

| | DETAIL ESTIMATION | |
|------------|-------------------------------------|---------------|
| No. | DESCRIPTION | |
| III | MECHANICAL WORKS | |
| 1 | PLUMBING WORK | |
| 1,1 | WATER SUPPLY SYSTEM | |
| 1.2. | DRAINAGE SYSTEM | |
| 1.2.a | Rain water at Unloading area | |
| 1.2.b | Sewer water system | |
| 1,3 | SANITARY SYSTEM | |
| 1,4 | LPG PIPING FOR KITCHEN | |
| 1,5 | KITCHEN EQUIPMENT | |
| 1,6 | FIRE HYDRANT SYSTEM | |
| 1,7 | FIRE EXTINGUISHER | |
| 1,8 | WASTE WATER TREATMENT | |
| | | |
| | SUB-TOTAL (1) | |
| | | |
| 2 | A/C AND VENTILATION WORK | |
| 2,1 | VENTILATION SYSTEM | |
| 2,2 | AIR CONDITIONING SYSTEM | |
| | | |
| | SUB-TOTAL (2) | |
| | | |
| 3 | UTILITY WORK | |
| 3,1 | WATER SUPPLY SYSTEM | |
| 3,2 | COMPRESSED AIR SYSTEM | |
| 3,3 | STEAM SUPPLY SYSTEM | |
| 3,4 | LPG SYSTEM | |
| 3,5 | SPOT VENTILATION SYSTEM | |
| | | |
| | SUB-TOTAL (3) | |
| | | |
| | SUB-TOTAL (III) | |
| | | |
| 1 | PLUMBING WORK | |
| 1,1 | WATER SUPPLY SYSTEM | |
| | Booster water pump | (2units/1set) |
| | Water cap.;350L/min at 0.34Mpa | |
| | Power supply: 3phs/380V/50Hz/4.0Kw | |
| | Common steel base and accessories | |
| | Control panel w/o inverter type | |

| DETAIL ESTIMATION | |
|--------------------------|--|
| No. | DESCRIPTION |
| | Alternative and Parralel Operation |
| | Lever rod |
| | RC base for booster pump |
| | Received water tank+FF tank, V=280m3 |
| | Priming water tank V=100L |
| | GIP BSM CLASS |
| | GIP 15Ax2.60t |
| | GIP 20Ax2.60t |
| | GIP 25Ax3.20t |
| | GIP 32Ax3.20t |
| | GIP 40Ax3.20t |
| | GIP 50Ax3.60t |
| | GIP 65Ax3.60t |
| | GIP 80Ax4.00t |
| | Fittings for above |
| | Support for above |
| | HDPE PIPE FOR WATER SUPPLY-PE 80 |
| | HDPE Pipe 20A |
| | HDPE Pipe 25A |
| | HDPE Pipe 63A |
| | HDPE Pipe 90A |
| | Fittings for above |
| | Support for above |
| | STAINLESS STEEL PIPE (SUS 304) |
| | Stainless Steel Pipe 50Ax2.77t |
| | Fittings for above |
| | Support for above |
| | GATE VALVE 10K CAST IRON FLANGE END |
| | GV (Flange End) 65A |
| | GV (Flange End) 80A |
| | GATE VALVE 10K BRASS SCREW END |
| | GV (Screw End) 20A |
| | GV (Screw End) 25A |
| | GV (Screw End) 32A |
| | GV (Screw End) 40A |
| | CHECK VALVE 10K BRASS SCREW END |
| | CV (Screw End) 20A |
| | CV (Screw End) 40A |
| | CV (Flange End) 65A |
| | BALL VALVE 10K BRASS SCREW END |

