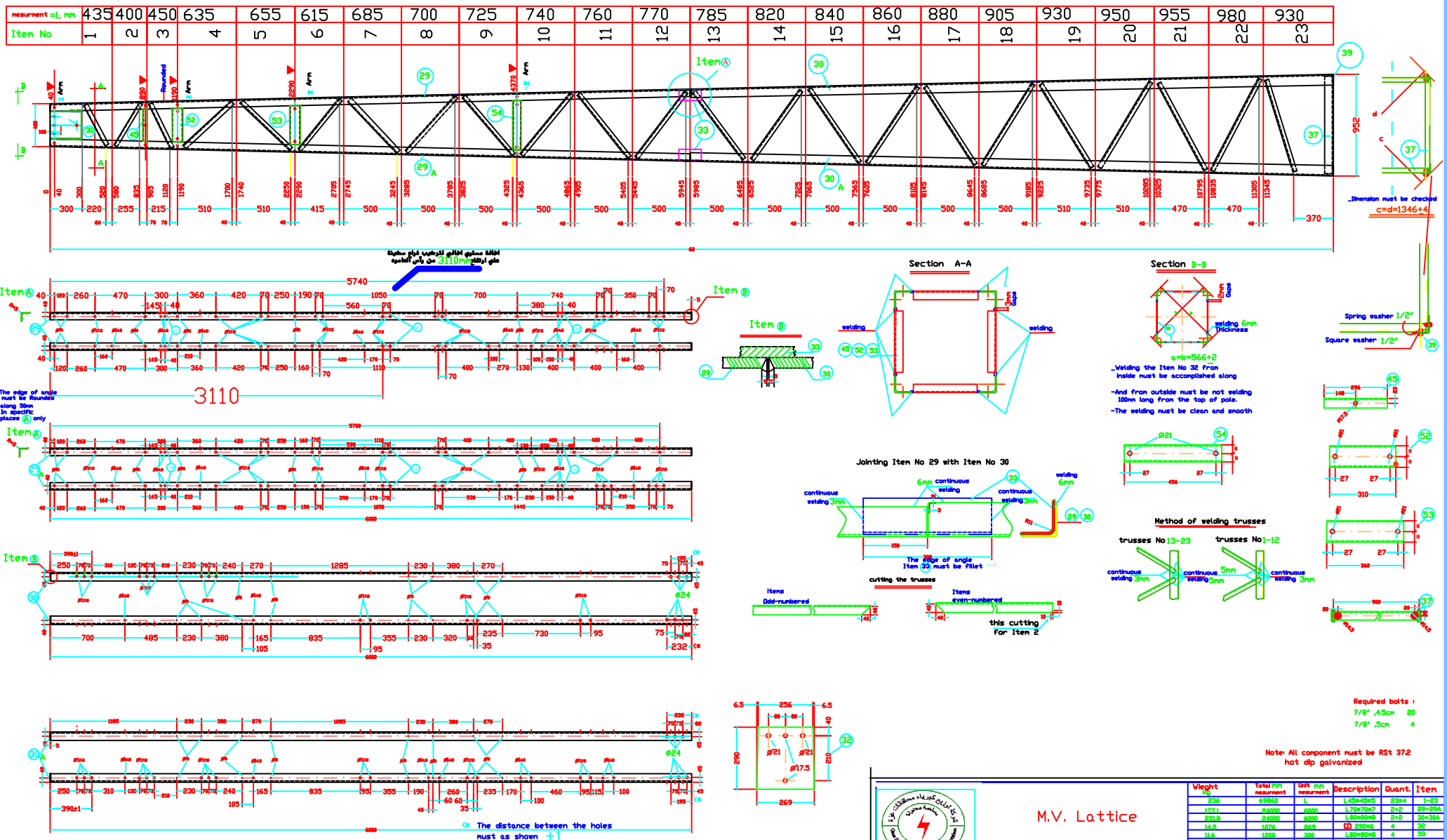


# RFQ: PAL-0000156974 - Drawings and Technical specifications

The width of the pole increase 46mm every one meter from the pole top until the end of pole



K2102



M.V. Lattice  
Steel Pole  
70/80 long  
12m

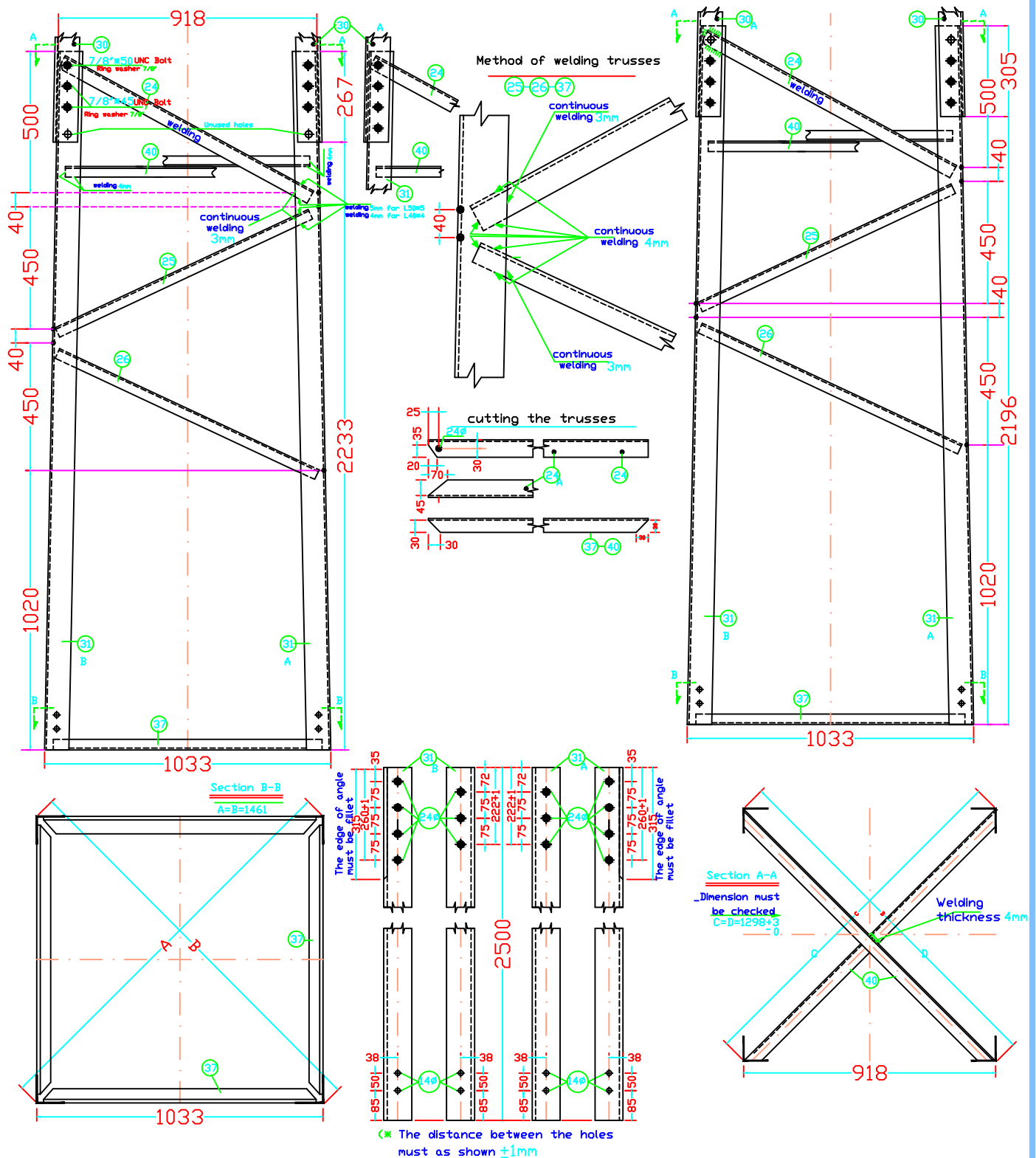
Weight	Total mtr	Unit mtr	Description	Quant	Item
236	69860	L	L45x45x5	2364	1-23
1721	24800	6000	L70x70x7	248	24-25
2310	24000	6000	L60x60x6	2400	26-27
143	1076	600	Ø20	4	28
114	1800	200	L60x60x6	4	29
87	3600	200	L45x45x5	4	30
BMC Bolt					
Spring washer 1/2"					
Square washer 1/2"					
4	1194	256	L45x45x5	4	31
167	1240	300	Ø18	4	32
124	1440	260	Ø18	4	33
158	1824	456	Ø18	4	34
783kg total weight					

Required bolts :  
7/8" A5cn 20  
7/8" A5cn 4

Note: All component must be RSt 372  
hot dip galvanized

Prepared: Eng. Ziad Al-Housami  
10101002

# K110

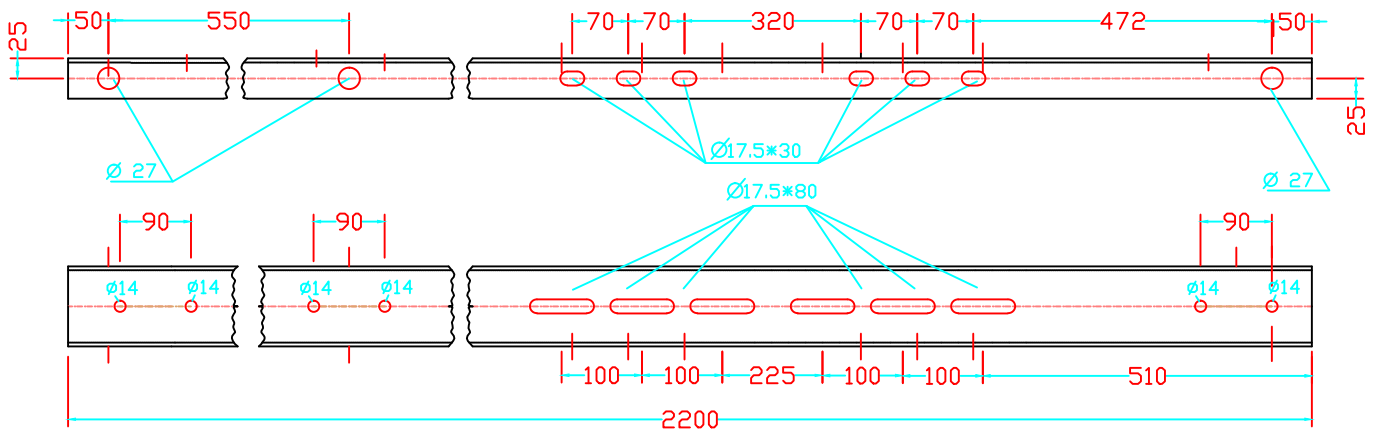
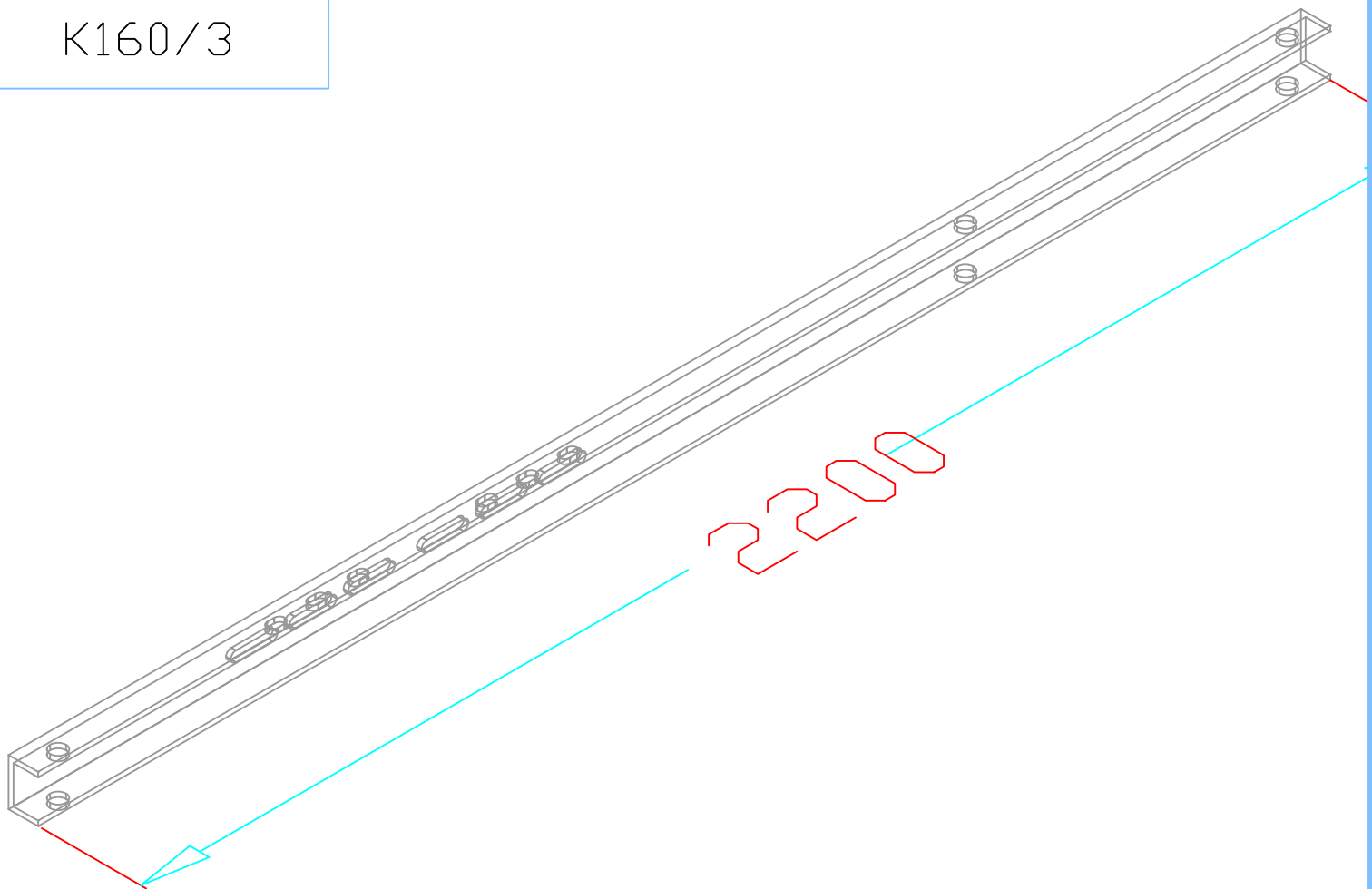


Steel Base 2.25m long  
For Lattice Steel pole  
70/80-12m

Note: All component must be RSt 37.2 Or S235JR  
hot dip galvanized

Weight kg	Total mm mesurement	Unit mm mesurement	Description	Item	Quant.
8.6	2550	1275	Truss L45*45*5	40	2
9.4	3880	970	Truss L40*40*4	37	4
96.6	10000	2500	L80*80*8	31AB	2+2
9.8	4040	1010	Truss L40*40*4	26	4
9.6	3960	990	Truss L40*40*4	25	4
7.5	1980	990	Truss L50*50*5	24A	2
7.6	2020	1010	Truss L50*50*5	24	2
149 kg	Total Weight				

