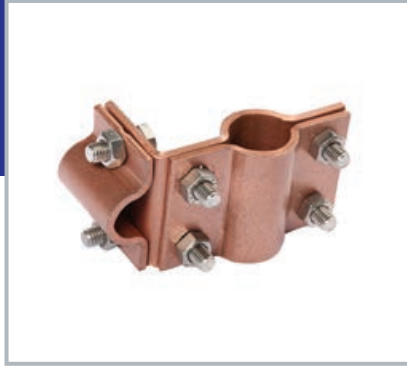


# TOPRAKLAMA

## EARTHING



**BİR-ER** ELEKTRİK SİSTEMLERİ YAPIM MÜHENDİSLİK SAN. ve TİC. LTD. ŞTİ.

**BAKIR KAPLI ÇELİK TOPRAKLAMA ELEKTRODLARI / COPPERBOND STEEL EARTH RODS**



Sipariş Kodu Reference No.	Elektrod Ölçüsü Range-Earth Rod Ø (mm) L (mm)	Cu Kaplama Kalınlığı Cu Covered Thickness (mm)
TE-18-BK-1-1000	18 1000	1
TE-18-BK-1-1500	18 1500	1
TE-18-BK-1-2000	18 2000	1
TE-18-BK-1-2500	18 2500	1
TE-18-BK-1-3000	18 3000	1
TE-20-BK-1-1000	20 1000	1
TE-20-BK-1-1500	20 1500	1
TE-20-BK-1-2000	20 2000	1
TE-20-BK-1-2500	20 2500	1
TE-20-BK-1-3000	20 3000	1
TE-20-BK-2-1000	20 1000	2
TE-20-BK-2-1500	20 1500	2
TE-20-BK-2-2000	20 2000	2
TE-20-BK-2-2500	20 2500	2
TE-20-BK-2-3000	20 3000	2
TE-22-BK-3-2500	22 2500	3

**SOM BAKIR TOPRAKLAMA ELEKTRODLARI / SOLID COPPER EARTH RODS**



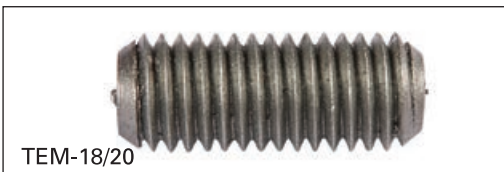
Sipariş Kodu Reference No.	Elektrod Ölçüsü Range-Earth Rod Ø (mm) L (mm)	Ağırlık Weight (kg)	Malzeme Material
TE-16-SB-1000	16 1000	1,792	SOLID COPPER
TE-16-SB-1500	16 1500	2,688	
TE-18-SB-1000	18 1000	2,268	
TE-18-SB-1500	18 1500	3,402	
TE-18-SB-2000	18 2000	4,536	
TE-18-SB-2500	18 2500	5,760	
TE-18-SB-3000	18 3000	6,804	
TE-20-SB-1000	20 1000	2,790	
TE-20-SB-1500	20 1500	4,185	
TE-20-SB-2000	20 2000	5,580	
TE-20-SB-2500	20 2500	6,975	
TE-20-SB-3000	20 3000	8,370	
TE-22-SB-2500	22 2500	8,470	

**TOPRAKLAMA ELEKTRODU ÇAKMA TAPASI / EARTH ROD DRIVING STUD**

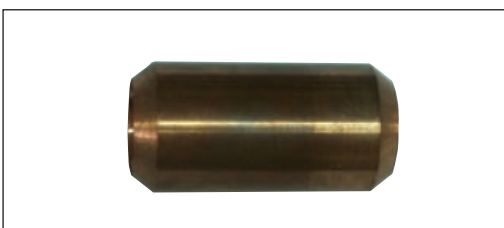


Sipariş Kodu Reference No.	Elektrod Ölçüsü Range-Earth Rod Ø (mm)	Malzeme Material
TEÇ-18/20	18-20	STEEL
TEÇ-22	22	

