan or grant provided by the US Department of Agriculture – Rural Development (USDA-RD) for any essential community facility in a rural area. It provides a loan or grant to develop essential community facilities with upgrades or equipment for improvement.

MEASUREMENT AND VERIFICATION

The results of these recommended measures can be measured through the collection of energy use data through the monthly bills provided by the local electric utility and the local fuel oil supplier. Collecting data and performing a historical comparison is the simplest method of validating the energy and cost savings seen by the measures. Additionally, active remote monitoring systems are available that can collect and store data regarding energy and fuel usage. These systems allow the user to track the usage in real time and can be shared more easily with partners across the state.

APPENDICES

Appendix A –Energy Billing Data

The table below shows the fuel and electricity data used during the energy modeling process to confirm the accuracy of the energy distribution. The fuel use distribution was estimated based on the times of each fuel delivery, which were not in a precisely monthly basis.

Month	Fuel Oil Use (gallons)	Electricity Use (kWh)
January	40	903
February	35	769
March	35	861
April	25	670
May	15	675
June	10	659
July	10	659
August	15	712
September	25	662
October	35	730
November	35	793
December	40	748

Appendix B – Energy Audit Report – Project Summary

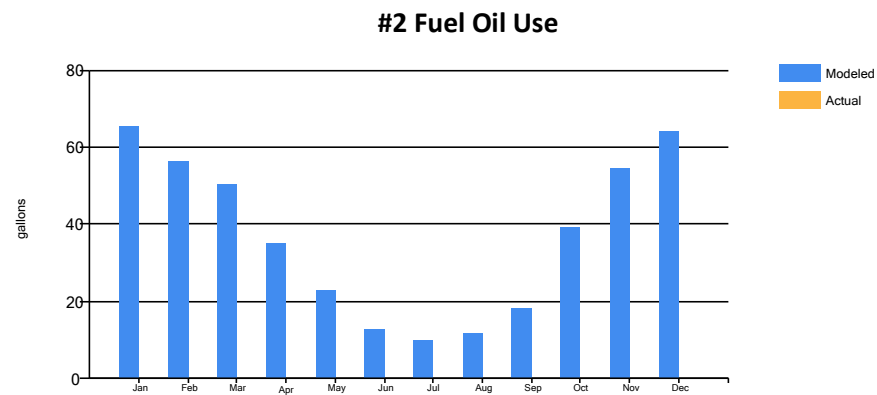
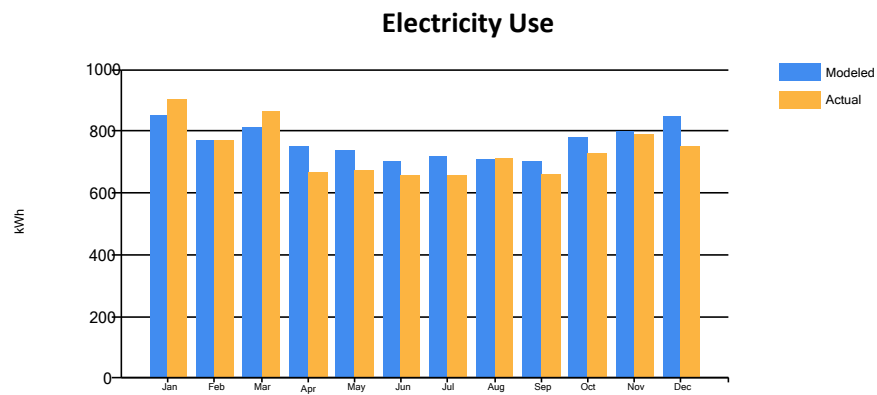
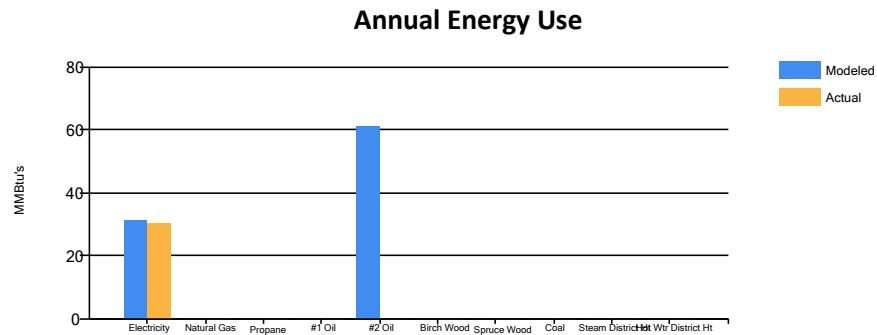
ENERGY AUDIT REPORT – PROJECT SUMMARY	
General Project Information	
PROJECT INFORMATION	AUDITOR INFORMATION
Building: Manokotak Natives Limited Corporation Building	Auditor Company: Alaska Native Tribal Health Consortium
Address: Manokotak	Auditor Name: Kevin Ulrich
City: Manokotak	Auditor Address: 4500 Diplomacy Drive Anchorage, AK 99508
Client Name: Teresa Ayojiak	
Client Address: P.O. Box 149 Manokotak, AK 99628-0149	Auditor Phone: (907) 729-3237
Client Phone: (907) 289-1062	Auditor FAX: (907) 729-4047
Client FAX: (907) 289-1007	Auditor Comment: Audit Assistant: Kelli Whelan, MS Env Eng (907) 729-3723
Design Data	
Building Area: 792 square feet	Design Space Heating Load: Design Loss at Space: 19,106 Btu/hour with Distribution Losses: 19,106 Btu/hour Plant Input Rating assuming 82.0% Plant Efficiency and 25% Safety Margin: 29,125 Btu/hour Note: Additional Capacity should be added for DHW and other plant loads, if served.
Typical Occupancy: 2 people	Design Indoor Temperature: 68 deg F (building average)
Actual City: Manokotak	Design Outdoor Temperature: -17.2 deg F
Weather/Fuel City: Manokotak	Heating Degree Days: 10,828 deg F-days
Utility Information	
Electric Utility: Manokotak Power Company	Average Annual Cost/kWh: \$0.57/kWh

Annual Energy Cost Estimate							
Description	Space Heating	Water Heating	Ventilation Fans	Lighting	Refrigeration	Other Electrical	Total Cost
Existing Building	\$2,312	\$1,736	\$4	\$1,950	\$182	\$823	\$7,007
With Proposed Retrofits	\$1,994	\$336	\$4	\$1,372	\$182	\$652	\$4,541
Savings	\$317	\$1,401	\$0	\$578	\$0	\$171	\$2,467

Building Benchmarks			
Description	EUI (kBtu/Sq.Ft.)	EUI/HDD (Btu/Sq.Ft./HDD)	ECI (\$/Sq.Ft.)
Existing Building	116.5	10.76	\$8.85
With Proposed Retrofits	97.0	8.96	\$5.73
EUI: Energy Use Intensity - The annual site energy consumption divided by the structure's conditioned area. EUI/HDD: Energy Use Intensity per Heating Degree Day. ECI: Energy Cost Index - The total annual cost of energy divided by the square footage of the conditioned space in the building.			

Appendix C – Actual Fuel Use versus Modeled Fuel Use

The graphs below show the modeled energy usage results of the energy audit process compared to the actual energy usage report data. The model was completed using AkWarm modeling software. The orange bars show actual fuel use, and the blue bars are AkWarm's prediction of fuel use.



Appendix D - EUI Calculation Details

The Manokotak Power Company owns and operates the utility that provides electricity to the residents of the community as well as to all the commercial and public facilities.

The average cost for each type of fuel used in this building is shown below in Table 5. This figure includes all surcharges, subsidies, and utility customer charges:

Table 5: Energy Cost Rates for each Fuel Type.

