

COLD ROOM



Ice Make is a leading manufacturer and supplier of highly efficient Cold Room and Storage that is easy to operate and better in performance. This tailor-made product range is built with premium quality range of material in standard size and customised specification to fulfil our customer needs



Applications: Industries such as,



Fruits & Vegetables



Horticulture



Ice Cream



Dry Fruits



Hospitality



Bakery Products



Frozen Food



Pharmaceutical & Chemical

Total Cold Chain Solution



Source



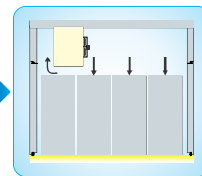
Pre Cooling



Mobile Pre Cooling



Grading & Sorting



Blast Chilling



Packing



Display Market



Transport Refrigeration



Market Distribution



Transport Refrigeration



Storage



Blast Freezing



Technical Specification

- Thickness** : 60, 80, 100, 125 & 150 mm
- Surface Material** : GI Pre-Painted Sheet, S.S. Sheet (Grade 304/316 & Surface finish 2B & Mate), GI Plain Sheet, Plain Galvanized Iron. (Inside & Outside different metal can be placed as per your requirement)
- Floor** : (A) For Kota stone or Concrete floor, Puf Slab with both side tar felt coated.
(B) For Kota stone or Concrete floor, both side metal surface panel in which each side fits with Camlock and prevent temperature loss.
(C) Aluminium Chequered Plate with Marine Ply.
(D) FRP Cladding on floor
- Door** : (A) Flush Type Swing Door with FRP Profile, Imported Hardware, Push Type Gasket & replaceable heater for easy door operation & long life
Opening Size: 24"x72", 30"x72", 34"x78", 46"x84" (Door Opening WxH)
(B) Overlap Type Swing door with frame with metal covering by using heavy duty hardware for better strength
Opening Size: 46"x84", 49"x84", 54"x84", 60"x90" (Door Opening WxH)
- Room Size** : (A) Length & Width Minimum 1.78 mt and Bigger size 0.146 mt in multiples as per requirement
(B) Standard Height for 60 mm thickness 2.47 mt, 80 mm-2.51 mt, 100 mm-2.55 mt, 125 mm-2.60 mt, 150 mm-2.65 mt. Single Panel Height upto 12 mt and above as per your requirement.

Accessories



Sliding Door:-

- Opening Size
- Width : 1000/1200/1500/1800 mm
- Height : 2100 to 3000 mm
- Thickness : 80 mm
- Panel Surface Material : Both side GIPP or S.S as per requirement



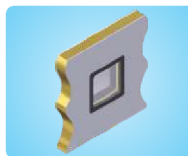
Hatch Window:-

- Opening Size (WxH): 20"x20", 24"x24", 30"x30"
- Different size hatch window with heavy frame for easy material movement in high turnover ice cream and dairy industries.



Pressure Ventilator:-

- Tri-action pressure ventilator with/without heater to balance pressure and vacuum inside cold room.



View Port:-

- 12" x 12" View port with three layer argon filled, toughen glass which can be visible up to 2°C inside the cold room.



Strip Curtain:-

- Semi transparent PVC strip curtain for negative temperature application to prevent heat loss and ultimately the power.



Wall Guard



Door Accessories



High-Low Temperature Alarm

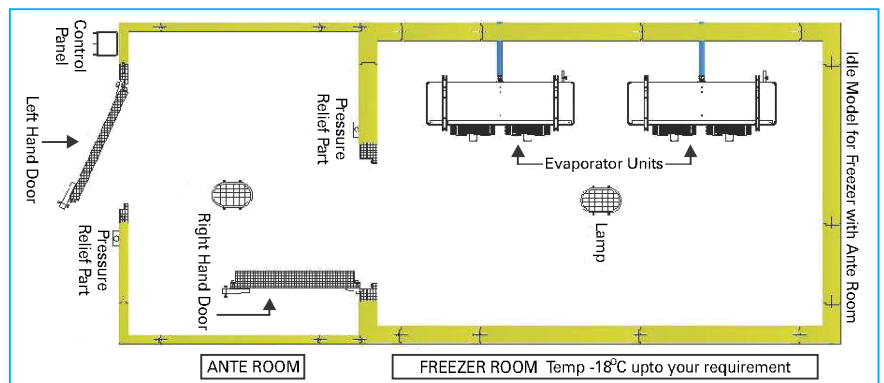
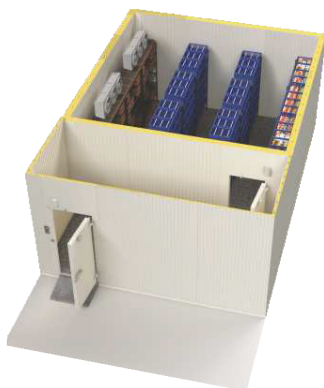


