Make
A
Difference
卓/尔/不/凡

AIR CONDITIONER
FRESCO30/36/40

变频顶置式驻车空调 CN
安装和使用说明书

Inverter Roof Top Air Conditioner EN
Installation and Operating Instructions

ARANA

CN

非常感谢您选购**阿雷纳**的制冷设备，在安装或使用该设备之前，请您仔细阅读此说明书。请将说明书保存在所有用户都可以找到的地方，以便随时查阅使用。如果该设备转让或者出售，请确保此说明书也交付给新用户，以便告知他们安装方法、使用和安全要求。

目 录

1.0 安全符号说明

危险！ 表示潜在的危险情况，会导致死亡或重伤。

警告！ 表示潜在的危险情况，会导致轻伤或重度损伤。

注意！ 表示潜在的危险情况，会导致财产损害。

提示！ 产品操作的补充信息。

2.0 安全说明

请遵守车辆制造商和售后服务商提到的安全说明和规定。

以下情况造成的损坏，**阿雷纳**不承担任何责任：

- 错误装配或连接。
- 机械影响和过电压造成产品的损坏。
- 未取得制造商明确许可擅自改变产品。
- 用于此说明书之外的用途。

2.1 一般性安全说明

警告！

- 该空调的安装和维修只能由熟悉风险和相关规定的专业人员进行，不当维修可能会造成严重的危险。
- 该电气设备不是玩具。
- 请将该电气设备远离儿童或体弱者，不要让他们在没有监督的情况下使用该电气设备。
- 生理、感官、精神能力受限或者缺乏知识和经验而无法安全使用该电气设备的人，

在没有责任人监督或指导下不得使用该电气设备。

- 不要拆卸该空调的外壳，以防发生火情。如果发生火情，不要用水灭火，要使用许可的灭火剂。

⚠ 注意！

- 该顶置式驻车空调必须安装牢固，防止坠落。
- 不要在靠近易燃液体或者封闭空间内使用顶置式驻车空调。
- 确保通风口附近没有存放或者安装易燃物品，应至少保持 50cm 的安全距离。
- 切勿将手插入通风口内或者将异物塞入顶置式驻车空调内。

⚠ 注意！

- 只能按照预期用途使用该电气设备。
- 不要对该电气设备进行任何变更或者改造。
- 顶置式驻车空调安装完成后，切勿驶入机动车辆自动清洗线。
- 如果制冷回路发生故障，必须由专业的公司进行正确的检查和维修。制冷剂绝对不可以释放到空气中。

i 提示！

- 请和车辆制造商确认，在安装顶置式驻车空调后是否需要进行技术检测，以及车辆文件中填写的车辆高度是否需要变更。

2.2 操作安全说明

⚠ 警告！

- 必须由专业人员进行电源线的连接。
- 安装或维护该电气设备时，一定要切断电源。

注意!

- 在穿过有锋利边缘的墙壁时，请使用穿线管铺设电缆线。
- 不要把松动或者弯曲的电缆放置在导电材料旁边。
- 只有在确定外壳和电线未损坏的情况下，才可操作该电气设备。

3.0 预期用途

该顶置式驻车空调是专为自行式房车、拖挂式房车和其它带有生活居住空间的车辆设计。

如果环境温度超过 52°C，请不要运行该顶置式驻车空调，在极端温度下，该空调的性能会受到影响。

提示!

- 可以从说明书的技术描述和操作说明中查阅到顶置式驻车空调的更多信息。

4.0 技术描述

阿雷纳 FRESCO 系列变频顶置式驻车空调向室内输送凉爽或温暖的干燥空气。
集成在通风面板中的 LED 氛围灯带提供舒适的照明。
该顶置式驻车空调可以通过控制面板上的按键或者遥控器操作。

提示!

- 顶置式驻车空调可以将车内温度降低到一定程度。温度取决于车辆类型、环境温度以及顶置式驻车空调的制冷能力。室外温度低于 16°C时，顶置式驻车空调将不再制冷，只运行“送风”模式。

CN

4.1 部件名称

顶置式驻车空调的制冷回路包含以下主要部件 , 详见第 32 页零部件明细表。

- **压缩机**

  压缩机将使用过的制冷剂吸入并进行压缩，这就提高了制冷剂的压力和温度。

- **冷凝器**

  内置液化器的工作原理与冷却器或热交换器类似，流经的空气吸收热量，热的制冷气体冷却变成液体。

- **蒸发器**

  蒸发器将流经的空气进行冷凝和除湿，制冷剂吸收热量并蒸发。

- **风机**

  风机通过通风口将冷气吹入车内。

4.2 控制面板

控制面板位于顶置式驻车空调的出风口单元上。

包含以下控件和显示元素：

	说明
按键 ⏻	打开和关闭空调运行
按键 △	温度调高
按键 ▽	温度降低
按键 Ⓜ	运行模式
按键	调节风量

CN

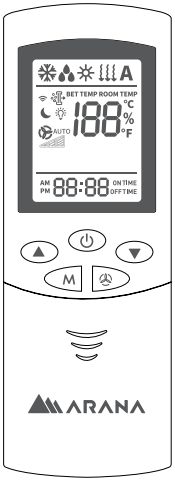
	说明
按键	LED 氛围灯
按键	等离子杀毒
按键	新风系统 *

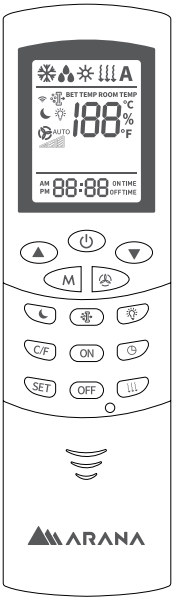
（* 本功能仅适用于部分机型）

4.3 遥控控制

4.3.1 功能说明

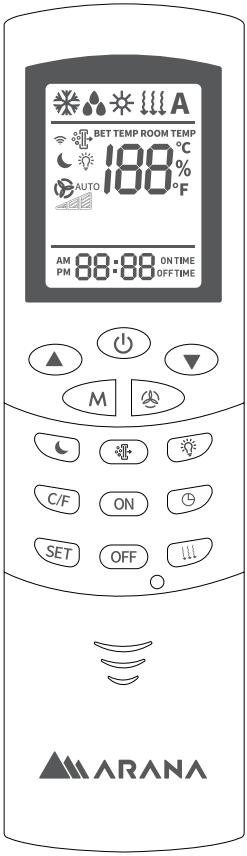
- 温度设定 16°C到 31°C
- 温度°C和°F转换
- 模式制冷 / 除湿 / 通风 / 制热 / 自动五档
- 风速低 / 中 / 高 / 自动四档
- 等离子功能
- 定时开和定时关功能
- 灯光功能





CN

4.3.2 按键操作功能介绍



说明

开关键 ⏻

打开和关闭空调运行

模式键 M

选择空调的运行模式，在自动 / 通风 / 制冷 / 除湿 / 制热五档循环切换

A（自动） （通风） （制冷） （除湿） （制热）

自动模式下没有温度显示，除湿模式下只有小风，各自模式下有自己单独的设置，可以设置不同的风速、温度。

风速键

调节风量，风速在自动风 / 小风 / 中风 / 大风四档循环切换

AUTO（自动风） （小风） （中风） （大风）

调温键 ▲ ▼

向上或向下调节温度，每按一下调节 1 度，在 16 ～ 31°C区间内调整

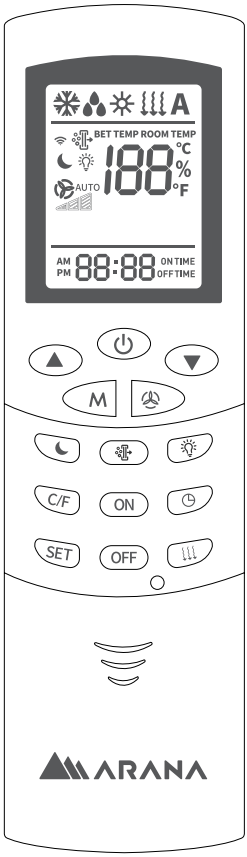
温度单位转换键 C/F

实现摄氏度和华氏之间的切换

灯光键

打开和关闭面板上的氛围灯，灯光键在任何模式下都工作

CN



睡眠键

开启和关闭空调的睡眠模式，只在制冷和制热模式下工作

等离子键

打开和关闭等离子杀毒功能

时钟键

可以设置摇控器上的时间。按 第一次，小时部分闪烁，按温度向上或向下键增加或减少，每次增减 1 小时，
按 第二次，分钟部分闪烁，按温度向上或向下键增加或减少，每次增减 1 分钟。3 秒内无动作后，自动保存已设置时钟

定时开机键 ON

可以设定空调开机时间。默认是 AM12:00，LCD 显示 AM12:00 , 按 **ON** 键时 **ON TIME** 闪烁，按温度向上或向下键增加或减小时间，每次增加或减少 30 分钟，
按 **SET** 键确定定时时间。**ON TIME** 不再闪烁，表示定时成功，LCD 屏幕一直显示 **ON TIME**

定时开机键 OFF

可以设定空调关机时间。默认是 AM12:00，LCD 显示 AM12:00 , 按 **OFF** 键时 **OFF TIME** 闪烁，按温度向上或向下键增加或减小时间，每次增加或减少 30 分钟，
按 **SET** 键确定定时时间。**OFF TIME** 不再闪烁，表示定时成功，LCD 屏幕一直显示 **OFF TIME**

SET 按键

定时开机和定时关机设置后，需要按 **SET** 键确认

室温显示

当不设置温度和风速时，遥控器显示室温

CN

4.4 工作模式

顶置式驻车空调包含以下工作模式：

空调模式	页面显示	说明
自动	A	根据制热或者制冷的需要，顶置式驻车空调自动将温度保持在 20°C到 25°C之间。
制冷		指定好温度和鼓风机的设置，顶置式驻车空调将室内温度降低至此。
制热		指定好温度和鼓风机的设置，顶置式驻车空调将室内温度升高至此。
送风		指定好风速等级，顶置式驻车空调将空气吹入室内。
除湿		与设定温度无关，压缩机持续运行，内风机强制在低档运行；除湿模式下不支持睡眠功能。

提示

- 请使用符合国家规定的连接线。
- 在选择发电机容量时，必须考虑车辆的总用电量，以及发电机的功率会因高海拔和缺少维护而受损这些因素。
- 电路保护：务必使用漏电开关。

5.0 安装说明

注意！

- 请在开始安装和使用该产品前，仔细阅读此安装和操作说明。
- 由于不遵循本说明书引起的任何损失或伤害，制造商概不承担任何责任。
- 安装务必遵守国家电气规程、法规或行业规范。

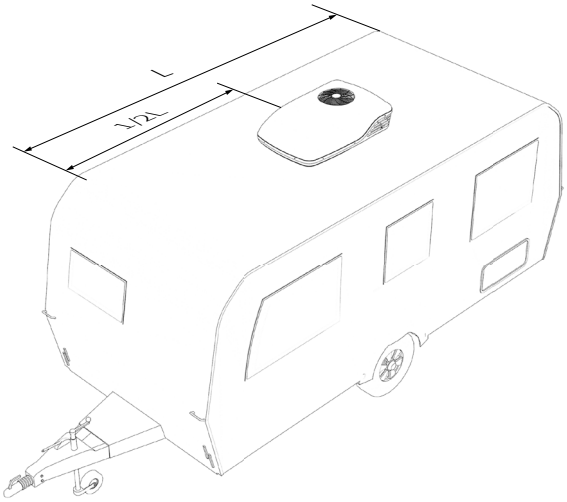
- 安装空调时，留意车辆结构和开口的密封情况。
- 爬到车顶前，请与车辆制造商确认好车顶承重力和负荷量。
- 未经**阿雷纳**的书面授权，该产品不得加装任何设备或附件。
- 该电气设备须由专业人员进行安装和维修。

5.1 选择安装位置

该顶置式驻车空调专用于安装在车顶上，在确定您的制冷需求时，应该考虑以下几点：

- 车辆尺寸。
- 车窗面积（面积越大，受热越多）。
- 车厢板和车顶隔热材料的厚度和保温性能。
- 客户使用车辆的地理位置。
- **通用位置：**将顶置式驻车空调安装在现有车顶通风口上。
  拆除通风口后，通常切割一个 362×362mm±2mm 或 400×400mm±2mm 的开口。
- **其他位置：**当车顶没有通风口或者是有更理想的位置时，建议采取以下做法：
  a. **安装一台顶置式驻车空调时：**应该安装在中心点略靠前的位置（从前头看），并处于左右两端的中心点（见图 01.）。

