



WIEGMANN®

ENCLOSURE SOLUTIONS
ÇEKME KUTULARI ve PANOLAR



STAINLESS STEEL • PASLANMAZ ÇELİK



**ULTIMATE SERIES
N412SSC (52), N412WSSC (21),
N412CSSST (18), N412CSSSTD (5)**

Size Ranges: 12 x 12 x 6 to 60 x 36 x 12
Key Features:

- Aesthetic, attractive, sleek design.
- Accessory driven product line.

- Larger Sub Panel foot prints (sub panels are optional).
 - Larger tub openings.
- Standard Features:**
- Available in 304 or 316 SS
 - Plasma welded seams
 - Removable & interchangeable doors
 - Print Pocket

- Solid or Plexiglass doors
 - FIP gasket
 - 1/4 turn latches
 - Rear mounting holes
 - 20 Degree sloped top on ST series
 - Smooth #4 pregrained finish.
- Ratings:** NEMA Type 3R, 4, 4X, 12, 13 UL & CSA



**N4 WALL MOUNT SERIES
SSN4 (76), ALN4 (16), SSN4X (9)**

Size Ranges: 12 x 12 x 6 to 60 x 36 x 12
Key Features:

- Rugged workhorse.
- Clamps on three sides of door provides for an excellent seal.

- Padlocking provision.
- Standard Features:**
- Available in 304 or 316 SS
 - Available in .080 aluminum
 - Seam welded design
 - Continuous hinge
 - Print Pocket
 - Clamps three sides

- FIP gasket
 - Hasp & staple (padlocking)
 - External mtg feet top & bottom
 - Optional sub panels
 - Smooth #4 pregrained finish.
- Ratings:** NEMA Type 3R, 4, 4X, 12, 13 UL & CSA



**3PT WALL MOUNT SERIES
SSN43PT (13), SSN43PTA (13)**

Size Ranges: 24 x 20 x 6 to 36 x 36 x 12
Key Features:

- Rugged workhorse.
- Simple 3pt latching access.

- Standard Features:**
- Available in 304 or 316 SS
 - Seam welded design
 - Continuous hinge
 - Print Pocket
 - 3pt latching handle
 - FIP gasket

- External mtg feet top & bottom
 - Optional sub panels
 - Smooth #4 pregrained finish.
- Ratings:** NEMA Type 3R, 4, 4X, 12 UL Pending



**JIC SERIES
BN4SS (8), BN4CHSS (16),
BN4CHAL (6)**

Size Ranges: 4 x 4 x 3 to 16 x 14 x 6
Key Features:

- Single door junction boxes.

- Hinge cover.
 - Lift off cover.
- Standard Features:**
- Available in 304 or 316 SS
 - Seam welded design
 - Continuous or lift off hinge
 - Clamp secured lid

- FIP gasket
 - External mtg feet top & bottom
 - Optional sub panels
 - Smooth #4 pregrained finish.
- Ratings:** NEMA Type 3R, 4, 4X, 12 UL & CSA



**FREESTANDING SS SERIES
SSFSN43PT (14), SSFSDAN43PT
(8), SSFSDN43PT (12),
FSDADN43PT (5), N4SFSS (3)**

Size Ranges: 60 x 24 x 18 to 90 x 72 x 36
Key Features:

- Versatile NEMA 4X Freestanding.
 - Simple 3pt latching access.
 - Single or dual access.
- Standard Features:**
- Available in 304 or 316 SS
 - Seam welded design
 - Continuous hinge

- Print Pocket
 - 3pt latching handle
 - FIP gasket
 - Optional sub panels
 - Lifting eyes
 - Smooth #4 pregrained finish.
- Ratings:** NEMA Type 3R, 4, 4X, 12 UL Pending



**FLOORMOUNT SS SERIES
SSN4D (5), SSN4D3PT (6)**

Size Ranges: 62 x 48 x 10 to 74 x 72 x 24
Key Features:

- Floor mounted N4X.
- Simple 3pt latching or clamp options.

- Standard Features:**
- Available in 304 or 316 SS
 - Welded 12" high leg kits
 - Seam welded design
 - Continuous hinge
 - Print Pocket
 - 3pt latching handle

- FIP gasket
 - Optional sub panels
 - Lifting eyes
 - Smooth #4 pregrained finish.
- Ratings:** NEMA Type 3R, 4, 4X, 12 UL Pending

Numbers in () represent total part numbers available within family.
() içindeki sayılar, o serideki toplam ürün sayısını gösterir.

MILD STEEL - NEMA 4 - ANSI 61 • ÇELİK - NEMA4 - FIRIN BOYALI



ULTIMATE SERIES
N412C (46), N412WC (27),
N412CST (25)

Size Ranges: 12 x 12 x 6 to 60 x 36 x 12

Key Features:

- Aesthetic, attractive, sleek design.
- Accessory driven product line.

- Larger Sub Panel foot prints (sub panels are optional).
- Larger tub openings.

Standard Features:

- Concealed hinges
- Plasma welded seams
- Removable & interchangeable doors
- Print Pocket

- Solid or Plexiglass doors
- FIP gasket
- 1/4 turn latches
- Rear mounting holes
- 20 Degree sloped top on ST series
- ANSI 61 polyester powder

Ratings: NEMA Type 3R, 4, 4X, 12, 13 UL & CSA



WALL MOUNT SERIES
N4 (40)

Size Ranges: 16 x 12 x 6 to 60 x 36 x 16

Key Features:

- Rugged workhorse.
- Clamps on three sides of door provides for an excellent seal.

- Padlocking provision.

Standard Features:

- Seam welded design
- Continuous hinge
- Print Pocket
- Clamps three sides
- FIP gasket
- Hasp & staple (padlocking)

- External mtg feet top & bottom

- Optional sub panels

- ANSI 61 polyester powder

Ratings: NEMA Type 3R, 4, 4X, 12, 13 UL&CSA



3PT WALL MOUNT SERIES
N43PT (40), N412C3PT (44)

Size Ranges: 16 x 12 x 6 to 60 x 36 x 16

Key Features:

- Rugged workhorse.
- Simple 3pt latching access.

Standard Features:

- Seam welded design
- Continuous hinge
- Print Pocket
- 3pt latching handle
- FIP gasket
- External mtg feet top & bottom

- Optional sub panels

- ANSI 61 polyester powder

Ratings: NEMA Type 3R, 4, 4X, 12 UL Pending



JIC SERIES
BN4 (8), BN4CH (10)

Size Ranges: 4 x 4 x 3 to 16 x 14 x 6

Key Features:

- Single door junction boxes.
- Hinge cover.

- Lift off cover.

Standard Features:

- Seam welded design
- Continuous or left off hinge
- Clamp secured lid
- External mtg feet top & bottom
- FIP gasket

- Optional sub panels

- ANSI 61 polyester powder

Ratings: NEMA Type 3R, 4, 4X, 12, 13 UL&CSA



FREESTANDING SERIES
FSN43PT (14), FSDAN43PT(8),
FSDN43PT (12), FSDADN43PT
(5) , N4SFS (3)

Size Ranges: 60 x 24 x 18 to 72 x 37 x 24

Key Features:

- Versatile NEMA 4 Freestanding.
- Simple 3pt latching access.
- Single or dual access.

Standard Features:

- Seam welded design
- Continuous hinge
- Print Pocket

- 3pt latching handle

- FIP gasket

- Optional sub panels

- Lifting eyes

- ANSI 61 polyester powder

Ratings: NEMA Type 3R, 4, 4X, 12, 13 UL Pending



FLOORMOUNT SERIES
N4D (5), N4D3PT (6)

Size Ranges: 62 x 48 x 10 to 74 x 72 x 24

Standard Features:

- Welded 12" high leg kits
- Seam welded design

- Continuous hinge

- Print Pocket

- 3pt latching handle

- FIP gasket

- Optional sub panels

- Lifting eyes

- ANSI 61 polyester powder

Ratings: NEMA Type 3R, 4, 4X, 12, 13 UL Pending

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STEEL - NEMA 12 - ANSI 61 • ÇELİK - NEMA 12 - FIRIN BOYALI



JIC SERIES
**B (14), BCH (22), BCHS (4),
BSC(16), WAGIE (11), JIC (3),
TCH (32), BCHL (20), BCHQR (7)**

Size Ranges: 4 x 4 x 3 to 16 x 14 x 10

Key Features:

- Variety of cover options

Standard Features:

- Single door junction enclosures
- Lift off cover
- Continuous hinge
- Screw cover
- Quick release
- Seam welded construction
- External mtg feet top & bottom

- Optional sub panels
- SS hinge pin

Ratings: NEMA Type 12, 13 UL & CSA



N12 WALL MOUNT SERIES
N12 (85), WAWF (12), WAFM (5)

Size Ranges: 16 x 12 x 6 to 72 x 30 x 16

Key Features:

- Rugged workhorse.
- Single or two door options
- Clamps (single door)

- 3pt handle (two door)

Standard Features:

- Single door (clamps, hasp & staple)
- Two door (3pt keylocking handle)
- Continuous hinge
- SS hinge pin
- External mtg feet top & bottom
- Seam welded construction

- Optional sub panel

- FIP (single door)

- Print pocket

- ANSI 61 polyester powder

Ratings: NEMA Type 12, 13 UL & CSA



DISCONNECT
WALLMOUNT SERIES
**SDN12 (32X), SDN12PL (31),
ABN12 (11), N412CSTD (8),
N412CSSSTD (5)**

Size Ranges: 20 x 21 x 8 to 60 x 38 x 16

Key Features:

- Disconnects designed to accept most major handle offerings

Standard Features:

- Single door
- Continuous hinge

- SS hinge pin

- External mtg feet top & bottom

- Optional sub panel

- FIP (single door)

- Print pocket

- ANSI 61 polyester powder

Ratings: NEMA Type 12, 13 UL & CSA



FLOOR MOUNT SERIES
N12 (21)

Size Ranges: 54 x 42 x 8 to 72 x 72 x 24

Key Features:

- Large two-door
- Industrial floor mounts

- Overlapping doors
- 3pt keylocking handle

Standard Features:

- 3pt keylocking handles
- Two door-overlapping
- Seam welded construction
- 12" floor stands

- Lifting eyes

- Continuous hinge

- Print pocket

- Collar studs for Optional

- Sub panels

- ANSI 61 polyester powder

Ratings: NEMA Type 12, 13 UL & CSA



FREESTANDING SERIES
**WAFS (14), WAFSD (12),
WAFSDA (8), WAFSDAD (5)**

Size Ranges: 60 x 24 x 18 to 90 x 72 x 36

Key Features:

- Large two-door
- Industrial freestandings

- Overlapping doors
- 3pt keylocking handle

Standard Features:

- Single & dual access
- 3pt keylocking handles
- Single and two door access
- Seam welded construction
- Lifting eyes

- Continuous hinge

- Print pocket

- Collar studs for Optional

- Sub panels

- ANSI 61 polyester powder

Ratings: NEMA Type 12, 13 UL & CSA



MULTI-DOOR SERIES
WAME(6)

Size Ranges: 86 x 112 x 14 to 86 x 187 x 20

Key Features:

- Heavy duty multi-door 3, 4 & 5 door options

Standard Features:

- 3pt padlocking handles
- Seam welded construction
- Heavy duty continuous hinges
- Lifting eyes
- Light mtg channels
- Print pocket

- Sub panels installed

- ANSI 61 polyester powder

Ratings: NEMA Type 12, 13 UL & CSA

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MILD/GALV STEEL - NEMA 1/3R • PREGALVANİZ ÇELİK - NEMA 1/3R



SC & A SERIES SC (63), SCNK (72), SCG (59), SCGNK (72), ACAB (31)

Size Ranges: 4 x 4 x 4 to 24 x 36 x 12

Key Features:

- W/KO, NO/KO options
- Carbon or Galvanized options

- Painted or Galvanized
- ACAB=NOKO/Hinge cover

Standard Features:

- Flat removable covers
- Wall mounting holes
- With or without KO's
- Shrink wrapped
- Painted = ANSI 61 Polyester Powder

- Unpainted = Galvanized steel
 - ACAB = Hinge cover/noko/ANSI 61 only
- Ratings:** NEMA Type 1 UL & CSA



N1C SERIES N1CS(19), N1CLP(27), N1CL(6)

Size Ranges: 6 x 6 x 4 to 48 x 37 x 17

Key Features:

- N1C's available in three different configurations: small, medium and large

Standard Features:

- Continuous or butt hinge versions
- N1CS & N1CLP; w/rear mtg holes
- N1CL: mtg feet top & bottom
- With 1/4 turn latches
- With sub panel mtg provisions (sub panels optional)
- Grounding provisions
- ANSI 61 Polyester power

Ratings: NEMA Type 1 UL & CSA



RSC-RHC-LOH SERIES RSC (44), RSCG (44), RHCS (7), RHCM (17), LOH (10)

Size Ranges: 4 x 4 x 4 to 60 x 16 x 12

Key Features:

- Three available configurations: Screw

Cover (reversible), Hinge Cover (continuous), and Lift Off

- RSC/RHC wth KO's
- Drip hoods
- Padlocking provisions
- (RSC/RHC) w/wall mounting provisions (sub panels optional)

- Grounding provisions
 - ANSI 61 polyester powder (LOH) Wall mtg & sub panel provisions optional RSC) also available in galv only
- Ratings:** NEMA Type 1, 3R UL & CSA



WCT-CTSD-DTDD SERIES WCT (5), CTSD (8), CTDD (11)

Size Ranges: 24 x 24 x 12 to 48 x 48 x 16

Key Features:

- Two lid configurations: Screw Cover and Hinge Cover (single/ double door)

Standard Features:

- Single or two door options
- N3R drip lip or hood
- Padlocking/meter seal provisions
- CTSD/CTDD with sub panel mtg provisions (panels optional)
- Grounding provisions

- CTSD/CTDD have lift off hinges
 - ANSI 61 Polyester powder
- Ratings:** NEMA Type 12, 13 UL & CSA



WAGSC SERIES WAGSC (22), WAGSCG (22)

Size Ranges: 8 x 6 x 4 to 36 x 36 x 12

Key Features:

- Seam Welded Screw Cover
- Available in Galv (no paint), and C/S (ANSI

61 polyester powder)

Standard Features:

- Gasketed screw cover
- Seam welded tub
- With captive rivnuts
- Grounding provisions
- GALV no paint

- Carbon steel painted ANSI 61 Polyester powder
 - Painted = ANSI 61 Polyester powder
 - Unpainted = Galvanized steel
- Ratings:** NEMA Type 1, 3R, 4 UL & CSA



WIREWAY SERIES RSCG (17), RSCGG (17), RSCGNK (17), RSCGNK (17), S (28), SNK(42), HS(28), HSNK(35)

Size Ranges: 2 1/2" SQT0 12" SQ

Key Features:

- Wireway available in Screw Cover and

Hinge Cover

- RSCG trough offered with closed ends and lift off cover

Standard Features:

- Screw cover available in nokno, c/s painted, or galv no paint
- Hinge cover available in noko or wko (painted only)

- RSCG is no intended for wireway (designed for btm conduit entry only)
 - S & HS wireway is also complimented by a very deep fittings line (elbows, tees, ends, panel adapter, etc.)
 - Painted = ANSI 61 Polyester powder
- Ratings:** NEMA Type 1 RSCG = Type 3R UL & CSA

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A.T.X.

**ATEX/IEC RATED ELECTRICAL
EQUIPMENT FOR EXPLOSIVE
ATMOSPHERES**

 **Appleton**[®]



INTRODUCTION

WHY CHOOSE APPLETON PRODUCTS FOR ATEX/IEC

Technological progress and economic development have an impact on industrial production equipment, including the electrical systems. Production facilities must evolve with the new technologies which ensure a safe environment. Production sites in potentially hazardous environments must be protected against any risk of explosion or fire. Appleton's line of ATX products are designed to ensure that protection.

Appleton's ATX product line offers a full range of electrical equipment certified to ATEX and IEC standards for installation and implementation in hazardous areas. Our range of products and our technical expertise and standards enable us to meet the challenges of complex hazardous electrical installations. Our engineers design and develop innovative lighting products, distribution equipment and plugs and receptacles for hazardous areas.

GİRİŞ

ATEX/IEC UYGULAMALAR İÇİN NEDEN APPLETON?

Teknolojik ilerleme ve ekonomik kalkınma, elektrik sistemleri de dahil olmak üzere endüstriyel üretim ekipmanı üzerinde önemli bir etkiye sahiptir. Üretim tesisleri, güvenli bir ortam sağlayan yeni teknolojilerle gelişmelidir. Potansiyel olarak tehlikeli ortamlardaki üretim yerleri patlama veya yangın riskine karşı korunmalıdır. Appleton'un ATX ürün serisi, bu korumayı sağlamak için tasarlanmıştır.

Appleton'un ATX ürün grubu, tehlikeli bölgelerde kurulum ve uygulama için ATEX ve IEC standartlarına göre sertifikalandırılmış her tür elektrikli ekipmanı sunmaktadır. Ürün yelpazemiz, teknik uzmanlığımız ve standartlarımız, çok karmaşık olan tehlikeli bölgelere uygun elektrik tesisatlarının zorluklarını gidermemizi sağlar. Mühendislerimiz, tehlikeli alanlar için yenilikçi aydınlatma ürünleri, control/şalt donanımı, anahtar, priz ve buatlar tasarlar ve geliştirir.



BI-PIN FLUORESCENT LUMINAIRES • FLORESAN ARMATÜRLER, NORMAL AYDINLATMA, IP66/67

These fluorescent luminaires are protected against the elements with an elastomer gasket that ensures a consistent, durable seal that is hosedown ready. The corrosion-resistant lens, body and hardware mean the fluorescent luminaires will endure the years. These fixtures also offer a host of exclusive safety features that make servicing safe and easy.

- Hinged polycarbonate diffuser and multi-parabolic reflector for one-handed maintenance
- Quick connector ballasts and IP 2X terminal shields
- Opening diffuser activates power cut-off switch to unit for safe access to internal controls
- Elastomer gasket and multiple cover fasteners
- Pre-impregnated fiberglass reinforced polyester body



FEB236BUPN luminaire with FEWMG wall mounting

ZONE 1 & 2 - 21 & 22	ATEX	IEC	CE	II2 G/D	- 40 °C to + 55 °C
Ex de IIC	T4 or T5	T75 °C	IP 66/67	IK 10	
TUBE (not supplied)	WATTS	WEIGHT (kg)	VOLUME (dm3)	CAT. NO. M20 110/254V	CAT. NO. M25 110/254V
1	18	5.5	32.3	FEB118BUSA *	FEB118BUSN *
2	18	5.5	32.3	FEB218BUSA *	FEB218BUSN *
1	36	7.9	54.2	FEB136BUSA *	FEB136BUSN *
2	36	7.9	54.2	FEB236BUSA *	FEB236BUSN *
3	36	9.9	54.2	FEB336BUSA *	FEB336BUSN *
1	58	9.0	65.2	FEB158BUSA *	FEB158BUSN *
2	58	9.0	65.2	FEB258BUSA *	FEB258BUSN *
3	58	11.0	65.2	FEB358BUSA *	FEB358BUSN *
POLE MOUNTING LUMINAIRES - DİREĞE MONTAJ İÇİN DEVE BOYNUYLA BİRLİKTE					
2	18	96.2	34.1	-	FEB218BUPN
2	36	8.7	54.2	-	FEB236BUPN

* Optional quick connect mounting bracket: FEFBZ

BI-PIN FLUORESCENT EMERGENCY LUMINAIRES • FLORESAN ARMATÜRLER, ACİL AYDINLATMA, 3 Saat, IP66/67

The emergency bi-pin fluorescent luminaire incorporates all the technical benefits of the increased safety standard luminaire. Green LED light indicates that the battery is charging and that the unit is working properly. It also confirms feedback of information for auto-test devices.



FEB236BUSNE

- Ø 26 mm bi-pin tubes, standard G13 lampholders
- Frequency: 50/60 Hz
- Common power supply circuit to provide both normal and emergency lighting
- Power supply via high frequency ballast 220/240V~ (± 10%)
- Instant start - Power factor > 0.95
- Battery voltage: 6 V 4 Ah
- Pre-impregnated fibre glass reinforced polyester body
- Polycarbonate multi-parabolic hinged reflector
- Polycarbonate diffuser hinged to body
- High temperature internal wiring
- Elastomer gasket
- Anti-vibration lampholders with spring system
- Operation: mains power switched on: 2 tubes lit
mains power switched off: 1 tube lit (battery backup)
- Battery-back up tube identified with green mark
- Open and close using an Allen key or flat screwdriver (system automatically protects against overturning)
- Battery pack easily interchangeable on site, fixed by screws
- Ballast and converter assembly fixed by screws

ZONE 1 & 2 - 21 & 22	ATEX	IEC	CE	II2 G/D	- 40 °C to + 55 °C - 40 °C to + 40 °C (58W)	
Ex de IIC	T4 or T5	T75 °C	IP 66/67	IK 10	CAT. NO. M20 *	CAT. NO. M25 *
TUBE (not supplied)	WATTS	DURATION 1 TUBE	WEIGHT (kg)	VOLUME (dm3)	220/240V	220/240 V
2	18	3 h	7.3	32.3	FEB218BUSAE	FEB218BUSNE
2	36	3 h	9.6	54.2	FEB236BUSAE	FEB236BUSNE
2	58	3 h	10.7	65.0	FEB258BUSAE	FEB258BUSNE
3	36	3 h	11.6	54.2	FEB336BUSAE	FEB336BUSNE
3	58	3 h	12.7	65.0	FEB358BUSAE	FEB358BUSNE

* Accessory fixing: FEFBZ

Please contact our office for ATX™ FELED Series Nonmetallic LED Luminaires
Bu armatürlerin LED versiyonları da mevcuttur; ofisimizle bağlantıya geçebilirsiniz.

FLAMEPROOF CYLINDRICAL FLUORESCENT LUMINAIRES • ALEV SIZDIRMAZ FLORESAN ARMATÜRLER

These fixtures deliver safety during installation and maintenance with a sliding gear tray, quick plug-in terminal blocks and a clip-on guard.

- Single and twin tube configurations
- Ferromagnetic ballast
- Available with high frequency electronic ballast
- Available emergency lighting with battery back-up power

- Operating temperatures range from -20°C to +55°C
- Works in any position with a variety of available mounts and guards
- High temperature internal wiring



FDB236XCXN luminaire 2 x 36 W

ZONE 1 & 2 - 21 & 22	ATEX	IEC	CE	II2 G/D	-20 °C to +55 °C	
Ex d IIB or IIC	T6-T5-T4	T78°C to T130°C	IP 66/68	IK 08	CAT. NO. 3/4 NPT 230 V / 50 Hz	CAT. NO. M20 240 V / 50 Hz
TUBE (not supplied)	WATTS	GROUP	WEIGHT (kg)	VOLUME (dm3)		
2	18	IIC	9.7	58	FDB218XCXN	FDB218X3M
2	36	IIB+H2	15.3	99	FDB236XCXN	FDB236X3M
1	58	IIB	17.0	119	FDB158XCXN	FDB158X3M
2	58	IIB	18.2	119	FDB258XCXN	FDB258X3M

BI-PIN HEAVY DUTY FLUORESCENT LUMINAIRES - NON-SPARKING, RESTRICTED BREATHING FLORESAN ARMATÜRLER, NORMAL AYDINLATMA, Ex nA, Ex nR

The heavy duty non-sparking, restricted breathing fluorescent luminaire is a seamless, one-piece injection molded housing. The reflector swings out for easy fixture maintenance.

- Ø 26 mm bi-pin tubes, standard G13 lampholders
- Frequency: 50/60 Hz
- Power supply via high frequency ballast depending on version 110/127 V ± 10% AC/DC or 220/240 V ~ ± 10%, 198 to 264 V
- Instant start. Power factor > 0.95
- Pre-impregnated fibre glass reinforced polyester body

- Polycarbonate diffuser hinged to body
- Polycarbonate multi-parabolic hinged reflector
- High temperature internal wiring
- Elastomer gasket
- Anti-vibration lampholders with spring system
- Open and close using an Allen key or flat screwdriver (system automatically protects against overturning)
- Ballast fixed by screws



FNB236BKSN

ZONE 1 & 2 - 21 & 22	ATEX	IEC	CE	II3 G/D and II2 D	-40 °C to +55 °C	
Ex d IIB or IIC	T6-T4	T78°C to T130°C	IP 66/67	IK 10	CAT. NO. M20 240 V / 50 Hz	CAT. NO. M25 220/240V
TUBE (not supplied)	WEIGHT (kg)	VOLUME (dm3)				
2 x 18	5.5	32.3			FNB218BKSN	FNB218BKSN
2 x 36	7.9	54.2			FNB236BKSN	FNB236BKSN
2 x 58	9.0	65.0			FNB258BKSN	FNB258BKSN

BI-PIN HEAVY DUTY FLUORESCENT EMERGENCY LUMINAIRES - NON-SPARKING, RESTRICTED BREATHING ZON 2 AĞIR HİZMET TİPİ FLORESAN ARMATÜRLER, AÇIL AYDINLATMA, Ex nA, Ex nR

The light duty restricted breathing fluorescent luminaire is seamless, one-piece injection molded housing. The reflector swings out for easy fixture maintenance.

- Ø 26 mm bi-pin tubes, standard G13 lampholders
- Common power supply circuit to provide both normal and emergency lighting
- Power supply via high frequency ballast 220/240V~ (± 10%), 50/60 Hz
- Instant start - Power factor > 0.95, Battery voltage: 6 V 4 Ah
- Pre-impregnated fibre glass reinforced polyester body
- Polycarbonate multi-parabolic hinged reflector & diffuser hinged to body
- High temperature internal wiring
- Elastomer gasket

- Anti-vibration lampholders with spring system
- Operation: mains power switched on: 2 tubes lit
mains power switched off: 1 tube lit (battery backup)
- Green LED on when the installation is operating normally and off in the event of a mains power failure or battery fault
- Battery-back up tube identified with green mark
- Open and close using an Allen key or flat screwdriver (system automatically protects against overturning)
- Battery pack easily interchangeable on site, fixed by screws
- Ballast and converter assembly fixed by screws



FNB236BUSNEN

ZONE 1 & 2 - 21 & 22	ATEX	IEC	CE	II3 G/D and II2 D	-40 °C to +55 °C	
Ex nA or nR II	T6-T4	T75°C	IP 66/67	IK 10	CAT. NO. M20 * 220/240 V	CAT. NO. M25 220/240V
TUBE (W) (not supplied)	DURATION 1 TUBE	WEIGHT (kg)	VOLUME (dm3)			
2 x 18	3 h	7.3	32.3		FNB218BUSAEN	FNB218BUSNEN
2 x 36	3 h	9.6	54.2		FNB236BUSAEN	FNB236BUSNEN
2 x 58	3 h	10.7	65.0		FNB258BUSAEN	FNB258BUSNEN

* Supplied with earth brass continuity plate. * Zırlı kabloda topraklama sürekliliği için piring plaka armatür girişine monte edilmiştir.

BI-PIN LIGHT DUTY FLUORESCENT LUMINAIRES - RESTRICTED BREATHING ZONE 2 NORMAL HİZMET FLORESAN ARMATÜRLER, NORMAL AYDINLATMA, Ex nR

The light duty restricted breathing fluorescent luminaire is a seamless, one piece injection molded housing.

- Ø 26 to 38 mmbi-pin tubes, standard G13 lampholders
- Frequency: 50/60 Hz
- Power supply via high frequency ballast depending on version 110/127 V ± 10% AC/DC or 220/240 V ~ ± 10%, 198 to 264 V» Instant start. Power factor > 0.95

- Pre-impregnated fibre glass reinforced polyester body
- Polycarbonate diffuser
- White painted sheet steel reflector
- Elastomer gasket
- Closing system using stainless steel clips



FLB218BKSA

ZONE 2 - 22 Ex nA or nR II	ATEX T6-T3	IEC T75 °C to T91 °C	CE IP 65/67	II3 G/D IK 08	- 20 °C to + 55 °C
TUBE (W) (not supplied)		WEIGHT (kg)	VOLUME (dm3)		CAT. NO. M20 220/240 V
1 x 18 *		2.3	22.3		FLB118BKSA
2 x 18		2.3	22.3		FLB218BKSA
1 x 36 *		2.8	38.0		FLB136BKSA
2 x 36		3.6	38.0		FLB236BKSA
1 x 58 *		3.4	45.0		FLB158BKSA
2 x 58		4.4	45.0		FLB258BKSA

* AC only

BI-PIN LIGHT DUTY FLUORESCENT EMERGENCY LUMINAIRES ZONE 2 NORMAL HİZMET FLORESAN ARMATÜRLER, ACİL AYDINLATMA, Ex nR

The light duty restricted breathing emergency fluorescent luminaire is a seamless, one-piece injection molded housing. The reflector swings out and is held out for easy fixture maintenance. Use where fixture is exposed to high humidity, corrosion, water, vapors and impact; typical installations include chemical plants, car washes, laundries, parking garages, dairies, etc.

- Ø 26 mm mono and bi-pin tubes, standard G13 lampholders
- Frequency: 50/60 Hz
- Common power supply circuit to provide both normal and emergency lighting
- Power supply via high frequency ballast 220/240V ~ (± 10%)
- Instant start - Power factor > 0.95
- Battery voltage: 6 V 4 A h
- Pre-impregnated fibre glass reinforced polyester body
- Painted sheet steel reflector

- Polycarbonate diffuser
- Elastomer gasket
- Operation: mains power switched on: 2 tubes lit
mains power switched off: 1 tube lit (battery back up)
- Battery power supply cut off by a switch which operates when diffuser is opened
- Green LED on when the installation is operating normally and off if there is a mains power failure or a battery fault
- Battery-back up tube identified with green mark
- Battery pack easily interchangeable on site, fixed by screws and equipped with a fast connector
- Ballast and converter fixed by screws
- Closing system using stainless steel clips



FLB218BUSAE

ZONE 2 - 22 Ex nA or nR II	ATEX T6-T3	IEC T75 °C to T91 °C	CE IP 65/67	II3 G/D IK 08	- 20 °C to + 55 °C
TUBE (W) (not supplied)	DURATION 1 TUBE	WEIGHT (kg)	VOLUME (dm3)		CAT. NO. M20 220/240 V
2 x 18	3 h	4.7	22.3		FLB218B
2 x 36	3 h	7.0	38.0		FUB236B
2 x 58	3 h	7.5	45.0		FUB258B

- Normal hizmet tip armatürler, Zon 2 veya 22 olarak belirlenmiş tehlikeli alanlar da dahil olmak üzere ticari ve hafif endüstriyel yerler için idealdir. Tipik uygulama alanları rafineriler petrokimya tesisleri, kağıt hamuru ve kağıt fabrikaları, tüneller ve diğer hafif sanayi imalathanelerini içerir.
- Fiber elyafı polyester gövdeden imal edilmiş, 2 adet T8 floresan ampul için tasarlanmıştır.
- 6 VDC, 4Ah batarya ile 18W için 29%, 36W için 15% ve 58W için 9% aydınlatma oranında 3 saat acil aydınlatma sağlar.
- Tüm acil aydınlatma armatürlerinde, armatür açıldığında devre kesici ile bataryaya giden enerji kesilir.

FDBAES LED SERIES SELF-CONTAINED EMERGENCY LIGHTING UNITS

FDBAES SERİSİ LED ACİL AYDINLATMA ARMATÜRLERİ



FDBAESLEDEN Escape Route Lighting

FDBAES LED series emergency lighting units provide adequate lighting and/or visual indication of access on exit routes during an evacuation in a hazardous environment. They can be installed in hazardous areas designated as Zone 1, 2, 21 and 22 and remotely controlled and checked without switching off the mains off with remote control unit from Legrand (cat. no. 03901) or URA (cat. no. 095448 and 095450) manufacturers.

- Power supply 230 V AC 50/60 Hz
- 1 Hour duration
- Threaded access cover with O-ring seal
- Interchangeable flameproof battery pack: Escape route lighting: 2.4 V - 1.5 Ah (2 cells - Nicd), Space lighting: 7.2 V - 2.2 Ah (6 cells - NiMh)
- Padlockable switch is available on switched models which individually cuts off power supply and remote unit

- Charge indicator by 1 green LED (life time over 10 years).
- Operates in any position.
- Connection to plug-in terminal block via 2 x 5 x 2.5 mm² terminals
- Automatic built-in self-test system (SATI) with memorization of tests indicated by LED's
- Using a microprocessor and an internal clock, the unit will carry out automatic tests
- Weekly test: Lamp check during 6 seconds
- Quarterly test: Emergency operation and lamp check for 1 hour
- The remote control unit installed in safe area or inside a flameproof box allows manual ignition of all the units (max. 300 units) for visual inspection of their operation

ZONE 1 & 2 - 21 & 22	ATEX	IEC	CE	II2 G/D	-20 °C to +55 °C	
Ex d IIC	T6	T80 °C	IP 66/68	IK 08		
LAMP (supplied)		FLUX (LUMEN)	DURATION 1 TUBE	WEIGHT (kg)	VOLUME (dm3)	CAT. NO. 3/4 NPT 230 V *
Space Lighting LED Array, Switched, Non-maintained, 1x3/4" entry		540	1h	10	40.4	FDBAESLEDNLW
Space Lighting LED Array, Unswitched, Non-maintained, 2x3/4" entry				81	37.1	FDBAESLEDLW
Escape Route LED Array, Switched, Non-maintained, 1x3/4" entry		55	1h	10	40.4	FDBAESLEDENW
Escape Route LED Array, Unswitched, Non-maintained, 2x3/4" entry				81	37.1	FDBAESLEDEN

UNSWITCHED FLAMEPROOF CYLINDRICAL EMERGENCY FLUORESENT LUMINAIRES

FLORESAN ACİL AYDINLATMA ARMATÜRLERİ, DEVRE KESİCİSİZ, 3 Saat



FDES1083N Fluorescent

The emergency fluorescent luminaire is available in 3 hour maintained or 3 hour non-maintained versions. This product must **NOT** be opened in hazardous areas. The electrical connection must be made via connection device to change lamps in hazardous areas.

- Sealed toughened glass tube
- Zamak end cap and cover, anticorrosion treated and painted grey

- Threaded access cover with O ring seal
- Operates in any position
- Connection to terminal block capacity 2.5 mm²
- External earth via bracket: 4 mm², Fixed using 2 brackets (supplied)
- Two M20 threaded cable entries with one M20 blanking plug
- Supplied with one M20 blanking plug (cable gland not supplied)

ZONE 1 & 2 - 21 & 22	ATEX	IEC	CE	II2 G/D	-20 °C to +40 °C	
Ex d IIC	T6	T80 °C	IP 68	IK 09		
TUBE (W) (supplied)	LUMEN	VOLTAGE	DURATION	WEIGHT (kg)	VOLUME (dm3)	CAT. NO. 20M 230 V *
1 x 8 W - N on Maintained	230	230/240 V - 50/60	3h	7.8	36	FDES1083N
1 x 8 W - Maintained	180	230/240 V - 50 Hz	3h	7.8	36	FDES1084M
2 x 8 W - Sustained	230	230/240 V - 50 Hz	3h	7.8	36	FDES2084S

* Mounting accessory supplied - Montaj aparatları dahildir.

BULKHEAD LUMINAIRES • KORİDOR AYDINLATMA

The versatile ATX compact fluorescent bulkhead luminaire is impact resistant, compact and operates in any position.

- Grey painted aluminum body and bezel 60 to 100 W

- Sealed toughened lamp glass, E27 lampholder
- Flanged flameproof joint Fixed using 2 integrated lugs
- Can be used with 15 W compact fluorescent lamps (not supplied)



SBDOSR

ZONE 1 & 2 - 21 & 22	ATEX	IEC	CE	II2 G/D	-20 °C to +40 °C
Ex d IIB	T6* or T4	T76 °C to T119 °C	IP 66	IK 08	
LAMP (not supplied)		WEIGHT (kg)	VOLUME (dm3)		CAT. NO. M20
60 W Red		3	9		SBDOS
100 W Clear		3	9		HBDO

* T6 with compact fluorescent lamp - 15 Kompak floresan ampul ile T6 olarak sertifikalıdır.

