

Running Contract Details	
Equipment Name	Walk-in Cold Room
Running Contract Valid Till	29-09-2025
Tender Ref No	KMSCL/EP/T447/653/2022
Tendered Quantity	20
Supplier Name	M/s Eakcon Systems Pvt. Ltd
GST No	33AAACE4708Q1ZH
Installation & Delivery Period	10 Week(s)
Up-time / PM vist	95% & 4 Visits per year
Warranty period	3 Years

Supplier`s Details		
Address	Contact Details	
No.123 Kothavalchavadi Street West Saidapet Chennai -600015	Contact Person	Mervin Yesuthasan
	Phone	04424716252
	Mobile No	9841070227
	Email	admin@eakcon.com

Item-wise Price Details				
#	Item Details	Unit Rate (Incl.all taxes & charges)	Service Charges (Through KMSCL)	Grand Total
1	<b>Walk-in Cold Room</b> <i>Model &amp; Make : ESPL/60/2022/EAKCON</i>	0 Incl.GST :0%	0	0
2	<b>PPGI PUF filled panels</b>	2832 Incl.GST :18%	198.24	3030.24
3	<b>PCC concrete flooring 1:2:4 at Floor stand (1 cement: 2 coarse sand :4 graded stone aggregate 20mm nominal size)</b>	8260 Incl.GST :18%	578.2	8838.2
4	<b>Flooring of walkincold room</b>	5074 Incl.GST :18%	355.18	5429.18
5	<b>Door with hinges and emergency safety lock size 900mmx2000mm</b>	64782 Incl.GST :18%	4534.74	69316.74
6	<b>Emergency alarm with standard length of cable</b>	8260 Incl.GST :18%	578.2	8838.2

Item-wise Price Details				
7	Two 5KW condensor and evaporator unit with automatic switch and canopy (including fixing and installation)	348100 Incl.GST :18%	24367	372467
8	Copper pipes for refrigeration unit additional requirement	2360 Incl.GST :18%	165.2	2525.2
9	Drain pipe additional requirement	531 Incl.GST :18%	37.17	568.17
10	Cables for refrigeration unit additional requirement	1272.04 Incl.GST :18%	89.04	1361.08
11	Control panel with switches and alarm	31270 Incl.GST :18%	2188.9	33458.9
12	Vapour proof lamp 2nos with cables and switches	7080 Incl.GST :18%	495.6	7575.6
13	External light with cables and switches	590 Incl.GST :18%	41.3	631.3
14	Digital data recorder with temperature alarm and SMS alert facility for temperature alarm	64900 Incl.GST :18%	4543	69443
15	SS 304 Grade 14 gauge Shelves 6x3 feet	27140 Incl.GST :18%	1899.8	29039.8
16	SS 304 Grade 14 gauge Shelves 5x3 feet	22420 Incl.GST :18%	1569.4	23989.4
17	SS 304 Grade 14 gauge Shelves 4x3 feet	17110 Incl.GST :18%	1197.7	18307.7
18	PVC blinds for door way	19470 Incl.GST :18%	1362.9	20832.9
19	<b>EARTHING AND SAFETY EQUIPMENTS :</b> Supply and providing pipe earthing as per IS 3043 with 3.60m long 40mm dia B class GI pipe, GI funnel with weld mesh, filling required quantity of charcoal & salt including construction of inspection chamber with a bed concrete of 1:4:8 PCC using 40mm broken stone (10cm thick), brick work in cement mortar 1:6, plastering the surface of brick masonry and the exposed surface of PCC bed with cement mortar 1:4, 12mm thick, (the finished inside dimension shall be 300x300x300mm) but excluding test joint, earth continuity conductor to the plate, and covering at the top ( in ordinary soil)	27140 Incl.GST :18%	1899.8	29039.8
20	Supply and drawing bare earthing conductors of the following sizes along with wiring/cables and giving connection as required. 4.00 mm copper conductor (8 SWG)	354 Incl.GST :18%	24.78	378.78