| DETAIL ESTIMATION | | |
|--------------------------|---|---------------------|
| No. | DESCRIPTION | |
| | BV (Screw End) 20A | |
| | FOOT VALVE | |
| | Foot Valve 50A | |
| | Float Valve 20A | |
| | AIR RELEASE VALVE (Arita) | |
| | Air Release Valve 20A | |
| | Y-STRAINER 10K CAST IRON FLANGE END | |
| | Y-Strainer (Screw End) 50A | |
| | Y-Strainer (Flange End) 80A | |
| | FLEXIBLE JOINT (RUBBER TYPE - TWIN SPHERE-FLANGED ENDS) | |
| | F.J. (Rubber Type) 40A | |
| | F.J. (Rubber Type) 50A | |
| | FLEXIBLE JOINT (S.U.S., FLANGE TYPE) | |
| | F.J. (SUS Type) 32A | |
| | Pressure Gauge F 50 | |
| | Float Valve 80A- FM type | |
| | Suction hood | |
| | Concrete for protection | |
| | 200x200 | |
| | Valve box | (For garden faucet) |
| | Garden Faucet | |
| | Painting for above | |
| | Consumable materials | |
| | Excavation and backfill | |
| | Others | |
| | | |
| | Materials total | |
| | | |
| | Labor cost | |
| | Testing and commissioning | |
| | Transportation Fee | |
| | | |
| | SUB-TOTAL (1,1) | |
| | | |
| 1.2.a | Rain water at Unloading area | |
| a | Rain water at Unloading area | |
| | Pump it for Drain water | |
| | Volume 8.0 m3 | |
| | Dimension: 2500Lx2500Wx1600D | |
| | Submersible pump vortex type | |

| DETAIL ESTIMATION | | |
|--------------------------|--|---------|
| No. | DESCRIPTION | |
| | Cap: 480L/min at 8mhd | |
| | Power supply: 3phs/380V/50Hz/0.75Kw | |
| | Submersible pump vortex type | |
| | Cap: 1000L/min at 8mhd | |
| | Power supply: 3phs/380V/50Hz/3.7Kw | |
| | Submersible pump vortex type | |
| | Cap: 3000L/min at 20mhd | |
| | Power supply: 3phs/380V/50Hz/15Kw | |
| | Floating switch | |
| | Control panel | |
| | Alternative and parallel operation | |
| | Handle rail | |
| | Auto coupling | |
| | PVC Pipe 80Ax3.5t | |
| | PVC Pipe 100Ax4.2t | |
| | PVC Pipe 125Ax5.4t | |
| | PVC Pipe 200Ax8.6t | |
| | Fitting for above | |
| | Support for above | |
| | Butterfly Valve 80A (Flange End) | |
| | Butterfly Valve 125A (Flange End) | |
| | Butterfly Valve 200A (Flange End) | |
| | CV (Flange End) 80A | |
| | CV (Flange End) 125A | |
| | CV (Flange End) 200A | |
| | Excavation and backfill | |
| | Consumable materials | |
| | Testing Fee | |
| | | |
| | MATERIAL TOTAL | |
| | | |
| | LABOUR COST TOTAL | |
| | | |
| | SUB-TOTAL (a) | |
| | | |
| b | Sewer water system | |
| | Septic tank | V=46m3 |
| | Dimension: 8000Lx4000Wx1950D | |
| | Septic tank | V=1.5m3 |
| | Dimension: 1500Lx1000Wx1200D | |

| DETAIL ESTIMATION | | |
|-------------------|---|----------------------|
| No. | DESCRIPTION | |
| | Drain gutter for kitchen with grating cover | |
| | Grease trap | V=4.4 m ³ |
| | Dimension: 3000Lx1500Wx1400D | |
| | Basket and SUS partition | |
| | Oil trap | |
| | Dimension: 1000Lx800Wx1000D | |
| | Pump pit for sewer water | |
| | Volume 1.5 m ³ | |
| | Dimension: 1500Lx1500Wx1600D | |
| | Submersible pump with cutter type | |
| | Cap:200L/min at 8mhd | |
| | Power supply: 3phs/380V/50Hz/1.5Kw | |
| | Submersible pump | |
| | Cap:600L/min at 10mhd | |
| | Power supply: 3phs/380V/50Hz/3.7Kw | |
| | Floating switch | |
| | Control panel | |
| | Alternative and parallel operation | |
| | Handle rail | |
| | Auto coupling | |
| | Buterfly Valve 50A (Flange End) | |
| | CV (Screw End) 50A | |
| | PVC PIPE FOR DRAIN-Class 3 | |
| | PVC Pipe 40Ax2.9t | |
| | PVC Pipe 50Ax2.9t | |
| | PVC Pipe 65Ax3.6t | |
| | PVC Pipe 80Ax3.5t | |
| | PVC Pipe 100Ax4.2t | |
| | PVC Pipe 125Ax5.4t | |
| | Fittings for above | |
| | Support for above | |
| | Manhole 450sq x 400D~500D | |
| | Manhole 600sq x 600D~1000D | |
| | Manhole 600sq x 1100D~1400D | |
| | Manhole Cover F 400 | |
| | Manhole Cover F 600 | |
| | FD 50A | Cast iron |
| | COA 50A | Cast iron |
| | COA 100A | Cast iron |
| | Vent Cap 100 F | |