WELLGLASS LUMINAIRES • WELLGLASS ARMATÜRLER

The ATX flameproof IIB and IIC Wellglass series offers compact size, low energy usage and available T6 temperature ratings for Zone 1-2 and 21-22 locations. Each fixture features engineered flame paths built into the threads. Their size makes them perfect for low-clearance locations or where fixture weight needs to be considered.

- Shock-resistant globe, corrosion-resistant stainless steel fastenings
- Ballast-free and numerous lamping as well as mounting options.
- Grey painted, marine grade, aluminum alloy body and bezel
- **ATX Alevsizdirmaz wellglass armatürleri, Zon 1 bölgelerde, ekonomik aydınlatma çözümleri sunar.**



LDP2075

ZONE 1 & 2 - 21 & 22	ATEX	IEC	CE	II2 G/D	-40°C to +50°C
Ex d IIC	T3-T4-T5-T6	T85 °C to T145°C	IP 66	IK 08	
LAMP (not supplied)		WEIGHT (kg)	VOLUME (dm3)		CAT. NO. *
18 to 200 W - 2 x 3/4" NPT		5	35.3		LDP2075
18 to 200 W - 2 x M20		5	35.3		LDP2M20

* Other versions available at www.afielektrik.com

FLOODLIGHT • PROJEKTÖRLER

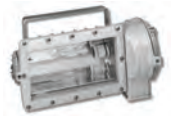
Keep large areas well-lit and safe with the ATX series of explosionproof floodlight products. Our optional mounting, efficient light patterns and various wattages enable you to put the light you need, wherever you need it. Floodlights are available for locations as cold as -40C and as high as +55C. We also use a ferromagnetic ballast for optimal energy efficiency, reduced power loss, higher light output and increased lamp service life.

- Hinged mounts and pivoting lenses for easier mounting and repair
- Internal controls are insulated by Class H materials for maximum service life
- Corrosion-resistant, lightweight aluminum alloy housings conform to AFNOR
- Operates at any angle
- Safety terminal box allows for safe and straightforward installation
- Adjustable beam angles



PBAL40X

ZONE 1 & 2 - 21 & 22	ATEX	IEC	CE	II2 G/D	-20°C to +55°C
Ex d IIB	T6* or T4	T76 °C to T119°C	IP 66	IK 08	
PERMISSIBLE LAMPS * (not supplied)	TYPE	WEIGHT (kg)	VOLUME (dm3)		CAT. NO. M20 230/240V
150 W High Pressure Sodium	oval/tubular	27.3	79.4		PBAL15XJB
250 W High Pressure Sodium	oval/tubular	28.3	79.4		PBAL25XJ
400 W High Pressure Sodium	tubular	29.8	79.4		PBAL40XJ
250 W Metal Halide	oval/tubular	28.3	79.6		PBAH25XJ
400 W Metal Halide	tubular	29.8	79.6		PBAH40XJ



PCAL40XJB

ZONE 1 & 2 - 21 & 22	ATEX	IEC	CE	II2 G/D	-20°C to +55°C
Ex d IIB	T6* or T4	T76 °C to T119°C	IP 66	IK 08	
PERMISSIBLE LAMPS * (not supplied)	TYPE	WEIGHT (kg)	VOLUME (dm3)		CAT. NO. M20 230/240V
150 W High Pressure Sodium	oval/tubular	29.0	104.4		PCAL15XJB
250 W High Pressure Sodium	oval/tubular	30.0	104.4		PCAL25XJB
400 W High Pressure Sodium	tubular	32.0	104.4		PCAL40XJB
250 W Metal Halide	oval/tubular	30.0	104.4		PCAH25XJB
400 W Metal Halide	tubular	32.0	104.4		PCAH40XJB

AREAMASTER™ FLOODLIGHTS • ZON 2 PROJKTÖRLER

Rugged, enclosed and gasketed, Areamaster floodlights are rated for Zone 2 Ex nR II and severe non-hazardous environments. Areamaster resists corrosion with a one-piece, pressure-cast, copper-free aluminum housing that features an architectural bronze polyester finish. Its compound parabolic and double segment design, with an Alzak finished aluminum reflector, provides optimum light distribution and efficiency.

- Compact size fits most locations
- Guard and reflector attached externally for quick and safe maintenance
- Thermal-shock and impact resistant glass
- Plug-in terminal block
- Available for use in conditions defined as Zone 2 Ex nR IIC utilizing Restricted Breathing as the method of protection



0950 43

ZONE 1 & 2 - 21 & 22 Ex d IIB	ATEX T6* or T4	IEC T76 °C to T119 °C	CE IP 66	II2 G/D IK 08	- 20 °C to + 55 °C
PERMISSIBLE LAMPS* (not supplied)		WEIGHT (kg)	VOLUME (dm3)		CAT. NO. M20 220/240 V
70 W High Pressure Sodium**		12.1	62.5		PNM1L7
150 W High Pressure Sodium**		12.9	62.5		PNM1L1
250 W High Pressure Sodium**		14.3	62.5		PNM1L2
400 W High Pressure Sodium		16.0	62.5		PNM1L4
250 W Metal Halide**		14.3	62.5		PNM1H2
400 W Metal Halide		16.0	62.5		PNM1H4

* Mercury vapor have been discontinued.
** Can also be used in Zone 21 areas.

* Cıva Buharlı armatürler imalattan kaldırılmıştır.
** Aynı zamanda Zon 21 bölgelerde de kullanılabilirler.

MERCMASTER™ III WELLGLASS LUMINAIRES MERCMASTER™ III WELLGLASS ARMATÜRLER, Ex nR Koruma

The Mercmaster III enclosed and gasketed fixture offers superior lighting for Ex nR II locations. It is suited for non-hazardous areas that are exposed to severe weather, excessive moisture, dirt and dust.

- Baked epoxy finish and stainless steel hardware for the ultimate corrosion resistance
- Captive clamping bolt and high safety hinge provide for safe, easy maintenance
- Stainless steel threaded inserts and stainless steel screws prevent freezing of reflectors, guards and other bolt-on attachments and allow for easy replacement without damaging the housing



LN1CL70AG2XJ

ZONE 1 & 2 - 21 & 22 Ex d IIB	ATEX T6* or T4	IEC T76 °C to T119 °C	CE IP 66	II2 G/D IK 08	- 20 °C to + 55 °C
PERMISSIBLE LAMPS (not supplied)		WATTAGE (W)	WEIGHT (kg)	VOLUME (dm3)	CAT. NO. M20 220/240 V
High Pressure Sodium		70	7.4	39.0	LN1CL70AG2XJ
		100	9.0	55.0	LN4CL40AG4XJ
		150	9.0	55.0	LN2CL15AG2XJ
		250	16.0	70.0	LN3CL25AG4XJ
		400	19.0	85.2	LN4CL40AG4XJ
Metal Halide		150	9.0	55.0	LN2CH15AG2X
		250	16.0	70.0	LN3CH25AG4X
		400	19.0	85.2	LN4CH40AG4X

* Mercury vapor have been discontinued.

* Cıva Buharlı armatürler imalattan kaldırılmıştır.

MERCMASTER™ III harici ortam armatürleri, hem Zon 2 bölgelerde hem de hava koşulları nedeniyle oluşacak korozyonun yıpratıcı olduğu yerler için idealdir. Boru, Direk, Tavan ve duvara montaj modelleri vardır. Ayrıntılı bilgiler için www.afielektrik.com adresine baş vurabilirsiniz.

ROUND BULKHEAD LUMINAIRES • YUVARLAK KORİDOR AYDINLATMA ARMATÜRLERİ, ZON 2

The versatile ATX round incandescent bulkhead luminaire is corrosion resistant.
Available with T4 and T5 temperature ratings for Zone 2-22 locations.

- E27 lampholder
- Grey painted aluminium alloy base
- Glass diffuser
- Silicone gasket
- Screw locking mechanism
- Operates in any position



HBNRI15+ HBEPGZ

ZONE 1 & 2 - 21 & 22	ATEX	IEC	CE	II2 G/D	- 20°C to + 55°C
Ex d IIB	T6* or T4	T76 °C to T119°C	IP 66	IK 08	
PERMISSIBLE LAMPS (not supplied)		WEIGHT (kg)	VOLUME (dm3)		CAT. NO. M20
60 to 150 W Incandescent or 100 W Mixed		3	15		HBNRI15
Galvanized Steel Guard		1	12		HBEPGZ

SIGNALING AND INSPECTION LUMINAIRES FOR ZONE 1 & 2 - 21 & 22 İKAZ ARMATÜRLERİ, SEYYAR AYDINLATMA, SİRENLER

ATX provides a complete line of signaling and inspection luminaires to meet Zone 1 & 2 and 21 & 22 requirements. Consult your local ATX sales office for additional information.

ATX standart aydınlatma armatürleri haricinde, gene Zone 1 & 2 and 21 & 22 bölgelerde kullanıma uygun ikaz, uyarı, gözetleme armatürleri ile el fenerleri de üretir.



SBD SRC4004A
Rotating beacon
Döner uyarı ışığı



SBDBFR0523A
Flashing beacon
Çakar ikaz lambası



SBD CSM0723A
Indicator bank
Sarı/Yeşil/Kırmızı Uyarı Lambası



HRDC020ZE
Inspection Light
Tank Gözetleme



TCH12C
Torch El Fenerleri

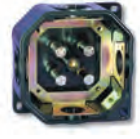
POLYCARBONATE JUNCTION BOXES Ex e • POLİKARBON BUATLAR, Ex e

Junction boxes are available in a wide range of configurations for "increased safety" applications. Boxes for non-armored and armored cable come in high impact resistant polycarbonate bodies and covers. The ATX series of junction boxes feature pillar terminal.

- Available with identification labels
- Each box is subjected to severe corrosion-resistance testing



JBEL1N4P16G



JBEL2N4M25G

ZONE 1 & 2 - 21 & 22	ATEX	IEC	CE	II2 G/D	- 40°C to + 55°C
Ex e II	T6	T75 °C to T80°C	IP 66	IK 10	(type Bje1 and type Bje2)
DESCRIPTION	WEIGHT (kg)	VOLUME (dm3)	CAT. NO. POLYCARBONATE		
4 entries via integrated cable gland 16 P 0 on seal: 8 to 16 mm. Knock-out cable gland cap can be used as a plug (sealed and grip 0 from 6 to 14.5mm) Buat üzerinde 8-16mm arası kablo çapına uygun girişler olup, kullanılmayan girişler için de kör tapalar vardır.	0.4	2	JBEL1N4P16G		
4 entries - supplied with 4 x M25 cable glands (sealed and grip 0 from 8 to 18.5mm) Haricen sağlanan 4xM25 kablo rakoru ile birlikte sağlanır (8-18.5mm sıkma aralığında)	0.4	2	JBEL2N4M25G		

Other terminal box options available at www.afelektrik.com - Diğer buat ebat ve tipleri için www.afelektrik.com adresini ziyaret ediniz.

ALUMINUM BOXES Ex d • ALUMINUM BUATLAR Ex d

Junction boxes are available in a range of configurations for "flameproof" applications.

Terminal blocks and cable glands sold separately.

Grey painted marine grade aluminium alloy

- Threaded flameproof joint
- Internal earth: 4 x M4 screws for 0 4 mm lugs
- External earth: M5 screw
- Terminal block to be ordered separately



JBDR30



JBDR20

ZONE 1 & 2 - 21 & 22	ATEX	IEC	CE	II2 G/D	- 40°C to + 55°C
Ex d IIC	T6-T5	T95 °C	IP 66	IK 10	
DESCRIPTION	WEIGHT (kg)	VOLUME (dm3)	CAT. NO. ALUMINIUM		
2 entries M20 (C)	0.7	2	JBDR20		
3 entries M20 (T)	0.7	2	JBDR30		
4 entries M20 (X)	0.8	2	JBDR40		
Terminal 4 x 4 mm ²	0.1	0.4	TBP44		

CONTROL STATIONS, Ex e • KUMANDA KUTULARI, Ex e

Polyamide control station come complete with compact box and cover.

- 2 x M20 clearance entries at the bottom
- Supplied with 1 polyamide cable gland (0 6.5 to 0 14.5) and 1 plug
- 1 earth terminal block 2 x 2.5 mm²
- White self-adhesive dilophane identification label 58 x 18 mm
- A2 stainless steel fast multi-threaded screw (1 1/2 turn)
- Contact components fixed to the base of the box



U43W2PGA3A3



U41W2D3



U41W2A3



ZONE 1 & 2 - 21 & 22	ATEX	IEC	CE	II2 G/D	- 40°C to + 55°C
Ex d IIC	T6-T5	T95 °C	IP 66	IK 10	
DESCRIPTION	WEIGHT (kg)	VOLUME (dm3)	CAT. NO. POLYAMIDE		
1 push button - with red (O) green (I), yellow and white inserts - NO+NC contacts	0.475	2	U41W2A3		
1 red EMERGENCY STOP mushroom-head button, push-pull - NO + NC contacts	0.475	2	U41W2D3		
1 green indicator + 2 push buttons - with red (O) green (I), yellow and white inserts - NO + NC contacts	0.783	2	U43W2PGA3A3		

Also available in stainless steel and polyester. • Polyester, Paslanmaz ve alüminyum türleri de bulunmaktadır, www.afelektrik.com.

DISCONNECT SWITCHES 16 AND 20 AMP • PAKO ANAHTARLAR, 16 ve 20 AMPER

ATX disconnect switches are designed to operate in explosive atmospheres during connect and disconnect operation of lighting and light power loads. Both the 16 and 20 Amp version have a switch mechanism fixed at the bottom of the box and are supplied with: 1 x M20 polyamide cable gland and 1 x M20 blanking plug.

16 Amp Version:

- Two bottom clearance holes for M20 cable gland
- Termination: Type 1: 2.5 mm² flexible. Type 2: 2.5 mm² flexible/4 mm² solid
- Internal earth: 2 x 2.5 mm² terminals
- Supplied with 1 x white (black lettering) self-adhesive laminated plastic tag label (58 x 18 mm)
- Standard materials: Polyamide box, A2 stainless steel coarse pitch screw (1 and a half turn), polyamide cable gland and blanking nut and nickel-plated brass locknut

20 Amp Version:

- Two bottom M20 threaded entries
- Padlockable handle in position using max. 4 padlocks (max. handle dia. 8 mm and min, 15 mm length)
- Termination: 2.5 mm² flexible/4 mm² solid
- Internal earth: 2 x 4 mm² terminals
- Supplied with 1 x yellow (black lettering) self-adhesive laminated plastic tag label (58 x 18 mm)
- Standard materials: Polyester box, A2 stainless steel captive screw



SWE016S201AG



SWE020S301AG

ZONE 1 & 2 - 21 & 22	ATEX	IEC	CE	II2 G/D	- 20°C to + 55°C
Ex d IIC	T6	T70 °C	IP 66	IK 09/10	
DIMENSIONS EXTERNAL (mm)	SWITCH TYPE	CURRENT (A)	WEIGHT (kg)	VOLUME (dm3)	CAT. NO.
90 x 104 x 80	2 pole on - off	16	0.53	2	SWE016S201AG (polyamide)
90 x 104 x 80	SPDT	16	0.53	2	SWE016C101AG (polyamide)
110 x 120 x 120	3 pole	20	1.00	2	SWE020S301AG (polyester)

Also available in stainless steel and aluminum. • Paslanmaz ve alüminyum modelleri için www.afi elektrik.com

PLUGS AND SOCKETS • FİŞ / PRİZ TAKIMLARI

A line of low voltage sockets and plugs deliver increased protection to industrial environments where durable and rugged equipment is needed. The polycarbonate socket and polyamide cover offer impact and corrosion-resistance where the elements, gases or detergents erode and deteriorate more commonly used materials.

- Color-coded by voltage
- Patented double-acting safety device ensures the total disconnection of power when the plug is removed
- Automatically disconnects each phase in a flameproof chamber



PRE316RB



PRE316PB



PRE432MR

ZONE 1 & 2 - 21 & 22	ATEX	IEC	CE	II2 G/D	- 20°C to + 55°C
Ex d IIC	T6	T70 °C	IP 66	IK 09/10	
DESCRIPTION	VOLTAGE (Volt)	WEIGHT (kg)	VOLUME (dm3)	CAT. NO.	
Socket 16 A - 2 P + E	200 to 250 V	0.6	3.8	PRE316RB	
Plug 16 A - 2 P + E	200 to 250 V	0.2	0.6	PRE316PB	
Connector 16 A - 2 P + E	200 to 250 V	0.4	1.3	PRE316MB	
Socket 32 A - 3 P + E	380 to 415 V	2	7	PRE432RR	
Plug 32 A - 3 P + E	380 to 415 V	0.4	4	PRE432PR	
Connector 32 A - 3 P + E	380 to 415 V	0.8	3.2	PRE432MR	

Voltage * 20/25 V — 40/50 — 100/130 V — 200/250 V — 380/415 V — 400/460 V — 480/500 V — 600/690 V — 20/50 V — 50/500 V — (300 to 500 Hz)

Power * 16 A - 32 A - 63 A - 125 A Frequency * 50 Hz - 60 Hz - 300/500 Hz

* Other voltages, power and metal versions "Ex d" available at www.afi elektrik.com. • Diğer gerilim, akım seçenekleri ve alüminyum muhafazalı alev sızdırmaz modeller için www.afi elektrik.com adresini ziyaret ediniz.

EQUIPMENT ON REQUEST • ÖZEL İMALAT EKİPMANLAR

ATX offers an extensive line of customized panelboards, motor starters and control panels for use in all types of environments. Contact your local ATX sales office for additional information.

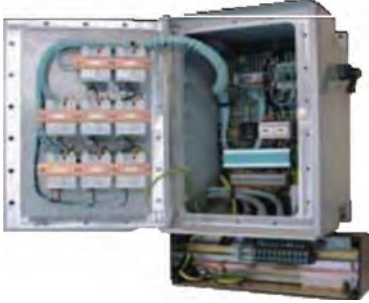
Eksproof şalt ve kontrol panoları, motor kumanda merkezleri, starterleri gibi tasarım gerektiren ürünler için taleplerinizi ofisimize gönderebilirsiniz. www.afielektrik.com.



Ex de Panelboard "Polyester"
Ex de Polyester Pano



Ex d Motor Starter up to 300 k
300 kW'a kadar Ex d Starter



Ex d Panelboard with Indirect Entry (polyester Ex e junction box)
Ex e Polyester Kumanda Kutu Girişli Ex d Pano



Ex d Flameproof Control Panel
Ex d Alev Sızdırmaz Pano



Ex ia Stainless Steel Intrinsic Safety Terminal Box
Ex ia Paslanmaz Çelik Kumanda Kutusu



Ex de Stainless Steel Control Panel
Ex de Paslanmaz Çelik Kumanda Kutusu



160kW Motor Starter Protected by Manual Circuit Breaker
Kompak Şalter Korunmalı 160kW Motor Starter



Custom Engineered Single Sided Switchrack
Explosionproof MCC



Custom Engineered Double Sided Switchrack
Exproof Çift Taraflı MCC

POLYAMIDE GLAND FOR UNARMORED CABLE • ZIRHSIZ KABLO RAKORLARI, POLYAMİD

For non-armored cables without earth continuity, certified for enclosures with the following protection methods:

- “e” Increased safety
- “nR” Restricted breathing
- “D” Dust environment
- Hazardous areas (gas and dust)
- On-shore and off-shore
- Features: Black polyamide body, 2 polyamide clamping rings, weatherproof Elastomer gasket and an entry thread seal



0956 06

ZONE 1 & 2 - 21 & 22	ATEX	IEC	CE	II2 G/D	- 20°C to + 55°C
Ex d IIC			IP 68	IK 08	
THREAD METRIC	SEALING CABLE		WEIGHT (kg)	VOLUME (dm3)	CAT. NO. POLYAMIDE
	O MIN.	O MAX.			
M16	3.0	8.5	0.01	0.16	0957 56
M20	6.5	14.5	0.02	0.16	0956 05
M25	8.0	18.5	0.03	0.16	0956 06
M32	10.0	25.0	0.06	0.44	0957 57
M40	24.0	34.0	0.07	0.72	0957 58

NICKEL-PLATED BRASS GLAND FOR UNARMORED CABLE - SERIES A2F ZIRHSIZ KABLO RAKORLARI, NİKEL KAPLI PİRİNÇ, A2F SERİSİ

Cable gland with elastomer seal for non-armored cable providing a combined flameproof seal and environmental seal on the cables outer sheath. For non-armored cables without earth continuity, certified for enclosures with the following protection methods:

- “e” Increased safety
- “nR” Restricted breathing
- “D” Dust environment
- Hazardous areas (gas and dust)
- On-shore and off-shore
- Body is nickel-plated brass (suffix 5) with a 316L stainless steel option (replace the suffix 5 with suffix 4)
- Seal is LSF (low smoke fume) thermoplastic elastomer



ZONE 1 & 2 - 21 & 22	ATEX	IEC	CE	II2 G/D	- 20°C to + 55°C
Ex d IIC	T6	T70 °C	IP 66	IK 09/10	
THREAD METRIC/NPT	O INNER SHEATH DIAMETER		WEIGHT (kg)	CAT. NO. METRIC	CAT. NO. NPT
	O MIN.	O MAX.			
20S / 1/2"	6.1	11.7	0.058	20S A2F 5	20S A2F 050 5
20 / 1/2"	6.5	14.0	0.062	20 A2F 5	20 A2F 050 5
25 / 3/4"	11.1	20.0	0.120	25 A2F 5	25 A2F 075 5
32 / 1"	17.0	26.3	0.134	32 A2F 5	32 A2F 100 5
M40 / 1-1/4"	23.5	32.2	0.182	40 A2F 5	40 A2F 125 5

NICKEL-PLATED BRASS GLAND FOR ARMORED CABLE

E1FX and E1FW Series cable gland with elastomer seal for use in hazardous areas with braided, tape and wire armor cable. The cable gland allows mechanical cable retention and earth continuity via cable armor termination. A detachable armor cone and AnyWay clamping ring arrangement facilitates remote make off and enables cable to be disconnected from the equipment. Inspection of the armor can be carried out while still maintaining the protection mode of the enclosure. Cable gland for armored cable certified for enclosures with the following protection modes:

- "d" Flameproof IIB or IIC (as per §10.4.2 of IEC 60079-14)
- "e" Increased safety
- "nR" Restricted breathing
- "D" Dust environment
- Hazardous areas (gas and dust)
- On-shore and Off-shore
- Body is nickel-plated brass (suffix 5)
- Seal is LSF (low smoke fume) Thermoplastic elastomer. Inner displacement seal and LRS (load retention seal) outer seal.



E1FX



E1FW

NICKEL-PLATED BRASS GLAND FOR ARMORED CABLE (BRAID OR TAPE) - SERIES E1FX ZIRHLI KABLO RAKORLARI, NİKEL KAPLI PİRİNÇ, STA, E1FX SERİSİ, STA

ZONE 1 & 2 - 21 & 22	ATEX		IEC		CE	II2 G/D		-60°C to +130°C
Ex d IIC/Ex e II / Ex nR			IP 66			IK 08		
THREAD METRIC/NPT	Ø SHEATH				WEIGHT (dm3)	CAT. NO. METRIC	CAT. NO. NPT	
	SEALING (A)		SEALING (B)					
	Ø MIN.	Ø MAX.	Ø MIN.	Ø MAX.				
20S / 1/2"	6.1	11.7	9.5	15.9	0.157	20S E1FX 5	20S E1FX 050 5	
20 / 1/2"	6.5	14.0	12.5	20.9	0.206	20 E1FX 5	20 E1FX 050 5	
25S / 3/4"	11.1	20.0	14.0	22.0	0.325	25S E1FX 5	25S E1FX 075 5	
25 / 3/4"	11.1	20.0	18.2	26.2	0.325	25 E1FX 5	25 E1FX 075 5	
32 / 1"	17.0	26.3	23.7	33.9	0.452	32 E1FX 5	32 E1FX 100 5	
M40 / 1-1/4"	22.0	32.2	27.9	40.0	0.667	40 E1FX 5	40 E1FX 125 5	

A: Inner Sheath Diameter B: Outer Sheath Diameter

NICKEL-PLATED BRASS GLAND FOR ARMORED CABLE (WIRE) - SERIES E1FW ZIRHLI KABLO RAKORLARI, NİKEL KAPLI PİRİNÇ, E1FW SERİSİ, SWA

ZONE 1 & 2 - 21 & 22	ATEX		IEC		CE	II2 G/D		-60°C to +130°C
Ex d IIC/Ex e II / Ex nR			IP 66			IK 08		
THREAD METRIC/NPT	Ø SHEATH				WEIGHT (dm3)	CAT. NO. METRIC	CAT. NO. NPT	
	SEALING (A)		SEALING (B)					
	Ø MIN.	Ø MAX.	Ø MIN.	Ø MAX.				
20 / 1/2"	6.5	14.0	12.5	20.9	0.206	20 E1FW 5	20 E1FW 050 5	
25S / 3/4"	11.1	20.0	14.0	22.0	0.325	25S E1FW 5	25S E1FW 075 5	
25 / 3/4"	11.1	20.0	18.2	26.2	0.325	25 E1FW 5	25 E1FW 075 5	
32 / 1"	17.0	26.3	23.7	33.9	0.452	32 E1FW 5	32 E1FW 100 5	
M40 / 1-1/4"	22.0	32.2	27.9	40.0	0.667	40 E1FW 5	40 E1FW 125 5	

A: Inner Sheath Diameter B: Outer Sheath Diameter
Other cable gland options available at www.egsatx.com

OPTIONS

For lead sheath armored cable:

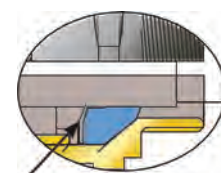
- Lead sheath version - E2FX series: Replace digit 1 by 2.
Example: 32 E1FX 5 → 32 E2FX 5

Series E2FX



Ring for lead sheath

Series E2FW



Ring for lead sheath



Appleton®

**EXPLOSION PROOF FITTINGS FOR CONDUIT INSTALLATIONS
BORULU SİSTEM İÇİN EXPROOF FITTINGS ÜRÜNLERİ**



CONNECTOR & FITTINGS

DISTRIBUTING POWER TO WHERE YOU NEED IT

Running cable and conduit in hazardous facilities demands a wide range of products that meet your needs for both today and tomorrow. Whether it is designing a new facility, adding production capacity to an existing plant, or reconfiguring current equipment needs, Appleton has conduit connectors and fitting products that help you run electrical power to where it's needed.

Tehlikeli yerlerde yapılacak boru tesisatı hem bugün hem de gelecekteki ihtiyaçlarınızı karşılayacak geniş bir yelpazede ürün talep eder. İster yeni bir tesis, mevcut bir tesise üretim kapasitesi ekleme veya mevcut ekipmanı yeniden yapılandırma için olsun, Appleton'da ihtiyaç duyulan yere elektrik verilmesine yardımcı olacak tesisat ürünleri bulunur.



Appleton offers the most expansive and complete product line of conduit connectors and fitting products in the industry. There is not a cable or conduit in the world that cannot be terminated with an Appleton product. We manufacture alternative designs for specialty applications and customer preferences. Appleton offers products constructed of standard brass, stainless steel, cast iron or aluminum.

Appleton fittings malzemeleri konusunda çok geniş bir ürün yelpazesine sahiptir. Her türlü kablo ya da borunun sonlandırılmasında kullanılacak bir Appleton ürünü vardır. Pirinç, paslanmaz çelik, pik ya da alüminyum döküm, çelikten mamul malzemelerin hepsi Appleton tarafından imal edilmektedir.



CONDUIT FITTINGS

FLEXIBLE COUPLINGS • FLEXIBLE RAKORLAR

Difficult bends, tight spaces, vibration and movement that challenge rigid conduit connections can be negotiated with Appleton's explosionproof, dust-ignitionproof, watertight flexible couplings. These bronze or stainless steel couplings are watertight and come with an inner core and insulating liner. Each coupling offers the electrical conductivity of rigid conduit, which negates the need for an external bonding jumper.

- Accurately tapped and tapered threads for tight, rigid joints
- Interior insulating liner protects wires from vibration induced abrasion
- Watertight
- No bonding jumper



UNY AND UNF UNION UNILETS® • UNY VE UNF UNION RAKORLAR

UNY and UNF explosionproof, dust-ignitionproof unions come in expansion and non-expansion versions for joining conduit and affixing conduit to enclosures in hazardous atmospheres. These unions feature a concentric ring interlocked design that creates a slim external casing for use in tight spaces, such as around pumps and motors. Expansion unions' one piece design eliminates the need for disassembly during installation and includes an internal bronze contact grounding spring that ensures a positive ground connection.

- Facilitates modifications and removal of enclosures without turning or removal of conduit
- Expansion unions with telescoping cylinder come in standard and long models (½"-1")
- Unions come in standard sizes (½"-6")
- Expansion unions do not require bonding jumper



SEALINGS FITTINGS • DURDURUCULAR

Maintain the integrity of Class I, Division 1 and 2 locations with Appleton's extensive range of explosionproof, dust-ignitionproof sealing fittings. Vertical and horizontal applications are available in a variety of finishes, including Appleton's triple coat finish of zinc electroplate, chromate and epoxy powder coat. Materials include high strength malleable iron, breakout Grayloy®-iron and corrosion-resistant aluminum. Sealing fittings come in 25% fill for greater wire capacities and 40% fill for more economical installations.

- Sizes range from ½" to 6"
- Access cover for drain seal fittings automatically channels any water that has accumulated above the seal

CAPPED AND PULLING ELBOWS EXPROOF KONDÜLETLER, KAPAKLI DİRSEKLER

Appleton's explosionproof capped and pulling elbows fit a wide range of Class I and II rated locations, endure exposure to corrosion accelerating agents and maintain the integrity of an explosionproof electrical system. The capped elbow models function as sealing fittings when used with sealing covers that also feature pry notches for easy opening. Elbows feature exclusive integral rollers that make pulling easier. The ELBD Series' body and cover feature ground mated surfaces to meet classified location requirements. The ELBY Series' threaded cover openings permit easy access for pulling conductors through hubs.

- Malleable iron bodies with copperfree aluminum covers have high tensile strength and ductility
- Smooth and rounded integral bushings protect conductor insulation
- Accurately engineered flame pathways ground into mating surfaces or threads



UNILET® CONDUIT OUTLET BODIES • PİK DÖKÜM KONDÜLET BAATLAR

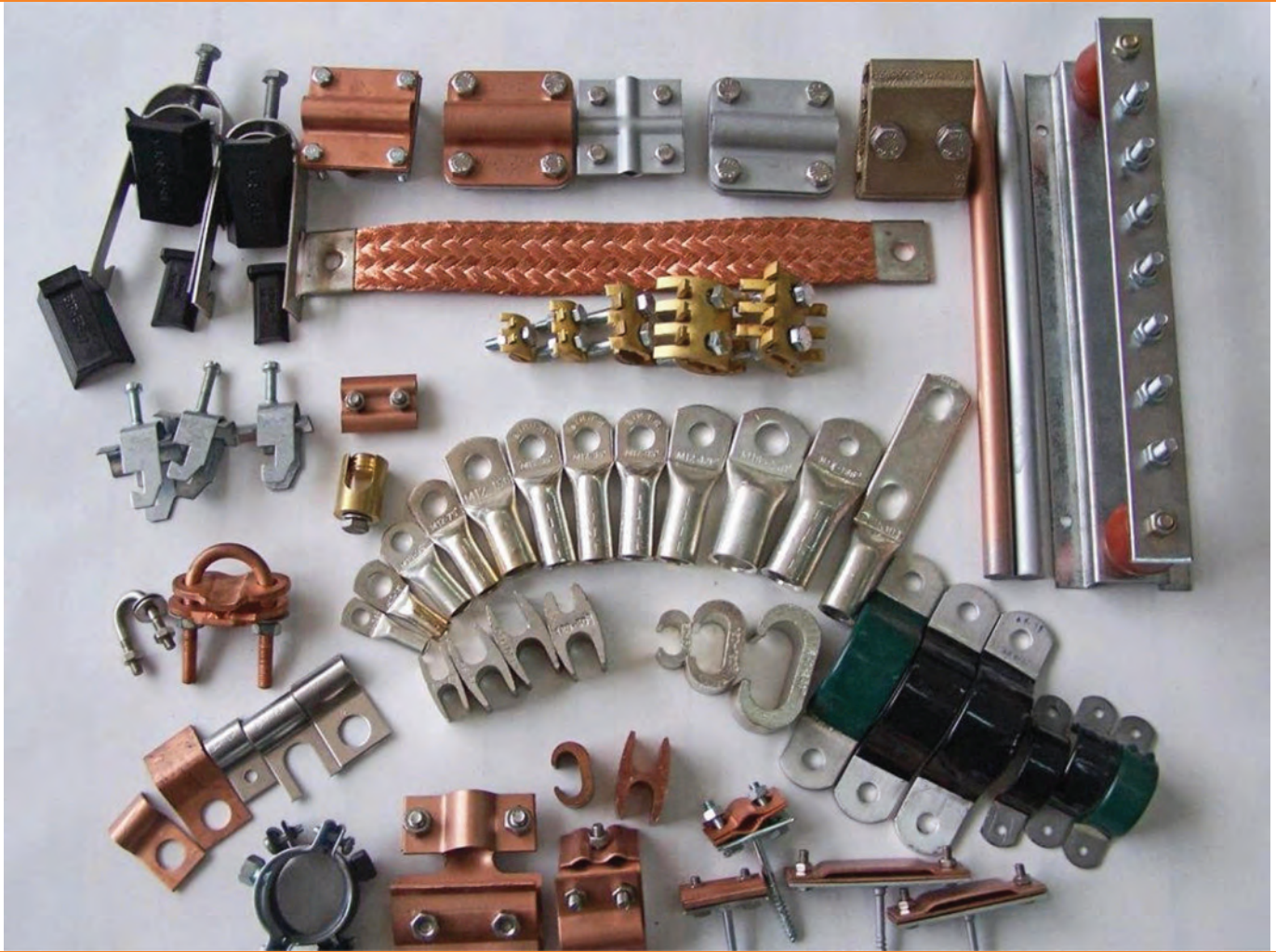
Whether it is new construction, modifications or renovations, Appleton has a conduit outlet body for any place wires are accessed or conduits change direction. The full range of conduit outlet bodies fits every application and footprint available with large interiors for easier maneuvering and accurately tapped, tapered threads for tight rigid joints and excellent ground continuity.

- Select series are interchangeable with other manufacturer conduit bodies
- Smooth, rounded and internal bushings prevent wire damage and easy pulling
- Available in malleable iron, aluminum and Grayloy®-iron for lightweight, watertight, corrosion-resistant and impact-resistant applications
- Stainless steel cover screws
- Form 35 features integral rollers on 1-1/4" to 4" trade sizes to facilitate easier pulling
- Appleton Form-IN-Place integral covers with gasket for FM7, FM8, and FM9 conduit bodies





IEC STANDARDS
IEC STANDARDINDA



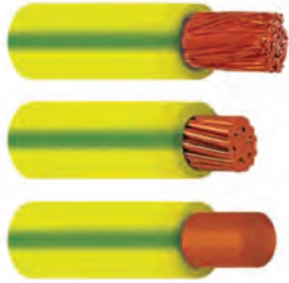
**GROUNDING, EXHOTHERMIC & LIGHTNING
PROTECTION PRODUCTS**
**TOPRAKLAMA, TERMO KAYNAK ve YILDIRIMDAN
KORUNMA ÜRÜNLERİ**

FLEXIBLE BARS FLOW CONDUCTION CAPACITY
FLEXIBLE BAKIR BARALAR AKIM TAŞIMA KAPASİTESİ

ORDER CODE ÜRÜN KODU	DIMENSION	1°C		1K		
		20K	30K	40 K	50 K	60 K
BCB- P202	20x2x1 mm	178A	214A	246A	275A	300A
BCB- P203	20x3x1 mm	227A	280A	323A	360A	395A
BCB- P245	24x5x1 mm	320A	398A	460A	514A	563A
BCB- P246	24x6x1 mm	360A	438A	506A	566A	620A
BCB- P325	32x5x1 mm	402A	496A	573A	640A	702A
BCB- P326	32x6x1 mm	457A	555A	640A	715A	783A
BCB- P328	32x8x1 mm	543A	667A	770A	860A	943A
BCB- P4Q6	40x6x1 mm	570A	667A	770A	860A	943A
BCB- P408	40x8x1 mm	660A	805A	930A	1040A	1140A
BCB- P4010	40x10x1 mm	759A	915A	1055A	1181A	1295A
BCB- P5010	50x10x1 mm	905A	1080A	1245A	1395A	1525A


AÇIKLAMALAR:

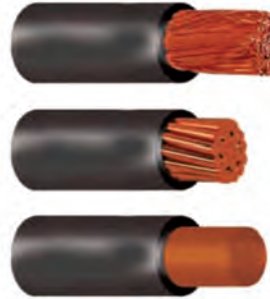
- 1- Tabloda belirtilen akım değerleri ilgili kesitteki esnek baradan geçtiğinde bakır iletken sıcaklığını tabloda karşılık düşen sıcaklık artış miktarı kadar + ortam sıcaklığının üstüne çıkar.
- 2- Şalter ile dağıtım barası arasındaki bağlantılarda kesit belirlenirken 20 K sıcaklık farkının esas alınmasını tavsiye eder.



