

厨房设备技术规范要求
KITCHEN EQUIPMENT SPECIFICATION-GENERAL SPECIFICATION

第一部分：通用要求
Part-1 General Requirements

第一章：关于设计图纸和资料信息
Chapter-1 Design Package and Information

1. 设计知识产权：Intellectual Property Right
- 本项目的设计文档的所有知识产权归本厨房顾问公司所有，任何投标人、承包商未取得本公司书面许可，不可将其用于任何商业用途。
- This & accompanying documents and information contained herein are the sole property of the Kitchen Consultant Company; concept cannot be used or reproduced in any way without the prior written consent of said Office.
- 投标人、承包商应确保所有设计文档的保密性，未取得本公司书面许可，不可外泄。
- Bidder or Contract shall keep all documents and information confidential and not allowed to release any of them to public without prior written consent of our company.
2. 设计文档的复核：Documents Review and Check
- 投标人有义务复核设计文档，在投标过程中，若发现设计文档中设计图与清单或技术规格描述的差异，应在规定的时间询问本厨房顾问公司。
- It’ s bidder’ s responsibility to review and check the tender documents in case of any discrepancy found during bidding process consult us immediately within the stipulated time.
- 必须明确一点，任何对设计文档的异议不得涉及设计概念。
- Any queries about the document shall not involve the design concept.

第二章：工作范围
Chapter-3 Scope of Work

- 承包商应负责本技术规范书中所包含的以下工作内容：
- The K.E.C. shall responsible for the scope of work in this tender document as below:
1. 根据设计图纸和文档中的设计内容，供应设备以及负责设备的安装工作：
- The K.E.C. provide kitchen equipment & installation based on this tender document
- 1.1 承包商负责按设计内容和标书中所规定的设备清单生产厂制品设备，运送至现场并就位安装。
- Provide delivery, transportation and installation of equipment per the quantities and specifications in the tender document.
- 1.2 承包商负责按设计内容和标书中所规定的品牌和型号采购设备，确保设备合法入关、运送至现场并完成就位和设

- 备安装。
- The K.E.C. shall furnish equipment subject to the brands and models specified in the tender document, ensure the legal entry trough the Custom, deliver them to the site and set them in the right place.
- 1.3 承包商与其他承包商的界面
- Interface between K.E.C. and other contractors

a. 建筑和装修；Architecture & Decoration				
序 No.	事项 Items	其他单位 By others	厨房承包 By K.E.C.	备注 Remarks
1	厨房外围、内部墙体 External & Internal Wall	●		
2	地面回填（包括防水） Back fill & Water proof	●		
3	墙砖地砖 Wall & Floor Tile	●		
4	墙体加固 Wall Backing	●		厨房承包商协调承重力 K.E.C. to coordinate
5	天花吊顶 Ceiling	●		
6	冷库顶部与天花之间空隙 Gap between Cooler & Ceiling		●	间隙不大于 500mm Gap no less than 500mm
7	烟罩顶部与天花之间空隙 Gap Between Hood & Ceiling		●	间隙不大于 500mm Gap no less than 500mm
8	混凝土/水泥地台 Concrete Plinth	●		
9	设备外饰面 I.D. Finish	●		
10	厨房门 Doors	●		
11	厨房玻璃隔断 Glass Partition	●		
12	厨房传菜窗/收碟口 Pass-through Window		●	
13	卷帘门 Roller Shutter	●		
14	防火卷帘 Fire Shutter	●		
15	厨房设备吊装支架 Ceiling Hung Bracket		●	
16	厨房设备挂墙支架 Wall Bracket		●	
17	自助餐台和餐台支架 Structure of Buffet Counter	●		

18	墙角护角条 Corner Guard	•	•	视每个项目要求而定 Case by case
19	墙面防撞条 Wall Protection	•		
20	封墙钢 S/S Wall Flashing		•	

b. 给排水和管道；Plumbing & Drainage

序 No.	事项 Items	其他单位 By Others	厨房承包 By K.E.C.	备注 Remarks
1	给排水管、透气管等系统管件 Water Piping/Vent Piping	•		
2	末端给水管阀门 Water Valve	•		
3	末端给水管阀门至设备 Connection From Valve to Equipment		•	原则为 1.5m 以内 Within 1.5m
4	地沟及地沟盖板 Floor Trough with Grating	•	•	视每个项目要求而定 Case by case
5	地漏 Floor Drain	•		
6	冷却水进水/回水管 Chilling Water In/Out Piping	•		
7	冷冻水进水/回水管 Frozen Water In/Out Piping	•		
8	冷却水、冷冻水供水泵 Water Pump	•		
9	冷却水、冷冻水供水泵至设备 Piping from Pump to Equipment		•	原则为 1.5m 以内 Within 1.5m
10	排水点位至设备排水口 Piping from Drainage to Equipment		•	原则为 1.5m 以内 Within 1.5m
11	厨房消防喷淋系统 Sprinkler in Kitchen	•		
12	蒸汽进水/回水管 Steam In/Out Piping	•		
13	蒸汽进水/回水管阀门 Steam Valve	•		
14	蒸汽进水/回水管阀门至设备 Piping from Valve to Equipment		•	原则为 1.5m 以内 Within 1.5m
15	燃气管道/燃气表 Gas Piping & Gas Meter	•		
16	燃气手动阀 Shut-off Valve	•		
17	燃气电磁阀 Solenoid Valve on Gas Pipe		•	烟罩灭火系统组件 Part of Fire Suspension System

18	燃气管道接驳至设备 Gas Piping from Rough-in to Equipment	•		
19	饮用水净水设备 Drink Water System		•	
20	洗碗机软水/纯水设备 R.O. Water for Dish Machine		•	

c. 强电和弱电；Heavy and Weak Currents

序 No.	事项 Items	其他单位 By Others	厨房承包 By K.E.C.	备注 Remarks
1	厨房区域配电柜 Power Distribution Panel in Kitchen	•		
2	厨房区域照明系统和灯具 Lighting in Kitchen	•		
3	厨房区域应急照明系统和灯具 Emergency Lighting in Kitchen	•		
4	厨房配电柜至设备用电点位配线 Wiring from Panel to Equipment	•		
5	墙面接线盒、插座面板 J-Box & Socket Panel	•		
6	天花电缆桥架和配线 Cable Bridge and Wiring	•		
7	设备断路器 Circuit Breaker	•		
8	设备断路器至设备用电点位配线 Wiring from Circuit Breaker to Rough-In	•		
9	设备用电点位至用电设备 Connect. from Rough-in to Equipment		•	
10	厨房打印机和餐厅点单系统 Printer and Ordering system	•		
11	收银机，POS 机和系统 Cashier and P.O.S. system	•		
12	厨房消防系统电路系统 Fire Protection System and Circuit	•		
13	燃气管电子切断阀门 Shut-off Valve on Gas Piping-Elec.		•	
14	燃气管手动切断阀门 Shut-off Valve on Gas Piping-Manual	•		
15	其他弱点系统 Other Weak Currents System	•		

d. 机械和暖通；Mechanical & HVAC

序 No.	事项 Items	其他单位 By Others	厨房承包 By K.E.C.	备注 Remarks
1	厨房暖通和空调系统 HVAC System in Kitchen	●		
2	厨房设备烟罩和集气罩 Condensate/Exhaust Hood		●	
3	厨房抽排风、排烟系统主管道 Vent Piping and Duct	●		
4	厨房排烟系统风机、油烟进化器 Fans, Purification System	●		
5	厨房烟罩补风系统主管道 M.U.A. System & Duct	●		
6	厨房烟罩补风系统风机 M.U.A. Fans	●		
7	厨房排烟、补风管道和烟罩的最终接驳 Final Connection	●		
8	风幕机 Air Curtain	●		

2. 项目协助和现场协调

Project & Site Coordination

承包商应主动与业主和其他承包商及各相关单位就本项目的以下事宜进行协调。

The K.E.C. shall responsible for coordinating the issues listed below with other contractors.

- 2.1 承包商应核实现场条件，自行与其他相关单位协调设备送货通道等要求，确保厨房中的最大件设备可以搬运进工地现场。
The K.E.C. shall verify site condition and coordinate the transportation path with other contractors to ensure the biggest equipment can be delivered.
- 2.2 承包商应与甲方协调现场办公条件，根据合约条款提供现场办公所需要的设备，设施，包括但不限于办公场所、员工宿舍、临时工地仓库、临水、临电、电话、网络、手机、传真机、电脑、复印和打印设备等，并提供相应安保、清洁、设备维护人员等人力需求。
The K.E.C. shall coordinate the on-site working conditions with the owner and provide the necessary office equipment & facilities according to the terms of the contract, including but not limited to the office space, staff dormitory, temporary site warehouse, water, electricity, telephone, network, mobile phone, fax machine, computer, copying and printing machine, etc., and provide labors for security, protection, cleaning, equipment maintenance.
- 2.3 承包商应在第一时间向甲方索要本项目的整体施工进度计划，核实针对厨房区域的所有计划和工作安排的可行性与合理性，并在甲方给出的规定时间内给予意见回复。同时、承包商应根据总进度要求制定具体施工计划，此计划必须根据现场实际进度每周更新并呈报各相关管理、施工配合单位。
The K.E.C. shall ask the owner for the master construction schedule of the project, verify the feasibility and rationality of all plans and work arrangements for the kitchen area, and feedback to the owner in time. Meanwhile, the K.E.C. shall submit their working plan & schedule based on that, which must be updated according to the actual progress on site on weekly basis and submitted to all of the relevant

management and construction cooperation parties.

- 2.4 承包商应参加所有与厨房设备、设施相关的现场会议或非现场会议（项目所在城市或地区）；并可自行组织相关会议，通知相关单位参加。
The K.E.C. shall participate every on/off site meeting/work shop/that related to kitchens and inform any other party to participate the meetings organized by K.E.C.
- 2.5 承包商应参加所有厨房设备、设施相关的工地验收、现场交接以及行政部门督查、巡检或验收。
The K.E.C. shall participate all site/acceptance/handover inspection of all kitchen equipment.
- 2.6 协助甲方或运营方办理各类相关运营证件（包括但不限于食品卫生许可证、餐厅、食堂营业执照等），帮助解释行政报审图纸和一切相关配合工作。
The K.E.C. shall assist the owner or operator applying for all kinds of relevant operation certificates (including but not limited to Food-safety-hygiene license, restaurant, canteen business license, etc.), help to explain the submitted drawings and all related cooperation.
- 2.7 承包商应负责与燃气公司协调燃气管道走向，燃气表，阀门及配件的要求。
The K.E.C. shall coordinate gas piping route, gas meter location and other related requirements for gas valves.

3. 施工图、文档的编制、深化和审批

Shop Drawings and Documents Submission

承包商必须针对项目的现场情况、合约条款以及最终甲方确认的设备、设施编制施工图、材料/设备资料、施工方案等资料，每次递交必须包括 1 套电子版和 4 套硬拷贝并递交甲方和顾问公司审批，具体审批流程和相关审核单位由甲方给出具体要求；如甲方无具体要求，则必须符合厨房顾问公司的报审要求。

Based on the on-site condition and contract equipment schedule the K.E.C. shall submit shop drawings, equipment cut book, construction method etc., to the owner and the Kitchen Consultant (1 set of soft copy and 4 sets of hard copies).

3.1 施工图编制、深化和审批

Requirement of Shop Drawings

- a. 设备平面图：根据现场尺寸，局部的设备布局可能会和招标设计图有差异，承包商应根据现场尺寸和最终合约设备清单上的真实设备尺寸重新绘制设备平面图，平面图纸的比例不小于 1:100，A3 幅面，图签中的信息和格式必须符合厨房设计顾问公司的要求；附上报审封面；（见附件）
Equipment Plans: The equipment plans in the tender may differ from the on-site dimension. The Contractor shall work out the equipment plans based on the on-site survey and the actual equipment size on the final contract equipment list. The minimal proportions of the plans are 1:100 in A3. The information and format in the drawing must conform to the kitchen consultant’ s requirements. (Refer to the submittal cover page in appendix)
- b. 土建条件要求示意：反应墙体加固要求，隔墙尺寸，地台，设备安装凹槽，防火墙体要求，墙体开口，开洞，门洞，天花开口等要求，图纸比例不小于 1:100，A3 幅面，图签中的信息和格式必须符合厨房设计顾问公司的要求；附上报审封面；（见附件）
Building Condition Plans: Shall reflect the information including wall backing location, dimension of the partition walls, plinths, installation foundation ditches, wall & door & ceiling openings, etc. The minimal proportions of the plans are 1:100 in A3. The information and format in the drawing must conform to the kitchen consultant’ s requirements. (Refer to the submittal cover page in appendix)
- c. 管道接驳点位示意：反应设备给排水接驳点位定位信息；蒸汽供回接驳点位定位信息；冷却水/冷冻水供回接驳点位定位信息；燃气设备接驳点位定位信息等；图纸比例不小于 1:100，A3 幅面，图签中的信息和格式必须符合厨房设计顾问公司的要求；附上报审封面；（见附件）

