Scott Runyan

From: Nathan M Juliana <Nathan.Juliana@modot.mo.gov>
Sent: Monday, May 5, 2025 3:05 PM
To: Scott Runyan
Cc: Christopher M. Harman
Subject: FW: Blue Parkway - Capital Electric Street Lights

External (nathan.juliana@modot.mo.gov)

GRIFFIN RILEY

Report This Email View Quarantine View Allow/Block List

Scott,

I have received approval from our lighting engineer for the lighting submittals.

Nathan Juliana
MoDOT – Traffic Operation Supervisor- KC District
600 NE Colbern Road
Lee's Summit, MO 64086
Phone: 816-607-2185
Nathan.juliana@modot.mo.gov

From: Brittany A. Saathoff <Brittany.Saathoff@modot.mo.gov>
Sent: Monday, May 5, 2025 9:46 AM
To: Nathan M Juliana <Nathan.Juliana@modot.mo.gov>; Christopher J. Divine <Christopher.Divine@modot.mo.gov>
Subject: RE: Blue Parkway - Capital Electric Street Lights

Nathan,

The lighting submittals are acceptable.

Thank you,

Brittany Saathoff, EIT
Senior Traffic Studies Specialist
MoDOT – Kansas City District
816-365-2587

SHOP DRAWING SUBMITTAL

Project: Blackwell Blue Parkway

City/State: Lee's Summit, MO

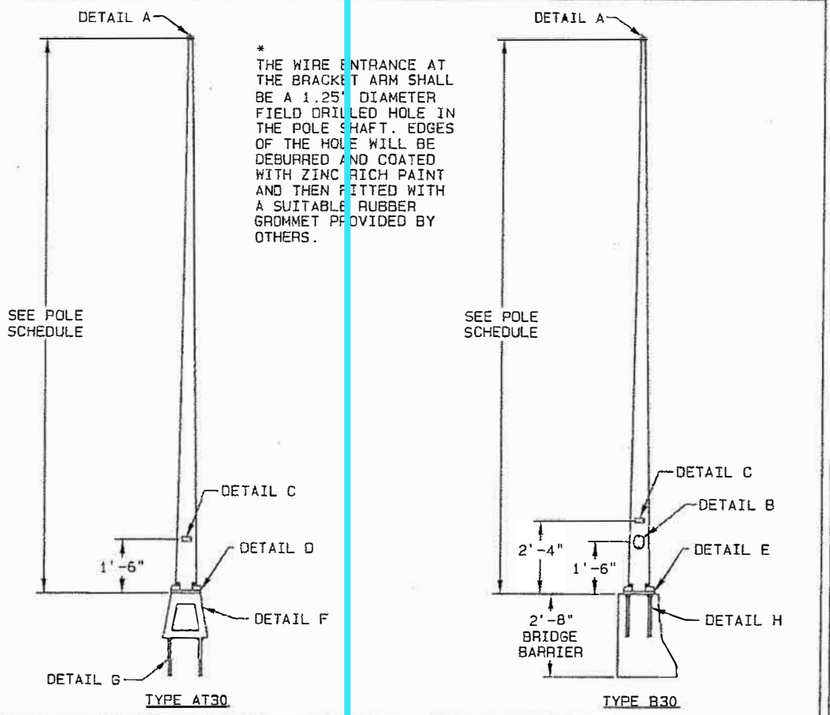
Scope of Work: Street Lighting

Attachments:

- AT30 - 30' STREET LIGHT POLE
- 6' SINGLE MEMBER ARM
- SCREW-IN FOUNDATION – 8" X 60"
- MODOT LED A FIXTURE
- MODOT 4 CIRCUIT LIGHTING CONTROLLER
- MODOT TYPE 2 POWER SUPPLY
- CLASS 1 JUCNTION BOX - 17" X 30" X 24" – "STATE LIGHTING"
- FUSE KIT – HEB-JW-RYC
- UNFUSED KIT – HET-JW-RYC
- 5 AMP FUSE

7050 Ensign Dr.
Parkville, MO 64152

Phone (816) 389-4000
Fax (816) 329-8260



* THE WIRE ENTRANCE AT THE BRACKET ARM SHALL BE A 1.25" DIAMETER FIELD DRILLED HOLE IN THE POLE SHAFT. EDGES OF THE HOLE WILL BE DEBURRED AND COATED WITH ZINC RICH PAINT AND THEN FITTED WITH A SUITABLE RUBBER GROMMET PROVIDED BY OTHERS.

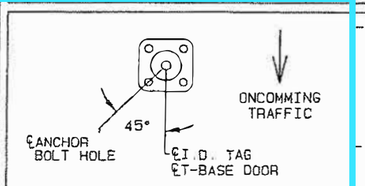
POLE SCHEDULE

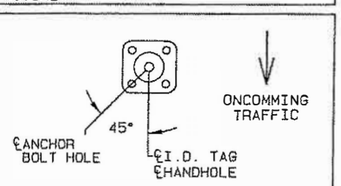
QTY.	TENON TOP	MISSOURI TYPE	BASE DIA.	TOP DIA.	LENGTH	GA.
12		AT30	8.00"	4.06"	28.00'	11
		B30	8.00	4.06	28.00	11

MATERIAL DATA

COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)
POLE SHAFT*	A595 GR.A	55*
LUM. ARM	A501, A513, A618, A500 GR.B	36
ARM STRUTS	A36	36
BASE PLATE	A709 / A572	50
GALVANIZING	A123 & A153 CLASS C	
POLE CAP & NUT COVERS	B86 ALLOY AG40A	
ANCHOR BOLTS	A449	92

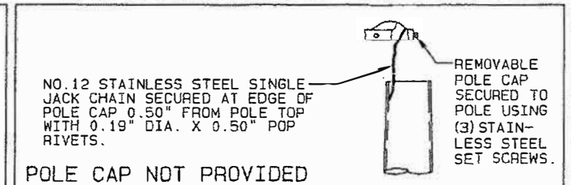
*AFTER MANUFACTURE





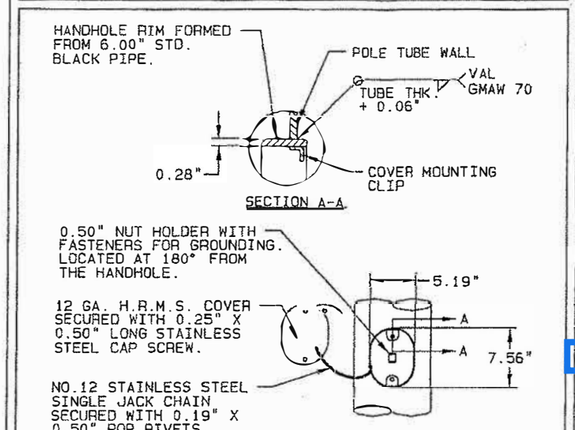
- ALL ANGLES MEASURED CLOCKWISE FROM I.D. TAG OR HANDHOLE AS VIEWED FROM SMALL END OF POLE
- LUMINAIRE ARMS WILL BE ORIENTED IN THE FIELD BY INSTALLERS

RADIAL INDEX

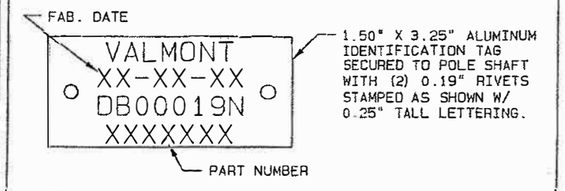


POLE CAP NOT PROVIDED IF TENON TOP IS USED.

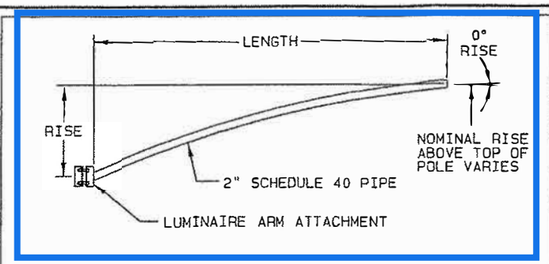
DETAIL A | POLE CAP

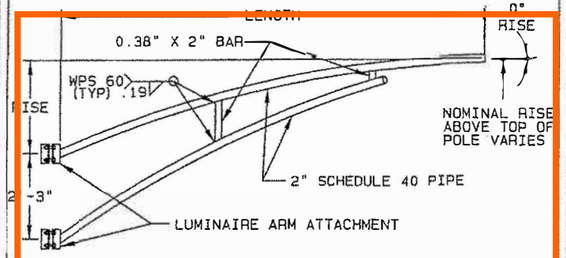


DETAIL B | HANDHOLE



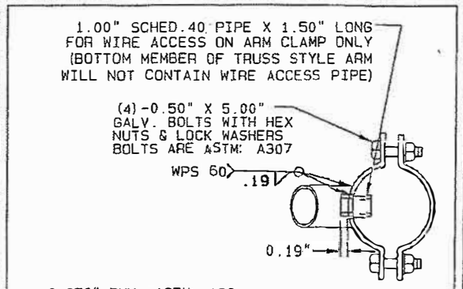
DETAIL C | I.D. TAG





LUMINAIRE ARM

QTY.	MISSOURI TYPE	LENGTH	RISE	STYLE
	AT30 OR B30	4.00'	1'-6"	SINGLE
4	AT30 OR B30	6.00'	1'-6"	SINGLE
	AT30 OR B30	8.00'	1'-6"	SINGLE
8	AT30 ONLY	10.00'	1'-6"	TRUSS
	AT30 ONLY	12.00'	1'-6"	TRUSS
	AT30 ONLY	15.00'	1'-6"	TRUSS



LUMINAIRE ARM ATTACHMENT

-2001 AASHTO (INCLUDING 2002 AND 2003 INTERIMS)

-90 MPH WIND (W/1.14 GUST FACTOR)

-50 YEAR DESIGN LIFE

-STRUCTURES ARE EXEMPT FROM THE MANDATORY FATIGUE REQUIRMENTS OF CHAPTER 11.

DESIGN CRITERIA

LSMO - JACO Blue Parkway
GSC PO 125766
Capital Electric Line Bldrs. - JOB 32033

Show Drawing Approved 8/10/06

STATE OF MISSOURI
NIZAM A. QASSEM
NUMBER PE-2005035711
PROFESSIONAL ENGINEER
2/06/06

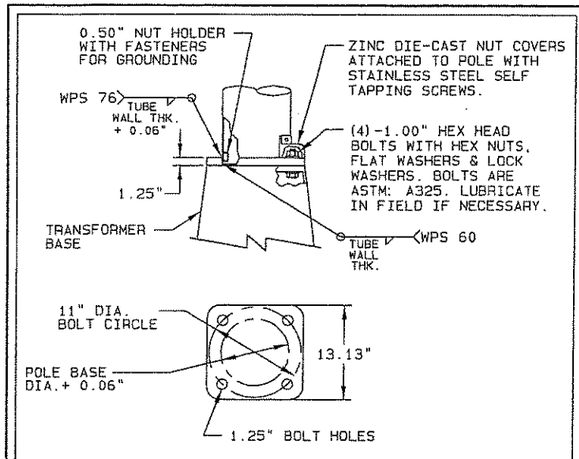
REV	DRAWN BY-DATE	CHECK BY-DATE	DESCRIPTION
N	GGL 06/08/06	GGL 06/08/06	REV PER MODOT REJECT LETTER 05/31/06
M	GGL 01/30/06	GGL 01/30/06	REV PER MODOT REJECT LETTER 12/23/05
L	GGL 08/05/05	GGL 08/05/05	REV PER MODOT REJECT LETTER 7/14/05
—	GM 05/01/81	GM 05/31/81	— — — — — — — — — — — — — — — — — —

TITLE: MISSOURI DOT
LIGHTING STRUCTURES
30'-0" MOUNTING HEIGHT

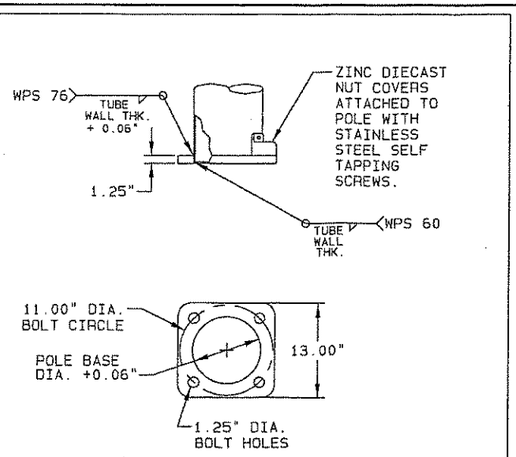
VALMONT INDUSTRIES, INC. RESERVES THE RIGHT TO INSTALL VARIOUS ENGINEER APPROVED MATERIAL HANGING ACCOMMODATIONS TO FACILITATE THE MANUFACTURING PROCESS.

valmont
Valley, NE 68064
(402) 359-2201

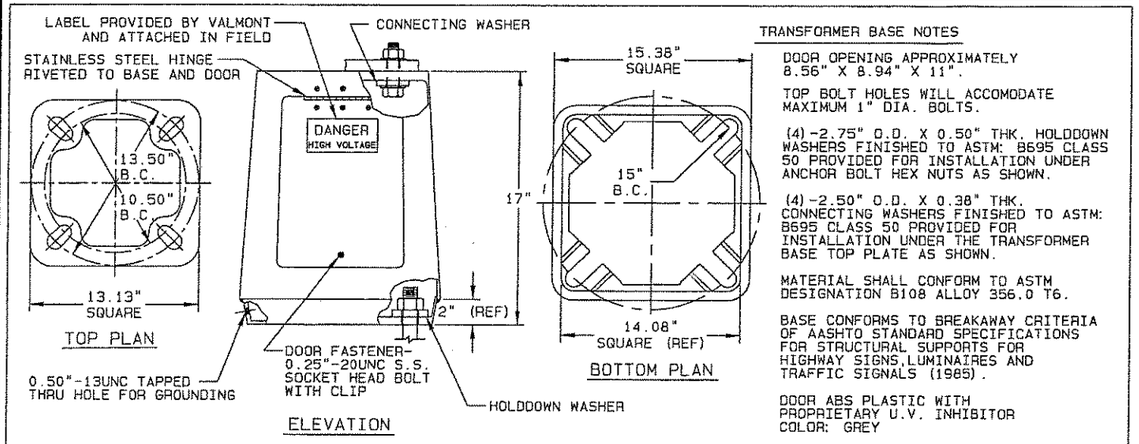
PAGE NUMBER: 1 OF 2
DRAWING NUMBER: DB00019
REV: N



DETAIL D | TYPE AT30 POLE BASE



DETAIL E | TYPE B30 POLE BASE



TRANSFORMER BASE NOTES

DOOR OPENING APPROXIMATELY 8.56" X 8.94" X 11".

TOP BOLT HOLES WILL ACCOMODATE MAXIMUM 1" DIA. BOLTS.

(4)-2.75" O.D. X 0.50" THK. HOLDDOWN WASHERS FINISHED TO ASTM: B695 CLASS 50 PROVIDED FOR INSTALLATION UNDER ANCHOR BOLT HEX NUTS AS SHOWN.

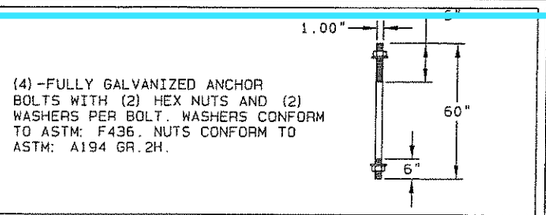
(4)-2.50" O.D. X 0.38" THK. CONNECTING WASHERS FINISHED TO ASTM: B695 CLASS 50 PROVIDED FOR INSTALLATION UNDER THE TRANSFORMER BASE TOP PLATE AS SHOWN.

MATERIAL SHALL CONFORM TO ASTM DESIGNATION B108 ALLOY 356.0 T6.

BASE CONFORMS TO BREAKAWAY CRITERIA OF AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS,LUMINAIRES AND TRAFFIC SIGNALS (1985).

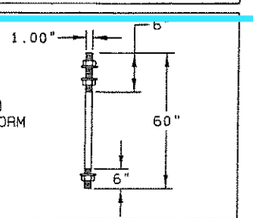
DOOR ABS PLASTIC WITH PROPRIETARY U.V. INHIBITOR COLOR: GREY

DETAIL F | AKRON MODEL TB1-17H (M093) T-BASE W/HINGED DOOR



(4)-FULLY GALVANIZED ANCHOR BOLTS WITH (2) HEX NUTS AND (2) WASHERS PER BOLT. WASHERS CONFORM TO ASTM: F436. NUTS CONFORM TO ASTM: A194 GR.2H.

DETAIL G | TYPE AT30 ANCHOR BOLT



(4)-FULLY GALVANIZED ANCHOR BOLTS WITH (3) HEX NUTS AND (3) WASHERS PER BOLT. WASHERS CONFORM TO ASTM: F436. NUTS CONFORM TO ASTM: A194 GR.2H.

DETAIL H | TYPE B30 ANCHOR BOLT

MoDOT

Show Drawing Approved 8/10/06

STATE OF MISSOURI
NIZAM A. QASSEM
NUMBER PE-2005035711
PROFESSIONAL ENGINEER
2/06/06

TITLE
MISSOURI DOT
LIGHTING STRUCTURES
30'-0" MOUNTING HEIGHT

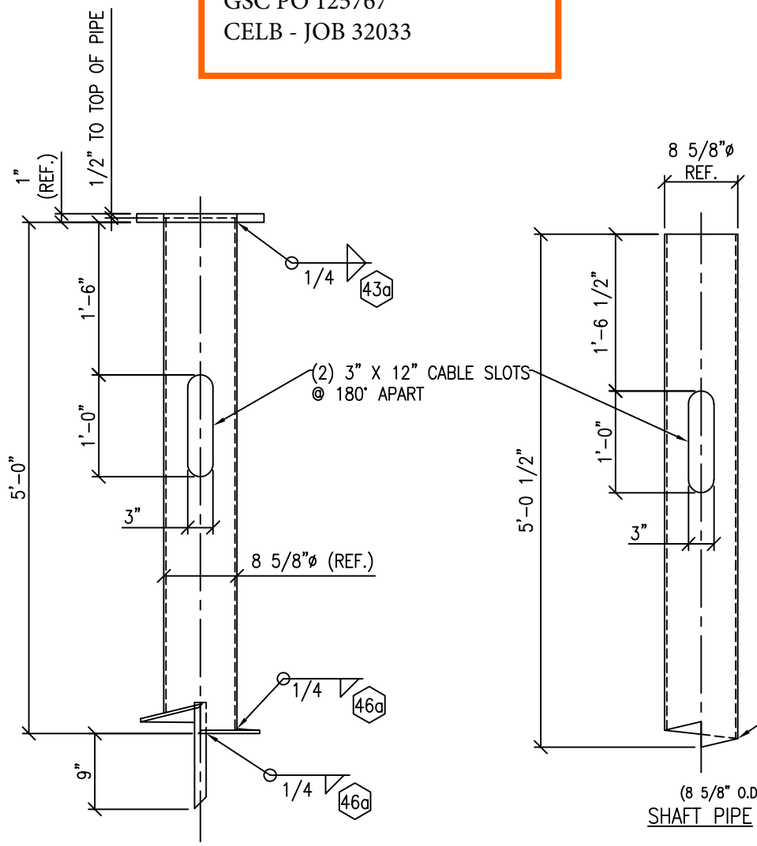
VALMONT INDUSTRIES, INC. RESERVES THE RIGHT TO INSTALL VARIOUS, ENGINEER APPROVED, MATERIAL HANGING ACCOMMODATIONS TO FACILITATE THE MANUFACTURING PROCESS.

valmont
Valley,NE 68064
(402) 359-2201

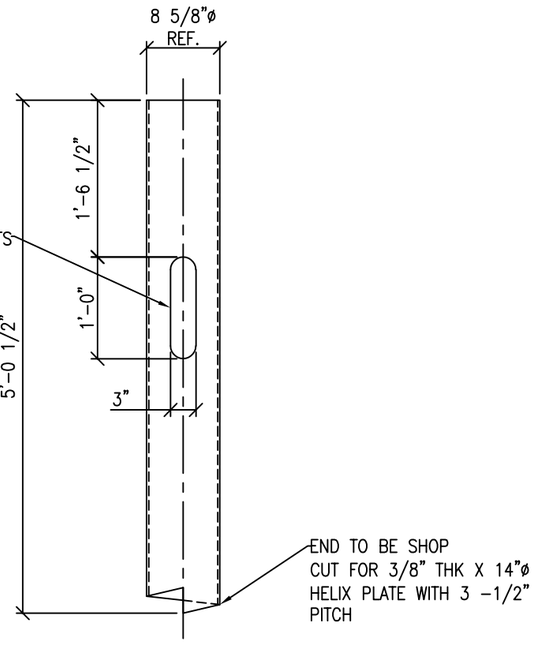
DRAWING NUMBER DB00019 | REV N

LSMO - JACO Blue Parkway
GSC PO 125767
CELB - JOB 32033

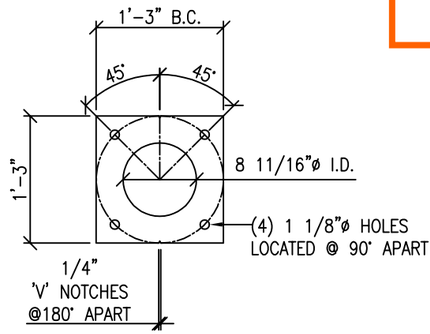
Qty - 12



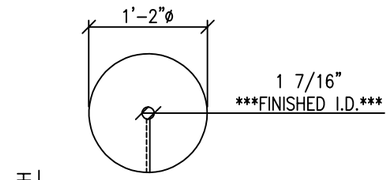
SCREW ANCHOR FOUNDATION~AT30
(STEEL HELIX)



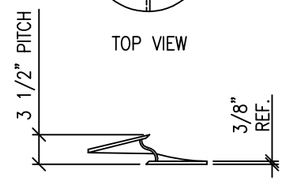
(8 5/8" O.D. x 1/4" WALL x 5'-0 1/2")
SHAFT PIPE



1" PL x 15" x 1'-3")
TOP PLATE

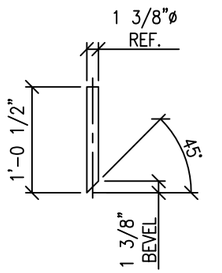


TOP VIEW



SIDE VIEW

(3/8" PL x 14"ø)
HELIX PLATE



(1 3/8"R x 12-1/2")
PILOT POINT

MATERIAL SPECS.
TOP PLATE – ASTM A36
SHAFT PIPE – ASTM A500 GR. B / ASTM A252 GR. 2
HELIX PLATE – ASTM A709 / ASTM A36
PILOT POINT – ASTM A36

HARDWARE SPECS.
BOLT – F3125 GR A325-1
NUT – A563-DH
FLAT WASHER – F439-1
LOCK WASHER – ANSI B18.21.1 (MEDIUM)

MATERIAL TO BE 100% MELTED & MANUFACTURED IN THE U.S.A.

WELD NOTES

⬡ = DENOTES WELDING PROCEDURE

1) ALL MILL SCALE TO BE REMOVED FROM ALL WELD POINTS PRIOR TO WELDING.

SHOP NOTES

1) TOP PL TO BE PERMANENTLY NOTCHED TO INDICATE CABLE SLOT LOCATIONS
2) TOP PL TO BE PERMANENTLY STAMPED W/ MANUFACTURER'S ID IN 1/2" LETTERS AND DATE IN 1/2" LETTERS
3) MAKE HOLES PER DRAWING
4) ANY ROUGHNESS TO BE GROUND SMOOTH PRIOR TO GALV.
5) BASE PLATE TO BE PERPENDICULAR TO THE SHAFT AXIS (± 1°)
6) CENTERLINE OF HOLES TO BE CONCENTRIC (± .188) TO SHAFT AXIS
7) PILOT POINT & SHAFT AXIS TO BE CONCENTRIC (± .125) AND IN LINE (± 2')

GALVANIZING NOTES

(G) FOR ALL STEEL COMPONENTS TO BE HOT DIP GALV. PER ASTM A123 & AASHTO M111
(G) FOR ALL HARDWARE TO BE HOT DIP GALV. PER ASTM A153 & AASHTO M232

GENERAL NOTES:

- ALL CLASSIFICATIONS ARE ASTM UNLESS OTHERWISE NOTED. SEE STANDARD SPECIFICATIONS FOR CLASSIFICATIONS NOT SHOWN.
- ALL CONNECTOR PLATE AND CLOSURE PLATE THICKNESS SHOWN ARE MINIMUM DIMENSIONS.

REV #	DESCRIPTION	DATE	BY
A	FOR RELEASE		

REVISIONS

AT30 8"X5' W/ 15" BC (STEEL HELIX)

REVISION: A	P.O. COMPANY: MIZZOU DOT	DRAWN BY: RCS
DATE: 4-29-19	P.O. NUMBER:	CHECKED BY:
CONTRACTOR:		

J. H. Botts LLC
BRIDGE & HWY. METAL PRODUCTS
AISC CERTIFIED FABRICATOR
253 E. BRUCE JOLIET, IL 60432

DWG. NO.