BCF

BCY

BCA



BCF-S

BCY-S

BCA-S

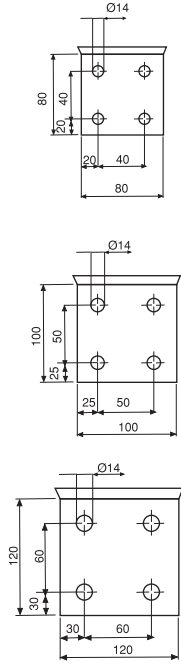
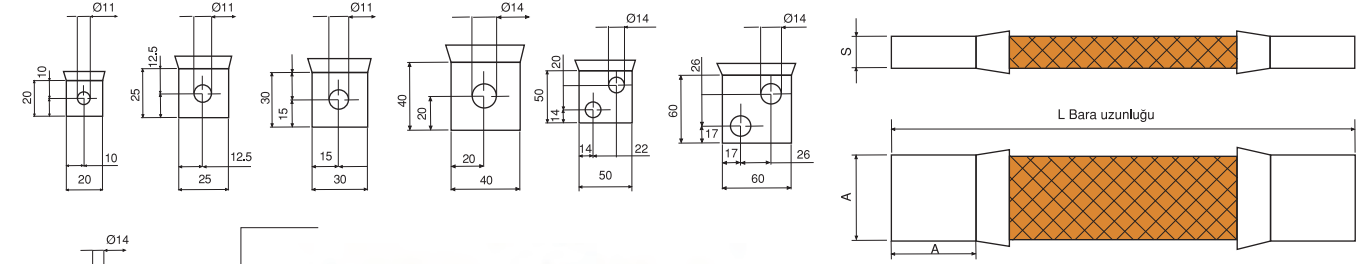
**YELLOW-GREEN PVC INSULATED
COPPER CONDUCTORS**
**SARI YEŞİL PVC İZOLASYONLU
BAKIR İLETKENLER**

KESİT (mm ²)	ORDER CODE ÜRÜN KODU	ORDER CODE ÜRÜN KODU	ORDER CODE ÜRÜN KODU
10	BCF-10	BCA- 10	BCY-10
16	BCF-16	BCA- 16	BCY-16
25	BCF- 25	BCA- 25	BCY-25
35	BCF- 35	BCA- 35	BCY-35
50	BCF- 50	BCA- 50	BCY-50
70	BCF- 70	BCA- 70	BCY-70
95	BCF- 95	BCA- 95	BCY-95
120	BCF-120	BCA-120	BCY-120

**BLACK PVC INSULATED
COPPER CONDUCTORS**
**SİYAH PVC İZOLASYONLU
BAKIR İLETKENLER**

KESİT (mm ²)	ORDER CODE ÜRÜN KODU	ORDER CODE ÜRÜN KODU	ORDER CODE ÜRÜN KODU
10	BCF-10S	BCA-10S	BCY-10S
16	BCF-16S	BCA-16S	BCY-16S
25	BCF-25S	BCA-25S	BCY-25S
35	BCF-35S	BCA-35S	BCY-35S
50	BCF-50S	BCA-50S	BCY-50S
70	BCF-70S	BCA-70S	BCY-70S
95	BCF-95S	BCA-95S	BCY-95S
120	BCF-120S	BCA-120S	BCY120S

PRESSED WITHOUT WELDING FLEXIBLE STRANDED COPPER BARS KAYNAKSIZ PRESLENMİŞ DİZAYN 25-4500 mm² ESNEK ÖRGÜLÜ BAKIR BARALAR



BFB-K
KIZIL FLEXIBLE BARA



BFB-Sn
KALAYLI FLEXIBLE BARA

KESİT (mm)	EBAT (mm)			AKIM (AMPER)	
	A	B	S	DC	AC
25	20	20	3.5	150	140
50			5	250	240
75			7	350	340
100			9	400	380
25	25	25	3.5	150	140
50			4.5	300	280
75			6	350	340
100			7	450	420
125			8.5	500	470
50	30	30	4	300	290
75			5	400	390
100			6	450	440
150			8.5	550	540
200			11.5	650	640
300			15.5	800	790
100	40	40	7.5	500	480
150			7.5	600	590
200			9.5	700	680
250			10.5	800	780
300			13	900	850
400			15.5	1000	960
140	50	50	6	650	630
210			8.2	800	780
280			10	950	900
420			14	1050	1000
560			16.2	1350	1200
140	60	60	6.5	700	680
210			8	900	850
350			11.2	1150	1100
490			13.1	1350	1300
560			15	1400	1350
340	80	80	9.5	1200	1100
520			11.5	1500	1400
700			14.5	1700	1600
840			16	1900	1800
1000			19.3	2100	1950
500	100	100	11	1600	1500
670			12.3	1850	1790
860			14.5	2100	2000
1000			17.5	2250	2150
1200			19	2450	2350
1500			23.5	2700	2550
610	120	120	11.7	1900	1750
1000			16	2650	2500
1540			21.2	3400	3200
2000			26.5	3950	3800
3000			36.2	4500	4550
4500			51	5400	5400

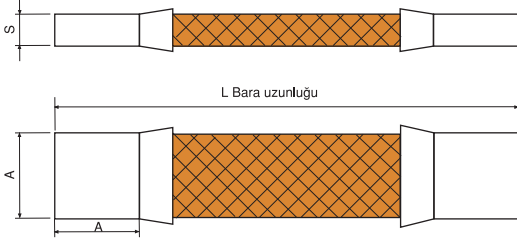
Teknik özellikler

Tavlınmış Cu-ETP tellerden mamul, kaplama yapılmamış yüzey standarttır. İsteğe bağlı kalaylı tel. Tel 0.10-0.20 mm

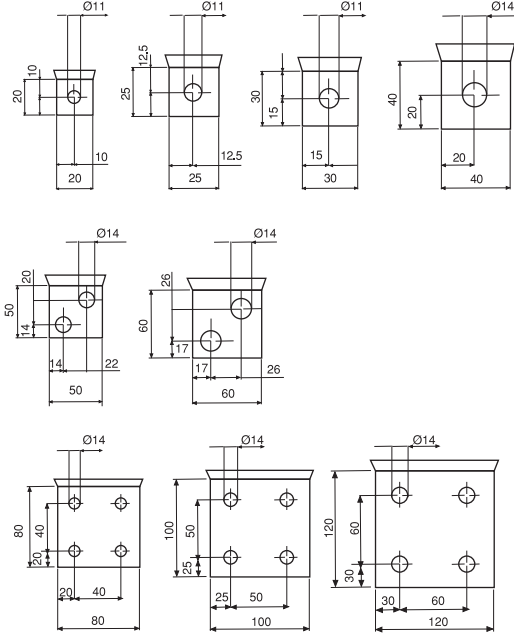
Teas bölgeleri

Kaynaksız Cu-ETP borular Kaplama yapılmamış papuç standarttır. Kalay, gümüş kaplamalı. İsteğe göre.

Not: Akım hakkındaki bütün bilgiler yalıtılmamış dizayn için yaklaşık değerlerdir, indirme faktörü yalıtılmış dizaynda 15-20% uygulamalara bağlıdır. İletkenin sıcaklığı kurulum, uygulama alanı, soğutma vs. bağlı olduğu bilinmektedir. Eğer indirme faktörleri dikkate alınırsa şirketimiz çalışanları size en iyi yanıtı vereceklerdir. Akımı taşıma hakkındaki bilgiler sadece yaklaşık değerlerdir.



KESİT (mm)	EBAT (mm)			AKIM (AMPER)	
	A	B	S	DC	AC
25	20	20	3.5	150	140
50			5	250	240
75			7	350	340
100			9	400	380
25	25	25	3.5	150	140
50			4.5	300	280
75			6	350	340
100			7	450	420
125			8.5	500	470
50	30	30	4	300	290
75			5	400	390
100			6	450	440
150			8.5	550	540
200			11.5	650	640
300			15.5	800	790
100	40	40	7.5	500	480
150			7.5	600	590
200			9.5	700	680
250			10.5	800	780
300			13	900	850
400			15.5	1000	960
140	50	50	6	650	630
210			8.2	800	780
280			10	950	900
420			14	1050	1000
560			16.2	1350	1200
140	60	60	6.5	700	680
210			8	900	850
350			11.2	1150	1100
490			13.1	1350	1300
560			15	1400	1350
340	80	80	9.5	1200	1100
520			11.5	1500	1400
700			14.5	1700	1600
840			16	1900	1800
1000			19.3	2100	1950
500	100	100	11	1600	1500
670			12.3	1850	1790
860			14.5	2100	2000
1000			17.5	2250	2150
1200			19	2450	2350
1500			23.5	2700	2550
610	120	120	11.7	1900	1750
1000			16	2650	2500
1540			21.2	3400	3200
2000			26.5	3950	3800
3000			36.2	4500	4550
4500			51	5400	5400



BFB-Sn-i
KALAYLI İZOLELİ FLEXIBLE BARA



BFB-K-i
KIZIL İZOLELİ FLEXIBLE BARA

Teknik özellikler

Tavlınmış Cu-ETP tellerden mamul, kaplama yapılmamış yüzey standarttır. İsteğe bağlı kalaylı tel. Tel 0.10-0.20 mm

Teas bölgeleri

Kaynaksız Cu-ETP borular, Kaplama yapılmamış papuç standarttır. Kalay, gümüş kaplamalı İsteğe göre.

Yalıtım

PVC - ısıyla daralan; Silikon, cam elyaf veya diğerleri isteğe bağlı.

Not: Akım hakkındaki bütün bilgiler yalıtılmamış dizayn için yaklaşık değerlerdir. İndirme faktörü yalıtılmış dizaynda 15-20% uygulamalara bağlıdır. İletkenin sıcaklığı kurulum, uygulama alanı, soğutma vs. bağlı olduğu bilinmektedir. Eğer indirme faktörleri dikkate alınırsa şirketimiz çalışanları size en iyi yanıtı vereceklerdir. Akımı taşıma hakkındaki bilgiler sadece yaklaşık değerlerdir.

PRESSED WITHOUT WELDING FLEXIBLE STRANDED COPPER BARS KAYNAKSIZ PRESLENMİŞ DİZAYN 25-4500 mm² ESNEK ÖRGÜLÜ BAKIR BARALAR



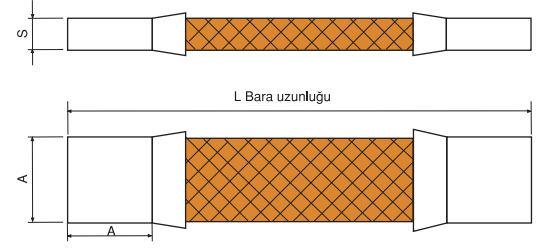
BFB-Sn-IP
KALAYLI İZOLELİ FLEXIBLE BARA



BFB-Sn-P
KALAYLI FLEXIBLE BARA



BFB-Sn-L
KALAYLI FLEXIBLE BARA



KESİT (mm)	EBAT (mm)			AKIM (AMPER)	
	A	B	S	DC	AC
25	20	20	3.5	150	140
50			5	250	240
75			7	350	340
100			9	400	380
25	25	25	3.5	150	140
50			4.5	300	280
75			6	350	340
100			7	450	420
125			8.5	500	470
50	30	30	4	300	290
75			5	400	390
100			6	450	440
150			8.5	550	540
200			11.5	650	640
300			15.5	800	790
100	40	40	7.5	500	480
150			7.5	600	590
200			9.5	700	680
250			10.5	800	780
300			13	900	850
400			15.5	1000	960
140	50	50	6	650	630
210			8.2	800	780
280			10	950	900
420			14	1050	1000
560			16.2	1350	1200
140	60	60	6.5	700	680
210			8	900	850
350			11.2	1150	1100
490			13.1	1350	1300
560			15	1400	1350
340	80	80	9.5	1200	1100
520			11.5	1500	1400
700			14.5	1700	1600
840			16	1900	1800
1000			19.3	2100	1950
500	100	100	11	1600	1500
670			12.3	1850	1790
860			14.5	2100	2000
1000			17.5	2250	2150
1200			19	2450	2350
1500			23.5	2700	2550
610	120	120	11.7	1900	1750
1000			16	2650	2500
1540			21.2	3400	3200
2000			26.5	3950	3800
3000			36.2	4500	4550
4500			51	5400	5400

Teknik özellikler

Tavlansız Cu-ETP tellerden mamul, kaplama yapılmamış yüzey standarttır. İsteğe bağlı kalaylı tel. Tel 0.10-0.20 mm

Teas bölgeleri

Kaynaksız Cu-ETP borular. Kaplama yapılmamış papuç standarttır. Kalay, gümüş kaplamalı. İsteğe göre.

Yalıtım

PVC - ısıyla daralan. Silikon, cam elyaf veya diğerleri isteğe bağlı.

Not: Akım hakkındaki bütün bilgiler yalıtılmamış dizayn için yaklaşık değerlerdir, indirme faktörü yalıtılmış dizaynda 15-20% uygulamalara başlıdır. İletkenin sıcaklığı kurulum, uygulama alanı, soğutma vs. bağlı olduğu bilinmektedir. Eğer İndirme faktörleri dikkate alınırsa şirketimiz çalışanları size en iyi yanıtı vereceklerdir. Akımı taşıma hakkındaki bilgiler sadece yaklaşık değerlerdir.

ORDER CODE ÜRÜN KODU COPPER / BAKIR	ORDER CODE ÜRÜN KODU TINNED / KALAYLI	KESİT (mm ²)	TEL ÇAPI (Ø mm)	AĞIRLIK (km/mt.)
BCU-10	BCU-10 K	10	7x1,32	0,0899
BCU-16	BCU-16 K	16	7x1,70	0,1422
BCU-25	BCU-25 K	25	7x2,12 19x1,32	0,2222
BCU-35	BCU-35 K	35	7x2,50	0,3111
BCU-50	BCU-50 K	50	7x3,00 19x1,76	0,4445
BCU-70	BCU-70 K	70	19x2,12	0,6223
BCU-95	BCU-95 K	95	19x2,50	0,8446
BCU-120	BCU-120 K	120	19x2,80	1,0668
BCU-150	BCU-150 K	150	37x2,20	1,3350
BCU-185	BCU-185 K	185	37x2,50	1,6450
BCU-240	BCU-240 K	240	37x2,82	2,1350

Örgülü Bakır Teller;

TS-3 ve DİN 48201 standartlarına uygun olarak üretilmektedir.

İletkenlik; 58 m/ohm mm² (min.)



SINGLE HOLDER CLAMP
TEKLİ BAKIR KROŞE

ORDER CODE ÜRÜN KODU	BTE 25	BTE 35	BTE 50	BTE 70	BTE 95	BTE 120
KESİT (mm ²)	25	35	50	70	95	120



SINGLE HOLDER CLAMP
TEKLİ BAKIR KROŞE

ORDER CODE ÜRÜN KODU	BTE A25	BTE A35	BTE A50	BTE A70	BTE A95	BTE A120
KESİT (mm ²)	25	35	50	70	95	120



SINGLE HELIX COPPER CLAMP
TEKLİ SALLYANGOZ BAKIR KROŞE

ORDER CODE ÜRÜN KODU	BTE S16	BTE S25	BTE S35	BTE S50	BTE S70	BTE S95	BTE S120
KESİT (mm ²)	16	25	35	50	70	95	120



SINGLE BAR HOLDER CLAMP
TEKLİ LAMA TAŞIYICI KROŞE

KESİT (mm ²)		25x3	30x3	40x4	50x5
COPPER BAKIR	ORDER CODE ÜRÜN KODU	BTE 253	BTE 303	BTE 404	BTE 505
GALVANISED GALVANİZ	ORDER CODE ÜRÜN KODU	BTEG 253	BTEG 303	BTEG 404	BTEG 505



COPPER CONNECTING TERMINAL
TEKLİ LAMA TAŞIYICI KROŞE

KESİT (mm ²)		25x3	30x3	40x4	50x5
COPPER BAKIR	ORDER CODE ÜRÜN KODU	BTE 1253	BTE 1303	BTE 1404	BTE 1505
GALVANISED GALVANİZ	ORDER CODE ÜRÜN KODU	BTEG 1253	BTEG 1303	BTEG 1404	BTEG 1505



BRASS CLAW CLAMP
PRİŇÇ TIRNAKLI KLEMENS


ORDER CODE ÜRÜN KODU	KESİT (mm ²)
BTP-16	10-16
BTP-25	25
BTP-35	35
BTP-50	50
BTP-70	70
BT-120	95-120


BRASS U TYPE CLAMP
PRİŇÇ U KLEMENS

ORDER CODE ÜRÜN KODU	KESİT (mm ²)
BUP-6	6
BUP-10	10
BUP-16	16
BUP-25	25
BUP-35	35
BUP-50	50
BUP-70	70
BUP-95	95
BU P-120	120


BRASS 4 WAY MUFF
PRİŇÇ DÖRTLÜ MUF

ORDER CODE ÜRÜN KODU	KESİT (mm ²)
BMP-201	6
BMP-202	10
BMP-203	16
BMP-204	25
BMP-205	35
BMP-206	50
BMP-207	70
BMP-208	95
BMP-209	120
BMP-210	150
BMP-211	185
BMP-212	240
BMP-213	300


BRASS "T" MUFF
PRİŇÇ "T" MUF

ORDER CODE ÜRÜN KODU	KESİT (mm ²)
BMP-101	6
BMP-102	10
BMP-103	16
BMP-104	25
BMP-105	35
BMP-106	50
BMP-107	70
BMP-108	95
BMP-109	120
BMP-110	150
BMP-111	185
BMP-112	240
BMP-113	300


BRASS MUFF
PRİŇÇ EK MUF

ORDER CODE ÜRÜN KODU	KESİT (mm ²)
BMP-301	6
BMP-302	10
BMP-303	16
BMP-304	25
BMP-305	35
BMP-306	50
BMP-307	70
BMP-308	95
BMP-309	120
BMP-310	150
BMP-311	185
BMP-312	240
BMP-313	300


BRASS HOOK CLAMP
PRİŇÇ KANCA SERFİL

ORDER CODE ÜRÜN KODU	KESİT (mm ²)
BKS-57249	16
BKS-57250	25
BKS-57251	35
BKS-57252	50
BKS-57253	70
BKS-57254	95
BKS-57255	120
BKS-57256	150
BKS-57257	185
BKS-57258	240

H TYPE BRASS JOINTING CLAMP
H TİPİ PİRİNÇ BAĞLANTI KLEMENSİ

ORDER CODE ÜRÜN KODU	KESİT (mm ²)	KESİT (mm ²)
BHB-50	50	50
BHB-70	70	70
BHB-95	95	95
BHB-100	95	70
BHB-120	120	120



BHB-A50 50/50mm²



BHB-A100 25/150mm²

B TYPE BRASS JOINTING CLAMP
B TİPİ PİRİNÇ BAĞLANTI KLEMENSİ

ORDER CODE ÜRÜN KODU	KESİT (mm ²)	KESİT (mm ²)
BPT-225	25	25
BPT-235	35	35
BPT-250	50	50
BPT-270	70	70



BPT-225 25/25mm²



BHT-A100 35/95mm²

A TYPE BRASS JOINTING CLAMP
A TİPİ PİRİNÇ BAĞLANTI KLEMENSİ

ORDER CODE ÜRÜN KODU	KESİT (mm ²)	KESİT (mm ²)
BPT-125	25	25
BPT-135	35	35
BPT-150	50	50



BPT-125 25/25mm²



BHB-B100 50/70mm²

A TYPE COPPER JOINTING CLAMP
A TİPİ BAKIR BAĞLANTI KLEMENSİ

ORDER CODE ÜRÜN KODU	KESİT (mm ²)	KESİT (mm ²)
BPT-201	50	50
BPT-202	50/95	50/95
BPT-204	120	120



BPT-201



BPT-202



BPT-204

B TYPE 4 WAY JOINTING CLAMP
B TİPİ DÖRTLÜ BAĞLANTI KLEMENSİ



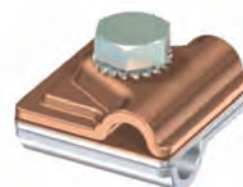
BDA-5070



BDB-5070



BDB-G 5070



BDB-BM 5070



BDB-P 5070

COPPER "C" CLAMP
BAKIR "C" KLEMENS

ORDER CODE ÜRÜN KODU	KESİT (mm ²)
BCK-101	35-50
BCK-102	50-50
BCK-103	70-70
BCK-104	95-95
BCK-105	120-120
BCK-106	150-150
BCK-107	185-185
BCK-108	240-240



COPPER "C" CLAMP (TINNED)
BAKIR "C" KLEMENS (KALAYLI)

ORDER CODE ÜRÜN KODU	KESİT (mm ²)
BCK-201	35-50
BCK-202	50-50
BCK-203	70-70
BCK-204	95-95
BCK-205	120-120
BCK-206	150-150
BCK-207	185-185
BCK-208	240-240



COPPER "H" CLAMP
BAKIR "H" KLEMENS

ORDER CODE ÜRÜN KODU	KESİT (mm ²)
BHK-101	35-50
BHK-102	50-50
BHK-103	70-70
BHK-104	95-95
BHK-105	120-120
BHK-106	150-150
BHK-107	185-185
BHK-108	240-240



COPPER "H" CLAMP (TINNED)
BAKIR "H" KLEMENS (KALAYLI)

ORDER CODE ÜRÜN KODU	KESİT (mm ²)
BHK-201	35-50
BHK-202	50-50
BHK-203	70-70
BHK-204	95-95
BHK-205	120-120
BHK-206	150-150
BHK-207	185-185
BHK-208	240-240



MUFF
EK MUF

ORDER CODE ÜRÜN KODU	BEM 6	BEM 10	BEM 16	BEM 25	BEM 35	BEM 50	BEM 70	BEM 95	BEM 120	BEM 150	BEM 185	BEM 240
KESİT (mm ²)	6	10	16	25	35	50	70	95	120	150	185	240



CABLE LUG
KABLO PABUCU

ORDER CODE ÜRÜN KODU	BKP 6	BKP 10	BKP 16	BKP 25	BKP 35	BKP 50	BKP 70	BKP 95	BKP 120	BKP 150	BKP 185	BKP 240	BKP 300
KESİT (mm ²)	6	10	16	25	35	50	70	95	120	150	185	240	300

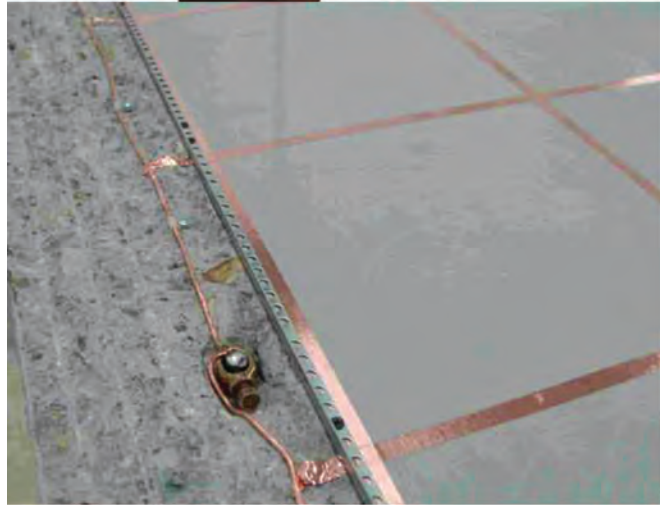


ELECTROLITIC COPPER STRIP ELEKTROLİTİK BAKIR RULO (BANT)

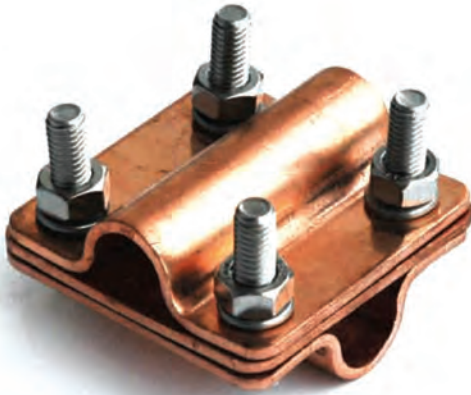
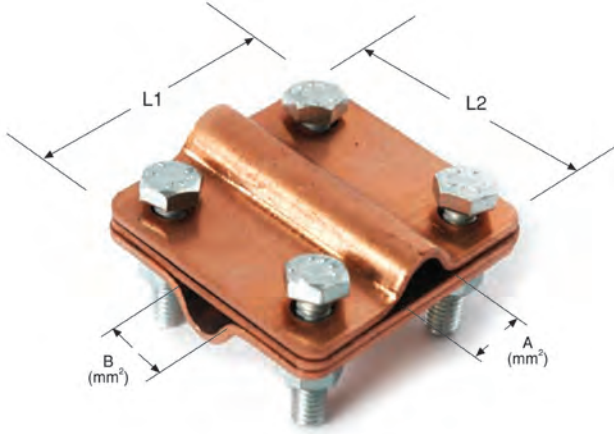
ORDER CODE ÜRÜN KODU	ÖLÇÜ (mm)	KESİT (mm ²)	AĞIRLIK (km/mt.)
BCR-1020	10x2	20	0,178
BCR-1030	10x3	30	0,267
BCR-1050	10x5	50	0,445
BCR-1520	15x2	30	0,267
BCR-1530	15x3	45	0,400
BCR-1550	15x5	75	0,667
BCR-2020	20x2	40	0,355
BCR-2030	20x3	60	0,534
BCR-2050	20x5	100	0,890
BCR-2520	25x2	50	0,445
BCR-2530	25x3	75	0,667
BCR-2550	25x5	125	1,110
BCR-3020	30x2	60	0,534
BCR-3030	30x3	90	0,800
BCR-3050	30x5	150	1,335
BCR-4020	40x2	80	1,712
BCR-4030	40x3	120	1,068
BCR-4050	40x5	200	1,780
BCR-5020	50x2	100	0,890
BCR-5030	50x3	150	1,335
BCR-5050	50x5	250	2,225



BCR-YF



ŞERİT YAPIŞKANLI RULO UYGULAMASI



BLT-40 KROS BAĞLANTI TABANI



BLT-50 KROS BAĞLANTI TABANI

ORDER CODE ÜRÜN KODU	A (mm ²)	A (mm ²)	L1xL2 (mm)
BLT-X151	25	25	40mm X 40mm
BLT-X152	35	35	40mm X 40mm
BLT-X153	50	50	40mm X 40mm
BLT-X 154	25	35	40mm X 40mm
BLT-X 155	25	50	40mm X 40mm
BLT-X 156	35	50	40mm X 40mm
BLT-X 157	50	50	50mm X 50mm
BLT-X 158	50	70	50mm X 50mm
BLT-X 159	50	95	50mm X 50mm
BLT-X 160	50	120	50mm X 50mm
BLT-X 161	50	150	50mm X 50mm
BLT-X 162	50	185	50mm X 50mm
BLT-X 163	50	240	50mm X 50mm
BLT-X 164	70	70	50mm X 50mm
BLT-X 165	70	95	50mm X 50mm
BLT-X 166	70	120	50mm X 50mm
BLT-X 167	70	150	50mm X 50mm
BLT-X 168	70	185	50mm X 50mm
BLT-X 169	70	240	50mm X 50mm
BLT-X 170	95	95	50mm X 50mm
BLT-X 171	95	120	50mm X 50mm
BLT-X 172	95	150	50mm X 50mm
BLT-X 173	95	185	50mm X 50mm
BLT-X 174	95	240	50mm X 50mm
BLT-X 175	120	120	50mm X 50mm
BLT-X 176	120	150	50mm X 50mm
BLT-X 177	120	185	50mm X 50mm
BLT-X 178	120	240	50mm X 50mm
BLT-X 179	150	150	50mm X 50mm
BLT-X 180	150	185	50mm X 50mm
BLT-X 181	150	240	50mm X 50mm
BLT-X 182	185	185	50mm X 50mm
BLT-X 183	185	240	50mm X 50mm
BLT-X 184	240	240	50mm X 50mm

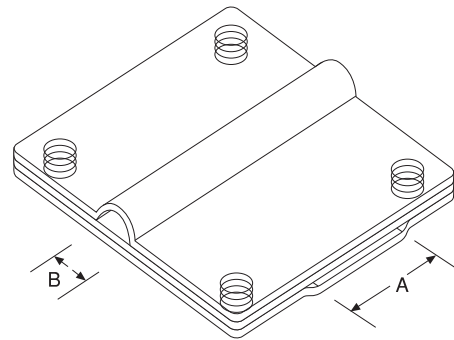
25x3 JOINTING CLAMP
25x3 BRANŞMAN BAĞLANTI KLEMENSİ

GALVANISED GALVANİZ	COPPER BAKIR	A (mm)	B (mm)
ORDER CODE ÜRÜN KODU	ORDER CODE ÜRÜN KODU		
BLT - 2510	BLT - 1253	25*3	25*3
BLT - 2515	BLT - 253	25*3	Ø 5,60 mm 25 mm ²
BLT - 2516	BLT - 254	25*3	Ø 6,00 mm 35 mm ²
BLT - 2520	BLT - 255	25*3	Ø 8,00 mm 50 mm ²
BLT - 2525	BLT - 256	25*3	Ø 9,50 mm 70 mm ²
BLT - 2526	BLT - 257	25*3	Ø 12,40 mm 95 mm ²
BLT - 2527	BLT - 258	25*3	Ø 14,20 mm 120 mm ²
BLT - 2530	BLT - 259	25*3	Ø 16 mm
BLT - 2535	BLT - 260	25*3	Ø 18 mm
BLT - 2540	BLT - 261	25*3	Ø 20 mm
BLT - 2542	BLT - 262	25*3	Ø 22 mm
BLT - 2550	BLT - 263	25*3	Ø 26 mm



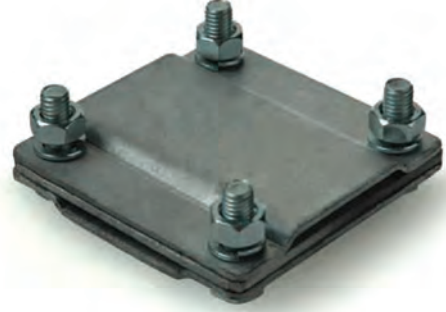
30x3 JOINTING CLAMP
30x3 BRANŞMAN BAĞLANTI KLEMENSİ

GALVANISED GALVANİZ	COPPER BAKIR	A (mm)	B (mm)
ORDER CODE ÜRÜN KODU	ORDER CODE ÜRÜN KODU		
BLT - 3010	BLT - 1303	30*3	30*3
BLT - 3015	BLT - 353	30*3	Ø 5,60 mm 25 mm ²
BLT - 3016	BLT - 354	30*3	Ø 6,00 mm 35 mm ²
BLT - 3020	BLT - 355	30*3	Ø 8,00 mm 50 mm ²
BLT - 3025	BLT - 356	30*3	Ø 9,50 mm 70 mm ²
BLT - 3026	BLT - 357	30*3	Ø 12,40 mm 95 mm ²
BLT - 3027	BLT - 358	30*3	Ø 14,20 mm 120 mm ²
BLT - 3030	BLT - 359	30*3	Ø 16 mm
BLT - 3035	BLT - 360	30*3	Ø 18 mm
BLT - 3040	BLT - 361	30*3	Ø 20 mm
BLT - 3042	BLT - 362	30*3	Ø 22 mm
BLT - 3050	BLT - 363	30*3	Ø 26 mm



40x4 JOINTING CLAMP
40x4 BRANŞMAN BAĞLANTI KLEMENSİ

GALVANISED GALVANİZ	COPPER BAKIR	A (mm)	B (mm)
ORDER CODE ÜRÜN KODU	ORDER CODE ÜRÜN KODU		
BLT-4010	BLT-1403	40*4	40*4
BLT-4015	BLT - 453	40*4	Ø 5,60 mm 25 mm ²
BLT-4016	BLT - 454	40*4	Ø 6,00 mm 35 mm ²
BLT-4020	BLT-455	40*4	Ø 8,00 mm 50 mm ²
BLT-4025	BLT-456	40*4	Ø 9,50 mm 70 mm ²
BLT-4026	BLT-457	40*4	Ø 12,40 mm 95 mm ²
BLT-4027	BLT-458	40*4	Ø 14,20 mm 120 mm ²
BLT-4030	BLT - 459	40*4	Ø 16 mm
BLT-4035	BLT-460	40*4	Ø 18 mm
BLT-4040	BLT-461	40*4	Ø 20 mm
BLT - 4042	BLT - 462	40*4	Ø 22 mm
BLT - 4050	BLT - 463	40*4	Ø 26 mm



50x5 JOINTING CLAMP
50x5 BRANŞMAN BAĞLANTI KLEMENSİ

GALVANISED GALVANİZ	COPPER BAKIR	A (mm)	B (mm)
ORDER CODE ÜRÜN KODU	ORDER CODE ÜRÜN KODU		
BLT-5010	BLT-1505	50*5	50*5
BLT-5015	BLT - 553	50*5	Ø 5,60 mm 25 mm ²
BLT-5016	BLT - 554	50*5	Ø 6,00 mm 35 mm ²
BLT - 5020	BLT - 555	50*5	Ø 8,00 mm 50 mm ²
BLT-5025	BLT-556	50*5	Ø 9,50 mm 70 mm ²
BLT-5026	BLT-557	50*5	Ø 12,40 mm 95 mm ²
BLT-5027	BLT - 558	50*5	Ø 14,20 mm 120 mm ²
BLT-5030	BLT-559	50*5	Ø 16 mm
BLT-5035	BLT-560	50*5	Ø 18 mm
BLT-5040	BLT-561	50*5	Ø 20 mm
BLT-5042	BLT-562	50*5	Ø 22 mm
BLT-5050	BLT - 563	50*5	Ø 26 mm



BLT-P40 BRONZ EK KLEMENSİ 40x4

COPPER GROUNDING PLATE
BAKIR TOPRAKLAMA LEVHASI

ORDER CODE ÜRÜN KODU	e (mm)	A (mm)	B (mm)
BTL-7010	1,00	700	700
BTL-7015	1,50	700	700
BTL-7020	2,00	700	700
BTL-7030	3,00	700	700
BTL-7040	4,00	700	700
BTL-7050	5,00	700	700
BTL-10010	1,00	1000	1000
BTL-10015	1,50	1000	1000
BTL-10020	2,00	1000	1000
BTL-10030	3,00	1000	1000
BTL-10040	4,00	1000	1000
BTL-10050	5,00	1000	1000



Bakir Topraklama Levhaları;

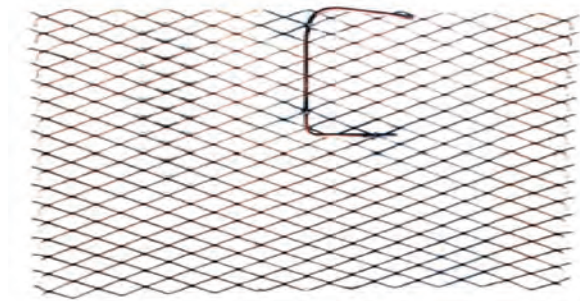
TS 552 standartlarına uygun olarak
üretilmektedir.