**TOPRAKLAMA ELEKTRODU EKLEME MANŞONU / EARTH ROD COUPLING**



Sipariş Kodu Reference No.	Elektrod Ölçüsü Range-Earth Rod Ø (mm)	Ölçü Dimension mm	Malzeme Material
TEM-18/20	18-20	M12x70	STEEL
TEM-22	22	M12x70	



Sipariş Kodu Reference No.	Elektrod Ölçüsü Range-Earth Rod Ø (mm)	Ölçü Dimension mm	Malzeme Material
TEM-B-16	16	60	COPPER
TEM-B-18	18	60	
TEM-B-20	20	60	
TEM-B-22	22	60	

## TOPRAKLAMA ELEKTRODU SİVRİ UÇ / EARTH ROD SPIKE

Sipariş Kodu Reference No.	Elektrod Ölçüsü Range-Earth Rod Ø (mm)	Malzeme Material
TES-18/20	18-20	STEEL
TES-22	22	STEEL



## GALVANİZLİ ÇELİK TOPRAKLAMA ELEKTRODLARI / H.D. GALVANIZED STEEL EARTH RODS

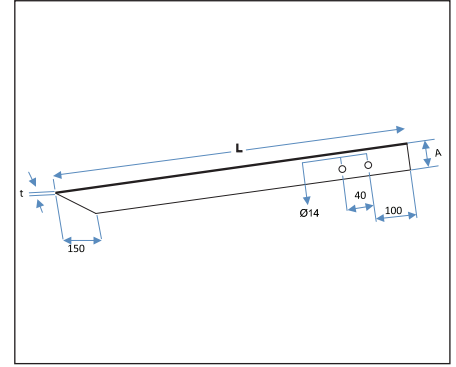
Sipariş Kodu Reference No.	Elektrod Ölçüsü Range-Earth Rod Ø (mm) L (mm)	Ağırlık Weight (kg)	Malzeme Material
TE-20-DG-1000	20 1000	2,600	H.D.G Steel
TE-20-DG-1500	20 1500	3,900	
TE-20-DG-2000	20 2000	5,100	



HDG: Hot Dip Galvanized Steel

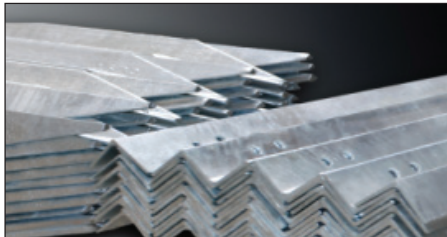
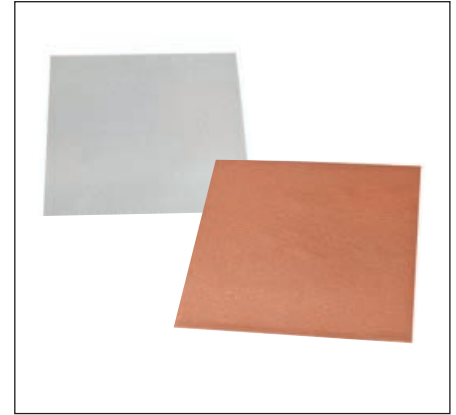
## S.D.GALVANİZLİ ÇELİK TOPRAKLAMA ELEKTRODLARI / H.D.G.S. EARTH RODS ANGLE IRON

Sipariş Kodu Reference No.	Elektrod Ölçüsü Range-Earth Rod A (mm) t (mm)	Elektrod Boyu Earth Rod Length L (mm)	Ağırlık Weight (kg)	Malzeme Material
TE-50x5x1000	50x50 5	1000	3,900	H.D. GALVANIZED STEEL
TE-50x5x1500	50x50 5	1500	5,800	
TE-50x5x2000	50x50 5	2000	7,800	
TE-60x6x1000	60x60 6	1000	5,400	
TE-60x6x1500	60x60 6	1500	8,100	
TE-60x6x2000	60x60 6	2000	11,000	
TE-65x7x1000	65x65 7	1000	7,000	
TE-65x7x1500	65x65 7	1500	10,500	
TE-65x7x2000	65x65 7	2000	14,000	



