

# REEFER™ 系统



REFEER™



REFEER™ 豪华版



REFEER™ 隔断式



# REEFER™ 系统



REEFER™ NANO



REEFER™ 450



REEFER™ 170



REEFER™ XL 525



REEFER™ 250



REEFER™ XXL 625



REEFER™ 350



REEFER™ XXL 750



REEFER™ XL 425



## REEFER™ NANO/170

操作手册



安装手册



底柜安装指南



## REEFER™ 250

操作手册



安装手册



底柜安装指南



## REEFER™ 350/XL425

操作手册



安装手册



底柜安装指南



## REEFER™ 450/XL525

操作手册



安装手册



底柜安装指南



# REEFER™ XXL 625/750

操作手册



安装手册



底柜安装指南



# REEFER™ 豪华版



REEFER™ 170 豪华版



REEFER™ 450 豪华版



REEFER™ 250 豪华版



REEFER™ XL 525 豪华版



REEFER™ 350 豪华版



REEFER™ XXL 625 豪华版



REEFER™ XL 425 豪华版



REEFER™ XXL 750 豪华版





## REEFER™ 豪华版 170

操作手册



安装手册



底柜安装指南



LED装配手册



## REEFER™ 豪华版 250

操作手册



安装手册



底柜安装指南



LED装配手册



## REEFER™ 豪华版 350/XL425

操作手册



安装手册



底柜安装指南



LED装配手册



## REEFER™ 豪华版 450/XL525

操作手册



安装手册



底柜安装指南



LED装配手册



## REEFER™ 豪华版 XXL 625/750

操作手册



安装手册



底柜安装指南



LED装配手册





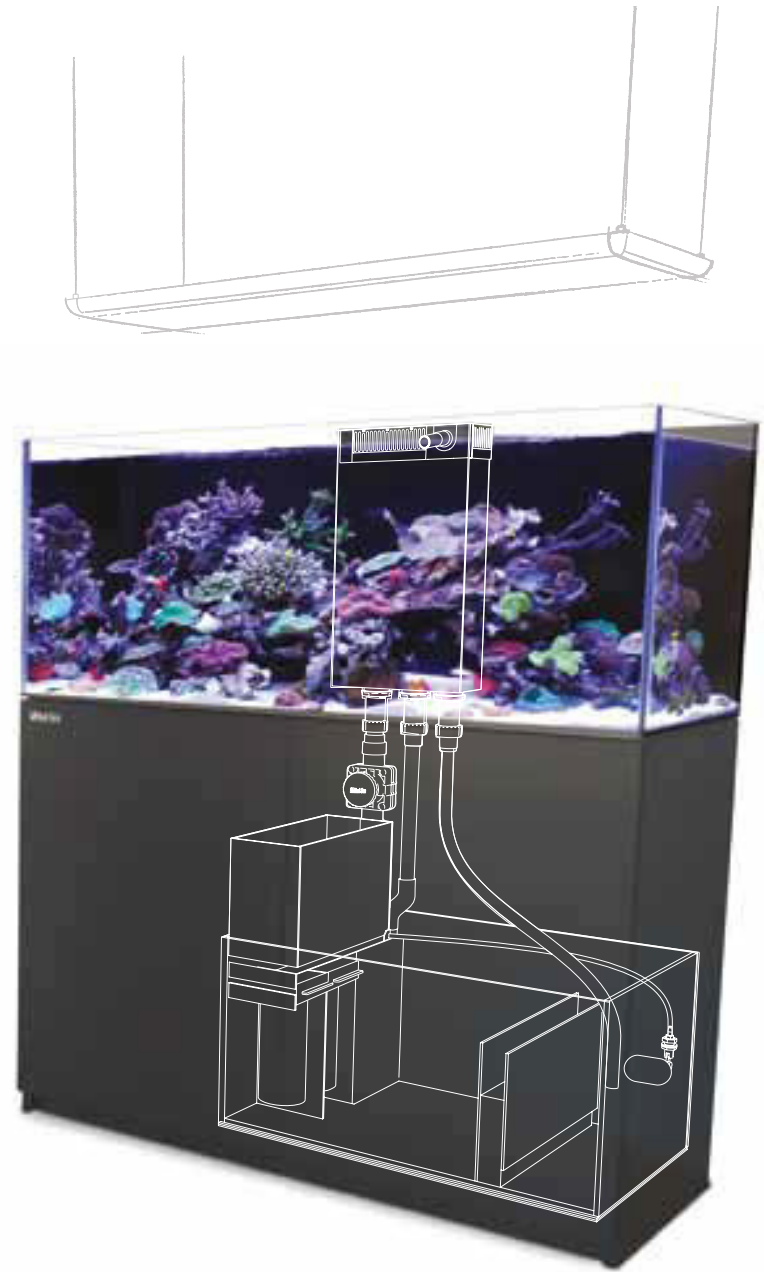
## 打印提示

只打印操作手册，打印页面14-25

# Red Sea REEFER™ SERIES

Reef-Ready systems for advanced hobbyists

Operation Manual



# Red Sea REEFER™ SERIES

为专业级爱好者设计的高延展性珊瑚礁岩系统

---

安装操作手册

## REEFER™ 安装操作手册

安全须知 .....	64
位置 .....	65
组装 .....	66
REEFER™水控制系统综述 .....	68
操作 .....	69
维护 .....	70



## 前言

感谢您购买红海REEFER™系列礁岩系统。

红海REEFER™系列珊瑚礁岩系统，为专业级玩家打造一个全方位珊瑚礁岩或海水水族箱，提供了坚实基础。REEFER™系列水族箱将一套拥有现代风格、无边框、超白玻璃的主缸与时尚的底柜及全方位的水控制系统相结合，包含了专业级的底缸设计，并配备有集成式自动补水系统，以及红海独一无二的静音下水体系。REEFER™系列的设计结合了红海起初为一体化MAX®系列珊瑚礁岩系统开发的相关技术，专业级玩家易于操作并能自行选择光照、过滤、水流及控制器的平台，使玩家可以创造一套独一无二的定制系统。此说明书对图表说明书进行了补充，且包含了所有REEFER™系列水族箱的安装和操作说明。

希望你能尽情享受您的REEFER™带给你的快乐！

获取更多产品最新信息和专享特别优惠，请注册成为我们的REEFER™系列产品的拥有人，注册网址为 [redseafish.com](http://redseafish.com)。

# 1 安全须知

请阅读并遵守以下安全须知

**危险:** 对已经放入水的水族箱实施操作时，需特别注意，避免触电。  
当出现以下情况时请勿自己尝试修理设备：将故障设备返回授权服务处或者丢弃故障设备。

**安全提示:** 为避免违规操作带来的伤害，请遵守以下基本安全操作规范：请勿运行任何插头或电源线受损而不正常工作的设备。

为避免设备的插头或插座弄湿，请将水族箱一面靠墙，防止水滴到插头或者插座上。你可以采用“滴水环”（见图1）的方式将水族箱设备电源线连接到插座上。“滴水环”就是电源线的一部分低于插座的水平，防止水沿着电源线流到插头或流入插座。如果不知道插头或者插座是否弄湿，请不要拔出电源线。断开保险丝或电路后，再拔出插头从而检查插座内是否有水。

当孩子使用或有孩子可能接触设备时需要密切监视。

为避免不必要的伤害，请勿接触正在工作的设备。

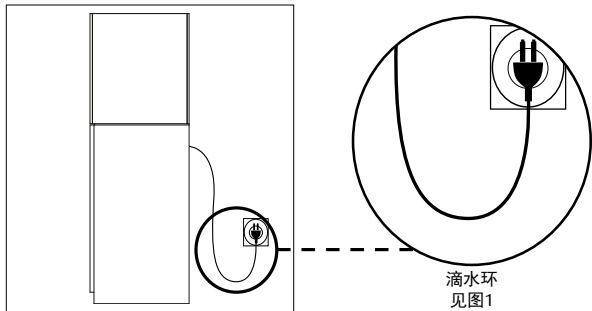
在取出设备或放入设备时，请先拔掉插头。设备停用时也请拔出电源插头。切勿拽拉电源线以拔出插头。正确的操作方式是握住插头并拔出。切勿使用任何超过使用期限的设备。

使用非制造商推荐的设备或配件会增加不安全因素。  
切勿在露天环境或者温度低于0℃的环境下使用设备。

在使用前，请确保设备的安装和放置已经牢固。

阅读并遵守所有安全注意事项。

**注意:** 电源线额定电流和功率超过额定值会导致发热而加快电源线老化和损坏。请放置好电源线，防止被电源线绊倒或牵拉电源线导致事故。



## 2 位置

安装REEFER™的第一步就是选择一个合适的位置。

### 重量

系统下方的地板必须能够支撑以下重量:

系统（包括水）的大约总重量					
型号	Nano	170	250	350	450
重量	180kg / 400lb	270kg / 595lb	375kg / 830lb	530kg / 1170lb	680kg / 1500lb

### 室温

位置的选择对于保持准确恒定的温度尤为重要。我们建议您保持室内温度舒适和稳定在22°C / 72°F。切勿把水族箱放置在空调前，热通风孔或阳光直射处。通风良好的室内环境加上适度的光照是放置水族箱的最佳位置。

### 可操作性

确保Reefer后面至少有10cm / 4"的空隙，从而能够方便进入对集水箱的电缆进行安装/拆除，同时又保持冷气装置有充足的空气循环（仅限大型号）。建议在水族箱的一侧与任何相邻墙壁或家具之间留有约60cm/24"的空隙以方便进入水箱的后面。

### 总则

确保水族箱周边区域防水和避免海水可能导致的损坏和腐蚀的可能。

**注意:** 切勿在REEFER™系统装满水后进行移动

### 3 组装

以下信息将对图形手册进行补充。

**提示:** 如果你没有自行组装家具的经验，请向有经验人士寻求相应的帮助

REEFER™ 包含以下主要组件:

- 主缸
- 底柜（自行组装）
- 过滤缸包含过滤棉，400微米滤袋和自动补水浮阀
- 带出水口喷嘴的内管件套件
- 自动补水系统

完整的 REEFER™ 详细安装操作流程可以在附带的手册上找到。

**注意:** 按照顺序组装REEFER™非常重要。

完成底柜的组装（包括图形组装手册中显示的门）并放置于最终操作位置（见上述位置）。

**警告:** 将主缸抬至底柜上之前请仔细阅读。

底柜的顶端离门约 86cm/34”。该表格显示不同型号的Reefer主缸的大约重量。

主缸的大约重量					
型号	Nano	170	250	350	450
重量	25kg / 55lb	33kg / 72lb	52kg / 115lb	64kg / 140lb	100kg / 220lb

确保您能够根据重量和大小配备恰当数量的人员抬起水族箱。

确保任何抬起水族箱的人在身体上都适合完成该操作，并且获得指导以恰当的方式抬起重物。

一旦水族箱与底柜恰当对齐，请检查底柜是否被移动。必要时，重新调整底柜的位置。

**注意:** 不得在 REEFER™ 水族箱系统装满水时进行移动

在将玻璃底缸置于底柜内之前，确保底柜门恰当对齐（查看底柜组装手册中的说明）。底缸一旦安装就位，就无法调节底部的门铰链，除非挪动底缸。在门已恰当对齐的情况下，调节底柜门板缓冲器的前部至适当位置，使门板可以在推按后弹开。

**溢流盒管件：**在组装之前，请确保O形环在螺纹接头的正确位置上。为使安装正确，应从底柜内部牢牢地握住螺纹接头，并用手拧紧。切勿使用工具。请避免从溢流盒内拧开管件，因为这样会降低防止反转的固定机制的效果。

**底缸管件：**在组装之前，请确保O形环在接头的正确位置上。组装完成后检查管道是否垂直，并且拧紧管件将其固定就位。切勿使用工具及过度拧紧。

**溢流盒盖：**溢流盒盖会减少水从水面油膜过滤器落下的声音。若您希望在溢流盒的后壁安装诸如灯具等的设备，请按图形手册所示拆卸部分盖子。取出可拆除部分后，使用锉刀或砂纸将其余的边缘磨光滑。

## 4 REEFER™ 水控制系统综述

### 水面油膜过滤器/溢流盒

水族箱中的表层水会通过拥有可拆除栅格的水面除油器流入溢流盒。溢流盒中拥有双下水口的静音下水管系统以及底缸回水泵的出水喷嘴。静音下水管系统包括一根控制流量的主下水管和一根二级溢流旁通管。在主下水管的上方加装了一个高度略高透明外包管，以此确保在溢流盒的整个水体高度内拥有有益的水流。

在主下水管上的流量微调阀能使溢流盒中的水位在主下水管和旁通管的进水口之间保持一个稳定的高度，这样在消除下水噪音的同时，可以确保高效去除水面油膜。当流量阀没有正确调节时，会出现下水噪音，这时需要重新调节流量阀。

### 底缸 /ATO

从流量可控的主下水管和二次溢流旁通管留下的水会进入底缸中的一个小巧的接收舱。在选择置于接收室中的过滤媒介时应小心谨慎，因为来自下水管的乱流状况可能会导致不断地排出细小的媒介颗粒。

然后，水流在进入衡高主反应舱或蛋分舱之前会经过400微米的过滤袋。若不经常清洁过滤袋而导致其堵塞，水会绕开过滤袋，不会影响底缸的总体运行。

反应舱和回水泵舱之间有一块装有粗泡沫材料的除沫格，以此防止来自蛋分的小气泡回流入主缸。

由蒸发造成的任何水损失都会导致底缸上水泵舱内的水位下降，这将由ATO系统进行补偿。

通过保持回水泵舱内稳定的水位（使用ATO），确保主泵进水处有持续的水压，对整个水控制系统来说至关重要。补水舱包含用于约3天蒸发的水量，应始终保持注水。

### 回水泵

回水泵的建议流速如下表所示。使用更高流速的泵会导致水族箱中的水位更高，除非对水面油膜过滤器的栅格进行了恰当修改。

回水泵的建议流速					
型号	Nano	170	250	350	450
流量	2000lph /530gph	2000lph /530gph	2500lph /660gph	3000lph /790gph	4000lph /1060gph

## 5 操作

### 初始蓄水

检查是否所有的管道都恰当地组装以及是否所有软管都安全就位。

开始往水族箱加水之前安装任何会占用过滤缸中水量的设备。

最大限度打开主流量阀（逆时针方向旋转）。

添加约15cm/6”的水至溢流盒以确保所有管件接头都不漏水。检查底柜内是否有漏水。

向主水箱内添加水，一旦添满，在开始填充水时监控过滤缸中的水位。一旦主泵舱内水量达到约15cm/6”，开启水泵并停止加水。

**警告:** 过滤缸过度充水会在电力中断时出现水溢出的情况。

开启除油器或其它会影响过滤缸水位的过滤器，按要求添加更多水以维护主泵舱内的15cm/6”的水量。

让系统运行几分钟，调整流量阀（如下所述）使溢流箱中的水位位于恰当的水平。

从系统中添加/排水并调整流量阀，直至系统中的水位稳定。

### 主落水管阀门调整

若要抬高溢流箱中的水位，顺时针方向旋转阀门。

若有降低溢流盒箱中的水位，逆时针方向旋转阀门

主落水管流量阀能够非常精确地控制流量，但是，在调整之后，系统需要几分钟的时间才能在新设置中稳定下来。

一旦为阀确定了大致设置，那么，每次只能进行很小的调整并需要等待几分钟时间。可能会需要多次临时调整才能达到稳定的水平。当设置恰当当时，该系统能够消除所有水向下流到过滤缸的噪音。

### ATO

在初始设置时，等待盐水系统稳定后再使用ATO。

确保注水流量阀完全关闭。

使用反渗透水填充蓄水池。从浮阀断开注水流量阀的连接，慢慢开启流量阀，直至注入的水以大约每秒1滴的速度下滴。断开流量阀至浮阀的连接。

调整浮阀的角度，从而使阀门在水位高于过滤缸进水口但低于除泡器顶端水平时会关闭。

### 断电测试

完成初始设置及向过滤缸添加了任何新设备后，对主阀进行必要的调整使系统稳定，并且进行一次“断电”测试以检查水是否会高出过滤缸的边缘。

**注意:** 在进行过滤缸维护时，建议关闭蓄水池进水口上的阀门。

## 6 维护

为了持续顺畅地操作水管理系统，应定期做以下检查：

- 溢流箱中的水位 - 按要求调整流量阀
- 蓄水池中的水位 - 按要求添加反渗透水
- 集水箱过滤缸中的水位，检查注水浮阀是否恰当运行
- 微米过滤袋 - 检查水是否通过袋子流动，必要时清理/替换
- 表面除油膜器格栅 - 除去任何会减少水流量的沉积物
- 泵出口喷嘴 - 检查是否有堵塞及藻类积累

### 微米过滤袋

建议保留至少3套过滤袋备用。

这里有一些清理滤袋的建议：

**快速有效** - 使用强力喷水管（如：花园浇水用软管）喷射袋子的外部以反冲洗毡制品碎屑。

**更彻底** - 在进行上述喷射操作前使用漂白剂或稀释醋浸泡袋子24小时。充分冲洗以便再次用于过滤缸时已去除所有化学物质。

也可以将过滤袋放在洗衣机中用一般的清洁剂或醋冷洗（可能需要进一步验证。）



#### North America

**Red Sea U.S.A & Canada**  
18125 Ammi Trail  
Houston, TX 77060  
Tel. +1-888-RED-SEA9  
[usa.info@redseafish.com](mailto:usa.info@redseafish.com)

#### Europe

**Red Sea Europe**  
ZA de la St-Denis  
F-27130 Verneuil s/Avre,  
France  
Tel: (33) 2 32 37 71 37  
[info@redseaeurope.com](mailto:info@redseaeurope.com)

#### UK & Ireland

**Red Sea Aquatics (UK) Ltd**  
PO Box 1237  
Cheddar, BS279AG  
Tel. +44 (0) 203 3711437  
[uk.info@redseafish.com](mailto:uk.info@redseafish.com)

#### Germany & Austria

**Red Sea Deutschland**  
Büro Deutschland  
Prinzenallee 7 (Prinzenpark)  
40549 Düsseldorf  
Tel: 0211-52391 481  
[de.info@redseafish.com](mailto:de.info@redseafish.com)

#### China

**Red Sea Aquatics (GZ) Ltd**  
Block A3, No.33 Hongmian Road,  
Xinhua Industrial Park,  
Huadu District, Guangzhou City,  
China, Postal code 510800.  
Tel: +86-020-6625 3828  
[info.china@redseafish.com](mailto:info.china@redseafish.com)



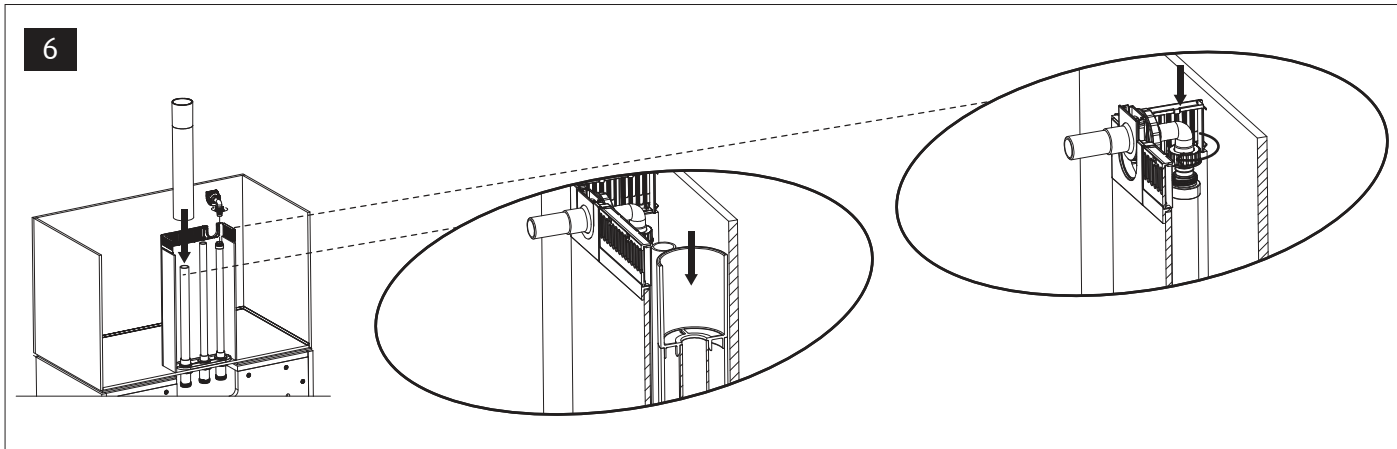
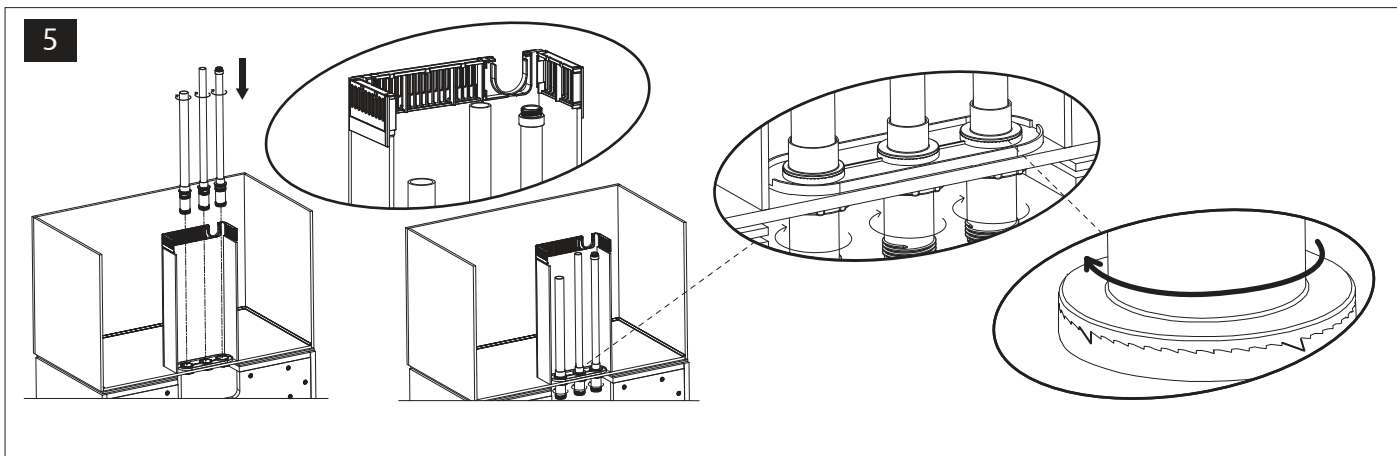
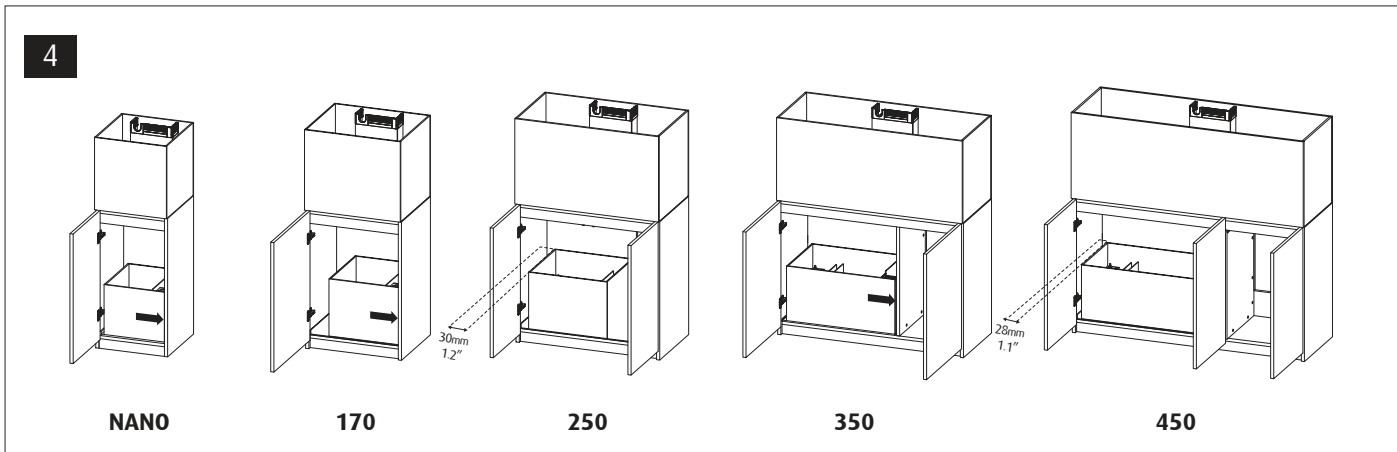
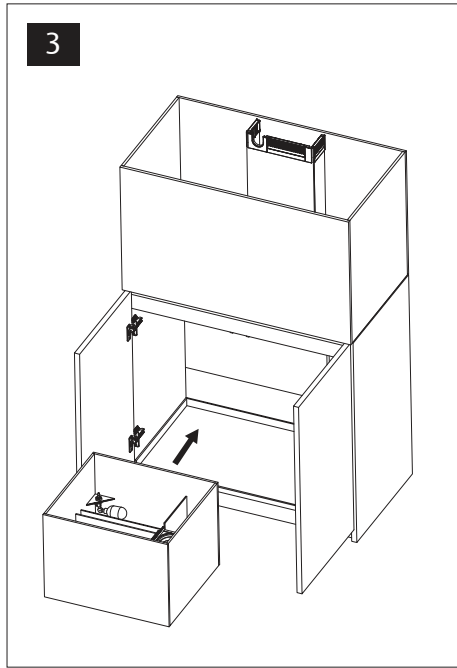
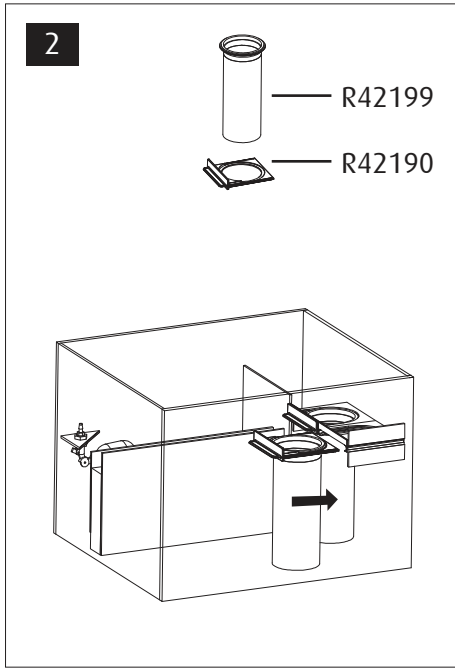
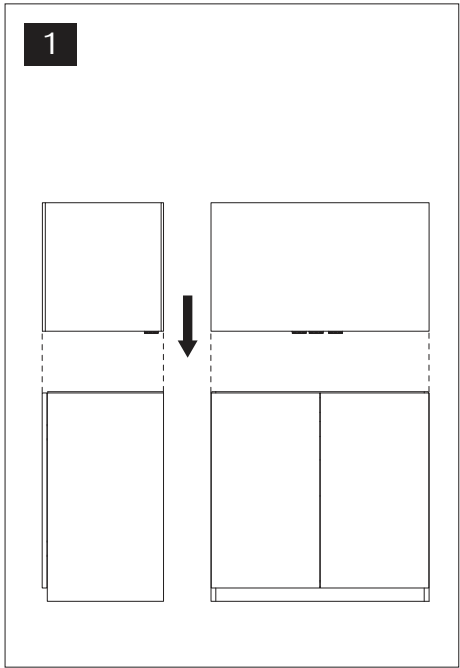
## 打印提示

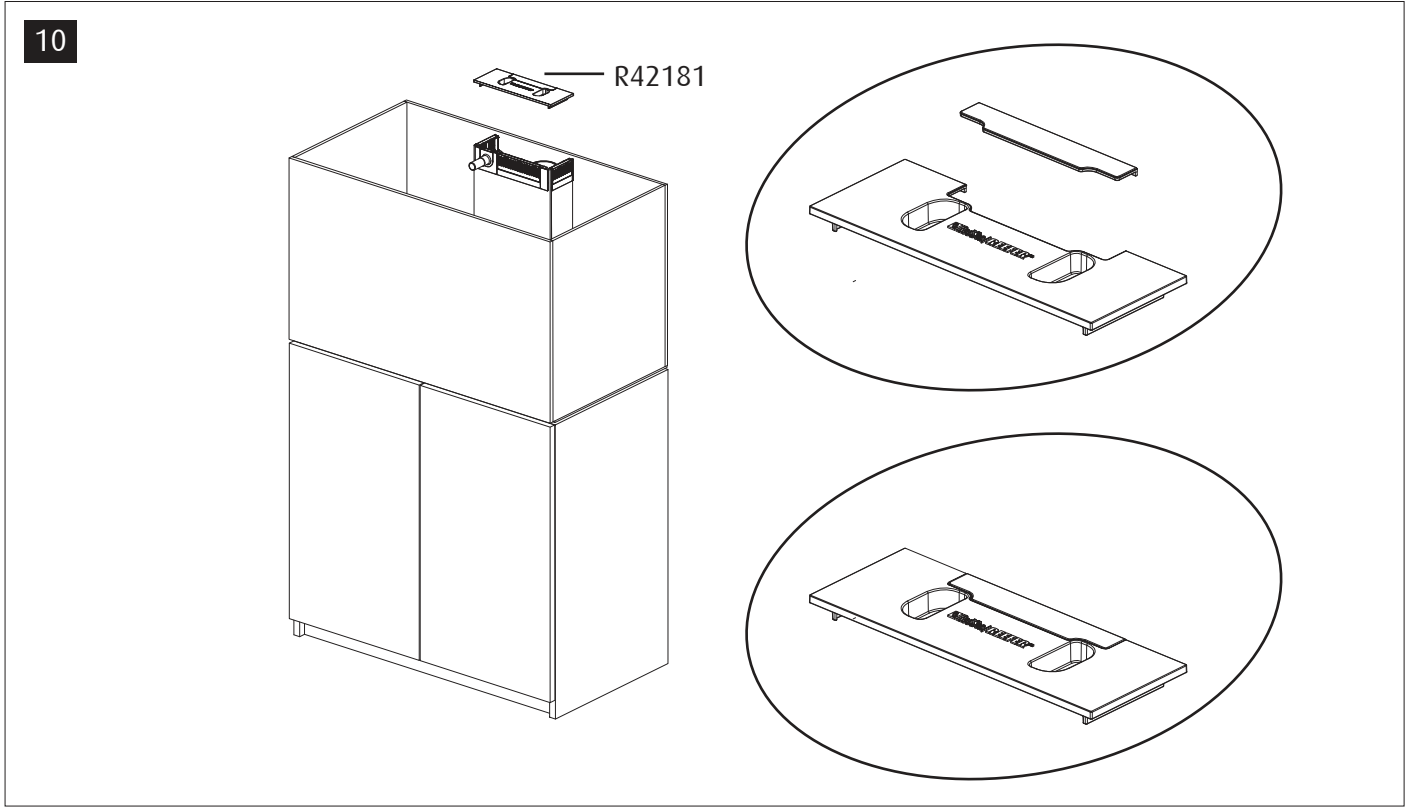
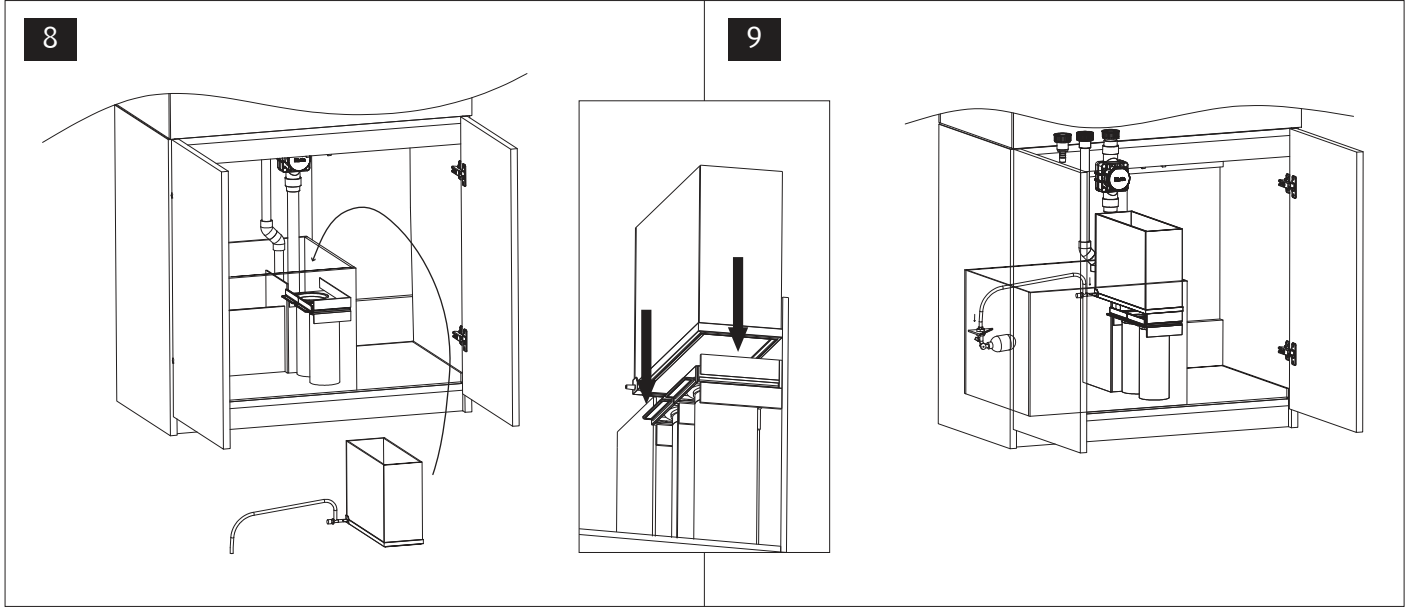
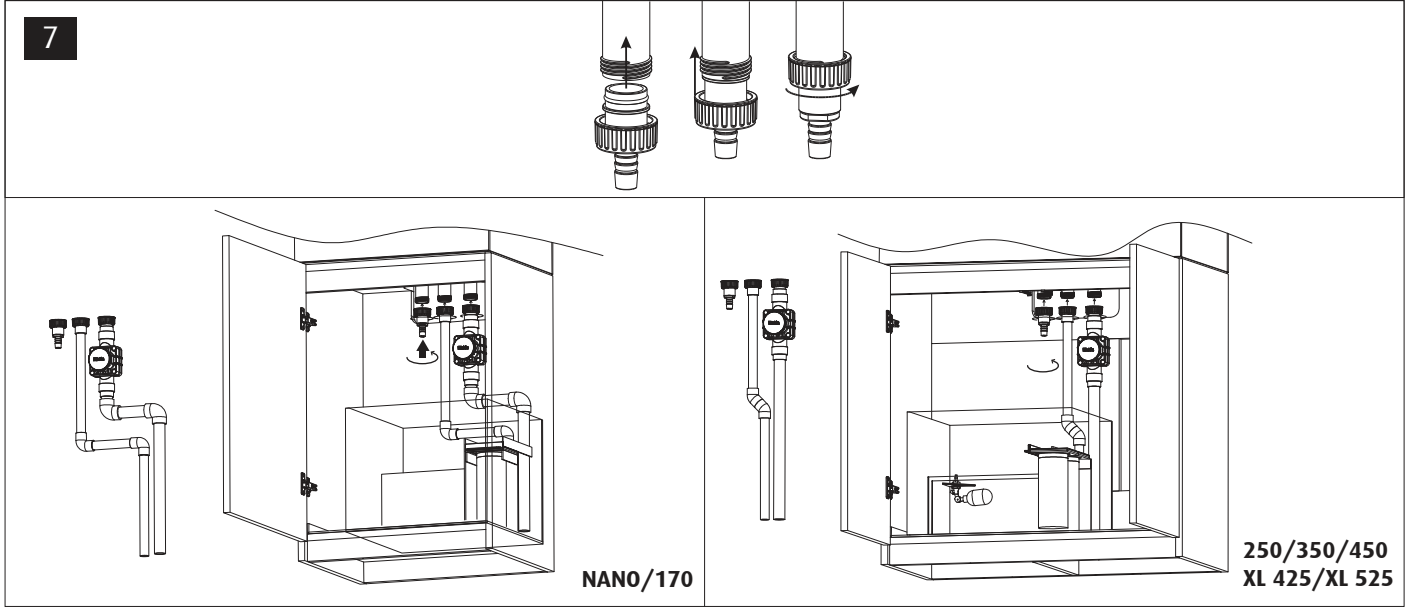
只打印安装手册，打印页面26-29。

# Red Sea REEFER<sup>TM</sup>

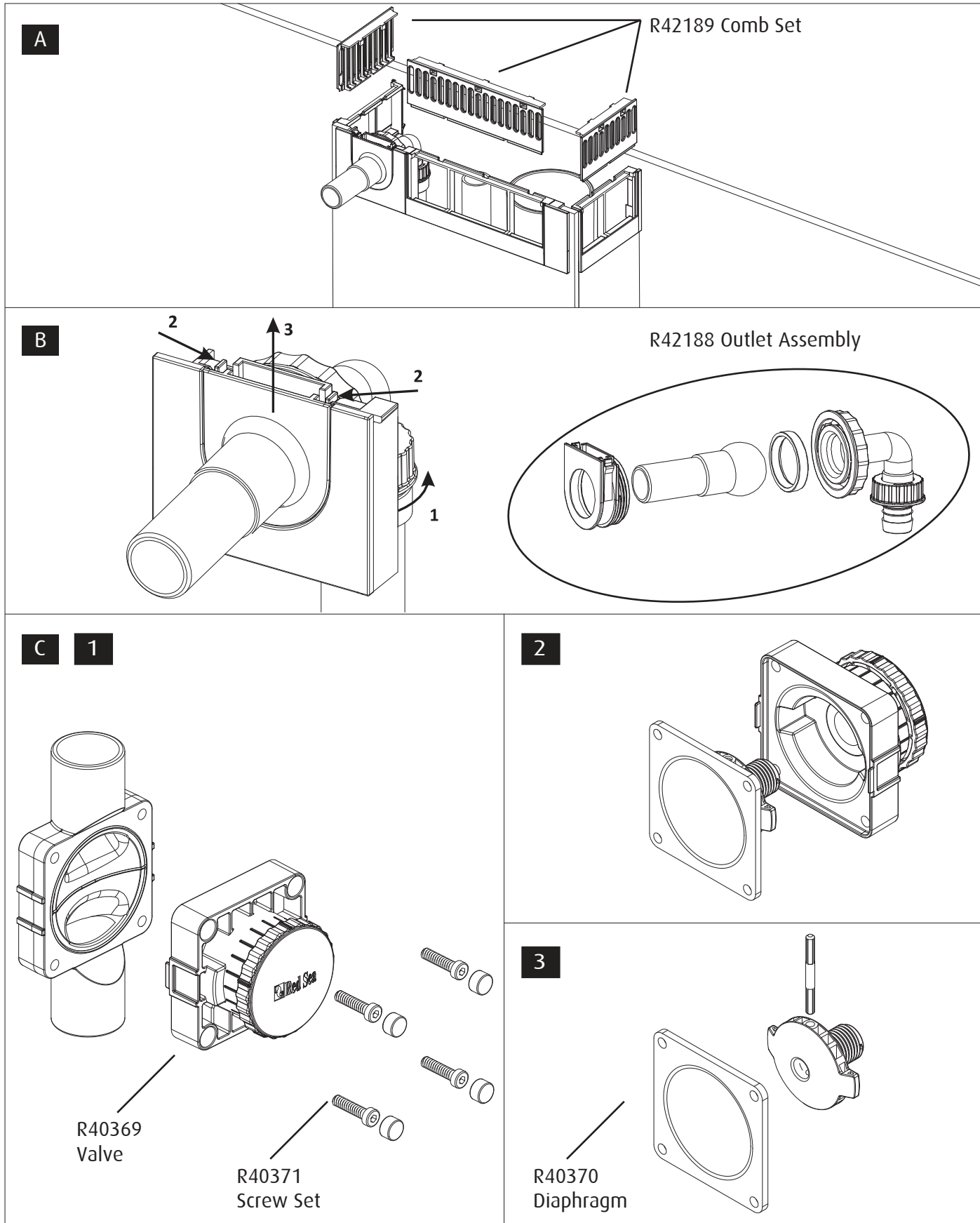
---

## Installation Manual





MAINTENANCE



Europe  
Red Sea Europe  
ZA de la St-Denis  
F-27130 Verneuil s/Avre,  
France  
Tel: (33) 2 32 37 71 37  
info@redseaeurope.com

UK & Ireland  
Red Sea Aquatics (UK) Ltd  
PO Box 1237  
Cheddar, BS279AG  
Tel: +44 (0) 203 3711437  
Fax: +44 (0) 800 0073169  
uk.info@redseafish.com

U.S.A  
Red Sea U.S.A  
18125 Ammi Trail  
Houston, TX 77060  
Tel: +1-888-RED-SEA9  
redseainfo@redseafish.com

Germany & Austria  
Red Sea Deutschland  
Prinzenallee 7 (Prinzenpark)  
40549 Düsseldorf  
Tel: 0211-52391 481  
de.info@redseafish.com

Red Sea Aquatics (GZ) Ltd  
Block A3, No.33 Hongmian Road,  
Xinhua Industrial Park,  
Huadu District, Guangzhou City,  
China, Postal code 510800  
Tel: +86-020-6625 3828

#5490\_v15A





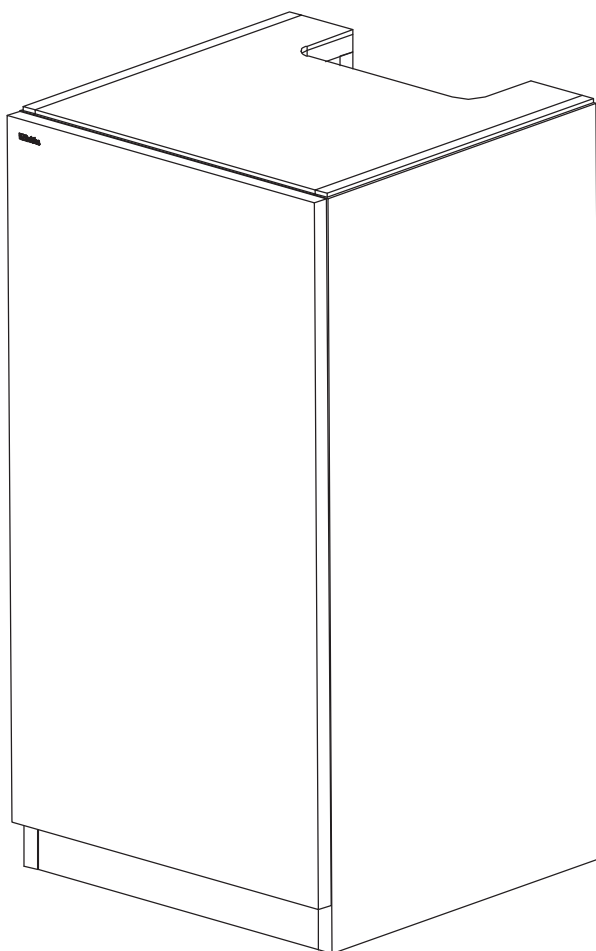
## 打印提示

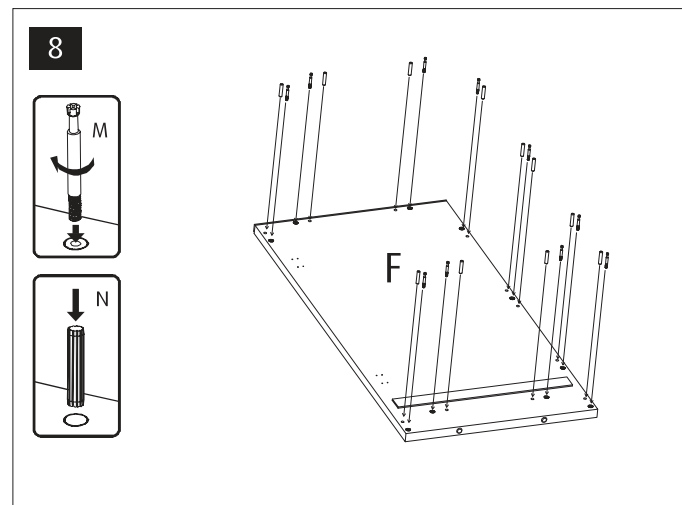
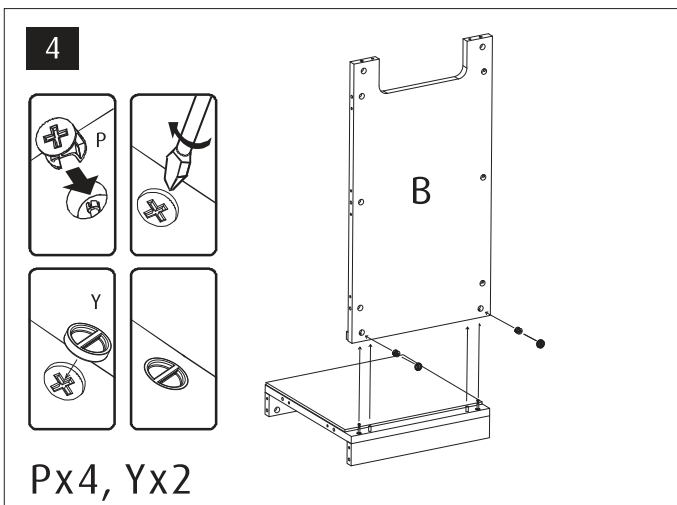
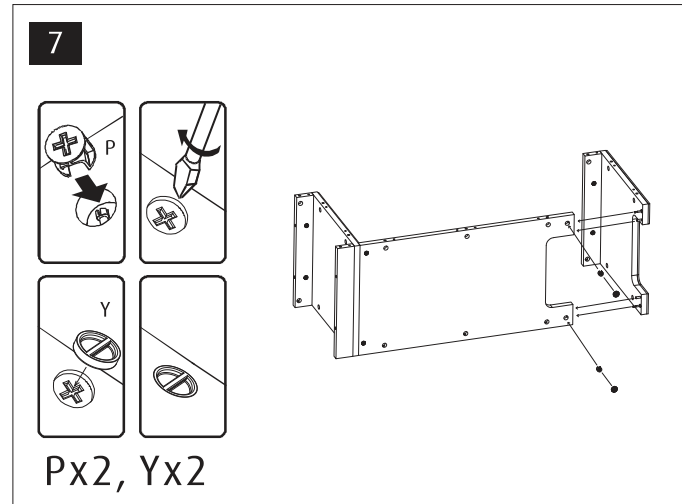
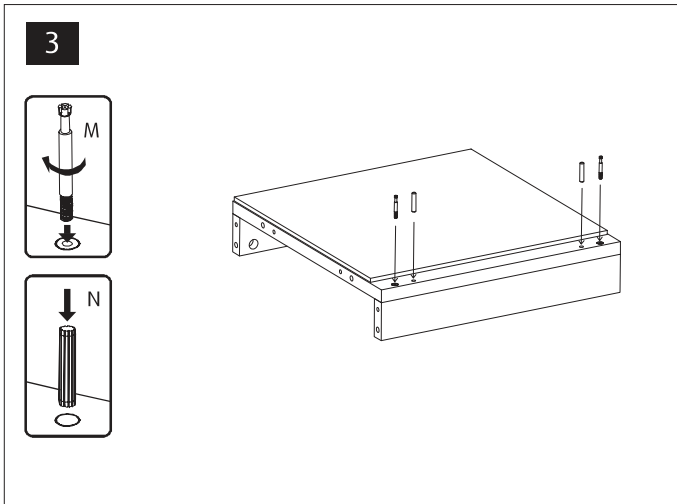
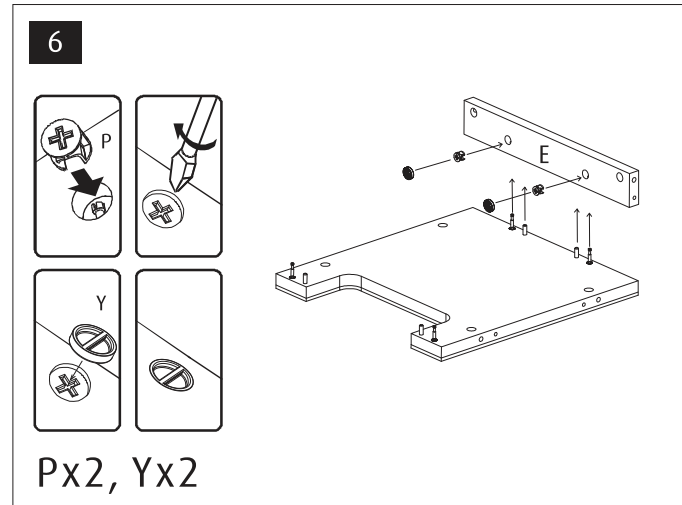
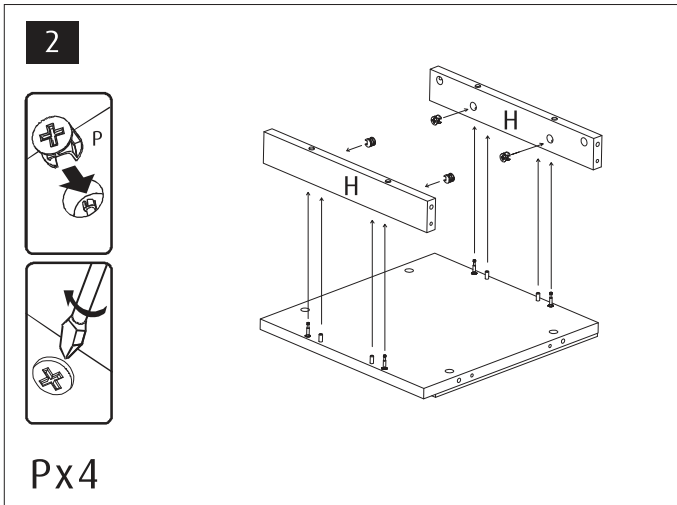
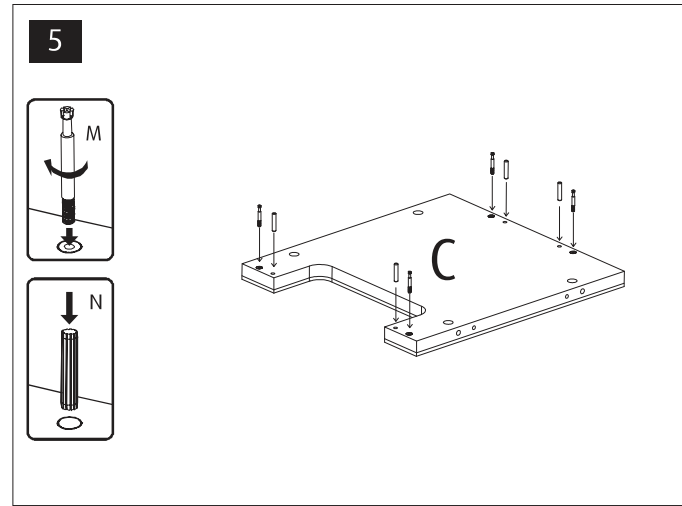
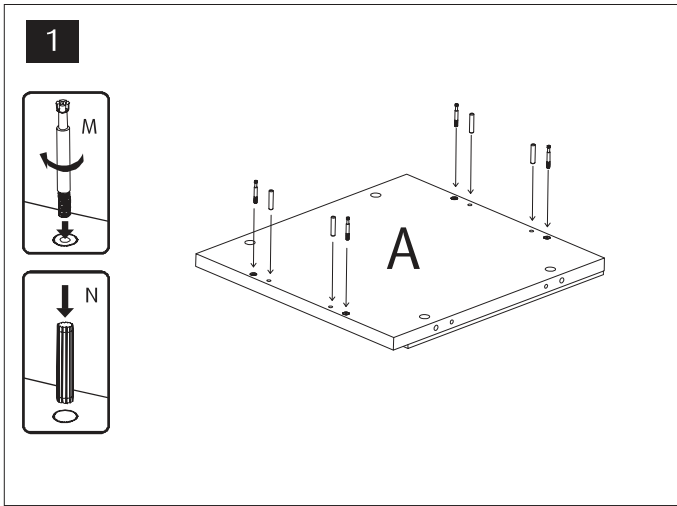
只打印底柜安装指南，打印页面30-33。