Item-wise Price Details				
21	<b>Door with hinges and emergency safety lock size 1000mmx2000mm</b>	76700 Incl.GST :18%	5369	82069
22	<b>Emergency alarm cable additional requirement (hooter)</b>	5546 Incl.GST :18%	388.22	5934.22
23	<b>Two 3KW condensor and evaporator unit with automatic switch and canopy (including fixing and installation)</b>	336300 Incl.GST :18%	23541	359841
24	<b>Two 4KW condensor and evaporator unit with automatic switch and canopy (including fixing and installation)</b>	342200 Incl.GST :18%	23954	366154
25	<b>Two 6KW condensor and evaporator unit with automatic switch and canopy (including fixing and installation)</b>	469640 Incl.GST :18%	32874.8	502514.8
26	<b>Two 8KW condensor and evaporator unit with automatic switch and canopy (including fixing and installation)</b>	584100 Incl.GST :18%	40887	624987
27	<b>Additional digital display unit with standard length of cables</b>	5546 Incl.GST :18%	388.22	5934.22
28	<b>Automatic 3 phase change over</b>	112100 Incl.GST :18%	7847	119947
29	<b>Cable for additional digital display unit</b>	1416 Incl.GST :18%	99.12	1515.12
30	<b>Demolition of old walkincold room</b>	23600 Incl.GST :18%	1652	25252
31	<b>MCBs AND MCB DISTRIBUTION BOARDS: Supply and installation of sheet steel, phosphatised and painted, dust and vermin proof enclosure of MCB DB including copper/brass busbar, neutral link, earth bus and DIN rail suitable for fixing MCB/isolator etc. fixed on wall using suitable anchor bolts or fixed in recess including cutting hole on the wall, making good the damages, colour washing etc.as required.4 way (8+12) -double cover TPN vertical DB with provision for fixing 4P MCB/Isolator/RCCB/RCBO as incomer and SP/TP MCB as outgoing (IP 42/43)</b>	31860 Incl.GST :18%	2230.2	34090.2
32	<b>Supply and fixing of following rating residual current circuit breaker having earth leakage protection (RCCB) 4 pole 63 amps. (415 Volts), 100mA sensitivity</b>	10502 Incl.GST :18%	735.14	11237.14

Item-wise Price Details							
33	Supply and fixing of following rating, 10 KA, Miniature circuit breakers of the following series as required6 A to 32 A TP MCB, C-CURVE MCB			5074 Incl.GST :18%	355.18	5429.18	
34	Supply and fixing of following rating, 10 KA, Miniature circuit breakers of the following series as required 6 A to 32 A SP MCB, C-CURVE MCB			5782 Incl.GST :18%	404.74	6186.74	
35	SP MCB blanking plate			4366 Incl.GST :18%	305.62	4671.62	
36	CABLES AND CABLING : Supply of following size 1.1 KV grade XLPE insulated, PVC sheathed, armoured Aluminium /copper conductor cable conforming to IS 7098 (Part 1) amended upto date. 4 C 16 Sq.mm Al			649 Incl.GST :18%	45.43	694.43	
37	Supply of following size 1.1 KV grade XLPE insulated, PVC sheathed, armoured Aluminium /copper conductor cable conforming to IS 7098 (Part 1) amended upto date. 3 C 10 Sq.mm Al			590 Incl.GST :18%	41.3	631.3	
38	Supplying and making end termination with brass compression gland and aluminium/Copper lugs for following size of XLPE insulated PVC sheathed aluminium conductor cable of 1.1 kV grade as required-4c 25 sqmm Sq.mm Al			354 Incl.GST :18%	24.78	378.78	
39	Laying and clamping of 1no. PVC insulated and PVC sheathed armoured power cable, 1.1KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages colour washing etc. as required 4 core cable of size exceeding 6sq.mm but not exceeding 25 sq.mm with company fabricated saddles.			247.8 Incl.GST :18%	17.35	265.15	
40	External over head Canopy for 2 outdoor units if the compressor units are placed in open area			23010 Incl.GST :18%	1610.7	24620.7	
41	Stablizer 15 KVA 3 phase wide range			153400 Incl.GST :18%	10738	164138	
				2851927.84	199634.95	3051562.79	
Annual / Comprehensive Maintenance Charges (Exl.Tax)							
Rate	4 <sup>th</sup> Year	5 <sup>th</sup> Year	6 <sup>th</sup> Year	7 <sup>th</sup> Year	8 <sup>th</sup> Year	9 <sup>th</sup> Year	10 <sup>th</sup> Year
Walk-in Cold Room							
Labour	48,000.00	56,000.00	64,000.00	72,000.00	80,000.00	88,000.00	96,000.00
Comprehensi ve	1,02,000.00	1,10,000.00	1,18,000.00	1,26,000.00	1,34,000.00	1,42,000.00	1,50,000.00