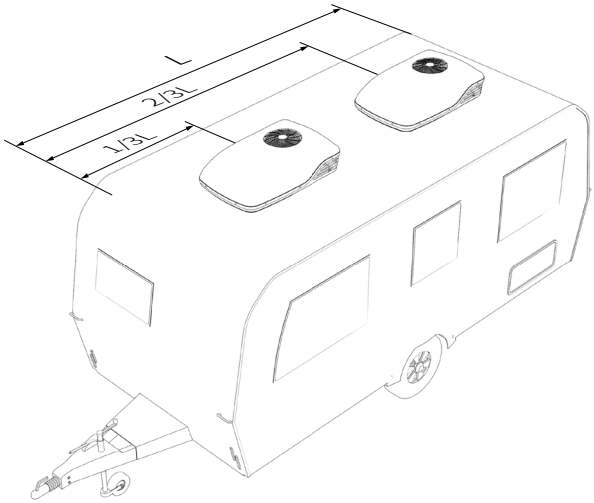
01



CN

b. **安装两台顶置式驻车空调时：**两台顶置式驻车空调应分别安装在距车辆车前端 1/3 和 2/3 的位置，并处于两端的中心点（见图 02.）。

02



· **选择位置后：**

a. 检查该电气设备安装区是否有障碍物，避免损坏任何车辆部件，例如车灯、橱柜、门等。

b. 安装前，请查明或者和车辆制造商确认其车顶结构是否可以承受空调的静态重量以及车辆移动时的负荷。若造成任何损失，空调制造商不承担责任。

c. 检查车辆内部是否有阻碍安装顶置式驻车空调内面板的障碍物（如：门孔、隔间架、窗帘和天花板夹具等）。空调主机及面板的外形尺寸请见图 03。

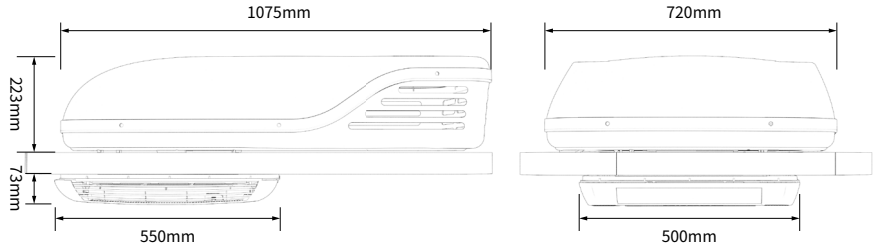
⚠ 注意！

· 该顶置式驻车空调最好水平安装（车辆停放在水平表面上为标准），最大倾斜度不可超过 5°。

· 设计人员应负责确保车辆结构的整体性，切勿在车顶制造会积水的低洼处，否则该电气设备周围积水可能会渗入车内，损坏电气设备和车辆。

CN

03



5.2 顶部准备工作

· **拆除车顶通风口：**

a. 拧开螺钉，并拆除通风口。

b. 去除开口处的所有填隙料。

c. 使用优质的耐候密封胶将车顶垫圈处的所有螺钉孔和接缝密封。

注意！

· 空调制造商只对标准配置中包括的零部件承担责任，如果该设备与第三方零件一起安装，保修有效期便终止。

· **新开口：**（非通风口的安装）

如果不打算使用现有的车顶通风口，则必须在车顶切割一个 362×362mm（±2mm）或 400mm×400mm（±2mm）的开口，此开口必须位于车顶加强固件之间。

a. 选定好具体安装位置；

b. 钻穿开孔方框的角；

c. 使用专用切割工具在车顶上切出开口，确保不损坏电缆；

d. 安装前请检查车顶开口是否需要特殊加固；

e. 用适当尺寸的木质或者钢构件辅助开口，防止固定空调时发生塌陷；

f. 如有需要，安装一个尺寸合适的 H 型框架来加固车顶。

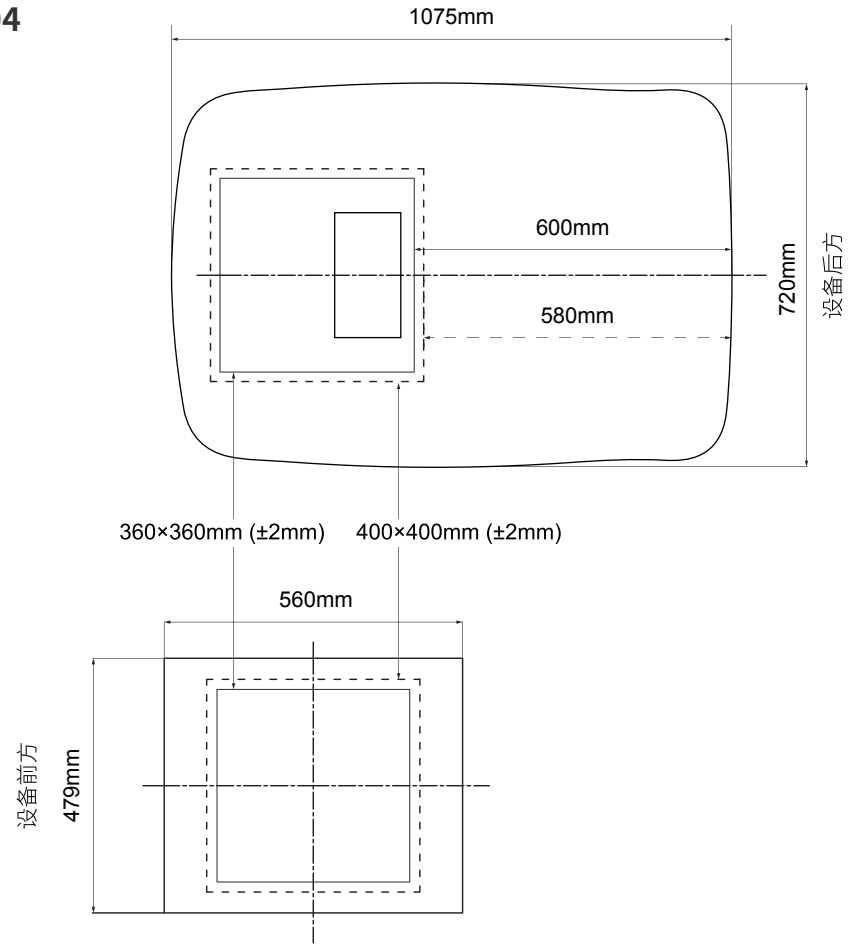
CN

362×362mm（±2mm）或 400mm×400mm（±2mm）的车顶开口是安装该顶置式驻车空调所必须的，请参考图 04 所示尺寸和位置在车顶切口。

危险!

· 车顶和天花板之间可能有电线，安装时请断开所有电源。不遵循此操作有触电的危险，会导致死亡或严重的人员伤害。

04



- **开口须知：**

  a. 如果开口超过 365×365mm，则有必要安装防水垫片。

  b. 如果开口小于 358×358mm，则必须扩大开口。

- **布线要求：**

  需要安装保险丝或断路器，并良好的接地。从断路器引出一条 2.5mm² 的铜质电缆线到车顶开口的前侧。

  a. 必须由合格的电工接通顶置式驻车空调的电源。

  b. 确保铭牌上的电压规格和电源电压相同。

  c. 电源必须位于单独的 20Amp 延时断路器上。

  d. 确保至少有 380mm 的电线延伸到车顶开口内部，这可方便顶置式驻车空调的安装。

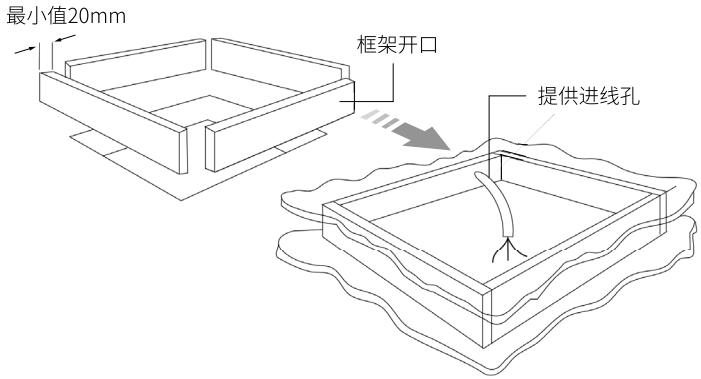
  e. 必须按照相关国家和地方的规定进行布线。

  f. 拆除通风口之后，如果现有电线的尺寸合适并正确安装了保险丝，则可以使用。

  g. 接入开口的电线需要加以保护避免损坏。

- 开口处必须有足够的支撑，并需要把车顶夹层填充满保温材料，防止夹层内有空气产生共振。必须使用 20mm 厚或更厚的木条密封四周（见图 05.）。
- 362×362mm（±2mm）或 400×400mm（±2mm）车顶开口是回气管的组成部分，必须根据行业标准进行抛光处理。

05



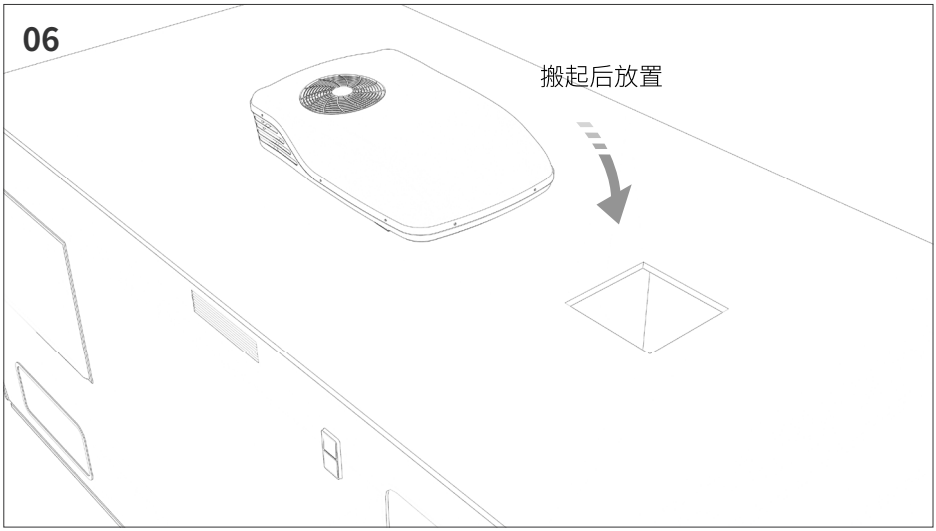
CN

5.3 将顶置式驻车空调放置在车顶上

⚠ 注意！

- 该顶置式驻车空调约重 38Kg。为防止损坏该空调，请使用机械起重机将其吊到车顶上。

- 取出纸箱内的顶置式驻车空调主机。
- 将顶置式驻车空调放在车顶上。
- 以顶置式驻车空调的 EVA 方框作为基准，搬起设备，并将其放置在准备好的开口上方。冷凝器盘管朝向房车的后方（见图 06.）。



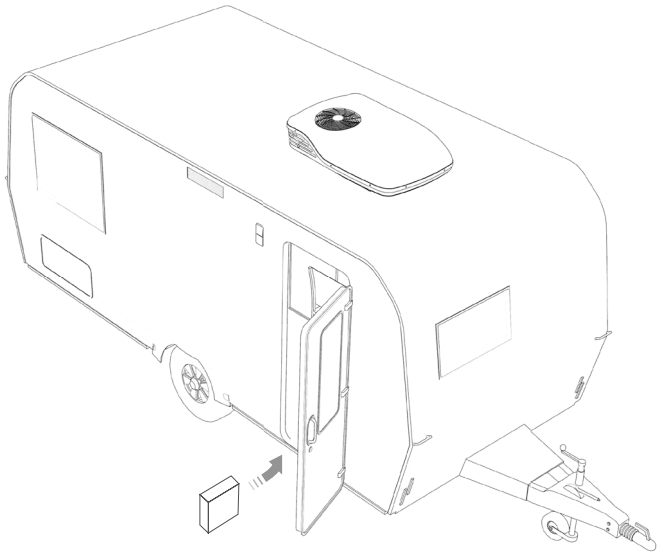
⚠ 注意！

- 禁止拖动顶置式驻车空调，因为会损坏底部的 EVA 衬垫，导致安装后密封不严而漏水。

- 将面板组件放入车内。该组件包含顶置式驻车空调安装用的紧固件，将被用在内部（见图 07.）。

CN

07



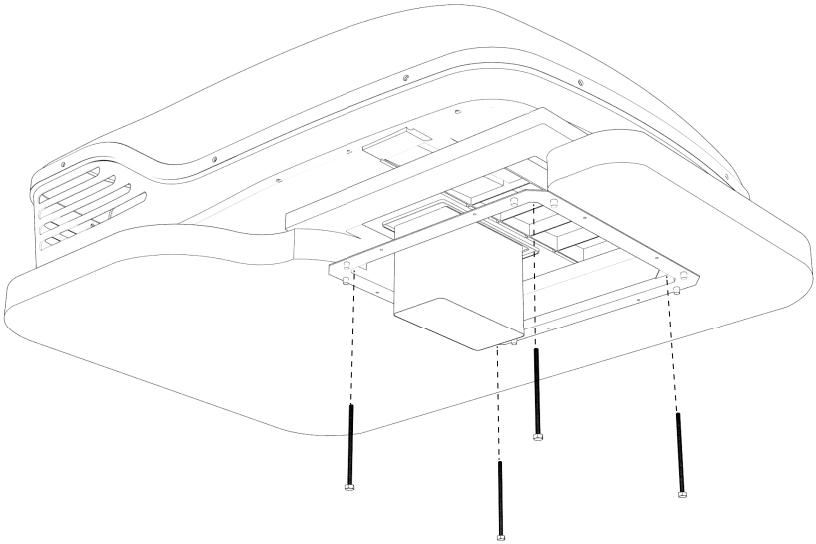
- 在安装内面板时如发现外主机位置有偏差，可在内部通过安装孔微调顶置式驻车空调主机。

5.4 出风管和车顶固定框的安装

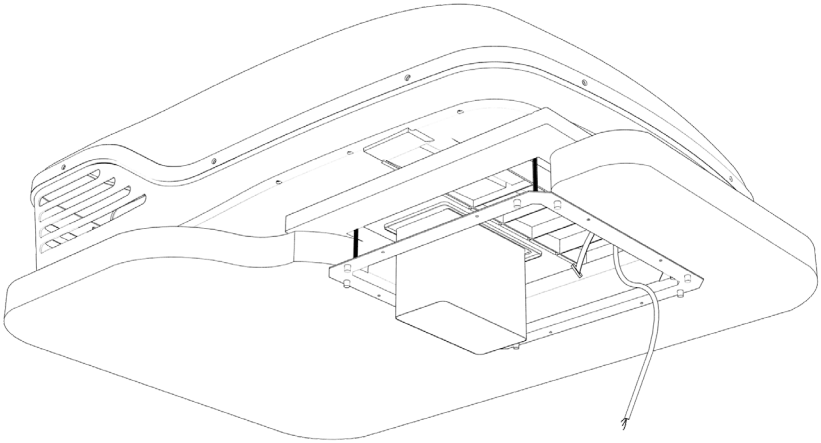
- 取出纸箱内的通风面板、固定框和安装用的紧固件。
- 用四根长螺栓（M6 x 135mm) 将车顶固定框安装到车顶方形开口处，主机底板上已开有螺丝孔 (见图 08.）。
- 检查是否正确对齐，必要时调整顶置式驻车空调（车顶的 EVA 方框刚好对齐 362×362mm 的方孔）。
- 均匀地拧紧 4 根螺栓，扭矩为 4.5 至 5.6Nm，将 EVA 方框压缩至 18-20mm 高度左右。
- 将顶置式驻车空调的电线从回气开口内拉下来，便于随后连接（见图 09.）。
- 用四颗螺钉（M6 x 10mm) 将车内顶板与车顶固定框连接起来（见图 10.）。
- 将风道布从出风口里拉出，撕掉排风口周围的胶带保护膜，将风道布紧紧地压在开口周围，用小刀切掉多余的风道布，注意不要将其撕裂到胶带之外 (见图 11.）。

