

JADUAL KADAR HARGA (LAIN-LAIN ITEM)**CADANGAN KONTRAK PERKHIDMATAN DAN PENYELENGGARAAN SISTEM PENYAMAN UDARA UNTUK TEMPOH SATU (1) TAHUN UITM CAWANGAN KELANTAN KAMPUS MACHANG KELANTAN DARUL NAIM**

(Harga adalah termasuk kos membekal, menghantar, memasang, dan mengujilari pada setiap alat ganti)

No.	ITEM DESCRIPTION	UNIT	BRAND	TOTAL PRICE (RM)
	<i>OTHER ITEMS (in-door accessory)</i>			
1	To replace new Blower Fan Motor c/w testing and commissioning. a) 3.5 hp b) 4.0 hp c) 5.0 hp d) 6.0 hp	Nos. Nos. Nos. Nos.		
2	To replace PC Board for Non-Inverter compressor (indoor) a) 3.5 hp b) 4.0 hp c) 5.0 hp d) 6.0 hp	Nos. Nos. Nos. Nos.		
3	To replace PC Board for inverter compressor (indoor) a) 3.5 hp b) 4.0 hp c) 5.0 hp d) 6.0 hp	Nos. Nos. Nos. Nos.		
4	To replace capillary tube c/w strainer: a) 1.0 hp b) 1.5 hp c) 2.0 hp d) 2.5 hp e) 3.0 hp f) 3.5 hp g) 4.0 hp h) 5.0 hp i) 6.0 hp	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.		
5	To replace standard air filtering element for: a) 1.0 hp b) 1.5 hp c) 2.0 hp d) 2.5 hp e) 3.0 hp f) 3.5 hp g) 4.0 hp h) 5.0 hp i) 6.0 hp	Set Set Set Set Set Set Set Set Set Set		
SUB-TOTAL to collection to page E13/18				

No.	ITEM DESCRIPTION	UNIT	BRAND	TOTAL PRICE (RM)
	OTHER ITEMS (in-door accessory)			
6	Front Casing for all model of Wall Type Split Unit: a) 1.0 Hp b) 1.5 Hp c) 2.0 Hp d) 2.5 Hp	Nos. Nos. Nos. Nos.		
7	To replace drain hose for all type	Nos.		
8	To replace blower wheel fan for i. Wall Mounted type (1.0hp - 3.5hp) ii. Ceiling suspended type (1.0hp - 6.0hp) iii. Ceiling cassette type (1.0hp - 6.0hp)	Nos. Nos. Nos.		
9	To replace louver motor	Nos.		
10	To replace swing flap a) wall mounted type b) ceiling exposed/ suspended type c) ceiling cassette type	Nos. Nos. Nos.		
11	To replace grill filter: a) wall mounted type b) ceiling exposed/ suspended type c) ceiling cassette type	Nos. Nos. Nos.		
12	To replace cooling coil evaporator a) 1.0 hp b) 1.5 hp c) 2.0 hp d) 2.5 hp e) 3.0 hp f) 3.5 hp g) 4.0 hp h) 5.0 hp i) 6.0 hp	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.		
13	To supply & install split unit Airconditioning system Wall Mounted Indoor Unit c/w accessories. a) 1.0 hp b) 1.5 hp	Nos. Nos.		
14	To supply & install split unit Airconditioning system Wall Mounted Outdoor Unit c/w accessories. a) 1.0 hp b) 1.5 hp	Nos. Nos.		
SUB-TOTAL to collection to page E13/18				