## TOPRAKLAMA LEVHASI / EARTH PLATES

Sipariş Kodu Reference No.	Ebatlar Dimensions (mm)	Ağırlık Weight (kg)	Malzeme Material
TL-1-B-700x700	700x700x1	4,360	COPPER
TL-1,5-B-700x700	700x700x1,5	6,540	COPPER
TL-2-B-700x700	700x700x2	8,720	COPPER
TL-3-B-700x700	700x700x3	13,080	COPPER
TL-1-B-1000x1000	1000x1000x1	8,920	COPPER
TL-2-B-1000x1000	1000x1000x2	17,840	COPPER
TL-1-B-1000x1000	1000x1000x3	26,760	COPPER
TL-2-G-400x1000	400x1000x2	6,500	H.D.GALVANIZED STEEL
TL-2-G-500x1000	500x1000x2	8,000	H.D.GALVANIZED STEEL
TL-2,5-G-500x1000	500x1000x2,5	10,000	H.D.GALVANIZED STEEL
TL-3-G-500x1000	500x1000x3	12,000	H.D.GALVANIZED STEEL



## TOPRAKLAMA ROGARI / EARTH PITS

Sipariş Kodu Reference No.	Ebatları Size (mm)	Malzeme Material
TR-400-G	400x400x400	HOT DIP GALVANIZED STEEL
TR-500-G	500x500x500	HOT DIP GALVANIZED STEEL

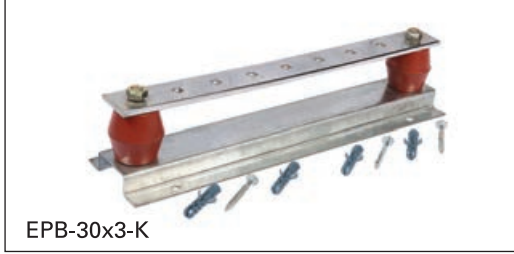


## TOPRAK ZEMİN İYİLEŞTİRME / EARTH GROUND IMPROVEMENT



Sipariş Kodu Reference No.	Açıklama Characteristics	Ağırlık Weight (kg)
EGI-12	Toprak iletkenliğini artırıcı toz / Earth conductivity improver powder	12

## EŞ POTANSİYEL BARA / EQUIPOTENTIAL BONDING



Sipariş Kodu Reference No.	Lama Ölçüsü Range - Tape (mm)	Uzunluk Length Size (mm)	Malzeme Material
EPB-30x3-B	30x3	300	E-Cu
EPB-30x5-B	30x5	300	
EPB-40x5-B	40x5	500	
EPB-50x5-B	50x5	500	
EPB-60x5-B	60x5	500	

DELİK ÇAPI VE DİĞER ÖLÇÜLER İÇİN İRTİBATA GEÇİNİZ. / FOR OTHER SIZES PLEASE CONTACT US.

B : BAKIR (KAPLAMASIZ) / SOLID COPPER

K : KALAY KAPLI BAKIR / TIN PLATED COPPER

N : NİKEL KAPLI BAKIR / NICKEL PLATED COPPER

G : SICAK DALDIRMA GALVANİZLİ ÇELİK LAMA / HOT DIP GALVANIZED STEEL

## EŞ POTANSİYEL BARA (AYIRICILI) / EQUIPOTENTIAL BONDING (DISCONNECTING)



Sipariş Kodu Reference No.	Lama Ölçüsü Range - Tape (mm)	Uzunluk Length Size (mm)	Malzeme Material
AEPB-40x5-B	40x5	500	E-Cu
AEPB-50x5-B	50x5	500	

DELİK ÇAPI VE DİĞER ÖLÇÜLER İÇİN İRTİBATA GEÇİNİZ. / FOR OTHER SIZES PLEASE CONTACT US.