1 of 1

Project	MODOT	**Catalog #**	ARCH-S-PA1-60-730-U-T3-AP-10K-K-PSC-PR7-10X-U131722	**Type**	MODOT LED A (150W EQUIV)
Prepared by	GSC LIGHTING	**Notes**		**Date**	

Streetworks

Archeon Small

Roadway Luminaire

Product Features

Light ARchitect™

Interactive Menu

Product Certifications

Quick Facts

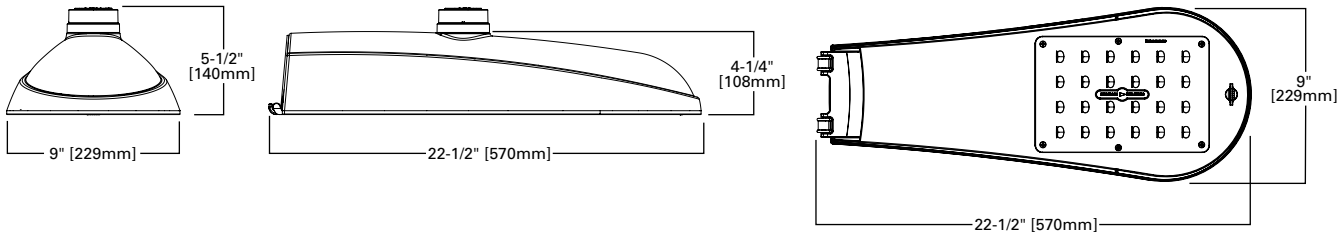
- Die-cast aluminum construction; Single latch tool-less entry
- Replaces up to 250W equivalent HID; -40°C to 40°C with optional 50°C operating range
- Pole-mounted; Optional arm and offset adjustable arm mounting
- 120-277V, 240-480V, 347V, and 480V, 50/60Hz operation

Connected Systems

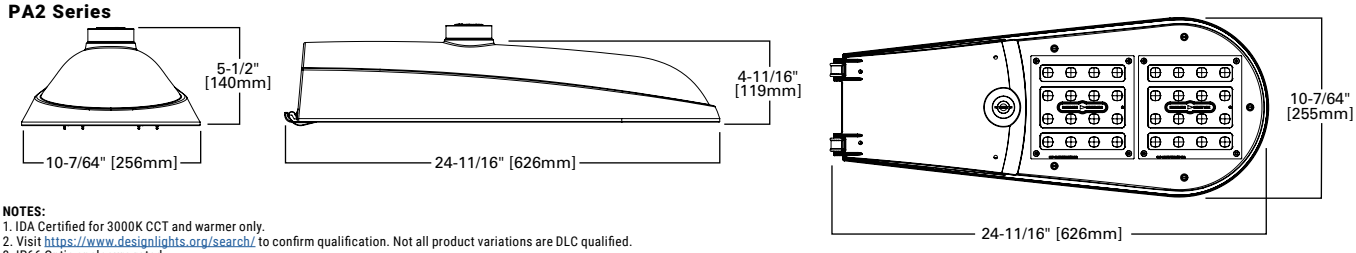
- WaveLinx
- Telensa

Dimensional Details

PA1 Series



PA2 Series



NOTES:
1. IDA Certified for 3000K CCT and warmer only.
2. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
3. IP66 Optic enclosure rated.

Ordering Information

SAMPLE ORDER NUMBER: **ARCH-S-PA1-100-740-U-T2R-A15-AP-10K-PR**

Product Family [3]	Light Engine	Wattage Bucket	Color Temperature	Voltage	Distribution	Mounting	Finish
ARCH-S=Archeon Small **BAA-ARCH-S=** Archeon Small Buy American Act Compliant [1,5] **TAA-ARCH-S=**Archeon Small Trade Agreements Act Compliant [1,5]	**PA1** (Only available up to 100W)	**30** **40** **50** **60** **70** **80** **90** **100**	**722**=70CRI, 2200K **727**=70CRI, 2700K **730**=70CRI, 3000K **735**=70CRI, 3500K **740**=70CRI, 4000K **750**=70CRI, 5000K **827**=80CRI, 2700K [5] **AMB**=Amber 590nm [17,18]	**U**=Universal (120-277V) **1**=120V [22] **2**=208V [22] **3**=240V [22] **4**=277V [22] **8**=480V [4,22] **9**=347V [22] **DV1**=240V-480V [4,23]	**T2R**=Type II Roadway **T2U**=Type II Urban **T3**=Type III **T4W**=Type IV Wide **5WQ**=Type V Square Wide	**[Blank]**=None **A15**=15" Straight Mast Arm [9] **ASJS15**=Adjustable Slipfitter (Factory set at 15° degrees) **ASJS25**=Adjustable Slipfitter (Factory set at 25° degrees) **ASJS45**=Adjustable Slipfitter (Factory set at 45° degrees)	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **WH**=White
	PA2	**20** **30** **40** **50** **60** **70** **80** **90** **100** **110** **120** **130**					

Options (Add as Suffix)	Controls	Accessories (Order Separately) [2]
F=Single Pole Fusing, specify voltage (120V, 277V, 347V) **FF**=Double Pole Fusing, specify voltage (208V, 240V, 480V) **10MSP**=Parallel 10kV MOV Surge Protection Device **10K**=Series 10kV UL 1449 Surge Protection Device **20MSP**=Parallel 20kV MOV Surge Protection Device **20K**=Series 20kV UL 1449 Surge Protection Device **20KI**=Series 20kV UL 1449 Surge Protection Device with light indicator **L90**=PA2 Optics Rotated 90° Left [24] **R90**=PA2 Optics Rotated 90° Right [24] **HSS**=Factory Installed House Side Shield [8,27] **GRSBK**=PA2 Glare Reducing Shield Black [24] **GRSWH**=PA2 Glare Reducing Shield Black [24] **HA**=50°C High Ambient Temperature [7] **K**=Level Indicator **CC**=Coastal Construction [20] **LCF**=PA2 Trim Painted to Match Housing [24] **10X-U131723=**Additional 5yr Warranty	**PSC**=Photocontrol Shorting Cap **NPC**=NEMA Photocontrol - Multi-Tap **LLPC**=Longlife Photocontrol Included **PR**=NEMA 3-PIN Twistlock Photocontrol Receptacle [6] **PR7**=NEMA 7-PIN Twistlock Photocontrol Receptacle **FADC**=Field Adjustable Dimming Controller [19] **5LTD**=DALI **SPB1**=Dimming Occupancy Sensor with Bluetooth Interface [21] **SPB2**=Dimming Occupancy Sensor with Bluetooth Interface, 8'-20' Mounting [21] **SPB4**=Dimming Occupancy Sensor with Bluetooth Interface, 21'-40' Mounting [21] **ZD**=DALI-enabled 4-PIN Twistlock Receptacle [12,25,26] **ZW**=WaveLinx-enabled 4-PIN Twistlock Receptacle [11,12] **SWPD4XX**=WaveLinx Wireless Sensor, 7' - 15 Mounting Height [12,13,14,15,16] **SWPD5XX**=WaveLinx Wireless Sensor, 15' - 40' Mounting Height [12,13,14,15,16] **WOBXX**=WaveLinx Wireless Sensor with Bluetooth, 7-15ft [12,13,14,15] **WOFXX**=WaveLinx Wireless Sensor with Bluetooth, 15-40ft [12,13,14,15]	**OA / RA1013**=Photocontrol Shorting Cap **OA1223**=10kV Surge Module Replacement **OA/RA1014**=NEMA Photocontrol - 120V **OA/RA1016**=NEMA Photocontrol - Multi-Tap **OA/RA1027**=NEMA Photocontrol - 480V **OA/RA1201**=NEMA Photocontrol - 347V **A15-XX**=Arm (15" Straight Arm) [9,10] **ASJS15-XX**=Adjustable slipfitter (Factory set at 15 degrees) [10] **ASJS25-XX**=Adjustable slipfitter (Factory set at 25 degrees) [10] **ASJS45-XX**=Adjustable slipfitter (Factory set at 45 degrees) [10] **HS-ARCH-24**=PA1 Field Installed ARCH House Side Shield [8,27] **VGS-ARCH**=PA1 Short Vertical Drop Shield [28] **VGL-ARCH**=PA1 Long Vertical Drop Shield [28] **SWPD4-XX**=WaveLinx Wireless Sensor, 7' - 15' Mounting Height [12,13,14,15,16] **SWPD5-XX**=WaveLinx Wireless Sensor, 15' - 40' Mounting Height [12,13,14,15,16] **WOB-XX**=Wavelinx Wireless Sensor with Blueetoth, 7'-15' Mounting Height [12,13,14,15] **WOF-XX**=Wavelinx Wireless Sensor with Bluetooth, 15'-40' Mounting Height [12,13,14,15]

NOTES:

1. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to **DOMESTIC PREFERENCES** website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
2. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
3. Customer is responsible for engineering analysis to confirm pole and fixture compatiblity for all applications. Refer to our white paper WP513001EN for additional support information.
4. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
5. Extended lead times may apply.
6. If "PR" selected, dimming functionality not available, dimming leads will be capped.
7. Option not available with PA1-90, PA1-100, PA2-100+.
8. HS-ARCH not available with 5WQ and T2U distribution.
9. Round pole adapter and mounting hardware included. "M" drill pattern.
10. Replace XX with color designation.
11. Only available with "U" universal voltage. Not available with PA2.
12. Controls system is not available with photocontrol receptacles (PR , PR7) or other controls systems (FADC, SPBx).
13. Requires 4-PIN twistlock receptacle (ZD or ZW) option.
14. Replace XX with sensor color (WH, BZ or BK).
15. Sensor passive infrared (PIR) may be overly sensitive with operating below -20°C (-4°F).
16. For this device to be field-configurable, requires WAC Gateway components WAC-PoE and WPOE-120 in appropriate quantities. Only compatible with WaveLinx system and software and requires system components to be installed for operation. See website for more WaveLinx application information.
17. Not available with HA option.
18. Amber 590nm +/-5nm for wildlife and observatory use. Supplied in PA1-30 and PA2-40 wattage bucket only.
19. Cannot be used with motion response control options.
20. Coastal construction finish salt spray tested to over 5,000-hours per ASTM B117, with a scribe rating of 9 per ASTM D1654.
21. Smart device with Sensor Configuration mobile application by Wattstopper required to change system defaults.
22. Required for voltage specific options
23. Only available for 80W through 130W.
24. PA2 Only.
25. Utilizes internal step-down transformer when 347V or 480V is selected.
26. Not available with PA1-30, PA1-90, and PA1-100.
27. Not available with PA2-110 through PA2-130.
28. Kit to install one side for one luminaire.

Product Specifications

Construction
- Heavy-duty die-cast aluminum housing and door
- Tool-less entry, hinged removable door for easy maintenance
- 3G vibration rated

Optics
- Choice of four patented, high efficiency AccuLED Optics
- Available in Type IIR, IIU, III, IV wide and V square wide the optics are precisely designed to shape the distribution maximizing efficiency and application spacing
- Offered standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 2200K, 2700K, 3000K, 3500K, and 5000K CCT
- For the ultimate level of spill light control, an optional house side shield accessory is available and can be field or factory installed
- Optics are IP66 enclosure rated
- IDA Certified for 3000K CCT and warmer only

Electrical
- 120-277V, 240-480V, 347V, and 480V; 50/60Hz operation
- Standard 0-10V dimming
- Optional 10kV and 20kV surge common- and differential-mode surge protection available
- Ambient operating temperature from -40°C to 40°C; 50°C HA, high ambient, capability available
- Standard with three position tunnel type compression terminal block
- Greater than 97% and 94% lumen maintenance expected at 50,000 and 100,000 hours respectively with calculated L70 greater than 150,000 hours
- Replaces 50W to 250W HID
- Luminaire available with the field adjustable dimming controller (FADC) to manually adjust wattage and reduce the total lumen output and light levels. Comes pre-set to the highest position at the lumen output selected

Mounting
- **PA1 Mounting:** Two-bolt/one-bracket slipfitter with cast-in pipe stop and 2.5° leveling steps
- **PA2 Mounting:** Four-bolt/two-bracket slipfitter with cast-in pipe stop and 2.5° leveling steps
- Fixed-in-place bird guard seals around 1-1/4" to 2" (1-5/8" to 2-3/8" O.D.) mounting arms
- Optional 15" pole mount arm available with round pole adapter and mounting hardware included

Finish
- Housing and cast parts finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear
- Consult your lighting representative at Cooper Lighting Solutions for a complete selection of standard colors

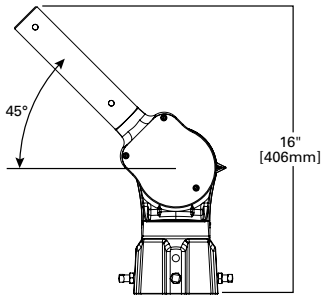
Shipping Data
PA1
- Approximate Net Weight: 12 lbs. (5.4 kgs.)
- Effective Projected Area: 0.5 (Sq. Ft.)

PA2
- Approximate Net Weight: 12.25 lbs. (5.6 kgs.)
- Effective Projected Area: 0.7 (Sq. Ft.)

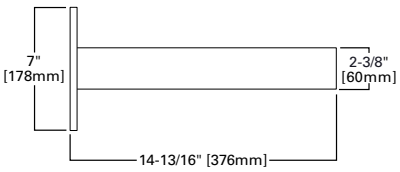
Warranty
- Five year limited warranty, consult website for details

Mounting Details

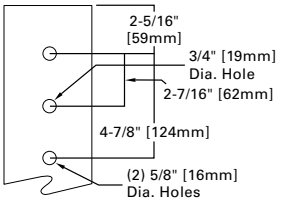
Adjustable Slipfitter Offset Arm



15" Straight Arm



Type "M" - Drilling Pattern



Energy and Performance Data

Lumen Maintenance

Light Engine	Ambient Temperature	25,000 hours*	50,000 hours*	60,000 hours*	100,000 hours*	L70*
PA1	25°C	99.7%	98.2%	97.6%	95.4%	>150,000
	40°C	98.7%	96.4%	95.5%	92.0%	>150,000
	50°C	99.2%	97.3%	96.5%	93.6%	>150,000
PA2	25°C	99.4%	97.8%	97.2%	94.7%	>150,000
	40°C	98.5%	96.0%	95.0%	91.2%	>150,000
	50°C	99.7%	98.5%	97.9%	95.9%	>150,000

Note: * Calculations provided in accordance with IES TM-21-11 using the configuration resulting in highest LED temperature. Previous versions of IES TM-21 where theoretical calculations were used are no longer recommended as a proxy of lumen depreciation.

LED Color Multipliers

	CCT					
	2200	2700	3000	3500	4000	5000
CRI	Lumen Multiplier*					
70	0.74	0.84	0.91	0.93	1.00	1.00
80	--	0.75	--	--	--	--

Note: * Estimates, refer to IES files for accuracy.

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

View Archeon Small IES files

FADC Settings

FADC Position	Percent of Typical Lumen Output
1	25%
2	46%
3	55%
4	62%
5	72%
6	77%
7	82%
8	85%
9	90%
10	100%

Energy and Performance Data

Power and Lumens (PA1 Light Engine) (70CRI - 4000K)

Light Engine - PA1		PA1-30	PA1-40	PA1-50	PA1-60	PA1-70	PA1-80	PA1-90	PA1-100
Power (Watts)		31	40	54	64	74	83	94	96
Wattage Label		30	40	50	60	70	80	90	100
Input Current @ 120V (A)		0.26	0.34	0.45	0.53	0.62	0.70	0.78	0.80
Input Current @ 277V (A)		0.12	0.16	0.21	0.24	0.28	0.31	0.35	0.35
Input Current @ 347V (A)		0.10	0.13	0.16	0.19	0.22	0.24	0.28	0.28
Input Current @ 480V (A)		0.07	0.09	0.13	0.15	0.17	0.18	0.21	0.21
Optics									
T2R	Lumens	4,756	6,137	7,912	9,083	10,127	10,942	11,729	11,850
	Lumens Per Watt	153	153	146	141	136	131	124	123
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2
T2U	Lumens	4,739	6,114	7,884	9,052	10,091	10,905	11,688	11,809
	Lumens Per Watt	152	152	146	141	136	131	124	123
	Bug Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3
T3	Lumens	4,729	6,102	7,868	9,033	10,071	10,882	11,664	11,785
	Lumens Per Watt	152	152	145	141	136	131	124	122
	Bug Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2
T4W	Lumens	4,700	6,062	7,819	8,976	10,006	10,813	11,591	11,710
	Lumens Per Watt	151	151	144	140	135	130	123	121
	Bug Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
5WQ	Lumens	4,832	6,234	8,040	9,230	10,291	11,120	11,918	12,042
	Lumens Per Watt	155	155	148	144	139	133	126	125
	Bug Rating	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2

Power and Lumens (PA2 Light Engine) (70CRI - 4000K)

Light Engine - PA2		PA2-20	PA2-30	PA2-40	PA2-50	PA2-60	PA2-70	PA2-80	PA2-90	PA2-100	PA2-110	PA2-120	PA2-130
Power (Watts)		23	33	43	53	63	73	83	93	103	113	123	133
Wattage Label		20	30	40	50	60	70	80	90	100	110	120	130
Input Current @ 120V (A)		0.20	0.28	0.36	0.45	0.53	0.61	0.69	0.77	0.86	0.96	1.02	1.10
Input Current @ 277V (A)		0.09	0.13	0.16	0.20	0.24	0.27	0.31	0.34	0.38	0.42	0.46	0.49
Input Current @ 347V (A)		0.07	0.10	0.13	0.16	0.18	0.21	0.24	0.27	0.30	0.33	0.36	0.39
Input Current @ 480V (A)		0.06	0.08	0.09	0.11	0.13	0.16	0.17	0.19	0.22	0.24	0.26	0.28
Optics													
T2R	Lumens	3,706	5,265	6,723	8,043	9,495	10,744	11,875	12,883	13,956	15,091	15,688	16,268
	Lumens Per Watt	158	157	155	150	150	147	143	139	135	132	128	124
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2
T2U	Lumens	3,648	5,183	6,618	7,917	9,346	10,576	11,689	12,682	13,738	14,854	15,442	16,014
	Lumens Per Watt	155	155	152	148	148	144	141	137	133	130	126	122
	Bug Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	Lumens	3,693	5,247	6,700	8,015	9,461	10,707	11,833	12,838	13,907	15038	15,633	16,211
	Lumens Per Watt	157	157	154	150	150	146	143	139	135	132	128	123
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3
T4W	Lumens	3,680	5,228	6,676	7,987	9,428	10,669	11,791	12,793	13,858	14,985	15,578	16,154
	Lumens Per Watt	157	156	153	149	149	146	142	138	134	131	127	123
	Bug Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G3
5WQ	Lumens	3,810	5,413	6,912	8,269	9,761	11,046	12,208	13,245	14,348	15,514	16,128	16,725
	Lumens Per Watt	162	162	159	154	155	151	147	143	139	136	132	127
	Bug Rating	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2

Cooper Lighting Solutions
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com

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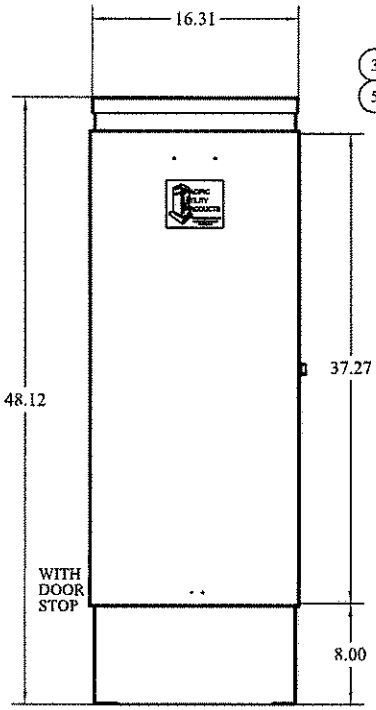
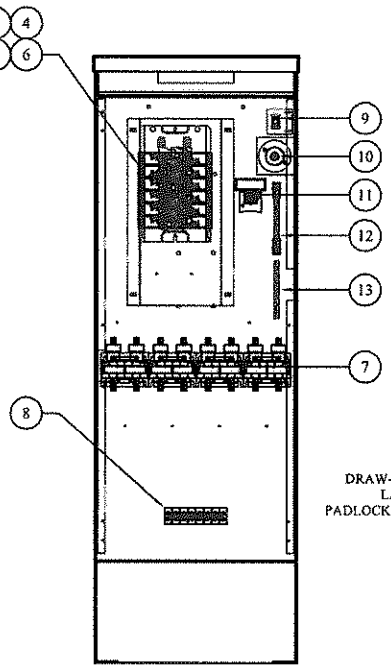
Specifications and dimensions
subject to change without notice.

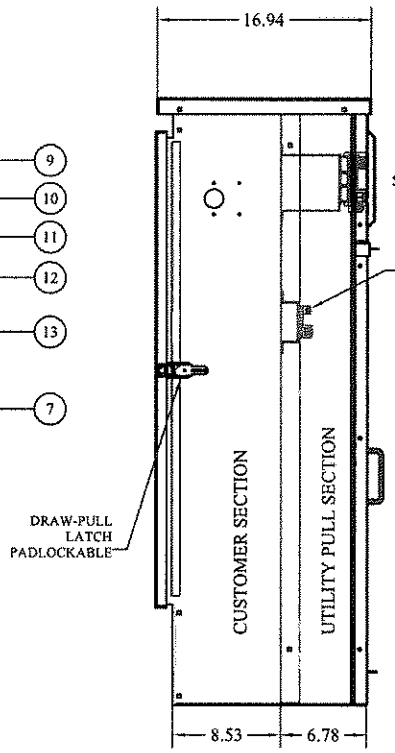
MODOT FOUR CIRCUIT LIGHTING CONTROLLER 120/240V W/PAD MOUNT BASE



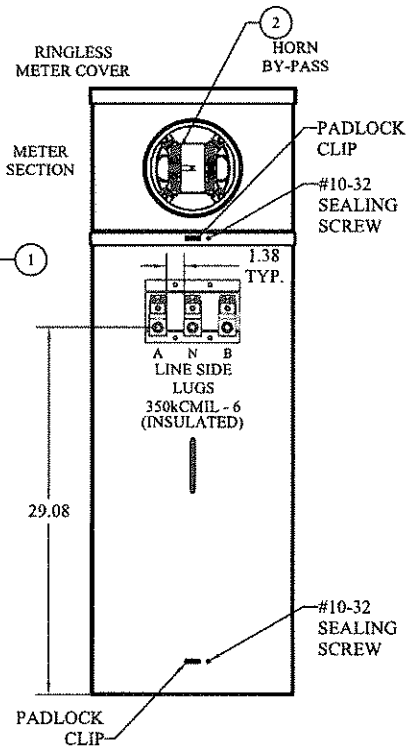
FRONT VIEW



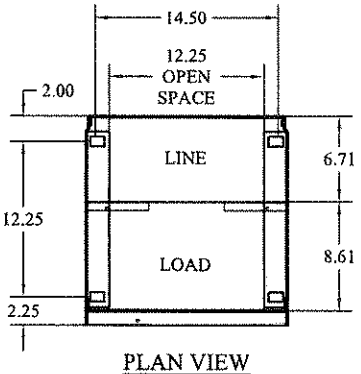
FRONT VIEW
SHOWN LESS DOOR & COVERS



SIDE VIEW



REAR VIEW



PLAN VIEW

LSMO - JACO Blue Parkway
GSC PO 125768
CELB Job 32033

SPECIFICATIONS

* NEMA 3R CONSTRUCTION
* FABRICATED FROM .125 THK NATURAL ALUMINUM
* FACTORY WIRING 600 VOLT RATED COPPER
* ALL EXTERIOR HINGES CONTINUOUS PIANO TYPE
* ALL COMPONENTS ARE U.L. LISTED.

PAGE 1 OF 2

THIS INFORMATION IS PROPRIETY TO PACIFIC UTILITY PRODUCTS, INC. AND IS NOT DISCLOSED OUTSIDE OF PACIFIC UTILITY PRODUCTS, INC. WITHOUT A CONFIDENTIALITY AGREEMENT.

COMPONENT DIRECTORY

CAT. NO. USP16R-M2100-112C-MoDOT1-AL

No.	120/240 VAC 1-PHASE 3-WIRE
1	LANDING LUGS 350kCMIL-6 PER PH
2	MTR SOCKET 200A 4J with 5th CLIP
3	MAIN CB 100A 2P 120/240VAC 10kAIC
4	LOAD CENTER 125A 12CKT 1-PHASE
5	(4) CB 30A 2P 120/240VAC 10kAIC
6	(1) CB 15A 1P 120/240VAC 10kAIC
7	(4) MERC RELAY 30A 2P #WM35AA-120A
8	(1) TERM BLK 8P 85A MARATHON
9	SWITCH TOGGLE SPST 20A
10	PE RECEPTACLE COOPER MAGNUM
11	(1) SURGE ARRESTER 650VAC #PSC270410
12	INSULATED NEUTRAL BUS
13	GROUND BUS

SERVICE PEDESTAL	
S.O. No.	QTY. 1
DATE	30 AUGUST, 2011
JOB NAME	-
DISTRIBUTOR	POWER EQUIPMENT SALES

USP NON-RESIDENTIAL
SERVICE PEDESTAL
0 - 200 AMPERES
0 - 600 VOLTS

PACIFIC
UTILITY
PRODUCTS
2430 RAILROAD ST.
CORONA CALIFORNIA 92880

PACIFIC UTILITY PRODUCTS
2430 RAILROAD ST. CORONA, CA. 92880

FAL147031
S.O.