No.	ITEM DESCRIPTION	UNIT	BRAND	TOTAL PRICE (RM)
	OTHER ITEMS (out-door Accessories)			
15	To replace new Condenser Fan Motor c/w testing and commissioning: a) 3.5 hp b) 4.0 hp c) 5.0 hp d) 6.0 hp	Nos. Nos. Nos. Nos.		
16	To replace Sight glass: a) 3/8" b) 1/2"	Nos. Nos.		
17	Replace propeller fan blade: a) 1.0 hp b) 1.5 hp c) 2.0 hp d) 2.5 hp e) 3.0 hp f) 3.5 hp g) 4.0 hp h) 5.0 hp i) 6.0 hp	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.		
18	To replace Inverter Compressor: a) 3.5 hp b) 4.0 hp c) 5.0 hp d) 6.0 hp	Nos. Nos. Nos. Nos.		
19	To replace Hermatic Rotary / Reciprocating Compressor: a) 3.5 hp b) 4.0 hp c) 5.0 hp d) 6.0 hp	Nos. Nos. Nos. Nos.		
20	To replace PC Board for Non- inverter compressor (<u>outdoor</u>) a) 3.5 hp b) 4.0 hp c) 5.0 hp d) 6.0 hp	Nos. Nos. Nos. Nos.		
21	To replace service valve a) Access valve (1/4) b) Access valve (3/8) c) Access valve (1/2) d) Access valve (5/8)	Nos. Nos. Nos. Nos.		
22	To replace hand valve 3/8"	Nos.		
SUB-TOTAL to collection to page E13/18				

No.	ITEM DESCRIPTION	UNIT	BRAND	TOTAL PRICE (RM)
	OTHER ITEMS (out-door Accessories)			
23	To replace filter dryer			
	a) 3/8"	Nos.		
	b) 1/2"	Nos.		
24	To Vacuum & top-up Refrigerant R-22 (To install new compressor)			
	a) 1.0 - 1.5 Hp	per refill		
	b) 2.0 - 2.5 Hp	per refill		
	c) 3.0 - 3.5 Hp	per refill		
	d) 4.0 Hp	per refill		
	e) 5.0 Hp	per refill		
	f) 6.0 Hp	per refill		
25	To Vacuum & top-up Refrigerant R-410a (To install new compressor)			
	a) 1.0 - 1.5 Hp	per refill		
	b) 2.0 - 2.5 Hp	per refill		
	c) 3.0 - 3.5 Hp	per refill		
	d) 4.0 Hp	per refill		
	e) 5.0 Hp	per refill		
	f) 6.0 Hp	per refill		
26	To Vacuum & top-up Refrigerant R-32 (To install new compressor)			
	a) 1.0 - 1.5 Hp	per refill		
	b) 2.0 - 2.5 Hp	per refill		
	c) 3.0 - 3.5 Hp	per refill		
	d) 4.0 Hp	per refill		
	e) 5.0 Hp	per refill		
	f) 6.0 Hp	per refill		
27	To supply & Install Fin condenser coil unit for outdoor unit			
	a) 1.0 hp	Nos.		
	b) 1.5 hp	Nos.		
	c) 2.0 hp	Nos.		
	d) 2.5 hp	Nos.		
	e) 3.0 hp	Nos.		
	d) 4.0 Hp	Nos.		
	e) 5.0 Hp	Nos.		
	f) 6.0 Hp	Nos.		
28	To Vacuum & top-up Refrigerant R22/R410a/R32a			
	a) 1.0 - 1.5 Hp	Nos.		
	b) 2.0 - 2.5 Hp	Nos.		
	c) 3.0 - 3.5 Hp	Nos.		
	d) 4.0 Hp	Nos.		
	e) 5.0 Hp	Nos.		
	f) 6.0 Hp	Nos.		
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No.	ITEM DESCRIPTION	UNIT	BRAND	TOTAL PRICE (RM)
	OTHER ITEMS (Electrical accessories)			
29	To replace control relay 240 V AC a) 8 pin b) 12 pin	Pcs Pcs		
30	Galvanised trunking a) 1" x 2" b) 2" x 2" c) 2" x 4" d) 3" x 4"	Meter Meter Meter Meter		
31	PVC trunking a) 1" x 2" b) 2" x 2" c) 2" x 4" d) 3" x 4" e) 5" x 4"	Meter Meter Meter Meter Meter		
32	PVC cable a) 1.5 mm ² b) 2.5 mm ² c) 4.0 mm ² d) 6.0 mm ²	Meter Meter Meter Meter		
33	To replace control relay 24 V DC a) 8 pin b) 12 pin	Pcs Pcs		
34	To replace timer relay a) 60 second b) 60 minute c) 24 hours d) 7 days	Nos. Nos. Nos. Nos.		
35	To replace MCB a) 6A b) 16A c) 18A d) 20A e) 30A/32A	Nos. Nos. Nos. Nos. Nos.		
36	To replace MCCB a) 100 A TPN b) 75 A TPN c) 63 A TPN d) 40 A TPN e) 30 A TPN	Nos. Nos. Nos. Nos. Nos.		
SUB-TOTAL to collection to page E13/18				