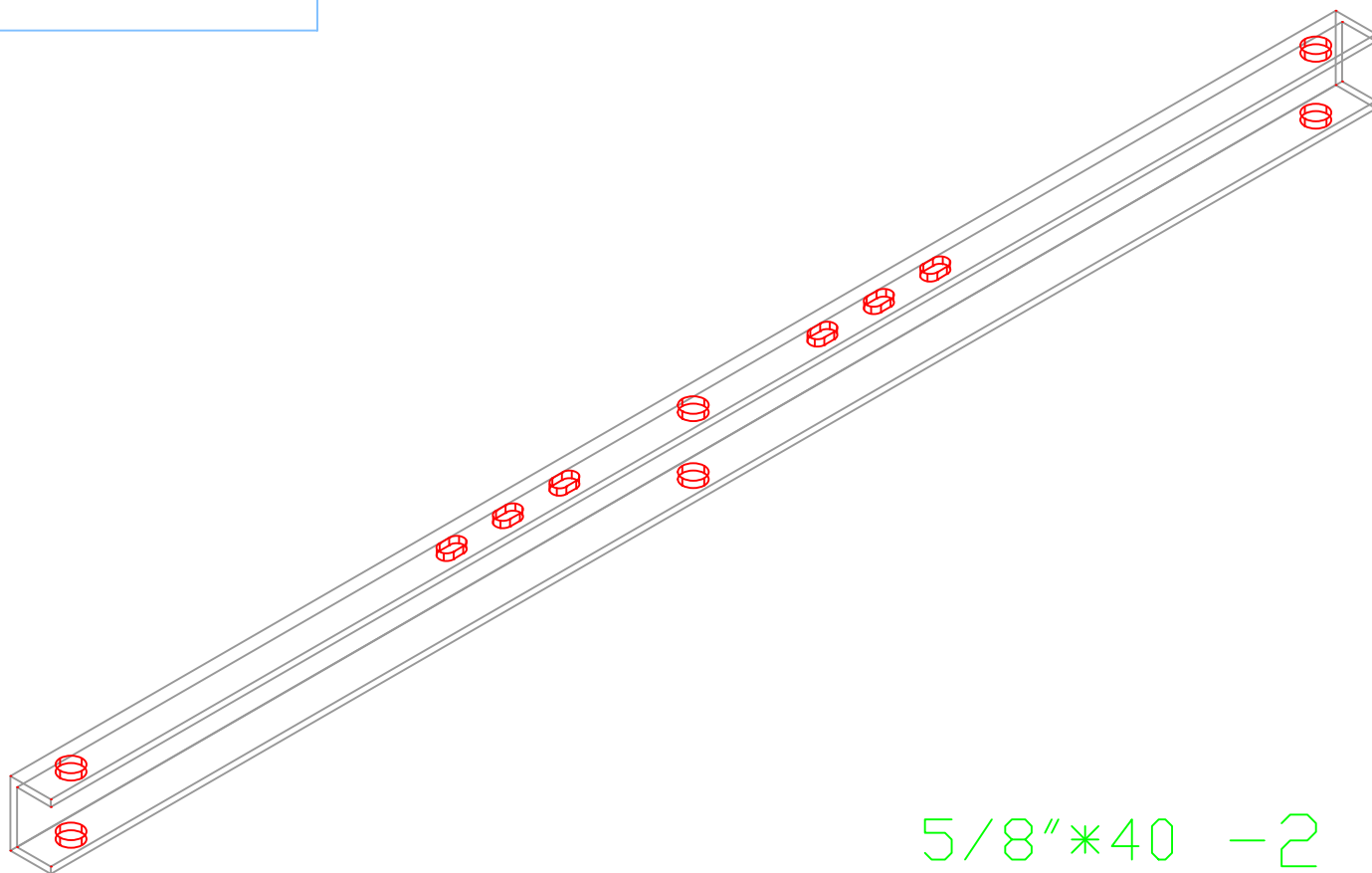
K160/3



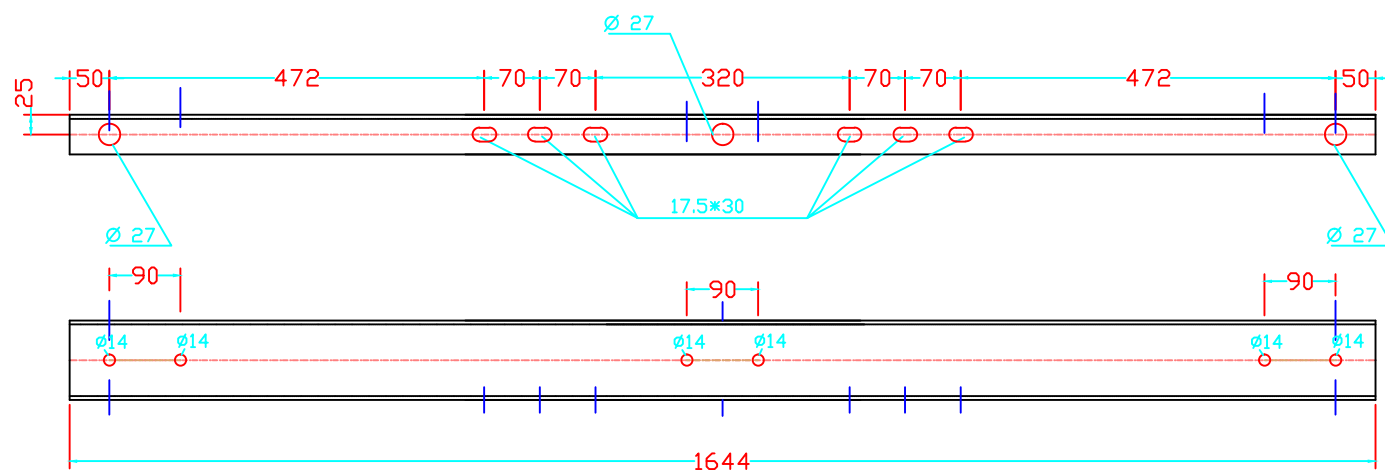
Hot Galvanized Auxilliary  
Steel Arm K160/3

Weight Kg	Unit mesurment	Description	Quant.
19	2200	CN° 8	1
Note: All component must be Steel RST37.2 hot dip galvanized Or S235 JR			

K160/3\_B



5/8" \* 40 - 2



شركة توزيع كهرباء محافظات غزة  
GEDCO

Prepared: Eng. ziad ALHoussaini

10405006

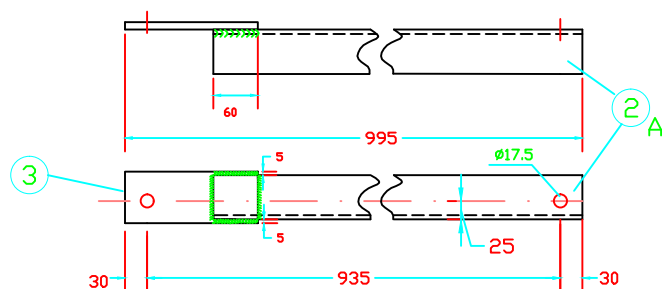
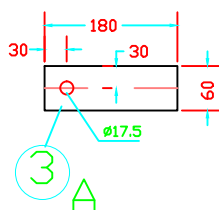
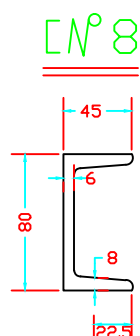
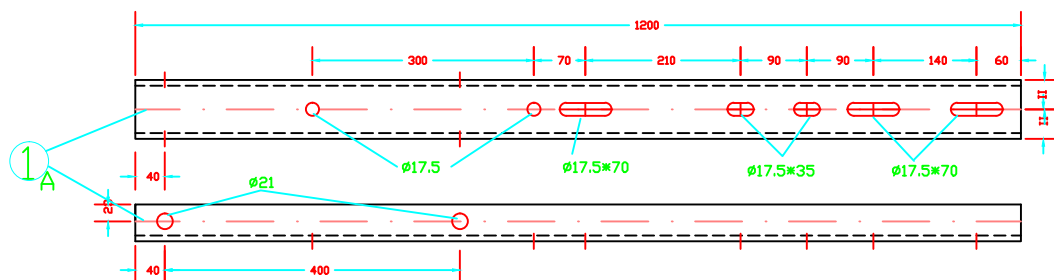
Hot Galvanized Auxilliary  
Steel Arm K160/3\_B

Weight Kg	Unit mesurment	Description	Quant.
	1644	CN° 8	1

Note: All component must be Steel RST37.2  
hot dip galvanized

Kg	measured	measured	Description	Item	Quant.
107.2	6700	3350	CN <sup>1</sup> 14	1	2
34.5	4000	2000	CN <sup>1</sup> 8	2	2
7.3	850	850	CN <sup>1</sup> 8	3	1
149Kg	Total Weight				

K287-120



Bolts Required for  
installation on  
the pole

- 4 UNC Bolt 5/8" \* 40mm
- 2 square washer 5/8"
- 2 Spring washer 5/8"

Note: All component must be Steel 37.2  
hot dip galvanized



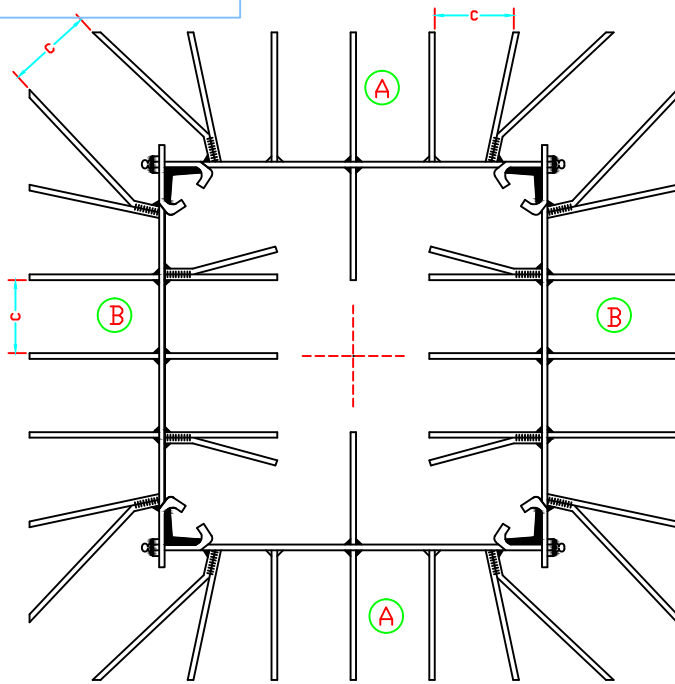
Hot Galvanized  
L.V Steel Pole Arm  
120cm Long , Single

Weight kg	Total mm mesurment	Unit mm mesurment	Description	Quant.	Item
	1200	1200	L#8	1	1
13.8	875	875	Plate L50*50*5	1	2
0.8	180	180	Plate Ø60*10	1	3

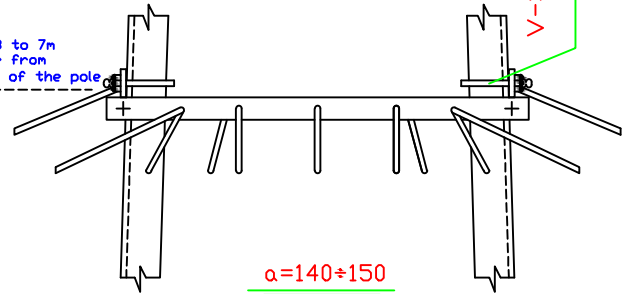
Prepared: Eng. ziad ALHoussaini

10409007

K113/8

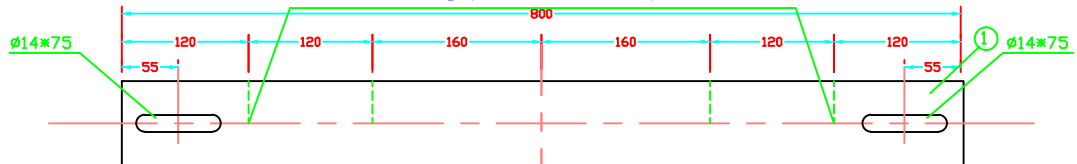


From 4.8 to 7m  
distance from  
the top of the pole

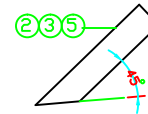
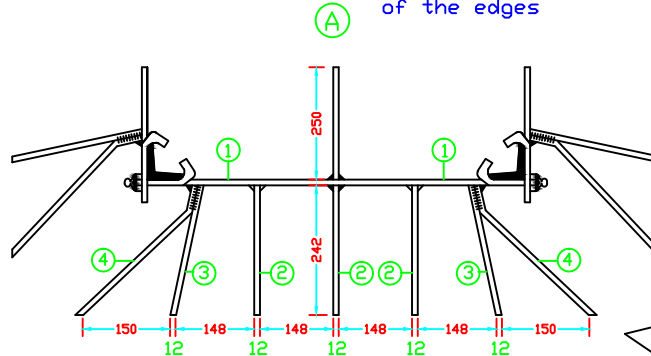


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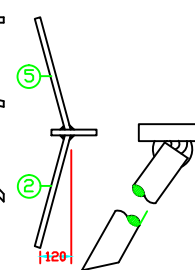
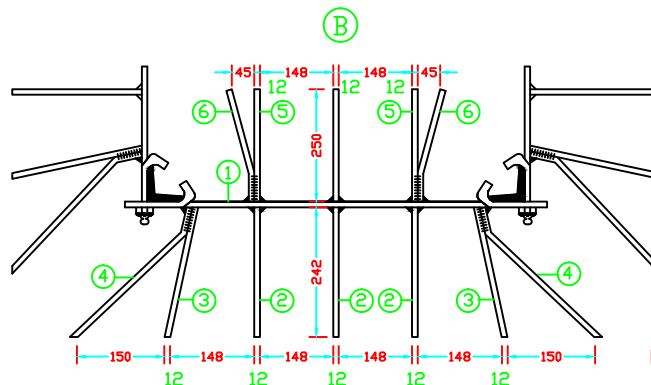
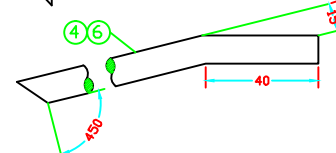
welding places of sharpened sides



Method of bending and Cutting  
of the edges



sharpened side from items 2 to 6 should  
be welding with Item No 1 thickness 5mm  
Bending in Cold as specified Standards



Bolts Required for  
installation on  
the pole

8 V-Shaped Bolt 1/2" 140mm

Note: All component must be Steel 37.2  
hot dip galvanized



Prepared: Eng. ziad ALHoussaini

10410005

Anti- Climbing Steel Arm K113/8

Weight Kg	Total mm mesurment	Unit mm mesurment	Description	Item	Quant
10	3200	800	Plate $\phi 50 \times 6$	1	4
2.9	3240	270	$\phi 12$	2	12
2.0	2240	280	$\phi 12$	3	8
2.4	2680	335	$\phi 12$	4	8
2.0	2240	280	$\phi 12$	5	8
1.0	1120	280	$\phi 12$	6	4
21kg					

**Technical Guarantees No. 10502002****12/20 kV Single Core Cable with XLPE Insulation and Aluminium Circular Stranded Conductor 1x120 mm<sup>2</sup>**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Design Standards		IEC60502-2 & IEC60228			
4	Test Standards		IEC60230 & IEC60502-2 & IEC60811			
5	Code & Designation		NA2XS(F)2Y , Power Cable with Aluminum Conductors and XLPE Insulation			
6	Climatic Design		- 5°C to 55°C			
<b>7- Rated Voltage</b>						
7.1	Between Conductor and Sheath (U <sub>0</sub> )	kV	12			
7.2	Between any Two Conductors (U)	kV	20			
7.3	Max. Service Voltage (U <sub>m</sub> )	kV	24			
7.4	System Nominal Voltage	kV	22			
8	Rated Frequency	HZ	50			
9	Impulse withstand Voltage 1,2/50 μs	kV	125			
<b>10- Cable Design</b>						
<b>10.1 Conductor :</b>						
10.1.1	Cross Section	mm <sup>2</sup>	120			
10.1.2	Material		Aluminum			
10.1.3	Class and Form		Class 2 - Stranded Compacted Circular (filled with swelling powder)			
10.1.4	Minimum / Maximum Diameter	mm	12.8 / 13.5			

**Technical Guarantees No. 10502002****12/20 kV Single Core Cable with XLPE Insulation and Aluminium Circular Stranded  
Conductor 1x120 mm<sup>2</sup>**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
10.1.5	Minimum Number of Strands	No	15			
10.1.6	Weight of Conductor Per Meter	Kg/Km	shall be filled by manufacturer			
10.1.7	Maximum DC Resistance of Conductor at 20°C	Ω/km	0.253			
10.1.8	Max. Rated Temperature for Permanent Load	°C	90			
10.1.9	Max. Rated Temperature for Emergency Loads	°C	105			
10.1.10	Max. Rated Conductor Temperature at Short Circuit (1 sec. max. duration)	°C	250			
<b>10.2 Inner Semi Conductive Layer (Conductor Screen) :</b>						
10.2.1	Material		Triple Extruded Bonded Thermosetting Semi-Conductive Layer			
10.2.2	Thickness at Any Point	mm	0.3			
10.2.3	Max Service Temperature	°C	90			
<b>10.3- XLPE Insulation :</b>						
10.3.1	Material		Triple Extruded Dry Cured (XLPE)			
10.3.2	Nominal Thickness	mm	5.5			
10.3.3	Minimum Thickness at Any Point	mm	4.85			
10.3.4	Diameter Over Insulation	mm	shall be filled by manufacturer			
10.3.5	Max Service Temperature	°C	90			

**Technical Guarantees No. 10502002****12/20 kV Single Core Cable with XLPE Insulation and Aluminium Circular Stranded Conductor 1x120 mm<sup>2</sup>**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
10.3.6	Weight	Kg/Km	shall be filled by manufacturer			
<b>10.4- Outer Semi Conductive Layer (Insulation Screen) :</b>						
10.4.1	Material		Triple Extruded Bonded Thermosetting Semi-Conductive Layer			
10.4.2	Thickness at Any Point	mm	0.3			
10.4.3	Max Service Temperature	°C	90			
<b>10.5- Semi-Conductive Water Swelling Tape :</b>						
10.5.1	Material		Semi Conductive Tape			
10.5.2	Thickness at Any Point	mm	0.3			
10.5.3	Max Service Temperature	°C	90			
<b>10.6- Copper Wire Screen (including Equalizing Tape) :</b>						
10.6.1	Material of Wire and Equalizing Tape		Copper			
10.6.2	Minimum Wires Number		shall be filled by manufacturer			
10.6.3	Wire Geometrical Cross Section	mm <sup>2</sup>	16			
10.6.4	Equalizing Tape Width	mm	10			
10.6.5	Equalizing Tape Thickness	mm	0.1			
<b>10.7- Separation Sheath (Binder Tape) :</b>						
10.7.1	Material		Water Blocking Tape Non-Conductive			

**Technical Guarantees No. 10502002****12/20 kV Single Core Cable with XLPE Insulation and Aluminium Circular Stranded  
Conductor 1x120 mm<sup>2</sup>**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
10.7.2	Thickness	mm	0.2 - 0.3			
10.7.3	Max Service Temperature	°C	90			
<b>10.8- Outer Sheath :</b>						
10.8.1	Material	mm	PE ST7 with Chemical Additives			
10.8.2	Specify PE (LDPE, MDPE, HDPE)		Required			
10.8.3	Nominal Thickness	mm	2.1			
10.8.4	Minimum Thickness at Any Point	mm	shall be filled by manufacturer			
10.8.5	Max Service Temperature	°C	90			
10.8.6	Color		Black			
10.8.7	Weight	Kg/Km	shall be filled by manufacturer			
<b>10.9- Completed Cable :</b>						
10.9.1	Overall Diameter of the Cable	mm	shall be filled by manufacturer			
10.9.2	Total Weight of the Cable	kg/km	shall be filled by manufacturer			
10.9.3	Minimum Bending Radius	mm	shall be filled by manufacturer			
10.9.4	<b>Sustained Current Rating in Underground Under Below Conditions :</b>					

