



抽屉式平台冷藏柜 / 冷冻柜

DRAWER TYPE UNDERCOUNTER REFRIGERATOR/FREEZER

使用说明书

INSTRUCTION MANUAL

RTL-98DDAC
RTL-140DDAC
RTL-182DDAC
FTL-98DDAC
FTL-140DDAC
FTL-182DDAC



RTL/FTL-140DDAC

- 使用说明书是本产品不可分割的重要组成部分，用户须妥善保管。
 - 请务必仔细阅读本使用说明书中描述的指南和警告事项，因为这些指南和警告事项为安装人员/用户提供了正确安装、持续安全地使用和保养本产品所需的重要信息。
 - 请妥善保管本使用说明书，以便必要时参考使用。
-
- This booklet is an integral and essential part of the product and should be kept and preserved by the user.
 - Please read carefully the guidelines and warnings contained herein as they are intended to provide the installer/user with essential information for the proper installation and the continued safe use and maintenance of the product.
 - Please preserve this booklet for any further consultation that may be necessary.

生产商： 星崎电机(苏州)有限公司
Manufacturer: Hoshizaki (Suzhou) Co., Ltd.

L1T081305 (070115)

中文

重要安全须知	1
I. 安装说明	2
1. 构造	2
2. 附件	2
3. 拆包	2
4. 位置	3
5. 安装	3
6. 电气连接	4
7. 排水管路连接	4
II. 操作说明	5
1. 启动	6
2. 柜内温度设定	6
3. 除霜方式	6
4. 指示灯	7
5. 关机	7
6. 拆卸抽屉	7
III. 保养	7
1. 清洁	7
2. 联系维修机构前	8
3. 废弃处理	9
4. 保修	9
规格	10

ENGLISH

IMPORTANT SAFETY INFORMATION	11
I. INSTALLATION INSTRUCTIONS	12
1. CONSTRUCTION	12
2. ACCESSORIES	12
3. UNPACKING	12
4. LOCATION	13
5. INSTALLATION	13
6. ELECTRICAL CONNECTIONS	14
7. DRAIN CONNECTION	14
II. OPERATING INSTRUCTIONS	15
1. START UP	16
2. CABINET TEMPERATURE SETTING	16
3. DEFROST	17
4. INDICATOR LIGHTS	17
5. SHUT DOWN	17
6. REMOVING DRAWERS	17
III. MAINTENANCE	18
1. CLEANING	18
2. BEFORE CALLING FOR SERVICE	19
3. DISPOSAL	20
4. WARRANTY	20
SPECIFICATIONS	20

重要安全须知

本说明书提供可能导致死亡、严重受伤或损坏设备的注意事项，请用户使用时注意。

▲警告	表示如不可避免，则可能导致死亡或严重受伤的危险情况。
▲小心	表示如不可避免，则可能导致轻微受伤或中度受伤的危险情况。
注意事项	表示如不可避免，则可能导致本设备损坏的危险情况。
▲卫生	表示与卫生和食品安全相关的重要预防措施。
重要	表示与使用和维护本设备相关的重要信息。

重要

使用说明书是本产品不可分割的重要组成部分，用户须妥善保管。

请务必仔细阅读本使用说明书中描述的指南和警告事项，因为这些指南和警告事项为安装人员/用户提供了正确安装、持续安全地使用和保养本产品所需的重要信息。

请妥善保管本使用说明书，以便必要时参考使用。

▲警告

本产品为商用冷藏柜/冷冻柜，只能用于家用和类似用途，如：

- 商店、办公室或其他工作场合的厨房区域；
- 农场以及宾馆、汽车旅店和居住型环境的顾客；
- 家庭旅馆型环境；
- 餐饮业和类似的非零售业应用。

本产品不适合用于任何其他用途，否则可能会造成危险。对于使用不当、错误使用和不合理使用造成的任何损坏，制造商概不负责。

安装及必要时的移机作业，必须交由具备相应知识的作业人员依照现行法规并根据生产商的说明进行。

请勿弄湿本产品或在潮湿环境下使用本产品。否则可能会导致漏电，进而造成触电或火灾。

保持机体内外通风口畅通无阻。

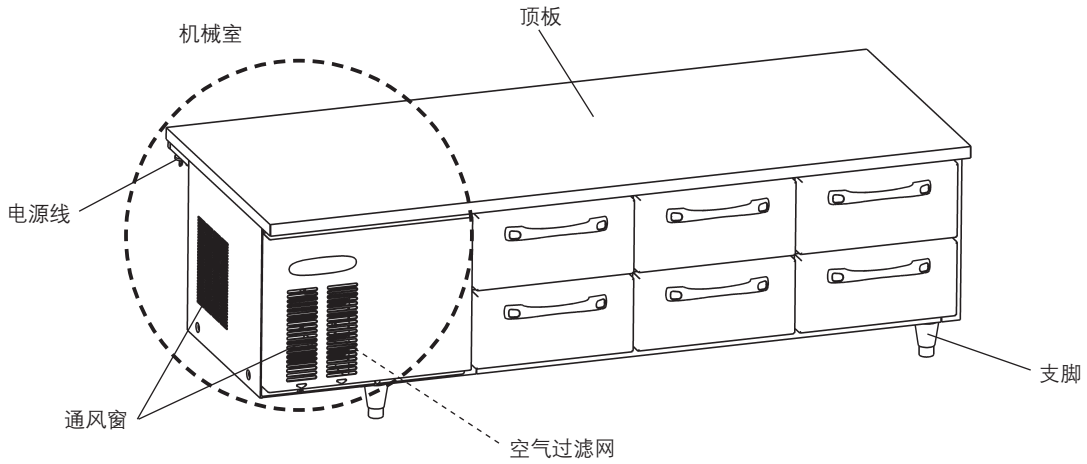
使用任何电气设备均应遵循一些基本规则，尤其是：

- * 高湿度和潮气会加大电路短路及潜在触电的危险。如有可疑情况，请切断冷藏柜/冷冻柜电源。
- * 请勿损坏电源线或通过拉拽冷藏柜/冷冻柜电源线的方式将制冰机从电源处断开。
- * 请勿用湿手触碰电气部件或操作开关。
- * 本产品不适合残障、智障及缺乏相应经验和知识的人士(包括儿童)单独使用，除非有专人负责其安全，并对其使用本产品加以监督和指导。
- * 另外还应对幼童加以看管，以确保其不玩耍本产品。
- * 请勿尝试改装冷藏柜/冷冻柜。应仅由具备相应知识的作业人员实施拆解或维修作业。