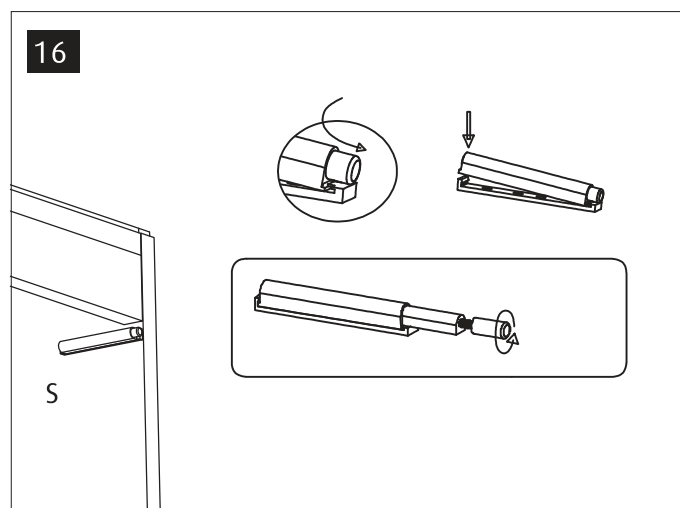
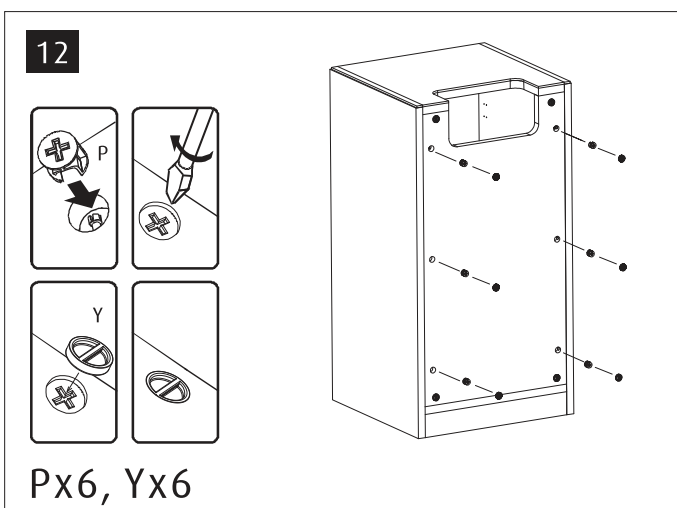
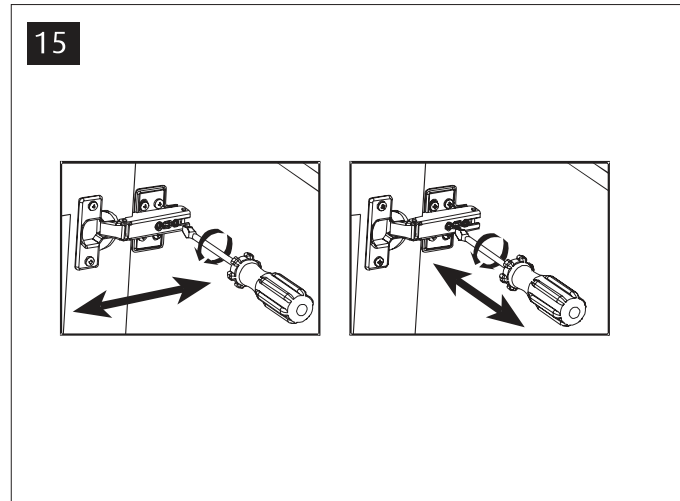
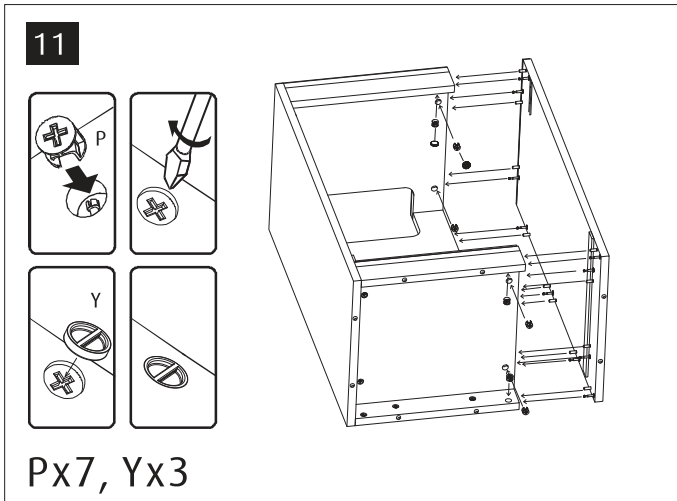
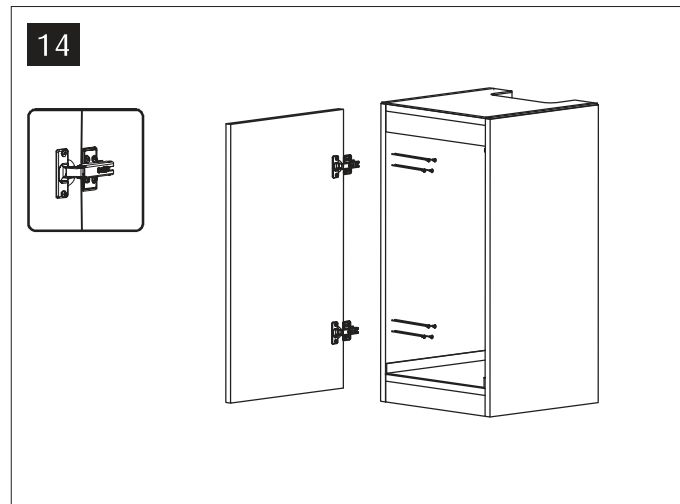
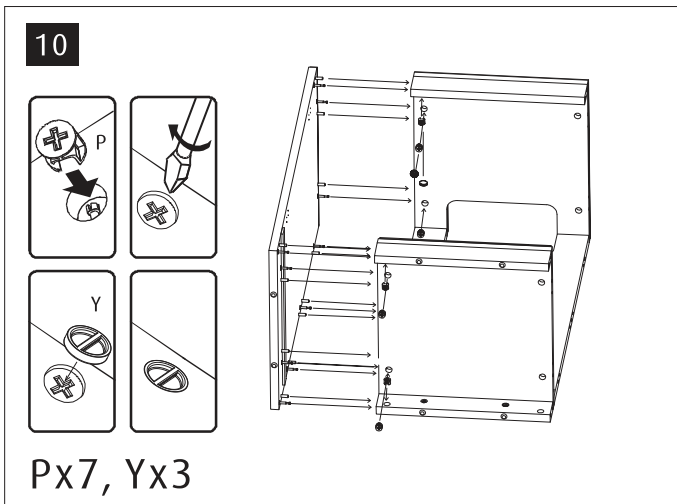
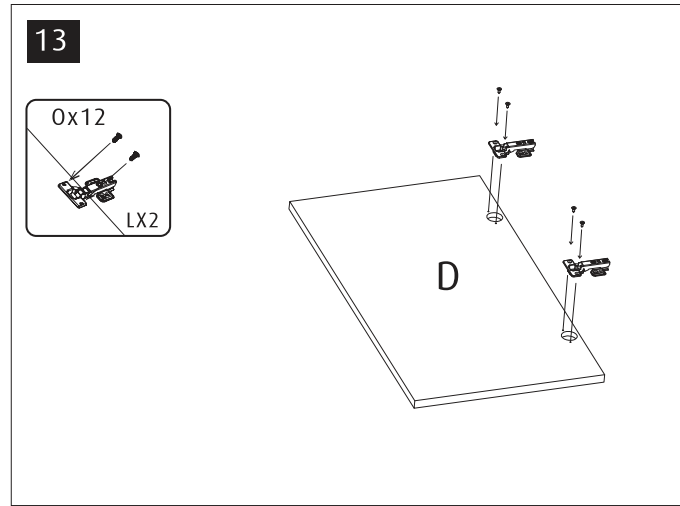
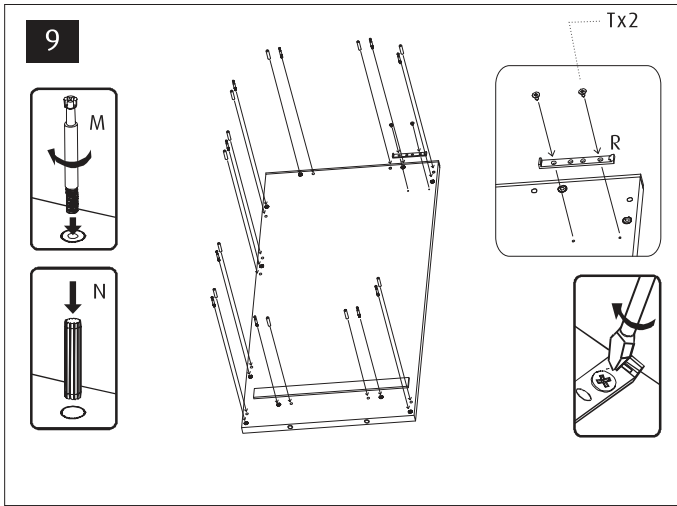
# Red Sea REEFER™

## NANO/170

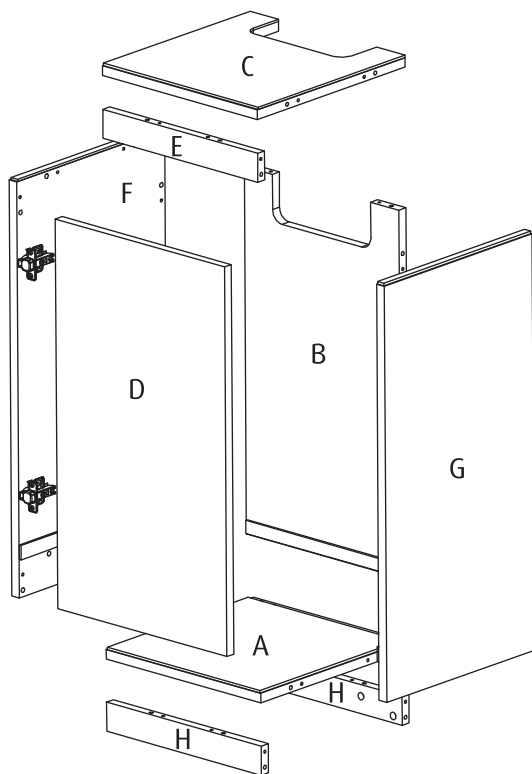
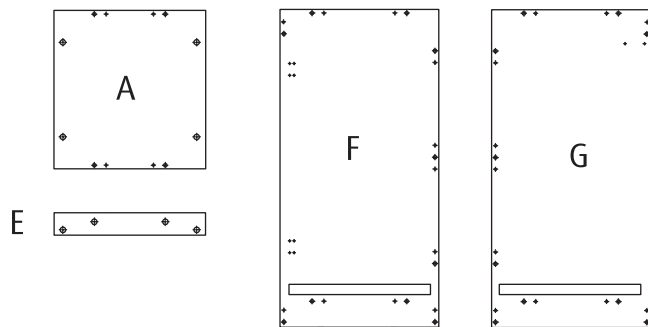
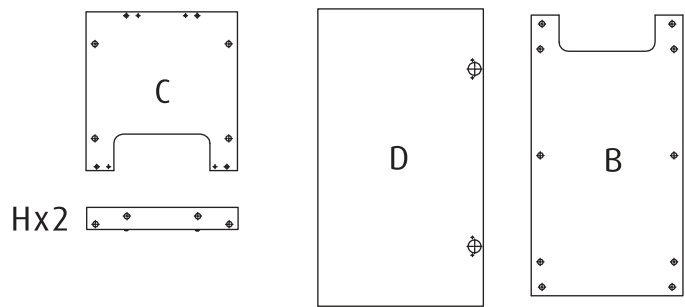
---











L		x2
M		x30
N		x32
O		x12
P		x30
R		x1
S		x1
T		x2
Y		x18

#5346 REEFER NANO/170\_V14A

**Europe**  
 Red Sea Europe  
 ZA de la St-Denis  
 F-27130 Verneuil s/Avre,  
 France  
 Tel: (33) 2 32 37 71 37  
 info@redseaeurope.com

**UK & Ireland**  
 Red Sea Aquatics (UK) Ltd  
 PO Box 1237  
 Cheddar, BS279AG  
 Tel: +44 (0) 203 3711437  
 Fax: +44 (0) 800 0073169  
 uk.info@redseafish.com

**U.S.A**  
 Red Sea U.S.A  
 18125 Ammi Trail  
 Houston, TX 77060  
 Tel: +1-888-RED-SEA9  
 redseainfo@redseafish.com

**Germany & Austria**  
 Red Sea Deutschland  
 Prinzenallee 7 (Prinzenpark)  
 40549 Düsseldorf  
 Tel: 0211-52391 481  
 de.info@redseafish.com

**Red Sea Aquatics (GZ) Ltd**  
 Block A3, No.33 Hongmian Road,  
 Xinhua Industrial Park,  
 Huadu District, Guangzhou City,  
 China, Postal code 510800  
 Tel: +86-020-6625 3828

  
 www.redseafish.com



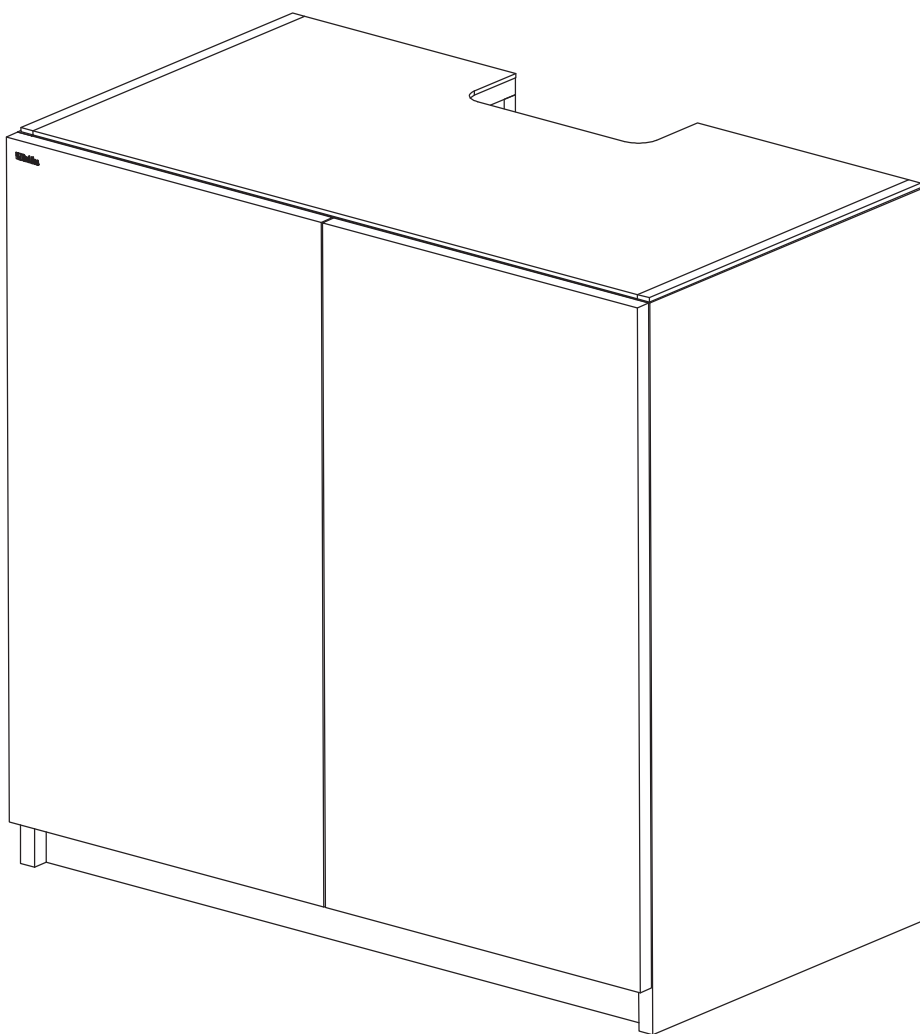
## 打印提示

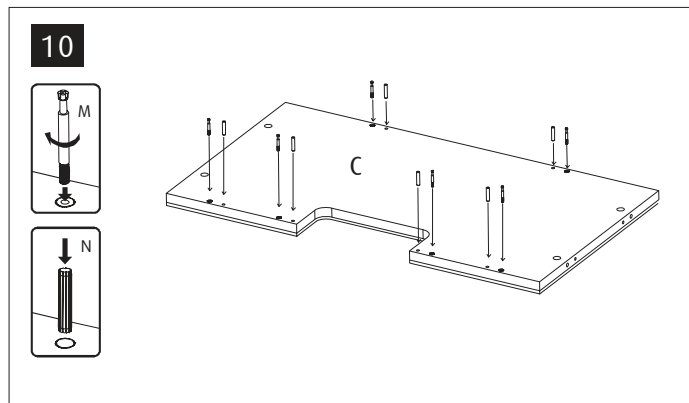
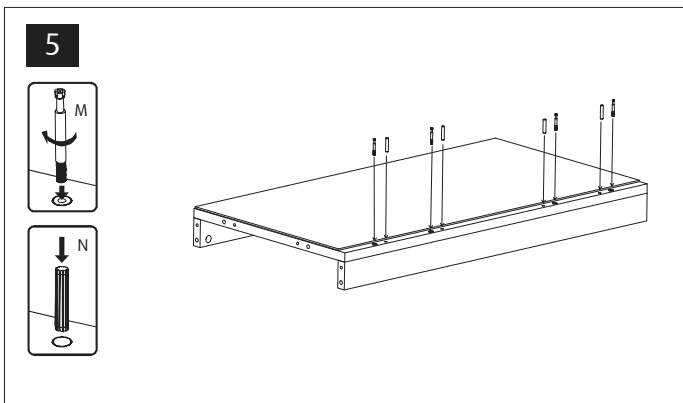
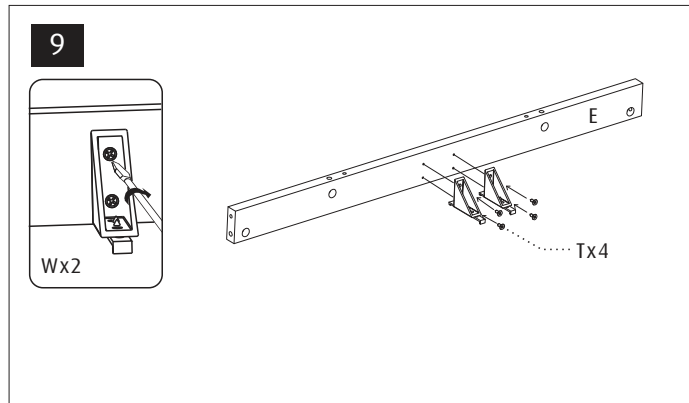
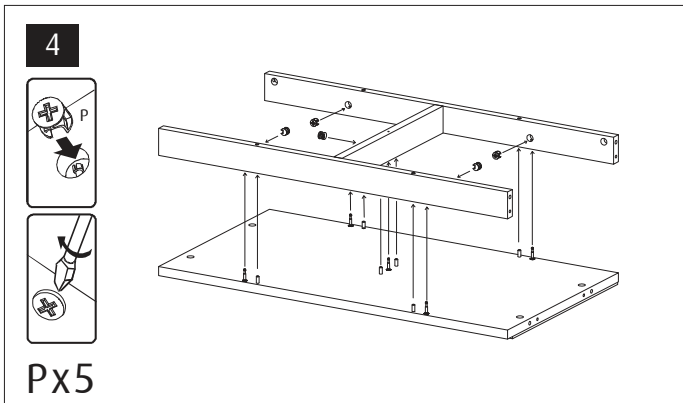
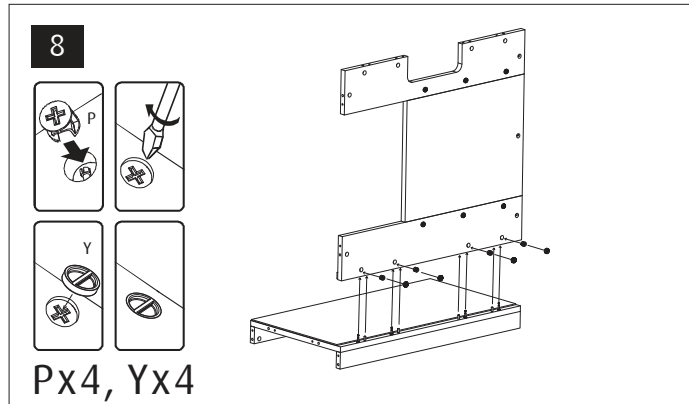
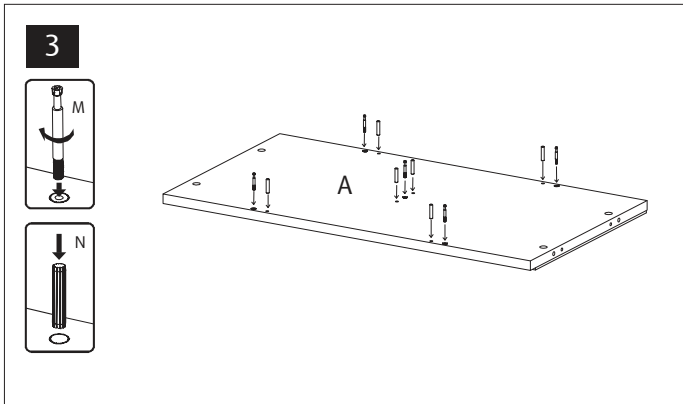
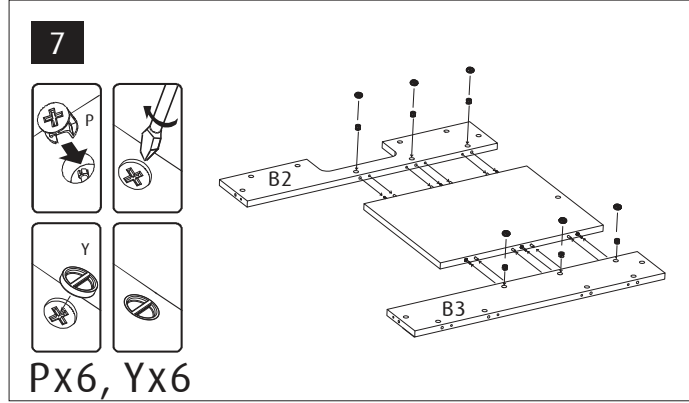
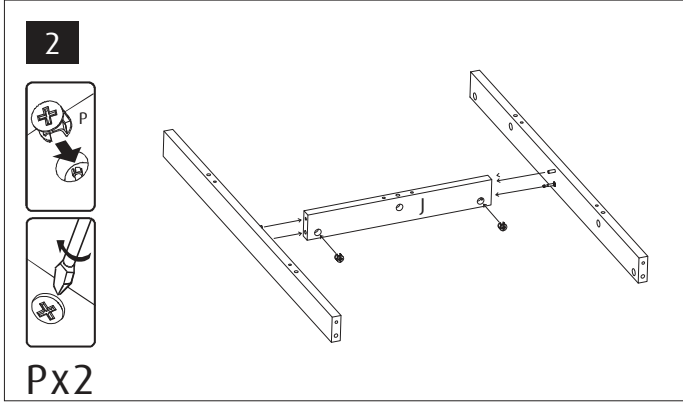
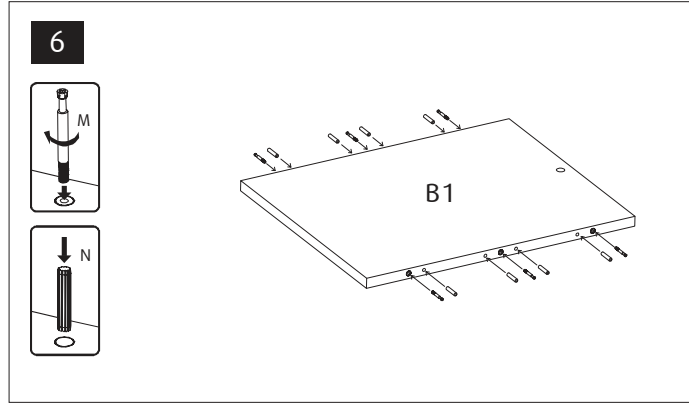
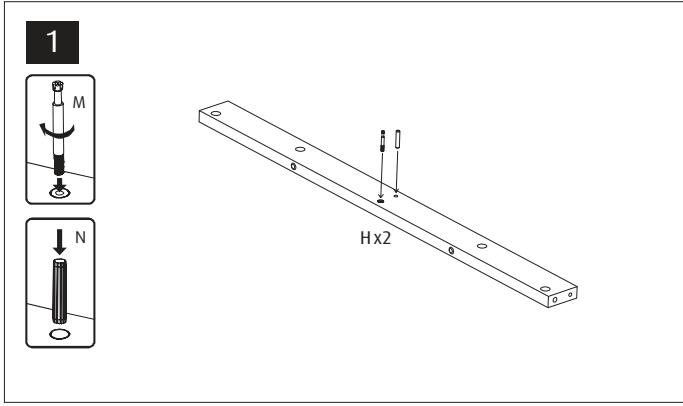
只打印底柜安装指南，打印页面34-37。

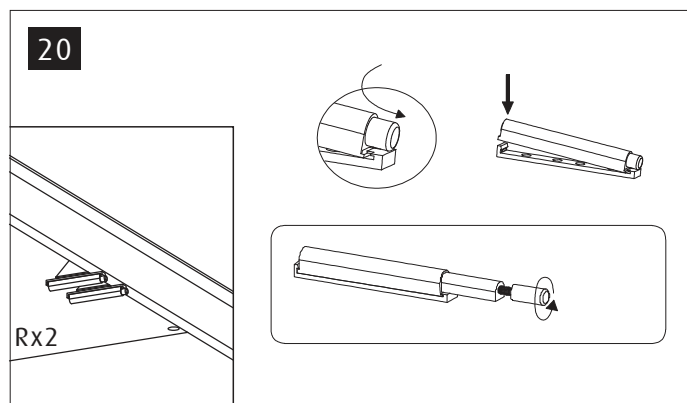
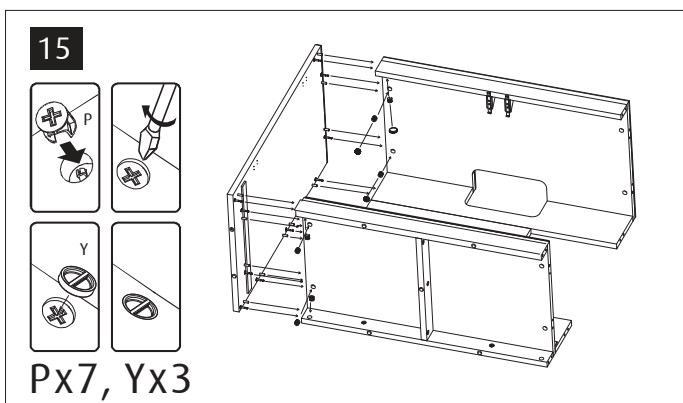
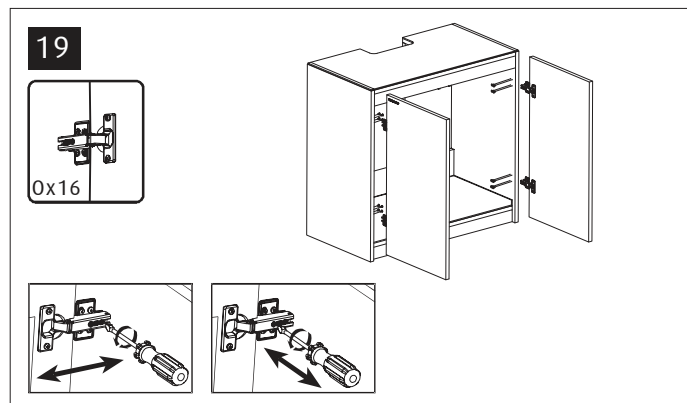
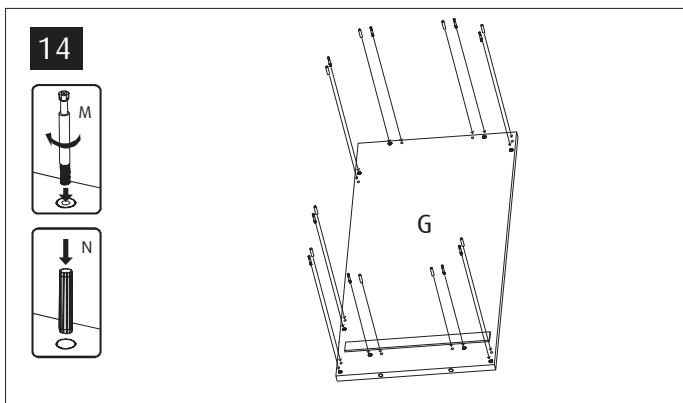
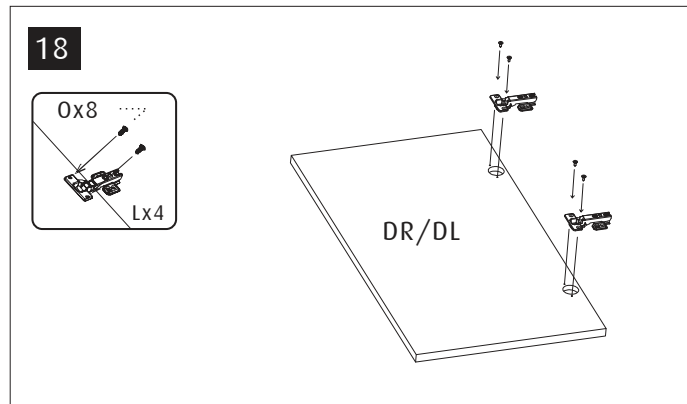
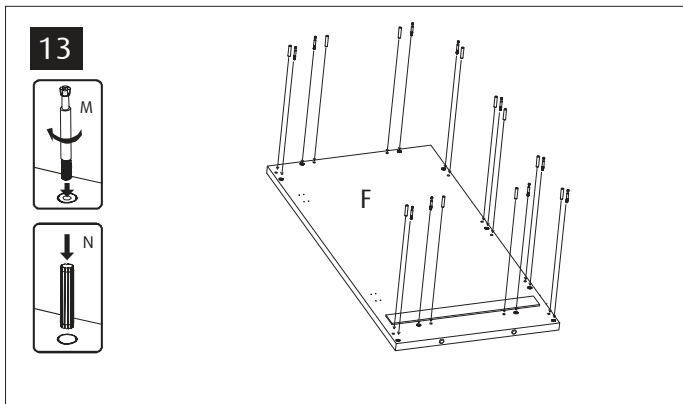
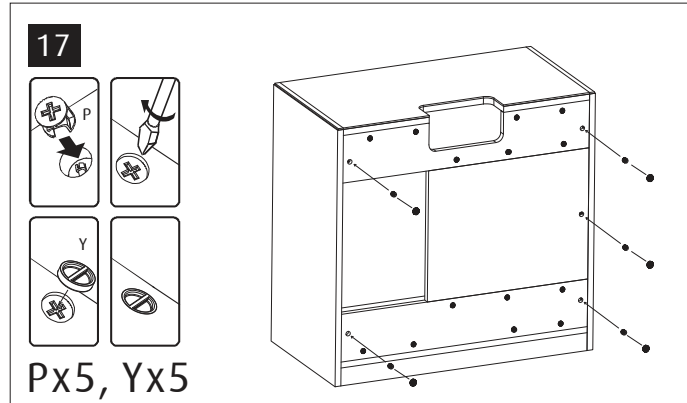
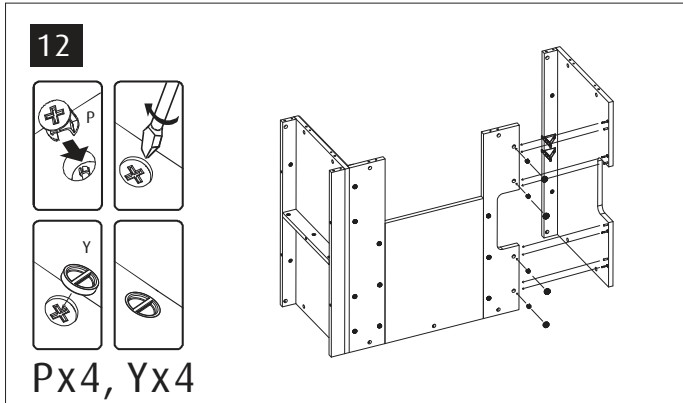
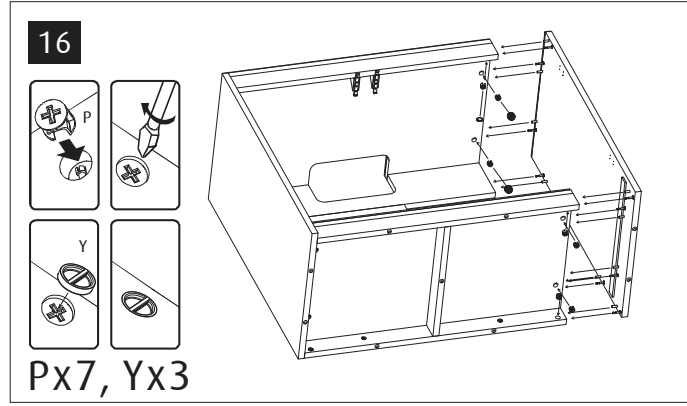
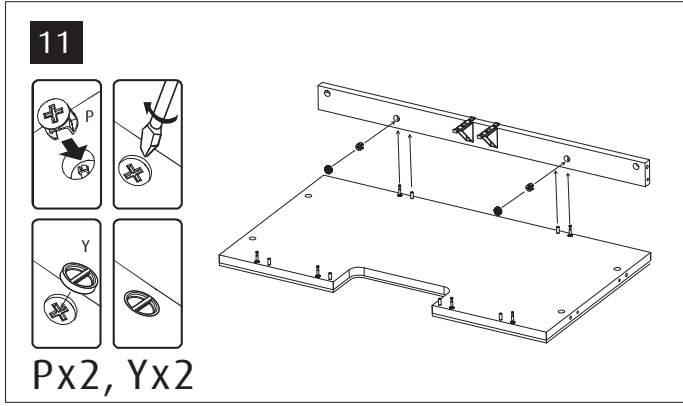
# Red Sea REEFER™

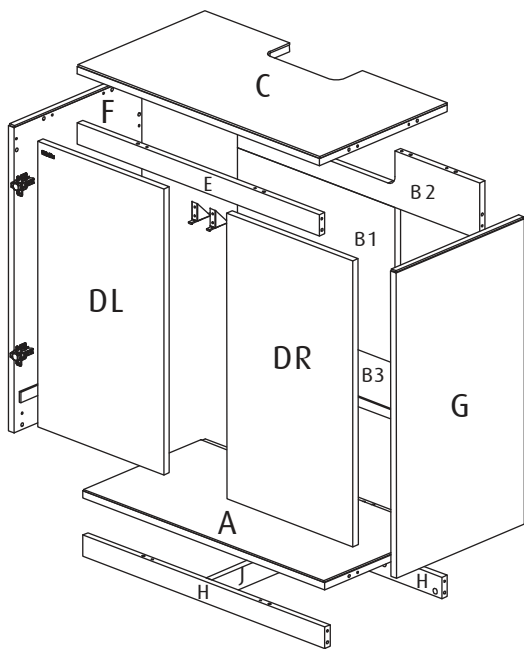
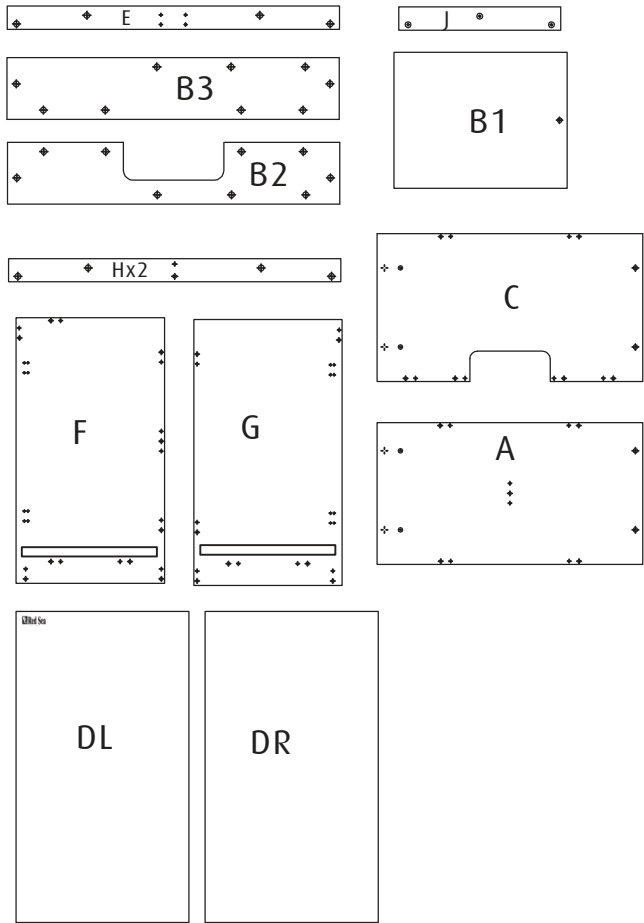
## 250

---









L		x 4
M		x 42
N		x 46
O	ST3.9 x16	x 24
P		x 42
R		x 2
Y		x 27
T	ST3.5 x14	x 4
W		x 2

#5347 REFER 250\_v14A

Europe  
 Red Sea Europe  
 ZA de la St-Denis  
 F-27130 Verneuil s/Avre,  
 France  
 Tel: (33) 2 32 37 71 37  
 info@redseaeurope.com

UK & Ireland  
 Red Sea Aquatics (UK) Ltd  
 PO Box 1237  
 Cheddar, BS279AG  
 Tel: +44 (0) 203 3711437  
 Fax: +44 (0) 800 0073169  
 uk.info@redseafish.com

U.S.A  
 Red Sea U.S.A  
 18125 Ammi Trail  
 Houston, TX 77060  
 Tel: +1-888-RED-SEA9  
 redseainfo@redseafish.com

Germany & Austria  
 Red Sea Deutschland  
 Prinzenallee 7 (Prinzenpark)  
 40549 Düsseldorf  
 Tel: 0211-52391 481  
 de.info@redseafish.com

Red Sea Aquatics (GZ) Ltd  
 Block A3, No.33 Hongmian Road,  
 Xinhua Industrial Park,  
 Huadu District, Guangzhou City,  
 China, Postal code 510800  
 Tel: +86-020-6625 3828



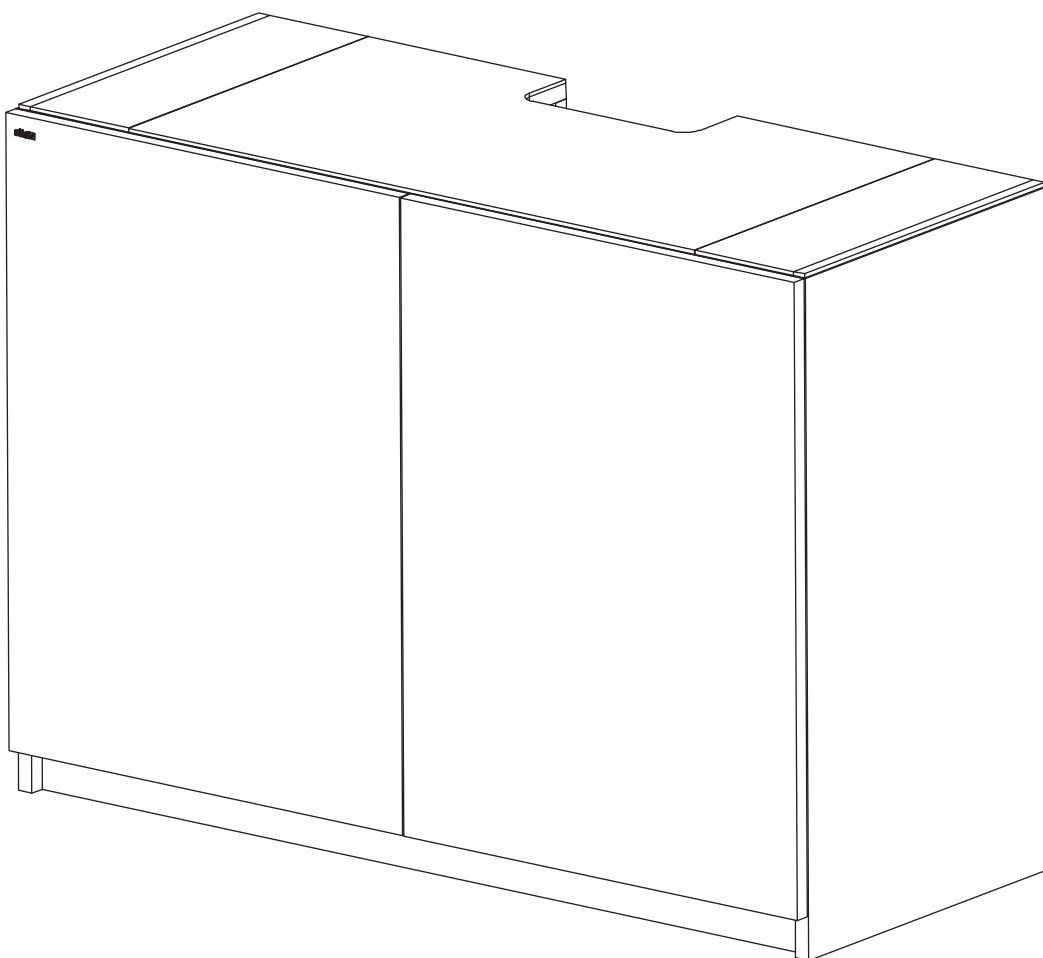


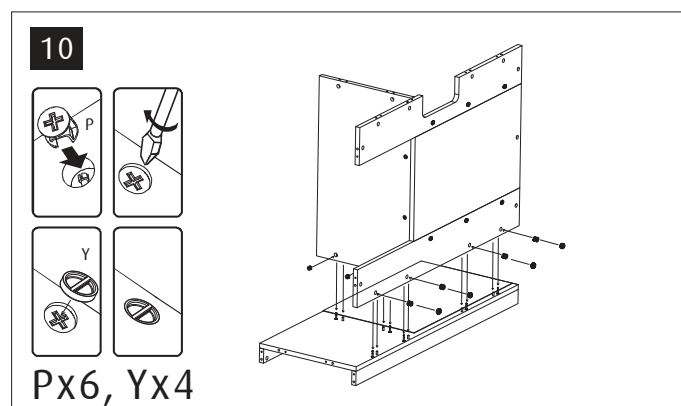
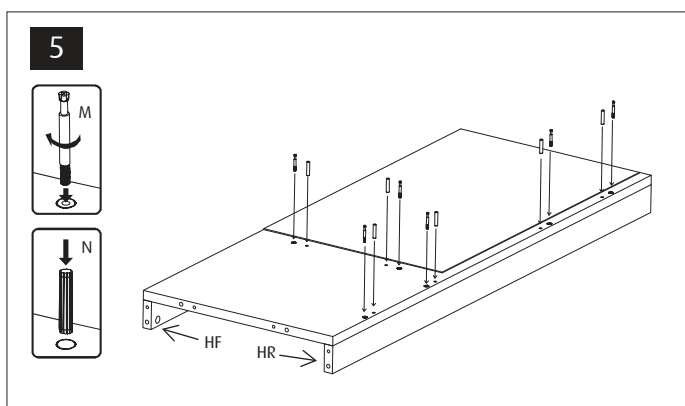
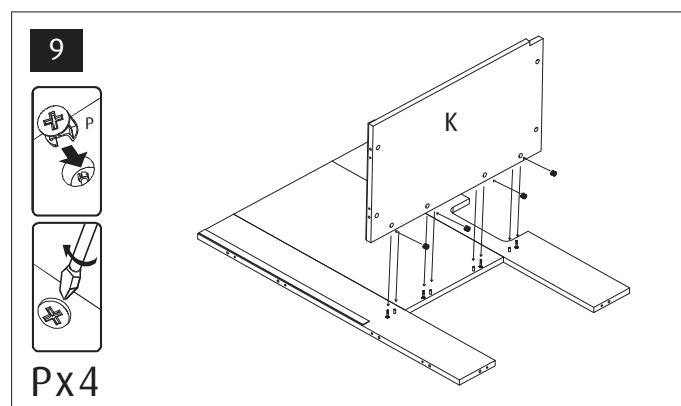
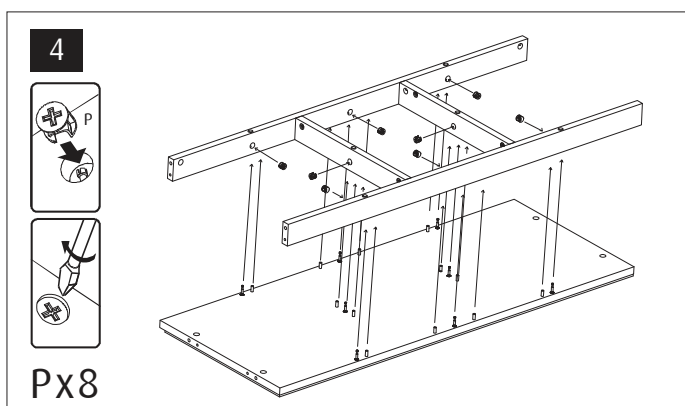
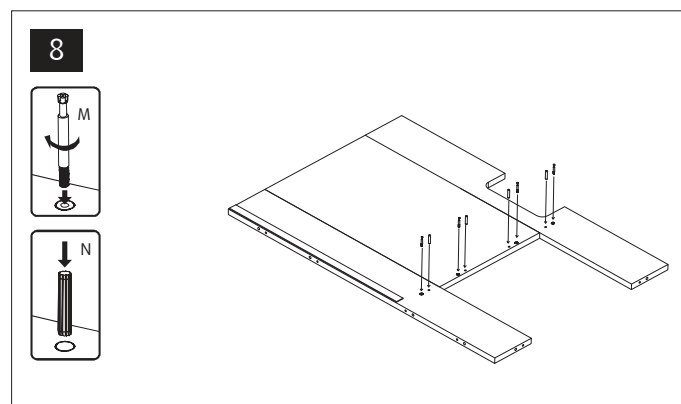
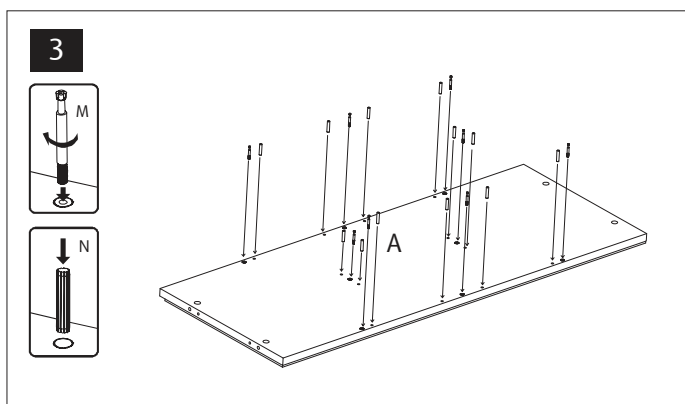
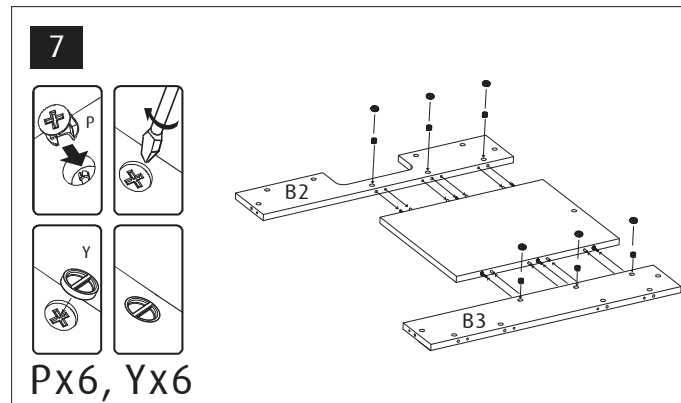
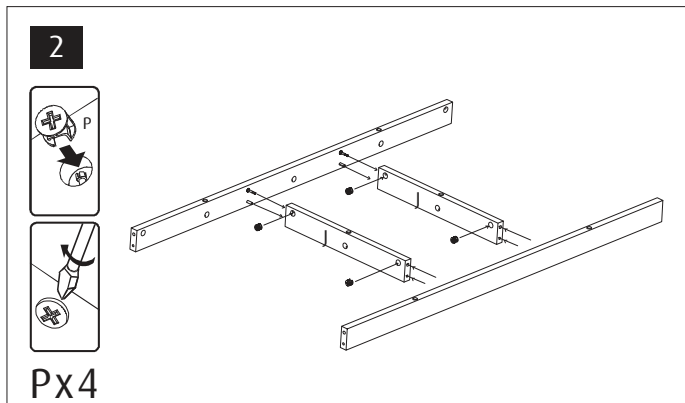
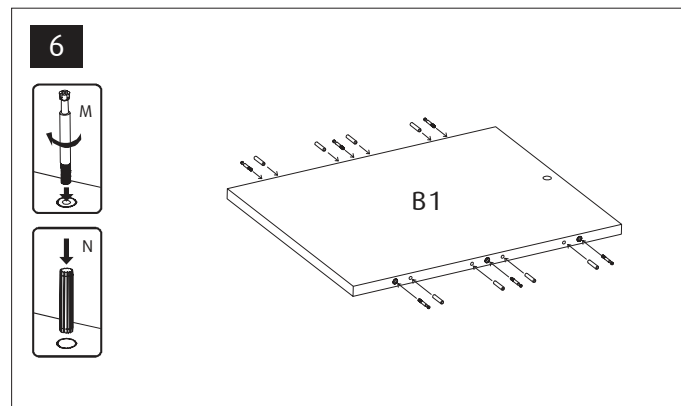
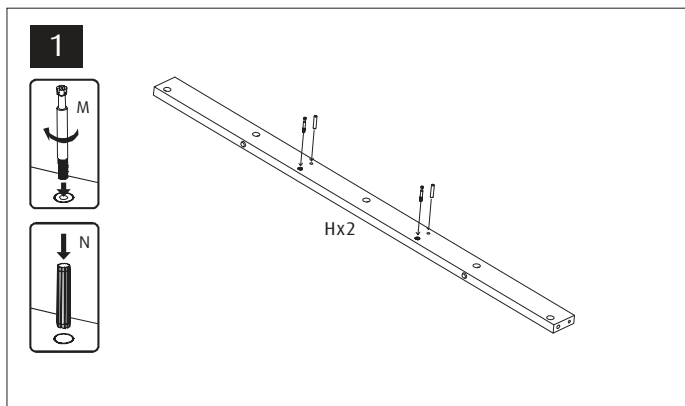
## 打印提示