Table 3.1 – Average Energy Cost	
Description	Average Energy Cost
Electricity	\$ 0.57/kWh
#2 Oil	\$ 4.00/gallons

Table 6 shows the calculated results for the building Energy Use Index (EUI), which determines the total energy usage for a type of building for comparison with other buildings of the same type. This allows the user to determine the relative energy use of a building in relation to others of the same type or use.

Table 6: EUI Building Calculations for the Manokotak Natives Limited Office

Energy Type	Building Fuel Use per Year	Site Energy Use per Year, kBTU	Source/Site Ratio	Source Energy Use per Year, kBTU
Electricity	9,196 kWh	31,387	3.340	104,834
#2 Oil	441 gallons	60,907	1.010	61,516
Total		92,294		166,349
BUILDING AREA				
		792	Square Feet	
BUILDING SITE EUI		117	kBTU/Ft ² /Yr	
BUILDING SOURCE EUI		210	kBTU/Ft²/Yr	
* Site - Source Ratio data is provided by the Energy Star Performance Rating Methodology for Incorporating Source Energy Use document issued March 2011.				

Table 7 shows information on common energy use benchmarks used to characterize the efficiency of a building.

Table 7: Building Benchmarks for the Manokotak Natives Limited Office

Building Benchmarks			
Description	EUI (kBtu/Sq.Ft.)	EUI/HDD (Btu/Sq.Ft./HDD)	ECI (\$/Sq.Ft.)
Existing Building	116.5	10.76	\$8.85
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EUI: Energy Use Intensity - The annual site energy consumption divided by the structure's conditioned area. EUI/HDD: Energy Use Intensity per Heating Degree Day. ECI: Energy Cost Index - The total annual cost of energy divided by the square footage of the conditioned space in the building.			

Appendix E – Materials List and Labor Estimation

Table 8 & 9: Materials List and Cost Estimation for Manokotak Natives Limited Office EEM's

Energy Retrofit	Required Materials	Quantity	Cost per Item	Total Materials Cost
Printers	Power Strips	2	5	10
Air Furnace Replacement	Air Furnace	1	4500	4500
Water Heater	Insulating Blanket	1	30	30
LED Lighting	T8 LED Equivalent 4 ft.	24	15	360
LED Lighting	Incandescent A-Lamp Equivalents	1	25	25
LED Lighting	2 CFL A lamp 15 W equivalents	2	5	10
Add Insulation to Walls, Ceiling, and Floor	R-21 Batt Insulation	1	3000	3000
Seal air drafts in electrical outlets	Caulking	3	25	75

Category	Cost (\$)
Labor	6815
Travel	1450
Materials	8010
Freight	752
Indirect	1703
Total	18730

This energy audit cost information assumes that all work will be completed by an employee from outside of the community. If local labor is used for the retrofits, the travel and indirect costs may be removed from the total estimated cost. The boiler cleaning and setback thermostat retrofits will likely require outside labor.

Appendix F – Materials Specifications

L85V

PRODUCT SPECIFICATIONS

85% OIL FURNACE VARIABLE SPEED

FORM NO. AL851V-100 (07/2015)



L85UF = Upflow / Highboy
L85BF/R = Basement / Lowboy

CONFIGURATIONS

- Upflow / Highboy
- Basement / Lowboy

HEAT EXCHANGER

- Heavy-duty 14 gauge steel with a long lasting, high temperature ceramic fiber combustion chamber
- Easy access large diameter stainless steel cleanout ports

CABINET

- Foil-faced high density fiberglass insulation reduces heat loss and sound
- Pre-painted steel for maximum durability

AIR DELIVERY

- EON variable speed blower motor
- Motor features “soft start” and “soft stop” for quiet operation
- Active and passive dehumidification feature
- Easily removable slide-out blower design
- Dynamically balanced blower wheel and resilient motor mounts for smooth and quiet operation

BURNER

- High quality Beckett™ Flame Retention NX Burner for efficient combustion
- High efficiency PSC Burner motor to provide consistent operation through all operating conditions
- Solid state ignition provides a consistent 10,000 volts for smooth ignition

INSTALLATION/SERVICEABILITY

- Includes standard barometric damper
- Low GPH nozzle installed, higher GPH nozzle provided (shipped loose)

WARRANTY

10 year limited parts warranty / lifetime heat exchanger warranty available. See limited warranty document for details.

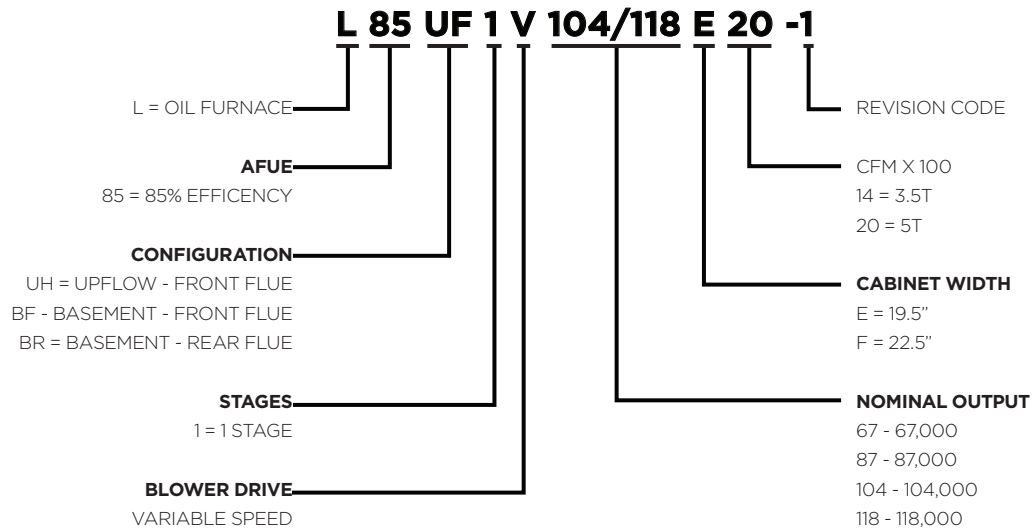
GENISYS™ ADVANCED BURNER CONTROL

(MODEL: 7505P152M) FEATURES THE FOLLOWING:

- Programmable valve-on delay and motor-off delay
- Three indicator lights for system monitoring and diagnostics
- Two communication ports for adding alarm contacts, programming display, and/or future wireless communications
- Welded relay protection with redundant motor relays
- Limited reset and limited recycle
- Sleek, modern design
- Technician Pump Prime mode



MODEL NUMBER GUIDE



PHYSICAL AND ELECTRICAL DATA

Configuration	Model	Nozzle Size	Input (Btuh)	Output (Btuh)	AFUE	Nom. Cooling Cap.	Flue Dia. (in.)	Filter Size (in.)	Volts/Hz/Phase	Max. Time Delay Breaker or Fuse (amp)	Trans. (V.A.)	Shipping Weight (lb.)
Upflow / Highboy	L85UF1V67/87E14	.50GPH-60°A	79,000	67,000	85.0	2.5 - 4.0	6	16 x 25*	120/60/1	15	40	250
		.65GPH-60°A	105,000	87,000								
	L85UF1V104/118F20	.75GPH-60°A	124,000	104,000	85.0	3.0 - 5.0	6	(2) * 16 x 251	120/60/1	15	40	270
		.85GPH-60°A	141,000	118,000								
Basement/Lowboy	L85BF/R1V67/87E14	.50GPH-60°A	79,000	67,000	85.0	2.5 - 4.0	6	18 x 19	120/60/1	15	40	225F
		.65GPH-60°A	105,000	87,000								230R
	L85BF/R1V104/118F20	.75GPH-60°A	124,000	104,000	85.0	3.0 - 5.0	6	19 x 21	120/60/1	15	40	270
		.85GPH-60°A	141,000	118,000								

