



	Gachsaran Polymer Industries Company HDPE Plant		
	Insulation MTO for Refrigerator Package	 	
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01	20-May-26	IFR	N.B	F.T	A.M
00	3-May-26	IFR	N.B	F.T	A.M
Rev.	DATE	PURPOSE OF ISSUE	PREPARED	CHECKED	APPROVED



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Piping

Cold Insulation

Personal Insulation: Polyurethane/ PIR

Item No.	insul-thk	Size	Type	size , type ,rating , insul thick	Lenght(m) QTY (Piece)	insulation type	Remark							
1	50.00mm	3/4"	Ball Valve	3/4",Ball Valve,300#,Cold Insulation insulation thick =50.00mm	21	Cold								
2	50.00mm	3/4"	Blind Flange	3/4",Blind Flange,300#,Cold Insulation insulation thick =50.00mm	14	Cold								
3	50.00mm	3/4"	Flange	3/4",Flange,300#,Cold Insulation insulation thick =50.00mm	22	Cold								
4	50.00mm	3/4"	Pipe	3/4",Pipe,,Cold Insulation insulation thick =50.00mm	5.5	Cold								
5	50.00mm	3/4"	Elbow	3/4",Elbow,Cold Insulation insulation thick =50.00mm	6	Cold								
6	50.00mm	1"	Ball Valve	1",Ball Valve,300#,Cold Insulation insulation thick =50.00mm	2	Cold								
7	50.00mm	1"	Flange	1",Flange,300#,Cold Insulation insulation thick =50.00mm	3	Cold								
8	50.00mm	1 1/2"	Ball Valve	1 1/2",Ball Valve,300#,Cold Insulation insulation thick =50.00mm	1	Cold								
9	50.00mm	1 1/2"	Flange	1 1/2",Flange,300#,Cold Insulation insulation thick =50.00mm	4	Cold								
10	50.00mm	2" x 1"	Reducer	2" x 1",Reducer,,Cold Insulation insulation thick =50.00mm	1	Cold								
11	50.00mm	2"	Ball Valve	2",Ball Valve,300#,Cold Insulation insulation thick =50.00mm	8	Cold								
12	50.00mm	2"	Globe Valve	2",Ball Valve,300#,Cold Insulation insulation thick =50.00mm	1	Cold								
13	50.00mm	2"	Blind Flange	2",Blind Flange,300#,Cold Insulation insulation thick =50.00mm	2	Cold								
14	50.00mm	2"	Flange	2",Flange,300#,Cold Insulation insulation thick =50.00mm	16	Cold								
15	50.00mm	2"	Elbow	2",Elbow,,Cold Insulation insulation thick =50.00mm	2	Cold								
16	50.00mm	2"	Pipe	2",Pipe,Cold Insulation insulation thick =50.00mm	1	Cold								
17	50.00mm	3"	Ball Valve	3",Ball Valve,300#,Cold Insulation insulation thick =50.00mm	3	Cold								



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Cold Insulation

Personal Insulation: Polyurethane/ PIR

Item No.	insul-thk	Size	Type	size , type ,rating , insul thick	Lenght(m) QTY (Piece)	insulation type	Remark							
18	50.00mm	3"	Flange	3",Flange,300#,Cold Insulation insulation thick =50.00mm	9	Cold								
19	50.00mm	3"	Globe Valve	3",Globe Valve,300#,Cold Insulation insulation thick =50.00mm	1	Cold								
20	50.00mm	3"	Elbow	3",Elbow,,Cold Insulation insulation thick =50.00mm	5	Cold								
21	50.00mm	3"	Pipe	3",Pipe,,Cold Insulation insulation thick =50.00mm	4.6	Cold								
22	50.00mm	3" x 2"	Reducer	3" x 2",Reducer,,Cold Insulation insulation thick =50.00mm	3	Cold								
23	50.00mm	4"	Elbow	4",Elbow,,Cold Insulation insulation thick =50.00mm	8	Cold								
24	50.00mm	4"	Flange	4",Flange,300#,Cold Insulation insulation thick =50.00mm	10	Cold								
25	50.00mm	4"	Tee	4",Tee,Cold Insulation insulation thick =50.00mm	4	Cold								
26	50.00mm	4"	Pipe	4",Pipe,,Cold Insulation insulation thick =50.00mm	9.7	Cold								
27	50.00mm	4" x 3"	Reducer	4" x 3",Reducer,,Cold Insulation insulation thick =50.00mm	2	Cold								
28	50.00mm	6"	Ball Valve	6",Ball Valve,300#,Cold Insulation insulation thick =50.00mm	1	Cold								
29	50.00mm	6"	Check Valve	6",Check Valve,300#,Cold Insulation insulation thick =50.00mm	2	Cold								
30	50.00mm	6"	Strainer	6",Strainer,300#,Cold Insulation insulation thick =50.00mm	2	Cold								
31	50.00mm	6"	Elbow	6",Elbow,Cold Insulation insulation thick =50.00mm	7	Cold								
32	50.00mm	6"	Flange	6",Flange,300#,Cold Insulation insulation thick =50.00mm	16	Cold								
33	50.00mm	6"	Pipe	6",Pipe,,Cold Insulation insulation thick =50.00mm	14.95	Cold								
34	50.00mm	6" x 2"	Reducer	6" x 2",Reducer,,Cold Insulation insulation thick =50.00mm	2	Cold								
35	50.00mm	6" x 4"	Reducer	6" x 4",Reducer,,Cold Insulation insulation thick =50.00mm	4	Cold								