## **Other terms & conditions**

1. The supplier shall execute an agreement with the purchaser as per tender conditions (agreement format is given in the tender document).
2. The supplier shall submit performance security amounting to 5.00% of the value of the supply order.
3. The labour & comprehensive charges of equipment after the completion of warranty period is finalized by KMSCL as mentioned above.
4. Since discount rate is not applicable for equipment under Running Contract of KMSCL, purchase/supply order can be issued directly to supplier at the given rate with tax & other charges (exclusive of KMSCL service charges).
5. If purchase/supply order is issued directly to the supplier, KMSCL service charge need not be paid. But the copy of the said order may be forwarded to KMSCL for information.

## **Technical Specification**

### **Equipment :Walk-in Cold Room**

#### **Equipment Name: Walk in Cold Room**

1. The cold room should maintain a temperature in the level of 2 to 8 deg cel. Outside design conditions: Minimum 35 deg cel. Storage of reagents and testkits for diagnostic purpose. Should have display for temperature.
2. The equipment /Compressors should have adequate capacity (to be designed by contactor and submit the detail for approval) to take care the cold room requirement at each warehouse. Cooling capacity should be minimum 10,000BTU/Hr with a pull down time of 12 hours approx from 35 deg cel. Air cooled split unit.
3. The cold room should be constructed using pre-fabricated PUF panels of 60 mm thick PUF with density  $40\pm 2$  Kg/m<sup>3</sup> wall & ceiling Panels laminated with 0.5mm PPGI outside and inside cold room as per site condition with necessary angles, channels, silicon sealing, nuts, bolts etc. complete.
4. Supplying heavy duty, single leaf hinged and flush type door of size 900x2000mm Aesthetic, efficient, with 60mm thick PUF with density  $40\pm 2$  Kg/m<sup>3</sup> laminated with 0.5mm PPGI outside & inside for cold room, cam lock, sweep / magnetic gasket flexible, posi lock with heaters & ramp facility and safety release device. Door hinges and handle should be heavy duty cast alloy chrome finish. Emergency alarm (Human trap alarm) and emergency safety lock to open from inside in case of accidental closure of door. The alarm using hooter in the open area of the installation location.
5. Supply and installation of 60mm thick PUF slabs using bitumen, T-30 emulsion up to plastic felt application. Top to be finished with 16mm marine plywood with 1.2 mm thick Aluminum chequered sheet properly riveted to the sides and bottom stiffener.
6. All refrigeration machines must be provided with 100 % stand by capacity with duplicate independent control panel, pipe work, instrumentation and machinery to provide against the failure of the primary system. Automatic changeover and starting of the secondary system is to be provided activated by thermostatic or electrical control. The two units must works alternatively/simultaneously at pre set times..
7. Dual Refrigeration system (100% standby) air cooled refrigeration units, split type, Off-cycle defrosting CFC free refrigerant. Tropicalized units suitable for ambient temperature up to 45 deg C.
8. Compressor type should be hermetic, reciprocating, compressor; make shall be Emerson Copeland/ Danfoss / Tecumsche or equivalent. The outdoor unit shall be closed type. Condensing unit shall be UV and corrosion resistant, inner grooved copper tubes, in-built safety and control device, weather proof canopy (outer cover). The outdoor unit shall be installed in suitable raised platforms made of blocks or Mild Steel structure painted. The compressor unit should have cover / canopy.
9. Supplying independent evaporating unit, stainless steel body and excellent corrosion resistance, inner grooved copper tubes.
10. Air flow should be sufficient for uniform temperature distribution.
11. Supply and installation of microprocessor based control panel with necessary switches, cables etc for controlling of main power supply light fixtures, emergency alarm and cooling units to be fitted on the wall of the room.
12. The temperature should be recorded continuously with digital temperature recorder (digital data logger) with inbuilt memory for storage of data for a year (without PC) with backup battery power. The digital data logger should have USB connectivity and suitable cable and software shall be provided for viewing the data in any computer.
13. Should have audio visual alarm if set temperature is not maintained and should have facility to send SMS to at least five