1 Requires return air be brought to both sides above 1600 CFM

Note: All models shipped with lower input nozzle installed

*Filters not included

ACCESSORIES

DESCRIPTION	USED WITH	CATALOG NUMBER	KIT NUMBER
Clean Out Kit	All models	1.841025	ABRSH380-3
Field Controls Side Wall Vent Kit *	All models	See Note Below	See Note Below
Evaporator Coil Mounting Kit	L85B(F/R)67/87 to EU1P (18,24,30,36,43,48) BN "B Width"	1.841175	AGOILKDCC19
Evaporator Coil Mounting Kit	L85BF/R67/87 to EU1P (30,43,48,49,50,60) "C Width"	1.841176	AGOILKDCC22
Evaporator Coil Mounting Kit	L85BF/R104/118 to EU1P (60, 62) DN "D Width"	1.841177	AGOILKDCC24
Evaporator Coil Mounting Kit	L85BF/R104/118 to EU1P59DN "D Width" 59 D Only	1.841179	AGOILKDCC27
Combustion Air Kit	All Models	1.841038	ABOOT571
Clean Out Cap Kit	All Models	1.841037	ACAP570
Filter Rack	Only Upflow units (Basement models have racks pre-installed)	R37398C001	5 Pack
Evaporator Coil Cabient Kits			

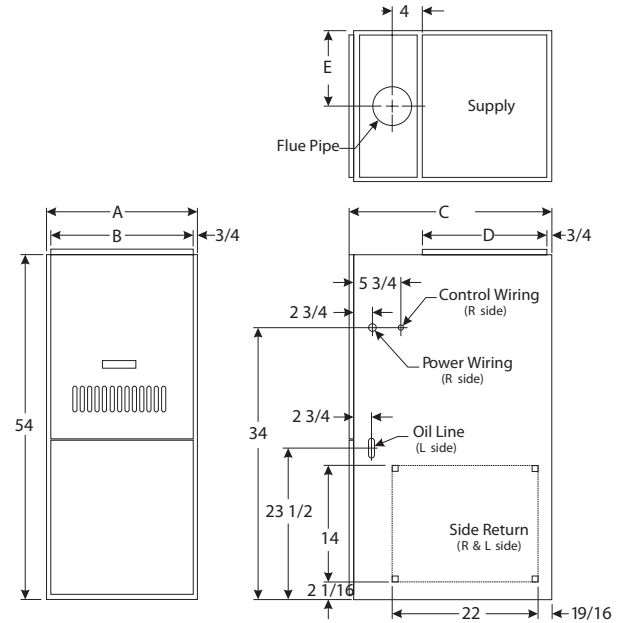
Note: * This can be ordered from Field Controls, part number SWG-5-CK61.

DIMENSIONS (IN.)**UPFLOW**

Model	A	B	C	D	E
L85UF1V67/87E14	19-1/2	18	30-5/8	19-5/8	9-3/4
L85UF1V104/118E20	22-1/2	21	33-1/8	22-1/8	11-1/4

CLEARANCES TO COMBUSTIBLES (IN.)

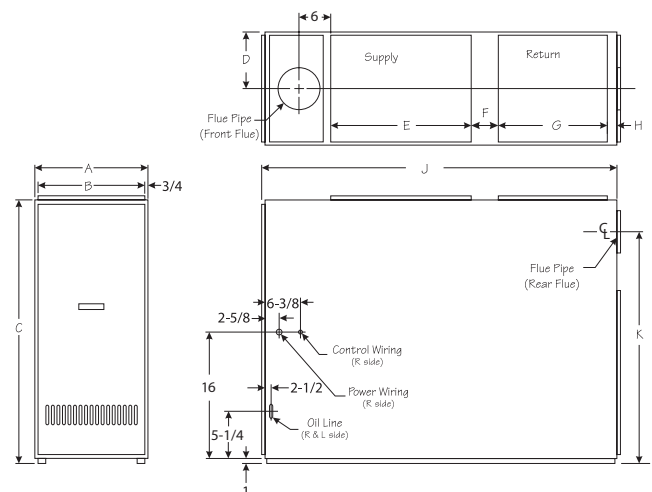
Model	Front	Sides	Rear	Floor	Above	Flue
L85UF1V67/87E14	4	0	0	Combustible	2	6
L85UF1V112/125E20						

**BASEMENT****DIMENSIONS (IN.)**

Model	A	B	C	D	E	F	G	H	J	K
L85BF/R1V67/87E14	19-1/2	18	37	9-3/4	21	3-1/4	16	1-1/2	52	N/A
L85BF/R1V104/118E20	22-1/2	21	37	11-1/4	21	3-1/4	16	1-1/2	52	N/A

CLEARANCES TO COMBUSTIBLES (IN.)

Model	Front	Sides	Rear	Above	Flue	Floor
L85BF/R1V67/87E14	4	6	24	2	9	Combustible
L85BF/R1V104/118E20						



BLOWER PERFORMANCE DATA

Configuration	Model	Motor Size (hp)	Blower Size	Nozzle GPH	Temp. Rise °F	Blower Speed Tap	Heating CFM@ 0.50" ESP	Cooling Adjustment	Cooling CFM @ .50 ext static pressure in. W.C.			
									Setting "A"	Setting "B"	Setting "C"	Setting "D"
Upflow / Highboy	L85UF1V67/87E14	1/2	10 x 10		---	---	---	Nom	1400	1200	1000	800
						---	---	(+)	1500	1400	1200	1000
						---	---	(-)	1200	1000	900	650
				.50	50	D Tap Setting*	1200	---	---	---	---	---
				.65	50	A Tap Setting*	1500	---	---	---	---	---
	L85UF1V104/118F20	3/4	12 x 11		---	---	---	Nom	2000	1800	1600	1200
						---	---	(+)	2000	2000	1800	1600
						---	---	(-)	1700	1550	1400	1200
				.75	60	C Tap Setting*	1550	---	---	---	---	---
				.85	60	A Tap Setting*	1850	---	---	---	---	---
Basement / Lowboy	L85BF1V67/87E14	1/2	10 x 9		---	---	---	Nom	1400	1200	1000	800
						---	---	(+)	1500	1400	1200	950
						---	---	(-)	1200	1050	860	650
				.50	50	D Tap Setting*	1200	---	---	---	---	---
				.65	50	B Tap Setting*	1450	---	---	---	---	---
	L85BF1V104/118F20	1	12 x 10		---	---	---	Nom	2000	1800	1600	1200
						---	---	(+)	2100	2000	1800	1350
						---	---	(-)	1650	1500	1350	950
				.75	60	C Tap Setting*	1550	---	---	---	---	---
				.85	60	B Tap Setting*	1730	---	---	---	---	---
	L85BR1V67/87E14	1/2	10 x 9		---	---	---	Nom	1400	1200	1000	800
						---	---	(+)	1500	1400	1200	950
						---	---	(-)	1200	1050	860	650
				.50	50	D Tap Setting*	1200	---	---	---	---	---
				.65	50	A Tap Setting*	1550	---	---	---	---	---
	L85BR1V104/118F20	1	12 x 10		---	---	---	Nom	2000	1800	1600	1200
						---	---	(+)	2100	2000	1800	1350
						---	---	(-)	1650	1500	1350	950
				.75	60	D Tap Setting*	1450	---	---	---	---	---
				.85	60	B Tap Setting*	1730	---	---	---	---	---

Note: All units shipped with low fire nozzle

* Required tap to maintain recommended rise.



1-800-448-5872

All specifications and illustrations
subject to change without notice and
without incurring obligations.