CN

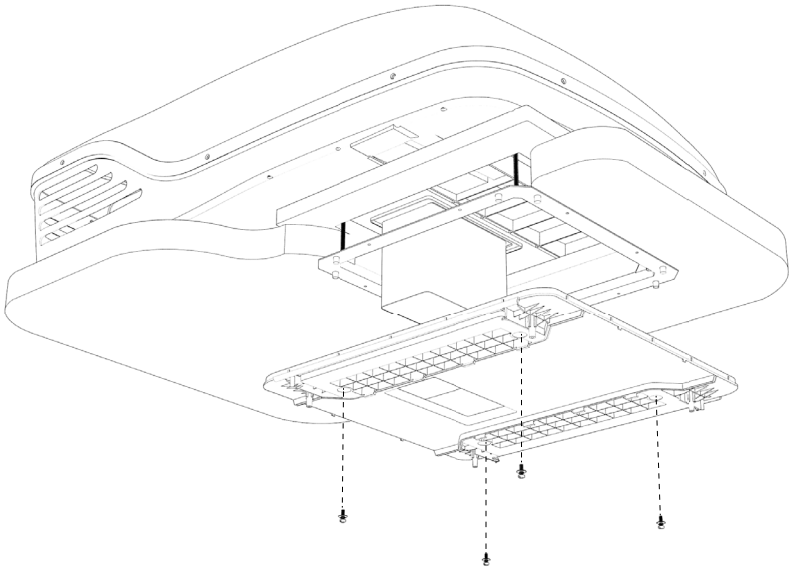
08



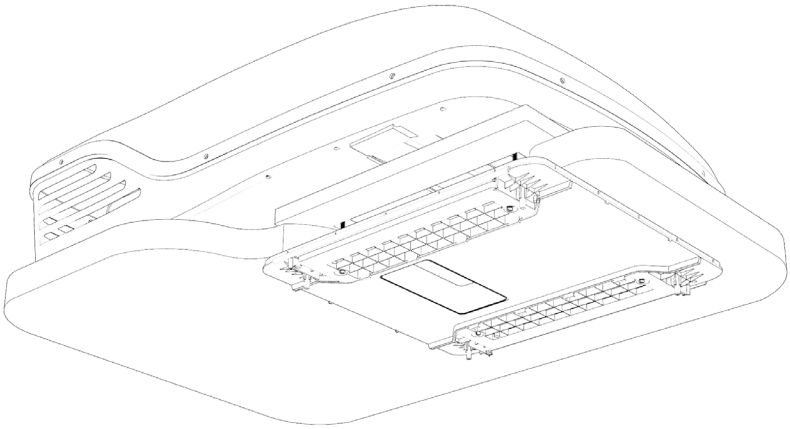
09



10



11



CN

- 用四颗螺钉（M4 x 20mm) 将通风面板与车内顶板连接起来，然后将螺丝孔盖推入卡槽（见图 12.）
- 将空气过滤网正确放置到通风面板中（见图 13.）。

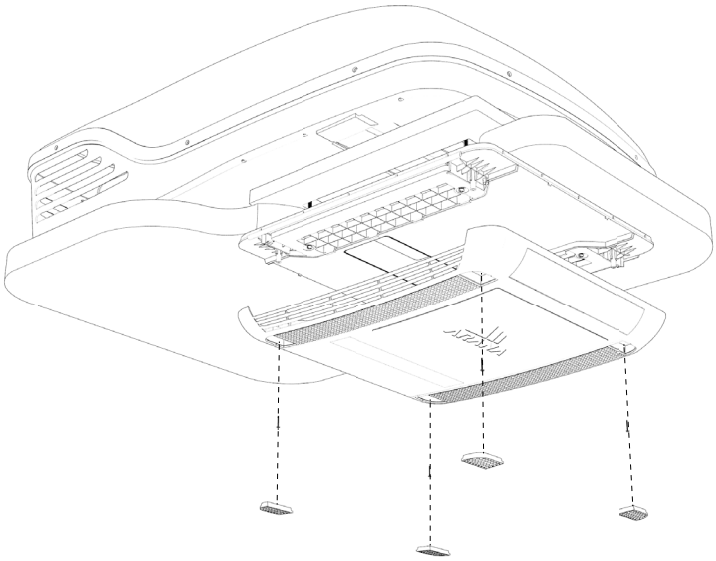
⚠ 注意!

- 如果螺栓松动，则可导致车顶密封不足；如果螺栓过度拧紧，可能会损坏顶置式驻车空调底盘或安装支架。

i 提示!

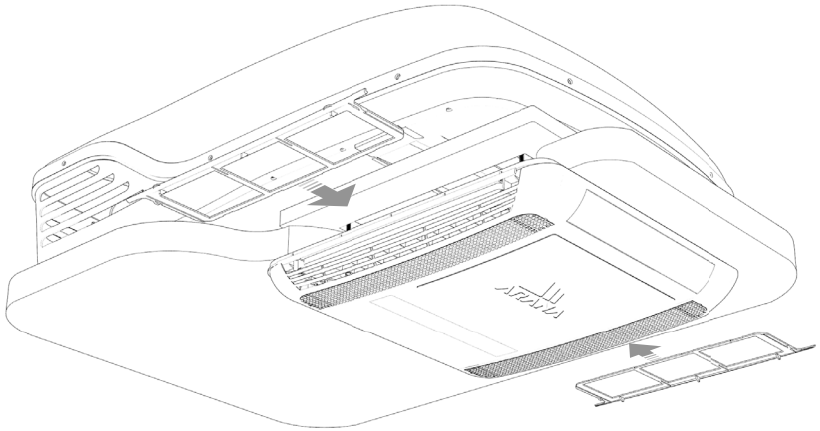
- 将电控 PCB 上的引线和 LED 氛围灯线拉出，并与由主机拉出来的插头对接。

12

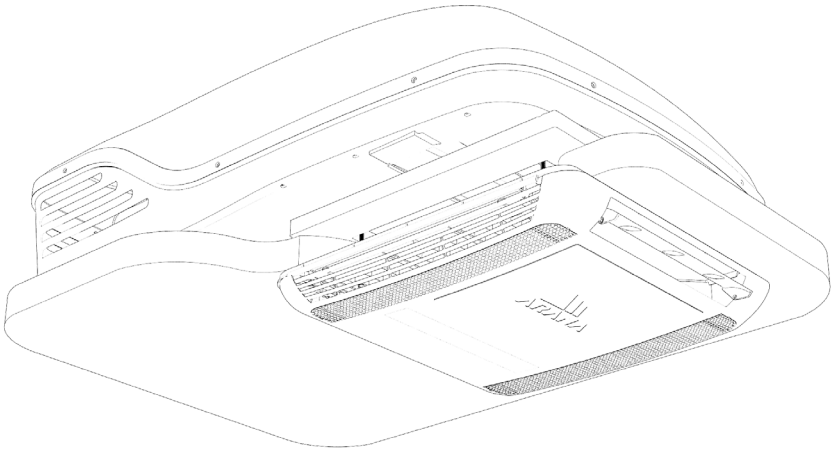


CN

13



14



CN

5.5 系统接线

⚠ 危险!

- 请先断开主要电源，否则会产生电击危害，进而导致人员伤亡!
- 该顶置式驻车空调有接地预留，用于防止电击危害。确保装置已连接至有可靠接地的 220V/50Hz 电路。若未能按照上述说明进行操作，则会导致人员死亡、受伤或设备受损。

重要事项:

- 电气安装必须由电工进行， 并遵守国家电气规程和当地的准则或规定。
- 顶置式驻车空调必须连接到能够提供所需电流的电路上。
- 选择与以下长度对应的电缆的横截面:
  长度 <7.5m: 2.5mm^2（国家标准）
  长度 >7.5m: 4mm^2（国家标准）
- 在车体夹层中布置线槽，以连通电源电缆。

6.0 初次使用

6.1 启动前的检查

在运行顶置式驻车空调之前 , 请注意以下事项 :

- 检查电源是否与产品上所粘贴的铭牌参数一致。
- 请确保进气口和送风道无堵塞。所有通风格栅必须始终保持畅通 , 以确保顶置式驻车空调能够发挥最大的制冷性能。

⚠ 注意!

- 请不要将手指或者物体插入送风道或进气格栅，小心受伤!

CN

6.2 检查遥控器并装入电池

电池盒位于遥控器滑盖的下方。

- 轻轻向下推动滑盖，将滑盖从导向槽内滑出取下；
- 如电池盒中所示，装入两节 7 号电池（AAA）；
- 将滑盖推入导向槽，向上推动并关闭。

7.0 操作说明

- 控制器首次上电，蜂鸣器响一声，控制器进入待机状态。
- 摇控器关机后再次开机，需要等三分钟压缩机才会启动工作。
- 当接切换工作模式时，空调延时 2 秒转换工作状态。

运行模式	
自动运行模式	进入自动模式，内风机工作，根据室温自动决定空调器的工作模式。
制冷运行模式	设置温度范围：16℃～ 31℃
	室外风机运行 睡眠模式下：室外室内风机强制低速运行。 正常制冷模式：当室外环境温度 < 30°C时，室内温度达到设定温度后，外风机会自动调整为低速运转。室外环境温度≥ 30°C时 , 室外风速强制高风。
	室内风机的风速控制 室内风机可按自动风速、低速、中速、高速循环控制 。 关机后，空调会启动防霉功能，室内风机延时 40s 再关机，不要强制关闭电源 。

CN

运行模式	
除湿运行模式	设置温度范围：16°C～ 31°C
送风运行模式	室内风机可选择自动风速、低速、中速、高速 **自动风速控制** 运行在中风速
制热运行模式	设置温度范围：16°C～ 31°C **室外风机运行** 睡眠模式下：室外风机强制低速运行。 正常制冷模式：当室外环境温度 > 15°C时，室内温度达到设定温度后，外风机会自动调整为低速运转。室外环境温度≤ 15°C时 , 室外风速强制高风。 **除霜功能** 自动运行

睡眠模式	
睡眠功能	室内、室外风机以低速运行保持不变； 睡眠功能运行 8 小时后自动关机。
定时功能	**定时开：**在关机状态下可以设定定时开机功能，达到设定时间后空调按照设定模式自动运行。定时间隔为 0.5 小时，设定的范围为 0.5 到 24 小时。定时功能启动时 点亮，当定时时间到空调开机后 熄灭。 **定时关：**在开机状态下可以设定定时关功能，定时时间到后空调自动关机。定时间隔为 0.5 小时，设定的范围为 0.5 到 24 小时。定时功能启动时 点亮，当定时时间到空调关机时 熄灭。
LED 氛围灯	通过控制面板灯光按键或者遥控器按键可以控制 LED 氛围灯带的开关，其工作电压为 12V，功率 20W。
等离子空气净化功能	通过遥控器上面按键来进行控制，按键按下等离子发生器开始工作，同时 LED 显示模块上等离子图标点亮。再次按下遥控器该键则关闭等离子发生器，同时 LED 显示模块上面等离子图标熄灭。等离子工作的条件是内风机必须运行，制热吹余热时不工作。

CN

8.0 清洁与维护

⚠ 警告！

- 该处所述的任何维护工作只能由专业人员完成，因为他们了解处理制冷剂和顶置式驻车空调以及相关规定事项时可能出现的风险。

⚠ 注意！预防伤害

- 不要使用高压水枪清理顶置式驻车空调。用水冲洗会造成该空调损坏。
- 不要使用锋利或者坚硬的东西或者清洁剂清理，否则会造成该空调损坏。
- 清理顶置式驻车空调时，在清水中加入柔和的清洁剂，切勿使用汽油、柴油或者溶剂。

清洁顶置式驻车空调

- 用湿布清理顶置式驻车空调的外壳和通风口单元。
- 定期清除顶置式驻车空调通风网栅上的落叶和其它污物，清理过程中请注意不要损坏网栅。
- 定期取下回风面罩后面的空气过滤网，用温水清洗，风干后重新装好。用微湿布擦拭遥控器，我们建议使用眼镜清洁布来清洁显示屏。

维护顶置式驻车空调

- 定期检查冷凝水的排放通道是否通畅，冷凝水是否能够排出。
- 每年检查一次顶置式驻车空调与车顶的密封处是否有裂痕和其它损坏。

9.0 故障排除

如果顶置式驻车空调不能正常运行，请做以下检查排除故障：

故障代码	现象	故障原因
E1	2 个 或 2 个 以上传感器故障，停机。 1 个 传 感 器 故障，降频运行。	室内环境温度故障
E2		室外盘管传感器故障
E3		室内盘管故障
E4		室外环境传感器故障
E5		室外排气传感器故障
E6	停机	室内机风机异常
E7	90 秒后停机	室内外通信故障
E8	停机	室外模块通信故障
F1		室内外 EE 故障
F2		模块保护故障
F3		压缩机运行失败故障
F4		过欠压保护故障
P1		室内盘管冻结故障
P2		过载保护
P3		排气保护
P4		过电流保护

故障现象	原因	解决办法
空调时常自动关机	防冻结传感器保护	外部温度太低或者空气喷嘴全部关闭
制冷不良	顶置式驻车空调未设定制冷模式	将顶置式驻车空调设置为制冷模式
	环境温度高于 52°C	本顶置式驻车空调在超过 52°C的环温下无法运行
	设定温度高于室温	选择更低的温度
	某个温度传感器存在缺陷	请与授权服务代理商或阿雷纳联系
	蒸发器风机损坏	
	冷凝器风机损坏	
制热不良	顶置式驻车空调未设定制热模式	将顶置式驻车空调设置为制热模式
	环境温度低于 -5°C	本顶置式驻车空调在低于 -5°C的环温下无法运行
	设定温度低于室温	选择更高的温度
	某个温度传感器存在缺陷	请与授权服务代理商或阿雷纳联系
	蒸发器风机损坏	
	冷凝器风机损坏	

故障现象	原因	解决办法
送风量小	进气口格栅被堵塞或阻塞	清除通风格栅上的树叶和其他污垢
	风机缺陷	请与授权服务代理商或阿雷纳联系
车身渗水	冷凝水排水口被阻塞	清洁冷凝水排水孔
	底盘排水口被阻塞	清洁底盘排水孔
	EVA 四方密封海绵圈损坏或没压缩到要求的形变量	请与授权服务代理商或阿雷纳联系
顶置式驻车空调无法开机	未连接电源电压（220V AC）	检查电源输入是否正常
	电压过低（低于200V AC）	检查输入电压是否正常
	电压变换器存在缺陷某个温度传感器存在缺陷	请与授权服务代理商或阿雷纳联系
顶置式驻车空调无法关机	电源的电气保险丝熔点太低	检查电源的电气保险丝
	某个温度传感器存在缺陷	请与授权服务代理商或阿雷纳联系
遥控器没有显示	遥控器未对准控制面板显示屏	
	遥控器电池需要更换注意：即使电池电量低，遥控器的显示屏仍然明亮	更换遥控器电池