INDUSTRIAL CONTROL-
SUITABLE FOR USE AS SERVICE EQUIPMENT

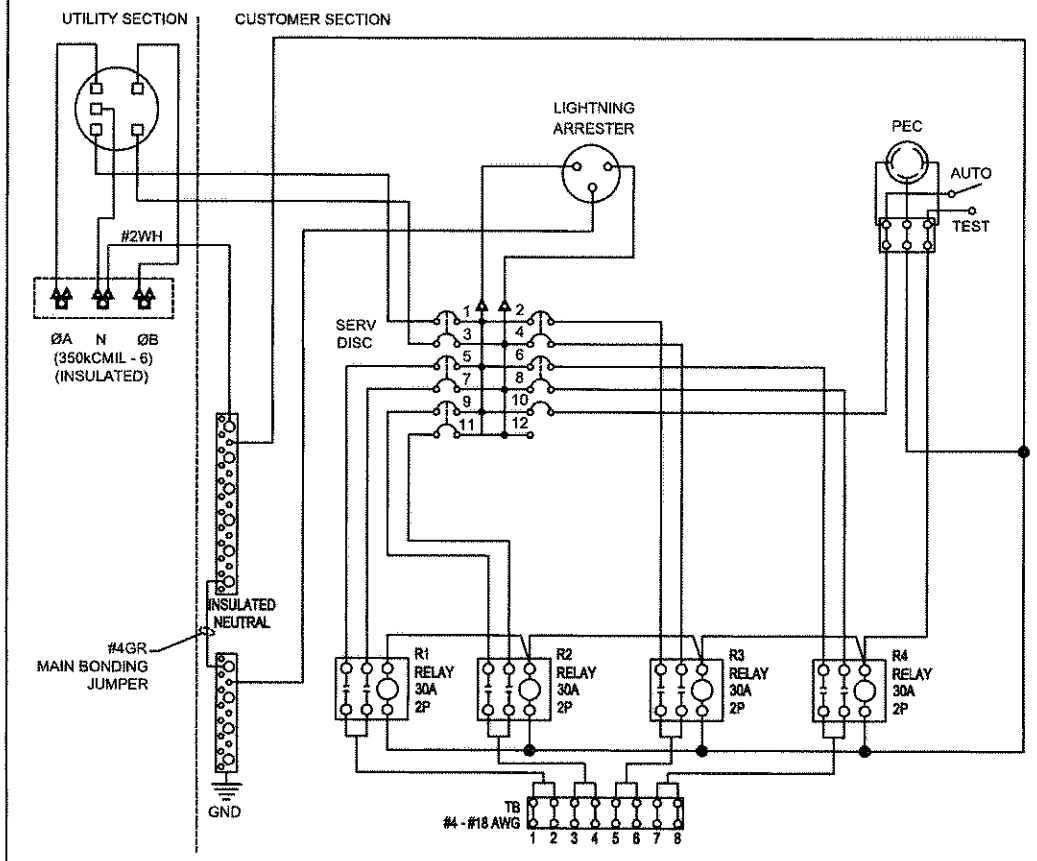
QTY. =

BONDED NEUTRAL REMOVE BONDING MEANS FOR TEST PURPOSES ONLY

CAT.NO. USP16R-M2100-112C-MODOT1 120/240VAC 1PH 60HZ 3 WIRE 100 AMPS

SHORT CIRCUIT RATING: 5,000 RMS SYMMETRICAL AMPS @ 240 VAC MAX.
HOWEVER, THIS SHORT CIRCUIT RATING IS LIMITED TO THE LOWEST INTERRUPTING CAPACITY ON ANY DEVICE INSTALLED.

*MAIN SERVICE DISCONNECT:100 AMPS CUTLER-HAMMER TYPE BR
*CIRCUIT BREAKERS 90 AMPS OR LESS: CUTLER-HAMMER TYPE BR, BD, BQ, GFCB. REPLACEMENT BREAKER(S) MUST BE SAME TYPE AND RATING.
*AUTOMATIC TRIP IS INDICATED BY HANDLE POSITION MIDWAY BETWEEN (ON) AND (OFF). TO RESTORE POWER MOVE HANDLE TO (OFF), THEN (ON).
*METER SOCKET: DURHAM, 200 AMPS CONTINUOUS.
*LOAD CENTER IS SUITABLE FOR USE WITH 60/75 DEGREE C COPPER OR ALUMINUM WIRE.
*LOAD CENTER IS LIMITED TO A MAXIMUM OF 12 INSTALLED CIRCUITS THAT UTILIZE A NEUTRAL CONNECTION, EITHER SINGLE POLE, MULTI-POLE, OR A COMBINATION OF EACH.
*SHIPPING TENDS TO LOOSEN ELECTRICAL CONNECTIONS - TIGHTEN ALL CONNECTIONS BEFORE ENERGIZING UNIT.



PAGE 2 OF 2

WIRING DIAGRAM

NO.	AMP.	POLE	DESCRIPTION
1-3	100	2	SERVICE DISCONNECT
5-7	30	2	LIGHTING 1
9-11	30	2	LIGHTING 2
2-4	30	2	LIGHTING 3
6-8	30	2	LIGHTING 4
10	15	1	PEC

*** TORQUE INFORMATION

□ 250MCM - 6	CU/AL		275 IN.LB.
△ #14-1/0	CU/AL		50 IN.LB.

*** NEUTRAL & EQUIPMENT GROUND-SINGLE CONDUCTOR

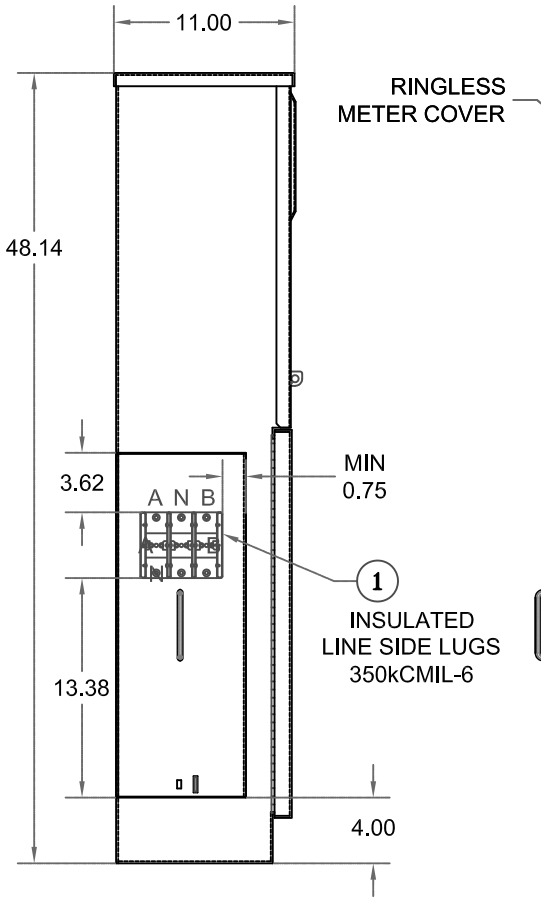
○ #14-1/0	CU/AL	#3-1/0	50 IN.LB.
		#6-4	45 IN.LB.
		#8	40 IN.LB.
		#14-10	25 IN.LB.
◦ #14-6	CU/AL	#6	35 IN.LB.
		#8	25 IN.LB.
		#14-10	20 IN.LB.

*** EQUIPMENT GROUND-MULTIPLE CONDUCTOR

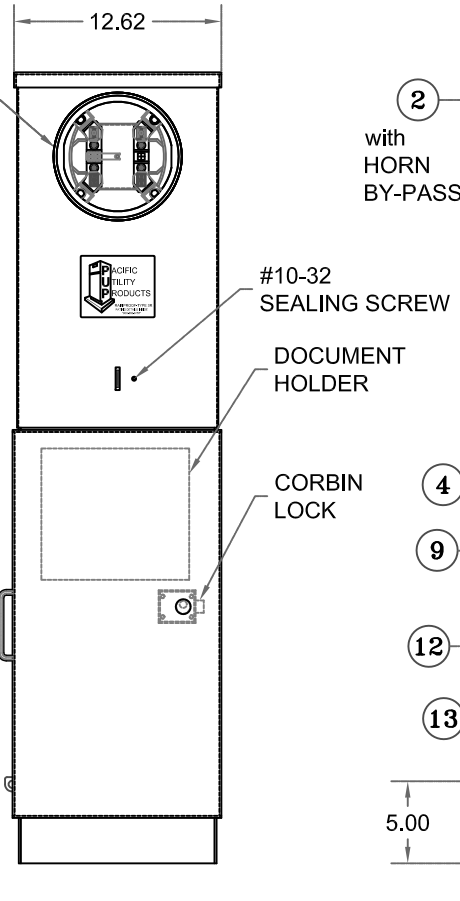
○ (2 OR 3)	#10,12,14	CU/AL	45 IN.LB.
◦ (2)	#12,14	CU/AL	20 IN.LB.

*** FIELD INSTALLED DEVICES-TORQUE TO VALUES INDICATED ON OR WITH DEVICE

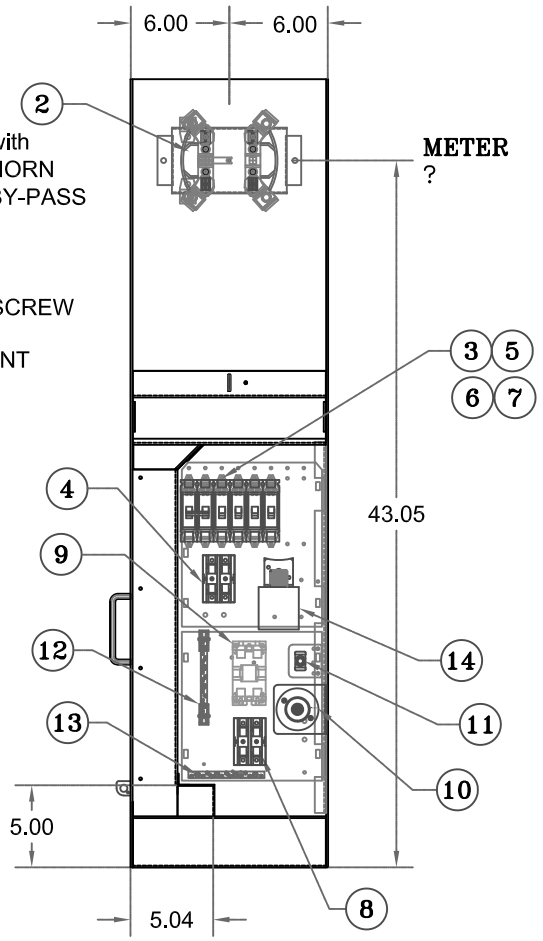
MODOT TYPE 2 POWER SUPPLY 120/240V [BOLT DOWN]



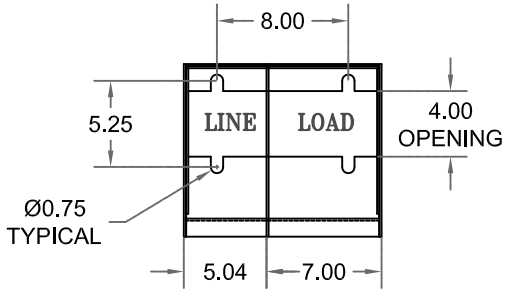
SIDE VIEW



FRONT VIEW



FRONT VIEW
SHOWN LESS COVERS



LSMO-JACO Blue Parkway
GSC PO 125768
CELB Job 32033

FAL127401A

SPECIFICATIONS

* NEMA 3R CONSTRUCTION
* FABRICATED FROM CORROSION-RESISTANT 0.125THK ALUMINUM
* FACTORY WIRING 600 VOLT RATED COPPER
* NATURAL ALUMINUM FINISH UNLESS OTHERWISE SPECIFIED
* POLYESTER POWDER-COATED FINISH EXCEEDS ASTM B-117 SPECIFICATIONS
* ALL EXTERIOR HINGES CONTINUOUS PIANO TYPE STAINLESS STEEL
* ALL COMPONENTS ARE U.L. LISTED.

PAGE 1 OF 2

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COMPONENT DIRECTORY

CAT. NO. USPAR-M2100-100-MODOT1

No.	120/240 VAC 1-PHASE 60Hz 3-WIRE
1	LANDING LUGS 350kCMIL - #6 AWG /PH
2	MTR SKT 200A 5J W/ HORN BY-PASS
3	MAIN CB 100A 2P 120/240VAC 10kAIC QC
4	(1) PDB 175A 2P MARATHON #1422570
5	(1) CB 15A 1P 120/240VAC 10k QC1015
6	(1) CB 30A 1P 120/240VAC 10k QC1030
7	(2) CB 40A 1P 120/240VAC 10k QC1040
8	(1) PDB 115A 2P MARATHON #142252
9	(1) CONTACTOR DP 60A 2P 120VAC COIL
10	(1) PE RECEPT TWIST-LK COOPER
11	(1) SWITCH TOGGLE SPST 15A 120VAC
12	INSULATED NEUTRAL
13	GROUND
14	SURGE ARRESTER 600V DELTA LA602

SERVICE PEDESTAL	
S.O.#	QTY. = 1
DATE	-
JOB NAME	-
DISTRIBUTOR	POWER EQUIPMENT SALES

USP NON-RESIDENTIAL
SERVICE PEDESTAL
0 - 200 AMPERES
0 - 600 VOLTS

PACIFIC UTILITY PRODUCTS
2950 E. PHILADELPHIA ST.
ONTARIO CALIFORNIA 91761

PACIFIC UTILITY PRODUCTS
2950 E. PHILADELPHIA ST. ONTARIO CA 91761

FAL127401A
S.O. SM129878

INDUSTRIAL CONTROL - RAINPROOF / OUTDOOR TYPE 2R SUITABLE FOR USE AS SERVICE EQUIPMENT

BONDED NEUTRAL REMOVE BONDING MEANS FOR TEST PURPOSES ONLY

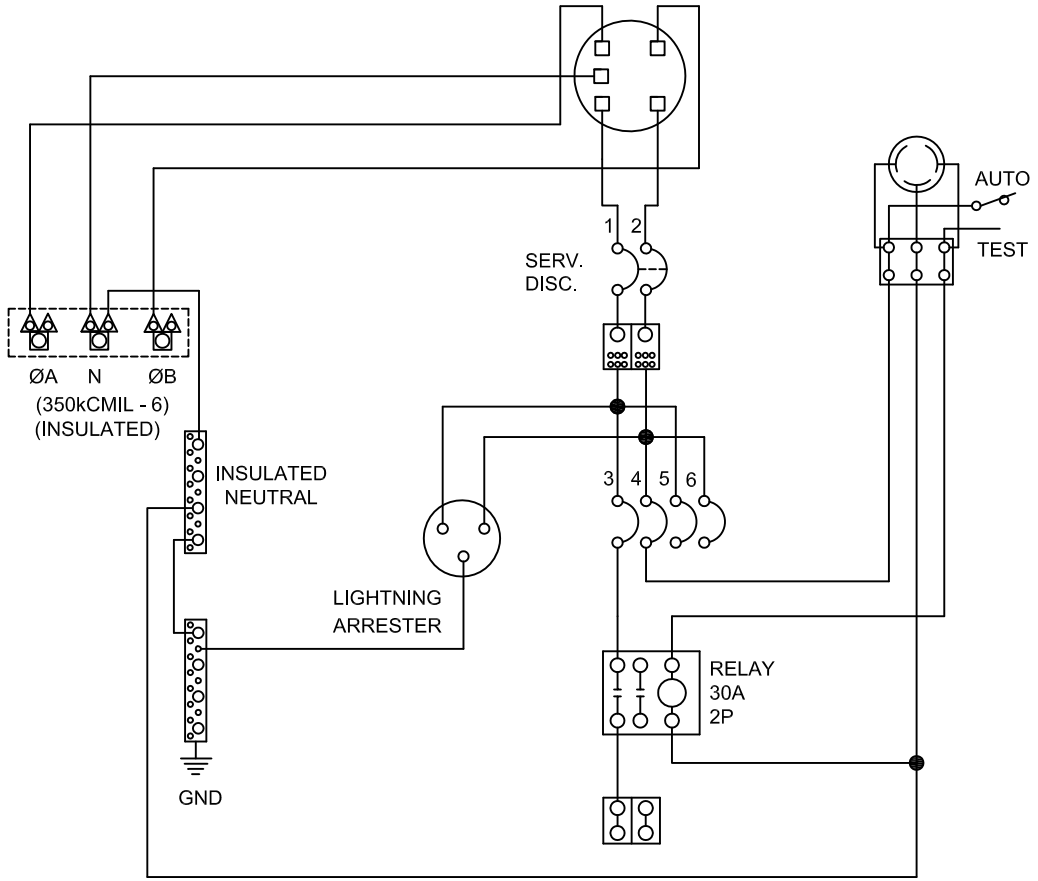
CAT.NO. USPAR-M2100-100-MoDOT 120/240VAC 1-PHASE 60 Hz 3 WIRE 100 AMPS

SHORT CIRCUIT RATING: 10,000 RMS SYMMETRICAL AMPS @ 480 VAC MAX.

*MAIN SERVICE DISCONNECT:100 AMPS CUTLER-HAMMER TYPE QC.
*CIRCUIT BREAKERS 90 AMPS OR LESS: CUTLER-HAMMER TYPE QC.
*REPLACEMENT BREAKER(S) MUST BE SAME TYPE AND RATING.
*AUTOMATIC TRIP IS INDICATED BY HANDLE POSITION MIDWAY BETWEEN (ON) AND (OFF). TO RESTORE POWER MOVE HANDLE TO (OFF), THEN (ON).

METER SOCKET: DURHAM 200 AMPS CONTINUOUS.
CAUTION: WATT-HOUR METER NOT INCLUDED IN SHORT CIRCUIT RATING.

*SHIPPING TENDS TO LOOSEN ELECTRICAL CONNECTIONS - TIGHTEN ALL CONNECTIONS BEFORE ENERGIZING UNIT.



NO.	AMP.	POLE	DESCRIPTION
1-2	100	2	SERVICE DISCONNECT
3	30	1	LIGHTING
4	15	1	PEC
5	40	1	SPARE
6	40	1	SPARE

*** TORQUE INFORMATION

▢	350MCM - 6	CU/AL		275 IN.LB.
◬	#14-1/0	CU/AL		50 IN.LB.

*** NEUTRAL & EQUIPMENT GROUND-SINGLE CONDUCTOR

○	#14-1/0	CU/AL	#3-1/0	50 IN.LB.
			#6-4	45 IN.LB.
			#8	40 IN.LB.
			#14-10	25 IN.LB.
∘	#14-6	CU/AL	#6	35 IN.LB.
			#8	25 IN.LB.
			#14-10	20 IN.LB.

*** EQUIPMENT GROUND-MULTIPLE CONDUCTOR

○	(2 OR 3)	#10,12,14	CU/AL	45 IN.LB.
∘	(2)	#12,14	CU/AL	20 IN.LB.

*** FIELD INSTALLED DEVICES-TORQUE TO VALUES INDICATED ON OR WITH DEVICE

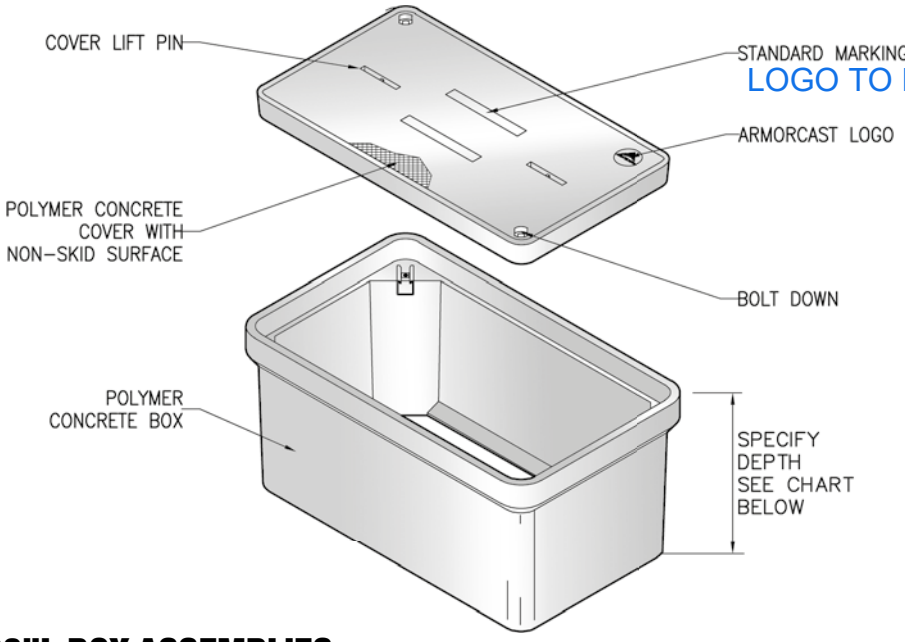
17” x 30” BOX ASSEMBLY

12” to 30” DEPTHS

POLYMER CONCRETE **ARMORCAST PRODUCTS COMPANY**

A6001640

UL LISTED
FILE #E364252



17”W x 30”L BOX ASSEMBLIES Specify Depth Below

DESCRIPTION	NOMINAL SIZE W x L x D	LOAD RATING	ANSI TIER	PART NUMBER	APPROX. WEIGHT	PALLET QTY.
Box & Cover Assembly	17” x 30” x 12”	10K	8	A6001640APCX12	114 lbs.	12
	17” x 30” x 12”	20K	15 / 22	A6001640TAPCX12 / A6001640HDAPCX12	140 lbs.	12
Box & Cover Assembly	17” x 30” x 18”	10K	8	A6001640APCX18	140 lbs.	6
	17” x 30” x 18”	20K	15 / 22	A6001640TAPCX18 / A6001640HDAPCX18	166 lbs.	6
Box & Cover Assembly	17” x 30” x 22”	10K	8	A6001640APCX22	154 lbs.	6
	17” x 30” x 22”	20K	15 / 22	A6001640TAPCX22 / A6001640HDAPCX22	180 lbs.	6
Box & Cover Assembly	17” x 30” x 24”	10K	8	A6001640APCX24	165 lbs.	6
	17” x 30” x 24”	20K	15 / 22	A6001640TAPCX24 / A6001640HDAPCX24	190 lbs.	6
Box & Cover Assembly	17” x 30” x 28”	10K	8	A6001640APCX28	184 lbs.	3
	17” x 30” x 28”	20K	15 / 22	A6001640TAPCX28 / A6001640HDAPCX28	210 lbs.	3
Box & Cover Assembly	17” x 30” x 30”	10K	8	A6001640APCX30	191 lbs.	3
	17” x 30” x 30”	20K	15 / 22	A6001640TAPCX30 / A6001640HDAPCX30	221 lbs.	3

COMPONENTS

MORE COVER VARIATIONS ARE AVAILABLE IN OUR “COVER SECTION”

DESCRIPTION	NOMINAL SIZE W x L x D	LOAD RATING	ANSI TIER	PART NUMBER	APPROX. WEIGHT	PALLET QTY.
Replacement Covers	17” x 30”	10K	8	A6001643	44 lbs.	30
	17” x 30”	20K	15 / 22	A6001947T / A6001947HD	70 lbs.	30
Replacement Boxes	17” x 30” x 12”	10K / 20K	22	A6001640PCX12	70 lbs.	12
	17” x 30” x 18”	10K / 20K	22	A6001640PCX18	96 lbs.	6
	17” x 30” x 22”	10K / 20K	22	A6001640PCX22	110 lbs.	6
	17” x 30” x 24”	10K / 20K	22	A6001640PCX24	121 lbs.	6
	17” x 30” x 28”	10K / 20K	22	A6001640PCX28	140 lbs.	3
	17” x 30” x 30”	10K / 20K	22	A6001640PCX30	151 lbs.	3

- **Boxes are Open Bottom and Stackable, also available with Solid Bottoms.**
- **For sizes not shown please contact Armorcast Products for more information.**

THIS PRODUCT IS LISTED TO APPLICABLE UL STANDARDS AND REQUIRMENTS BY UL.

17” x 30” BOX ASSEMBLY

STANDARD DIMENSIONS

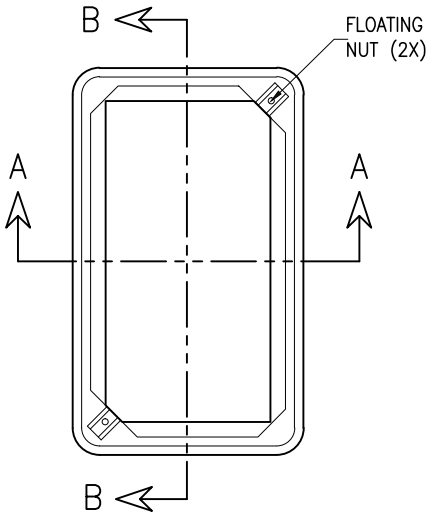
ARMORCAST PRODUCTS COMPANY

POLYMER CONCRETE

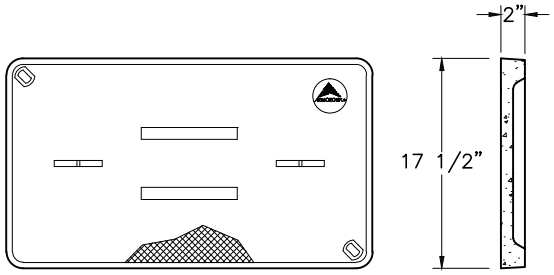
A6001640

LISTED

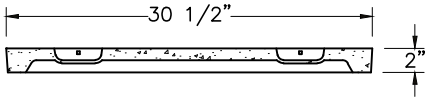
FILE #E364252

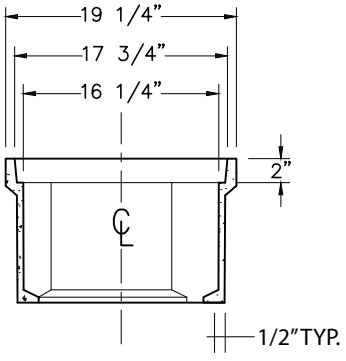


PLAN VIEW

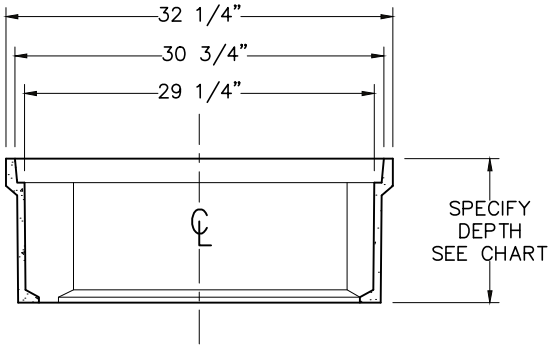


POLYMER CONCRETE COVER





SECTION A–A



SECTION B–B

POLYMER CONCRETE BOXES

Armorcast Products Company reserves the right to update or discontinue product information at any time without notice.