**Technical Guarantees No. 10502002****12/20 kV Single Core Cable with XLPE Insulation and Aluminium Circular Stranded  
Conductor 1x120 mm<sup>2</sup>**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
10.9.4.1	At <b>Flat</b> Laying Arrangement (Buried in 0.7 m Deep in Soil at 20 °C with 1 k.m/w Thermal Resistivity and Load Factor 0.7 )	A	319			
10.9.4.2	At <b>Trefoil</b> Laying Arrangement (Buried in 0.7 m Deep in Soil at 20 °C with 1 k.m/w Thermal Resistivity and Load Factor 0.7 )	A	285			
11	Maximum Short-Circuit Current of Conductor During 1 sec.	KA	≥11.3			
<b>12- Drum :</b>						
12.1	Method of Cable Delivery		on Drums			
12.2	Length of Cable on Drum	m	1000			
12.3	Drum Material		New Wood			
12.4	Cable Protection on Drum		Wooden Batten			
12.5	Max. Gross Weight of Drum with Cable	kg	shall be filled by manufacturer			
12.6	Dimension of Drum	mm	shall be filled by manufacturer			
13	Permissible Pulling Forces	N	shall be filled by manufacturer			
<b>14- Test :</b>						

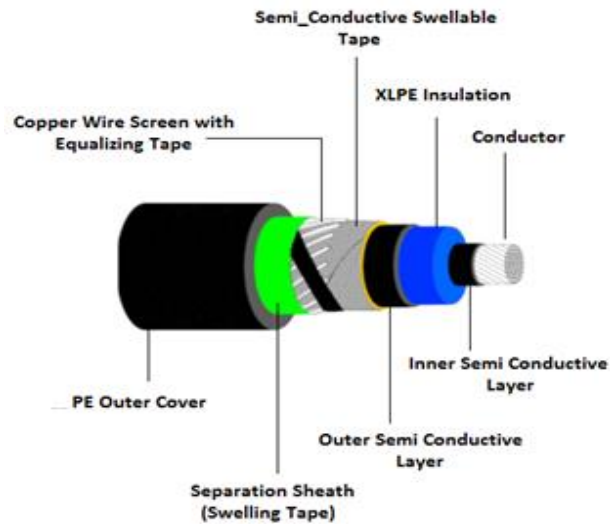
**Technical Guarantees No. 10502002****12/20 kV Single Core Cable with XLPE Insulation and Aluminium Circular Stranded  
Conductor 1x120 mm<sup>2</sup>**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
14.1	Type Test Certificates /Reports from internationally reputed testing agency		Required			
14.1	Acceptance & Routine tests witnessed by Three Beneficiary Engineers		Required			
15	Marking		<b>Hot Stamping, giving :</b>			
			1- Type of cable			
			2- Conductor Cross-section area			
			3- Beneficiary Name ( <b>Gedco</b> )			
			4- Manufacturer name			
			5- Nominal voltage			
			6- Length for Each Meter			
			7- Production year			
			8- No. Of Purchase order (GEDCo )			
			9- type of PE			

## Technical Guarantees No. 10502002

### 12/20 kV Single Core Cable with XLPE Insulation and Aluminium Circular Stranded Conductor 1x120 mm<sup>2</sup>

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
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Tenderer's Signature : .....

Date: .....

**Technical Guarantees No. 10504006****0.6/1 KV ABC Cable 1x95 mm<sup>2</sup> Aluminium**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Reference Standards		CENELEC HD 626 S1:1996 PART 6 Section E, included in National Standards NFC 33209and BS 7870-5			
4	Max. Rated Conductor Temperature at Short Circuit (5 sec. max. duration)	°C	250			
5	Max. Rated Temperature for Permanent Load	°C	90			
6	<b>Voltage</b>					
	a) Rated Voltage	kV	0.6/1			
	b) Max. Service Voltage	kV	1.2			
7	Nominal System Voltage Phase to Phase	kV	0.4			
8	Type		Insulated 3 Phase and 1 Neutral Messenger			
9	All Conductors Form		Circular Compacted , Concentric Strand			

**Technical Guarantees No. 10504006****0.6/1 KV ABC Cable 1x95 mm<sup>2</sup> Aluminium**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
11	<b>2- Neutral Messenger Conductor</b>					
	a) Cross Sectional Area	mm <sup>2</sup>	95			
	b) Number of Cores		1			
	c) Minimum Number of Strands	No	≥12			
	d) Minimum / Maximum Diameter of Conductor	mm	12/12.9			
	e) Messenger Conductor Material		Aluminium Alloy			
	f) Insulation Material		Extruded Black Weather-Resistant XLPE			
	g) Insulation Average Thickness	mm	1.6			
	h) Min / Max Diameter Over Insulation	mm	shall be filled by manufacturer			
	i) Max. Phase Conductor DC Resistance at 20 °C	Ω/km	0.343			
	j) Minimum Breaking load	KN	27.5			
	k) Marking		<b><i>Embedded print, giving :</i></b> 1- Type of cable 2- Cross-section area of phase and neutral conductors 3- Beneficiary Name ( <b>Gedco</b> ) 4- Manufacturer name 5- Nominal voltage and Length for Each Meter 6- Production year			

**Technical Guarantees No. 10504006****0.6/1 KV ABC Cable 1x95 mm<sup>2</sup> Aluminium**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
12	Approximate Overall Diameter of all cable	mm	shall be filled by manufacturer			
13	Approximate Total Weight of the Complete Cable	kg/km	shall be filled by manufacturer			
14	Drum Material		New Wood			
15	Cable Protection on Drum		Wooden Batten			
16	Drum Dimensions		shall be filled by manufacturer			
18	Type Test Certificates/Reports from internationally reputed testing agency		Required			
19	Acceptance & Routine tests witnessed by Beneficiary		Required			

Tenderer's Signature : .....

Date: .....

**Technical Guarantees No. 10506016****Hard Drawn Stranded Copper Conductor 35 mm<sup>2</sup>**

	Project Name & Number					
	Contractor Name					
No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Reference Manufacturing Standards		BS7884 & DIN 48201			
4	Conductor Material		Copper			
5	Conductor Construction		Hard Drawn Stranded			
6	Nominal Cross-Sectional Area of Conductor	mm <sup>2</sup>	35			
7	Number Copper Strands	No.	7			
8	Diameter of Copper Strand	mm	2.5			
9	Overall Diameter of Conductor	mm	7.5			
10	Max. Conductor DC Resistance at 20 °C	Ω/km	0.5337			
11	Minimum Breaking Load	Newton	12860			
12	Current Rating in Free Air	Amps	200			
13	Conductor Geometric Mean radius	mm	shall be filled by manufacturer			
14	Modulus of Elasticity	kg/mm <sup>2</sup>	shall be filled by manufacturer			
15	Coefficient of Thermal Elongation , per °C		shall be filled by manufacturer			

**Technical Guarantees No. 10506016****Hard Drawn Stranded Copper Conductor 35 mm<sup>2</sup>**

	<b>Project Name &amp; Number</b>					
	<b>Contractor Name</b>					
<b>No</b>	<b>Description</b>	<b>Unit</b>	<b>Requirements</b>	<b>Offered Data</b>	<b>Notes, Remarks , Ref to Documentation</b>	<b>Evaluation Committee Comments</b>
16	Conductor Nominal mass per unit Length	kg/km	308			
17	Drum Material		New Wood			
18	Cable Protection on Drum		Wooden Batten			
19	Drum Dimensions		shall be filled by manufacturer			
20	Conductor Length on Drum	m	1000			
21	Total mass of Conductor with Drum	Kg	shall be filled by manufacturer			
22	Type Test Certificates/Reports from internationally reputed testing agency		Required			
23	Acceptance & Routine tests witnessed by Beneficiary		Required			

Tenderer's Signature : .....

Date: .....

**Technical Guarantees No. 10507001****ACSR Conductor Rabbit**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Reference Manufacturing Standards		British Sizes BS215 PART2 or EN 50182			
4	Type		Aluminium Conductor Steel Reinforced - (ACSR)			
5	Core Material		Greased Stranded Galvanized Steel Wires			
6	Conductor Material		Stranded Aluminium Wires			
7	Code		ACSR Rabbit			
8	Nominal Cross-Sectional area of ACSR Wire	mm <sup>2</sup>	61.7			
9	Number of Steel Core Strands	No.	1			
10	Diameter of Steel Core Strand	mm	3.35			
11	Number of Aluminium Strands	No.	6			
12	Diameter of Aluminium Strand	mm	3.35			

**Technical Guarantees No. 10507001****ACSR Conductor Rabbit**

<b>No</b>	<b>Description</b>	<b>Unit</b>	<b>Requirements</b>	<b>Offered Data</b>	<b>Notes, Remarks , Ref to Documentation</b>	<b>Evaluation Committee Comments</b>
13	Total Overall Diameter of Conductor	mm	10.05			
14	Max. Conductor DC Resistance at 20 °C	Ω/km	0.5426			
15	Breaking Strength	KN	18.3			
16	Min. Current Rating in free Air	Amps	185			
17	Conductor resistance for base temperature 20 C°	ohm/Km	shall be filled by manufacturer			
18	Modulus of Elasticity	kg/mm <sup>2</sup>	shall be filled by manufacturer			
19	Coefficient of Thermal Elongation , per °C		shall be filled by manufacturer			
20	Weight of Aluminium Conductors	kg/km	145			
21	Weight of Steel Conductors	kg/km	68.5			
22	Total Weight of the Conductor	kg/km	shall be filled by manufacturer			
23	Drum Material		New Wood			
24	Cable Protection on Drum		Wooden Batten			
25	Drum Dimensions	mm	shall be filled by manufacturer			
26	Conductor Length on Drum	m	2000			

**Technical Guarantees No. 10507001**

**ACSR Conductor Rabbit**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
27	Type Test Certificates/Reports from internationally reputed testing agency		Required			
28	Acceptance & Routine tests witnessed by Two Gedco Engineers		Required			

Tenderer's Signature : .....

Date: .....

**Technical Guarantees No. 10801001****36 Kv, 3-phase Outdoor Isolating Switch With Built-In Arc Interruption**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer		ELCO or Equivalent			
2	Country of Origin		ISRAEL			
3	Standards		IEC 62271-103, IEC62271-102			
4	Rated Voltage	kV	36			
5	Design and Operating		Manual Isolating Switch under load having capability of frequent switching			
6	All Ferrous Parts Material		Hot Galvanized Steel			
7	Pole No.		3			
8	Safe Operating Zone Temperature	°C	-10 to +55			
9	Rated Frequency	Hz	50			
10	<b>Arc Interruption</b>					
	Name of Manufacturer					
	Country of Origin					
	Type		Heavy Duty			
	Operating		without an External Arc or Flame Conforming to IEC 62271-103		can be fixed in both directiones of the pole	
	Installation		Hard Fixed and not Able to Rotate and can be fixed in both directiones of the pole (inside , outside )			
<b>Insulators</b>						

**Technical Guarantees No. 10801001****36 Kv, 3-phase Outdoor Isolating Switch With Built-In Arc Interruption**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
11	Name of Manufacturer					
	Country of Origin					
	a) Material		Polymer			
	b) Creepage Distance	mm	1050			
12	Continuous Current Capacity	A	630			
13	Rated Peak withstand Current	KA	31.5			
14	Rated Short Time Current (1 sec Duration)	KA	12.5			
15	<b>Rated Lightning Impulse withstand Voltage</b>					
	a) Standard Impulse with Stand Voltage to Earth (1.2/50 $\mu$ s Full Wave)	kV	170			
	b) Between Poles Across Isolating Distance	kV	190			
16	<b>Rated One Minute Power Frequency withstand Voltage in Dry and Wet Conditions</b>					
	a) Power Frequency Test Voltage to Earth	kV	75			
	b) Between Poles Across Isolating Distance	kV	100			
17	Minimum Clearance Between Phase and earth	mm	shall be filled by manufacturer			
18	Minimum Clearance Between Phases	mm	shall be filled by manufacturer			
19	Mechanical Operations	C/O	$\geq 1000$			
20	Electrical Operations Under 400A load	C/O	shall be filled by manufacturer			
21	Short Circuit Electrical Operations	C/O	shall be filled by manufacturer			

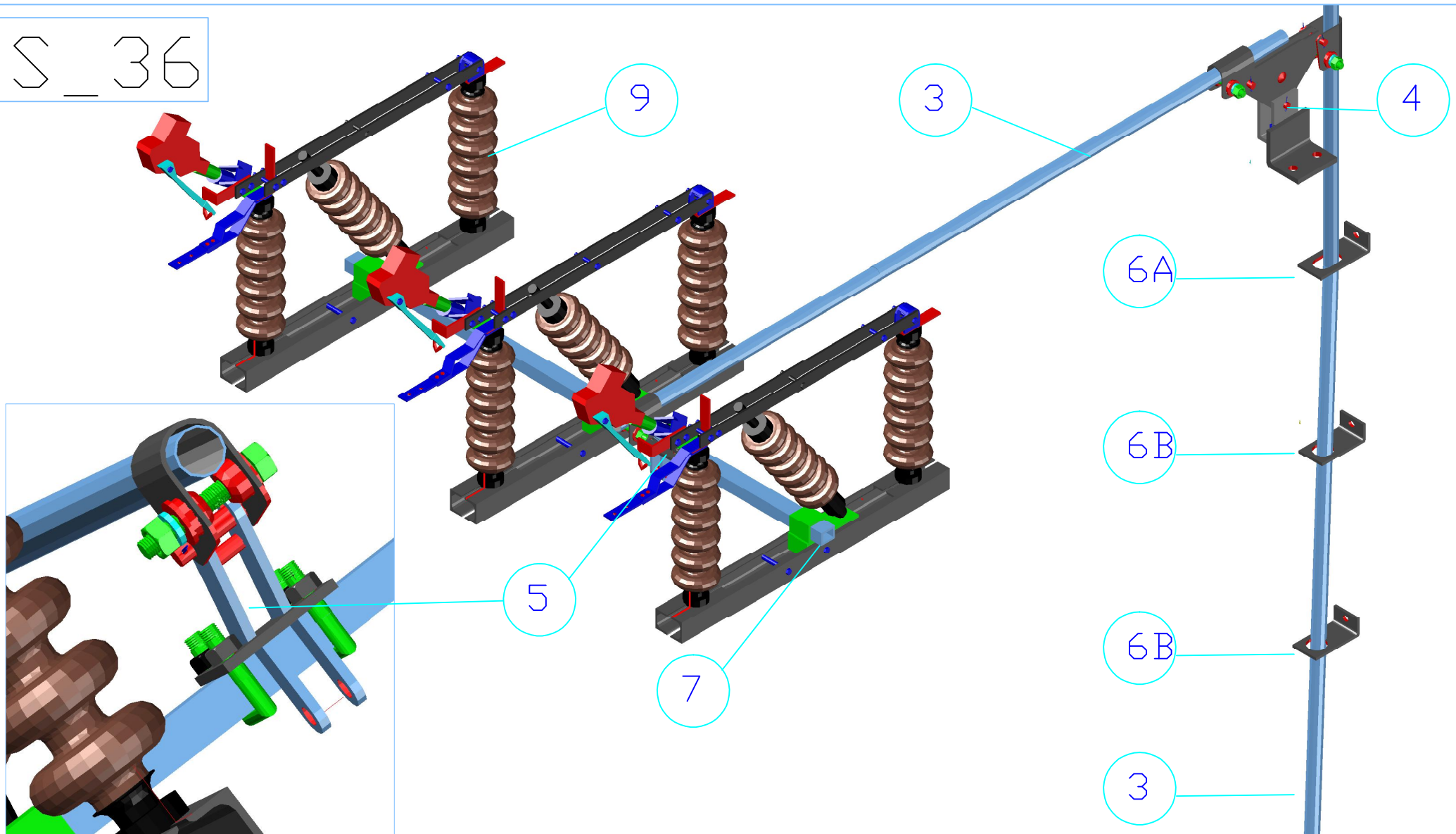
**Technical Guarantees No. 10801001****36 Kv, 3-phase Outdoor Isolating Switch With Built-In Arc Interruption**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
22	Installation and operating accessories		Required			
23	Type Test Certificates/Reports from internationally reputed testing agency (According IEC 62271-1 and IEC 62271-103)		Required			
24	Acceptance & Routine tests witnessed by Beneficiary		Required			
25	Switch Parts, Accessories and All Dimensions		As Attached Drawing No IS_36			

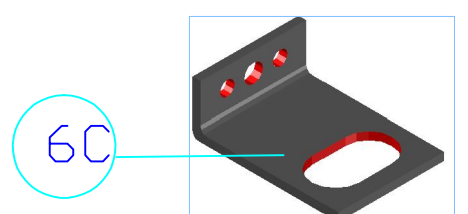
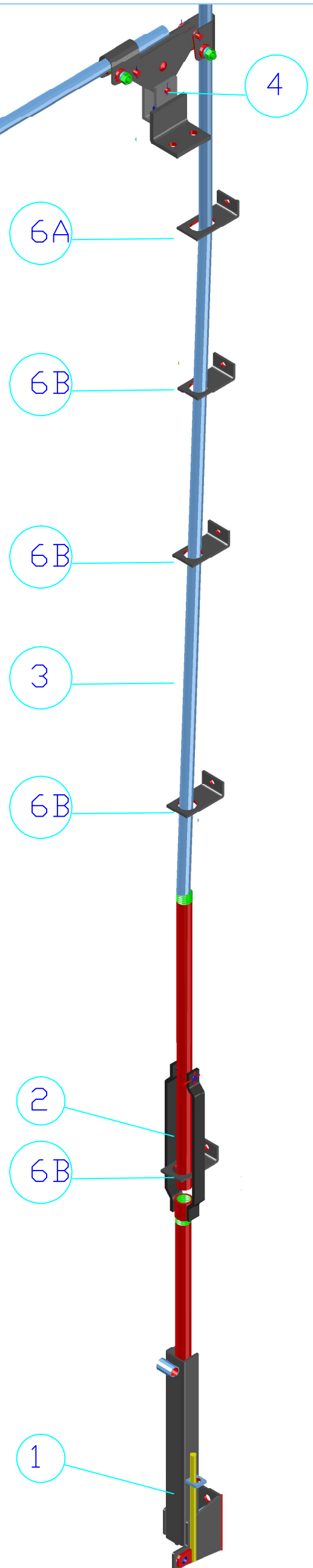
Tenderer's Signature : .....