No.	ITEM DESCRIPTION	UNIT	BRAND	TOTAL PRICE (RM)
	OTHER ITEMS (Electrical accessories)			
37	To replace Isolator a) 30A TPN b) 40 A TPN c) 60 A TPN	Nos. Nos. Nos.		
38	To replace electrical contactor for motor a) 10 Amp b) 15 Amp c) 20 Amp d) 30 Amp	Nos. Nos. Nos. Nos.		
39	To replace indicating (pilot) light bulb c/w housing	Nos.		
40	To replace wire cable in metal conduit or trunking c/w fittings per meter run a) 3 x 1.5mm ² PVC c/w earthing b) 3 x 2.5mm ² PVC c/w earthing c) 4 x 4.0mm ² PVC c/w earthing d) 4 x 6.0mm ² PVC c/w earthing e) 4 x 10.0mm ² PVC c/w earthing f) 4 x 16.0mm ² PVC c/w earthing g) 4 x 25.0mm ² PVC c/w earthing	Meter Meter Meter Meter Meter Meter Meter		
41	To replace a) Volt Meter b) Ammeter c) Over Current Relay d) ELR c/w testing & result	Nos. Nos. Nos. Nos.		
42	To replace Switches a) Toggle Switch b) On/Off Push Button	Nos. Nos.		
43	PLC (On/Off module) all type Air Cond Board	set		
44	To replace Auto/Off/Manual Selector Switch	Nos.		
45	To replace Thermostat: a) Conventional operated Thermostat b) Electronic operated Thermostat	Nos. Nos.		
46	To replace 15 Amp plug top	Nos.		
47	To replace 15 Amp socket outlet c/w housing box	Nos.		
SUB-TOTAL to collection to page E13/18				

No.	ITEM DESCRIPTION	UNIT	BRAND	TOTAL PRICE (RM)
	OTHER ITEMS (Electrical accessories)			
48	To replace complete set new Auto-trans switch board c/w On/Off push,voltmeter, Amp meter,button, MCB,MCCB & other accessories: a) 3.7 KW to 6.0 KW (2 Autotrans) b) 6.1 KW to 7.5 KW (2 Autotrans)	Set Set		
49	MCB 24 hrs timer, starter and metalclad board c/w wiring panel and accessories	Set		
50	To replace transformer c/w power wiring: a) 3.75 kW b) 5.5 kW c) 7.5 kW d) 11.5 kW e) 15.0 kW f) 22.0 kW	Nos. Nos. Nos. Nos. Nos. Nos.		
51	To replace overload contactor	Nos.		
52	To replace ELCB a) TPN 400V, ELCB 4P 60A/63A b) SPN 240V, ELCB 2P 60A/63A	Nos. Nos.		
53	To replace wire armoured cable in metal conduit or trunking,nylon c/w accessories & fittings permeter run. a) PVC/SWA/PVC 2.5 mm persegi 2 teras. b) PVC/SWA/PVC 6.0mm persegi 4 teras. c) PVC/SWA/PVC 10.0mm persegi 4 teras. d) PVC/SWA/PVC 16.0mm persegi 4 teras. e) PVC/SWA/PVC 25.0mm persegi 4 teras.	Meter Meter Meter Meter Meter		
54	Supply and Install Panel Control Elektrik (DFB) (Metal Clad) Three phase c/w Ammeter,Voltmeter MCCB,ELCB, MCB and accessories a) 4 way b) 8 Way c) 10 way d) 12 way	Set Set Set Set		
55	To calibrate, testing & comossioning for control panel aircond	Nos.		
56	To supply & Install Exhaust Fan c/w bracket anda ccessories -wall/ceiling a) 8 inci b) 10 inci c) 12 inci d) 16 inci	Set Set Set Set		
SUB-TOTAL to collection to page E13/18				

