



# DARWIN AND CONSTRUCTION SUPPLY

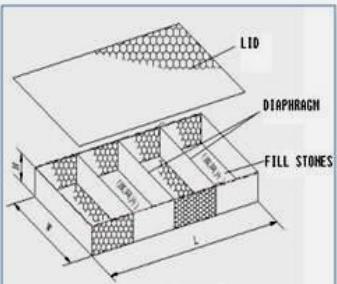
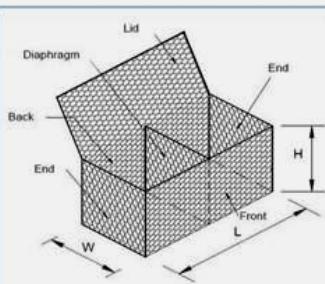
NAPPACCU PEQUEÑOREINA MERCEDES ISABELA

# DARWIN & CONSTRUCTION SUPPLY

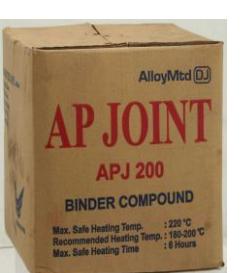
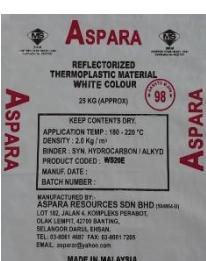
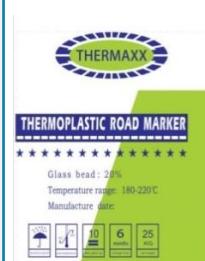
NAPACCU PEQUEÑO REINA MERCEDES ISABELA

## PRODUCT LIST:

Thermo Plastic Powder ( Calmax, Hi Brite, Thermaxx )  
Glass Beads, Road Primer, Calsomine  
PVC Traffic Cone, Traffic Barrier  
Reflectorize Traffic Paint  
Thermoplastic Applicator, Kneading Machine  
Aluminium Road Signage, Informative Sign  
Galvanize Guardrail, Endrail, Splice Bolt  
Asphalt Sealant R115/15 ( Pail/Bag )  
Asphalt SSI. CSSI, MC70, 85/100  
Coldmix  
Concrete Epoxy Sealant ( Crack and Scaling )  
Galvanize Gabion Wire / Mattresses  
Filter Cloth ( Geotextile )  
Galvanize Steel Lamp Post  
LED, Solar LED, Solar Power  
Conveyor Roller  
Geotube  
Traffic light  
Manhole Cover



## GABION WIRE / MATTRESS



THERMOPLASTIC PAINT THERMAXX / ASPARA / AP BINDER



## STEEL SHEET PILE / GEOTUBE



## (STREET LIGHT) LAMPPOST



## ASPHALT / COLD MIX / BLOWN ASPHALT



## APPLICATOR MACHINE



## SIGNAGES / MANHOLE COVER



## GUARD RAIL / ROAD STUD

**HYUNDAI**  
HEAVY INDUSTRIES CO., LTD.

**DOOSAN**

**VOLVO**  
Construction Equipment

**DAEWOO**

**SAMSUNG**

**KOMATSU**

## GENUINE KOREA HEAVY PARTS

## & HYDRAULIC PUMP PARTS

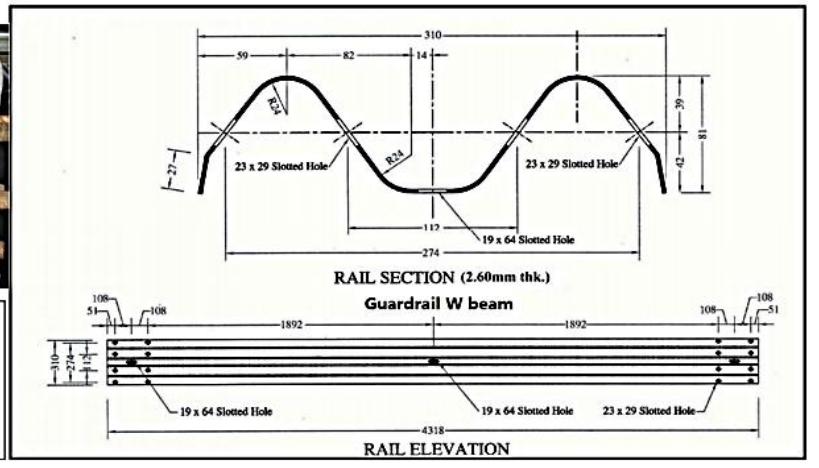


## CONCRETE PUMP & PARTS

# GUARD RAIL

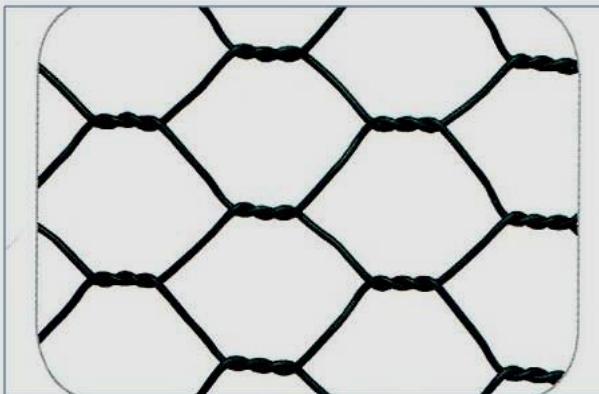
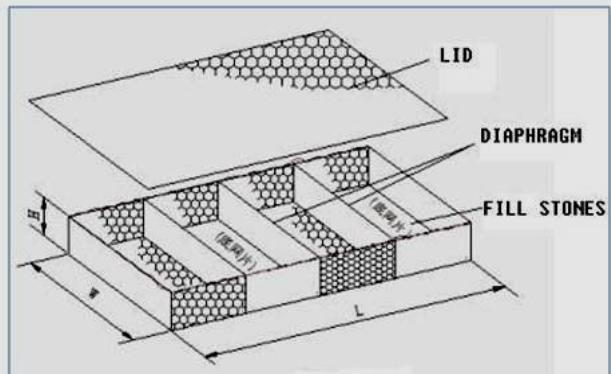
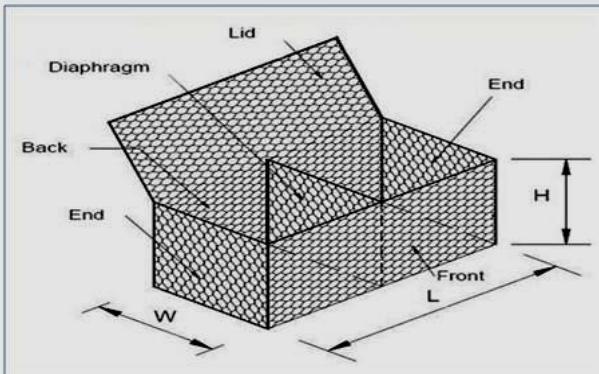


Model: 4128\*310\*85\*2.7mm



Model: 120\*80\*5\*1995mm  
150\*75\*6\*1800mm  
120\*55\*7\*1900mm  
178\*76\*6\*1800mm

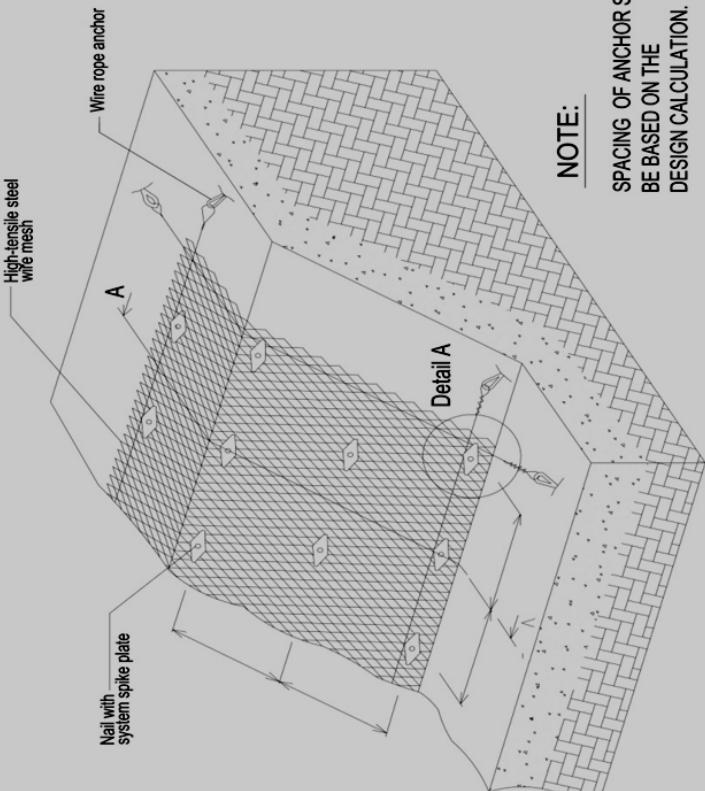




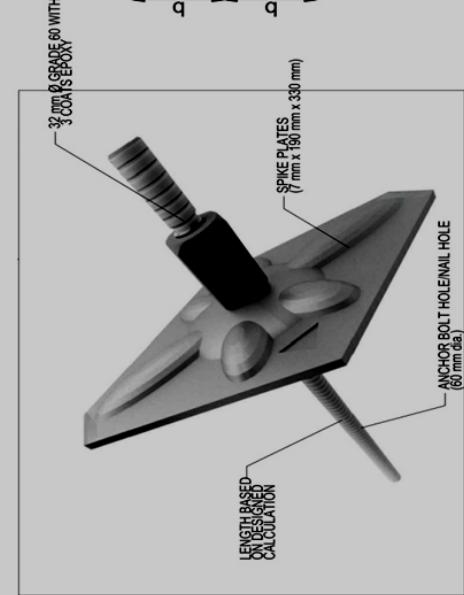
## **HOT DIP GALVANIZED GABION, 250G/M<sup>2</sup> ZINC COATED**