THIS PRODUCT IS LISTED TO APPLICABLE UL STANDARDS AND REQUIRMENTS BY UL.

Single-Pole
13/32" x 1 1/2" Fuses

HEB-
For any 13/32" x 1 1/2" fuse. Fuse holder rated 30A, 600V (CSA Listed 15A max.). Typical fuse types: Edison MOL MEN, MEQ and MCL. (1/10 -30A)

HET-
A HEB- fuse holder with a permanently installed solid neutral. Easily identified by white plastic coupling nut.

Double-Pole
Class CC

HEY-
Double-pole fuse holder has water-resistant, polarized design, and accepts Class CC branch circuit fuses (Edison fuse types EDCC, HCTR or HCLR, 600V or less) Particularly applicable in street lighting circuits with optional breakaway receptacle.

13/32" x 1 1/2" Midget Fuses

HEX-
For any 13/32" x 1 1/2" fuse. Fuse holder rated 30A, 600V (CSA Listed 15A max.). Typical fuse types: Edison MOL MEN, MEQ and MCL. (1/10 -30A)

HEB-JW-RYC - supply with specified fuse

HET-JW-RYC - w/permanently installed neutral

Single- and Double-Pole without Breakaway Option

Packaging & Ordering Information:

XXX	—			
HEB HET HEY HEX		Load Side Terminal A thru W		Line Terminal A thru W

Single-Pole with Breakaway Option

Packaging & Ordering Information:

XXX	—		W	—	
HEB or HET		Load Terminal A thru K	Line Terminal		Break-W-Way Terminal RLC - A thru J or RYC

Double-Pole with Breakaway Option

Packaging & Ordering Information:

XXX	—		W	—	
HEX or HEY		Load Terminal A thru K	Line Terminal		Break-W-Way Terminal DRLC - A thru J or DRYC

Available Part Numbers

Non-Breakaway Units:

HEB-AA(1) (2) (3), HEB-AB(2), HEB-AC(2), HEB-AD(2), HEB-AE(2), HEB-AJ, HEB-AK, HEB-AL, HEB-AR, HEB-AY, HEB-BA(2), HEB-BB(2), HEB-BC(2), HEB-BD(2), HEB-CC(2), HEB-DD(2), HEB-JJ, HEB-JK, HEB-JL, HEB-JY, HEB-LL, HEB-NN, HEB-PP(2), HEB-QQ(2), HEB-RR(2), HEB-SS, HEB-TT(2), HEB-ZA.

Agency Information:

(1)UL Recognized, Guide IZLT2, File E14853

(2)CSA Certified, Class 6225-01, File 47235

(3)CE

Breakaway Units:

(Includes fuse holder, breakaway part and insulating boots):

HEB-AW-RLA, HEB-AW-RLC-A(1) (2) (3), HEB-AW-RLC-B, HEB-AW-RLC-C, HEB-AW-RLC-J, HEB-AW-RYA, HEB-AW-RYC, HEB-BW-RLC-A, HEB-BW-RLC-B, HEB-BW-RYC, HEB-JW-RLC-J, HEB-JW-RYC, HEB-KW-RLC-J, HEB-KW-RYC, HEB-LW-RLA, HEB-LW-RLC-J, HEB-LW-RYA

Agency Information:

(1)UL Recognized, Guide IZLT2, File E14853

(2)CSA Certified, Class 6225-01, File 47235

(3)CE

Catalog and Specification Data

Note: The construction elements listed below illustrate the full construction of the available part numbers. NOT all construction elements are available in all combinations.

Conductor Terminals

Type Terminal	Size	Conductor Data: No. Per Terminal	Solid	Stranded	Terminal Symbols: Load Side	Line Side
Copper Crimp 	#12 to #8	1	•	•	**A**	**A**
	#12	2	•	•		
	#10	2	•	•	**B**	**B**
	#6	1	•	•		
	#4	1	•	•		
	#8	2	•	•	**C**	**C**
	#4	1	—	•		
	#6	2	•	•	**D**	**D**
	#2	1	—	•		
	#4	2	•	•	**E**	**E**
Copper Set-Screw 	#12 to #2	1	•	•	**J**	**J**
	#12 to #2	2	•	•	**K**	**K**
Solid Breakaway 	**(Required with Breakaway Receptacle)**				**W**	**W**

Available Part Numbers

HEX Series:
HEX-AA(1) (2), HEX-AB, HEX-AC, HEX-AD,HEX-AE, HEX-AY, HEX-BB, HEX-CC, HEX-JJ, HEX-JK, and HEX-KK.

Agency Information:
(1)UL Recognized, Guide IZLT2, File E14853
(2)CSA Certified, Class 6225-01, File 47235

HEY Series:
HEY-AA, HEY-AB, HEY-AC, HEY-AD, HEY-AE, HEY-AL, HEY-BB, and HEY-JJ.

HET Series:
HET-AA, HET-AB, HET-BB, HET-JJ, and HET-JK

Optional

Type Terminal	Size	Conductor Data: No. Per Terminal	Solid	Stranded	Breakaway Terminal: Single-Pole	*Double-Pole
Copper Crimp 	#12 to #8	1	•	•	**-RLC-A**	**-DRLC-A**
	#6	1	•	•	**-RLC-B**	**-DRLC-B**
	#4	1	•	•	**-RLC-C**	**-DRLC-C**
Copper Set-Screw 	#12 to #2	1	•	•	**-RLC-J**	**-DRLC-J**
	#12 to #2	2	•	•	**-RYC**	**-DRYC**

* Terminal illustrations show the end view of single-pole receptacles and one-pole only of the double-pole receptacles. Thus, for example, in the case of a double-pole, set-screw type receptacle with terminals that accept two conductors, a total of four conductors could be connected to the receptacle per the following drawing.

Catalog Data — Insulating Boots

Catalog Numbers	Type
2A0660	Single Conductor
2A0661	Two Conductor

Insulating boots are optional and not included with non-Breakaway holders and must be ordered separately. They are included as a standard item with the breakaway series.

When boots are utilized, extra heat retention requires that fuses are sized at a minimum of 200% of the RMS load current.

Watertight Fuse Protection

HEB in-line fuse holders are water resistant and easy to install. Protect fuses in locations exposed to water, weather, corrosive fumes, salt-spray, etc. Holders are two-sectioned, molded plastic. The captive nut couples the loadside section to the lineside section; compression of the o-ring when the nut is tightened forms a vapor and water resistant unit.

Double-Pole Fuse Holders For Simultaneous Non- Load-Break Disconnect of Two Conductors

HEX and HEY units permit the fusing of two conductors. Loadside conductors can be disconnected from the lineside conductors by disengaging a captive stainless steel screw. Positive non-load-break disconnect (for non-energized circuits) provides maintenance safety. Helps prevent shock. Makes loads electrically dead.

Fuse holders are polarized. They can be used for line-to-line or line-to-neutral loads. Polarization prevents inadvertent reversal of loadside conductors (provides compliance with NEC® Section 240-22).

Both loadside terminals are always identical; both lineside terminals are always identical.

Serve As A Non-Load-Break Disconnect

The body of the fuse recesses within the loadside section so that it does not make electrical contact with the lineside section until the coupling nut engages the threads on the lineside section. The holder section thus provides a positive means of breaking or opening a non-energized electrical circuit for maintenance and repair.

Breakaway Receptacles For Impact Seperation

Are available as an option with fuse holders. Ideally suited for breakaway lighting standards as required by state and federal highway commissions). Receptacle consists of a female terminal jacketed in an integral rubber insulating sleeve, and an external wire/cable terminal. The female terminal tightly mates with a lineside, solid, copper rod terminal (symbol “W”) of the fuse holder. The insulating sleeve also insulates the body of the lineside section of the fuse holder. Should the holder be subjected to an undue pull, it will separate from the lineside, Breakaway receptacle and become electrically dead. Separating the holder and receptacle on a non-engergized circuit facilitates repair/maintenance.

Solid “W” Terminals Mate With Breakaway

Receptacles

A solid copper “rod” terminal must be used on the line-side of a fuse holder when holder is equipped with a breakaway receptacle. This solid rod terminal mates with the internal female terminal(s) of the breakaway receptacle. The letter “W” in the catalog number of the fuse holder designates this type terminal.

Crimp And Set-Screw Terminals

Crimp and setscrew type terminals are available for copper conductors.

2A0661

2A0660

Insulating Boots Save Installation Time

Boots come in two configurations - for single conductor and the “Y” type for two conductors. Fit all Edison in-line fuse holders. Designed to snugly fit over conductor insulation. Fits to wire by cutting off tapered tip. Diameter of conductor insulation cannot exceed 0.450". Inside of boots are treated with silicone to facilitate drawing of wire.

Boots come as a standard item with breakaway receptacles. They are optional and must be ordered separately for fuse holders without breakaway receptacles. **When boots are utilized, extra heat retention requires that fuses are sized at a minimum of 200% of the RMS load current.**

“Tap-Off” Connections

Fuse holders with terminal accepting two conductors can be used as a tap-off connector. Saves cost and manhours.

Midget 10x38mm Fuses
KLK Series

600 V ac/500 V dc • 1/10–30 A • Fast Acting

KLK 008

Description

The KLK series fast-acting fuses are designed specifically for the protection of control circuits, street lighting, HID lighting, computers, and other applications without high in-rush currents. These midget fuses also have high-interrupting and current-limiting capability. They are intended to supplement the primary branch-circuit fuse or breaker to provide backup overcurrent protection. The KLK fuses are non-indicating and may be used with an indicating fuse block to identify a blown fuse.

Features & Benefits

FEATURES	BENEFITS
10x38 mm size	Common dimensions used in a variety of applications
Fast-acting	Provides fast, reliable short-circuit response within the interrupting rating
POWR-GARD® technology	Ensures quality backup overcurrent protection

Applications

- Control circuits
- Street and HID lighting
- Computers

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Specifications are subject to change without notice.
Revised: 11/03/2022

Midget 10x38mm Fuses
KLK Series

Specifications

Voltage Rating	600 V ac / 500 V dc
Interrupting Ratings	AC: 100 kA 200 kA Littelfuse self-certified
Ampere Range	1/10 – 30 A
Applicable Standards	UL 248-14 Listed (File: E10480) CSA Certified (File: LR29862) QPL (File: F60C) CE
Environmental	RoHS Compliant
Material	Body: Melamine Caps: Copper Alloy
Operating Temperature	See Rerating Curve
Country of Origin	Mexico

Certification & Compliance

UL	UL Listed (File: E10480)
CSA	CSA Certified (File: LR29862)
CE	EU_DOC-KLK_201218
RoHS	RoHS 2 Directive 2011/65/EU; Directive (EU) 2015/863

Accessories

Littelfuse LPSM dead-front series fuse holder
Littelfuse LEB series fuse holder
Littelfuse L60030M series fuse holder

Ordering Information

AMP RATING	CATALOG NUMBER	ORDERING NUMBER	PRODUCT MARKING	VOLTAGE		INTERRUPTING RATING (KA)		UPC	WEIGHT LB (G)	AGENCY APPROVALS	
				AC	DC	AC	DC			UL	CSA
1/10	KLK.100	0KLK.100T	KLK 1/10A	600	500	100	50	07945825011	.013 (5.90)	•	•
1/8	KLK.125	0KLK.125T	KLK 1/8A	600	500	100	50	07945825012	.013 (5.90)	•	•
2/10	KLK.200	0KLK.200T	KLK 2/10A	600	500	100	50	07945825018	.013 (5.90)	•	•
1/4	KLK.250	0KLK.250T	KLK 1/4A	600	500	100	50	07945825019	.013 (5.90)	•	•
3/10	KLK.300	0KLK.300T	KLK 3/10A	600	500	100	50	07945825020	.013 (5.90)	•	•
1/2	KLK.500	0KLK.500T	KLK 1/2A	600	500	100	50	07945825024	.013 (5.90)	•	•
3/4	KLK.750	0KLK.750T	KLK 3/4A	600	500	100	50	07945825029	.013 (5.90)	•	•
1	KLK001	0KLK001.T	KLK 1A	600	500	100	50	07945825031	.013 (5.90)	•	•
1 1/2	KLK01.5	0KLK01.5T	KLK 1-1/2A	600	500	100	50	07945825037	.013 (5.90)	•	•
2	KLK002	0KLK002.T	KLK 2A	600	500	100	50	07945825041	.017 (7.71)	•	•
2 1/2	KLK02.5	0KLK02.5T	KLK 2-1/2A	600	500	100	50	07945825043	.017 (7.71)	•	•
3	KLK003	0KLK003.T	KLK 3A	600	500	100	50	07945825047	.017 (7.71)	•	•
3 1/2	KLK03.5	0KLK03.5T	KLK 3-1/2A	600	500	100	50	07945825048	.017 (7.71)	•	•

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Midget 10x38mm Fuses
KLK Series

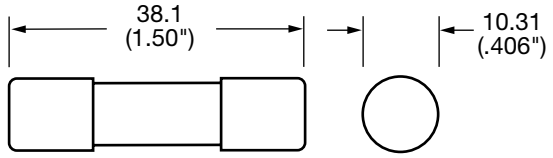
Ordering Information

AMP RATING	CATALOG NUMBER	ORDERING NUMBER	PRODUCT MARKING	VOLTAGE		INTERRUPTING RATING (KA)		UPC	WEIGHT LB (G)	AGENCY APPROVALS	
				AC	DC	AC	DC			UL	CSA
4	KLK004	0KLK004.T	KLK 4A	600	500	100	50	07945825053	.017 (7.71)	•	•
5	KLK005	0KLK005.T	KLK 5A	600	500	100	50	07945825055	.017 (7.71)	•	•
6	KLK006	0KLK006.T	KLK 6A	600	500	100	50	07945825058	.017 (7.71)	•	•
7	KLK007	0KLK007.T	KLK 7A	600	500	100	50	07945825061	.017 (7.71)	•	•
8	KLK008	0KLK008.T	KLK 8A	600	500	100	50	07945825063	.017 (7.71)	•	•
9	KLK009	0KLK009.T	KLK 9A	600	500	100	50	07945825064	.017 (7.71)	•	•
10	KLK010	0KLK010.T	KLK 10A	600	500	100	50	07945825065	.017 (7.71)	•	•
12	KLK012	0KLK012.T	KLK 12A	600	500	100	50	07945825067	.017 (7.71)	•	•
15	KLK015	0KLK015.T	KLK 15A	600	500	100	50	07945825068	.017 (7.71)	•	•
20	KLK020	0KLK020.T	KLK 20A	600	500	100	50	07945825071	.017 (7.71)	•	•
25	KLK025	0KLK025.T	KLK 25A	600	500	100	50	07945825072	.017 (7.71)	•	•
30	KLK030	0KLK030.T	KLK 30A	600	500	100	50	07945825073	.017 (7.71)	•	•

Electrical Specification - Agency Requirements

AMPERAGE RATING	OPENING TIME (MINUTES)		
	100 % OF AMP RATING PER UL	135 % OF AMP RATING PER UL	200 % OF AMP RATING PER UL
1/10–30	Temperature Stabilization	60 Max	2 Max

Dimensions Millimeters (inches)



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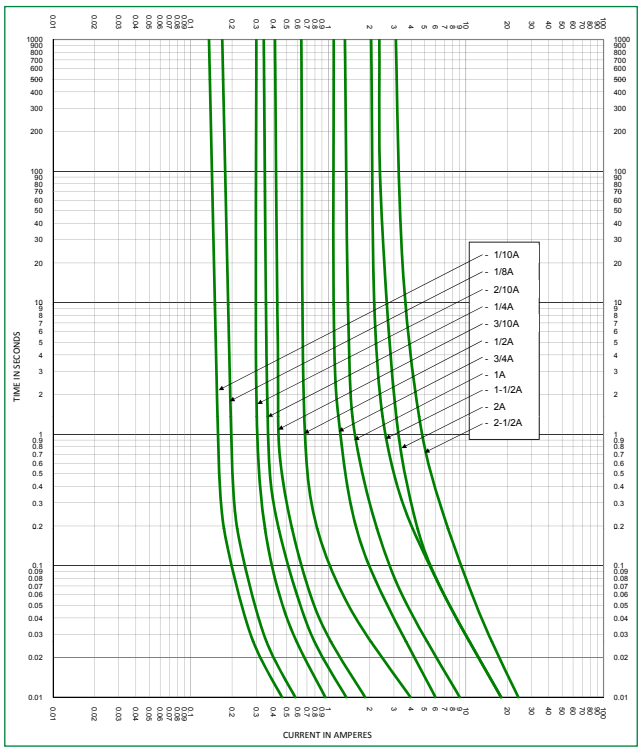
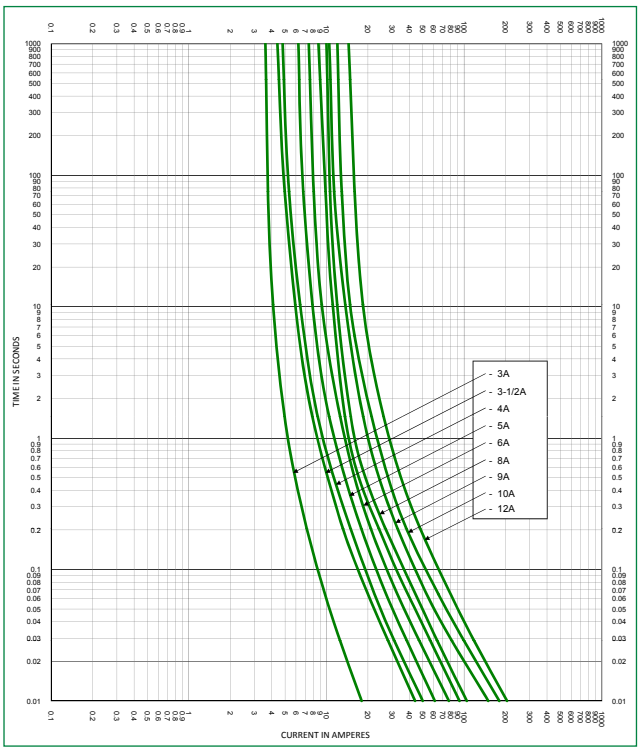
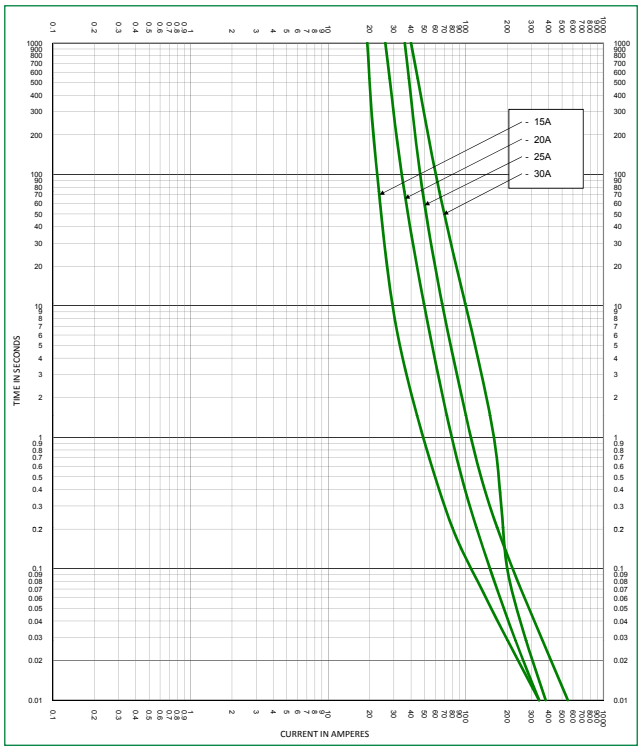
Midget 10x38mm Fuses
KLK Series

Time Current Curves







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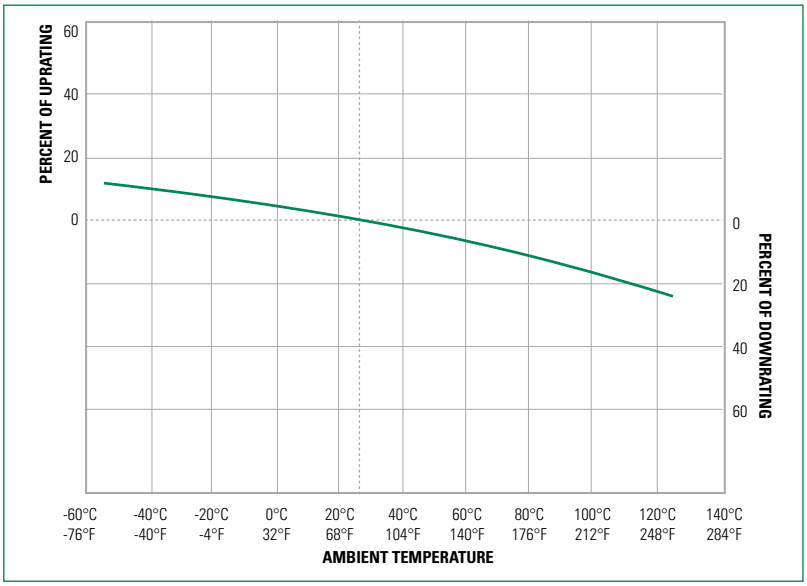
Temperature Rerating Curve

Ambient temperature: temperature of air immediately surrounding fuse



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SHOP DRAWING SUBMITTAL

Project: Blackwell Blue Parkway

City/State: Lee's Summit, MO

Scope of Work: Street Lighting

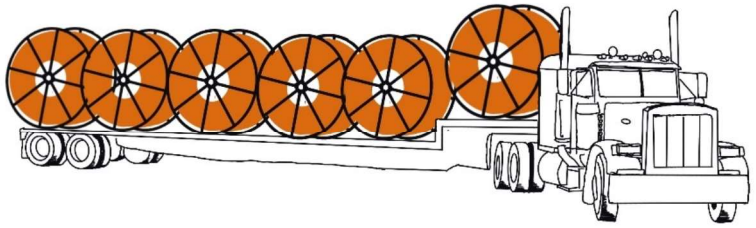
Attachments:

- 2" SDR11 HDPE
- 4" SDR11 HDPE
- SCH40 PVC CONDUIT
- PVC FITTINGS
- HDPE COUPLER
- 3C #2 XLP USE (BLACK/BLACK/BLACK) (SERVICE ENTERANCE WIRE)
- 2C #8 XLP USE (BLACK/RED) (DISTRIBUTION WIRE)
- 1C #8 BARE STR (DISTRIBUTION WIRE)
- BARE #6 SOILD (GROUND WIRE)
- 1C #10 THHN STR BLACK (POLE & BRACKET WIRE)
- 1C #10 THHN STR RED (POLE & BRACKET WIRE)
- 1C #10 THHN STR GREEN (POLE & BRACKET WIRE)
- GROUND ROD
- GROUND ROD CLAMP

7050 Ensign Dr.
Parkville, MO 64152

Phone (816) 389-4000
Fax (816) 329-8260

SMOOTH WALL CONDUIT



SDR		3/4"	1"	1 1/4"	1 1/2"	2"	3"	4"
SDR9	OD	1.050	1.315	1.660	1.900	2.375	3.500	4.500
	ID	0.818	1.023	1.292	1.478	1.847	2.722	3.500
	WALL	0.117	0.146	0.184	0.211	0.264	0.389	0.500
	WT/FT	0.150	0.230	0.360	0.480	0.750	1.360	2.688
SDR11	OD	1.050	1.315	1.660	1.900	2.375	3.500	4.500
	ID	0.860	1.075	1.358	1.554	1.943	2.864	3.682
	WALL	0.095	0.120	0.151	0.173	0.216	0.318	0.409
	WT/FT	0.120	0.190	0.300	0.400	0.640	1.400	2.250
SDR 13.5	OD	0.000	1.315	1.660	1.900	2.375	3.500	4.500
	ID	0.000	1.121	1.414	1.618	2.023	2.982	3.834
	WALL	0.000	0.097	0.123	0.141	0.176	0.259	0.330
	WT/FT	0.000	0.160	0.260	0.340	0.530	1.160	1.910

SCHEDULE		3/4"	1"	1 1/4"	1 1/2"	2"	3"	4"
SCH 40	OD	1.050	1.315	1.660	1.900	2.375	3.500	4.500
	ID	0.784	1.009	1.340	1.570	2.027	3.016	3.970
	WALL	0.113	0.133	0.140	0.145	0.154	0.213	0.237
	WT/FT	0.150	0.220	0.290	0.350	0.470	0.960	1.380
SCH 80	OD	1.050	1.315	1.660	1.900	2.375	3.500	4.500
	ID	0.702	0.915	1.232	1.452	1.887	2.828	3.746
	WALL	0.154	0.179	0.191	0.200	0.218	0.300	0.337
	WT/FT	0.190	0.280	0.380	0.460	0.640	1.310	1.914

Material

We use only virgin material that meets or exceeds ASTMD-3350 standards

Colorant

Our colorants contain UV protection and are heavy metal free

Print Line

Sequential footage markings, customized print lines are available

Options

- ☐ Pull Tape
- ☐ Segmented Reels
- ☐ Stripes

QUALPOL

CONDUIT PIPE SUBMITTAL

Introduction:

This document outlines the specifications, certifications, and materials used in the manufacturing of QualPol HDPE Conduit Pipe. These details ensure clarity and compliance for all stakeholders.