GALVANİZ
TOPRAKLAMA LEVHASI

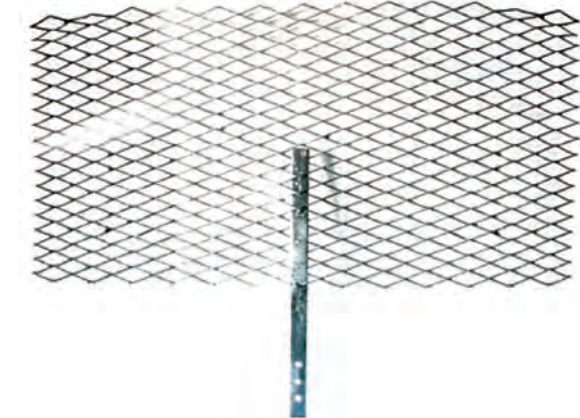
GALVANISED GROUNDING PLATE
GALVANİZ TOPRAKLAMA LEVHASI

ORDER CODE ÜRÜN KODU	e (mm)	A (mm)	B (mm)
BTL-5020	2,00	500	1000
BTL-5025	2,50	500	1000
BTL-5030	3,00	500	1000

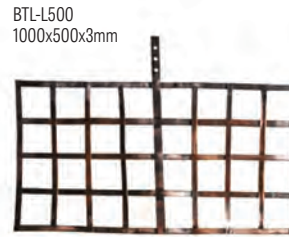


LATTICE COPPER GROUNDING PLATE
KAFES TİPİ TOPRAKLAMA LEVHASI

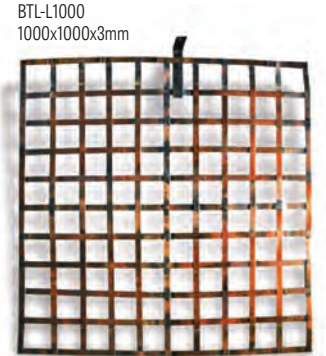
BTL-120
1000x500x2mm
BAKIR



BTL-G120
1000x500x2mm
GALVANİZ



BTL-L500
1000x500x3mm



BTL-L1000
1000x1000x3mm

BAR TYPE GROUNDING PLATE / LAMA TİPİ TOPRAKLAMA LEVHASI



BTL-G205
200x200x5mm
STATİK GALVANİZ TOPRAKLAMA LEVHASI



COPPER BONDED GROUNDING RODS
BAKIR BORU GEÇME TOPRAKLAMA ÇUBUKLARI

	L (1000 mm)	L (1200 mm)	L (1500 mm)	L (1750 mm)	L (2000 mm)	L (2500 mm)	L (3000 mm)	L (3500 mm)
∅ (18 mm) 1000 micron	BTEK-1610	BTEK-1612	BTEK-1615	BTEK-1617	BTE K-1620	BTE K-1625	BTE K-1630	BTE K-1635
∅ (20 mm) 1000 micron	BTEK-1810	BTEK-1812	BTEK-1815	BTEK-1817	BTE K-1820	BTE K-1825	BTE K-1830	BTE K-1835
∅ (22 mm) 1000 micron	BTEK-2010	BTEK-2012	BTEK-2015	BTEK-2017	BTEK-2020	BTEK-2025	BTEK-2030	BTEK-2035
∅ (22 mm) 3000 micron	BTEK-2210	BTEK-2212	BTEK-2215	BTEK-2217	BTEK-2220	BTEK-2225	BTEK-2230	BTEK-2235



COPPER BONDED GROUNDING RODS
BAKIR BORU GEÇME TOPRAKLAMA ÇUBUKLARI

	L (1000 mm)	L (1200 mm)	L (1500 mm)	L (1750 mm)	L (2000 mm)	L (2500 mm)	L (3000 mm)	L (3500 mm)
∅ (18 mm) 1000 micron	BTEK-1610S	BTEK-1612S	BTEK-1615S	BTEK-1617S	BTEK-1620S	BTEK-1625S	BTEK-1630S	BTEK-1635S
∅ (20 mm) 1000 micron	BTEK-1810S	BTEK-1812S	BTEK-1815S	BTEK-1817S	BTEK-1820S	BTEK-1825S	BTEK-1830S	BTEK-1835S
∅ (22 mm) 1000 micron	BTEK-2010S	BTEK-2012S	BTEK-2015S	BTEK-2017S	BTEK-2020S	BTEK-2025S	BTEK-2030S	BTEK-2035S
∅ (22 mm) 3000 micron	BTEK-2210S	BTEK-2212S	BTEK-2215S	BTEK-2217S	BTEK-2220S	BTEK-2225S	BTEK-2230S	BTEK-2235S



COPPER BONDED GROUNDING RODS
BAKIR BORU GEÇME TOPRAKLAMA ÇUBUKLARI

	L (1000 mm)	L (1200 mm)	L (1500 mm)	L (1750 mm)	L (2000 mm)	L (2500 mm)	L (3000 mm)	L (3500 mm)
∅ (18 mm) 1000 micron	BTEK-1610D	BTEK-1612D	BTEK-1615D	BTEK-1617D	BTEK-1620D	BTEK-1625D	BTEK-1630D	BTEK-1635D
∅ (20 mm) 1000 micron	BTEK-1810D	BTEK-1812D	BTEK-1815D	BTEK-1817D	BTEK-1820D	BTEK-1825D	BTEK-1830D	BTEK-1835D
∅ (22 mm) 1000 micron	BTEK-2010D	BTEK-2012D	BTEK-2015D	BTEK-2017D	BTEK-2020D	BTEK-2025D	BTEK-2030D	BTEK-2035D
∅ (22 mm) 3000 micron	BTEK-2210D	BTEK-2212D	BTEK-2215D	BTEK-2217D	BTEK-2220D	BTEK-2225D	BTEK-2230D	BTEK-2235D





TOPRAKLAMA RÖGARI / PLASTİK BTR-10



TOPRAKLAMA RÖGARI / SAC BTR-20 / 300x300x300mm
TOPRAKLAMA RÖGARI / SAC BTR-25 / 400x400x400mm



TOPRAKLAMA RÖGARI / PLASTİK BTR-55 / 550x550x500mm
TOPRAKLAMA RÖGARI / PLASTİK BTR-40 / 400x400x400mm
TOPRAKLAMA RÖGARI / PLASTİK BTR-15 / 300x300x300mm



TOPRAKLAMA RÖGARI / BETON BTR-30 / 400x400x200mm
TOPRAKLAMA RÖGARI / BETON BTR-35 / 400x400x400mm



BSU-10



BÇT-10



BSU-12



BÇT-12



BSU-16



BAB-16



BÇT-16



BAB-12
BAB-10



25x3 U TYPE GROUNDING ROD CLAMP
25x3 U TİPİ ELEKTROD BAĞLANTI KLEMENSİ

ALUMINIUM ALÜMİNYUM	BRONZE BRONZ	Ø (mm)
BÇK-U161	BÇK-U162	16
BÇK-U181	BÇK-U182	18
BÇK-U201	BÇK-U202	20


U TYPE GROUNDING ROD CLAMP
U TİPİ ELEKTROD BAĞLANTI KLEMENSİ

ORDER CODE ÜRÜN KODU	Ø (mm)	KESİT (mm ²)
BÇK-U16	16	35-150
BÇK-U18	18	35-150
BÇK-U20	20	35-150


25x3 U TYPE GROUNDING ROD CLAMP
25x3 U TİPİ ELEKTROD BAĞLANTI KLEMENSİ

ALUMINIUM ALÜMİNYUM	BRONZE BRONZ	Ø (mm)
BÇK-U163	BÇK-U164	16
BÇK-U183	BÇK-U184	18
BÇK-U203	BÇK-U204	20


U TYPE GROUNDING ROD CLAMP
U TİPİ ELEKTROD BAĞLANTI KLEMENSİ

ORDER CODE ÜRÜN KODU	Ø (mm)	KESİT (mm ²)
BÇK-U250	20	1x50
BÇK-U251	20	2x35
BÇK-U252	20	2x50
BÇK-U253	20	2x70
BÇK-U254	20	2x95


U TYPE GROUNDING ROD CLAMP
U TİPİ ELEKTROD BAĞLANTI KLEMENSİ

ORDER CODE ÜRÜN KODU	Ø (mm)	KESİT (mm ²)
BÇK-U350	20	1x50
BÇK-U351	20	2x35
BÇK-U352	20	2x50
BÇK-U353	20	2x70



C TYPE GROUNDING ROD CLAMP
C TİPİ ELEKTROD BAĞLANTI KLEMENSİ

ORDER CODE ÜRÜN KODU	Ø (mm)	KESİT (mm ²)
BÇK-C16	16	35-70
BÇK-C18	18	35-70
BÇK-C20	20	35-70
BÇK-C22	22	35-70



A TYPE GROUNDING ROD CLAMP
A TİPİ ELEKTROD BAĞLANTI KLEMENSİ

ORDER CODE ÜRÜN KODU	Ø (mm)	KESİT (mm ²)
BÇK-A16	16	35-70
BÇK-A18	18	35-70
BÇK-A20	20	35-70



S TYPE GROUNDING ROD CLAMP
S TİPİ ELEKTROD BAĞLANTI KLEMENSİ

ORDER CODE ÜRÜN KODU	Ø (mm)	KESİT (mm ²)
BÇK-S16	16	35-70
BÇK-S18	18	35-70
BÇK-S20	20	35-70



W TYPE GROUNDING ROD CLAMP
W TİPİ ELEKTROD BAĞLANTI KLEMENSİ

ORDER CODE ÜRÜN KODU	Ø (mm)	KESİT (mm ²)
BÇK-WV16	16	50-95
BÇK-WV18	18	50-95
BÇK-W20	20	50-95
BÇK-W22	22	50-95
BÇK-W26	26	50-95



T TYPE GROUNDING ROD CLAMP
T TİPİ ELEKTROD BAĞLANTI KLEMENSİ

KESİT (mm)	25x3 mm	30x3 mm	40x4 mm	50x5 mm
Ø 16 mm	BÇK-T161	BÇK-T162	BÇK-T163	BÇK-T164
Ø 18 mm	BÇK-T181	BÇK-T182	BÇK-T183	BÇK-T184
Ø 20 mm	BÇK-T201	BÇK-T202	BÇK-T203	BÇK-T204
Ø 22 mm	BÇK-T221	BÇK-T222	BÇK-T223	BÇK-T224
Ø 26 mm	BÇK-T261	BÇK-T262	BÇK-T263	BÇK-T264



K TYPE GROUNDING ROD CLAMP
K TİPİ ELEKTROD BAĞLANTI KLEMENSİ

	KESİT (mm ²) 10-16	KESİT (mm ²) 25-35	KESİT (mm ²) 50	KESİT (mm ²) 70	KESİT (mm ²) 95	KESİT (mm ²) 120	KESİT (mm ²) 150	KESİT (mm ²) 185	KESİT (mm ²) 240
Ø 16 mm	BÇK-16L1	BÇK-16L2	BÇK-16L3	BÇK-16L4	BÇK-16L5	BÇK-16L6	BÇK-16L7	BÇK-16L8	BÇK-16L9
Ø 18 mm	BÇK-18L1	BÇK-18L2	BÇK-18L3	BÇK-18L4	BÇK-18L5	BÇK-18L6	BÇK-18L7	BÇK-18L8	BÇK-18L9
Ø 20 mm	BÇK-20L1	BÇK-20L2	BÇK-20L3	BÇK-20L4	BÇK-20L5	BÇK-20L6	BÇK-20L7	BÇK-20L8	BÇK-20L9



GROUNDING ROD CLAMPS / BRONZE
ELEKTROD BAĞLANTI KLEMENSİ / BRONZ


ORDER CODE ÜRÜN KODU	(mm ²)	B
BFT-103 A	25	M.6
BFT-103 B	25	M.8
BFT-103 C	25	M.10
BFT-103 D	25	M.12

ORDER CODE ÜRÜN KODU	(mm ²)	B
BFT-104 A	35	M.6
BFT-104 B	35	M.8
BFT-104 C	35	M.10
BFT-104 D	35	M.12

ORDER CODE ÜRÜN KODU	(mm ²)	B
BFT-105 A	50	M.6
BFT-105 B	50	M.8
BFT-105 C	50	M.10
BFT-105 D	50	M.12

ORDER CODE ÜRÜN KODU	(mm ²)	B
BFT-106 A	70	M.6
BFT-106 B	70	M.8
BFT-106 C	70	M.10
BFT-106 D	70	M.12

ORDER CODE ÜRÜN KODU	(mm ²)	B
BFT-107 A	95	M.6
BFT-107 B	95	M.8
BFT-107 C	95	M.10
BFT-107 D	95	M.12

ORDER CODE ÜRÜN KODU	(mm ²)	B
BFT-108 A	120	M.6
BFT-108 B	120	M.8
BFT-108 C	120	M.10
BFT-108 D	120	M.12

25x3 GROUNDING ROD CLAMPS / BRONZE
25x3 BRONZ ELEKTROD BAĞLANTI KLEMENSİ

ORDER CODE ÜRÜN KODU	(mm ²)	B
BFT-100	25x3	Q 20


GROUNDING ROD CLAMPS / BRONZE
ELEKTROD BAĞLANTI KLEMENSİ / BRONZ

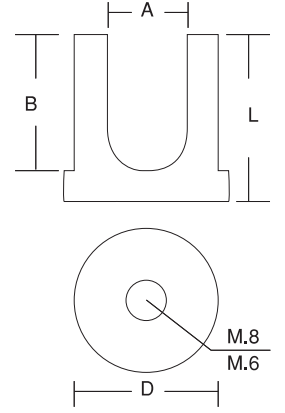
ORDER CODE ÜRÜN KODU	(mm ²)	B
BFT-101	16/50	Q 16
BFT-102	16/70	Q 18
BFT-103	16/95	Q 20



**BRASS FIXING AND JOINTING CLAMP (HEXAGONAL)
PRİNÇ EK VE TESPİT KLEMENSİ (ALTI KÖŞE)**



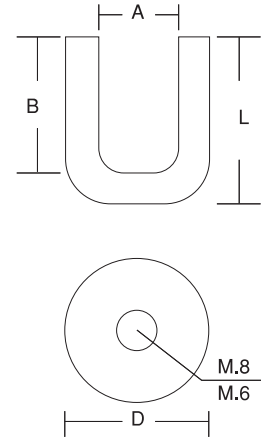
ÜRÜN KODU ORDER CODE	mm ²	A mm	B mm	D mm	L mm	Ø mm
BTP-2010	10-35	8	14	18	22	M6 M8
BTP-2015	35-70	10	17	21	25	M6 M8
BTP-2020	70-150	16	29	28	39	M6 M8
BTP-2025	150-185	18	33	31	45	M6 M8



**BRASS FIXING AND JOINTING CLAMP (CYLINDRICAL)
PRİNÇ EK VE TESPİT KLEMENSİ (SİLİNDİR)**



ÜRÜN KODU ORDER CODE	mm ²	A mm	B mm	D mm	L mm	Ø mm
BTP-1010	10-35	8	14	18	22	M6 M8
BTP-1015	35-70	10	17	21	25	M6 M8
BTP-1020	70-150	16	29	28	39	M6 M8
BTP-1025	150-185	18	33	31	45	M6 M8



**IRON FIXING AND JOINTING CLAMP (CYLINDRICAL)
DEMİR EK VE TESPİT KLEMENSİ (SİLİNDİR)**

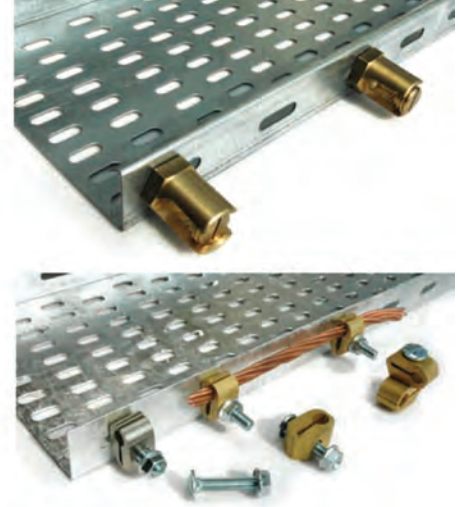


ÜRÜN KODU ORDER CODE	mm ²	A mm	B mm	D mm	L mm	Ø mm
BTP-1010	10-35	8	14	18	22	M6 M8
BTP-1015	35-70	10	17	21	25	M6 M8
BTP-1020	70-150	16	29	28	39	M6 M8
BTP-1025	150-185	18	33	31	45	M6 M8



CABLE TRAY FIXING CLAMP
KANAL İLETKEN TESPİT ELEMANI

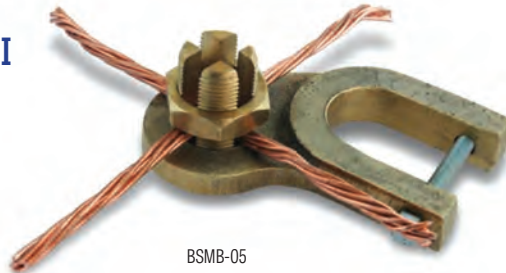
ORDER CODE ÜRÜN KODU		KESİT (mm ²)
PRİNÇ	KALAYLI	
BKS-P16	BKS-K16	16
BKS-P25	BKS-K25	25
BKS-P35	BKS-K35	35
BKS-P50	BKS-K50	50
BKS-P70	BKS-K70	70
BKS-P95	BKS-K95	95
BKS-P120	BKS-K120	120
BKS-P150	BKS-K150	150
BKS-P185	BKS-K185	185
BKS-P240	BKS-K240	240


PIPE GROUNDING
BORU TOPRAKLAMA

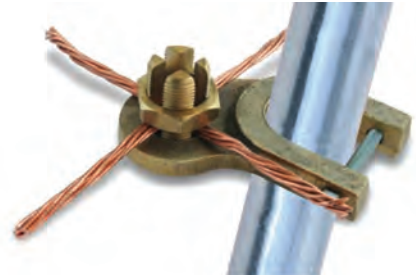
ORDER CODE ÜRÜN KODU	KESİT (mm ²)
BKS-B16	16
BKS-B25	25
BKS-B35	35
BKS-B50	50
BKS-B70	70
BKS-B95	95
BKS-B120	120
BKS-B150	150
BKS-B185	185
BKS-B240	240


STATICAL GROUNDING NIPPER
STATİK TOPRAKLAMA MAŞASI


BSTM-10

STATICAL PIPE GROUNDING
STATİK BORU TOPRAKLAMASI


BSMB-05



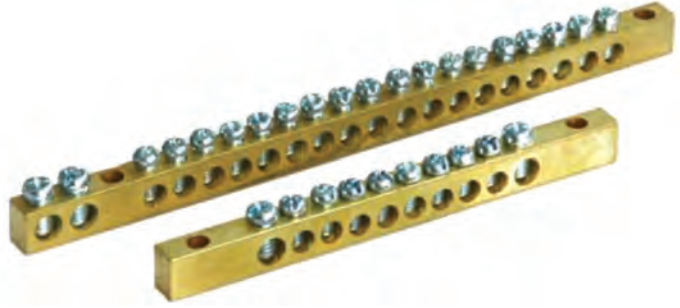
PANEL GROUNDING CLAMP
PANO TOPRAKLAMA KLEMENSİ

ORDER CODE ÜRÜN KODU	L mm	DESCRIPTION AÇIKLAMA	mm x mm
BTK-56904	36	4 Giriş	6,50 x 9,00
BTK-56905	42	5 Giriş	6,50 x 9,00
BTK-56906	48	6 Giriş	6,50 x 9,00
BTK-56907	54	7 Giriş	6,50 x 9,00
BTK-56909	67	9 Giriş	6,50 x 9,00
BTK-56910	73	10 Giriş	6,50 x 9,00
BTK-56912	85	12 Giriş	6,50 x 9,00



PANEL GROUNDING CLAMP
PANO TOPRAKLAMA KLEMENSİ

ORDER CODE ÜRÜN KODU	L mm	DESCRIPTION AÇIKLAMA	mm x mm
BTK-53612	135	12 Giriş	6,50 x 9,00
BTK-53615	145	15 Giriş	6,50 x 9,00
BTK-53620	156	20 Giriş	6,50 x 9,00
BTK-53622	175	22 Giriş	6,50 x 9,00
BTK-53625	186	25 Giriş	6,50 x 9,00
BTK-53630	216	30 Giriş	6,50 x 9,00
BTK-53642	185	42 Giriş	6,50 x 9,00



PANEL GROUNDING CLAMP
PANO TOPRAKLAMA KLEMENSİ

ORDER CODE ÜRÜN KODU	L mm	DESCRIPTION AÇIKLAMA	mm x mm
BTK-54606	100	6 Giriş	6,50 x 9,00
BTK-54607	106	7 Giriş	6,50 x 9,00
BTK-54610	124	10 Giriş	6,50 x 9,00
BTK-54612	148	12 Giriş	6,50 x 9,00
BTK-54615	155	15 Giriş	6,50 x 9,00
BTK-54620	186	20 Giriş	6,50 x 9,00
BTK-54622	205	22 Giriş	6,50 x 9,00
BTK-54625	218	25 Giriş	6,50 x 9,00
BTK-54630	245	30 Giriş	6,50 x 9,00



PANEL GROUNDING CLAMP
PANO TOPRAKLAMA KLEMENSİ

ORDER CODE ÜRÜN KODU	L mm	DESCRIPTION AÇIKLAMA	mm x mm
BTK-82910	75	6 Giriş	7,00 x 12,00
BTK-82911	124	10 Giriş	7,00 x 12,00
BTK-82912	162	15 Giriş	7,00 x 12,00
BTK-82913	200	20 Giriş	7,00 x 12,00
BTK-82914	238	25 Giriş	7,00 x 12,00
BTK-82915	275	30 Giriş	7,00 x 12,00





TYPE 1 EQUAL POTENTIAL BAR
TİP 1 EŞPOTANSİYEL BARA

	KESİT (mm x mm)	30 x 3	30 x 5	30 x 10	40 x 5	40 x 10	50 x 5	50 x 10	60 x 5	60 x 10
GALVANISED EQUAL POTENTIAL BAR GALVANİZ EŞPOTANSİYEL BARA	L=200mm	BEP-20033	BEP-20035	BEP-20010	BEP-20005	BEP-20040	BEP-20055	BEP-20050	BEP-20065	BEP-20060
	L=300mm	BEP-30033	BEP-30035	BEP-30010	BEP-30005	BEP-30040	BEP-30055	BEP-30050	BEP-30065	BEP-30060
	L=400mm	BEP-40033	BEP-40035	BEP-40010	BEP-40005	BEP-40040	BEP-40055	BEP-40050	BEP-40065	BEP-40060
	L=500mm	BEP-50033	BEP-50035	BEP-50010	BEP-50005	BEP-50040	BEP-50055	BEP-50050	BEP-50065	BEP-50060
COPPER EQUAL POTENTIAL BAR BAKIR EŞPOTANSİYEL BARA	L=200mm	BEP-2B033	BEP-2B035	BEP-2B010	BEP-2B005	BEP-2B040	BEP-2B055	BEP-2B050	BEP-2B065	BEP-2B060
	L=300mm	BEP-3B033	BEP-3B035	BEP-3B010	BEP-3B005	BEP-3B040	BEP-3B055	BEP-3B050	BEP-3B065	BEP-3B060
	L=400mm	BEP-4B033	BEP-4B035	BEP-4B010	BEP-4B005	BEP-4B040	BEP-4B055	BEP-4B050	BEP-4B065	BEP-4B060
	L=500mm	BEP-5B033	BEP-5B035	BEP-5B010	BEP-5B005	BEP-5B040	BEP-5B055	BEP-5B050	BEP-5B065	BEP-5B060
COPPER EQUAL POTENTIAL BAR / TINNED BAKIR EŞPOTANSİYEL BARA / KALAYLI	L=200mm	BEP-2S033	BEP-2S035	BEP-2S010	BEP-2S005	BEP-2S040	BEP-2S055	BEP-2S050	BEP-2S065	BEP-2S060
	L=300mm	BEP-3S033	BEP-3S035	BEP-3S010	BEP-3S005	BEP-3S040	BEP-3S055	BEP-3S050	BEP-3S065	BEP-3S060
	L=400mm	BEP-4S033	BEP-4S035	BEP-4S010	BEP-4S005	BEP-4S040	BEP-4S055	BEP-4S050	BEP-4S065	BEP-4S060
	L=500mm	BEP-5S033	BEP-5S035	BEP-5S010	BEP-5S005	BEP-5S040	BEP-5S055	BEP-5S050	BEP-5S065	BEP-5S060



TYPE 2 EQUAL POTENTIAL BAR
TİP 2 EŞPOTANSİYEL BARA

	KESİT (mm x mm)	30 x 3	30 x 5	30 x 10	40 x 5	40 x 10	50 x 5	50 x 10	60 x 5	60 x 10
GALVANISED EQUAL POTENTIAL BAR GALVANİZ EŞPOTANSİYEL BARA	L=200mm	BEP-20133	BEP-20135	BEP-20110	BEP-20105	BEP-20140	BEP-20155	BEP-20150	BEP-20165	BEP-20160
	L=300mm	BEP-30133	BEP-30135	BEP-30110	BEP-30105	BEP-30140	BEP-30155	BEP-30150	BEP-30165	BEP-30160
	L=400mm	BEP-40133	BEP-40135	BEP-40110	BEP-40105	BEP-40140	BEP-40155	BEP-40150	BEP-40165	BEP-40160
	L=500mm	BEP-50133	BEP-50135	BEP-50110	BEP-50105	BEP-50140	BEP-50155	BEP-50150	BEP-50165	BEP-50160
COPPER EQUAL POTENTIAL BAR BAKIR EŞPOTANSİYEL BARA	L=200mm	BEP-2B133	BEP-2B135	BEP-2B110	BEP-2B105	BEP-2B140	BEP-2B155	BEP-2B150	BEP-2B165	BEP-2B160
	L=300mm	BEP-3B133	BEP-3B135	BEP-3B110	BEP-3B105	BEP-3B140	BEP-3B155	BEP-3B150	BEP-3B165	BEP-3B160
	L=400mm	BEP-4B133	BEP-4B135	BEP-4B110	BEP-4B105	BEP-4B140	BEP-4B155	BEP-4B150	BEP-4B165	BEP-4B160
	L=500mm	BEP-5B133	BEP-5B135	BEP-5B110	BEP-5B105	BEP-5B140	BEP-5B155	BEP-5B150	BEP-5B165	BEP-5B160
COPPER EQUAL POTENTIAL BAR / TINNED BAKIR EŞPOTANSİYEL BARA / KALAYLI	L=200mm	BEP-2S133	BEP-2S135	BEP-2S110	BEP-2S105	BEP-2S140	BEP-2S155	BEP-2S150	BEP-2S165	BEP-2S160
	L=300mm	BEP-3S133	BEP-3S135	BEP-3S110	BEP-3S105	BEP-3S140	BEP-3S155	BEP-3S150	BEP-3S165	BEP-3S160
	L=400mm	BEP-4S133	BEP-4S135	BEP-4S110	BEP-4S105	BEP-4S140	BEP-4S155	BEP-4S150	BEP-4S165	BEP-4S160
	L=500mm	BEP-5S133	BEP-5S135	BEP-5S110	BEP-5S105	BEP-5S140	BEP-5S155	BEP-5S150	BEP-5S165	BEP-5S160



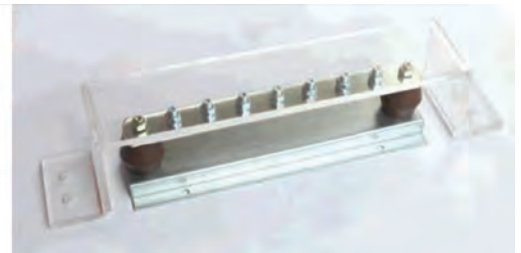
TYPE 3 EQUAL POTENTIAL BAR
TİP 3 EŞPOTANSİYEL BARA

	KESİT (mm x mm)									
		30 x 3	30 x 5	30 x 10	40 x 5	40 x 10	50 x 5	50 x 10	60 x 5	60 x 10
GALVANISED EQUAL POTENTIAL BAR GALVANİZ EŞPOTANSİYEL BARA	L=200mm	BEP-20233	BEP-20235	BEP-20210	BEP-20205	BEP-20240	BEP-20255	BEP-20250	BEP-20265	BEP-20260
	L=300mm	BEP-30233	BEP-30235	BEP-30210	BEP-30205	BEP-30240	BEP-30255	BEP-30250	BEP-30265	BEP-30260
	L=400mm	BEP-40233	BEP-40235	BEP-40210	BEP-40205	BEP-40240	BEP-40255	BEP-40250	BEP-40265	BEP-40260
	L=500mm	BEP-50233	BEP-50235	BEP-50210	BEP-50205	BEP-50240	BEP-50255	BEP-50250	BEP-50265	BEP-50260
COPPER EQUAL POTENTIAL BAR BAKIR EŞPOTANSİYEL BARA	L=200mm	BEP-2B233	BEP-2B235	BEP-2B210	BEP-2B205	BEP-2B240	BEP-2B255	BEP-2B250	BEP-2B265	BEP-2B260
	L=300mm	BEP-3B233	BEP-3B235	BEP-3B210	BEP-3B205	BEP-3B240	BEP-3B255	BEP-3B250	BEP-3B265	BEP-3B260
	L=400mm	BEP-4B233	BEP-4B235	BEP-4B210	BEP-4B205	BEP-4B240	BEP-4B255	BEP-4B250	BEP-4B265	BEP-4B260
	L=500mm	BEP-5B233	BEP-5B235	BEP-5B210	BEP-5B205	BEP-5B240	BEP-5B255	BEP-5B250	BEP-5B265	BEP-5B260
COPPER EQUAL POTENTIAL BAR / TINNED BAKIR EŞPOTANSİYEL BARA / KALAYLI	L=200mm	BEP-2S233	BEP-2S235	BEP-2S210	BEP-2S205	BEP-2S240	BEP-2S255	BEP-2S250	BEP-2S265	BEP-2S260
	L=300mm	BEP-3S233	BEP-3S235	BEP-3S210	BEP-3S205	BEP-3S240	BEP-3S255	BEP-3S250	BEP-3S265	BEP-3S260
	L=400mm	BEP-4S233	BEP-4S235	BEP-4S210	BEP-4S205	BEP-4S240	BEP-4S255	BEP-4S250	BEP-4S265	BEP-4S260
	L=500mm	BEP-5S233	BEP-5S235	BEP-5S210	BEP-5S205	BEP-5S240	BEP-5S255	BEP-5S250	BEP-5S265	BEP-5S260



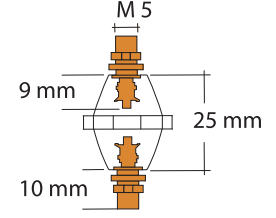
TRANSPARENT COVER
ŞEFFAF MUHAFAZA

ORDER CODE ÜRÜN KODU	L (mm)
BEP-200	200
BEP-300	300
BEP-400	400
BEP-500	500

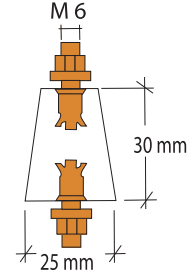


MINI INSULATOR
MİNİ İZOLATÖR

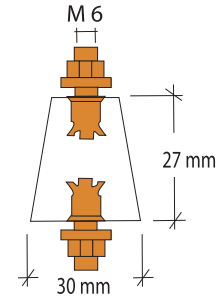
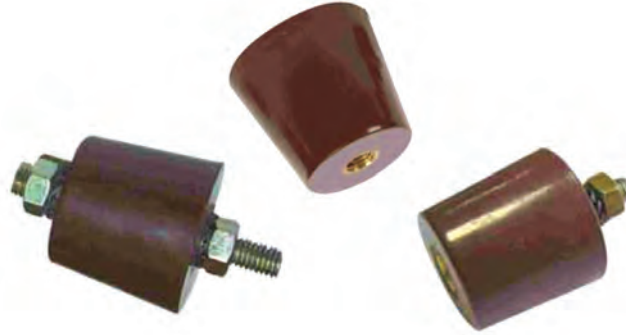
ORDER CODE ÜRÜN KODU	DESCRIPTION AÇIKLAMA
Bİ-57219	BMI - M 5/2 C
Bİ-57220	BMI-M 5/1 C + 1S
Bİ-57221	BMI - M 5/2 S


CONIC INSULATOR (SMALL)
KONİK İZOLATÖR (KÜÇÜK)

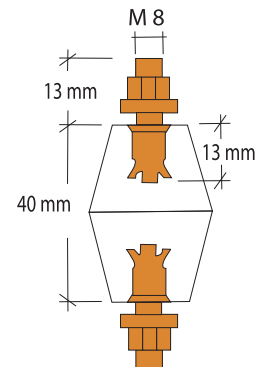
ORDER CODE ÜRÜN KODU	DESCRIPTION AÇIKLAMA
Bİ-57222	BMI - M 6/2 C
Bİ-57223	BMI-M 6/1 C + 1S
Bİ-57224	BMI - M 6/2 S


CONIC INSULATOR (MEDIUM)
KONİK İZOLATÖR (ORTA)

ORDER CODE ÜRÜN KODU	DESCRIPTION AÇIKLAMA
Bİ-57225	BMI - M 6/2 C
Bİ-57226	BMI-M6/1 C + 1S
Bİ-57227	BMI - M 6/2 S
Bİ-57236	BMI - M 8/2 C
Bİ-57237	BMI-M 8/1 C + 1S
Bİ-57238	BMI - M 8/2 S


INSULATOR (LARGE)
İZOLATÖR (BÜYÜK)

ORDER CODE ÜRÜN KODU	DESCRIPTION AÇIKLAMA
Bİ-57228	BMI - M 8/2 C
Bİ-57232	BMI-M 8/1 C + 1S
Bİ-57230	BMI - M 8/2 S
Bİ-57229	BMI - M 10/2 C
Bİ-57233	BMI-M 10/1 C + 1S
Bİ-57231	BMI - M 10/2 S



WELDING MOULD
KAYNAK POTASI

ORDER CODE ÜRÜN KODU	MOULD TYPE POTA TİPİ
BKP-A	A
BKP-C	C
BKP-D	D



POTA KAZIYICI / BKP-K

MOULD HANDLE CLAMP
POTA PENSESİ

ORDER CODE ÜRÜN KODU	MOULD TYPE POTA TİPİ
BKP-P1	C
BKP-P2	D



POTA FIRÇASI / BKP-F

EXOTHERMIC WELDING POWDER
TERMO KAYNAK TOZU

ORDER CODE ÜRÜN KODU	WELDING POWDER KAYNAK TOZU
BKT-15	15
BKT-25	25
BKT-32	32
BKT-45	45
BKT-65	65
BKT-90	90
BKT-115	115
BKT-150	150
BKT-200	200
BKT-250	250