- 2 x 1 x 1, ( 83 x 113 mm OPENING ), 3.05 BODY X 3.80mm perimeter
- 3 x 1 x 1, ( 83 x 113 mm OPENING), 3.05 BODY X 3.80mm perimeter
- 4 x 1 x 1, ( 83 x 113 mm OPENING), 3.05 BODY X 3.80mm perimeter
- MATTRESS 6M x 2M x 0.30M, ( 60 x 80 opening ), 2.2mm body x 2.7  
perimeter PLUS FREE LACING WIRE 2.2mm at 3 % of BODY  
WEIGHT

GENERAL SPECIFICATION			
I.	MATERIAL	PROPERTIES	SPECIFICATION
1. WIRE MESH	WIRE DIAMETER: 3mm (min). PER STRAND STAINLESS STEEL HIGH TENSILE	TENSILE STRENGTH OF 5mm Ø ASTM 370-97 = 1600 NS <sub>0.2</sub> mm (mm)	
2. WIRE COATING	STAINLESS STEEL G-144GR	ASTM 318	
3. ACCELERATED WEATHERING	1000 HRS. UNTIL 5% DBR	ASTM B117	
4. ANCHOR BOLTS	32mm Ø GRADE 80 WELDABLE DEFORMED BAR W/ COAT EPOXY	PNS 48-2002	
5. SPIKE PLATE	7mm THICK X 190mm (WIDTH) x 350mm (LENGTH)	GAVALIZED ASTM TEST DATA	
6. CEMENT GROUT	NON SHRINK GROUT: 5,000 Psi @ 28 DAYS	ASTM C 109 AND ASTM 1107	
II.	MATERIAL TESTING:	PROPERTIES	SPECIFICATION
	DPMR REPRESENTATIVE SHALL WITNESS ACTUAL TESTING AS PER SPECIFICATION.	1. TENSILE STRENGTH OF WIRE 2. TENSILE STRENGTH OF 1m X 1m MESH: (LONGITUDINAL & TRANSVERSE DIRECTION) 3. PUNCTURE TEST OF SPIKE PLATE AND MESH 4. TRANSMISSION TEST OF MESH TO NAIL	ASTM 370-97 ASTM A 97-93
III.	EQUIPMENTS	PROPERTIES	SPECIFICATION
	1. PNEUMATIC ROTARY/HAMMER DRILL DRY TYPE 2. AIR COMPRESSOR 3. HYDROSEEDING MACHINE	A. DRILLED HOLES SHALL BE FROM 60-80 mm Ø B. NO WATER WILL BE ALLOWED TO BE INTRODUCED DURING THE DRILLING PROCESS 10 BAR (MIN)	
		C. MACHINE CAN SPRAY MINIMUM OF 40 METERS	
		D. MATERIALS TO BE SPRAYED SHALL BE A MIXTURE OF PULP, FERTILIZER, CENTROSENA SEED AND TACKIFIER.	
		E. WATERING OF HYDROSEDED MATERIALS SHALL BE MAINTAINED FOR SIXTY (60) DAYS	
		F. MINIMUM LENGTH OF BOOM TRUCK SHALL BE 20 METERS	
		G. SCREW TYPE OR PNEUMATIC	
		H. PULLOUT EQUIPMENT SHALL HAVE A CAPACITY OF 50KN (MINIMUM) LOADING REQUIREMENT OF ANCHOR BOLTS SHALL BE BASED ON THE DESIGN CALCULATION WHICH SHALL UNDERNEATH ONE (1) WEEK FROM DATE OF GRouting TWO (2) ANCHOR BOLTS SHALL BE TESTED AND VERIFIED IN ACCORDANCE TO DESIGN CALCULATION	
		I. DESIGN CALCULATIONS, INCLUDING ASSUMPTIONS AND INPUTS TO COMPUTE FOR ANCHOR LENGTH, SPACING AND MINIMUM PULLOUT STRENGTH, IF A SOFTWARE PROGRAM IS USED IN THE DESIGN AND ITS USAGE SHALL BE ACKNOWLEDGED AND ACCEPTED BY DPMR BUREAU OF DESIGN.	
		J. GEOTECHNICAL REPORT PRESENTING DETAILED SUBSURFACE INFORMATION AND RECOMMENDATIONS SIGNED AND SEALED BY CIVIL ENGINEER REGISTERED IN THE PHILIPPINES.	
IV.	SUBMITTAL WITH BID DOCUMENTS BY BIDDER CONTRACTOR	3. CONTRACTOR OR INSTALLER SHALL PROVIDE A TEN (10) YEARS WARRANTY FOR LABOR AND SHALL REPLACE ANY DEFECTIVE WORKS AT NO COST TO DPWH.	
V.	SUBMITTAL WITH BID DOCUMENTS BY CONTRACTOR BIDDER FROM SUPPLIER OF ITS MATERIALS	4. BIDDER / CONTRACTOR PROJECT SHALL PROVIDE SWORN CERTIFICATION THAT (A) MATERIALS AND COMPONENTS TO BE SUPPLIED THE PROJECT ARE COVERED BY MANUFACTURERS PATENTS, (B) THE BIDDER CONTRACTOR HAS LICENSE, PERMIT OR AUTHORITY TO THE USE OF THE MATERIAL AND COMPONENTS TO ENSURE THAT THERE WILL BE NO INFRINGEMENT IN THE USE OF INTELLECTUAL PROPERTY RIGHTS, AND (C) THE BIDDER CONTRACTOR SHALL INDEMNIFY THE PROCUREMENT AGENCY AGAINST ALL THIRD-PARTY CLAIMS OF INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS ARISING FROM THE USE OF THE MATERIALS AND COMPONENTS OR ANY PART THEREOF.	
		5. MANUFACTURER SHALL PROVIDE INTERNATIONAL PATENTS OVER THE MATERIALS AND COMPONENTS AND SHALL FURTHER PROVIDE SWORN CERTIFICATION THAT THESE DO NOT VIOLATE INTELLECTUAL PROPERTY RIGHTS OF THIRD PARTIES.	

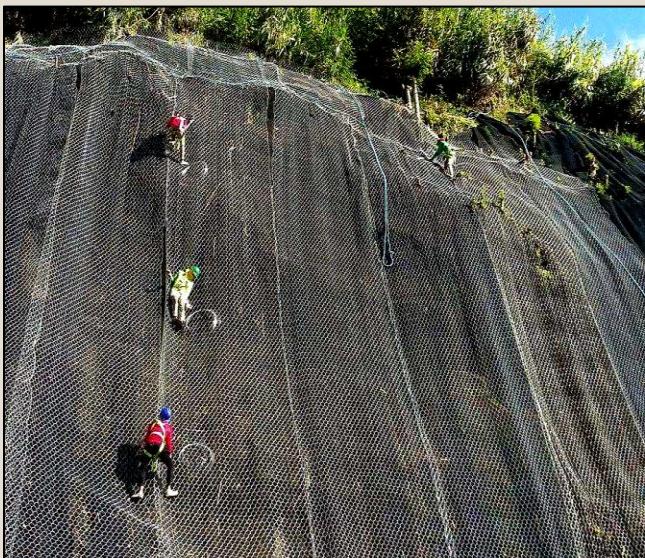
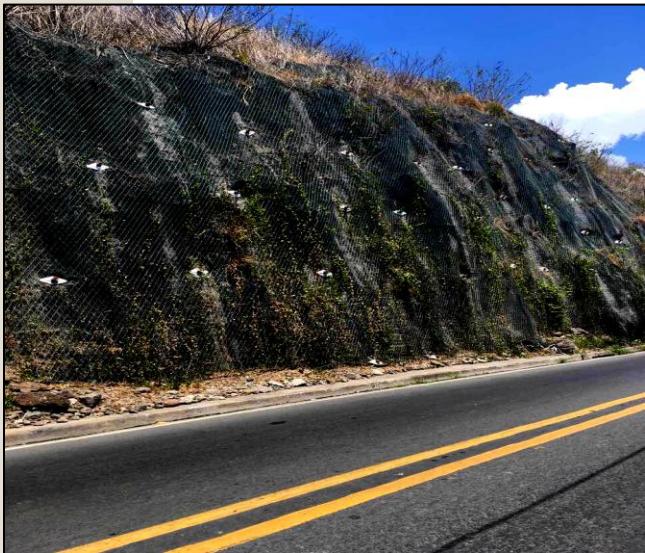


TYPICAL SECTION OF ANCHOR BOLT BAR AND SPIKE PLATE



NAIL ARRANGEMENT  
DETAILS # AND D  
BASED ON DESIGN CALCULATION

# ROCKFALL NETTING



DPWH

ITEM:

- 512(1)a Erosion Control Mat
- 513( 1 ) Permanent Ground Rod Anchor
- 520( 1 ) Hydro Seeding
- 522( 1 ) Rock fall Netting

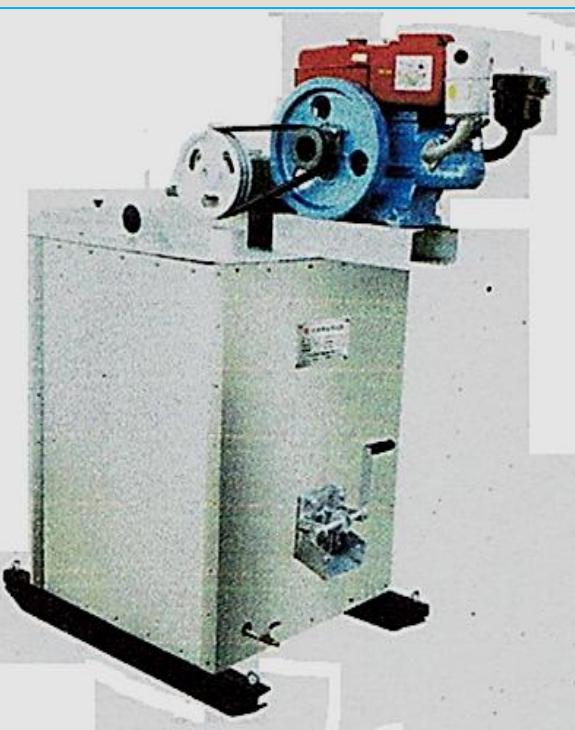
# CK320 Hand-push The Thermoplastic Road Marking Machine

## ■ Technical Parameters

- Thermoplastic Tank: double stainless steel heating insulation barrels, capacity 100 kg, plug-in manually mixer devices, removable devices
- Glass Bead Container: 10kg/box
- Glass Beads Dispenser: synchronous clutch spread with speed gearshift device
- Marking equipment: 150mm Marking shoe (High-precision ultra-thin material manufacturing, scraper-type structure)
- Knife Underframe: Carbide, with eccentric sleeve device can adjust the thickness of the scope marking :1-3 mm
- Tire: Alloy Wheel, a special heat-resistant rubber
- Rear Wheel Directional Device: Ensure the machine moving in straight line or turning freely in curved road
- Marking width: 100mm、200mm、250mm、300mm、400mm、450mm (at customers' option)
- Dimensions (L\*W\*H): 1320 \* 850 \* 1000 mm
- Weight: 120 kg



## CK300 Mechanistic Single – Cylinder Thermoplastic Pre - Heater



## Technical Parameters

-Engine 6.5HP diesel engine

Thermoplastic tank capacity: 300 kg of stainless steel cylinder, high-carbon steel bottom of the pot, iodine vertical mixer.