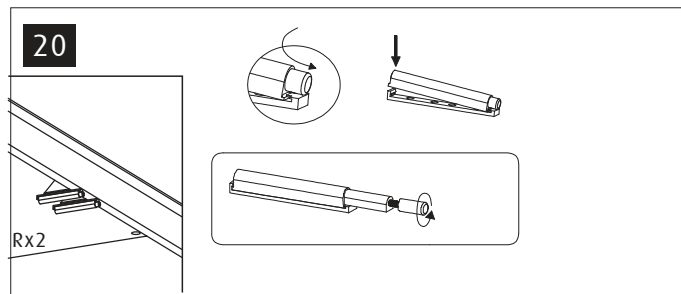
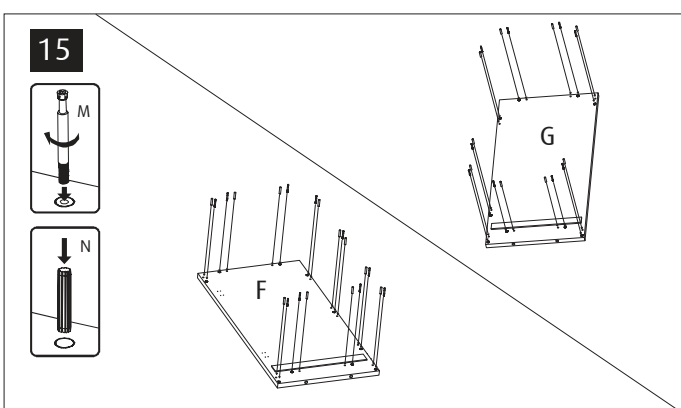
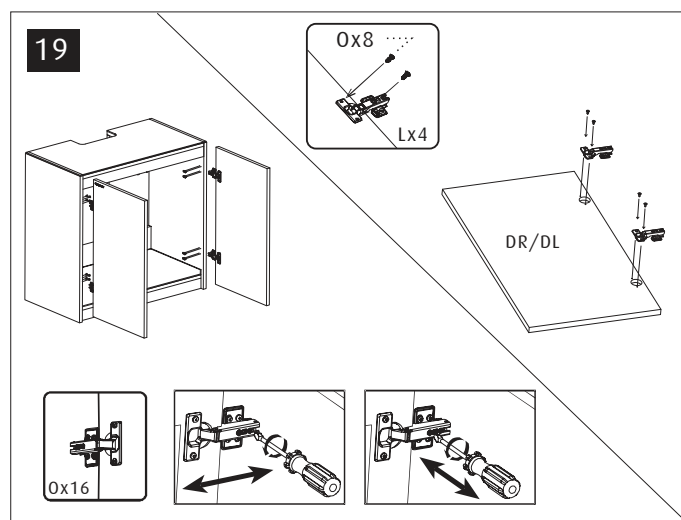
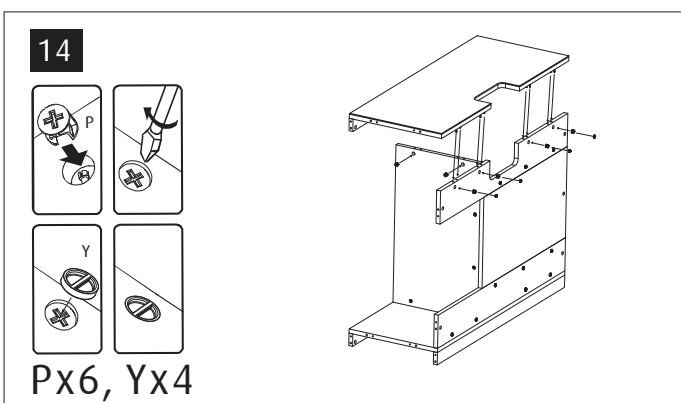
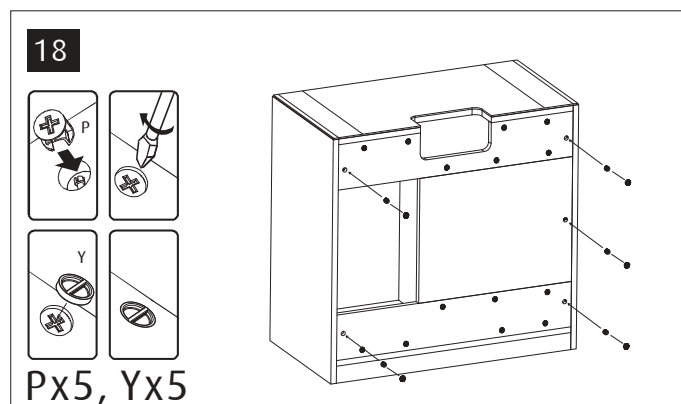
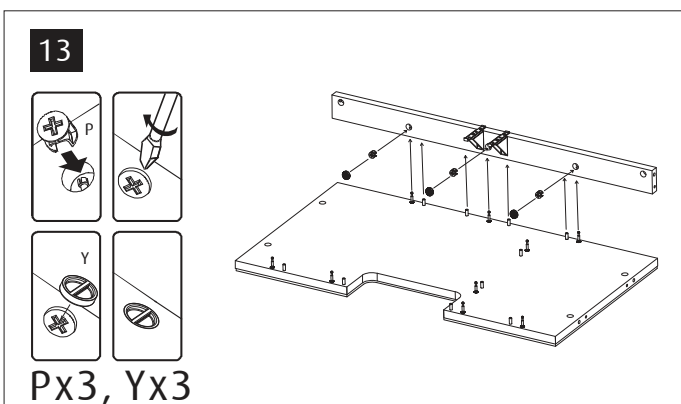
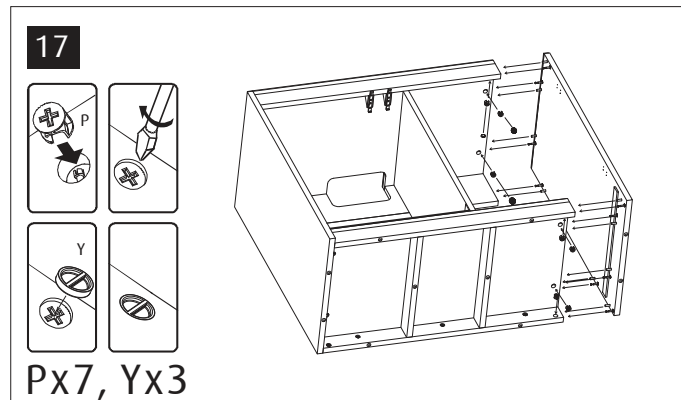
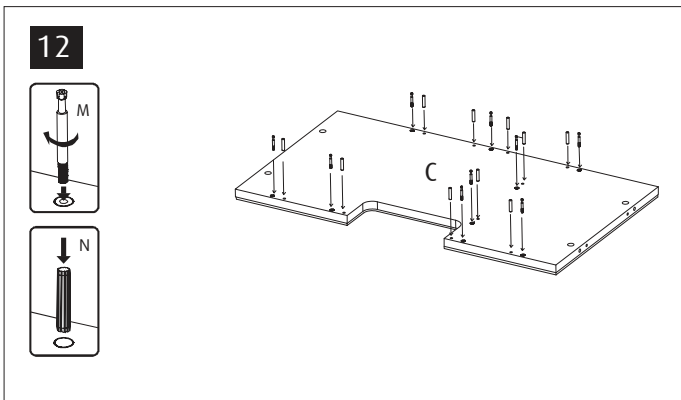
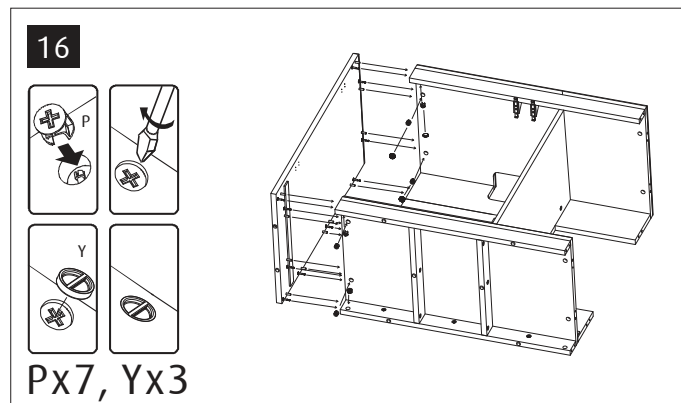
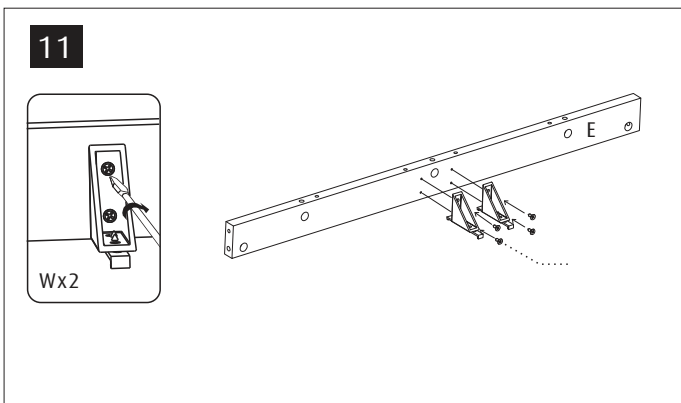
只打印底柜安装指南，打印页面38-41。

# Red Sea REEFER™

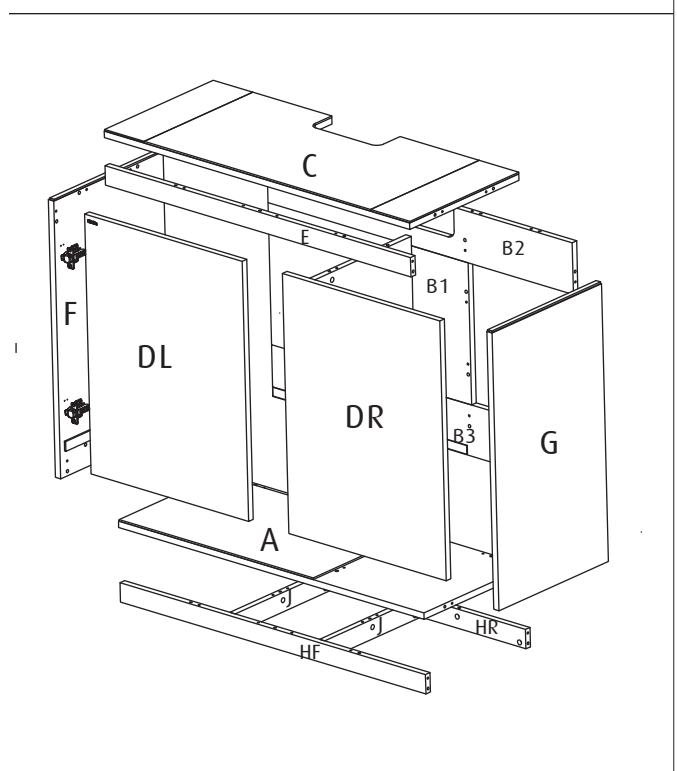
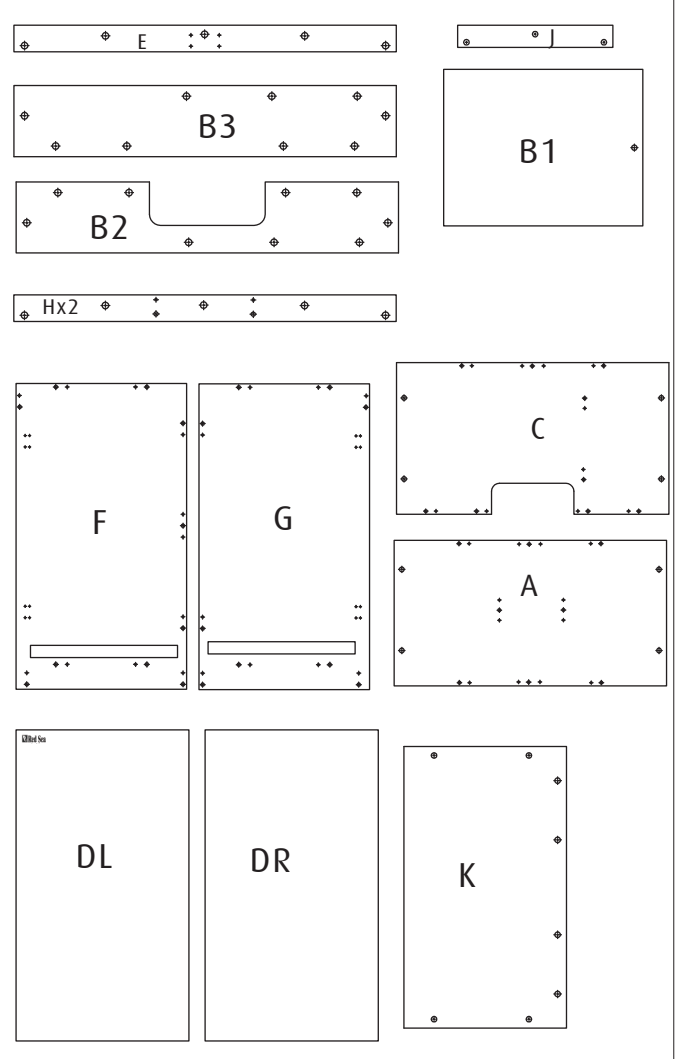
350/XL 425











L		x 4
M		x 56
N		x 62
O	ST3.9 x16	x 24
P		x 56
R		x 2
Y		x 28
T	ST3.5 x14	x 4
W		x 2

#5348 REEFER 350\_v15A

Europe  
 Red Sea Europe  
 ZA de la St-Denis  
 F-27130 Verneuil s/Avre,  
 France  
 Tel: (33) 2 32 37 71 37  
 info@redseaeurope.com

UK & Ireland  
 Red Sea Aquatics (UK) Ltd  
 PO Box 1237  
 Cheddar, BS279AG  
 Tel: +44 (0) 203 3711437  
 Fax: +44 (0) 800 0073169  
 uk.info@redseafish.com

U.S.A  
 Red Sea U.S.A  
 18125 Ammi Trail  
 Houston, TX 77060  
 Tel: +1-888-RED-SEA9  
 redseainfo@redseafish.com

Germany & Austria  
 Red Sea Deutschland  
 Prinzenallee 7 (Prinzenpark)  
 40549 Düsseldorf  
 Tel: 0211-52391 481  
 de.info@redseafish.com

Red Sea Aquatics (GZ) Ltd  
 Block A3, No.33 Hongmian Road,  
 Xinhua Industrial Park,  
 Huadu District, Guangzhou City,  
 China, Postal code 510800  
 Tel: +86-020-6625 3828





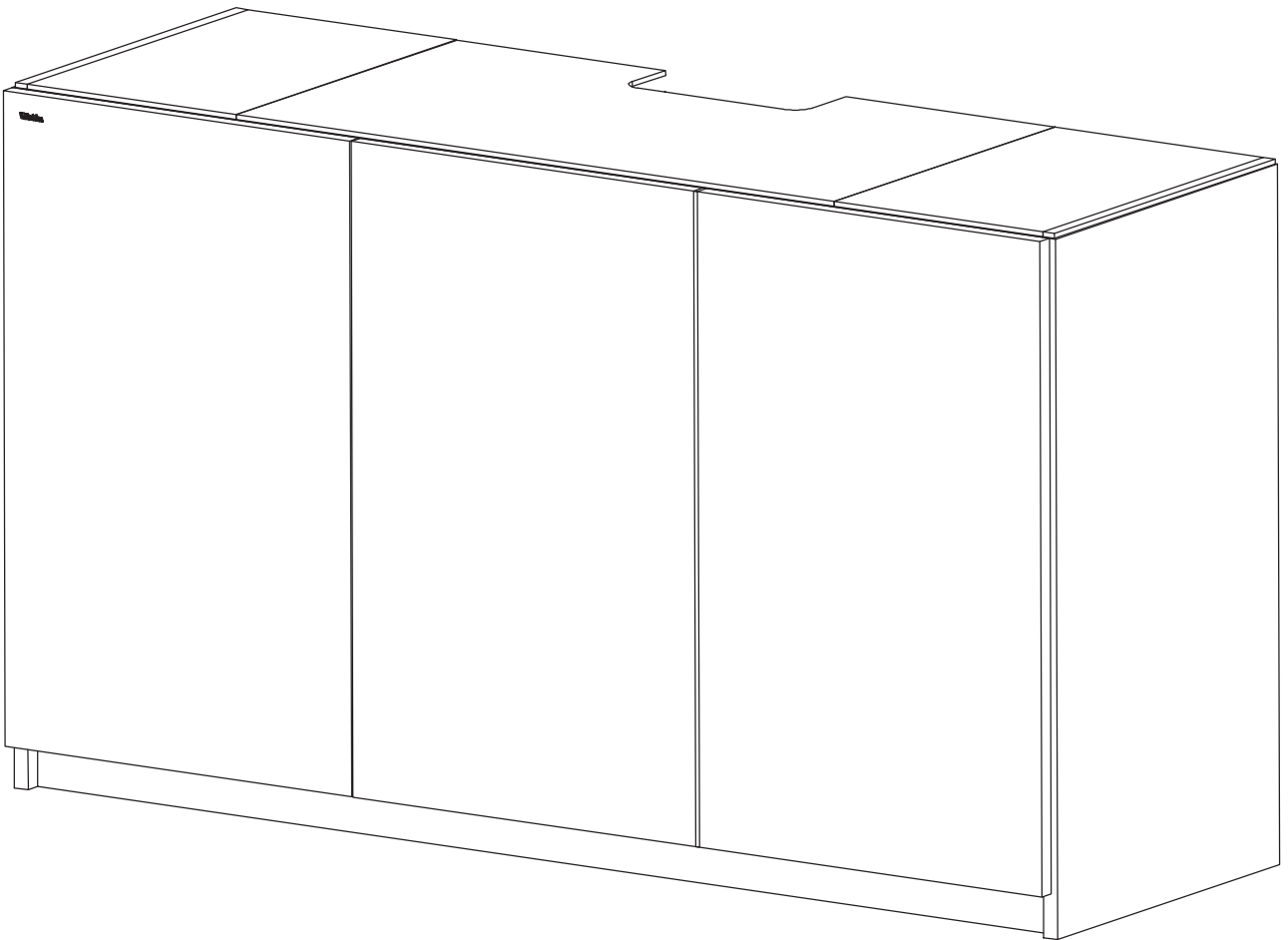
## 打印提示

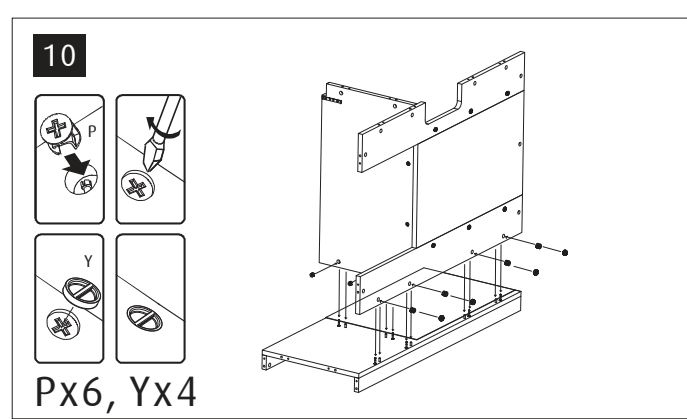
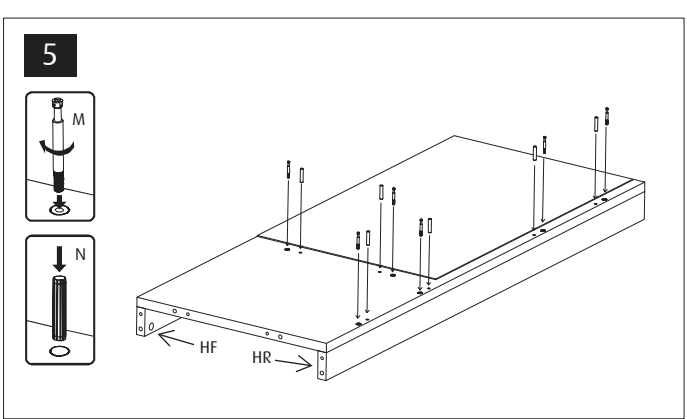
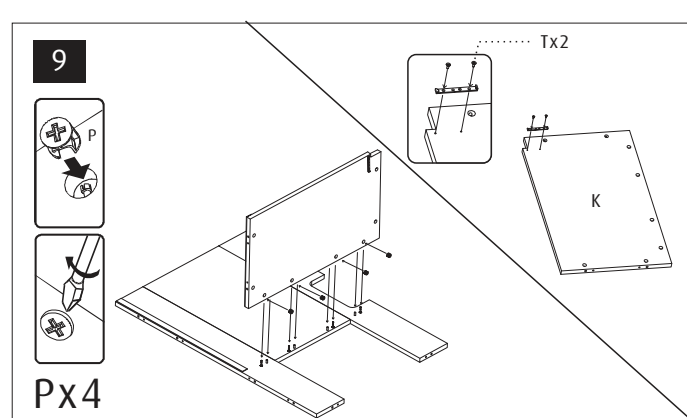
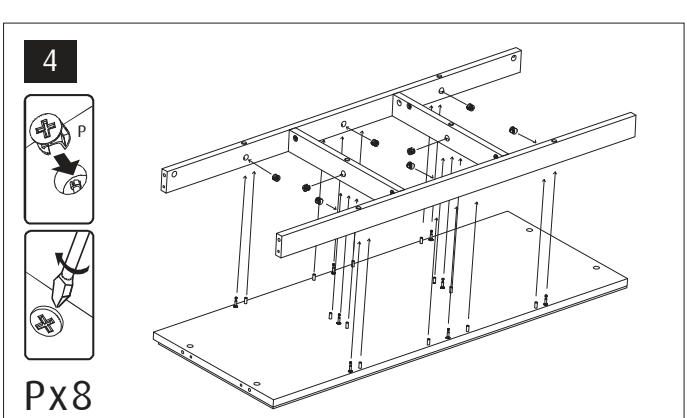
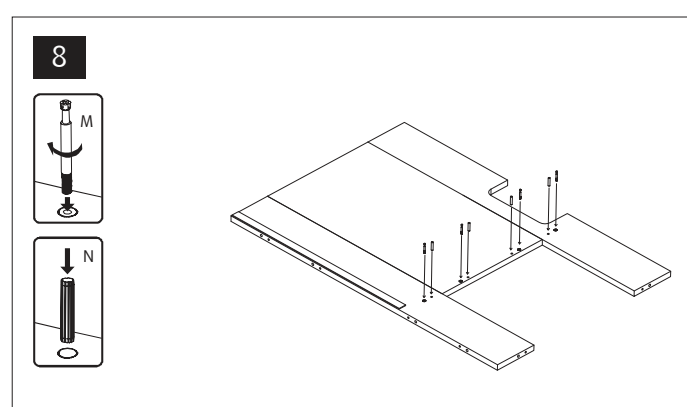
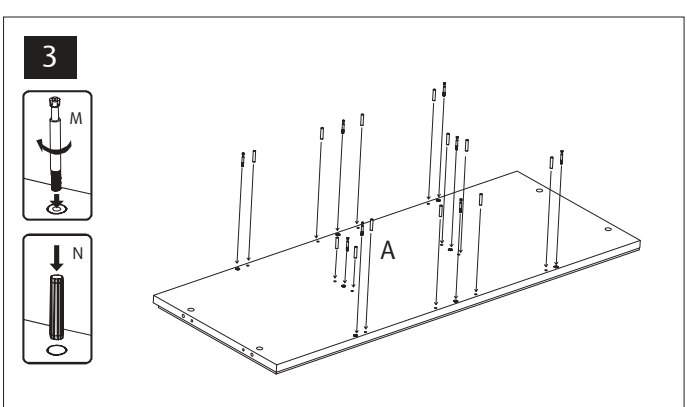
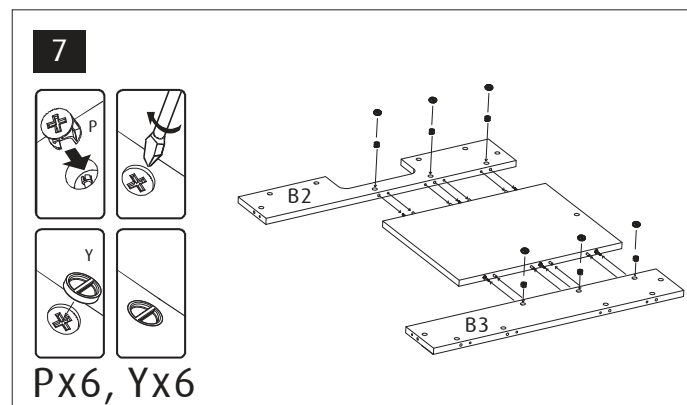
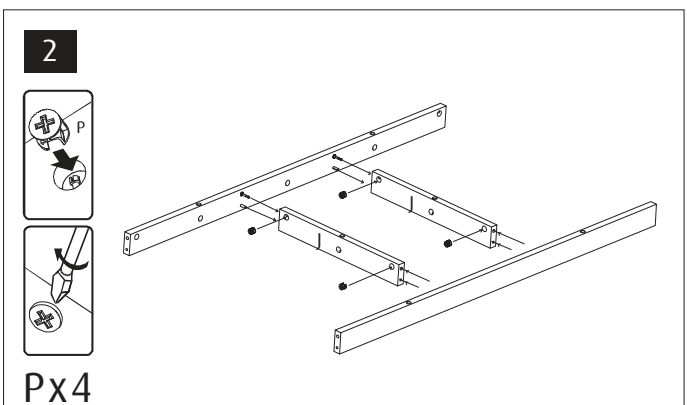
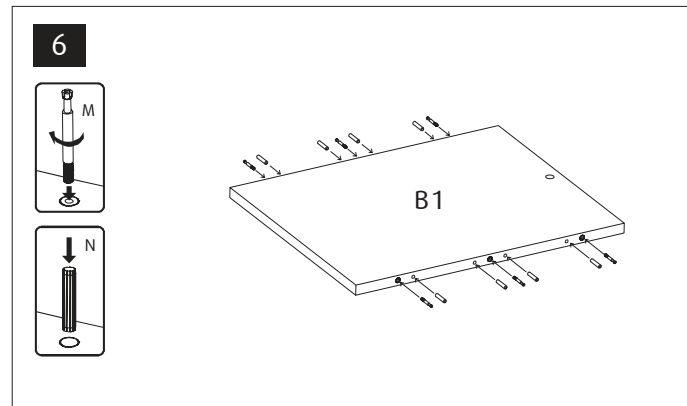
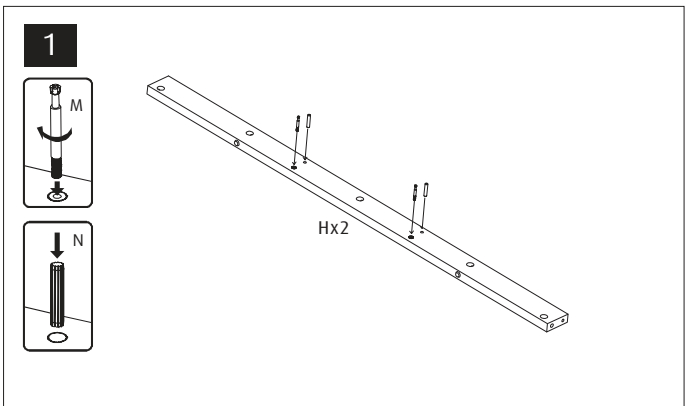
只打印底柜安装指南，打印页面42-45。

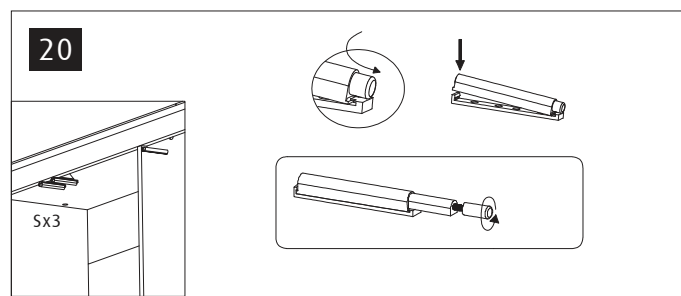
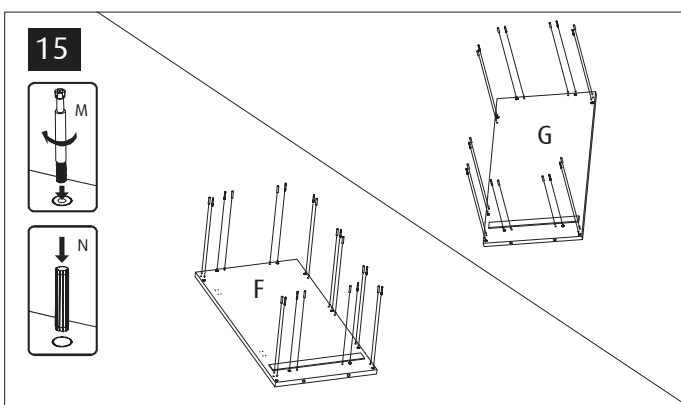
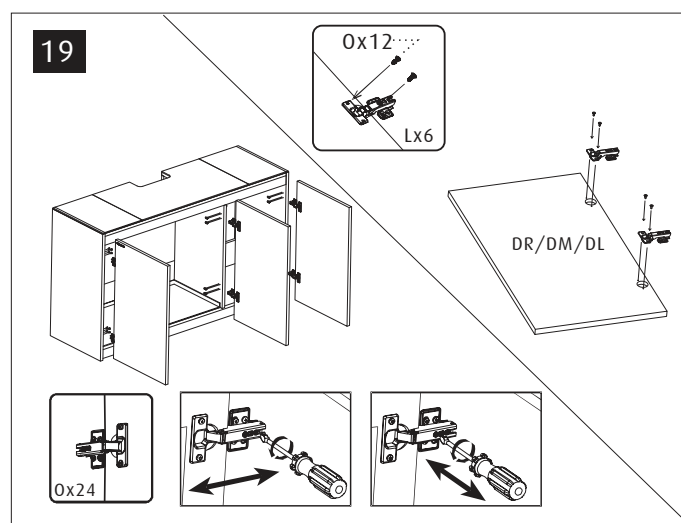
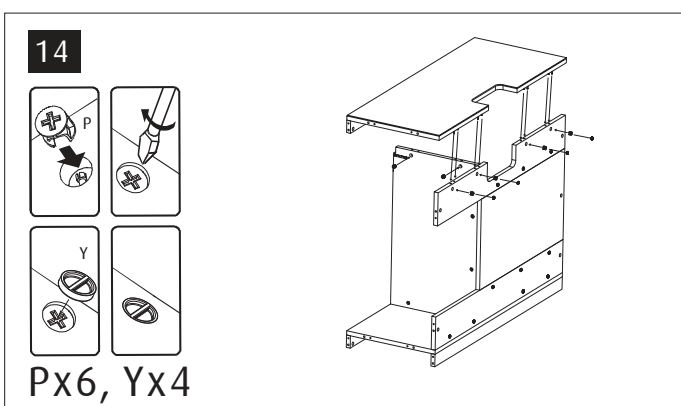
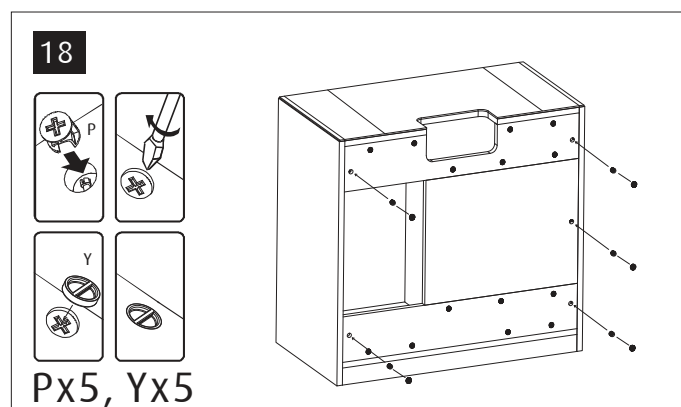
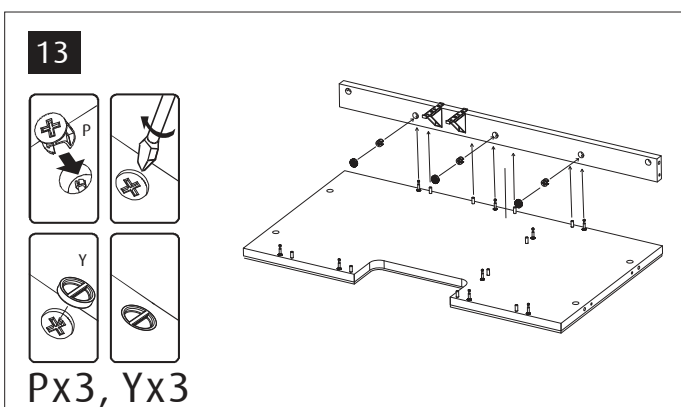
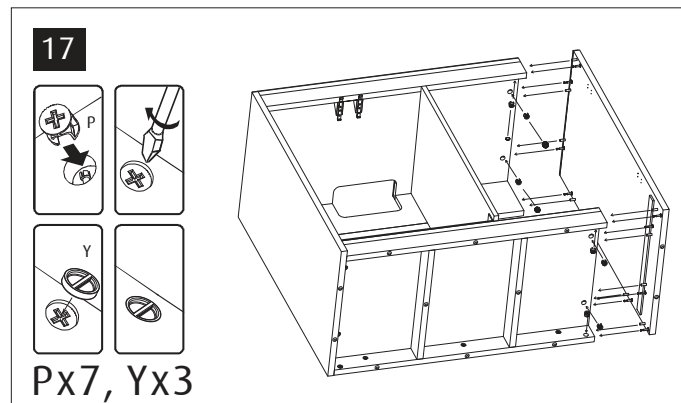
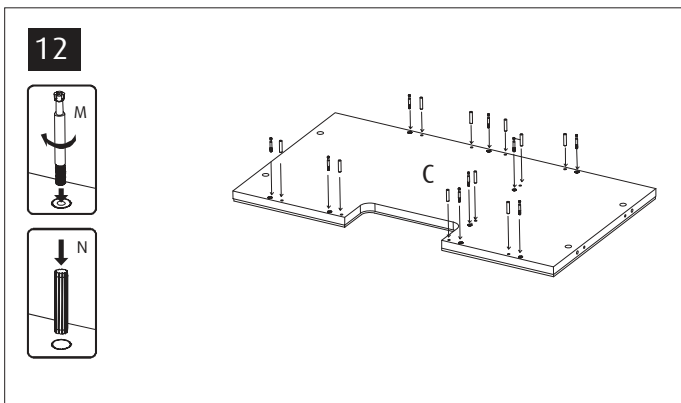
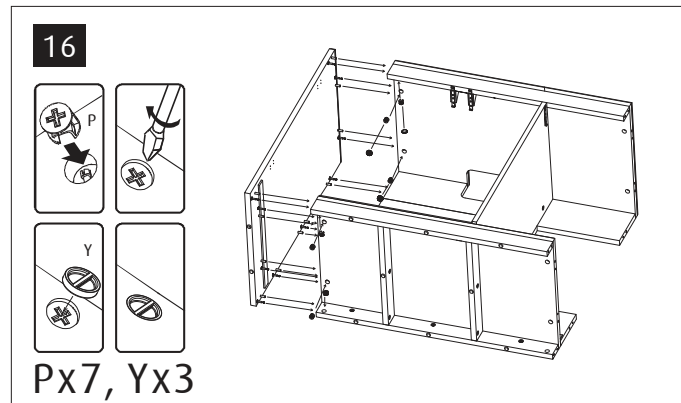
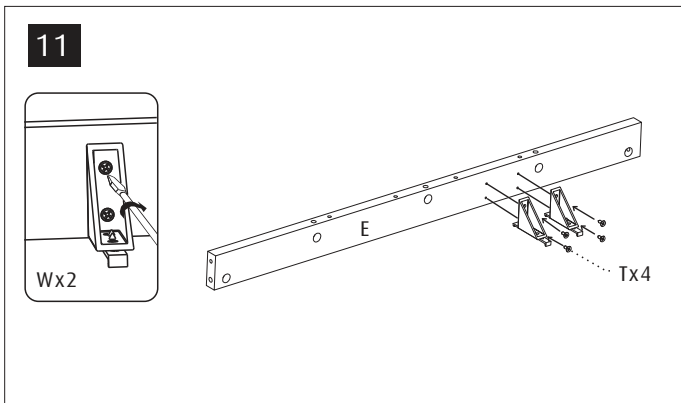
# Red Sea REEFER™

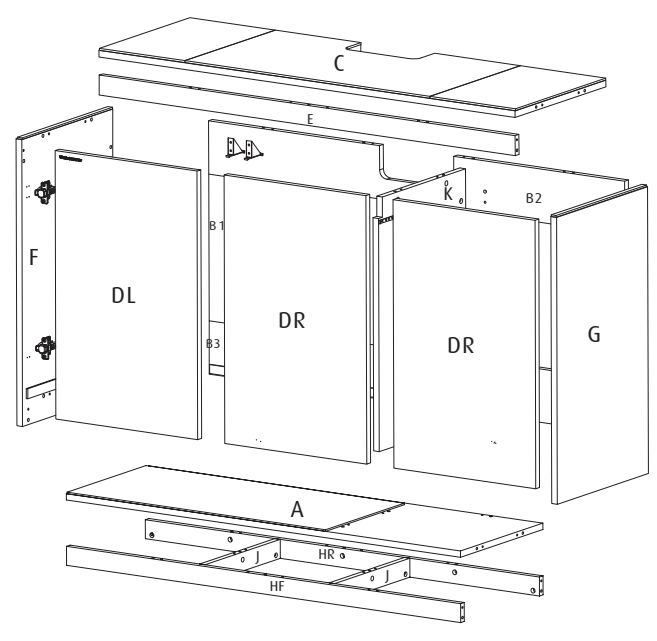
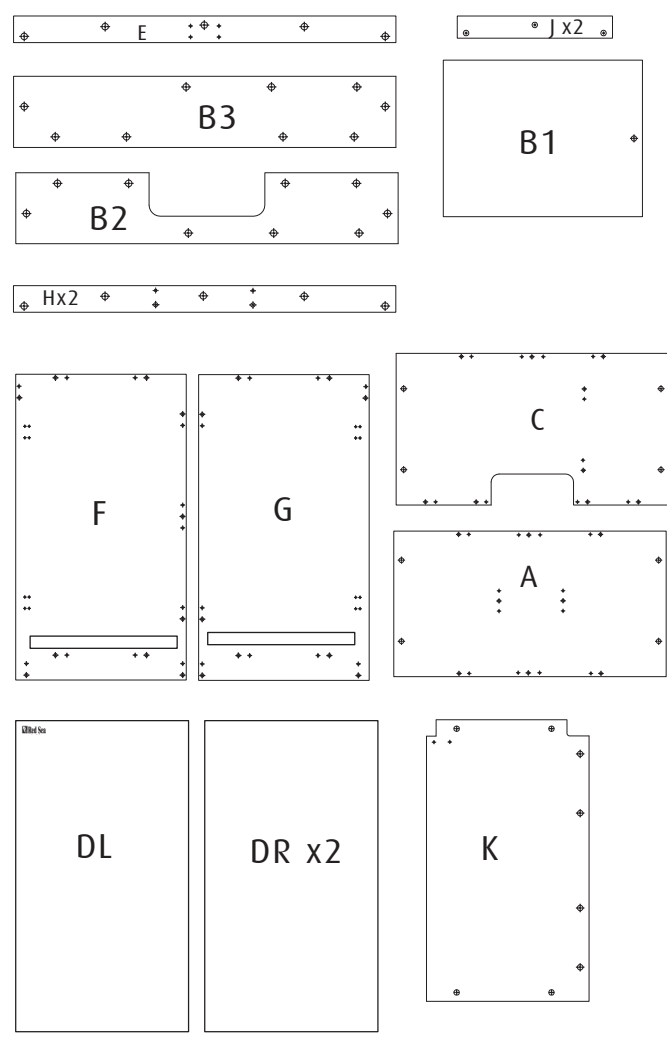
## 450/XL 525

---









L		x6
M		x56
N		x62
O	ST3.9 x16	x36
P		x56
R		x1
S		x3
Y		x28
T	ST3.5 x14	x6
W		x2

#5349 REEFER 450\_v15A

Europe  
 Red Sea Europe  
 ZA de la St-Denis  
 F-27130 Verneuil s/Avre,  
 France  
 Tel: (33) 2 32 37 71 37  
 info@redseaeurope.com

UK & Ireland  
 Red Sea Aquatics (UK) Ltd  
 PO Box 1237  
 Cheddar, BS279AG  
 Tel: +44 (0) 203 3711437  
 Fax: +44 (0) 800 0073169  
 uk.info@redseafish.com

U.S.A  
 Red Sea U.S.A  
 18125 Ammi Trail  
 Houston, TX 77060  
 Tel: +1-888-RED-SEA9  
 redseainfo@redseafish.com

Germany & Austria  
 Red Sea Deutschland  
 Prinzenallee 7 (Prinzenpark)  
 40549 Düsseldorf  
 Tel: 0211-52391 481  
 de.info@redseafish.com

Red Sea Aquatics (GZ) Ltd  
 Block A3, No.33 Hongmian Road,  
 Xinhua Industrial Park,  
 Huadu District, Guangzhou City,  
 China, Postal code 510800  
 Tel: +86-020-6625 3828