CN

10.0 技术参数

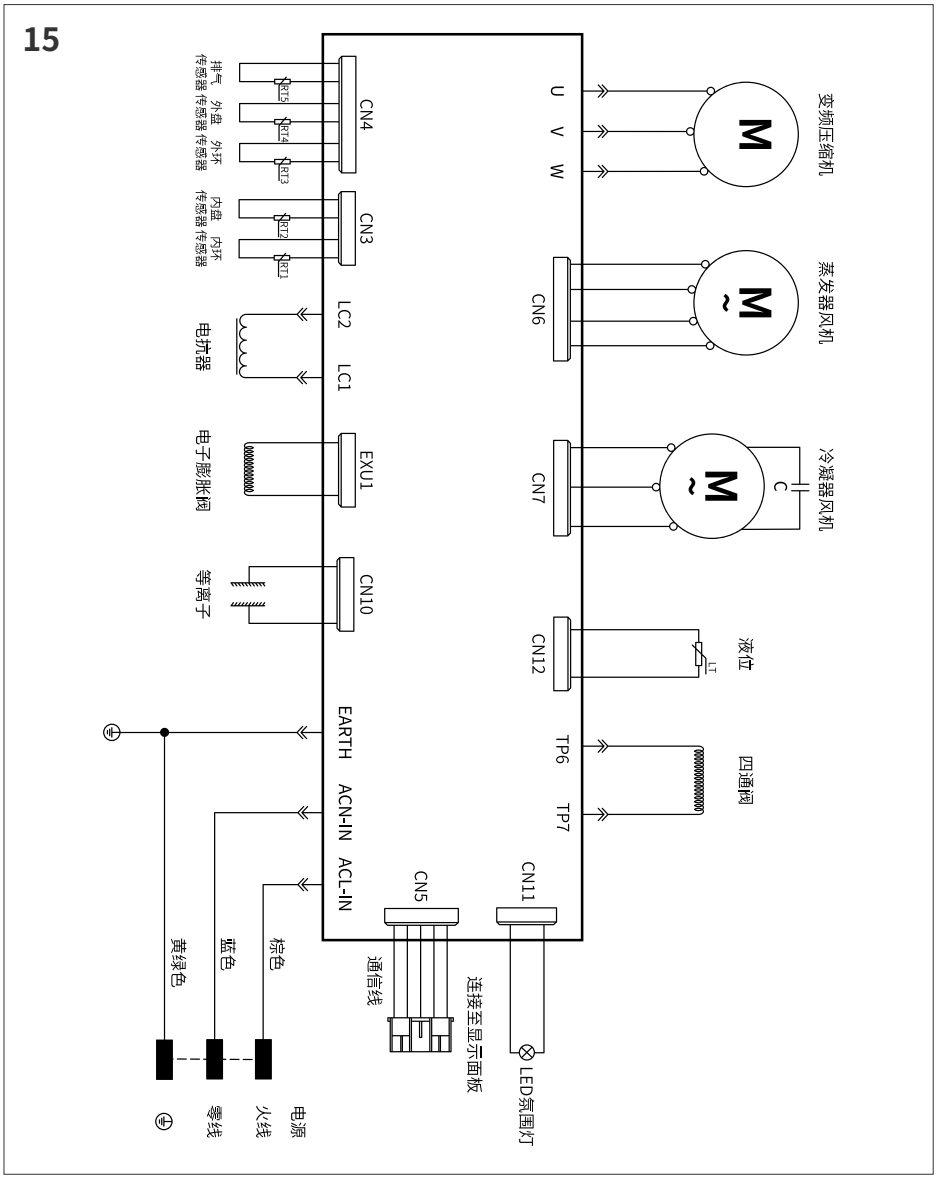
顶置式驻车空调型号	FRESCO 30	FRESCO 36	FRESCO 40
制冷量	2600W	3000W	3600W
制冷消耗功率	1122W	1280W	1398W
制热量	2500W	2800W	3300W
制热消耗功率	1210W	1356W	1473W
额定输入电压	220V AC/ 50Hz	220V AC/ 50Hz	220V AC/ 50Hz
制冷额定输入电流	5.1A	5.8A	6.3A
制热额定输入电流	5.5A	6.1A	6.7A
工作温度范围	-5°C至 52°C	-5°C至 52°C	-5°C至 52°C
制冷剂	R410a	R410a	R410a
风量（高速）	三档 / 自动	三档 / 自动	三档 / 自动
建议最大车辆长度	⩽ 5m	⩽ 6m	⩽ 7.5m
尺寸 L x W x H（mm）	1075 x 720 x 223	1075 x 720 x 223	1075 x 720 x 223
重量	38Kg	38Kg	38Kg

提示！

- 我们将不断改进我们的产品，并保留修改某些规格的权利，恕不另行通知，请以产品铭牌为主。

CN

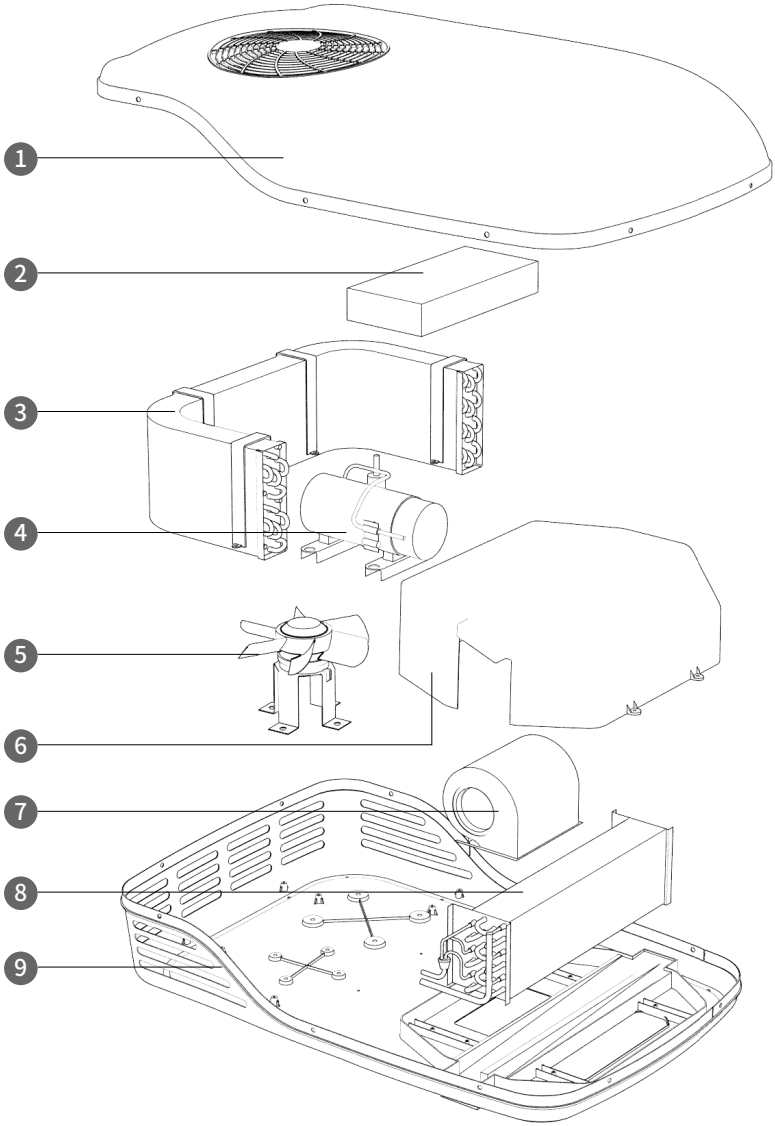
11.0 电路接线图


15
变频压缩机
U
V
W
蒸发器风机
CN6
冷凝器风机
C
CN7
液位
LT
CN12
四通阀
TP6
TP7
CN11
LED氛围灯
连接至显示面板
CN5
通信线
CN4
CN3
排气传感器
外盘传感器
外环传感器
内盘传感器
内环传感器
DT5
DT4
DT3
DT2
DT1
LC2
LC1
电抗器
EXU1
电子膨胀阀
CN10
等离子
EARTH
ACN-IN
ACL-IN
棕色
蓝色
黄绿色
电源
火线
零线

CN

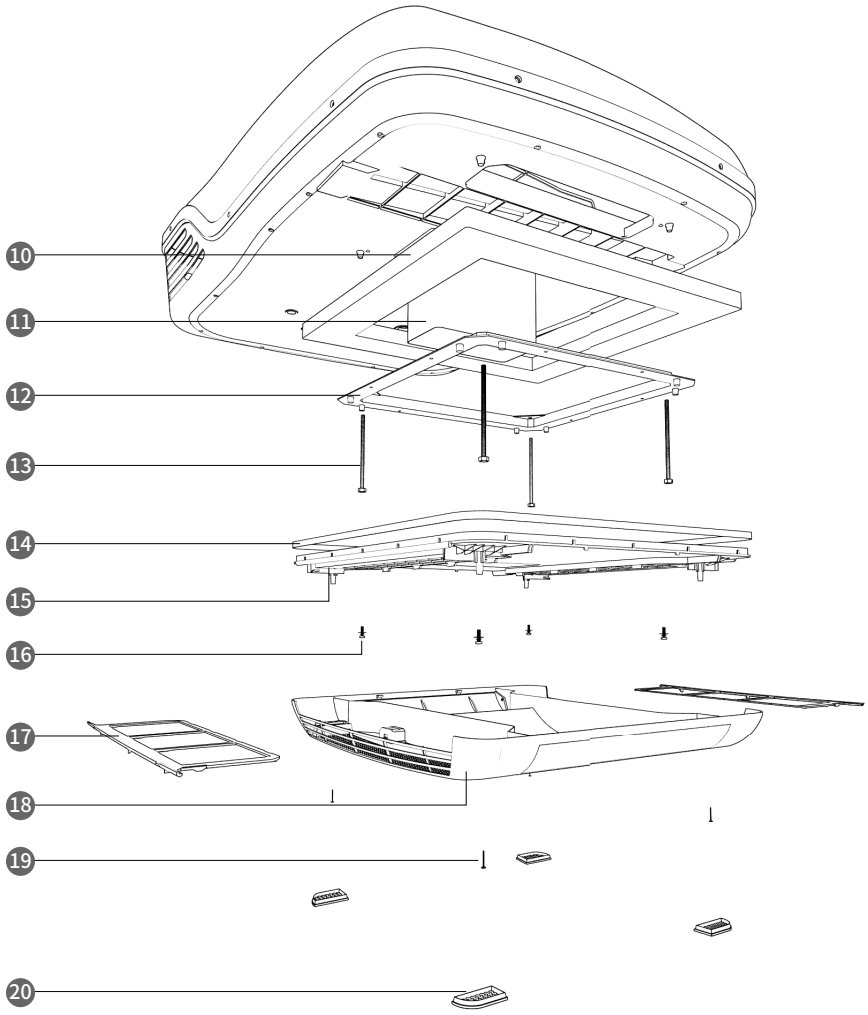
12.0 零部件明细表

16



CN

17



序 号	名 称	数 量
1	外壳	1
2	电控盒	1
3	冷凝器	1
4	压缩机	1
5	外风机	1
6	蒸发箱上盖	1
7	内风机	1
8	蒸发器	1
9	底板	1
10	EVA 密封圈	1
11	风道组件	1
12	车顶固定框	1
13	车顶固定框紧固螺栓	4
14	LED 氛围灯	1
15	车内顶板	1
16	车内顶板紧固螺栓	4
17	空气过滤网	2
18	面板	1
19	面板紧固螺钉	4
20	螺钉孔盖	4

CN

13.0 质量保证

该顶置式驻车空调适用法律规定的保修条款和条件，如果产品出现故障，请与最近的经销商联系。

维修该顶置式驻车空调，请准备好如下文件：

- 注明购买日期的发票复印件。
- 故障的描述或索赔原因。

但是产品的保修将不覆盖如下情况：

- 在消费者使用产品时所发生的损坏、事故等，而这些损坏不是由于产品材料的缺陷或制造原因导致的。
- 消费者未按照说明书规定进行的误操作而导致的损坏。
- 整机外观破损，包括磨损导致的外观损坏。
- 未经制造商授权的维修、更改。

ARANA

保 修 卡

客户姓名		联系电话	
产品名称		产品型号	
购买日期		序 列 号	
如果该设备为车厂原装空调，请您填写如下车辆信息：			
车辆品牌		车辆型号	
购买日期		车 架 号	

本保修卡请用户妥善保管，以做维修凭证。
保修期限自购买之日起十二个月内。
全国统一服务电话：400 110 1890

请关注微信公众号

阿雷纳科技（深圳）有限公司
ARANA Technology (Shenzhen) Co., Ltd.

Thanks for choosing **ARANA** air conditioning devices. Please read the instructions carefully before installation or first use of the device and store it in a place where all users could find it for easy reference. If the device is transferred or sold, please hand over the instructions along with it so that the new user is aware of installation methods, usage and safety requirements.

Table of content

1.0 Explanation of symbols

DANGER! Indicates a potential hazardous situation which, if not avoided, could result in death or serious injury.

WARNING! Indicates a potential hazardous situation which, if not avoided, could result in minor or moderate injury.

ATTENTION! Indicates a potential hazardous situation which, if not avoided, could result in property damage.

NOTE! Supplementary information for product operation.

2.0 Safety instructions

Please observe the prescribed safety instructions and stipulations from the vehicle manufacturer and service workshops.

ARANA accepts no liability for damage in the following cases:

- Faulty assembly or connection
- Damage to the product resulting from mechanical influences and excess voltage
- Alterations to the product without express permission from the manufacturer
- Use for purposes other than those described in the operating manual

2.1 General safety instructions

WARNING!

- Installation and repair of the rooftop air conditioner may only be carried out by qualified personnel who are familiar with the risks involved and the relevant regulations. Inadequate repairs may cause serious hazards.
- Electrical devices are not toys.
- Keep electrical devices out of reach of children or infirm persons. Do not allow them to use electrical devices without supervision.