| DETAIL ESTIMATION | | |
|--------------------------|--|---------|
| No. | DESCRIPTION | |
| | Concrete for protection | |
| | 400x400 | |
| | Painting for above | |
| | Excavation and backfill | |
| | Consummable materials | |
| | Others | |
| | | |
| | Materials total | |
| | | |
| | Labor cost | |
| | Testing and commissioning | |
| | Transportation Fee | |
| | | |
| | SUB-TOTAL (1.2.a) | |
| | | |
| 1,3 | SANITARY SYSTEM | |
| | WATER CLOSET c/w accessories | |
| | CST 660D1 (2 part)(TS116R+T53P100V+TX437SV1W) | |
| | URINAL(TOTO VN) c/w accessories | |
| | Medium size UT57(Manual flush valve TS402P) | |
| | LAVATORY(TOTO VN) c/w accessories | |
| | Wall hang LT 236C(TS105B13+TS119AS5+TX709AV1N) | |
| | U/d Counter type LT 546(TS105B13+TS119AS5+TX709AV1N) | |
| | Service sink SS558S (Ceasar) | |
| | Single Faucet for Sink TS124B13 | |
| | Pantry Sink with cabinet | L=1200L |
| | Mixing Faucet for Sink TX604KDN | |
| | SUS Sink for café counter | |
| | Single Faucet for Sink TS124B13 | |
| | Elec. water heater 30 Liter Titec pro(Ariston) | |
| | Hose | |
| | Chippings for above | |
| | Consummable materials | |
| | Others | |
| | | |
| | Materials total | |
| | | |
| | Labor cost | |
| | Testing and commissioning | |

| DETAIL ESTIMATION | | |
|--------------------------|--------------------------------|-----------------------------|
| No. | DESCRIPTION | |
| | Transportation Fee | |
| | SUB-TOTAL (1,3) | |
| 1,4 | LPG PIPING FOR KITCHEN | |
| | LPG yard | (for 12pcs of Gas cylinder) |
| | C/w: Roof, floor, fence, door | |
| | Dimension: 5200Lx 1200Dx 2000H | |
| | Gas cylinders 24 botles | (12 botles * 2 units) |
| | Gas header | |
| | High pressure hose to cylinder | 30K |
| | Seamless Steel Pipe 15Ax2.77t | |
| | Seamless Steel Pipe 20Ax2.87t | |
| | Seamless Steel Pipe 25Ax3.38t | |
| | Seamless Steel Pipe 40Ax3.68t | |
| | Fittings for above | |
| | Support for above | |
| | BV (Screw End) 15A | 30K |
| | BV (Screw End) 40A | 30K |
| | Regulator 120kg/hr | |
| | BV (Screw End) 15A | 10K |
| | BV (Screw End) 20A | 10K |
| | BV (Screw End) 25A | 10K |
| | BV (Screw End) 40A | 10K |
| | Pressure Gauge F 50 | |
| | Paiting for above | |
| | Consummable materials | |
| | Safety licience | |
| | Others | |
| | Materials total | |
| | Labor cost | |
| | Testing and commisioning | |
| | Transportation Fee | |
| | SUB-TOTAL (1,4) | |
| 1,5 | KITCHEN EQUIPMENT | (600 Meals x 3 shifts) |
| a | Kitchen equipments | |