Product Range:

- QualPol Conduit Pipe

- Available in sizes: ¾”-4” - SDR9, SDR11, SDR13.5, SCHEDULE 40, SCHEDULE 80

Manufacturing Facility:

Location: 946 W Main Street, Jerome, Idaho 83338

Materials Used:

- Virgin HDPE Resin:

    - A high-quality resin specifically designed for conduit applications. Technical data sheets for this resin are available upon request.

- Colorants with UV Protection:

    - UV-protected colorants that are heavy metal-free, ensuring long-lasting durability.

- 1250# Pull Tape:

    - Heavy-duty pull tape included for enhanced functionality.

Certifications & Compliance:

- ASTM F2160: QualPol Conduit Pipe is manufactured to meet ASTM F2160 dimensional specifications.

- No Regrind Policy: No regrind material is allowed on the premises to maintain high standards for NSF-certified drinking water pipe production.

- Build America, Buy America: Ensuring compliance with domestic content regulations.

Contact Information: For more information, technical support, or additional documentation, please contact:

STANDARD

SMOOTHWALL

- Manufactured from flexible HDPE, makes gradual bends without special equipment
- Continuous lengths reduce joining costs
- Excellent low-temperature properties, allows installation in cold climates
- Outstanding long-term cable protection from shifting ground, rock, and root impingement
- Provides a permanent pathway, simpifies future cable repairs or replacement

INSTALLATION TYPES

Aerial
Subdivided Conduit
Plow
Trench
Directional Bore
Tray
Direct Burial

SIZE RANGE AVAILABLE

1/2"	2"	6"
3/4"	2 1/2"	8"
1"	3"	10"
1 1/4"	4"	12"
1 1/2"	5"	

WALL TYPES

SDR 9	SCH 40
SDR 11	SCH 80
SDR 13.5	SIDR 9
SDR 15.5	SIDR 11
SDR 17	

STANDARD COLORS

or custom colors with optional stripes

FEATURES

STANDARD

MATERIAL Manufactured from flexible HDPE (High Density Polyethylene)

SPECIFICATIONS All Smoothwall conduit dimensions meet or exceed one or more of the following: ASTM F-2160, ASTM D-3350, ASTM D-3485, NEMA TC-7, UL 651A, UL 1990, Bellcore GR-356, CSA C22.2 No. 327-18

CONDUIT MARKINGS Permanent marking along conduit includes: material, relevant standards, production info, and sequential feet or meter markings. Custom options available.

OPTIONS

CO-EXTRUDED LINING SILICORE® ULF (Ultra-Low Friction) is co-extruded inside the HDPE wall creating a slick, permanent, interior lining. With a coefficient of friction 60% lower than standard HDPE conduit without the aid of wet lubricants, SILICORE® ULF exhibits no loss in performance over time or in extreme temperature conditions.

PRE-INSTALLED TAPE Factory pre-installed Bull-Line™ Pull Tape with EVEN-LOAD™ ensures extra slack at any access point throughout the reel. Available 500lb–6,000lb tensile strength or locatable.

PRE-INSTALLED CABLE Cable can be factory pre-installed in conduit

UV PROTECTANT Available for UV exposure applications (Aerial, Lashed, or External Tray)

SMOOTHWALL (SDR/SCH) TECHNICAL SPECIFICATIONS (additional sizes next pages)

SIZE	WALL TYPE	NOM OD (IN)	OD TOLERANCE +/-	MIN WALL (IN)	WALL TOLERANCE +	AVG ID (IN)	MIN ID (IN)	WEIGHT (LB/FT)	BEND RADIUS SUP (IN)	BEND RADIUS UNSUP (IN)	SWPS (LB)
1/2"	SDR 9	0.840	0.004	0.093	0.020	0.634	0.614	0.098	8	16	525
	SDR 11	0.840	0.004	0.076	0.020	0.668	0.648	0.084	8	16	440
	SDR 13.5	0.840	0.004	0.062	0.020	0.696	0.676	0.072	8	16	365
	SDR 15.5	0.840	0.004	0.062	0.018	0.698	0.680	0.071	8	16	351
	SCH 40	0.840	0.004	0.109	0.020	0.602	0.582	0.111	8	16	601
	SCH 80	0.840	0.004	0.147	0.020	0.526	0.506	0.139	8	16	768
3/4"	SDR 9	1.050	0.005	0.117	0.020	0.796	0.776	0.152	10	20	821
	SDR 11	1.050	0.005	0.095	0.020	0.840	0.820	0.128	10	20	687
	SDR 13.5	1.050	0.005	0.078	0.020	0.874	0.854	0.110	10	20	570
	SDR 15.5	1.050	0.005	0.068	0.020	0.894	0.874	0.098	10	20	536
	SDR 17	1.050	0.005	0.062	0.020	0.906	0.886	0.091	10	20	460
	SCH 40	1.050	0.005	0.113	0.020	0.804	0.784	0.148	10	20	798
	SCH 80	1.050	0.005	0.154	0.020	0.722	0.702	0.188	10	20	1,040
1"	SDR 9	1.315	0.007	0.146	0.020	1.003	0.983	0.234	13	26	1,288
	SDR 11	1.315	0.007	0.120	0.020	1.055	1.035	0.199	13	26	1,078
	SDR 13.5	1.315	0.007	0.097	0.020	1.101	1.081	0.167	13	26	894
	SDR 15.5	1.315	0.007	0.084	0.020	1.127	1.107	0.149	13	26	792
	SDR 17	1.315	0.007	0.077	0.020	1.141	1.121	0.138	13	26	722
	SCH 40	1.315	0.007	0.133	0.020	1.029	1.009	0.217	13	26	1,340
	SCH 80	1.315	0.007	0.179	0.021	0.936	0.915	0.276	13	26	1,533
1 1/4"	SDR 9	1.660	0.008	0.184	0.022	1.270	1.248	0.370	17	34	2,052
	SDR 11	1.660	0.008	0.151	0.020	1.338	1.318	0.312	17	34	1,717
	SDR 13.5	1.660	0.008	0.123	0.020	1.394	1.374	0.263	17	34	1,425
	SDR 15.5	1.660	0.008	0.107	0.020	1.426	1.406	0.234	17	34	1,234
	SDR 17	1.660	0.008	0.098	0.020	1.444	1.424	0.217	17	34	1,150
	SCH 40	1.660	0.008	0.140	0.020	1.360	1.340	0.293	17	34	1,604
	SCH 80	1.660	0.008	0.191	0.023	1.255	1.232	0.382	17	34	2,116

SMOOTHWALL (SDR/SCH) TECHNICAL SPECIFICATIONS (additional sizes previous and next pages)

SIZE	WALL TYPE	NOM OD (IN)	OD TOLERANCE +/-	MIN WALL (IN)	WALL TOLERANCE +	AVG ID (IN)	MIN ID (IN)	WEIGHT (LB/FT)	BEND RADIUS SUP (IN)	BEND RADIUS UNSUP (IN)	SWPS (LB)
1 1/2"	SDR 9	1.900	0.010	0.211	0.025	1.453	1.428	0.485	19	38	2,688
	SDR 11	1.900	0.010	0.173	0.021	1.533	1.512	0.408	19	38	2,249
	SDR 13.5	1.900	0.010	0.141	0.020	1.598	1.578	0.342	19	38	1,867
	SDR 15.5	1.900	0.010	0.123	0.020	1.634	1.614	0.304	19	38	1,607
	SDR 17	1.900	0.010	0.112	0.020	1.656	1.636	0.281	19	38	1,507
	SCH 40	1.900	0.010	0.145	0.020	1.590	1.570	0.350	19	38	1,919
	SCH 80	1.900	0.010	0.200	0.024	1.476	1.452	0.463	19	38	2,564
2"	SDR 9	2.375	0.012	0.264	0.032	1.815	1.783	0.759	24	48	4,200
	SDR 11	2.375	0.012	0.216	0.026	1.917	1.891	0.636	24	48	3,515
	SDR 13.5	2.375	0.012	0.176	0.021	2.002	1.981	0.528	24	48	2,917
	SDR 15.5	2.375	0.012	0.153	0.020	2.049	2.029	0.467	24	48	2,466
	SDR 17	2.375	0.012	0.140	0.020	2.075	2.055	0.432	24	48	2,355
	SCH 40	2.375	0.012	0.154	0.020	2.047	2.027	0.469	24	48	2,579
	SCH 80	2.375	0.012	0.218	0.026	1.913	1.887	0.641	24	48	3,501
2 1/2"	SDR 9	2.875	0.014	0.319	0.038	2.199	2.161	1.110	29	58	6,155
	SDR 11	2.875	0.014	0.261	0.031	2.322	2.291	0.930	29	58	5,151
	SDR 13.5	2.875	0.014	0.213	0.026	2.423	2.397	0.775	29	58	4,274
	SDR 15.5	2.875	0.014	0.185	0.022	2.483	2.461	0.680	29	58	3,592
	SDR 17	2.875	0.014	0.169	0.020	2.517	2.497	0.625	29	58	3,450
	SCH 40	2.875	0.014	0.203	0.024	2.445	2.421	0.740	29	58	4,090
	SCH 80	2.875	0.014	0.276	0.033	2.290	2.257	0.978	29	58	5,409
3"	SDR 9	3.500	0.018	0.389	0.047	2.675	2.628	1.648	39	78	9,122
	SDR 11	3.500	0.018	0.318	0.038	2.826	2.788	1.380	39	78	7,633
	SDR 13.5	3.500	0.018	0.259	0.031	2.951	2.920	1.146	39	78	6,335
	SDR 15.5	3.500	0.018	0.226	0.027	3.021	2.994	1.011	39	78	5,342
	SDR 17	3.500	0.018	0.206	0.025	3.063	3.038	0.928	39	78	5,114
	SCH 40	3.500	0.018	0.216	0.026	3.042	3.016	0.969	39	78	5,348
	SCH 80	3.500	0.018	0.300	0.036	2.864	2.828	1.310	39	78	7,238

SMOOTHWALL (SDR/SCH) TECHNICAL SPECIFICATIONS (additional sizes previous and next pages)

SIZE	WALL TYPE	NOM OD (IN)	OD TOLERANCE +/-	MIN WALL (IN)	WALL TOLERANCE +	AVG ID (IN)	MIN ID (IN)	WEIGHT (LB/FT)	BEND RADIUS SUP (IN)	BEND RADIUS UNSUP (IN)	SWPS (LB)
4"	SDR 9	4.500	0.023	0.500	0.060	3.440	3.380	2.723	50	100	15,080
	SDR 11	4.500	0.023	0.409	0.049	3.633	3.584	2.282	50	100	12,618
	SDR 13.5	4.500	0.023	0.333	0.040	3.794	3.754	1.895	50	100	10,472
	SDR 15.5	4.500	0.023	0.290	0.035	3.885	3.850	1.669	50	100	8,814
	SDR 17	4.500	0.023	0.265	0.032	3.938	3.906	1.534	50	100	8,453
	SCH 40	4.500	0.023	0.237	0.028	3.998	3.970	1.380	50	100	7,618
	SCH 80	4.500	0.023	0.337	0.040	3.786	3.746	1.914	50	100	10,578
5"	SDR 9	5.563	0.028	0.618	0.074	4.253	4.179	4.161	61	122	23,045
	SDR 11	5.563	0.028	0.506	0.061	4.490	4.429	3.490	61	122	19,284
	SDR 13.5	5.563	0.028	0.412	0.049	4.690	4.641	2.896	61	122	16,004
	SDR 15.5	5.563	0.028	0.359	0.043	4.802	4.759	2.552	61	122	13,483
	SDR 17	5.563	0.028	0.327	0.039	4.870	4.831	2.339	61	122	12,918
	SCH 40	5.563	0.028	0.258	0.031	5.016	4.985	1.872	61	122	10,320
	SCH 80	5.563	0.028	0.375	0.045	4.768	4.723	2.657	61	122	14,669
6"	SDR 9	6.625	0.033	0.736	0.088	5.065	4.977	5.901	73	146	32,684
	SDR 11	6.625	0.033	0.602	0.072	5.349	5.277	4.944	73	146	27,349
	SDR 13.5	6.625	0.033	0.491	0.059	5.584	5.525	4.122	73	146	22,697
	SDR 15.5	6.625	0.033	0.427	0.051	5.720	5.669	3.615	73	146	19,123
	SDR 17	6.625	0.033	0.390	0.047	5.798	5.751	3.324	73	146	18,321
	SCH 40	6.625	0.033	0.280	0.034	6.031	5.997	2.432	73	146	13,395
	SCH 80	6.625	0.033	0.432	0.052	5.709	5.657	3.656	73	146	20,172
8"	SDR 9	8.625	0.043	0.958	0.115	6.593	6.479	10.001	155	233	55,397
	SDR 11	8.625	0.043	0.784	0.094	6.963	6.869	8.383	155	233	46,355
	SDR 13.5	8.625	0.043	0.639	0.077	7.270	7.193	6.969	155	233	38,470

SMOOTHWALL (SDR/SCH) TECHNICAL SPECIFICATIONS (additional sizes previous and next pages)

SIZE	WALL TYPE	NOM OD (IN)	OD TOLERANCE +/-	MIN WALL (IN)	WALL TOLERANCE +	AVG ID (IN)	MIN ID (IN)	WEIGHT (LB/FT)	BEND RADIUS SUP (IN)	BEND RADIUS UNSUP (IN)	SWPS (LB)
10"	SDR 9	10.750	0.054	1.194	0.143	8.219	8.076	15.534	194	290	86,057
	SDR 11	10.750	0.054	0.977	0.117	8.679	8.562	13.019	194	290	72,010
	SDR 13.5	10.750	0.054	0.796	0.096	9.062	8.966	10.821	194	290	59,762
12"	SDR 9	12.750	0.064	1.417	0.170	9.746	9.576	21.866	230	344	121,056
	SDR 11	12.750	0.064	1.159	0.139	10.293	10.154	18.319	230	344	101,297
	SDR 13.5	12.750	0.064	0.944	0.113	10.749	10.636	15.214	230	344	84,067

SMOOTHWALL SDR & SCHEDULE NOTES

1. Bend Radius

½" through 2 ½"	Supported Bend Radius 10 times the OD	Unsupported Bend Radius 20 times the OD
3" through 6"	Supported Bend Radius 11 times the OD	Unsupported Bend Radius 22 times the OD
8" through 16"	Supported Bend Radius 18 times the OD	Unsupported Bend Radius 27 times the OD

2. During cable placement, large sweeping bends are recommended over tighter bends. Pre-formed sweeps are recommended for conduit sizes 8" through 16" diameters.

3. SWPS (Safe Working Pull Strength) is calculated using a 25% safety factor with the minimum resin tensile strength of 3,000 psi, the average OD and average wall thickness.

SMOOTHWALL (SIDR) TECHNICAL SPECIFICATIONS

SIZE	WALL TYPE	AVG OD (IN)	MIN WALL (IN)	WALL TOLERANCE +	MIN ID (IN)	WEIGHT (LB/FT)	BEND RADIUS SUP (IN)	BEND RADIUS UNSUP (IN)	SWPS (LB)
1/2"	SIDR 9	0.780	0.069	0.020	0.622	0.072	8	16	445
	SIDR 11.5	0.762	0.060	0.022	0.622	0.063	8	16	390
3/4"	SIDR 9	1.026	0.092	0.020	0.824	0.122	10	20	760
	SIDR 11.5	0.986	0.072	0.020	0.824	0.096	10	20	597
1"	SIDR 9	1.298	0.117	0.020	1.049	0.192	13	26	1,471
	SIDR 11.5	1.246	0.091	0.020	1.049	0.150	13	26	891
1 1/4"	SIDR 9	1.701	0.153	0.020	1.380	0.324	17	34	1,652
	SIDR 11.5	1.635	0.120	0.020	1.380	0.253	17	34	1,549
1 1/2"	SIDR 11.5	1.908	0.140	0.020	1.610	0.341	19	38	2,123
2"	SIDR 9	2.553	0.230	0.028	2.067	0.729	24	48	4,535
	SIDR 11.5	2.447	0.180	0.022	2.067	0.558	24	48	3,468
2 1/2"	SIDR 11.5	2.919	0.215	0.026	2.469	0.792	29	58	4,934
3"	SIDR 11.5	3.627	0.267	0.032	3.068	1.225	39	78	7,627
4"	SIDR 11.5	4.768	0.350	0.042	4.026	2.111	50	100	13,119
6"	SIDR 11.5	7.175	0.527	0.063	6.065	4.782	73	146	29,750

SMOOTHWALL SIDR NOTES:

1. Bend Radius

½" through 2 ½"	Supported Bend Radius 10 times the OD	Unsupported Bend Radius 20 times the OD
3" through 6"	Supported Bend Radius 11 times the OD	Unsupported Bend Radius 22 times the OD
8" through 16"	Supported Bend Radius 18 times the OD	Unsupported Bend Radius 27 times the OD

2. During cable placement, large sweeping bends are recommended over tighter bends. Pre-formed sweeps are recommended for conduit sizes 8" through 16" diameters.

3. SWPS (Safe Working Pull Strength) is calculated using a 25% safety factor with the minimum resin tensile strength of 3,000 psi, the average OD and average wall thickness.

4. Internal or external ribs are in addition to the average wall and for determining OD and ID dimensions. The average rib height to be added is 0.020"

5. Add 0.016 #/ft for ribbed products 1 1/2" and less. For 2" and larger, add 0.025 #/ft

Blue Diamond HDPE Specifications

Fiber Optic and Power Conduit

BDI213GY Conduit
Date 04022025

MATERIAL	OD**	ID**	WALL
2" SDR 11 SOLID WALL PE, COILABLE CONDUIT	2.375	1.917	0.216 MIN

**NOMINAL

SPECIFICATIONS

ASTM F2160: STANDARD SPECIFICATION FOR SOLID WALL HDPE CONDUIT BASED ON CONTROLLED OUTSIDE DIAMETER

ASTM D3350 (CELL CLASSIFICATION 334480C OR E): STANDARD SPECIFICATION FOR PE PLASTIC PIPE AND FITTINGS MATERIALS-RESINS EXCEEDING THE ABOVE CELL CLASS IN ONE OR MORE PROPERTIES IS ACCEPTABLE

Typical Properties

Property	Test Procedures	Units**
Density (3)	ASTM D1505	0.940 - 0.947 gm/cc
Melt Index (3)	ASTM D1238	<0.40 to 0.15 gm/10 min
Flexural Modulus (4)	ASTM D790	80,000 – 110,000 psi
Tensile Strength (Yield) (4) Environmental Stress	ASTM D638	3000 - 3500 psi
Crack Resistance (ESCR) (8)**	ASTM D1693	96 hrs
HDB @ 73.4oF (0)*	ASTM D2837	----
UV Stabilizer (C or E)	ASTM D1603	1 year exposure
Ultimate Elongation	ASTM D638	>400%

** F10>96 hours per ASTM F2160
* Not pressure rated - Consult ASTM D3350 for specific values
*** Consult ASTM Standards for acceptable tolerances.

BLUE DIAMOND
A PART OF HEXATRONIC GROUP

4040 Finn Way, Suite 240
Lexington, KY, 40517
859.224.0415
859.224.0543 fax
www.bdiky.com

Blue Diamond HDPE Specifications

Fiber Optic and Power Conduit

BDI413GY Conduit
Date 04022025

MATERIAL	OD**	ID**	WALL
4" SDR 11 SOLID WALL PE, COILABLE CONDUIT	4.500	3.633	0.409 MIN

**NOMINAL

SPECIFICATIONS

ASTM F2160: STANDARD SPECIFICATION FOR SOLID WALL HDPE CONDUIT BASED ON CONTROLLED OUTSIDE DIAMETER

ASTM D3350 (CELL CLASSIFICATION 334480C OR E): STANDARD SPECIFICATION FOR PE PLASTIC PIPE AND FITTINGS MATERIALS-RESINS EXCEEDING THE ABOVE CELL CLASS IN ONE OR MORE PROPERTIES IS ACCEPTABLE

Typical Properties

Property	Test Procedures	Units**
Density (3)	ASTM D1505	0.940 - 0.947 gm/cc
Melt Index (3)	ASTM D1238	<0.40 to 0.15 gm/10 min
Flexural Modulus (4)	ASTM D790	80,000 – 110,000 psi
Tensile Strength (Yield) (4) Environmental Stress	ASTM D638	3000 - 3500 psi
Crack Resistance (ESCR) (8)**	ASTM D1693	96 hrs
HDB @ 73.4oF (0)*	ASTM D2837	----
UV Stabilizer (C or E)	ASTM D1603	1 year exposure
Ultimate Elongation	ASTM D638	>400%

** F10>96 hours per ASTM F2160
* Not pressure rated - Consult ASTM D3350 for specific values
*** Consult ASTM Standards for acceptable tolerances.

BLUE DIAMOND
A PART OF HEXATRONIC GROUP

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WL PLASTICS
An INEOS Business

WL134 Power & Communications Conduit

Conduit, Power & Telecom

The ideal piping solution

WL134 Power & Communications Conduit

Smoothwall conduit product overview

Product features

- Manufactured with the highest quality HDPE materials
  - Classified to ASTM D3350
  - Meet or exceed cell class PE334480C or E
  - No recycled or filler materials
- Ideal protective pathway for power and communication installations
  - Flexibile, durable, and impact resistant
  - Non-corrosive and resistant to chemicals
  - Protects against rock and root impingement
  - Ductile at low temperatures
- Long continuous lenghts on reels for ease of installation

Product options

- Diameters ranging from 3/4” to 12”
- Variety of wall dimensions (SDR, SIDR, SCH40 & SCH80)
- Custom colors, stripes, lengths, and print-lines
- Pre-installed pull tape available
- Segmented reels available
- Manufactured in accordance with industry standards
  - ASTM F2160
  - NEMA TC-7
  - UL 651A Listed

Raw material overview

WL Plastics conduit pipe is manufactured from high density polyethylene compounds that meet or exceed ASTM D 3350 requirements and cell classification PE435540A.

Typical Physical Properties for WL Plastics HDPE conduit pipe compound

Physical property	Test method	Typical value
Cell classification	ASTM D3350	PE435540A
Melt index (190/2.16)	ASTM D1238	0.3 g/10 min
High load melt index (190/21.6)	ASTM D1238	6-26 g/10 min
Density natural resin (73°F/23°C)	ASTM 792/ D1505	0.941-0.949 g/ cm3
Tensile strength at yield (2 in/min; 73°F/23°C)	ASTM D638	3500-4000 psi
Tensile elongation (2 in/min; 73°F/23°C)	ASTM D638	>600%
Flexural modulus (73°F/23°C)	ASTM D790	>130,000 psi
SCR, Condition B (100% Igepal)	ASTM D1693	> 1000 h
Thermal stability	ASTM D3350	>428°F (> 220°C)
Low temperature brittleness	ASTM D746	<-103°F (<-75°C)
Thermal expansion coefficient	ASTM D1822	9 x 10-5 inn/F
Tensile impact	ASTM D1822	277 ft-lb/in

Smoothwall conduit sizes

SDR product dimensions

Pipe size[A/D]	Avg OD, in	SDR[D]	7	9	11	13.5	15.5*	17*	21*
.75"	1.050	Min wall, in	0.150	0.117	0.095	0.078			
		Avg ID[C], in	0.732	0.803	0.848	0.874			
		Weight, lb/ft	0.187	0.148	0.124	0.103			
1"	1.315	Min wall, in	0.15	0,146	0.120	0.097			
		Avg ID[C], in	0.917	1.005	1.062	1.206			
		Weight, lb/ft	0.288	0.232	0.195	0.101			
1.25"	1.000	Min wall, in	0.237	0.184	0.151	0.123			
		Avg ID[C], in	1.157	1.269	1.340	1.399			
		Weight, lb/ft	0.459	0.369	0.310	0.257			
1.5"	1.900	Min wall, in	0.271	0.211	0.173	0.141			
		Avg ID[C], in	1.825	1.452	1.534	1.801			
		Weight, lb/ft	0,600	0,485	0.406	0.337			
2"	2.375	Min wall, in	0.339	0.284	0.216	0.178	0.153	0.140	
		Avg ID[C], in	1.656	1.816	1.917	2.002	2.050	2.079	
		Weight, lb/ft	0.930	0.758	0.634	0.526	0.462	0.425	
2.5"	2.875	Min wall, in	0.411	0.319	0.261	0.213	0.185	0.169	
		Avg ID[C], in	2.004	2.188	2.521	2.424	2.492	2.516	
		Weight, lb/ft	1.371	1.109	0.928	0.771	0.677	0.622	
3"	3.500	Min wall, in	0.500	0,389	0.318	0.259	0.226	0.208	0.167
		Avg ID[C], in	2.440	2.676	2.625	2.950	3.021	3.064	3.147
		Weight, lb/ft	1.377	1.846	1.378	1.141	1.006	0.923	0.757
4"	4.500	Min wall, in	0.643	0.500	0.400	0.339	0.290	0.265	0.214
		Avg ID[C], in	3.137	3.440	3.633	3.799	3.885	3.939	4.048
		Weight, lb/ft	3.372	2.720	2.275	1.887	1.080	1.528	1.247
5"	5.553	Min wall, in	0.795	0.818	0.500	0.412	0.359	0.327	0.265
		Avg ID[C], in	3.878	4.253	4.491	4.689	4.802	4.869	5.001
		Weight, lb/ft	5.154	4,156	3.479	2.886	2.540	2.328	1.909
6*	6.825	Min wall, in	0.946	0.738	0.802	0.491	0.427	0.380	0.315
		Avg ID[C], in	4.619	5.064	5.348	5.585	6.719	5.799	5.956
		Weight, lb/ft	7.305	5.894	4.930	4.095	3.599	3.307	2.703
8"*	8.625	Min wall, in	1.232	0,858	0.784	0.639	0.558	0.507	0.411
		Avg ID[C], in	6.013	6.583	6.063	7.271	7.445	7.549	7.754
		Weight, lb/ft	12.385	9.988	8.359	8.939	6.100	5.597	4.591
10"*	10.750	Min wall, in	1.596	1.184	0.977	0.796	0.894	0.632	0.512
		Avg ID[C], in	7.494	8.218	8.878	9.082	9.280	9,409	8.665
		Weight, lb/ft	19.245	15.515	12.983	10.774	9.490	8.685	7.128
12"*	12.750	Min wall, in	1.821	1.417	1.159	0.944	0.823	0.750	0.607
		Avg ID[C], in	8.889	9.747	10.298	10.748	11.006	11.160	11.483
		Weight, lb/ft	27.062	21.837	18.287	15.155	13.348	12.238	10.023

*Products greater than 6" in diameter. Schedule 40 products greater than SDR 15.5 and SDR 17 products are available in stick lengths only. WL offers these products in stick lenaths to ensure product quality and to limit pipe ovality.