- Persons whose physical, sensory or mental capabilities or whose lack of experience and knowledge prevent them from using electrical devices safely should not use it without supervision or instruction by a responsible person.
- Do not undo the upper cover of the rooftop air conditioner in the event of a fire. Use approved extinguishing agents instead. Do not use water to extinguish fires.

⚠ ATTENTION!

- The rooftop air conditioner must be installed securely so that it cannot fall down.
- Do not use the rooftop air conditioner near flammable fluids or in closed rooms.
- Make sure no combustible objects are stored or installed near the air outlet. A distance of at least 50cm must be kept.
- Do not reach into air outlets or insert any foreign objects in the rooftop air conditioner.

⚠ ATTENTION!

- Only use the device as intended.
- The rooftop air conditioner is not suitable for use in agricultural or construction vehicles.
- Do not make any alterations or conversions to the electrical device.
- Once the installation of the rooftop air conditioner is finished, do not drive into the automatic vehicle washing line.
- If faults occur in the refrigerant circuit, the system must be checked by a specialist company and repaired properly. The refrigerant must never be released into the air.

i NOTE!

- Please ask your vehicle manufacturer if a technical inspection is required after fitting an rooftop air conditioner and whether the height entered in the vehicle documents needs to be altered.

2.2 Operating the device safely

⚠ WARNING!

- The electrical power supply may only be connected by a qualified electrician.
- Always disconnect the power supply when working on the electrical device.

⚠ ATTENTION!

- Use cable ducts to lay cables through walls with sharp edges.
- Do not lay loose or bent cables next to electrically conductive materials (metal).
- Operate the electrical device only if you are certain that the housing and the cables are undamaged.

3.0 Intended use

The rooftop air conditioner is designed for use in motorcaravans, caravans and other vehicles with habitation compartments only.

The rooftop air conditioner is not suitable for installation in construction machines, agricultural machines or similar equipment. It will not work properly if exposed to strong vibrations.

Please do not use the rooftop air conditioner if the ambient temperature is over 52° C. The performance will be affected at extreme temperature.

i NOTE!

- You can find additional information on rooftop air conditioners in the operating manual, such as the technical description or the controls.

4.0 Technical description

The rooftop air conditioner supplies the interior with cool or warm dehumidified air without dust and dirt.
The LED ambient lights belt integrated in the air outlet unit provides pleasant lighting.
The rooftop air conditioner is operated with the button on control panel and the remote control.

i NOTE!

- The rooftop air conditioner can lower the temperature within the vehicle to a certain level. The temperature depends on the type of vehicle, the ambient temperature and the cooling capacity of your rooftop air conditioner.
- Below an outer temperature of 16° C the rooftop air conditioner does not cool anymore. In this case,only operating the "Ventilation" mode.

4.1 Components

The refrigerant circuit of the rooftop air conditioner consists of the following main components (see Parts list in page 70).

- **Compressor**
  The compressor draws in the refrigerant used and compresses it. This raises the pressure and therefore the temperature of the refrigerant.
- **Condenser**
  The built-in liquefier works like a cooler or heat exchanger. The air flowing past absorbs the heat and the hot refrigerant gas cools down and becomes liquid.
- **Evaporator**
  The evaporators cool down and dehumidify the air flowing past them. The refrigerant absorbs the heat and vaporizes.
- **Blower**
  The blower distributes the cooled air within the vehicle through an air outlet unit.

4.2 Control panel

The control panel is at the air outlet unit of the rooftop air conditioner.

It contains the following control and display elements:

	Explanation
Button ⏻	Switching the rooftop air conditioner on, off or to stand-by mode
Button △	Increasing the temperature value
Button ▽	Reducing the temperature value
Button Ⓜ	Selecting the operation mode
Button	Adjusting the fan speed
Button	Switching on/off the LED light
Button	Activating the plasma sterilization function
Button	Activating the fresh air function*

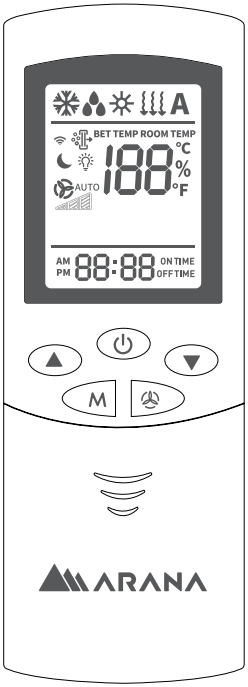
(*Some functions are not available for this model.)

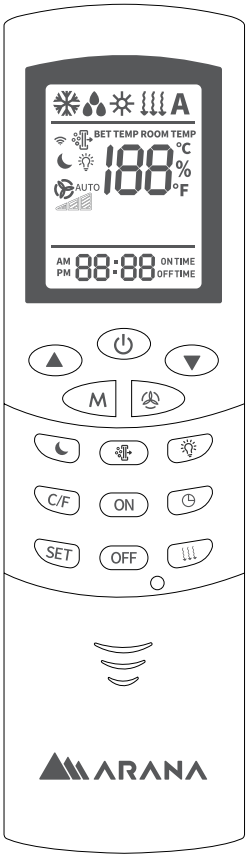
4.3 Remote control

4.3.1 Functions Instruction

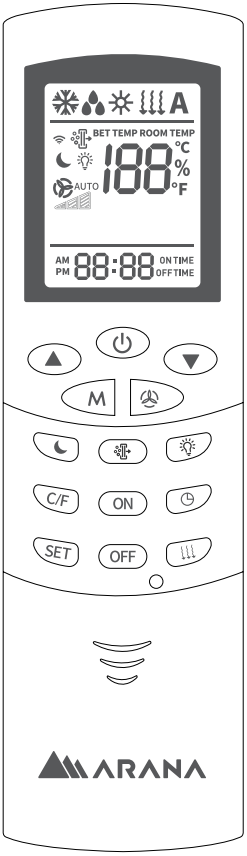
EN

- Sets the temperature from 16° C to 31° C.
- Selects the target value of temperature in ° C or °F .
- Five modes, Cooling /Dehumidification/Ventilation/Heating/Automation.
- Four modes of fan speed, High/Middle/Low/Automatic.
- Plasma function.
- Timer function.
- Lighting function.





4.3.2 Introduction of button functions



Instruction

Button ⏻

Switches on/off the air conditioner

Button M

Selects the air conditioning mode

A				
Automation	Ventilation	Cooling	Dehumidification	Heating

No temperature displays in automatic mode. Only Low fan speed works in dehumidification mode. Each mode has its own separate settings, can set different fan speed and temperature.

Button

Adjusts the fan speed

AUTO			
Automatic	Low	Middle	High

Button ▲ ▼

Increases or reduces the temperature value, 1° C changes via pressing everytime, adjusting the temperature from 16 ° C to 31 ° C.

Button C/F

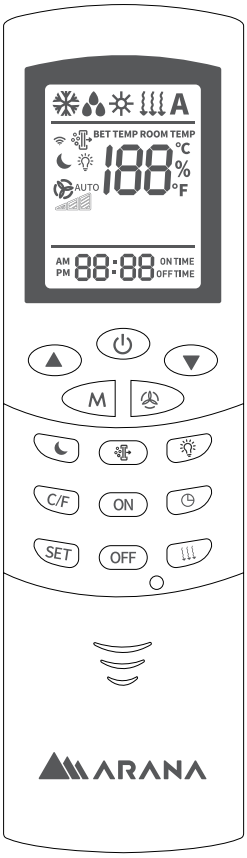
Switches between temperature units Celsius (° C) and Fahrenheit (°F).

Button

Switches on/off the air conditioner lights, The button remains functional under all the modes.

EN

EN



Button

Activates the sleep function. Operates in cooling and heating mode only.

Button

Activates the plasma sterilization function.

Button

Sets the time on remote control. Presses the first time, the hour part starts flashing, presses button ▲▼ ,increasing or reducing one hour every time; Presses the second time, minute part starts flashing, presses button ▲▼ , increasing or reducing one minute every time. Without action within 3 seconds, the setting time will be remembered automatically.

Timer ON

The air conditioner is switched on at the specified time. Default time is AM12:00, LCD shows as AM12:00, presses "**ON**" button, "**ON TIME**" starts flashing, presses " ▲▼ ", the time increasing or reducing 30 minutes every time, presses "**SET**" to confirm the time. "**ON TIME**" ends flashing, the time is set successfully, LCD shows "**ON TIME**" all the time.

Timer OFF

The air conditioner is switched off at the specified time. Default time is AM12:00, LCD shows as AM12:00, presses "**OFF**" button, "**OFF TIME**" starts flashing, presses " ▲▼ ", the time increasing or reducing 30 minutes every time, presses "**SET**" to confirm the time. "**OFF TIME**" ends flashing, the time is set successfully, LCD shows "**OFF TIME**" all the time.

Button SET

Presses "**SET**" to confirm the timer setting.

Room temperature display

Without setting temperature and fan speed. The remote control shows the room temperature.

4.4 Air conditioning modes

The rooftop air conditioner has the following air conditioning modes:

Mode	Display message	Explanation
Automatic	A	The rooftop air conditioner automatically maintains the temperature between 20 ° C and 25 ° C by heating or cooling as needed.
Cooling		You specify the temperature and blower settings, and the rooftop air conditioner cools the interior to this temperature.
Heating		You specify the temperature and blower settings, and the rooftop air conditioner heats the interior to this temperature.
Ventillation		You specify the fan level, and the rooftop air conditioner blows air into the interior.
Dehumidification		The compressor continues to run, the internal fan is forced to run at low speed. The sleep function can not be activated in dehumidification mode.

NOTE!

- Please use the connecting wirings which are in accordance with state regulations.
- When selecting the generator capaicity, it is important to consider the total power consumption of the vehicle, and the power loss of the generator due to high altitude and lack of maintenance.
- Circuit protection: Make sure to use the leakage protector.

5.0 Installation instructions

⚠ ATTENTION!

EN

- Read installation and operating instructions carefully before attempting to start your rooftop air conditioner installation.
- The manufacturer will not be liable for any damages or injury incurred due to non-compliance of the instructions.
- Installation must comply with the national and local codes and/or regulations.
- Install the air conditioner, please pay attention on the structure of the vehicle and the sealing of the openings.
- Before climbing to the roof, please contact with manufacturer to confirm the bearing and loading capacity.
- DO NOT add any devices or accessories to the rooftop air conditioner except those specifically authorized in writing by **ARANA**.
- This equipment must be serviced by qualified personnel and some states require these people to be licensed.

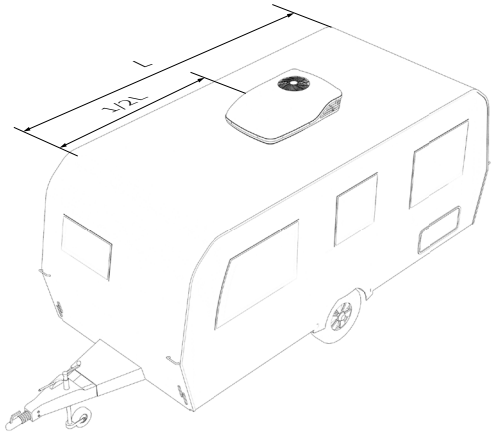
5.1 Choosing Installation location

This rooftop air conditioner is specifically designed for installation on the roof of a vehicle with habitation compartments. The following points need to be considered to determine the cooling requirements:

- The size of the vehicle.
- The size of the window (increases heat gain).
- Amount of insulation in walls and roof.
- Geographical location where the vehicle will be used.
- **Normal locations:** the rooftop air conditioner is designed to fit over an existing roof vent opening. When the vent is removed, it normally creates a 362*362mm (±2mm) opening or a 400*400mm (±2mm) opening.
- **Other locations:** When no roof vent is available or another location is desired, the following is recommended:

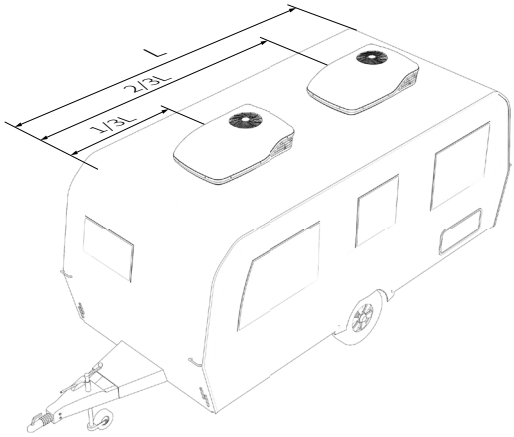
a. **For one unit installation:** The rooftop air conditioner should be mounted slightly forward of center (front to back) and centered from side to side. See FIG.01.

01



b. **For two units installation:** Install one rooftop air conditioner 1/3 and the other 2/3 from front of vehicle and centered from side to side. See FIG.02.

02



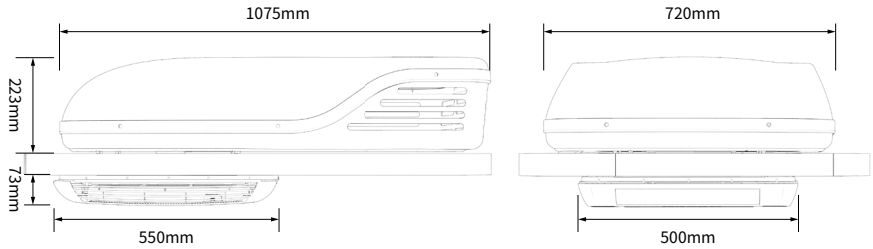
EN

- **After location has been selected:**
  a. Check for obstructions in the area where rooftop air conditioner will be installed.
  b. Before installing the air conditioner, please check or confirm with vehicle manufacturer to make sure the roof is strong enough to bear the static weight and moving loading of the air conditioner. The air conditioner manufacturer accepts no liability for any damage.
  c. Check inside the vehicle for air distribution box obstructions(i.e. door openings, room dividers, curtains, ceiling fixtures, etc.). Please check the dimentions of the rooftop air conditioner and the air distribution box. See FIG.03.

⚠ ATTENTION!

- It is preferred that the unit be installed on a relatively flat and level roof section measured with the vehicle parked on a level surface, but up to a 5° tilt is acceptable.
- It is the responsibility of the designer to ensure the structural integrity of the vehicle. Never create a low spot on the roof where water will collect. Water standing around the rooftop air conditioner may leak into the interior causing damage to the product and vehicle.