| DETAIL ESTIMATION | | |
|--------------------------|--|--------------------------|
| No. | DESCRIPTION | |
| Storage | | |
| S01 | S/s 4-level platted shelf | 1 500 x 500 x 1 520mm. |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | With s/s 4-level platted shelf | |
| S02 | Loading trolley | 600 x 900 x 190/900 |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| S03 | Rice and flour bin cart | 500 x 700 x 750mm. |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| Preparation Area | | |
| P01 | Up right Chiller 4 Doors | 1,340x840x2,110mm |
| | Made of stainless steel AISI- 304 | |
| | capacity : 1 200 litres | |
| | Operating temperature: -0 oC~ +10oC | |
| P02 | Up right freezer 4 doors | 1,340x840x2,110mm |
| | Made of stainless steel AISI- 304 | |
| | capacity : 1 200 litres | |
| | Operating temperature: -10 oC~ -20 oC | |
| P03 | S/s soiled dish table with 01 hole for garbage(left) | |
| | 1300 x 750 x 850/950mm. | |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | With one hole for garbage | |
| P04 | Mobile garbage bin cart | D450 x 600 mm |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | With drainage hole in the bottom. | |
| P04* | Wall mounted shelf | 1 300 x 350 x 250mm. |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | With one-level platted shelf | |
| P05 | S/s single big sink table | 1 200 x 750 x 850/950mm. |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | Sink dim: 800 x 450 x 300mm | |
| | C/w faucet, overflow pipe, drainage | |
| P06 | S/s worktop table withundershelf | |
| | 1 500 x 750 x 850/950mm. | |

| DETAIL ESTIMATION | | |
|--------------------------|---|--------------------------|
| No. | DESCRIPTION | |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | With 01 undershelf | |
| P07 | Wall mounted shelf | 1 500 x 500 x 250mm. |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | With one-level platted shelf | |
| P08 | S/s double big sink table | 1 800 x 750 x 850/950mm. |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | Sink dim: 800 x 450 x 300mm | |
| | C/w faucet, overflow pipe, drainage | |
| P09 | Wall mounted shelf | 1 800 x 500 x 250mm. |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | With one-level platted shelf | |
| P10 | S/s worktop table withundershelf w/Plastic chop block | |
| | 1 800 x 1900 x 850 | |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | Ổ 02 phía có 01 phần thớt thái mặt nhựa. | |
| P11 | Chopping block | |
| | 440 x 440 x 750mm. | |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | With 01 undershelf | |
| Cooking area | | |
| C01 | Double gas kwalie range | 1 500x900 x 800/1150 |
| | ISO 9001- 2000 certified | |
| | Body made of stainless steel | |
| | Gas consumption: 2 x 24 000 kcal/h | |
| | Gas pressure: 500 mbar | |
| | With water and drainage piping system and top water feed. | |
| C02 | Neutral unit to form asia | 500 x 900 x850/1150mm |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | Front shape as kitchen Asia kitchen equipment shape | |
| C03 | Exhaust hood w/greasefilter | |
| | 3 650 x 12000 x 600mm. | |
| | ISO 9001 - 2000 Certified | |

| DETAIL ESTIMATION | | |
|--------------------------|-----------------------------------|------------------------|
| No. | DESCRIPTION | |
| | Made of stainless steel | |
| C05 | Gas stock pot stove double burner | |
| | 1400 x 700 x 450/1150 | |
| | ISO 9001- 2000 certified | |
| | Body made of stainless steel | |
| | Gas consumption: 2x23 000 kcal/h | |
| C06 | Gas cooker | |
| | Capacity: 7 Kg | |
| | Gas consumption: 7000kcal/h | |
| | Ignition by battery | |
| C07 | S/s worktop table withundershelf | |
| | 1 800 x 750 x 850/950mm. | |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | With 01 undershelf | |
| C08 | S/s worktop table withundershelf | |
| | 1 500 x 750 x 850/950mm. | |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | With 01 undershelf | |
| C09 | Exhaust hood w/greasefilter | |
| | 2 300 x 12000 x 600mm. | |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | Distribution area | |
| D01 | S/s worktop table withundershelf | |
| | 1 500 x 750 x 850mm. | |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | With 01 undershelf | |
| D02 | S/s 4-level slatted shelf | 1 200 x 500 x 1 520mm. |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | With s/s 4 -level slatted shelf | |
| D03 | S/s worktop table withundershelf | |
| | 1 800 x 750 x 850mm. | |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | With 01 undershelf | |
| D04 | Neutral unit | 820 x 750 x 220mm |