No.	ITEM DESCRIPTION	UNIT	BRAND	TOTAL PRICE (RM)
	OTHER ITEMS (piping)			
57	Thermoflex Pipe Insulation			
	a) Pipe Diameter 1/4"	Meter		
	b) Pipe Diameter 3/8"	Meter		
	c) Pipe Diameter 1/2"	Meter		
	d) Pipe Diameter 3/4"	Meter		
	e) Pipe Diameter 1"	Meter		
58	To replace PVC drain pipe			
	a) Diameter 1/2"	Meter		
	b) Diameter 3/4"	Meter		
	c) Diameter 1"	Meter		
59	Refrigerant Copper Pipe (for R-22 & R-134a)			
	a) Diameter 1/4"	Meter		
	b) Diameter 3/8"	Meter		
	c) Diameter 1/2"	Meter		
	d) Diameter 5/8"	Meter		
	e) Diameter 3/4"	Meter		
	f) Diameter 1" (hard copper)	Meter		
	g) Diameter 1½ (hard copper)	Meter		
60	Refrigerant Copper Pipe (for R-410a & R32)			
	a) Diameter 3/8"	Meter		
	b) Diameter ½"	Meter		
	c) Diameter 1/2"	Meter		
	d) Diameter 5/8"	Meter		
	e) Diameter 3/4"	Meter		
	f) Diameter 1" (hard copper)	Meter		
	g) Diameter 1½ (hard copper)	Meter		
61	G.I Conduit			
	a) 1/2"	Meter		
	b) 3/4"	Meter		
	c) 1"	Meter		
62	Flexible Conduit (coated insulation)			
	a) 1/2"	Meter		
	b) 3/4"	Meter		
	c) 1"	Meter		
63	Flare Nut			
	a) 1/4"	Pcs		
	b) 3/8"	Pcs		
	c) 1/2"	Pcs		
	d) 5/8"	Pcs		
	e) 3/4"	Pcs		
SUB-TOTAL to collection to page E13/18				

No.	ITEM DESCRIPTION	UNIT	BRAND	TOTAL PRICE (RM)
	OTHER ITEMS (other)			
64	To complete dismantle split unit airconditioning system and transport to Store as directed by the S.O.			
	a) Window Unit	Nos.		
	b) 1.0 hp	Nos.		
	c) 1.5 hp	Nos.		
	d) 2.0 hp	Nos.		
	e) 2.5 hp	Nos.		
	a) 3.0 hp	Nos.		
	b) 3.5 hp	Nos.		
	c) 4.0 hp	Nos.		
	d) 5.0 hp	Nos.		
	e) 6.0 hp	Nos.		
65	To do static pressure copper pipe to check leakage with flushing nitrogen gas	Nos.		
66	To top-up Refrigerant R-134a			
	a) 1.0 - 1.5 Hp	per refill		
	b) 2.0 - 2.5 Hp	per refill		
	c) 3.0 - 3.5 Hp	per refill		
	d) 4.0 Hp	per refill		
	e) 5.0 Hp	per refill		
	f) 6.0 Hp	per refill		
67	Rental crane (10 tonne)	Day		
68	Rental crane (5 tonne)	Day		
69	To check, clean and overhaul air curtain	No.		
70	Daily wages of contractor staff per person			
	a) Engineer/ Supevisor	Per Hour		
	b) Tecnician/ Competent Person	Per Hour		
	c) Skilled worker	Per Hour		
	d) General worker	Per Hour		
71	Rental Stand Fan	per rent		
72	Rental Portable Airconditioner			
	a) 1 HP	per rent		
	b) 1.5 HP	per rent		
73	Penalty failing to wear uniform	per day		
74	Supply 13.5kg R-22 gas (disposable type) cylinder storage	cyl		
75	Supply 13.5kg R-410a gas (disposable type) cylinder storage	cyl		
SUB-TOTAL to collection to page E13/18				