Inside Safety Alarm



Ramp with Chequered Plate

3D / PLAN VIEW OF ICE CREAM COLD ROOM

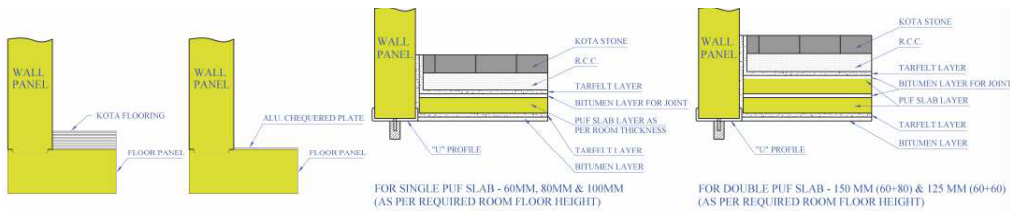


Note : For Positive temperature Ante Room is not Compulsory

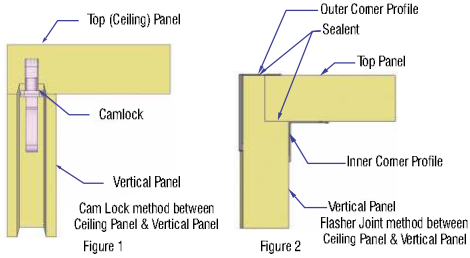


Panel Construction Configuration

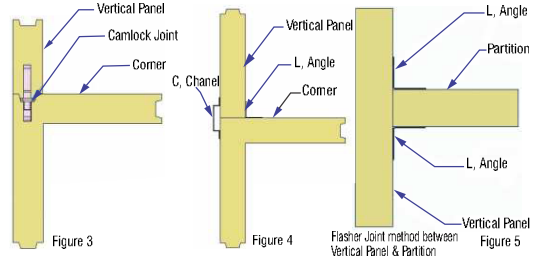
Types of Cold Room Floor



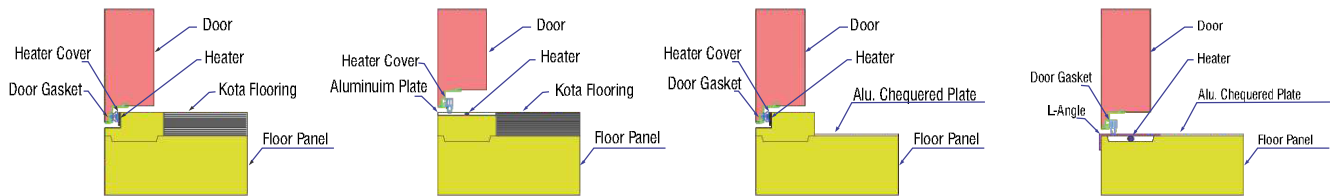
Vertical & Top Panel Joining Method