LED

T8 | T12

Notify Me when Available

[Large Project? Click here to get a volume quote.](#)



DESCRIPTION

SPECIFICATIONS

REVIEWS

EarthLED Total Product Insight

PERFORMANCE SPECIFICATIONS

REPLACEMENT FOR:	T8 OR T12 4 FOOT FLUORESCENT TUBE
BRIGHTNESS (LUMENS):	2000
COLOR TEMPERATURE:	4000K 5000K
COLOR ACCURACY (CRI):	80
DIMENSIONS	1.02" X 47.2"
POWER CONSUMPTION:	18 WATTS
VOLTAGE:	120-277 VOLTS
DIMMABLE:	NO

DIMENSIONS / ADDITIONAL DATA

CERTIFICATIONS:	UL, DESIGNLIGHTS (DLC)
PRODUCT/ORDER CODE:	4000K - 18WT8P-4F-40K-BYP 5000K - 18WT8P-4F-50K-BYP

LIFESPAN / COST TO RUN

PROJECTED LIFE: @3 HRS/DAY	50,000 HRS
YEARLY ENERGY COST: 3 HRS/DAY @ .11 KWH	\$2.17

WARRANTY

5 YEAR THINKLUX LIGHTING LIMITED WARRANTY
EARTHLED PRODUCT PROTECTION PLAN IS AVAILABLE

EarthLED Total Product Insight	
Performance Specifications	
REPLACEMENT FOR:	E12 CANDELABRA
BRIGHTNESS (LUMENS):	500
COLOR TEMPERATURE:	3000K 5000K
COLOR ACCURACY (CRI):	>80
TRADITIONAL WATTAGE EQUIVALENT:	60 WATTS
POWER CONSUMPTION:	7 WATTS
VOLTAGE:	120 VOLTS
DIMMABLE:	YES
MOISTURE RATING:	DAMP
FIXTURE RATING:	OPEN FIXTURES
BASE TYPE:	E12
ENERGYSTAR QUALIFIED:	YES (TKUCA38S01-7W-D-830-E12)
Dimensions / Additional Data	
BULB DIAMETER:	1.6 IN
MAXIMUM OVERALL LENGTH:	4.9 IN
PRODUCT WEIGHT:	6.7 OUNCES
CERTIFICATIONS:	UL
PRODUCT/ORDER CODE:	3000K - TKUCA38S01-7W-D-830-E12 5000K - TKUCA38S01-7W-D-850-E12
Lifespan / Cost To Run	
PROJECTED LIFE: @3 HRS/DAY	25,000 HRS
YEARLY ENERGY COST: 3 HRS/DAY @ .11 KWH	\$0.84
WARRANTY	3 YEAR THINKLUX LIMITED WARRANTY EARTHLED PRODUCT PROTECTION PLAN IS AVAILABLE



FEATURES & SPECIFICATIONS

INTENDED USE

Provides years of maintenance-free general illumination for outdoor use in commercial applications such as retail, education, multi-unit housing and storage. Ideal for lighting building facades, parking areas, walkways, garages, loading areas and any other outdoor space requiring reliable safety and security.

CONSTRUCTION

Sturdy weather-resistant aluminum housing with a bronze finish, standard unless otherwise noted. A clear polycarbonate lens protects the optics from moisture, dirt and other contaminants.

OPTICS

8 high performance LEDs are powered by a multi-volt (120V-277V) LED driver that uses 18 input watts and provides 1,490 delivered lumens. 100,000 hour LED lifespan based on IESNA LM-80-08 results and calculated per IESNA TM-21-11 methodology.

ELECTRICAL

Rated for outdoor installations, -40°C minimum ambient.

Adjustable Dusk-to-dawn, multi-volt photocell standard automatically turns light on at dusk and off at dawn for convenience and energy savings.

Photocell can be disabled by rotating the photocell cover.

6KV

Surface or recessed mount. A universal junction box is included standard.

All mounting hardware included.

LISTINGS

UL Certified to US and Canadian safety standards. Wet location listed for mounting higher than 4 feet off the ground.

Tested in accordance with IESNA LM-79 and LM-80 standards.

WARRANTY

5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Actual performance may differ as a result of end-user environment and application.

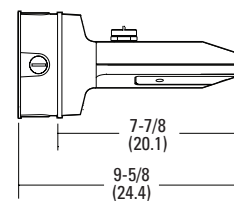
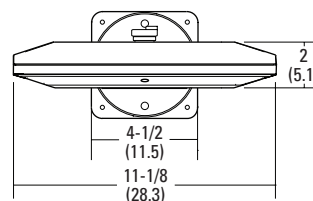
Note: Specifications subject to change without notice.

Catalog Number
Notes
Type

Outdoor General Purpose

OLW14

LED WALL PACK



All dimensions are inches (centimeters) unless otherwise indicated.

ORDERING INFORMATION

For shortest lead times, configure product using **bolded options**.

Example: OLW14

OLW14				
Series	Color temperature (CCT) ¹	Voltage	Control	Finish
OLW14 1400 lumen LED wall pack	(blank) 5000K ¹	(blank) MVOLT (120V-277V)	(blank) MVOLT photocell included	(blank) Bronze WH White

Accessories: Order as separate catalog number.

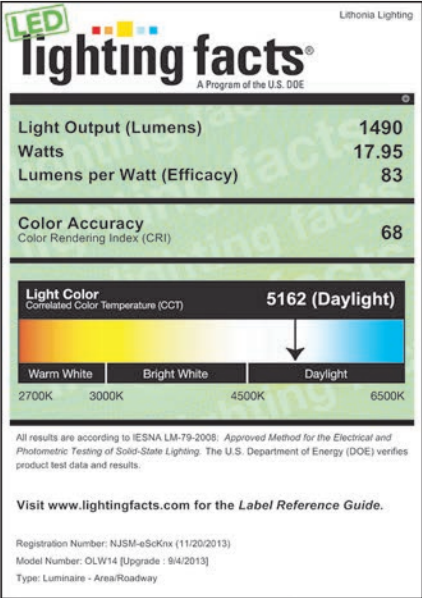
FCOS M24	Full cutoff shield
FCOS WH M24	Full cutoff shield, white

Notes

¹ Correlated Color Temperature (CCT) shown is nominal per ANSI C78,377-2008.

PHOTOMETRIC DIAGRAMS

Full photometric data report available within 2 weeks from request. Consult factory. Tested in accordance with IESNA LM-79 and LM-80 standards.





Value and versatility defined

Our new “traditional-style” LED luminaires offer the shapes you’ve grown accustomed to coupled with the high-powered, energy-efficient LEDs you want.

This fixture was designed to fit seamlessly — eliminating unwanted markings from the removal of older fixtures. **Replace one or replace them all, either case, with energy-savings of up to 80%, Lithonia has you covered!**