-Structure: The frame structure, the body inner and outer is covered with insulation thermal material

-Heating system: petroleum gas and imported highly efficient burner

-Dimensions: 1400 \*900\*1600mm

-Net weight: 300kg

# CK1050 Thermoplastic Road Marking Remover

## ■ Product Introduction

Ck1050 is definitely the professional removing machine that is applied to get rid of the damage and breaking, discoloration and incorrect tagging outlines. The motor drives the grinding head to revolving quickly. The grinding head eliminates the convex surface area under the impact of centrifugal force, and clears the marking lines. The equipment contains the capabilities of excellent removal effect, rapid removal speed and very simple operation and maintenance.



## ■ Technical Parameters

Type	CK1050
Engine	11HP imported Honda / 10.5HP Pericom four stroke Cooling petrol
Operating method	the handle bar is equipped with petcock control, Sswitch, and the frame is equipped with burnishing head landing control bar and burnishing force adjuster
Adjusting range of burnishing force	active trimming knife strong, moderate, and weak stepless control
Rubber tire	cast iron wheel nave, made of antifriction gelatin, and the rear wheel is equipped with dual gun single-stack axis strengthening wheel
Burnishing head	made of three independently revolving burnishing head, and the head is inlaid with imported super-antifriction hard alloy, and width is 180mm
Serving life of burnishing head	20000 to 30000m
Dimension	20000 to 30000m
Net weight	180kg

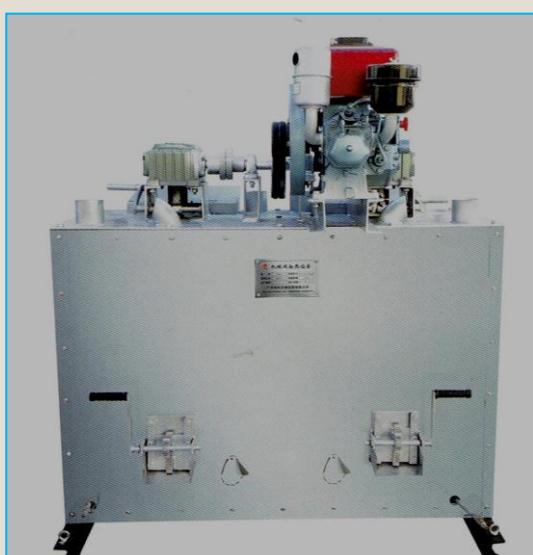
# CK600 Mechanistic Double-cylinder Thermoplastic Pre-Heater

## ■ Product Introduction

Ck600 Mechanistic Double-cylinder Thermoplastic Pre-heater uses well-known diesel engine, through the control of sophisticated gear clutch systems, drive-axis of the reactor cylinder mixing paint to do a positive stir. Mechanical driving is adopted in mechanical double-cylinder fusing kettle, as well as melting material cylinder of medium capacity and imported highly efficient burner. It features stable function, efficient melting and easy operation and maintenance.

## ■ Technical Parameters

Type	CK600
Engine	8.0HP water-cooling diesel engine
Capacity	300kg*2,stainless steel cylinder, high-carbon steel bottom of the pot, Vertical mixer.
Structure	Frame structure, the body inner and outer is cover with insulation thermal Materials.
Heating system	Petroleum gas (recommended by 50KG tank) and imported highly efficiency burner.
Operate contro	Manual clutch controls two cylinders to make a positive mixing.
Safety device	Equip with automatic overload protection device.
Dimensions	1320*1350*1450mm
Weigh	500kg



## PORTABLE ASPHALT KETTLE



PORTABLE ASPHALT KETTLE = 25 gallons capacity

Made of Ms plate 3mm thick with outside casing of gauge 14 and (2.2mm thick)  
1" asbestos packing insulation, 2 ½" distance from kettle heating system using LPG with temperature gauge 0-400 degree centigrade and capable of melting Asphalt 30 to 60 minutes provided exhaust pipe swivel to prevent from back  
Fire with stirrer manual, complete with discharge gate valve 2" Ø and 1 ½" Ø Gate valve with ½ " Ø Metallic hose 1 meter long with nozzle tip 50 kilos  
LPG tank complete with Burner with regulator, with 2 sets of rubber wheel 10" Ø fixed 1 set rubber Wheel 8" Ø swivel . size (0.85 M W x 1.3 M L x 1.1 M H)

## ASPHALT KETTLE Model ak100

### ASPHALT KETTLE = Model ak100 with

Kettle 100 gals. Maximum capacity w/ outside casing of gauge 12" and 1" asbestos packing insulation in between kettle and Casing heating system provided w/ asphalt temperature gauge 0-500 degree thru horizontal return passage by kerosene, 5 coil Burner with nozzle and capable of melting asphalt in 45 to 60 Minutes using kerosene of about 2 ½ gals. Per hour, fuel tank Of 15 gals. Capacity complete with fuel filter provided with air Compressor 1 HP double head driven by 5 HP Briggs & Stratton Brand gasoline engine, air cooled manual start, complete with Air pressure gauge , gate & safety valve gear type asphalt pump Driven by 13.5 HP Briggs & Stratton Gasoline Engine , By pass Valve with two (2) pcs. 15 ft. flexible metallic hose with 1 meter Long spring holder, One (1) pc. 6 ft. Spray bar with nozzle and two (2) pcs. Sealer bar with Nozzle Loading System 1 ton Differential block with swinging davit and Drum Spanner mounted on Construction type Trailer of all steel Electrically welded chassis made of channel 5" iron with Axle And Two (2) Heavy duty Springs Two (2) pcs. wheels with Pneumatic Tires 600 x 16" x 8 ply (brand new tire China) complete With front legs for support with caster wheel 5" Ø swivel, for support Draw bar with eye for towing with pressurized tank.



# ASPHALT EMULSIONS



## SS-1h

Anionic slow setting asphalt emulsion

formulated for warmer climates with its harder base

not compatible with Cationic Emulsions (CRS, CSS, etc.)

## CSS-

Cationic slow setting asphalt emulsion

formulated for warmer climates with its harder base (lower penetration)

not compatible with Anionic Emulsions (RS, MS, etc.)

## SPECIFICATIONS

	Min	Max	
Viscosity, Saybolt Furol, 77 F, Sec	20	100	
Sieve Test, %	-	0.1	
Miscibility		Pass	
Cement mixing, %	-	2.0	
Storage stability, 1 day , %	-	1	<b>SLOW SETTING GRADES</b>
Distillation test:			<b>ARE DESIGNED FOR</b>
Residue by distillation, % by wt.	57	-	<b>MAXIMUM MIXING</b>
Oil distillate, % by volume of emulsion	-	0.5	<b>STABILITY</b>
Tests on residue from distillation:			
Penetration, 77 degree F, 100 g, 5 sec.	40	90	<b>(FOR TACK COATS AND</b>
Solubility in trichloroethylene, %	97.5	-	<b>OTHER SPECIAL</b>
Ductility, 77 degree F, 5 cm/min., cm	40	-	<b>APPLICATIONS)</b>

# ASPHALT COLDMIX

DPWH Item 308/309

conformed

suitable for any pavement  
that requires immediate  
palliative repair work

for potholes and crack  
repairs without unnecessary  
cutting and expanding slab  
corners

offers repair flexibility of  
any kind of size, shape,  
dimension and depth

contains mineral crushed  
aggregate (6mm - 10 m)



## ASPHALT PATCHING MATERIAL ( COLD-LAID BITUMINOUS READYMIX)

### SPECIFICATIONS

Sieve Analysis:	
3/4"	100%
1/2"	95-100
#4	15-40
#8	10-25
#30	4-13
#50	0-5
Specific Gravity	2.35
Marshall, lbs	1000
Flow @1/10 in, inch	6-16
Air Voids, %	3-5
Residual Asphalt Content, %	4.5-6.0

## TRAFFIC CONES



## BARRICADE TAPES



## TRAFFIC VESTS



# CONSTRUCTION EQUIPMENT



TAMPERING HAMMER



BRICK SAW



CONCRETE VIBRATOR



VIBRATORY ROLLER



CONCRETE MIXER



SUBMERSIBLE PUMP



PLATE COMPACTOR



POWER TROWEL



FLOOR SAW



#### Profile Diagram

Dimensions of installation pipe:Φ60

Mounting heihtg:9-12m

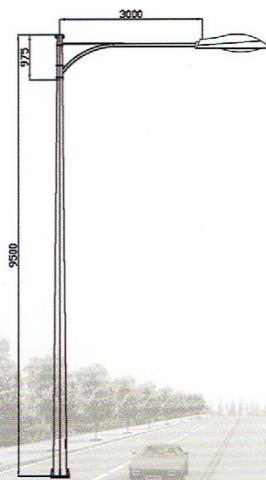
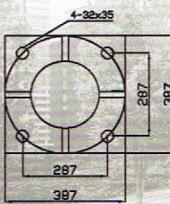
Space between posts:30m-40m

Material:Q235 steel plate(T=4mm)