numbers. Should have mute facility for audio alarm.

a. Sim and recurrent charges should be provided by the user institutions.

14. Supply and fixing of vapour proof Light fittings inside the cold room that withstand in the 2 to 8 deg cel. Internal ceiling-mounted CFL/LED lighting with an external switch and pilot light should be provided. The external light and light switch must be fixed to the wall of the cold room enclosure near to the entrance door. The minimum illumination level on the vertical face of the lowest shelves must be 150 lux. The lighting should be evenly distributed inside the cold room.
15. Supplying refrigeration piping & electrical cabling between indoor and outdoor unit for each machine.
16. The pipes should be fully insulated to avoid the sweating water drop.
17. Supply flushing GI threaded rods, connectors, rivets, puf chemical, copper pipes, copper fitting, and accessories
18. Posi-loc locking assemblies that provide perfect alignment of walls, ceiling, floor, corners and door frames
19. Sweep gasket: Airtight heavy-duty sealing gasket below door with a double sweep, remains flexible at any temperature
20. Additional digital display unit of minimum 8 inch size with low temperature/high temperature alarm be kept in other area shall be offered as option, which will not be taken for evaluation.
21. Compressor/Equipments should be suitable for 220 to 240 V or 360 to 440 V continuous operation.
22. Cold room(s) to be fitted with running adjustable shelves, all around the wall (excluding portion of door) and intermediate shelves should be placed suitably.

The total area covered by shelves should be at least 42% of the ground area.

There should be a minimum 900 mm distance in between two intermediate racks, to facilitate the movement of men and material.

The final drawing of the room with shelves will have to be got approved from the hospital authorities.

The material of the shelves should be non corrosive stainless steel – grade 304 to take load of at least 20 kg/ sq. ft.

The top face of the lowest shelf must be mounted 200 mm above the floor.

Shelving must be washable.

Dimensions of the shelf shall be

a. 3' x 1' 5" x 6' rack (90 cm x 45 cm x 180 cm), 5 shelf

b. 3' x 1' 5" x 5' rack (90 cm x 45 cm x 150 cm), 4 shelf

c. 3' x 1' 5" x 4' rack (90 cm x 45 cm x 120 cm), 3 shelf

Thickness of shelf shall be 18 gauge and support frames shall be 14 gauge

1. 3' x 1' 5" x 4' rack (90 cm x 45 cm x 120 cm), 3 shelf
2. The PVC vertical blinds should be provided on the door way.
3. The unit should be installed on a concrete platform 5 inches thick. The exposed portions of the platform (sides and offsets if any) shall be finished with the same flooring material of the surrounding room so that it is aesthetically pleasing.
4. Unit rate offered for the PPGI PUF filled panels shall be inclusive of all required materials for installation.
5. If required stabilizer of the following capacity shall be provided.