- Plumbing Rough-in Plans: Shall reflect plumbing rough-in locations and requirements including water supply, drainage, steam supply, chilled water supply, gas supply etc. The minimal proportions of the plans are 1:100 in A3. The information and format in the drawing must conform to the kitchen consultant’ s requirements. (Refer to the submittal cover page in appendix)
- d. 电气接驳点位示意：反应用电设备接驳点位定位信息；断路开关定位信息等；图纸比例不小于 1:100， A3 幅面，图签中的信息和格式必须符合厨房设计顾问公司的要求; 附上报审封面；（见附件）
- Electrical Rough-in Plans: Shall reflect power rough-in information and the location of breakers etc. The minimal proportions of the plans are 1:100 in A3. The information and format in the drawing must conform to the kitchen consultant’ s requirements. (Refer to the submittal cover page in appendix)
- e. 排风接驳点位示意：烟罩、排气罩抽排风、排烟接驳口定位信息；制冷设备散热、通风要求等；图纸比例不小于 1:100， A3 幅面，图签中的信息和格式必须符合厨房设计顾问公司的要求; 附上报审封面；（见附件）
- Ventilation Rough-in Plans: shall reflect
- f. 制冷系统管布线示意：反应制冷机组至冷库的冷媒管、电线、信号线连接和走线路径示意，必须根据工地现场情况绘制；图纸比例不小于 1:200， A3 幅面，图签中的信息和格式必须符合厨房设计顾问公司的要求; 附上报审封面；（见附件）
- Refrigeration System Plans: Shall reflect the refrigerant piping, cabling and wiring route from walk-in coolers to the compressor, must be strictly subject to the on-site condition. The minimal proportions of the plans are 1:200 in A3. The information and format in the drawing must conform to the kitchen consultant’ s requirements. (Refer to the submittal cover page in appendix)
- g. 后场设备立面图：图纸比例不小于 1:25， A3 幅面，局部关键剖面和节点图的比例不小于 1:10，图签中的信息和格式必须符合厨房设计顾问公司的要求; 附上报审封面；（见附件）
- Equipment Elevations: The minimal proportions of the plans are 1:25 in A3, section and details shall be at least 1:10. The information and format in the drawing must conform to the kitchen consultant’ s requirements. (Refer to the submittal cover page in appendix)
- h. 前场设备立面图和装饰配合示意图：图纸比例不小于 1:25， A3 幅面,局部关键剖面和节点图的比例不小于 1:10，与装饰单位确认装饰材料尺寸，图签中的信息和格式必须符合厨房设计顾问公司的要求; 附上报审封面；（见附件）
- F.O.H. Elevations: The minimal proportions of the plans are 1:25 in A3, section and details shall be at least 1:10., to confirm the actual size of the I.D. materials with I.D. Contractor. The information and format in the drawing must conform to the kitchen consultant’ s requirements. (Refer to the submittal cover page in appendix)
- 3.2 材料、设备资料编制和审批
- Material & Equipment Cut Book
- a. 外购件设备资料：附上报审封面；（见附件）
- Cut book (Refer to the submittal cover page in appendix)
- b. 厂制品单件图：附上报审封面；（见附件）
- Fabrication drawings (Refer to the submittal cover page in appendix)
- c. 安装材料资料：附上报审封面；（见附件）
- Installation material and accessories (Refer to the submittal cover page in appendix)
- d. 不锈钢设备局部样品和配件实样：承包商需按招标人之要求，提供所有产品的制作材料样板及安装材料样板及清单详表，另需提供配件样品如脚轮、开关、阀门、温控、手柄、龙头、小五金等，交由业主、顾问公司经确认后方能使用。
- Stainless Steel sample pieces: The K.E.C. shall provide the sealed samples including stainless steel

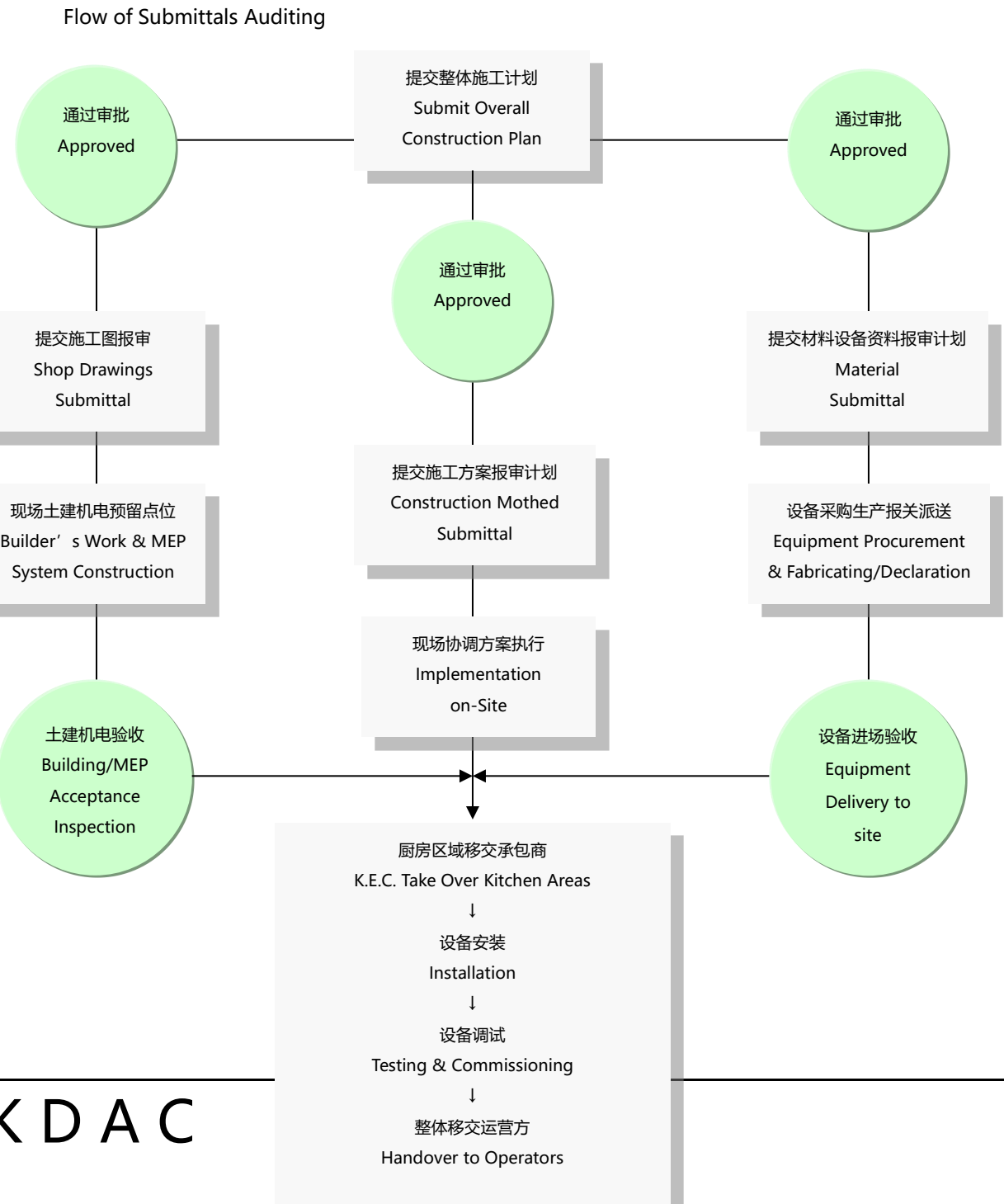
- samples and other accessories such as wheel, switch, valve, thermal control, faucets and other hardware that required to be approved by the Owner and Kitchen Consultant.
- e. 5%厂制品设备出厂前检验：在厂制品单件图审批过程中，由厨房顾问公司指定一些设备作为实样（总量不超过 5%），承包商应安排甲方和厨房顾问公司对这些设备进行查看，给出意见。
- Factory Inspection: The K.E.C. shall pre-fabricates several different types of equipment listed by the Kitchen Consultant (no more than 5% out of the total amount) and invite the Owner and Kitchen Consultant to arrange a factory inspection for comments.
- 3.3 施工方案
- Construction Method
- a. 施工计划：包括整体施工计划；报审计划；采购、生产计划；区域设备安装计划；工程验收、设备调试计划；移交计划；报审格式见附件；附上报审封面；（见附件）
- Construction Plan: Includes an overall plan, submission plan, procurement plan, fabrication plan, installation plan (by areas), inspection plan, testing plan and handover plan etc., the format must conform to the kitchen consultant’ s requirements. (Refer to the submittal cover page in appendix)
- b. 设备送货路径图：工地送货入口至施工区域计划路线，送货通道宽度、高度、承重量、设备要求、临时机电、土建要求等；附上报审封面；（见附件）
- Transportation Route Plans: indicate the delivery and transportation path from the entrance of the site to the designated equipment location, illuminate width, height, floor loading of corridors and equipment or utility requirements. The format must conform to the kitchen consultant’ s requirements. (Refer to the submittal cover page in appendix)
- c. 其他方案：根据业主要求编制，例如安全施工计划、质量保证计划、环境保护计划，人力安排计划等，不必报审厨房顾问公司。
- Other Plans: Per the Owner’ s demand, e.g. HSE plan is not required to be approved by the Kitchen Consultant.
- 3.4 审图单位建议表：

Recommended Submittals Auditing Members					
类别 Type	序 No.	名称 Items	主审单位 Main Audit	副审单位 2ndary Audit	副审单位 2ndary Audit
施工图类 Shop Drawings	a	设备平面图 Equipment Plans	K.C.	Ops	
	b	土建条件要求示意 Building Condition Plans	L.D.I.	K.C.	Arch.
	c	管道接驳点位示意 plumbing Rough-in Plans	L.D.I.	K.C.	M&E
	d	电气接驳点位示意 Electrical Rough-in Plans	L.D.I.	K.C.	M&E
	e	排风/排烟接驳点位示意 Ventilation Rough-in Plans	L.D.I.	K.C.	M&E
	f	制冷系统管布线示意 Refrigeration System Plans	L.D.I.	K.C.	M&E
	g	后场设备立面图 BOH Equipment Elevations	K.C.	Ops	
	h	前场设备立面图和配合示意图 FOH Equipment Elevations	I.D.	K.C.	Ops
材料 Material	a	外购件设备资料 Cut Book	K.C.	Ops	
	b	厂制品单件图 Fabrication Drawings	K.C.	Ops	
	c	安装材料资料 Installation hardware	K.C.	Ops	
	d	不锈钢设备局部样品和配件实样 Sealed Samples	K.C.	Ops	
	e	5%厂制品设备出厂前检验 Mock up in factory	K.C.	Ops	
施工	a	整体施工计划 Overall Plan	G.C.	K.C.	L.D.I.
	b	施工图报审计划 Shop Drawing Submission Plan	K.C.	G.C.	L.D.I.

	c	材料、施工方案报审计划 Material Submission Plan	K.C.	Ops	
	d	采购、生产计划 Procurement Plan	G.C.	K.C.	
	e	区域设备安装计划 Installation Plan	G.C.	K.C.	Ops
	f	工程验收、设备调试计划 Inspection & Testing Plan	Ops	G.C.	K.C.
	g	移交计划 Handover Plan	Ops	G.C.	K.C.
Others					

K.C.=Kitchen Consultant/厨房顾问 L.D.I.= Design Institute/设计院 G.C.=General Contractor/总包
Ops=Operators/运营团队 I.D.=Interior Design/内装设计 Arch.=Architect/建筑设计
M&E=M&E Consultant/机电顾问

3.5 审图流程



4. 厨房设备阶段性检查和验收

Site Inspection

5. 移交前的设备调试

Testing & Commissioning Before Handover

6. 配合验收和移交工作

Acceptance Inspection & Handover

承包商在完工移交前因准备好如下资料：

The K.E.C. shall submit completion documents including the contents listed below:

- 竣工图，必须正确反映最终设备布局情况，比例不小于 1:100。
As-built drawings reflect final kitchen equipment layouts, the min. proportion no less than 1:100.
- 所有设备使用说明书，并附清单及最终使用方的签收证明。
Operating Manuals for all the equipment and a list of the manuals with operator's signature.
- 产品合格证，并附清单及最终使用方的签收证明。
Certificate of Conformity of the equipment and a list of the Certificates with operator's signature.
- 所有设备的调试报告，包括燃气，电器，蒸汽等特殊设备，并附清单及最终使用方的签收证明。
Testing & Commissioning Reports for equipment including Gas, Electrical, Steaming and other specialized equipment and a list of the T&C reports with operator's Signature.
- 所有资料必须征订成册，共 4 套，附加 1 套电子版。
Provide 1 digital copy and 4 hard copies bound into book.

7. 维保服务

Maintenance

- 承包商为所有设备提供 1 年免费维修和保养，易损件和易耗品除外。
The K.E.C. shall provide 1years warranty and free maintenance, except for wearing parts and consumable items.
- 投标文件内必须包含易损件和易耗品的清单供各相关单位审批。
The K.E.C. shall submit a list of wearing parts and consumable items to related parties for approval.

(本章节完) End

厨房设备技术规范要求

KITCHEN EQUIPMENT SPECIFICATION-GENERAL SPECIFICATION

第二部分：材料要求

Part-2 Material

第一章：设备

Chapter-1 Equipment

本章节所描述的设备技术规格若与设备特殊技术要求章节不符，以后者所规定的要求为准。

In case of any discrepancy found between this chapter and particular specifications be subject to latter.