B : BAKIR (KAPLAMASIZ) / COPPER (UNCOATED)

K : KALAY KAPLI BAKIR / TIN PLATED COPPER

N : NİKEL KAPLI BAKIR / NICKEL PLATED COPPER

G : SICAK DALDIRMA GALVANİZLİ ÇELİK LAMA / HOT DIP GALVANIZED STEEL

## NÖTR TOPRAKLAMA BARASI / NOTR BAR



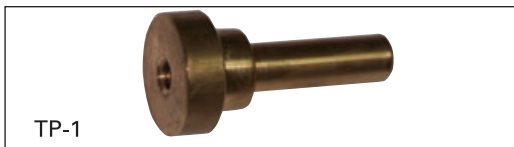
Sipariş Kodu Reference No.	Lama Ölçüsü Thickness (mm)	Uzunluk Length Size (mm)	Malzeme Material
NT-1,5-B	1.5	1000	E-Cu
NT-2-B	2	1000	
NT-3-B	3	1000	

## FENS LAMASI / COPPER TAPE FOR FENCE



Sipariş Kodu Reference No.	Ebatları Dimensions (mm)	Uzunluk Length Size (mm)	Malzeme Material
FL-30x3-B	30X3	300	E-Cu
FL-30x5-B	30X5	300	
FL-40x3-B	40X3	300	
FL-40x5-B	40X5	300	

## TOPRAKLAMA PRİZİ / EARTH POINTS



Sipariş Kodu Reference No.	Civata Ölçüsü Bolt Dimensions (mm)	Boyut Size (mm)	Malzeme Material
TP-1	M8x15	Ø12x60	NAVAL BRASS

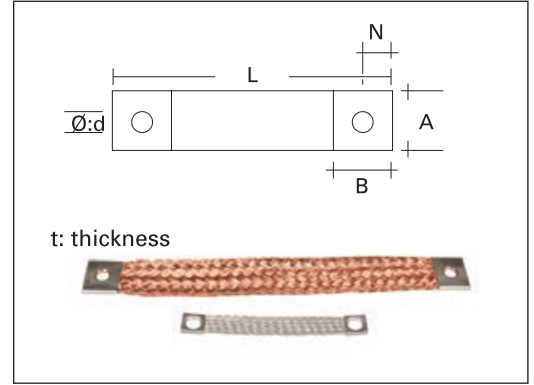
## TOPRAKLAMA TAKOZU / GROUNDING BLOCK



Sipariş Kodu Reference No.	Civata Ölçüsü Bolt Dimension (mm)	Boyut Size (mm)	Malzeme Material
TT-30	M8x20	Ø30x35	GALV. STEEL

## FLEXIBLE ÖRGÜLÜ BAKIR İLETKEN / FLEXIBLE COPPER BRAID CONDUCTORS

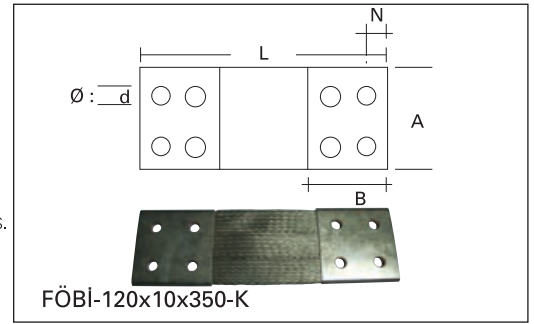
Sipariş Kodu Reference No.	İletken Kesiti Conductor Range (mm <sup>2</sup> )	Ölçü / Dimensions (mm)			
		A	N	L	d
FC 10-150		17	10	150	8.5
FC 10-200	10	17	10	200	8.5
FC 10-250		17	10	250	8.5
FC 16-150		17	10	150	8.5
FC 16-200	16	17	10	200	8.5
FC 16-250		17	10	250	8.5
FC 25-150		21	10	150	8.5
FC 25-200	25	21	10	200	8.5
FC 25-250		21	10	250	8.5



ENxBOY, KESİT ve DELİK ÖLÇÜSÜ BİLDİRİNİZ./ FOR HOLE DIAMETER AND OTHER SIZES PLEASE CONTACT US.  
K : KALAY KAPLI / TIN PLATED B : BAKIR (KAPLAMASIZ) / COPPER (UNCOATED)