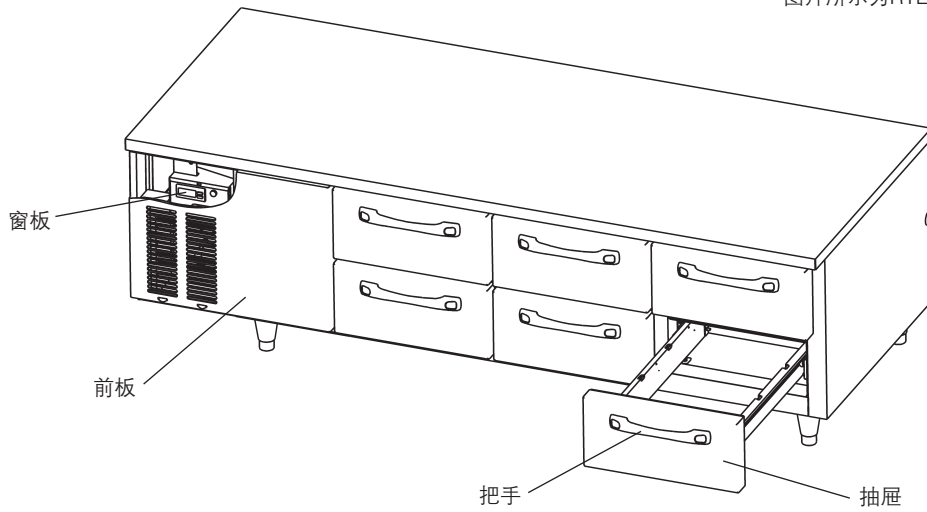
中文

I. 安装说明

1. 构造

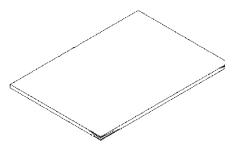


* 图片所示为RTL/FTL-182DDAC机型

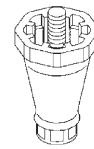


2. 附件

型号	98	140, 182
使用说明书	1	1
支脚	5	4
挠性软管	1	1
弯头	1	1
电缆扎带	3	3
管夹	2	2



使用说明书



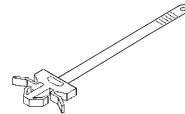
支脚



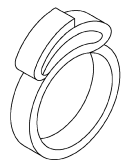
挠性软管



弯头



电缆扎带



管夹

3. 拆包

▲警告

包装零件(塑料袋和发泡聚苯乙烯等)存在潜在危险, 必须放置到儿童接触不到的地方。

▲小心

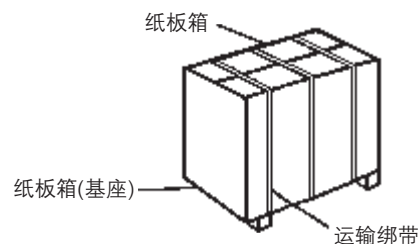
请勿使用搬运带提升或搬动纸箱。

手动搬动设备时, 请托起设备底部。

搬运设备时, 请戴好防护手套。

搬运纸箱或拆开包装的设备时, 请结伴作业, 以防止受伤。

- 1) 剪断运输绑带，然后拆下纸板箱。
- 2) 确保冷藏柜/冷冻柜状态良好。如有任何疑问，请勿使用本产品，而应与具备相应资质的专业人员联系。
- 3) 拆下用于固定制冰机抽屉和前板的运输用胶带。
- 4) 撕掉外表面的塑料防护膜。如果冷藏柜/冷冻柜暴露于阳光下或温度过高，请待其冷却后再撕掉塑料防护膜。
- 5) 打开包装的附件。参照“2.附件”检查附件。



4. 位置

警告

本冷藏柜/冷冻柜仅供室内使用。
本产品不适合安装在可能使用洒水器的区域。

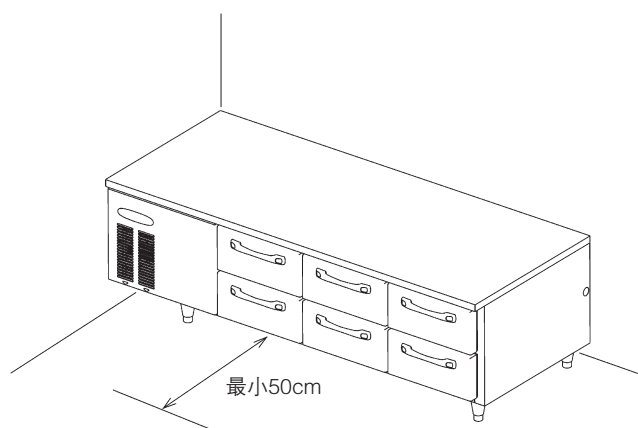
小心

冷藏柜/冷冻柜应安装在坚固和平坦的地面。

重要

正常的工作环境温度应介于5°C至38°C之间。若冷藏柜/冷冻柜长时间在超出该正常工作环境温度范围以外运行，其制冷性能可能会受到影响。

在本机前板的进风口/出风口与墙壁或其它设备之间至少应留出50cm的间隙，以利于空气流通顺畅。本机前方应留出足够空间，以确保顺畅调节柜内温度。如果环境温度可能会超过38°C，则应使机械室一侧远离墙壁至少10cm，以防止过载和损坏制冷回路。



高湿度环境下，机器内部可能会产生冷凝水，从而滴在地上。因此，请勿将其安装在易因滴水而损坏地板的场所。采用并排或背靠背安装方式(可能是与其它厂商的产品一起安装)时，两台机器之间可能会出现冷凝，从而导致冷凝水滴落到地板上。

请勿将本机暴露在直射阳光或高温下。

5. 安装

小心

错误的安装可能导致人员、动物受伤或损坏其它物品。生产商对由此造成的损坏不承担责任。

注意事项

为防止底部的排水管道受到损害，在安装附属支脚前请勿将机器直接安置在地板上。

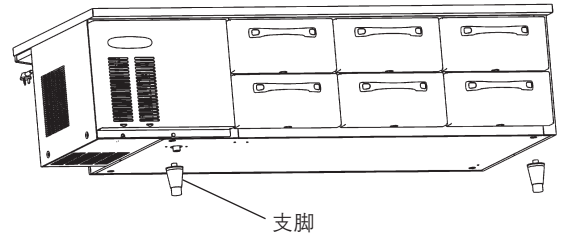
安装支脚时，请勿使本机倾斜超过45°。

在机器上放置炉灶、微波炉及煎锅等任何可能产生高温的设备时，请在顶板上放置一块5~10mm厚的石膏板。否则，设备产生的高温可能会损坏顶板底部的隔热材料，进而降低其冷却性能。

中文

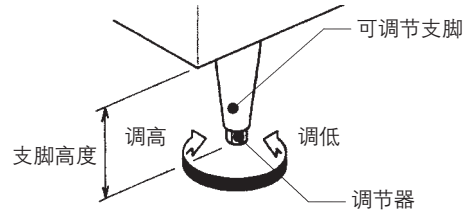
- 1) 将本机向后倾斜，以安装前支脚(两人作业)。
- 2) 以相同的方法安装后支脚。

注：RTL/FTL-98DDAC需要将5个脚全部安装上去。



▲小心
请勿过度向前倾斜机器。否则抽屉可能会滑出。

- 3) 运行本机前，请去除所有的运输纸板箱、包装物、胶带以及外壳、内胆和顶板上的塑料防护膜。请小心不要损坏外板。
- 4) 将本机摆放到事先选好的位置。
- 5) 将软布浸泡在由冷水或温水加适量中性清洁剂混合而成的溶液中，然后取出软布并拧干，再使用该软布清洁本机内部。



- 6) 将本冷藏柜/冷冻柜在左右和前后方向上调水平。若要调节本机高度，请转动可调节支脚的调节器。

▲小心
可调节支脚的高度必须在9~12cm的范围内。如果伸出过长，可能会减弱支脚强度，或者导致调节器脱落，造成意外受伤。

注意事项
若要在顶板上放置炉灶、微波炉及煎锅等任何重物，则放置物品的重量不得超过100kg(RTL/FTL-98DDAC)，180kg(RTL/FTL-140DDAC)或250kg(RTL/FTL-182DDAC)。

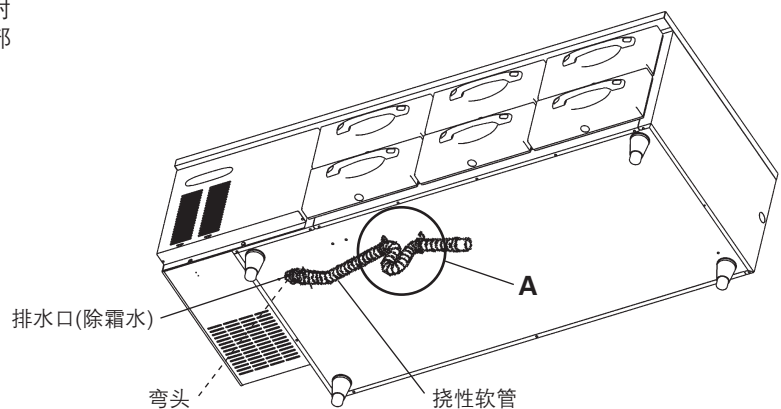
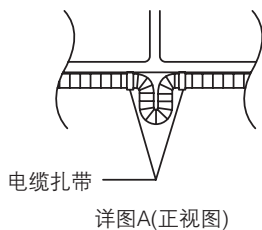
6. 电气连接

注意事项
本冷藏柜/冷冻柜未配备电源开关或接地漏电断路器，而只配备过电流保护装置(保险丝)。请在主电源上安装一个不小于10A的、防止过载的接地漏电断路器。

- * 本冷藏柜/冷冻柜的电源插头必须插入单独的电源插座，且该插座必须方便插拔并具有足够的容量。允许的最大电压波动不得超过铭牌上规定的额定电压的±6%。详情请参见铭牌。
- * 通常情况下，应由持有电工资质证书或经授权的维修人员进行作业。
- * 如需更换电源线和电源插头，必须交由具备相应知识的维修人员进行更换。

7. 排水管路连接

- 1) 将附属的挠性软管和弯头连接至位于机器底部的排水口。
- 2) 如图所示，将挠性软管弯曲成一个存水弯。使用附属的电缆扎带将挠性软管牢牢地固定在机器底部(配有安装孔)。