## 打印提示

只打印底柜安装指南，打印页面46-57。

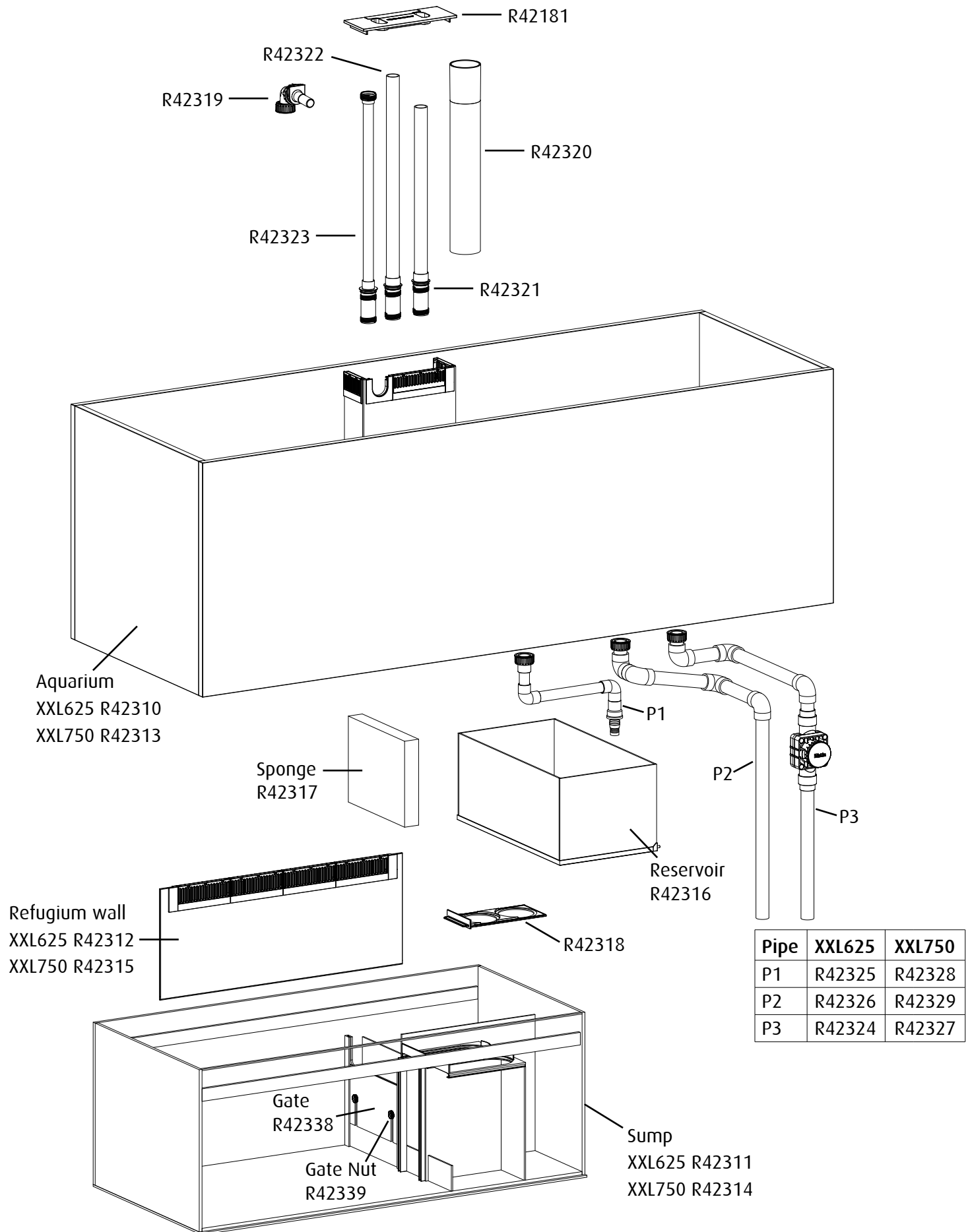
# Red Sea REEFER™

XXL 625/XXL 750

---

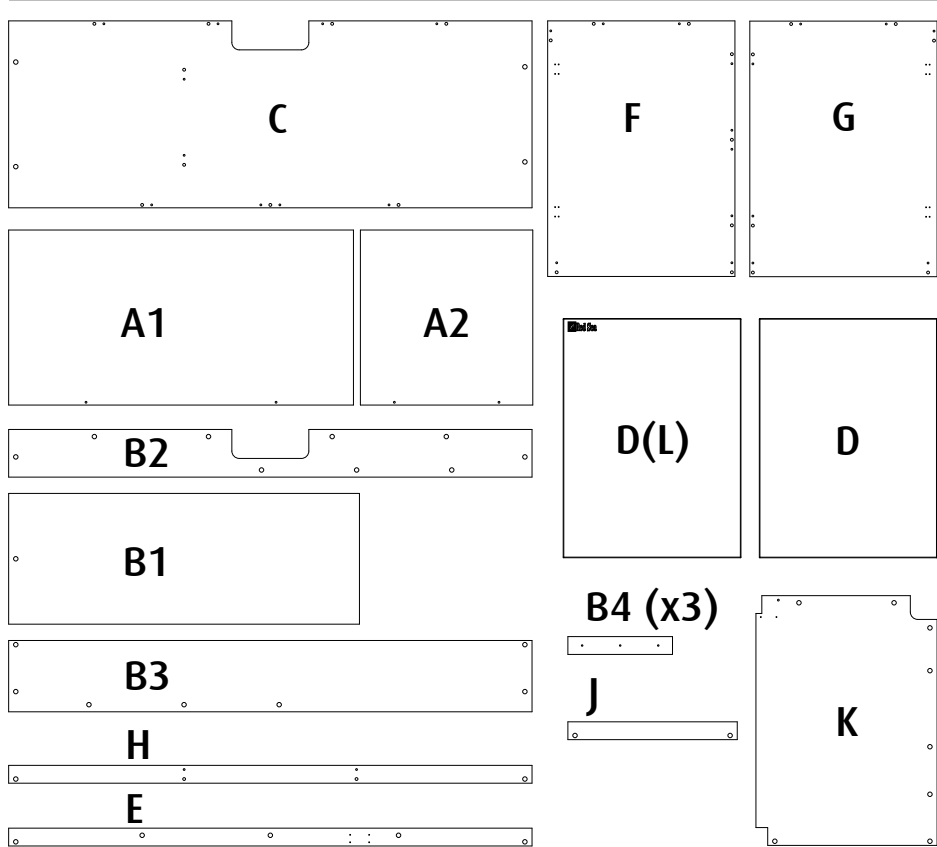
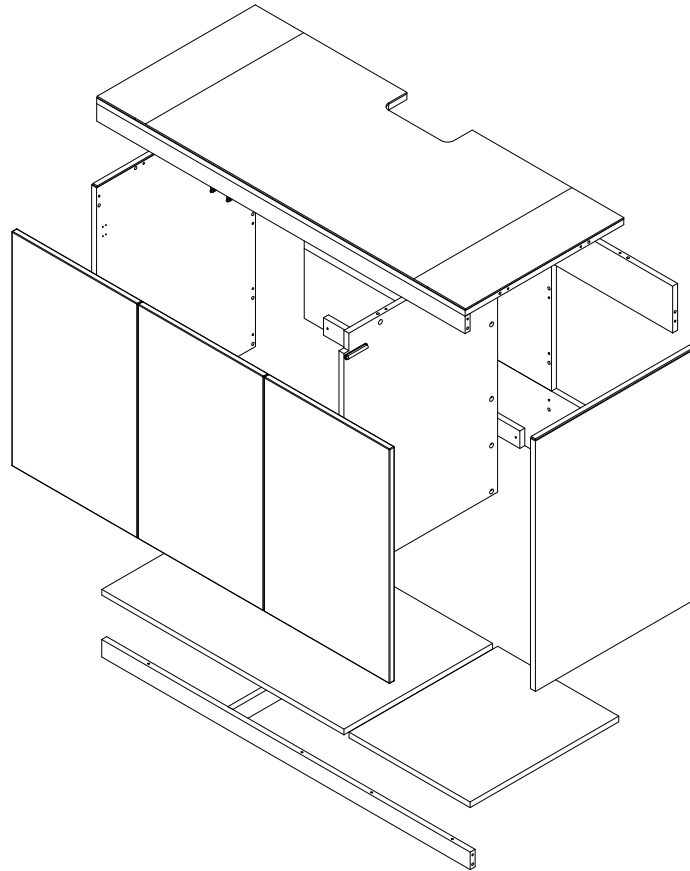
Aquarium & Cabinet Assembly Manual

# Aquarium Water Management System



Pipe	XXL625	XXL750
P1	R42325	R42328
P2	R42326	R42329
P3	R42324	R42327

Cabinet

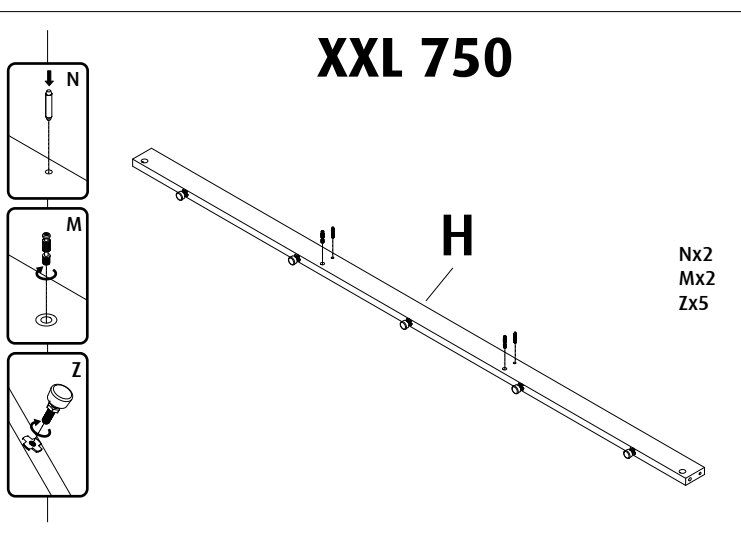
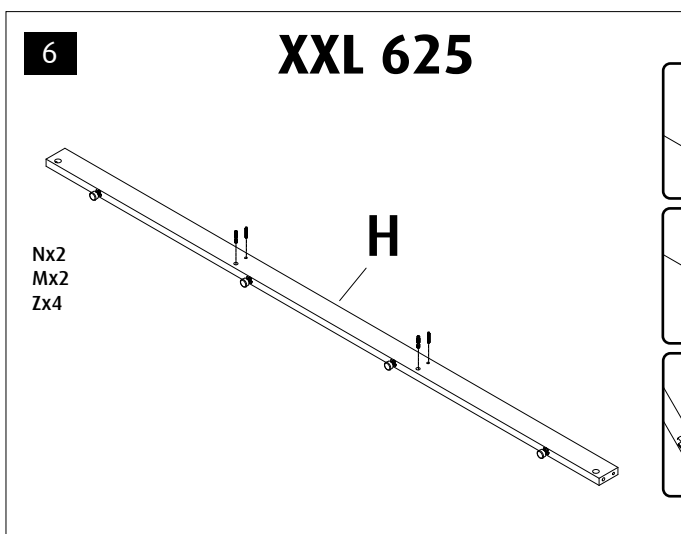
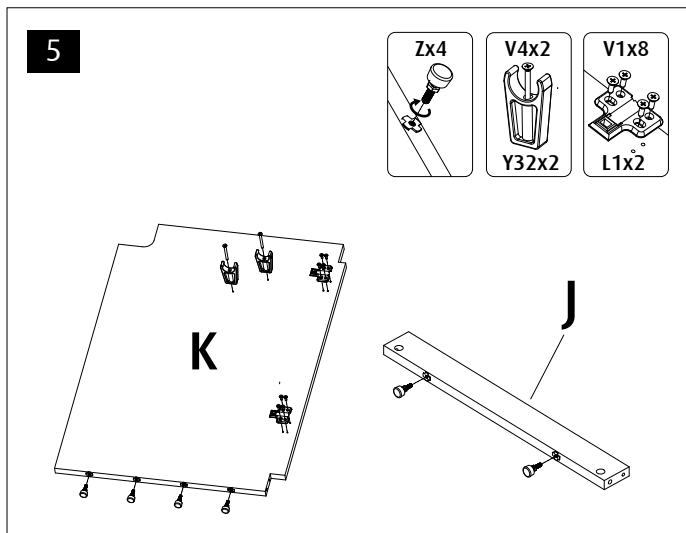
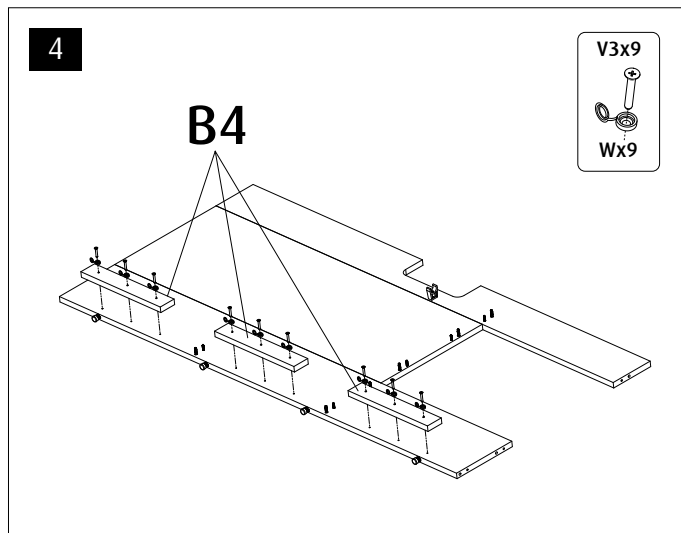
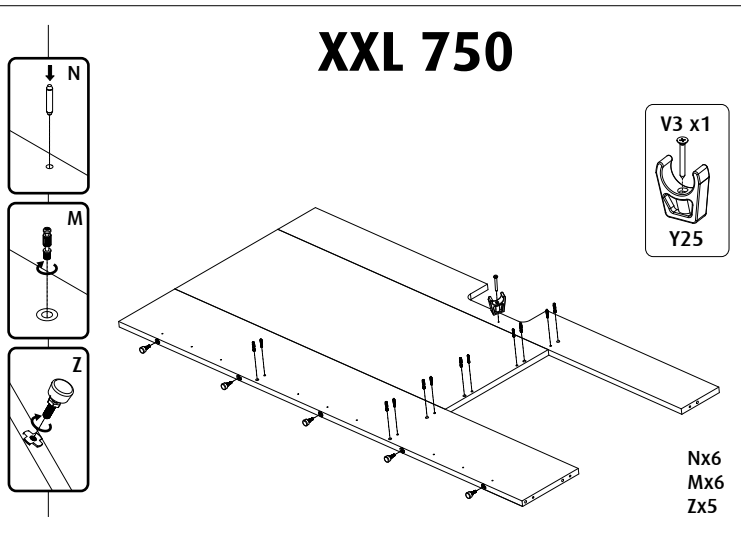
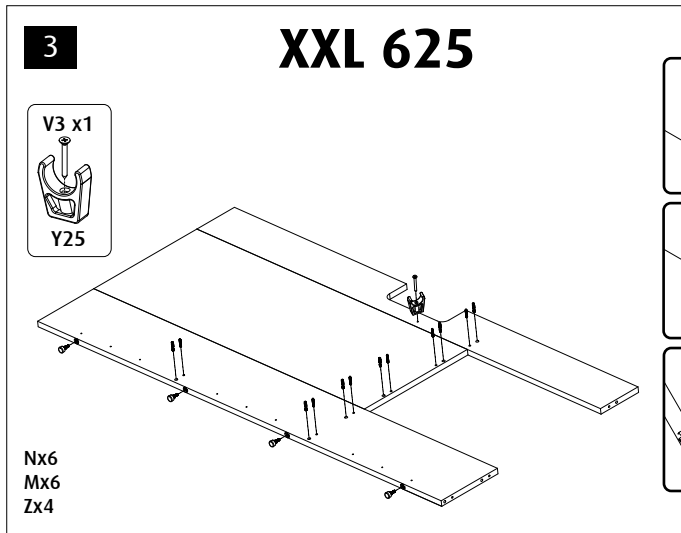
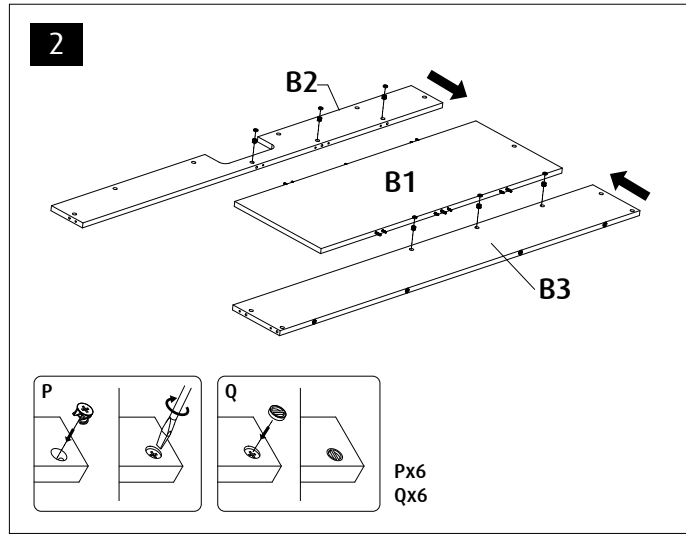
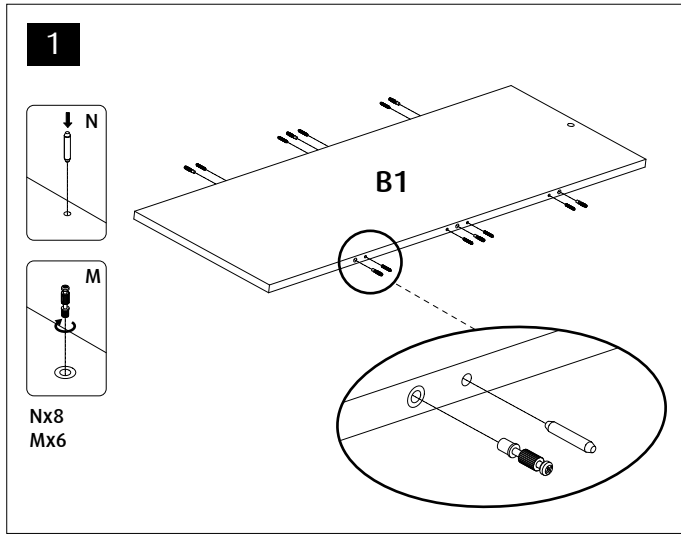


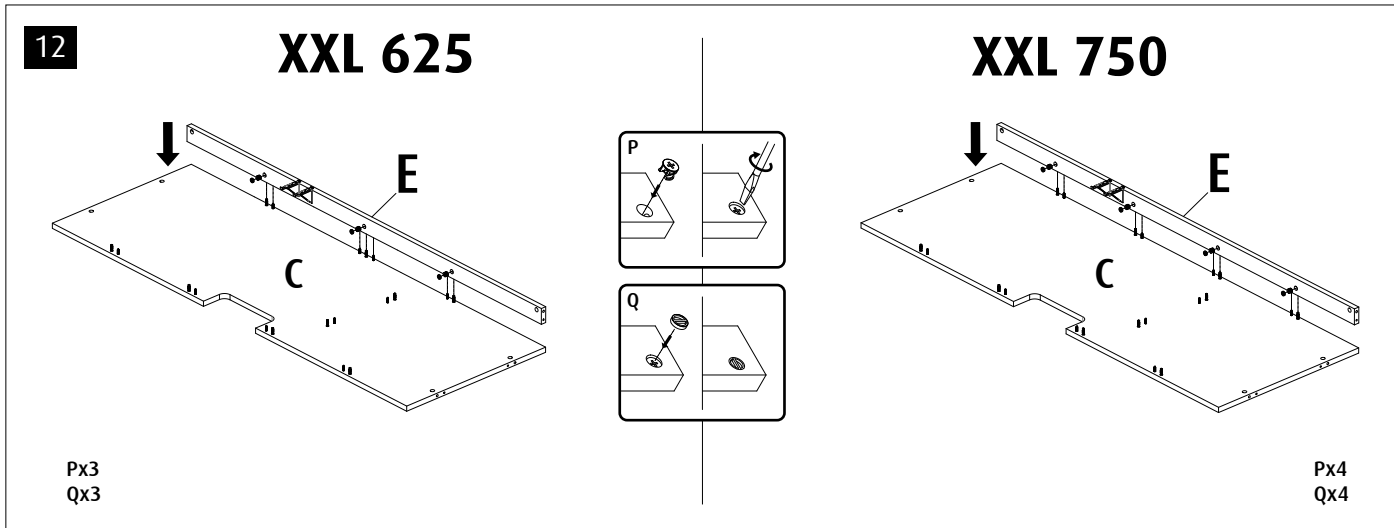
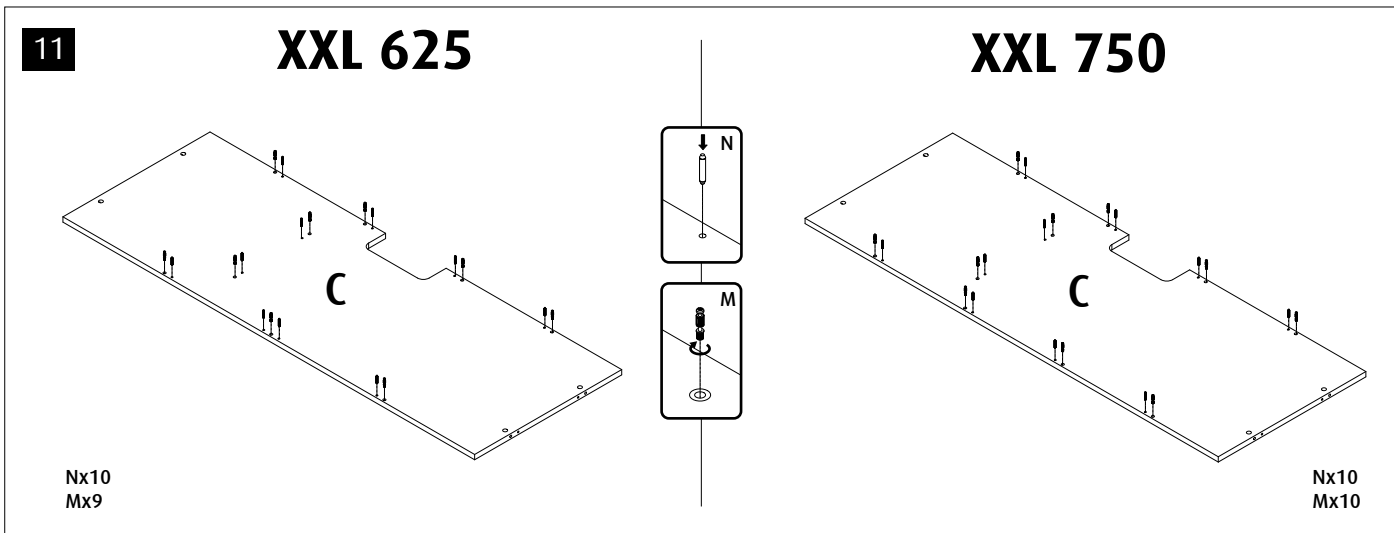
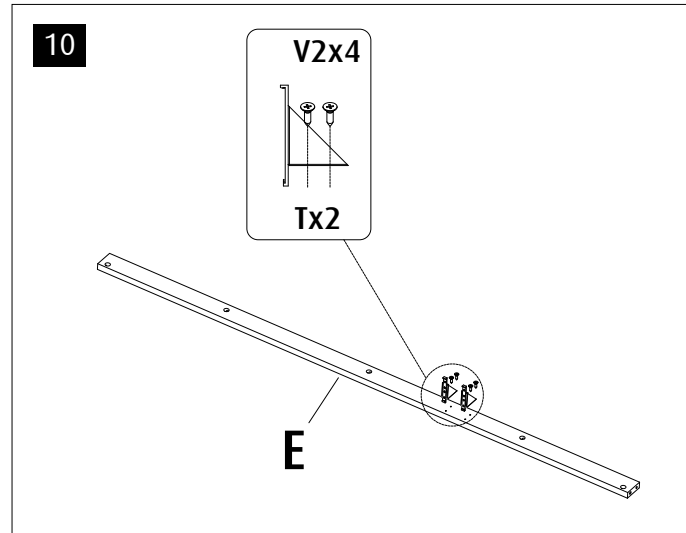
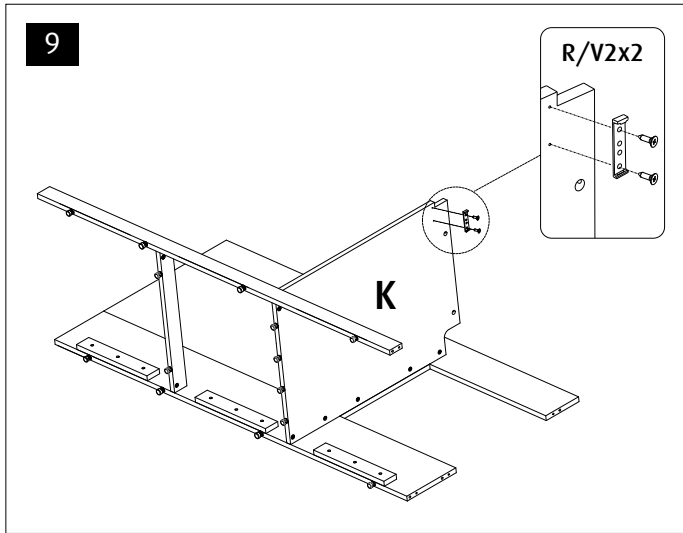
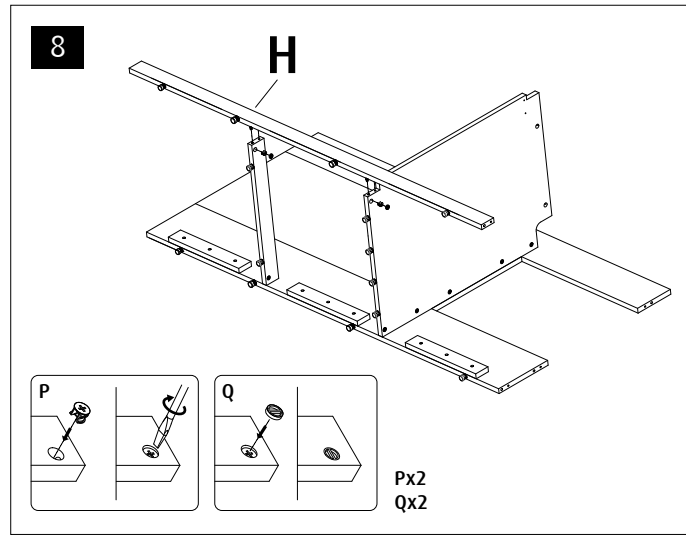
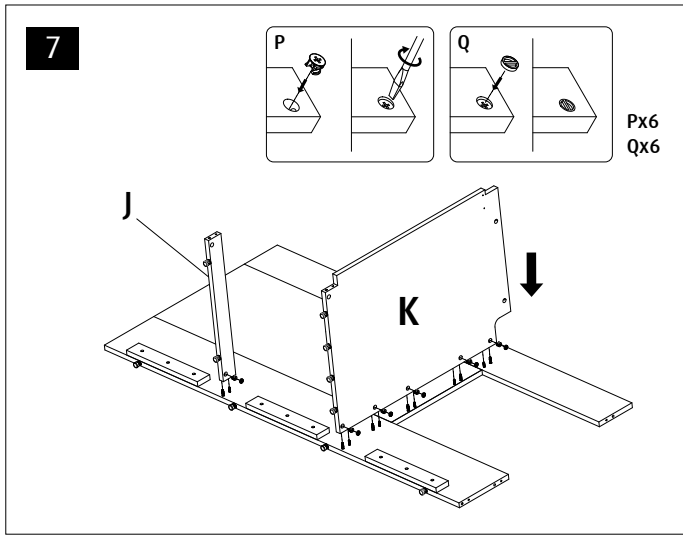
		625	750
L2		6	
L1			
N		46	
M		38	39
P		38	39
Q		38	39
R		1	
S		3	
T		2	
V1	ST4x16	36	
V2	ST3.5x14	6	
V3	ST5x35	10	
V4	ST5x60	2	
W		9	
Y32		2	
Y25		1	
Z		22	24

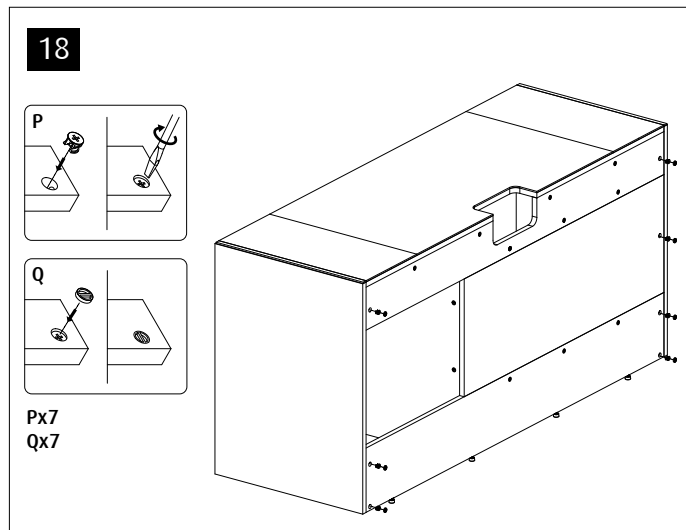
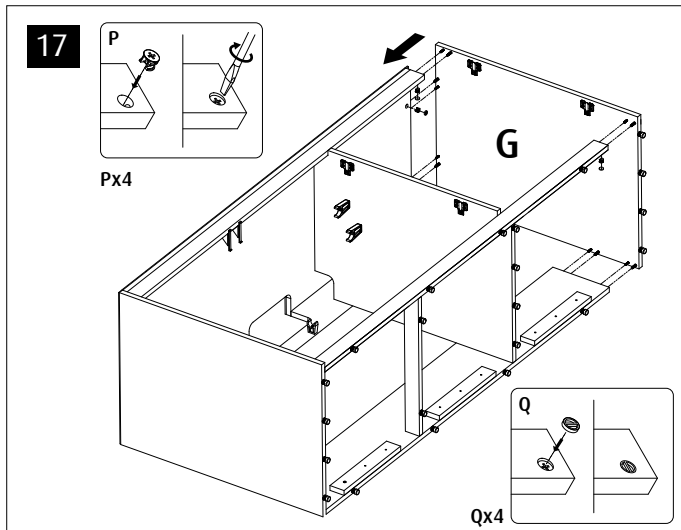
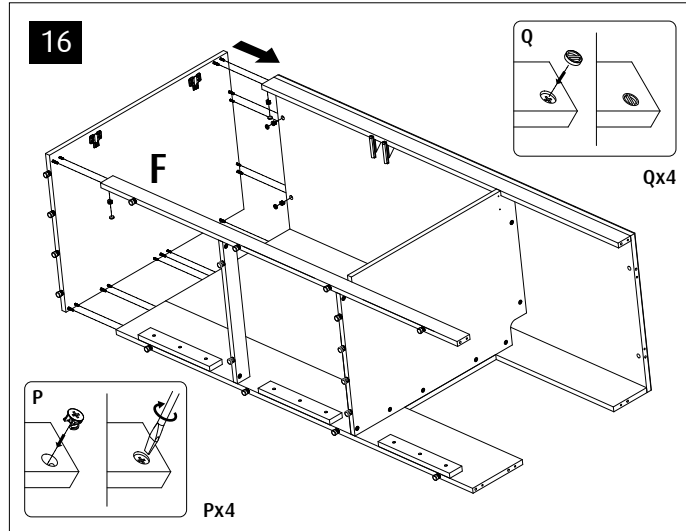
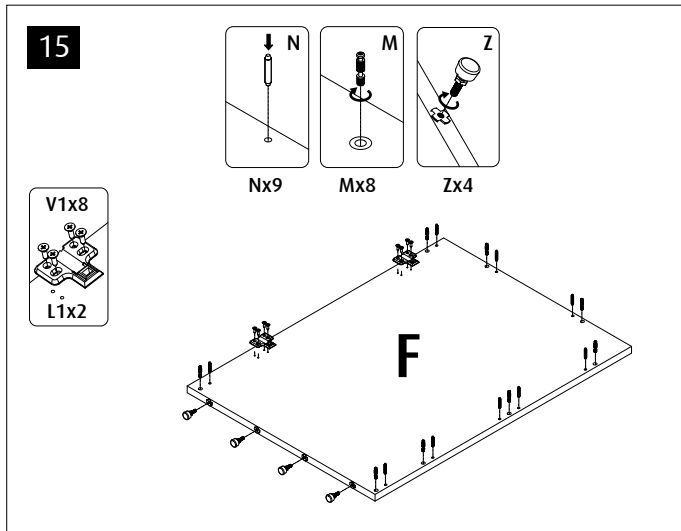
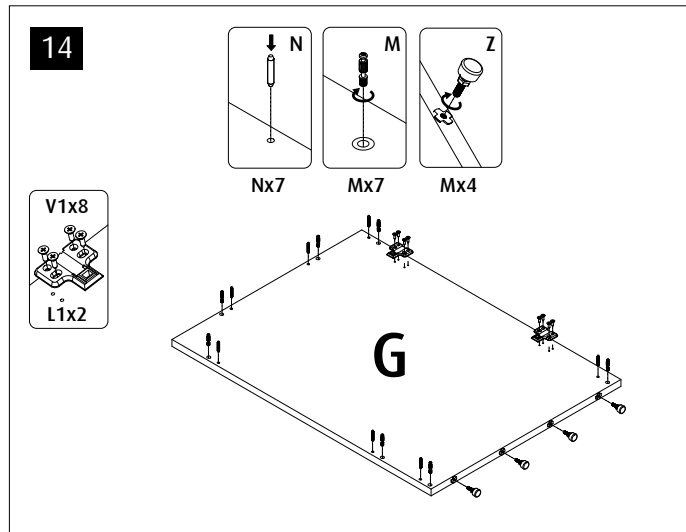
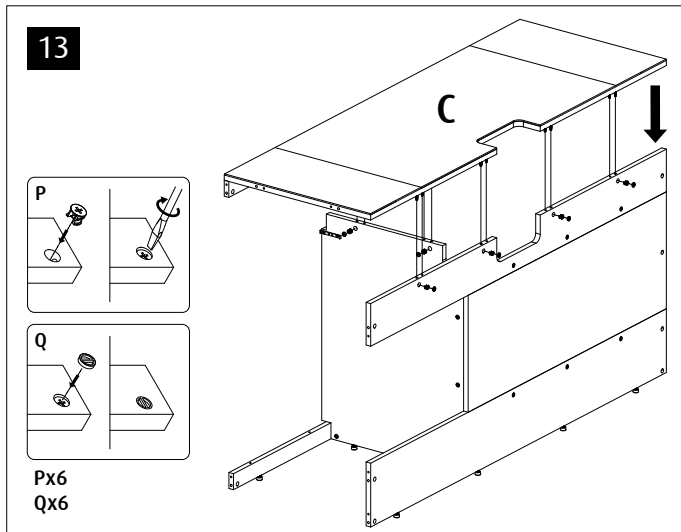
XXL	625	750	Part Description
A1	6138B	6238B	Cabinet Bottom Sump
A2	6139B	6239B	Cabinet Bottom Chiller
B1	5304BP	6234B	Cabinet Rear Middle
B2	5305BP	6235B	Cabinet Rear Top
B3	5306BP	6236B	Cabinet Rear Bottom
B4	6132B	6240B	Cabinet Rear Bottom Support
C	6137B	6237B	Cabinet Top

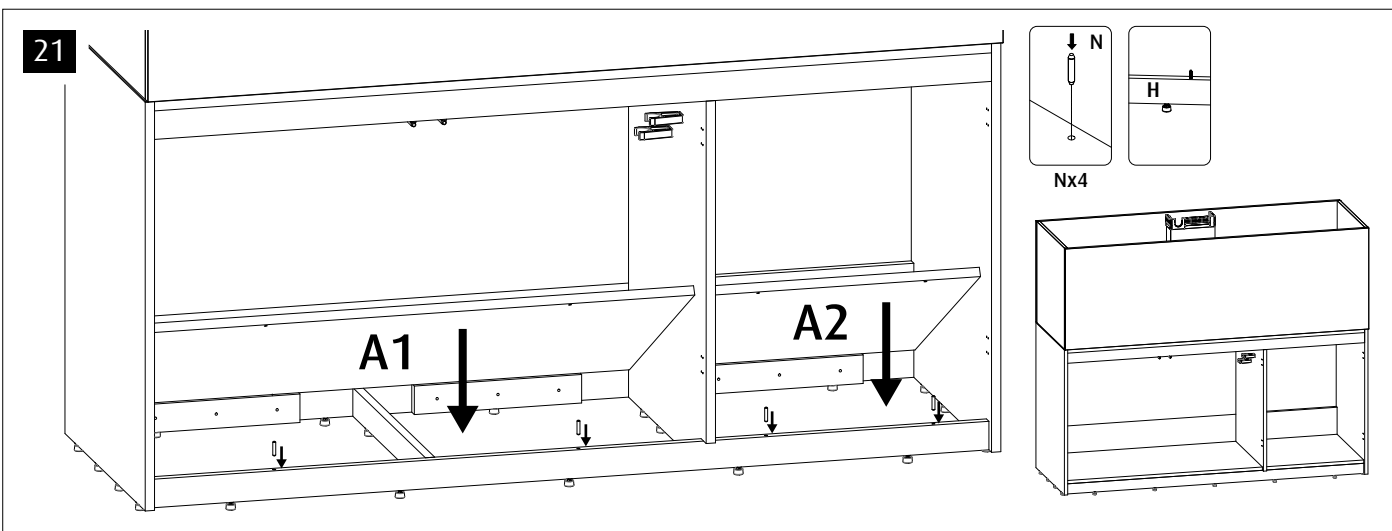
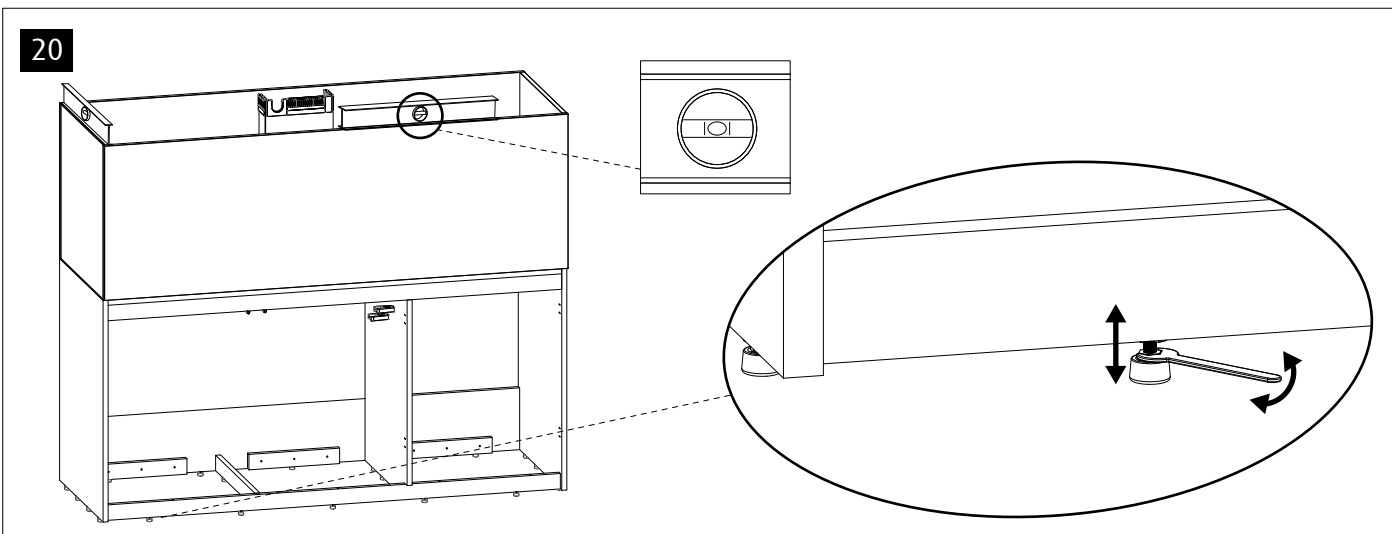
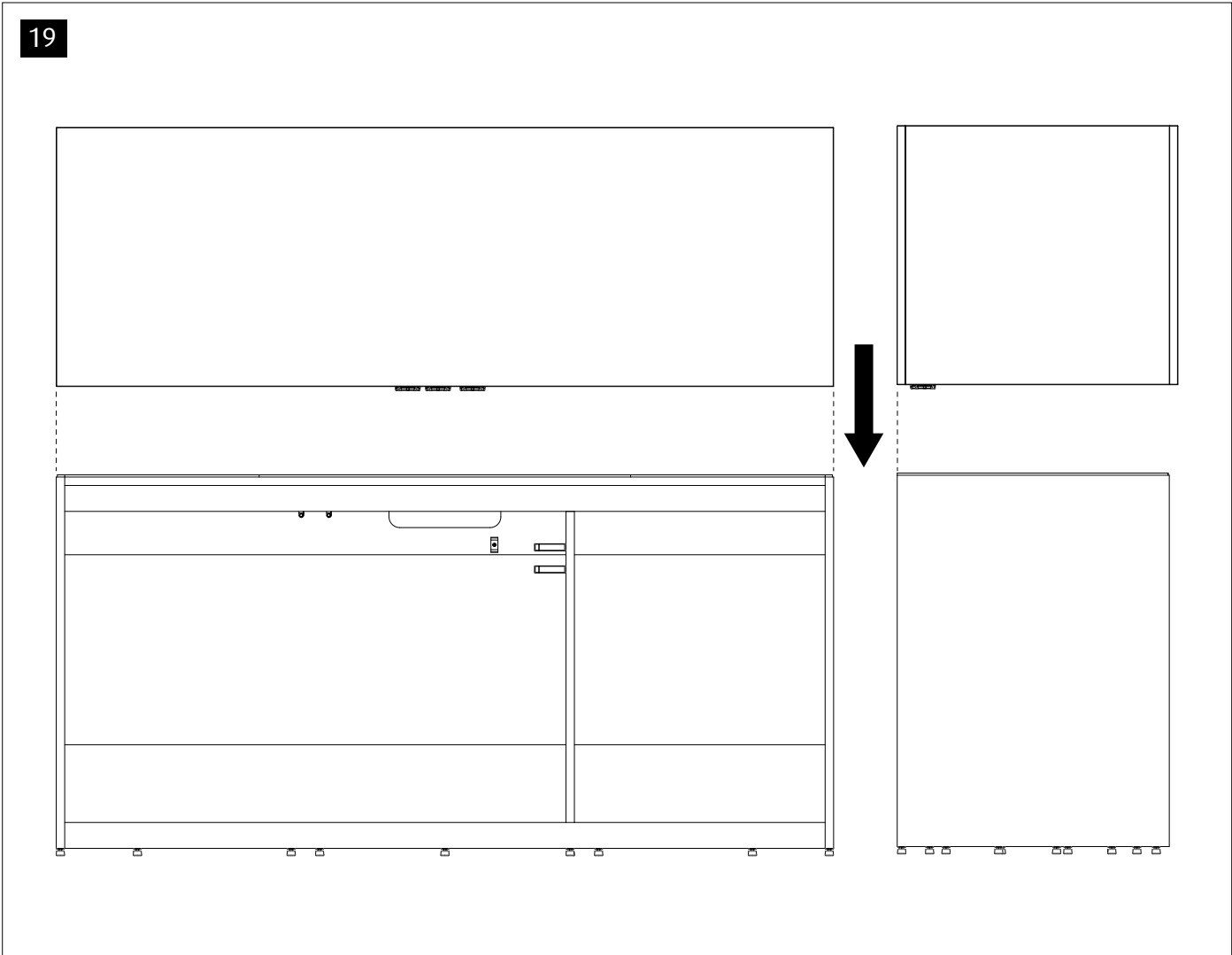
XXL	625	750	Part Description
D	5307 - B/W	5275 - B/W	Cabinet Door - Black/White
E	5309BP	6232B	Cabinet Front Upper
F	6133 - B/W		Cabinet Side Left
G	6134 - B/W		Cabinet Side Right
H	5303P - B/W	6233 - B/W	Cabinet Front Lower - Black/White
J	6135B		Cabinet Base Support
K	6136B		Cabinet Internal Wall

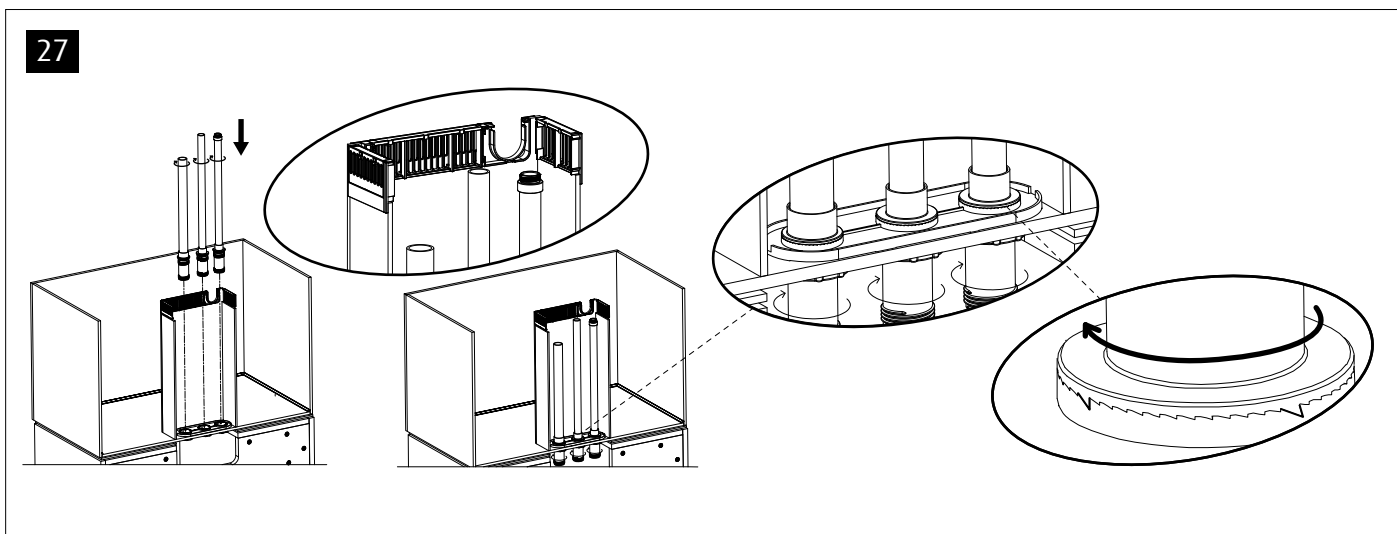
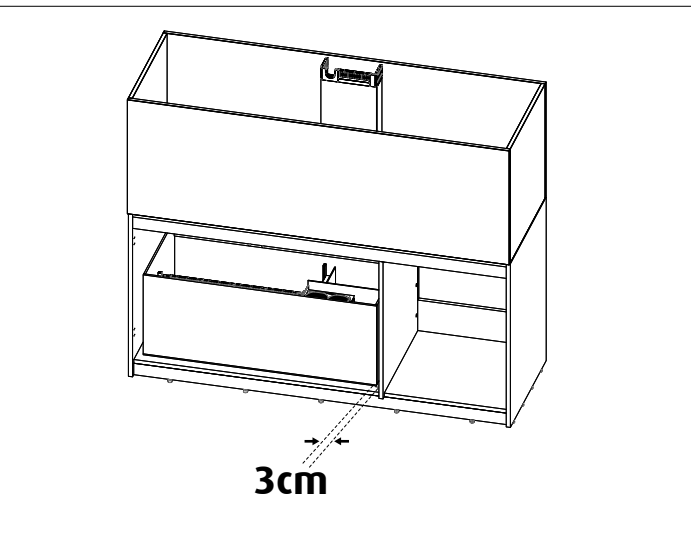
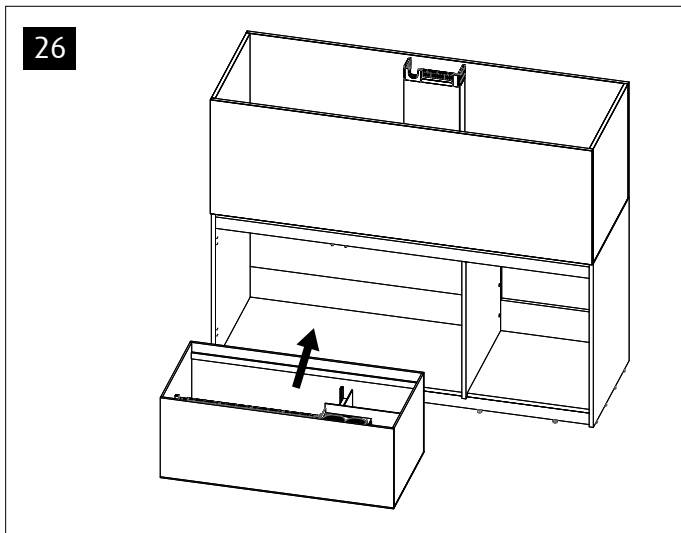
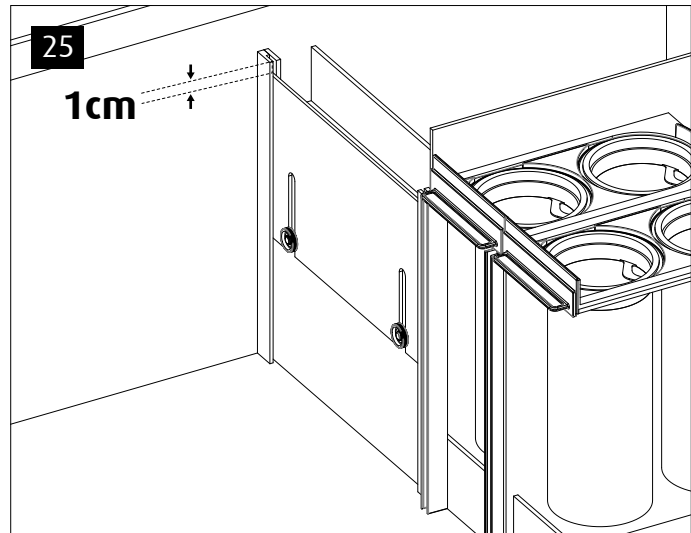
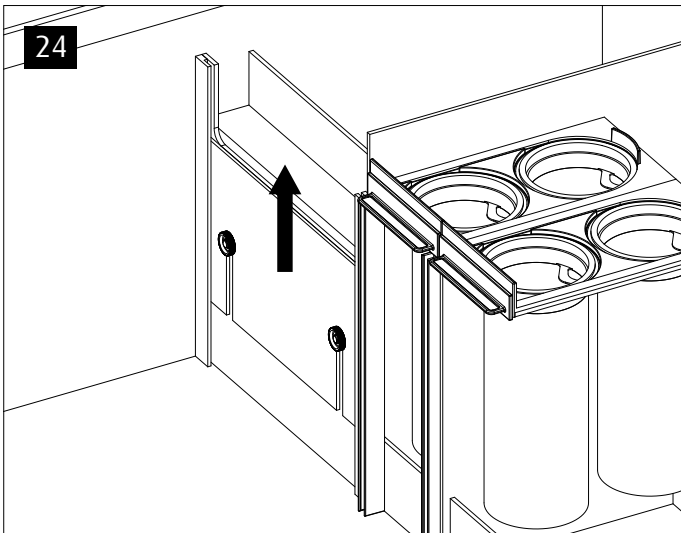
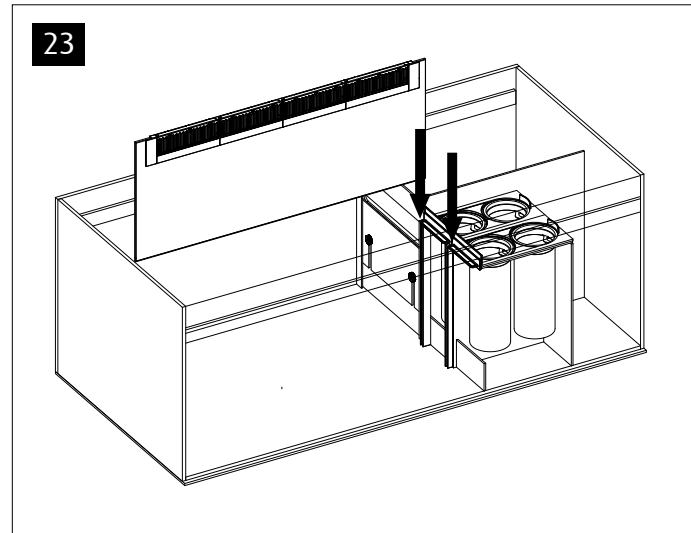
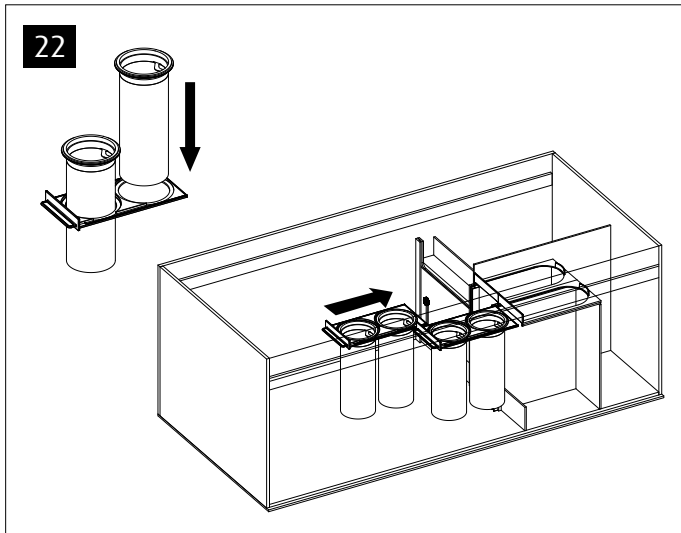