03



5.2 Roof preparation

- **Roof vent removal:**
  a. Unscrew and remove the roof vent.
  b. Remove all caulking compound around opening.
  c. Seal all screw holes and seams where the roof gasket will be located. Use a good grade of all weather sealer.

i NOTE!

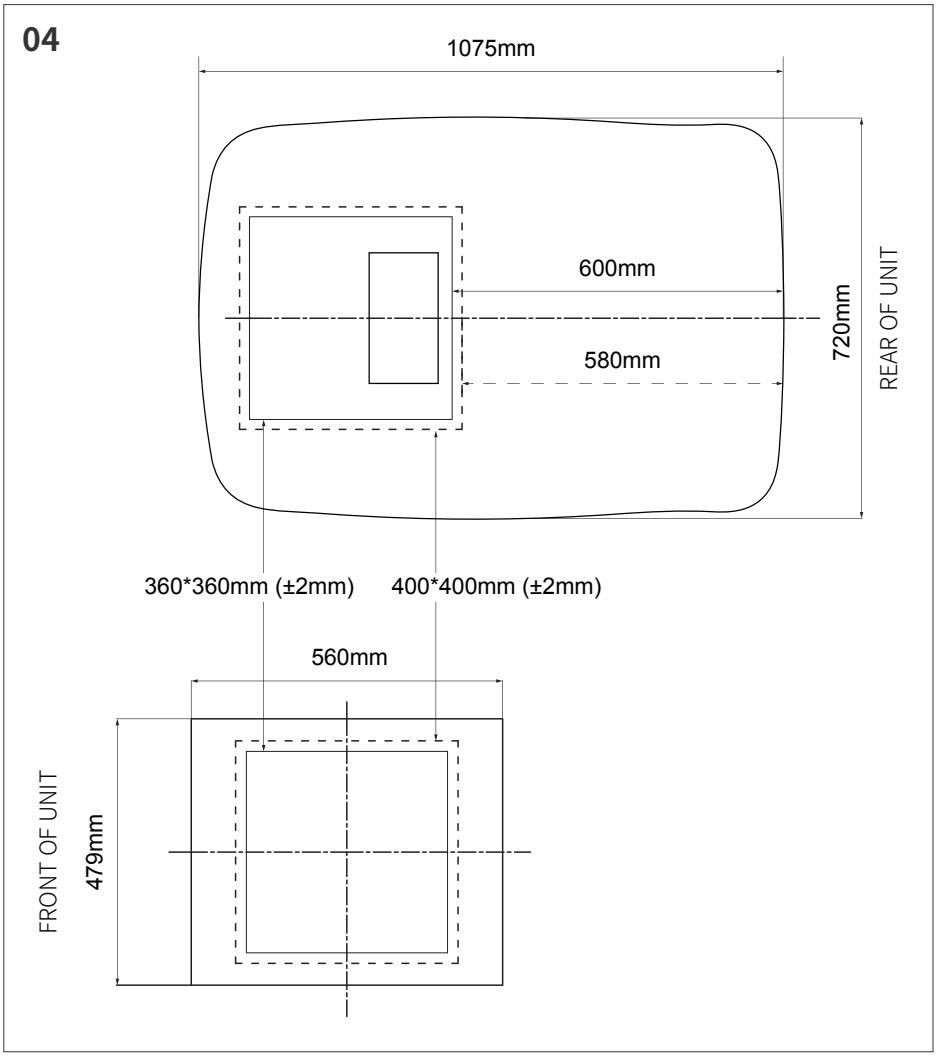
- Air conditioner manufacturer only be responsible for the spare parts which belong to the standard configuration, if the air conditioner is installed with the third party spare parts, the warranty period is ended.

- **New opening：** (installation other than vent opening)
  A 362*362mm (±2mm) or 400*400mm (±2mm) opening must be cut through the roof and ceiling of the vehicle if the existing vents will not be used. It is recommended this opening be located between roof reinforcing members.

  a. Make sure the installation place.
  b. Drill through the corners of the opening.
  c. Cut out the installation opening by using the technical cutting tool, make sure the wiring cables will not be damaged.
  d. Check whether the opening needs special reinforcement before installation.
  e. Use wooden or steel structural parts in proper size to assist the opening, to avoid subsidence when fix the air conditioner.
  f. If necessary, install a H frame in proper size to reinforce the roof.

Mark a 362*362mm (±2mm) or 400*400mm (±2mm) square on the roof and carefully cut the opening. Using the roof opening as a guide, cut the matching hole in the ceiling. See FIG.04.

EN



DANGER!

- There may be electrical wiring between the roof and the ceiling. Disconnect all the power. Failure to follow this instruction may create a shock hazard causing death or severe personal injury.

- **Opening instructions:**

  a. If the opening exceeds 365*365mm, it will be necessary to install spacers.
  b. If the opening is less than 358*358mm, it must be enlarged.

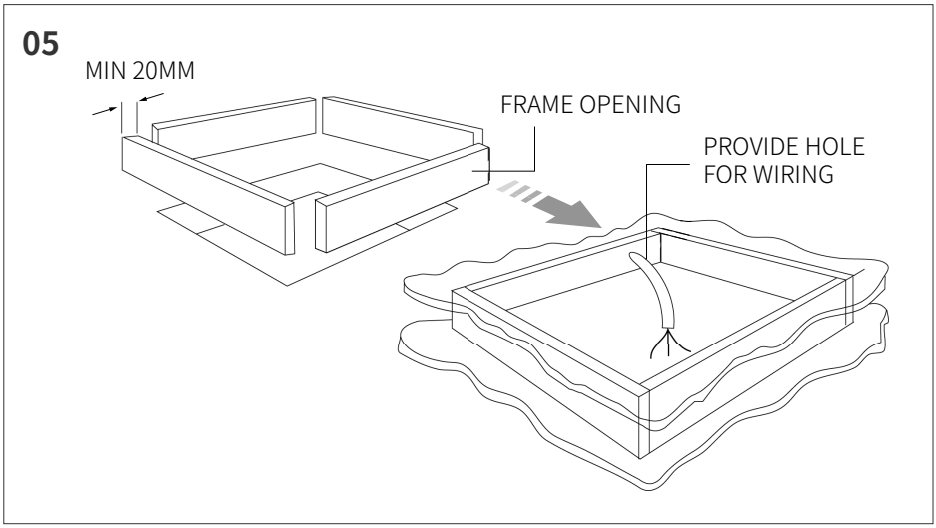
- **Wiring requirements:**

  Route a copper 2.5mm^2, with ground, supply line from the fuse or circuit breaker box to the roof opening.

  a. The power of the rooftop air conditioner must be connected by qualified electrician.
  b. The voltage specification on the plate must be consistent with the power voltage.
  c. The power supply must be on a separate 20 Amp time delay fuse or hacr circuit breaker.
  d. Make sure at least 380mm of wire extends into the roof opening. This insures easy rooftop air conditioner attachment.
  e. Wiring methods must comply with all national and local wiring codes and/or regulations.
  f. If vent fan was removed, the existing wire may be used provided it is of proper size and correctly fused.
  g. The entry wires to the opening need more protection to avoid damage.

- The opening must be framed to provide adequate support and prevent air from being drawn from the roof cavity. Framing stock 20mm or more in thickness must be used. Remember to provide an entrance hole for the power supply wire. See FIG.05.
- The 362*362mm (±2mm) or 400*400mm (±2mm) roof opening is part of the return air duct and must be polished according to the industry standard.

EN

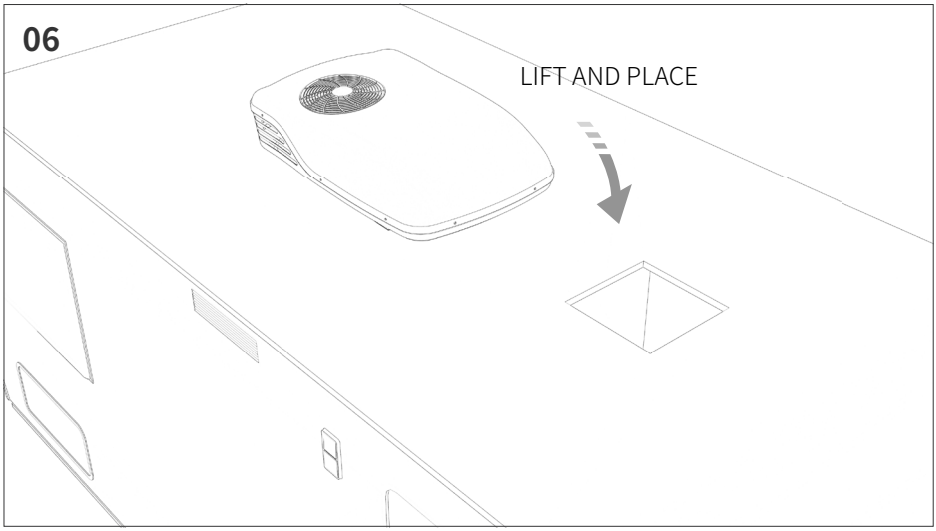


5.3 Placing rooftop air conditioner on the roof

⚠ ATTENTION!

- This rooftop air conditioner weighs approximately 38Kg. To prevent back injury, use a mechanical hoist to place air conditioner on roof.

- Take out the rooftop air conditioner from the carton.
- Place the rooftop air conditioner on the vehicle roof.
- Lift and place rooftop air conditioner over the prepared opening using the EVA gasket as a guide. The condenser coil goes toward the rear of the vehicle. See FIG.06.



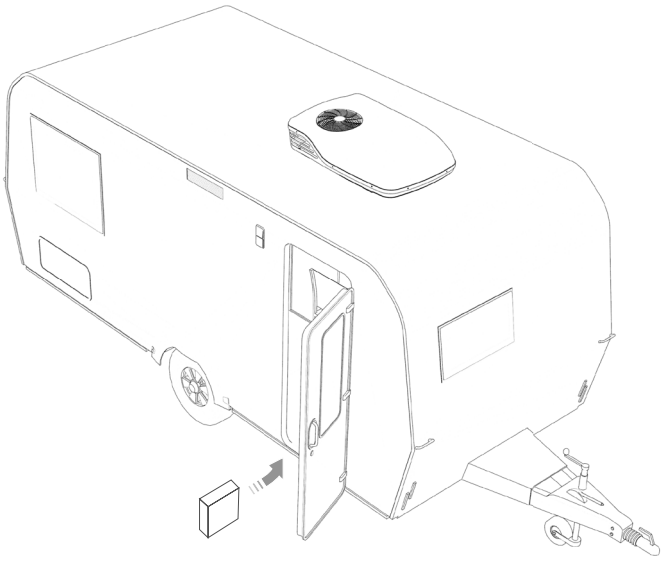
⚠ ATTENTION!

- Do not slide the unit. This may damage the EVA gasket attached to the bottom and create a leaky installation.

- Place the air distribution box kit inside the vehicle. This unit contains mounting hardware for the rooftop air conditioner and will be used inside the vehicle. See FIG.07.
- This completes the outside work. Minor adjustments can be done from the inside of the vehicle if required.

EN

07



5.4 Installing discharge duct and mounting bracket

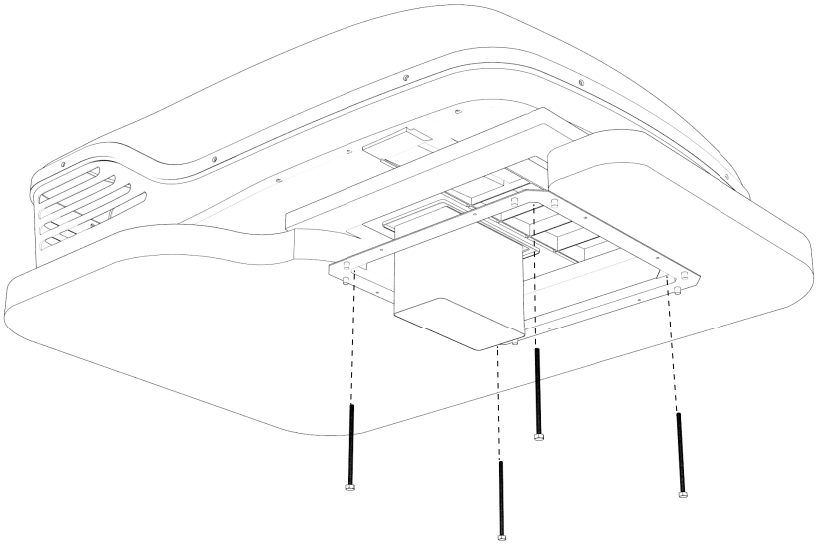
- Taking out air distribution box and mounting hardware from carton.
- Install the mounting bracket on the roof square opening via 4 bolts (M6*135mm), holes are provided at the bottom of base pan for these bolts to go into. See FIG.08.
- Check for correct alignment and adjust the rooftop air conditioner as necessary (EVA gasket centers over 362*362mm square opening).
- Evenly tighten 4 mounting bolts to a torque of 4.5 to 5.6Nm. This will compress the EVA gasket to a height of about 18-20mm.
- Reach up into return air opening and pull the unit electrical cord down for later connection. See FIG.09.

⚠ ATTENTION!

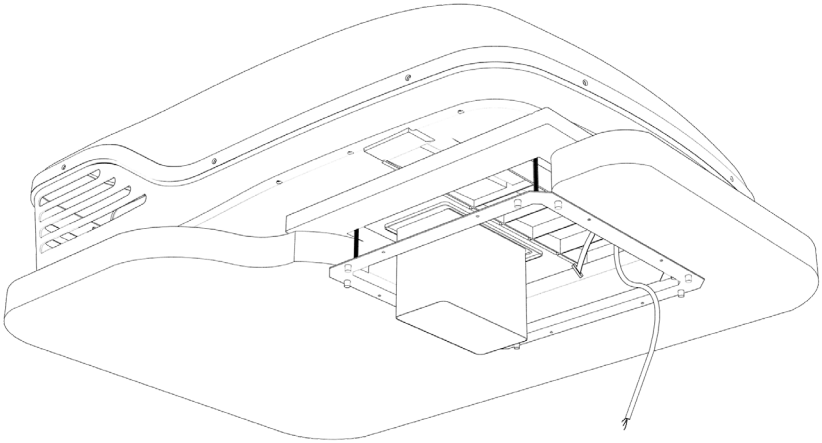
- If bolts are left loose there may not be an adequate roof seal or if over tightened, damage may occur to the rooftop air conditioner base or mounting bracket.