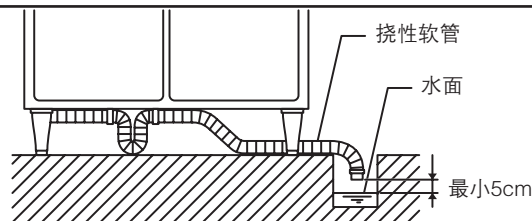


重要

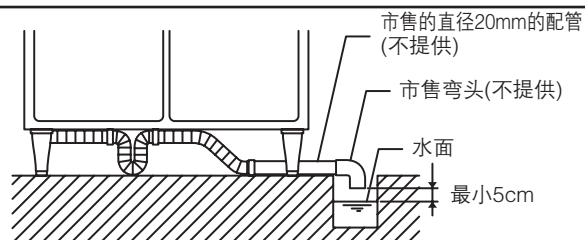
为防止断开，请务必使用电缆扎带将挠性软管固定到位。

排水管路应尽量短而直、向下倾斜并且置于排水口的下方。

为防止废水回流，请勿将排水管直连至下水道系统。在挠性软管的末端和地漏之间至少应留出5cm的空隙。



如果挠性软管过短而不能伸到地漏处，请用一根市售管连接到挠性软管。请务必在排水管的末端和地漏之间至少留出5cm的空隙。



排水连接时，应防止周围空气在蒸发器上结成过多的霜，进而造成制冷能力下降。

请勿让废水在流入下水道之前直接排放到地板上，地面上的异物可能会混入水中并堵塞地漏，或者水可能会朝错误的方向流动。

II. 操作说明**警告**

请勿弄湿机械室，否则会导致本机发生故障或触电。

为防止触电，请勿用湿手触摸连接插头。

请勿在本机中存放易挥发或易燃物品，如汽油、乙醚、粘合剂和LPG。以及不得贮存爆炸物，如助燃喷雾剂。

小心

本冷藏柜/冷冻柜的设计用途是临时存放食物。将其用于任何其它用途(例如存放疫苗、血清等化学或医学用品)可能会导致存放的物品变质。

请勿将物品抛掷到抽屉中或者在单格抽屉中放置12kg以上的物品，否则抽屉可能会下陷并导致受伤。

请勿悬挂或踩踏在抽屉上，否则可能会导致抽屉掉落或机器倾翻。

为防止受伤，请切实安装好抽屉。

请勿在出风口处存放玻璃瓶或易拉罐。否则，瓶罐内的液体可能会结冰造成瓶罐破裂，进而导致受伤。

请勿在本机附近使用可燃喷雾剂或放置易挥发物品和易燃物品。否则，操作开关或类似装置产生的火花可能会导致这些物品起火。

请勿在机械室内或进风口/出风口处放置任何物品。内部高速旋转的风扇可能会造成人员受伤或产生高温。

重要

在柜内放置食物前，请使冷藏柜/冷冻柜通电1小时，并检查温度是否正常。

请勿将食物放置在阻挡进风口/出风口的位置。

请勿在柜内塞满食物。请在食物与食物之间留出适当空间，以确保空气流通顺畅。

请使用食物盘或其它特制容器储存抽屉中的食物。

为确保适当的空气流通及抽屉移动的便利，抽屉内的容器及食物的高度不得超过100mm。

请勿放入温热或滚烫的食物。请首先让食物自然冷却，否则会导致柜内温度上升，从而可能会造成柜内存放的其它食物变质或导致冷藏柜/冷冻柜过载。

确保所有物品在各个抽屉中摆放有序。

潮湿或新鲜的食物以及海鲜等具有强烈气味的食物应使用保鲜膜包裹或存放在容器中。否则，这些食物可能会变干或使得其它食物串味。

含有醋酸或酵母的食物应使用保鲜膜包裹。否则，这些食物可能会加速蒸发器和铜管的腐蚀，进而导致故障。

请勿使用冷冻柜来冷冻食物。冷冻柜仅用来存放冷冻好的食物。除霜过程中，高品质冰激凌可能会融化，因此不应将其存放在冷冻柜中。

抽屉门刚关闭时难以立即打开，因为此时柜内会产生负压。因此请等待约30秒。

中文

1. 启动

- 1) 插入本机的电源插头。
- 2) 压缩机和冷凝器风扇马达将在4分钟后启动。

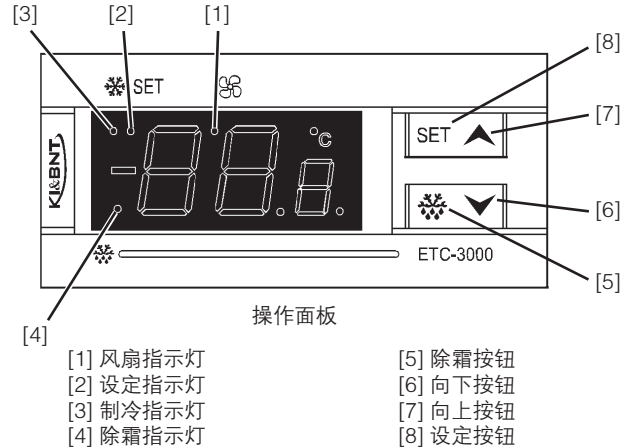
2. 柜内温度设定

重要

按向下按钮只能降低温度设定值，并不会起到加快制冷速度的作用。
下文中的温度范围仅指可调节范围。柜内的实际温度取决于环境温度和其它条件。

柜内温度在出厂时设为1°C(对于冷藏柜)和-20°C(对于冷冻柜)。如有需要，请按照如下方法重新调节温度。

- 1) 松开前面板底部的翼型螺栓，然后拆下前面板。
- 2) 按住设定按钮3秒钟：
当显示屏显示“SET”时，再次按设定按钮以显示设定温度。按向上或向下按钮设定所需的温度，然后按设定按钮。当显示屏显示“SET”时，再次按住设定按钮3秒钟或者在10秒钟内不执行任何操作。系统将保存设定温度，且显示屏上将显示柜内温度。



注意事项

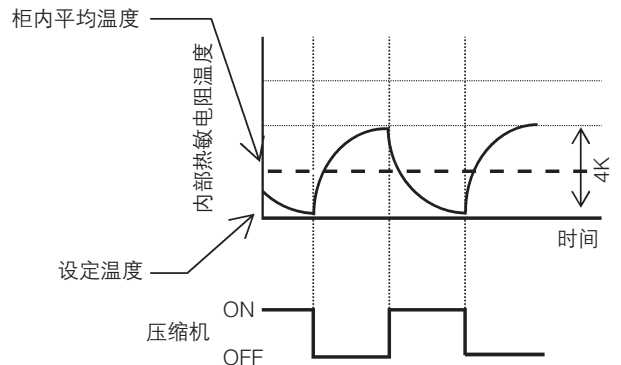
为防止可能引起的故障，必须将温度设定为-6~12°C(用作冷藏柜时)以及-23~-7°C(用作冷冻柜时)的范围内。
为避免发生故障，请勿更改除“SET”以外的其它菜单。

重要

显示的柜内温度被调节为与未放置食物时柜内中心处的温度几乎相同。但根据存放的食物、柜门开启频率或测量点不同，显示温度可能会与实际温度有所不同。

当柜内温度下降至设定温度时，压缩机停止运行。而当柜内温度上升至高于设定温度4°C时，压缩机启动。因此，柜内的平均温度将保持在高于设定温度2°C左右。

设定温度(压缩机关闭温度)
加热器除霜(RTL系列): -6~+12°C
加热器除霜(FTL系列): -23~-7°C



3. 除霜方式

自动除霜过程

在制冷过程启动后，冷藏柜/冷冻柜将自动对蒸发器除霜6小时。除霜过程启动时，操作面板上的除霜指示灯将点亮。

手动除霜过程

若要启动手动除霜过程，请按住除霜按钮(冷冻柜)3秒钟。除霜过程启动时，操作面板上的除霜指示灯将点亮。

4. 指示灯

指示灯	符号	状态	功能
制冷		点亮	压缩机运行
		熄灭	压缩机停止运行
		闪烁	延迟压缩机的运行
		高速闪烁	手动制冷
除霜		点亮	除霜
		熄灭	除霜停止
		闪烁	除霜排水
		高速闪烁	手动除霜
风扇		点亮	风扇运行
		熄灭	风扇停止运行
		闪烁	延迟风扇的运行
设定按钮	SET	点亮	设定模式
		熄灭	普通模式
摄氏度	C	点亮	普通模式下显示摄氏温度
		熄灭	普通模式下显示华氏温度

5. 关机

- 1) 关机前，请将存放的食物移至另一台冷藏柜/冷冻柜。
- 2) 拔下本机的电源插头或断开主电源。
- 3) 打算长时间不使用本机时，请清洁柜内部和柜门衬垫，并将其彻底晾干，然后将本机存放在干燥场所。