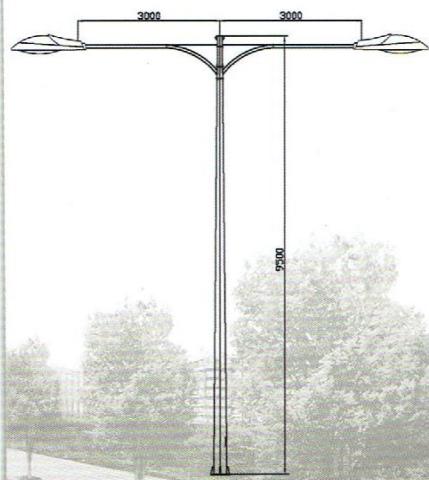
#### TECHNICAL PARAMETERS

- 1.Protection rating:IP66
- 2.Shells anti-corrosion property:classII
- 3.working enviroment:-35°C ~ +45°C
- 4.Electric shock-proofrating:classI
- 5.Lamp holder:E40
- 6.power source:220V (±10%) /50Hz
- 7.Lamp:250W-400W high pressure sodium lamp

#### Foundation Drawing



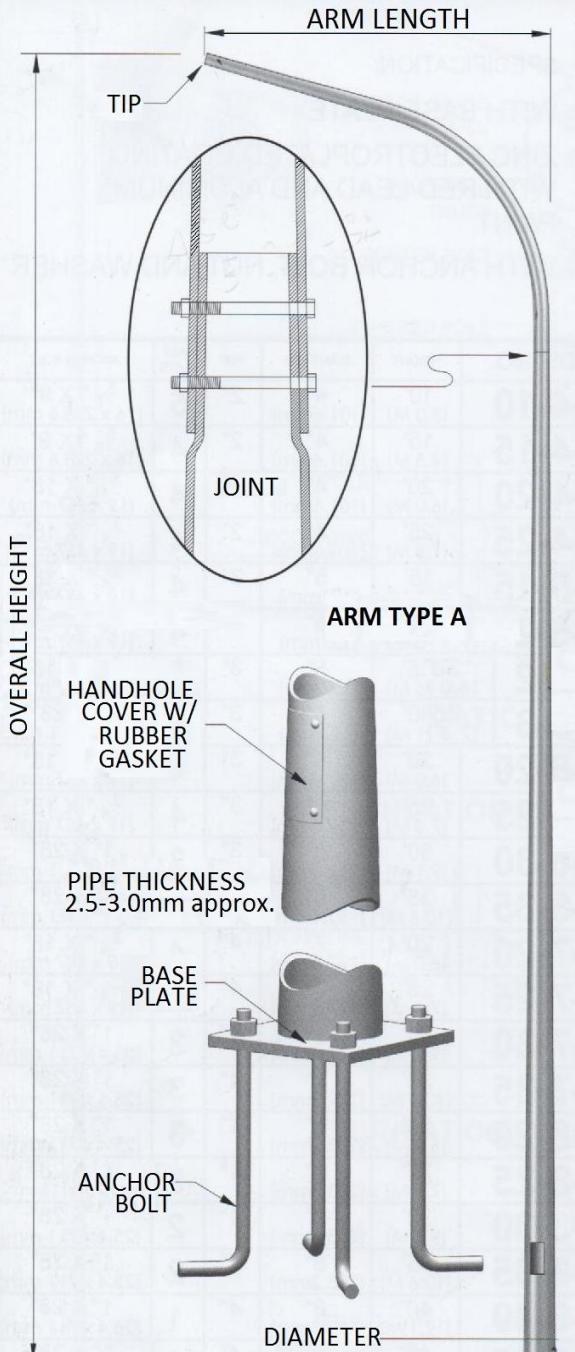
MODEL:SM-ST003



MODEL:SM-ST004

# SINGLE ARM STEEL TAPERED LAMP POST

( HOT-DIP GALVANIZED AVAILABLE UPON REQUEST )

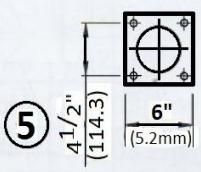
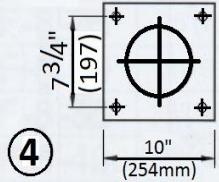
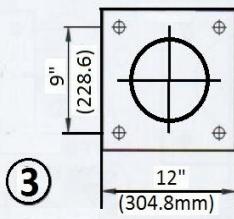
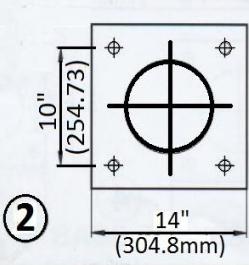
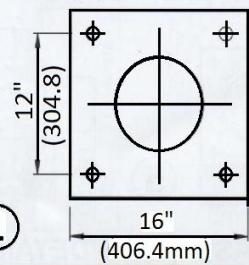


## SPECIFICATION:

- ♦ WITH BASE PLATE
- ♦ ZINC ELECTROPLATED COATING WITH RED LEAD AND ALUMINUM PAINT
- ♦ WITH ANCHOR BOLT, NUT AND WASHER

**ARM TYPE B**

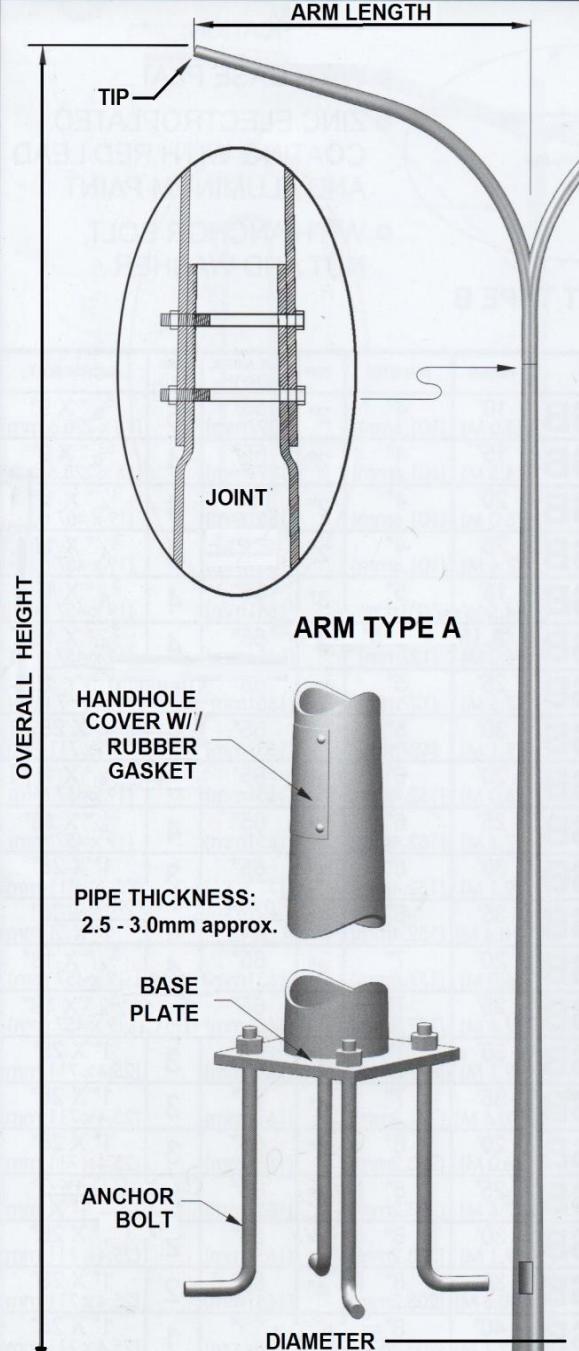
MODEL NO.	HEIGHT	DIAMETER	JOINT	ARM LENGTH	BASE PLATE	ANCHOR BOLT
<b>T-4-10-SA</b>	10' (3.0M)	4" (101.6mm)	CONTINUOS	55" (1397mm)	5	5/8" x 9" (16 x 228.6mm)
<b>T-4-15-SA</b>	15' (4.5M)	4" (101.6mm)	CONTINUOS	55" (1397mm)	4	5/8" x 9" (16 x 228.6mm)
<b>T-4-20-SA</b>	20' (6.0M)	4" (101.6mm)	CONTINUOS	65" (1651mm)	4	3/4" x 18" (19 x 457mm)
<b>T-4-25-SA</b>	25' (7.6M)	4" (101.6mm)	2 1/2" (63mm)	65" (1651mm)	4	3/4" x 18" (19 x 457mm)
<b>T-5-15-SA</b>	15' (4.5M)	5" (127mm)	CONTINUOS	55" (1397mm)	4	3/4" x 18" (19 x 457mm)
<b>T-5-20-SA</b>	20' (6.0M)	5" (127mm)	CONTINUOS	65" (1651mm)	4	3/4" x 18" (19 x 457mm)
<b>T-5-25-SA</b>	25' (7.6M)	5" (127mm)	2 1/2" (63mm)	65" (1651mm)	4	3/4" x 18" (19 x 457mm)
<b>T-5-30-SA</b>	30' (9.1M)	5" (127mm)	2 1/2" (63mm)	65" (1651mm)	3	1" X 28" (25.4x711mm)
<b>T-6-20-SA</b>	20' (6.0M)	6" (152.4mm)	CONTINUOS	65" (1651mm)	4	3/4" x 18" (19 x 457mm)
<b>T-6-25-SA</b>	25' (7.6M)	6" (152.4mm)	2 1/2" (63mm)	65" (1651mm)	4	3/4" x 18" (19 x 457mm)
<b>T-6-30-SA</b>	30' (9.1M)	6" (152.4mm)	2 1/2" (63mm)	65" (1651mm)	3	1" X 28" (25.4x711mm)
<b>T-6-35-SA</b>	35' (10.6M)	6" (152.4mm)	2 1/2" (63mm)	65" (1651mm)	3	1" X 28" (25.4x711mm)
<b>T-7-20-SA</b>	20' (6.0M)	7" (177.8mm)	CONTINUOS	65" (1651mm)	4	3/4" x 18" (19 x 457mm)
<b>T-7-25-SA</b>	25' (7.6M)	7" (177.8mm)	2 1/2" (63mm)	65" (1651mm)	4	3/4" x 18" (19 x 457mm)
<b>T-7-30-SA</b>	30' (9.1M)	7" (177.8mm)	2 1/2" (63mm)	65" (1651mm)	3	1" X 28" (25.4x711mm)
<b>T-7-35-SA</b>	35' (10.6M)	7" (177.8mm)	2 1/2" (63mm)	65" (1651mm)	3	1" X 28" (25.4x711mm)
<b>T-8-20-SA</b>	20' (6.0M)	8" (203.2mm)	CONTINUOS	65" (1651mm)	3	1" X 28" (25.4x711mm)
<b>T-8-25-SA</b>	25' (7.6M)	8" (203.2mm)	3" (76mm)	65" (1651mm)	3	1" X 28" (25.4x711mm)
<b>T-8-30-SA</b>	30' (9.1M)	8" (203.2mm)	3" (76mm)	65" (1651mm)	2	1" X 28" (25.4x711mm)
<b>T-8-35-SA</b>	35' (10.6M)	8" (203.2mm)	3" (76mm)	65" (1651mm)	2	1" X 28" (25.4x711mm)
<b>T-8-40-SA</b>	40' (12.1M)	8" (203.2mm)	3" (76mm)	65" (1651mm)	1	1" X 28" (25.4x711mm)
<b>T-8-45-SA</b>	45' (13.7M)	8" (203.2mm)	3" (76mm)	65" (1651mm)	1	1" X 28" (25.4x711mm)