No.	ITEM DESCRIPTION	UNIT	BRAND	TOTAL PRICE (RM)
	OTHER ITEMS (other)			
76	Supply 13.5kg R-32 gas (disposable type) cylinder storage	cyl		
77	Supply 13.5kg R-134a gas (disposable type) cylinder storage	cyl		
78	"Condition Audit" dan mengemaskini inventori	Nos		
79	To complete reinstall the existing split unit air-conditioning system: a) 1.0 Hp b) 1.5 Hp c) 2.0 Hp d) 2.5 Hp e) 3.0 Hp f) 3.5 Hp g) 4.0 Hp h) 5.0 Hp i) 6.0 Hp	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.		
80	To do overhaul c/w chemical cleaning for window unit	Nos.		
81	To do overhaul c/w chemical cleaning for indoor unit a) wall mounted type b) ceiling exposed/ suspended type c) ceiling cassette type	Nos. Nos. Nos.		
82	To do overhaul c/w chemical cleaning for outdoor unit :- a) 1.0 Hp b) 1.5 Hp c) 2.0 Hp d) 2.5 Hp e) 3.0 Hp f) 3.5 Hp g) 4.0 Hp h) 5.0 Hp i) 6.0 Hp j) 8.0 Hp k) 10.0 Hp l) 12.0 Hp m) 15.0 Hp	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.		
83	To replace high/low pressure switch	Nos.		
84	Rental Scaffolding 1-3 step 4-8 step	Day Day		
SUB-TOTAL to collection to page E13/18				

No.	ITEM DESCRIPTION	UNIT	BRAND	TOTAL PRICE (RM)
	ITEM(WATER COOLED & AIRCOOLED PACKGED UNIT)			
85	To replace standard air filtering element for AHU/Ducted Blower	M ²		
86	Replace Blower Fan for AHU/Ducted Blower a) 8 Hp b) 15 Hp c) 35 Hp d) 40Hp	Nos. Nos. Nos. Nos.		
87	To replace Hermatic Rotary / Reciprocating Compressor: a) 8Hp b) 10 Hp c) 12Hp c) 15Hp d) 25Hp	Nos. Nos. Nos. Nos. Nos.		
88	Replace Condenser Fan Motor: a) 8Hp b) 10 Hp c) 12Hp c) 15Hp	Nos. Nos. Nos. Nos.		
89	To replace capillary tube c/w strainer: a) 8Hp b) 10 Hp c) 12Hp c) 15Hp d) 25Hp	Nos. Nos. Nos. Nos. No.		
90	To replace belting for Motor AHU/FCU/Ducted Blower all size	Nos.		
91	To replace new Expansion Valve: a) 8Hp b) 10 Hp c) 12Hp c) 15Hp d) 25Hp	Nos. Nos. Nos. Nos. Nos.		
92	To supply and install new Electrical Motor & pump (centrifugal) 3 Phase a) 20 hp b) 25 hp b) 30 hp	Nos. Nos. Nos.		
SUB-TOTAL to collection to page E13/18				