| DETAIL ESTIMATION | | |
|--------------------------|--|--------------------------|
| No. | DESCRIPTION | |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | Front shape as kitchen Western kitchen equipment shape | |
| | Dishwashing Area | |
| W01 | S/s 4-level slatted shelf | 1 500 x 500 x 1 520mm. |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | With s/s 4 -level slatted shelf | |
| W03 | S/s single big sink table | 1 500 x 750 x 850/950mm. |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | Sink dim: 650 x 450 x 300mm | |
| | C/w faucet, overflow pipe, drainage | |
| W04 | Wall mounted shelf | 1 500 x 500 x 250mm. |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | With one-level platted shelf | |
| W05 | S/s double sink table | 1 800 x 750 x 850/950mm. |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | Sink dim: 650 x 450 x 300mm | |
| | C/w faucet, overflow pipe, drainage | |
| W06 | Wall mounted shelf | 1 800 x 350 x 250mm. |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | With one-level platted shelf | |
| W07 | S/s soiled dish table with 02 holes for garbage | |
| | 1750 x 750 x 850/950mm. | |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | With one hole for garbage | |
| W08 | Mobile garbage bin cart | D450 x 600 mm |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | With drainage hole in the bottom. | |
| W09 | Neutral unit | 1130 x 750 x220mm |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | Front shape as kitchen Western kitchen equipment shape | |
| W10 | S/s soiled dish table with 02 holes for garbage | |

| DETAIL ESTIMATION | | |
|--------------------------|-------------------------------------|--------------------------|
| No. | DESCRIPTION | |
| | 2200 x 750 x 850/950mm. | |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | With one hole for garbage | |
| W11 | S/s single big sink table | 1 500 x 750 x 850/950mm. |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | Sink dim: 650 x 450 x 300mm | |
| | C/w faucet, overflow pipe, drainage | |
| W12 | S/s worktop table withundershelf | |
| | 1 500 x 750 x 850/950mm. | |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | With 01 undershelf | |
| W13 | SS Tank cart | 700 x 600 x 700mm. |
| | ISO 9001 - 2000 Certified | |
| | Made of stainless steel | |
| | | |
| b | Piping connection | |
| | PVC Pipe 20Ax3.0t | |
| | Fittings for above | |
| | Support for above | |
| | PVC Pipe 50Ax2.9t | |
| | Fittings for above | |
| | Support for above | |
| | GV (Screw End) 20A | |
| | Regulator for rice cooker | |
| | Hose connection | |
| | Consummable materials | |
| | Others | |
| | | |
| | Materials total | |
| | | |
| | Labor cost | |
| | Testing and commisioning | |
| | Transportation Fee | |
| | | |
| | SUB-TOTAL (1,5) | |
| | | |
| 1,6 | FIRE HYDRANT SYSTEM | |

| DETAIL ESTIMATION | |
|--------------------------|--|
| No. | DESCRIPTION |
| | Received water tank+FF tank, V=280m ³ |
| | Eletrical fire fighting pump |
| | Water cap.:1200L/min at 60mhd |
| | Engine fire fighting pump |
| | Water cap.:1200L/min at 60mhd |
| | Priming water tank V=100L |
| | Control panel for FF pump |
| | GIP 50Ax3.60t |
| | GIP 65Ax3.60t |
| | GIP 100Ax4.50t |
| | Fittings for above |
| | Support for above |
| | GV (Flange End) 65A |
| | GV (Flange End) 100A |
| | GV (Screw End) 20A |
| | GV (Screw End) 25A |
| | GV (Screw End) 32A |
| | GV (Screw End) 40A |
| | CV (Screw End) 20A |
| | CV (Flange End) 65A |
| | CV (Flange End) 100A |
| | BV (Screw End) 20A |
| | Float Valve 20A |
| | Foot Valve 100A |
| | Air Release Valve 20A |
| | Y-Strainer (Flange End) 100A |
| | F.J. (SUS Type) 100A |
| | Pressure Gauge F 100 |
| | Suction hood |
| | Concrete for protection |
| | 200x200 |
| | Indoor Hydrant Box 700x900x220 |
| | Hose F 50 x 20m(Germany-Sakura) |
| | Outdoor Hydrant Box 700x900x220 |
| | Noozle F16 |
| | Hose F 65 x 20m(Germany-Sakura) |
| | Noozle F13 |
| | Noozle F16 |
| | Instruction Plate |
| | Receiving Port(With CV) |