Smoothwall conduit sizes

Schedule product dimensions

Pipe size[A/D]	Avg OD, in	Schedule[B]	40	80
.75"	1.05	Min wall, in	0.113	
		Avg ID[C], in	0.81	
		Weight, lb/ft	0.144	
1"	1.315	Min wall, in	D.133	0.179
		Avg ID[C], in	1.033	0.938
		Weight, lb/ft	0.214	0.277
1.25"	1.66	Min wall, in	0.14	0.191
		Avg ID[C], in	1.363	1.255
		Weight, lb/ft	0.289	0.382
1.5"	1.9	Min wall, in	0.145	0.200
		Avg ID[C], in	1.593	1.476
		Weight, lb/ft	0.346	0.482
2"	2.375	Min wall, in	0.154	0.218
		Avg ID[C], in	2.049	1.913
		Weight, lb/ft	0.485	0.639
3"	3.5	Min wall, in	0.216	0.300
		Avg ID[C], in	3.042	2.864
		Weight, lb/ft	0.985	1.305
4"	4.5	Min wall, in	0.237	0.837
		Avg ID[C], in	3.998	3.786
		Weight, lb/ft	1.374	1.908
6*	6.625	Min wall, in		0.432
		Avg ID[C], in		5.708
		Weight, lb/ft		3.038

SIDR product dimensions

Pipe size[A/D]	Min. inside diameter, in	SIDR[B]	11.5
1"	1.049	Min wall, in	0.091
		Wall tolerance, in	0.020
		Avg. OD, in	1.246
		Weight, lb/ft	0.143
1.25"	1.380	Min wall, in	0.120
		Wall tolerance, in	0.020
		Avg. OD, in	1.635
		Weight, lb/ft	0.247
2"	2.067	Min wall, in	0.180
		Wall tolerance, in	0.022
		Avg. OD, in	2.447
		Weight, lb/ft	0.555
4"	4.026	Min wall, in	0.350
		Wall tolerance, in	0.042
		Avg. OD, in	4.768
		Weight, lb/ft	2.103
6*	6.056	Min wall, in	0.527
		Wall tolerance, in	0.063
		Avg. OD, in	7.183
		Weight, lb/ft	4.770

Contact WL Plastics plant customer service to confirm availability and for sizes and DRs not shown.

a. Conduit pipe sizes/diameters per ASTM F2160

b. SDR (Standard Dimension Ratio) Schedules SIDR (Standard Inside Dimension Ratio) per ASTM F2160.

c. Calculated Avg ID = Avg OD - (2.12 x min wall). Pipe ID is approximate, and not a specification dimension. All dimensions in inches

d. The information in this publication does not constitute a guarantee or warranty for piping installations and cannot be guaranteed because the conditions of use are beyond WL Plastics control. See WL125 Terms and Conditions of Sale. The user of this information assumes all risk associated with its use. Changes to this publication may occur from time to time without notice. Contact WL Plastics to determine if you have the most current edition.

UL listed conduit sizes

UL listed product dimensions

Pipe size	Avg OD, in		Schedule 40	Schedule 80	EPEC-B (DR 13.5)
1"	1.315	Min wall, in	0.133	0.179	0.097
		Avg ID[c], in	1.033	0.936	1.206
		Weight, lb/ft	0.214	0.277	0.161
1.25"	1.66	Min wall, in	0.14	0.191	0.123
		Avg ID[c], in	1.363	1.255	1.399
		Weight, lb/ft	0.289	0.382	0.257
1.5"	1.9	Min wall, in	0.145	0.2	0.141
		Avg ID[c], in	1.593	1.476	1.601
		Weight, lb/ft	0.346	0.462	0.337
2"	2.375	Min wall, in	0.154	0.218	0.176
		Avg ID[c], in	2.049	1.913	2.002
		Weight, lb/ft	0.465	0.639	0.526
3"	3.5	Min wall, in	0.216	0.3	0.259
		Avg ID[c], in	3.042	2.864	2.950
		Weight, lb/ft	0.965	1.305	1.141
4"*	4.5	Min wall, in	0.237	0.337	0.333
		Avg ID[c], in	3.998	3.786	3.793
		Weight, lb/ft	1.374	1.908	1.887
6"*	6.625	Min wall, in	0.28	0.432	0.491
		Avg ID[c], in	6.031	5.709	5.585
		Weight, lb/ft	2.416	3.638	4.095

*Products greater than 6" in diameter, Schedule 40 products greater than 3" in diameter, and all SDR 15.5 and SDR 17 products are available in stick lengths only.

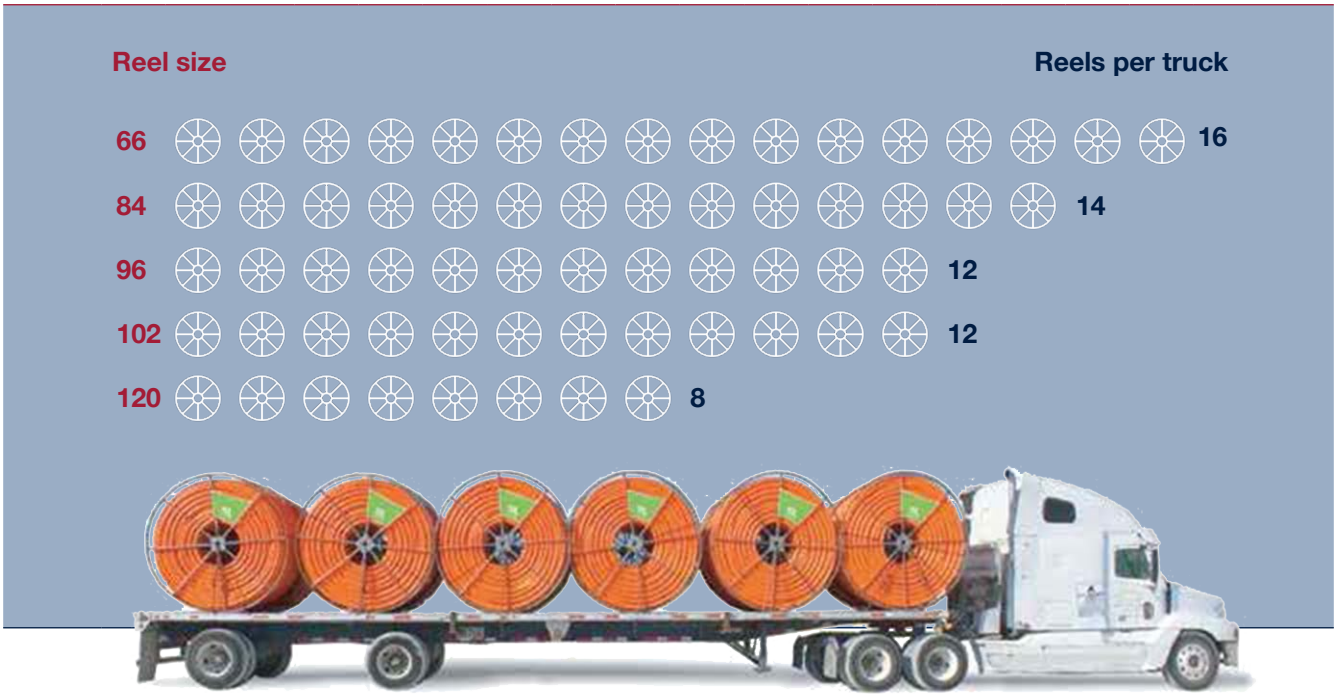
WL offers these products in stick lengths to ensure product quality and limit pipe ovality.

Reel and truck capacity

Standard lengths per reel (in feet)

Pipe diameter	66" reel	84" reel	96" reel				102" reel				120" reel
	Single	Single	Single	Double	Triple	Quad	Single	Double	Triple	Quad	Single
.75”	10,000	12,000	15,000	14,000							
1”	6,000	8,000	10,000	10,000	9,800	9,500	12,000	12,000	12,000	12,000	
1.25”	3,350	6,500	8,000	8,000	7,500	7,200	10,000	8,800	8,400	8,200	
1.5”	2,200	3,500	6,000	5,600	5,400	5,000	7,000	6,800	6,600	6,400	
2”	1,100	3,000	4,000	4,000	3,300	3,200	5,000	4,200	4,000		
2” SIDR 11.5		1,500	4,000				4,500				
2.5”		1,500	2,000				2,500				
3"							1,200				
4"							800				1,250
4” SIDR 11.5							700				1,100
5”											750
6											450
6” SIDR 11.5											450

Standard truckload capacity



Engineering information

Bend radius guidelines

Pipe size	Bend radius	
	Supported	Unsupported
.75"	10	20
1"	13	26
1.25"	17	34
1.5"	19	38
2"	24	48
2.5"	29	58
3"	39	78
4"	50	100
5"	61	122
6"	73	146
8"	155	233
10"	194	290
12"	230	344

Contact WL Plastics Engineering for technical information not shown.

When installing conduit, large radius sweeping bends are recommended

Bend radius	Supported bend radius	Unsupported bend radius
.5"–2.5"	10 x outside diameter	20 x outside diameter
3"–6"	11 x outside diameter	22 x outside diameter
83"–12"	18 x outside diameter	27 x outside diameter

Safe working loads calculated based on up to a 12-hour pull, minimum resin tensile of 3,000 psi, average OD, minimum wall thickness and using a 20% factor

Safe pullback force

		Pullback load (lbf)						
Pipe Diameter	Average OD	SDR 9	SDR 11	SDR 13.5	SDR 15.5	SDR 17	Schedule 40	Schedule 80
.75”	1.050	780	653				758	988
1”	1.315	1,224	1,024	850			1,273	1,457
1.25”	1.660	1,950	1,631	1,354			1,524	2,010
1.5”	1.900	2,554	2,137	1,774			1,823	2,435
2”	2.375	3,990	3,340	2,771	2,439	2,237	2,450	3,368
2.5”	2.875	5,847	4,893	4,061	3,573	3,278	3,885	5,138
3”	3.500	8,666	7,252	6,018	5,296	4,858	5,081	6,876
4”	4.500	14,326	11,987	9,948	8,754	8,030	7,237	10,049
5”	5.563	21,893	18,320	15,204	13,379	12,272	9,804	13,935
6”	6.625	31,050	25,982	21,563	18,974	17,405	12,725	19,163
8”	8.625	52,627	44,037	36,547	32,159	29,500	19,150	
10”	10.750	81,754	68,410	56,773	49,958	45,827	27,151	
12”	12.750	115,003	96,232	79,863	70,276	64,466	35,898	

WL PLASTICS
An INEOS Business

Manufacturing locations

Bowie, TX
Casper, WY
Cedar City, UT
Elizabethtown, KY
Lubbock, TX (HDPE)
Lubbock, TX (MDPE)
Rapid City, SD
Snyder, TX
Statesboro, GA
Titusville, PA (HDPE/MDPE)

Corporate office

3575 Lone Star Circle, Suite 300,
Fort Worth, TX, 76177

Contact

Contact WL Plastics for more information

SALES: wlsales@wlplastics.com

TECHNICAL: wltechnical@wlplastics.com

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PETROFLEX

HIGH DENSITY POLYETHYLENE PETRODUCT™

— PRODUCT CATALOG —

PROUDLY MADE IN THE USA

WE RECYCLE 100% OF OUR SCRAP

1983 PETROFLEX 40th ANNIVERSARY 2023

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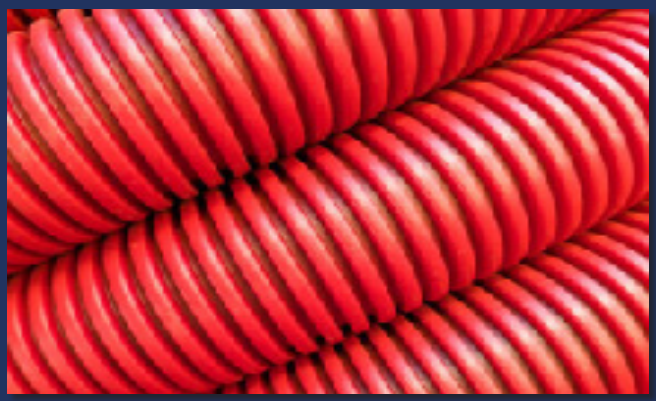
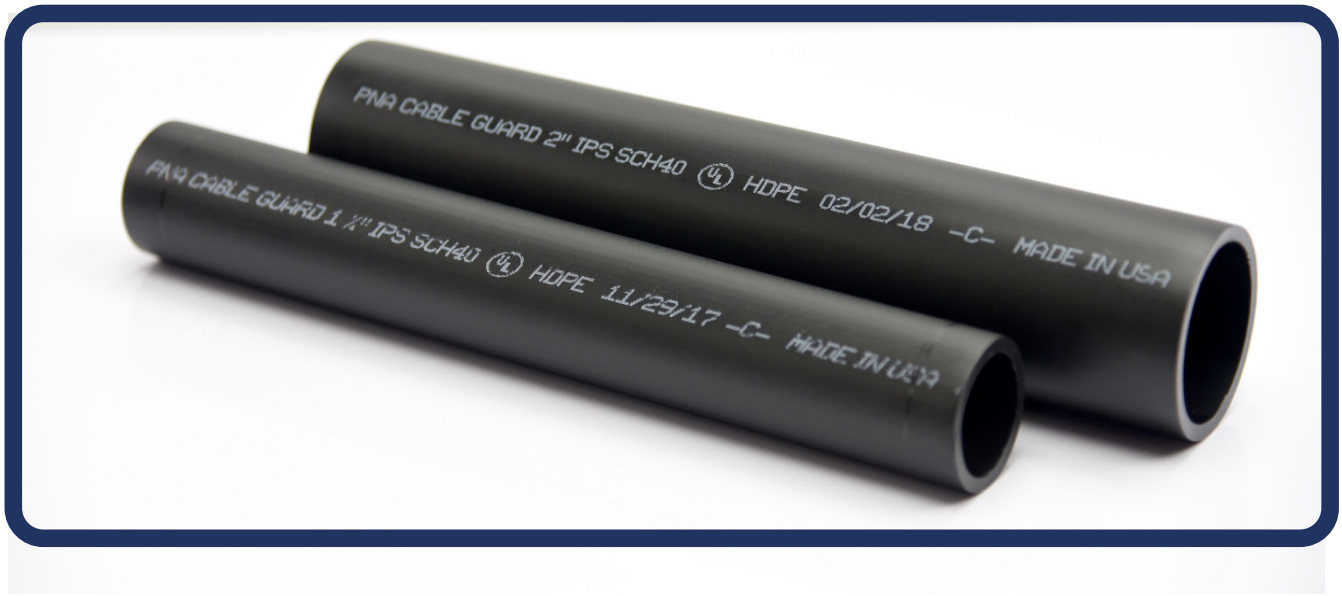
CONTENT

PETROFLEX

About ...

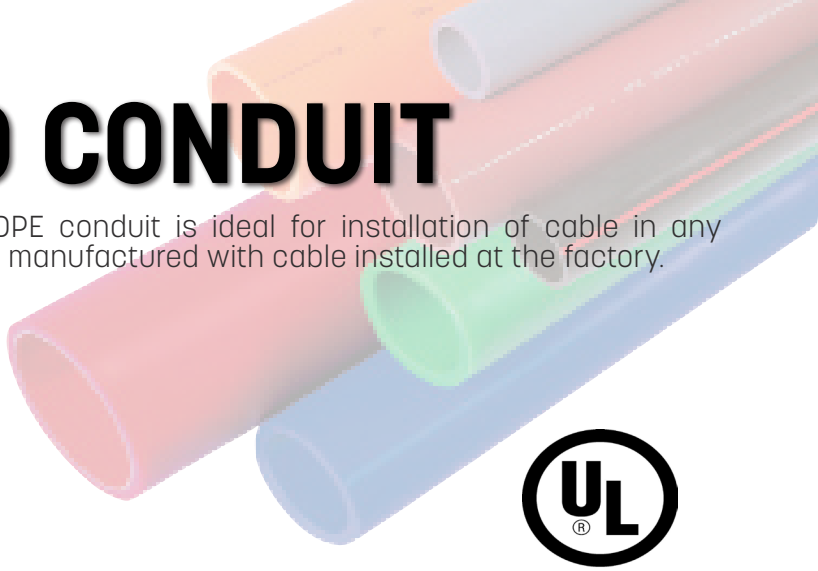


High Density Polyethylene Duct from Petroflex has been tested and proven under the most severe conditions. From extreme temperatures to abrasive and high tension applications in underground installations, HDPE from Petroflex provides quality and versatility in a wide range of uses. As a smooth and flexible duct for cable, HDPE is unequaled for ease of installation and continuous strength. Manufactured to ASTM D2239, ASTM D2447, ASTM D3035, ASTM D3485, ASTM F2160 and NEMA TC7 Specifications. Selected sizes available with UL mark.



Headquartered in Gainesville, Texas, the Petroflex family was founded by Pete and Susie Shauf in 1983. The company is a leading extruder of HDPE (high-density polyethylene) duct and accessories. Petroflex manufactures high quality products for the irrigation, electric utility, telecommunications, data/voice, renewable energy (wind & solar), and cable television markets. The product line includes cable-in-conduit, straight duct, corrugated duct, duct with striping, duct over rope and tape, take apart metal reels, lubricants, couplings & fittings. Our duct is manufactured in sizes ranging from 13mm to 6". Petroflex's products are sold throughout the United States directly to a network of wholesale distributors. The manufacturing facilities operate 24 hours a day, seven days a week.

UL LISTED CONDUIT



Petroflex Petroduct™ UL listed smooth wall HDPE conduit is ideal for installation of cable in any application. Petroduct smooth wall can also be manufactured with cable installed at the factory.

Features:

- Made from Prime HDPE Pipe Grade Resin
- Smooth inner wall
- Available with pre-installed tape or empty
- Available pre-installed with our cable or yours
- Available pre-lubricated with Petroflex's own ProPull™ Lube
- Sequential footage and UL listed markings every two feet
- Custom print lines available
- Packaged on lightweight steel reels or in coils (minimum orders apply per size)
- Manufactured to ASTM D2447, D3035 (F2160), D1693, D3350, D3485 and NEMA TC7 Specifications
- Listed to UL 651B, UL 1990 Compliant with the latest NEC Article 353
- 2, 3, or 4 colors available paralleled onto one reel as a special order
- Conforms to NEMA TC-7 Smoothwall Coilable PE Electrical Plastic Conduit

*R prefix to any part # indicates cut-to-length & does not change fit, form or function (i.e. RP150SCH40UL, RP125SCH80UL)
*CS or PS prefix to any part # indicates pre-installed cable in conduit & does not change fit, form or function (i.e. CSP200SCH40UL, PSP150SCH80UL)

SMOOTHWALL UL LISTED SPECIFICATIONS

Size	Product Part #	Nominal O.D.	Min I.D.	Mean Wall	Weight Lbs/Ft
0.75”	P075SCH40UL	1.050	0.784	0.133	0.1475
	P075SCH80UL	1.050	0.702	0.164	0.1880
	P075EPECBUL	1.050	0.854	0.088	0.1095
1.00”	P100EPEC-B	1.315	1.080	0.107	0.1672
	P100SCH40UL	1.315	1.009	0.143	0.2168
	P100SCH80UL	1.315	0.917	0.189	0.2754
1.25”	P125EPEC-B	1.660	1.374	0.133	0.2628
	P125SCH40UL	1.660	1.340	0.150	0.2931
	P125SCH80UL	1.660	1.232	0.201	0.3827
1.50”	P150EPEC-A	1.900	1.630	0.125	0.2871
	P150EPEC-B	1.900	1.579	0.141	0.3417
	P150SCH40UL	1.900	1.570	0.145	0.3500
	P150SCH80UL	1.900	1.452	0.200	0.4630
2.00”	P200EPEC-B	2.375	1.981	0.186	0.5268
	P200SCH40UL	2.375	2.027	0.164	0.4692
	P200SCH80UL	2.375	1.887	0.231	0.6408
2.50”	P250EPEC-B	2.875	2.397	0.226	0.7746
	P250SCH40UL	2.875	2.421	0.215	0.7400
	P250SCH80UL	2.875	2.257	0.293	0.9774
3.00”	P300EPEC-B	3.500	2.919	0.274	1.1437
	P300SCH40UL	3.500	3.016	0.229	0.9692
	P300SCH80UL	3.500	2.828	0.318	1.3092
4.00”	P400EPEC-B	4.500	3.753	0.353	1.8941
	P400SCH40UL	4.500	3.970	0.252	1.3851
	P400SCH80UL	4.500	3.746	0.357	1.9137

SMOOTHWALL PETRODUCT™

Petroflex Petroduct™ smoothwall HDPE conduit is ideal for installation of cable or fiber in any underground application. Petroduct smoothwall is manufactured with a smooth inner wall and is available in many different sizes and color variations from quality HDPE Pipe Grade Resin with a smooth inner wall. Manufactured to ASTM D2447, D3035 (F2160), D1693. D3350, D2239 (ID controlled pipe only) and NEMA TC7 Specifications.

Features:

- Available with pre-installed tape or empty.
- Available pre-lubricated with Petroflex's own ProPull™ Lube.
- Sequential footage markings every two feet.
- Royal Utility Services listed (RUS).
- Available in solid colors and/or with striping.

STANDARD SPECIFICATIONS FOR NEMA TC7

Size	Product Part #	Nominal O.D.	Min I.D.	Weight LBS/Ft	Mean Wall
0.75"	P075NTC7	1.050	0.910	0.0820	0.070
1.00"	P100NTC7	1.315	1.145	0.1280	0.085
1.25"	P125NTC7	1.660	1.440	0.2140	0.110
1.50"	P150NTC7	1.900	1.650	0.2820	0.125
2.00"	P200NTC7	2.375	2.045	0.4452	0.155
2.50"	P250NTC7	2.875	2.445	0.7440	0.213
3.00"	P300NTC7	3.500	3.042	0.9700	0.226

COMPARISON OF SCH WALLS TO SDR WALLS

PIPE SIZE	SCH MIN WALL	EQUAL SDR RATING
2" SCH40	.154"	15.4
2" SCH80	.218"	10.9
2-1/2" SCH40	.203"	14.2
2-1/2" SCH80	.276"	10.4
3" SCH40	.216"	16.2
3" SCH80	.300"	11.7
4" SCH40	.237"	19.0
4" SCH80	.337"	13.4

When equaling the two, the figures clearly show that there is no consistency between SCH wall thickness and SDR rating.

STANDARD DIMENSION RATIO (SDR)

SDR RATINGS ARE DIRECTLY PROPORTIONAL TO THE O.D. OF THE PIPE AS FOLLOWS:

$$SDR = \frac{O.D.}{MIN.\ WALL} \qquad OR\ MIN.\ WALL = \frac{O.D.}{SDR}$$

MIN WALL = (+0.26" TOLERANCE)

THEREFORE: WALL THICKNESS WILL RANGE FROM .213" TO .239".

WE HAVE CLASSIFIED HDPE PIPE AS FOLLOWS:
SDR 15.5= LIGHT DUTY
SDR 13.5= REGULAR DUTY
SDR 11.0= HEAVY DUTY

NOTE: All pipe diameters with the same SDR in the same burial conditions have the same critical collapse, buckling and/or load bearing endurances. (Please reference Petroflex Technical Data.)