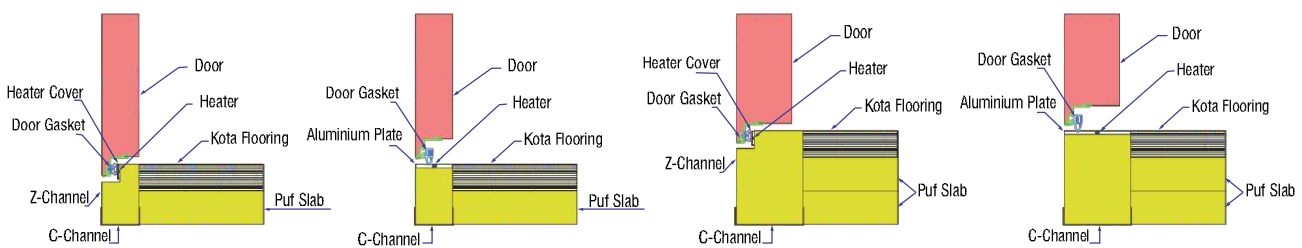
Corner-Vertical Panel Joining Method



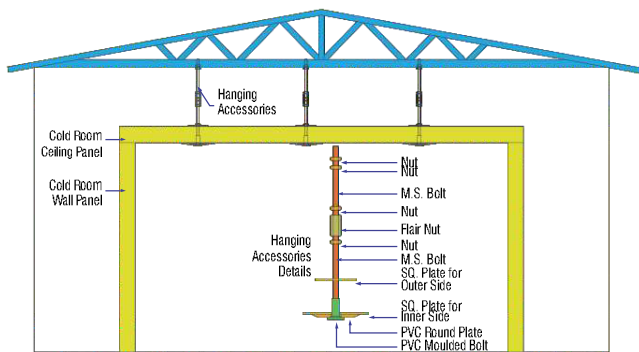
Door on Floor Panel Design



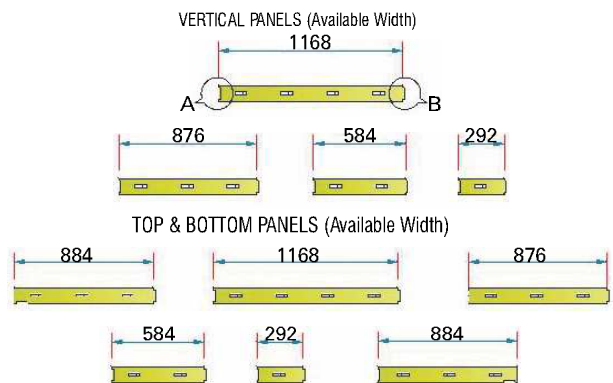
"C" & Z Channel Door Design



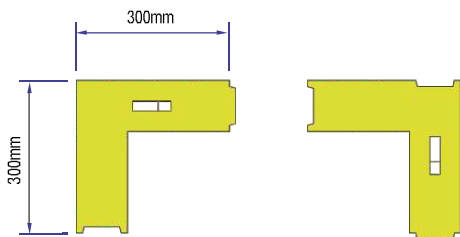
Ceiling Panel Hanging Method



Panel Width Size



Corners



Panel Joints



Available Cold Room Size Standard Length & Width (with common thickness)