Date: .....

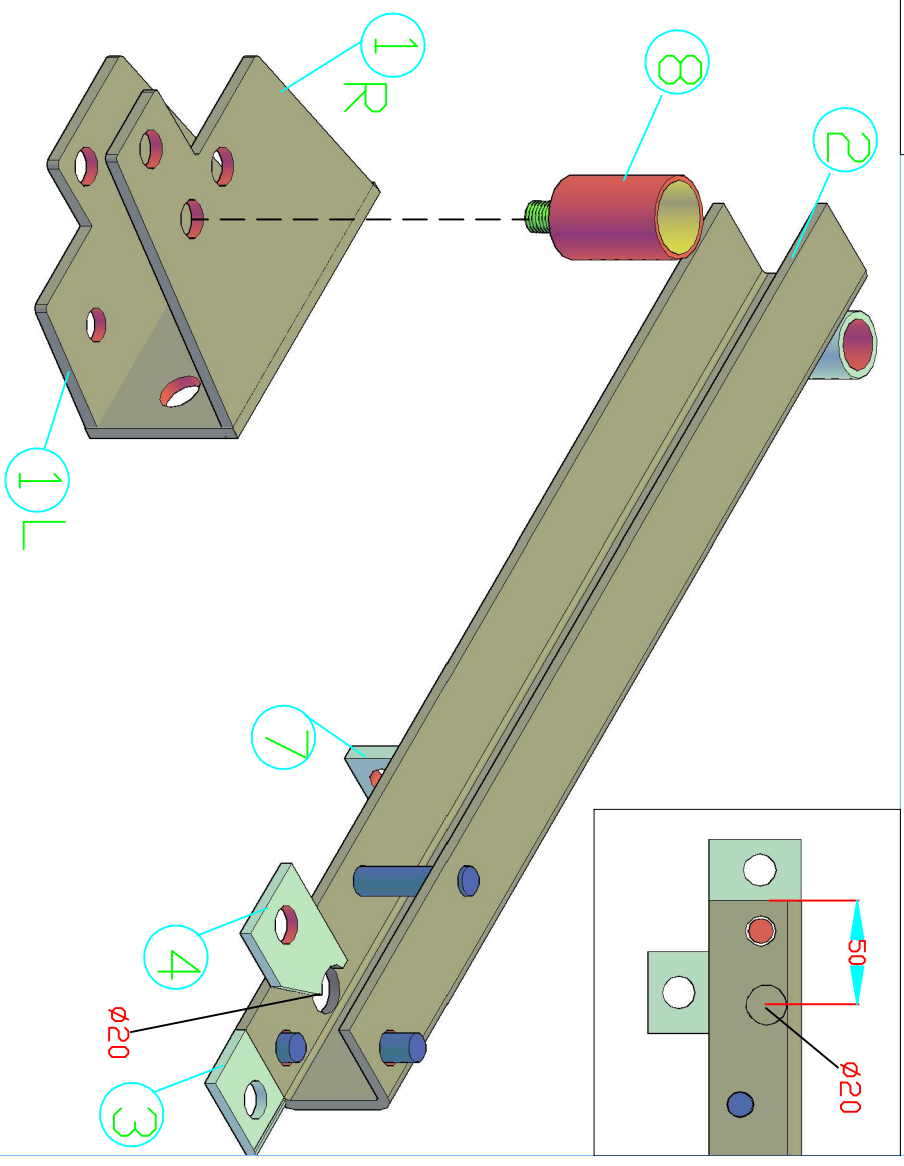
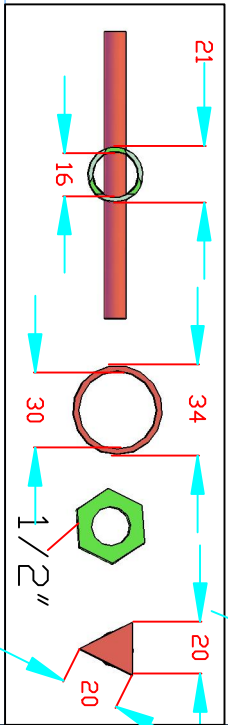
IS\_36



Itm	Description	Q.
1	Operating Handle	1
2	Adjusting Device	1
3	Glav. operating Pipe 1 1/4"	12m
4	Crank	1
5	Control Operating Lever	1
6A	Pipe guide model A	1
6B	Pipe guide model B	4
6C	Pipe guide model C	1
7	Interphase Shaft 35*35*3.5mm	3m
8	'U' Bolt Clamps 1/2"	12
9	36Kv Insulator Polymer	9



# OPERATING HANDEL 1

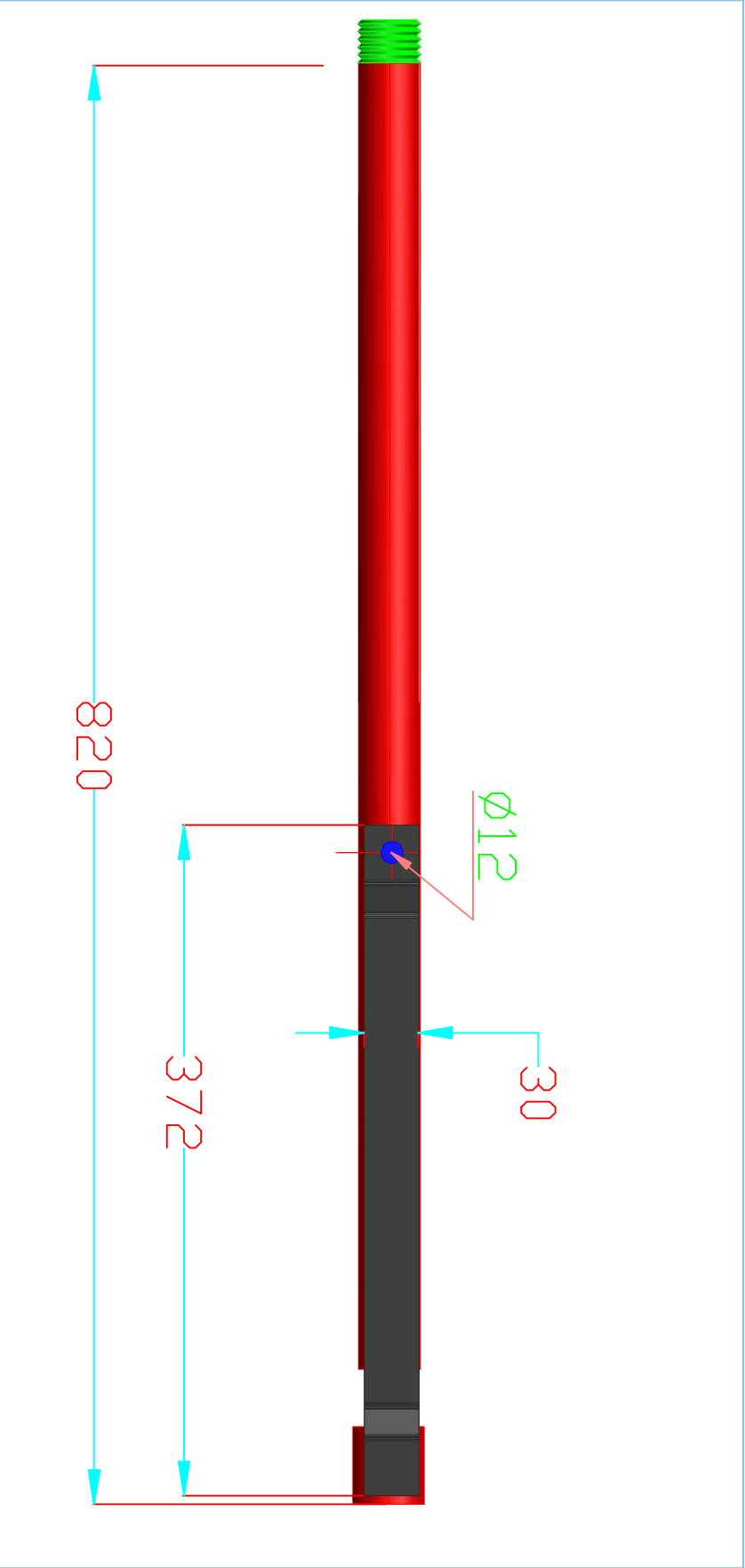


# OPERATING HANDEL

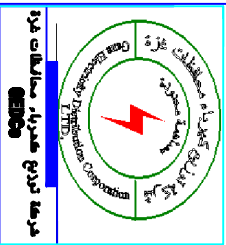
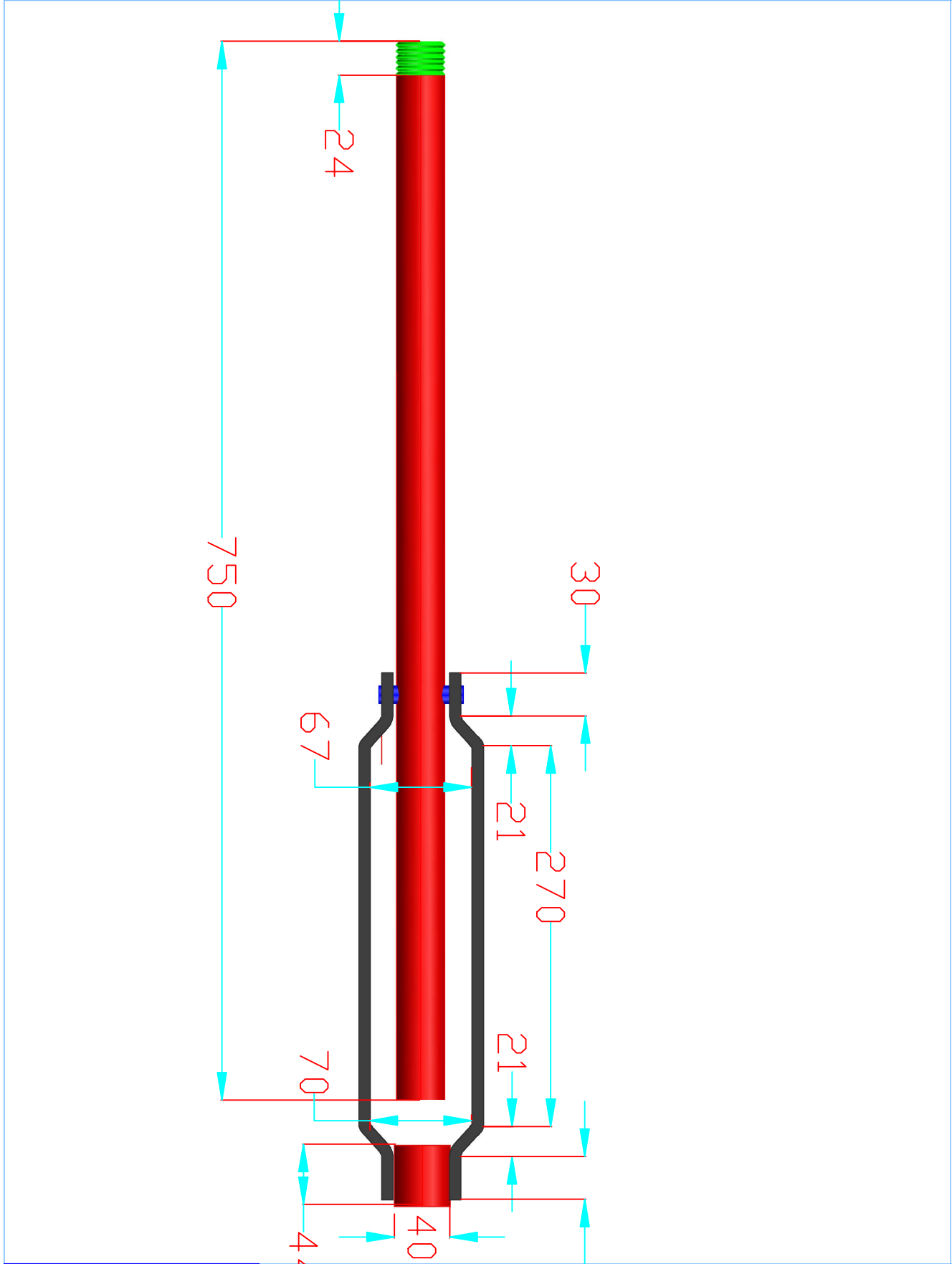
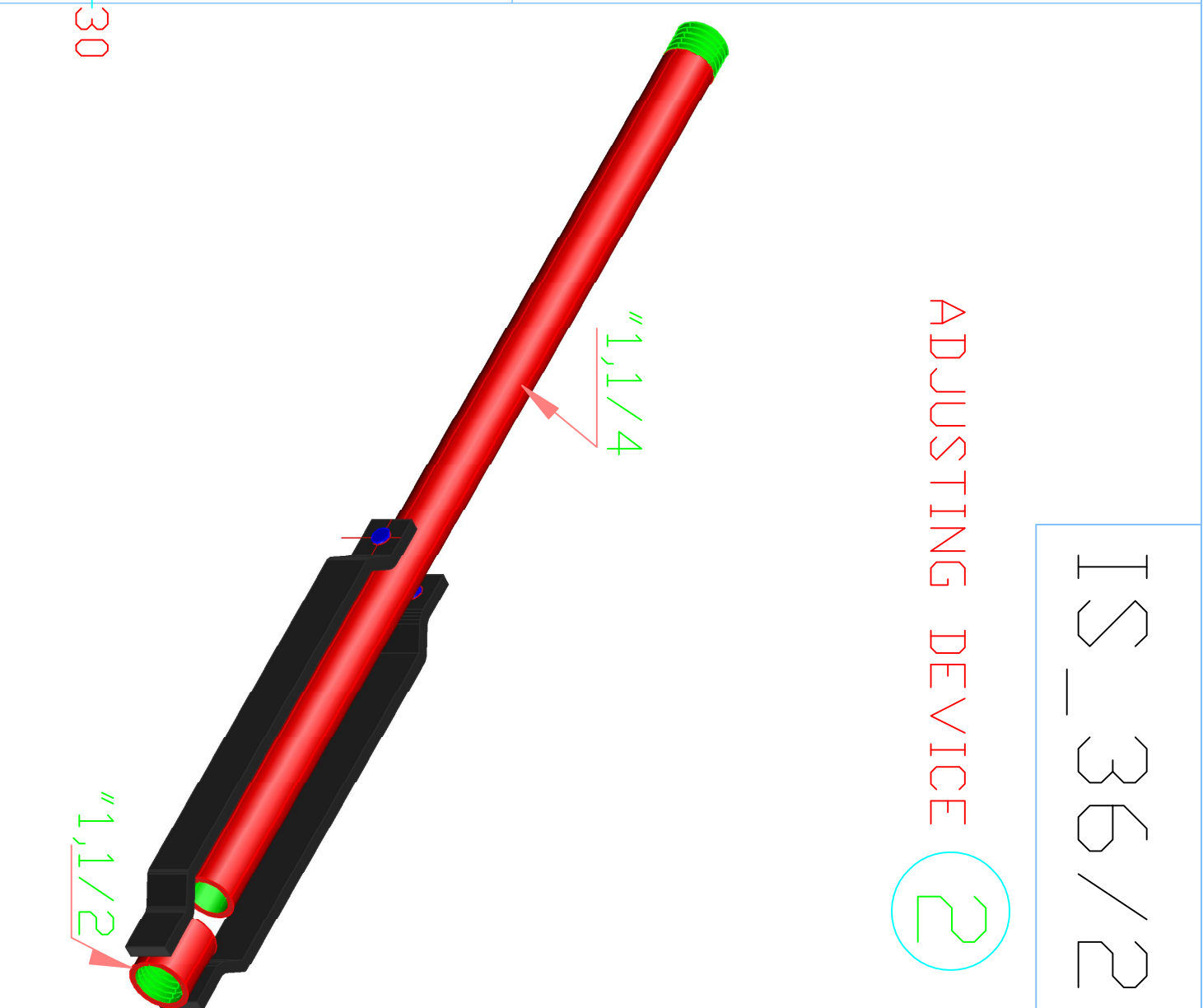