6. 拆卸抽屉

- 1) 打开抽屉，取出所有物品及容器。
- 2) 将抽屉向外滑出，略往上提，然后向外拉出。

▲小心

拆卸及安装抽屉时，请用双手小心托住。

III. 保养

1. 清洁

▲警告

在进行任何清洁或保养作业之前，请拔下本机的电源插头。

请勿用喷水器清洁机械室。

▲小心

使用中性溶液时，请务必充分阅读并理解所附带的说明书，防止产生潜在的健康问题。

注意事项

请勿触摸或打湿机械室内的零件，否则会导致故障或停机。

请勿将塑料零件放入温度超过 40°C 的水中或洗碗机中清洗，以免损坏零件。

使用中性清洁剂以外的化学试剂可能会导致内表面和外表面损坏。

为防止涂层表面受到损坏，请勿使用市售的不锈钢清洁剂清洗抽屉。

中文

[a] 内部、外部、抽屉及抽屉把手

- * 为保持使用卫生，应每周清洁本机的内部和外部至少一次。
- * 将软布浸泡在由冷水或温水加适量中性清洁剂混合而成的溶液中，然后取出软布并拧干，再使用该软布清洁本机内部和外部。
- * 抽屉的外表面及把手部位极易变脏，请每天彻底清洁这些部位。

* 任何洗涤剂残留都将损伤金属或塑料表面，因此请使用蘸有温水的软布将其擦除。

* 请勿使用下列物品，以免其损坏喷漆或塑料表面：

抛光粉、酒精、稀释剂、汽油、酸性或碱性洗涤剂、热水、石油精、肥皂粉、金属打磨工具或刷子等。
尤其不可使用专用于清除通风设备或微波炉上油脂的洗涤剂。

注：采用除上述以外的其它溶液也可能会损坏喷漆或塑料表面，因此，一旦出现问题，应立即停止使用。



* 柜门衬垫及其接触表面容易藏污纳垢，请彻底清洁这些部位。否则，食物残渣会加速这些部位的老化。

* 请每周拆卸并清洗抽屉一次。

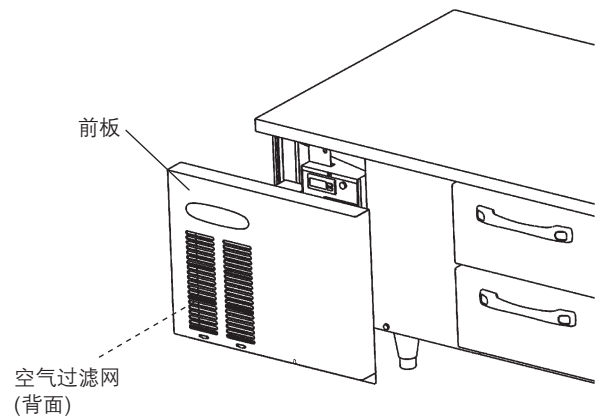
* 用抹布擦干柜内残留的水。

[b] 空气过滤网

该空气过滤网可以滤除空气中的脏物或灰尘，以防止冷凝器堵塞。如果过滤网堵塞，冷藏柜/冷冻柜的制冷性能将下降。

请每月至少对空气过滤网检查两次。如果过滤网堵塞，请使用温水和中性清洁剂进行清洗。请勿在空气过滤网已拆下的情况下使用本机，否则会导致冷凝器堵塞，进而造成本机故障。

- 1) 松开前面板底部的翼型螺栓，然后拆下前板。
- 2) 将空气过滤网从前板的背面拆下。
- 3) 使用含有适量中性清洁剂的冷水或温水小心地清洗空气过滤网。
- 4) 彻底冲洗并晾干空气过滤网。
- 5) 将空气过滤网装回前板的背面。
- 6) 用挂钩勾住柜体的前面板的顶部，然后紧固前板底部的翼型螺栓。



注意事项

清洁后，请务必将空气过滤网装回原处。

2. 联系维修机构前

注意事项

请勿尝试自行维修本机。

重要

如果操作面板上的显示屏显示故障代码或本机存在故障迹象，请根据以下说明查找可能的故障原因。如果故障仍然存在，请立即联系授权的星崎维修公司。

联系维修公司时，请向对方说明型号、序列号、安装日期(参见保修卡)以及故障状况。

[a]有故障代码显示

如果显示屏上显示下述故障代码，请在联系维修机构前检查以下事项：

代码	可能的原因	操作和补救措施
HHH	环境温度过高	压缩机以运行45分钟然后停止15分钟的方式循环工作。检查环境温度。若问题无法解决，请立即联系星崎授权的维修公司。
LLL	环境温度过低	

* “dF” 代码并非故障代码，而是表示本机正处于除霜过程。

[b]无故障代码显示

如果冷藏柜/冷冻柜无法正常工作或根本不工作且显示屏上无故障代码显示，请在联系维修机构前检查以下事项：

症状	可能的原因
本机无法运转	未插电源插头。
	停电。
	主电源断开。
制冷性能不佳	环境温度过高。
	抽屉门开关过于频繁。
	柜内温度设定过高。
	柜内塞满了食物或进风口/出风口阻塞。
	空气过滤网脏污。
	抽屉未关上。
	柜内存放了温热或滚烫的食物。
机器处于除霜过程。在除霜过程中，柜内温度可能会暂时上升，但不会影响柜内的食物。	
抽屉附近出现冷凝水	环境湿度过高。
	抽屉未关紧。
噪声	压缩机、冷凝器风扇马达或内部风扇马达的正常运转声。
	安装在不稳定的地面上。请联系授权的星崎维修公司。
	未在左右或前后方向上调水平。请联系授权的星崎维修公司。
柜内结霜	环境湿度过高。
	频繁打开抽屉门。

请联系当地的星崎维修机构，以获取进一步的帮助或咨询。

3. 废弃处理

对冷藏柜/冷冻柜进行废弃处理时，请联系授权的星崎维修公司或专门的废品处理公司。

▲警告

用于机体的隔热材料发泡剂含有易燃气体环戊烷。请记住这一点，以正确处置冷藏柜/冷冻柜。

**4. 保修**

星崎向拥有者/用户保证，星崎品牌的所有产品在产品“保修期”内不存在材料和/或工艺缺陷。产品保修在自产品安装之日起一年内有效。

星崎在此保修条款下承担有限责任，日常维护、清洁、必需的保养和/或因误用以及未根据星崎的准则安装而导致的修理则不在星崎的责任范围内。

保修范围内的维修应由授权的星崎经销商或维修机构采用星崎的原装/纯正零部件实施。

若要获取有关保修和授权维修机构的详细信息，请联系经销商/供货商或最近的星崎维修办事处。

中文

规格

型号	RTL-98DDAC	RTL-140DDAC		
类型	2抽屉式	4抽屉式		
电源	单相220~240V 50Hz 容量 0.5kVA (2.27A)	单相220~240V 50Hz 容量 0.5kVA (2.27A)		
功率	马达: 225W 制冷: 239W	加热器: 163W 除霜: 163W	马达: 225W 制冷: 248W	加热器: 174W 除霜: 174W
有效容积	85L	176L		
柜内温度	-6~12°C可调	-6~12°C可调		
尺寸	980mm(宽)×750mm(深)×570mm(高)	1400mm(宽)×750mm(深)×570mm(高)		
制冷剂	R134a	R134a		
重量	净重: 65kg (毛重:74kg)	净重: 93kg (毛重:102kg)		
环境温度	5-38°C	5-38°C		
电压范围	额定电压±6%	额定电压±6%		

型号	RTL-182DDAC	FTL-98DDAC		
类型	6抽屉式	2抽屉式		
电源	单相220~240V 50Hz 容量 0.5kVA (2.27A)	单相220~240V 50Hz 容量 0.95kVA (4.3A)		
功率	马达: 225W 制冷: 257W	加热器: 183W 除霜: 183W	马达: 360W 制冷: 376W	加热器: 320W 除霜: 320W
有效容积	267L	85L		
柜内温度	-6~12°C可调	-23~-7°C可调		
尺寸	1820mm(宽)×750mm(深)×570mm(高)	980mm(宽)×750mm(深)×570mm(高)		
制冷剂	R134a	R404A		
重量	净重: 118kg (毛重:130kg)	净重: 74kg (毛重:80kg)		
环境温度	5-38°C	5-38°C		
电压范围	额定电压±6%	额定电压±6%		

型号	FTL-140DDAC	FTL-182DDAC		
类型	4抽屉式	6抽屉式		
电源	单相220~240V 50Hz 容量 0.95kVA (4.3A)	单相220~240V 50Hz 容量 0.79kVA (3.6A)		
功率	马达: 360W 制冷: 390W	加热器: 347W 除霜: 347W	马达: 360W 制冷: 418W	加热器: 360W 除霜: 360W
有效容积	176L	267L		
柜内温度	-23~7°C可调	-23~7°C可调		
尺寸	1400mm(宽)×750mm(深)×570mm(高)	1820mm(宽)×750mm(深)×570mm(高)		
制冷剂	R404A	R404A		
重量	净重: 99kg (毛重:108kg)	净重: 124kg(毛重:136kg)		
环境温度	5-38°C	5-38°C		
电压范围	额定电压±6%	额定电压±6%		

注: 上述规格适用于代表型号。

制品标准番号:

GB 4706.1

GB 4706.13

GB 4343.1

GB 17625.1

IMPORTANT SAFETY INFORMATION

Throughout this manual, notices appear to bring your attention to situations which could result in death, serious injury, or damage to the unit.