No.	ITEM DESCRIPTION	UNIT	BRAND	TOTAL PRICE (RM)
	ITEM(WATER COOLED & AIRCOOLED PACKGED UNIT)			
93	To replace gasket for pump a) 20 hp b) 30 hp	Set Set		
94	The cost of rewinding the stator coil for following Three phase Electrical motor : - a) 3.0 - 6.0hp b) 6.1 - 10.0hp c) 10.1- 15.0hp d) 15.1 - 20.0hp e) 20.1 - 25.0hp f) 25.1 - 30.0hp	Set Set Set Set Set Set		
95	To replace rubber expansion Joint a) 2 inci b) 3 inci c) 4 inci d) 6 inci	Nos. Nos. Nos. Nos.		
96	To replace new electrical motor FCU/AHU/Ducted Blower complete alignment, testing and commissioning i. 1.0HP to 2.0Hp ii. 2.1HP to 3.0HP iii. 3.1HP to 5.0HP iv. 5.1HP to 7.0HP iv. 7.1HP to 10.0HP	Nos. Nos. Nos. Nos. Nos.		
97	To alligment electrical motor FCU/AHU/Ducted Blower complete testing & commissioning i. 1.0HP to 2.0Hp ii. 2.1HP to 3.0HP iii. 3.1HP to 5.0HP iv. 5.1HP to 7.0HP iv. 7.1HP to 10.0HP	Nos. Nos. Nos. Nos. Nos.		
98	To supply & install PU Foam Insulation per m ² c/w Dunlop Glue a) 12 mm thickness b) 25mm thickness	M ² M ²		
99	Replace Propeller Fan blade Motor: a) 8Hp b) 10 Hp c) 12Hp c) 15Hp	Nos. Nos. Nos. Nos.		
SUB-TOTAL to collection to page E13/18				

No.	ITEM DESCRIPTION	UNIT	BRAND	TOTAL PRICE (RM)
	ITEM(WATER COOLED & AIRCOOLED PACKGED UNIT)			
100	To replace PC Board for Non-Inverter compressor (Outdoor)	Nos.		
	a) 8Hp	Nos.		
	b) 10 Hp	Nos.		
	c) 12Hp	Nos.		
	c) 15Hp	Nos.		
101	To cleaning Fubric Ducting c/w rental scaffolding, clean by Vacuum ,Wash in washing machine & soap detergents.	Lot		
102	To top-up Refrigerant R-22			
	a) 8Hp	per kg		
	b) 10 Hp	per kg		
	c) 12Hp	per kg		
	c) 15Hp	per kg		
103	To top-up Refrigerant R-410A			
	a) 8Hp	per kg		
	b) 10 Hp	per kg		
	c) 12Hp	per kg		
	c) 15Hp	per kg		
104	Vacuum & To top-up Refrigerant R-22 (To install new compressor)			
	a) 8Hp	per kg		
	b) 10 Hp	per kg		
	c) 12Hp	per kg		
	c) 15Hp	per kg		
105	Vacuum & To top-up Refrigerant R-410A(To install new compressor)			
	a) 8Hp	per kg		
	b) 10 Hp	per kg		
	c) 12Hp	per kg		
	c) 15Hp	per kg		
106	Aluminium Foil c/w fibre glass insulation of thickness 2" 2lb.	m ²		
107	Flexible duct c/w fibre glass insulation of thickness 2" 2 lb.			
	a) 6" dia.	meter		
	b) 8" dia.	meter		
	c) 10" dia.	meter		
108	To Supply & Install Rectangular Ducting stainless steel c/w fitting and accessories.	m ²		
109	To supply & Install Variable Frequency Drive (VFD) for Motor Blower (Ducted Blower)	Nos		
110	To supply & install Belt Heater for compressor 8hp-15hp	Nos		
SUB-TOTAL to collection to page E13/18				