BASE PLATE DETAIL

# DOUBLE ARM STEEL TAPERED LAMP POST

( HOT-DIP GALVANIZED AVAILABLE UPON REQUEST )

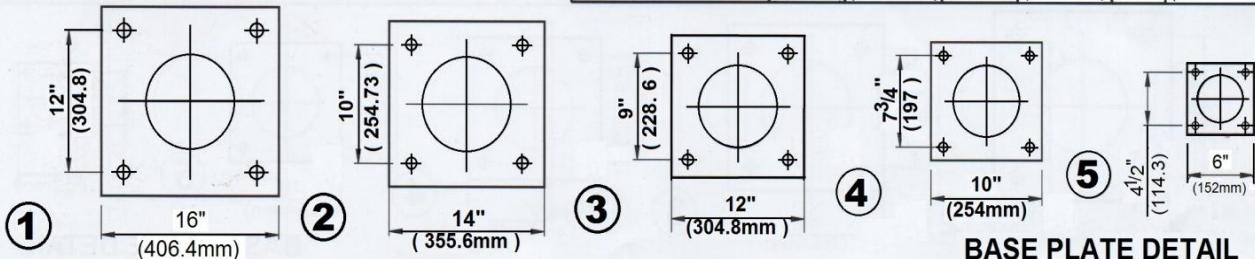


## SPECIFICATION:

- WITH BASE PLATE
- ZINC ELECTROPLATED COATING WITH RED LEAD AND ALUMINUM PAINT
- WITH ANCHOR BOLT, NUT AND WASHER

## ARM TYPE B

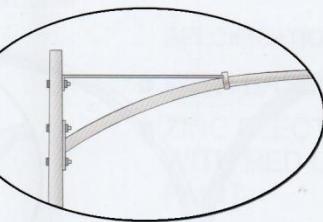
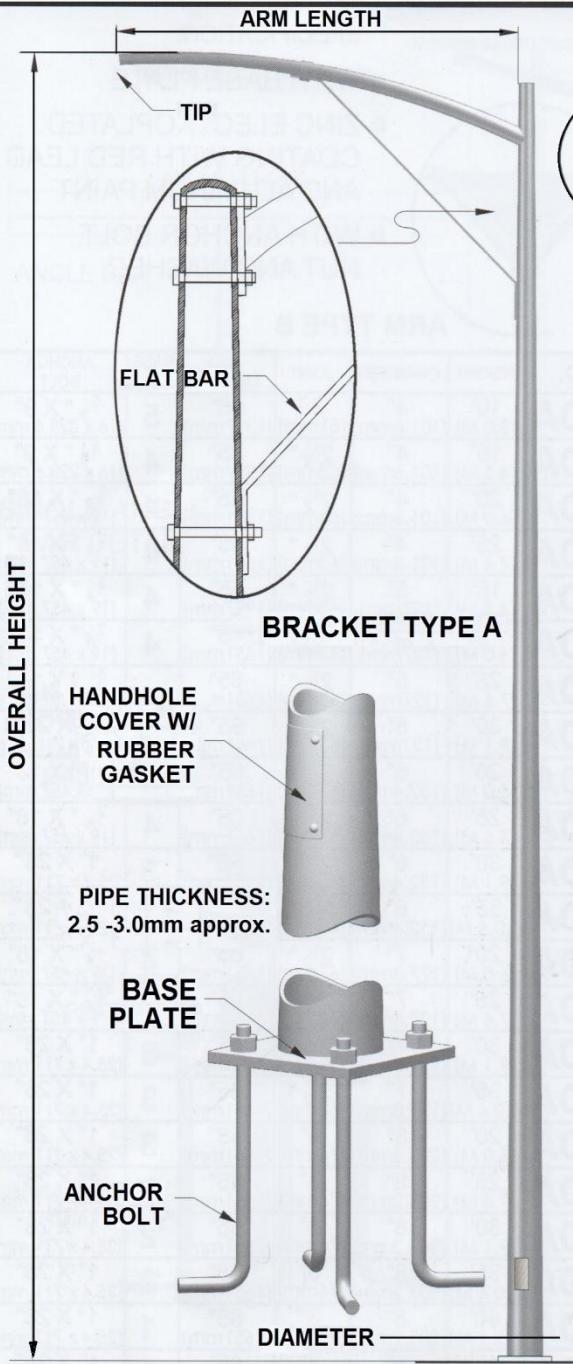
MODEL NO.	HEIGHT (M)	DIAMETER (mm)	JOINT (mm)	ARM LENGTH (mm)	BASE PLATE	ANCHOR BOLT
T-4-10-DA	10' (3.0 M)	4" (101.6mm)	2" (51mm)	55" (1397mm)	5	5/8"X9" (16 x 228.6mm)
T-4-15-DA	15' (4.5 M)	4" (101.6mm)	2½" (63mm)	55" (1397mm)	4	5/8"X9" (16 x 228.6mm)
T-4-20-DA	20' (6.0 M)	4" (101.6mm)	2½" (63mm)	65" (1651mm)	4	3/4"X18" (19 x 457mm)
T-4-25-DA	25' (7.6 M)	4" (101.6mm)	2½" (63mm)	65" (1651mm)	4	3/4"X18" (19 x 457mm)
T-5-15-DA	15' (4.5 M)	5" (127mm)	2½" (63mm)	55" (1397mm)	4	3/4"X18" (19 x 457mm)
T-5-20-DA	20' (6.0 M)	5" (127mm)	2½" (63mm)	65" (1651mm)	4	3/4"X18" (19 x 457mm)
T-5-25-DA	25' (7.6 M)	5" (127mm)	2½" (63mm)	65" (1651mm)	4	3/4"X18" (19 x 457mm)
T-5-30-DA	30' (9.1M)	5" (127mm)	2½" (63mm)	65" (1651mm)	3	1" x 28" (25.4 x 711mm)
T-6-20-DA	20' (6.0 M)	6" (152.4mm)	2½" (63mm)	65" (1651mm)	4	3/4"X18" (19 x 457mm)
T-6-25-DA	25' (7.6 M)	6" (152.4mm)	2½" (63mm)	65" (1651mm)	4	3/4"X18" (19 x 457mm)
T-6-30-DA	30' (9.1M)	6" (152.4mm)	2½" (63mm)	65" (1651mm)	3	1" x 28" (25.4 x 711mm)
T-6-35-DA	35' (10.6 M)	6" (152.4mm)	2½" (63mm)	65" (1651mm)	3	1" x 28" (25.4 x 711mm)
T-7-20-DA	20' (6.0 M)	7" (177.8mm)	2½" (63mm)	65" (1651mm)	4	3/4"X18" (19 x 457mm)
T-7-25-DA	25' (7.6 M)	7" (177.8mm)	2½" (63mm)	65" (1651mm)	4	3/4"X18" (19 x 457mm)
T-7-30-DA	30' (9.1M)	7" (177.8mm)	2½" (63mm)	65" (1651mm)	3	1" x 28" (25.4 x 711mm)
T-7-35-DA	35' (10.6 M)	7" (177.8mm)	2½" (63mm)	65" (1651mm)	3	1" x 28" (25.4 x 711mm)
T-8-20-DA	20' (6.0 M)	8" (203.2mm)	3" (76mm)	65" (1651mm)	3	1" x 28" (25.4 x 711mm)
T-8-25-DA	25' (7.6 M)	8" (203.2mm)	3" (76mm)	65" (1651mm)	3	1" x 28" (25.4 x 711mm)
T-8-30-DA	30' (9.1M)	8" (203.2mm)	3" (76mm)	65" (1651mm)	2	1" x 28" (25.4 x 711mm)
T-8-35-DA	35' (10.6 M)	8" (203.2mm)	3" (76mm)	65" (1651mm)	2	1" x 28" (25.4 x 711mm)
T-8-40-DA	40' (12.1M)	8" (203.2mm)	3" (76mm)	65" (1651mm)	1	1" x 28" (25.4 x 711mm)
T-8-45-DA	45' (13.7M)	8" (203.2mm)	3" (76mm)	65" (1651mm)	1	1" x 28" (25.4 x 711mm)



BASE PLATE DETAIL

# SINGLE BRACKET STEEL TAPERED LAMP POST

( HOT-DIP GALVANIZED AVAILABLE UPON REQUEST )