▲WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
▲CAUTION	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
NOTICE	Indicates a hazardous situation which, if not avoided, could result in damage to the unit.
▲HYGIENE	Indicates important precautions for hygiene and food safety.
IMPORTANT	Indicates important information about the use and care of the unit.

IMPORTANT

This booklet is an integral and essential part of the product and should be kept and preserved by the user.

Please read carefully the guidelines and warnings contained herein as they are intended to provide the installer/user with essential information for the proper installation and the continued safe use and maintenance of the product.

Please preserve this booklet for any further consultation that may be necessary.

▲WARNING

This is a commercial refrigerator/freezer intended to be used in household and similar applications such as:

- staff kitchen areas in shops, offices and other working environments;
- farm houses and by clients in hotels, motels and other residential type environments;
- bed and breakfast type environments;
- catering and similar non-retail applications.

Any other use should be considered improper and therefore dangerous. The manufacturer will not be held liable or responsible for any damage caused by improper, incorrect and unreasonable use.

The installation, and relocation if necessary, must be carried out by qualified personnel, in accordance with current regulations, according to the manufacturer's instructions.

Do not wet this product or use it in potentially wet conditions. This may cause electric leakage, resulting in electric shock or fire.

Keep ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstruction.

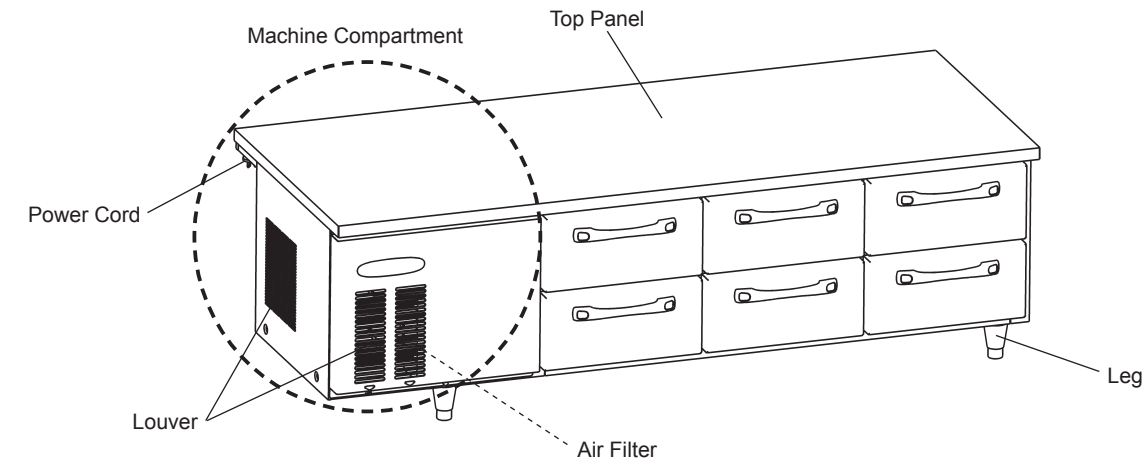
The use of any electrical appliance involves the observance of some fundamental rules. In particular:

- * Instances of high humidity and moisture increase the risk of electrical short circuits and potential electrical shocks. If in doubt, disconnect the refrigerator/freezer.
- * Do not damage the power cord or pull it in order to disconnect the refrigerator/freezer from the electrical supply network.
- * Do not touch the electrical parts or operate the switches with damp hands.
- * This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- * Young children should be supervised to ensure that they do not play with the appliance.
- * Do not attempt to modify the refrigerator/freezer. Only qualified personnel may disassemble or repair the appliance.

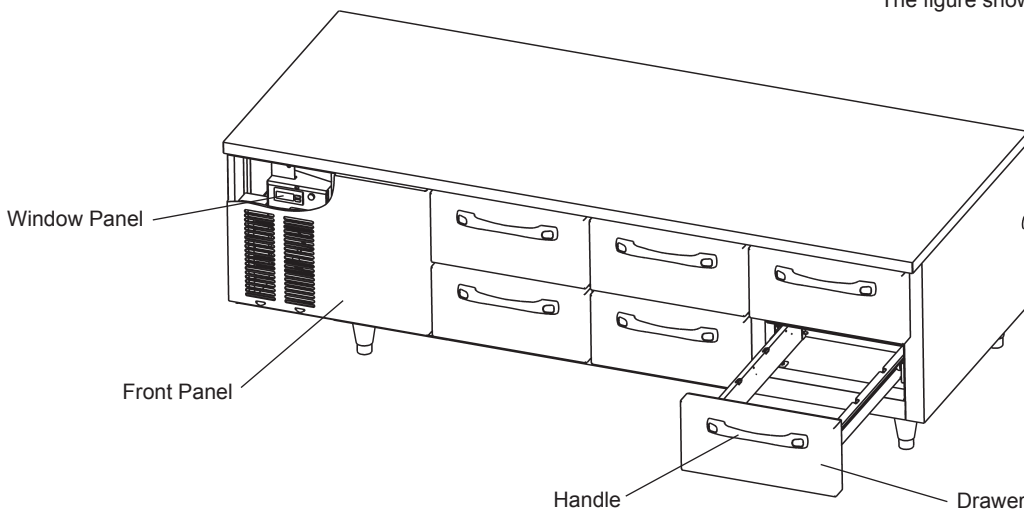
ENGLISH

I. INSTALLATION INSTRUCTIONS

1. CONSTRUCTION

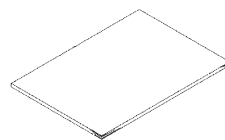


* The figure shows RTL/FTL-182DDAC

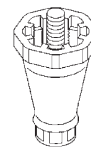


2. ACCESSORIES

Model Number	98	140, 182
Instruction Manual	1	1
Leg	5	4
Flexible Hose	1	1
Elbow	1	1
Cable Strap	3	3
Hose Clamp	2	2



Instruction Manual



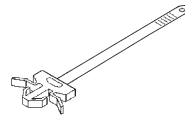
Leg



Flexible Hose



Elbow



Cable Strap



Hose Clamp

3. UNPACKING

⚠ WARNING

Children should not be allowed in reach of the packaging elements (plastic bags and expanded polystyrene) as they are potential sources of danger.

⚠ CAUTION

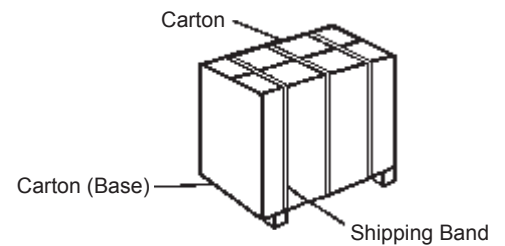
Do not lift or manoeuvre the carton by using the shipping bands.

When moving the unit by hand, hold the unit bottom.

Always wear protective gloves when carrying the unit.

When handling the carton or the unpacked unit, work in pair to prevent injury.

- 1) Cut the shipping band and remove the carton.
- 2) Make sure that the refrigerator/freezer is in good condition. If in doubt, please do not use the refrigerator/freezer but apply to professionally qualified personnel.
- 3) Remove the shipping tape holding the drawers and front panel.
- 4) Remove the protective plastic film from the exterior. If the refrigerator/freezer is exposed to the sun or to heat, remove the film after the refrigerator/freezer cools.
- 5) Remove the package of accessories. Check the contents according to "2. ACCESSORIES".



4. LOCATION

⚠ WARNING

This refrigerator/freezer is not intended for outdoor use.

This appliance is not suitable for installation in an area where a water jet could be used.

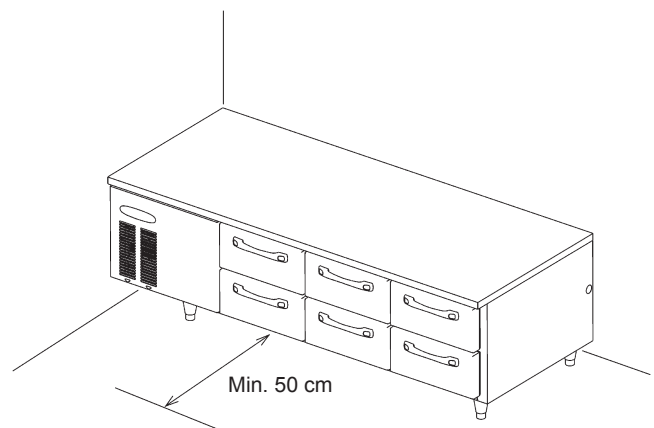
⚠ CAUTION

The location should provide a firm and level foundation for the refrigerator/freezer.