Inch	Feet	Meter	Inch	Feet	Meter	Inch	Feet	Meter	Inch	Feet	Meter	Inch	Feet	Meter
41.25"	3' - 5.25"	1.05	282.75"	23' - 6.75"	7.18	524.25"	43' - 8.25"	13.32	765.75"	63' - 9.75"	19.45	1007.25"	83' - 11.25"	25.58
47"	3' - 11"	1.19	288.5"	24' - 0.5"	7.33	530"	44' - 2"	13.46	771.5"	64' - 3.5"	19.6	1013"	84' - 5"	25.73
52.75"	4' - 4.75"	1.34	294.25"	24' - 6.25"	7.47	535.75"	44' - 7.75"	13.61	777.25"	64' - 9.25"	19.74	1018.75"	84' - 10.75"	25.88
58.5"	4' - 10.5"	1.49	300"	25'	7.62	541.5"	45' - 1.5"	13.75	783"	65' - 3"	19.89	1024.5"	85' - 4.5"	26.02
64.25"	5' - 4.25"	1.63	305.75"	25' - 5.75"	7.77	547.25"	45' - 7.25"	13.9	788.75"	65' - 8.75"	20.03	1030.25"	85' - 10.25"	26.17
70"	5' - 10"	1.78	311.5"	25' - 11.5"	7.91	553"	46' - 1"	14.05	794.5"	66' - 2.5"	20.18	1036"	86' - 4"	26.31
75.75"	6' - 3.75"	1.92	317.25"	26' - 5.25"	8.06	558.75"	46' - 6.75"	14.19	800.25"	66' - 8.25"	20.33	1041.75"	86' - 9.75"	26.46
81.5"	6' - 9.5"	2.07	323"	26' - 11"	8.2	564.5"	47' - 0.5"	14.34	806"	67' - 2"	20.47	1047.5"	87' - 3.5"	26.61
87.25"	7' - 3.25"	2.22	328.75"	27' - 4.75"	8.35	570.25"	47' - 6.25"	14.48	811.75"	67' - 7.75"	20.62	1053.25"	87' - 9.25"	26.75
93"	7' - 9"	2.36	334.5"	27' - 10.5"	8.5	576"	48'	14.63	817.5"	68' - 1.5"	20.76	1059"	88' - 3"	26.9
98.75"	8' - 2.75"	2.51	340.25"	28' - 4.25"	8.64	581.75"	48' - 5.75"	14.78	823.25"	68' - 7.25"	20.91	1064.75"	88' - 8.75"	27.04
104.5"	8' - 8.5"	2.65	346"	28' - 10"	8.79	587.5"	48' - 11.5"	14.92	829"	69' - 1"	21.06	1070.5"	89' - 2.5"	27.19
110.25"	9' - 2.25"	2.8	351.75"	29' - 3.75"	8.93	593.25"	49' - 5.25"	15.07	834.75"	69' - 6.75"	21.2	1076.25"	89' - 8.25"	27.34
116"	9' - 8"	2.95	357.5"	29' - 9.5"	9.08	599"	49' - 11"	15.21	840.5"	70' - 0.5"	21.35	1082"	90' - 2"	27.48
121.75"	10' - 1.75"	3.09	363.25"	30' - 3.25"	9.23	604.75"	50' - 4.75"	15.36	846.25"	70' - 6.25"	21.49	1087.75"	90' - 7.75"	27.63
127.5"	10' - 7.5"	3.24	369"	30' - 9"	9.37	610.5"	50' - 10.5"	15.51	852"	71'	21.64	1093.5"	91' - 1.5"	27.77
133.25"	11' - 1.25"	3.38	374.75"	31' - 2.75"	9.52	616.25"	51' - 4.25"	15.65	857.75"	71' - 5.75"	21.79	1099.25"	91' - 7.25"	27.92
139"	11' - 7"	3.53	380.5"	31' - 8.5"	9.66	622"	51' - 10"	15.8	863.5"	71' - 11.5"	21.93	1105"	92' - 1"	28.07
144.75"	12' - 0.75"	3.68	386.25"	32' - 2.25"	9.81	627.75"	52' - 3.75"	15.94	869.25"	72' - 5.25"	22.08	1110.75"	92' - 6.75"	28.21
150.5"	12' - 6.5"	3.82	392"	32' - 8"	9.96	633.5"	52' - 9.5"	16.09	875"	72' - 11"	22.22	1116.5"	93' - 0.5"	28.36
156.25"	13' - 0.25"	3.97	397.75"	33' - 1.75"	10.1	639.25"	53' - 3.25"	16.24	880.75"	73' - 4.75"	22.37	1122.25"	93' - 6.25"	28.51