## FLEXIBLE ÖRGÜLÜ BAKIR İLETKEN / FLEXIBLE COPPER BRAID CONDUCTORS

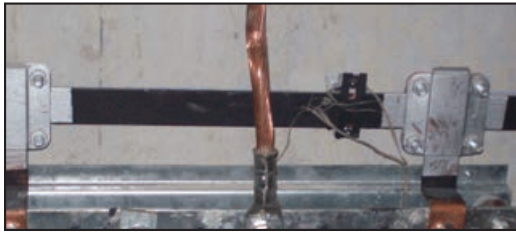
Sipariş Kodu Reference No.	Ölçü / Dimensions (mm)					Malzeme Material
	A	B	N	L	d	
FÖBİ-B						COPPER
FÖBİ-K						TIN PLATED COPPER
FÖBİ-G						SILVER PLATED COPPER



ENxBOY, KESİT ve DELİK ÖLÇÜSÜ BİLDİRİNİZ./FOR HOLE DIAMETER AND OTHER SIZES PLEASE CONTACT US.  
K : KALAY KAPLI / TIN PLATED  
B : BAKIR (KAPLAMASIZ) / COPPER (UNCOATED)  
G : GÜMÜŞ KAPLAMALI / SILVER PLATED



(application) FL-30x3-B



(application) EPB-40x5x500-K



(application) FÖBİ-K 2x(120x10x350)

## Bİ-METAL PUL(Alüminyum-Bakır Kaplı) / BIMETALLIC WASHER(Aluminium inside/Copper outside)

Sipariş Kodu Reference No.	Pul Washer (mm)	Malzeme Material
BP-8	M.8	COPPER COATED ALUMINIUM
BP-10	M.10	
BP-12	M.12	



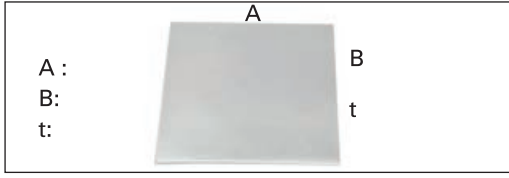
## Bİ-METAL LEVHA(Alüminyum-Bakır Kaplı) / BIMETALLIC PLATES(Aluminium inside/Copper outside)

Sipariş Kodu Reference No.	Ölçü Dimensions AxBxt (mm)	Malzeme Material
BL-A-B-1	Ölçü bildiriniz	SINGLE COATED COPPER SURFACE



ÖLÇÜ BİLDİRİNİZ. / PLEASE SPECIFY THE SIZE.

**Bİ-METAL LEVHA (Bakır-Gümüş Kaplı) / BIMETALLIC PLATES (Copper inside-Silver outside)**



Sipariş Kodu Reference No.	Ölçü Dimensions AxBxt (mm)	Malzeme Material
BL-B-G-1	Ölçü bildiriniz	SINGLE SURFACE COATED SILVER PLATE
BL-B-G-2	Ölçü bildiriniz	DOUBLE COATED SILVER PLATE

ÖLÇÜ BİLDİRİNİZ. / PLEASE SPECIFY THE SIZE.

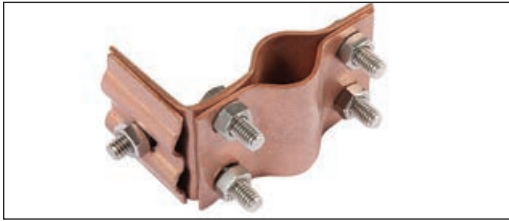
**ELEKTROD BAŞLIĞI İLETKEN İÇİN / ROD TO CABLE CLAMP**



Sipariş Kodu Reference No.	Elektrod Çapı Range-Earth Rod Ø (mm)	İletken Kesiti Conductor Range (mm <sup>2</sup> )	Malzeme Material
EB-18-B-25	18	1x25	E-Cu
EB-18-B-35	18	1x35	
EB-18-B-50	18	1x50	
EB-18-B-70	18	1x70	