PETROFLEX

SMOOTHWALL PETRODUCT™

SMOOTHWALL LISTED SPECIFICATIONS

Size	Product Part #	SDR/SCH Rating	Nominal O.D.	Min I.D.	Min Wall	Max Wall	Weight Lbs/Ft	Mean Wall	Mean Density
0.50”	P050	13.5	0.840	0.676	0.062	0.082	0.0715	0.072	0.950
	P050	11	0.840	0.647	0.076	0.096	0.0839	0.086	0.950
	P050	SCH40	0.840	0.582	0.109	0.129	0.1110	0.119	0.950
	P050	SCH80	0.840	0.506	0.147	0.167	0.1387	0.157	0.950
0.75”	P075	13.5	1.050	0.854	0.078	0.098	0.1095	0.088	0.950
	P075	11	1.050	0.820	0.095	0.115	0.1284	0.105	0.950
	P075	SCH40	1.050	0.784	0.113	0.133	0.1475	0.123	0.950
	P075	SCH80	1.050	0.702	0.154	0.174	0.1880	0.164	0.950
1.00”	P100	17	1.315	1.120	0.077	0.097	0.1382	0.087	0.950
	P100	15.5	1.315	1.105	0.085	0.105	0.1499	0.095	0.950
	P100	13.5	1.315	1.080	0.097	0.117	0.1672	0.107	0.950
	P100	11	1.315	1.036	0.120	0.140	0.1993	0.130	0.950
	P100	9	1.315	0.983	0.146	0.166	0.2339	0.156	0.950
	P100	7	1.315	0.889	0.188	0.211	0.2890	0.200	0.950
	P100	SCH40	1.315	1.009	0.133	0.153	0.2168	0.143	0.950
	P100	SCH80	1.315	0.917	0.179	0.199	0.2754	0.189	0.950
1.25”	P125	13.5	1.660	1.374	0.123	0.143	0.2628	1.330	0.950
	P125	11.5	1.660	1.332	0.144	0.164	0.3001	0.154	0.950
	P125	11	1.660	1.318	0.151	0.171	0.3123	0.161	0.950
	P125	9	1.660	1.248	0.184	0.206	0.3696	0.195	0.950
	P125	7	1.660	1.130	0.237	0.265	0.4576	0.251	0.950
	P125	SCH40	1.660	1.340	0.140	0.160	0.2931	0.150	0.950
	P125	SCH80	1.660	1.232	0.191	0.214	0.38217	0.203	0.950
1.50”	P150	15.5	1.900	1.615	0.123	0.143	0.3041	0.133	0.950
	P150	13.5	1.900	1.579	0.141	0.161	0.3417	0.151	0.950
	P150	11.5	1.900	1.530	0.165	0.185	0.3906	0.175	0.950
	P150	11	1.900	1.515	0.173	0.194	0.4065	0.183	0.950
	P150	9	1.900	1.428	0.211	0.236	0.4857	0.224	0.950
	P150	SCH40	1.900	1.570	0.145	0.165	0.3500	0.155	0.950
	P150	SCH80	1.900	1.452	0.200	0.224	0.4630	0.212	0.950
2.00”	P200	17	2.375	2.056	0.140	0.160	0.4318	0.150	0.950
	P200	15.5	2.375	2.029	0.153	0.173	0.4665	0.163	0.950
	P200	13.5	2.375	1.981	0.176	0.197	0.5268	0.186	0.950
	P200	11	2.375	1.891	0.216	0.242	0.6358	0.229	0.950
	P200	9	2.375	1.781	0.264	0.296	0.7590	0.280	0.950
	P200	7	2.375	1.614	0.339	0.380	0.9386	0.360	0.950
	P200	SCH40	2.375	2.027	0.154	0.174	0.4692	0.164	0.950
	P200	SCH80	2.375	1.887	0.218	0.244	0.6408	0.231	0.950

SMOOTHWALL PETRODUCT™

SMOOTHWALL LISTED SPECIFICATIONS

Size	Product Part #	SDR/SCH Rating	Nominal O.D.	Min I.D.	Min Wall	Max Wall	Weight Lbs/Ft	Mean Wall	Mean Density
2.50”	P250	13.5	2.875	2.397	0.213	0.239	0.7746	0.226	0.950
	P250	11	2.875	2.288	0.261	0.293	0.9311	0.277	0.950
	P250	SCH40	2.875	2.421	0.203	0.227	0.7400	0.215	0.950
	P250	SCH80	2.875	2.257	0.276	0.309	0.9774	0.293	0.950
3.00”	P300	13.5	3.500	2.919	0.259	0.290	1.1437	0.274	0.950
	P300	11	3.500	2.788	0.318	0.356	1.3792	0.337	0.950
	P300	9	3.500	2.628	0.389	0.436	1.6461	0.412	0.950
	P300	7	3.500	2.380	0.500	0.560	2.0367	0.530	0.950
	P300	SCH40	3.500	3.016	0.216	0.242	0.9692	0.229	0.950
	P300	SCH80	3.500	2.828	0.300	0.336	1.3092	0.318	0.950
4.00”	P400	13.5	4.500	3.753	0.333	0.373	1.8941	0.353	0.950
	P400	11	4.500	3.584	0.409	0.458	2.2832	0.434	0.950
	P400	9	4.500	3.380	0.500	0.560	2.7224	0.530	0.950
	P400	7	4.500	3.146	0.643	0.720	3.3650	0.681	0.950
	P400	SCH40	4.500	3.970	0.237	0.265	1.3851	0.252	0.950
	P400	SCH80	4.500	3.746	0.337	0.377	1.9137	0.357	0.950

Size	Product Part #	SIDR Rating	Nominal O.D.	Min I.D.	Min Wall	Max Wall	Weight Lbs/Ft	Mean Wall	Mean Density
4.00”	P400	11.5	4.727	3.991	0.347	0.389	2.0758	0.368	0.950

Size	Product Part #	SDR/SCH Rating	Nominal O.D.	Min I.D.	Min Wall	Max Wall	Weight Lbs/Ft	Mean Wall	Mean Density
5.00”	P500	13.5	5.563	4.639	0.412	0.461	2.8983	0.437	0.950
	P500	11	5.563	4.430	0.506	0.567	3.4863	0.536	0.950
	P500	9	5.563	4.179	0.618	0.692	4.1594	0.65	0.950
	P500	SCH40	5.563	4.985	0.258	0.289	1.8750	0.274	0.950
	P500	SCH80	5.563	4.723	0.375	0.420	2.6598	0.398	0.950
6.00”	P600	13.5	6.625	5.526	0.491	0.550	4.1075	0.520	0.950
	P600	11	6.625	5.276	0.602	0.674	4.9422	0.638	0.950
	P600	9	6.625	4.977	0.736	0.824	5.8988	0.780	0.950
	P600	7	6.625	4.504	0.946	1.060	7.2959	1.003	0.950
	P600	SCH40	6.625	5.997	0.280	0.314	2.4317	0.297	0.950
	P600	SCH80	6.625	5.657	0.432	0.484	3.6545	0.458	0.950

PETROFLEX

Petroflex North America, Ltd
1305 North Interstate 35
P.O. Box 1356
Gainesville, TX 76240
Toll Free (800) 433-5711 Local (940) 668-7283
petroflexna.com

Good Service Is Not Extinct™

Rigid Non-Metallic Schedule 40 Electrical Conduit

Schedule 40 Electrical Conduit

Allied Tube & Conduit® created the long bell for ease and efficiency. In compliance with the industry standards, Allied Tube & Conduit® PVC Electrical Conduit is manufactured from PVC compounds complying with the UL651 standards. Our PVC Electrical Conduits are subject to in-process quality control to assure compliance with appropriate manufacturing and performance standards.

- UL 651
- NEMA TC-2
- Sunlight resistant per UL 651
- Listed for 90° C conductors or cable
- Rigid nonmetallic raceway for wires and cables in accordance with the NEC
- Product manufactured with one integral solvent-weld bell standard per length

10' Part No.	20' Part No.	Trade Size	Average O.D. (in)	Minimum Average I.D. (in)	Minimum Wall (in)	Weight Per Foot (lbs)	10 Ft Crate Quantity (ft)
8102	8502	½	0.840	0.578	0.109	0.165	6000
8103	8503	¾	1.050	0.780	0.113	0.220	4400
8104	8504	1	1.315	1.004	0.133	0.326	3600
8105	8505	1 ¼	1.660	1.335	0.140	0.441	3300
8106	8506	1 ½	1.900	1.564	0.145	0.528	2250
8108	8508	2	2.375	2.021	0.154	0.730	1400
8110	8510	2 ½	2.875	2.414	0.203	1.158	930
8112	8512	3	3.500	3.008	0.216	1.609	880
8114	8514	3 ½	4.000	3.486	0.226	1.935	630
8116	8516	4	4.500	3.961	0.237	2.292	570
8120	8520	5	5.563	4.975	0.258	3.105	380
8124	8524	6	6.625	5.986	0.280	4.030	260
880747	924297	8*	8.625	7.853	0.322	6.065	140

Meets or exceeds the requirements of **NEMA TC 2** and **UL 651** for Schedule 40 Conduit.

* UL 651 does not include 8"

Intertek

Item availability may vary by region.

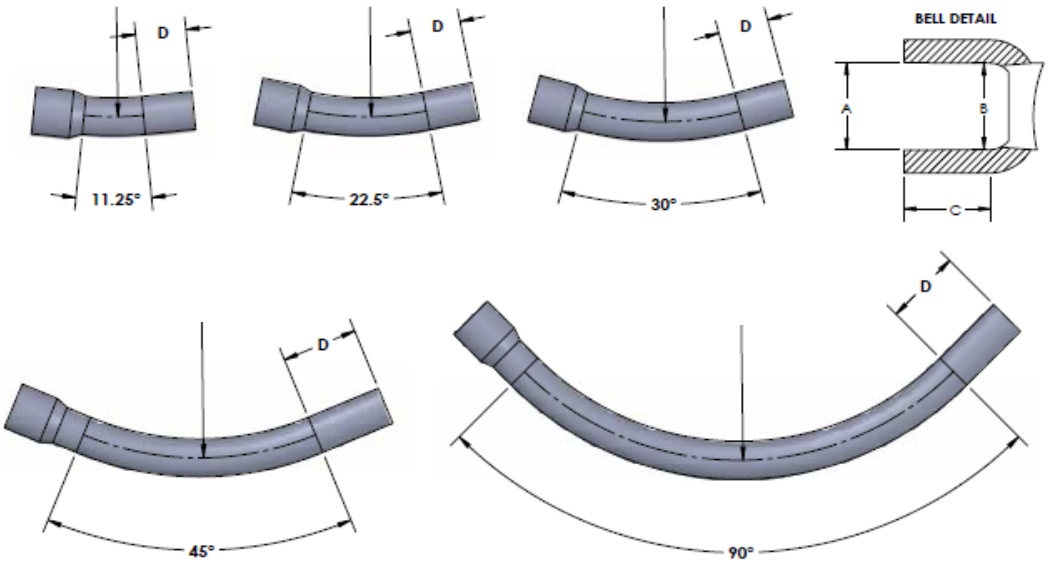
NOTE: Special orders are non-cancelable, non-returnable and non-refundable

16100 S. Lathrop Ave., Harvey, IL 60426
Phone / 708.339.1610 • Toll-Free / 800.882.5543
www.alliedeg.com

Elbows Schedule 40 and Schedule 80

Atkore
Allied Tube & Conduit

11.25°, 22.5°, 30°, 45°, 90°



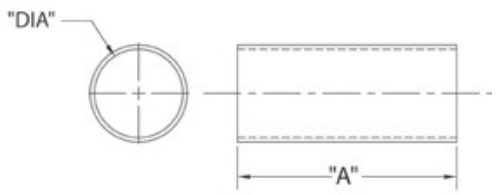
Intertek

Trade Size (in)	Bell Entrance A	Bell Bottom B	Bell Length C	Target Length D
½	0.852	0.836	1.250	1.750
¾	1.064	1.046	1.250	1.750
1	1.330	1.310	1.625	2.125
1¼	1.677	1.655	1.750	2.250
1½	1.918	1.894	2.250	2.250
2	2.393	2.369	2.250	2.250
2½	2.890	2.868	2.750	3.250
3	3.515	3.492	2.875	3.375
3½	4.015	3.992	3.000	3.500
4	4.515	4.491	3.500	3.625
5	5.593	5.553	4.375	4.625
6	6.658	6.614	5.250	5.500
8	8.670	8.610	6.250	6.500

- Dimensions are nominal (inches) and are subject to normal manufacturing tolerances
- Not all radii/angles are available in every size – consult sales catalog for details
- Available with standard or special (18", 24", 36", 48", 60") radius
- Available in both Bell-End and Plain-End versions. Bell dimensions do not apply to Plain End Elbows
- 6" and below tested and certified by ETL Intertek to UL651. UL 651 does not include 8"
- Conforms to NEMA TC-3

Schedule 40 Longline Coupling with No Center Stop - Fabricated

Part Number	Trade Size	Carton Qty.	"DIA"	"A"
6141702	1	20	1.313	4.500
6141703	1-1/2	20	1.875	4.875
6203000	2	20	2.375	6.125
6203002	2-1/2	20	2.875	6.000
6203005	3	25	3.563	6.750
6203006	3-1/2	25	4.000	6.375
6203007	4	15	4.500	6.375
6203009	5	8	5.688	8.750
6203010	6	4	6.688	9.750
6202008	6	4	6.688	12.625



Schedule 40 Long Line Couplings with No Center Stops are used to repair or join lengths of conduit pipe together with two solvent weld socket ends.

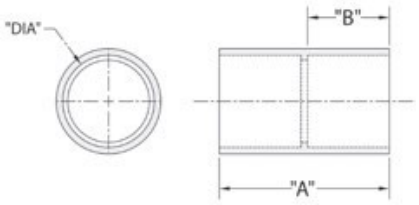
- For use with Schedule 40 and Schedule 80 conduit
- No Center Stop for easy repair of broken or damaged conduit
- For use aboveground and underground
- Non-conductive and sunlight resistant
- Meets NEMA TC-3 Standards
- Made in USA
- Made of rigid PVC

Dimensions are nominal

Schedule 40 Longline Coupling with Center Stop - Molded

Part Number	Trade Size	Carton Qty.	"DIA"	"A"	"B"
6202000	2	20	2.375	4.188	2.000
6202005	3	25	3.500	6.500	3.250
6202010	4	15	4.500	7.000	3.500
6202017	6	15	6.625	6.375	3.000

Dimensions are nominal



Schedule 40 Long Line Center Stop Couplings are used to repair or join lengths of conduit/ pipe together with two solvent weld socket ends.

- For use with Schedule 40 and Schedule 80 conduit
- Center stop to help determine proper depth of connection
- For use aboveground and underground
- Non-conductive and sunlight resistant
- Meets NEMA TC-3 Standards
- Made in USA
- Made of rigid PVC

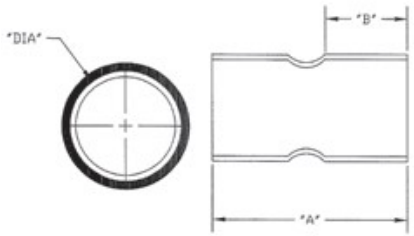
Schedule 40 Longline Swedged Coupling with Center Stop - Fabricated

Schedule 40 Long Line Center Stop Couplings are used to repair or join lengths of conduit/ pipe together with two solvent weld socket ends.

- For use with Schedule 40 and Schedule 80 conduit
- Center stop to help determine proper depth of connection
- For use aboveground and underground
- Non-conductive and sunlight resistant
- Meets NEMA TC-3 Standards
- Made in USA
- Made of rigid PVC

Part Number	Trade Size	Carton Qty.	"DIA"	"A"	"B"
6202002	2-1/2	25	2.875	6.313	2.750
6202015	5	8	5.563	8.313	3.625
6202016	6	4	6.625	9.000	3.500

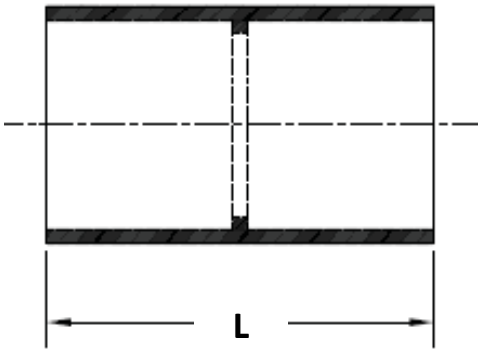
Dimensions are nominal



Long Line Couplings

Atkore
Allied Tube & Conduit

PVC Electrical Conduit Fittings and Accessories

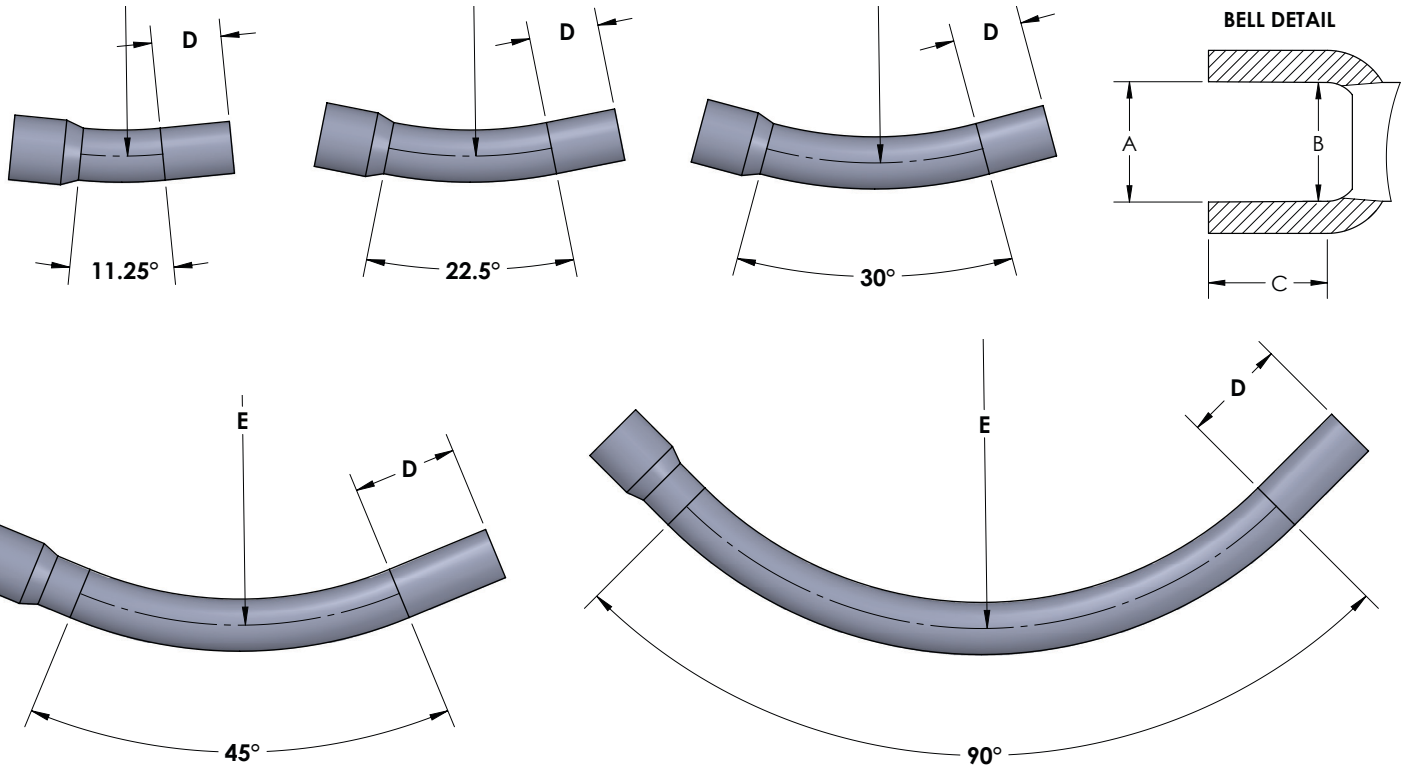


Trade Size (in)	Catalog Part Number	System Part Number	L
2	LLC20	925111	4.188
2½	LLC25	925112	6.313
3	LLC30	925113	6.500
4	LLC40	925114	7.000

- Injection-molded with center-stop
- Dimensions are nominal (inches) and are subject to normal manufacturing tolerances

Special Radius Elbows Schedule 40 and Schedule 80

11.25°, 22.5°, 30°, 45°, 90°, 36” Radius



Nominal Size	Dimensions (inches)				
	Bell Entrance A (Avg)	Bell Bottom B (Avg)	Bell Length C (Min)	Tangent Length D (Min)	Typical Radius E
1	1.330	1.310	0.875	1.875	36
1 ¼	1.677	1.655	0.938	2.000	36
1 ½	1.918	1.894	1.062	2.000	36
2	2.393	2.369	1.125	2.000	36
2 ½	2.890	2.868	1.469	3.000	36
3	3.515	3.492	1.594	3.125	36
3 ½	4.015	3.992	1.687	3.250	36
4	4.515	4.491	1.750	3.375	36
5”	5.593	5.553	1.937	3.625	36
6”	6.658	6.614	2.125	3.750	36

Tested and Certified by ETL Intertek to UL 651
Available in both bell end and plain end versions. Bell dimensions do not apply to plain end sweeps.

Intertek

Item availability may vary by region.

NOTE: Special orders are non-cancelable, non-returnable and non-refundable

16100 S. Lathrop Ave., Harvey, IL 60426
Phone / 708.339.1610 • Toll-Free / 800.882.5543
www.alliedeg.com

STANDARD ACCESSORIES

SHUR-LOCK II COUPLER

- Designed for coupling HDPE & PVC conduit
- Can also be used to couple dissimilar conduits such as HDPE to PVC, threaded or non-threaded metal conduit, or fiberglass (FRP) conduit
- Stainless steel band clamps (hand tightened using a 5/16" nut driver) and locking ring
- Pre-lubricated O-ring forms an air-tight seal to withstand 125 psi
- One person installation; re-enterable, no special tools required
- Air and water tight
- No I.D. reduction
- Excellent pull out strength on HDPE, PVC, FRP and steel
- No-Stop version available for confined areas or repairs (*NS)
- Specialized for use by electrical installers requiring ETL/UL listing, including CSA STD C22.2 18.3-04 and UL STD 514B
- NOTE: Certain sizes ETL-Listed for use with HDPE and PVC for underground and concrete encased applications only! Not for use with PVC in above-ground applications. Not premise (indoor) rated

ORDER REFERENCE

DESCRIPTION		NOMINAL PULL-OUT STRENGTH (LBS)	PACKAGING	SHIP WEIGHT (LBS)/CTN	PART #
1.00" Shur-Lock II Coupler SDR 1.315" ± 0.020"	ETL	600	10/ctn	4.5	20000118
1.25" Shur-Lock II Coupler SDR 1.660" ± 0.020"	ETL	700	10/ctn	5.2	20000120
1.25" Shur-Lock II Coupler HYB 1.590" ± 0.020"		700	10/ctn	5.2	20000121
1.50" Shur-Lock II Coupler SDR 1.900" ± 0.020"	ETL	700	10/ctn	5.8	20000122
2.00" Shur-Lock II Coupler SDR 2.375" ± 0.020"	ETL	700	10/ctn	6.7	20000123
2.00" Shur-Lock II Coupler-Extended SDR 2.375" ± 0.020" (8.25" long vs 5.75" standard)		700	10/ctn	6.7	20000264
2.50" Shur-Lock II Coupler SDR 2.875" ± 0.020"	ETL	1,000	6/ctn	7.7	20000172
3.00" Shur-Lock II Coupler SDR 3.500" ± 0.020"	ETL	1,000	6/ctn	9.8	20000173
4.00" Shur-Lock II Coupler SDR 4.500" ± 0.020"	ETL	1,000	4/ctn	10.7	20000245
5.00" Shur-Lock II Coupler SDR 5.563" ± 0.020"	ETL	1,000	2/ctn	8.3	20000254
6.00" Shur-Lock II Coupler SDR 6.625" ± 0.020"	ETL	1,000	2/ctn	9.9	20000256

ETL Intertek Please specify if ETL listing is required

SHUR-LOCK II COUPLER W/NO CENTER STOP

Center stop is removed to allow the coupler to be pulled back over the end of the duct for limited clearance installations.

DESCRIPTION	NOMINAL PULL-OUT STRENGTH (LBS)	PACKAGING	SHIP WEIGHT (LBS)/CTN	PART #
1.00" Shur-Lock II Coupler SDR 1.315" ± 0.020"	600	10/ctn	4.5	20002340
1.25" Shur-Lock II Coupler SDR 1.660" ± 0.020"	700	10/ctn	5.1	20000236
1.50" Shur-Lock II Coupler SDR 1.900" ± 0.020"	700	10/ctn	5.7	20002341
2.00" Shur-Lock II Coupler SDR 2.375" ± 0.020"	700	10/ctn	6.7	20000237
2.50" Shur-Lock II Coupler SDR 2.875" ± 0.020"	1,000	6/ctn	7.6	20000238
3.00" Shur-Lock II Coupler SDR 3.500" ± 0.020"	1,000	6/ctn	9.7	20000239
4.00" Shur-Lock II Coupler SDR 4.500" ± 0.020"	1,000	4/ctn	10.6	20000260
5.00" Shur-Lock II Coupler SDR 5.563" ± 0.020"	1,000	2/ctn	8.1	20001531
6.00" Shur-Lock II Coupler SDR 6.625" ± 0.020"	1,000	2/ctn	9.6	20000261

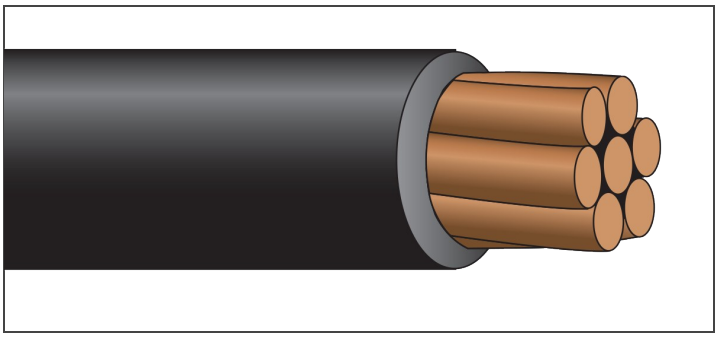
Please specify if ETL listing is required

RECOMMENDED ACCESSORY: PALM RATCHET

Used with Shur-Lock II and Split-Lock couplers.

DESCRIPTION	PACKAGING	SHIP WEIGHT (LBS)	PART #
Palm Ratchet with 5/16" and 7/16" Sockets	each	1	20002747

SINGLE CONDUCTORS



SERVICEPRO-X®

USE-2 or RHW-2

600/1,000 Volt Copper, CT Rated

No Pulling Lubricant Required

ISO 9001: 2015 RoHS COMPLIANT Made in the USA REACH COMPLIANCE c UL us LISTED

Description:

Single copper conductor, stranded and insulated with moisture and heat resistant, chemically crosslinked polyethylene. Featuring ServicePRO-X® Insulation–No Pulling Lubricant Required *(#6 AWG and larger)*. ***Available in colors.***

Application:

Suitable for use in general purpose wiring applications and may be installed in raceway, conduit, direct burial, and aerial installations where a cable having superior flame retardance is required. Suitable for use in 105°C dry systems. Also suitable for use in low leakage circuits requiring a dielectric constant of 3.5 or less *(Hospital Grade)*.

