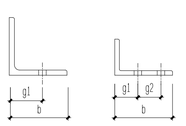
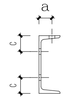
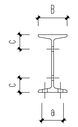
螺栓开孔明细表　LIST FOR BOLT HOLES

LIST-3　GAUGE OF BOLT HOLES
表-3　螺栓开孔位置尺寸

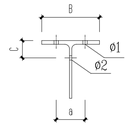






A OR B	g1	g2	D_{MAX}	TYPE	a	c	D_{MAX}	TYPE	a	c	D_{MAX}
45	25	–	11	[8	25	–	13	I10	36	–	11
50	30	–	13	[10	28	35	13/11	I12.6	42	–	11
56	30	–	15	[12.6	30	45	17/13	I14	44	40	13
63	35	–	17	[14a	35	45	17	I16	44	45	15
70	40	–	19	[16a	35	50	21.5	I18	50	50	17
75	45	–	21.5	[18a	40	55	21.5	I20a	54	50	17
80	45	–	21.5	[20a	45	55	21.5	I22a	54	50	19
90	50	–	23.5	[22a	45	60	21.5	I25a	64	60	21.5
100	55	–	23.5	[25a	50	60	21.5	I28a	64	65	21.5
110	60	–	25.5	[28a	50	65	25.5	I32a	70	65	21.5
125	70	–	25.5	[32a	50	70	25.5	I36a	74	65	23.5
140	70	–	25.5	[36a	60	75	25.5	I40a	80	70	23.5
160	60	70	23.5					I45a	84	75	25.5
180	65	80	23.5					I50a	94	75	25.5
200	80	80	25.5								

TYPE	a	ø	TYPE	a	ø	TYPE	a	ø
HW-100X100	52	15	HM-148X100	58	15	HN-150X75	43	13.5
HW-125X125	62	17	HM-194X150	80	21	HN-200X100	58	15
HW-150X150	74	21	HM-244X175	88	25.5	HN-250X125	66	17.5
HW-175X175	82	25.5	HM-294X200	106	31.5	HN-300X150	80	21.5
HW-200X200	100	31.5	HM-340X250	110	31.5	HN-350X175	88	25.5
HW-250X250	104	31.5	HM-390X300	118	31.5	HN-400X200	100	31.5
HW-300X300	110	31.5	HM-440X300	122	31.5	HN-450X200	110	31.5
HW-350X350	112	31.5	HM-488X300	126	31.5	HN-500X200	110	31.5
HW-400X400	120	31.5	HM-588X300	128	31.5	HN-600X200	120	31.5
						HN-700X300	130	31.5



TYPE	a	c	ø1	ø2	
TN75X75	43	40	13.5	21.5	
TN100X100	58	40	15	23.5	
TN125X125	66	45	17.5	25.5	
TN150X150	80	45	21.5	25.5	
TN175X175	88	50	25.5	25.5	
TN200X200	100	60	25.5	25.5	

LIST-4　DIAMETER FOR CONNECTION BOLT HOLES
表-4　连接节点螺栓孔直径　(UNIT:mm)

BOLT DIA 螺栓直径	DIAMETER OF HOLES 螺栓孔直径			
	COMMON STRENGTH BOLT 普通螺栓		HIGH STRENGTH BOLT 高强螺栓	
	DIA Ø 直径	CLEARANCE 间隙	DIA Ø 直径	CLEARANCE 间隙
M10	11	+1.0		
M12	13	+1.0	13.5	+1.5
M14	15	+1.0		
M16	17	+1.0	17.5	+1.5
M18	19.5	+1.5		
M20	21.5	+1.5	22	+2.0
M22	23.5	+1.5	24	+2.0
M24	25.5	+1.5	26	+2.0

LIST-5　DIAMETER OF EQUIP SET BOLT HOLES
表-5　设备安装螺栓孔直径　(UNIT:mm)

BOLT DIA 螺栓直径	DIAMETER OF HOLES 螺栓孔直径	
	DIA Ø 直径	CLEARANCE 间隙
M12	15	+3.0
M16	19	+3.0
M20	23	+3.0
M22	25	+3.0
M24	27	+3.0
M28	31	+3.0
M30	35	+5.0
M36	41	+5.0

REMARK:
备注:
THE LIST JUST IS APPLIED TO REFERENCE. THE DIAMETER OF HOLES DEPEND ON THE EQUIPMENT CONDITION DURING DESIGNING
此开孔仅供参考,设计时应以设备条件为准

业主单位	福建福海创石油化工有限公司					
业主文件编号	FAP103-47-CV-DP01-0007					
张健健	程峰	王世武		2025.3.27		0
设计 DESIGNED BY	校对 CHECKED BY	审核 APPROVED BY	审定 F.APPROVED BY	日期 DATE	说明 DESCRIPTION	版次 REVISION
中国昆仑工程有限公司 CHINA KUNLUN CONTRACTING & ENGINEERING CO., LTD.				项目 PROJECT	福建福海创石油化工有限公司原料适应性技改项目	
				装置/单元 UNIT	50万吨/年重芳烃轻质化装置	
资质等级 GRADE OF QUAL	综甲 A	证书编号 CERT. NO.	A111007731	图名 DWG. NAME	钢结构设计总说明及节点图 螺栓开孔明细表	
专业 DISCIPLINE	结构	阶段 PHASE	详细设计			
比例 SCALE	见图	第 1 张 SHEET	共 1 张 OF	图号 DWG. NO.	01TK23025D-0120-SE-21-0007	

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