IMPORTANT

Normal operating ambient temperature should be within 5°C to 38°C. Operation of the refrigerator/freezer, for extended periods, outside of this normal temperature range may affect cooling performance.

Allow at least 50 cm clearance between the front panel air inlet/outlet and the wall or other equipment for proper air circulation. The front of the unit should have enough space for smooth adjustment of the cabinet temperature. If the ambient temperature can exceed 38°C, allow at least 10 cm clearance from the wall at the side of the machine compartment to prevent overloading and damaging the refrigeration circuit.



In some high humidity environments, condensation may form inside the machine and drip onto the floor. Do not install where the floor can be affected by water. Especially, a side-by-side or back-to-back installation (possibly with other manufacturer's unit) may cause condensation between the two units, resulting in dripping onto the floor.

Do not expose the unit to direct sunlight or higher temperatures.

5. INSTALLATION

⚠ CAUTION

Incorrect installation can cause harm to people, animals or other items, for which the manufacturer cannot be held responsible.

NOTICE

To prevent damage to the drain pipe at the bottom, do not place the unit directly on the floor before mounting the accessory legs.

Do not tilt the unit more than 45° when mounting the legs.

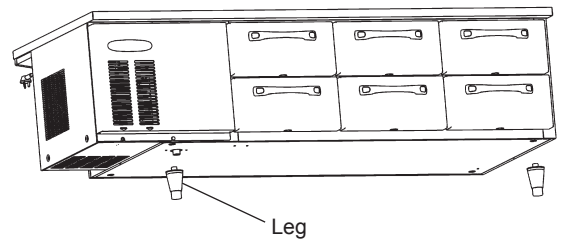
When any high heat producing equipment such as cooking range, microwave oven, and fryer is placed on the unit, lay a 5 - 10 mm thick plasterboard on the top panel. Otherwise heat from the equipment may eventually deteriorate the insulation material at the bottom of the top panel and reduce cooling performance.

ENGLISH

1) Tilt the unit backward to mount the front legs (work in pair).

2) Mount the rear legs in the same way.

Note: For RTL/FTL-98DDAC, attach the five legs provided to the mounting holes located at the bottom of the unit.



⚠ CAUTION

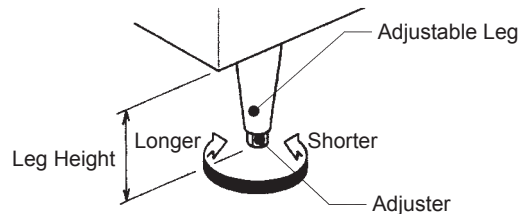
Do not tilt the unit too much forward. The drawers may slide out.

3) Before operating the unit, remove all shipping carton, packing, tape(s) and protective plastic film on the exterior, interior and top panel. Be careful not to damage the exterior panels.

4) Position the unit in a selected site.

5) Clean the interior with a soft cloth soaked in cold or warm water containing the proper amount of neutral cleaner and wrung dry.

6) Level the refrigerator/freezer in both the left-to-right and the front-to-rear directions. To adjust the height of the unit, turn the adjusters of the adjustable legs.



⚠ CAUTION

The height of the adjustable legs must be within 9 - 12 cm. If extended too much, the legs may become weak or the adjusters can come off, causing unexpected injuries.

NOTICE

Any heavy item such as cooking range, microwave oven, and fryer to be placed on the top panel must not exceed the maximum weight of 100 kg (RTL/FTL-98DDAC), 180 kg (RTL/FTL-140DDAC) or 250 kg (RTL/FTL-182DDAC).

6. ELECTRICAL CONNECTIONS

NOTICE

This refrigerator/freezer is provided with no power switch or earth leakage circuit breaker, but with overcurrent protection (fuse) only. Install an earth leakage circuit breaker with overload protection rated at least 10A on the main power supply.

* This refrigerator/freezer must be plugged into the separated power receptacle which is readily accessible and has enough capacity. The maximum allowable voltage variation should not exceed ± 6 percent of the nameplate rating. See the nameplate.

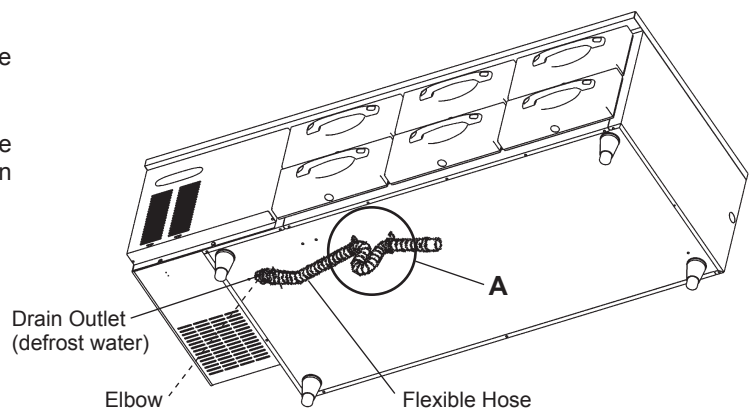
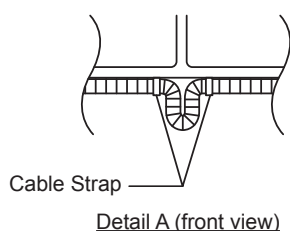
* Usually an electrical permit and services of a licensed electrician are required.

* If the supply cord and the plug should need to be replaced, it should only be done by a qualified service engineer.

7. DRAIN CONNECTION

1) Connect the accessory flexible hose and elbow to the drain outlet located at the bottom of the unit.

2) Bend the flexible hose into a trap as shown. Use the accessory cable straps to fix the flexible hose tightly on the bottom of the unit (mounting holes provided).

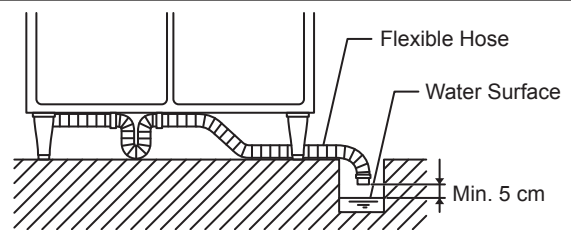


IMPORTANT

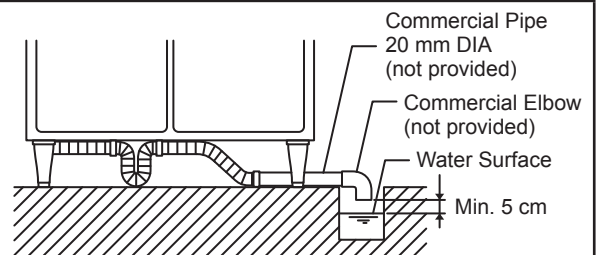
To prevent disconnection, be sure to use the cable straps to secure the flexible hose in place.

The drain line should be as short and straight as possible, sloped downward, and located below the drain outlet.

To prevent backflow, do not connect the flexible hose directly to the sewer system. An air gap of at least 5 cm should be between the end of the flexible hose and the floor drain.



If the flexible hose is too short to reach the floor drain, connect a commercial pipe to the flexible hose. Be sure to allow an air gap of at least 5 cm between the end of the drain pipe and the floor drain.



The drain connections are required to prevent ambient air from causing excessive frost build up on the evaporator, resulting in reduction of the refrigeration capacity.

Do not let water drain directly onto the floor before running into the drain. Foreign matter on the floor may mix into the water and clog the drain, or the water could run in a wrong direction.

II. OPERATING INSTRUCTIONS

⚠ WARNING

Be careful not to wet the machine compartment. This might cause failure or electric shock hazard.

To prevent electric shock, do not touch the attachment plug with wet hands.

Do not store any volatile or flammable substances such as benzine, ether, adhesives and LPG, or any explosive substances such as aerosol cans with a flammable propellant in the unit.

⚠ CAUTION

This refrigerator/freezer is designed only for temporary storage of foods. Use for any other purposes (e.g. storage of chemicals or medical supplies such as vaccine and serum) could cause deterioration of stored items.

Do not throw anything into the drawers or load more than 12 kg on each of them. They may fall off and cause injury.

Do not hang on or step on the drawers. They may fall off or the unit can tip over.

To prevent injury, install the drawers properly and securely.

Do not store bottles or cans near the air outlet. They may freeze up and break, causing a risk of injury.

Do not use combustible spray or place volatile and flammable substances near the unit. They could catch fire from a spark of a switch or the like.