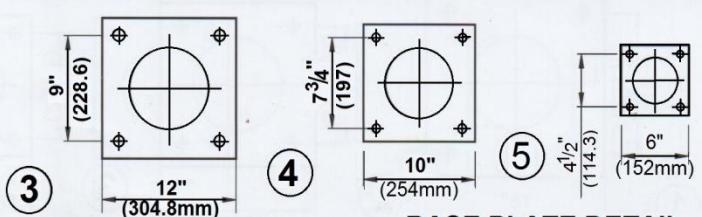


**BRACKET TYPE B**

## SPECIFICATION:

- WITH BASE PLATE
- ZINC ELECTROPLATED COATING WITH RED LEAD AND ALUMINUM PAINT
- WITH ANCHOR BOLT, NUT AND WASHER

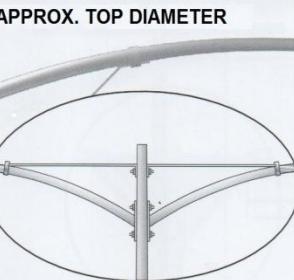
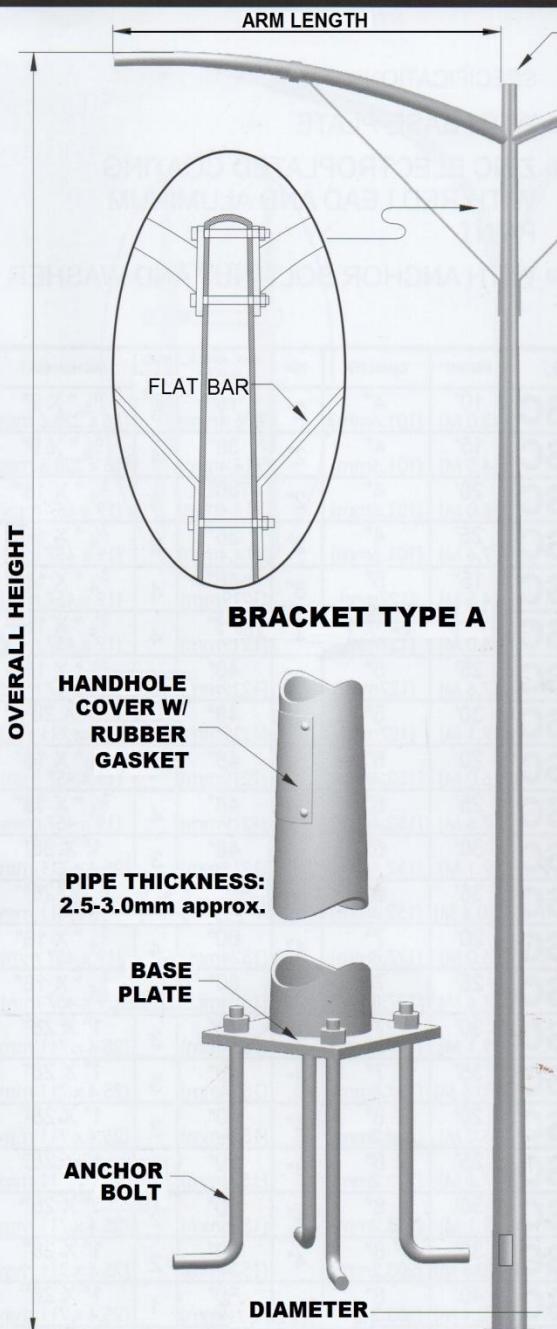
MODEL NO.	HEIGHT (M)	DIAMETER (mm)	TOP (mm)	MAX. ANGLE LENGTH (mm)	BASE PLATE (mm)	ANCHOR BOLT (mm)
T-4-10-SB	10' (3.0 M)	4" (101.6mm)	2"	55" (1397mm)	5	5/8"X9" (16 x 228.6mm)
T-4-15-SB	15' (4.5 M)	4" (101.6mm)	2"	55" (1397mm)	4	5/8"X9" (16 x 228.6mm)
T-4-20-SB	20' (6.0 M)	4" (101.6mm)	2"	65" (1651mm)	4	3/4"X18" (19 x 457.0mm)
T-4-25-SB	25' (7.6 M)	4" (101.6mm)	2"	65" (1651mm)	4	3/4"X18" (19 x 457.0mm)
T-5-15-SB	15' (4.5 M)	5" (127mm)	3"	55" (1397mm)	4	3/4"X18" (19 x 457.0mm)
T-5-20-SB	20' (6.0 M)	5" (127mm)	3"	65" (1651mm)	4	3/4"X18" (19 x 457.0mm)
T-5-25-SB	25' (7.6 M)	5" (127mm)	3"	65" (1651mm)	4	3/4"X18" (19 x 457.0mm)
T-5-30-SB	30' (9.1M)	5" (127mm)	3"	65" (1651mm)	3	1" x 28" (25.4 x 711mm)
T-6-20-SB	20' (6.0 M)	6" (152.4mm)	3"	65" (1651mm)	4	3/4"X18" (19 x 457.0mm)
T-6-25-SB	25' (7.6 M)	6" (152.4mm)	3"	65" (1651mm)	4	3/4"X18" (19 x 457.0mm)
T-6-30-SB	30' (9.1M)	6" (152.4mm)	3"	65" (1651mm)	3	1" x 28" (25.4 x 711mm)
T-6-35-SB	35' (10.6 M)	6" (152.4mm)	3"	65" (1651mm)	3	1" x 28" (25.4 x 711mm)
T-7-20-SB	20' (6.0 M)	7" (177.8mm)	4"	65" (1651mm)	4	3/4"X8" (19 x 457.0mm)
T-7-25-SB	25' (7.6 M)	7" (177.8mm)	4"	65" (1651mm)	4	3/4"X18" (19 x 457.0mm)
T-7-30-SB	30' (9.1M)	7" (177.8mm)	4"	65" (1651mm)	3	1" x 28" (25.4 x 711mm)
T-7-35-SB	35' (10.6 M)	7" (177.8mm)	4"	65" (1651mm)	3	1" x 28" (25.4 x 711mm)
T-8-20-SB	20' (6.0 M)	8" (203.2mm)	4"	65" (1651mm)	3	1" x 28" (25.4 x 711mm)
T-8-25-SB	25' (7.6 M)	8" (203.2mm)	4"	65" (1651mm)	3	1" x 28" (25.4 x 711mm)
T-8-30-SB	30' (9.1M)	8" (203.2mm)	4"	65" (1651mm)	2	1" x 28" (25.4 x 711mm)
T-8-35-SB	35' (10.6 M)	8" (203.2mm)	4"	65" (1651mm)	2	1" x 28" (25.4 x 711mm)
T-8-40-SB	40' (12.1M)	8" (203.2mm)	4"	65" (1651mm)	1	1" x 28" (25.4 x 711mm)
T-8-45-SB	45' (13.7M)	8" (203.2mm)	4"	65" (1651mm)	1	1" x 28" (25.4 x 711mm)



**BASE PLATE DETAIL**

# DOUBLE BRACKET STEEL TAPERED LAMP POST

( HOT-DIP GALVANIZED AVAILABLE UPON REQUEST )

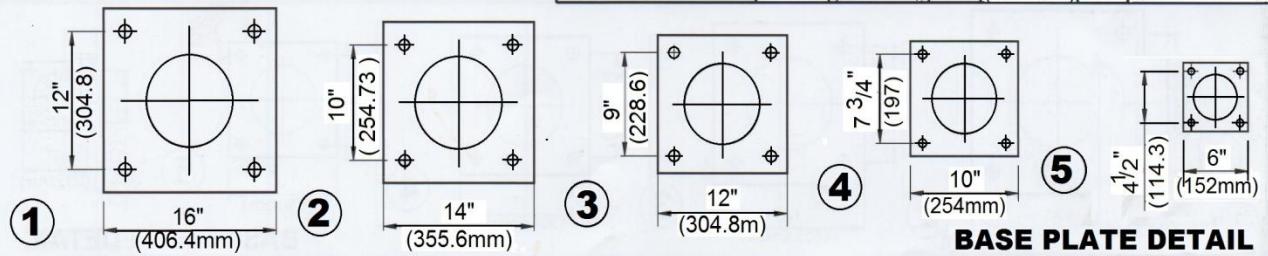


## SPECIFICATION:

- WITH BASE PLATE
- ZINC ELECTROPLATED COATING WITH RED LEAD AND ALUMINUM PAINT
- WITH ANCHOR BOLT, NUT AND WASHER

## BRACKET TYPE B

MODEL NO.	HEIGHT	DIAMETER	TOP	MAX. ANGLE LENGTH	BASE PLATE	ANCHOR BOLT
T-4-10-DB	10' (3.0 M)	4" (101.6mm)	2"	55" (1397mm)	5	5/8"X9" (16 x 228.6mm)
T-4-15-DB	15' (4.5 M)	4" (101.6mm)	2"	55" (1397mm)	4	5/8"X9" (16 x 228.6mm)
T-4-20-DB	20' (6.0M)	4" (101.6mm)	3"	65" (1651mm)	4	3/4"X18" (19 x 457.mm)
T-4-25-DB	25' (7.6M)	4" (101.6mm)	3"	65" (1651mm)	4	3/4"X18" (19 x 457.mm)
T-5-15-DB	15' (4.5M)	5" (127mm)	3"	55" (1397mm)	4	3/4"X18" (19 x 457.mm)
T-5-20-DB	20' (6.0M)	5" (127mm)	3"	65" (1651mm)	4	3/4"X18" (19 x 457.mm)
T-5-25-DB	25' (7.6M)	5" (127mm)	3"	65" (1651mm)	4	3/4"X18" (19 x 457.mm)
T-5-30-DB	30' (9.1M)	5" (127mm)	3"	65" (1651mm)	3	1" x 28" (25.4 x 711mm)
T-6-20-DB	20' (6.0M)	6" (152.4mm)	3"	65" (1651mm)	4	3/4"X18" (19 x 457.mm)
T-6-25-DB	25' (7.6M)	6" (152.4mm)	3"	65" (1651mm)	4	3/4"X18" (19 x 457.mm)
T-6-30-DB	30' (9.1M)	6" (152.4mm)	3"	65" (1651mm)	3	1" x 28" (25.4 x 711mm)
T-6-35-DB	35' (10.6M)	6" (152.4mm)	3"	65" (1651mm)	3	1" x 28" (25.4 x 711mm)
T-7-20-DB	20' (6.0M)	7" (177.8mm)	4"	65" (1651mm)	4	3/4"X18" (19 x 457.mm)
T-7-25-DB	25' (7.6M)	7" (177.8mm)	4"	65" (1651mm)	4	3/4"X18" (19 x 457.mm)
T-7-30-DB	30' (9.1M)	7" (177.8mm)	4"	65" (1651mm)	3	1" x 28" (25.4 x 711mm)
T-7-35-DB	35' (10.6M)	7" (177.8mm)	4"	65" (1651mm)	3	1" x 28" (25.4 x 711mm)
T-8-20-DB	20' (6.0M)	8" (203.2mm)	4"	65" (1651mm)	3	1" x 28" (25.4 x 711mm)
T-8-25-DB	25' (7.6M)	8" (203.2mm)	4"	65" (1651mm)	3	1" x 28" (25.4 x 711mm)
T-8-30-DB	30' (9.1M)	8" (203.2mm)	4"	65" (1651mm)	2	1" x 28" (25.4 x 711mm)
T-8-35-DB	35' (10.6M)	8" (203.2mm)	4"	65" (1651mm)	2	1" x 28" (25.4 x 711mm)
T-8-40-DB	40' (12.1M)	8" (203.2mm)	4"	65" (1651mm)	1	1" x 28" (25.4 x 711mm)
T-8-45-DB	45' (14.7M)	8" (203.2mm)	4"	65" (1651mm)	1	1" x 28" (25.4 x 711mm)