162"	13' - 6"	4.11	403.5"	33' - 7.5"	10.25	645"	53' - 9"	16.38	886.5"	73' - 10.5"	22.52	1128"	94'	28.65
167.75"	13' - 11.75"	4.26	409.25"	34' - 1.25"	10.39	650.75"	54' - 2.75"	16.53	892.25"	74' - 4.25"	22.66	1133.75"	94' - 5.75"	28.8
173.5"	14' - 5.5"	4.41	415"	34' - 7"	10.54	656.5"	54' - 8.5"	16.68	898"	74' - 10"	22.81	1139.5"	94' - 11.5"	28.94
179.25"	14' - 11.25"	4.55	420.75"	35' - 0.75"	10.69	662.25"	55' - 2.25"	16.82	903.75"	75' - 3.75"	22.96	1145.25"	95' - 5.25"	29.09
185"	15' - 5"	4.7	426.5"	35' - 6.5"	10.83	668"	55' - 8"	16.97	909.5"	75' - 9.5"	23.1	1151"	95' - 11"	29.24
190.75"	15' - 10.75"	4.85	432.25"	36' - 0.25"	10.98	673.75"	56' - 1.75"	17.11	915.25"	76' - 3.25"	23.25	1156.75"	96' - 4.75"	29.38
196.5"	16' - 4.5"	4.99	438"	36' - 6"	11.13	679.5"	56' - 7.5"	17.26	921"	76' - 9"	23.39	1162.5"	96' - 10.5"	29.53
202.25"	16' - 10.25"	5.14	443.75"	36' - 11.75"	11.27	685.25"	57' - 1.25"	17.41	926.75"	77' - 2.75"	23.54	1168.25"	97' - 4.25"	29.67
208"	17' - 4"	5.28	449"	37' - 5.5"	11.42	691"	57' - 7"	17.55	932.5"	77' - 8.5"	23.69	1174"	97' - 10"	29.82
213.75"	17' - 9.75"	5.43	455.25"	37' - 11.25"	11.56	696.75"	58' - 0.75"	17.7	938.25"	78' - 2.25"	23.83	1179.75"	98' - 3.75"	29.97
219.5"	18' - 3.5"	5.58	461"	38' - 5"	11.71	702.5"	58' - 6.5"	17.84	944"	78' - 8"	23.98	1185.5"	98' - 9.5"	30.11
225.25"	18' - 9.25"	5.72	466.75"	38' - 10.75"	11.86	708.25"	59' - 0.25"	17.99	949.75"	79' - 1.75"	24.12	1191.25"	99' - 3.25"	30.26
231"	19' - 3"	5.87	472.5"	39' - 4.5"	12	714"	59' - 6"	18.14	955.5"	79' - 7.5"	24.27	1197"	99' - 9"	30.4
236.75"	19' - 8.75"	6.01	478.25"	39' - 10.25"	12.15	719.75"	59' - 11.75"	18.28	961.25"	80' - 1.25"	24.42	1202.75"	100' - 2.75"	30.54
242.5"	20' - 2.5"	6.16	484"	40' - 4"	12.29	725.5"	60' - 5.5"	18.43	967"	80' - 7"	24.56	1208.50"	100' - 8.5"	30.69
248.25"	20' - 8.25"	6.31	489.75"	40' - 9.75"	12.44	731.25"	60' - 11.25"	18.57	972.75"	81' - 0.75"	24.71	1214.25"	101' - 2.25"	30.84
254"	21' - 2"	6.45	495.5"	41' - 3.5"	12.59	737"	61' - 5"	18.72	978.5"	81' - 6.5"	24.85	1220"	101' - 8.0"	30.98
259.75"	21' - 7.75"	6.6	501.25"	41' - 9.25"	12.73	742.75"	61' - 10.75"	18.87	984.25"	82' - 0.25"	25	1225.75"	102' - 1.75"	31.13
265.5"	22' - 1.5"	6.74	507"	42' - 3"	12.88	748.5"	62' - 4.5"	19.01	990"	82' - 6"	25.15	1231.5"	102' - 7.5"	31.28
271.25"	22' - 7.25"	6.89	512.75"	42' - 8.75"	13.02	754.25"	62' - 10.25"	19.16	995.75"	82' - 11.75"	25.29	1237.25"	103' - 1.25"	31.42
277"	23' - 1"	7.04	518.5"	43' - 2.5"	13.17	760"	63' - 4"	19.3	1001.5"	83' - 5.5"	25.44	1243"	103' - 7"	31.57

