

Document: Bill of Material

Project: Tepco

Project nro: 000345

Revision: 6

<u>Group</u>	<u>Item</u>	<u>Material</u>	<u>pcs/meters</u>	<u>Supplier</u>
Panel fixing system				
	AluGrid continuous beam 6000mm	Aluminium	1016	Schletter GmbH
	AluGrid module clamp 40	Aluminium	15064	Schletter GmbH
	AluGrid Ws sh.10°ST L1621-1680 W940-1019	Aluminium	3746	Schletter GmbH
	AluGrid lower module bearing 10°	Aluminium	4443	Schletter GmbH
	AluGrid fastening clamp	Aluminium	4443	Schletter GmbH
	AluGrid interior connector kit		833	Schletter GmbH
	AluGrid rubb. underlay contin. beam in m	Rubber	1366	Schletter GmbH
	Pliers for AluGrid vn.2		10	Schletter GmbH
	Proklip-Multi8		7632	Schletter GmbH
	Proklip-U		3786	Schletter GmbH
	AluGrid mounting instructions	Paper	15	Schletter GmbH
	AluGrid tool operating instructions	Paper	18	Schletter GmbH
	ID plate Solar Mounting Systems	Aluminium	7	Schletter GmbH
	Box bolts	Steel, Hot Dip Galvanized	5000	Yuyao BeiShuo Hardware Co.,Ltd
	U channel steel 41*62*2.5x5800mm	Steel, Hot Dip Galvanized	725	Frontier Technology Group Ltd
	U channel steel 41*62*2.5x4700mm	Steel, Hot Dip Galvanized	401	Frontier Technology Group Ltd
	M8*40 bolts and square nuts	Steel, Hot Dip Galvanized	8300	Frontier Technology Group Ltd
	washer 40x40x3mm	Steel, Hot Dip Galvanized	4800	Frontier Technology Group Ltd
	GEF-S-Clamp T2.0mm SS304	Stainless steel AISI304	1500	Frontier Technology Group Ltd
	Std square washer	Steel, Hot Dip Galvanized	3500	Frontier Technology Group Ltd
	Self drilling screws M6.3x76SS201	Stainles steel	1500	Frontier Technology Group Ltd
	Concrete tiles	5 kg/pcs	1914	Tepco

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Cables:

	16mm ² yellow-green Cu Earthing copper	Cu; 16 mm ²	115 m	
	25 mm ² yellow-green Cu Earthing copper	Cu; 25 mm ²	170 m	
	AC-cable earth installation current 200A	AL 4x185+57 mm ² OR Cu 4x150+70mm ²	200 m	
	AC-cable	Cu 4x16+16 mm ² or 5 x 16 mm ²	100 m	
	AC-cable ground installation	4x16+16 mm ²	80 m	
	AC-cable	Cu 2x2,5+2,5 mm ² or 3 x 2,5 mm ²	20m	
	AC-cable ground installation	Cu 2x1,5+1,5 mm ²	250m	
	Ethernet Cable (Industrial)	CAT5e or CAT6	200m	
	Modbus Cable Twisted+armed JAMAK	2x(2+1)x0,5	170m	
	Ethernet Connectors (Industrial)		25	Phoenix
	DC-Cable for stringbox	1x240 mm ² or Cu 1x95mm ²	1800 m	
	DC solar cable 6 mm ² black	1 x 6 mm ²	6000 m	HIS
	DC solar cable 6 mm ² red	1 x 6 mm ²	6000 m	HIS
	DC solar cable weidmuller connectors male and female		500+500pcs	HIS/Weidmuller
	Aluminum or steel Cable ladder (width 500mm), with Extension parts and fastening parts.		800m	

Panels:

	Panels JAM6(K)-60-280/4BB		3780pcs	JA SOLAR Holdings Co., Ltd
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Inverters and string boxes:

	LTI PVM3.59.350.EM		2	LTI
	Ingecon SUN 3Play TL -P		7	Ingeteam
	ABB AB24M3 String-boxes		6	
	DC Combiner boxes		2	LTI