Standards:

ASTM Standards: B-3 *(soft or annealed)*, B-8 *(concentric lay stranded)*, B-787 *(combination strand)*
UL 44 and UL 854
ICEA S-95-658/NEMA WC-70
L-824C *(#12 AWG - #4 AWG)*
Federal Spec. A-A-59544
Flame Rated: CT Use *(1/0 AWG and larger)*
Temperature Rated at 90°C Wet/Dry, Cold Temperature Rated at -40°C
Sunlight Resistant, Gasoline and Oil Resistant II
Direct Burial
RoHS Compliant

Part Number	Size (AWG or Kcmil)	Strand (no.)	Insulation Thickness (mils)	Approx. Diameter Overall (in.)	Aprox. Net Weight (lb./1000')	Ampacity* 90°C Wet/Dry
USE14BK	**14**	**7**	**45**	**0.163**	**21**	**35†**
USE12BK	**12**	**7**	**45**	**0.182**	**30**	**40†**
USE10BK	**10**	**7**	**45**	**0.205**	**43**	**55†**
USE8BK	**8**	**7**	**60**	**0.263**	**69**	**80**
USE6BK	**6**	**7**	**60**	**0.301**	**103**	**105**
USE4BK	**4**	**7**	**60**	**0.350**	**156**	**140**
USE3BK	**3**	**7**	**60**	**0.374**	**192**	**165**
USE2BK	**2**	**7**	**60**	**0.404**	**238**	**190**
USE1BK	**1**	**19**	**80**	**0.476**	**307**	**220**
USE1/0BK	**1/0**	**19**	**80**	**0.517**	**384**	**260**
USE2/0BK	**2/0**	**19**	**80**	**0.562**	**476**	**300**
USE3/0BK	**3/0**	**19**	**80**	**0.610**	**590**	**350**
USE4/0BK	**4/0**	**19**	**80**	**0.669**	**735**	**405**
USE250BK	**250**	**37**	**95**	**0.762**	**868**	**455**
USE300BK	**300**	**37**	**95**	**0.819**	**1,031**	**500**
USE350BK	**350**	**37**	**95**	**0.866**	**1,192**	**570**
USE400BK	**400**	**37**	**95**	**0.911**	**1,353**	**615**
USE500BK	**500**	**37**	**95**	**0.986**	**1,673**	**700**
USE600BK	**600**	**61**	**110**	**1.111**	**2,033**	**780**
USE750BK	**750**	**61**	**110**	**1.205**	**2,493**	**885**

**Per NEC Table 310.15 (B)(17). †The overcurrent protection for items marked with an obelisk (†) shall not exceed 15 amps for #14 AWG, 20 amps for #12 AWG, and 30 amps for #10 AWG per NEC 310-17 footnote. NOTE: The data shown is approximate and subject to standard industry tolerances.*

SOFT-DRAWN BARE - COPPER CONDUCTOR

ENGINEERING SPECIFICATIONS

Standards

ASTM-B3 for soft-drawn solid copper wire; ASTM-B8 for soft-drawn concentric lay stranded copper wire; ASTM-B787 for 19-wire combination unilay stranded wire; ARRA 2009 Section 1605 "Buy American" Compliant; RoHS Compliant; MasterSpec Division 26 Sections 260519, 26052

RoHS COMPLIANT

MADE IN USA

CONSTRUCTION

Conductors

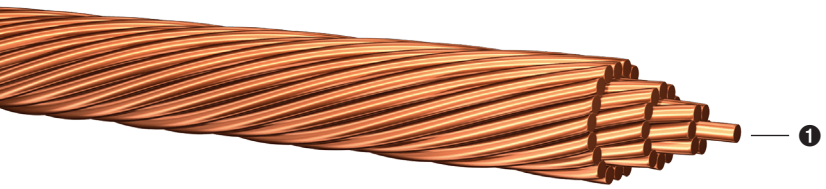
Soft-Drawn Solid or Stranded, Annealed Bare Copper

APPLICATIONS

Copper conductors are used in overhead electrical transmission, distribution systems for grounding and bonding of electrical systems, and where high-conductivity and flexibility are required for equipment grounding and bonding.

FEATURES

Highest conductivity per unit area of all common commercial metals. Excellent corrosion resistance. Flexible; easily worked and formed into place. Packaged on non-returnable spools for easy transportation to job sites and to provide adequate footage for mass installations. Good fatigue-resistance; not subject to breaks due to nicks or cuts when terminating. Totally recyclable with high scrap value. Contact your local representative for information on the Encore Wire Scrap Purchase Program.



1 Stranded or Solid Copper Conductor
(Copper purity of 99.95% or higher)

Size (AWG)	No. of Strands	Outside Diameter		Area (cmils)	Soft-Drawn (Annealed)		Approximate Net Weight (lbs/1000 ft)	Standard Packaging (ft)
		(mm)	(in)		Rated Strength (lbs)	DC Resistance (Ohms/1000 ft @ 20°C)		
14	Solid	1.63	0.0641	4,110	124	2.5700	12.4	2000' Reels
12	Solid	2.05	0.0808	6,530	197	1.6200	19.8	1250' Reels
10	Solid	2.59	0.1019	10,380	314	1.0190	31.4	800' Reels
8	Solid	3.26	0.1285	16,510	479	0.6407	50.0	500' 1000' 2500' 5000' Reels
6	Solid	4.12	0.1620	26,240	762	0.4031	79.5	315' 500' 1000' 2500' 5000' Reels
4	Solid	5.19	0.2043	41,740	1,214	0.2535	126.4	200' 500' 1000' 2500' 5000' Reels
2	Solid	6.54	0.2576	66,360	1,930	0.1594	212.8	125' 500' 1000' 5000' Reels
8	7	3.71	0.1460	16,510	498	0.6408	51	500' 1000' 2500' 5000' Reels
6	7	4.67	0.1840	26,240	795	0.4030	81	315' 500' 1000' 2500' 5000' Reels
4	7	5.89	0.2320	41,740	1,320	0.2530	129	200' 500' 1000' 2500' 5000' Reels
3	7	6.60	0.2600	52,620	1,670	0.2010	162	500' 1000' 5000' Reels
2	7	7.42	0.2920	66,360	2,110	0.1590	205	125' 500' 1000' 2500' 5000' Reels
1[1]	19	8.33	0.3280	83,690	2,552	0.1270	258	500' 1000' 5000' Reels
1/0[1]	19	9.14	0.3600	105,600	3,221	0.1022	326	500' 1000' 2500' 5000' Reels
2/0[1]	19	10.26	0.4040	133,100	4,060	0.07910	411	500' 1000' 2500' 5000' Reels
3/0[1]	19	11.53	0.4540	167,800	5,118	0.06274	518	500' 1000' 2500' 5000' Reels
4/0[1]	19	12.95	0.5100	211,600	6,459	0.0497	653	500' 1000' 2500' 5000' Reels
250	37	13.77	0.5420	250,000	7,942	0.0421	772	500' 1000' 2500' 4000' Reels
300	37	15.09	0.5940	300,000	9,164	0.0351	926	500' 1000' 3500' Reels
350	37	16.28	0.6410	350,000	10,685	0.0300	1081	500' 1000' 3000' Reels
400	37	17.40	0.6850	400,000	13,435	0.0263	1235	500' 1000' 3000' Reels
500	37	19.46	0.7660	500,000	15,242	0.0210	1544	500' 1000' 2500' Reels
600	61	22.68	0.8930	600,000	18,300	0.01754	1883	500' 1000' 2000' Reels
750	61	25.35	0.9980	750,000	22,894	0.01436	2316	500' 1000' 1500' Reels
1000	61	29.26	1.1520	1,000,000	30,500	0.01059	3088	500' Reels

[1] Note: 1 - 4/0 Bare Copper available in 7/w construction.
The above data is approximate and subject to normal manufacturing tolerances.

PACKAGING: Available on Encore's Reel Payoff and Reel Deal.
The above data is approximate and subject to normal manufacturing tolerances.

ENGINEERING SPECIFICATIONS

Standards

Underwriters Laboratories Standards UL-83, UL-1063, UL-1581, UL-1685, UL-2556; AWM Spec 1316, 1317, 1318, 1319, 1320, 1321; ASTM Stranding Class B3, B8, B787; Federal Specification A-A-59544; American National Standards Institute; Canadian Standards Association C22.2 No. 75; NEMA WC70/ICEA S-95-658; UL VW-1 Flame Test; UL 1685-FT4/IEEE 1202 (70,000 Btu/hr) Flame Test (1/0 AWG and larger); New York State DOS-16120-87-1222-1048; ICEA T-29-520 (210,000 Btu/hr) Flame Test; NFPA 70 (NEC®) Article 310; ARRA 2009 Section 1605 "Buy American" Compliant; RoHS Compliant; MasterSpec Division 26 Sections 260519, 260523; UL Listing #E-123774, #E-156878, #E-156879

CONSTRUCTION

Conductors

Solid, uncoated copper conductors per ASTM-B3; Stranded, uncoated copper conductors per ASTM-B3, ASTM-B8 and ASTM-B787

Insulation

Color-coded Polyvinyl Chloride (PVC), heat and moisture-resistant, flame retardant compound per UL-83 and UL-1063

Jacket

A tough, polyamide, Nylon outer covering per UL-83 and UL-1063

APPLICATIONS

Type THHN/THWN-2 building wire is intended for general purpose applications as defined by the National Electrical Code (NEC). Type THHN/THWN-2 is permitted for new construction or rewiring for 600-volt applications. For applications requiring Type THHN or THWN-2, the conductor is appropriate for use in wet or dry locations at temperatures not to exceed 90°C or not to exceed 75°C in oil or coolants. For applications requiring Type MTW, the conductor is appropriate for use in dry locations at 90°C, or not to exceed 60°C in wet locations or where exposed to oils or coolants.

FEATURES

A great alternative to eliminate the need for lube. Slick Nylon outer jacket for easy pulling. SuperSlick Elite is available in sizes 14 AWG through 1000 KCMIL. All sizes rated gasoline and oil resistant II. On 250 KCMIL and larger, sequential footage markings located every foot for easy measuring. For 1 AWG through 4/0 AWG sequential foot markings located on master reels only unless otherwise specified. 6 AWG and larger Sunlight Resistant in all colors. For 1/0 AWG and larger conductors are rated for cable tray use and comply with IEEE 1202/FT4 (70,000 Btu/hr.) flame test and ICEA T-29-20 (210,000 Btu/hr.) flame test.

1. SuperSlick Elite[1] Nylon Jacket
2. PVC Insulation
3. Stranded Copper Conductor

Size (AWG or KCMIL)	No. of Strands	Cross Sect. Area (mm²)	PVC Insulation Thickness (Conductor)		Nylon Jacket Thickness		Outside Diameter		Approximate Net Weight		Allowable Ampacity (Amps)[2]			Standard Packaging (ft)
			(mm)	(in)	(mm)	(in)	(mm)	(in)	(kg/km)	(lbs/1000 ft)	60°C	75°C	90°C	
14	Solid	6.258	0.38	0.015	0.10	0.004	2.593	0.101	22	15	15	15	15	2000' carton (4 x 500'), 2500' Reels
12	Solid	8.581	0.38	0.015	0.10	0.004	3.05	0.120	34	23	20	20	20	2000' carton (4 x 500'), 2500' Reels
10	Solid	13.62	0.51	0.020	0.10	0.004	3.78	0.149	55	37	30	30	30	1000' carton (2x500), 2500' Reels
14	19	6.258	0.38	0.015	0.10	0.004	2.77	0.109	25	16	15	20	25	2000' carton (4 x 500'), 2500' Reels
12	19	8.581	0.38	0.015	0.10	0.004	3.25	0.128	36	23	20	25	30	2000' carton (4 x 500'), 2500' Reels
10	19	13.62	0.51	0.020	0.10	0.004	4.09	0.161	57	38	30	35	40	1000' carton, 2500' Reels
8	19	23.61	0.76	0.030	0.13	0.005	5.41	0.213	94	62	40	50	55	500' 1000' 2500' 5000' Reels
6	19	32.71	0.76	0.030	0.13	0.005	6.32	0.249	141	94	55	65	75	500' 1000' 2500' 5000' Reels
4	19	53.16	1.02	0.040	0.15	0.006	8.08	0.318	228	153	70	85	95	500' 1000' 2500' 5000' 20,000' Reels
3	19	62.77	1.02	0.040	0.15	0.006	8.79	0.346	281	189	85	100	115	500' 1000' 2500' 5000' 15,000' Reels
2	19	74.71	1.02	0.040	0.15	0.006	9.60	0.378	348	233	95	115	130	500' 1000' 2500' 5000' 14,000' Reels
1	19	100.80	1.27	0.050	0.18	0.007	11.05	0.435	445	298	110	130	145	500' 1000' 2500' 5000' 22,000' Reels
1/0	19	119.70	1.27	0.050	0.18	0.007	12.04	0.474	554	372	125	150	170	500' 1000' 2500' 5000' 16,000' Reels
2/0	19	143.40	1.27	0.050	0.18	0.007	13.16	0.518	687	462	145	175	195	500' 1000' 2500' 5000' 14,000' Reels
3/0	19	172.80	1.27	0.050	0.18	0.007	14.43	0.568	851	572	165	200	225	500' 1000' 2500' 5000' 12,000' Reels
4/0	19	208.80	1.27	0.050	0.18	0.007	15.85	0.624	1059	712	195	230	260	500' 1000' 2500' 5000' 9000' Reels
250	37	256.10	1.52	0.060	0.20	0.008	17.22	0.678	1266	849	215	255	290	500' 1000' 2500' 4000' 8500' Reels
300	37	297.30	1.52	0.060	0.20	0.008	18.54	0.730	1503	1010	240	285	320	500' 1000' 3500' 7000' Reels
350	37	338.20	1.52	0.060	0.20	0.008	19.74	0.777	1741	1170	260	310	350	500' 1000' 3000' 6000' Reels
400	37	378.30	1.52	0.060	0.20	0.008	20.85	0.821	1979	1330	280	335	380	500' 1000' 3000' 5000' Reels
500	37	456.30	1.52	0.060	0.20	0.008	22.91	0.902	2455	1650	320	380	430	500' 1000' 2500' 4000' Reels
600	61	559.70	1.78	0.070	0.23	0.009	26.70	1.051	3004	2019	350	420	475	500' 1000' 2000' 3000' Reels
750	61	677.20	1.78	0.070	0.23	0.009	29.36	1.156	3670	2466	400	475	535	500' 1000' 1500' 2500' Reels
1000	61	869.50	1.78	0.070	0.23	0.009	33.27	1.310	4851	3260	455	545	615	500' 1000' Reels

[1] SuperSlick Elite manufactured under Patent No. 8,658,576

[2] Ampacity of conductors are based on NFPA 70 (NEC) Table 310.15(B)(16). See 110.14(C), 240.4(D) and 310.15(B) for other limitations where applicable.

The above data is approximate and subject to normal manufacturing tolerances.

PRINT LEGEND:

SOLID CONDUCTOR SIZES 14 AWG THROUGH 10 AWG: ENCORE WIRE CORPORATION (SIZE) AWG TYPE THHN OR THWN-2 GR II VW-1 600 VOLTS (UL) OR AWM OR C-(UL) TYPE T90 NYLON OR TWN 75. DATE/TIME/OPER/QC

14 AWG THROUGH 8 AWG: ENCORE*WIRE*CORP*(SIZE)*TYPE*MTW*OR*THHN*OR*THWN-2*GR2*VW-1*600V*(UL)*OR*AWM*OR*C(UL)*TYPE*T90*NYLON*OR*TWN*75 **SUPERSLICK ELITE**

6 AWG THROUGH 1 AWG: ENCORE*WIRE*CORP*(SIZE)*TYPE*MTW*OR*THHN*OR*THWN-2*GR2*SUN-RES*VW-1*600V*(UL)*OR*AWM*OR*C(UL)*TYPE*T90*NYLON*OR*TWN*75*DATE*TIME*OPERATOR*QC **SUPERSLICK ELITE**

1/0 AWG THROUGH 1000 KCMIL: ENCORE*WIRE*CORP*(SIZE)*TYPE*MTW*OR*THHN*OR*THWN-2*GR2*SUN-RES*VW-1*FT4*IEEE*1202*600V*FOR*CT*USE*(UL)*OR*C(UL)*TYPE*T90*NYLON*OR*TWN*75*DATE*TIME*OPERATOR*QC **SUPERSLICK ELITE**

PACKAGING: Available in Encore's Cyclone Barrel Packs, Reel Payoff and Reel Deal.

COPPER-BONDED GROUND ROD, POINTED, 3/4" DIA, 10', 10 MIL PLATING, 12.6 LB

CATALOG NUMBER

613400

CERTIFICATIONS

FEATURES

- 99.9% pure electrolytic copper coating
- Rods have a high carbon steel core and tip that provide superior strength when driving
- Copper coating will not crack when bent or tear when driven
- Minimum copper coating of 10 mils on rods listed to UL® 467
- nVent ERICO name, length, diameter and part number is roll-stamped within 12" (304,8 mm) of chamfered end
- UL logo and control number where applicable stamped on each rod for easy inspection after installation

PRODUCT ATTRIBUTES

- Material: Copper-Bonded Steel
- Tensile Strength: 80,000 psi Min
- Ground Rod Diameter, Nominal: 3/4"
- Ground Rod Diameter, Actual: 0.681"
- Length: 10'
- Plating Thickness: 10 mil

Unit Weight: 12.600 lb

UPC Label: No

Complies With: IEC® EN 62561-2;ANSI®/NEMA® GR1

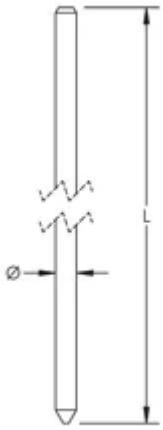
ADDITIONAL PRODUCT DETAILS

For rods to be listed to UL® 467, they must be at least 8' (2.44 m) in length.

IEC® EN 62561-2 supercedes EN 50164-2.

Additional lengths available.

DIAGRAMS



WARNING

nVent products shall be installed and used only as indicated in nVent's product instruction sheets and training materials. Instruction sheets are available at www.nvent.com and from your nVent customer service representative. Improper installation, misuse, misapplication or other failure to completely follow nVent's instructions and warnings may cause product malfunction, property damage, serious bodily injury and death and/or void your warranty.

⚠ WARNING: This product can expose you to chemicals including nickel, which is known to the State of California to cause cancer and birth defects or other reproductive harm.- For more information go to-www.P65Warnings.ca.gov.

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Option 1 – Customer Care
Option 2 – Technical Support

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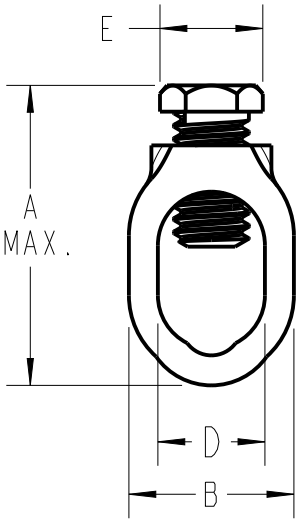
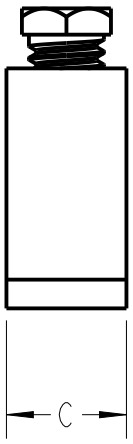
Blackburn®

GROUND ROD CLAMPS

TYPE G





CAT. NO.	NOMINAL ROD DIA.		WIRE RANGE				DIMENSIONS (IN.)					
	IN.	(MM)	MAX.	MIN.	MAX. (MM^2)	MIN. (MM^2)	A (MAX.) BOLT	SCREW THREAD SIZE UNC-2A	B (MAX.)	C (MAX.)	D (MAX.)	E (MAX.)
*⊕ G3	3/8	9.5	4 STR.	10 SOL.	21.1	5.2	1-7/16	5/16-18	11/16	1/2	27/64	3/8
G4	1/2	12.7	2 STR.	10 SOL.	33.6	5.2	2	3/8-16	27/32	19/32	37/64	1/2
G5	5/8	15.8	2 STR.	10 SOL.	33.6	5.2	2-1/8	3/8-16	29/32	19/32	43/64	1/2
G6	3/4	19.0	2 STR.	10 SOL.	33.6	5.2	2-3/16	3/8-16	1-1/16	21/32	13/16	1/2

- ☐ HIGH-STRENGTH CORROSION-RESISTANT COPPER ALLOY CASTING
- ☐ FURNISHED WITH HEX HEAD BOLTS
- ☐ SIMPLIFIED, COMPACT DESIGN MAKES LASTING, TROUBLE-FREE CONNECTION
- ☐ UL LISTED FOR DIRECT BURIAL INSTALLATION

NOTES:
* NOT UL LISTED
⚌ RUS LISTED
⊕ NOT CSA LISTED
ADD SUFFIX P TO CAT No. FOR TIN-PLATED CLAMP
G5 IS NOT CSA LISTED FOR REBAR # 4

GENERAL NOTES

1. ALL DIMENSIONS ARE FOR REFERENCE ONLY.
2. DIMENSIONS IN BRACKETS [ ] ARE IN METRIC UNITS.

REVISIONS

3 SEE ERN (2018345) FOR APPROVAL SIGNATURES & RELEASE DATE. PROJECT NO: 014V001169

www.tnb.com

Thomas&Betts
A Member of the ABB Group

DESCRIPTION: GROUND ROD CLAMPS

ORIGINAL PROJECT NO / (ERN NO)	SHEET NO:	REV. NO:	DRAWING NO:
BC55835 / (2010404)	1 OF 2	3	WSD-000478

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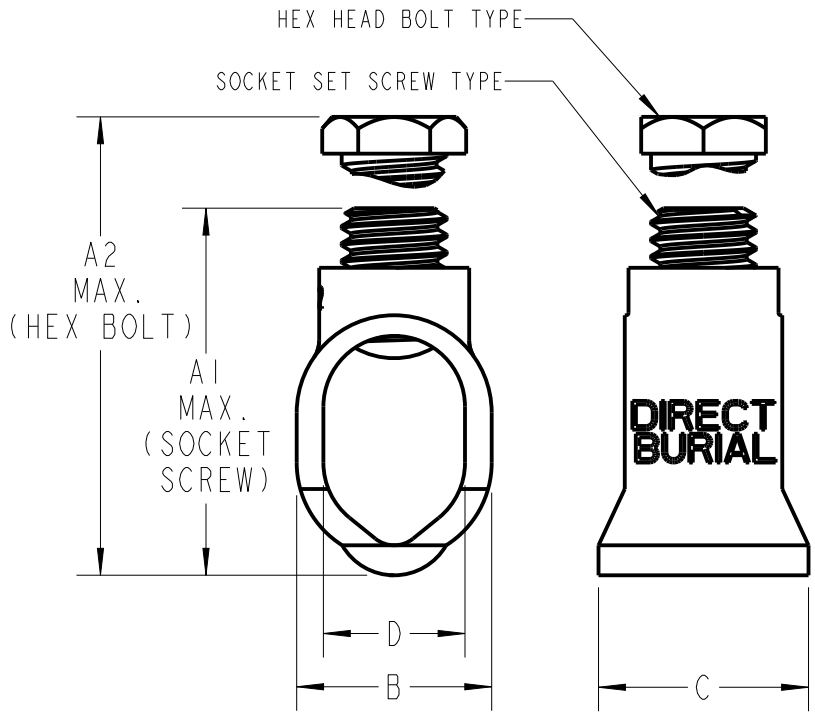
TYPES JAB and JABH

(SOCKET SET SCREW TYPE SHOWN)



CAT. NO.		NOMINAL ROD DIA.		WIRE RANGE				DIMENSION (IN.)					
SOCKET SET SCREW	HEX HEAD BOLT	IN.	(MM)	MAX.	MIN.	MAX. (MM^2)	MIN. (MM^2)	A1 (MAX.) SOC. SCREW	A2 (MAX.) HEX BOLT	SCREW THREAD SIZE UNC-2A	B (MAX.)	C (MAX.)	D (MAX.)
JAB12	JAB12H	1/2	12.7	2 STR.	10 SOL.	33.6	5.2	1-5/8	2-3/32	7/16-14	27/32	15/16	5/8
JAB58	JAB58H	5/8	15.8	1/0 STR.	8 SOL.	53.4	8.3	1-27/32	2-1/4	7/16-14	15/16	1-1/16	11/16
JAB34	JAB34H	3/4	19.0	1/0 STR.	8 SOL.	53.4	8.3	1-7/8	2-5/16	7/16-14	1-1/16	1-1/16	13/16
—	JAB34C	5/8 3/4	15.8 19.0	3/0 STR.	8 SOL.	95.0	8.3	—	1-3/8	7/16-14	1-1/8	1-1/16	13/16
⊕ JAB1	JAB1H	1	25.0	4/0 STR.	8 SOL.	107.1	8.3	2-7/16	3	7/16-14	1-3/8	1-1/8	1

- ☐ HIGH-STRENGTH CORROSION-RESISTANT COPPER ALLOY CASTING
- ☐ SOCKET SET SCREW OR HEX HEAD BOLTS TYPES AVAILABLE
- ☐ UL LISTED FOR DIRECT BURIAL INSTALLATION
- ☐ CSA CERTIFIED

NOTES:
* NOT UL LISTED
— RUS LISTED
⊕ NOT CSA LISTED
ADD SUFFIX P TO CAT No. FOR TIN-PLATED CLAMP
G5 IS NOT CSA LISTED FOR REBAR # 4

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DESCRIPTION: Ground Clamps

SHEET NO:	REV. NO:	DRAWING NO:
2 OF 2	3	WSD-000478

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