1. 厂制品 Fabrication
- 1.1 工作台、活动工作台、设备架和星盆工作台（后场）：
Worktable/Mobile Table/Equipment Stand/Sink (B.O.H.)
- a. 台面

1.5mm±5%

304 18/8 不锈钢
- Tabletop

14 Gauge

Stainless Steel 304 18/8
- b. 台面和下层板加强筋

2.0mm±5%

304 18/8 不锈钢
- Reinforcement

12 Gauge

Stainless Steel 304 18/8
- c. 下层板

1.2mm±5%

304 18/8 不锈钢
- Undershelves

14 Gauge

Stainless Steel 304 18/8
- d. DN50mm 脚杯

2.0mm±5%

304 18/8 不锈钢
- DN2” Leg Cup

12 Gauge

Stainless Steel 304 18/8
- e. DN38mm 支撑脚

1.5mm±5%

304 18/8 不锈钢
- DN1-1/2” Leg

14 Gauge

Stainless Steel 304 18/8
- f. DN20mm 横通

1.5mm±5%

304 18/8 不锈钢
- DN 3/4” Crossbraising

14 Gauge

Stainless Steel 304 18/8
- g. 子弹脚-NSF 认可的不锈钢材料；圆柱形脚趾；最大圈外径 40mm-42mm；承重力不小于 850kg；高度可调节范围不小于 30mm。

Bullet foot-NSF approved S/S, cylindrical foot, DN1-3/4” outer ring, 850Kg loading, adjustable range no less than 1-1/4 ”.

参考品牌和型号，Component Hardware, A10-0852-C

Preferred Brand & Model, Component Hardware, A10-0852-C
- h. 5” 脚轮-外径 5” 的万向轮；承重力不小于 90kg；灰色聚亚安酯橡胶轮；橡胶厚度不小于 30mm；带润滑油加油嘴和密封盖；带可拆卸式的固定底板。

DN5” Outer ring universal wheel, 90Kg loading, Polyurethane dark gray, min. thickness no less than 1-1/4” , with filling noodle & lid for lubricating oil, with removal bottom fixing panel.

参考品牌和型号，Component Hardware, C21-2050-SS (不带刹车) 或 C21-2051-SS (带刹车)

Preferred Brand & Model, Component Hardware, C21-2050-SS (without breaker) or C21-20510-SS (with breaker)
- i. 星盆

1.5mm±5%

304 18/8 不锈钢
- Sink Basin

14 Gauge

Stainless Steel 304 18/8

- j. 插盘架

1.5mm±5%

304 18/8 不锈钢
- Pan Slide

14 Gauge

Stainless Steel 304 18/8
- 1.2 工作柜、高身柜、星盆工作柜（后场）：
Work counter/With Sink/Upright Cabinet (B.O.H.)
- a. 台面

1.5mm±5%

304 18/8 不锈钢
- Tabletop & Bottom

14 Gauge

Stainless Steel 304 18/8
- b. 台面和下层板加强筋

2.0mm±5%

304 18/8 不锈钢
- Reinforcement

12 Gauge

Stainless Steel 304 18/8
- c. 下层板

1.2mm±5%

304 18/8 不锈钢
- Undershelves

16 Gauge

Stainless Steel 304 18/8
- d. 侧板

1.2mm±5%

304 18/8 不锈钢
- Lateral Panel

16 Gauge

Stainless Steel 304 18/8
- e. 背板

1.2mm±5%

30418/8 不锈钢
- Rear Panel

16 Gauge

Stainless Steel 304 18/8
- f. DN40mm 脚连子弹脚

NSF 认可的不锈钢材料；六角形脚趾；承重力不小于 850kg；高度为 150mm 左右；可调节范围不小于 40mm；带可拆卸式的固定底板。

Bullet foot-NSF approved S/S, hexagonal foot, 850Kg loading, 6” high, adjustable range no less than 1-1/2 ”, with removable bottom plate.

参考品牌和型号，Component Hardware, A48-5048-C

Preferred Brand & Model, Component Hardware A48-5048-C
- g. 星盆

1.5mm±5%

304 18/8 不锈钢
- Sink

14 Gauge

Stainless Steel 304 18/8
- h. 柜门

1.2mm±5%

304 18/8 不锈钢
- Door Panel

16 Gauge

Stainless Steel 304 18/8
- i. 抽屉

1.5mm±5%

304 18/8 不锈钢
- Drawer Runner

14 Gauge

Stainless Steel 304 18/8
- j. 抽屉导轨-全不锈钢或镀锌钢等防腐蚀材料制成；承重力不小于 45kg；带自动关闭；带阻尼；静音导轨；导轨便于清洁、易于维护。

Drawer Runner-Made of anticorruption material such as stainless steel or galvanized steel, 45kg loading, self-closing with , silent rail, easy to clean an maintain.

参考品牌和型号，Hettich, Quadro V6 带阻尼系统

Preferred Brand & Model, Hettich, Quadro V6 Silent
- k. 抽屉锁或锁扣-全 304 18/8 不锈钢；带两把金属钥匙。

Drawer Locker-304 stainless steel housing, with 2 keys.

参考品牌和型号，Component Hardware , P10-0370, P20-0490

Preferred Brand & Model, Component Hardware, P10-0370, P20-0490
- l. 移门导轨

2.0mm±5%

304 18/8 不锈钢
- Door Runner

12 Gauge

304 18/8 Stainless Steel
- m. 移门滚轮-全 304 18/8 不锈钢；带不锈钢滚珠轴承；不锈钢固定螺栓。

Door Wheel-all 304 stainless steel parts

参考品牌和型号，Component Hardware, B20, B30, B40 系列

Preferred Brand & Model, Component Hardware, B20, B30, B40 series
- n. 门铰链-可采用顶/底部固定式或排铰，全 304 18/8 不锈钢组件，单扇门用的铰链总承重力不小于 150kg。

Hinge-Using shaft hinges or barrel hinges, all parts shall be made of stainless steel, min. loading shall be no less than 150Kg.

参考品牌和型号， Component Hardware, M48 系列， R74 系列

Preferred Brand & Model, Component Hardware, M48 series, R74 series

1.3 洗手星连下柜

Hand sink with cabinet

a.	外壳	1.2mm±5%	304 18/8 不锈钢
	Housing	16 Gauge	Stainless Steel 304 18/8
b.	星盆	1.5mm±5%	304 18/8 不锈钢
	Basin	14 Gauge	Stainless Steel 304 18/8

1.4 推车类：

Trolley/Cart

a.	40*40mm 方通	2.0mm±5%	304 18/8 不锈钢
	40*40mm Tube	12 Gauge	Stainless Steel 304 18/8
b.	底板	1.5mm±5%	304 18/8 不锈钢
	Bottom Plate	14 Gauge	Stainless Steel 304 18/8
c.	底板加强筋	2.0mm±5%	304 18/8 不锈钢
	Reinforcement	12 Gauge	Stainless Steel 304 18/8
d.	锁杆支架	2.0mm±5%	304 18/8 不锈钢
	Lock Stick Bracket	12 Gauge	Stainless Steel 304 18/8
e.	DN15 锁杆	1.5mm±5%	304 18/8 不锈钢
	Lock Stick	14 Gauge	Stainless Steel 304 18/8
f.	护角片-耐高温人造树脂材料；耐高温极限为-43℃ to 230℃。		
	Corner Guard-made of heat resistant ABS, melting limit temperature 109°F~446°F.		
	参考品牌和型号， Component Hardware		
	Preferred Brand & Model, Component Hardware		
g.	插盘架	1.5mm±5%	304 18/8 不锈钢
	Pan slide	14 Gauge	Stainless Steel 304 18/8
h.	耐高温脚轮-4” 或 5” 轮 ,耐高温人造树脂材料，耐高温极限为-43℃ to 230℃		
	Heat resistant Wheel-4” ~5” , made of heat resistant ABS, melting limit temperature 109°F~446°F.		

参考品牌和型号， Component Hardware

Preferred Brand & Model, Component Hardware

1.5 挂墙架、墙柜，天花吊架、吊柜，坐台架、台柜（后场）：

Wall/Ceiling hung/Countertop shelf/ cabinet (B.O.H.)

a.	顶板和底板	1.5mm±5%	304 18/8 不锈钢
	Top & Bottom Plate	14 Gauge	Stainless Steel 304 18/8
b.	顶板加强筋	2.0mm±5%	304 18/8 不锈钢
	Reinforcement	12 Gauge	Stainless Steel 304 18/8
c.	隔板	1.5mm±5%	304 18/8 不锈钢
	Mid-shelf	14 Gauge	Stainless Steel 304 18/8
d.	挂墙架支架	2.0mm±5%	304 18/8 不锈钢
	Wall Shelf Bracket	12 Gauge	Stainless Steel 304 18/8
e.	DN25mm 吊杆/支架	1.5mm±5%	304 18/8 不锈钢

	DN25mm Rod	14 Gauge	Stainless Steel 304 18/8
f.	柜门	1.2mm±5%	304 18/8 不锈钢
	Door Panel	16 Gauge	Stainless Steel 304 18/8
g.	移门导轨	2.0mm±5%	304 18/8 不锈钢
	Door Runner	12 Gauge	Stainless Steel 304 18/8
h.	移门滚轮-全 304 18/8 不锈钢；带不锈钢滚珠轴承；不锈钢固定螺栓。		
	Door Wheel-all 304 stainless steel parts		

参考品牌和型号， Component Hardware, B20, B30, B40 系列

Preferred Brand & Model, Component Hardware, B20, B30, B40 series

i.	门铰链-可采用顶/底部固定式或排铰，全 304 18/8 不锈钢组件，单扇门用的铰链总承重力不小于 150kg。		
	Hinge-Using shaft hinges or barrel hinges, all parts shall be made of stainless steel, min. loading shall be no less than 150Kg.		

参考品牌和型号， Component Hardware, M48 系列， R74 系列

Preferred Brand & Model, Component Hardware, M48 series, R74 series

j.	墙体固定夹	2.0mm±5%	304 18/8 不锈钢
	Wall Clip	12 Gauge	Stainless Steel 304 18/8
k.	墙体固定槽	2.0mm±5%	304 18/8 不锈钢
	Wall fixture	12 Gauge	Stainless Steel 304 18/8
l.	柜底灯箱片	3.0mm±5%	半透明白色亚克力板
	Light Film	3.0mm±5%	Translucent or white acrylic
m.	LED 灯管/底座 色温 4000K；白色冷光；亮度不小于 200Lux；寿命不小于 20000 小时；额定功率 25~60W。		
	LED Light-4000k, 200Lux, 20000Hours lifelong span, 25~60w.		

参考品牌和型号， Philips, Master TL5

Preferred Brand & Model, Philips, Master TL5

1.6 地沟连盖板：

Floor Trough and Grating

a.	地沟篦子	1.5mm±5%	316 不锈钢
	Housing	14 Gauge	Stainless Steel 316
b.	地沟盖板	2.0mm±5%	304 18/8 不锈钢
	Grating	12 Gauge	Stainless Steel 304 18/8
c.	排水口隔渣栏	1.0mm±5%	316 不锈钢
	Filtering Basket	18 Gauge	Stainless Steel 316

1.7 集气罩、油网烟罩、运水烟罩和紫外线烟罩（后场）：

Condensate/Grease/Water Washing/UV Hood (B.O.H.)

a.	壳体	1.5mm±5%	304 18/8 不锈钢
	Housing	14 Gauge	Stainless Steel 304 18/8
b.	排烟口支管和法兰	1.5mm±5%	304 18/8 不锈钢
	Vent Duct & Flange	14 Gauge	Stainless Steel 304 18/8
c.	补分口支管和法兰	1.5mm±5%	304 18/8 不锈钢
	M.U.A. Duct & Flange	14 Gauge	Stainless Steel 304 18/8
d.	支管保温材料	双层不锈钢	中空 10mm
	Duct Insulation	Double deck S/S	10mm Thick Cavity

- e.

普通油网板-铝合金材质;罩面尺寸在 500mm*500mm 左右;每块重量不超过 4.5kg;对于 3-10um 粒径的油烟粒子,净化效率不低于 85%;压损不超过 110Pa。
Grease Filtering Panel-made of aluminum, size of each piece no larger than 20” *20” , the weight of each piece no heavier than 4.5kg, the purification efficiency is not less than 85% for 3-10um particle sized oil and the pressure drop is no more than 110Pa。
参考品牌和型号, Dirk, DX-5050
Preferred Brand & Model, Dirk, DX-5050
- f.

紫外线油网板-铝合金材质;罩面尺寸在 500mm*500mm 左右;每块重量不超过 7.0kg;对于 3-10um 粒径的油烟粒子,净化效率不低于 85%;压损不超过 117Pa;完全遮挡紫外线的外泄。
Grease Filtering Panel-made of aluminum, size of each piece no larger than 20” *20” , the weight of each piece no heavier than 7.0kg, the purification efficiency is not less than 85% for 3-10um particle sized oil and the pressure drop is no more than 117Pa。
参考品牌和型号, Dirk, DX-5050-UV
Preferred Brand & Model, Dirk, DX-5050-UV
- g.

紫外线灯管-灯管为欧美全进口;灯管为人造石英材质;管长从 700mm-1700mm 可自由根据烟罩长度组合;设计风速为 2M-2.5M/秒;灯管组件包括全进口镇流器;净化效率不低于 90%;灯管功率不小于每米 35w。
UV Light-light tube must be imported, made of synthetic quartz, 28”-67” long based on the length of hood, designed velocity 2m~5m/sec., with imported ballast, the purification efficiency is not less than 90%, min. power of the light tube no less than 35w/m。
参考品牌和型号, Barton, H 系列灯管
Preferred Brand & Model, Barton, H series
- h.