| DETAIL ESTIMATION | | |
|--------------------------|---|--|
| No. | DESCRIPTION | |
| | Angle valve 50A(Copper-TQ) | |
| | Painting for above | |
| | Consummable materials | |
| | Licence fee | |
| | Others | |
| | | |
| | Materials total | |
| | Labor cost | |
| | Testing and commisioning | |
| | Transportation Fee | |
| | | |
| | SUB-TOTAL (1,6) | |
| | | |
| 1,7 | FIRE EXTINGUISHER | |
| | ABC Dry Extinguisher 4Kg(V-Senji TQ) | |
| | ABC Dry Extinguisher 8Kg(V-Senji TQ) | |
| | ABC Dry Extinguisher 35Kg /w Wheels(V-Senji TQ) | |
| | CO2 Extinguisher 3Kg(V-Senji TQ) | |
| | CO2 Extinguisher 5Kg(V-Senji TQ) | |
| | Hanger and support | |
| | Licence fee | |
| | Others | |
| | | |
| | Materials total | |
| | Labor cost | |
| | Testing and commisioning | |
| | Transportation Fee | |
| | | |
| | SUB-TOTAL (1,7) | |
| | | |
| 1,8 | WASTE WATER TREATMENT | |
| | Waste water treatment | |
| | Raw water is domestic waste water | |
| | Total person calculation: 2400 persons | |
| | Dischager water is Class A | |
| | Transportation and installation | |
| | Designed fee | |
| | | |
| | Materials total | |

| DETAIL ESTIMATION | | |
|--------------------------|------------------------------------|--|
| No. | DESCRIPTION | |
| | | |
| | | |
| | Labor cost | |
| | Testing and commisioning | |
| | Transportation Fee | |
| | | |
| | SUB-TOTAL (1,8) | |
| | | |
| | | |
| 2 | A/C AND VENTILATION WORK | |
| 2,1 | VENTILATION SYSTEM | |
| | <i>Wall mounted exhaust fan</i> | |
| | Air cap.:546m3/hr | |
| | Air cap.:840m3/hr | |
| | Air cap.:990m3/hr | |
| | Support for above | |
| | <i>Ceiling fan</i> | |
| | Air cap.:80m3/hr-40Pa | |
| | Support for above | |
| | <i>Inline-fan</i> | |
| | Air cap.:240m3/hr-150Pa | |
| | Air cap.:1300m3/hr-150Pa | |
| | Air cap.:3650m3/hr-150Pa | |
| | Air cap.:3900m3/hr-150Pa | |
| | Support for above | |
| | <i>Axial fan wall mounted type</i> | |
| | Air cap.:800m3/hr-50Pa | |
| | Air cap.:1500m3/hr-50Pa | |
| | Air cap.:3000m3/hr-50Pa | |
| | Air cap.:3600m3/hr-50Pa | |
| | Air cap.:4500m3/hr-50Pa | |
| | Air cap.:5000m3/hr-50Pa | |
| | Air cap.:6000m3/hr-50Pa | |
| | Support for above | |
| | <i>Centrifugal fan</i> | |
| | Air cap.:8000m3/hr-400Pa | |
| | Support for above | |
| | Galvanized Steel Duct 0.6t | |
| | Fittings for above | |
| | Support for above | |
| | Spiral Duct 150 F | |

| DETAIL ESTIMATION | | |
|--------------------------|---|--|
| No. | DESCRIPTION | |
| | Fittings for above | |
| | Vent Cap 150 F | |
| | BY GI SHEET FINISHED BY POWDER COATING | |
| | Weather Cover 300x300 | |
| | Weather Cover 350x350 | |
| | Weather Cover 400x400 | |
| | Weather Cover 450x450 | |
| | Weather Cover 500x500 | |
| | Weather Cover 600x600 | |
| | Weather Cover 800x500 | |
| | VCD (VOLUME CONTROL DAMPER) | |
| | VCD f150 | |
| | VCD 250x250 | |
| | VCD 400x400 | |
| | EA Grill (Double Layer) 600x600 | |
| | EA Grill (Single Layer) 600x600 | |
| | Box for Difuser 600x600x600 | |
| | G.W. Sheet /w Al. foil 32Kg/m ³ x 25t | |
| | Flexible Duct /w Insulation 150 F | |
| | Flexible Duct 250 F | |
| | Canvas | |
| | Painting for above | |
| | Consummable materials | |
| | Others | |
| | | |
| | Materials total | |
| | | |
| | Labor cost | |
| | Testing and commisioning | |
| | Transportation Fee | |
| | | |
| | SUB-TOTAL (2,1) | |
| | | |
| | | |
| 2,2 | AIR CONDITIONING SYSTEM | |
| a | Air conditioner for Office and others | |
| | <i>Wall mounted, Cooling only Air conditioner</i> | |
| | Cooling load: 2250 Kcla/hr | |
| | Cooling load: 4500 Kcla/hr | |
| | Cooling load: 6000 Kcla/hr | |