TWS LED 1 replaces up to **70W HPS**



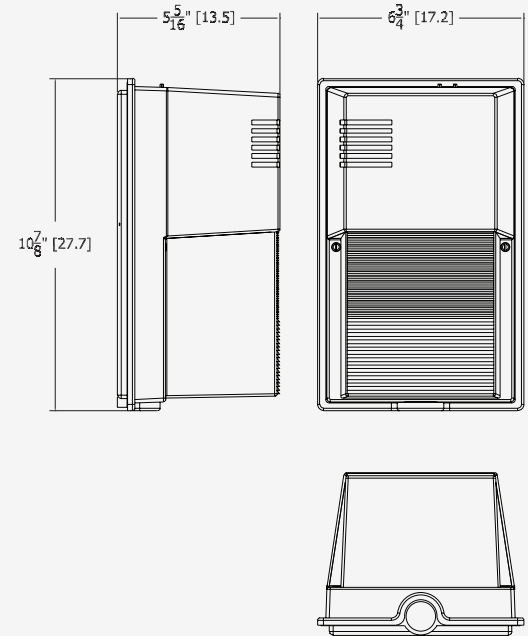
Value and versatility defined

www.lithonia.com



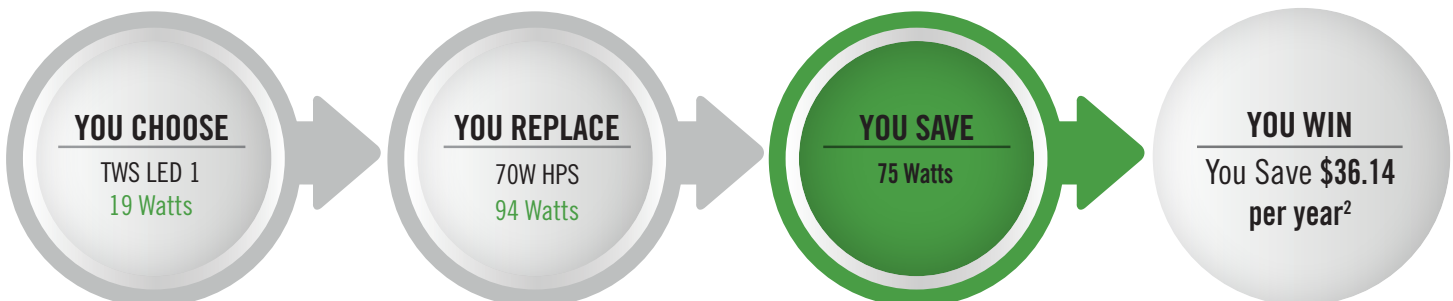
Mounts to a recessed junction box — **lower mounting height, 7-10 feet**

Product Dimensions



- **Impact resistant polycarbonate lens** provides an **even light distribution** and protects electronics
- 100,000 hour LED life¹
- Includes standard photo cell for dusk to dawn operation
- **Cast aluminum back plate** dissipates heat from LEDs to promote long life
- Highly efficient LEDs provide **54 lumens per watt**

¹ LED lifespan based on IESNA LM-80-08 results and calculated per IESNA TM-21-11 methodology.



² Based on 12 hours operation per day and energy costs of \$.11 per kWh

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: TWS LED 1 50K 120 PE

TWS LED							
Series	Performance Package	Color Temperature (CCT)	Voltage	Control Options	Finish		
TWS LED LED Wall Pack	1 1017 lumens	50K 5000K ³	120 120 volts	PE Photoelectric Cell, Button Type	(blank)	Dark Bronze	



Notes

³ Correlated Color Temperature (CCT) shown is nominal per ANSI C78,377-2008.

Catalog Number
Notes
Type

FEATURES & SPECIFICATIONS

INTENDED USE — The OLFL provides years of maintenance-free general illumination for residential or commercial outdoor applications such as yards, driveways, patios, loading areas and warehouses.

CONSTRUCTION — Dusk-to-dawn photocell automatically turns on at dusk and off at dawn for convenience and energy savings.

Rugged cast-aluminum, corrosion-resistant housing in bronze finish.

Tempered glass lens is fully gasketed to protect LEDs and keep out moisture, dirt and bugs.

120V driver operates at 60 Hz, 0.258 amps, 25 watts.

Rated for outdoor installations, -40°C minimum ambient.

OPTICS — High-performance LEDs produce 1900 lumens and maintain 70% of light output at 50,000 hours of service. (LED lifespan based on IESNA LM-80-08 results and calculated per IESNA TM-21-11 methodology.)

Precision optics and reflector for maximum light output.

See Lighting Facts Labels for specific fixture performance.

INSTALLATION — Mounts easily to existing junction box on wall or under eave.

Adjustable head allows precise illumination.

LISTINGS — UL Listed to US and Canadian safety standards for wet locations. ENERGY STAR® certified product.

WARRANTY — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application.

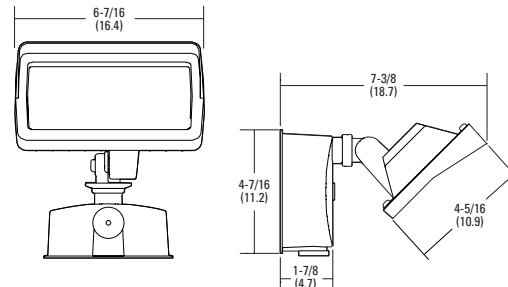
All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

Outdoor General Purpose

OLFL

LED FLOODLIGHT



All dimensions are inches (centimeters) unless otherwise indicated.

ORDERING INFORMATION

All configurations of this product are considered "standard" and have short lead times.

Example: OLFL 14 PE BZ

OLFL	14		PE	BZ
Series	Model / Color temperature (CCT) ¹	Voltage	Control	Finish
OLFL	14 4000K	(blank) 120V	PE Button photocell	BZ Bronze

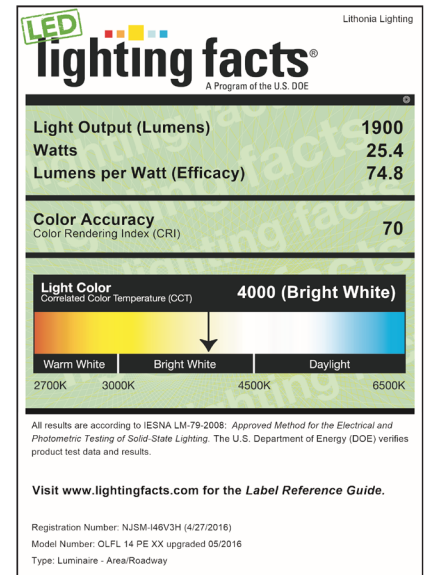
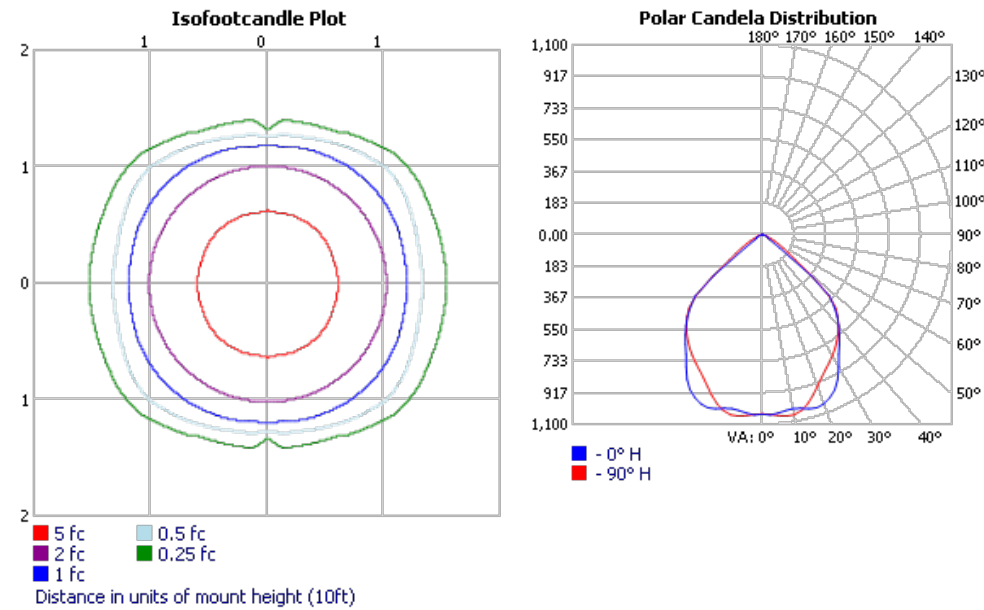
Notes

¹ Nominal Correlated Color Temperature (CCT) per ANSI C78.377-2008.

PHOTOMETRIC DIAGRAMS

To see complete photometric reports or download .ies files for this product, visit the OLFL home page on www.Lithonia.com. Tested in accordance with IESNA LM-79 and LM-80 standards. Actual wattage may differ by +/- 8% when operating between 120V +/- 10%.

OLFL 14



R-19 Kraft Faced Insulation Batts 23 in. x 93 in.