紫外线灯管支架	1.5mm±5%	304 18/8 不锈钢
UV light bracket	14 Gauge	Stainless Steel 304 18/8
- i.

新风口百叶-根据设计图尺寸定加工或采购;不锈钢或塑料材质;可拆卸。
M.U.A. Louver-to purchase or fabricate based on the designed dimension, removable, made of stainless steel.
- j.

顶部封板	1.2mm±5%	304 18/8 不锈钢
Top Closure Panel	16 Gauge	Stainless Steel 304 18/8
- 1.8

烟罩控制箱:
Hood Control Panel
- a.

箱体	1.5mm±5%	304 18/8 不锈钢
Housing	14 Gauge	Stainless Steel 304 18/8
- 1.9

加热元件:
Heating Elements
- a.

干发热管-304 18/8 不锈钢;长度可定制;管径 20mm-25mm;单管功率 (500mm 长) 不小于 2.5kw; 220v 或 380v 额定电压;使用寿命不小于 10000 小时。
Dry Heating-made of Stainless Steel 304 18/8, custom size & DN3/4” ~1” , min. power of each tube no less than 2.5kw/20 ”, either 1 or 3 phase, lifelong span no less than 10000 hours.
- b.

出口/回风面板	1.2mm±5%	304 18/8 不锈钢
In/out let Panel	16 Gauge	Stainless Steel 304 18/8
- c.

湿发热管-316 不锈钢;长度可定制;管径 20mm-25mm;单管功率 (500mm 长) 不小于 2.5kw; 220v 或 380v 额定电压;使用寿命不小于 10000 小时。

Wet Heating-made of Stainless Steel 316, custom size & DN3/4” ~1” , min. power of each tube no less than 2.5kw/20 ”, either 1 or 3 phase, lifelong span no less than 10000 hours.

1.10 其他设备:

Other Equipment			
a.	DN25mm 托盘架	1.5mm±5%	304 18/8 不锈钢
	DN1” Tray Side	14 Gauge	Stainless Steel 304 18/8
b.	托盘架支架	2.0mm±5%	304 18/8 不锈钢
	Tray Slide Bracket	12 Gauge	Stainless Steel 304 18/8
c.	DN25mm 挂锅架	1.5mm±5%	304 18/8 不锈钢
	DN1” Pot Rack	14 Gauge	Stainless Steel 304 18/8
d.	挂锅架支架	2.0mm±5%	304 18/8 不锈钢
	Pot Rack Bracket	12 Gauge	Stainless Steel 304 18/8
c.	踢脚板	1.5mm±5%	304 18/8 不锈钢
	Kick Plate	14 Gauge	Stainless Steel 304 18/8

2. 制冷设备 Refrigeration Equipment

2.1 冷库

Walk-in Cooler

Walk-in Cooler

a.	外露面库板外侧板材	1.0mm±5%	304 18/8 不锈钢
	Exposed Panel Surface Outside	18 Gauge	Stainless Steel 304 18/8
b.	非外露面库板外侧板材	0.6mm±5%	304 18/8 不锈钢
	Hidden Panel Surface Outside	22 Gauge	Stainless Steel 304 18/8
c.	库内饰面立板板材	0.8mm±5%	304 18/8 不锈钢
	Exposed Panel Surface Inside	22 Gauge	Stainless Steel 304 18/8
d.	顶板内外饰面板材	0.6mm±5%	304 18/8 不锈钢
	Top Panel	22 Gauge	Stainless Steel 304 18/8
e.	底板内外侧板材	1.5mm±5%	镀锌板
	Bottom Panel	14 Gauge	White coated steel
f.	外露面库板外护墙板	2.0mm±5%	压花铝合金
	Wall Protection Outside	12 Gauge	Embossed aluminum
g.	库内底板敷完成饰面	3.0mm±5%	压花铝合金 (无安装基坑)
	Finished Floor	8 Gauge	Embossed aluminum

In the case of be without installation sunken floor.

h.	冷库库板内圆角不允许内圆角弧形封板, 必须是冷库弧形角板	
	The sanitizing curve shall be part of the corner pieces of the panels formed integrally.	
i.	库门外立面板材	1.0mm±5% 304 18/8 不锈钢
	Cooler Door Outside	18 Gauge Stainless Steel 304 18/8
j.	库门铰链 -304 18/8 不锈钢; 带高强度弹簧自动回归功能; 开门角度不小于 100°; 每扇门安装 3 组门铰链	
	Door Hinge-made of stainless steel 18/8, self-closing, opening angle no less than 100°, provide 3 hinges for each door.	

参考品牌和型号, Component Hardware, W60 系列, W99 系列

Preferred Brand & Model, Component Hardware, W60 series, W99 series

- k.

库门把手和门锁-304 18/8 不锈钢高光处理，门内装有安全锁可由内部打开，以便开启逃生
Lock-made of polished stainless steel 18/8, with safety unlock device inside cooler. Easily disable the lock and escaped from inside in case of get trapped.
- l.

顶部卡箍件-主体 304 18/8 不锈钢，带密封件
Door Closer-made of stainless steel 18/8, with sealant.
参考品牌和型号， Component Hardware, W95 系列
Preferred Brand & Model, Component Hardware, W95 series
- m.

隔热保温填-100mm 厚 100% 硬质聚氨酯或聚异氰脲酸酯隔热物质；导热系数:≤0.022W/m²·K；表观芯密度:≥40KG/立方米
Insulation foaming-4” thickness Polyurethane or Polyisocyanuric foamed (PU or PIR), Thermal Conductivity no larger than 0.022W/m²·K, density no less than 40KG/M³.
- n.

平衡窗-装置应附加加热设备，以避免结霜及防潮。
Pressure Relief Port-with heater to prevent from frosting.
考品牌和型号， Component Hardware, W86 系列
Preferred Brand & Model, Component Hardware, W86 series
- o.

整体库板必须符合《GB50072-2021 冷库设计标准》，燃烧等级为 B1，并具备地方质量监督检测研究院或同等部门的质量检测报告。
Insulation panels must comply with GB50072-2001, Standard for design of cold store. The combustion grade is B1, and it is accompanied by a quality inspection report issued by a local quality supervision and inspection research institute or an equivalent department.

2.2 工作台冰箱

Countertop Refrigerator

- a.

台面板材
Countertop

1.5mm±5%

304 18/8 不锈钢
- b.

侧板/背板
Lateral/Rear

1.2mm±5%

304 18/8 不锈钢
- c.

底板板材
Bottom panel

1.5mm±5%

304 18/8 不锈钢
- d.

门板
Door Panel

1.2mm±5%

304 18/8 不锈钢
- e.

门铰链-顶部、底部安装式；全 304 18/8 不锈钢组件，单扇门用的铰链总承重力不小于 80kg；带自动回归功能。
Hinge-shaft hinges, made of stainless steel 304 18/8 , min. loading no less than 80KG, self-closing.
- f.

抽屉导轨
Drawer Runner

304 18/8 不锈钢

stainless steel 304 18/8
- g.

插盘架
Pan Slide

1.5mm±5%

304 18/8 不锈钢
- h.

冷媒介质-高温冰箱采用无 CFC 的环保雪种(R-134a)；低温冰箱采用无 CFC 的环保雪种(R-404a)。
Refrigerant-CFC free, R-134a for refrigerators and R-404a for freezers.
- i.

隔热保温填充
Insulation

厚 75mm

环保 PU 绝缘材料

2.3 高身冰箱

Upright Refrigerator

- a.

面板
Front Panel

1.5mm±5%

304 18/8 不锈钢
- b.

侧板/背板
Lateral/Rear

1.2mm±5%

304 18/8 不锈钢
- c.

底板板材
Bottom panel

1.5mm±5%

304 18/8 不锈钢
- d.

门板
Door Panel

1.5mm±5%

304 18/8 不锈钢
- e.

门铰链-顶部、底部安装式；全 304 18/8 不锈钢组件，单扇门用的铰链总承重力不小于 80kg；带自动回归功能。
Hinge-shaft hinges, made of stainless steel 304 18/8 , min. loading no less than 80KG, self-closing
- f.

插盘架
Pan Slide

1.5mm±5%

304 18/8 不锈钢
- g.

冷媒介质-高温冰箱采用无 CFC 的环保雪种(R-134a)； 低温冰箱采用无 CFC 的环保雪种(R-404a)。
Refrigerant-CFC free, R-134a for refrigerators and R-404a for freezers.
- h.

隔热保温填充
Insulation

厚 75mm

环保绝缘材料

2.4 前场冰箱/展示柜

Refrigerator (F.O.H.)

- a.

台面板材
Countertop

1.2mm±5%

304 18/8 不锈钢
- b.

侧板/背板
Lateral/Rear

1.0mm±5%

304 18/8 不锈钢
- c.

底板板材
Bottom panel

1.2mm±5%

304 18/8 不锈钢
- d.

门板
Door Panel

1.2mm±5%

304 18/8 不锈钢
- e.

隔板
Shelf

1.2mm±5%

304 18/8 不锈钢
- f.

玻璃（单层）
Glass (Single Layer)

12mm、8mm、3mm；钢化玻璃；超白玻璃；

12mm, 8mm, 3mm tempered & ultra-clear glass
- g.

玻璃（中空双层）
Glass (Double Layers)

5+6A+5mm, 6+9A+6mm；钢化玻璃；超白玻璃；

5+6A+5mm, 6+9A+6mm tempered & ultra-clear glass
- h.

玻璃（单层+电热丝）
Glass (Single Layer with Heater)

12mm、8mm、钢化玻璃；超白玻璃；

12mm, 8mm tempered & ultra-clear glass
- i.

玻璃（中空+电热丝）
Glass (Double Layers with Heater)

5+6A+5mm, 6+9A+6mm；钢化玻璃；超白玻璃；

5+6A+5mm, 6+9A+6mm tempered & ultra-clear glass
- j.

玻璃边框-0.6mm±5% 304 18/8 不锈钢，完成面、颜色由室内设计指定，见设备特殊要求章节。
Glass Frame-22 Gauge stainless steel 304 18/8, finish and color to be specified by I.D. Refer to the Particular specification for more details
- k.

底部不可见面柜体
Hidden Bottom Plate

1.2mm±5%

304 18/8 不锈钢

- l.

所有可见面板材-根据具体设计要求见设备特殊要求章节
Refer to the Particular specification for all exposed finished materials.
- m.

冷媒介质-高温冰箱采用无 CFC 的环保雪种(R-134a)；低温冰箱采用无 CFC 的环保雪种(R-404a)
Refrigerant-CFC free, R-134a for refrigerators and R-404a for freezers.
- n.

照明-由室内设计和灯光顾问指定，见设备特殊要求章节。
Lights-to be specified by I.D. and lighting consultant. Refer to the Particular specifications.

3. 洗碗设备 Dish Washing Equipment

- a.

双层外壳 double-layer shell
- b.

洗涤水量确定

框

水量

Standard Water Volume	Rack	Water Volume
台下式洗碗机	500*500	2.2 升/筐
Under-counter	500*500	2.2 l/rack
揭盖式洗碗机	500*500	2.2 升/筐
Lid-opening	500*500	2.2 l/rack
隧道式洗碗机	500*500	230（260）升/小时
Tunnel	500*500	230（260）l/h
长龙式洗碗机	/	238 升/小时
Conveyor	/	238l/h
- c.

喷淋温度

预洗	主洗	润洗	
Spray Temperature	Pre-wash	Main Wash	Rinse Wash
台下式洗碗机	/	62℃	85℃
Under-counter	/	62℃	85℃
揭盖式洗碗机	/	62℃	85℃
Lid-opening	/	62℃	85℃
隧道式洗碗机	/	55-65℃	80-85℃
Tunnel	/	55-65℃	80-85℃
长龙式洗碗机	40-50℃	73℃	75℃-75℃-85℃
Conveyor	40-50℃	73℃	75℃-75℃-85℃

(三重润洗 Triple Rinse)
- d.

包含上载区 1270mm（含除渣区），预洗区、主洗区、润洗区、烘干区和下载区 1200mm。
Including loading zone 1270mm (including active dirt removal zone), pre-wash zone, main wash zone, rinse zone & drying zone & unloading zone 1200mm.
- e.

传送带履带齿间距不大于 60mm，具备三档传送速度。
Belt with 60 mm finger distance, 3 transport speeds.
- f.

具备三重润洗功能。
Triple rinse.
- g.

防水等级为 IPX5。
IP protection class: IPX5.
- h.

符合 DIN EN 17735 标准。
Certified in accordance with DIN EN 17735.

4. 万能蒸烤箱 Combi Oven

- 4.1 全自动型 Fully Automatic

4.1.1 材质 Material

a.

圆角边高强度 AISI304 不锈钢烹饪室
Rounded-edge high-strength AISI 304 stainless steel cooking chamber

b.

AISI 316 L 海洋级不锈钢烹饪室。
AISI 316L marine-grade stainless steel cooking chamber

c.

门集成式 LED 照明灯。
Door-integrated LED lighting system

d.

9.5” 电容式控制面板。
9.5" capacitive touch control panel

e.

IPX5 防水认证控制面板。
IPX5 waterproof-certified control panel

f.

门集成式水滴收集系统,即使烤箱门开启时也能运行。问题与故障自动诊断系统。
Door-integrated water droplet collection system (operational even when oven door is open)
Automatic problem & fault diagnosis system
- g.