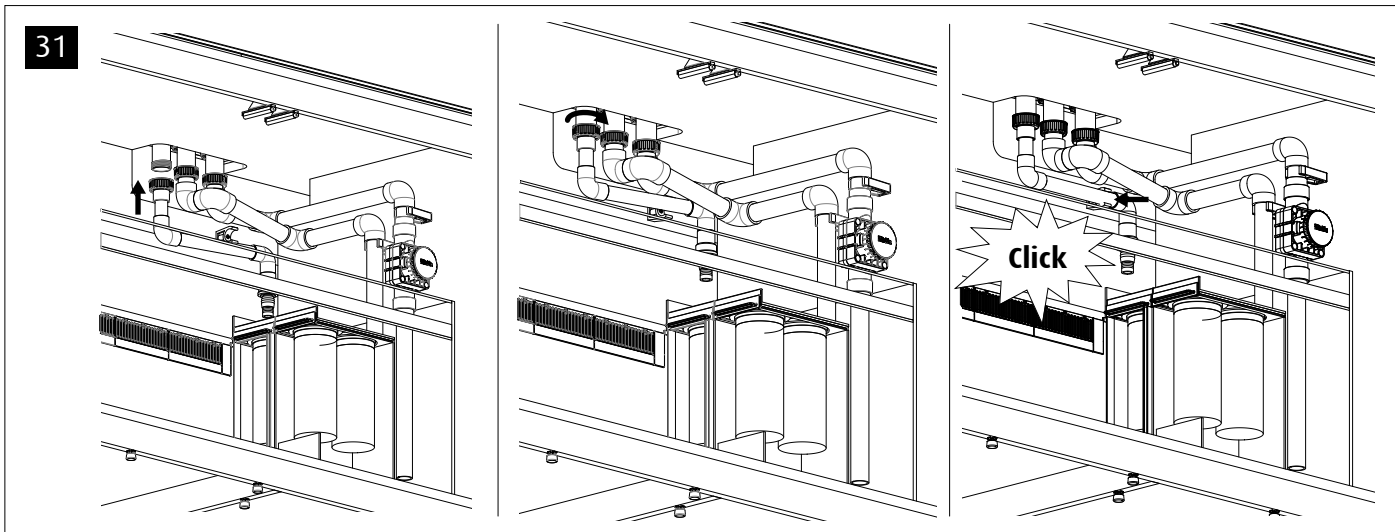
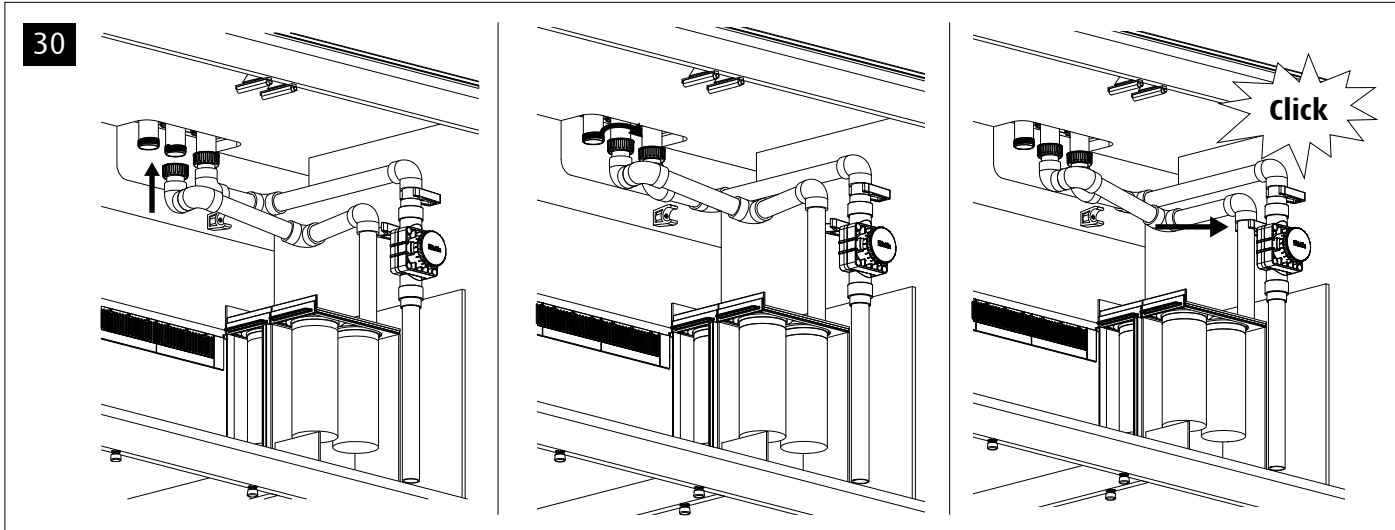
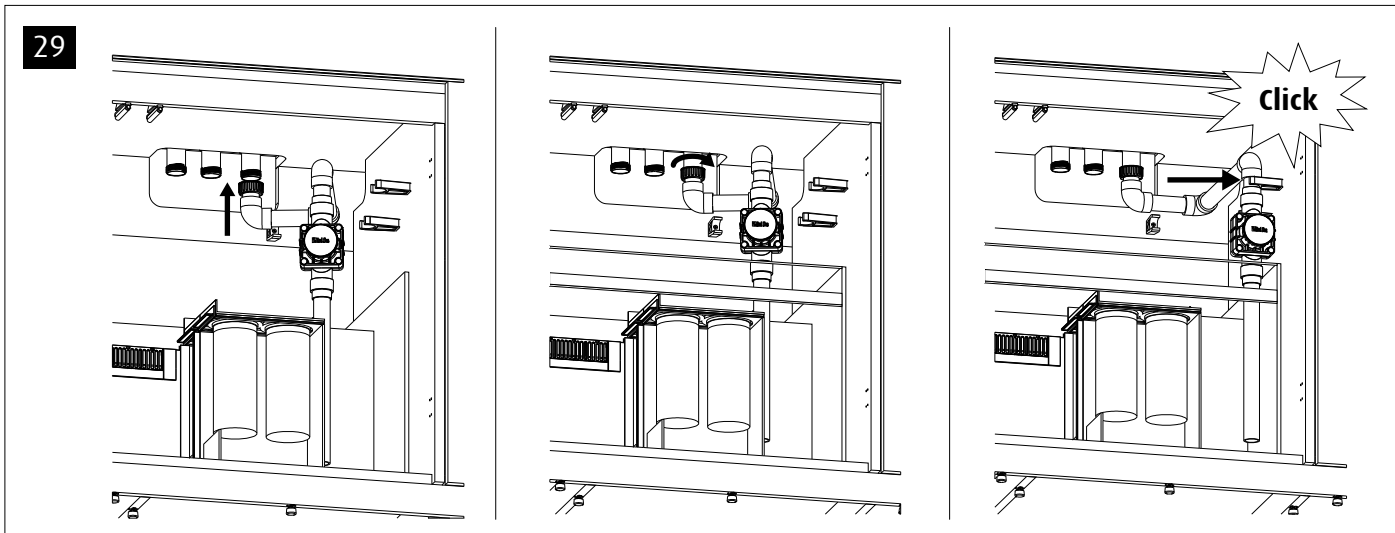
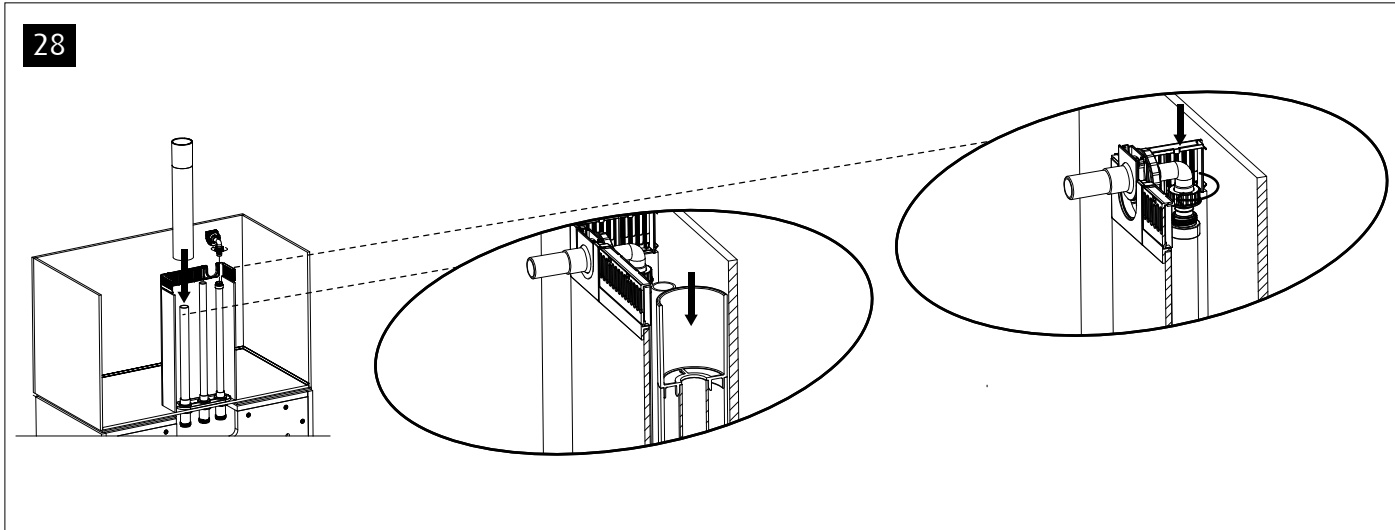


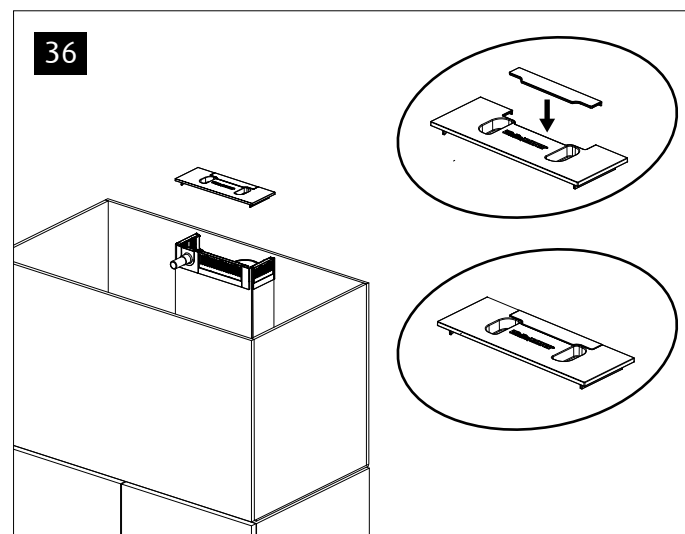
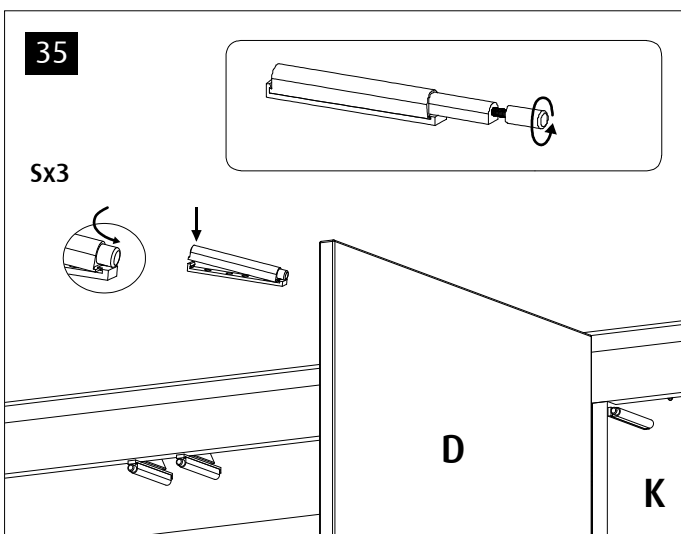
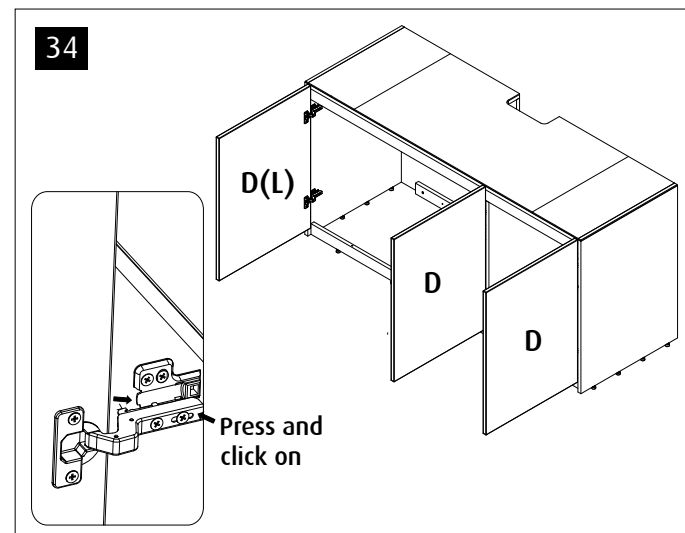
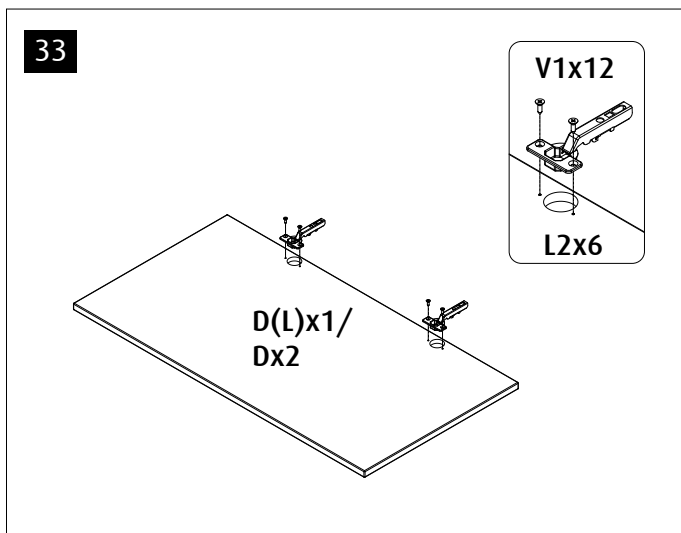
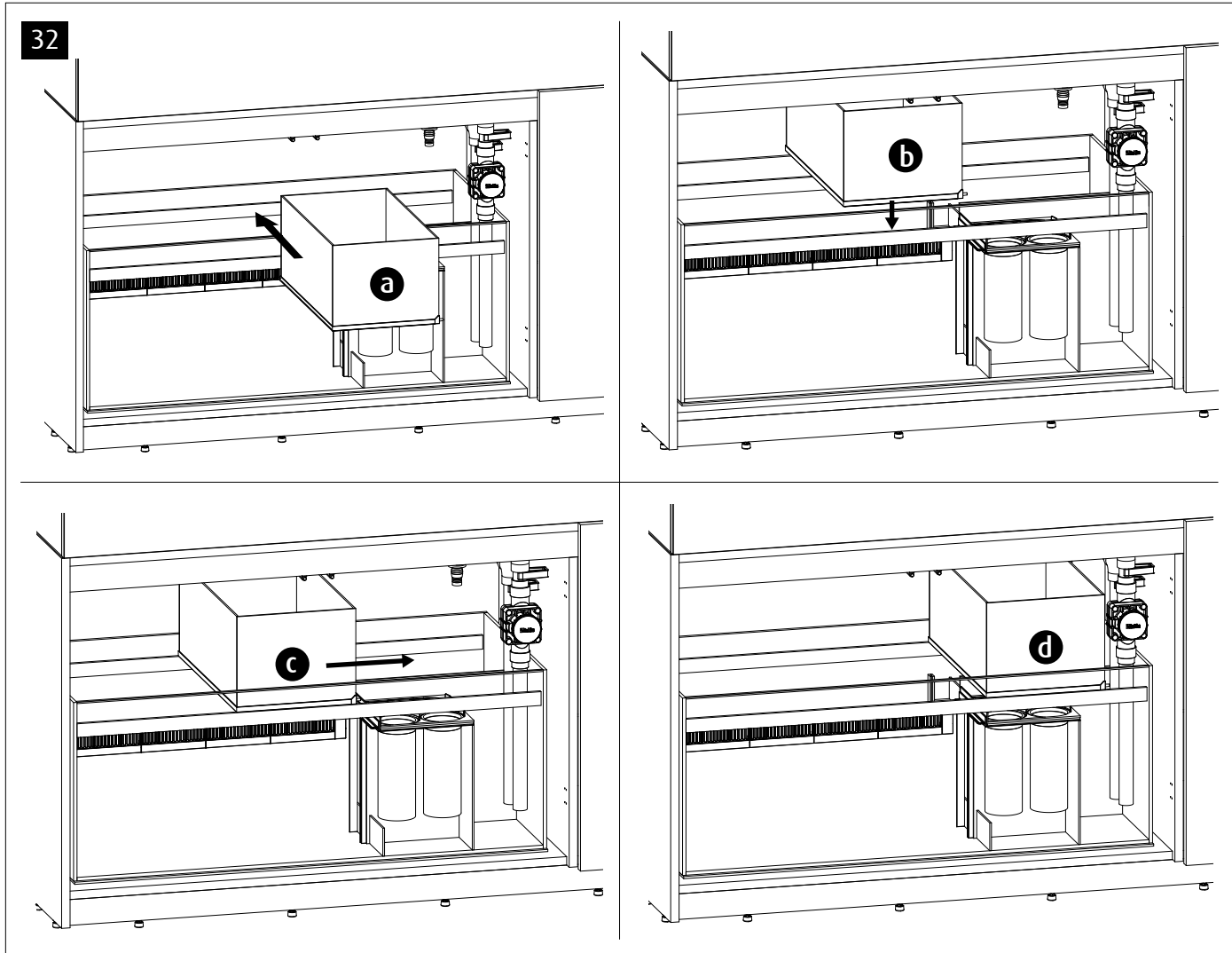




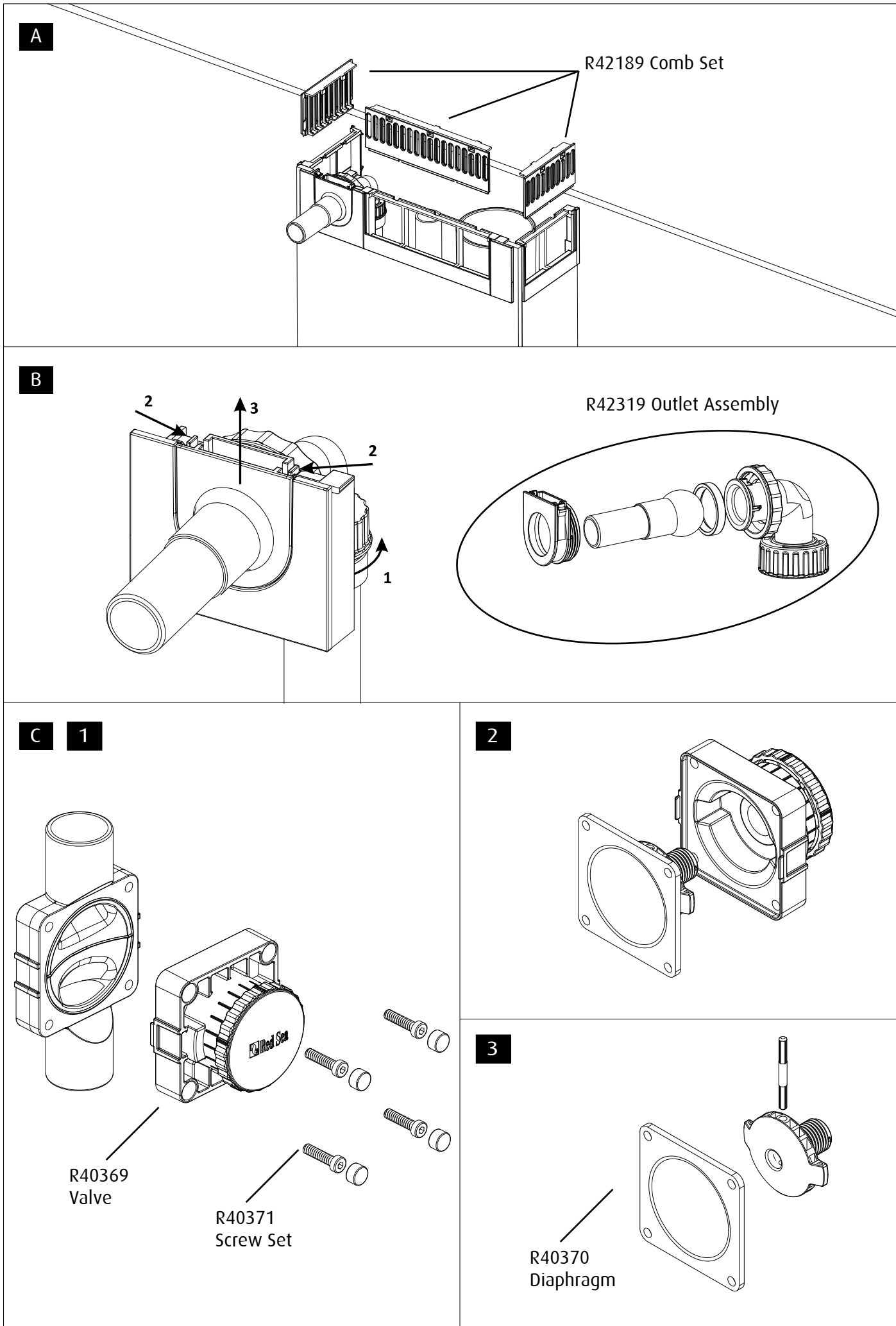








# Maintenance





**Europe**  
Red Sea Europe  
ZA de la St-Denis  
F-27130 Verneuil s/Avre,  
France  
Tel: (33) 2 32 37 71 37  
eur.info@redseafish.com

**UK & Ireland**  
Red Sea Aquatics (UK) Ltd  
PO Box 1237  
Cheddar, BS279AG  
Tel: +44 (0) 203 3711437  
Fax: +44 (0) 800 0073169  
uk.info@redseafish.com

**U.S.A**  
Red Sea U.S.A  
4687 World Houston  
Parkway #150  
Houston, TX 77032  
Tel: +1-888-RED-SEA9  
redseainfo@redseafish.com

**Germany & Austria**  
Red Sea Deutschland  
Prinzenallee 7 (Prinzenpark)  
40549 Düsseldorf  
Tel: 0211-52391 481  
de.info@redseafish.com

Red Sea Aquatics (GZ) Ltd  
Block A3, No.33 Hongmian Road,  
Xinhua Industrial Park,  
Huadu District, Guangzhou City,  
China, Postal code 510800  
Tel: +86-020-6625 3828

  
www.redseafish.com



## 打印提示

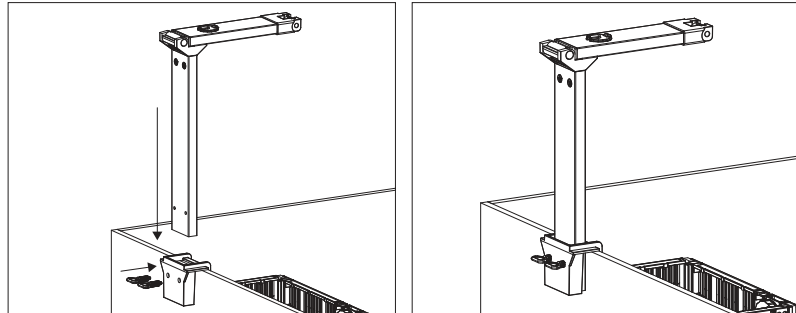
只打印LED装配手册，打印页面58-61。

# REEFER™ LED Assembly Manual

---

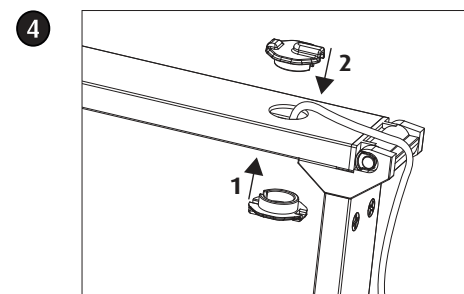
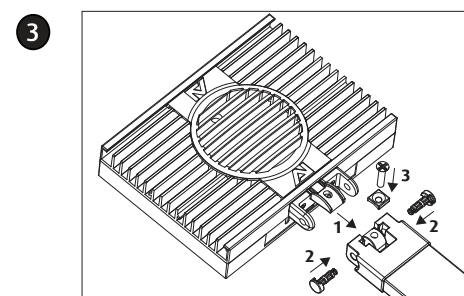
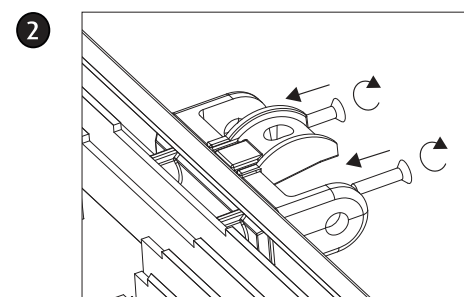
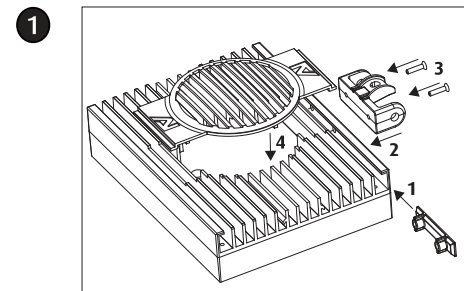
## Assembly - LED Mounts

Place the mounting bracket in the desired position on the back wall of the aquarium. Insert the mounting column to the bracket and fix in position with 2 screws provided. Hand-tighten the screws only! Do not attach the LED modules at this time. Do not insert the cable plugs into the hole in the arm. Make sure that the mounting arm is in the horizontal position.



## Installation of LED Modules

1. Remove the fan cover. Slide the connector plate into the module so that the threaded bushings in the plate are aligned with the holes in the aluminum.
2. Using the M3 screws provided, lightly attach the swivel connector as shown in the diagram. Replace the fan cover and ensure that the swivel connector is parallel to the top of the aluminum before tightening the screws.
3. Put the swivel connector pins and fixing screw within easy reach of the aquarium. Locate the LED Module in front of the mounting arm and push swivel connector in position. Insert the connector pins to both sides and push until firmly in position. Screw the fixing screw into the top of the connector. Adjust the position of the LED module until it is parallel with the top of the aquarium and tighten the fixing screw. The swivel connector allows rotational adjustment for personal preference of approximately 5 degrees.
4. Bring the cable to the rear of the mount and thread the cable through the hole in the arm so that there is sufficient cable to plug the DC jack into the connector on the LED module. Flatten the cable against the underside of the mounting arm and insert the bottom cable plug. Insert the cable plug into the top of the arm so that the cable is facing backwards.



**WARNING:** The LED module is not waterproof. Do not get the unit wet and do not submerge any part of it or the power cord in the aquarium water.

**WARNING:** LED lights produce extremely intense light output that may damage or injure your eyes. Do not look directly into the LED's any time the fixture is illuminated.

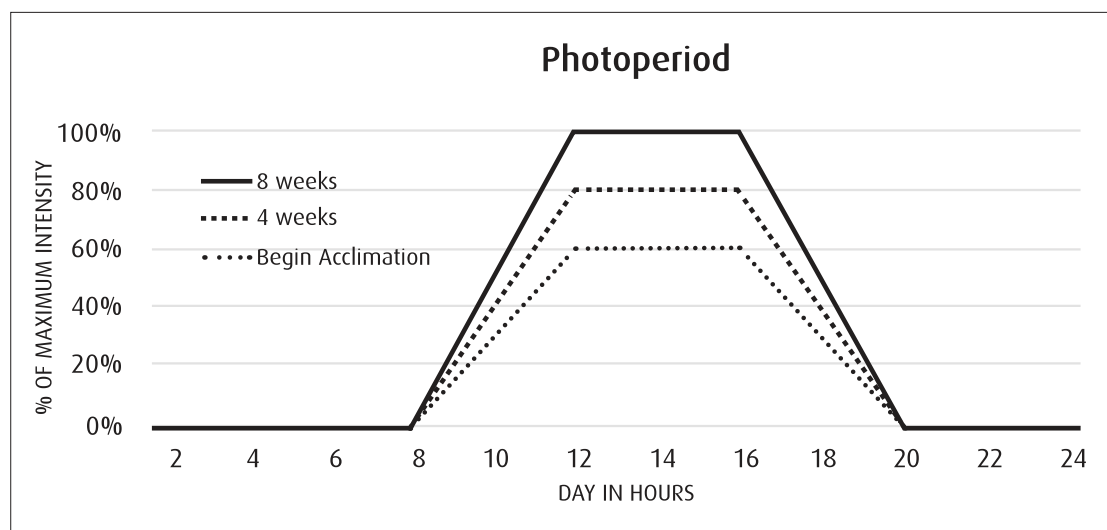
## LED Set up and programming

The LED modules have a built-in Wi-Fi network and must be connected to a smartphone or Wi-Fi enabled computer to get the benefits of all of the features. To set up and program the LED's follow the instructions provided with the LED modules.

### Programming guidelines:

#### Photoperiod: Day/moonlight

The day photoperiod should be between 8 – 12 hours with no more than 4 hours at maximum intensity and at ramp up/down rate of approximately 25% (of maximum intensity) per hour. Corals and fish must have daily periods of darkness. LED moonlight should be limited to 1% of the maximum light intensity for a maximum period of 6 hours.



#### Acclimation

To prevent photo-inhibition due to the high intensity of LED lights, an acclimation period is recommended for new systems or when introducing new corals.

Acclimation will vary for different kinds of corals however it is recommended to allow a period of 8 weeks for new set-ups as follows:

Set the day photoperiod as described above however the 4 hour peak intensity should not exceed 60% of maximum. Increase the peak intensity by 10% every 2 weeks.

During the acclimation period look for signs of photo stress and photo-inhibition such as:

- Whitening/Bleaching of the upper section of the tissue (the lower section will continue to show pigments and zooxanthellae).
- Polyps retraction.
- Gas bubbles inside the soft tissue.

In the event of any of the above symptoms immediately reduce the peak intensity by 20% for about 4 weeks and thereafter increase by 5% per week until maximum intensity is reached.

When introducing new corals to already acclimated systems, start by positioning them at the lower levels of the aquarium and gradually raising them to their desired position over a period of several weeks. Keep watching for signs of photo inhibition/stress and if necessary return an affected coral to lower levels for recuperation.

**NOTE:** Red and Green wavelengths are not recommended for use in Reef systems as they may promote the outbreak of unwanted Algae or Cyanobacteria.





## 打印提示

只打印LED装配手册，打印页面58-61。

# REEFER™ XXL LED Assembly Manual

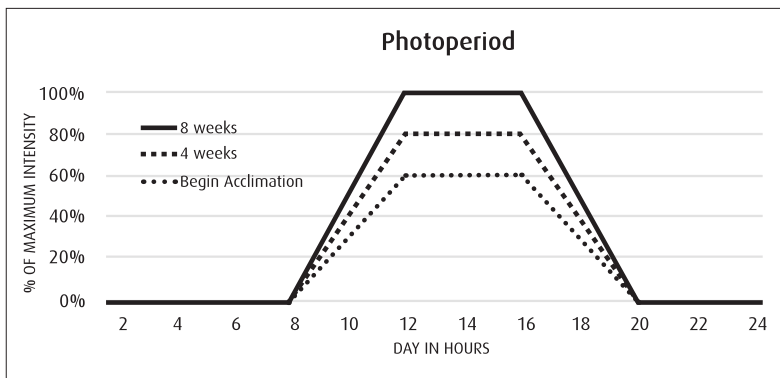
## LED Set up and programming

The LED modules have a built-in Wi-Fi network and must be connected to a smartphone or Wi-Fi enabled computer to get the benefits of all of the features. To set up and program the LED's follow the instructions provided with the LED modules.

### Programming guidelines:

#### Photoperiod: Day/moonlight

The day photoperiod should be between 8 – 12 hours with no more than 4 hours at maximum intensity and at ramp up/down rate of approximately 25% (of maximum intensity) per hour. Corals and fish must have daily periods of darkness. LED moonlight should be limited to 1% of the maximum light intensity for a maximum period of 6 hours.



#### Acclimation

To prevent photo-inhibition due to the high intensity of LED lights, an acclimation period is recommended for new systems or when introducing new corals.

Acclimation will vary for different kinds of corals however it is recommended to allow a period of 8 weeks for new set-ups as follows:

Set the day photoperiod as described above however the 4 hour peak intensity should not exceed 60% of maximum. Increase the peak intensity by 10% every 2 weeks.

During the acclimation period look for signs of photo stress and photo-inhibition such as:

- Whitening/Bleaching of the upper section of the tissue (the lower section will continue to show pigments and zooxanthellae).
- Polyps retraction.
- Gas bubbles inside the soft tissue.

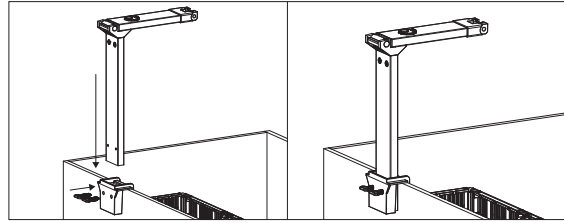
In the event of any of the above symptoms immediately reduce the peak intensity by 20% for about 4 weeks and thereafter increase by 5% per week until maximum intensity is reached.

When introducing new corals to already acclimated systems, start by positioning them at the lower levels of the aquarium and gradually raising them to their desired position over a period of several weeks. Keep watching for signs of photo inhibition/stress and if necessary return an affected coral to lower levels for recuperation.

**NOTE:** Red and Green wavelengths are not recommended for use in Reef systems as they may promote the outbreak of unwanted Algae or Cyanobacteria.

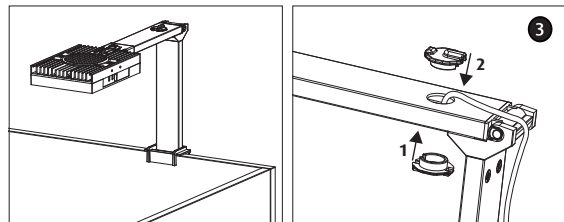
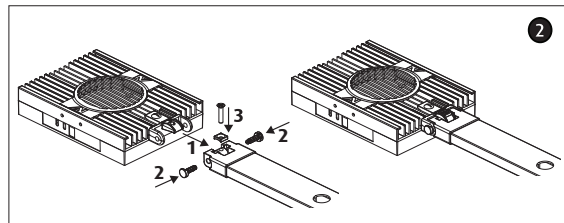
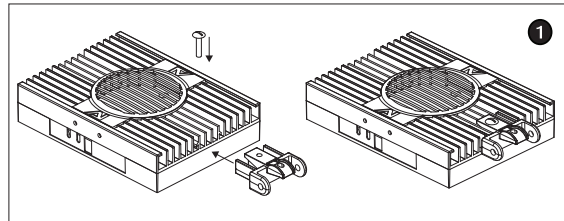
## Assembly - LED Mounts

Place the mounting bracket in the desired position on the back wall of the aquarium. Insert the mounting column to the bracket and fix in position with 2 screws provided. Hand-tighten the screws only! Do not attach the LED modules at this time. Do not insert the cable plugs into the hole in the arm. Make sure that the mounting arm is in the horizontal position.



## Installation of LED Modules

- Using the M3 screws provided, lightly Attach the swivel connector to the Hydra 26 HD as shown in the diagram. Replace the fan cover and ensure that the swivel connector is parallel to the top of the aluminum before tightening the screws.
- Put the swivel connector pins and fixing screw within easy reach of the aquarium. Locate the LED Module in front of the mounting arm and push swivel connector in position. Insert the connector pins to both sides and push until firmly in position. Screw the fixing screw into the top of the connector. Adjust the position of the LED module until it is parallel with the top of the aquarium and tighten the fixing screw. The swivel connector allows rotational adjustment for personal preference of approximately 5 degrees.
- Bring the cable to the rear of the mount and thread the cable through the hole in the arm so that there is sufficient cable to plug the DC jack into the connector on the LED module. Flatten the cable against the underside of the mounting arm and insert the bottom cable plug. Insert the cable plug into the top of the arm so that the cable is facing backwards.



**WARNING:** The LED module is not waterproof. Do not get the unit wet and do not submerge any part of it or the power cord in the aquarium water.

**WARNING:** LED lights produce extremely intense light output that may damage or injure your eyes. Do not look directly into the LED's any time the fixture is illuminated.