Sipariş Kodu Reference No.	Elektrod Çapı Range-Earth Rod Ø (mm)	İletken Kesiti Conductor Range (mm <sup>2</sup> )	Malzeme Material
EB-18-B-95	18	1x95	E-Cu
EB-18-B-120	18	1x120	
EB-18-B-150	18	1x150	
EB-20-B-25	20	1x25	
EB-20-B-35	20	1x35	
EB-20-B-50	20	1x50	
EB-20-B-70	20	1x70	
EB-20-B-95	20	1x95	
EB-20-B-120	20	1x120	
EB-20-B-150	20	1x150	
EB-20-B-185	20	1x185	
EB-20-B-240	20	1x240	
EB-22-B-25	22	1x25	
EB-22-B-35	22	1x35	
EB-22-B-50	22	1x50	
EB-22-B-70	22	1x70	
EB-22-B-95	22	1x95	
EB-22-B-120	22	1x120	
EB-22-B-150	22	1x150	
EB-22-B-185	22	1x185	
EB-22-B-240	22	1x240	



Sipariş Kodu Reference No.	Elektrod Çapı Range-Earth Rod Ø (mm)	İletken Kesiti Conductor Range (mm <sup>2</sup> )	Malzeme Material
EB-18-B-2x25	18	2x25	E-Cu
EB-18-B-2x35	18	2x35	
EB-18-B-2x50	18	2x50	
EB-18-B-2x70	18	2x70	



Sipariş Kodu Reference No.	Elektrod Çapı Range-Earth Rod Ø (mm)	İletken Kesiti Conductor Range (mm <sup>2</sup> )	Malzeme Material
EB-18-B-2x95	18	2x95	E-Cu
EB-18-B-2x120	18	2x120	
EB-18-B-2x150	18	2x150	
EB-20-B-2x25	20	2x25	
EB-20-B-2x35	20	2x35	
EB-20-B-2x50	20	2x50	
EB-20-B-2x70	20	2x70	
EB-20-B-2x95	20	2x95	
EB-20-B-2x120	20	2x120	
EB-20-B-2x150	20	2x150	
EB-22-B-2x185	22	2x95	
EB-22-B-2x240	22	2x120	

Bolts : Inox A2-70

**TOPRAKLAMA ELEKTROD BAŞLIĞI / ROD TO TAPE CLAMP**

üç parçalı / three-piece

Sipariş Kodu Reference No.	Elektrod Çapı Range-Earth Rod Ø (mm) Cu	Lama Ölçüsü Copper Tape (mm)	Malzeme Material
EB-18-B-20x3	18	20x3	E-Cu
EB-18-B-20x5	18	20x5	
EB-18-B-25x3	18	25x3	
EB-18-B-30x3	18	30x3	
EB-18-B-30x5	18	30x5	
EB-18-B-40x3	18	40x3	
EB-18-B-40x4	18	40x4	
EB-18-B-40x5	18	40x5	
EB-18-B-50x3	18	50x3	
EB-18-B-50x5	18	50x5	
EB-20-B-20x3	20	20x3	
EB-20-B-20x5	20	20x5	
EB-20-B-25x3	20	25x3	
EB-20-B-30x3	20	30x3	
EB-20-B-30x5	20	30x5	
EB-20-B-40x3	20	40x3	
EB-20-B-40x4	20	40x4	
EB-20-B-40x5	20	40x5	
EB-20-B-50x3	20	50x3	
EB-20-B-50x5	20	50x5	
EB-22-B-20x3	22	20x3	
EB-22-B-20x5	22	20x5	
EB-22-B-25x3	22	25x3	
EB-22-B-30x3	22	30x3	
EB-22-B-30x5	22	30x5	
EB-22-B-40x3	22	40x3	
EB-22-B-40x4	22	40x4	
EB-22-B-40x5	22	40x5	
EB-22-B-50x3	22	50x3	
EB-22-B-50x5	22	50x5	
EB-22-B-60x4	22	60x4	
EB-22-B-60x5	22	60x5	