安全温度开关
Safety temperature cutoff switch
- 4.1.2 功能 Function

a.

从 30℃至 260℃的对流烹饪。
Convection cooking from 30℃ to 260℃

b.

DELTA T 功能与核心探针烹饪。
DELTA T function with core temperature probe cooking

c.

单点/多点核心探针。
Single/multi-point core temperature probe

d.

程序:储存 300 个以上可命名、配图片或手动签名的程序。
Programs: Store over 300 named programs with images or manual signatures

e.

分层计时:同时管理多达 10 个烹饪程序
Layered timing: Manage up to 10 cooking programs simultaneously

f.

转子清洗:4 个自动清洗程序。水与清洁剂液位检测器。
Rotor cleaning: 4 automatic cleaning programs with water and detergent level detectors

g.

集成式 Rinse 清洁剂盒。
Integrated Rinse detergent cartridge

h.

烤箱门开启时风扇自动停止。
Automatic fan shutdown when oven door is opened

i.

根据实际需要调节电或燃气功率。
Adjustable electric or gas power according to actual requirements

4.1.2 控制精度 Control Precision

a.

自适应烹饪:自动调节烹饪参数以确保可重复的烹饪结果。
Adaptive cooking: Automatically adjusts cooking parameters for consistent results

b.

湿度控制:全面控制烹饪室湿度。
Humidity control: Comprehensive management of cooking chamber humidity

- c.

智能预热:自动设置温度和预热时间。
Intelligent preheating: Automatically sets temperature and preheat time
- d.

感应清洗:评估烤箱污垢程度,并建议适合的清洗程序。
Sensor cleaning: Evaluates oven soiling level and recommends appropriate cleaning program
- e.

多个可反转风扇及 4 类风速设置。
Multiple reversible fans with 4-speed settings
- f.

能源效率获美国 ENERGENCY STAR 能源之星认证。
Energy efficiency certified to ENERGY STAR® standards

- 4.1 机械型

Mechanical Type
- 4.2.1 材质

Material
- h.

圆角边高强度 AISI304 不锈钢烹饪室
Rounded-edge high-strength AISI 304 stainless steel cooking chamber
- i.

AISI 316 L 海洋级不锈钢烹饪室。
AISI 316L marine-grade stainless steel cooking chamber
- j.

门集成式 LED 照明灯。
Door-integrated LED lighting system
- k.

9.5” 控制面板。
9.5" capacitive touch control panel
- l.

IPX5 防水认证控制面板。
IPX5 waterproof-certified control panel
- m.

门集成式水滴收集系统,即使烤箱门开启时也能运行。问题与故障自动诊断系统。
Door-integrated water droplet collection system (operational even when oven door is open)
Automatic problem & fault diagnosis system
- n.

安全温度开关
Safety temperature cutoff switch
- 4.1.2 功能

Function
- a.

从 30°C至 260°C的对流烹饪。
Convection cooking from 30°C to 260°C
- b.

DELTA T 功能与核心探针烹饪。
DELTA T function with core temperature probe cooking
- c.

单点核心探针。
Single core temperature probe
- d.

程序:储存 300 个以上可命名、配图片或手动签名的程序。
Programs: Store over 300 named programs with images or manual signatures
- e.

转子清洗:4 个自动清洗程序。水与清洁剂液位检测器。
Rotor cleaning: 4 automatic cleaning programs with water and detergent level detectors
- f.

集成式 Rinse 清洁剂盒。
Integrated Rinse detergent cartridge
- g.

烤箱门开启时风扇自动停止。
Automatic fan shutdown when oven door is opened
- h.

根据实际需要调节电或燃气功率。

- Adjustable electric or gas power according to actual requirements
- 4.2.2 控制精度

Control Precision
- a.

湿度控制:全面控制烹饪室湿度。
Humidity control: Comprehensive management of cooking chamber humidity
- b.

多个可反转风扇及 4 类风速设置。
Multiple reversible fans with 4-speed settings
- c.

能源效率获美国 ENERGENCY STAR 能源之星认证。
Energy efficiency certified to ENERGY STAR® standards

5. 咖啡机 Espresso Machine

- 5.1 全自动咖啡机

Automatic
- 5.1.1 豆仓数量，最少 2 个豆仓和一个粉仓。
Quantity of bean containers, min. 2 bean containers and 1 powder container.
- 5.1.2 冲泡器大小，15g 的冲泡器。
Brewer capacity no less than 15g.
- 5.1.3 锅炉大小，大于 500ml。
Min. 500ml water boiler.
- 5.1.4 可自动调节高度的出咖啡口。
Automatic adjustment of the height of the coffee nozzle.
- 5.2 半自动咖啡机

Semi-Automatic
- 5.2.1 根据不同的口味需求条件压力和温度控制，使咖啡的质感、酸度、苦味强度和风味可调节和改善
Pressure and temperature control system with customization parameters to adjust and enhance coffee texture, acidity, bitterness intensity, and flavor profiles.
- 5.2.2 系统可控制每个冲煮头温度，实现各种形式的配方
Independent temperature control for each group nozzle, enabling diverse brewing recipes.
- 5.2.3 每组咖啡煮头可设置 2 个温度曲线
Dual temperature profiles programmable per group head.
- 5.2.4 升降系统，按需调整工作台高度
Adjustable-height work platform for ergonomic operation.
- 5.2.5 智能手柄识别系统
Intelligent portability recognition system.
- 5.2.6 防烫蒸汽棒
Anti-scald steam wand.
- 5.2.7 可移动式杯架
Removable cup tray.
- 5.2.8 配置蓝牙
Bluetooth connectivity.
- 5.2.9 标配温杯、冲煮头照明
Standard features: Cup warmer and group head illumination.
- 5.2.10 蒸汽锅炉容量，2 头不低于 10L，3 头不低于 15L
Steam boiler capacity: Minimum 10L for dual-group models, 15L for triple-group models.
- 5.2.11 咖啡锅炉压力不低于 12bar，蒸汽锅炉压力不低于 2bar
Coffee boiler pressure: Minimum 12 bar; Steam boiler pressure: Minimum 2 bar.
- 5.2.12 节能环保

Energy-efficient and environmentally friendly design.

（本章节完） End

厨房设备技术规范要求

KITCHEN EQUIPMENT SPECIFICATION-GENERAL SPECIFICATION

第三部分：设备制作工艺及要求

Part-3 Producing & Workmanship

所有施工材料需要符合中华人民共和国或项目当地的最新条例和规范；有关条例包括卫生、环保部门或其他有关条例。

All construction material must comply with latest P.R.C. or local regulation and code in terms of Food Safety, Environmental Protection, etc.

燃气设备须符合政府之相关要求且具国家销售许可证及相关证书，异地销售必须在当地办理相关手续及证书，符合节能减排之要求。

Gas equipment must meet the relevant requirements of the government and have a national sales license and relevant certificates. The local sales must go through relevant procedures and certificates to meet the requirements of energy saving and emission reduction.

提供的设备规格，必须符合招标要求。

Bidding Equipment must meet tender specification.

不锈钢制品的制作工艺要求，焊接，打磨等工艺要求规范，必须符合招标要求。

Workmanship including welding, polishing and finish of stainless steel fabrication must meet tender specification.

第一章：厨房设备配件要求

Chapter-1: Parts

1. 电器设备 Electrical equipment

所有电器设备必须符合有关部门之相关标准，如国家标准（GB）、电力行业标准（DL）等。

All electrical equipment must comply with the authority standards, such as national standards (GB), power industry standards (DL), etc.

马达需要防水式之马达或完全封闭式马达。除小型马达例如时间控制马达外，需要滚珠轴承式及可承受两个小时满载运转。除防水外，马达还需要防潮。当马达安装在尘土、油烟、潮湿的地方时，需要安装全封闭式马达。马达需有足够之马力，应负满载负荷而满载电流不会超过额定电流。

The motor must be waterproof fully enclosed. Apart from small motors such as time control motors, ball bearing type and can withstand two hours full load operation are required. In addition to waterproof, the motor also needs moisture proof. When the motor is installed in dusty, sooty and humid places, it is necessary to install a fully enclosed motor. The motor must have enough horsepower to bear full load and the full load current will not exceed the rated current.

投标人需提供设备启动开关，设备接驳软线及插头。

Bidders shall provide breakers cable and connectors.

当使用软线及插头时，软线需为三芯包胶软线，其中一根需连接设备柜架及接地；或五芯包胶软线，另加一根接地软线。所有软线及插座需有一定的安全系数及合乎当地的条例。

When using flexible wires and plugs, the flexible wires should be three-core glued flexible wires, one of which should be connected to the equipment rack and grounding, or five-core glued flexible wires, plus a grounding soft wire. All soft wires and sockets shall have a certain safety factor and conform to local regulations.

马达启动开关要附含漏电保护装置。所有用电设备应另设空气开关。

The motor start switch should be equipped with leakage protection device. All electrical equipment should be equipped with air-switches.

一匹马力或以上的马达需要安装过载保护。

Motors more than one horsepower needs overload protection.

投标人需提供用具内的电线，包括开关制、指示灯等。

The bidder shall provide the internal wiring in the appliances, including switch system, indicator lamp, etc.

控制开关与每一发热线元件之间，需安装机旁保险丝，在控制开关与马达之间不需要安装保险丝。

Between the control switch and each heater element, fuse should be installed beside the machine, and between the control switch and the motor, fuse should not be installed.

马达在 1/3 匹马力或以下，需附有过热保护装置及手动开关。如该等马达是安装作为自动操作时，则采用磁力开关控制及手动复位。

Motor with 1/3 horsepower or less shall be equipped with overheating protection device and manual switch. If the motor is installed as an automatic operation, the magnetic switch control and manual reset shall be installed.

1/2 匹马力或以上需安装磁力启动器，并有手动复位。

Motor over 1/2 horsepower requires a magnetic starter and manual reset.

控制开关是遥控操作，除特别注明外，设备投标人需提供整套管线及负责安装。

For remote control, except as specified, the equipment bidder shall provide the whole casing line and be responsible for installation.

电器设备需接地线。

Electrical equipment must be with grounding wire.

除特别注明外，所有电热器具，如咖啡炉、暖柜等需安装恒温装置。

All electric heating appliances, such as coffee urn and warmers, shall be equipped with thermostats except as specified.

2. 制冷设备 Refrigeration Equipment

所有雪柜品牌根据标书指定品牌选定。

All refrigerators and freezers must be selected according to the recommendation list in the specification.

开放厨房制冷设备必须根据顾问公司与内装设计确认的立面效果制件；

Refrigerators and freezers in F.O.H. must be produced according to the specification from the kitchen consultant and rendering & elevation from the Interior Design.

开放厨房分体雪柜机组安装支架由中标单位根据现场情况负责；雪柜的具体柜体尺寸、柜门尺寸、门把手，温控器位置均有特殊要求；柜门及门把手需铣槽处理。

Compressors & racks of the remote refrigeration equipment to be provided by the Kitchen Contractor according to site conditions. Pay attention to particular specifications such as sizes of cabinets, doors, handles and location of thermal controls; v-cut all visible bends of doors and handles.

分体联动机组：Refrigeration Rack System

机组设备的自动开停与循环启动，故障自动切换，两套机组系统相互轮流工作（根据实际情况可以设置 24 小时或 48 小时）；

Automatic start-up and shut-down and cyclic start-up of the system is composed of two sets of compressor systems working alternately (24 hours or 48 hours interval can be set according to actual conditions) and automatic fault switching.

特点：1、可以设置自动控制；2、也可以设置为手动控制；3、该项目系统设计每个区域 3~4 台冰箱或雪柜共用

2 套西克 BOHN 风冷冷凝机组联动系统定时轮流供冷，这样可以预防机组长时间运作出现故障，并且确保系统供冷万无一失，保证冰箱、冷柜的长期正常使用；

Features: 1. With automatic control mode; 2. With manual control mode; 3. Every 3-4 refrigerators in each area sharing 2 sets of BOHN air-cooled compressor racks to prevent from long-term operation failure, and ensure life-long span.

系统电控箱含各种规格的开关、按钮、继电器、循环定时器，保护器等采用进口或合资名牌产品；
The electronic control box of the system contains various switches, buttons, relays, cycle timers and protectors, which are imported or joint-venture famous brand products.

可实现自动控制，自动融霜，自动报警，多重保护（过热，过载，高低压，缺相，电压过低，延时启动等）；且控制精度高（±1~2℃），控制性能可靠，故障率低。

With automatic control mode, automatic defrosting, automatic alarm, multiple protection (overheating, overload, high and low voltage, phase-gap, low voltage, delay start etc.) and has high control accuracy (+1~2℃), reliable control performance and low failure rate.

所有冷凝机组，不论安装在柜体内，或分离式安装或安装在平台上，均需安装品质优良的减震装置。所有冷凝机组，均需安装启动装置，并有空气开关控制。

All condensing units including those installed in the counter or remote installed on the platform shall be equipped with high-quality shock absorbers. All condensing units should be equipped with start-up device and controlled by air switch.

接驳铜管时，需要除湿及密封，并需附有压力保护装置、干燥剂及冷媒观察镜等。
Dehumidification and sealing are required when connecting copper pipes. Pressure protection devices, desiccants and refrigerant observation sight glasses are also required.