- Soft to touch, pre-cut widths to fit between studs and joists
- Greenguard GOLD certified & verified to be Formaldehyde free
- Offers exceptional thermal and sound control performance

\$88.20 / each

If you buy 15 or more

\$61.74 / each

Quantity

Product Overview

EcoTouch insulation is the reinvention of fiberglass insulation from Owens Corning, the industry leader that invented fiberglass insulation. Install our insulation with confidence knowing that over 70 years of innovation and experience has gone in the making of EcoTouch insulation. Unlike traditional fiberglass insulation, Owens Corning EcoTouch insulation contains more than 99% natural ingredients consisting of minerals and plant-based compounds and is verified to be formaldehyde free. Owens Corning EcoTouch insulation is third-party certified to include a minimum of 65% total recycled content for unfaced insulation and 58% for kraft faced insulation. Owens Corning EcoTouch insulation helps to control sound and temperature - keeps your home warm in the winter and cool in the summer.

- Dimensions: 6-1/4 in. x 23 in. x 93 in., 8 pieces (118.83 sq. ft. / bag)
- Application: 2 in. x 6 in. walls (Interior / exterior), floors
- Completely fills the cavity, eliminating gaps and the need for additional handwork
- Provides thermal performance and helps lower monthly heating / cooling costs
- EcoTouch insulation helps control sound; add to bedrooms, home office, family room, utility room, kitchen and bathroom
- Can be combined with FOAMULAR insulating sheathing to achieve greater R-value in exterior wall applications

Specifications

Dimensions

Coverage Area (sq. ft.)

118.83

Product Depth (in.)

93

Product Height (in.)

6.25

Product Length (ft.)

7.75 ft

Product Thickness (in.)

6.25 in

Product Width (in.)

23

Details

Faced or Unfaced

Faced

Formaldehyde Free

Yes

Insulation Application Type

2x6 Walls,Crawlspaces,Floors

Insulation R-Value

19

Insulation Type

Fiberglass

Product Weight (lb.)

34lb

Roll or Batt

Batt

Vapor Retardant

Yes

Warranty / Certifications

Warranty Information

Limited Lifetime



EcoTouch® PINK® FIBERGLAS™ Insulation

Manufacturers Fact Sheet

This fact sheet contains important details about Owens Corning's™ **EcoTouch® PINK® FIBERGLAS™ Insulation**. Read it carefully. The chart below covers the entire line of EcoTouch® products sold under the names Thermal Batt, FastBatt, Cathedral Batt, Basement Blanket™, Sound Attenuation Batt (SAB) and Sonobatts®. The chart includes all products, both unfaced and faced with Kraft paper, foil, polyethylene ("Poly"), FSK or PSK.

EcoTouch® PINK® FIBERGLAS™ Insulation

R-value	Thickness (inches)	Width (inches)	Length (inches)	Piece Sq. Ft.	Pieces/ Package	Package Sq. Ft.
8	2.5	16	96	10.7	20	213.3
8	2.5	24	96	16.0	20	320.0
11	3.5	15	93	9.7	16	155.0
11	3.5	15	94	9.8	9	88.1
11	3.5	15	105	10.9	16	175.0
11	3.5	16	96	10.7	16	170.7
11	3.5	23	93	14.9	16	237.7
11	3.5	23	96	15.3	16	245.3
11	3.5	24	48	8.0	32	256.0
11	3.5	24	96	16.0	16	256.0
11	3.5	48	720	240.0	1	240.0
13	3.5	11	93	7.1	22	156.3
13	3.5	15	93	9.7	10	96.9
13	3.5	15	93	9.7	11	106.6
13	3.5	15	93	9.7	13	125.9
13	3.5	15	105	10.9	12	131.3
13	3.5	15	94	9.8	9	88.1
13	3.5	15.25	93	9.8	12	118.2
13	3.5	15.25	93	9.8	13	128.0
13	3.5	15.25	105	11.1	12	133.4
13	3.5	16	96	10.7	11	117.3
13	3.5	16	96	10.7	13	138.7
13	3.5	19.25	93	12.4	11	136.8

EcoTouch® PINK® FIBERGLAS™ Insulation

R-value	Thickness (inches)	Width (inches)	Length (inches)	Piece Sq. Ft.	Pieces/ Package	Package Sq. Ft.
13	3.5	23	93	14.9	11	163.4
13	3.5	24	48	8.0	24	192.0
13	3.5	24	96	16.0	11	176.0
13	3.5	24	96	16.0	12	192.0
13	3.5	48	480	160.0	1	160.0
15	3.5	11	93	7.1	14	99.5
15	3.5	15	93	9.7	7	67.8
15	3.5	15	93	9.7	8	77.5
15	3.5	15	105	10.9	7	76.6
15	3.5	15	105	10.9	8	87.5
15	3.5	16	96	10.7	7	74.7
15	3.5	16	96	10.7	8	85.3
15	3.5	23	93	14.9	7	104.0
15	3.5	24	96	16.0	7	112.0
19	6.25	11	93	7.1	16	113.7
19	6.25	15	48	5.0	16	80.0
19	6.25	15	93	9.7	8	77.5
19	6.25	15	94	9.8	5	49.0
19	6.25	15	105	10.9	8	87.5
19	6.25	15	470	49.0	1	49.0
19	6.25	15.25	93	9.8	8	78.8
19	6.25	15.25	105	11.1	8	89.0
19	6.25	16	48	5.3	16	85.3
19	6.25	16	96	10.7	8	85.3
19	6.25	19.25	48	6.4	16	102.7
19	6.25	19.25	93	12.4	8	99.5
19	6.25	19.25	96	12.8	8	102.7
19	6.25	23	48	7.7	16	122.7
19	6.25	23	93	14.9	8	118.8
19	6.25	23	94	15.0	5	75.1
19	6.25	23	96	15.3	8	122.7
19	6.25	23	470	75.1	1	75.1
19	6.25	24	48	8.0	16	128.0
19	6.25	24	96	16.0	8	128.0
19	6.25	48	470	156.7	1	156.7
19	6.25	48	480	160.0	1	160.0
21	5.5	15	93	9.7	7	67.8
21	5.5	15	93	9.7	8	77.5
21	5.5	15	105	10.9	8	87.5
21	5.5	16	96	10.7	7	74.7
21	5.5	23	93	14.9	6	89.1
21	5.5	24	96	16.0	7	112.0
22	6.75	15	48	5.0	14	70.0

Read This Before You Buy

What you should know about R-Values

The chart shows the R-values of this insulation. R means resistance to heat flow. The higher the R-value, the greater the insulating power. Compare insulation R-values before you buy.

There are other factors to consider. The amount of insulation you need depends mainly on the climate you live in. Also, your fuel savings from insulation will depend on the climate, the type and size of house, the amount of insulation already in your house, and your fuel-use patterns and family size. If you buy too much insulation, it will cost you more than what you'll save on fuel.

To get the marked R-value, it is essential that this insulation be installed properly.