No.	ITEM DESCRIPTION	UNIT	BRAND	TOTAL PRICE (RM)
	ITEM(AIRCOOLED PACKGED UNIT)			
111	<u>MICROPROCESSOR & ACCESSORIES</u>			
	a. MICROPROCESSOR, NC25-4 KEYPAD & DISPLAY BOARD	Set		
	b. MICROPROCESSOR, NC25-4 CPU MOTHER BOARD	Set		
	c. ANALOG BOARD, DDA18-T1	Set		
	d. DIGITAL BOARD, DDIO16	Set		
	e. SUCTION PRESSURE TRANSDUCER	Nos.		
	f. DISCHARGE PRESSURE TRANSDUCER	Nos.		
	g. CHILLED WATER TEMPERATURE SENSOR	Nos.		
	h. CONDENSER WATER TEMPERATURE SENSOR	Nos.		
	i. DISCHARGE TEMPERATURE SENSOR (RTD TYPE)	Nos.		
	j. COMPRESSOR SUMP OIL TEMPERATURE SENSOR	Nos.		
	k. SHAFT SEAL OIL TEMPERATURE SENSOR	Nos.		
112	<u>COMPRESSOR & ACCESSORIES</u>			
	a. COMPRESSOR SHAFT SEAL	Nos.		
	b. COMPRESSOR SLIDE VALVE POTENTIAL METER	Nos.		
113	<u>OIL PUMP & ACCESSORIES</u>			
	a. OIL PUMP (FULL SET)	Liter		
	b. OIL PUMP SHAFT SEAL	Liter		
	c. OIL PUMP MOTOR (TECO)	Liter		
	d. OIL PUMP COUPLING	Liter		
	e. OIL PUMP STRAINER (SET)	Liter		
	f. OIL PUMP COUPLING RUBBER BUSH	Liter		
114	<u>LIQUID LEVEL CONTROL & ACCESSORIES</u>			
	a. LIQUID LINE CHECK VALVE	set		
	b. SOLENOID VALVE	Set		
	c. LIVING WATER SENSOR	Set		
	d. CONTACTOR RELAY	Set		
	e. OVERLOAD COMPRESSOR	Set		
115	<u>VALVE & ACCESSORIES</u>			
	a. MODULATING BALL VALVE	Nos.		
	b. TXV	Nos.		
	c. DISCHARGE CHECK VALVE	Nos.		
	d. OIL PRESSURE REGULATING VALVE	Nos.		
	e. 3 WAY MODULATING VALVE	Nos.		
	f. AIR VALVE	Nos.		
	g. OIL RETURE CHECK VALVE	Nos.		
	h. OIL RETURN SIGHT GLASS	Nos.		
	i. OIL RETURN JET PUMP	Nos.		
	j. TRANSFORMER 415 -110V	Nos.		
	k. CONTACTOR COMPRESSOR 110V-24V	Nos.		
	l. FILTER BOARD	Nos.		
	m. STEEL FLEXIBLE HOSE	Nos.		
	n. UNLOADER PAD	Nos.		
	o. THERMOMETER	Nos.		
	p. ENTERING WATER SENSOR	Nos.		
	q. UNDER VOLTAGE RELAY	Nos.		
	r. HEATER BELT FOR COMPRESSOR	Nos.		
SUB-TOTAL to collection to page E13/18				

No.	ITEM DESCRIPTION	UNIT	BRAND	TOTAL PRICE (RM)
	ITEM(AIRCOOLED PACKGED UNIT)			
116	<u>To supply and upgrade chiller's microprocessor board model NC25-4 (existing) to Vision 2020i</u> a) Programmable electronic microcontroller Vission 2020i b) Graphic display panel Vission 2020i c) Leaving chilled water temperature sensor Vission 2020i d) Evaporator pressure transducer Vission 2020i e) Compressor current transducer Vission 2020i f) Condenser pressure transducer Vission 2020i g) Discharge Temperature Sensor Vission 2020i h) Control relays i) Transformer j) Wiring diagram and misc items	Set Set Set Set Set Set Set Set Set Set		
117	To programmer, calibrate, testing & commosioning for panel board one chiller	Lot		
118	Cleaning of chiller condensor tubes and evaporators tubes by using of chemical and special brushing machine	No.		
119	Chiller compressor shaft coupling alignment and check shaft seal for excessive oil leakage.	Set		
120	To do pressure test for solving leak case by using Nitrogen gas for piping including evaporator & compressor.	Lot		
121	Cleaning of AHU- Cooling Coil by using of chemical and special brushing machine	Nos.		
122	Pump & Motor shaft coupling alignment and check shaft with SKF laser	Nos.		
123	To replace bearing, rubber bush coupling & mechanical shaft seal for pump 30hp-40hp	Nos.		
124	To replace Y-strainer refurbish	Set		
125	To replace gasket for pump/motor 30hp-40hp	Set		
126	To dismantle and reinstall for motor/pump 30-40hp	Nos.		
127	To replace Bearing and shaft for motor 30hp-40hp	Nos.		
128	To repair cooling coil pipe and accessories for chiller/AHU c/w test leak	Lot		
129	To drain out water and gas from the cooler tubing and then flushing with oil and test	Lot		
130	To supply & Install Fin Coil Condenser complete set with accessories. a) 8.0 hp b) 10.0 hp c) 12.0 hp d) 15.0 hp	Nos. Nos. Nos. Nos.		
SUB-TOTAL to collection to page E13/18				