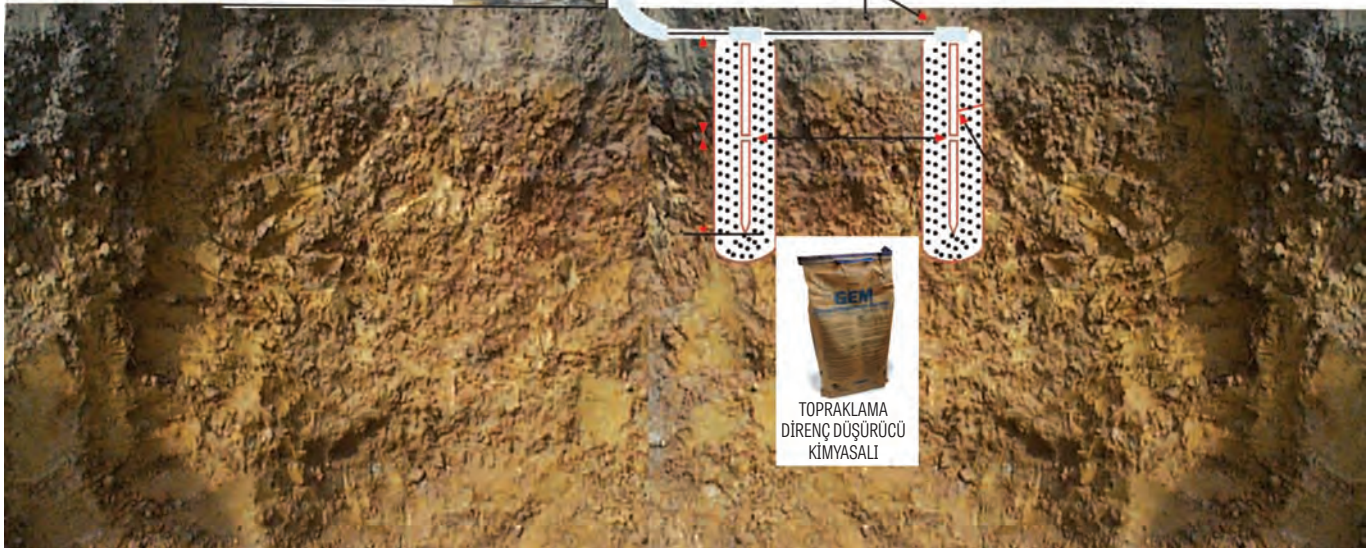
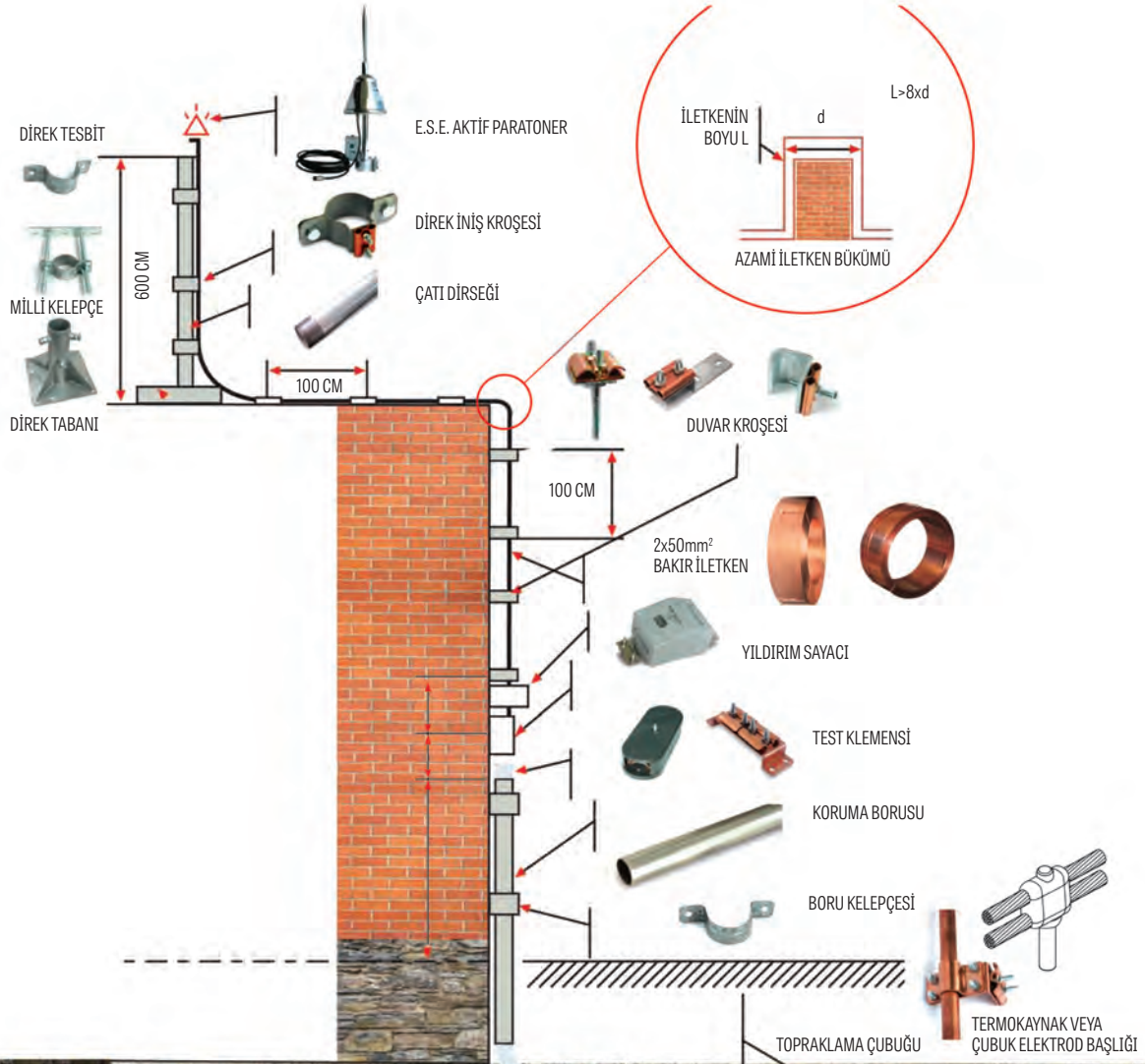
POTA MACUNU / BKP-M

IGNITOR
POTA ÇAKMAĞI



IGNITOR
POTA ÇAKMAĞI





HARGER®

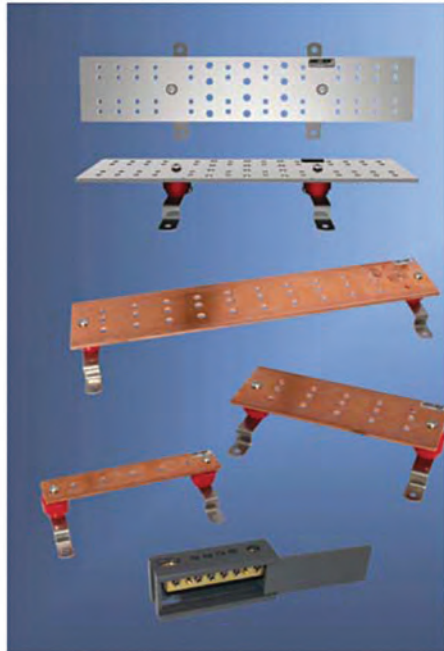
grounding • exothermic • lightning protection

NEMA Standartlarında Topraklama,
Termo Kaynak ve Yıldırımdan Korunma

Exothermic Welding



Grounding Busbars



Conductors



Lightning Protection



Solutions for Lightning Protection, Bonding & Grounding

Typical Roof Lightning Protection Layout • Yıldırımdan Korunma Uygulama Örneği



Lightning Protection Equipment • Yıldırımdan Korunma Ekipmanları

1 thru 4 - Copper Air Terminals 1 - 4 Bakır Yakalama Uçları

Part No.	Diameter	Length	Class
3812CUAT	3/8"	12"	I
3824CUAT	3/8"	24"	I
1212CUAT	1/2"	12"	II
1224CUAT	1/2"	24"	II
5812CUAT	5/8"	12"	II
5824CUAT	5/8"	24"	II

1 thru 4 - Aluminum Air Terminals 1 - 4 Alüminyum Yakalama Uçları

Part No.	Diameter	Length	Class
1212ALAT	1/2"	12"	I
1224ALAT	1/2"	24"	I
5812ALAT	5/8"	12"	II
5824ALAT	5/8"	24"	II

• For nickel or tin plated air terminals add suffix N for nickel and suffix T for tin.

1 thru 3 - Air Terminal Bases 1 - 3 Direk Tabanı

Part No.	Material	Internally Threaded Hub Diameter
CUBU38I	Copper	3/8"
CUBU12I	Copper	1/2"
CUBU58I	Copper	5/8"
AUBU12I	Aluminum	1/2"
AUBU58I	Aluminum	5/8"

• Add prefix T for electro-tin plated copper base.
• Accepts #14 bonding conductor up thru Class II main lightning conductor.

4 - Pipe Railing Bases 4 - Boru Kelepçeleri

Part No.	Material	Air Terminal Diameter
CPRB1.5/2AT38*	ETPB**	3/8"
CPRB1.5/2AT12*	ETPB**	1/2"
CPRB1.5/2AT58*	ETPB**	5/8"
APRB1.5/2AT12*	Aluminum	1/2"
APRB1.5/2AT58*	Aluminum	5/8"

* Nominal pipe size range 1.25" - 2"

** Electro Tin Plated Bronze

• Fits all main size conductors up to 9/16" diameter.
• Other sizes available. Please contact factory.

5 - Class I - Copper Conductors 5 - Class I Örgülü Bakır İletken

Part No.	No. of Strands	Strand Size	Reel/Coil Size
29-50COIL	29	16 AWG	50'
29-100	29	16 AWG	100'
29-250	29	16 AWG	250'

• Approximate diameter 3/8" and 72,500 x-sectional area.
• Electro Tin Plated conductors also available

5 - Class II - Copper Conductors 5 - Class II Örgülü Bakır İletken

Part No.	No. of Strands	Strand Size	Reel/Coil Size
28-50COIL	28	14 AWG	50'
28-100	28	14 AWG	100'
28-250	28	14 AWG	250'

• Approximate diameter is 1/2" and 115,000 x-sectional area.
• Electro Tin Plated conductor also available.

Lightning Protection Equipment • Yıldırımından Korunma Ekipmanları



cUL LISTED US 96

5 - Class I - Aluminum Conductors
5 - Class II Alüminyum İletkenler

Part No.	No. of Strands	Strand Size	Reel/Coil Size
A24-50COIL	24	14 AWG	50'
A24-100	24	14 AWG	100'
A24-250	24	14 AWG	250'

• Approximate diameter is $7/16"$ and 98,600 x-sectional area.



cUL LISTED US 96

7 - Cable Holders
7 - Kablo Tutucular

Part No.	Material
262	Copper
A262	Aluminum

• For use with all cables thru $4/0$ or up to $9/16"$ diameter.
• Electro Tin Plated copper holders also available.

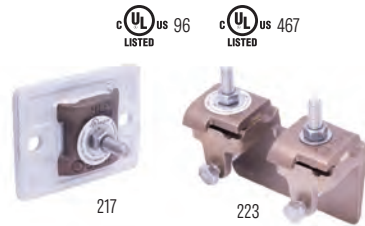


cUL LISTED US 96

10 - Bi-Metal Connector
10 - Bimetal Ek Parçası

Part No.	Material	Class
211R	Bi-Metal	II

• Brass side accepts all main size conductors up to $17/32"$ diameter.
• Aluminum side accepts all main size conductors up to $19/32"$ diameter.



217

223

14 - Bonding Plate
14 - Bağlantı Plakası

Part No.	Material	Class
217	ETPB*	II
223	Copper	II

• Electro Tin Plated Bronze
• Accepts all main size conductors up to $9/16"$ diameter.
• 8 square inches of bonding surface.



cUL LISTED US 96

5 - Class II - Aluminum Conductors
5 - Class II Alüminyum İletkenler

Part No.	No. of Strands	Strand Size	Reel/Coil Size
A37R-50COIL	37	13 AWG	50'
A37R-100	37	13 AWG	100'
A37R-250	37	13 AWG	250'

• Approximate diameter is $19/32"$ and 98,600 x-sectional area.



cUL LISTED US 96

cUL LISTED US 467

8 - 1 Bolt Parallel Connectors
8 - 1 Tek Civatalı Klemensler

Part No.	Material	Class
B1BC	Copper	II
A1BC	Aluminum	II
TB1BC	ETPB*	II

* Electro Tin Plated Bronze
• Accepts all main size conductors up to $5/8"$ diameter.

11 - Thru-Roof Assemblies
11 - Çatıya Montaj Direkleri

Part No.	Description	Riser Length
SSTRCC15812	Vertical, Stainless Steel	12"
SSTRCC15824	Vertical, Stainless Steel	24"
SSTRACBM15812	Vertical, Stainless Steel, Bi-Metal	12"
SSTRACBM15824	Vertical, Stainless Steel, Bi-Metal	24"

• Other sizes available. Please contact factory.



15 - M-1 Structural Sealant
15 - M-1 Sıvı Conta

Part No.	Color
M1-100Z-B	Black
M1-100Z-G	Gray
M1-100Z-L	Limestone
M1-100Z-W	White

• 10.1 fluid oz. cartridge.
• Application coverage (per tube) is approximately 40 cable holders or 40 bases.
• For use on metal, masonry and wood. Not for use on TPO or hypolon roofs.
• Install on clean surfaces in temperatures not below 30°F.

6 - Cable Clips
6 - Kablo Kroşeleri



cUL LISTED US 96

Part No.	Material	Fits Lightning Conductors	Fits Grounding Conductors
ACC2	Aluminum	A28 & A24	N/A
ACC4	Aluminum	A37R	N/A
CCC1	Copper	#14	2 Str., 4 Str., 2 Sol.
CCC2	Copper	29 & 32	1/0 Str. & 2/0 Str.
CCC3	Copper	28 & 24	4/0

• Electro Tin Plated clips also available.



cUL LISTED US 96

9 - Bi-Metal 1 Bolt Parallel Connector
9 - Bimetal Tek Civatalı Klemensler

Part No.	Material	Class
BM1BC	Bi-Metal	II

• 2" x 1-1/2" bi-metal connector allows splicing of aluminum conductors to copper conductors.



214

2158M

A222

13 - Bonding Lugs
13 - Kablo Papuçları

Part No.	Material
214	Copper
A214	Aluminum
216BM	Bi-Metal
222	Copper
A222	Aluminum

• Electro Tin Plated Bronze



15 - DuraSill

Part No.	Color	Box Qty.	Approx Box Wt. (lbs.)
DURASIL	Translucent	24	24

• fluid oz. cartridge
• Bonds to Kynar 500® and Tedlar® PVF coated surfaces
• Contains no volatile organic solvents. (No VOC's)
• Service temperature: -80 °F to 400 °F

Copper Clad Steel Ground Rods Bakır Kılıflı Topraklama Çubukları

cUL US 467
LISTED

Part No.	Size	Approx. Each Wt. (lbs.)	Standard Bundle	Approx. Wt. lbs./Bundle	UL Mark	With UPC Label
1208UPC	1/2" x 8'	6	5	30	Yes	Yes
1210	1/2" x 10'	7	5	35	Yes	No
588	5/8" x 8'	7	5	35	Yes	No
588RUS	5/8" x 8'	7	5	35	Yes	No
588UPC	5/8" x 8'	7	5	35	Yes	Yes
5810	5/8" x 10'	9	5	45	Yes	No
5810UPC	5/8" x 10'	9	5	45	Yes	Yes
348	3/4" x 8'	11	5	55	Yes	No
3410	3/4" x 10'	13	5	65	Yes	No
3412	3/4" x 12'	15	5	75	Yes	No
110	1" x 10'	23	3	69	Yes	No



NEC 2014 Article 250.53(G) (Summarized)

The electrode shall be installed so that 8' of length is in contact with the soil. It shall be driven to a depth of not less than 8' except where rock bottom is encountered. In the case of bedrock, the electrode shall be driven at an angle not to exceed 45 degrees from the vertical or shall be buried in a trench that is at least 2-1/2' deep.

Sectional Copper Clad Steel Ground Rods Parçalı Topraklama Çubukları

cUL US 467
LISTED

Part No.	Size	Approx. Each Wt. (lbs.)	Standard Bundle	Approx. Wt. lbs./Bundle	UL Mark
S582	5/8" x 2'	2	5	10	No
S583	5/8" x 3'	3	5	15	No
S585	5/8" x 5'	5	5	25	No
S588	5/8" x 8'	7	5	35	Yes
S5810	5/8" x 10'	9	5	45	Yes
S348	3/4" x 8'	11	5	55	Yes
S3410	3/4" x 10'	13	5	65	Yes
S110	1" x 10'	23	3	69	Yes



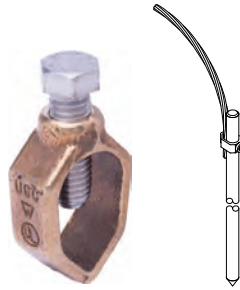
APPLICATION NOTES:

- Sectional ground rods are used to help reduce ground resistance in poor soils such as sand and gravel.
- Doubling ground rod length theoretically reduces resistance 40%.

Universal Ground Rod Clamp Topraklama Çubuğu İletken Tespit Kelepçesi

cUL US 467
LISTED

Part No.	Ground Rod Size	Conductor Range (AWG)	Box Qty.	Approx. Box Wt. (lbs.)
302UGRC	1/2"	1/0 - 10 Sol.	10	2
	5/8"	1/0 - 10 Sol.		
	3/4"	1/0 - 8 Sol.		



- Light duty ground rod clamp for securing cable to ground rod.
- Eliminates the need to inventory assorted different size clamps.
- Manufactured from corrosion resistant silicon bronze.
- UL and CSA listed for Direct Burial.

CPC Pipe Clamps CPC Boru Kelepçeleri

cUL US 96
LISTED

cUL US 467
LISTED

Part No.	Material	Nom. Pipe Size Range	Pipe Outside Diameter
CPC.5/75	Tinned Bronze	.5" - .75"	.375" - 1"
CPC1/1.25	Tinned Bronze	1" - 1.25"	.75" - 1.7"
CPC1.5/2	Tinned Bronze	1.5" - 2"	1" - 2.4"
CPC2.5/3	Tinned Bronze	2.5" - 3"	2.25" - 3.5"
CPC3.5/4	Tinned Bronze	3.5" - 4"	3.2" - 4.5"
CPC5/6	Tinned Bronze	5" - 6"	4.75" - 6.63"



- Wide conductor range; #6 Solid through 250 MCM.
- Electro Tin Plated Bronze includes stainless steel hardware.
- CPC series only Dual UL Listing (UL96 and UL467)
- CPC series only suitable for direct burial in earth & concrete.

Universal Pipe Clamp • Boru Topraklama Kelepçesi

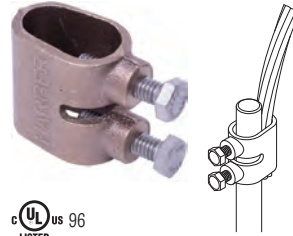
Part No.	Material	Nominal Pipe Size	Torque Rating (in./lb.)	Box Qty.	Approx. Box Wt. (lbs.)
UPC8C	Tinned Copper	8"	210	5	14
UPC10C	Tinned Copper	10"	210	5	15-1/4
UPC12C	Tinned Copper	12"	210	5	17-3/4



- Provides bi-directional grounding capabilities making it the perfect connection for grounding large diameter pipes.
- Clamps include mechanical connector to connect ground conductors #6 AWG thru 250 MCM.
- Manufactured from electro tinned copper; includes stainless steel hardware.
- Lug ends are 1/4" x 1" and have holes that are 7/16" diameter 1" on center spacing.
- For conductors larger than 250 MCM exothermically welded to the clamp.
- Suitable for direct burial in earth & concrete.

Universal Ground Rod Clamp - Heavy Duty • Topraklama Çubuk Kelepçesi, Ağır Hizmet Tipi

Part No.	Ground Rod Size	Conductor Range (AWG)	Box Qty.	Approx. Box Wt. (lbs.)
302U	1/2"	#6 Sol. - 350 MCM	5	5
	5/8"	#6 Sol. - 350 MCM		
	3/4"	#2 Sol. - 250 MCM		



- Heavy duty bronze ground rod clamps. Provides over 1-1/2 inches of contact area with cables and ground rod.
- Two stainless steel cap screws secure the cable to the ground electrode for a positive electrical connection.

Ground Rod Couplers • Topraklama Çubuk Ek Mufu Dişli Tip

Part No.	Ground Rod Size	Material	Box Qty.	Approx. Box Wt. (lbs.)
GRC12	1/2"	Bronze	5	2-1/2
GRC12SS	1/2"	Stainless Steel	5	2-1/2
GRC58	5/8"	Bronze	5	2-1/2
GRC58SS	5/8"	Stainless Steel	5	2-1/2
GRC34	3/4"	Bronze	5	2-1/2
GRC34SS	3/4"	Stainless Steel	5	2-1/2
GRC1	1"	Bronze	5	5
GRC1SS	1"	Stainless Steel	5	5



- Corrosion resistant silicon bronze threaded ground rod coupler for sectional ground rods.
- Stainless steel couplers are not UL Listed.

Topraklama Çubuk Ek Mufu Sıkmalı Tip

Part No.	Ground Rod Size	Box Qty.	Approx. Box Wt. (lbs.)
GRCC58	5/8"	5	2-1/2
GRCC34	3/4"	5	2-1/2



- Corrosion resistant bronze ground rod compression coupler for use on non-sectional copper clad ground rods.

Drive Studs • Topraklama Çubuk Çakma Civatası

Part No.	Ground Rod Size	Box Qty.	Approx. Box Wt. (lbs.)
GDS12	1/2"	5	2-1/2
GDS58	5/8"	5	2-1/2
GDS34	3/4"	5	2-1/2
GDS1	1"	3	3



- High strength alloy driving stud prevents damage to the coupler or ground rod threads when driving ground rods.

Ultrafill - Earth (Ground) Enhancement Material • Topraklama Katkı Maddesi

Ultrafill is a low resistance carbon based backfill material, which dramatically lowers ground system resistance in difficult soil situations. Ultrafill contains no bentonite or concrete components, which, in very dry conditions, can cause shrinkage around the ground electrode, thus rendering it ineffective.



Part No.	Approx. Wt.
ULTRAFILL25	25 lbs.
ULTRAFILL	50 lbs.

Pounds of Ultrafill Required Per Foot		
Hole Size	5/8" Ground Rod	2" EGR
4"	3.5	2.7
6"	8.1	7.3
8"	14.5	13.6
10"	22.6	21.8
12"	32.6	31.8

For example, placing a 5/8" x 10' ground rod in a 4" hole would require 35 pounds of Ultrafill. (3.5 x 10 = 35 pounds)

Pounds of Ultrafill Required Per Foot				
Trench Width	Thickness of Ultrafill (Inches)			
	1"	2"	3"	4"
4"	1.2	2.3	3.5	4.6
6"	1.7	3.5	5.2	6.9
8"	2.3	4.6	6.9	9.3
10"	2.5	5.8	8.7	11.6
12"	3.5	6.9	10.4	13.9

For example, using 2" of material in a 6" wide by 10' long trench would require 35 pounds of Ultrafill. (3.5 x 10 = 35 pounds)

Concentric Lay Soft-Drawn Bare Copper • 7 ve 19 Bükümlü Örgülü Bakır İletkenler



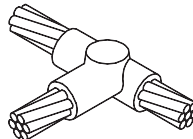
Part No.	Electro Tin Plated	Size (AWG)	No. of Strands	CM Area	Approx. Wt. lbs./M ft.
8-7	No	8	7	16,510	51
87T	Yes	8	7	16,510	51
6-7	No	6	7	26,240	81
67T	Yes	6	7	26,240	81
4-7	No	4	7	41,740	127
47T	Yes	4	7	41,740	127
2-7	No	2	7	66,360	204
27T	Yes	2	7	66,360	204
1/0-19	No	1/0	19	105,600	325
1/019T	Yes	1/0	19	105,600	325
2/0-7	No	2/0	7	133,100	410

Part No.	Electro Tin Plated	Size (AWG)	No. of Strands	CM Area	Approx. Wt. lbs./M ft.
2/07T	Yes	2/0	7	133,100	410
2/0-19	No	2/0	19	133,100	410
2/019T	Yes	2/0	19	133,100	410
3/0-19	No	3/0	19	167,800	518
3/019T	Yes	3/0	19	167,800	518
4/0-7	No	4/0	7	211,600	653
4/07T	Yes	4/0	7	211,600	653
4/0-19	No	4/0	19	211,600	653
4/019T	Yes	4/0	19	211,600	653
250MCM-19	No	250	19	250,000	772
250MCMT	Yes	250	19	250,000	772

Düz geçiş ve T, bakır iletken bağlantısı için termo kaynak pota ve barutlar

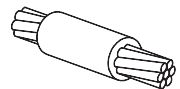
Cable to Cable Connections - RT Connection Type

Cable Size		Mold Part No.	Weld Metal	
Run	Tap		UltraShot	NUWTUBE
#2	#2	RT-22B	US45	NUWTUBE45
#2 Sol	#2 Sol	RT-2S2SB	US45	NUWTUBE45
1/0	#2	RT-1/02B	US45	NUWTUBE45
	1/0	RT-1/01/0B	US90	NUWTUBE90
2/0	#2	RT-2/02B	US45	NUWTUBE45
	1/0	RT-2/01/0B	US90	NUWTUBE90
	2/0	RT-2/02/0B	US90	NUWTUBE90
	#2	RT-3/02B	US45	NUWTUBE45
3/0	1/0	RT-3/01/0B	US90	NUWTUBE90
	2/0	RT-3/02/0B	US90	NUWTUBE90
	3/0	RT-3/03/0B	US115	NUWTUBE115
4/0	#2	RT-4/02B	US90	NUWTUBE90
	1/0	RT-4/01/0B	US90	NUWTUBE90
	2/0	RT-4/02/0B	US90	NUWTUBE90
	3/0	RT-4/03/0B	US115	NUWTUBE115
	4/0	RT-4/04/0B	US150	NUWTUBE150

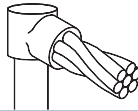


Cable to Cable Connections - BS Connection Type

Cable Size	Mold Part No.	Weld Metal	
		UltraShot	NUWTUBE
#6 Sol	BS-6SL	US25	NUWTUBE25
#4	BS-4L	US25	NUWTUBE25
#2	BS-2L	US32	NUWTUBE32
1/0	BS-1/0B	US45	NUWTUBE45
2/0	BS-2/0B	US65	NUWTUBE65
3/0	BS-3/0B	US90	NUWTUBE90
4/0	BS-4/0B	US90	NUWTUBE90
250 MCM	BS-25CMB	US115	NUWTUBE115

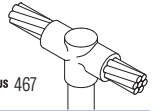


**Cable to Ground Rod Connections -
GD Connection Type**
Kablo/Çubuk Termo Kaynak



Ground Rod Size	Cable Size	Mold Part No.	Weld Metal	
			UltraShot	NUWTUBE
5/8"	#2 Sol	GD-582SB	US65	NUWTUBE65
	#2	GD-582B	US65	NUWTUBE65
	1/0	GD-581/0B	US90	NUWTUBE90
	2/0	GD-582/0B	US90	NUWTUBE90
	3/0	GD-583/0B	US90	NUWTUBE90
	4/0	GD-584/0B	US90	NUWTUBE90
3/4"	#2 Sol	GD-342SB	US90	NUWTUBE90
	#2	GD-342B	US90	NUWTUBE90
	1/0	GD-341/0B	US90	NUWTUBE90
	2/0	GD-342/0B	US90	NUWTUBE90
	3/0	GD-343/0B	US90	NUWTUBE90
	4/0	GD-344/0B	US90	NUWTUBE90

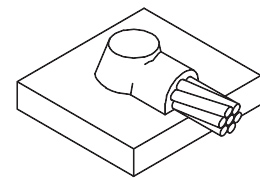
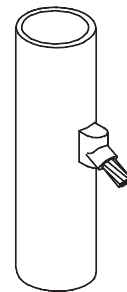
**Cable to Ground Rod Connections -
GO Connection Type**
Kablo/Çubuk Termo Kaynak



Ground Rod Size	Cable Size	Mold Part No.	Weld Metal	
			UltraShot	NUWTUBE
5/8"	#2 Sol	GO-582SB	US90	NUWTUBE90
	#2	GO-582B	US90	NUWTUBE90
	1/0	GO-581/0B	US90	NUWTUBE90
	2/0	GO-582/0B	US115	NUWTUBE115
	3/0	GO-583/0B	US115	NUWTUBE115
	4/0	GO-584/0B	US115	NUWTUBE115
3/4"	#2 Sol	GO-342SB	US90	NUWTUBE90
	#2	GO-342B	US90	NUWTUBE90
	1/0	GO-341/0B	US115	NUWTUBE115
	2/0	GO-342/0B	US115	NUWTUBE115
	3/0	GO-343/0B	US115	NUWTUBE115
	4/0	GO-344/0B	US115	NUWTUBE115

**Cable to Steel Surface/Pipe Connections -
VA (Pipe) Connection Type (Range Taking)**

Cable Size	Nominal Pipe Size	Mold Part No.	Weld Metal	
			UltraShot	NUWTUBE
#2 Sol	1/2" to 1" Pipe	VA-2SV.5X1B	US45	NUWTUBE45
	1-1/2" to 4" Pipe	VA-2SV1.5X4B	US45	NUWTUBE45
	4" to 6" Pipe	VA-2SV4X6B	US45	NUWTUBE45
	6" to 10" Pipe	VA-2SV6X10B	US45	NUWTUBE45
#2	1/2" to 1" Pipe	VA-2V1.5X4B	US45	NUWTUBE45
	4" to 6" Pipe	VA-2V4X6B	US45	NUWTUBE45
	6" to 10" Pipe	VA-2V6X10B	US45	NUWTUBE45
1/0	2" to 4" Pipe	VA-1/0V2X4B	US90	NUWTUBE90
	4" to 6" Pipe	VA-1/0V4X6B	US90	NUWTUBE90
	6" to 10" Pipe	VA-1/0V6X10B	US90	NUWTUBE90
2/0	2" to 4" Pipe	VA-2/0V2X4B	US90	NUWTUBE90
	4" to 6" Pipe	VA-2/0V4X6B	US90	NUWTUBE90
	6" to 10" Pipe	VA-2/0V6X10B	US90	NUWTUBE90
4/0	2" to 4" Pipe	VA-4/0V2X4B	US115	NUWTUBE115
	4" to 6" Pipe	VA-4/0V4X6B	US115	NUWTUBE115
	6" to 10" Pipe	VA-4/0V6X10B	US115	NUWTUBE115

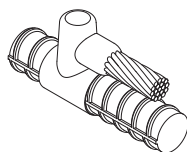
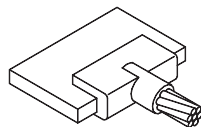


**Cable to Steel Surface/Pipe Connections -
HD Connection Type**

Cable Size	Mold Part No.	Weld Metal	
		UltraShot	NUWTUBE
#2 Sol	HD-2SA	US45	NUWTUBE45
#2	HD-2A	US45	NUWTUBE45
1/0	HD-1/0B	US90	NUWTUBE90
2/0	HD-2/0B	US90	NUWTUBE90
3/0	HD-3/0B	US115	NUWTUBE115
4/0	HD-4/0B	US115	NUWTUBE115
250 MCM	HD-25CMB	US115	NUWTUBE115

Cable to Busbar Connections - BE Connection Type

Bus/Lug Size	Cable Size	Mold Part No.	Weld Metal	
			UltraShot	NUWTUBE
1/4 x 1-1/2" & WIDER	#6	BE-141.56B	US65	NUWTUBE65
	#2 Sol	BE-141.52SB	US65	NUWTUBE65
	#2	BE-141.52B	US65	NUWTUBE65
	1/0	BE-141.51/0B	US90	NUWTUBE90
	2/0	BE-141.52/0B	US90	NUWTUBE90
	3/0	BE-141.53/0B	US90	NUWTUBE90
3/8 x 1-1/2" & WIDER	4/0	BE-141.54/0B	US90	NUWTUBE90
	1/0	BE-381.51/0B	US90	NUWTUBE90
	2/0	BE-381.52/0B	US90	NUWTUBE90
	3/0	BE-381.53/0B	US115	NUWTUBE115
1/2 x 1-1/2" & WIDER	4/0	BE-381.54/0B	US115	NUWTUBE115
	1/0	BE-121.51/0B	US115	NUWTUBE115
	2/0	BE-121.52/0B	US115	NUWTUBE115
	3/0	BE-121.53/0B	US150	NUWTUBE150
4/0	BE-121.54/0B	US150	NUWTUBE150	



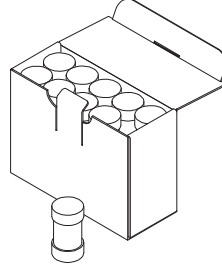
Cable to Reinforcing Steel Connections - RP Connection Type

Bus/Lug Size	Cable Size	Mold Part No.	Packing Mat'l No.	Weld Metal	
				UltraShot	NUWTUBE
3	#6	RP-36B	WRPSLV	US25	NUWTUBE25
	#2	RP-32B	WRPSLV	US45	NUWTUBE45
	2/0	RP-32/0B	WRPSLV	US90	NUWTUBE90
	3/0	RP-33/0B	WRPSLV	US115	NUWTUBE115
	4/0	RP-34/0B	WRPSLV	US115	NUWTUBE115
	4 & Larger	#6	RP-4L6A	CERPM1	US25
#2		RP-4L2A	CERPM1	US45	NUWTUBE45
4	2/0	RP-42/0B	WRPSLV	US90	NUWTUBE90
	4/0	RP-44/0B	WRPSLV	US115	NUWTUBE115
5	2/0	RP-52/0B	WRPSLV	US90	NUWTUBE90
	4/0	RP-54/0B	WRPSLV	US115	NUWTUBE115
6** & Larger	2/0	RP-6L2/0B	CERPM2	US90	NUWTUBE90
	4/0	RP-6L4/0B	CERPM2	US115	NUWTUBE115

** Requires #UMHDKIT Hold Down Kit for welds made to #6 and Larger reinforcing steel.
(2) #WRPSLV Wrap Sleeve required per weld.
(1) #CERPM1 or #CERPM2 Ceramic Packing Material required per weld.

NUWTube® (Pour & Shoot Weld Metal) • Termo Kaynak Barutlar

- The weld metal, a mixture of copper oxide and aluminum, is packaged in individual, moisture resistant plastic tubes.
- Dual chamber design holds starting material and weld metal separately, in the same tube.
- Easy to identify with color coded caps. Clear = Weld Metal, Orange = Starting Material.
- Each cartridge is marked with the size.
- Each box also contains instructions and metal disks. One metal disk is used for each connection.

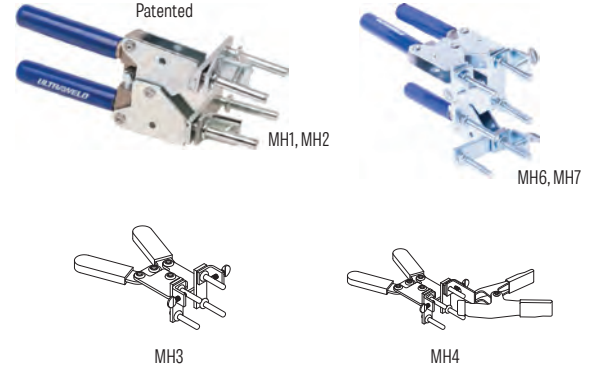


Size	Qty. Per Carton	Size	Qty. Per Carton
NUWTUBE15	20	NUWTUBE90	10
NUWTUBE25	20	NUWTUBE115	10
NUWTUBE32	20	NUWTUBE150	10
NUWTUBE45	20	NUWTUBE200	10
NUWTUBE65	20	NUWTUBE250	10

Mold Handle Clamps • Termo Kaynak Pota Penseleri

Part No.	Application	Qty.	Approx. Each Wt. (lbs.)
MH1	For All molds with B, E, K, P & Q mold price key (3" wide)	EA	2-3/4
MH2	For All molds with C, D, F, Y & Z mold price key	EA	3-1/2
MH3	For Combo molds with L & M mold price key	EA	1/4
MH4	For Combo molds with R mold price key	EA	1-1/2
MH6	For 3 Piece I mold price key	EA	4-3/4
MH7	For 3 Piece J mold price key	EA	5

- Mold Handle Clamps are required for all molds.
- Some molds are used with specialized frames.
- Handle clamps have a Zinc plated finish.