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Cold Insulation

Personal Insulation: Polyurethane/ PIR

Item No.	insul-thk	Size	Type	size , type ,rating , insul thick	Lenght(m) QTY (Piece)	insulation type	Remark						
36	50.00mm	6"	Tee	6",Tee,,Cold Insulation insulation thick =50.00mm	1	Cold							
37	50.00mm	12"	Ball Valve	12",Ball Valve,300#,Cold Insulation insulation thick =50.00mm	2	Cold							
38	50.00mm	12"	Check Valve	12",Check Valve,300#,Cold Insulation insulation thick =50.00mm	2	Cold							
39	50.00mm	12"	Flange	12",Flange,300#,Cold Insulation insulation thick =50.00mm	8	Cold							
40	50.00mm	12"	Elbow	12",Elbow,Cold Insulation insulation thick =50.00mm	2	Cold							
41	50.00mm	12"	TEE	12",Tee,,Cold Insulation insulation thick =50.00mm	1	Cold							
42	50.00mm	12"	Pipe	12",Pipe,,Cold Insulation insulation thick =50.00mm	10.1	Cold							
43	50.00mm	14"	Flange	14",Flange,300#,Cold Insulation insulation thick =50.00mm	10	Cold							
44	50.00mm	14"	Blind Flange	14",Blind Flange,300#,Cold Insulation insulation thick =50.00mm	2	Cold							
45	50.00mm	14" x 12"	Reducer	14" x 12",Reducer,,Cold Insulation insulation thick =50.00mm	2	Cold							
46	50.00mm	14"	TEE	14",Tee,,Cold Insulation insulation thick =50.00mm	2	Cold							
47	50.00mm	14"	Pipe	14",Pipe,,Cold Insulation insulation thick =50.00mm	2.8	Cold							

Equipment

Item	Tag No.	Description	Qty.	Est. Dimensions (mm)		Insulation							
				Dia.	TL-TL	Type	Thickness (mm)	Surface (m2)					
1	E-6101	CHILLER	1	1146	7554	COLD	50.0	39.0					
2	Pipe Header	CHILLER PIPE HEADER	1	939	5580	COLD	50.0	24.0					
3	E-6105	ECONOMIZER	1	376	832	COLD	50.0	5.0					



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Personnel Protection

Personnel Insulation: Mineral Wool

Item No.	insul-thk	Size	Type	size , type ,rating , insul thick	Lenght(m) QTY (Piece)	insulation type	Remark							
1	30.00mm	3/4"	Ball Valve	3/4",Ball Valve,300#,Personnel Insulation insulation thick =30.00mm	7	Personnel Protection								
2	30.00mm	3/4"	Blind Flange	3/4",Blind Flange,300#,Personnel Insulation insulation thick =30.00mm	7	Personnel Protection								
3	30.00mm	3/4"	Flange	3/4",Flange,300#,Personnel Insulation insulation thick =30.00mm	8	Personnel Protection								
4	30.00mm	3/4"	Elbow	3/4",Elbow,,Personnel Insulation insulation thick =30.00mm	4	Personnel Protection								
5	30.00mm	3/4"	Pipe	3/4",Pipe,,Personnel Insulation insulation thick =30.00mm	1.2	Personnel Protection								
6	30.00mm	1 1/2"	Ball Valve	1 1/2",Ball Valve,300#,Personnel Insulation insulation thick =30.00mm	1	Personnel Protection								
7	30.00mm	1 1/2"	Blind Flange	1 1/2",Blind Flange,300#,Personnel Insulation insulation thick =30.00mm	1	Personnel Protection								
8	30.00mm	1 1/2"	Flange	1 1/2",Flange,300#,Personnel Insulation insulation thick =30.00mm	4	Personnel Protection								
9	30.00mm	1 1/2"	Elbow	1 1/2",Elbow,,Personnel Insulation insulation thick =30.00mm	1	Personnel Protection								
10	30.00mm	1 1/2"	Pipe	1 1/2",Pipe,,Personnel Insulation insulation thick =30.00mm	0.5	Personnel Protection								
11	30.00mm	2"	Ball Valve	2",Ball Valve,300#,Personnel Insulation insulation thick =30.00mm	5	Personnel Protection								
12	30.00mm	2"	Check Valve	2",Ball Valve,300#,Personnel Insulation insulation thick =30.00mm	2	Personnel Protection								
13	30.00mm	2"	Blind Flange	2",Blind Flange,300#,Personnel Insulation insulation thick =30.00mm	4	Personnel Protection								
14	30.00mm	2"	Flange	2",Flange,300#,Personnel Insulation insulation thick =30.00mm	14	Personnel Protection								
15	30.00mm	2"	Elbow	2",Elbow,,Personnel Insulation insulation thick =30.00mm	12	Personnel Protection								
16	30.00mm	2"	Pipe	2",Pipe,,Personnel Insulation insulation thick =30.00mm	5.2	Personnel Protection								
17	30.00mm	3"	Ball Valve	3",Ball Valve,300#,Personnel Insulation insulation thick =30.00mm	2	Personnel Protection								