## AIO-B08



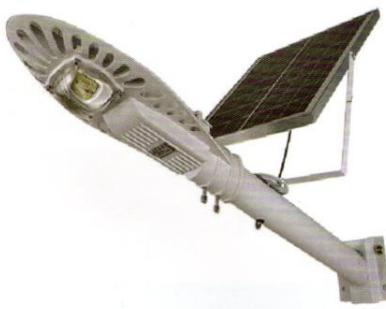
Type	Project Funds Solar Street Light
LED Chips	Bridgelux Chip
Power	20W / 30W / 40W / 50W
Capacity	25Ah / 40Ah / 50Ah / 60Ah
Solar Panel	Mono / Poly 50W / 80W / 100W / 120W
Lumen(LM/W)	>120LM/W
Angle Beam	≥120°
Working Mode	Lighting control + Time control
Material	Die-cast aluminum alloy
Battery Type	Lithium / LiFe PO4 battery

## AIO-B12

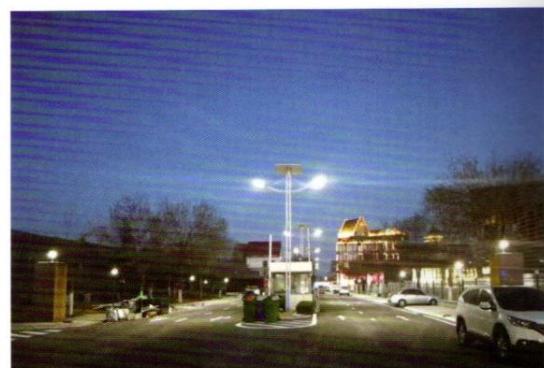
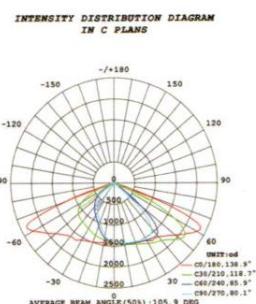


Type	Project Funds Solar Street Light
LED Chips	Bridgelux Chip
Power	20W / 30W / 40W / 50W
Capacity	25Ah / 40Ah / 50Ah / 60Ah
Solar Panel	Mono / Poly 50W / 80W / 100W / 120W
Lumen(LM/W)	>120LM/W
Angle Beam	≥120°
Working Mode	Lighting control + Time control
Material	Die-cast aluminum alloy
Battery Type	Lithium / LiFe PO4 battery

## AIO-B36



Type	Bulid In Solar Street Light
LED Chips	Bridgelux Chip
Power	20W / 30W / 40W / 50W
Capacity	20Ah / 30Ah / 40Ah / 50Ah
Solar Panel	Mono / Poly 50W / 80W / 100W / 120W
Lumen(LM/W)	>120LM/W
Angle Beam	≥120°
Working Mode	Lighting control + Time control
Material	Die-cast aluminum alloy
Battery Type	Lithium / LiFe PO4 battery



# LED Street Light



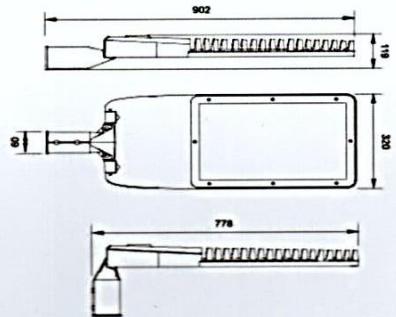
## • Description

Body mode of Die-cast aluminium

Polyester powder coating

Colour temperature:3000-6500K

High recyclability rate

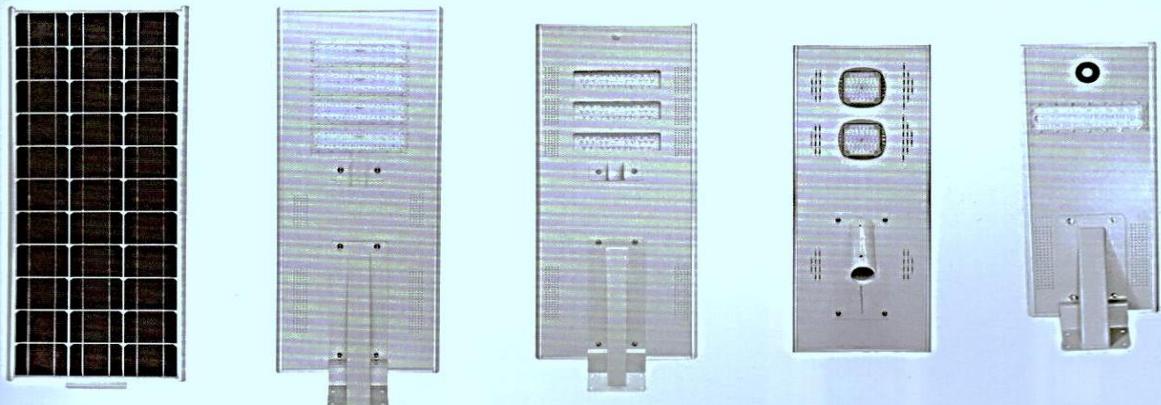
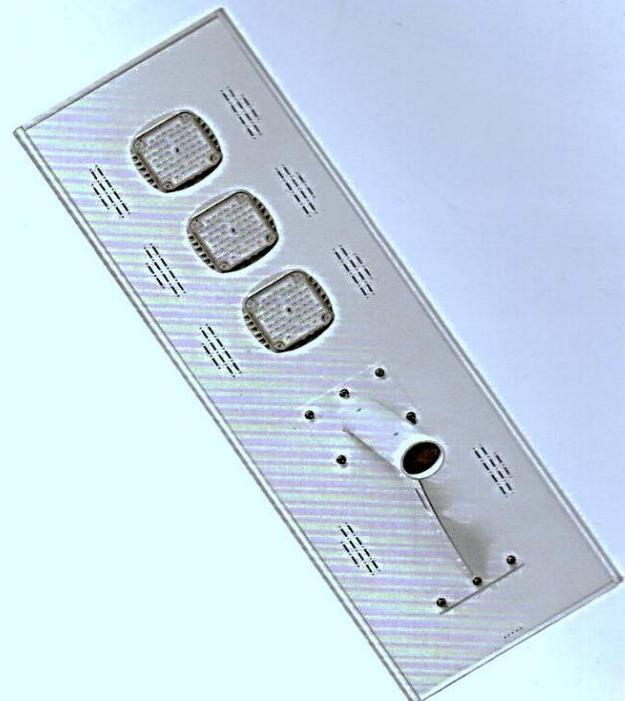


## Technical

Model	Power	Luminous	Input Power	Working Life	IP	PF	Size	Lighting control
AIO-S16 - 60W	60W	7800LM	AC86-265V	>50,000hrs	IP65	>0.9	62.2*32*11.9cm	
AIO-S16 - 120W	120W	15600LM	AC86-265V	>50,000hrs	IP65	>0.9	62.2*32*11.9cm	
AIO-S16 - 150W	150W	19500LM	AC86-265V	>50,000hrs	IP65	>0.9	72*32*11.9cm	Can choose with photoresistor or not
AIO-S16 -200W	200W	26000LM	AC86-265V	>50,000hrs	IP65	>0.9	72*32*11.9cm	
AIO-S16 -240W	240W	31200LM	AC86-265V	>50,000hrs	IP65	>0.9	90.2*32*11.9cm	
AIO-S16 -300W	300W	39000LM	AC86-265V	>50,000hrs	IP65	>0.9	90.2*32*11.9cm	

# Integrated Solar Street Light

- Long span
- Super Brightness
- High CRI
- Strong Radiating
- Low Decline



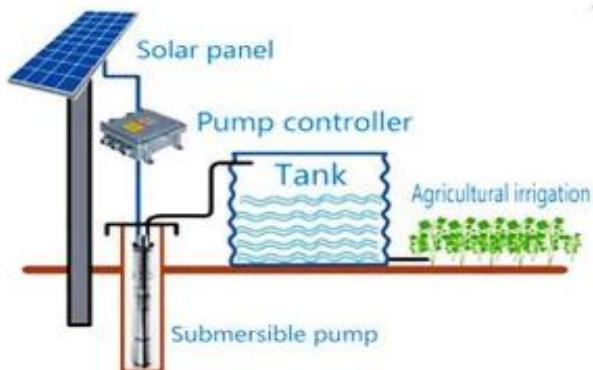
Different bracket and human sensor can be choose