Do not put anything into the machine compartment or the air inlet/outlet. The fan rotating rapidly inside may cause injury or heat.

IMPORTANT

Energise the refrigerator/freezer for 1 hour and check for proper temperature before putting foods in the cabinet.

Do not block the air inlet/outlet with foods.

Do not pack the cabinet with foods. Allow some space between them to ensure good air flow.

Use gastronorm pans or other special containers to store foods in the drawers.

To ensure proper air flow and smooth drawer movement, containers and foods inside the drawers must not exceed 100 mm in height.

Do not put in warm or hot foods. Let them cool first, or they will raise the cabinet temperature and could deteriorate other foods in the cabinet or overload the refrigerator/freezer.

ENGLISH

Make sure all items are snug in each drawer.

Moist or fresh foods and those with a strong smell like seafood should be wrapped up in a plastic film or packed in a container. Otherwise the foods may dry up or give their smells to other foods.

Foods containing acetic acid or yeast should be wrapped up in a plastic film. Otherwise they may accelerate corrosion of the evaporator and copper tubes, resulting in failure.

Do not use the freezer to freeze foods. It is designed only to store frozen foods. High quality ice cream may melt during defrost cycle and should not be stored in the freezer.

The drawers may become difficult to open just after closed because of the negative pressure created inside the cabinet. Wait for about 30 seconds.

1. START UP

- 1) Plug in the unit.
- 2) The compressor and condenser fan motor will start in 4 minutes.

2. CABINET TEMPERATURE SETTING

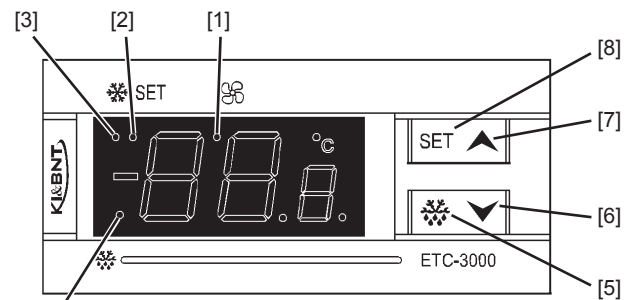
IMPORTANT

Pressing the down key will not speed up refrigeration, but will only lower the temperature setting.

The temperature range given below is only the adjustable range. The actual cabinet temperature depends on the ambient temperature and other conditions.

The cabinet temperature is factory-adjusted to 1°C for the refrigerator and -20°C for the freezer. If necessary, readjust the temperature as follows.

- 1) Loosen the thumbscrew at the bottom of the front panel, and remove the front panel.
- 2) Press the set key for 3 seconds:
When the screen displays "SEt", press the set key again to indicate the set temperature. Press the up or down key to set the desired temperature and press the set key. When the screen displays "SEt", press the set key again for 3 seconds or perform no operation for 10 seconds. The system will save the set temperature and indicate the cabinet temperature on the screen.



NOTICE

The temperature setting must be between -6 and 12°C for the refrigerator and -23 and -7°C for the freezer to prevent possible failure.

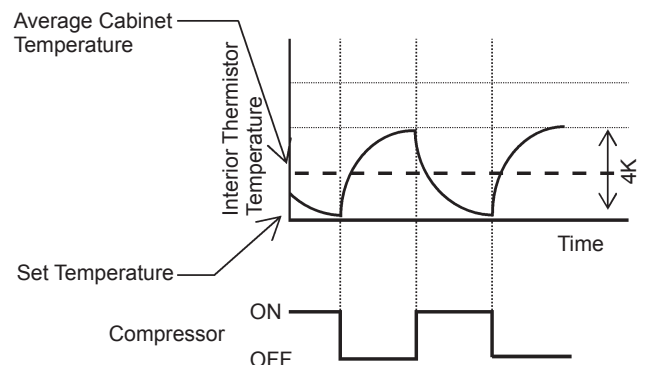
To avoid the risk of failure, do not make changes to other menus than "SEt".

IMPORTANT

The displayed cabinet temperature is adjusted to be almost equal to the temperature at the center of the cabinet without foods. But it can be different from the actual temperature depending on arrangement of stored foods, frequency of door opening or measuring points.

The compressor stops when the cabinet temperature reaches down to the set temperature, and starts when the cabinet temperature rises to the set temperature + 4°C. Accordingly, the average cabinet temperature will be around the set temperature + 2°C.

- Set temperature (compressor off temperature)
- Heater defrost (RTL series): -6 to +12°C
 - Heater defrost (FTL series): -23 to -7°C



3. DEFROST




Automatic defrost cycle

The refrigerator/freezer automatically defrosts the evaporator 6 hours after the refrigeration starts. The defrost indicator light on the operation panel comes on when the defrost cycle starts.

Manual defrost cycle

To start the manual defrost cycle, press the defrost key (freezer) for 3 seconds. The defrost indicator light on the operation panel comes on when the defrost cycle starts.

4. INDICATOR LIGHTS

Indicator Light	Symbol	Status	Function
Refrigeration		On	Compressor running
		Off	Compressor stopped
		Flash	Compressor delayed
		Quick flash	Manual refrigeration
Defrost		On	Defrosting
		Off	Defrost stopped
		Flash	Defrost drain
		Quick flash	Manual defrost
Fan		On	Fan running
		Off	Fan stopped
		Flash	Fan delayed
Set	SET	On	Setting mode
		Off	Normal mode
Celsius	C	On	Celsius display under normal mode
		Off	Fahrenheit display under normal mode

5. SHUT DOWN

- 1) Before shutting down the unit, move the stored foods into another refrigerator/freezer.
- 2) Unplug the unit or disconnect the main power supply.
- 3) When preparing the unit for long storage, clean the cabinet interior and door gaskets, dry them thoroughly and store the unit in a dry place.

6. REMOVING DRAWERS

- 1) Open the drawer, and take out all items and containers inside.
- 2) Slide the drawer forward, lift it up, and pull it out.

⚠ CAUTION

When removing and installing the drawer, hold it securely with both hands.

ENGLISH

III. MAINTENANCE

1. CLEANING

⚠ WARNING

Before carrying out any cleaning or maintenance operations, unplug the unit.

Do not use a water jet to clean the machine compartment.

⚠ CAUTION

When using a neutral cleaner, thoroughly read and understand the instructions provided to prevent potential health problems.

NOTICE

Do not touch or wet the machine compartment parts. This could result in failure or breakdown.

To prevent possible damage, do not clean the plastic parts with water above 40°C or in a dishwasher.

Chemical agents other than neutral cleaner might cause damage to the interior and exterior surfaces.

To prevent damage to the painted surface, do not use a commercial stainless cleaner on the drawer.

[a] Interior, Exterior, Drawer and Drawer Handle

- * Clean the interior and exterior at least once a week for sanitary use.
- * Clean off the interior and exterior with a soft cloth soaked in cold or warm water containing the proper amount of neutral cleaner and wrung dry.
- * The exterior surface of the drawer and drawer handle is easily contaminated. Clean these parts thoroughly every day.
- * Any remaining detergent will damage metal or plastic surfaces. Use a soft cloth dampened with warm water to wipe it off.
- * Do not use the following items. They could damage painted or plastic surfaces:

Polishing powder, alcohol, thinner, benzine, acidic or alkaline detergent, hot water, petroleum, soap powder, metal scourer or brush, etc.

Especially detergent to clean grease on ventilator or microwave.

Note: Some solutions other than the above may also damage painted or plastic surfaces. Immediately stop using such solutions if they cause any problems.



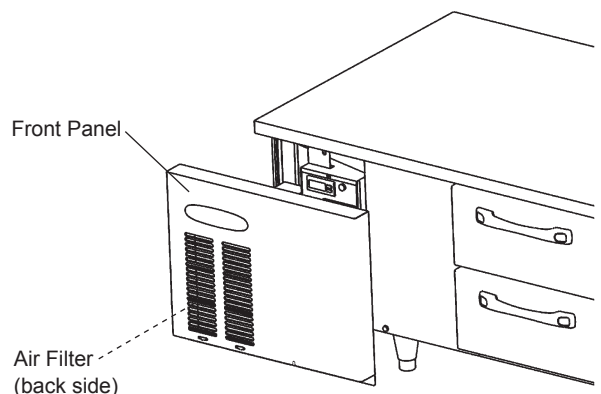
- * The door gasket and its contact surface get soiled easily. Clean every surface of these parts thoroughly. Remnants of food will accelerate aging.
- * Remove and clean the drawer once per week.
- * Use a cloth to wipe off any water staying inside the cabinet.

[b] Air Filter

Plastic mesh air filters remove dirt or dust from the air, and keep the condenser from getting clogged. If the filters get clogged, the refrigerator/freezer's performance will be reduced.