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Personnel Protection

Personnel Insulation: Mineral Wool

Item No.	insul-thk	Size	Type	size , type ,rating , insul thick	Lenght(m) QTY (Piece)	insulation type	Remark							
18	30.00mm	3"	Strainer	3",Strainer,300#,Personnel Insulation insulation thick =30.00mm	2	Personnel Protection								
19	30.00mm	3"	Elbow	3",Elbow,,Personnel Insulation insulation thick =30.00mm	14	Personnel Protection								
20	30.00mm	3"	Flange	3",Flange,300#,Personnel Insulation insulation thick =30.00mm	20	Personnel Protection								
21	30.00mm	3"	Blind Flange	3",Blind Flange,300#,Personnel Insulation insulation thick =30.00mm	2	Personnel Protection								
22	30.00mm	3"	Pipe	3",Pipe,,Personnel Insulation insulation thick =30.00mm	9.9	Personnel Protection								
23	30.00mm	3"	Tee	3",Tee,,Personnel Insulation insulation thick =30.00mm	1	Personnel Protection								
24	30.00mm	3" x 2"	Tee	3" x 2",Tee,,Personnel Insulation insulation thick =30.00mm	2	Personnel Protection								
25	30.00mm	3" x 2"	Reducer	3" x 2",Reducer,Personnel Insulation insulation thick =30.00mm	3	Personnel Protection								
26	30.00mm	4"	Flange	4",Flange,300#,Personnel Insulation insulation thick =30.00mm	1	Personnel Protection								
27	30.00mm	4"	Pipe	4",Pipe,,Personnel Insulation insulation thick =30.00mm	0.2	Personnel Protection								
28	30.00mm	6"	Blind Flange	6",Blind Flange,300#,Personnel Insulation insulation thick =30.00mm	1	Personnel Protection								
29	30.00mm	6"	Flange	6",Flange,300#,Personnel Insulation insulation thick =30.00mm	2	Personnel Protection								
30	30.00mm	6"	Pipe	6",Pipe,,Personnel Insulation insulation thick =30.00mm	0.5	Personnel Protection								
31	30.00mm	8"	Elbow	8",Elbow,,Personnel Insulation insulation thick =30.00mm	2	Personnel Protection								
32	30.00mm	8"	Flange	8",Flange,300#,Personnel Insulation insulation thick =30.00mm	6	Personnel Protection								
33	30.00mm	8"	Pipe	8",Pipe,,Personnel Insulation insulation thick =30.00mm	0.6	Personnel Protection								
34	30.00mm	10"	Ball Valve	10",Ball Valve,300#,Personnel Insulation insulation thick =30.00mm	2	Personnel Protection								
35	30.00mm	10"	Flange	10",Flange,300#,Personnel Insulation insulation thick =30.00mm	8	Personnel Protection								
36	30.00mm	10"	Elbow	10",Elbow,,Personnel Insulation insulation thick =30.00mm	2	Personnel Protection								

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Piping

Personnel Protection
Personnel Insulation: Mineral Wool

Item No.	insul-thk	Size	Type	size , type ,rating , insul thick	Lenght(m) QTY (Piece)	insulation type	Remark						
37	30.00mm	10"	TEE	10", Tee,,Personnel Insulation insulation thick =30.00mm	1	Personnel Protection							
38	30.00mm	10" x 8"	Reducer	10" x 8",Reducer,Personnel Insulation insulation thick =30.00mm	2	Personnel Protection							

Equipment

Item	Tag No.	Description	Qty.	Est. Dimensions (mm)		Insulation							
				Dia.	TL-TL	Type	Thickness(mm)	Surface(m2)					
1	D-6101	OIL SEPARATOR	1.0	1372.0	3556.0	P.P	30.0	26.0					
2	E-6102	OIL COOLER	1.0	401.0	5681.0	P.P	30.0	10.0					