| | DETAIL ESTIMATION | |
|-----|--|--|
| No. | DESCRIPTION | |
| | <i>Ceiling cassette Cooling only Air conditioner</i> | |
| | Cooling load: 6000 Kcla/hr | |
| | Cooling load: 11200 Kcla/hr | |
| | <i>Ceiling cassette heatpump Air conditioner</i> | |
| | Cooling load: 4500 Kcla/hr | |
| | Cooling load: 6000 Kcla/hr | |
| | Cooling load: 9000 Kcla/hr | |
| | Cooling load: 11200 Kcla/hr | |
| | <i>Ceiling suspended Cooling only Air conditioner</i> | |
| | Cooling load: 9000 Kcla/hr | |
| | Cooling load: 11200 Kcla/hr | |
| | <i>Ceiling conceal Cooling only Air conditioner</i> | |
| | Cooling load: 30100 Kcla/hr | |
| | <i>Floor mounted Cooling only Air conditioner</i> | |
| | Cooling load: 97500 Kcla/hr | |
| | Copper pipe F6.35x0.81t | |
| | Copper pipe F9.52x0.81t | |
| | Copper pipe F12.70x0.81t | |
| | Copper pipe F15.88x0.81t | |
| | Copper pipe F19.05x0.81t | |
| | Copper pipe F22.22x0.81t | |
| | Copper pipe F34.93x0.81t | |
| | Copper pipe F41.28x1.00t | |
| | Fittings for above | |
| | Support for above | |
| | PVC Pipe 20Ax3.0t | |
| | PVC Pipe 32Ax2.5t | |
| | PVC Pipe 40Ax2.9t | |
| | Fittings for above | |
| | Support for above | |
| | Insulation for Copper Pipe F6.35x19.0t | |
| | Insulation for Copper Pipe F9.52x19.0t | |
| | Insulation for Copper Pipe F12.70x19.0t | |
| | Insulation for Copper Pipe F15.88x19.0t | |
| | Insulation for Copper Pipe F19.05x19.0t | |
| | Insulation for Copper Pipe F22.22x19.0t | |
| | Insulation for Copper Pipe F34.93x19.0t | |
| | Insulation for Copper Pipe F41.28x19.0t | |
| | Insulation for Copper Pipe F28.58x10.0t | |
| | Insulation for Copper Pipe F34.93x10.0t | |

| | DETAIL ESTIMATION | |
|-----|--|--|
| No. | DESCRIPTION | |
| | Insulation for Copper Pipe F50.80x10.0t | |
| | Trunking | |
| | 500Wx150H | |
| | 150Wx120H | |
| | Electrical Control Cable 1.5mm ² x2c | |
| | Electrical Cablbe 3x2.5mm ² +1.5mm ² E | |
| | Electrical Cablbe 3x6.0mm ² +4.0mm ² E | |
| | Gas R22 charging | |
| | Foundation for out door and indoor unit | |
| | Dimension: 900L*600W*200H | |
| | Dimension: 1200L*1200W*200H | |
| | Dimension: 2800Lx2450Wx200H | |
| | Dimension: 2000Lx1250Wx200H | |
| | Galvanized Steel Duct 0.6t | |
| | Galvanized Steel Duct 0.8t | |
| | Galvanized Steel Duct 1.0t | |
| | Fittings for above | |
| | Support for above | |
| | G.W. Sheet /w Al. foil 32Kg/m ³ x 50t | |
| | Chamber box 1900Lx1200Wx650H | |
| | VCD 800x650 | |
| | VCD 800x300 | |
| | SA Grill (Double Layer) 800x300 | |
| | RA Grill (Double Layer) 1350x900 | |
| | VCD 400x400 | |
| | Weather Cover 450x450 | |
| | OA Filter box 450x450 | |
| 34 | Consumable Material | |
| 30 | Painting Work | |
| 37 | Safety licience | |
| 34 | Others | |
| | | |
| | Materials total | |
| | | |
| 39 | Labor cost | |
| 35 | Testing and commisioning | |
| 36 | Transportation Fee | |
| | | |
| | SUB-TOTAL (2,2) | |
| | | |