Check the filter at least twice a month. When clogged, use warm water and a neutral cleaner to wash the filter. Do not operate the unit with the air filter removed, or the condenser will get clogged, resulting in failure.

- 1) Loosen the thumbscrew at the bottom of the front panel, and remove the front panel.
- 2) Remove the air filter from the back of the front panel.



- 3) Wash the air filter carefully with cold or warm water containing the proper amount of neutral cleaner.
- 4) Rinse and dry the air filter thoroughly.
- 5) Attach the air filter to the back of the front panel.
- 6) Hook the top of the front panel on the cabinet, and tighten the thumbscrew at the bottom of the front panel.

NOTICE

After cleaning, be sure to place the air filter back in position.

2. BEFORE CALLING FOR SERVICE

NOTICE

Do not attempt to repair the unit yourself.

IMPORTANT

If the screen on the operation panel indicates an error code or something seems wrong with the unit, check for possible causes according to the following instructions. If the problem still exists, immediately contact an authorized Hoshizaki service company.

When contacting a service company, let them know the model name, serial number, date of installation (see warranty card) and state of the trouble.

[a] Error Code Indication

If one of the following error codes is indicated on the display, before calling for service, check the following.

Code	Possible Cause	Operation and Remedy
HHH	Ambient temp too high	Compressor cycles on for 45 minutes and off for 15 minutes. Check ambient temperature. If problem cannot be resolved, immediately contact an authorized Hoshizaki service company.
LLL	Ambient temp too low	

* The code "dF" is not an error code but indicates the unit is in defrost cycle.

[b] No Error Code Indication

If the refrigerator/freezer does not work properly or does not work at all and no error code is indicated on the display, before calling for service, check the following:

Problem	Possible Cause
Unit fails to operate	Unplugged.
	Power failure.
	Main power supply disconnected.
Poor cooling performance	Ambient temperature too high.
	Drawer(s) opened too often.
	Cabinet temperature setting too high.
	Too packed with foods or air inlet/outlet blocked.
	Air filter not clean.
	Drawer(s) left open.
	Warm or hot foods inside.
Unit in defrost process. The cabinet temperature may rise temporarily during defrost cycle but will not affect the foods inside.	


ENGLISH

Condensation around drawer(s)	Ambient humidity too high.
	Drawer(s) not closed tightly.
Noise	Normal operating sounds from compressor, condenser fan motor or Interior fan motor.
	Installed on an unsteady floor. Contact an authorized Hoshizaki service company.
	Not leveled in the left-to-right or front-to-rear directions. Contact an authorized Hoshizaki service company.
Frosting inside compartment	Ambient humidity too high.
	Drawer(s) opened too often.

For further assistance or advice, contact your local Hoshizaki service agent.

3. DISPOSAL

When disposing of the refrigerator/freezer, contact an authorized Hoshizaki service company or a specialized waste disposal company.

⚠ WARNING	
	The insulation foaming agent used for the unit body contains flammable gas cyclopentane. With this in mind, dispose of the refrigerator/freezer properly.

4. WARRANTY

Hoshizaki warrants to the original owner/user that all Hoshizaki branded products shall be free of defects in material and/or workmanship for the duration of the “warranty period”. The warranty shall be effective for one year from the date of installation. Hoshizaki’s liability under the terms of the warranty are limited and shall exclude routine servicing, cleaning, essential maintenance and/or repairs occasioned by misuse and installations not in accordance with Hoshizaki guidelines.

Warranty repairs should be completed by an approved Hoshizaki dealer or service agency using genuine Hoshizaki components.

To obtain full details of your warranty and approved service agency, please contact your dealer/supplier, or the nearest Hoshizaki Service office.

SPECIFICATIONS

Model	RTL-98DDAC	RTL-140DDAC
Type	2 drawers	4 drawers
Power Supply	1 phase 220 - 240V 50Hz Capacity: 0.5kVA (2.27A)	1 phase 220 - 240V 50Hz Capacity: 0.5kVA (2.27A)
Electric Consumption	Motor: 225W Heater: 163W Refrigeration: 239W Defrost: 163W	Motor: 225W Heater: 174W Refrigeration: 248W Defrost: 174W
Effective Capacity	85L	176L
Cabinet Temp	Adjustable from -6 to 12°C	Adjustable from -6 to 12°C
Dimensions	980mm(W) x 750mm(D) x 570mm(H)	1400mm(W) x 750mm(D) x 570mm(H)
Refrigerant	R134a	R134a
Weight	Net: 65kg (Gross: 74kg)	Net: 93kg (Gross: 102kg)
Ambient Temp	5 - 38°C	5 - 38°C
Voltage Range	Rated voltage ± 6%	Rated voltage ± 6%

Model	RTL-182DDAC	FTL-98DDAC
Type	6 drawers	2 drawers
Power Supply	1 phase 220 - 240V 50Hz Capacity: 0.5kVA (2.27A)	1 phase 220 - 240V 50Hz Capacity: 0.95kVA (4.3A)
Electric Consumption	Motor: 225W Heater: 183W Refrigeration: 257W Defrost: 183W	Motor: 360W Heater: 320W Refrigeration: 376W Defrost: 320W
Effective Capacity	267L	85L
Cabinet Temp	Adjustable from -6 to 12°C	Adjustable from -23 to -7°C
Dimensions	1820mm(W) x 750mm(D) x 570mm(H)	980mm(W) x 750mm(D) x 570mm(H)
Refrigerant	R134a	R404A
Weight	Net: 118kg (Gross: 130kg)	Net: 74kg (Gross: 80kg)
Ambient Temp	5 - 38°C	5 - 38°C
Voltage Range	Rated voltage ± 6%	Rated voltage ± 6%

Model	FTL-140DDAC	FTL-182DDAC
Type	4 drawers	6 drawers
Power Supply	1 phase 220 - 240V 50Hz Capacity: 0.95kVA (4.3A)	1 phase 220 - 240V 50Hz Capacity: 0.79kVA (3.6A)
Electric Consumption	Motor: 360W Heater: 347W Refrigeration: 390W Defrost: 347W	Motor: 360W Heater: 360W Refrigeration: 418W Defrost: 360W
Effective Capacity	176L	267L
Cabinet Temp	Adjustable from -23 to -7°C	Adjustable from -23 to -7°C
Dimensions	1400mm(W) x 750mm(D) x 570mm(H)	1820mm(W) x 750mm(D) x 570mm(H)
Refrigerant	R404A	R404A
Weight	Net: 99kg (Gross: 108kg)	Net: 124kg (Gross: 136kg)
Ambient Temp	5 - 38°C	5 - 38°C
Voltage Range	Rated voltage ± 6%	Rated voltage ± 6%

Note: The above specifications are for the representative models.

联系人:

星崎冷热机械(上海)有限公司

上海市静安区南京西路580号南证大厦2802室

邮编: 200041

电话: +86 21 5228-8181

传真: +86 21 5228-0113

星崎香港有限公司

香港九龙官塘伟业街161号德胜广场12楼1201-1202室

电话: +852 2866-2108

传真: +852 2866-2109

Hoshizaki Singapore Pte Ltd

18 Boon Lay Way #07-142 Tradehub 21, Singapore 609966

Tel: +65 6225-2612

Fax: +65 6225-3219

Hoshizaki Lancer Pty Ltd

5 Toogood Avenue, Beverley SA 5009 Australia

Tel: +61 8-8268-1388

Fax: +61 8-8268-1978

Contact:

Hoshizaki Shanghai Co., Ltd.

Room 2802, Nanzheng Building, No. 580 West Nanjing Road, Jingan District,
Shanghai 200041 China

Tel: +86 21 5228-8181

Fax: +86 21 5228-0113

Hoshizaki Hong Kong Co., Limited

Unit 1201-1202, 12/F, Tamson Plaza, 161 Wai Yip Street, Kwun Tong, Kowloon, HK

Tel: +852 2866-2108

Fax: +852 2866-2109

Hoshizaki Singapore Pte Ltd

18 Boon Lay Way #07-142 Tradehub 21, Singapore 609966

Tel: +65 6225-2612

Fax: +65 6225-3219

Hoshizaki Lancer Pty Ltd

5 Toogood Avenue, Beverley SA 5009 Australia

Tel: +61 (0)8-8268-1388

Fax: +61 (0)8-8268-1978

生产商:

星崎电机(苏州)有限公司

江苏省苏州工业园区青丘街15号

邮编: 215126

电话: +86 512-62807850

传真: +86 512-62807860

Manufacturer:

Hoshizaki (Suzhou) Co., Ltd.

No. 15 Qingqiu Street, Suzhou Industrial Park, Suzhou 215126 China

Tel: +86 512-62807850

Fax: +86 512-62807860

HOSHIZAKI