**Prepared: King, and AlHousain**

**Checked By: Eng. Kamal Rabal**



## ADJUSTING DEVICE 2



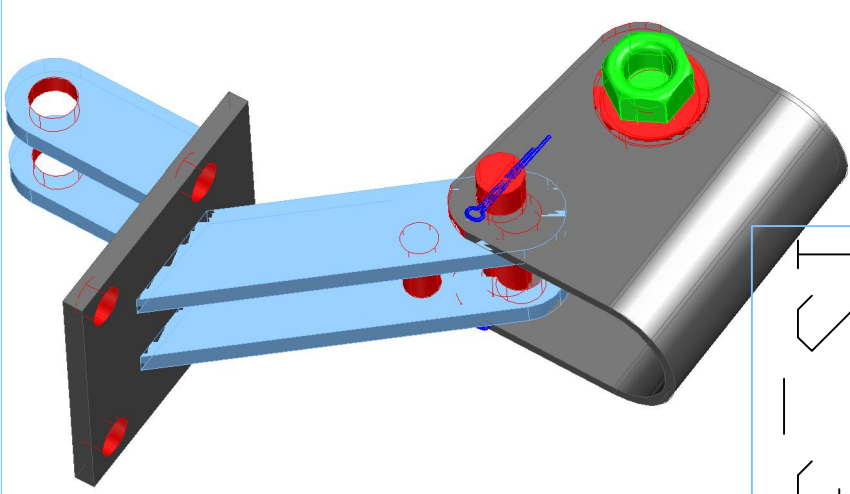
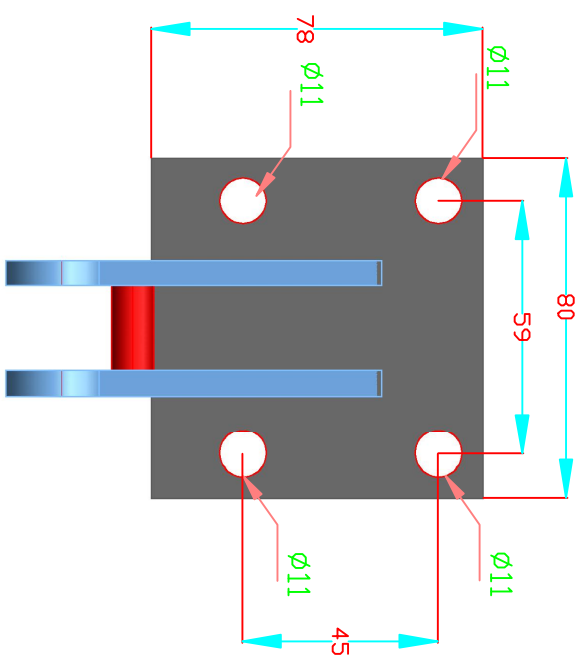
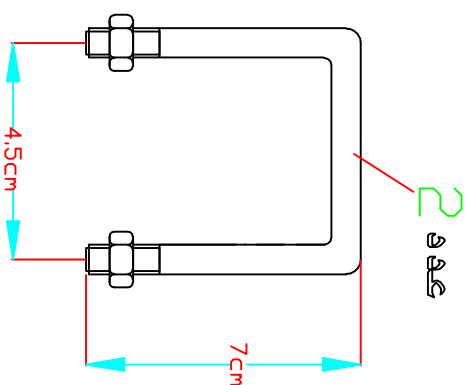
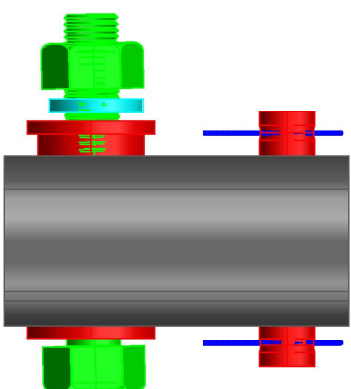
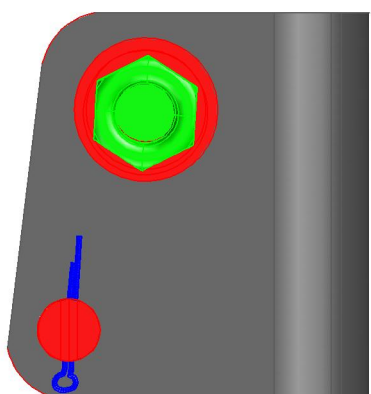
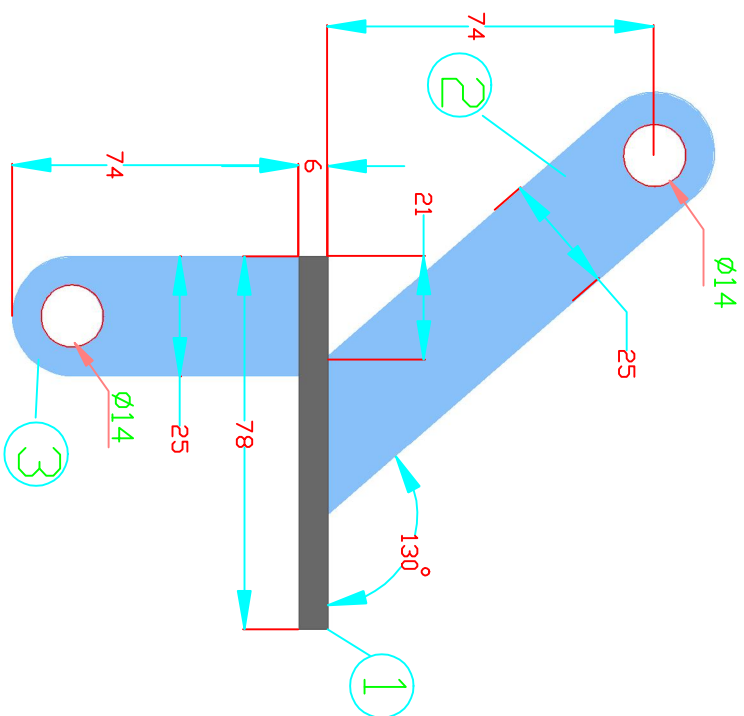
شركة توزيع كبرى - محافظات غزة  
GIZCO

**Prepared By: ziad ALHusseini**

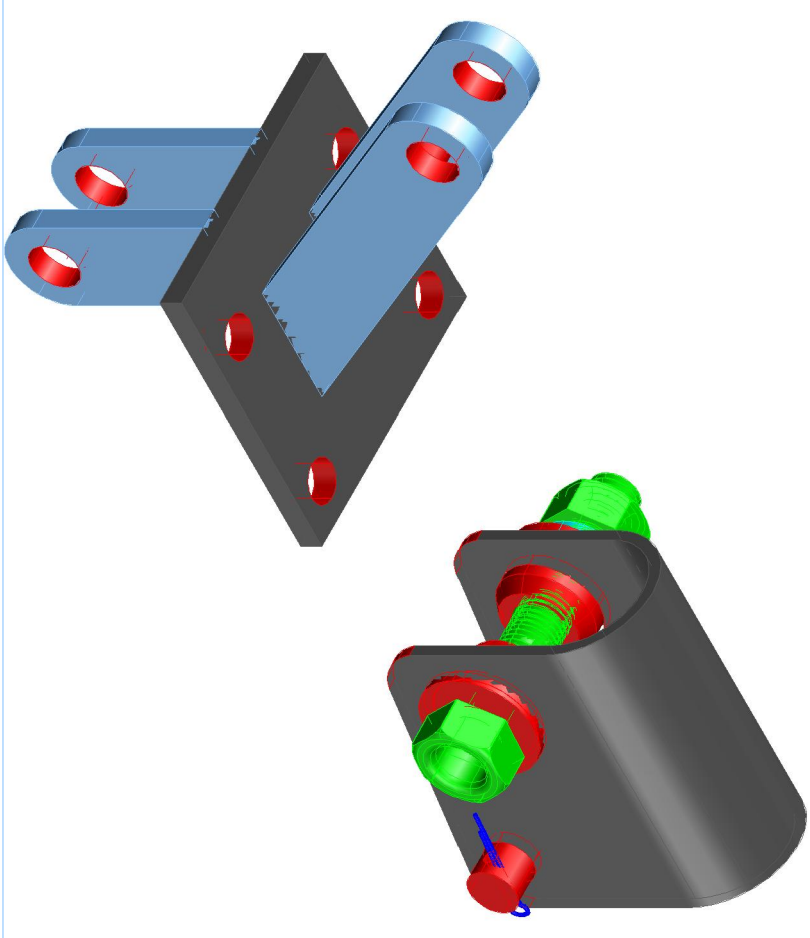
**Checked By: Eng. Kamel Rabeh**

## ADJUSTING DEVICE





IS\_36/5



Control Operating

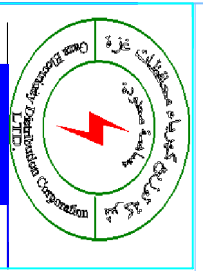
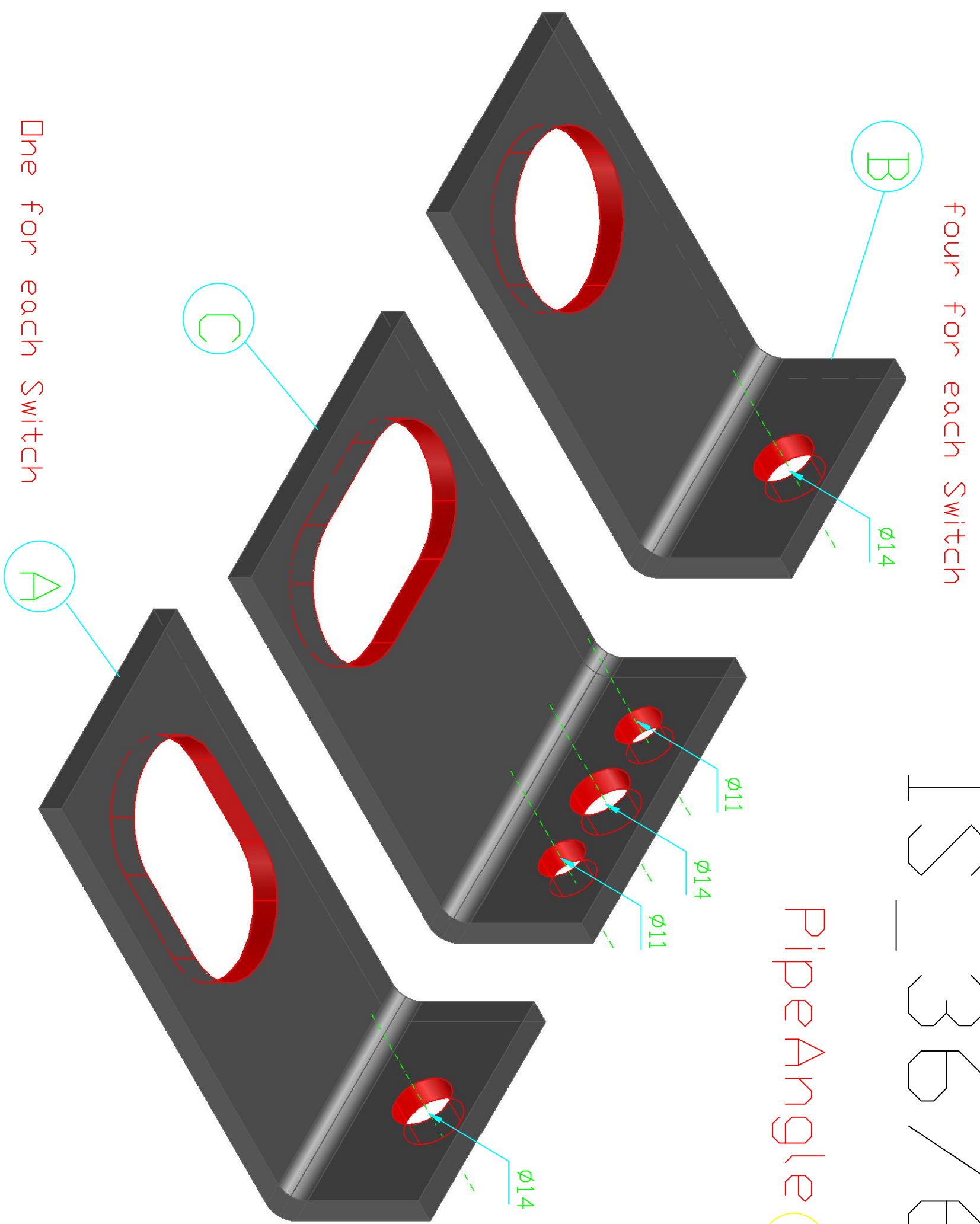
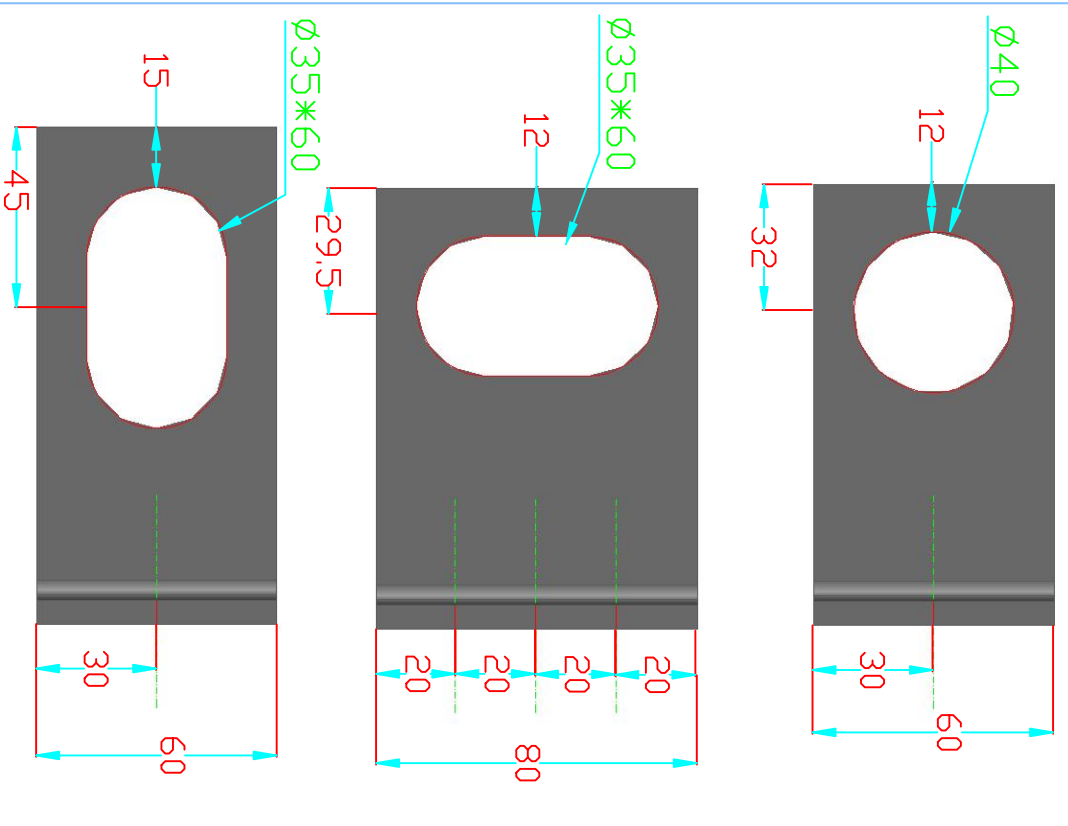
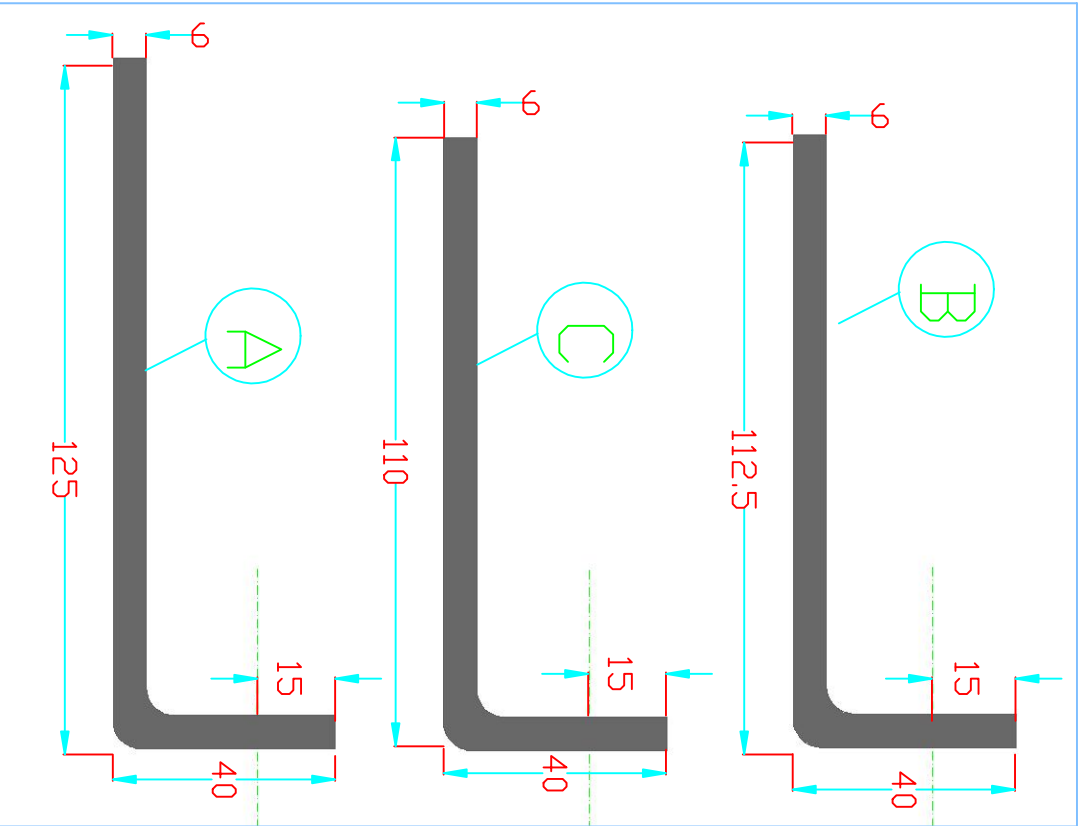
lever