| DETAIL ESTIMATION | | |
|--------------------------|----------------------------------|------|
| No. | DESCRIPTION | |
| | | |
| 3 | UTILITY WORK | |
| 3,1 | WATER SUPPLY SYSTEM | |
| | WATER SUPPLY SYSTEM | |
| | Others | |
| | | |
| | Materials total | |
| | | |
| | Labor cost | |
| | Testing and commisioning | |
| | Transportation Fee | |
| | | |
| | SUB-TOTAL (3,1) | |
| | | |
| 3,2 | COMPRESSED AIR SYSTEM | |
| | Oil flooded screw Air compressor | |
| | Capacity: 37kw | |
| | Air cap.: 6.1m ³ /min | |
| | Pressure:7.0kgf/cm ² | |
| | Air dryer | |
| | Air cap.: 7.6m ³ /min | |
| | Pre-filter | |
| | After filter | |
| | Air tank 2000L | |
| | Header D150-L1200 | |
| | Auto drain 20A | |
| | Foundation for Compressor | |
| | Dimension: 1900L*1100W*200H | |
| | Foundation for Air dryer | |
| | Dimension: 1100L*400W*200H | |
| | Foundation for air tank | |
| | Dimension: 1300L*1300W*200H | |
| | GIP 100Ax4.50t | |
| | GIP 50Ax3.60t | |
| | GIP 40Ax3.20t | |
| | GIP 25Ax3.20t | |
| | Fittings for above | |
| | Support for above | |
| | Coupler | 40SM |
| | BV (Flange End) 100A | |

| DETAIL ESTIMATION | | |
|--------------------------|---|--|
| No. | DESCRIPTION | |
| | BV (Screw End) 50A | |
| | BV (Screw End) 25A | |
| | GV (Screw End) 20A | |
| | GV (Screw End) 15A | |
| | Pressure Gauge F 100 | |
| | Drain trap | |
| | Galvanized Steel Duct 0.8t | |
| | WEATHER COVER | |
| | BY GI SHEET FINISHED BY POWDER COATING | |
| | Weather Cover 650x650 | |
| | Paiting for above | |
| | Consummable materials | |
| | Painting for above | |
| | Safety licience | |
| | Others | |
| | | |
| | Materials total | |
| | | |
| | Labor cost | |
| | Testing and commisioning | |
| | Transportation Fee | |
| | | |
| | SUB-TOTAL (3,2) | |
| | | |
| 3,3 | STEAM SUPPLY SYSTEM | |
| | STEAM SUPPLY SYSTEM | |
| | Others | |
| | | |
| | Materials total | |
| | | |
| | Labor cost | |
| | Testing and commisioning | |
| | Transportation Fee | |
| | | |
| | SUB-TOTAL (3,3) | |
| | | |
| 3,4 | LPG SYSTEM | |
| | LPG SYSTEM | |
| | Others | |

III.Mechanical

| DETAIL ESTIMATION | | |
|--------------------------|--------------------------|--|
| No. | DESCRIPTION | |
| | | |
| | | |
| | Materials total | |
| | | |
| | Labor cost | |
| | Testing and commisioning | |
| | Transportation Fee | |
| | | |
| | SUB-TOTAL (3,4) | |
| | | |
| | | |
| 3,5 | SPOT VENTILATION SYSTEM | |
| | SPOT VENTILATION SYSTEM | |
| | Others | |
| | | |
| | Materials total | |
| | | |
| | Labor cost | |
| | Testing and commisioning | |
| | Transportation Fee | |
| | | |
| | SUB-TOTAL (3,5) | |
| | | |
| | | |