15KVA Three Phase Servo Stabilizer (wide range)

- i. The Stabilizer should be 15 KVA 3 Phase wide range Servo type.
- ii. Should be able to operate in the input voltage range of 225V to 460V.
- iii. Should provide a three phase steady state output voltage of 400V +/- 1% (phase to phase).
- iv. Output Frequency – 50Hz.
- v. Equipment should be air-cooled/oil cooled.
- vi. Mode of operation – Auto/Manual.
- vii. Efficiency shall be 98% at nominal load.
- viii. Overload Capacity – 120% for 10 Minute
- ix. There shall be separate Meters to measure/monitor the Input/output Voltage, Current etc.
- x. There shall be a separate bypass mechanism for the mains supply.
- xi. Protection: - Low Voltage, High Voltage, Overload and short circuit.
- xii. There shall be separate indicators for Input and Output On.

**Note :**

1. The installation shall be done strictly as per the conditions mentioned above.
2. Optional rate shall be provided for additional wiring and refrigeration units of higher capacity as per the specification mentioned above. Rate will not be taken for evaluation.
3. The installation of outdoor unit should be included in the rate offered for refrigeration unit.

**1. TURNKEY WORKS**

1. Tenderers shall quote unit rate in the price bid form (BOQ). Item wise rates shall be quoted. The quantity taken for evaluation is shown in BOQ and in appendix III.
2. The scope of turnkey work shall be electrical cabling work, dismantling old walk-in cold room. The rate for the same has to be quoted in the BOQ which will not be taken for evaluation. If required for any site order will be issued in the rate offered.

The items rate shall be offered for the following:

S/n	DESCRIPTION	UNIT
1	<b>MCBs AND MCB DISTRIBUTION BOARDS:</b> Supply and installation of sheet steel, phosphatised and painted, dust and vermin proof enclosure of MCB DB including copper/brass busbar, neutral link, earth bus and DIN rail suitable for fixing MCB/isolator etc. fixed on wall using suitable anchor bolts or fixed in recess including cutting hole on the wall, making good the damages, colour washing etc. as required. 6 way (8+18) - double cover TPN vertical DB with provision for fixing 4P MCB/Isolator/RCCB/RCBO as incomer and SP/TP MCB as outgoing (IP 42/43)	no
2	Supply and fixing of following rating residual current circuit breaker having earth leakage protection (RCCB) as per specification as required 4 pole 63 amps. (415 Volts), 100mA sensitivity	no
3	Supply and fixing of following rating residual current circuit breaker having earth leakage protection (RCCB) as per specification as required. 4 pole 63 amps. Mini break isolator	no
4	Supply and fixing of following rating, 10 KA, Miniature circuit breakers of the following series as required. 6 A to 32 A TP MCB, C-CURVE MCB	no
5	SP MCB blanking plate	no
6	<b>CABLES AND CABLING :</b> Supply of following size 1.1 KV grade XLPE insulated, PVC sheathed, armoured Aluminium /copper conductor cable conforming to IS 7098 (Part 1) amended upto date. 4 C 16 Sq.mm Al	m
7	Supplying and making end termination with brass compression gland and aluminium/Copper lugs for following size of XLPE insulated PVC sheathed aluminium conductor cable of 1.1 kV grade as required-4c 25 sqmm Sq.mm Al	no
8	Laying and clamping of 1no. PVC insulated and PVC sheathed armoured power cable, 1.1KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages colour washing etc. as required 4 core cable of size exceeding 6sq.mm but not exceeding 25 sq.mm with company fabricated saddles.	m
9	<b>EARTHING AND SAFETY EQUIPMENTS :</b> Supply and providing pipe earthing as per IS 3043 with 3.60m long 40mm dia B class GI pipe, GI funnel with weld mesh, filling required quantity of charcoal & salt including construction of inspection chamber with a bed concrete of 1:4:8 PCC using 40mm broken stone (10cm thick), brick work in cement mortar 1:6, plastering the surface of brick masonry and the exposed surface of PCC bed with cement mortar 1:4, 12mm thick, (the finished inside dimension shall be 300x300x300mm) but excluding test joint, earth continuity conductor to the plate, and covering at the top ( in ordinary soil)	no
10	Supply and drawing bare earthing conductors of the following sizes along with wiring/cables and giving connection as required. 4.00 mm copper conductor (8 SWG)	m