冷凝机组及蒸发器之铜管需作绝热包裹及适当地固定，高压管道需与低压管道分别包裹。
Copper pipes of condensing units and evaporators should be insulated and properly fixed. High-pressure pipes should be wrapped separately from low-pressure pipes.

雪柜有外置温度显示器及控制开关。开放厨房温度显示器及控制开关根据要求放置，安装后需测定及调校准确。
The B.O.H. refrigerator has an external temperature display and control switch. Temperature Display and Control Switch for FOH refrigerator should be placed according to the design and specification. After installation, it should be tested and adjusted accurately.

保温层为环保型无 CFC 泡沫保温层，柜门材料根据招标文件。
The insulation is environmentally-friendly, CFC free foamed, refer to the tender specification for the material of the doors.

雪柜除装有自动关闭的门铰及磁力条，除门内填充保温材料外，另门框周围应装有加热防潮线来防止冷凝水结露，开放厨房雪柜柜门若需有特殊要求处理，需查阅招标文件按要求制作。

In addition to the door hinges and magnetic sticks which are automatically closed and the insulation materials filled in the door, there should be a heating damp-proof line around the door frame to prevent condensate condensation. If there are special designs for the open kitchen refrigerator doors, the tender documents should be consulted and equipment should be produced accordingly.

所有雪柜箱体内壁边角为内圆角设计，符合 HACCP 之标准。
Cabinet of refrigerator shall be designed with sanitizing cove comply with HACCP criteria.

3. 冷库 Walk-in Cooler & Freezer

冷库分为埋地做法与地台（详见标书要求及图纸标注）。冷库尺寸为整个库体外围尺寸（包括墙板、天板、地板）。
2 methods of installation of the Walk-in Coolers & Freezers, built-in floor & built-on plinth. Size of the unit means the external dimension of the box including walls, ceilings & floors.

3.1 埋地式做法：Built-in Floor

由厨房设备承包商完成保温层后，地面材料由土建配合完成。埋地冷库由土建负责冷库下沉部位做好防水处理，需与地面防水连成一体。由投标人完成冷库墙板及冷库底板后，由土建负责冷库保温底板以上土建部分处理（包括混凝土、钢筋网、地砖等），冷库墙体与地坪交接处必须用防水材料填实（做好阴角处理）。在土建水泥未彻底干燥前，切记不能关上冷库门，防止冷库花铝板发生化学反应。投标人必须做好冷库墙板保护处理。（参见图纸 FS.B.2 所示）
The builder shall tile the bottom insulation installed by the Kitchen Equipment Contractor and provide the waterproofing integrated into the ground waterproofing in sunken area for coolers & freezers. The builder shall responsible for floor material above the bottom insulation including concrete, metal mesh, floor tiles etc.; Waterproofing materials and sanitizing cove must be used to fill the junction between wall and floor of the cooler & freezer. Make sure not to close the cooler & freezer door until the construction cement is thoroughly dried to prevent the chemical reaction of the aluminum board inside. The K.E.C. must provide proper protection for cooler & freezer panels.

3.2 地台做法：Built-on Plinth

冷库安装由土建做好防水层，厨房设备承包商负责冷库底板与墙板安装，底板与底板及底板与墙板的拼接处必须用密封胶注满，在底板与墙板安装后，墙板与底板拼接处用密封胶做阴角处理，完成后在冷库底板上加放 3mm 防滑花铝板，花铝板之间及花铝板与墙板之间用密封胶处理，冷库墙体与地坪交接处必须用防水材料填实（做好阴角处理），如底板与室内地坪之间存在标高差异必须做斜坡，坡度不大于 1:15。
The waterproof for cooler & freezer shall be pre-installed and the K.E.C. shall be responsible for the installation of the bottom and vertical panels. Waterproofing materials and sanitizing cove must be used to fill the junction between wall and floor of the cooler & freezer. The K.E.C. shall provide 3mm thick anti-slip aluminum board to pave the bottom insulation panel, silicon seal the joints in-between the aluminum boards Waterproofing materials must be used to fill the junction between wall and floor plinth of the cooler & freezer. A min 1:15 slope shall be provided in case of elevation difference between inside and outside of the cooler & freezer.

3.3 压缩机组及管道：Refrigerant Piping and Compressor

压缩机组品牌根据招标文件选定。
All compressor units must be selected according to the recommendation list in the specification.
冷库压缩机组的组装需有国家颁发的制冷系统的生产许可证。
The compressor assembly of walk-in cooler & freezer requires the production license of refrigeration system issued by the state.
冷库压缩机组安装位置详见图纸，分体机组位必须做好机架，库顶安装压缩机必须配置良好的通风条件，通风量由投标人提供。

The installation location of compressor unit is as shown in the drawings. The remote rack system must be provided with equipment rack. Ventilation condition must be provided in the space above the compressors, K.E.C. to provide calculation and ventilation volume.

冷凝机组应配置高低压控制、缺相保护、过载保护、避震管等。
Condensing units should be equipped with high and low pressure control, phase-absence protection, overload protection, shock absorber, etc.

高低温冷库均采用电融霜。
Electric defrosting shall be adopted for coolers and freezers.

冷库所使用的铜管内壁应有螺纹以便于导热。
The inner walls of copper pipes used for coolers and freezers shall be threaded in order to facilitate heat transmission.

制冷系统管道低压吸气管应设置一定坡度，该坡度应大于或等于 0.02，坡度方向坡向压缩机。

The low pressure suction pipe of refrigeration system should have a certain gradient, which should be greater than or equal to 0.02 and the gradient direction should be tilting towards compressor.

管道运行中的吸气管道应加有保温层，以防止管道结露。
Insulation should be wrapping the suction pipeline in order to prevent condensation.
高温管道保温材料厚度应大于或等于 25mm，低温管道保温材料厚度应大于或等于 50mm。
The minimal thickness of insulation material for high temperature pipeline is 25 mm and the minimal thickness of insulation material for low temperature pipeline is 50 mm.
低温冷凝排水管材料为铜管并加有电加热及保温层，以防排水管道内结冰。
The low-temperature condensation drainage pipe shall be made of copper pipe and shall be equipped with electric heating coil and insulation to prevent from frozen the drainage.

3.4 制冷系统 Refrigeration System

冷库制冷方式分为风冷和水冷型，具体选型按照招标文件而定。
Refer to the tender specification for the cooling mothed, air-cooled or water cooled.
所有的制冷系统需按明细表装配。制冷系统包括制冷机组及蒸发器。
All refrigeration systems shall be assembled in accordance with the tender specification including compressor unit and evaporator coil.
蒸发器安装时，应保证气流畅通，冷库内送风均匀，送风方便。
Ensure good air circulation and cold air is evenly distributed when install the evaporator coil.
风机的排风方向应尽可能避开对门方向，离墙距离应符合各品牌的技术要求。
To avoid evaporator coil blowing towards the door and the clearance on rear side shall meet the technical specification of the evaporator coil.
蒸发器应该设有自动除霜系统，包括加热器和时间控制器。制冷系统应完全在制造厂装配妥当。
The evaporator coil should have an automatic defrosting system, including a heater and a time controller.
The system should be fully assembled in the factory.

3.5 压缩机通风条件 Ventilation requirement for compressor

3.5.1 冷库装冷机组必须提供机架，高度不低于 1600mm，并做好保护网架，机架构造要适宜，架身涂上适当的防锈蚀保护涂料，并需安装稳妥并有减震装置，该位置要有良好的通风条件，便于机组散热。
Condensing units must be provided racks with protection guard, no less than 1600 mm in height.
The frame should be properly constructed. The frame should be coated with appropriate anti-rust protective paint and stable installation with shock absorber. Provide good ventilation conditions to facilitate the heat dissipation of the unit.
3.5.2 冷库压缩机级安装在冷库顶部时，必须在冷库前沿至天花为活动百叶，通风散热检修孔不小于 1200×600mm，压缩机组处需有 24 小时运转的通风装置；若冷库顶部至天花不能满足通风检修条件要求，则要求在冷库前沿天花上刑具不小于 1200×600mm 通风散热检修孔，压缩机组处需有 24 小时运转的通风装置。
When the compressor is installed on the top of the cooler & freezer, it is must to provide removable louvers in the front under ceiling for air circulation and maintenance, the size of the panel shall be no less than 1200 *600mm, and provide ventilation devices running for 24 hours at the compressor unit. If the ceiling over the cooler & freezer cannot meet the requirements of ventilation and maintenance requirement, the panel can be mounted on ceiling and the size shall be no less than 1200 *600mm, a 24-hour ventilation system is still required.
3.5.3 压缩机的通风系统由机电负责。
HVAC contractor to provide the ventilation system.

3.6 电器安装 Electrical Installation

冷库内门框上都应装有防水照明灯,防水开关外置。

Waterproof lighting and waterproof switch should be installed on the door frame of cooler & freezer.
防潮灯与库板安装要用密封胶密封，冷库板的穿线孔内外均用密封胶密封。
Seal the joint in-between the damp-proof lamp and door panel and the penetration between inside and outside panels.
冷库讯号控制箱应放置于冷库前端或其他预先设定的位置，显示讯号包括压缩机的运行、故障、除霜及冷库的温度显示，冷库操作温度显示需使用 LED 跳字温度表
The control box of the cooler & freezer should be placed in the front of or other pre-set positions. The display signals include the running status of the compressor, malfunction alert, defrosting and temperature display. The operation temperature display should a LED thermometer.

4. 燃气设备 Gas Equipment

具体燃气设备品牌根据招标文件选定。
All Gas Equipment must be selected according to the recommendation list in the specification.

4.1 中式炒炉 Chinese Wok Range

中式炒炉分内厨房与开放厨房两种做法。
Chinese Wok Ranges in F.O.H. kitchen varies from B.O.H. ranges
4.1.1 整体耐火砖保温炉膛。炒炉主架用 50mm 角铁制造，炒炉结构必须牢固并能承载炒炉所有之附件，所有角铁架必须涂有足够之防锈漆。炒炉围板用 1.0mm 不锈钢造，必须有足够隔热；炒炉面用 2.0mm 厚不锈钢造，炉面下面必须有足够支撑，以免炉面下陷，炒炉面向炉前倾斜，75mm 宽 50mm 深集水槽，集水槽下面焊有直径为 2” 的排水口，炒炉后面设有 400mm×130mm 高不锈钢制背板，背板厚度不少于 1.0mm。燃烧器为预混鼓风式节能铸铁炉头，火焰大小可任意调节。每个炉头必须设有燃烧室，燃烧室围有足够的耐火砖隔热，燃烧室顶部装有铸铁环，，铁环的直径必与炒炉配合。燃烧室后部设有尾撑，燃烧后的余热通过尾撑，由烟囱排出。所有不锈钢部分设计必须容易拆卸，便于维修。每一个炒炉头必须配有摇摆式冷水龙头、水盆、篮球架、锅枕、调味板、风机。去水管用金属管连接。意大利全自动安会掣连电子点火，熄火保护系统。特制节能减排燃烧器，运行时噪音低于 65dB，CO2 排放小于 200ppm。
Furnace constructed with integral refractory brick insulation. The main frame of the wok range is made of 50mm angle iron and the structure must be firm and able to carry all the accessories of the range and coated with sufficient anti-rust paint. The enclosure panels of the wok ranges made of 1.0mm thick stainless steel with good heat insulation; the range top of the is made of 2.0mm thick stainless steel with robust reinforcement to avoid the sinking of the surface. The range top is inclined towards the 75 mm wide and 50 mm deep drain trough with a DN 2” drain in front edge. Wok ranges equipped with 400mm (H)*130mm (D) rear panel made of 1.0mm thick stainless steel. The Wok ranges equipped with premixed blast energy-saving cast iron burners, and the flame can be adjusted easily. Each burner must be equipped with a combustion chamber built with refractory bricks to insulate the heat, the top of the combustion chamber is equipped with cast iron rings, and the diameter of the iron rings must be matched with the opening of the range top. The rear part of the combustion chamber is provided with a water pot where the residual heat from combustion is discharged by the chimney through. All stainless steel parts must be designed to be easily disassembled and maintained. Each burner must be equipped with swing cold water faucet, water pot, basketball rack, pot rest, seasoning board and fan and connected with metal drain pipes. Equipped with Full Automatic Safety valve with Electronic Ignition and Flameout Protection device from Italy. Special energy saving and emission reduction burner, operating noise shall be less than 65 dB, CO2 emission shall be less than 200 ppm.
4.1.2 开放厨房炒炉具体做法需与装修配合，根据装修设计效果及相关图纸制作，必须低噪音。

- Wok ranges style in F.O.H. kitchens shall be match the interior design and produced in according with the design and specification in the tender. Wok ranges shall be noiseless.
- 4.2

中式蒸炉 Chinese Wok Steamer

意大利全自动安全掣连电子点火，熄火保护系统，无风机。特制节能减排燃烧器，运行时噪音低于 58dB，CO2 排放小于 200ppm；2mm 不锈钢内胆；其余制作说明基本同于中式炒炉；去水管用金属管连接。
Equipped with Full Automatic Safety valve with Electronic Ignition and Flameout Protection device from Italy, special energy saving and emission reduction burner, without blower, running noise less than 58db, CO2 emission shall be less than 200 ppm. 2mm thick S/S chamber, the rest of the parts shall be similar to Chinese Wok Range, with metal drain pipes.
- 4.3

蒸柜 Steaming Cabinet

意大利全自动安全掣连电子点火，熄火保护系统，无风机；特制燃烧器，运行时噪音低于 58dB，CO2 排放小于 200ppm；2mm 不锈钢内胆；自动进水保护装置，水过滤器，去水管用金属管连接。
Equipped with Full Automatic Safety valve with Electronic Ignition and Flameout Protection device from Italy, special energy saving and emission reduction burner, without blower, running noise less than 58db, CO2 emission shall be less than 200 ppm. 2mm thick S/S chamber and water filter, with metal drain pipes.
- 4.4

矮仔炉 Gas Soup Stove

矮汤炉主架用 50×50×5 mm 角铁造。所有角铁架必须涂有防锈漆，炉上面设有铁炉花，炉花用整体铸铁板。炉后设有背挡板 1.0mm304 不锈钢造，挡板的高度需与其它设备协调。燃烧器须附有火种，火种设有独立开关,按当地燃气规范制作。
The main frame of the stove is made of 50×50×5 mm angle iron anticorrosive painted. There are iron grates made of integrate cast iron plate on the top of the burners. Back splash made of 1.0mm thick 304 stainless steel should be coordinated with other equipment beside on height. The burner must be equipped with a flame, which has an independent switch and is made in accordance with local gas regulations.
5.