Prepared By: Eng. Khalid M. Al-Hussaini  
Checked By: Eng. Kamel R. Al-Sayid

IS - 36 / 6

PipeAngle6



مراجعة: **Eng. Kamil Rabea**  
Prepared: **Eng. Kamil Rabea**  
Checked By: **Eng. Kamil Rabea**

Pipe Guide

**Technical Guarantees No. 11002003****36 kv Heat Shrinkable Outdoor Termination Kit for XLPE Cable 1x120/16 mm<sup>2</sup>**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Standards		IEC60502 & CENELEC HD629.1 S1			
4	Max. Service Voltage (Um)	kV	36			
5	Outdoor Termination Material , form , Designation		Heat Shrink Tubing and Molded Parts Shall be Flexible, Made from Specially Formulated Cross-Lined Polymeric			
6	Cable and Conductor Type		Single Core Conductor Cable with Copper Wire Shield			
7	Cable Insulation Type / Thickness		XLPE / 5.5 mm			
8	Conductor Cross Sectional Area	mm <sup>2</sup>	120			
9	Wire Screen Cross Sectional Area	mm <sup>2</sup>	16			
10	Termination Length	mm	530			

**Technical Guarantees No. 11002003****36 kv Heat Shrinkable Outdoor Termination Kit for XLPE Cable 1x120/16 mm<sup>2</sup>**

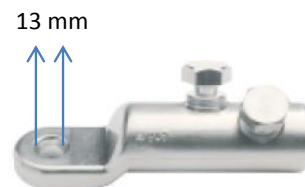
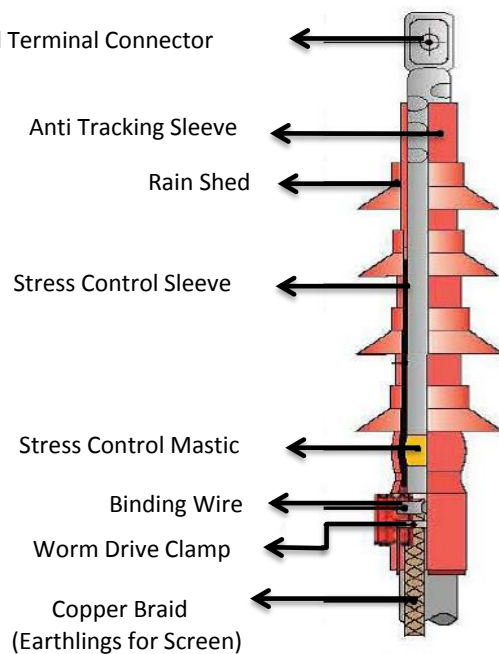
No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
11	Rain Shed Diameter	mm	115			
12	Number of Rain Sheds	No	4			
13	Insulating , Electrical Material and Rain Shed Brittle Temperature	°C	<-40			
14	Impulse withstand Voltage Test 1.2 Micro Second Between Conductor & Screen Grounded	kV	170			
<b>15- Test :</b>						
15.1	All Type tests reports by qualified laboratory according to CENELEC HD 629.1 S1		Required			
15.2	Routine test report		Required			
<b>Heat Shrinkable Outdoor Termination Kit Parts</b>						
16	Bimetallic Terminal Mechanical Lug with 13 mm Hole and 2 each Shear_Head Bolts (for Aluminium or Copper Conductors)		Required			
	Anti-Tracking Sleeve		Required			
	Rain-Sheds (4each)		Required			
	Stress Control Sleeve		Required			

## Technical Guarantees No. 11002003

### 36 kv Heat Shrinkable Outdoor Termination Kit for XLPE Cable 1x120/16 mm<sup>2</sup>

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
	Stress Control Mastic		Required			
	Binding Wire		Required			
	Worm Drive Clamp		Required			
	Copper Braid (Earthlings)		Required			
17	Installation Instruction Documents		Required			

Bimetallic Mechanical Terminal Connector



Bimetallic Mechanical Terminal Connector

Tenderer's Signature : .....

Date: .....

## Technical Guarantees No. PPYI\_800

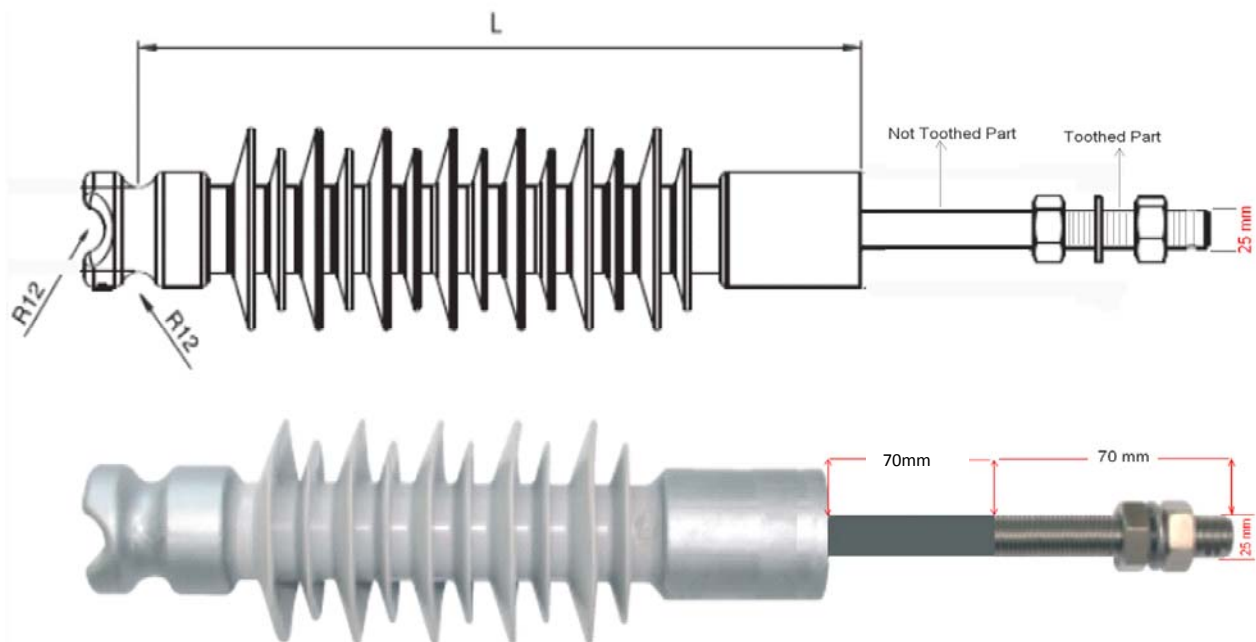
### 22kv Overhead Line Pin Type Polymer Insulator with Creepage Distance 800 mm

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Design Standards		IEC 61109 , IEC 60815			
4	Nominal System Voltage	kV	24			
5	Type		Pin Type			
6	Insulating Material		Composite Polymer			
7	Housing		Silicon			
8	Metal Parts		Hot Dip Galvanized			
9	Number of Sheds					
10	Total Length (L)	mm				
11	Shed Diameter	mm				
12	Min. Creepage Distance	mm	800			
13	Cantilever Strength	KN	12.5			
14	Total Weight	Kg				
<b>15- Power Frequency withstand Voltage (1 min)</b>						
15.1	a) Dry	kV	70			
15.2	b) Wet	kV	50			
15.3	c) Impulse +VE & -VE	kV	150			
<b>16- Flashover Voltage</b>						
16.1	a) Power Frequency (Dry)	kV	100			
16.2	b )Power Frequency (Wet)	kV	70			
16.3	c) Impulse +VE & -VE	kV	160			

## Technical Guarantees No. PPYI\_800

### 22kv Overhead Line Pin Type Polymer Insulator with Creepage Distance 800 mm

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
<b>17- Fittings</b>						
17.1	Pin Diameter (stud)	mm	25			
17.2	Pin Not-Toothed Part Length	mm	70			
17.3	Pin Toothed Part Length	mm	70			
17.4	The Top slot Diameter	mm	24			
17.5	Pin Accessories		Nuts and Washers			
18	Type Test Certificates/Reports from internationally reputed testing agency		Required			
19	Dimensions		as Below Drawing			



Tenderer's Signature : .....

Date: .....

**Technical Guarantees No. HST\_50/16****Flame Retardant Heat Shrinkable Tube with Shrink Ratio 3:1**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Reference Manufacturing Standards		IEC243 , IEC251			
4	Description		Environment friendly flame retardant heat			
5	Operating Temperature	C°	-55 to+125 C			
6	Rated Voltage	kv	0.6/1			
7	Material		High Quality Polymer			
8	Min. / Max. Cable Outer Diameter	mm	16/48			
9	Cable Outer Sheath	mm	PVC or LDPE			
10	Dielectric strength	KV/mm	≥20			
11	Tensile strength	Mpa	≥13			
12	Tensile strength after aging	Mpa	≥11			
13	Ultimate Elongation	%	≥300			
14	Shrink Ratio		3:1			
15	Tube Size Before Heating	mm	50			
16	Tube Size after Heating	mm	16			
17	Tube Min. Thickness	mm	1.2			
18	Colour		Black			

Tenderer's Signature : .....

Date: .....

Technical Guarantees No. 11106013

Electrical Insulation Black Tape

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Standards		UL 510, ASTM D1000			
4	Material		Flame Retardant Vinyl			
5	Color		Black			
6	Width	mm	20			
7	Length	m	20			
8	Thickness	mm	0.18			
9	Max. Voltage	V	600			
10	Tensile Strength	Kg/cm	3.2			
11	Elongation	%	200			
12	Adhesive		Rubber Resin			
13	Dielectric Breakdown	Volts	9000			
14	UV Resistance		Yes			

Tenderer's Signature : .....

Date: .....

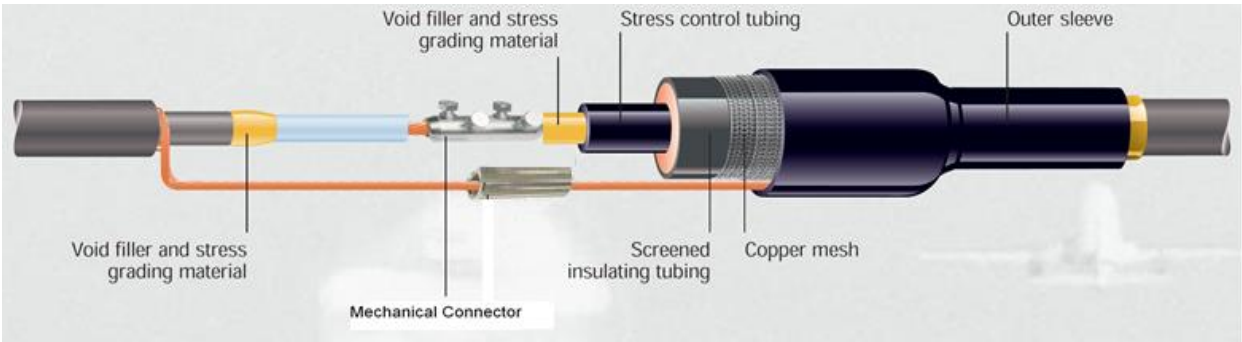
**Technical Guarantees No. 11201006****24 kv Heat Shrinkable Straight Joint for Single Core XLPE Cable 1x120/16 mm<sup>2</sup>**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Standards		HD 629.1 S1 , VDE0276 , VDE0620			
4	Max. Service Voltage (Um)	kV	24			
5	Cable and Conductor Type		12/20 kv Single Core Cable with Copper Wire Shield			
6	Cable Insulation Type		XLPE			
7	Conductor Cross Sectional Area	mm <sup>2</sup>	120			
8	Copper Shield Cross Sectional Area	mm <sup>2</sup>	16			
<b>9- Test :</b>						
9.1	Below Type tests reports by qualified laboratory according to CENELEC HD 629.1 S1 or IEC 60502-4 :-  AC Voltage Withstand Partial Discharge Impulse Voltage Withstand Short Time Current Cyclic Aging DC Voltage Withstand High Voltage Time Shielding		Required			
9.2	Mechanical connectors Test used in joints should pass the requirements in accordance with IEC 61238-1 class A.		Required			
10	Routine test report		Required			
11	Installation Instruction Documents		Required			
<b>Heat Shrinkable Straight Joint Parts</b>						
	Stress Control Tubing		Required			
	Screened insulating Sleeve		Required			
	Outer Sleeve (Heat Shrink able Conductive Material)		Required			

Technical Guarantees No. 11201006

24 kv Heat Shrinkable Straight Joint for Single Core XLPE Cable 1x120/16 mm<sup>2</sup>

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
12	Screened Insulating Tubing		Required			
	Filling Mastic		Required			
	24kv Mechanical Connector with Shear-Head Bolts and Central Barrier for AL or CU Conductors (120 mm2)		Required			
	Compression Connector for Copper Shield (16 mm2)		Required			
	Mastic Wrap		Required			
	Copper Mesh		Required			



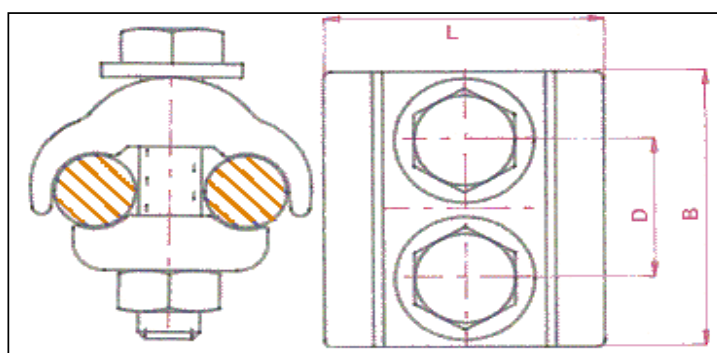
Tenderer's Signature : ..... Date: .....

**Technical Guarantees No. 11303004****Copper Parallel Groove Clamp 10-95 mm<sup>2</sup> / 10-95 mm<sup>2</sup>**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer		Kfar Menachem or Equivalent			
2	Country of Origin					
3	Standards					
4	<b>Material</b>					
	a) Body		High Strength Copper Alloy (Cu Ni 2 Si)			
	b) Bolts		High Strength Copper Alloy, F-60, DIN 933			
	c) Nuts		Copper, DIN 934			
	d) Washers (4 each)		Steel, DIN 6796, Copper Plated			
5	Surface		Uncoated			
6	Conductor Cross Sectional Area	mm <sup>2</sup>	10-95 CU			
7	Conductor Diameter	mm	3.5-12.5			
8	Bolts (No. x Size x Length)		2 x M8 x 45			
9	Bolt Torque Moments		20Nm			
10	Metal Stamping		Required including manufacturer Logo and the Size of the Clamp			
11	Total Weight	gr	270			



L = 42.5mm  
D = 22.5 mm  
B = 42 mm

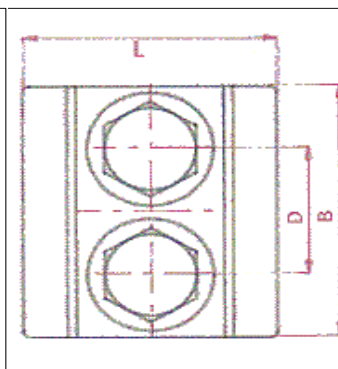
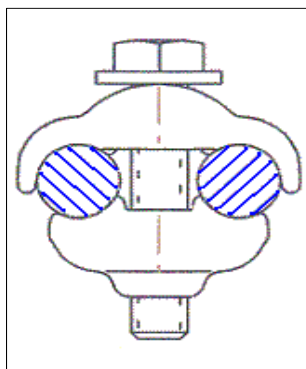


Tenderer's Signature : .....

Date: .....

**Technical Guarantees No. 11305002****Aluminium Parallel Groove Clamp 16-120 mm<sup>2</sup> / 16-120 mm<sup>2</sup>**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer		Kfar Menachem or Equivalent			
2	Country of Origin					
3	Reference Manufacturing Standards		DIN 48072-1			
4	<b>Material</b>					
	a) Body		High strength, corrosion-resistant, aluminium alloy (AlMgSi1)			
	b) Bolts		DIN 933, steel 8.8, hot-dip galvanized			
	c) Nuts		DIN 934, steel hot-dip galvanized, pressed into lower clamp body			
	d) Washers (6 each)		DIN 6796, corrosion-protected			
5	Conductor Cross Sectional Area	mm <sup>2</sup>	16-120 AL and 16/2.5-95/15 ACSR			
6	Conductor Diameter	mm	5.1-14			
7	Bolts (No. x Size x Length)		2 x M8 x 50			
8	Bolt Torque Moments		23Nm			
9	Metal Stamping		Required including manufacturer Logo and the Size of the Clamp			
10	Total Weight	gr	145			



L = 45 mm  
D = 25 mm  
B = 50 mm

Tenderer's Signature : .....

Date: .....