# REEFER™ 隔断式



REFEER™ 500 隔断式



REFEER™ 500 隔断式豪华版



REFEER™ 650 隔断式



REFEER™ 650 隔断式豪华版



## REEFER™ 500 隔断式

操作手册



装配手册



## REEFER™ 500 隔断式豪华版

操作手册



装配手册



LED吊绳安装手册



## REEFER™ 650 隔断式

操作手册



装配手册



## REEFER™ 650 隔断式豪华版

操作手册



装配手册



LED吊绳安装手册





## 打印提示

只打印水族箱和底柜安装指南，  
打印页面71-82。

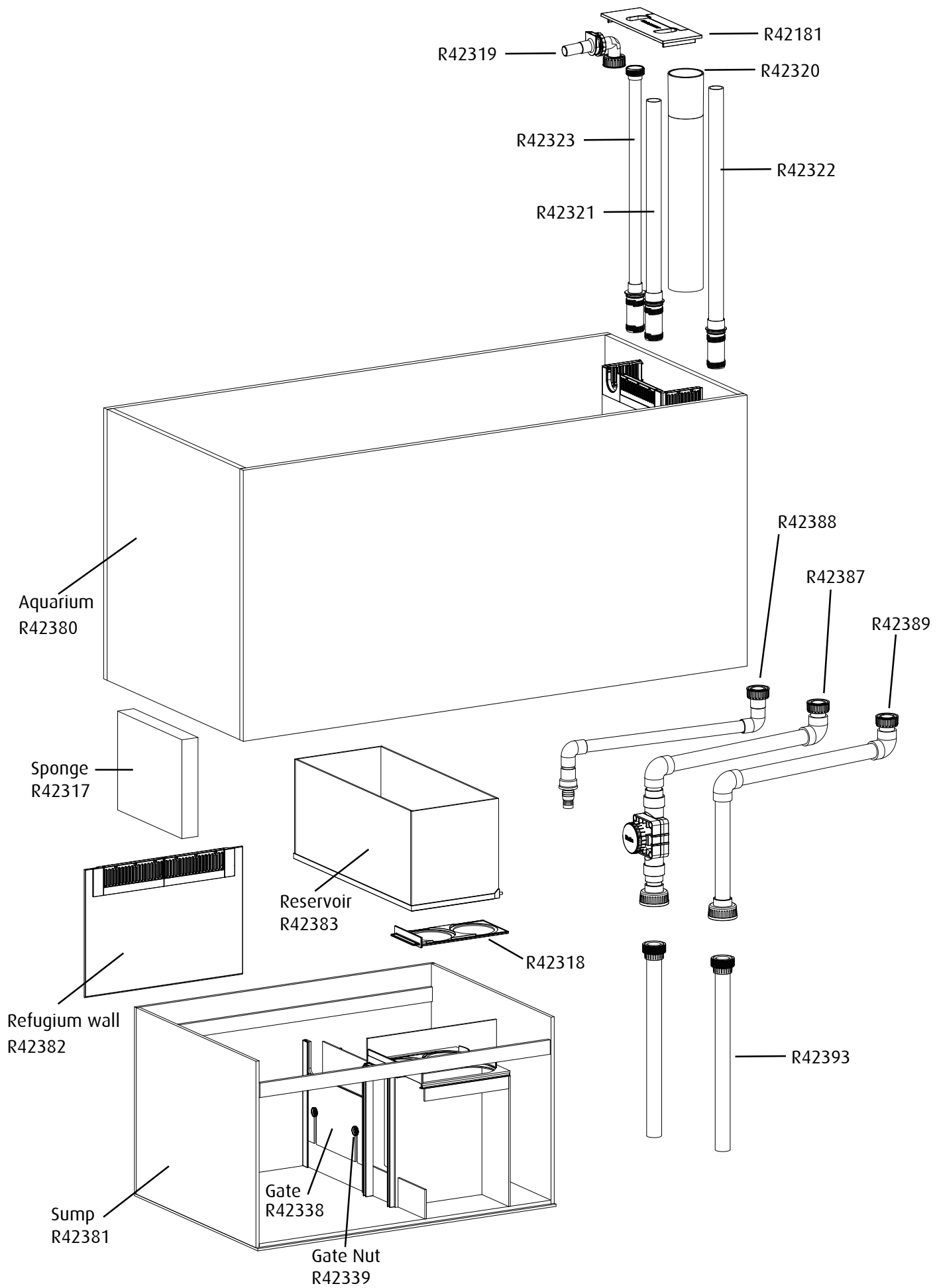
# Red Sea REEFER™

## Peninsula 500

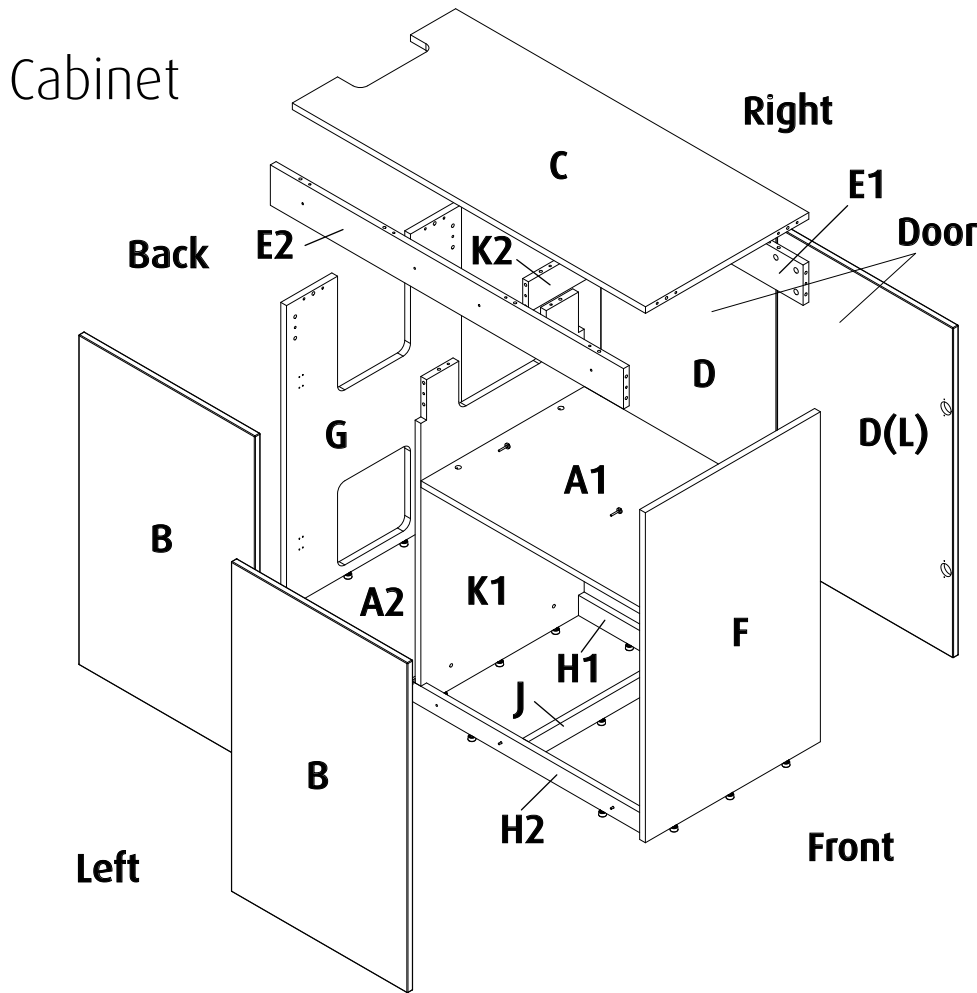
---

Aquarium & Cabinet Assembly Manual

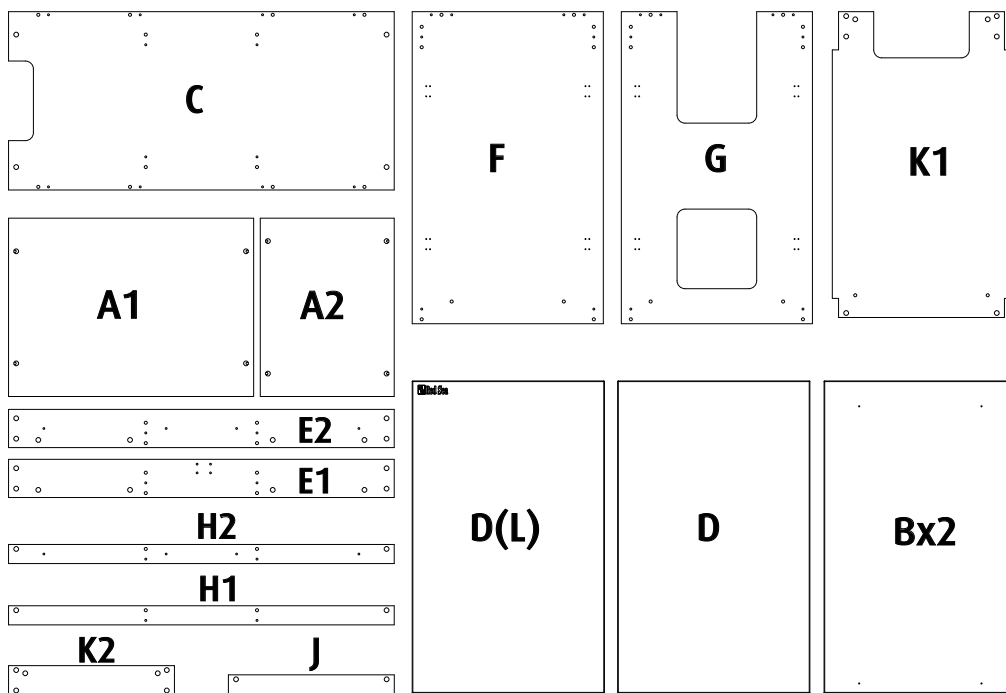
# Aquarium Water Management System





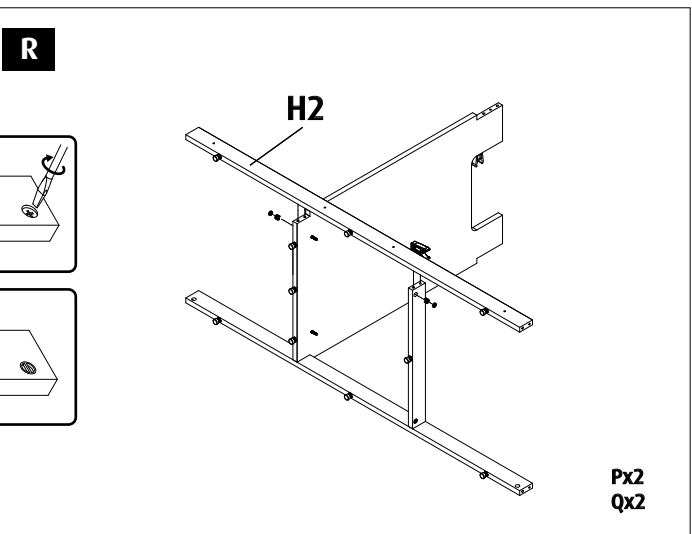
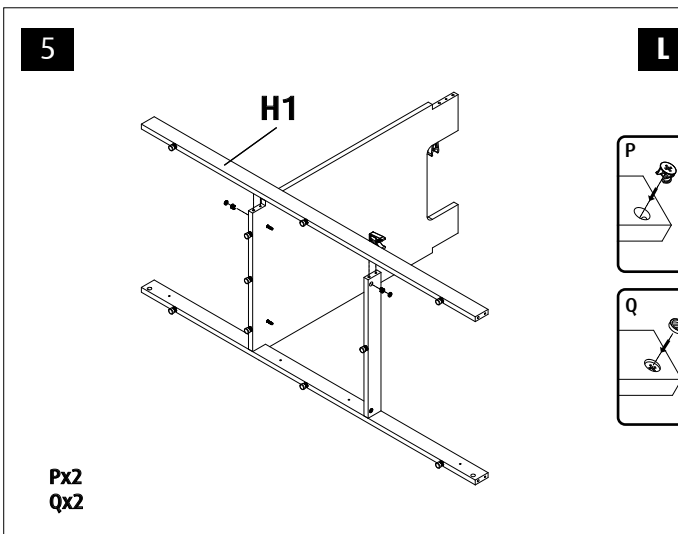
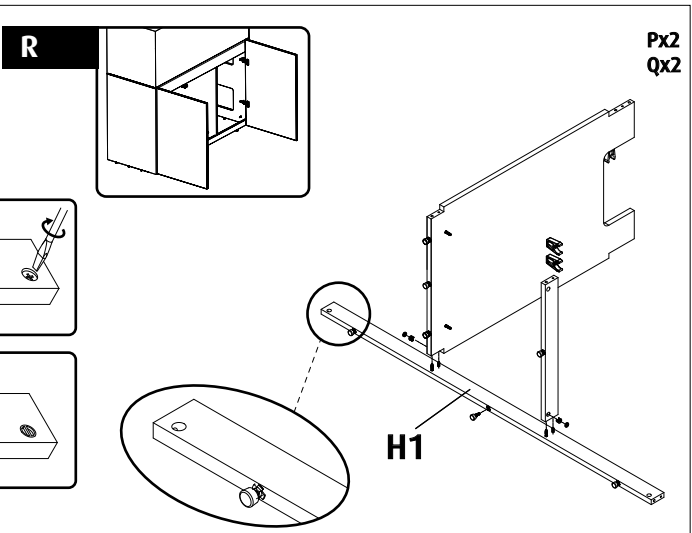
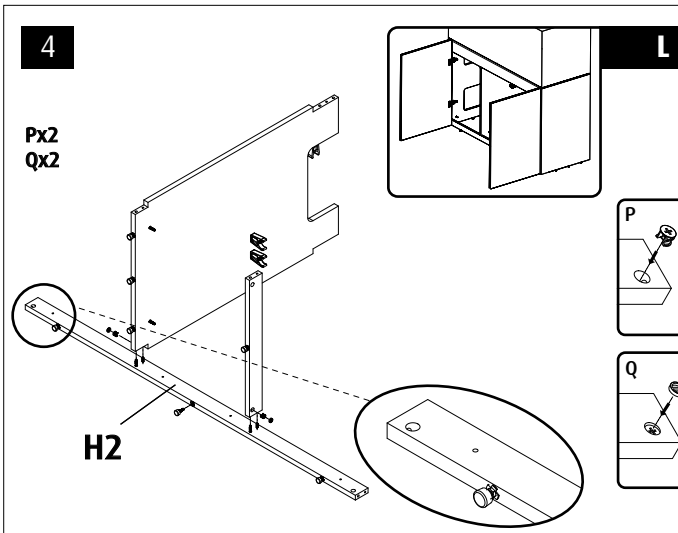
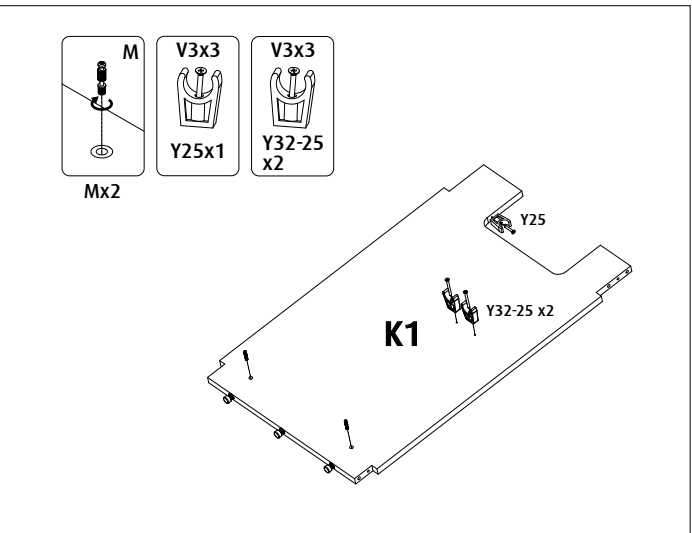
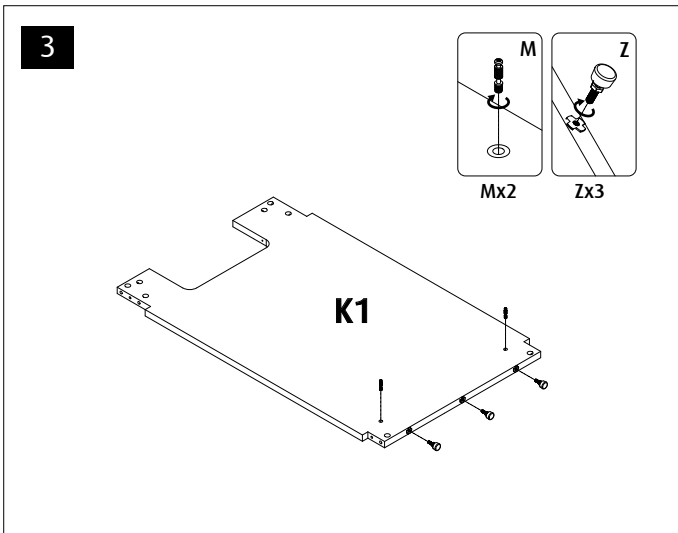
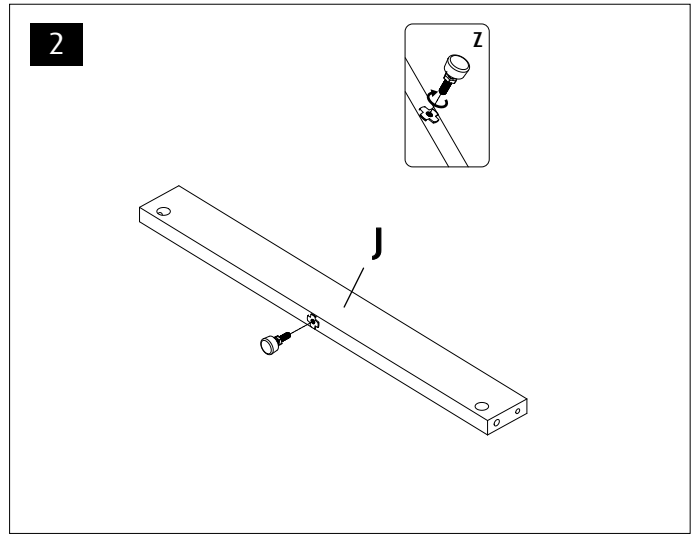
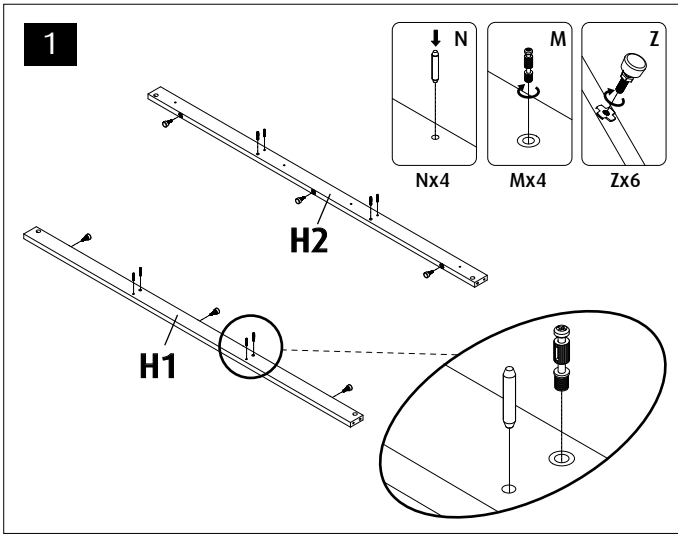


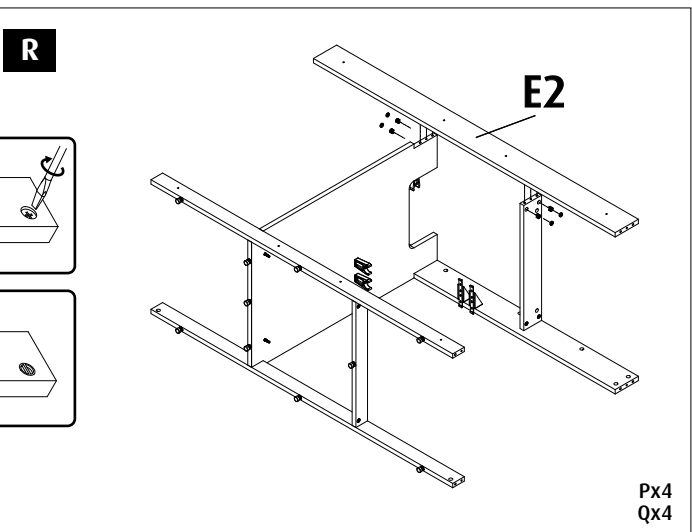
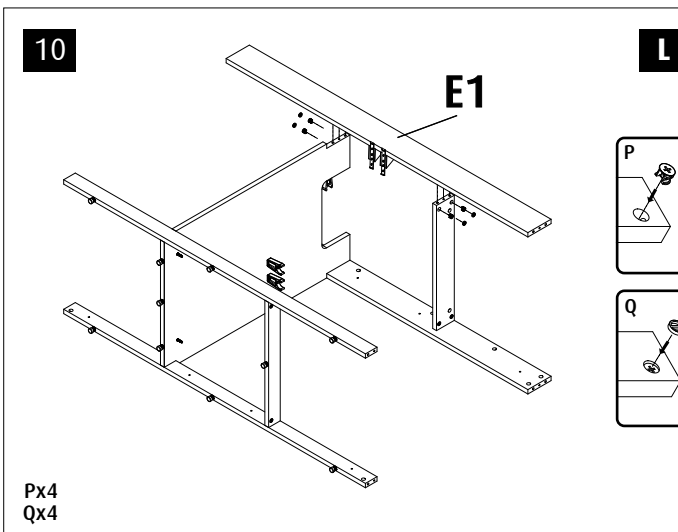
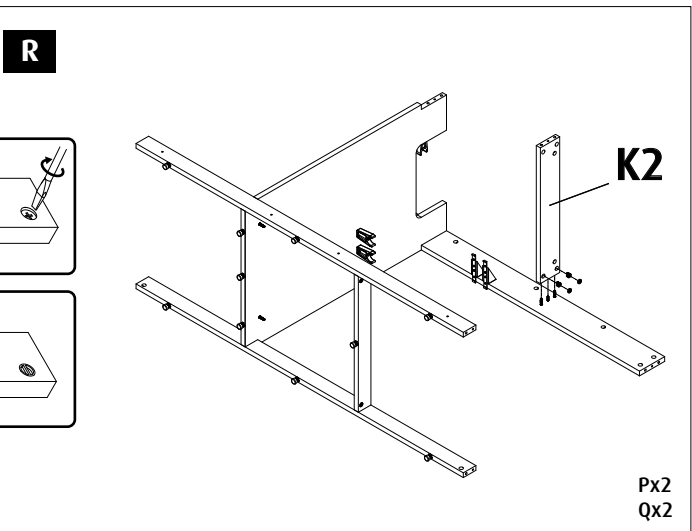
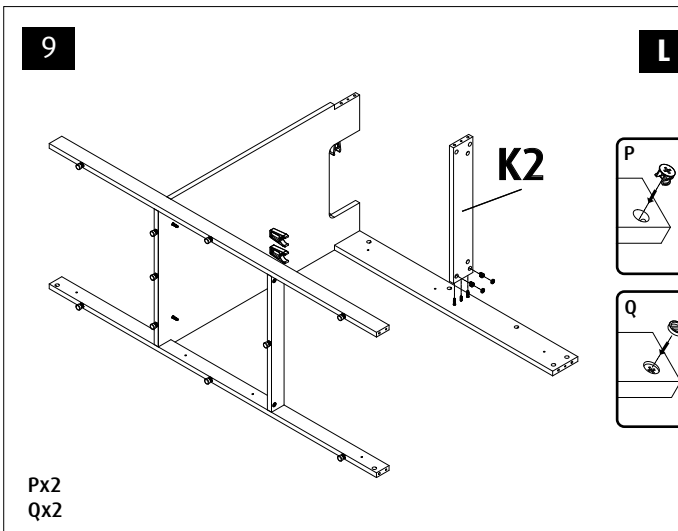
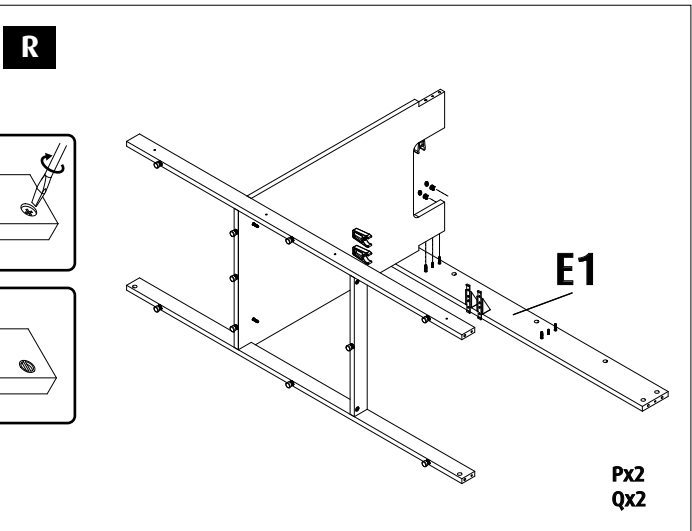
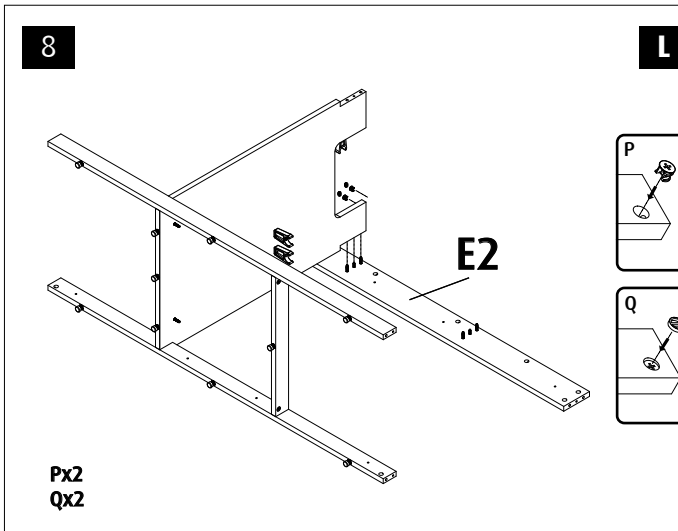
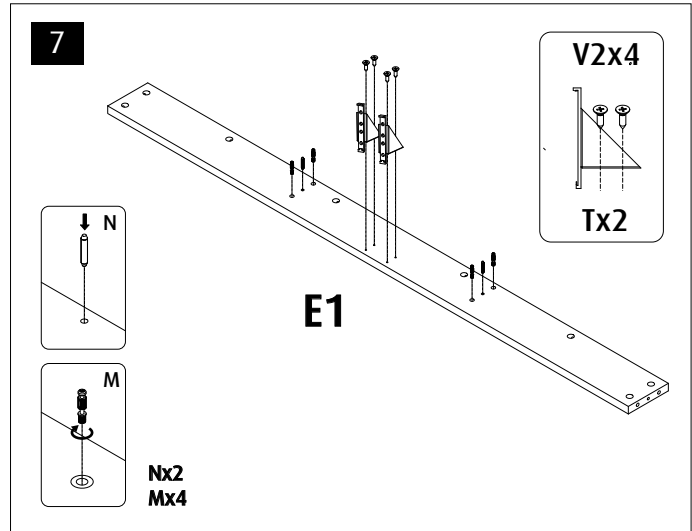
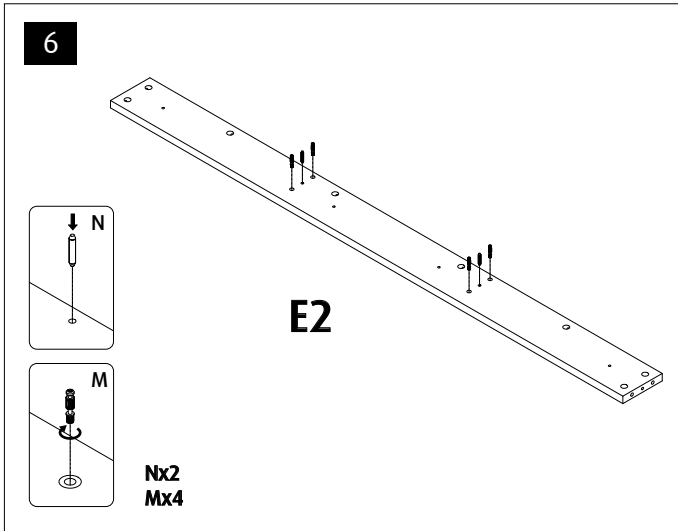
L3		4
L1		
N		36
M		48
P		48
Q		48
S		2
T		2
V1	ST4x16	24
V2	ST3.5x14	4
V3	ST5x35	11
W		8
Y32-25		2
Y25		1
Z		16

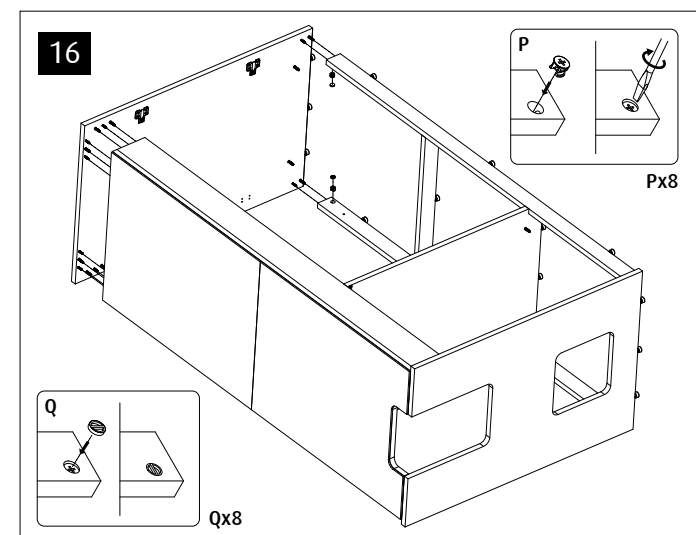
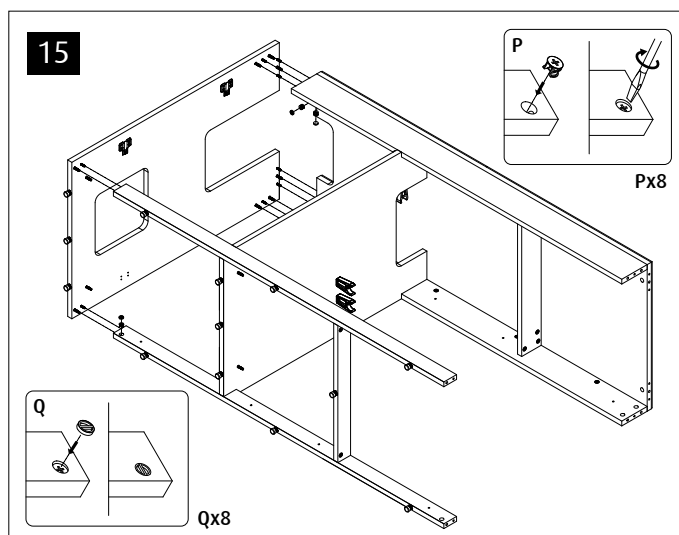
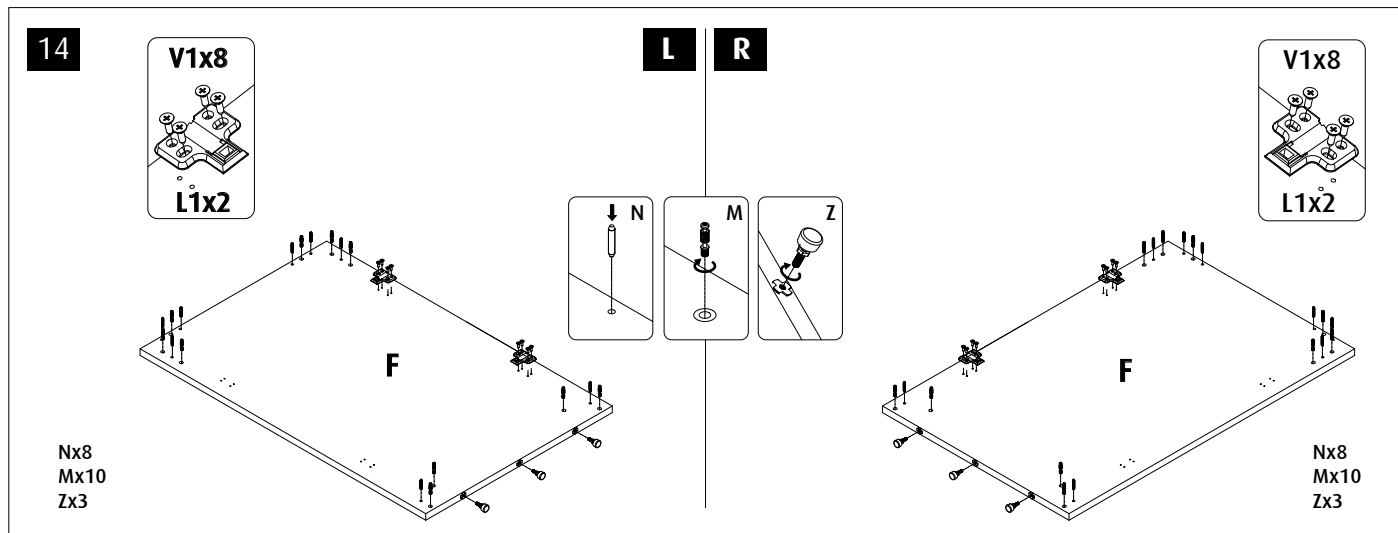
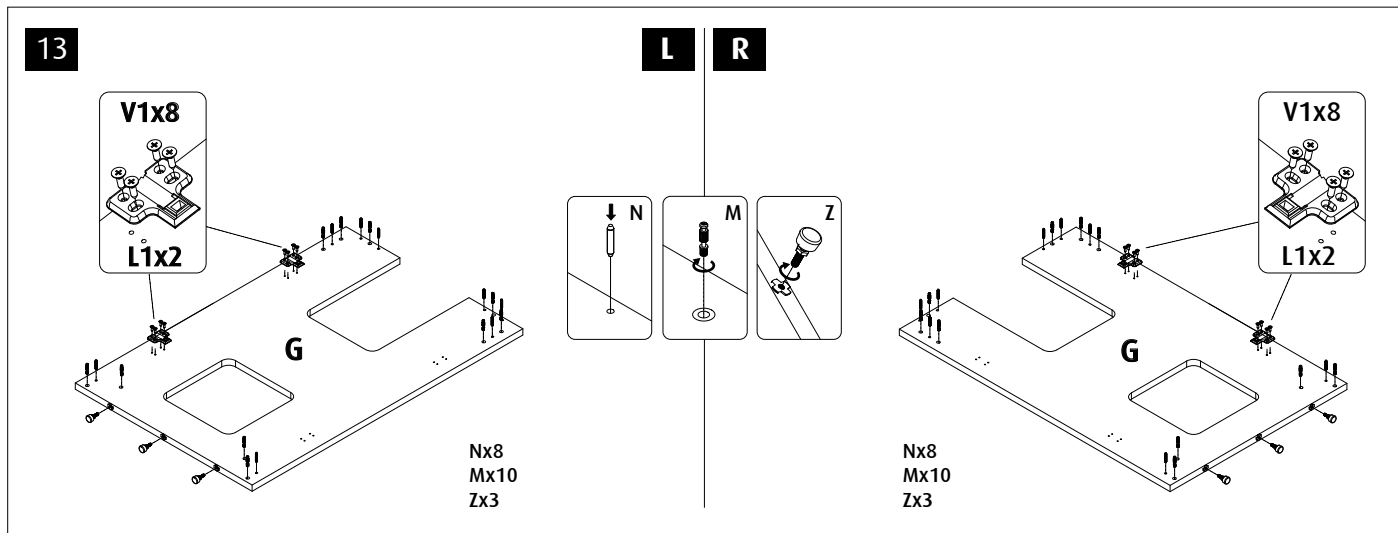
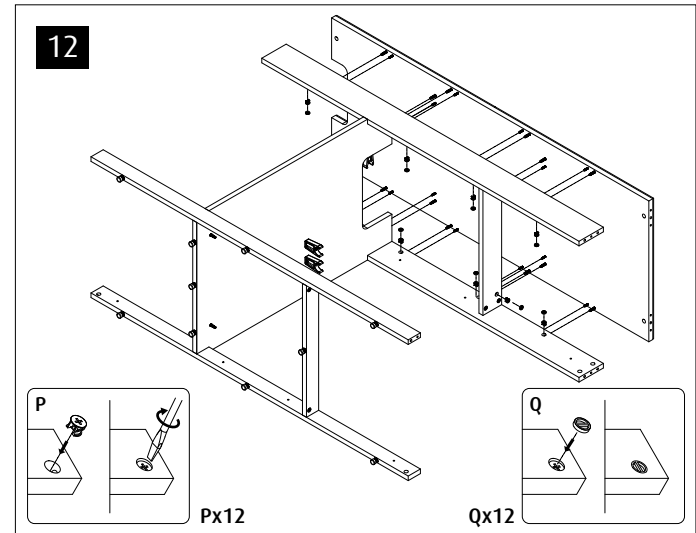
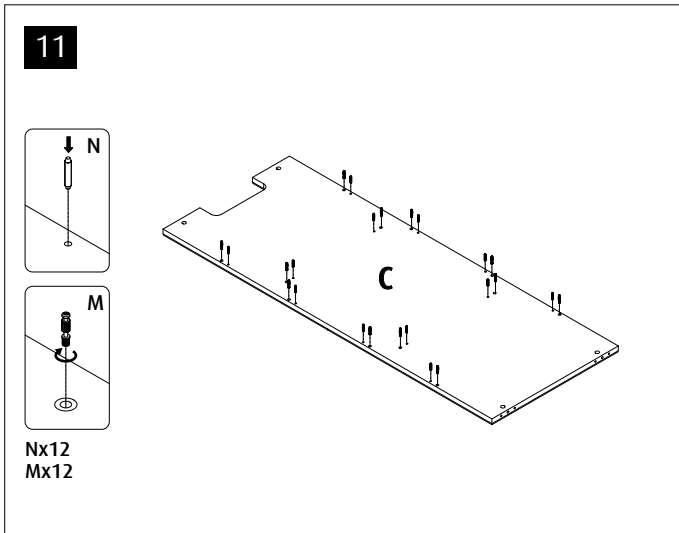


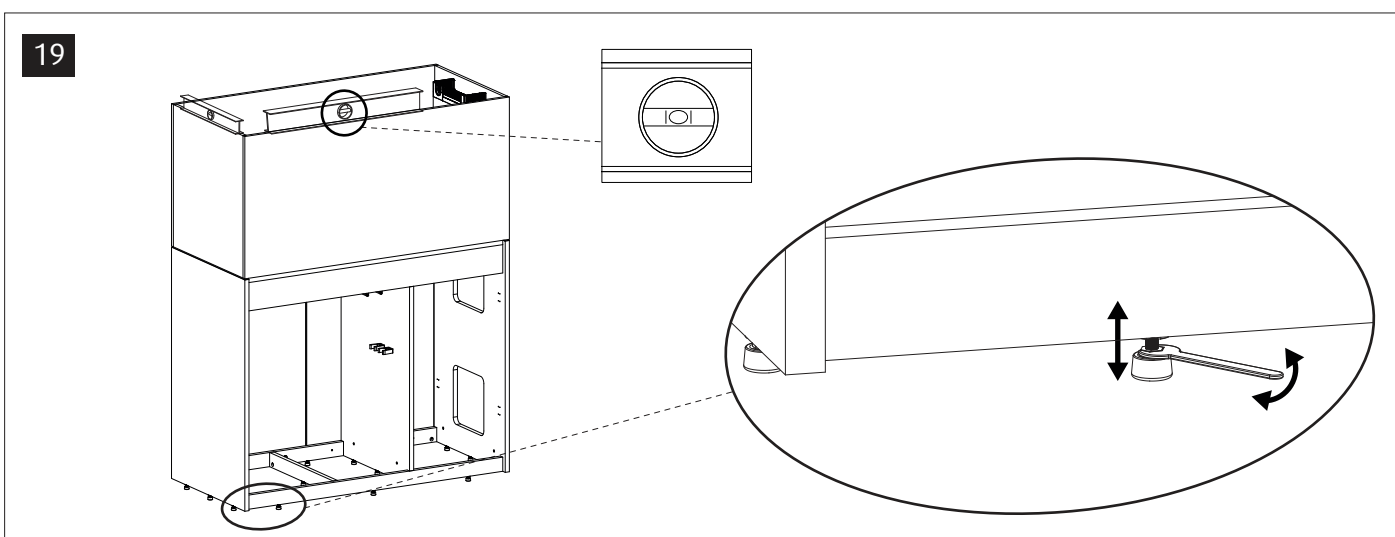
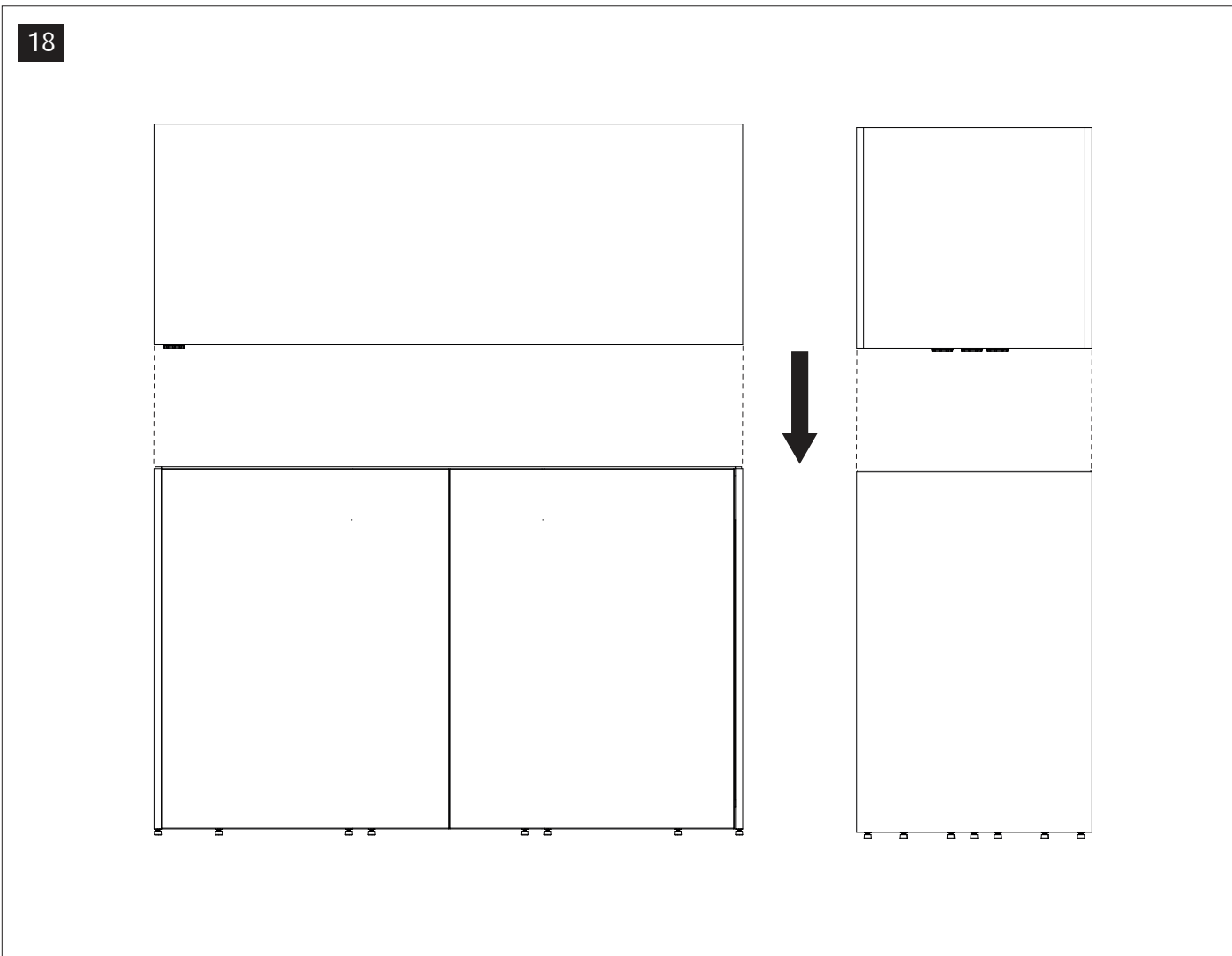
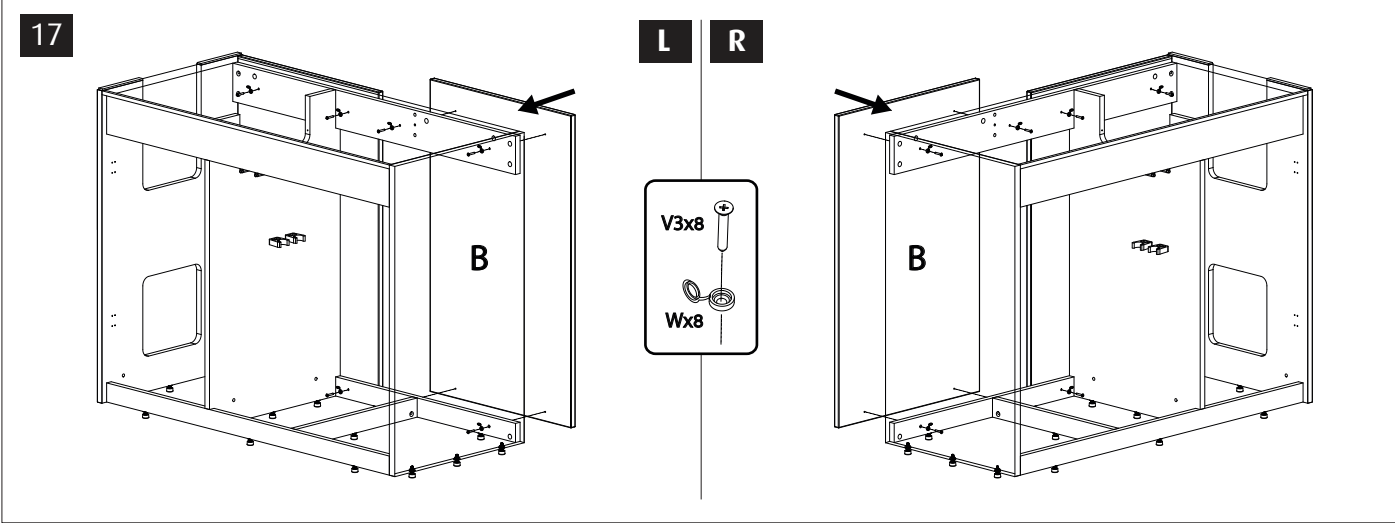
	P500	Part Description
A1	6501B	Cabinet Bottom Sump
A2	6502B	Cabinet Bottom Chiller
B - Black	R42403	Cabinet Side Panel - Black
B - White	R42404	Cabinet Side Panel - White
C	6500B	Cabinet Top
D - Black	R42401	Cabinet Door - Black
D - White	R42402	Cabinet Door - White
E1	6506B	Cabinet Front Upper - Door Side

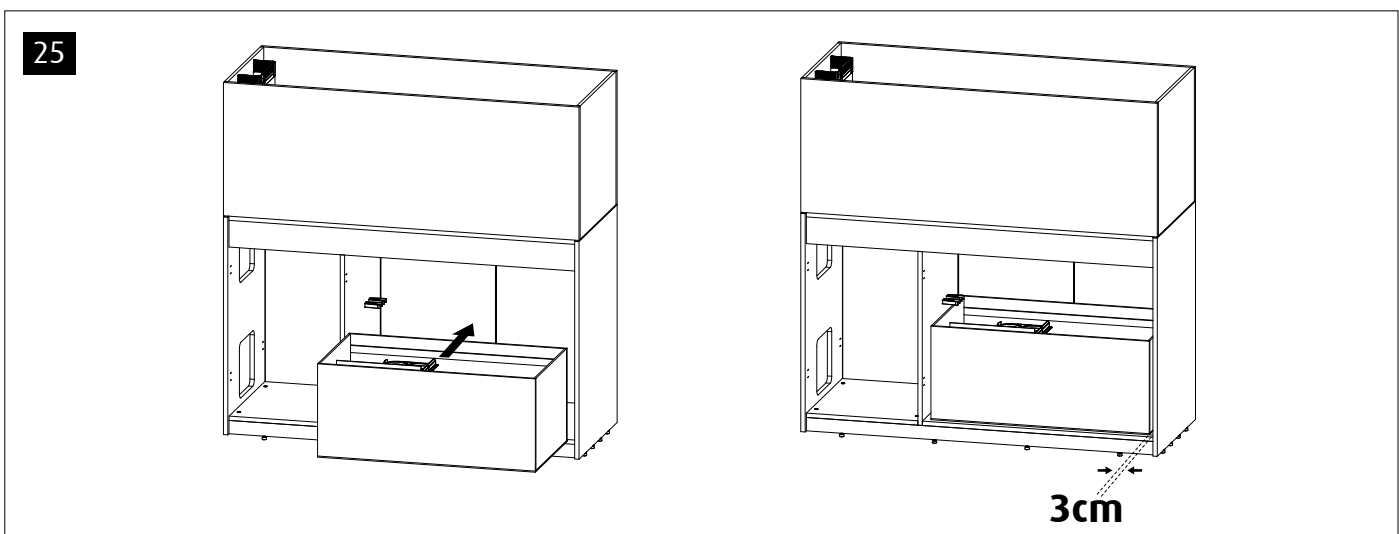
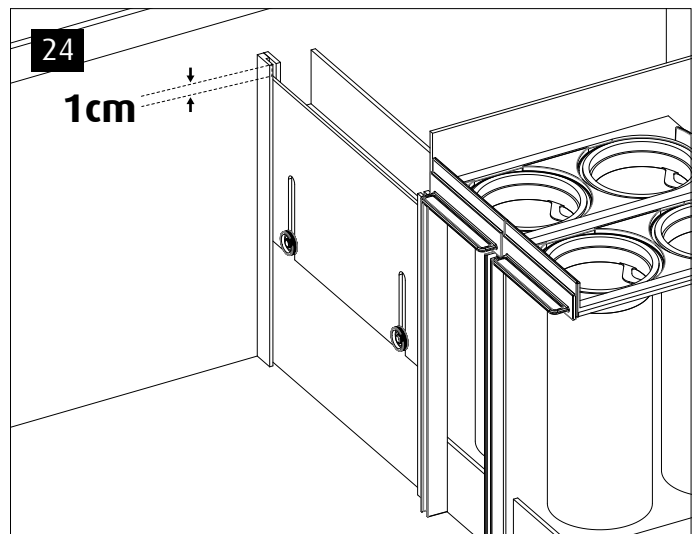
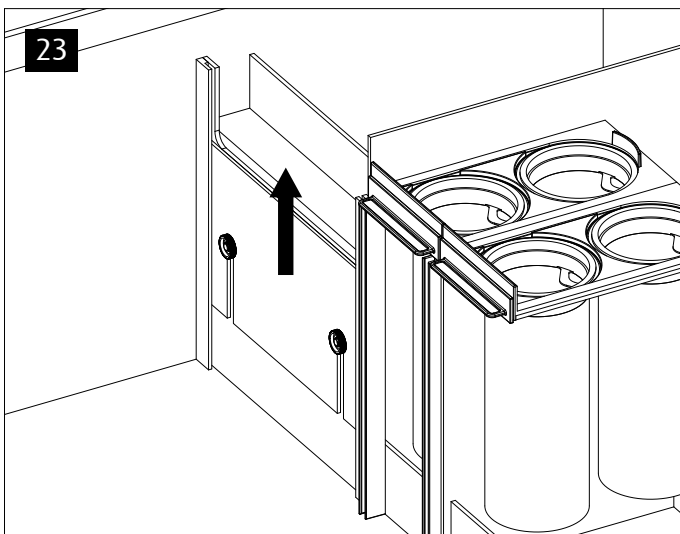
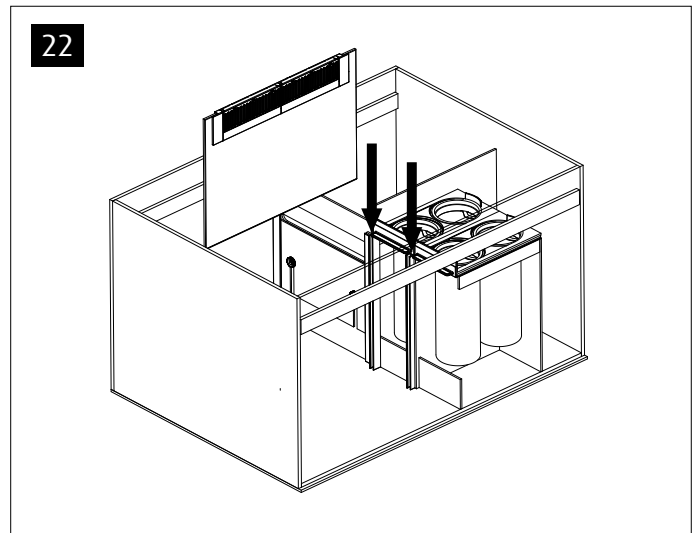
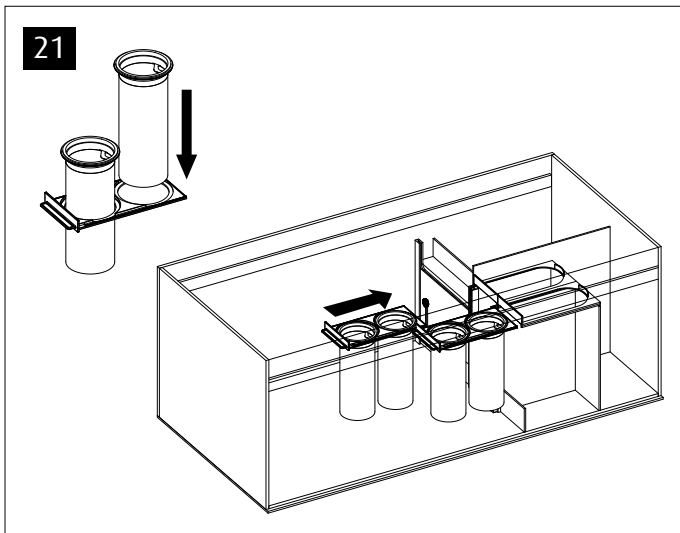
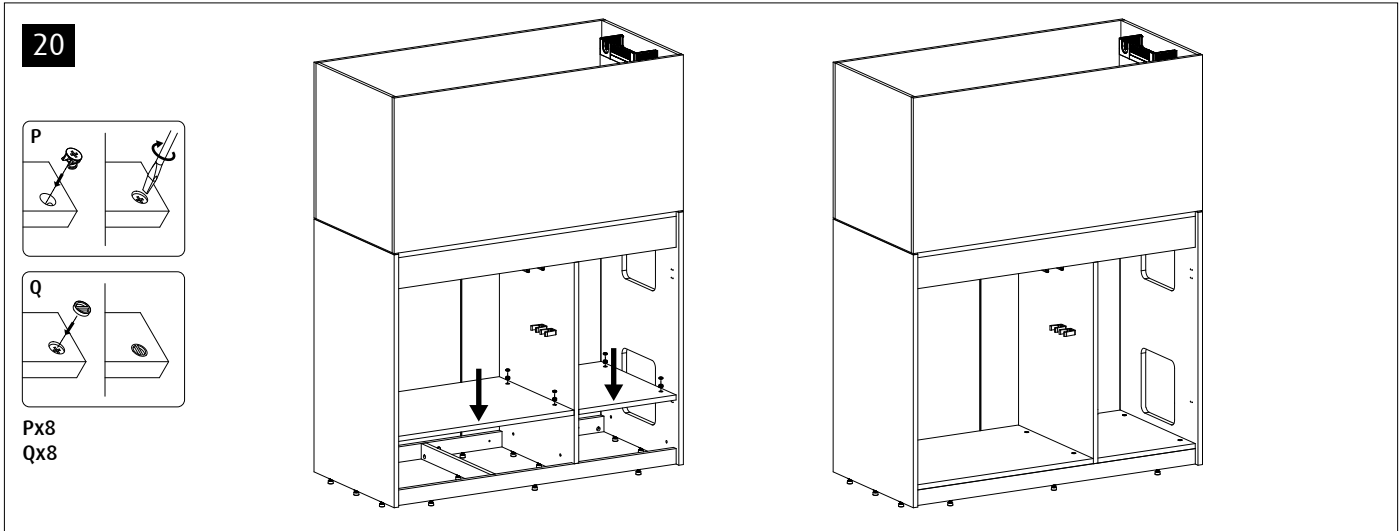
	P500	Part Description
E2	6506B-1	Cabinet Front Upper - Panel Side
F	6431-B/W	Cabinet Front - Black/White
G	6430-B/W	Cabinet Rear - Black/White
H1	6507B	Cabinet Front Lower - Door Side
H2	6508B	Cabinet Front Lower - Panel Side
J	6504B	Cabinet Base Support
K1	6503B	Cabinet Internal Wall
K2	6505B	Cabinet Internal Support