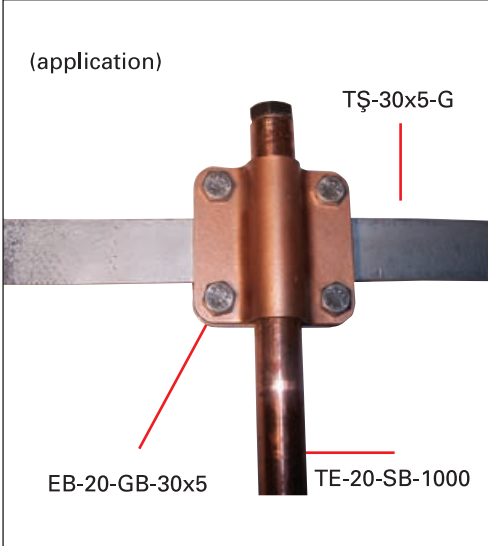
dört parçalı / four-piece

Sipariş Kodu Reference No.	Elektrod Çapı Range-Earth Rod Ø (mm) HDG.S	Lama Ölçüsü Galvanized Tape (mm)	Malzeme Material
EB-18-G-20x3	18	20x3	H.D.G. Steel
EB-18-G-20x5	18	20x5	
EB-18-G-25x3	18	25x3	
EB-18-G-30x3	18	30x3	
EB-18-G-30x5	18	30x5	
EB-18-G-40x3	18	40x3	
EB-18-G-40x4	18	40x4	
EB-18-G-40x5	18	40x5	
EB-18-G-50x3	18	50x3	
EB-18-G-50x5	18	50x5	
EB-20-G-20x3	20	20x3	
EB-20-G-20x5	20	20x5	
EB-20-G-25x3	20	25x3	
EB-20-G-30x3	20	30x3	
EB-20-G-30x5	20	30x5	
EB-20-G-40x3	20	40x3	
EB-20-G-40x4	20	40x4	
EB-20-G-40x5	20	40x5	
EB-20-G-50x3	20	50x3	
EB-20-G-50x5	20	50x5	



**TOPRAKLAMA ELEKTROD BAŞLIĞI / ROD TO TAPE CLAMP**

dört parçalı / four-piece



Sipariş Kodu Reference No.	Elektrod Çapı Range-Earth Rod Ø (mm) Cu	Lama Ölçüsü Galvanized Tape (mm)	Malzeme Material
EB-18-GB-20x3	18	20x3	E-Cu + H.D.G. Steel
EB-18-GB-20x5	18	20x5	
EB-18-GB-25x3	18	25x3	
EB-18-GB-30x3	18	30x3	
EB-18-GB-30x5	18	30x5	
EB-18-GB-40x3	18	40x3	
EB-18-GB-40x4	18	40x4	
EB-18-GB-40x5	18	40x5	
EB-18-GB-50x3	18	50x3	
EB-18-GB-50x5	18	50x5	
EB-20-GB-20x3	20	20x3	
EB-20-GB-20x5	20	20x5	
EB-20-GB-25x3	20	25x3	
EB-20-GB-30x3	20	30x3	
EB-20-GB-30x5	20	30x5	
EB-20-GB-40x3	20	40x3	
EB-20-GB-40x4	20	40x4	
EB-20-GB-40x5	20	40x5	
EB-20-GB-50x3	20	50x3	
EB-20-GB-50x5	20	50x5	
EB-22-GB-20x3	22	20x3	
EB-22-GB-20x5	22	20x5	
EB-22-GB-25x3	22	25x3	
EB-22-GB-30x3	22	30x3	
EB-22-GB-30x5	22	30x5	
EB-22-GB-40x3	22	40x3	
EB-22-GB-40x4	22	40x4	
EB-22-GB-40x5	22	40x5	
EB-22-GB-50x3	22	50x3	
EB-22-GB-50x5	22	50x5	
EB-22-GB-60x4	22	60x4	
EB-22-GB-60x5	22	60x5	

H.D.G. Steel : Hot Dip Galvanized Steel

Bolts : Inox A2-70