Standard Height (with common thickness)

Height	Thickness	60 MM						Height	Thickness	80 MM					
		PUF Slab			Alu. Checkered					PUF Slab			Alu. Checkered		
		Wall Panel	Inch	Feet	Meter	Inch	Feet			Meter	Wall Panel	Inch	Feet	Meter	Inch
St. Height-1	92.5	94.9	7'-10.9"	2.4101	97.22	8'-1.2"	2.47	St. Height-1	92.5	95.6	7'-11.6"	2.43	98.8	8'-2.8"	2.51
St. Height-2	112	114.4	9'-6.4"	2.91	116.7	9'-8.7"	2.96	St. Height-2	112	115.1	9'-7.1"	2.92	118.3	9'-10.3"	3
Maximum single panel	240	242.2	20'-2.4"	6.1576	244.7	20'-4.7"	6.22	Maximum single panel	240	243.1	20'-3.1"	6.18	246.3	20'-6.3"	6.26

Height	Thickness	100 MM						Height	Thickness	125 MM					
		PUF Slab			Alu. Checkered					PUF Slab			Alu. Checkered		
		Wall Panel	Inch	Feet	Meter	Inch	Feet			Meter	Wall Panel	Inch	Feet	Meter	Inch
St. Height-1	92.5	96.4	8'-0.4"	2.45	100.39	8'-4.4"	2.55	St. Height-1	92.5	97.4	8'-1.4"	2.48	102.34	8'-6.3"	2.60
St. Height-2	112	115.9	9'-7.9"	2.94	119.9	9'-11.9"	3.05	St. Height-2	112	116.9	9'-8.9"	2.97	121.8	10'-1.8"	3.09
Maximum single panel	240	243.9	20'-3.9"	6.20	247.9	20'-7.9"	6.30	Maximum single panel	240	244.9	20'-4.9"	6.22	249.8	20'-9.8"	6.35

Height	Thickness	150 MM					
		PUF Slab			Alu. Checkered		
		Wall Panel	Inch	Feet	Meter	Inch	Feet
St. Height-1	92.5	98.4	8'-2.4"	2.50	104.3	8'-8.3"	2.65
St. Height-2	112	117.9	9'-9.9"	2.99	123.8	10'-3.8"	3.14
Maximum single panel	240	245.9	20'-5.9"	6.25	251.8	20'-11.8"	6.40

COLD ROOM



PUF Thickness (mm)	Recomm -ended Temp. Degree @ 32°C Ambient Temp.	Weight						Thermal Conductivity 'K' Value W/mK	Thermal Transmittance 'U' Value W/m²K	Thermal Resistance 'R' Value m²K/W	Thermal Transmittance 'U' Value K.Cal/m²K	Thermal Resistance 'R' Value m²K/K.Cal		
		Wall & Ceiling		Floor Panel		60	100						125	150
		Kg/Sq.ft	Kg/Sq.mtr	Kg/Sq.ft	Kg/Sq.mtr									
60	+20 to +2	1.5	16	0.25	3	2.5	27	0.022	0.3521	2.84	0.3018	3.31		
80	+2 to -8	1.6	17	0.35	4	2.6	28	0.022	0.2679	3.73	0.2296	4.36		
100	-8 to -18	1.7	18	0.425	5	2.7	29	0.022	0.2163	4.62	0.1854	5.39		
125	-18 to -27	1.85	20	0.525	6	2.85	31	0.022	0.1721	5.81	0.1475	6.78		
150	-27 to -50	2	22	0.65	7	3	32	0.022	0.1459	6.85	0.1251	7.99		

Thermal Transmittance 'U' Value													
		W/m²K						K.cal / m²K					
Panel Thickness (mm)	Temp. Difference °C	60	80	100	125	150	60	80	100	125	150		
1		0.3521	0.2679	0.2163	0.1721	0.1459	0.3018	0.2296	0.1854	0.1475	0.1251		
10		3.5205	2.6797	2.1631	1.7556	1.4596	3.0174	2.2968	1.8540	1.5047	1.2510		
15		5.2808	4.0196	3.2446	2.6335	2.1894	4.5262	3.4452	2.7810	2.2572	1.8766		
20		7.0411	5.3595	4.3262	3.5113	2.9192	6.0349	4.5936	3.7080	3.0095	2.5021		
25		8.8014	6.6993	5.4077	4.3891	3.6491	7.5437	5.7419	4.6350	3.7619	3.1276		
30		10.5617	8.0391	6.4893	5.2670	4.3789	9.0524	6.8903	5.5620	4.5143	3.7531		
35		12.3219	9.3790	7.5708	6.1447	5.1087	10.5611	8.0387	6.4890	5.2667	4.3786		
40		14.0822	10.7189	8.6524	7.0226	5.8384	12.0699	9.1871	7.4159	6.0191	5.0041		
45		15.8424	12.0587	9.7340	7.9004	6.5682	13.5786	10.3356	8.3430	6.7714	5.6296		
50		17.6028	13.3986	10.8155	8.7782	7.2980	15.0873	11.4840	9.2699	7.5238	6.2551		
55		19.3631	14.7385	11.8971	9.6561	8.0278	16.5961	12.6324	10.1970	8.2762	6.8806		
60		21.1239	16.0784	12.9786	10.5339	8.7576	18.1053	13.7808	11.1239	9.0286	7.5062		
65		22.8836	17.4182	14.0602	11.4117	9.4874	19.6135	14.9292	12.0510	9.7810	8.1317		
70		24.6439	18.4382	15.1417	12.2896	10.2172	21.1223	15.8034	12.9779	10.5334	8.7572		
80		28.1644	21.4377	17.3048	14.0452	11.6769	24.1397	18.3743	14.8320	12.0382	10.0082		