## Parameter

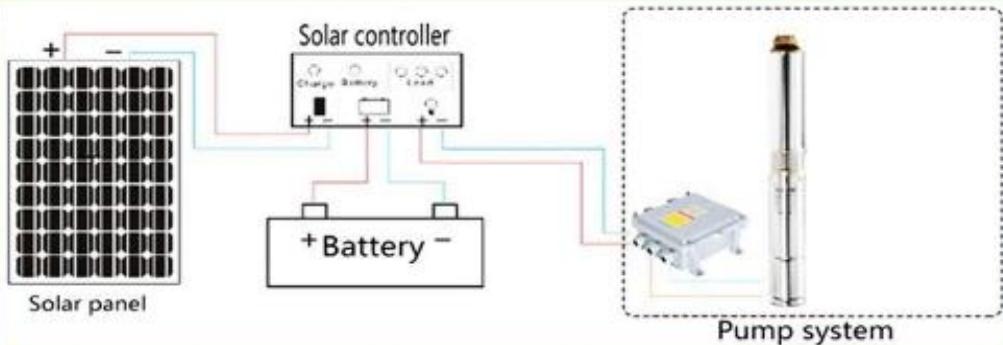
Item	SST-SS50N / 60N
Power	50W / 60W
Solar Panel	55W/70W Mono
LED Chips	3 pcs Module
Battery	Lithium Battery / LiFe PO4 battery
Working Mode	Lighting control+Human sensor / Lighting control+Time control
IP Rating	≥IP65
Material	Die-cast Aluminum
Operating Temperature(°C)	-20°C~+55°C

## SOLAR POWER





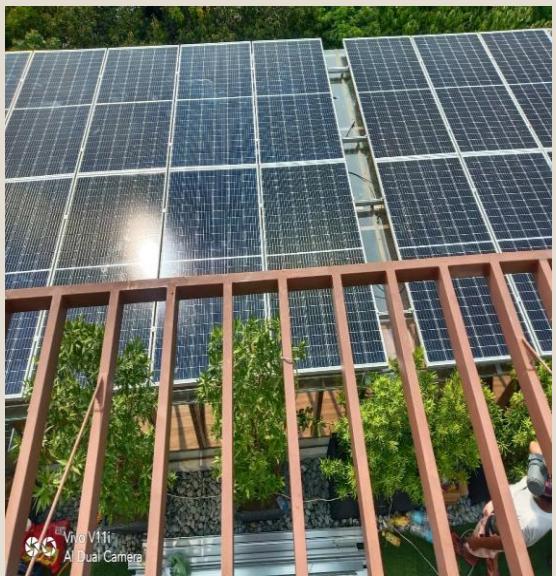
Solar Energy Pump System Connection Diagram



Solar Energy Pump System with Battery Wiring Scheme



# OFFICE SOLAR POWER





## FARM SOLAR SYSTEM



## NIA SOLAR WATER PUMP



# RESIDENTIAL SOLAR SYSTEM



# **SEWAGE TREATMENT PLANT SYSTEM**



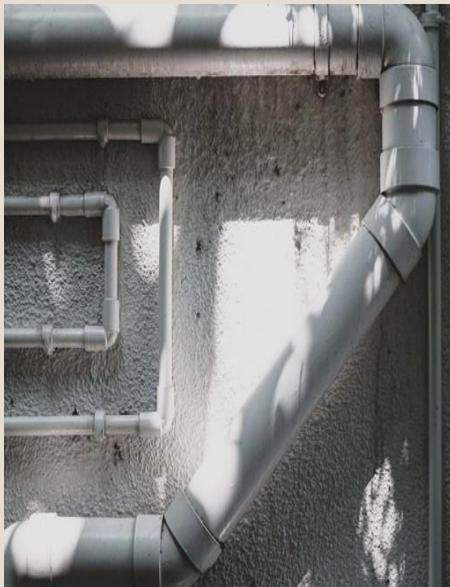
# OUR SERVICES

**Sewage  
Treatment  
Plant**



**Plumbing  
Services**

**Motor Control Panels**



## WHY THE NEED FOR WASTEWATER TREATMENT SYSTEMS?

Monitoring of the country's rivers as early as 1996 revealed that 49% of our rivers are polluted and had already been contaminated by household, industrial, and agricultural activities.

Wastewater coming from domestic establishments was the leading source of contamination in our bodies of water. Despite the increasing rate of water pollution, only 3% of investments were dedicated for sewage treatment and sanitation.

To compensate with this, the Philippine Clean Water Act of 2004 (RA No. 9725) was enacted to protect the country's water bodies from pollution from land-based sources. It aims to prevent and minimize contamination of water through multi-sectoral and participatory approach involving all stakeholders.

All owners or operators of facilities that discharge wastewater are required to hold a permit to discharge from DENR or the Laguna Lake Development Authority (LLDA). Existing industries without any permit are given 12 months starting from the effectivity of the implementing rules and regulations.

SOURCE: DENR Environmental Management Bureau

Anyone who disregards this Act and regulations such as discharging untreated wastewater into any water body will be fined for every day of violation amounting to not less than PhP 10,000 but not more than PhP 200,000.

With this, the Department of Environment and Natural Resources released a guideline of parameters that establishments that discharges wastewater should meet.



# DENR DAO 2021-19

### Biochemical Oxygen Demand (BOD)

represents the amount of oxygen consumed by bacteria and other microorganisms while they decompose

**< 50 mg/L**

### Chemical Oxygen Demand (COD)

the amount of dissolved oxygen that must be present in water to oxidize chemical organic materials

**< 100 mg/L**

### Fat, Oil, & Grease

byproduct of food preparation

**< 5 mg/L**

### pH

the degree of acidity or alkalinity

**6.0 - 9.5**

### Total Suspended Solids

particles that are larger than 2 microns found in the water column

**< 100 mg/L**

### Total Coliform Bacteria

a large collection of different kinds of bacteria

**< 10<sup>10</sup> MAX**

### Color

the observed color of water

**< 150 mg/L**

### Fecal Coliform

are types of total coliform that exist in feces

**< 400 mg/L**

### Nitrate

naturally occurring ions that are part of the nitrogen cycle

**< 14 mg/L**

### Phosphate

chemical compounds containing phosphorus

**< 1.9 mg/L**

### Ammonia

colourless, pungent gas composed of nitrogen and hydrogen

**< 4.0 mg/L**

# HOSPITAL



# OUR PROJECTS

## ONE SPATIAL CONDOMINIUM



## STAFFHOUSE      HEALTH CENTER



# NYLON STRING TANSI



Nylon String locally known as Tansi Labay commonly used as a cheaper alternative for blades of grass cutting equipment. 3mm thick tansi rotating at rated rpm can cut soft grass conveniently and cost effectively.

# BRUSH CUTTER KAWASAKI



**TJ45E**



**TD40 2 Stroke Engine**



**TJ53E**



**TJ53E**



REPUBLIC OF THE PHILIPPINES  
PROVINCE OF ISABELA  
MUNICIPALITY OF REINA MERCEDES  
**OFFICE OF THE MAYOR**  
**BUSINESS PERMIT AND LICENSING OFFICE**

## **BUSINESS/MAYOR'S PERMIT**

*is hereby granted to*

### **DARWIN AND CONSTRUCTION SUPPLY**

*NATIONAL HIGHWAY, NAPPACCU PEQUEÑO, REINA MERCEDES, ISABELA*

*to conduct/ operate/ engage/ maintain business pursuant to the Revised Revenue Code of the  
Municipality of Reina Mercedes described below:*

**0203125-2025-0000147**

*Owner*

**CHARLES DARWIN UY ONGTO**

*MAHARLIKA HIGHWAY, DISTRICT II (POB.), CITY OF CAUAYAN, ISABELA*

*Status of Business*

**RENEW**

*Nature of Business*

**HARDWARE/CONSTRUCTION SUPPLY**

*Given this Friday, 10<sup>th</sup> day of January 2025 at Reina Mercedes, Isabela Philippines.*

*Approved:*

**ATTY. MARIA LOURDES P. RESPICIO-SAGUBAN**  
**MUNICIPAL MAYOR**

OR No. : 18129438  
Amount Paid : 54,972.57  
Series : 2025  
VALID UP TO DECEMBER 31, 2025

for the period ending December 31, 2025 or until  
sooner revoked, within the Municipality of Reina  
Mercedes, Isabela subject to rules and regulations  
governing said business/occupation/privilege.



This certifies that

**DARWIN AND CONSTRUCTION SUPPLY**  
(CITY/MUNICIPALITY)

REINA MERCEDES, ISABELA - REGION II (CAGAYAN VALLEY)

is a business name registered in this office pursuant to the provisions of Act 3883, as amended by Act 4147 and Republic Act No. 863, and in compliance with the applicable rules and regulations prescribed by the Department of Trade and Industry.

This certificate issued to

**CHARLES DARWIN UY ONGTO**

is valid from 09 November 2022 to 09 November 2027 subject to continuing compliance with the above-mentioned laws and all applicable laws of the Philippines, unless voluntarily cancelled

In testimony whereof, I hereby sign this

**Certificate of Business Name Registration**

and issue the same on 09 November 2022 in the Philippines.

  
**ALFREDO E. PASCUAL**  
Secretary

**Business Name No. 4282587**

This certificate is not a license to engage in any kind of business and valid only at the scope indicated herein.



OKJU350014101266



### DTI Business Name Official Receipt

Reference Code	OKJU350014101266
Confirmation Date	09 Nov 2022 01:43 PM
Application Name	CHARLES DARWIN UY ONGTO
Particulars	NEW BUSINESS NAME REGISTRATION
GCASH Reference No.	044121202
Total Amount	Php 530.00
Application Fee	Php 500.00
Documentary Stamp Tax	Php 30.00

This serve as your Official receipt

Your transaction was successfully processed.

Thank you for using GCASH



### DTI Business Name Official Receipt

Reference Code	OKJU350014101266
Confirmation Date	09 Nov 2022 01:43 PM
Application Name	CHARLES DARWIN UY ONGTO
Particulars	NEW BUSINESS NAME REGISTRATION
GCASH Reference No.	044121202
Total Amount	Php 530.00
Application Fee	Php 500.00
Documentary Stamp Tax	Php 30.00

This serve as your Official receipt

Your transaction was successfully processed.

Thank you for using GCASH



### DTI Business Name Official Receipt

Reference Code	OKJU350014101266
Confirmation Date	09 Nov 2022 01:43 PM
Application Name	CHARLES DARWIN UY ONGTO
Particulars	NEW BUSINESS NAME REGISTRATION
GCASH Reference No.	044121202
Total Amount	Php 530.00
Application Fee	Php 500.00
Documentary Stamp Tax	Php 30.00

This serve as your Official receipt

Your transaction was successfully processed.

Thank you for using GCASH



# DARWIN & CONSTRUCTION SUPPLY

NAPACCU PEQUEÑO REINA MERCEDES ISABELA