灭火系统 Fire Suspension System

具体品牌根据标书文件要求
All Fire Suspension System must be selected according to the recommendation list in the specification.
厨房灭火系统应为预设计液剂，储于罐筒式容器并连接固定喷咀的分布网。灭火系统应在 UL 认表列内并符合 NFPA 标准。
Fire Suspension System should be pre-designed liquid agents stored in tank containers and connected to the distribution piping of fixed nozzles. Fire Suspension System should be UL listed and comply with NFPA criteria.
- 5.1

该灭火系统应对厨房内的明火区域有扑灭及抑制能力，包括用于保护煮食炉具如油炸锅，扒炉，明火炉，炭烧或链式之烧烤炉，电热熔岩式或燃气辐射式烤炉.....等。灭火系统亦应有保护炉具上的通风系统连油烟罩及隔油网能力。该系统应具有自动检测和手动或遥控开动的能力，当机械式切断装置启动系统时,通向上述厨房惹火区域的气体供应将会自动切断.所有关闭装置应视为灭火系统不可或缺的部分，并与系统同时运作。所有这些设备均为手动复位类型。该系统应能够对第一个失火灾区做出紧急反应，以防止火势扩散，造成更大灾害。化学药剂应是符合 NFPA18 的湿性类型，并且具有和热油脂或涂油层发生学反应的能力，形成一层像包毡式的泡沫，且拥有以下的特性：
The Fire Suspension System should be able to extinguish and suppress open fire in kitchens, including sniff out fire from cooking ranges such as fryers, griddles, open flame stoves, charcoal or conveyor grills, electric heating lava or gas radiation grills... And so on. Fire extinguishing system

- should also be able to protect the exhaust hood and ventilation system over cooking ranges. The system should be able to automatically detect and operate manually or remotely. When the mechanical cut-off device triggers the system, the gas supply to the fire-provoking area of the kitchen will be cut off automatically. All the shut-off devices should be regarded as an indispensable part of the Fire Suspension System and operate simultaneously with the system. All these devices are of manual reset type. The system should be able to respond urgently to the first fire zone in order to prevent the spread of the fire and cause greater disasters. The chemicals should be in accordance with the wet type of NFPA18, and be able to react with hot oil or oil layer to form a foam blanket, and possess the following characteristics:
- 不易燃

Non inflammable
- 减少易燃的挥发

Reduce flammable volatilization
- 将未被波及的燃料封隔，不能与空气中的氧气接触

Keep rest of the fuel away from the oxygen in the air
- 降低燃料和器具之表面温度，进一步减小复燃的可能性

Reduce the surface temperature of fuel and appliances to further reduce the possibility of re-burning
- 火灾后能轻易及快速地清洗

Easy and fast cleaning after fire
- 应提供详细的技术说明书，包括系统描述、设计、安装、重装和维护方法以及附件 + 安装和复位指令。

Detailed technical specifications should be provided, including system description, design, installation, reinstallation and maintenance methods, and accessories for installation and reset instructions.
- 5.2

系统设备 System Devices
- 5.2.1

可调释放机械装置（分为手动和自动两种）Adjustable release mechanism (manual and automatic)

可调释放机械装置应是加载弹簧力学/ 充气加压型，能向液剂罐提供释出气体。它应包括一个工厂预置的调节器，最大值为 1000 磅/psi(690KPA)，内部调压约为 130~150 磅/psi（896~1034KPA）。在 '被用' 位置之主弹簧力对小孔活塞应是 150 磅(68 公斤),该机械装置应具有一个不必打开密封就能对火灾情况进行监视的显示器。
The adjustable release mechanism should be loaded spring mechanics/aerated pressurization type, which release gas into the liquid tank. It should include a factory preset regulator, maximum of 1000 lb. /psi (690 KPA) and an internal pressure regulation of 130-150 lb. /psi (896-1034 KPA). The main spring force at the 'used' position should be 150 pounds (68 kilograms) to the pinhole piston. The mechanical device shall include a display that can monitor the fire situation without opening the seal.
- 5.2.2

可调释放机械装置应包括一个启动组件.一个调节器.一条排气软管.一组 3 加仑药剂罐，储在一镀铬有盖箱匣内，匣内应包括可使用 13 毫米(1/2 英寸)导管的喷射器，匣盖应包括可供按钮和显示器使用的开口。可调释放机械装置应与机械气体供应关闭装置相配合。
The adjustable release mechanism shall include a start-up assembly, a regulator, an exhaust flexi-hose, a set of 3-gallon reagent tanks, which shall be stored in a chrome-plated capped box containing an ejector connecting 13mm (1/2 inch) conduit and an opening for using the buttons and displays. The adjustable release mechanism should be matched with the mechanical gas cut-off device.
- 5.2.3

药剂：灭火液剂应由碳酸钾和醋酸基钾配方配制，以扑灭火焰和与油脂有关的火灾。
Agent: Fire Extinction liquid is composed of potassium carbonate and potassium acetate formula to extinguish fire especially oil-generated fire.
- 5.2.4

储藏罐和支架：Storage Tanks and Brackets

- 液剂储藏罐应是一个容积 3 加仑(11.4 公升) 冲压成形的不锈钢筒，罐壳应符合以下压力试验要求:100 磅/psi（2069KPA）试验压力，600 磅/psi(4137KPA) 最小爆破压力，罐体应包括一个镀铬转接器/管组件，并焊接于钢支架以便在最小空间上安装附加罐。这些液剂罐应稳固地排列在有链铰的支架上。
The liquid storage tank shall be a 3 gallon (11.4 liter) deep-drawn stainless steel cylinder. The shell shall withstand 100 lb. /psi (2069KPA) test pressure, 600 lb. /psi (4137KPA) minimum explosion pressure; a chrome-plated adapter/tube assembly shall be included in the tank and welded to the steel bracket to install additional tanks in limited space. These liquid tanks should be firmly fixed on hinged supports.
- 5.2.5 喷嘴 Nozzles
每一个喷嘴均需先行测试，管嘴的位置应由管嘴末端孔口大小确定，管嘴尖端应是黄铜或镀铬黄铜，并且标记部件编号和流量值，管嘴滤网应是每平方英寸有 50 孔的不锈黄铜筛子，每一个管嘴尖端都配上防护式盖掩。
Every nozzle should be tested first. The position of nozzles should be determined by its sizes. The tip of the nozzle should be brass or chrome-plated brass, and the item numbers and flow value of the parts should be labeled. The nozzle filter should be a stainless brass sieve with 50 holes per square inch. The tip of each nozzle should be equipped with a protective cover.
- 5.2.6 监控系统 Monitoring System
可调释放装置应与保险丝监控系统一起协调运作。保险丝的选择和安装需根据通风系统中的操作温度而定。保险丝的设定温度如下：（热溶保险丝设定温度使用在工作温度不能超过下列）
The adjustable release device shall operate in coordination with the fuse monitoring system. The selection and installation of fuses depends on the operating temperature in the ventilation system. The temperature limit of the fuse should be set as follows: (the temperature limit of the hot fuse should not exceed the following working temperature)

130℃	107℃
182℃	143℃
232℃	182℃
260℃	204℃

保险丝应该由监控器支架/连接装置来支撑，这种装置应有预留空间以供 12 毫米坚硬的或 EMT 型的薄壁导线管以及直径为 1.6 毫米的软性不锈钢丝之间的联接。导线管和不锈钢丝的方向改变应由压铸的铝合金滑轮及 90 度弯节来达成。
The fuse shall be supported by bracket/connection device of the monitor, which shall have reserved space for connection between a 12 mm rigid or EMT type thin-walled conductor tube and a 1.6 mm diameter soft stainless steel wire. The bend of conductor and stainless steel wire should be achieved by die-casting aluminum alloy pulley and 90 degree bending joint.
- 5.3 附属设备 Accessories
下列的附属设备应包括在产品之中，而且应能与液剂式的灭火系统一起工作。
The following accessories shall be included in the product and shall work with the liquid Fire Suspension System.
- 5.3.1 分体式手动操作器 Manual valve
如果可调释放装置不能以手动操作则必须装置分体式手动操作器以提供基本手动启动功能。操作器应该是拉杆型的，有玻璃水镜的管而且它必须由直径为 0.16 毫米的不锈钢丝以及 13 毫米（1/2 英寸）的导管与释放装置的拉杆相连。操作器与释放装置间的距离不能超过 38 米（125 英尺）。
If the adjustable release device cannot be operated manually, a remote manual valve must be installed to provide basic manual start-up function. The valve should be a rod with glass water mirror and it must be connected to the rod of the release device by a DN0.16 mm stainless steel wire with a

- diameter of and a 13 mm (1/2 inch) tube. The distance between the valve and the release device should not exceed 38 meters (125 feet).
- 5.3.2 机械的供气管关闭阀 Mechanical Gas Shutoff Valve
UL 列表中的机械式的供气关闭阀需确保能隔断输往所有燃气炉具之气体供应。它应通过一个充气型的活塞柱与释放装置的接收器相辅而行，该阀应为铝质外壳配以不锈钢组件的弹回装置。该阀是双向的，一般需要有 4 ~ 15 磅（1.8~8.8KG）的拉力才能打开它。阀门（1~4 英寸）还带有一个外置显示器以指示阀门的状态是开或是关。
安全性: 若一旦断源，供应给燃气炉具的气体不能自动恢复启动，需要按下再启动按钮。在再启动按钮旁边，应该贴上一个警告标志注明:按再启动按钮之前，请先关闭所有燃气炉具。
A UL listed mechanical gas shutoff valve shall ensure that the gas supply to all gas equipment is cut off. It should be complemented by an inflatable piston column and a receiver for the release device. The valve should be an aluminum case with a spring back device with stainless steel components. The valve is bidirectional and generally requires a pull of 4 to 15 pounds (1.8 to 8.8 KG) to open it. Valves (1 to 4 inches) also equipped with an external display to indicate on/off status.
Safety: once the gas is cut off, the gas supplied to the gas equipment cannot be automatically restored to start, it is necessary to press the restart button. Next to the restart button, a warning post should be affixed to indicate that before pressing the restart button, please make sure all gas equipment is shut-off.
- 5.4 ANSUL 灭火系统必须由 ANSUL 公司指定并有资质的安装人员进行安装。由 ANSUL 公司认可的验收单位出据相关检测验收报告。
Fire Suspension System ANSUL must be installed by qualified installers designated by ANSUL Company. Testing & Acceptance Report must be issued by ANSUL approved Company.
6. UV 高效油烟净化器 Exhaust Hood with Ultraviolet Filtration
技术原理 Technical Principle
利用特制的高效能 UV-C 紫外线 C 波段（185nm）光束照射油烟，改变油脂的分子结构，使高分子化合物降解成低分子化合物。UV-C 紫外线 C 波段是在含有低压汞蒸汽的特殊气体放电管中的产生的。在工作时与空气中的氧气反映生成高于一般紫外线 10 几倍的臭氧。臭氧是一种非常活跃的不稳定的氧的形态。臭氧对有机物具有有机强的氧化能力。对油烟及气味有很强的清除效果。臭氧将小油脂分子冷燃烧生成二氧化碳和水及微量白色粉末，并通过排风管排出室外。
Oil fume was radiated by a special high-performance ultraviolet C band (185 nm) beam, which modify the molecular structure of oil and fat, and degraded the macromolecule compounds into low molecular compounds. Ultraviolet C band is produced in a special gas discharge tube containing low pressure mercury vapor. When working with oxygen in the air, ozone is produced more than 10 times as much as ultraviolet radiation. Ozone is a very active and unstable form of oxygen. Ozone has strong oxidation ability to organic substances. It has a strong removal effect on oil fume and odor. Ozone combusts small oil molecules to form carbon dioxide and water and trace white powders, which are discharged outdoors through exhaust ducts.
7. 厂制品制作 Fabrication Equipment
所有生产制作产品和外购件设备必须为全新、合格的产品，并且没有瑕疵或缺陷。必须附有说明书、电路图和出厂合格证等相关资料。
All products and buy-out equipment must be brand-new and qualified without defects. Instructions, circuit diagrams and factory certificates must be submitted.