GEF kiosk & Vision components

	Camera Avigilon H4 PTZ 2 MP		1	
	Camera CM-MT-WALL		1	
	Camera ES-HD-MNT-POLE-MD		1	
	Camera POE-INJ2		1	
	GEF Vision™ reader		1	GreenEnergy Finland
	GEF Vision™ kiosk		1	GreenEnergy Finland

ADAM RS485/Modbus /TCP		4	
EdgeRouter ER-8		1	
Advantech EKI-2525I		1	

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Installation tools:				
	MAKITA DP4011 DRILL 720W		5	
	Teng. 6-tool 1/2 "5MM		3	
	Teng. 6-tool 1/2 "6MM		3	
	Teng. Socket 1/2 10 MM 50-6		4	
	Teng. Socket 1/2 12MM		4	
	Teng. Socket 1/2 13MM		4	
	Teng. Socket 1/2 14MM		2	
	Teng. Socket 1/2 17MM		2	
	Teng. Socket 1/2 19 MM		6	
	MAGNET TOOL 8MM / 42MM		10	
	MAGNET TOOL 8MM / 42MM		45	
	MAGNET tOOL 13MM / 50MM		10	
	LUNA 6.0 DRILL BIT HSS-G		10	
	LUNA 10.0 DRILL BIT HSS-G		10	
	LUNA 8.0 DRILL BIT HSS-G		7	
	LUNA METALdrill. 8.0 MM 7		3	
	Sharpie ink PCS BLACK 10.00		10	
	MAKITA SDS + BLADE 8x210MM		8	
	MAKITA SDS + BLADE 10x260MM		5	
	MAKITA SDS + BLADE 12x260MM		1	
	MAKITA SDS + BLADE 14x310MM		1	
	MAKITA SDS + BLADE 14x260MM		1	
	Teng. Spanners 13X13		2	
	Teng. Spanners 14X14		2	
	Teng. Spanners 17x17		2	
	Teng. Spanners 19x19		2	
	Teng. Tools set 101.00		1	
	HAMMER LUC hexag.		7	
	MORA KNIFE 511		6	
	OSBORN STEEL BRUSH		2	
	KNIPEX polygrip 8701 250		1	
	Teng. WRENCH 12 "300MM		1	
	Teng. WRENCH 8 "200MM		1	
	Teng. WRENCH 10 "250MM		1	
	Bucket 17 L 12.31		8	
	CABLE REEL 25M 3G 2.5		7	
	Work glove GUIDE 761		24	
	Tape measures 5M		2	
	MAKITA DGA504Z 18V		1	
	coating sheet 2T 3 / 6M		4	
	Cut-off wheels 125X1,6		10	
	Grinding wheel 125X7,2		10	

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Installation tools:				
	Cut-off wheels 125X1 M-		1	
	FT30CM Lufkin 30 m		3	
	53 002 FT50CM Lufkin 50		1	
	Wrench 1/2 "Pro Precis		4	
	Metal Drill 11mm		10	
	Wrench 18mm		10	
	Socket 1/2 10mm + add		10	
	Saw and baldes		1	
	Worm gear saw blades		1	
	Percussion drill		1	
	Worm gear		1	
	saw blades		1	
	Percussion drill		1	
	The blades		1	
	Clamps hand		1	
	battery clamps		1	
	Hand shears		1	
	Battery shears		1	
	Fluke & wires		1	
	Fluge gauge		1	
	Brother printer&ribbons		1	
	Bushing Socket		1	
	wrench 1/2		1	
	bolt gun		1	
	extencion cord		1	
	Torque wrench		1	
	coil sons		2	
	Marking Tapes			
	electricity Erathing shield			
	Press + 2p		2	
	white silicone		5	
	The stone walls Batches 6-10mm		10	
	wall plugs		50	
	Series Screws and the treatment applied		1	
	WallMount screw 10mm		50	
	Cable ties black		2000	
	Sikaflex®-11 FC+		30	
	0,31L SIKA HD silicon press		8	