Ground Access Wells - High Security • Ağır Tonajlı Topraklama Rögarları

- The Harger traffic rated security wells can support vehicle loading up to AASHTO H-20 rating of 32,000 lbs. (14,500 kgs) per axle. This rating refers to the ability of a roadway to safely accommodate 3-4 axle vehicles, such as a large semi-truck and trailer.
- 3/8" steel top cover with 120 degree opening latch.
- Must be shipped by truck only.



Part No.	Dimensions	Approx. Each Wt. (lbs.)
GAW121212DLH	12" x 12" x 12" deep	40
GAW181818DLH	18" x 18" x 18" deep	80
GAW242424DLH	24" x 24" x 24" deep	140
GAW363636DLH	36" x 36" x 36" deep	300

Ground Access Wells - Light Weight Polymer Concrete • Hafif Tonajlı Topraklama Rögarları

- Lid & Grade Ring manufactured from high density polymer concrete.
- Body manufactured from sheet molding compound for exceptional toughness and reduced weight.
- Comes with load category Tier 15 rated covers.
- Suitable for installation and use through a temperature range of -40°C to +90°C.
- Gray color.
- GAW121224HD is a two piece stackable, each 12" high.

Part No.	Dimensions	Approx. Each Wt. (lbs.)
GAW121212HD	12" x 12" x 12" deep	52
GAW121218HD	12" x 12" x 18" deep	57
GAW121224HD*	12" x 12" x 24" deep	67
GAW132418HD	13" x 24" x 18" deep	97-1/2



WIRE & CABLE TO NEC & IEC SPECS
NEC ve IEC TİP KABLolar



Southwire

&



ebion kablo





600 Volts. Copper Conductor
Thermoplastic Insulation/SIM Nylon Sheath
Heat, Moisture, Gasoline, and Oil Resistant II
Also Rated MTW and THWN-2
SIM Technology® for Easier Pulling



APPLICATIONS

Southwire SIMpull THHN or THWN-2 conductors are primarily used in conduit and cable trays for services, feeders, and branch circuits in commercial or industrial applications as specified in the National Electrical Code. Voltage for all applications is 600 volts. SIMpull THHN conductors are designed to be used without application of pulling lubricant. Allowable temperatures are as follows:

- THHN or T90 Nylon- Dry locations not to exceed 90° C
- THWN-2- Wet or dry locations not to exceed 90° C or locations not to exceed 75° C when exposed to oil
- TWN75- Wet locations not to exceed 75° C
- MTW- Wet locations or when exposed to oil at temperatures not to exceed 60° C or dry locations not to exceed 90° C (with ampacity limited to that for 75° C conductor temperature per NFPA 79)
- AWM- Dry locations not to exceed 105° C when rated and used as appliance wiring material

SPECIFICATIONS

Southwire SIMpull THHN® or THWN-2 or MTW (also AWM) comply with:

- ASTM - All applicable standards
- UL Standard 83, 1581, and 1063(MTW)
- T90 Nylon/TWN75 sizes through 1000 kcmil CSA C22.2 No. 75
- NOM-ANCE 90° C
- Federal Specification A-A-59544
- National Electrical Code, NFPA 70
- VW-1 - Sizes 14 through 1 AWG
- CT rated in sizes 1/0 AWG and larger
- FT1
- AWM - Sizes 14 through 6 AWG. MTW available in stranded only
- NEMA WC-70 Construction Requirements
- RoHS/REACH Compliant

Construction

Southwire SIMpull THHN or THWN-2 or MTW copper conductors are soft annealed copper. #14 - 4/0 AWG uses a combination unilay strand and 250 kcmil and larger uses a compressed copper strand. The wire is insulated with a tough heat and moisture resistant poly vinyl chloride (PVC), over which a SIM (SLIKQWIK® Infused Membrane) nylon (polyamide) or UL Recognized equal jacket is applied. Available in black, white, red, blue, purple, green, yellow, orange, brown and gray. Some colors are subject to economic order quantity. Marked sunlight resistant in sizes 2 AWG and larger.

THWN-2 available in sizes 8 AWG and larger.

Sizes 14 -10 AWG are available with SIMpull Technology only in SIMpull Barrel configurations.

Conductor		Insulation Thickness (mils)	Jacket Thickness (mils)	Nominal O.D. (mils)	Approx. Weight per 1000' (lbs)	Allowable Ampacities*			Standard Package
Size (AWG or kcmil)	Number of Strands					60° C	75° C	90° C	
14*	1	15	4	102	15	15	15	AC	
12*	1	15	4	119	23	20	20	AC	
10*	1	20	4	150	36	30	30	AC	
14*	19	15	4	109	16	15	15	AC	
12*	19	15	4	128	24	20	20	AC	
10*	19	20	4	161	38	30	30	AC	
8	19	30	5	213	63	40	50	ABCD	
6	19	30	5	249	95	55	65	ABCD	
4	19	40	6	318	152	70	85	ABCD	
3	19	40	6	346	189	85	100	ABCD	
2	19	40	6	378	234	95	115	ABCD	
1	19	50	7	435	299	110	130	ABCD	
1/0	19	50	7	474	372	125	150	ABCD	
2/0	19	50	7	518	462	145	175	ABCD	
3/0	19	50	7	568	575	165	200	ABCD	
4/0	19	50	7	624	718	195	230	ABCD	
250	37	60	8	694	851	215	255	ABCD	
300	37	60	8	747	1012	240	285	ABC	
350	37	60	8	797	1174	260	310	ABC	
400	37	60	8	842	1334	280	335	ABC	
500	37	60	8	926	1655	320	380	ABCD	
600	61	70	9	1024	1987	350	420	ABC	
750	61	70	9	1126	2464	400	475	BC	
1000	61	70	9	1275	3257	455	545	C	

* Sizes 14 -10 AWG available with patented Sim Technology® No Lube® jacket only in SIMpull® Wire Barrel configurations.

+ Allowable ampacities shown are for general use as specified by the 2011 Edition of the National Electrical Code Section 310.15 and 240.4(D). Unless the equipment is marked for use at higher temperatures the conductor shall be limited to the following per NEC 110.14(C).

60° C - When terminated to equipment for circuits rated 100 amperes or less or marked for 14 - 1 AWG conductors.

75° C - When terminated to equipment for circuits rated over 100 amperes or marked for conductors larger than 1 AWG.

90° C - THHN dry locations and THWN wet or dry locations for ampacity adjustment purposes using NEC section 310.15.

Standard Package:

A - 2500' Reel

B - 1000' Reel

C - 500' Spool

D - 5000' Reel

SIMpull THHN kablo, NEC normunda üretilen standart THHN kablolarından farklı olarak, üzerinde fabrikada uygulanmış kablo çekme sabunu ile gelir .Bu sahadaki iş yükünüzü azaltır ve kablonun da kolay çekilmesini sağlar. 14 AWG - 1,000 MCM aralığında, değişik renk ve makara uzunluklarında imal edilir. IEC standartlarında NYA kabloya denktir.

THHN/PVC THREE CONDUCTOR

600 Volt
Copper Conductors
PVC/Nylon Insulated Singles Rated THHN
Three Conductors With Ground
Overall PVC Jacket
Heat, Moisture and Sunlight Resistant
Type TC-ER

**APPLICATIONS**

Southwire's Type TC Power Cable is used to supply power to motors, or for connection to other power devices in industrial settings. Primary installations include cable trays, raceways, and outdoor locations where supported by a messenger wire. Type TC Power Cable is listed for direct burial and for use in Class 1, Division 2 hazardous locations and Class 1 control circuits. This cable may be used at temperatures not to exceed 75°C in wet locations and 90°C in dry locations. 6 and 8 AWG constructions with insulated grounds (standard) and 4 AWG and larger with bare or insulated ground are UL listed for exposed runs (ER) per NEC® 336.10.

SPECIFICATIONS

Southwire's Type TC Power Cable meets or exceeds the applicable requirements of the following standards and specifications:

- ASTM - (All applicable standards)
- UL 1277 - Electrical Power and Control Tray Cables
- UL 1581 - Electrical Wires, Cables and Flexible Cords
- ICEA S-58-679 - Control Cable Conductor Identification. (Method 4 - single color compounds with surface printing of numbers)
- UL 1685 - UL Flame Exposure Test
- ICEA T-29-520 - Vertical Cable Tray Flame Test (210,000 BTU/hr)
- IEEE 1202 - Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial Occupancies (70,000 BTU/hr)

CONSTRUCTION

Southwire's Type TC Power Cable is available in sizes 8 AWG through 750 kcmil and is manufactured using Type THHN or THWN conductors. Individual conductors are bare annealed copper covered with a polyvinyl chloride (PVC) insulation over which a nylon (polyamide) or UL listed equal jacket is applied. The overall jacket consists of a flame retardant, moisture and sunlight resistant PVC jacket.

WEIGHTS AND MEASUREMENTS									
SIZE AWG or kcmil	STRANDING	GROUND CONDUCTOR SIZE (AWG)	JACKET THICKNESS (inch)	AVERAGE OVERALL DIAMETER		APPROXIMATE WEIGHT		ALLOWABLE AMPACITIES*	
				inch	mm	lbs/1000 ft	kg/km	75°C	90°C
TYPE TC-POWER CABLE THREE THHN OR THWN CONDUCTORS WITH GROUND									
8	7	10	0.060	0.625	15.9	295	440	50	55
6	7	8	0.060	0.710	18.0	435	647	65	75
4	7	8	0.060	0.795	20.2	606	902	85	95
2	7	6	0.080	0.958	24.3	942	1401	115	130
1	19	6	0.080	1.100	27.9	1195	1779	130	150
1/0	19	6	0.080	1.184	30.1	1445	2150	150	170
2/0	19	6	0.080	1.281	32.5	1734	2579	175	195
3/0	19	4	0.080	1.391	35.3	2163	3218	200	225
4/0	19	4	0.080	1.508	38.3	2617	3894	230	260
250	37	4	0.080	1.659	42.1	3070	4568	255	290
350	37	3	0.110	1.942	49.3	4276	6363	310	350
500	37	2	0.110	2.220	56.4	5906	8788	380	430
750	61	1	0.110	2.652	67.4	8601	12811	475	535

Note: Ampacities are based on Table 310.16 of the NEC® 2008 Edition.

*Ampacities are for general use with a 90°C conductor and 30°C ambient temperature as specified in section 310.15 and in cable trays as specified in section 392.11.

TC tip çok damarlı THHN kablo, izolasyon ve ceket altında 3 faz iletkeni ve 1 örgülü bakır toprak iletkeninden imal edilmiştir. Kablo tavası ya da boru içinden çekilebildiği gibi doğrudan toprağa da gömülebilir. Class 1 Division 2 sınıfı tehlikeli yerlerde kullanıma uygun olup, nemli ortamda 75° C kuru ortamda ise 90° C sıcaklıkta çalışır. NYY kabloya denktir.

XHHW/PVC THREE CONDUCTOR

600 Volt
Copper Conductors
XLP Insulated Singles Rated XHHW-2
Three Conductors With Ground
Overall PVC Jacket
Heat, Moisture and Sunlight Resistant
Type TC-ER

**APPLICATIONS**

Southwire's Type TC Power Cable is used to supply power to motors, or for connection to other power devices in industrial settings. Primary installations include cable trays, raceways, and outdoor locations where supported by a messenger wire. Type TC Power Cable is listed for direct burial or in underground ducts and for use in Class 1, Division 2 hazardous locations and Class 1 control circuits. This cable may be used in wet and dry locations at temperatures not to exceed 90°C. 6 and 8 AWG constructions with insulated grounds (standard) and 4 AWG and larger with bare insulated ground are UL Listed for exposed runs (ER) per NEC® 336.10.

SPECIFICATIONS

Southwire's Type TC Power Cable meets or exceeds the applicable requirements of the following standards and specifications:

- ASTM - (All applicable standards)
- UL 1277 - Electrical Power and Control Tray Cables.
- ICEA S-58-679 - Control Cable Conductor Identification (Method 4 - single color (black) compounds with surface printing of numbers)
- UL 1685 - UL Flame Exposure Test (70,000 BTU/hr)
- UL 1581 - UL Flame Exposure Test (VW-1)
- ICEA T-29-520 - Vertical Cable Tray Flame Test (210,000 BTU/hr)
- IEEE 1202 - Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial Occupancies (70,000 BTU/hr)
- Southwire's Type TC Cable meets and exceeds all construction requirements of ICEA S-95-658 (NEMA WC 70) - Nonshielded 0-2 kV Cables, with testing frequencies based on UL requirements.

CONSTRUCTION

Southwire's 600 Volt Type TC Power Cable is available in sizes 8 AWG through 750 kcmil and is manufactured using Type XHHW-2 conductors. Individual conductors are bare annealed copper covered with a cross-linked polyethylene (XLP) insulation. The overall jacket consists of a flame retardant, moisture and sunlight resistant PVC jacket. Non-halogen and CPE jacket available upon request.

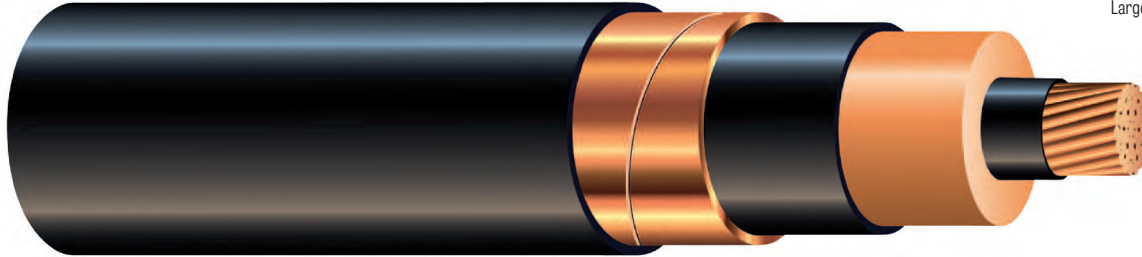
WEIGHTS AND MEASUREMENTS								
SIZE AWG or kcmil	STRANDING	GROUND CONDUCTOR SIZE (AWG)	JACKET THICKNESS (inch)	AVERAGE OVERALL DIAMETER		APPROXIMATE WEIGHT		ALLOWABLE AMPACITIES*
				inch	mm	lbs/1000 ft	kg/km	90°C
TYPE TC-POWER CABLE THREE XLP (XHHW-2) CONDUCTORS WITH GROUND								
8	7	10	0.060	0.681	17.3	330	491	55
6	7	8	0.060	0.766	19.4	468	697	75
4	7	8	0.060	0.797	20.2	606	901	95
2	7	6	0.080	0.960	24.4	954	1420	130
1	19	6	0.080	1.100	27.9	1173	1746	150
1/0	19	6	0.080	1.186	30.1	1421	2115	170
2/0	19	6	0.080	1.279	32.5	1704	2536	195
3/0	19	4	0.080	1.385	35.2	2135	3177	225
4/0	19	4	0.080	1.506	38.2	2580	3839	260
250	37	4	0.080	1.653	42.0	3021	4496	290
300	37	3	0.110	1.827	46.4	3684	5481	320
350	37	3	0.110	1.935	49.1	4219	6277	350
400	37	3	0.110	2.032	51.6	4747	7064	380
500	37	2	0.110	2.214	56.2	5755	8564	430
750	61	1	0.110	2.663	67.6	8543	12711	535

Note: Ampacities are based on Table 310.16 of the NEC® 2008 Edition.

*Ampacities are for general use with a 90°C conductor and 30°C ambient temperature as specified in section 310.15 and in cable trays as specified in section 392.11. Insulation thickness are per UL 44 for XHHW conductors. See XHHW for insulation thickness.

TC tip XHHW kablo, THHN'den farklı olarak, XLPE izolasyonludur. Kullanım alanları THHN ile aynı olup, IEC standardındaki çok damarlı XLPE izolasyonlu kablolarla denktir. XHHW kablo nemli ya da kuru ortamda, 90° C sıcaklıkta çalışır.

15 kVU Type MV-105
 Copper Conductor
 Thermosetting Conductor Shield
 EPR Insulation
 Thermosetting Insulation Shield
 Copper Tape Shield
 PVC Jacket
 Sizes AWG 1/0 and
 Larger Listed for CT Use



APPLICATIONS

Southwire CT1-13ET Type MV-105 Cable is for use in aerial, direct burial, cable trays, conduit, and underground duct installations as permitted by the NEC®. These cables are capable of operating continuously at a conductor temperature not in excess of 105°C for normal operation, 140°C for emergency overload conditions, and 250°C for short circuit conditions, and are rated at 15,000 V, 133% insulation level (ungrounded system).

SPECIFICATIONS

Southwire CT1-13ET Type MV-105 Cable is manufactured and tested in accordance with the latest revisions of the following standards and specification:

- UL 1072 - Medium Voltage Power Cables
- ICEA S-93-639 (NEMA WC 74) - 5-46 kV Shielded Power Cable for Use in the Transmission & Distribution of Electric Energy
- ICEA S-97-682 (when requested) 5-46 kV Standard for Utility Shielded Power Cable.
- UL 1685 - (AWG 1/0 and larger) - UL Flame Exposure Test
- IEEE 1202 - Flame Test (70,000 BTU/hr Vertical Tray Test)

Certified qualification tests were performed in accordance with the requirements of AEIC CS-8. Cable has fully met the qualification testing requirements of AEIC CS-8.

CONSTRUCTION

Southwire CT1-13ET Type MV-105 Cable offers flexible, easy bending insulation, easy cable preparation, fast stripping thermosetting insulation shield, 105°C continuous operating temperature, 100% shield coverage, and it is triple extruded. Cable is sunlight resistant, suitable for direct burial, and listed for cable tray use in sizes AWG 1/0 and larger. SOLONON® low smoke, non-halogen polyolefin jackets and CPE jackets are available upon request.

• Scope

This specification covers single conductor EPR (ethylene propylene rubber) insulated, shielded, thermoplastic jacketed power cable for use in aerial, direct burial, cable trays, conduit, and underground duct installations. This cable is capable of operating continuously at a conductor temperature not in excess of 105°C for normal operation, 140°C for emergency overload conditions, and 250°C for short circuit conditions, and is rated at 15,000 V, 133% insulation level (ungrounded system).

• Standards

The following standards shall form a part of this specification - UL Standard 1072 for Medium Voltage Power Cable and ICEA S-93-639 (NEMA WC 74) 5-46 kV Shielded Power Cable for Use in the Transmission & Distribution of Electric Energy.

• Conductor

The conductor shall be Class B compressed soft or annealed copper in accordance with ASTM specs B3 and B8 and ICEA Part 2, Section 2.1 and 2.5.

WEIGHT, MEASUREMENTS AND PACKAGING															
PRODUCT CODE	SIZE	CONDUCTOR DIAMETER*		0.220" (5.59mm) INSULATION DIAMETER		EXTRUDED INSULATION SHIELD DIAMETER		MINIMUM POINT JACKET THICKNESS		APPROXIMATE OVERALL DIAMETER		APPROXIMATE NET WEIGHT		ALLOWABLE AMPACITIES**	
		AWG or kcmil	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs/1000 ft	kg/km	DUCTS
CT1-13ET-002	2	0.283	7.19	0.773	19.62	0.828	21.02	0.070	1.78	0.995	25.3	641	953	165	165
CT1-13ET-001		0.322	8.18	0.813	20.64	0.868	22.03	0.070	1.78	1.035	26.3	719	1070	185	190
CT1-13ET-010	1/0	0.362	9.19	0.853	21.65	0.908	23.05	0.070	1.78	1.075	27.3	819	1219	215	215
CT1-13ET-020	2/0	0.405	10.29	0.893	22.67	0.948	24.07	0.070	1.78	1.115	28.3	930	1384	245	255
CT1-13ET-030	3/0	0.456	11.58	0.943	23.94	0.998	25.34	0.070	1.78	1.165	29.6	1071	1594	275	290
CT1-13ET-040	4/0	0.512	13.00	0.998	25.34	1.053	26.73	0.070	1.78	1.220	31.0	1238	1841	315	330
CT1-13ET-250	250	0.558	14.17	1.053	26.73	1.108	28.13	0.070	1.78	1.275	32.4	1392	2071	345	365
CT1-13ET-350	350	0.661	16.79	1.158	29.40	1.213	30.80	0.070	1.78	1.380	35.0	1772	2637	415	440
CT1-13ET-500	500	0.790	20.07	1.283	32.58	1.338	33.97	0.070	1.78	1.505	38.2	2317	3447	500	535
CT1-13ET-750	750	0.968	24.59	1.470	37.34	1.525	38.74	0.100	2.54	1.755	44.6	3313	4930	610	655
CT1-13ET-100	1000	1.117	28.37	1.615	41.02	1.670	41.02	0.100	2.54	1.900	48.5	4197	6245	690	755

* Minimum diameter per ASTM Standards. Dimensions accuracy ±0.050"

** Ampacities are based on the NEC® 2008 Edition. Duct ampacities are based on Table 310.77 three conductors in one underground duct, 105°C conductor, 20°C earth ambient temperature. Conduit in air ampacities are based on Table 310.73 three cables in isolated conduit in air, 105°C conductor, 40°C ambient temperature.

CONSTRUCTION (continued)

• **Conductor Shield**

The conductor shall be shielded with an extruded semi-conducting thermosetting polymeric layer over the conductor, applied in tandem with and firmly bonded to the insulation.

• **Insulation**

The insulation shall be EPR (ethylene propylene rubber) meeting the requirements of the referenced standards. The nominal thickness shall be 0.220".

• **Insulation Shield**

The insulation shall be shielded with an extruded layer of semi-conducting thermosetting material which shall be identified as being semi-conducting. Over this layer shall be applied a helically-wrapped 5-mil copper tape with 25% overlap.

• **Jacket**

The cable shall be provided with a jacket of black sunlight resistant PVC conforming to the requirements specified for polyvinyl chloride jackets in ICEA. The average thickness shall be in accordance with Table 7-3 of ICEA. Optional SOLONON® low smoke, non-halogen polyolefin jackets and CPE jackets are available upon request.

• **Identification**

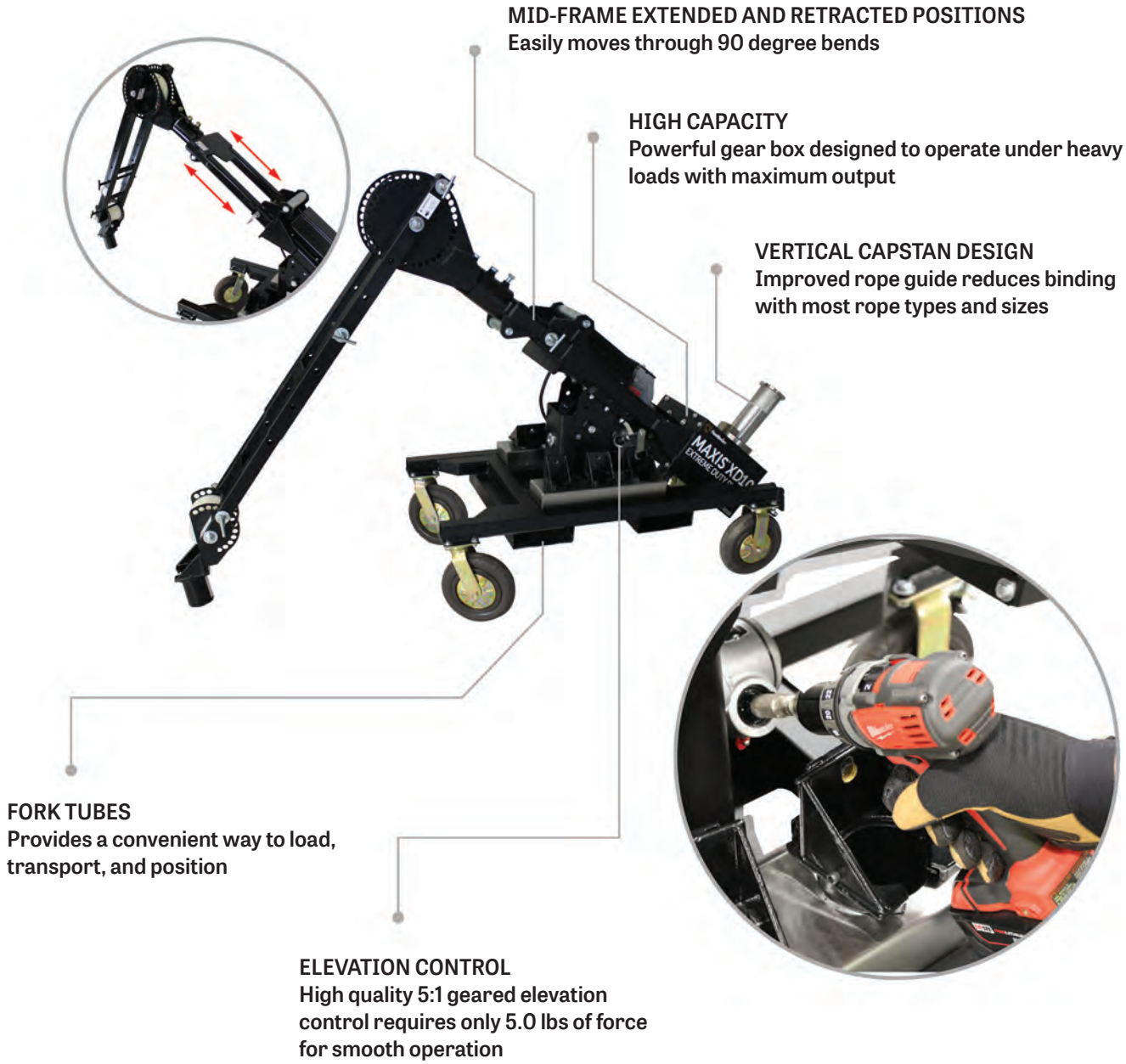
Cable shall be identified by surface printing on jacket.

• **Tests**

Certified qualification tests were performed in accordance with the requirements of AEIC.

The Strongest, Fastest 10,000 lbs. Cable Puller... Guaranteed!

Güçlü ve Hızlı 5 Ton Kapasiteli Kablo Çekme Makinesi... Garantili!



5 Ton kapasiteli, XD10 Kablo Çekme Makinesi, eşdeğer ürünler içerisinde en güçlü olanı olup, en hızlı kablo çekimi yapılmasını sağlar. Çok yönlü mekanizması sayesinde, 90° dönüşlerden kolayca kabloyu geçirir, güçlü şanzımanı ağır yük altında mükemmel performans gösterir. Dik tasarımlanmış jeraskal düzeneği, yükseklik kontrolü, kolay taşınabilirliği ile ağır kablo çekme işi yapan tüm elektrik firmalarının işini kolaylaştıracak bir makinedir.

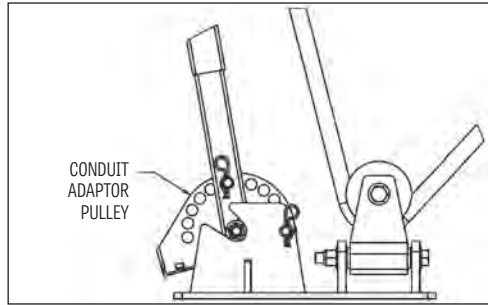
FEATURES & BENEFITS

- Gear reducer design allows for increased efficiency, durability and power while maintaining low operating temperature
- 10,000 lbs. peak pulling force with a continuous pulling rating of 7,000 lbs
- Fixed Caster Brakes aid in set up and positioning
- Includes single foot control
- Telescoping front and mid section
- Twice as fast as the leading competitor under load
- Fork tubes, brakes, and 10 inch casters for mobility



BOLT DOWN ADAPTER (Sold Separately)

- Easily attaches to the XD10 without any disassembly
- Stand Alone roller system for improved rope path



SPECIFICATIONS

MODEL #	STOCK#	DESCRIPTION	HEIGHT	WIDTH	LENGTH	WEIGHT
XD10	59190402	Maxis® XD10 EXTREME Duty Cable Puller	40"	26"	70"	598 lbs
XD10-BD	59727001	XD10-BD Maxis® XD10 Bolt Down Kit	18"	14"	16"	35 lbs

CAPACITY	Pulling Speed Low		Pulling Speed High:	
At 2,000 lbs	11fpm	At 2,000 lbs	20fpm	
At 4,000 lbs	10fpm	At 4,000 lbs	18fpm	
At 6,000 lbs	9fpm			
At 7,000 lb	8fpm			
At 10,000 lbs.	7fpm			

H07Z1-U

H07Z1-R

450/750V LSZH, Halogen Free, Flame Retardant Single Wires
450/750V LSZH, Halojensiz, Alev İletmeyen Tek Damarlı Kablolar

Maksimum İşletme Sıcaklığı
Maximum operating temperature



Maksimum Kısa Devre Sıcaklığı
Maximum short circuit temperature



Alev Dayanıklılık
Flame Retardant
IEC 60332-1-2



Halojenden Arındırılmış
Halogen free
IEC 60754-1/2



Düşük Duman Yoğunluğu
Low Smoke Emission
IEC 61034-1/2

Application Area

Used in places which has much human density and can consider as areas of high risk of fire. For example business centers, shopping centers, hotels, schools, hospitals, tunnels.

Construction

Conductor : EN 60228 Class 1-2 Copper

Insulation : Thermoset LSZH compound Type TI7

Technical Data

Max. operating temperature : 90°C

Max. short circuit temperature : 250°C

Applicable Standards

TS EN 50525-3-31 / VDE 0250

Uygulama Alanı

İnsanların yoğun olarak bulunduğu iş merkezleri, alışveriş merkezleri, oteller, okullar, hastaneler, tüneller ve bu gibi yangın tehlikesi olan yerlerde kullanılır.

Yapısı

İletken : EN 60228 Sınıf 1-2 Bakır

İzole : Termoset LSZH Bileşik Tip TI7

Teknik Veriler

Maks. çalışma sıcaklığı : 90°C

Maks. kısa devre sıcaklığı : 250°C

Uygulanabilir Standartlar

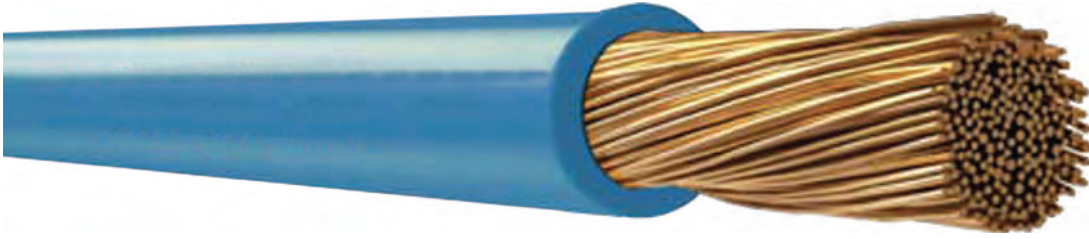
TS EN 50525-3-31 / VDE 0250

Technical Features • Teknik Özellikler

Nominal Cross-section (mm ²)	Approx. Overall Diameter (mm)	Approx. Net Weight (Kg/Km)	Standard Delivery Length (m)	Conductor DC Resistance at 20°C (Ohm/Km) Max.	Current Carrying Capacity	
					In Conduit (A)	In Air (A)
Nominal Kesit (mm ²)	Yaklaşık Dış Çap (mm)	Yaklaşık Net Ağırlık (Kg/Km)	Standart Sevk Uzunluğu (m)	20°C'de İletken DC Direnci (Ohm/Km) Maks.	Akım Taşıma Kapasitesi	
					Boru içinde (A)	Havada (A)
1.5re	3	20.0	100	12.1	20	31
1.5rm	3	22	100	12.1	24	30
2.5re	3.7	35	100	7.41	26	43
2.5rm	3.6	34	100	7.41	32	40
4re	4.2	50	100	4.61	34	56
4rm	4.1	49	100	4.61	42	52
6re	4.8	65	100	3.08	44	71
6rm	4.7	69	100	3.08	53	64
10rm	6	110	100	1.83	60	97
16rm	6.8	170	100	1.15	81	130
25rm	8.5	260	100	0.727	110	171
35rm	9.5	350	1000	0.524	137	210
50rm	11	480	1000	0.387	175	262
70rm	13	680	1000	0.268	262	325
95rm	15	920	1000	0.193	312	387
120rm	16.5	1150	1000	0.153	-	456
150rm	18	1400	1000	0.124	-	518
185rm	20	1770	1000	0.0991	-	593
240rm	23	2300	1000	0.0754	-	700

H05Z1-K
H07Z1-K

300/500V and 450/750V LSF, Halogen Free, Flame Retardant Single Wires with Flexible Conductor
300/500V ve 450/750V LSF, Halojensiz, Alev İletmeyen Tek Damarlı Esnek İletkenli Kablolar



Application Area

Used in places which has much human density and can consider as areas of high risk of fire. For example business centers, shopping centers, hotels, schools, hospitals, tunnels.

Construction

Conductor : EN 60228 Class 5 Copper

Insulation : Thermoset LSZH compound Type TI7

Technical Data

Max. operating temperature : 90°C

Max. short circuit temperature : 250°C

Applicable Standards

TS EN 50525-3-31, VDE 250

Uygulama Alanı

İnsanların yoğun olarak bulunduğu iş merkezleri, alışveriş merkezleri, oteller, okullar, hastaneler, tüneller ve bu gibi yangın tehlikesi olan yerlerde kullanılır.

Yapısı

İletken : EN 60228 Sınıf 5 Bakır

Yalıtkan : Termoset LSZH Bileşik Tip TI7

Teknik Veriler

Maks. çalışma sıcaklığı : 90°C

Maks. kısa devre sıcaklığı : 250°C

Uygulanabilir Standartlar

TS EN 50525-3-31, VDE 250

Technical Features • Teknik Özellikler

Nominal Cross-section (mm ²)	Approx. Overall Diameter (mm)	Approx. Net Weight (Kg/Km)	Standard Delivery Length (m)	Conductor DC Resistance at 20°C (Ohm/Km) Max.	Current Carrying Capacity	
					In Conduit (A)	In Air (A)
Nominal Kesit (mm ²)	Yaklaşık Dış Çap (mm)	Yaklaşık Net Ağırlık (Kg/Km)	Standart Sevk Uzunluğu (m)	20°C'de İletken DC Direnci (Ohm/Km) Maks.	Akım Taşıma Kapasitesi	
					Boru içinde (A)	Havada (A)
0.5	1.9	8	100	39	-	8
0.75	2.3	12	100	26	-	16
1	2.5	15	100	19.5	12	20
1.5	2.9	20.0	100	12.1	15	24
2.5	3.6	32	100	7.41	20	32
4	4.3	48	100	4.61	25	42
6	4.9	68	100	3.08	33	54
10	6.3	120	100	1.83	45	73
16	8	180	100	1.15	61	98
25	9.6	275	100	0.727	83	129
35	11	370	1000	0.524	103	158
50	13.3	520	1000	0.387	132	198
70	15.5	728	1000	0.268	165	245
95	18	950	1000	0.193	197	292
120	20	1200	1000	0.153	235	344
150	22	1490	1000	0.124	-	391
185	25	1850	1000	0.0991	-	448
240	28	2420	1000	0.0754	-	528

YXZ1
2XH
(N)2XH



0.6/1 kVXLPE Insulated, Halogen Free, Flame Retardant Cables
0.6/1 kV XLPE İzoleli, Halojensiz, Alev İletmeyen Kablolar



Application Area

Used in energy networks in hotels, schools, tunnels, high buildings, hospitals, power plants, data processing centers, business centers where there is a risk of fire.

Construction

1. Conductor : EN 60228 Class 1-2 Copper
2. Insulation : XLPE VDE 276-604 (HD 604) Type 2X11
3. Sheat : LSZH Compound VDE 276-604 (HD 604) Type HM4

Technical Data

- Min. bending radius : 12xD
Max. operating temperature : 90°C
Max. short temperature : 250°C

Applicable Standards

TS IEC 60502-1/ HD 604 S1 IEC 60502-1 VDE 276-604

Uygulama Alanı

Oteller, okullar, tüneller, yüksek binalar, enerji santralleri, bilgi işlem merkezleri ve insanların yoğun olarak bulunduğu iş merkezleri ile yangına hassas bölgelerde kullanılır.