EN

08



09



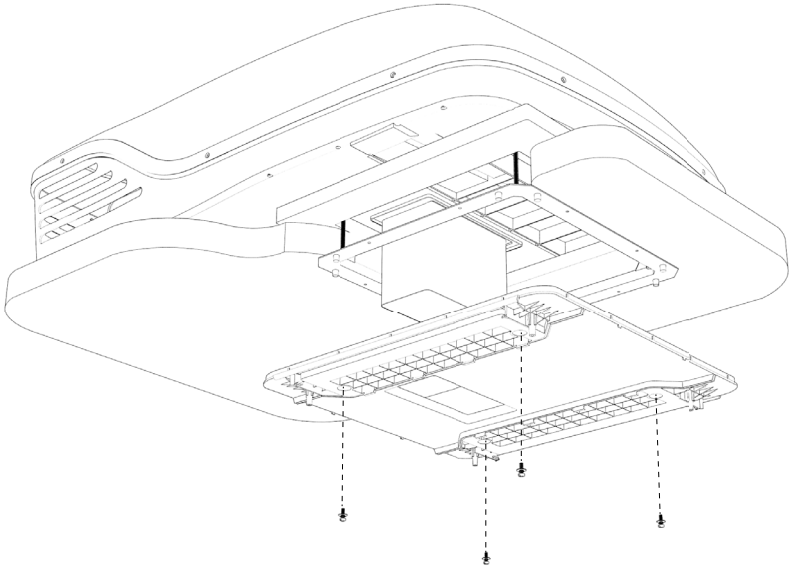
EN

- Connect the air diffuser base to the mounting bracket by using 4 bolts (M6*10mm). See FIG.10.
- Pull the fabric duct material through ceiling assembly discharge opening. Peel the release liner from the adhesive strip around the discharge opening. Press the fabric duct material firmly in place around opening. Cut off the excess fabric on inside of ceiling assembly chute with a box knife taking care not to tear the fabric beyond the adhesive strip. See FIG 11.

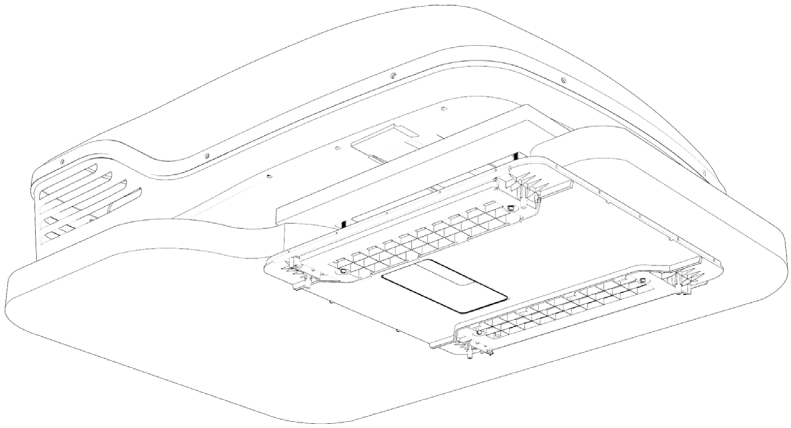
NOTE!

- Check the thickness of the vehicle roof, the air conduct is made of fabric material which is suitable for maximum 130mm roof thickness and you can cut it as needed.

10



11



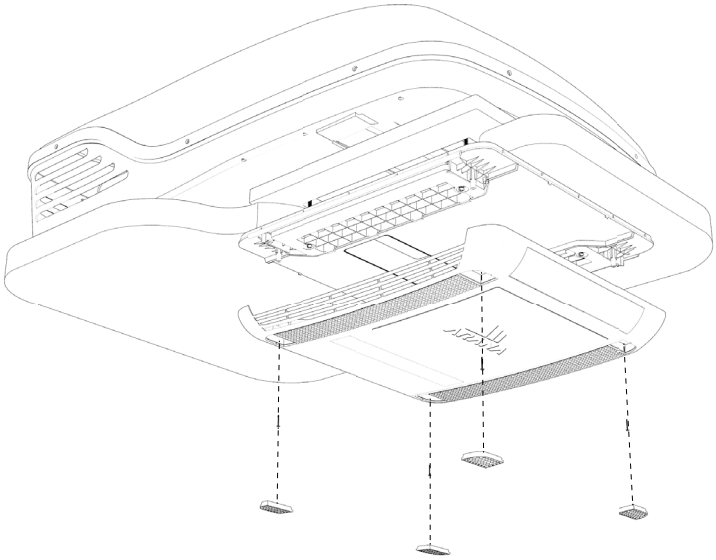
- Connect the air diffuser to the base by using 4 screws (M4*20mm), then push the screw hole covers into slots. See FIG.12.
- Put air filter into the correct place of air diffuser. See FIG.13.

⚠ NOTE!

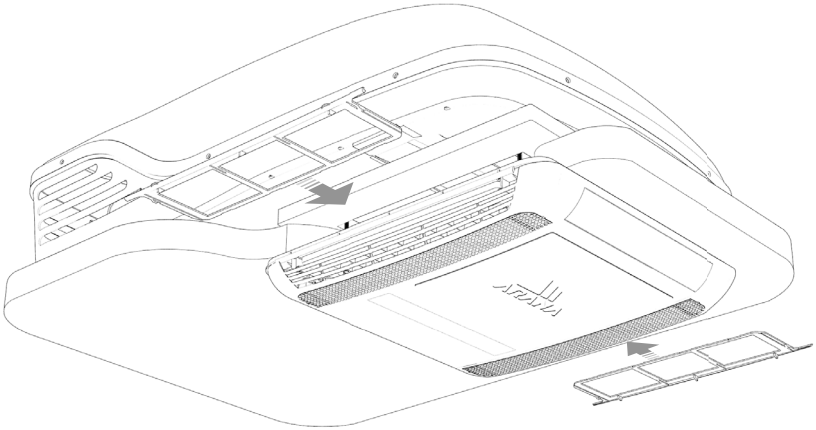
- Pull out the lead wirings on the electric control PCB and LED ambient lights, then connect with the plug which pulled out form the main unit.

EN

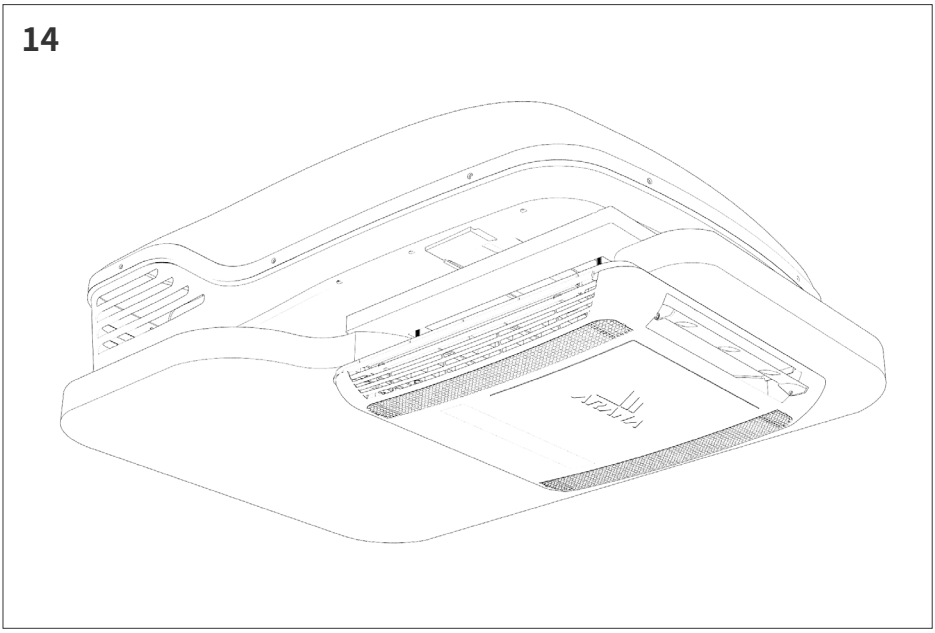
12



13



14



5.5 Wiring the system

DANGER!

- Disconnect the power. Failure to follow these instructions could create a shock hazard causing death or severe personal injury!
- This product is equipped with a 3 wires (grounded) system for protection against shock hazard. Make sure that the appliance is wired into a properly grounded 220V/50Hz AC circuit and the polarity is correct. Failure to do so could result in death, personal injury or damage to the equipment.

NOTE!

- All wiring must be done by qualified personnel and comply with the national and local wiring codes and/or regulations.

- All the wirings must be connected by qualified electrician and comply with the national and local wiring codes and/or regulations.
- The rooftop air conditioner must connect to the circuit which is able to supply the needed current.
- Select the cross sections of the wirings which are correspond to the following lengths:
  Length < 7.5m; 2.5mm^2 (national standard)
  Length > 7.5m; 4mm^2 (national standard)
- Lay cable duct between the gap of vehicle to connect the power wirings.

6.0 Initial use

6.1 Inspection before starting up

Before you switch on the rooftop air conditioner, observe the following:

- Check whether the supply voltage corresponds to the values specified in the data plate .
- Ensure both the air intake opening and the air nozzles are free. All ventilation grilles must always be kept free to ensure that the rooftop air conditioner is able to operate at maximum capacity.

⚠ ATTENTION!

- Do not insert your fingers or objects into the air nozzles or the intake grille. Beware of injury!

6.2 Checking remote control and insert batteries

The battery compartment is located below the sliding lid of the remote control.

- Gently push down the sliding lid out of the guide slot and remove it.
- Insert the new batteries (2*type AAA) in the remote control as indicated in the battery compartment.
- Push the sliding lid into the guide slot, and push up to close it.

7.0 Operating instruction

- The controller is powered on the first time, the buzzer rings one time, the controller switches on the stand-by mode.
- The remote control switches off and then switches on, need to wait for 3 minutes and the compressor will restart work.
- Switch the operating modes, the air conditioner will delay 2 seconds to the new mode.

Operating mode	
Automatic mode	In this mode, the rooftop air conditioner will run automaically and the runing mode will be selected automatically according to the room temperature.
Cooling mode	You can specify a temperature between 16 ° C and 31 ° C
	External fan operation Sleep mode: the external and internal fans are enforced to operate at low speed. Normal cooling mode: when the outdoor ambient temperature < 30° C, the indoor temperature reaches to the setting temperature, the external fan will operate at low speed automatically. The outdoor ambient temperature ⩾ 30° C, the external fan is enforced to operate at high speed.
	Adjusting the speed of the internal fan The internal fan can be adjusted cyclically at automatic speed, low speed, middle speed and high speed. Switch off the cooling mode, the air conditioner will activate anti-mildew function, the internal fan will switch off after delaying 40s. Do not switch off the power supply forcibly.

EN

Operating mode	
Dehumidification mode	You can specify a temperature between 16 ° C and 31 ° C
Ventilation mode	The internal fan can operate at automatic speed, low speed, middle speed and high speed. Under the automatic fan speed mode, the air conditioner will operate at middle speed.
Heating mode	You can specify a temperature between 16 ° C and 31 ° C **External fan operation** Sleep mode: the external fan is enforced to operate at low speed. Normal cooling mode: when the outdoor ambient temperature > 15° C, the indoor temperature reaches to the setting temperature, the external fan will operate at low speed automatically. The outdoor ambient temperature ⩽ 15° C, the external fan is enforced to operate at high speed. **Defrost function** Operate automatically

EN

Function mode	
Sleep function	Internal and external fan keep operating at low speed without changes; Sleep mode will switch off automatically after operating 8 hours.
Timing function	Setting the switch-on time: The switch-on time can be set when the air conditioner is switched off, once gets to the setting time that the air conditioner will operate automatically according to the setting mode. The time can be set in 0.5 hour increments, the time increments are from 0.5 hour to 24 hours. Activate the timing function, the symbol appears, when gets to the setting time that the air conditioner switches on, the symbol disappears.
	Setting the switch-off time: The switch-off time can be set when the air conditioner is switched on, once gets to the setting time that the air conditioner will switch off automatically. The time can be set in 0.5 hour increments, the time increments are from 0.5 hour to 24 hours. Activate the timing function, the symbol appears, when gets to the setting time that the air conditioner switches off, the symbol disappears.
LED ambient lights	Switch on/off the LED ambient lights via the button on the remote control or the button on the control panel, the operation voltage is 12V and the power is 20W.
Plasma sterilization function	The plasma generator is switched on via pressing button on the remote control, while the symbol on the LED display module appears. Press the button once more, the plasma generator is switches off, while the symbol on the LED display module disappears. Only when the internal fan is operated that the function can be activated.

8.0 Cleaning and maintenance

⚠ WARNING!

- Any other maintenance work to that which is described here may only be carried out by qualified personnel who are familiar with the risks involved when handling refrigerant and air conditioning systems as well as the relevant regulations.

⚠ ATTENTION! Beware of damage

- Do not clean the rooftop air conditioner with a high-pressure cleaner. Exposure to water can damage the rooftop air conditioner.
- Do not use sharp or hard objects or cleaning agents for cleaning as these may damage the rooftop air conditioner.
- To clean the rooftop air conditioner, use water with a gentle cleaning agent. Never use petrol, diesel or solvents.

Cleaning the rooftop air conditioner

- Clean the housing of the rooftop air conditioner and the air outlet unit occasionally with a damp cloth.
- Regularly remove leaves and other dirt from the ventilation grilles of the rooftop air conditioner. Make sure you do not damage the grilles in the process.
- Regularly clean the filter of the air return grille with warm water, and reinstall it after drying.
- Clean the remote control with a slightly damp cloth from time to time. We recommend using a cleaning cloth for glasses to clean the display.

Maintenance of the rooftop air conditioner

- Regularly check whether the condensation water drainage channels at the sides of the rooftop air conditioner are clear and the condensation water is able to escape.
- Check the seal between the rooftop air conditioner and the roof of the vehicle for cracks and other damage once per year.