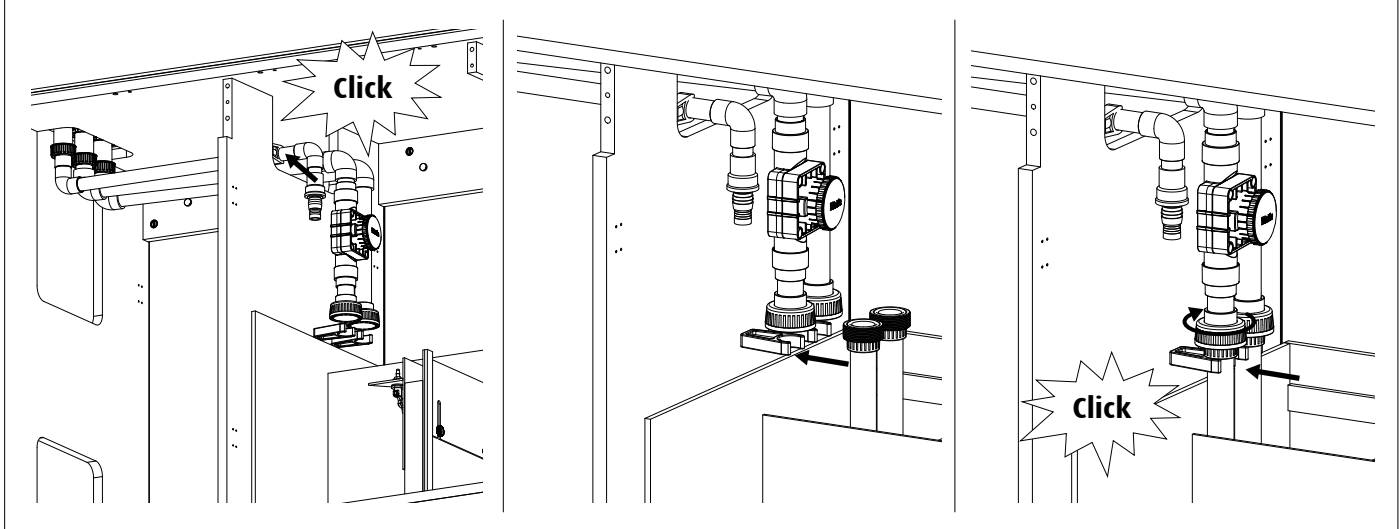
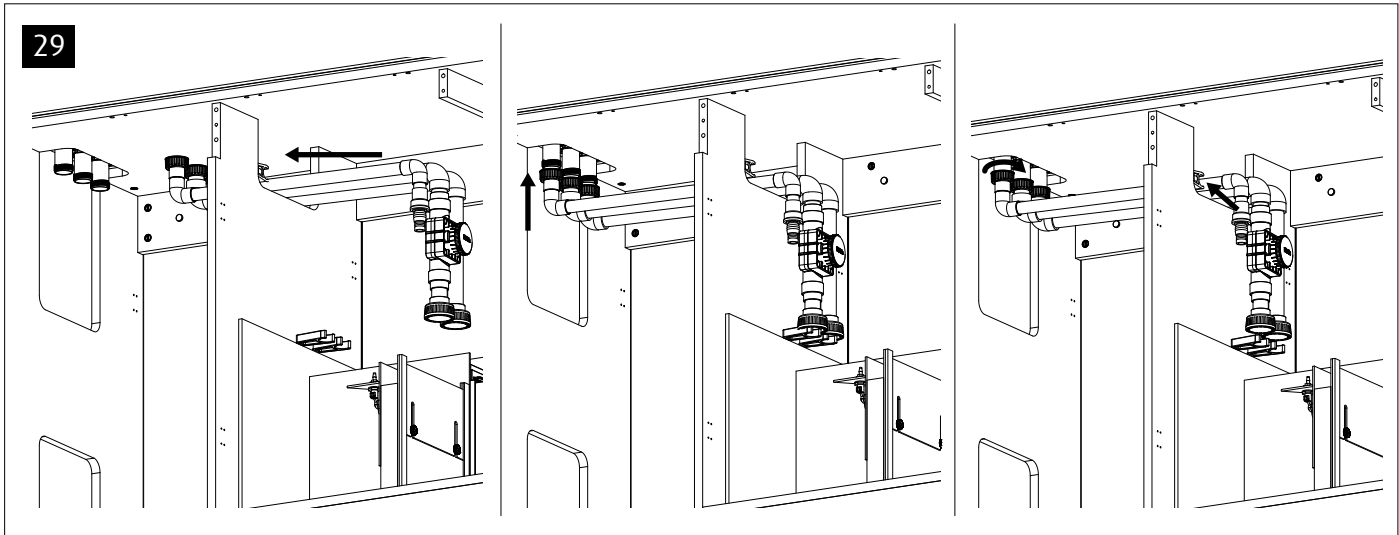
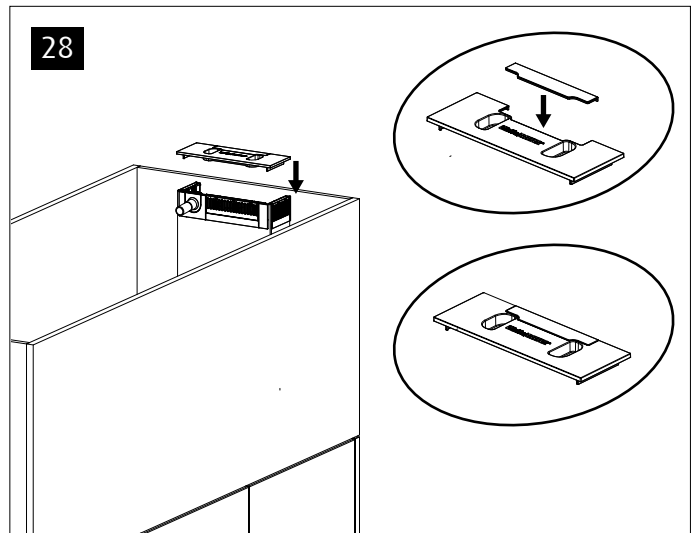
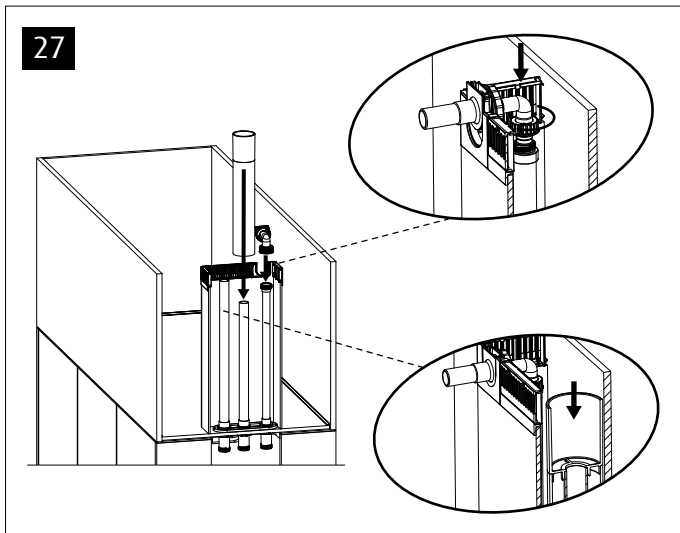
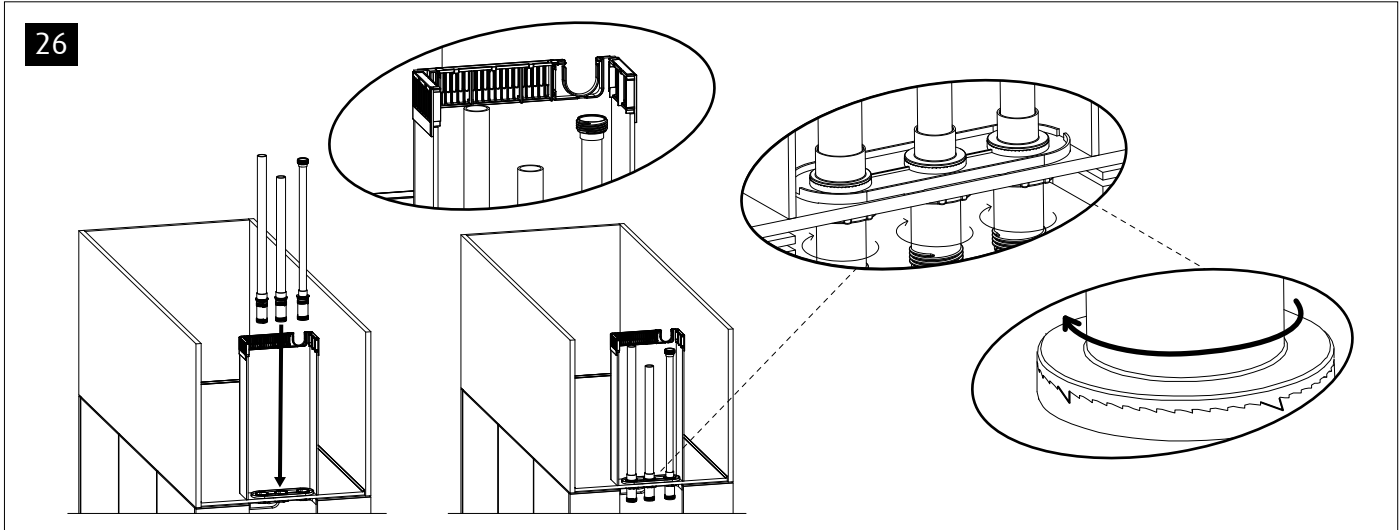


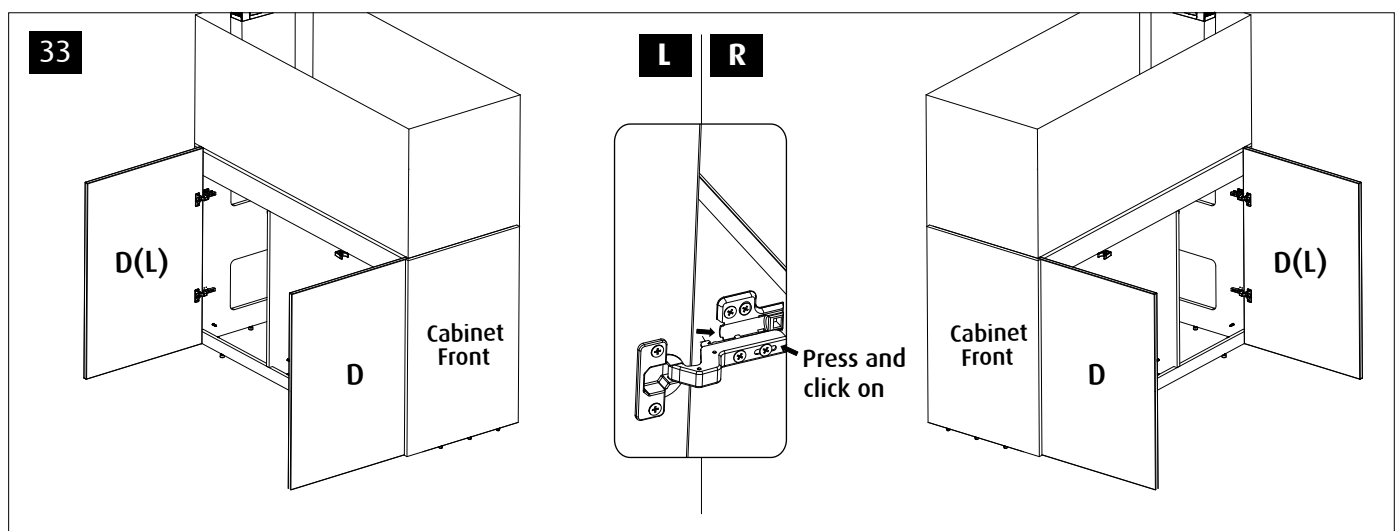
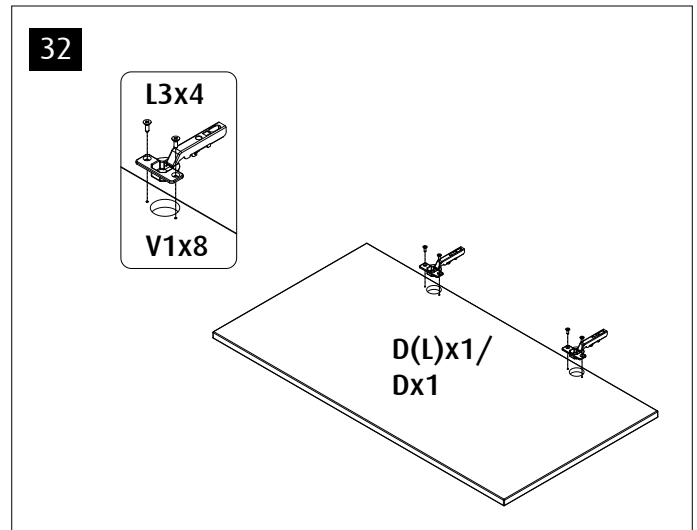
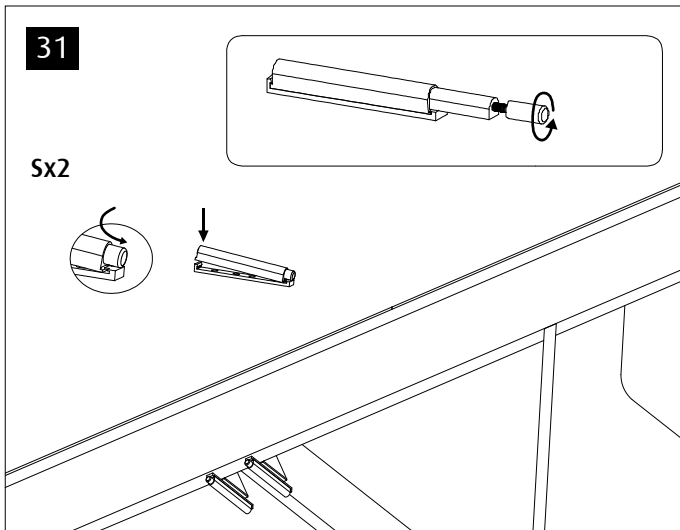
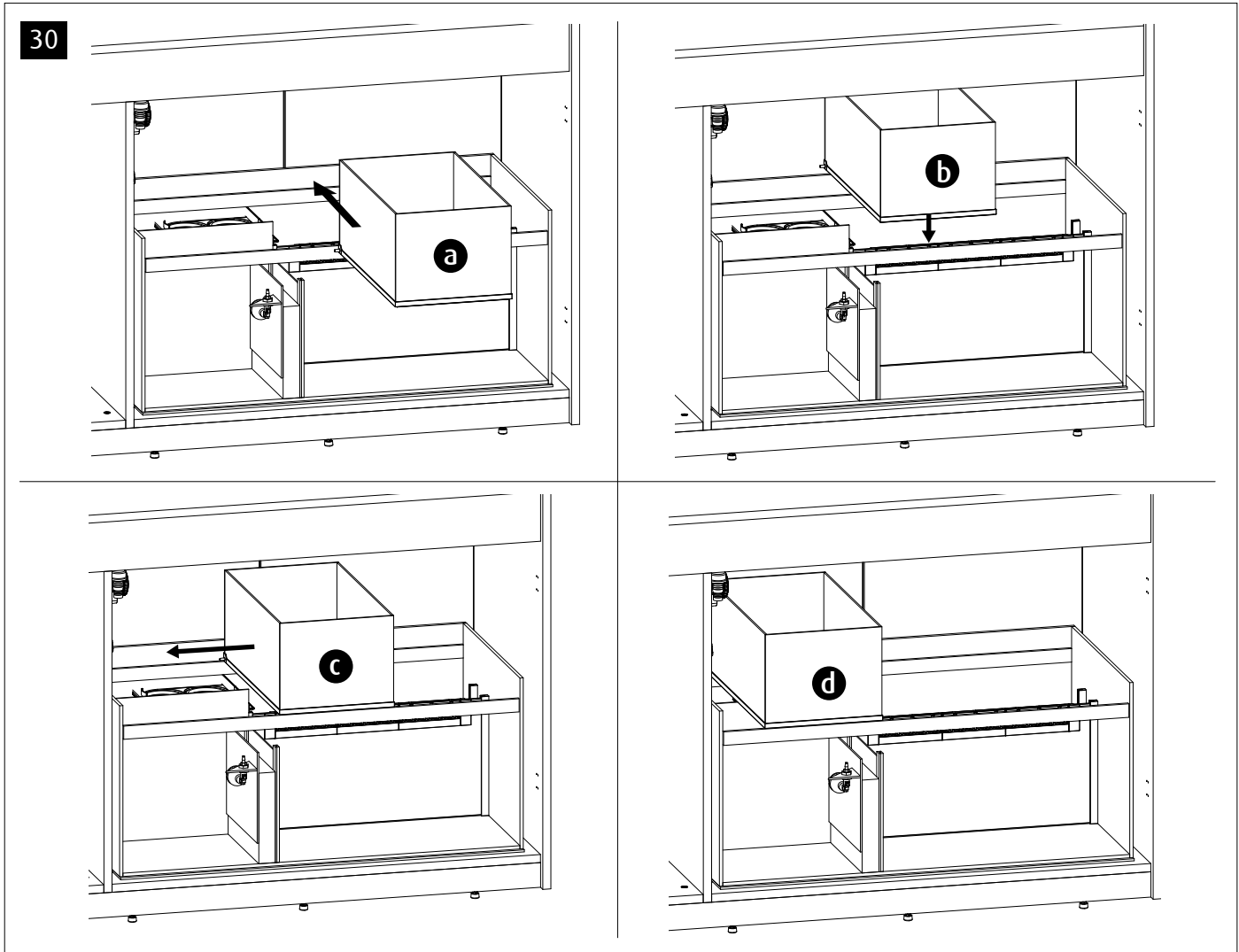






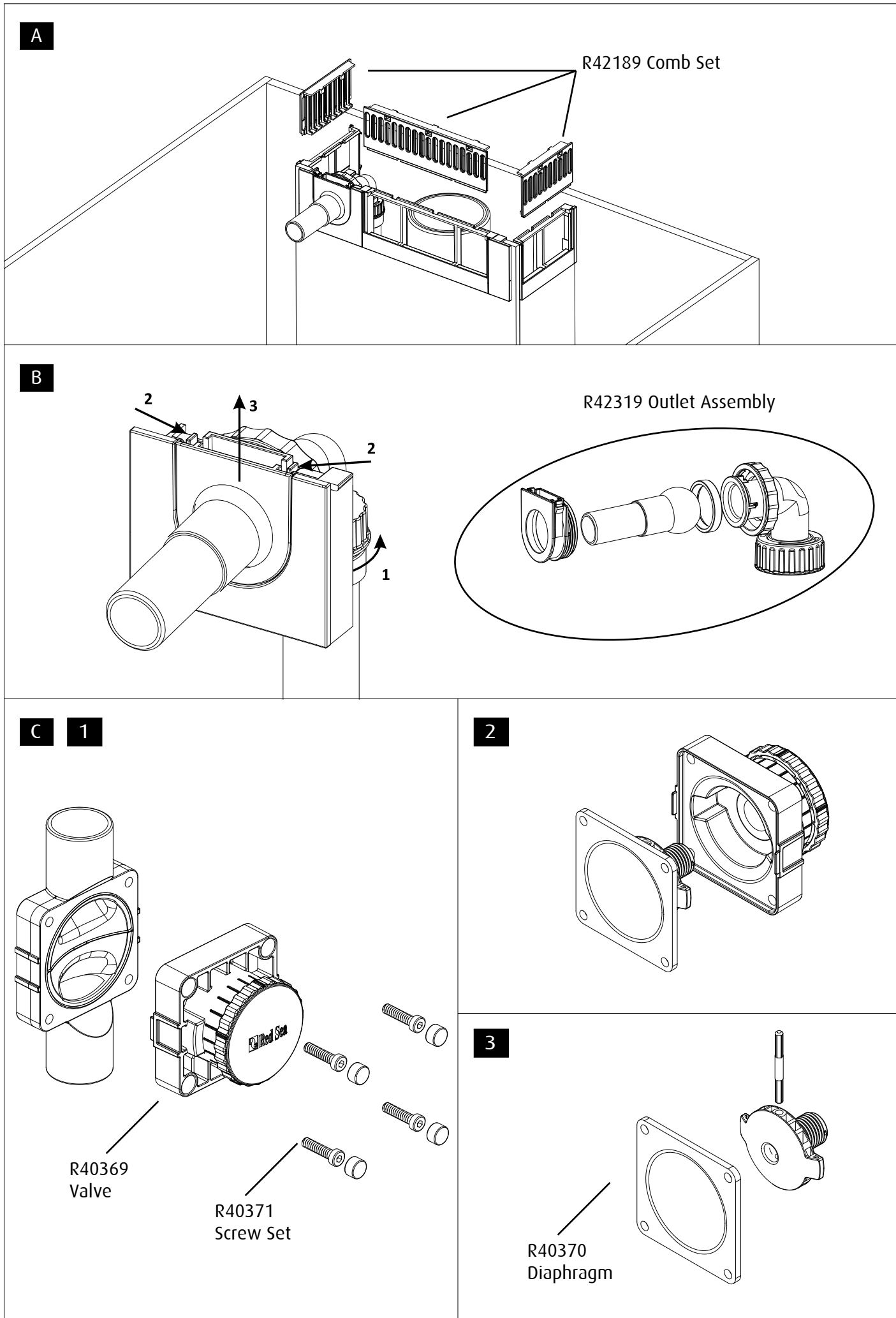








Maintenance



#### Europe

Red Sea Europe  
ZA de la St-Denis  
F-27130 Verneuil s/Avre,  
France  
Tel: (33) 2 32 37 71 37  
eur.info@redseafish.com

#### UK & Ireland

Red Sea Aquatics (UK) Ltd  
PO Box 1237  
Cheddar, BS279AG  
Tel: +44 (0) 203 3711437  
Fax: +44 (0) 800 0073169  
uk.info@redseafish.com

#### U.S.A

Red Sea U.S.A  
4687 World Houston  
Parkway #150  
Houston, TX 77032  
Tel: +1-888-RED-SEA9  
redseainfo@redseafish.com

#### Germany & Austria

Red Sea Deutschland  
Prinzenallee 7 (Prinzenpark)  
40549 Düsseldorf  
Tel: 0211-52391 481  
de.info@redseafish.com

Red Sea Aquatics (GZ) Ltd  
Block A3, No.33 Hongmian Road,  
Xinhua Industrial Park,  
Huadu District, Guangzhou City,  
China, Postal code 510800  
Tel: +86-020-6625 3828

 **Red Sea**  
www.redseafish.com



## 打印提示

只打印水族箱和底柜安装指南，  
打印页面83-94。

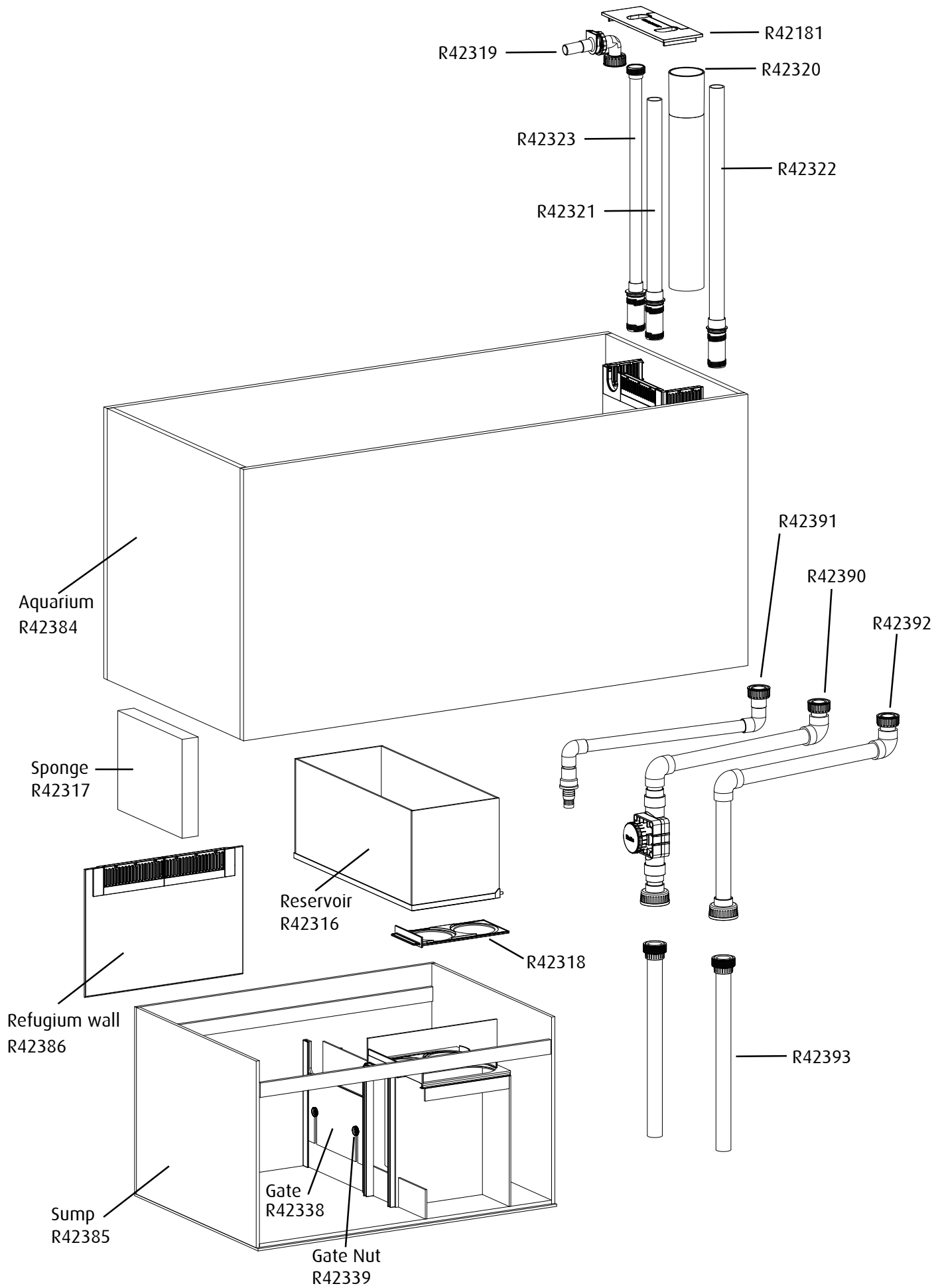
# Red Sea REEFER<sup>TM</sup>

## Peninsula 650

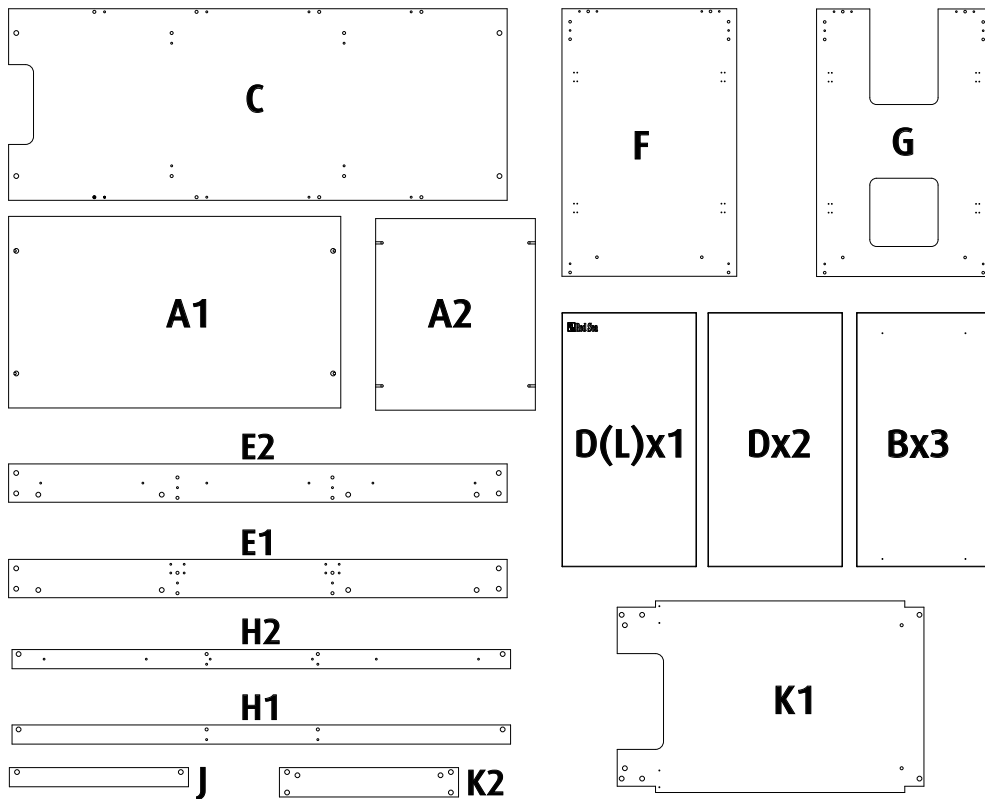
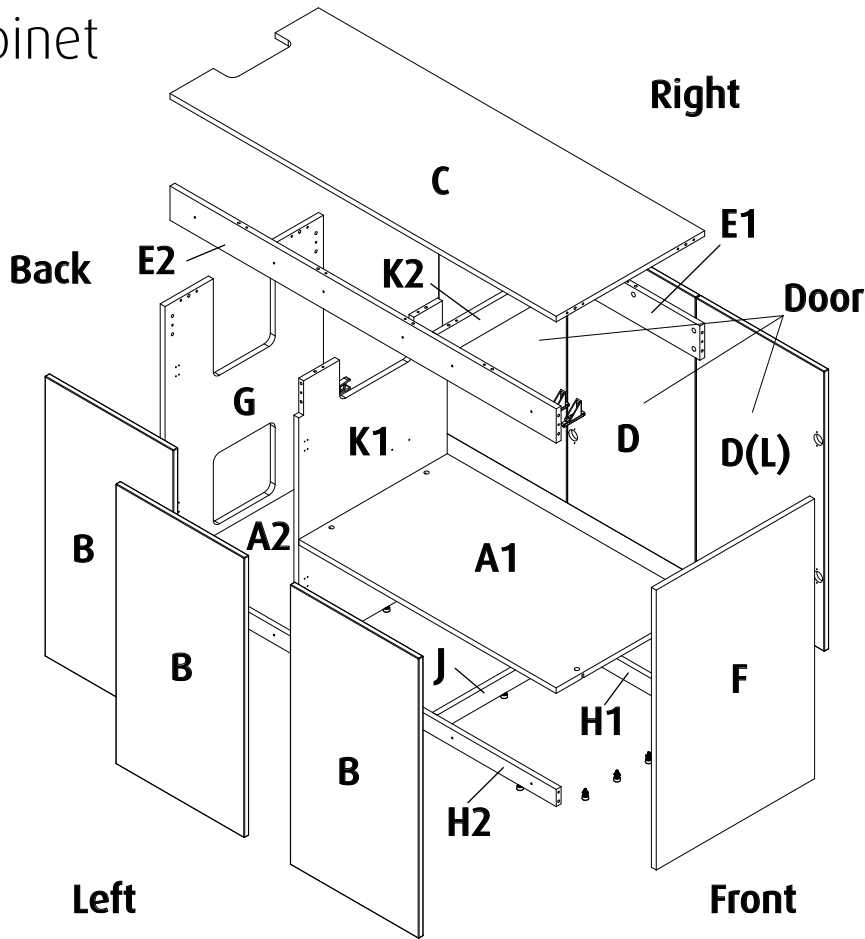
---

Aquarium & Cabinet Assembly Manual

# Aquarium Water Management System



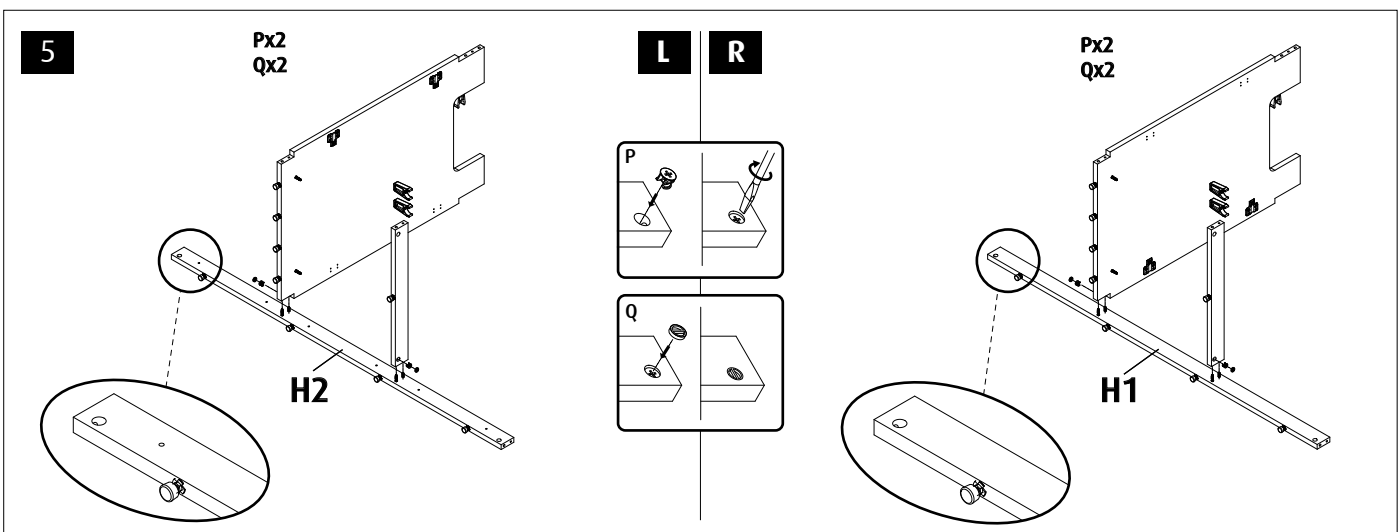
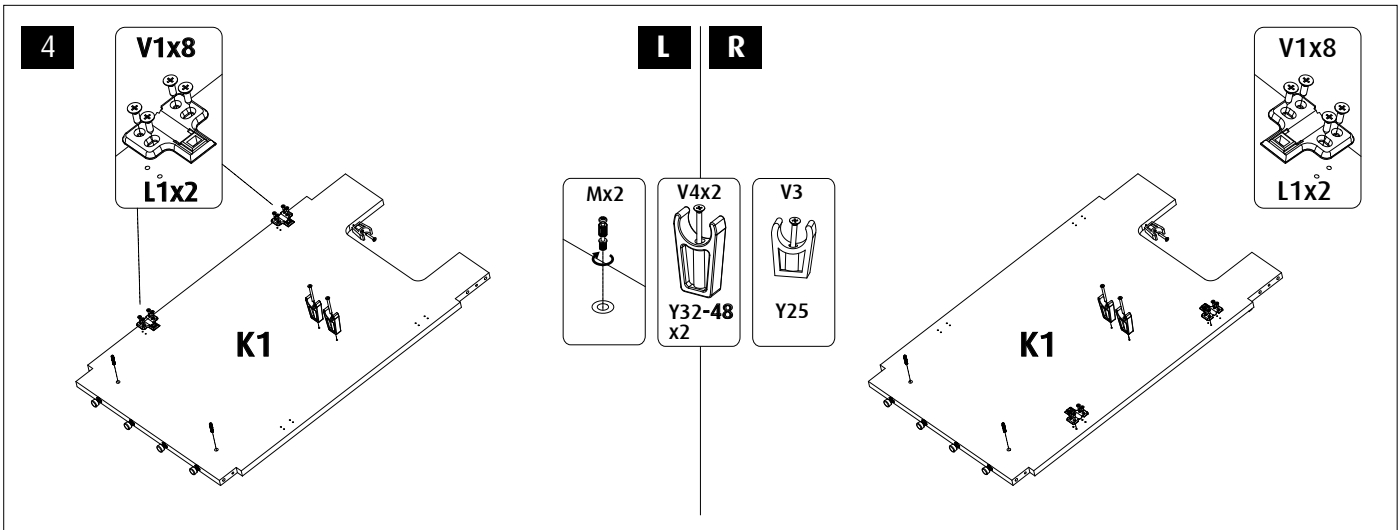
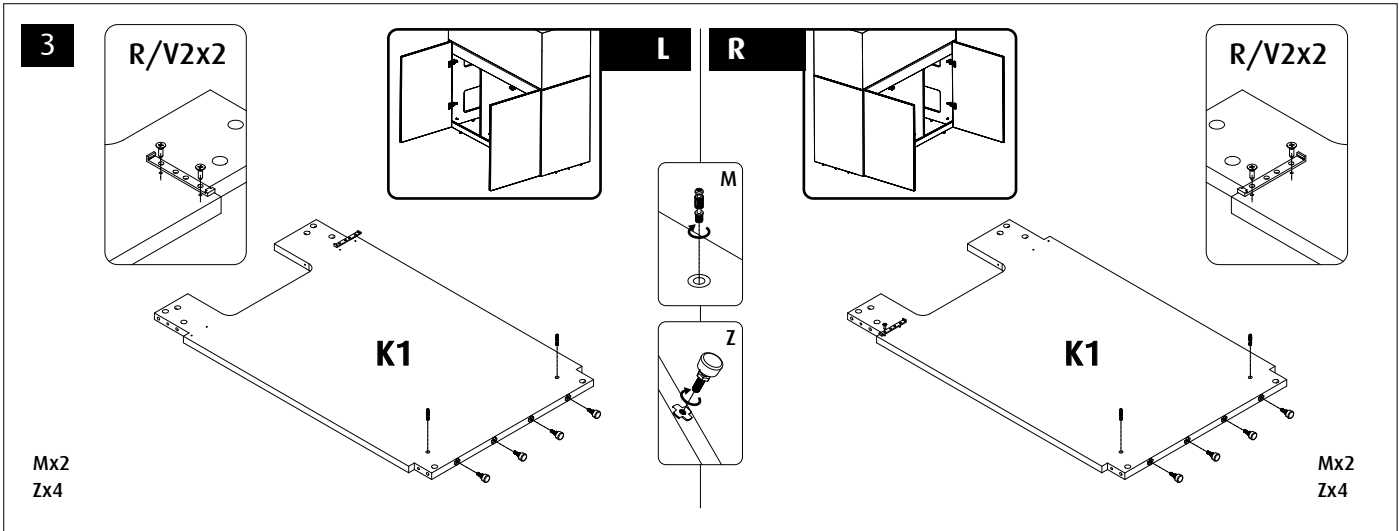
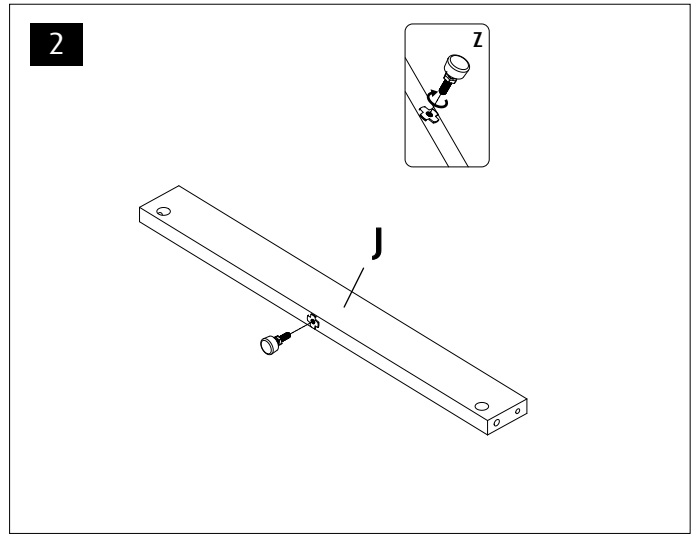
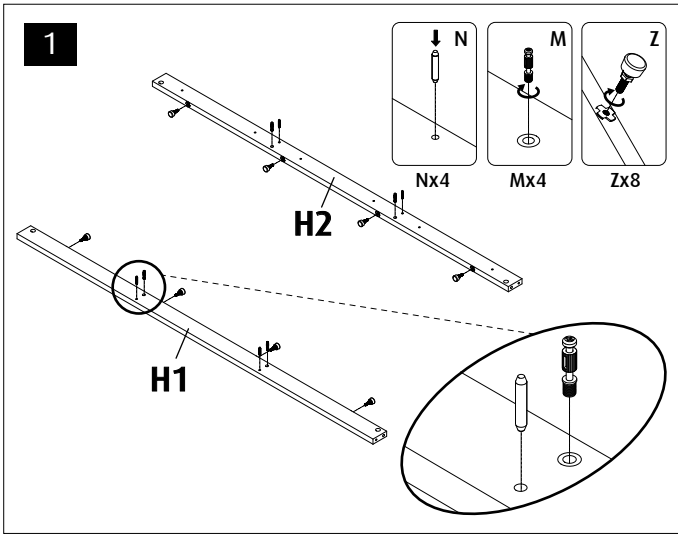
Cabinet

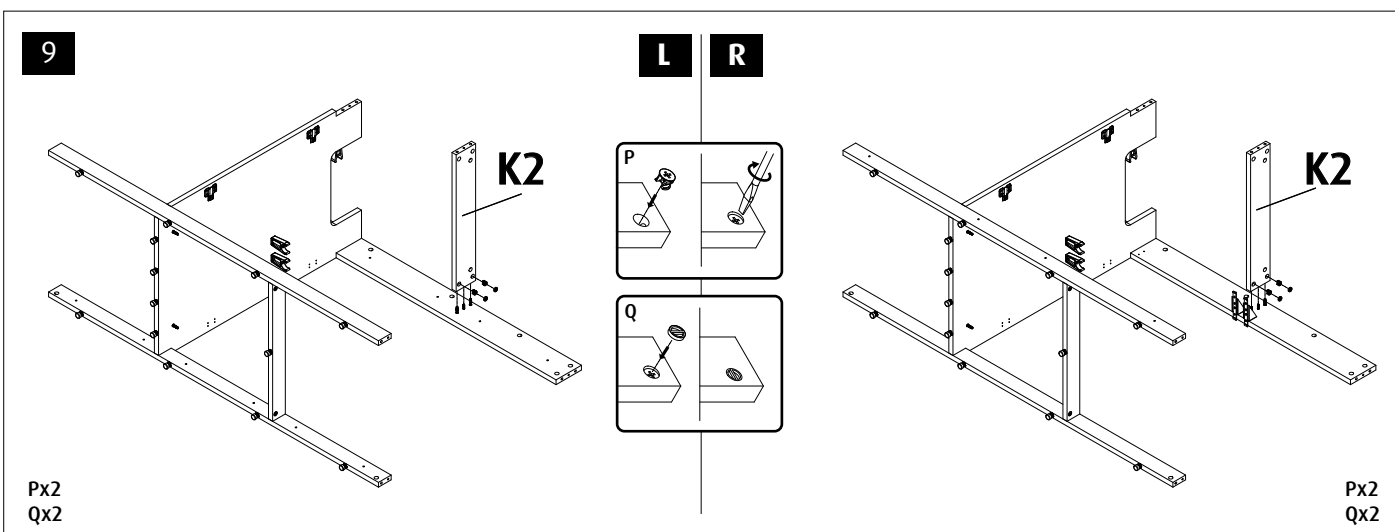
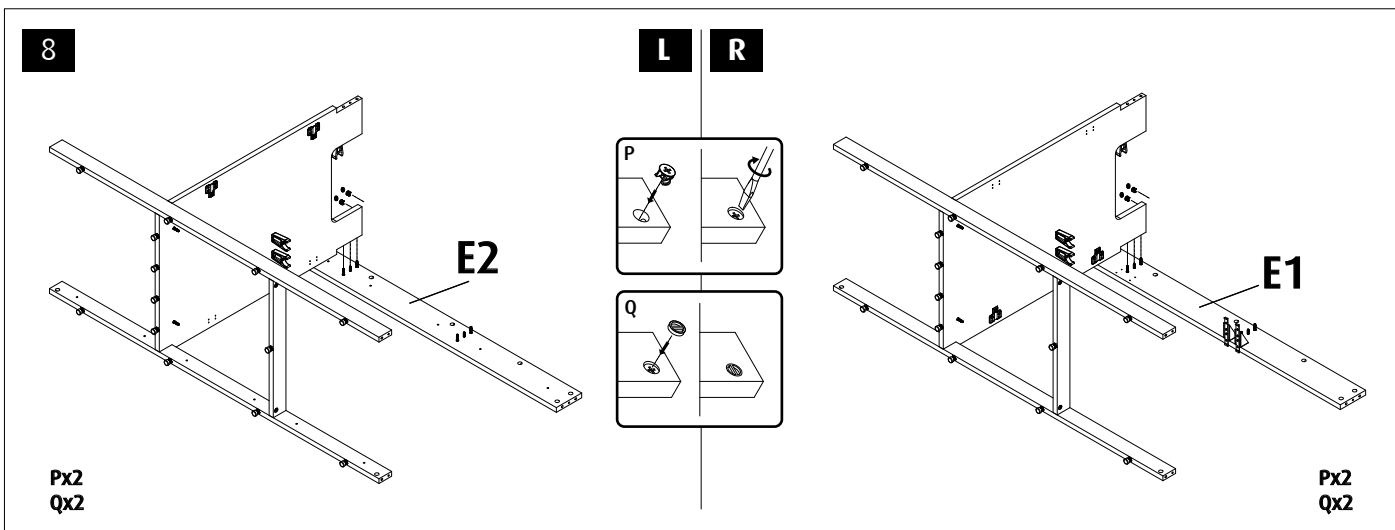
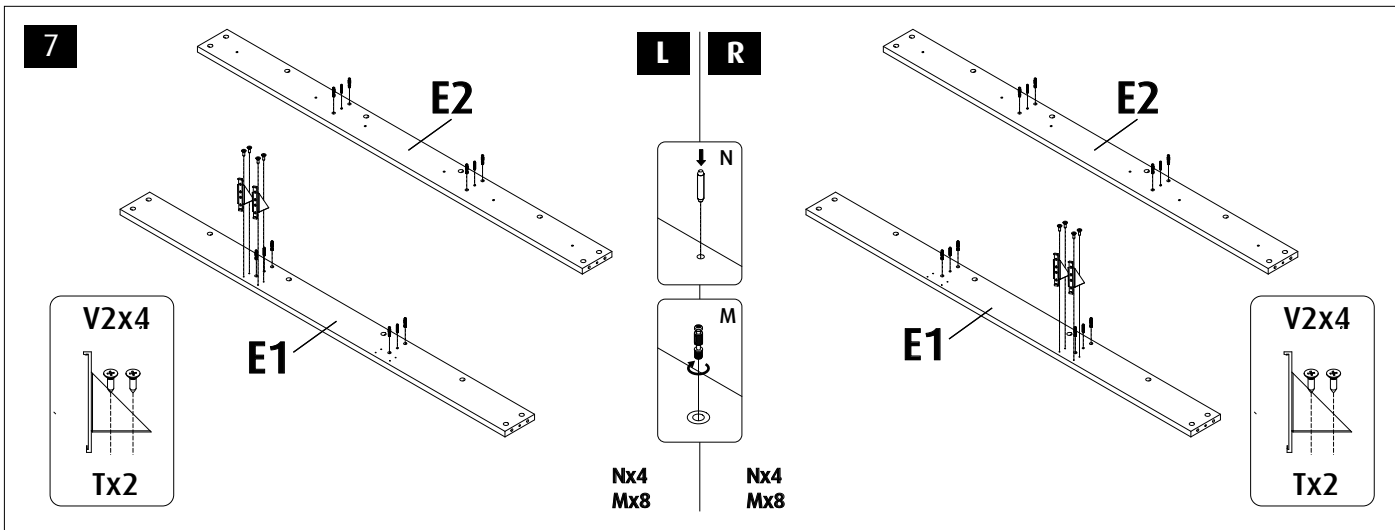
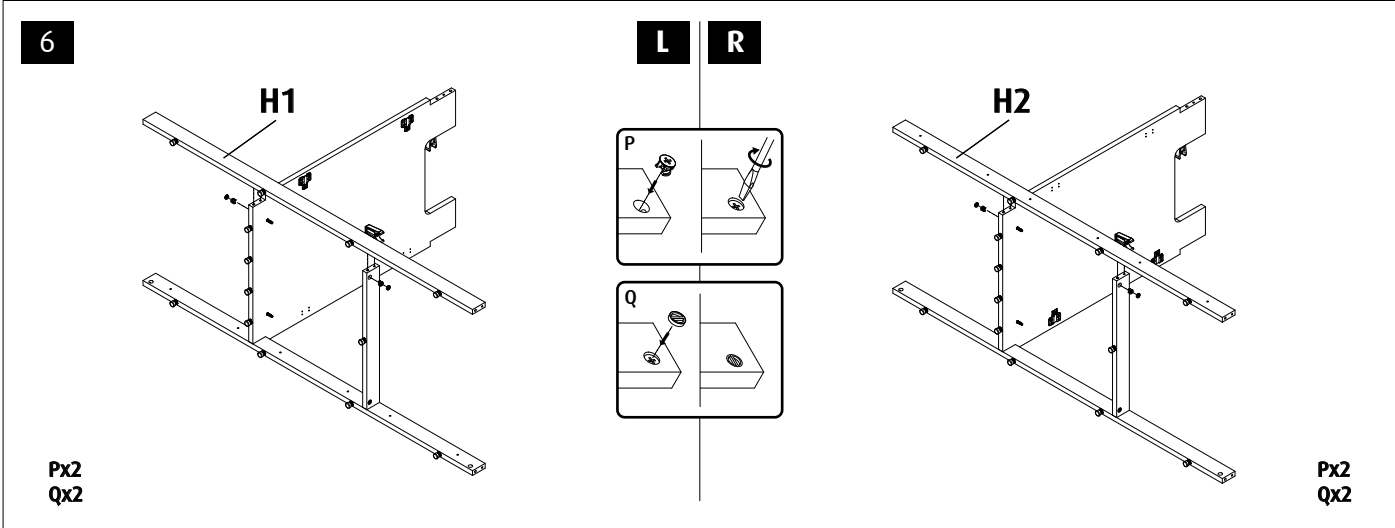