INNOVATIONS FOR LIVING®

EcoTouch® PINK® FIBERGLAS™ Insulation

Manufacturers Fact Sheet

EcoTouch® PINK® FIBERGLAS™ Insulation

R-value	Thickness (inches)	Width (inches)	Length (inches)	Piece Sq. Ft.	Pieces/ Package	Package Sq. Ft.
22	6.75	23	48	7.7	14	107.3
22	6.75	24	48	8.0	14	112.0
25	8	19.25	96	12.8	6	77.0
25	8	23	96	15.3	6	92.0
25	8	16	96	10.7	6	64.0
25	8	16	48	5.3	12	64.0
25	8	24	96	16.0	6	96.0
30	9.5	12	48	4.0	20	80.0
30	9.5	15	48	5.0	10	50.0
30	9.5	15	300	31.3	1	31.3
30	9.5	16	48	5.3	10	53.3
30	9.5	16	48	5.3	11	58.7
30	9.5	19.25	48	6.4	10	64.2
30	9.5	23	300	47.9	1	47.9
30	9.5	24	48	8.0	10	80.0
30	9.5	24	48	8.0	11	88.0
30	8.25	15.5	48	5.2	11	56.8
30	8.25	23.75	45	7.4	10	74.2
30	8.25	23.75	48	7.9	10	79.2
38	12	16	48	5.3	8	42.7
38	12	19.25	48	6.4	8	51.3
38	12	24	48	8.0	8	64.0
38	10.25	15.5	48	5.2	8	41.3
38	10.25	23.75	48	7.9	8	63.3

Please contact 419-248-6557 for additional information. Email: gettech@owenscorning.com

Disclaimer of Liability

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INNOVATIONS FOR LIVING®

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ONE OWENS CORNING PARKWAY
TOLEDO, OHIO, USA 43659

1-800-GET-PINK®
www.owenscorning.com

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Window Jambs and Light-Duty Door Jambs

RUBBER SEAL

Part Number Example

Color: 1 (X=BLACK, OW=WHITE)
 Tape Option: 3 (BT)
 Rubber Seal Profile: 2 (X105)
 (If Applicable): 4 (SINGLE)

Single and Dual Option
 Tape Options:
 NT = No Tape
 HT = General Acrylic PSA
 BT = 3M® Bonded Tape System

"D" SECTIONS

 X2476	 X1333	 OW1333	 X1153	 X1543	 X110
 X109	 OW109	 X2507	 X119	 X125	 OW125
 X2373	 X135	 OW135	 X1750	 X2576	
 X105	 X202	 OW202	 X101	 X2338	

See page 42 for tape options

RUBBER SEAL

Part Number Example



Color

Tape Option

1

3

X

105

BT

2

SINGLE

(If Applicable)

Rubber Seal Profile



Single and Dual Option

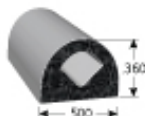
Tape Options:

NT = No Tape

HT = General Acrylic PSA

BT = 3M[®] Bonded Tape System

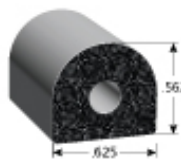
"D" SECTIONS



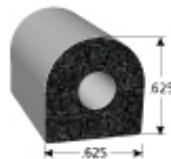
X108



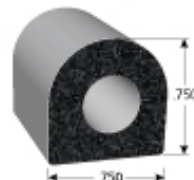
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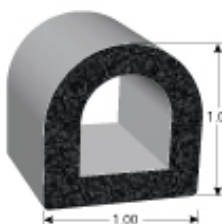
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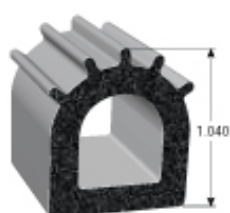
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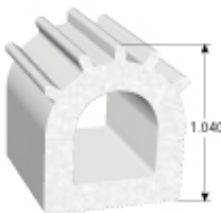
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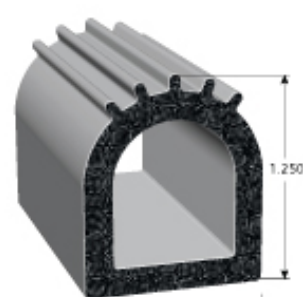
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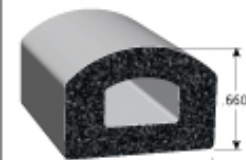
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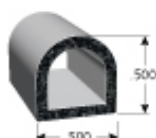
OW2828



X2492



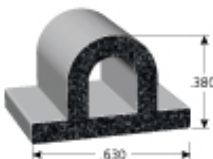
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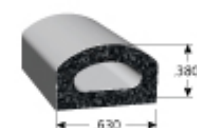
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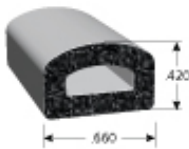
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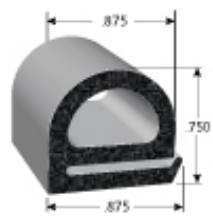
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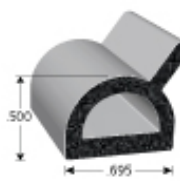
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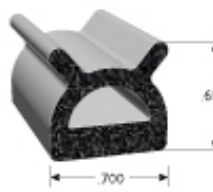
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X1921



X5036



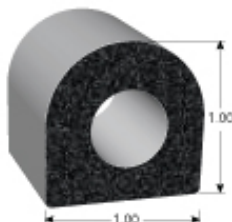
X2354

RUBBER SEAL

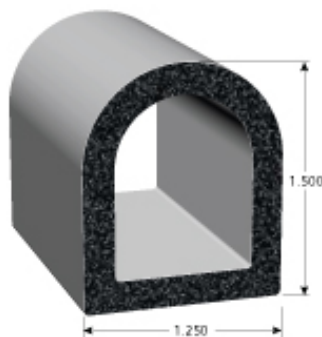


SEALS

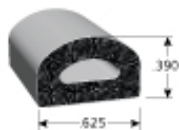
TRIANGLE SECTIONS



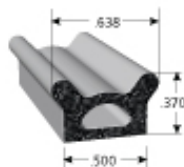
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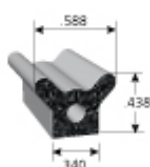
X1655



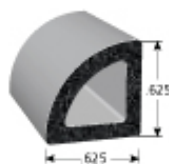
2495



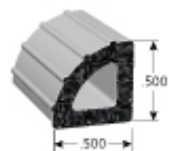
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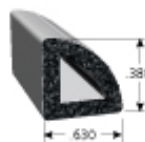
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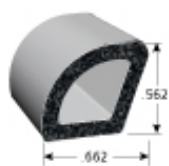
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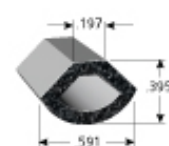
X2532



X2025



X1711



X1923

Adhesive Options -

Choose the tape that fits your needs

"HT" GENERAL PURPOSE PRESSURE SENSITIVE ADHESIVE

This acrylic based adhesive is best used to hold the rubber seal in place while installed in a static application or compressed between two stationary objects. May be used in some light duty dynamic applications against a variety of substrates. Good heat performance -20°F. to +158°F. Please Note: During application ambient temperature must be above 60° F.



"BT" 3M™ HIGH STRENGTH TAPE SYSTEM

The ultimate bond between the rubber and substrate. Creates a moisture barrier and air tight seal between rubber and substrate. Highest peel and shear resistance, can be used under high loads of stress and force. Has low initial tack for easy re-positioning during installation and requires 72 hours of cure time for full bond strength. Good heat performance -20°F. to +158°F.



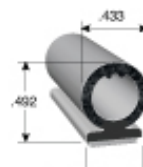
See our How to Install video at: www.rubber-seal-install.info



PEDESTAL SEALS



DD6109

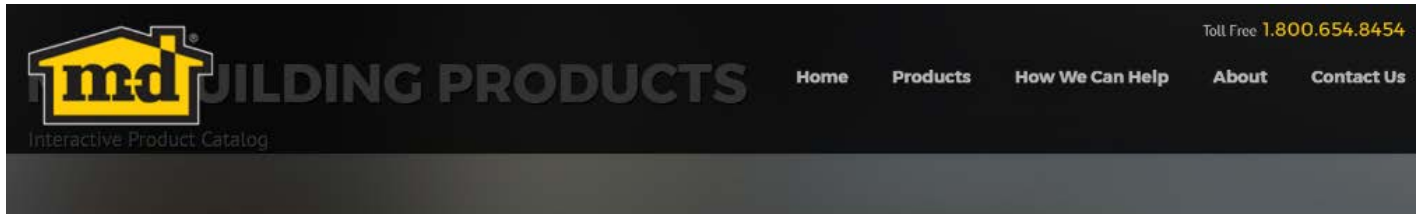


DD1604

See page 42 for tape options

Door Bottom Sweep

(Replacement for Damaged Brush Sweep)



M-D Building Products, Inc. > Products > DB006 Commercial Grade Door Sweep - 1-1/4" EPDM - 36"

Product Search

Search by name, model, or upc.