Yapısı

1. İletken : EN 60228 Sınıf 1-2 Bakır
2. İzole : XLPE VDE 0276-604 (HD 604) Tip 2X11
3. Kılıf : LSZH Bileşik VDE 276-604 (HD 604) Tip HM4

Teknik Veriler

- Min. bükülme yarıçapı : 12xD
Maks. çalışma sıcaklığı : 90°C
Maks. kısa devre sıcaklığı : 250°C

Uygulanabilir Standartlar

TS IEC 60502-1/ HD 604 S1 IEC 60502-1 VDE 276-604

Technical Features • Teknik Özellikler

Nominal Cross-section (mm ²)	Approx. Overall Diameter (mm)	Approx. Net Weight (Kg/Km)	Standard Delivery Length (m)	Conductor DC Resistance at 20°C (Ohm/Km) Max.	Current Carrying Capacity			
					In Conduit (A)		In Air (A)	
Nominal Kesit (mm ²)	Yaklaşık Dış Çap (mm)	Yaklaşık Net Ağırlık (Kg/Km)	Standart Sevk Uzunluğu (m)	20°C'de İletken DC Direnci (Ohm/Km) Maks.	Akım Taşıma Kapasitesi			
					Boru içinde (A)		Havada (A)	
1x4re	6.5	65	70	4.61	66	55	56	44
1x6re	7	85	70	3.08	82	68	71	57
1x10re	8	125	70	1.83	109	90	96	77
1x16rm	9	190	80	1.15	139	115	128	102
1x25rm	11	300	90	0.727	179	149	173	139
1x35rm	12	375	90	0.524	213	178	212	170
1x50rm	14	500	90	0.387	251	211	258	208
1x70rm	15	700	100	0.268	307	259	328	265
1x95rm	17	950	110	0.193	366	310	404	326
1x120rm	19	1200	120	0.153	416	352	471	381
1x150rm	21	1400	130	0.124	465	396	541	438
1x185rm	23	1800	140	0.0991	526	449	626	507
1x240rm	26	2300	160	0.0754	610	521	749	606
1x300rm	28	3000	200	0.0601	689	587	864	697
1x400rm	32	3800	220	0.0470	788	669	1018	816
1x500rm	36	4800	240	0.0366	889	748	1173	933

YXZ1
2XH
(IU)2XH

90°C

Maksimum işletme sıcaklığı
Maximum operating temperature

250°C

Maksimum Kısa Devre Sıcaklığı
Maximum short Circuit Temperature

Alev dayanıklılık

Flame Retardant
IEC 60332-1-2

Halojenden Arındırılmış

Halogen free
IEC 60754-1/2

Düşük Duman Yoğunluğu

Low Smoke Emission
IEC 61034-1/2

0.6/1 kVXLPE Insulated, Halogen Free, Flame Retardant Cables

0.6/1 kV XLPE İzoleli, Halojensiz, Alev İletmeyen Kablolar



Application Area

Used in energy networks in hotels, schools, tunnels, high constructions, hospitals, power plants, data processing centers, business centers where there is a risk of fire.

Construction

1. Conductor : EN 60228 Class 1-2 Copper
2. Insulation : XLPE VDE 276-604 (HD 604) Type 2X11
3. Filler : LSZH
4. Sheat : LSZH Compound VDE 276-604 (HD 604) Type HM4

Technical Data

- Min. bending radius : 12xD
Max. operating temperature : 90°C
Max. short circuit temperature : 250°C

Applicable Standards

- TS IEC 60502-1/ HD 604 S1
IEC 60502-1
VDE 276-604

Uygulama Alanı

Oteller, okullar, tüneller, yüksek binalar, enerji santralleri, bilgi işlem merkezleri ve insanların yoğun olarak bulunduğu iş merkezleri ile yangına hassas bölgelerde kullanılır.

Yapısı

1. İletken : EN 60228 Sınıf 1-2 Bakır
2. İzole : XLPE VDE 0276-604 (HD 604) Tip 2X11
3. Dolgu : LSZH
4. Kılıf : LSZH Bileşik VDE 276-604 (HD 604) Tip HM4

Teknik Veriler

- Min. bükülme yarıçapı : 12xD
Maks. çalışma sıcaklığı : 90°C
Maks. kısa devre sıcaklığı : 250°C

Uygulanabilir Standartlar

- TS IEC 60502-1/ HD 604 S1
IEC 60502-1
VDE 276-604

Technical Features • Teknik Özellikler

Nominal Cross-section (mm ²)	Approx. Overall Diameter (mm)	Approx. Net Weight (Kg/Km)	Standard Delivery Length (m)	Conductor DC Resistance at 20°C (Ohm/Km) Max.	Current Carrying Capacity	
					In Conduit (A)	In Air (A)
Nominal Kesit (mm ²)	Yaklaşık Dış Çap (mm)	Yaklaşık Net Ağırlık (Kg/Km)	Standart Sevk Uzunluğu (m)	20°C'de İletken DC Direnci (Ohm/Km) Maks.	Akım Taşıma Kapasitesi	
					Boru içinde (A)	Havada (A)
2x1.5re	10.1	126	80	12.1	30	24
2x2.5re	10.9	157	80	7.41	40	32
2x4re	11.8	200	80	4.61	52	42
2x6re	12.8	253	80	3.08	64	53
2x10rm	15.40	395	100	1.83	86	73
2x16rm	17.60	558	110	1.15	111	96
2x25rm	20.40	811	120	0.727	143	130
2x35rm	22.60	1038	130	0.524	173	160
2x50rm	25.20	1341	150	0.387	205	195
2x70rm	29.00	1850	150	0.268	252	247
2x95rm	34.00	2556	180	0.193	303	305
2x120rm	36.60	3066	180	0.153	346	355
2x150rm	40.60	3837	200	0.124	390	407
2x185rm	46.20	4788	240	0.0991	441	469
2x240rm	52.00	6164	240	0.0754	511	551
3x1.5re	11	135	90	12.1	30	24
3x2.5re	11.5	175	90	7.41	40	32
3x4re	12.5	225	90	4.61	52	42
3x6re	13.5	300	100	3.08	64	53
3x10rm	15.5	430	110	1.83	86	73
3x16rm	18	650	120	1.15	111	96
3x25rm	22	950	130	0.727	143	130
3x35rm	24	1250	140	0.524	173	160
3x50rm	27	1700	160	0.387	205	195
3x70rm	31	1450	180	0.268	252	247
3x95rm	35	3300	200	0.193	303	305
3x120rm	39	4100	230	0.153	346	355
3x150rm	43	5050	250	0.124	390	407
3x185rm	48	6250	280	0.0991	441	469
3x240rm	54	8150	230*	0.0754	511	551
3x300rm	60	10200	250*	0.0601	580	638
3x400rm	67	13000	280*	0.0470	663	746

* For 500 m. cable. / 500 m. kablo için.

** For 250 m. cable. / 250 m. kablo için.

**YXZ2Z1
2XRH
(N)2XRH
CU/XLPE/SWA/LSF****0.6/1 kV XLPE Halogen Free, Armoured Flame Retardant Cables
0.6/1 kV XLPE Halojensiz, Alev İletmeyen Zırhlı Kablolar****Application Area**

Used in energy networks in hotels, schools, tunnels, high buildings, hospitals, power plants, data processing centers, business centers where there is a risk of fire. These cables with a low dielectric loss coupled with mechanical resistance are mainly used in energy networks with sudden load change residential or industrial areas. Can be laid outdoors, under grounds and in areas where sudden mechanical stresses are expected.

Technical Data

Min. bending radius	: 12xD
Max. operating temperature	: 90°C
Max. short circuit temperature	: 250°C

Construction

1. Conductor : EN 60228 Class 1-2 Copper
2. Insulation : XLPE BS 7655-1-3 Type GP8, VDE 276-604 (HD604) Type 2X11
3. Filler : LSZH
4. Armour : Galvanized round steel wire
5. Sheath : LSZH Compound BS 7655-6.1 Type LTS1, VDE276-604 (HD 604) Type HM4

Applicable Standards

TS IEC 60502-1/ HD 604
IEC 60502-1
VDE 276-604
BS6724

Uygulama Alan

Oteller, okullar, tüneller, yüksek binalar, enerji santralleri, bilgi işlem merkezleri ve insanların yoğun olarak bulunduğu iş merkezleri ile yangına hassas bölgelerde kullanılır. Mekanik zorlamalara dayanıklı ve dielektrik kaybı çok düşük olan bu kablolar yerleşme ve endüstri bölgelerinde, hariçte, toprak altında ve kablo kanallarında ani yük değişimlerinin olduğu enerji tesislerinde kullanılır.

Teknik Veriler

Min. bükülme yarıçapı	: 12xD
Maks. çalışma sıcaklığı	: 90°C
Maks. kısa devre sıcaklığı	: 250°C

Yapısı

1. İletken : BS EN 60228 Sınıf 1-2 Bakır
2. İzole : XLPE, BS 7655-1-3 Tip GP8, VDE 276-604 (HD 604) Tip 2X11
3. Dolgu : LSZH
4. Zırh : Galvanizli Yuvarlak çelik tel
5. Kılıf : LSZH Bileşik BS 7655-6.1 Tip LTS1, VDE 276-604 (HD 604) Tip HM4

Uygulanabilir Standartlar

TS IEC 60502-1/ HD 604
IEC 60502-1
VDE 276-604
BS6724

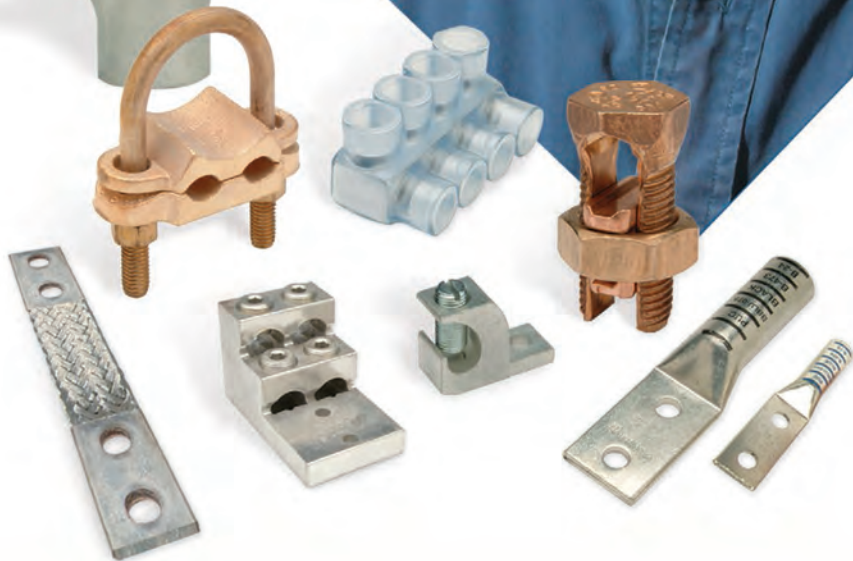
Technical Features • Teknik Özellikler

Nominal Cross-section (mm ²)	Approx. Overall Diameter (mm)	Approx. Net Weight (Kg/Km)	Standard Delivery Length (m)	Conductor DC Resistance at 20°C (Ohm/Km) Max.	Current Carrying Capacity	
					In Conduit (A)	In Air (A)
Nominal Kesit (mm ²)	Yaklaşık Dış Çap (mm)	Yaklaşık Net Ağırlık (Kg/Km)	Standart Sevk Uzunluğu (m)	20°C'de İletken DC Direnci (Ohm/Km) Maks.	Akım Taşıma Kapasitesi	
					Boru içinde (A)	Havada (A)
4x1.5rm	13	320	90	12.1	30	24
4x2.5 rm	15	420	100	7.41	40	32
4x4rm	16	500	110	4.61	52	42
4x6rm	18.5	730	120	3.08	64	53
4x10rm	21	950	120	1.83	86	73
4x16rm	23	1250	130	1.15	111	96
4x25rm	28	1900	150	0.727	143	130
4x35rm	30	2450	160	0.524	173	160
4x50sm	33	3000	200	0.387	205	195
4x70sm	39	4300	230	0.268	252	247
4x95sm	43	5500	250	0.193	303	305
4x120sm	48	7000	280	0.153	346	355
4x150sm	53	8400	230*	0.124	390	407
4x185sm	58	10200	250*	0.0991	441	469
4 x240sm	64	12800	280*	0.0754	511	551



CONNECTING YOUR TOMORROW.™

Manufacturer of
Electrical Power Connectors,
Tools & Accessories

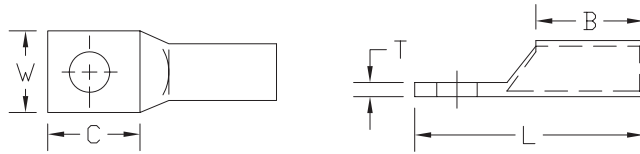



PENNUNION™
CONNECTING YOUR TOMORROW.™

Standard Barrel - One Hole Tongue with Inspection Window
Standart Tip, Gözetleme Delikli

Type BLU-S
BLU-S Modeli

- Manufactured from high conductivity seamless copper tubing
- Tin-plated to inhibit corrosion
- Beveled entry for easy cable insertion
- Inspection window to ensure full cable insertion
- Color coded barrels are marked with die index numbers
- Connectors are suitable for voltages up to 35 KV
- 45° and 90° angles are UL listed and CSA certified
- Connectors are UL listed and CSA certified with Penn-Union, Burndy, T&B, Huskie, Greenlee and Versa-Crimp® style tooling



BLU-S DIMENSIONS & INSTALLATION TOOLING INFORMATION • BLU-S BOYUTLAR ve SIKMA PENSESİ BİLGİLERİ

CATALOG NUMBER	COPPER CONDUCTOR SIZE	STUD HOLE SIZE	FIGURE DIMENSIONS (IN.)					INSTALLATION TOOLING				WIRE STRIP LENGTH
			TONGUE WIDTH "W"	TONGUE LENGTH "C"	TONGUE THICKNESS "T"	BARREL LENGTH "B"	OVERALL LENGTH "L"	COLOR CODE	PENN-UNION DIELESS MECHANICAL TOOLS	BURNDY DIE INDEX NO. / TOOL	PENN-UNION DIE CATALOG NO.	
BLU-8S14	8 AWG	#10	.37	.50	.08	.41	1.09	Red	TDM-250 or TDM-500	6	T-49	1/2"
BLU-8S15		1/4"	.37	.56	.08	.41	1.14					
BLU-8S16A		5/16"	.60	.64	.07	.57	1.46					
BLU-8S17A		3/8"	.60	.64	.07	.58	1.52					
BLU-8S18A		1/2"	.70	1.00	.09	.57	1.72					
BLU-6S	6 AWG	#10	.41	.53	.09	.81	1.51	Blue	TDM-250 or TDM-500	7	T-7	15/16"
BLU-6S1		1/4"	.41	.69	.09	.81	1.67					
BLU-6S2		5/16"	.45	.75	.07	.82	1.78					
BLU-6S8		3/8"	.60	.88	.06	.81	1.97					
BLU-6S9+		1/2"	.70	.94	.08	.75	1.88					
BLU-5S	5 AWG	#10	.43	.56	.08	.81	1.61	Blue	TDM-250 or TDM-500	7	T-7	15/16"
BLU-5S1		1/4"	.43	.69	.08	.81	1.73					
BLU-5S2		5/16"	.61	.72	.06	.81	1.77					
BLU-5S3		3/8"	.61	.88	.06	.81	1.92					
BLU-4S	4 AWG	#10	.48	.56	.09	.81	1.61	Gray	TDM-250 or TDM-500	8	T-8	15/16"
BLU-4S1		1/4"	.48	.69	.09	.81	1.67					
BLU-4S10		5/16"	.48	.72	.09	.81	1.76					
BLU-4S2		3/8"	.60	.88	.08	.81	1.97					
BLU-4S4 +	1/2"	1.12	1.12	.13	.83	2.22						
BLU-3S	3 AWG	#10	.53	.56	.09	.88	1.67	White	TDM-250 or TDM-500	9	T-9	1"
BLU-3S1		1/4"	.53	.69	.09	.88	1.80					
BLU-3S2		5/16"	.53	.75	.09	.88	1.86					
BLU-3S3		3/8"	.59	.88	.08	.88	1.98					

BLU-S DIMENSIONS & INSTALLATION TOOLING INFORMATION • BLU-S BOYUTLAR ve SIKMA PENSESİ BİLGİLERİ

CATALOG NUMBER	COPPER CONDUCTOR SIZE	STUD HOLE SIZE	FIGURE DIMENSIONS (IN.)					INSTALLATION TOOLING				WIRE STRIP LENGTH
			TONGUE WIDTH "W"	TONGUE LENGTH "C"	TONGUE THICKNESS "T"	BARREL LENGTH "B"	OVERALL LENGTH "L"	COLOR CODE	PENN-UNION DIELESS MECHANICAL TOOLS	BURNDY DIE INDEX NO. / TOOL	PENN-UNION DIE CATALOG NO.	
BLU-2S15	2 AWG	#10	.59	.69	.11	.88	1.73	Brown	TDM-250 or TDM-500	10	T-10	1"
BLU-2S		1/4"	.59	.69	.11	.88	1.73					
BLU-2S1		5/16"	.59	.75	.11	.88	1.86					
BLU-2S2		3/8"	.59	.87	.11	.88	1.98					
BLU-2S10		1/2"	.82	1.13	.10	.88	2.25					
BLU-1S9	1 AWG	1/4"	.67	.56	.11	.62	1.42	Green	TDM-250 or TDM-500	11	T-11	3/4"
BLU-1S		5/16"	.67	.75	.11	.88	1.86					1"
BLU-1S1		3/8"	.67	.87	.11	.94	2.05					1-1/16"
BLU-1S4A		1/2"	.70	1.06	.09	.82	2.03					15/16"
BLU-1/OS19	1/0 AWG	1/4"	.73	.87	.12	.87	2.05	Pink	TDM-250 or TDM-500	12	T-12	1"
BLU-1/OS		5/16"	.73	.87	.12	.88	2.05					
BLU-1/OS1		3/8"	.73	.87	.12	.88	2.05					
BLU-1/OS20		1/2"	.73	1.06	.12	.87	2.25					
BLU-2/OS20	2/0 AWG	1/4"	.81	.81	.12	.94	2.06	Black	TDM-250 or TDM-500	13	T-13	1-1/16"
BLU-2/OS21		5/16"	.81	.81	.12	.94	2.06					
BLU-2/OS		3/8"	.81	.87	.12	.94	2.11					
BLU-2/OS4		1/2"	.81	1.12	.12	.94	2.37					
BLU-3/OS14	3/0 AWG	1/4"	.89	.81	.12	.75	1.94	Orange	TDM-250 or TDM-500	14	T-14	1-1/8"
BLU-3/OS15		5/16"	.89	.81	.12	.75	1.94					
BLU-3/OS		3/8"	.89	.87	.12	1.00	2.25					
BLU-3/OS1		1/2"	.89	1.12	.12	1.00	2.50					
BLU-4/OS19	4/0 AWG	1/4"	1.00	.78	.14	1.00	2.22	Purple	TDM-250 or TDM-500	15	T-15	1-1/8"
BLU-4/OS25		5/16"	1.00	.78	.14	1.00	2.22					
BLU-4/OS		3/8"	1.00	.87	.14	1.00	2.31					
BLU-4/OS1		1/2"	1.00	1.09	.14	1.00	2.50					
BLU-025S4	250 kcmil	1/4"	1.09	.78	.15	1.06	2.34	Yellow	TDM-250 or TDM-500	16	T-16	1-3/16"
BLU-025S5		5/16"	1.09	.78	.15	1.06	2.34					
BLU-025S2		3/8"	1.09	1.13	.15	1.06	2.69					
BLU-025S		1/2"	1.09	1.13	.15	1.06	2.69					
BLU-030S6	300 kcmil	5/16"	1.19	.78	.16	1.06	2.41	White	TDM-500	17	T-17	1-3/16"
BLU-030S7		3/8"	1.19	1.09	.16	1.06	2.75					
BLU-030S		1/2"	1.19	1.09	.16	1.06	2.75					
BLU-030S8		3/8"	1.19	1.69	.16	1.06	3.31					
BLU-035S1	350 kcmil	3/8"	1.28	.88	.17	1.13	2.63	Red	TDM-500	18	T-18	1-1/4"
BLU-035S		1/2"	1.28	1.16	.17	1.13	2.91					
BLU-035S3		5/8"	1.28	1.41	.17	1.13	3.16					
BLU-040S4	400 kcmil	1/2"	1.39	1.19	.19	1.19	3.06	Blue	TDM-500	19	T-19	1-5/16"
BLU-040S		5/8"	1.39	1.44	.19	1.19	3.31					
BLU-045S1	450 kcmil	1/2"	1.45	1.19	.22	1.19	3.06	Blue	TDM-500	19	T-19	1-5/16"
BLU-045S		5/8"	1.45	1.44	.22	1.18	3.31					
BLU-050S2	500 kcmil	1/2"	1.53	1.13	.21	1.38	3.28	Brown	TDM-500	20	T-20	1-1/2"
BLU-050S		5/8"	1.53	1.44	.21	1.38	3.63					
BLU-060S	600 kcmil	5/8"	1.72	1.75	.27	1.38	3.97	Green	-	22	T-22	1-1/2"
BLU-060S1		1/2"	1.72	1.75	.27	1.38	3.97					
BLU-065S4	650 kcmil	5/8"	1.78	1.75	.27	1.38	3.97	Pink	-	300	T-300	1-1/2"
BLU-065S5		1/2"	1.78	1.75	.27	1.38	3.97					
BLU-075S	750 kcmil	5/8"	1.91	1.75	.27	1.63	4.31	Black	-	24	T-24	1-3/4"
BLU-080S	800 kcmil	5/8"	1.96	1.88	.25	1.63	4.53	Orange	-	25	T-25P	1-3/4"
BLU-100S	1000 kcmil	5/8"	2.17	1.75	.33	1.88	4.75	White	-	27	T-27P	2"
BLU-100S4		3/4"	2.17	1.88	.33	1.88	4.88					
BLU-150S	1500 kcmil	3/4"	2.69	2.19	.39	2.00	5.47	Green	-	31	T-31P	2-1/8"
BLU-200S	2000 kcmil	3/4"	3.07	2.31	.46	2.25	5.94	Brown	-	34	-	2-3/8"

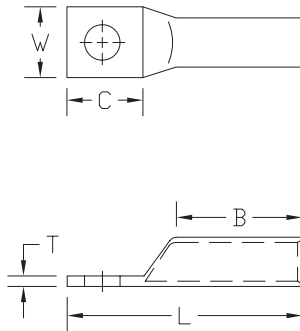
Δ cULus listed
• Not UL listed
+ Not CSA certified

- For 45° or 90° BENT TONGUES add suffix "-45" for 45 deg. or "-90" for 90 deg. to the catalog number
- Connectors from 8 AWG - 2000 kcmil are UL listed per UL486A-B and CSA certified per C22.2 No.65 for POWER applications
- Connectors from 8 AWG - 500 kcmil are UL listed for grounding, bonding and direct burial applications per UL467
- Connectors from 8 AWG - 250 kcmil are CSA certified for grounding, bonding and direct burial applications per C22.2 No.41

Long Barrel - One Hole Tongue with Closed Transition Uzun Silindirli Tip

Type BBLU-S BBLU-S Modeli

- Manufactured from high conductivity seamless copper tubing
- Tin-plated to inhibit corrosion
- Beveled entry for easy cable insertion
- Closed transition protects end of cable from environmental conditions
- Long barrel provides high pull out force and added secureness for improved mechanical and electrical properties
- Color coded barrels are marked with die index numbers
- Connectors are suitable for voltages up to 35 KV
- 45° and 90° angles are UL listed and CSA certified
- Connectors are UL listed and CSA certified with Penn-Union, Burndy, T&B, Huskie, Greenlee and Versa-Crimp® style tooling



BBLU-S
See table for dimensions and
installation tooling information

BBLU-S DIMENSIONS & INSTALLATION TOOLING INFORMATION - BBLU-S BOYUT ve SIKMA PENSESİ BİLGİLERİ

CATALOG NUMBER	COPPER CONDUCTOR SIZE	STUD HOLE SIZE	FIGURE DIMENSIONS (IN.)					INSTALLATION TOOLING				WIRE STRIP LENGTH
			TONGUE WIDTH "W"	TONGUE LENGTH "C"	TONGUE THICKNESS "T"	BARREL LENGTH "B"	OVERALL LENGTH "L"	COLOR CODE	PENN-UNION DIELESS MECHANICAL TOOLS	BURNDY DIE INDEX NO. / TOOL	PENN-UNION DIE CATALOG NO.	
BBLU-8S -	8 AWG	#10	.41	.69	.08	1.06	2.00	Red	TDM-250 or TDM-500	6	T-49	1-3/16"
BBLU-8S2 -		1/2"	.41	.69	.08	1.06	2.00					
BBLU-6S	6 AWG	1/4"	.41	.69	.09	1.09	2.03	Blue	TDM-250 or TDM-500	7	T-7	1-1/4"
BBLU-6S1		1/2"	.70	1.07	.09	1.00	2.20					
BBLU-4S	4 AWG	1/4"	.48	.69	.09	1.09	2.06	Gray	TDM-250 or TDM-500	8	T-8	1-1/4"
BBLU-4S1		3/8"	.82	1.23	.10	1.13	2.65					
BBLU-4S2		1/2"	.70	1.07	.09	1.00	2.20					
BBLU-3S3	3 AWG	1/4"	.53	.75	.10	1.12	2.15	White	TDM-250 or TDM-500	9	T-9	1-1/4"
BBLU-3S1		5/16"	.53	.75	.09	1.13	2.16					
BBLU-3S	2 AWG	1/2"	.93	1.12	.10	1.13	2.53	Brown	TDM-250 or TDM-500	10	T-10	1-3/8"
BBLU-2S9		#10	.59	.75	.11	1.22	2.25					
BBLU-2S2		1/4"	.59	.75	.11	1.22	2.25					
BBLU-2S		5/16"	.59	.75	.11	1.22	2.25					
BBLU-2S4		3/8"	.59	.75	.11	1.22	2.25					
BBLU-2S3	1/2"	.75	1.07	.09	1.10	2.33	-	Y644HS	-	1-1/4"		
BBLU-1S3	1 AWG	#10	.67	.75	.11	1.34	2.38	Green	TDM-250 or TDM-500	11	T-11	1-1/2"
BBLU-1S7		1/4"	.67	.75	.11	1.34	2.38					
BBLU-1S		5/16"	.67	.75	.11	1.34	2.36					
BBLU-1S2		3/8"	.67	.75	.11	1.34	2.38					
BBLU-1S8		1/2"	.75	1.25	.09	1.38	2.86					
BBLU-1/0S	1/0 AWG	5/16"	.73	.75	.13	1.34	2.44	Pink	TDM-250 or TDM-500	12	T-12	1-1/2"
BBLU-1/0S2		3/8"	.75	.81	.12	1.25	2.37					
BBLU-1/0S15	2/0 AWG	1/2"	.75	1.38	.13	1.38	3.06	Black	TDM-250 or TDM-500	13	T-13	1-5/8"
BBLU-2/0S		3/8"	.81	.87	.13	1.50	2.72					
BBLU-2/0S1	3/0 AWG	1/2"	.81	1.25	.13	1.50	3.06	Orange	TDM-250 or TDM-500	14	T-14	1-5/8"
BBLU-3/0S2		3/8"	.89	1.25	.12	1.50	3.12					
BBLU-3/0S	1/2"	.89	1.25	.13	1.50	3.12	Purple	TDM-250 or TDM-500	15	T-15	1-3/4"	
BBLU-4/0S	4/0 AWG	1/2"	1.00	1.25	.14	1.63						3.31
BBLU-025S	250 kcmil	1/2"	1.09	1.25	.16	1.63	3.38	Yellow	TDM-250 or TDM-500	16	T-16	1-3/4"
BBLU-030S	300 kcmil	1/2"	1.19	1.25	.16	2.00	3.81	White	TDM-500	17	T-17	2-1/8"
BBLU-035S	350 kcmil	1/2"	1.28	1.25	.17	2.00	3.84	Red	TDM-500	18	T-18	2-1/8"
BBLU-040S	400 kcmil	5/8"	1.39	1.50	.19	2.13	4.31	Blue	TDM-500	19	T-19	2-1/4"
BBLU-040S1		1/2"	1.39	1.25	.18	2.12	4.06					
BBLU-050S	500 kcmil	5/8"	1.53	1.47	.21	2.31	4.56	Brown	-	20	T-20	2-13/16"
BBLU-050S2		1/2"	1.53	1.25	.21	2.25	4.25					
BBLU-060S2	600 kcmil	1/2"	1.72	1.50	.27	2.69	5.09	Green	-	22	T-22	2-13/16"
BBLU-060S		5/8"	1.72	1.75	.27	2.69	5.34					
BBLU-065S	650 kcmil	1/2"	1.78	1.75	.26	2.81	5.40	Pink	-	300	T-300	2-15/16"
BBLU-065S1		5/8"	1.78	1.75	.27	2.81	5.41					
BBLU-075S	750 kcmil	5/8"	1.91	1.75	.27	2.88	5.56	Black	-	24	T-24	3"
BBLU-080S	800 kcmil	5/8"	1.96	1.50	.25	2.93	5.46	Orange	-	25	T-25P	1-3/4"
BBLU-100S	1000 kcmil	5/8"	2.17	1.75	.33	3.00	5.88	White	-	27	T-27P	3-1/8"
BBLU-150S	1500 kcmil	3/4"	2.69	2.13	.39	3.19	6.53	Green	-	31	T-31P	3-5/16"
BBLU-200S	2000 kcmil	3/4"	3.07	2.12	.46	3.43	6.87	Brown	-	34	-	3-9/16"

■ CSAus certified

- For 45° or 90° BENT TONGUES add suffix "-45" for 45 deg. or "-90" for 90 deg. to the catalog number
- Connectors from 8 AWG - 2000 kcmil are UL listed per UL486A-B and CSA certified per C22.2 No.65 for POWER applications
- Connectors from 8 AWG - 500 kcmil are UL listed for grounding, bonding and direct burial applications per UL467
- Connectors from 8 AWG - 250 kcmil are CSA certified for grounding, bonding and direct burial applications per C22.2 No.41

Dieless Mechanical Compression Tool - Çenesiz Mekanik Pense
TDM-250 / TDM-250 Modeli

ECONOMICAL

- Dieless - no dies to buy or lose
- Compression connectors are UL listed and CSA certified when installed in accordance with manufacturer's installation instructions
- Crimps #8-250 kcmil AL or CU
- Costs less than expensive hydraulic tools
- Quality construction - all-steel, durable construction
- Five year manufacturer's warranty for replacement or service



CONVENIENT TO USE

- Unique telescopic handle design provides increased leverage. At 250 kcmil, the TDM-250 requires less handle load than conventional 250 kcmil tools require at 250 kcmil
- Easily adjustable tool settings
- Easy-to-read settings are provided on calibrated index plates, one for AL and one for CU, located on the side of the tool
- Small head - convenient in confined areas
- Easiest bench use - machined flat head surface allows you to stand tool freely in working position

CATALOG NUMBER	WIRE RANGE
TDM-250	#8 - 250 kcmil CU #8 - 250 kcmil AL
TDM-250XF	#8 - 4/0 EXTRA FLEXIBLE CU #8 - 250 kcmil CU

For use with: BLU, BBLU, BBLZ, BCU, BBCU and BLY (use TDM-250XF) style copper connectors

LENGTH: 26.0 in. / **WEIGHT:** 9.5 lbs.

Dieless Mechanical Compression Tool - Çenesiz Mekanik Pense
TDM-500 / TDM-500 Modeli

ECONOMICAL

- Dieless - no dies to buy or lose
- Compression connectors are UL listed and CSA certified when installed in accordance with manufacturer's installation instructions
- Widest range available - crimps #8-500 kcmil AL or CU
- Costs less than expensive hydraulic tools
- Quality construction - all-steel, durable construction
- Five year manufacturer's warranty for replacement or service



CONVENIENT TO USE

- Unique telescopic handle design provides increased leverage.
- At 500 kcmil, the TDM-500 requires less handle load than conventional 250 kcmil tools require at 250 kcmil
- Easily adjustable tool settings
- Easy-to-read settings are provided on calibrated index plates, one for AL and one for CU, located on the side of the tool
- Small head - convenient in confined areas
- Easiest bench use - machined flat head surface allows you to stand tool freely in working position

CATALOG NUMBER	WIRE RANGE
TDM-500	#8 - 500 kcmil CU #8 - 500 kcmil AL

For use with: BLU, BBLU, BBLZ, BCU, and BBCU style copper connectors

LENGTH: 27.4 in. / **WEIGHT:** 9.9 lbs.