No.	ITEM DESCRIPTION	UNIT	BRAND	TOTAL PRICE (RM)
	ITEM(CIVIL WORKS)			
134	Kadar Upah Buruh a) Tukang Kimpal b) Tukang konkrit c) Tukang lepa d) Tukang Cat 3) Buruh Am	day day day day day		
135	Kadar Sewa Logi a) Welding Machine b) Air Compressor	day day		
136	Kerja-kerja memecah dan merobohkan konkrit sedia ada dan membaiki semula mana-mana bahagian rosak	ft2		
137	Kerja-kerja plaster simen ke atas permukaan konkrit(kerja-kerja membaiki)	ft2		
138	Pintu Rintangan Api Membekal dan memasang pintu rintangan api yang diluluskan mengikut spesifikasi pembekal termasuk pelengkapan besi dan sisi jenang berterusan yang bertingkat a) 1 jam, 1 daun 900 x 2100 x 44mm b) 1 jam, 2 daun 1820 x 2100 x 44mm c) 2 jam, 1 daun 900 x 2100 x 44mm c) 2 jam, 2 daun 1820 x 2100 x 44mm	set set set set		
139	Membekal dan memasang kepingan siling akustik gentian mineral	m2		
140	Membekal Pad lock termasuk kunci jenama Solex atau setaraf	set		
141	kikis cat lama dari permukaan lama dan basuh	m2		
142	Sediakan permukaan dan sapu satu lapisan cat emulsi pada permukaan bata/konkrit	m2		
143	Sediakan permukaan dan sapu satu lapisan cat rintangan cuaca (weathershield) pada permukaan bata/konkrit	m2		
144	Sediakan permukaan dan sapu satu lapisan prime coating pada permukaan besi/kayu	m2		
145	Sediakan permukaan dan sapu dua lapisan cat akrilik berasas minyak pada permukaan besi/kayu	m2		
146	To replace Rubber Mounting Compressor for all Outdoor split Unit	set		
147	To replace Rubber Pad Compressor for all Outdoor Packaged	m		
148	To supply and install Bracket GI for outdoor split unit	set		
149	To supply and install Rubber Stand Anti Vibration for outdoor unit.	set		
SUB-TOTAL to collection to page E13/18				

No.	ITEM DESCRIPTION	TOTAL PRICE (RM)
1	Sub-Total from page E13/1	
2	Sub-Total from page E13/2	
3	Sub-Total from page E13/3	
4	Sub-Total from page E13/4	
5	Sub-Total from page E13/5	
6	Sub-Total from page E13/6	
7	Sub-Total from page E13/7	
8	Sub-Total from page E13/8	
9	Sub-Total from page E13/9	
10	Sub-Total from page E13/10	
11	Sub-Total from page E13/11	
12	Sub-Total from page E13/12	
13	Sub-Total from page E13/13	
14	Sub-Total from page E13/14	
15	Sub-Total from page E13/15	
16	Sub-Total from page E13/16	
17	Sub-Total from page E13/17	
GRAND TOTAL AMOUNT RM		