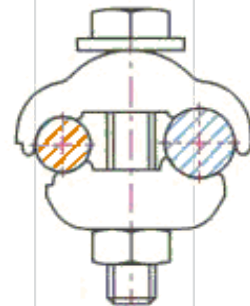
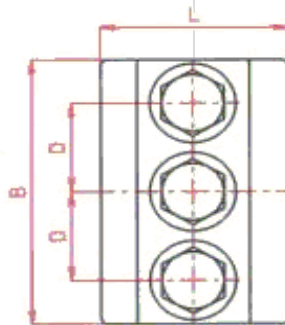
## Technical Guarantees No. 11307002

### Bimetallic Parallel Groove Clamp 50-300 mm<sup>2</sup> AL / 35-240 mm<sup>2</sup> CU

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentatio	Evaluation Committee Comments
1	Name of Manufacturer		Kfar Menachm or Equivalent			
2	Country of Origin					
3	Reference Standards					
4	<b>Material</b>					
	a) Body		High strength, corrosion-resistant, aluminium alloy (AlMgSi1) with hot forged bimetallic sheet, for copper tap-off			
	b) Bolts		Steel 8.8, DIN 933, hot-dip galvanized			
	c) Nuts		Steel 8, DIN 934 hot-dip galvanized			
	d) Conical Washers		According to DIN 6796 corrosion-protected			
5	ACSR or Aluminium Conductor Diameter	mm	9-24.5			
6	Copper Conductor Diameter	mm	7.5-20.3			
7	Bolts (No. x Size x Length)		3 x M10 x 70			
8	Bolt Torque Moments		46Nm			
9	Metal Stamping		Required including manufacturer Logo and the Size of the Clamp			
10	Test Certification		Required			



L = 105mm  
D = 33 mm  
B = 65 mm



Tenderer's Signature : .....

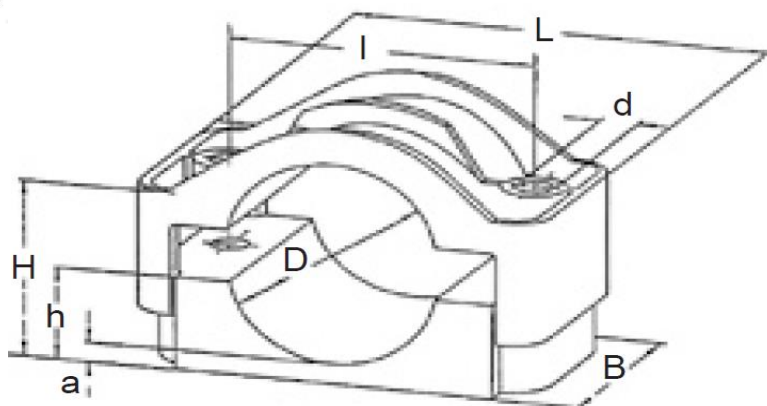
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**Technical Guarantees No. 11314004****Clamp to Holder the Cable (Single , Small )**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Description		Cable Clamps			
4	Cable Outer Diameter	mm	26-38			
5	No. of Cables		1			
6	Material		Polyamide, Glass Fiber Reinforced			
7	Tensile strength	N/mm <sup>2</sup>	120			
8	Flexural Strength	N/mm <sup>2</sup>	200			
9	Thermal Expansion		0.02% / 1°C			
10	Fire Resistance		UL 94 , VDE 0304, Part 3			
11	Accessories		2 Hot Galvanized Bolt with nuts and washers			
12	Dimensions		As Drawing			

*Including 2 Hot Galvanized Bolts for fixing with the Plate*



DIMENSIONS mm				
L	B	I	Ød	H
92	60	60	12.4	32 - 44

Tenderer's Signature : .....

Date: .....

**Technical Guarantees No. NCT\_50****Natural Nylon Cable Tie 500 mm Long**

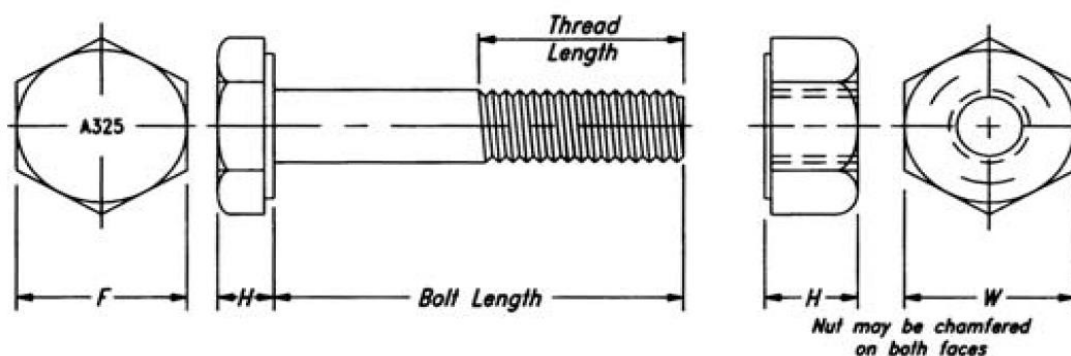
No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Standards		DIN 4102			
4	Material		UV Resistant , UL94 V0 self- extinguishing Natural Nylon ties			
5	Size	mm	7.5			
6	Length	mm	500			
7	Max. bundle diameter	mm	160			
8	Thickness	mm	1.8			
9	Average opening load	daN	65			

Tenderer's Signature : .....

Date: .....

**Technical Guarantees No. 11402001****Hot Dip Galvanized Steel Bolt 7/8" , 4.5 cm Complete with Nuts and Washers**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Standards		ASTM - A325 or equivalent			
4	Zinc cotating standard		ASTM A123, A153, A239 and A385, or relevant BS.			
5	Material		hot dip galvanized steel			
<b>6</b>	<b>Heavy Hex Structural Bolt Dimension</b>					
6.1	with across flat F	in	.1 7/16			
6.2	height H	in	.35/64			
6.3	Thread Length T	in	.1 1/2			
<b>7</b>	<b>Heavy Hex Nut Dimension</b>					
7.1	With across flats W	in	.1 7/16			
7.2	Height H	in	.55/64			
8	Ring washer		Required			
9	Spring wacher		Required			

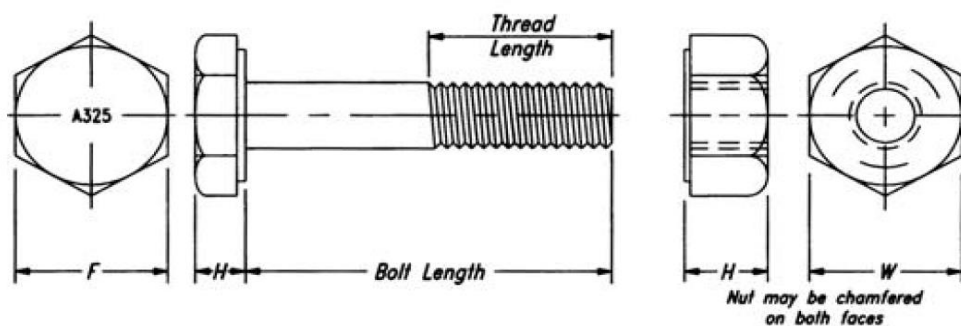


Tenderer's Signature : .....

Date: .....

**Technical Guarantees No. 11402002****Hot Dip Galvanized Steel Bolt 7/8" , 5.0 cm Complete with Nuts and Washers**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Standards		ASTM - A325 or equivalent			
4	Zinc coating standard		ASTM A123, A153, A239 and A385, or relevant BS.			
5	Material		hot dip galvanized steel			
6	<b>Heavy Hex Structural Bolt Dimension</b>					
6.1	with across flat F	in	.1 7/16			
6.2	height H	in	.35/64			
6.3	Thread Length T	in	.1 1/2			
7	<b>Heavy Hex Nut Dimension</b>					
7.1	With across flats W	in	.1 7/16			
7.2	Height H	in	.55/64			
8	Ring washer		Required			
9	Spring washer		Required			
10	Grade		Grade 5 OR Grade A325			
11	Min. Yield Strength	(psi)	92000			
12	Min. Tensile Strength	(psi)	120000			
13	Test certificate		Required			

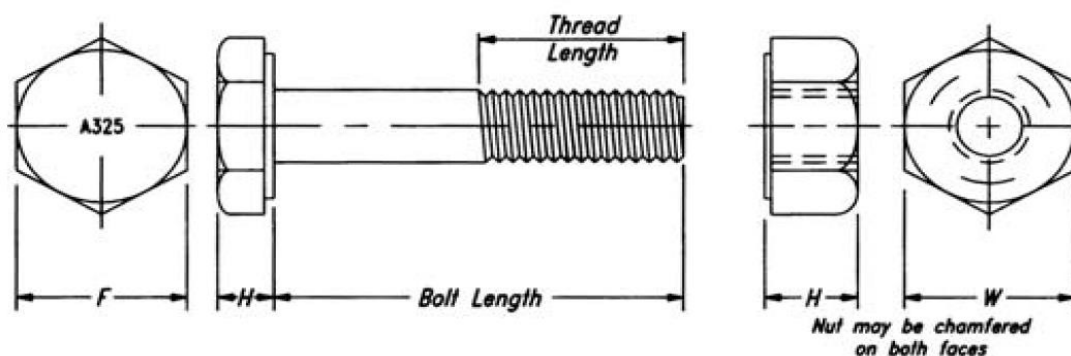


Tenderer's Signature : .....

Date: .....

**Technical Guarantees No. 11404003****Hot Dip Galvanized Steel Bolt 5/8" , 4 cm Complete with Nuts and Washers**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Standards		ASTM - A325 or equivalent			
4	Zinc cotating standard		ASTM A123, A153, A239 and A385, or relevant BS.			
5	Material		hot dip galvanized steel			
<b>6</b>	<b>Heavy Hex Structural Bolt Dimension</b>					
6.1	with across flat F	in	.1 1/16			
6.2	height H	in	.25/64			
6.3	Thread Length T	in	.1 1/4			
<b>7</b>	<b>Heavy Hex Nut Dimension</b>					
7.1	With across flats W	in	.1 1/16			
7.2	Height H	in	.39/64			
8	Ring washer		Required			
9	Spring wacher		Required			

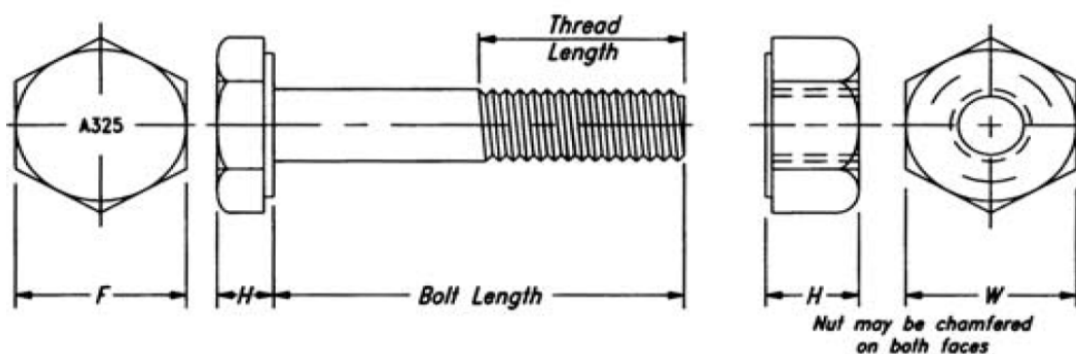


Tenderer's Signature : .....

Date: .....

**Technical Guarantees No. 11405001****Hot Dip Galvanized Steel Bolt 1/2" , 3.5 cm Complete with Nuts and Washers**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Standards		ASTM - A325 or equivalent			
4	Zinc cotating standard		ASTM A123, A153, A239 and A385, or relevant BS.			
5	Material		hot dip galvanized steel			
<b>6</b>	<b>Heavy Hex Structural Bolt Dimension</b>					
6.1	with across flat F	in	7/8			
6.2	height H	in	.51/16			
6.3	Thread Length T	in	<b>1</b>			
<b>7</b>	<b>Heavy Hex Nut Dimension</b>					
7.1	With across flats W	in	7/8			
7.2	Height H	in	.31/64			
8	Ring washer		Required			
9	Spring wacher		Required			

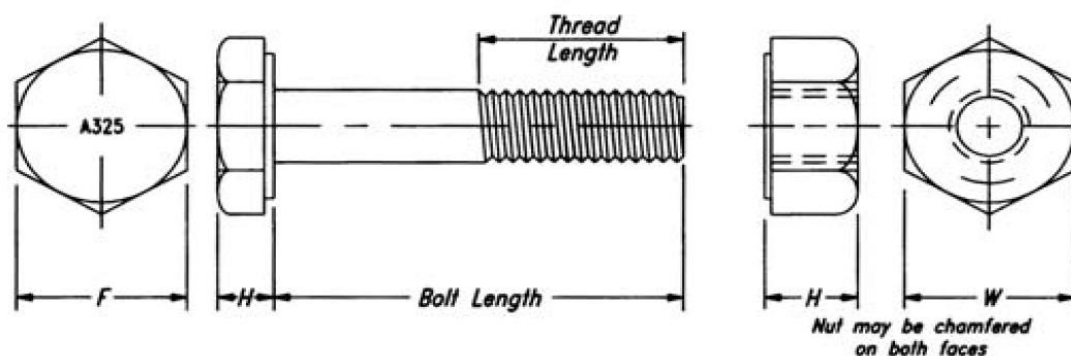


Tenderer's Signature : .....

Date: .....

**Technical Guarantees No. 11405003****Hot Dip Galvanized Steel Bolt 1/2" , 5.0 cm Complete with Nuts and Washers**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Standards		ASTM - A325 or equivalent			
4	Zinc cotating standard		ASTM A123, A153, A239 and A385, or relevant BS.			
5	Material		hot dip galvanized steel			
<b>6</b>	<b>Heavy Hex Structural Bolt Dimension</b>					
6.1	with across flat F	in	7/8			
6.2	height H	in	.5/16			
6.3	Thread Length T	in	<b>1</b>			
<b>7</b>	<b>Heavy Hex Nut Dimension</b>					
7.1	With across flats W	in	7/8			
7.2	Height H	in	.31/64			
8	Ring washer		Required			
9	Spring wacher		Required			



Tenderer's Signature : .....

Date: .....

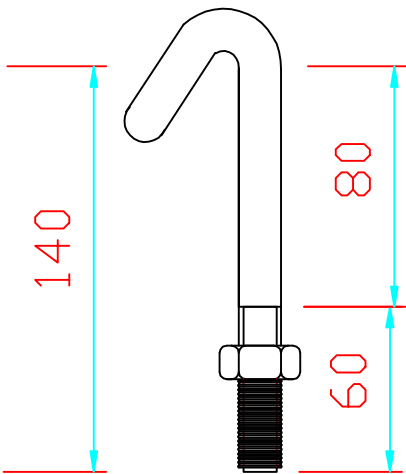
A-2

# -UNC-V-Bolt-

Using : For fixing Outdoor L.V switch box  
and Anti-climbing arm K1 13/8 on lattice steel poles

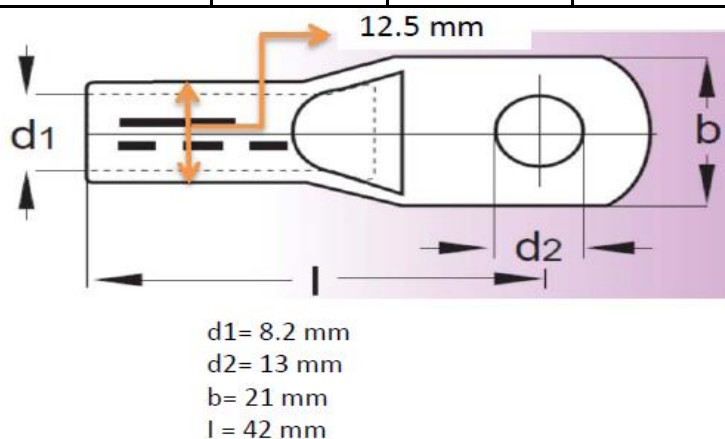
Description

1-UNC-V-Bolt 1/2"\*140mm. with nut,  
Spring wesher and Ring washer.



**Compression Terminal Lug with 13 mm Hole for 35 mm<sup>2</sup> Copper Conductor**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Reference Manufacturing Standards		DIN 46235			
4	Description		Copper Compression Lug with 13mm Hole			
5	Material		E-Cu, DIN 40500/2, F-25			
6	Surface		Tin-plated			
7	Type		Compression, Longitudinally Sealed			
8	Conductor Cross Section	mm <sup>2</sup>	35			
9	Conductor Diameter	mm	7.5			
10	No. of Mech. Compression		2			
11	Dimensions		as Below Drawing			
13	Test certificate		Required			



Tenderer's Signature : .....

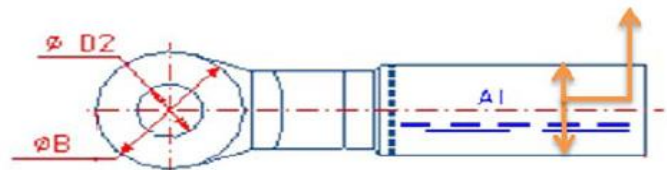
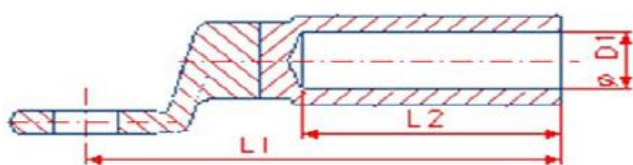
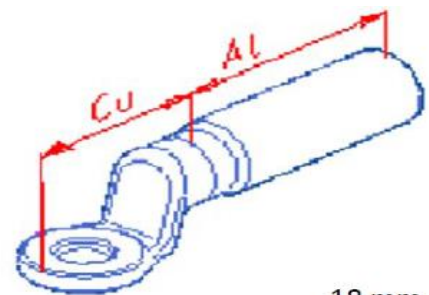
Date: .....