Copper Alloy Split Bolt Connectors • Tespit Klemensleri, Bakır

- Manufactured from high strength copper alloy - highly resistant to corrosion and season cracking
- For use with a wide range of copper solid, compact, compressed, concentric, copperweld conductors, and rebar
- Approved for electrical power, grounding/bonding, and direct burial applications



APPLICATION/USE:

- **Type S** is for use with two conductors in electrical power applications; 2 conductors or conductor to rebar in grounding/ bonding and direct burial applications in earth and concrete
- **Type SEL** is for use with two or three conductors in electrical power, grounding/ bonding, and direct burial applications in earth and concrete
- DB permanently marked on head for conductor sizes up to 500 kcmil



HIGH QUALITY DESIGN:

- True hex design allows easy installation with standard tooling
- Under torque, this design provides high contact pressure between conductors or conductor to rebar
- Pressure bar design features give assurance of high “pull-out” and secure connection on all combinations of conductors
- Wide wire range
- Rated for copper conductors, 600 V, 90°C

INSTALLATION:

- Use with torque wrench, standard socket, box or open-end wrenches
- Reusable with proper installation practice

Type S - Two Conductors • S Tipi - 2 İletken

CATALOG NUMBER	RANGE OF EQUAL RUN & TAP	MIN. TAP W/ ONE MAX. MAIN	MAX. CONDUCTOR COPPERWELD		UL ONLY REBAR W/ 6 OR 8AWG	APPROXIMATE DIMENSIONS (IN.)				TORQUE (IN-LBS)
			STR.	TYPE A		L	W	B	A	
S-10*	16 Str. - 10 Str.	16 Str.	-	-	-	.72	.50	.34	.13	80
S-8*	16 Str. - 8 Str.	16 Str.	-	-	-	.84	.50	.38	.15	80
S-6*	10 Sol. - 6 Sol.	16 Sol.	-	-	-	1.05	.63	.50	.17	165
S-4*	8 Sol. - 4 Sol.	16 Sol.	3 No. 12	8A	-	1.05	.69	.56	.22	165
S-3*	6 Sol. - 2 Sol.	12 Sol.	3 No. 9	5A	-	1.32	.81	.69	.33	275
S-2*	6 Sol. - 2 Str.	14 Str.	3 No. 7	3A	-	1.32	.81	.69	.33	275
S-1/0*	4 Sol. - 1/0 Str.	14 Sol.	3 No. 6	2A	-	1.64	.88	.75	.38	385
S-2/0	2 Sol. - 2/0 Str.	14 Str.	3 No. 5	-	#3 (3/8)	1.82	1.00	.81	.42	385
S-3/0	2 Sol. - 3/0 Str.	12 Sol.	7 No. 7	-	-	2.00	1.13	.88	.47	500
S-4/0-250	1/0 Sol. - 250 kcmil	10 Sol.	7 No. 5	-	#4 (1/2)	2.08	1.31	1.00	.58	650
S-350+	4/0 Str. - 350 kcmil	8 Sol.	19 No. 7	-	#5 (5/8)	2.63	1.63	1.50	.75	650
S-500+	250 - 500 kcmil	8 Sol.	19 No. 6	-	#6 (3/4)	3.00	1.81	1.63	.83	825
S-750++	350 - 750 kcmil	8 Sol.	19 No. 5	-	-	3.75	2.13	1.94	1.03	1000
S-1000++	500 - 1000 kcmil	8 Sol.	-	-	-	4.00	2.50	2.25	1.22	1100

+ UL Only Grounding, Bonding, Direct Burial (350 & 500)

++ Not Approved Grounding, Bonding, Direct Burial

* RUS REA Accepted

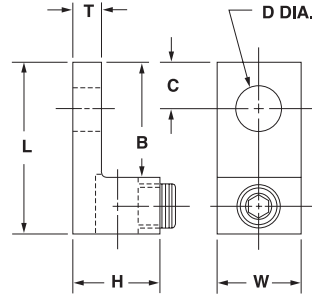
Type SEL - Two or Three Conductors • SEL Tipi, 2 ya da 3 İletken

CATALOG NUMBER	RANGE OF EQUAL RUN & TAP	MIN. TAP W/ ONE MAX. MAIN	MAX. CONDUCTOR COPPERWELD		APPROXIMATE DIMENSIONS (IN.)				TORQUE (IN-LBS)
			STR.	TYPE A	L	W	B	A	
SEL-8*	16 Str. - 8 Str.	16 Str.	-	-	.84	.50	.38	.14	80
SEL-6*	10 Sol. - 6 Sol.	16 Sol.	-	-	1.09	.63	.50	.17	165
SEL-4*	8 Sol. - 4 Sol.	16 Sol.	3 No. 12	8A	1.27	.69	.56	.22	165
SEL-2*	6 Sol. - 2 Str.	14 Str.	3 No. 7	3A	1.55	.81	.69	.33	275

CONNECTOR TYPE	POWER	UL-467 GROUNDING			CSA C22.2 NO. 41 GROUNDING		
	UL486A-B CSA 22.2 NO. 65 WIRE RANGE	UL GROUNDING MAX. WIRE	GROUNDING & BONDING	DIRECT BURIAL REBAR	CSA GROUNDING MAX. WIRE	GROUNDING & BONDING	DIRECT BURIAL
S SEL	16 Str. - 1000 kcmil	500 kcmil	Yes	Yes	250 kcmil	Yes	Yes

Aluminum Dual Rated Lugs - One Hole Tongue • Vidalı Kablo Papucu, Tek Montaj Delikli, Alüminyum

- Manufactured from high strength aluminum alloy extrusion
- Electro-tin plated to ensure minimum contact resistance and protection against corrosion when used with copper wire
- Connectors are rated for 600 V, 90°C applications
- The use of oxide inhibitor is recommended for all aluminum terminations



CATALOG NUMBER	CONDUCTOR RANGE	APPROXIMATE DIMENSIONS (IN.)							MTG. BOLT SIZE	HEX SIZE
		L	W	H	T	B	C	D (DIA.)		
LA-6	14 Str. - 6 Str.	1.06	.50	.50	.09	.69	.25	.27	1/4	Slot
LA-2	14 Str. - 2 Str.	1.16	.50	.55	.11	.69	.31	.27	1/4	Slot
LA-0	14 Str. - 1/0 Str.	1.47	.63	.78	.19	.84	.42	.27	1/4	Slot
LA-2/0	14 Str. - 2/0 Str.	1.47	.63	.80	.19	.84	.44	.27	1/4	3/16
LA-250	6 Str. - 250 kcmil	2.00	1.00	1.13	.25	1.00	.45	.33	5/16	3/8
LA-350	6 Str. - 350 kcmil	2.25	1.13	1.25	.25	1.13	.50	.41	3/8	3/8
LA-500	4 Str. - 500 kcmil	2.81	1.25	1.56	.31	1.56	.88	.41	3/8	3/8
LA-600	2 Str. - 600 kcmil	3.13	1.50	1.56	.44	1.81	.88	.53	3/8	3/8
LA-800	300 - 800 kcmil	3.50	1.75	1.94	.50	1.88	.81	.66	5/8	1/2
LA-1000	500 - 1000 kcmil	3.50	1.75	1.94	.50	1.88	.81	.66	5/8	1/2



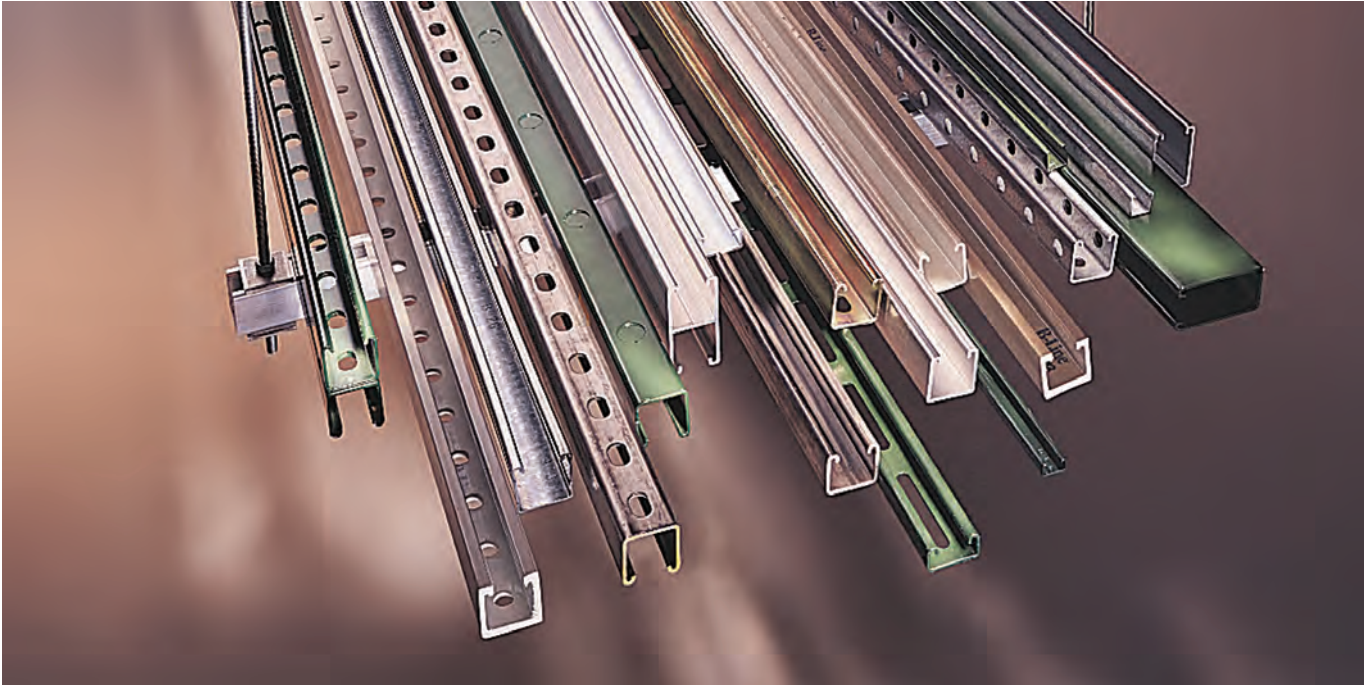
STRUT SYSTEMS
B-LINE SERIES



STRUT & ACCESSORIES C PROFİL ve AKSESUARLARI

EATON

Powering Business Worldwide



Channel

Metal framing channel is cold formed on our modern rolling mills from 12 Ga. (2.6mm), 14 Ga. (1.9mm), and 16 Ga. (1.5mm) low carbon steel strips. A continuous slot with inturned lips provides the ability to make attachments at any point.

Lengths & Tolerances

All channels excluding 'SH' style $\pm 1/8"$ (3.2 mm) on 10' (3.05 m) and $\pm 3/16"$ (4.76 mm) on 20' (6.09 m)

All 'SH' channels only $\pm 1/4"$ (6.35 mm) on 10' (3.05 m) and $\pm 1/2"$ (12.70 mm) on 20' (6.09 m)

Custom lengths are available upon request.

Slots

Slotted series of channels offer full flexibility. A variety of pre-punched slot patterns eliminate the need for precise field measuring for hole locations. Slots offer wide adjustments in the alignment and bolt sizing.

Holes

A variety of pre-punched $9/16"$ (14.3 mm) diameter hole patterns are available in our channels. These hole patterns provide an economical alternative to costly field drilling required for many applications.

Knockouts

When used with series B217-20 Closure Strips, knockout channels can be used to provide an economical U.L. listed surface raceway. Channels are furnished with $7/8"$ (22.2 mm) knockouts on 6" (152 mm) centers, allowing for perfect fixture alignment on spans up to 20' (6.09 m).

Materials & Finishes (Unless otherwise noted)

Steel: Plain & Pre-galvanized

12 Ga. (2.6), 14 Ga. (1.9) and 16 Ga. (1.5)

Note: A minimum order may apply on special material and finishes.

Finish Code	Finish	Specification
PLN	Plain	ASTM A1011, 33,000 PSI min. yield
GRN	DURA GREEN™	
GLV	Pre-Galvanized	ASTM A653 33,000 PSI min. yield
HDG	Hot-Dipped Galvanized	ASTM A123
YZN	Yellow Zinc Chromate	ASTM B633 SC3 Type II
SS4	Stainless Steel Type 304	ASTM A240
SS6	Stainless Steel Type 316	ASTM A240
AL	Aluminum	Aluminum 6063-T6

Design Load (Steel & Stainless Steel)

The design loads given for strut beam loads are based on a simple beam condition using an allowable stress of 25,000 psi. This allowable stress results in a safety factor of 1.68. This is based upon virgin steel minimum yield strength of 33,000 psi cold worked during rolling to an average yield stress of 42,000 psi. For aluminum channel loading multiply steel loading by a factor of 0.38.








Welding

Weld spacing is maintained between 2½ inches (63.5 mm) and 4 inches (101.6 mm) on center. Through high quality control testing of welded channels and continuous monitoring of welding equipment, we provide the most consistent combination channels available today.

Metric

Metric dimensions are shown in parentheses. Unless noted, all metric dimensions are in millimeters.

**Selection Chart
for Channels, Materials and Hole Patterns**

Channel Type	Channel Dimensions		Material & Thickness* Stainless Steel				Channel Hole Pattern**				
	Height 	Width 	Steel 1	Aluminium 2	Type 304 3	Type 316 4	SH <small>9/16" x 1 1/8" slots on 2" centers</small> 	S <small>1 3/32" x 3" slots</small> 	H1 7/8 <small>9/16" diameter holes</small> 	SH <small>9/16" diameter on 1 1/8" centers</small> 	K06 <small>1/8" diameter knockouts</small> 
B11	3/4" (82.5)	1 5/8" (41.3)	12 Ga.	.105	-	-	1	1	1	-	1
B12	2 7/16" (61.9)	1 5/8" (41.3)	12 Ga.	.105	-	-	1 2	1	1 2	-	1 2
B22	1 5/8" (41.3)	1 5/8" (41.3)	12 Ga.	.105	12 Ga.	12 Ga.	1 2 3 4	13	1 2 3 4	1	1 2
B24	1 5/8" (41.3)	1 5/8" (41.3)	14 Ga.	.080	14 Ga.	14 Ga.	1 2 3 4	1	1 2 3 4	-	1 2
B26	1 5/8" (41.3)	1 5/8" (41.3)	16 Ga.	-	-	-	1	1	1	-	1
B32	1 3/8" (34.9)	1 5/8" (41.3)	12 Ga.	-	12 Ga.	-	1 3	1	1 3	-	1
B42	1" (25.4)	1 5/8" (41.3)	12 Ga.	-	12 Ga.	-	1 3	1	1 3	-	1
B52	1 3/16" (20.6)	1 5/8" (41.3)	12 Ga.	-	12 Ga.	12 Ga.	1 3 4	1	1	-	1
B54	1 3/16" (20.6)	1 5/8" (41.3)	14 Ga.	.080	14 Ga.	14 Ga.	1 2 3 4	1	1 2 3 4	-	1 2
B56	1 3/16" (20.6)	1 5/8" (41.3)	16 Ga.	-	-	-	1	1	1	-	1
B62	1 3/16" (20.6)	1 3/16" (20.6)	18 Ga.	-	-	-	-	-	-	-	-
B72	1 3/32" (10.3)	1 3/16" (20.6)	18 Ga.	-	-	-	-	-	-	-	-

The selection has been prepared to provide a reference for available channel, materials and hole patterns. Material types available for various hole patterns are defined by numbers 1 thru 4.

Some stainless steel channels with hole patterns are available on special order only.

*Metric equivalent for thicknesses shown in chart.

12 Ga. = 2.6 mm

14 Ga. = 1.9 mm

16 Ga. = 1.5 mm

18 Ga. = 1.2 mm

.105 = 2.6 mm

.080 = 2.0 mm

** 1- Steel

2- Aluminium

3- Type 304 Stainless Steel

4- Type 316 Stainless Steel

Properties may vary due to commercial tolerances of the material.

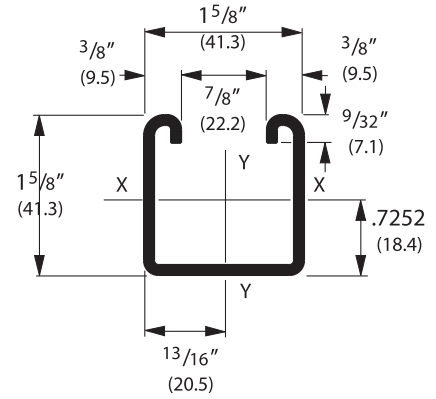
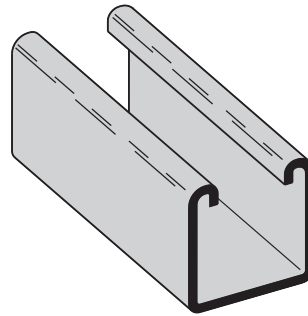
Channel Part Numbering Example			
B22 SH - 120 SS4			
Channel Type	Hole Patterns	Length	Material/Finish
B11	SH (pg. 40)	120	GRN
B12	S (pg. 40)	240	GLV
B22 *	H178 (pg. 40)		HDG
B24 *	TH (pg. 41)		YZN
B26	K06 (pg. 41)		SS4
B32	SHA (pg. 41)		SS6
B42	S58 (pg. 42)		AL
B52 *	M (pg. 42)		
B54 *	H25 (pg. 43)		
B56	H112 t (pg. 42)		
B62	* Leave blank for no hole pattern		
B72			

B22

- Thickness: 12 Gauge (2.6 mm)
- Standard lengths: 10' (3.05 m) & 20' (6.09 m)
- Standard finishes: Plain, DURA GREEN™, Pre-Galvanized, Hot-Dipped Galvanized, Stainless Steel Type 304 or 316, Aluminum
- Weight: 1.90 Lbs./Ft. (2.83 kg/m)

Note:

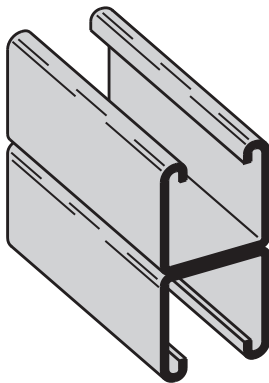
Aluminum loading, for B22 & B22A, can be determined by multiplying load data times a factor of 0.38



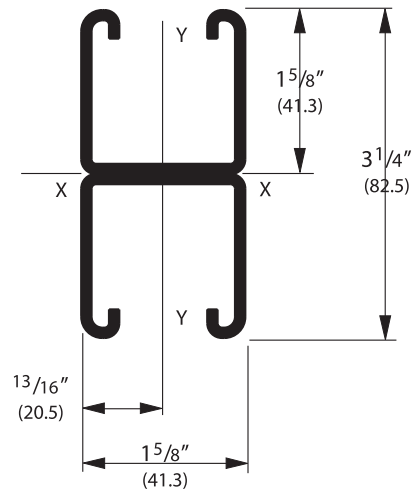
Section Properties

Channel	Weight		Areas of Section		X - X Axis						Y - Y Axis					
					Moment of Inertia (I)		Section Modulus (S)		Radius of Gyration (r)		Moment of Inertia (I)		Section Modulus (S)		Radius of Gyration (r)	
					in. ⁴	cm ⁴	in. ³	cm ³	in.	cm	in. ⁴	cm ⁴	in. ³	cm ³	in.	cm
B22	1.910	(2.84)	.562	(3.62)	.1912	(7.96)	.2125	(3.48)	.583	(1.48)	.2399	(9.99)	.2953	(4.84)	.653	(1.66)
B22A	3.820	(5.69)	1.124	(7.25)	.9732	(40.51)	.5989	(9.81)	.931	(2.36)	.4798	(19.97)	.5905	(9.68)	.653	(1.66)
B22X	6.649	(9.89)	1.956	(12.62)	4.1484	(172.67)	1.7019	(27.89)	1.456	(3.70)	1.1023	(45.88)	1.2027	(19.71)	.751	(1.91)

Calculations of section properties are based on metal thicknesses as determined by the AISI Cold-Formed Steel Design Manual.

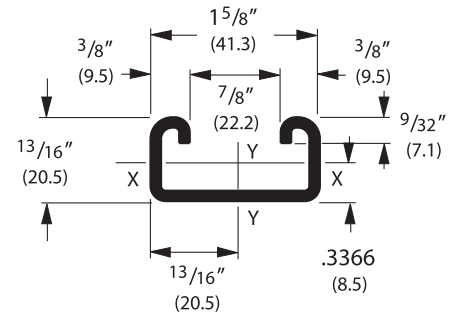
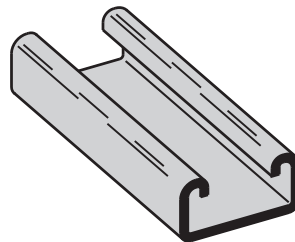


B22A
 Wt. 3.80 Lbs. / Ft. (5.65 kg/m)



B52 - 41x21x2.6mm

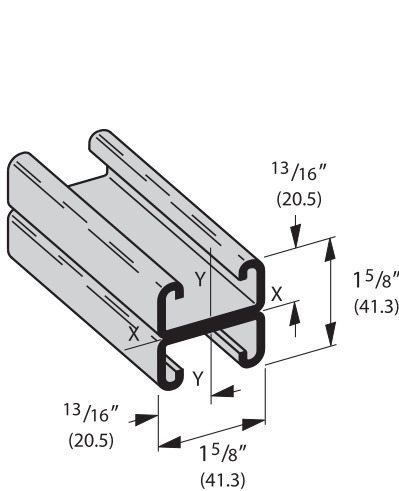
- Thickness: 12 Gauge (2.6 mm)
- Standard lengths: 10' (3.05 m) & 20' (6.09 m)
- Standard finishes: Plain, DURA GREEN™, Pre-Galvanized, Stainless Steel Type 304 or 316, Hot-Dipped Galvanized
- Weight: 1.27 Lbs./Ft. (1.89 kg/m)



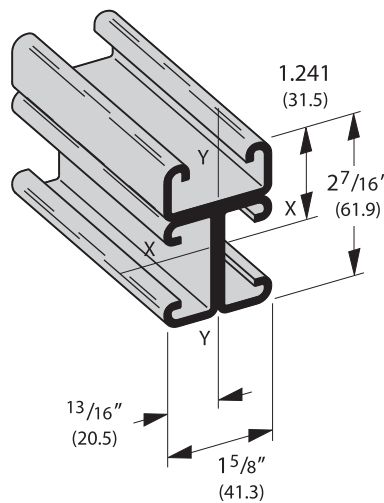
Section Properties

Channel	Weight		Areas of Section		X - X Axis						Y - Y Axis					
					Moment of Inertia (I)		Section Modulus (S)		Radius of Gyration (r)		Moment of Inertia (I)		Section Modulus (S)		Radius of Gyration (r)	
	lbs./ft.	kg/m	sq. in.	cm ²	in. ⁴	cm ⁴	in. ³	cm ³	in.	cm	in. ⁴	cm ⁴	in. ³	cm ³	in.	cm
B52	1.313	(1.95)	.386	(2.49)	.0320	(1.33)	.0673	(1.10)	.288	(.73)	.1404	(5.84)	.1728	(2.83)	.603	(1.53)
B52A	2.627	(3.91)	.773	(4.99)	.1517	(6.31)	.1868	(3.06)	.443	(1.13)	.2809	(11.69)	.3457	(5.67)	.603	(1.53)

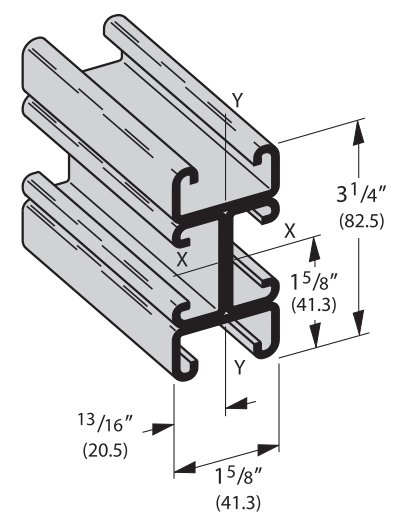
Calculations of section properties are based on metal thicknesses as determined by the AISI Cold-Formed Steel Design Manual.



B52A
 Wt. 2.54 Lbs./Ft. (3.78 kg/m)



B52B3
 Wt. 3.81 Lbs./Ft. (5.67 kg/m)



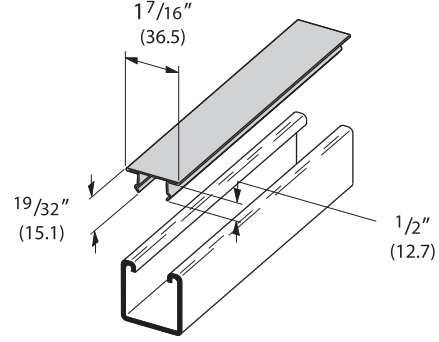
B52B4
 Wt. 5.08 Lbs./Ft. (7.56 kg/m)

B217-20

41 x 3,050 x 0.9mm Çelik

Snap Closure Strip for All 1⁵/₈" (41.3) Wide Channels

- Refer to Raceway Fill Chart pages 231-232
- Material: 20 Gauge (.9)
- Standard finishes: GRN, GALV, YZN
- Standard length: 120" (3.05m)
- Wt./CFT 36 Lbs. (16.3 kg)

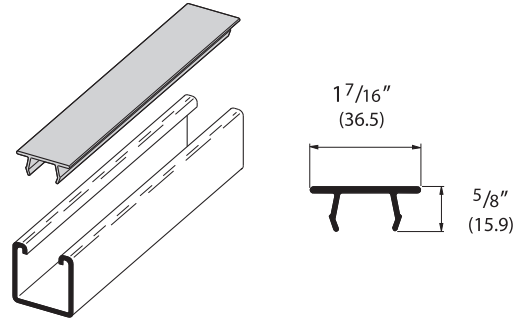


B217P

41 x 3,050 mm Plastik

Plastic Snap Closure Strip for All 1⁵/₈" (41.3) Wide Channels

- Refer to Raceway Fill Chart pages 231-232
- Standard finishes: Green (GRN) or Gray (GRY) Plastic
- Standard length: 120" (3.05m)
- Wt./CFT 9.2 Lbs. (4.2 kg)

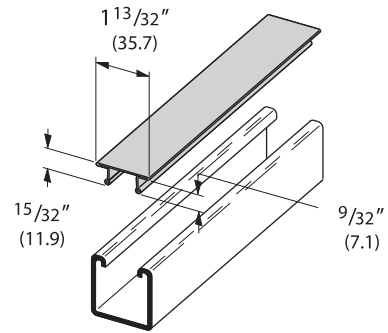


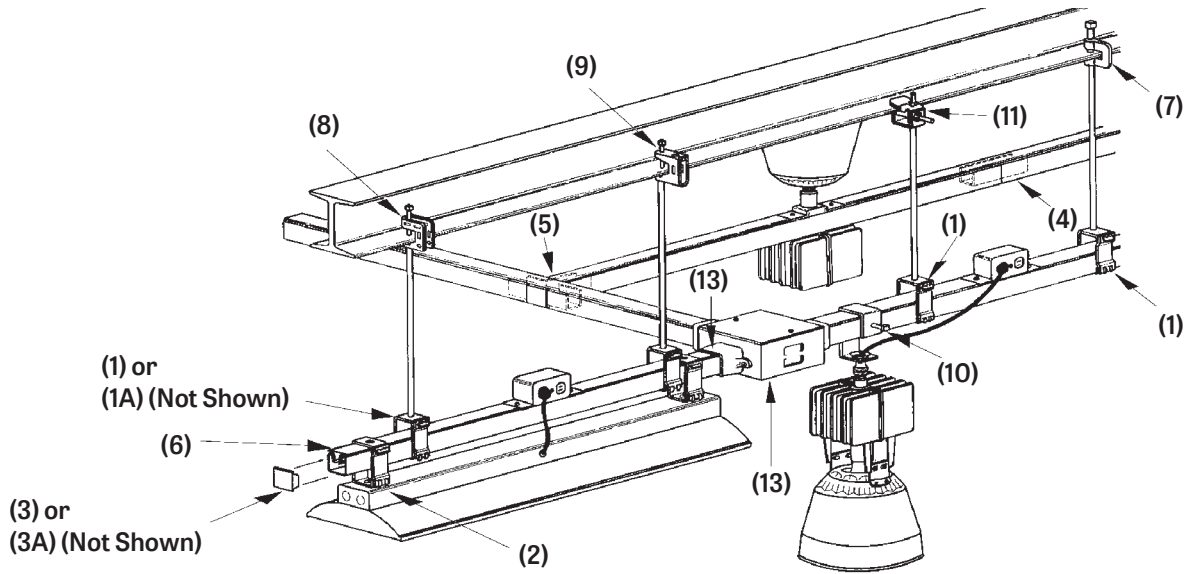
B217-24

41x3, 050x0.6mm Çelik

Snap Closure Strip for All 1⁵/₈" (41.3) Wide Channels

- Refer to Raceway Fill Chart pages 231-232
- For use with 7 or fewer conductors no larger than #12 AWG
- Material: 24 Gauge (.6)
- Standard finishes: GRN, GALV, YZN
- Standard length: 120" (3.05m)
- Wt./CFT 28 Lbs. (12.7 kg)





Selection Chart

Channel Number	Depth		1 Channel Hanger	1A Channel Hanger	2 Fixture Hanger	3 End Cap	3A Connection End Cap	4 Internal Straight Splice	5 Internal Tee Splice
	in.	mm							
B22A	3/4"	(82.5)	B616-22A*	B241S*	B616S-22A*	B205 or B285	B392-22**	B766-22 (2) B285	B768-22 (2)
B11	3/4"	(82.5)	B616-22A*	B241S*	B616S-22A*	B222	B392-11**	B766-11	B768-11
B12	27/16"	(61.9)	B616-22A*	B241S*	B616S-22A*	B221	B392-12**	B766-12	B768-12
B22 B24	15/8"	(41.3)	B616*	B216S*	B616S* B616TG*	B205 or B285 B223 or B286	B392-22**	B766-22	B768-22
B26	15/8"	(41.3)	B616*	-	-	-	B392-22**	-	-
B32	13/8"	(34.9)	B616*	B216S*	B616S* B616TG*	B206	B392-32**	B766-32	B768-32
B42	1"	(25.4)	B616*	B215S*	B616S* B616TG*	B203	-	B766-42	B768-42
B52 B54	13/16"	(20.6)	B616*	B215S*	B616S* B616TG*	B220 or B283 B204 or B284	-	B766-52	B768-52
B56	13/16"	(20.6)	B616*	B215S*	B616S* B616TG*	-	-	B766-56	-

* Specify Hanger Rod or Conduit Size.

** Specify Conduit Size

Other Items Shown on Illustration

B217-20 Snapy-in Closure Strip	(6)	B351L Beam Clamp	(7)	B755 Beam Clamp	(8)	B751 Beam Clamp	(9)
B465 H.I.D. Fixture Hanger	(10)	B750 Beam Clamp	(11)	B447 B447A Conduit Connection Plate	(12)	B719 B718 Series Junction Box	(13)



Channel Nuts

Channel nuts are one of the main components of our strut system. It is designed to provide essential gripping power and ease during installation. Channel nuts are press formed, machined and hardened from steel which meets the requirements of ASTM A108 or ASTM A36 for our larger sizes.

Bolts, Screws, and Nuts

All bolts, screws and nuts meet the physical and chemical requirements of ASTM A307, SAE J429 or ASTM A563, and have unified inch screw threads (coarse, UNC). ISO metric threads are also available on special request.

Recommended Torque

Special Note:

For recommended torque on 4Dimension trapeze hangers using B200 series square washers see page 4D08.

Materials & Finishes*

* Unless otherwise noted.

Note: Channel nuts are not available in HDG, Aluminum, or Stainless Steel Type 304

Metric

Metric dimensions are shown in parentheses. Unless noted, all metric dimensions are in millimeters.

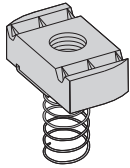
Bolt Size	1/4"-20	5/16"-18	3/8"-16	1/2"-13
Foot/Lbs.	6	11	19	50
Nm	8	15	26	68

Bolt Size	M6 x 1	M8 x 1.25	M10 x 1.5	M12 x 1.75
Foot/Lbs.	12	17	36	62
Nm	9	13	27	46

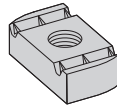
Finish Code	Finish	Specification
PLN	Plain	ASTM A108/A307 Gr. A, ASTM A563, SAE J429
ZN	Electro-Plated Zinc	ASTM B600 SCI Type III
CZ	Chromium Zinc	ASTM F1136 Gr. 0
HDG	Hot-Dipped Galvanized	ASTM A153
SS6	Stainless Steel Type 016	MPIF 05/ASTM F590
AL	Aluminum	ASTM F468 S4

Standard Channel Nuts				
Numbering Example N 7 25 - (*) WO				
Nut Type	Channel Type	Thread Size	Stud Length	Suffix
N = Standard Nut	7 = Tall Channels	21 = #8-32	* = Specify Length of stud below for Stud Nut or Twirl Stud Nuts ¾ = ¾" 1 = 1" 1¼ = 1¼" 1½ = 1½"	WO = Without Spring — = Twirl-Nut™ or nuts with springs have blank suffix
TN = Twirl-Nut™	B11	22 = #10-24		
SN = Stud Nut	B12	27 = #10-32		
STN = Stud Twirl-Nut™	2 = Medium Channels	24 = ¼"-20		
NW = Combo Nut	B22	23 = 5/16"-18		
Washer	B24	28 = 3/8"-16		
	B26	26 = 7/16"-14		
	B32	25 = 1/2"-13		
	5 = Short Channels	55 = 5/8"-11		
	B42	75 = ¾"-10		
	B52	78 = 7/8"-9		

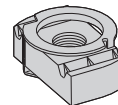
Standard Channel Nuts		
Numbering Example BMS - 6 M		
Nut Type	Metric Thread Size	Suffix
BMS = Spring Nut	3 = M3.5	S = Short Spring
BMS-D = Spring Nut (½" thick)	4 = M4	M = Medium Spring
BMT = Twirl-Nut™	5 = M5	L = Long Spring
BMT-D = Twirl-Nut™ (½" thick)	6 = M6	— = Twirl-Nut™ and nuts without springs have blank suffix
BMM = Spring Nut (Mini channel)	8 = M8	
	10 = M10	
	12 = M12	



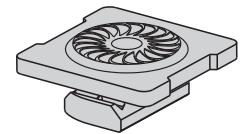
Spring Nut
Yaylı Kanal Somunu



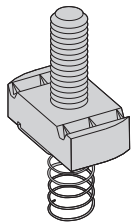
Nut without Spring
Yaysız Kanal Somunu



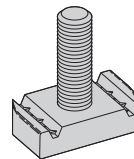
Twirl-Nut™
Rondelali Somun



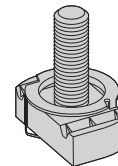
Combo Nut Washer
Pul/Somun Kombin



Stud Nut with Spring
Kanal T Civatası, Yaylı



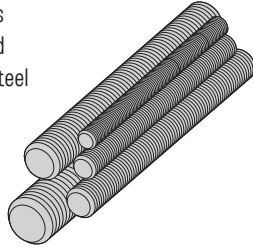
Stud Nut without Spring
Kanal T Civatası, Yaysız



Twirl Stud Nut
Kanal T civatası, rondelali

ATR - All Threaded Rod

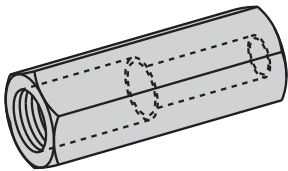
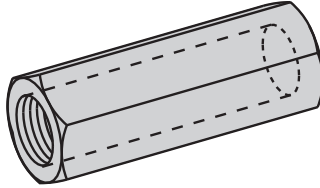
- Available in 36" (91.4 cm), 72" (182.9 cm), 120" (304.8 cm), 144" (365.7 cm) lengths
- Safety Factor of 5 on recommended load
- Standard finish: Zinc-Plated, Stainless Steel Type 304



Part No. & Size	Threads Per Inch	Recommended Load		Wt./C Ft. (3048.0 cm)	
		Lbs.	kN	Lbs.	kg
ATR 1/4"	20	240	(1.07)	12	(5.44)
ATR 5/16"	18	400	(1.78)	19	(8.62)
ATR 3/8"	16	730	(3.24)	29	(13.15)
ATR 1/2"	13	1350	(6.00)	53	(24.04)
ATR 5/8"	11	2160	(9.60)	89	(40.37)
ATR 3/4"	10	3230	(14.37)	123	(55.79)
ATR 7/8"	9	4480	(19.93)	170	(77.11)
ATR 1"	8	5900	(26.24)	225	(102.06)

B655 Rod Coupling B656 Reducer Rod Coupling

- Load rating for each coupler meets All Threaded Rod value
- Standard finish: Zinc-Plated, Stainless Steel Type 304



Part No.	Size	Recommended Load		Length		Wt./C	
		Lbs.	kN	In.	mm	Lbs.	kg
B655-1/4	1/4"-20	240	(1.07)	7/8"	(22.2)	1.9	(.86)
B655-5/16	5/16"-18	380	(1.69)	7/8"	(22.2)	1.8	(.81)
B655-3/8	3/8"-16	730	(3.24)	1 1/8"	(28.6)	3.6	(1.63)
B655-1/2	1/2"-13	1350	(6.00)	1 3/4"	(44.4)	11.3	(5.12)
B655-5/8	5/8"-11	1810	(8.05)	2 1/8"	(54.0)	17.6	(7.98)
B655-3/4	3/4"-10	2710	(12.05)	2 1/4"	(57.1)	28.1	(12.74)
B655-7/8	7/8"-9	3770	(16.77)	2 1/2"	(63.5)	57.2	(25.94)
B655-1	1"-8	4960	(22.06)	2 3/4"	(69.8)	73.7	(33.43)

Part No.	Size	Recommended Load		Length		Wt./C	
		Lbs.	kN	In.	mm	Lbs.	kg
B656-3/8 x 1/4	3/8"-16 & 1/4"-20	240	(1.07)	1"	(25.4)	3.7	(1.68)
B656-1/2 x 3/8	1/2"-13 & 3/8"-16	730	(3.24)	1 1/4"	(31.7)	6.6	(2.99)
B656-5/8 x 1/2	5/8"-11 & 1/2"-13	1350	(6.00)	1 1/4"	(31.7)	11.6	(5.26)
B656-3/4 x 5/8	3/4"-10 & 5/8"-11	1810	(8.05)	1 1/2"	(38.1)	20.6	(9.34)
B656-7/8 x 3/4	7/8"-9 & 3/4"-10	2710	(12.05)	1 3/4"	(44.4)	39.4	(17.87)

BHR Series Hot Rods for Trapeze Hangers

- 12" length of threaded rod completely assembled with rod coupling, locking hex nuts, square washer, and channel nut.
- Standard finish: Zinc-Plated



Part No.	Rod Size	Recommended Load		Wt./C	
		Lbs.	kN	Lbs.	kg
BHR1225ZN	1/4"-20	240	(1.07)	41	(18.6)
BHR1238ZN	3/8"-16	730	(3.24)	63	(28.6)
BHR1250ZN	1/2"-13	1350	(6.00)	98	(44.4)
BHR1262ZN	5/8"-11	1500	(6.67)	148	(67.1)

Note: Based on use with 12 ga. channel.
(BHR1225, BHR1238, and BHR1250 use combo nut washers instead of square washers and channel nuts)