9.0 Troubleshooting

If the rooftop air conditioner does not operate normally, please check the followings:

Error code	Phenomenon	Cause
E1	Two or more sensors are malfunctional, switch off the device. One sensor is malfunctional, operate the device at lower frequency.	Indoor ambient temperature sensor malfunction
E2		Outdoor coil sensor malfunction
E3		Indoor coil sensor malfunction
E4		Outdoor ambient temperature sensor malfunction
E5		Outdoor air discharge sensor malfunction
E6	Out of service	Internal fan malfunction
E7	After 90s, out of service	Communication error between indoor and outdoor
E8	Out of service	Communication error of outdoor module
F1		EE malfunction between indoor and outdoor
F2		Module protection malfunction
F3		Compressor operation failure
F4		Over/Lower voltage protection malfunction
P1		Indoor coil freeze malfunction
P2		Overloading protection
P3		Air discharging protection
P4		Over current protection

EN

Error	Cause	Remedy
The air conditioner switches off itself constantly	Icing sensor protection	Outer temperature is too low or all the air nozzles are closed
Poor cooling capacity	The rooftop air conditioner is not set to cooling mode	Set the rooftop air conditioner as cooling mode
	The ambient temperature is higher than 52° C	The rooftop air conditioner is only designed for ambient temperature lower than 52° C
	The setting temperature is higher than room temperature	Select lower temperature
	One of the temperature sensor is defective	Contact with authorized workshop or ARANA
	The evaporator fan is damaged	
	The condenser fan is damaged	
Poor heating capacity	The rooftop air conditioner is not set to heating mode	Set the rooftop air conditioner to heating mode
	The ambient temperature is lower than -5° C	The rooftop air conditioner is designed for ambient temperature higher than -5° C
	The setting temperature is lower than room temperature	Select higher temperature
	One of the temperature sensor is defective	Contact with authorized workshop or ARANA
	The evaporator fan is damaged	
	The condenser fan is damaged	

Error	Cause	Remedy
Low air outlet	The air intake section is blocked	Remove any leaves and other dirt from the ventilation grilles
	The blower is defective	Contact with the authorized workshop or ARANA
Water enters into vehicle	The condensation drainage openings are blocked	Clean the condensation drainage openings
	The chassis drainage openings are blocked	Clean the chassis drainage openings
	The square sealing sponge ring of the EVA is damaged or not compressed to the required deformation	Contact with the authorized workshop or ARANA
The rooftop air conditioner does not switch on	No supply voltage connected (220V AC)	Check the power supply
	The voltage is lower (under 200V AC)	Check the voltage
	The voltage converter is defective. One of the temperature sensor is defective	Contact with the authorized workshop or ARANA
The rooftop air conditioner does not switch off	The electrical fuse of the power supply is too low	Check the electrical fuse of the power supply
	One of the temperature sensor is defective	Contact with the authorized workshop or ARANA
No display on the remote control	The remote control does not target to the display of the control panel	
	Need to replace battery for the remote control Note: Even the battery power is lower, the remote control display is bright	Replace battery for the remote control

10.0 Technical data

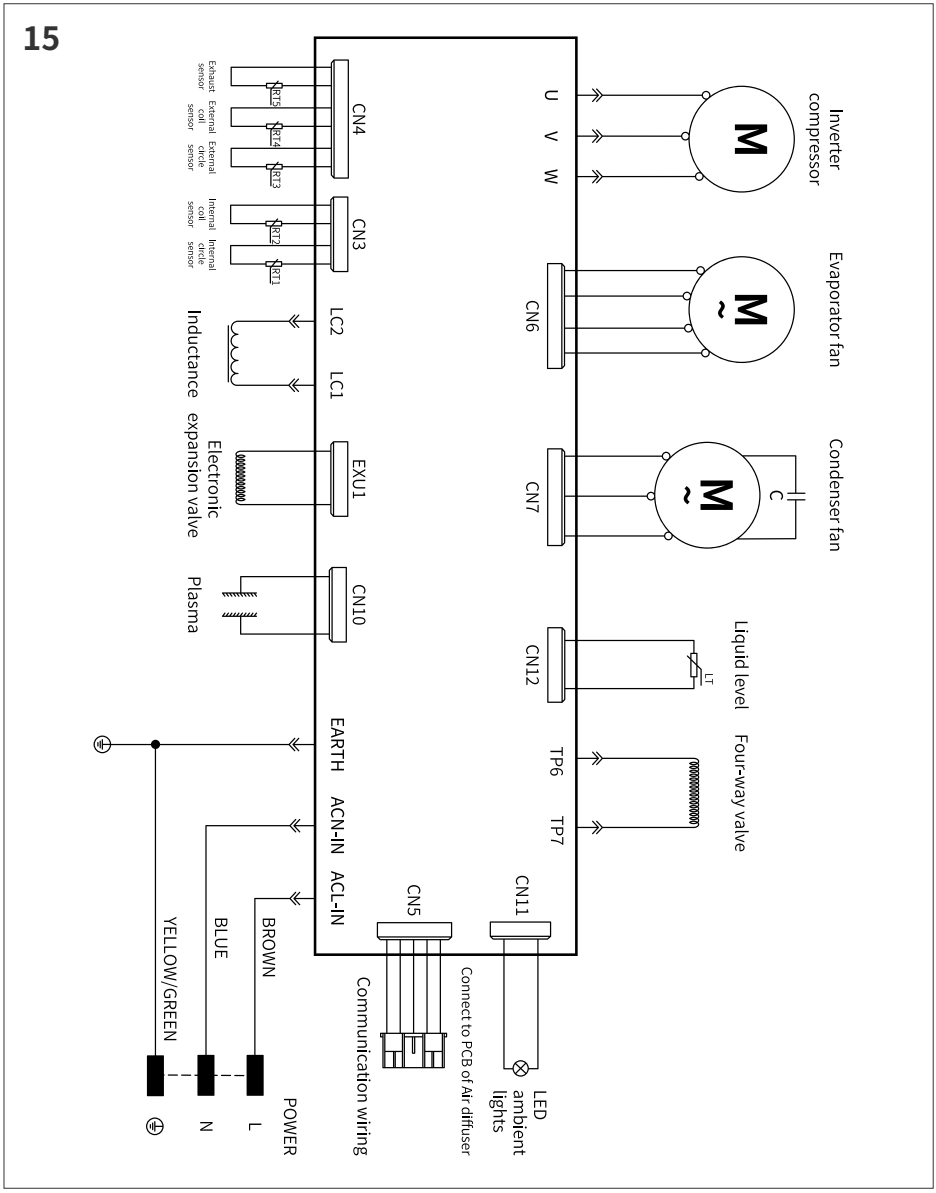
Model	FRESCO 30	FRESCO 36	FRESCO 40
Compressor cooling capacity	2600W	3000W	3600W
Input power cooling	1122W	1280W	1398W
Heating capacity	2500W	2800W	3300W
Input power heating	1210W	1356W	1473W
Rated input voltage	220V AC/ 50Hz	220V AC/ 50Hz	220V AC/ 50Hz
Power consumption in cooling mode	5.1A	5.8A	6.3A
Power consumption in heating mode	5.5A	6.1A	6.7A
Applicable temperature	-5° C~ 52° C	-5° C~ 52° C	-5° C~ 52° C
Refrigerant	R410a	R410a	R410a
Blower	3levels/1 automatic	3levels/1 automatic	3levels/1 automatic
Applicable maximum vehicle length	⩽ 5m	⩽ 6m	⩽ 7.5m
Dimensions L * W * H（mm）	1075 * 720 * 223	1075 * 720 * 223	1075 * 720 * 223
Weight	38Kg	38Kg	38Kg

NOTE!

- To continuously improve our products, we reserve the rights to change some specifications without further notice, please check the data plate.

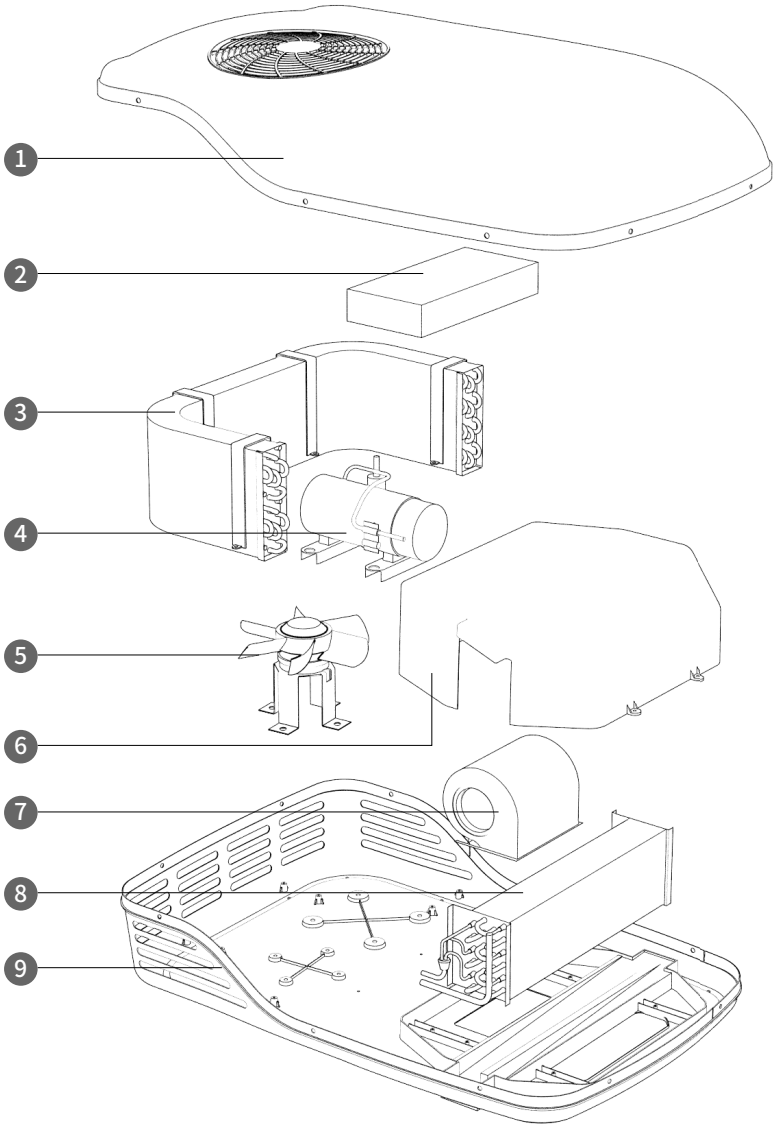
EN

11.0 Wiring diagram



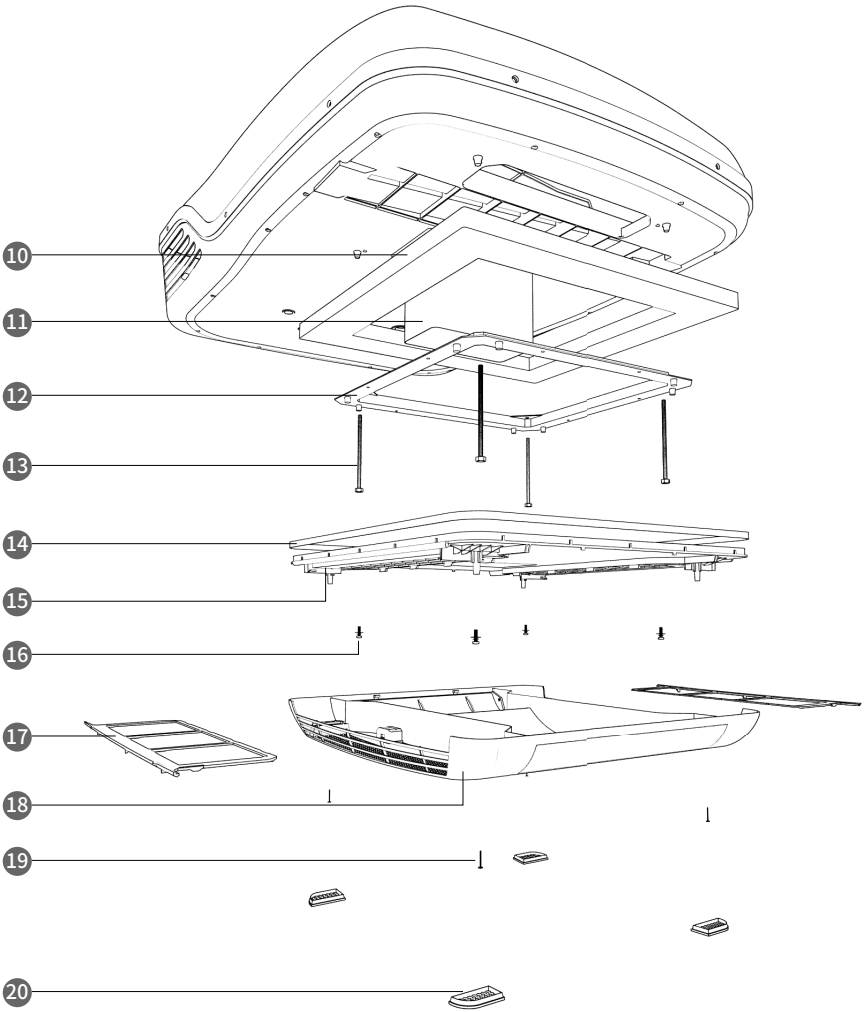
12.0 Parts list

16



EN

17



EN

Serial number	Name	Quantity
1	Housing	1
2	Electric control box	1
3	Condenser	1
4	Compressor	1
5	External fan	1
6	Lid of the evaporator	1
7	Internal fan	1
8	Evaporator	1
9	Base pan	1
10	EVA gasket	1
11	Air duct components	1
12	Roof mounting bracket	1
13	Fastening bolt	4
14	LED ambient lights	1
15	Air diffuser base	1
16	Fastening bolt	4
17	Air filter	2
18	Air diffuser	1
19	Tightening screw	4
20	Screw hole cover	4

13.0 Warranty

The statutory warranty period applies. If the product is defective, please contact the nearest supplier in your location. For repair and guarantee processing, please prepare the following documents:

- A copy of the invoice with purchasing date.
- A reason for the claim or description of the fault.

No warranty claim shall be applicable under the following circumstances:

- Damage, accident or otherwise, to the air conditioner while in the possession of the consumer not caused by a defect in material or workmanship.
- Damage caused by consumer misuse, tampering, or failure to follow the care and special handling provisions in the instructions.
- Damage to the finish of the case, or other appearance parts caused by wear.
- Damage caused by repairs or alterations of the air conditioner by anyone other than those authorized by the manufacturer.

ARANA

FRESCO 40.0620.V01

www.arana.com.cn
服务热线 : **400 110 1890**