**Technical Guarantees No. 11703002****Aluminium / Copper Compression Terminal Lug with 13 mm Hole for 70 mm<sup>2</sup> Aluminium Conductor**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Reference Standards					
4	<b>Material</b>					
	a) Barrel Part		Aluminium of Purity Equal to or Greater than 99.5%			
	b) Palm Part		Electrolytic Copper			
	c) Barrel		Capped and Filled with Grease to Avoid Oxidation			
5	Surface		Uncoated			
6	Type		Resistant to high temperature Connection Between CU and AL sides and the Barrel Compression, Longitudinally Sealed			
7	Conductor Cross Section	mm <sup>2</sup>	70			
8	Conductor Diameter	mm	10.5			
9	Dimensions		as below Drawing			



D1= 11.5 mm  
 D2= 13 mm  
 B = 25 mm  
 L1= 81 mm  
 L2= 60 mm



Tenderer's Signature : .....

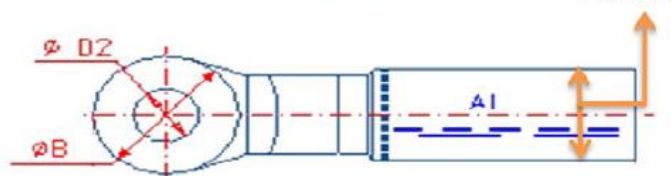
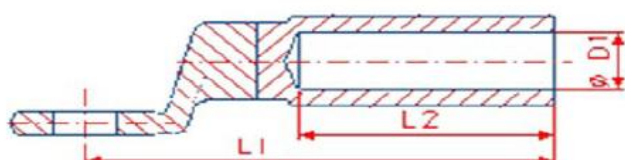
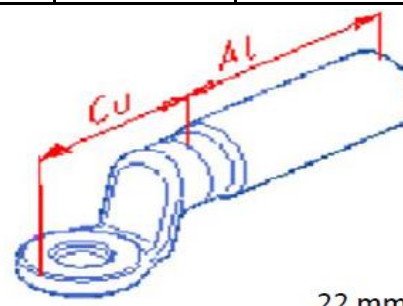
Date: .....

**Aluminium / Copper Compression Terminal Lug with 13 mm Hole for 95 mm<sup>2</sup> Aluminium Conductor**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Reference Standards					
4	<b>Material</b>					
	a) Barrel Part		Aluminium of Purity Equal to or Greater than 99.5%			
	b) Palm Part		Electrolytic Copper			
	c) Barrel		Capped and Filled with Grease to Avoid Oxidation			
5	Surface		Uncoated			
6	Type		Resistant to high temperature Connection Between CU and AL sides and the Barrel Compression, Longitudinally Sealed			
7	Conductor Cross Section	mm <sup>2</sup>	95			
8	Conductor Diameter	mm	12.6			
9	Dimensions		as below Drawing			
10	Test certificate		Required			



D1= 13.5 mm  
 D2= 13 mm  
 B = 25 mm  
 L1= 81 mm  
 L2= 60 mm



Tenderer's Signature : .....

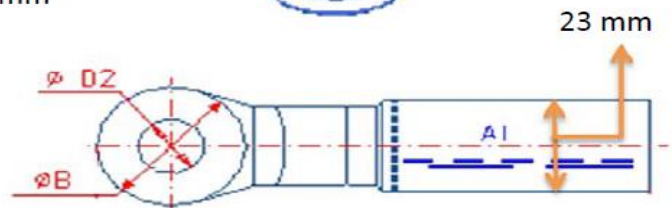
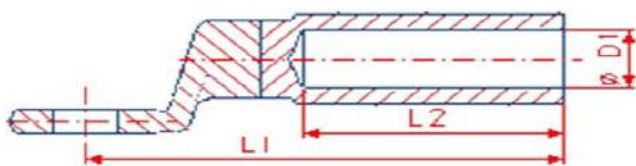
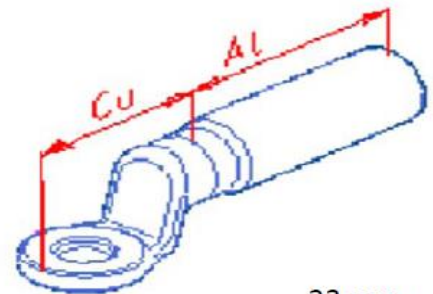
Date: .....

**Technical Guarantees No. 11703004****Aluminium / Copper Compression Terminal Lug with 13 mm Hole for 120 mm<sup>2</sup> Aluminium Conductor**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Reference Standards					
4	<b>Material</b>					
	a) Barrel Part		Aluminium of Purity Equal to or Greater than 99.5%			
	b) Palm Part		Electrolytic Copper			
	c) Barrel		Capped and Filled with Grease to Avoid Oxidation			
5	Surface		Uncoated			
6	Type		Resistant to high temperature Connection Between CU and AL sides and the Barrel Compression, Longitudinally Sealed			
7	Conductor Cross Section	mm <sup>2</sup>	120			
8	Conductor Diameter	mm	14			
9	Dimensions		as below Drawing			



D1= 15 mm  
 D2= 13 mm  
 B = 25 mm  
 L1= 81 mm  
 L2= 60 mm



Tenderer's Signature : .....

Date: .....

Technical Guarantees No. 12301005

Hot Galvanized Steel Cable Guard

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Description		Cable Guard			
4	Material		Hot Dip Galvanized steel			
5	Steel Guard with Steel Cover		Required			
6	Steel Guard and Steel Cover Length	mm	2400			
7	Steel Guard Width	mm	250			
8	Steel Cover Width	mm	255			
9	Steel Guard Edge Height	mm	150			
10	Cover Edge Height	mm	26			
11	Bottom		Rounded			
12	Steel Guard and Steel Cover Thickness	mm	1.5			
13	Attached Drawing		Drawing			

Tenderer's Signature : .....

Date: .....

SCG\_240

Cable Guard

Steel Guard and Steel Cover  
Thickness 1.5mm

2400

255

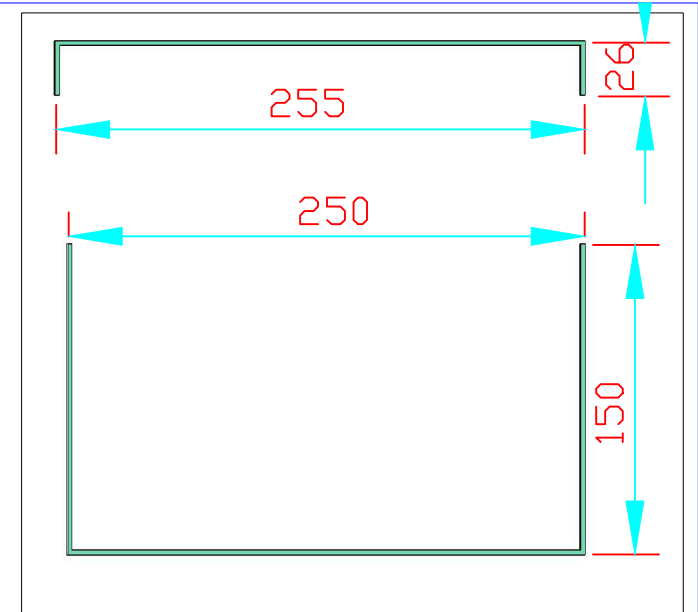
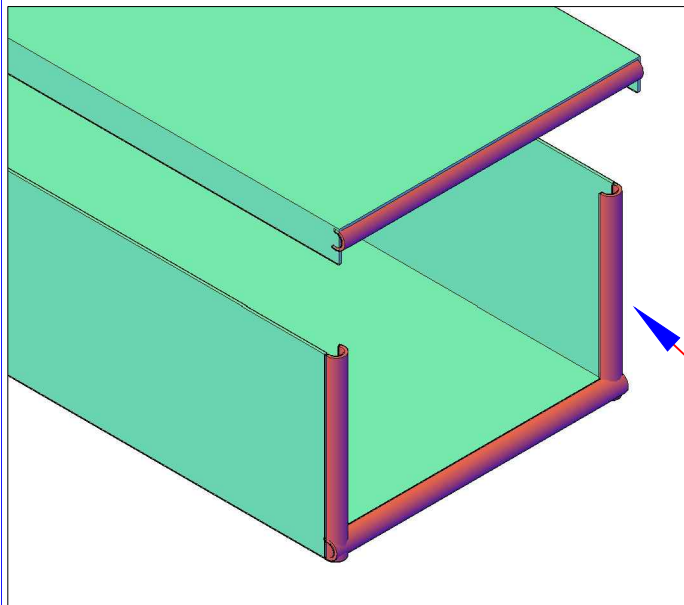
250

150

26

The Bottom  
must be rounded

250



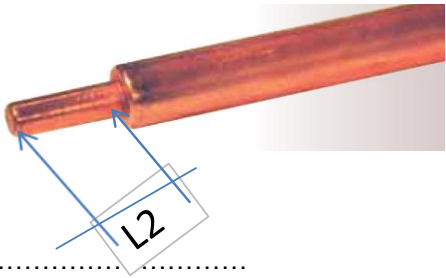
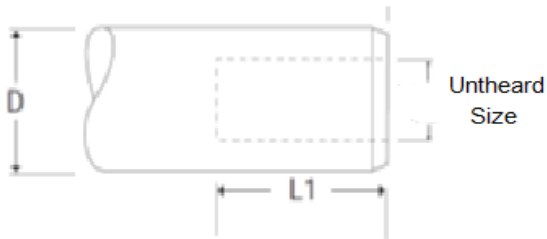
**Technical Guarantees No. 12401002****Earth Rod 18 mm Diameter , 1.5 m**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer		Required			
2	Country of Origin		Required			
3	Reference Standards		Required			
4	Description		Earth rod with coupling joint Male-Female			
5	Material		low carbon steel core St-60			
6	Coating		Copper shrink jacket			
7	Coating thickness		Min. 0.3 mm			
8	UnThreaded Size (L2) coupling dowel	mm	Required			
9	UnThreaded Part Length (L2) coupling dowel	mm	Required			
8	UnThreaded Size (L1) hole	mm	Required			
9	UnThreaded Part Length (L1) hole	mm	Required			
10	Length (L)	mm	1500			
11	Shank Diameter (D)	mm	18			
12	WEIGHT	kg	Required			
13	Quality Certification		Required			
14	type test		Required			

Technical Guarantees No. 12401002

Earth Rod 18 mm Diameter , 1.5 m

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
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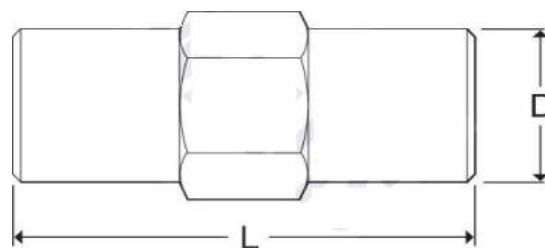


Tenderer's Signature : .....

Date: .....

**Technical Guarantees No. 12409001****Earth Rod Joint**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Reference Standards					
4	Material		high strength copper content Aluminium Bronze alloy			
5	Size		5/8"			
6	Length (L)	mm	70			
7	Outside Diameter (D)	mm	20			
8	Test Certificate		Required			

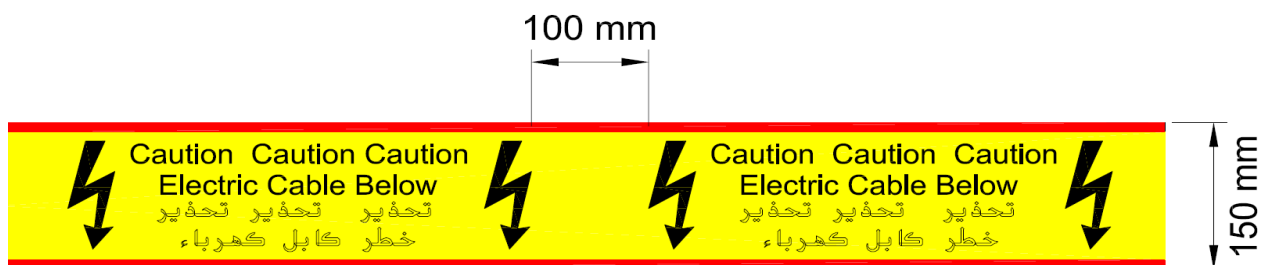


Tenderer's Signature : .....

Date: .....

**Technical Guarantees No. 12410001****Warning Tape**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Description		Warning Tape			
4	Material		Low Density Polyethylene			
5	Roll Length	meter	250			
6	Width	mm	150			
7	Minimum Thickness	mm	0.1			
8	Printed Legend (2 Language)	English	CAUTION CAUTION CAUTION Electrical Cables Buried Below			
		Arabic	تحذير تحذير تحذير خطر كابل كهرباء			
9	Tape Colour		Phosphoric Yellow			
10	Text Colour		Dark Black			
11	Text Form		Big			
12	Space Between Text	mm	100			
13	Resistant		Acid / Alkali Resistant			
14	test certificate		Required			



Tenderer's Signature : .....

Date: .....

Technical Guarantees No. 12410002

Stainless Steel Band

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Standards					
4	Material		201 Stainless Steel			
5	Coil		The steel band Roll Must be properly coiled on Reinforced weatherproof plastic Totes			
6	Width	mm	12.7			
7	Thickness	mm	0.76			
8	Cabbaged Length on the tote	m	30			
9	Test Certificate		Required			



Tenderer’s Signature : .....

Date: .....

Technical Guarantees No. 12410003

Stainless Steel Ear-Lokt Buckle

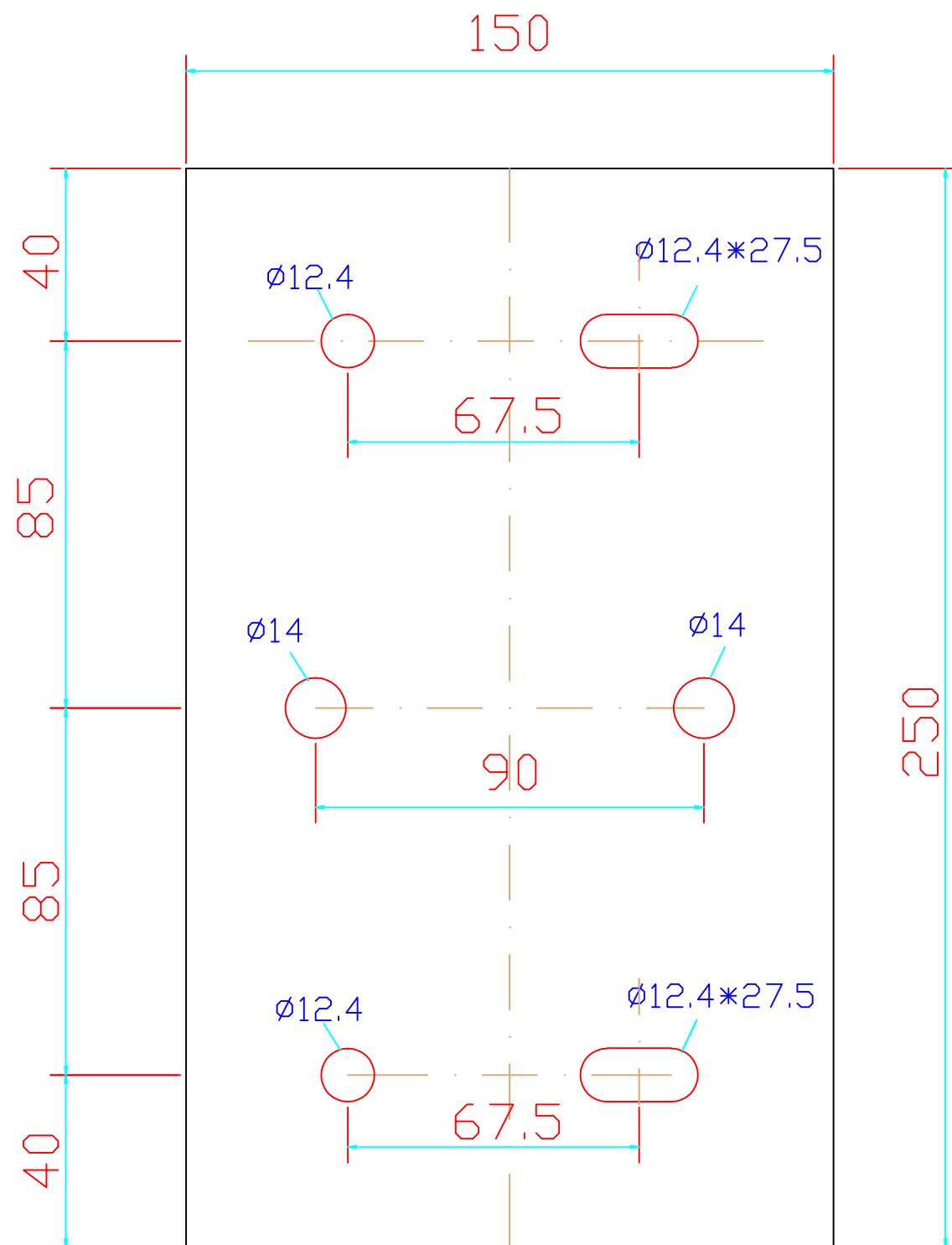
No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Standards					
4	Description		Buckle to hold wrapped band for cable bundling			
5	Construction		with teeth and ears provide for maximum clamping strength			
6	Material		201 Stainless Steel			
7	Entry Slot High (for Band Thickness 0.76mm)	mm	2.3			
8	Min. Width (for Band Width 12.7mm)	mm	15			
9	Test Certificate		Required			



Tenderer's Signature : ..... Date: .....

PMV\_250

Plate for M.V Cable



Bolts Required for  
installation on the Arm

2 UNC Bolt 1/2"\*35mm



Plate for M.V Cable

Nots: All component must be Steel 37.2  
hot dip galvanized

Unit mesurment	Description	Item	Quant.
250	Plate 150*3	1	1