DB006 Commercial Grade Door Sweep - 1-1/4" EPDM - 36"

This heavy duty commercial grade door sweep provides years of service in high traffic applications. Heavy rubber seal stands up to the elements. Fasteners are included.

SKU: 68247 CATEGORIES: [DOOR SEALS](#), [WEATHERIZATION & THRESHOLDS](#)

[WHERE TO BUY](#)

Door Bottom Sweep

(For Doors w/ Very Large Gaps and/or Damaged Bottom Edges)



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[> DB054 Door Bottom - 1-3/4" Vinyl - 36"](#)

Product Search

Search by name, model, or upc.



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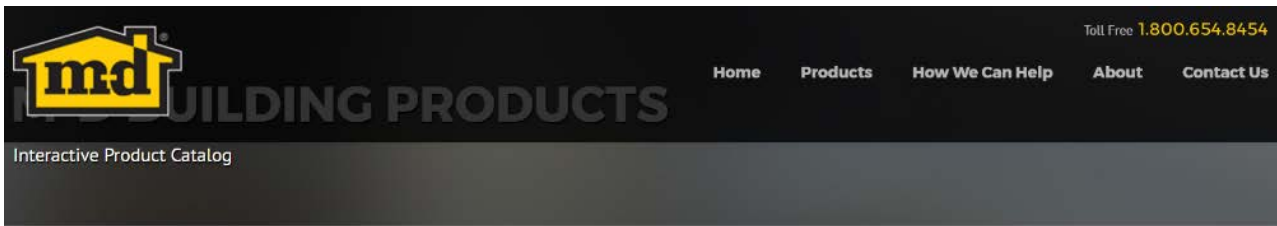
DB054 Door Bottom - 1-3/4" Vinyl - 36"

Energy loss through the bottom of doors can be minimized with the installation of a door bottom in conjunction with your smooth top threshold. This combination provides a weatherproof seal between the bottom of the door and the top of the threshold. Drip caps also provide your exposed entry ways protection by diverting water away from the door bottom and thresholds. M-D Building Products offers multiple combinations of new and replacement door bottoms and drip caps that will fit most entry doors.

SKU: 68593 CATEGORIES: [DOOR SEALS](#), [WEATHERIZATION &](#)

Door Bottom Sweep

(Lower Profile)



M-D Building Products, Inc. > Products > DB002 U-Shaped Door Bottom w/Drip Cap - 1-3/8" x 36"

Product Search

Search by name, model, or upc.



DB002 U-Shaped Door Bottom w/Drip Cap - 1-3/8" x 36"

Energy loss through the bottom of doors can be minimized with the installation of a door bottom in conjunction with your smooth top threshold. This combination provides a weatherproof seal between the bottom of the door and the top of the threshold. Drip caps also provide your exposed entry ways protection by diverting water away from the door bottom and thresholds. M-D Building Products offers multiple combinations of new and replacement door bottoms and drip caps that will fit most entry doors.

SKU: 80630 CATEGORIES: [DOOR SEALS](#), [WEATHERIZATION & THRESHOLDS](#)

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Door Top and Side Jambs

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M-D Building Products, Inc. > Products > Cinch Door Seal Tops and Sides 42" Silver

Product Search

Search by name, model, or upc.

Q



Cinch Door Seal Tops and Sides 42" Silver

Cinch™ Door Seal Top & Sides is a fast and easy way to save money by sealing your doors against drafts and leaks. Say goodbye to drills, screws, screwdrivers or pilot holes. Simply measure, trim, peel and stick your way to energy savings in any season. Specially developed with 3M™ Adhesive Technology, Cinch installs in mere minutes and lasts for years.

SKU: 43303 CATEGORIES: DOOR SEALS, WEATHERIZATION & THRESHOLDS TAGS: AIR-TIGHT, CINCH, ENERGY SAVINGS

WHERE TO BUY



Bottom of Garage Doors



For Questions or Concerns, Please Call

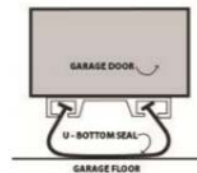
(800) 992-2018

ProSeal™ U-shaped Garage Door Bottom Seal Installation Instructions

1. Remove existing garage door bottom seal. Some garage door manufacturers will pinch the aluminum track to hold the bottom seal in place. To open a pinched track, insert a flathead screw driver, into the end of the track, and gently pry open the end, just enough to allow removal of the old door seal. Both ends of the track may need to be opened.
2. Make sure any debris in the track has been removed and that it is clean and dry. Straighten out any cramps in the track.

Quick Tip: Mix a bucket of water with some liquid dish soap or liquid laundry detergent. Place the seal in the soapy water and pull it out as you install it into the track.

3. Starting at either end of the garage door, insert the ¼" T-ends, attached to the ProSeal™ Garage Door Bottom Seal, into the track. Next, slide the ProSeal™ into the track, until it reaches the opposite side. Continue to pull the seal until you have approximately 2" protruding beyond the end of the track.
4. Leave 2" protruding on both sides, then use scissors to trim off the excess ProSeal™. If your door seal track was pinched and you wish to pinch it back together, use pliers to gently pinch the track back into place. Now tuck the 2" of excess seal back into the U-shaped opening. This will lock the seal in place.



6345 Nancy Ridge Drive, San Diego, CA 92121
(858) 625-0005 • (800) 992-2018 • Fax (858) 625-0010 • Email: info@auto-care.com



Top and Sides of Garage Doors



Pemko Brush Gasketing/Door Bottom, 45-degree, Clear Anodized Aluminum with 0.625" Gray Nylon Brush insert, 0.31" width, 0.25" Height, 72" Length

[Be the first to review this item](#)

Price: **\$23.35** & **FREE Shipping** on orders over \$25—or get **FREE Two-Day Shipping** with 

Usually ships within 1 to 2 months.

Ships from and sold by Amazon.com.

New (1) from \$23.35 & FREE shipping on orders over \$25.00. [Details](#)

Specifications for this item

Part Number	45061CNB72	Height	0.25 inches
Number of Items	1	Length	72 inches
UPC	086787113621	Material	Aluminum
Brand Name	Pemko	Model Number	45061CNB72
		Width	0.31 inches

Product features

- All brush seals greatly reduce the infiltration of light, air, wind, rain, and snow; prevent heat loss; control the penetration of smoke and fumes.
- The dense nylon filaments conform to the contours of every sealing surface, providing a superior seal with extremely low closing force.
- Brush remains flexible down to -40°F and has a melting point above 400°F.
- UV stabilized, dependable, long-lasting, cost-effective.
- All clear anodized brush products are supplied with gray brush

Product description

Brush Perimeter seals are designed to seal the gap between the door and the door jamb. They are surface mounted to the frame and are usually supplied with an angled flange. The angled flange provides the best contact between the brush and the surface of the door.

Product details

Shipping Weight: 9.6 ounces ([View shipping rates and policies](#))

Domestic Shipping: Currently, item can be shipped only within the U.S. and to APO/FPO addresses. For APO/FPO shipments, please check with the manufacturer regarding warranty and support issues.

International Shipping: This item is not eligible for international shipping. [Learn More](#)

ASIN: B00BU8TLNS

Item model number: 45061CNB72

Average Customer Review: [Be the first to review this item](#)

Amazon Best Sellers Rank: #754,396 in Industrial & Scientific ([See Top 100 in Industrial & Scientific](#))
#144 in Industrial & Scientific > Commercial Door Products > Commercial Door Hardware > **Trims, Seals & Gaskets**

Manufacturer’s warranty can be requested from customer service. [Click here](#) to make a request to customer service.