Technical Specifications of Puf Panels

Sr.No.	PARAMETERS	DESCRIPTION
1	Average PUF Density	40 ± 2 Kg/m ³
2	PUF Blowing Agent	141B (CFC free)
3	Insulation Material	Polyurethane foam
4	Temperature range	+90°C to -60°C
5	Penal Type	Discontinuous type with camlock
6	M.O.C. of Camlocks	Cam locks body material HIPS and male latch is made of nylon Glass field with GI sheet reinforcement. Cam-lock panel joints easy assembly and leakage resistant, panel-to-panel joints.
7	Type of Panel joints	Tongue & Groove Joint with Cam lock and all side rubber gaskets
8	Corner Panel Available	12" x 12" x 162" (maximum Length)
9	Length of Wall & ceiling Panel	2032 mm to 12000 mm 80" to 472.5" inch
10	Ceiling Suspension items with specs	MS bolt with thermal breaking cap. PVC Round Plate 6 mm thickness x 90 mm diameter Aluminium/MS washer plate for load distribution Anchor bolt (MS) hanging bolt with 40 mm washer 2.0 mm thickness Sealing to panel MS road Clamp with an insulated crown.
11	Closed cell content	90 to 95%
12	Vapour Permeability	5.5mg/PASM
13	Water Absorption	Less than 2%
14	Fire Grade Polyurethane PUF Panel	FR Grade B2 (Fire Resistant Grade)
15	Compressive Strength at 10% Deformation	0.21 N/ sq.mm (For PUF only)
16	Tensile Strength	0.58 N /sq.mm (For PUF only)
17	Adhesive Strength (Foam to Sheet)	2.9 kg /sq.mtr
18	Dimension Stability	Less than 2%
19	Panel Facing Availability	With Rib or plain on Demand (Ribs are provided for more strength)
20	Wall & Ceiling Panel facing Material	<ul style="list-style-type: none"> • Pre Painted Galvanised sheet , Thickness 0.50mm • Plain Galvanised sheet , Thickness 0.50mm • S.S. Sheet, Grade 316, 0.50mm, finish 2B/0.6 mm mate No.4 • S.S. Sheet, Grade 304, 0.50mm, finish 2B/0.6 mm mate No.4
21	Floor Panel Facing Material	<ul style="list-style-type: none"> • PUF Panel with both side tarfelt sheet. • PUF Panel with both side 0.5mm GIPP sheet. • PUF Panel with outside GIPP sheet, inside 9 mm thick marine ply with 2 mm thick Aluminium Chequered Plate
22	Specification for Colour Coating	<p>A. RAL No. : 9002/9003 or it's nearest</p> <p>B. Indian Standard code Colour Coating : IS 14246 Galvanizing : IS 277 Base Metal : IS 513</p> <p>C. Organic Coating : Type RMP (Polyester)</p> <p>D. Zinc Coating : 120 GSM</p> <p>E. Top Primer (Thickness in micron 'μ') : 5 +/- 1 μ</p> <p>F. Top Coat (Thickness in micron 'μ') : 20 +/- 1 μ</p> <p>G. Back Primer (Thickness in micron 'μ') : 4 +/- 1 μ</p> <p>H. Back Coat (Thickness in micron 'μ') : 4 +/- 1 μ</p> <p>I. Guard Film (Thickness in micron 'μ') : 40 +/- 3 μ</p> <p>J. Salt Spray Test /Humidity Test : 750 hrs. /1000 hrs.</p>