	开放厨房所有设备柜门在制作折边前，必须先铣槽后再折边。 V-cut all visible bends for fabrications in F.O.H. kitchen.	
7.1	烟罩 Exhaust Hood 所有烟罩应用不锈钢制作，根据标书及图纸要求制作；内厨房烟罩前沿底部应距离地面 2000mm；所有烟罩需用可膨胀螺丝挂于背板或用 15mm 直径吊码挂于天花。吊于天花板之吊码需用螺丝及固板固定，吊码应为平底式并牢固于不锈钢支架。所有烟罩应设有接驳口以供其它承包商接驳到风管之用，烟罩内应设置防水照明装置。所有内厨房排烟罩需有前封板及两侧板，所有内厨房抽气罩需有排水管接入去水口，以排冷凝水之用。所有烟罩顶部的上方且离地 2500mmH 以上不得有管道穿过，以免妨碍烟罩的吊装及排放。 All Exhaust hood shall be made of stainless steel according to the specifications and drawings in tender; the front bottom of the hood in B.O.H. kitchen shall be 2000 mm away from the finished floor; hood shall be hung on the backplane with expandable dysprosium or on the ceiling with a 15 mm diameter hanging brackets. The hanging brackets suspended from the ceiling shall be fixed by upsetting wire and fixing plate, and the hanging brackets shall be flat-bottomed and firmly fixed to the stainless steel bracket. All hoods shall be provided with vent flange for other contractors to connect to air ducts, and waterproof lighting shall be installed in the hoods. All B.O.H. kitchen hoods should be with front and side panels, and all B.O.H. kitchen condensate hoods should be with drainage pipes to access the water outlet for drainage of condensate. No pipe or duct should be passed over the top of all hood and above 2500mm from finished floor to avoid obstructing the hoisting and discharge of hood.	
7.1.1	成品烟罩，详见成品厂家制作图。 For buy-out exhaust hood, refer to the manufacturer's drawing for details.	
7.1.2	所有开放厨房烟罩需与装修配合制作，见光部分需用磨砂处理，详见招标文件。 All F.O.H. kitchen hoods need to match decoration around, and all visible parts needs to be polished. Refer to tender documents for details.	
7.1.3	所有烟罩灯具需送样于业主及顾问公司经确认后方可进行安装。 Submit samples of all hood lights to kitchen consultant before producing.	
7.1.4	所有安装 UV 紫外线净化系统之烟罩必须配置防紫外线泄漏油网板。 All UV hoods purification system must be equipped with ultraviolet leak proof panels.	
7.2	机电柜（通风装置）Ventilation Control Cabinet 所有电磁炉及加热设备机电柜，内置通风系统装置，并安装电器控制开关，通风装置安装由厨房设备承包商。 All M.E.P. cabinets for induction cookers should be equipped with ventilation system controlled by breaker & switches, which should be provided by the K.E.C.	
7.3	木案面工作台 Wooden Top Table 木案面材料为枫木，用 45×80mm 木条相拼制成，顶端用相同木质封口，枫木条连接用不锈钢柱固定，封口处用枫木块填补，木面完成后需用食用油涂浸并由塑胶纸包扎。不锈钢支架台详见产品制作图。 Maple is suggested, the block composed of 45*80mm maple bars and fixed with maple bars on both side and stainless steel rod penetrating the entire block, coated with cooking oil and wrapped with plastic tape after assembled; refer to the elevation & section view for detail of the maple stand.	
7.4	云石面工作台 Marble Top Table 所有云石面采用人造大理石面 12mm 厚杜邦“可丽耐”设计师白 WN910，符合食品卫生标准，底部由不锈钢加强筋支撑；四周打磨光滑。 12mm thick Corian from Du Pont, artificial marble is suggested (WN910 Designer White), comply with Food Safety Grade; the marble top to be backed by stainless steel reinforcement and all visible sides shall be ground.	
7.5	洗手星盆台 Hand sink 洗手星采用挂墙安装，安装高度位台面离地 750mm，背挡水板与周边设备齐平。采用墙排水 450mm 高。 Hand sink to be wall mounted, the top of the wash basin shall be 750mm above finished floor, top of the back splash shall line up the equipment splash beside; wall drain pipe 450mm above finished floor.	
7.6	炉具墙体封板 Stainless Steel Wall Flashing 墙体炉具封板制作方法详见制作图，需配合装修；封板上端开具通风孔，封板在墙体装修时先期安装，封板面与磁砖完成面平齐。封板尺寸应与烟罩长度总长相同；墙板分段尺寸应与单个炉具尺寸相同，拼接缝应同炉具拼接缝在同一位置。面板拉丝方向应和炉具拉丝方向一致。 Refer to the fabrication details for S/S wall flashing drawings, which needs to be coordinated with decoration. The panels shall be provided ventilation access on the top and pre-installed before tiling the wall and panels are level with tiles. The overall length of the wall flashing shall be the same as the length of hood and the joint in-between shall line up the edge of each cooking equipment in front, the direction of the S/S hairline shall be the same as the cooking equipment.	
7.7	冰槽 Ice Well 玻璃冰槽：详见玻璃冰槽产品制作图。 Ice well with glass shield: refer to elevation and details. 不锈钢框边冰槽：详见不锈钢冰槽产品制作图。 Ice well with S/S frame: refer to elevation and details. 嵌入式冰槽：详见嵌入式冰槽产品制作图。 Drop-in Ice well: refer to elevation and details.	
7.8	工作台（砧板）、工作柜、星盆台 Worktable (Chop Board), Cabinet, Sink	
7.8.1	内厨房所有台面为半圆前口，台面厚度为 40mm；开放厨房所有台面前口为 90 度折边，无大理石台面之设备台面厚度为 30mm，台面铣槽处理；其他根据招标文件制作。 The shape of front edge of the worktables and counters shall be rolled, 40mm thick and straight turn-down, 30mm thick for F.O.H. Kitchen tables and counters without décor finish on top and v-cut all visible bends unless specified otherwise.	
7.8.2	工作柜柜门 Cabinet Doors 柜门材质为不锈钢，厚度参照标书通用规范第二部分第一章 1.2 说明而定，所有柜门需安装锁具，门厚 15～20mm，内有封板。所有开放厨房工作柜柜门的不锈钢丝纹方向与雪柜柜门的丝纹必须一致。 Door to be made of Stainless Steel, refer to General Specs., part 2 chapter 1 1.2 for more details, each door shall be equipped with lock, the overall thickness of the door shall be 15~20mm, enclosure panel on both sides, the direction of the S/S hairline shall be the same as the refrigerators beside.	
7.8.3	滑动趟门 Sliding Doors 抽手与门整件制造。采用双层式结构，门厚 20mm，采用吊装式滑动，即不需工具就可以卸下，以便清理，柜门内必须有填充料，门关闭时必须有防滑开装置。上下装有限位器，以防门在滑动时脱位。 Handles are integrated into the door. Double-layer structure 20 mm thick, using hoisting sliding and can be easily removed for cleaning without any additional tools, cabinet doors must have filling materials, doors must be equipped with closers. Limited positioner is installed to prevent the door from dislocating when sliding.	
7.9	热汤池 Hot Wells 热汤池浸水池必须与台面满焊，配置缺水保护装置，优质水浸发热管，EGO 温控，160mm 处设有多孔层板保护发热管。自动入水、溢水装置，保证发热管不被干烧。 Hot well basin must be fully welded with the table surface, equipped with water shortage protection	

- device, high-quality water heater, EGO temperature control; perforated panel installed 160mm high from the basin to protect heater. The automatic water inflow and overflow device ensures that the heater will not be dry and burned.
- 7.10 传递窗台板 Pass Through Windows
详见招标图纸 FSB.3。 Refer to the tender drawing FS B.3 for details.
- 7.11 员工餐厅收碟框
详见招标图纸 FSB.8。 Refer to the tender drawing FS B.8 for details.
- 7.12 抽屉 Drawers
抽屉应安装于装配好的 2.0mm 厚不锈钢连锁式路轨上，路轨应设有足够长度的静音滚珠轴以防止抽屉被拉出时脱轨。路轨应为不锈钢制作，并可伸缩，全伸展及负荷量不少于 60KG。抽屉可抽出其长度的全长。抽屉组合在打开后应能自动关闭型，而且不需要工具即能拆卸，除非另有说明，抽屉内置盘应为 GN1/1。 Drawers should be installed on the assembled 2.0 mm thick stainless steel chain track, which should have a long enough silent ball bearing to prevent the drawer from derailing when pulled out. The rail shall be made of stainless steel and can be retracted, with full extension and load not less than 60KG. Drawers can be fully drawn. Drawer runner should be automatically closed after opening, and can be disassembled without tools. Unless otherwise specified, the built-in container of drawer should be GN1/1 sized.

第二章：制造工艺

Chapter-2: Workmanship

1. 焊接 Welding
- 1.1. 不锈钢焊接必须采用电弧焊或氩气弧焊，不允许采用其他焊接方式。焊条成分需与金属本身成分相同，透彻地焊接，不能有砂眼、裂缝等不完整的地方。焊缝必须坚固及有韧性，多余的填料必须磨平及磨光至焊接物本身的颜色一样。器具的工作面如工作台、污水板、洗盆等，均需焊接。如器具制造是超过一块不锈钢时，两件不锈钢必须碰口连续地焊接及磨平处理，而不能采用补底点焊再填锡的方式。
Except for arc welding or argon arc welding other welding methods are not allowed for stainless steel. The composition of the electrode should be the same as that of the metal itself. It should be thoroughly welded. There should be no incomplete places such as sand holes and cracks. The weld must be firm and tough, and the excess filler must be flattened and polished to the same color as the weld itself. The working surface of the equipment, such as worktable, drain board, washbasin, etc., should be welded. If the appliances are made of more than one piece of stainless steel, the two pieces of stainless steel must be welded and ground continuously, instead of filling tin by bottom filling spot welding.
- 1.2. 所有焊接应尽量在工厂内处理及做表面处理，花纹应磨平磨光处理，与原来的不锈钢一样，尽量减少在工地焊接，所有需要在工地焊接的设备必须采用连续焊接及磨平处理顺滑。磨平磨光方法将按以下的“磨平磨光”表面处理一节进行。焊接底部应涂以防锈漆处理，以防经焊接后发生腐蚀。
All welds should be treated as far as possible in the factory and done surface treatment. The pattern should be ground and polished as with the original stainless steel, the welding on the site should be minimized. All equipment that needs to be welded on the site must be treated smoothly by continuous welding and polishing. The method of grinding and polishing will be carried out according to the following section of "grinding and polishing" surface treatment. The bottom of welding should be anti-rust painted to prevent corrosion after welding.

- 1.3. 末端焊接，接头可容忍压力，须相等同样尺寸及同类型喉管，“T”型接头必须为单一铸体，不能采用由两根喉管结合而成之“T”型接头，并且配有至少一支直径少于主喉管之喉管，除蒸汽喉外，允许使用喉座之气候操作压力为 16PSIG 或以上，水喉为 125PSIG 以上。
Welding the end of equipment, joint shall tolerate pressure and must use the same size and the same type of throat pipe, "Tee" type joint must be a single casting, cannot use the "Tee" formed by two throat pipes, and has at least one throat pipe with a diameter less than the main throat pipe, in addition to the steam throat, the gas throat operating pressure should be 16 PSIG or above, and the water throat is 125 PS. IG or above.
- 1.4. 焊接铜管之焊药，其熔点为华氏 460 度，成分为 95/100 锡和 5/100 锑，所有喉管装须以坚固美观为准，并依据制造商之指示为原则。喉管焊接部分必须清洁妥当才可焊接。
The melting temperature of the flux for welding copper pipes shall be 460 degrees Fahrenheit and composition of 95/100 tin and 5/100 antimony. All throat pipes shall be strong and beautiful, and shall be in accordance with the manufacturer's instructions. The welded part of the throat pipe must be cleaned properly before welding.
2. 磨平、磨光、表面处理 Grinding, Polishing and Finishing
- 2.1. 所有在表面能看见的焊接即需要适当的磨平、磨光及作表面处理，如果焊缝由于在焊接时下沉，则需整平及磨平，不能有高低点。在磨平时应避免不锈钢过热使变色。在工序处理时应先粗磨平，再磨光及作最后花纹表面处理。
All welds visible on the surface require proper grinding, polishing and surface treatment. If the weld sinks during welding, it needs to be flattened and ground. Stainless steel should be avoided from overheating and discoloration during grinding the first process should be roughly grinding, then polishing and finishing of the final pattern surface treatment should be done.
- 2.2. 所有由于不锈钢在加工时产生的折裂、锯齿边等问题都需要磨角的地方需要磨平磨光圆滑。所有焊缝在磨平后不能有重叠现象。
All defects such as cracks and serrated edges of stainless steel equipment during fabricating need to be ground and smoothed. All welds should not overlap after flattening.
- 2.3. 防锈处理 Anti-rust treatment
不锈钢在焊接为防止氧化腐蚀，须经防锈处理。在焊接表面须磨光以防腐蝕，底部适当地磨平后须涂上金属色泽的防锈涂料。如果需要焊接镀锌框架，则需在焊接后涂上金属色泽的防锈涂料。
Stainless steel welding must be rust-proof in order to prevent oxidation corrosion. The welded surface shall be polished to prevent corrosion, and the bottom shall be polished and metal-colored rust-proof painted. If the galvanized frame needs to be welded, the metal-colored rust-proof coating should be applied after welding.

(本章节完) End