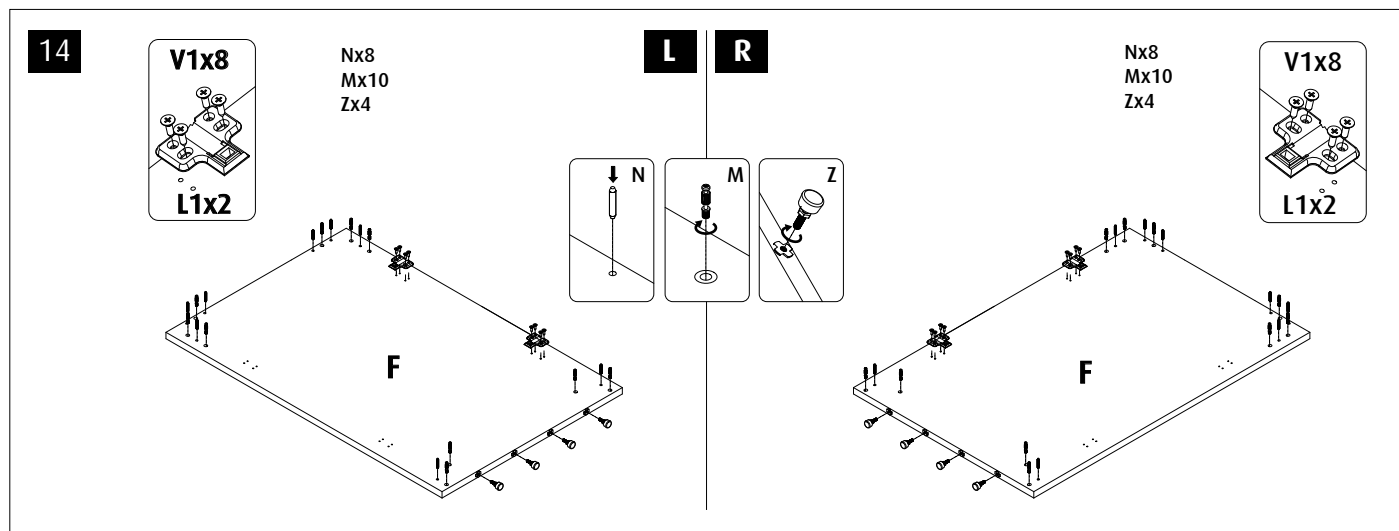
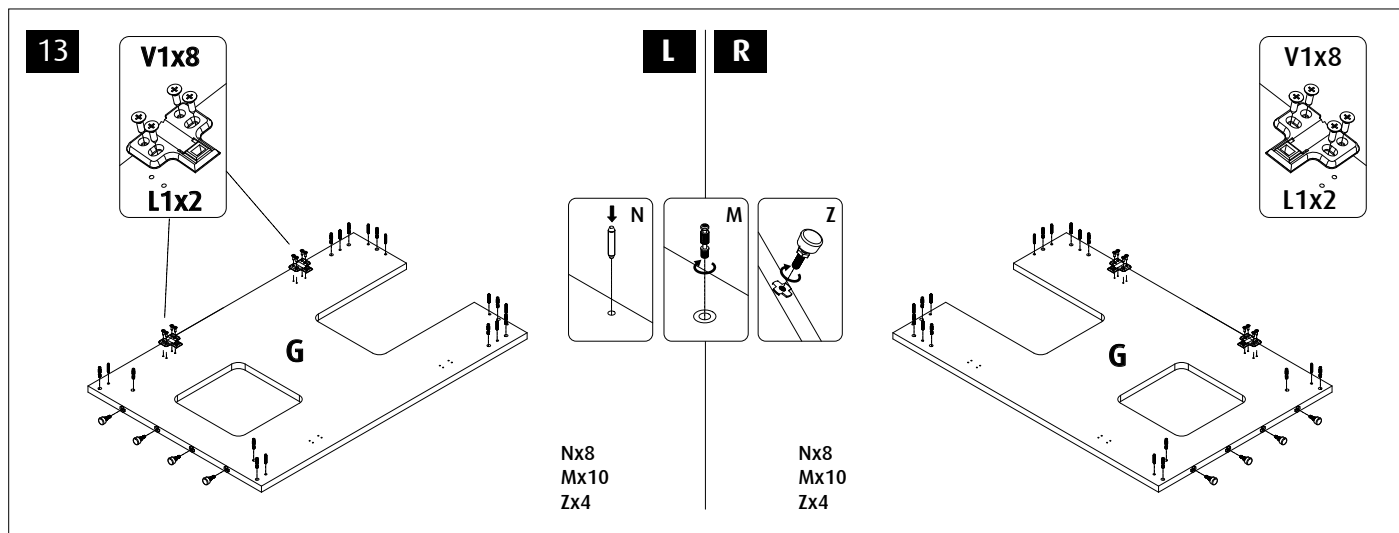
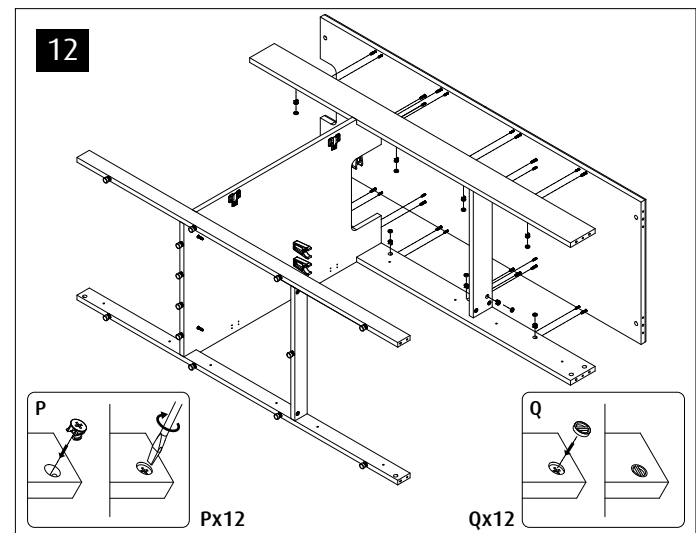
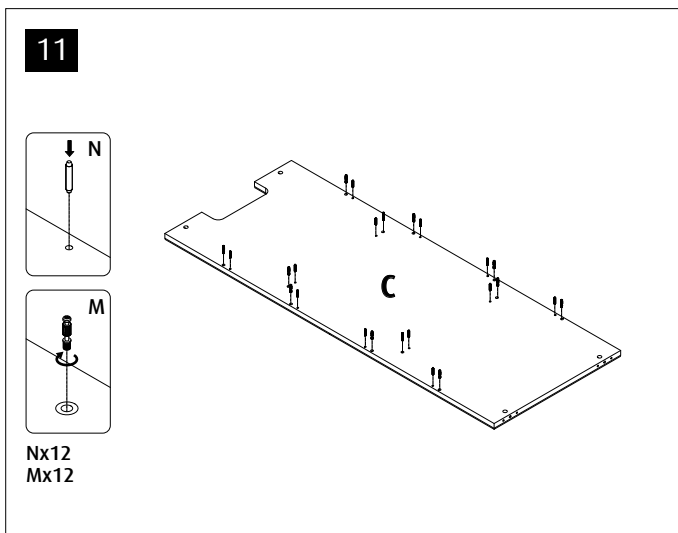
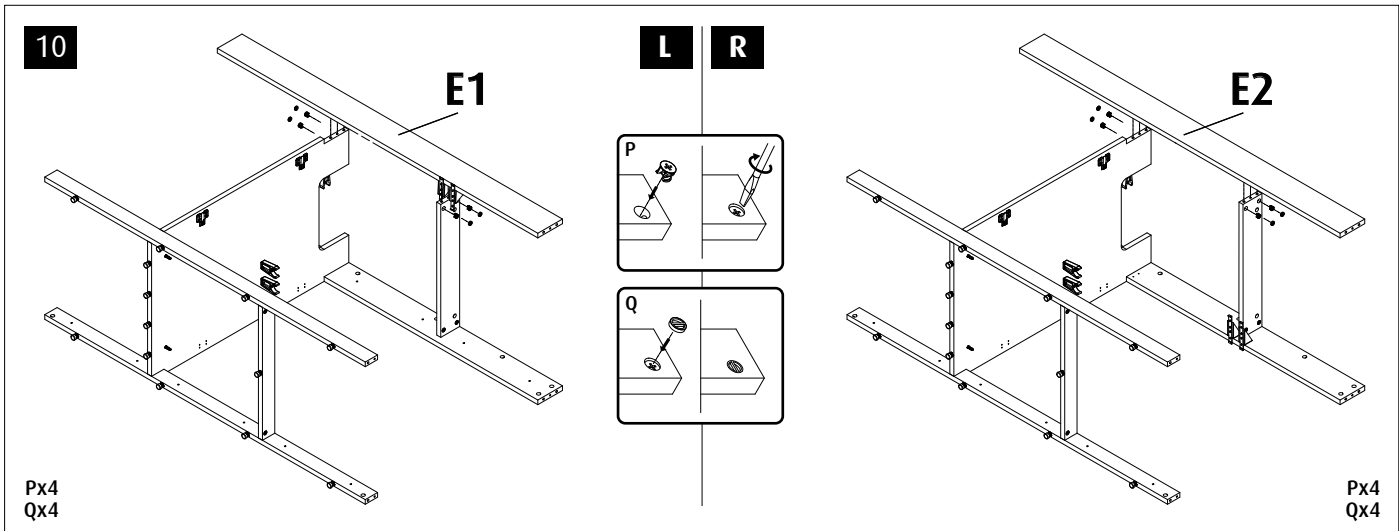
L3		6
L1		
N		36
M		48
P		48
Q		48
R		1
S		3
T		2
V1	ST4x16	36
V2	ST3.5x14	6
V3	ST5x35	13
V4	ST5x60	2
W		12
Y32-48		2
Y25		1
Z		21

	P650	Part Description
A1	6511B	Cabinet Bottom Sump
A2	6512B	Cabinet Bottom Chiller
B - Black	R42407	Cabinet Side Panel - Black
B - White	R42408	Cabinet Side Panel - White
C	6510B	Cabinet Top
D - Black	R42405	Cabinet Door - Black
D - White	R42406	Cabinet Door - White
E1	6516B	Cabinet Front Upper - Door Side

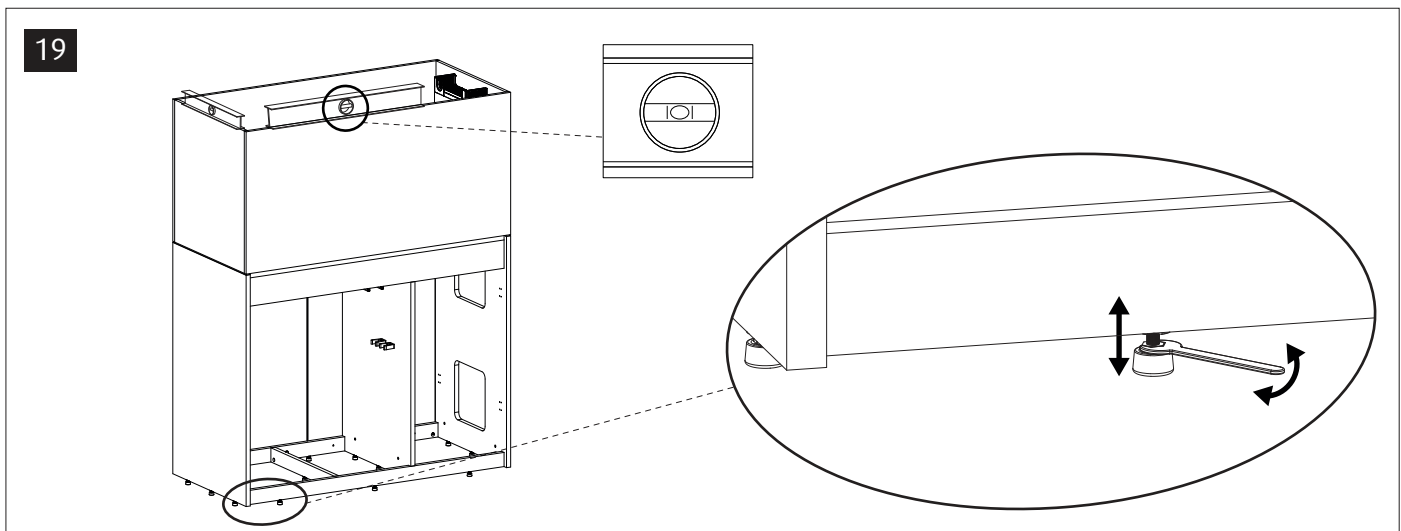
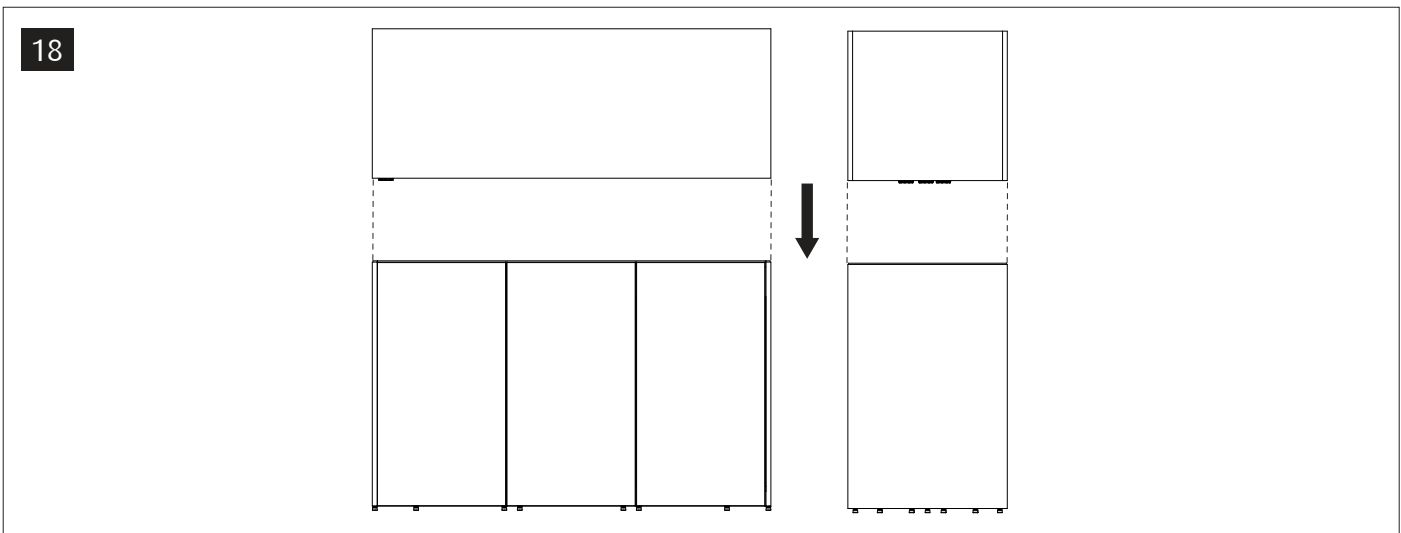
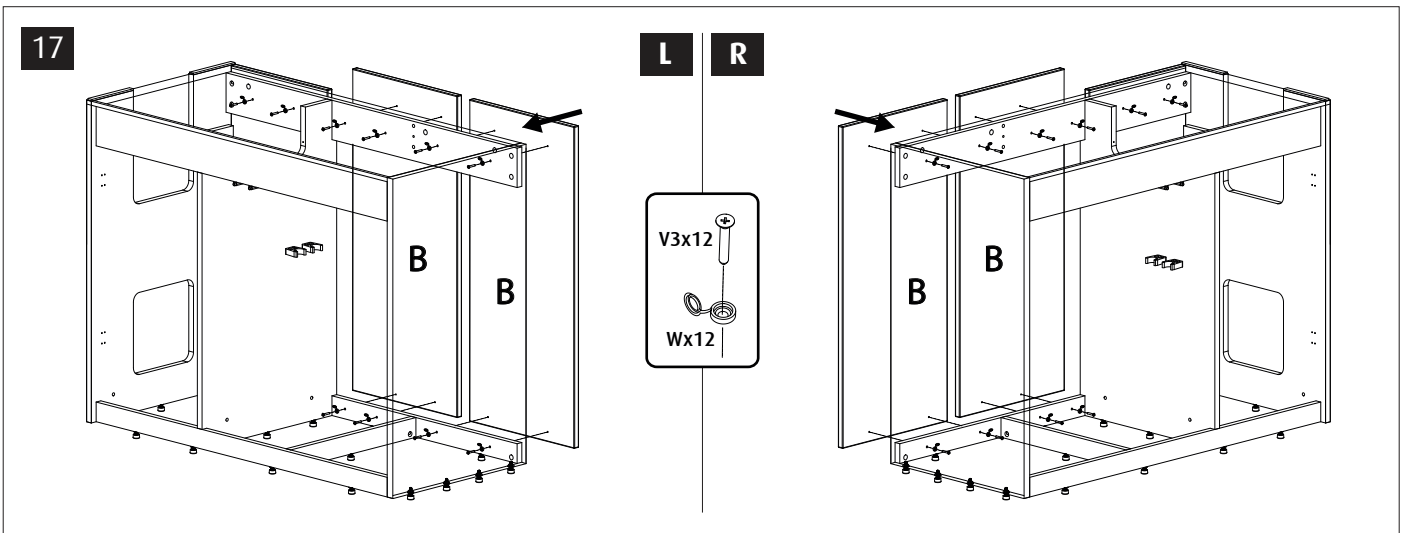
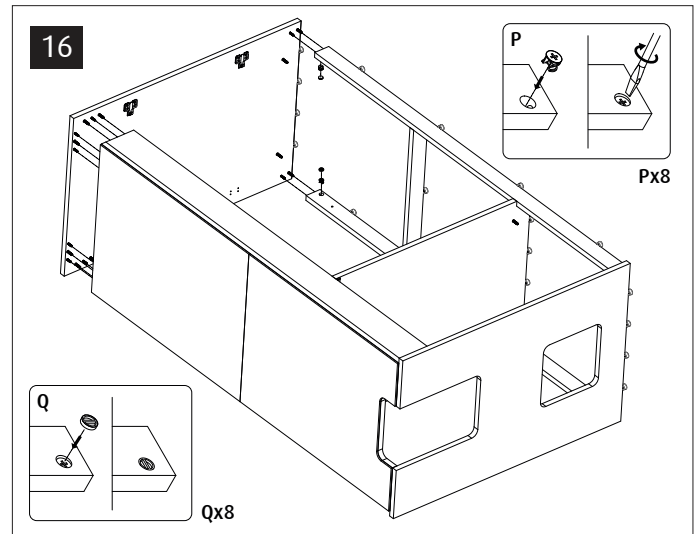
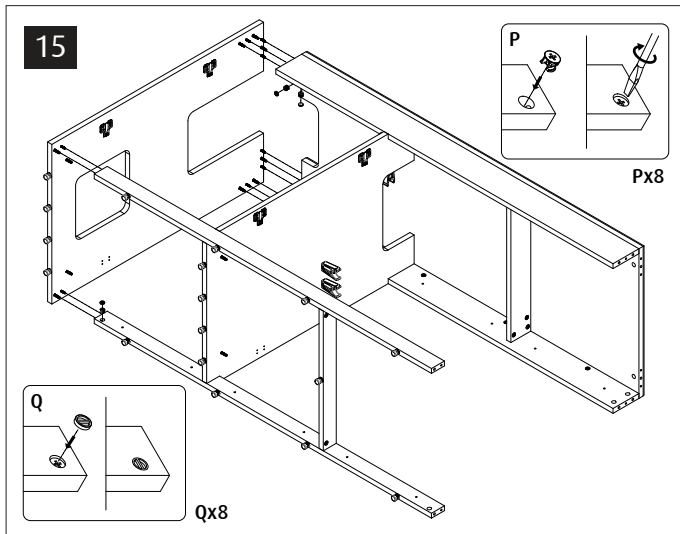
	P650	Part Description
E2	6516B-1	Cabinet Front Upper - Panel Side
F	6437-B/W	Cabinet Front - Black/White
G	6436-B/W	Cabinet Rear - Black/White
H1	6517B	Cabinet Front Lower - Door Side
H2	6518B	Cabinet Front Lower - Panel Side
J	6514B	Cabinet Base Support
K1	6513B	Cabinet Internal Wall
K2	6515B	Cabinet Internal Support

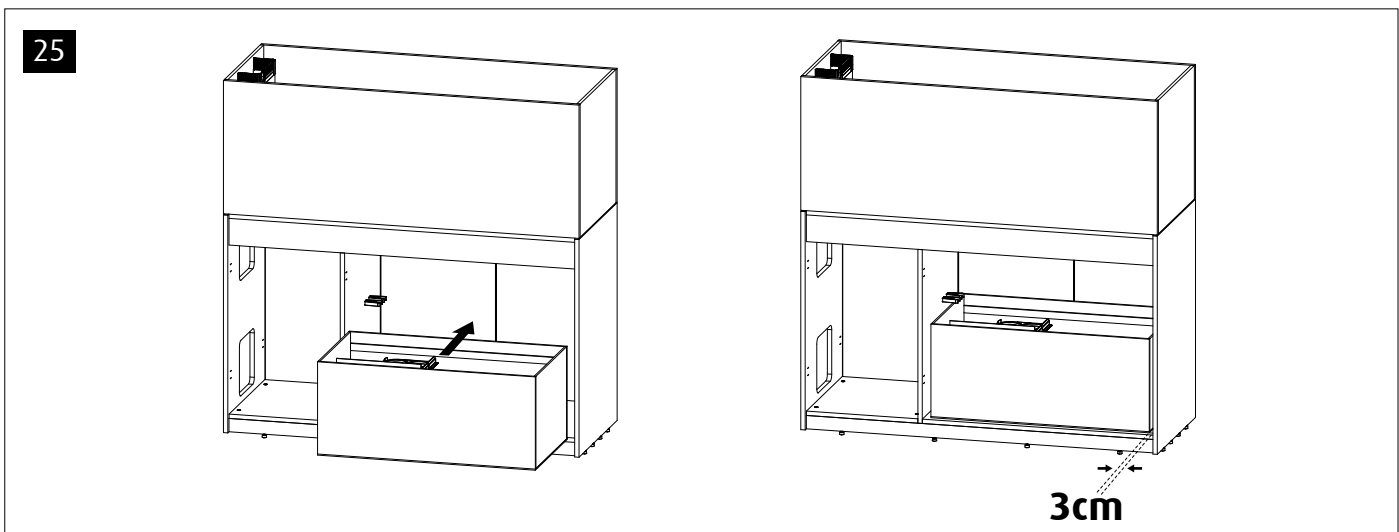
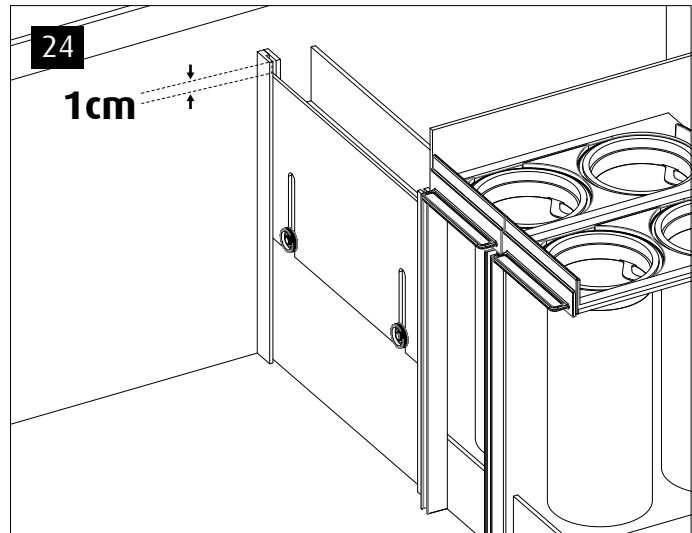
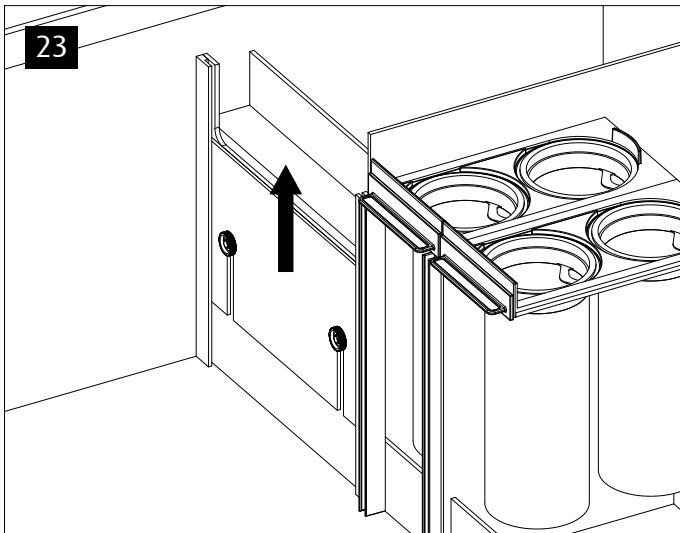
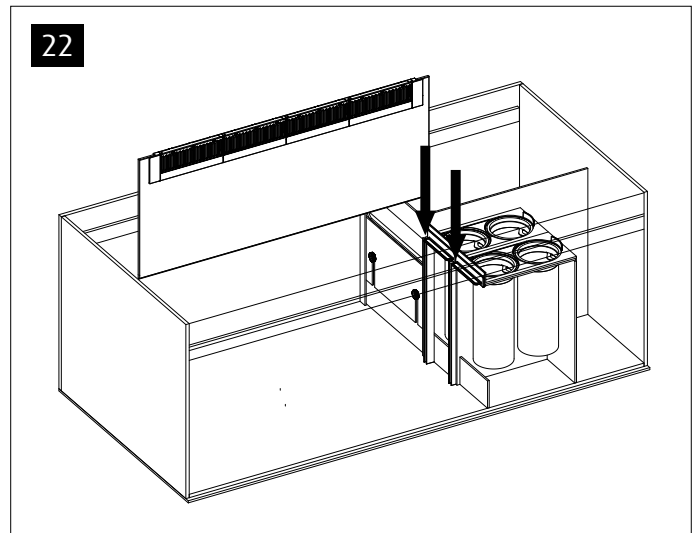
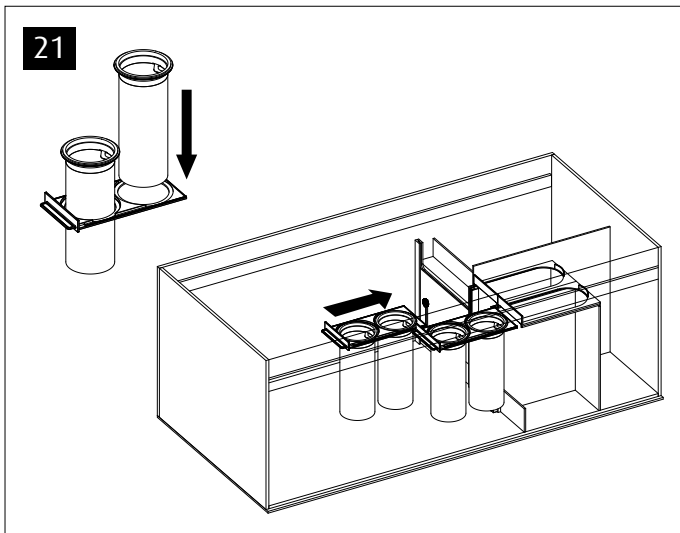
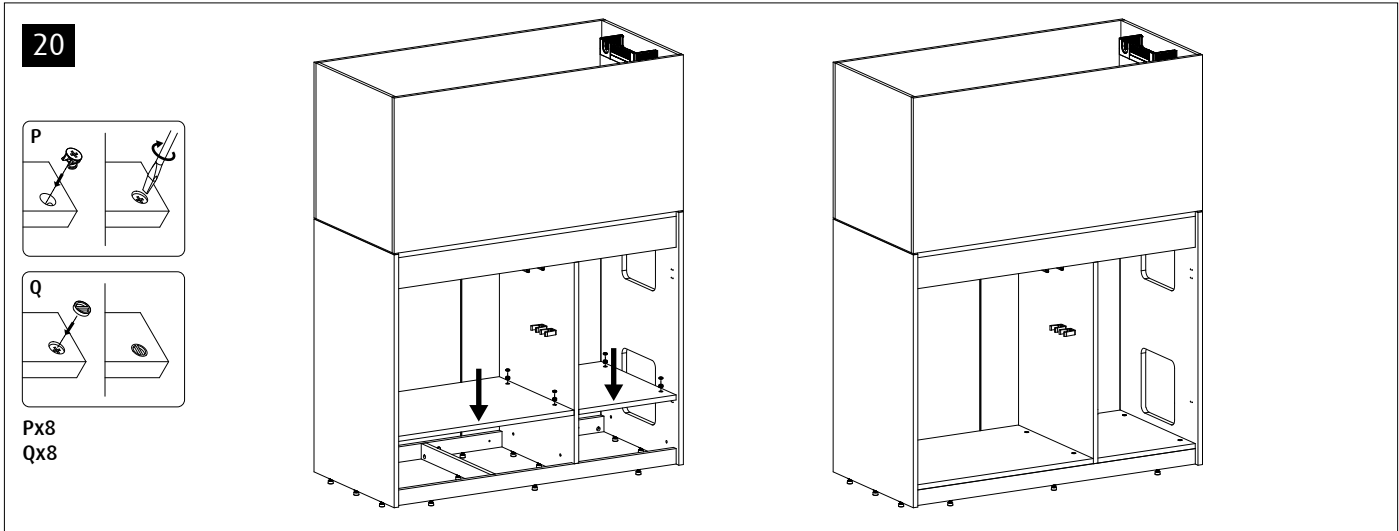


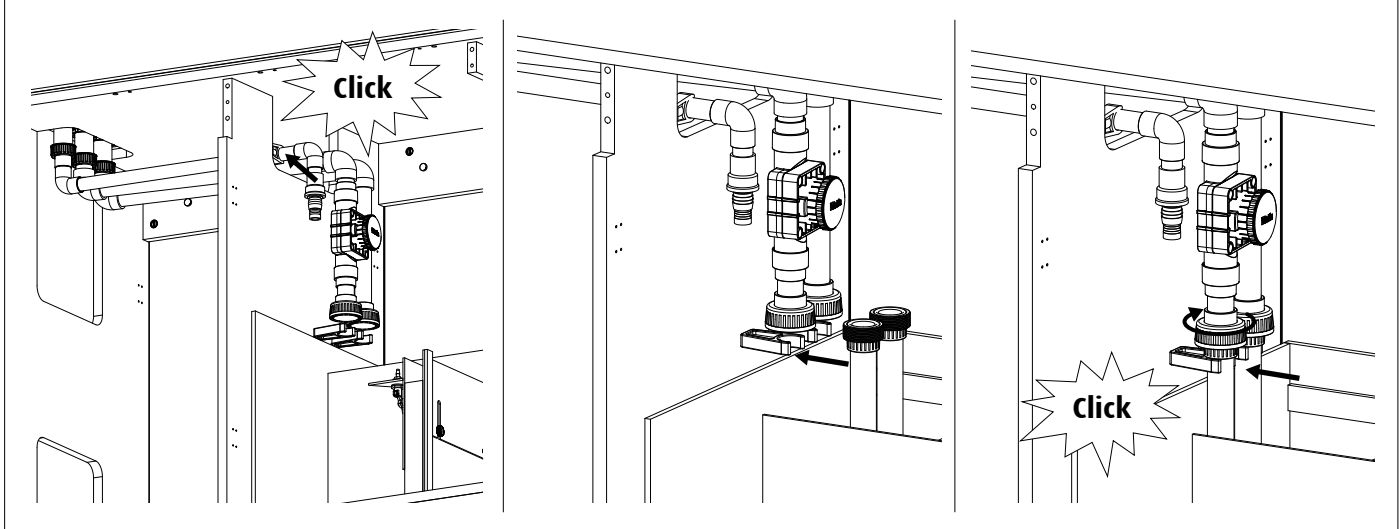
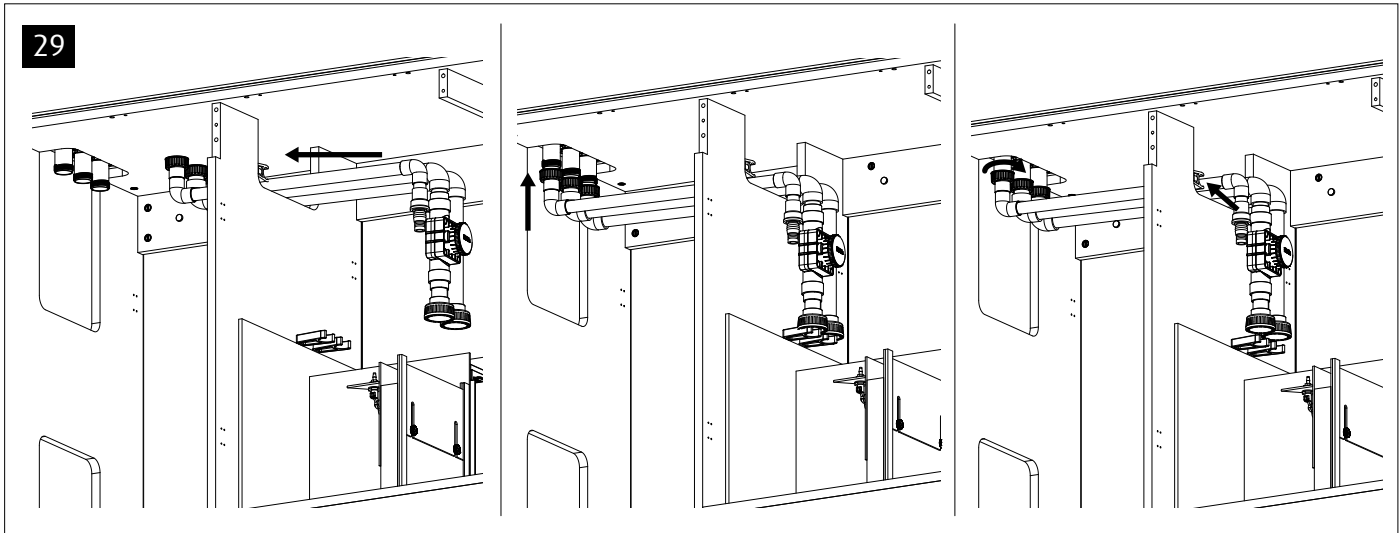
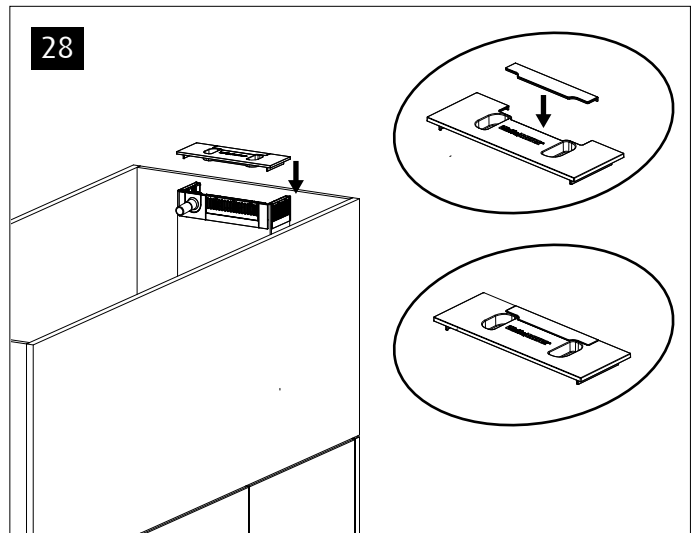
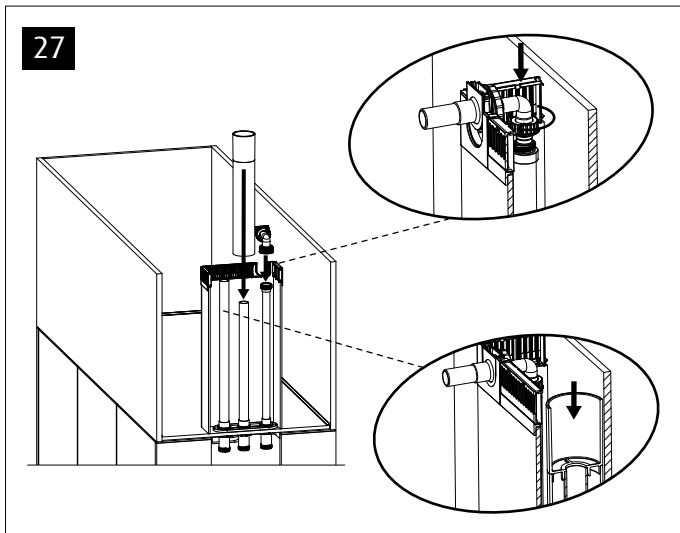
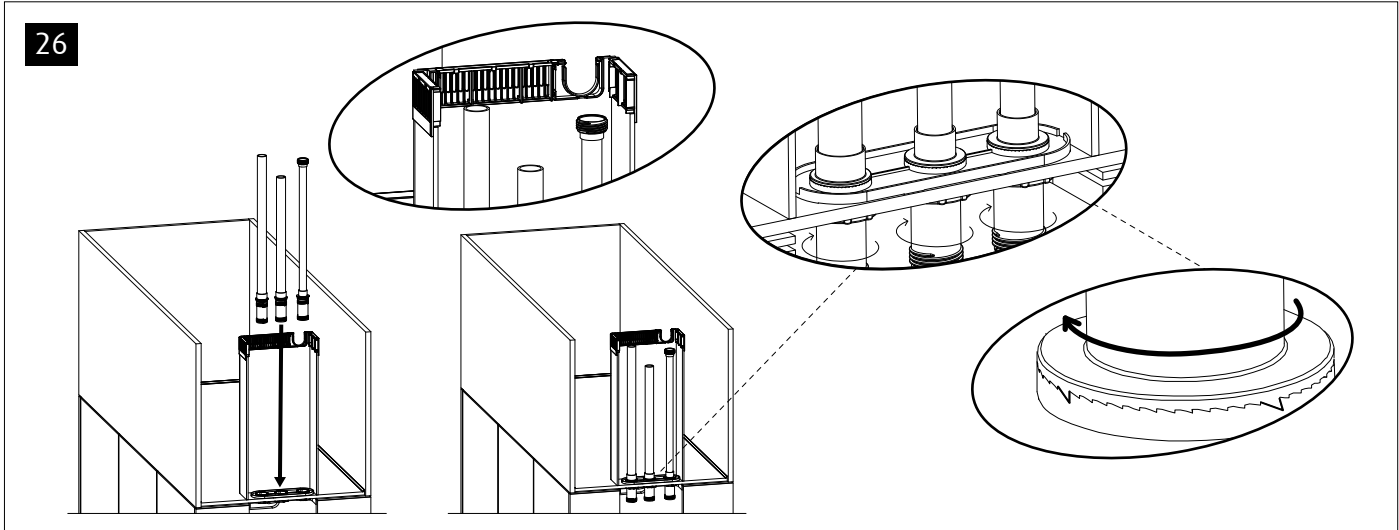


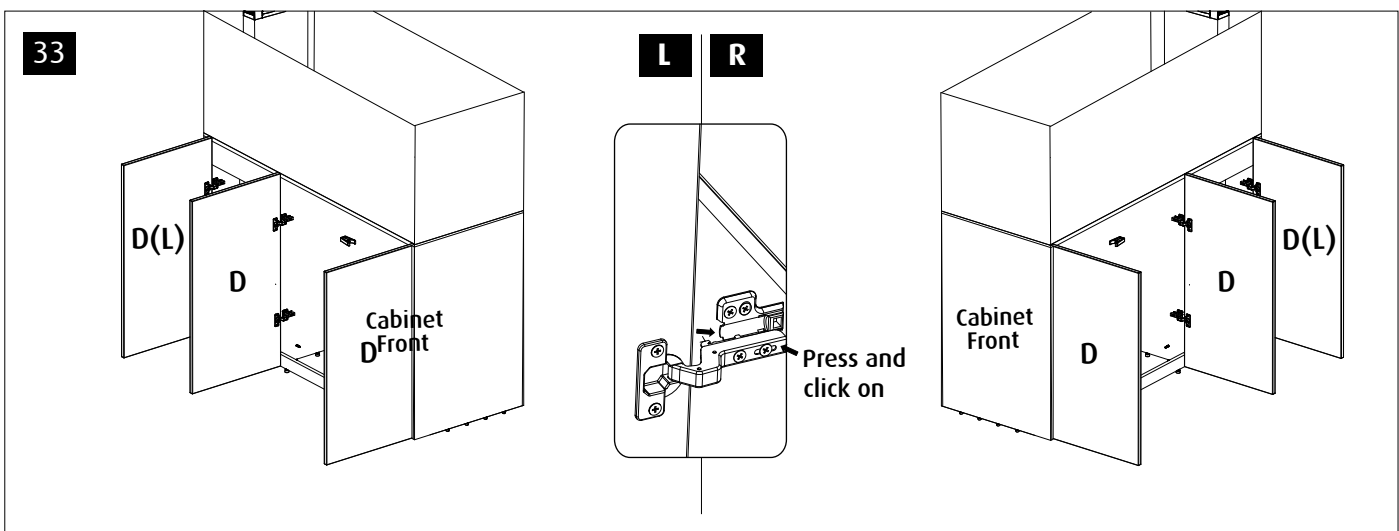
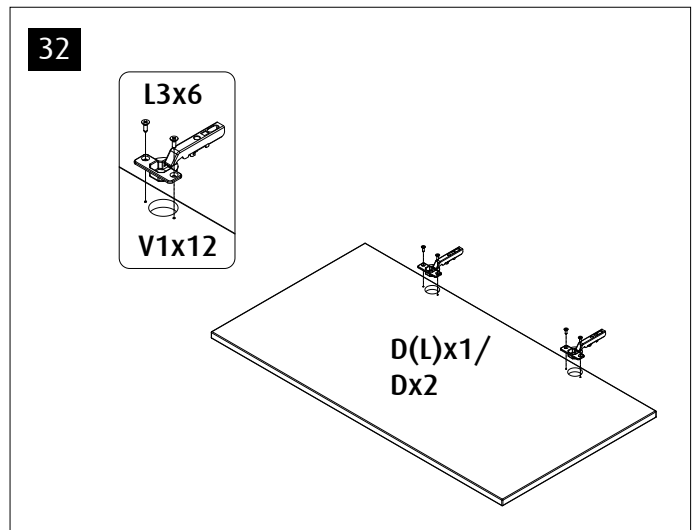
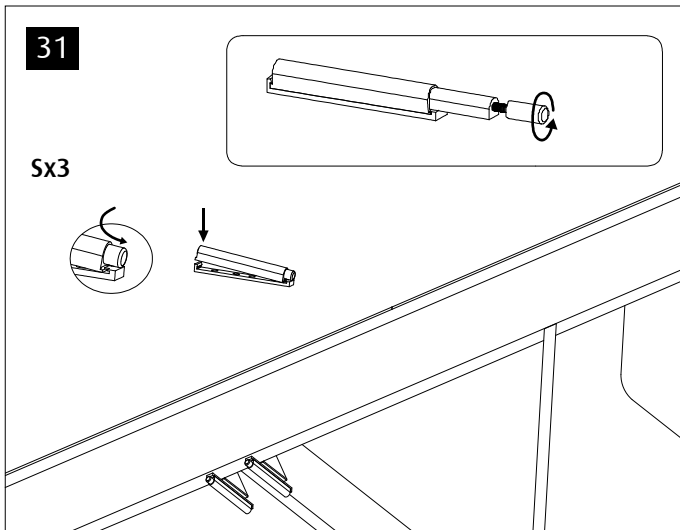
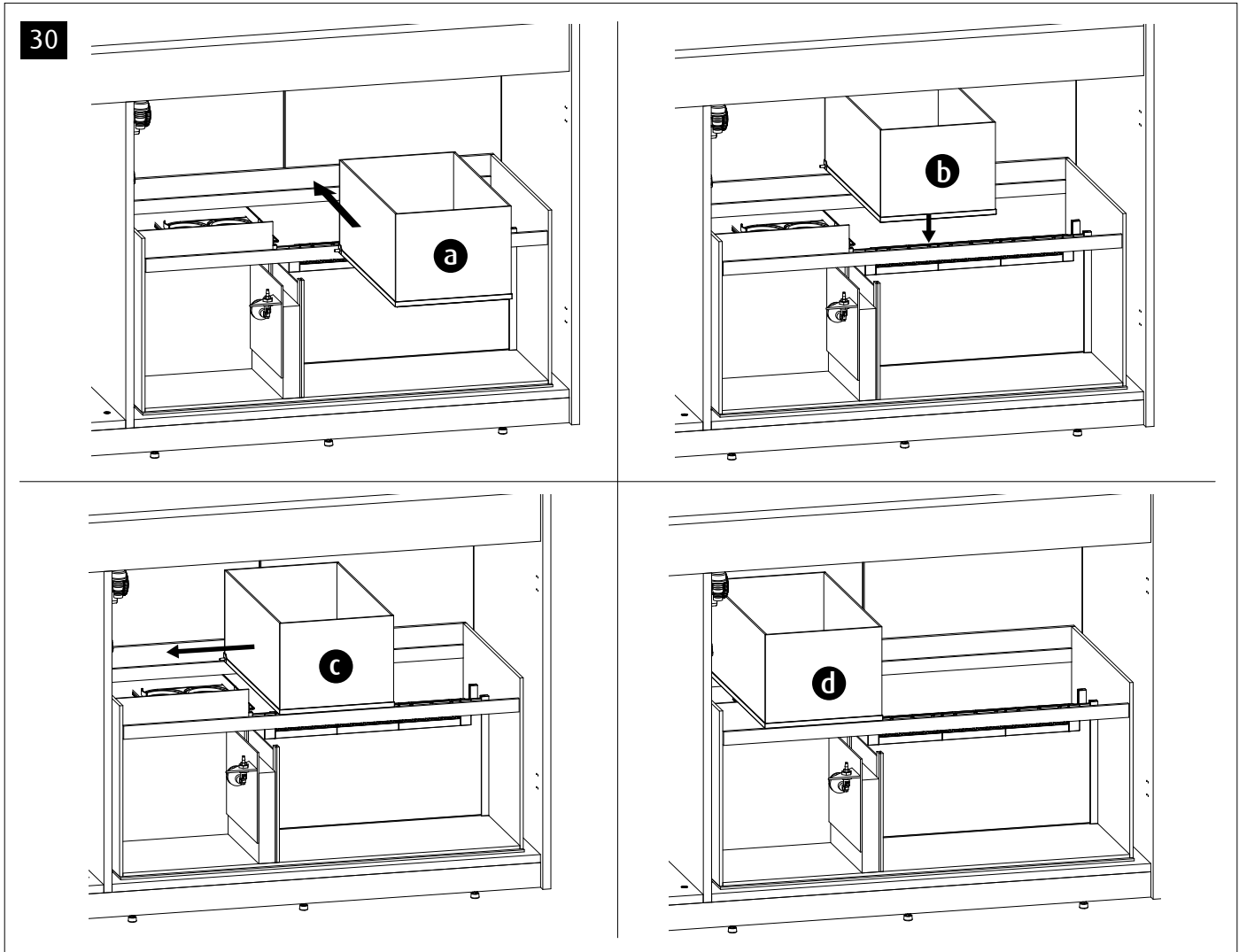




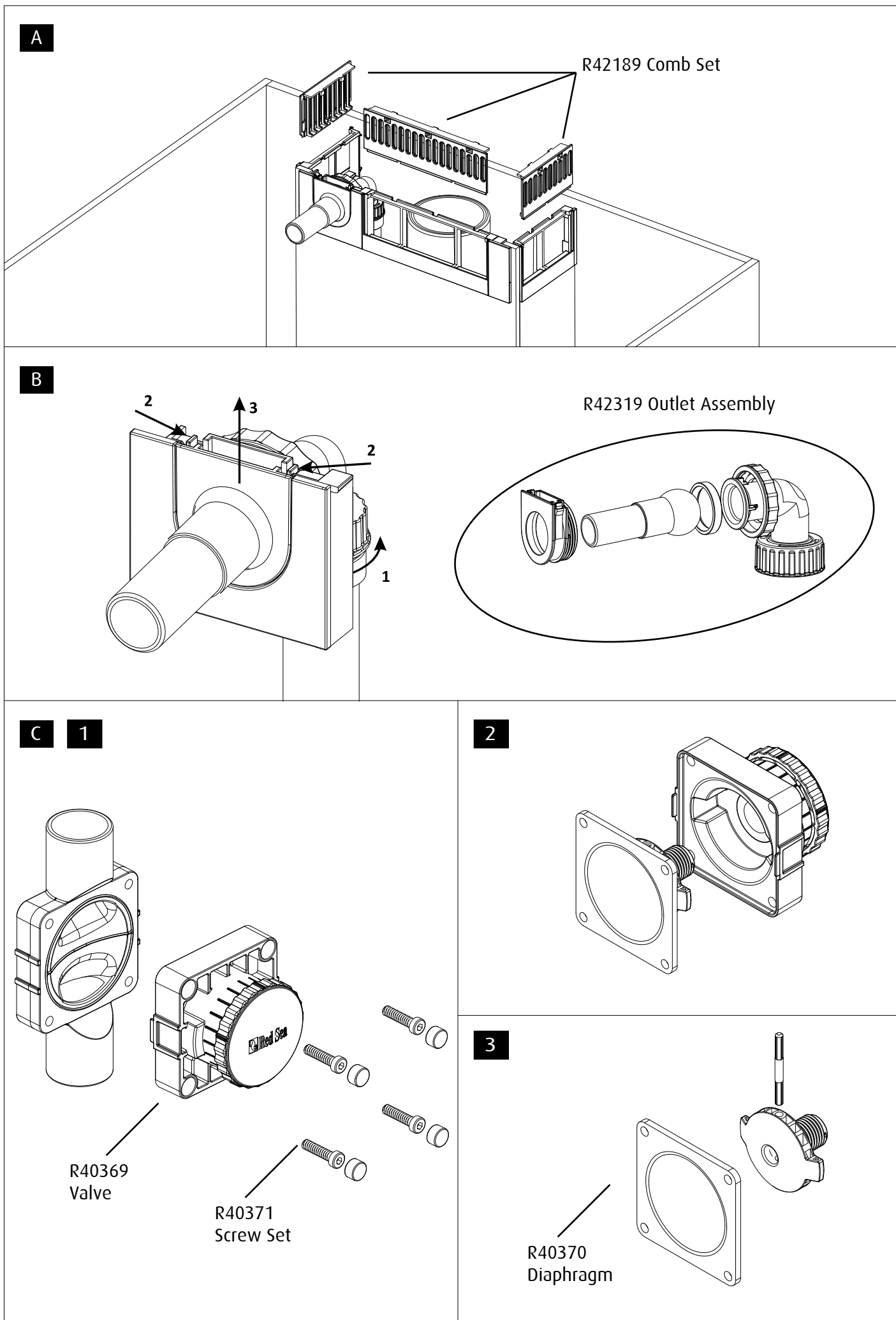








Maintenance



**Europe**

Red Sea Europe  
ZA de la St-Denis  
F-27130 Verneuil s/Avre,  
France  
Tel: (33) 2 32 37 71 37  
eur.info@redseafish.com

**UK & Ireland**

Red Sea Aquatics (UK) Ltd  
PO Box 1237  
Cheddar, BS279AG  
Tel: +44 (0) 203 3711437  
Fax: +44 (0) 800 0073169  
uk.info@redseafish.com

**U.S.A**

Red Sea U.S.A  
4687 World Houston  
Parkway #150  
Houston, TX 77032  
Tel: +1-888-RED-SEA9  
redseainfo@redseafish.com

**Germany & Austria**

Red Sea Deutschland  
Prinzenallee 7 (Prinzenpark)  
40549 Düsseldorf  
Tel: 0211-52391 481  
de.info@redseafish.com

Red Sea Aquatics (GZ) Ltd  
Block A3, No.33 Hongmian Road,  
Xinhua Industrial Park,  
Huadu District, Guangzhou City,  
China, Postal code 510800  
Tel: +86-020-6625 3828

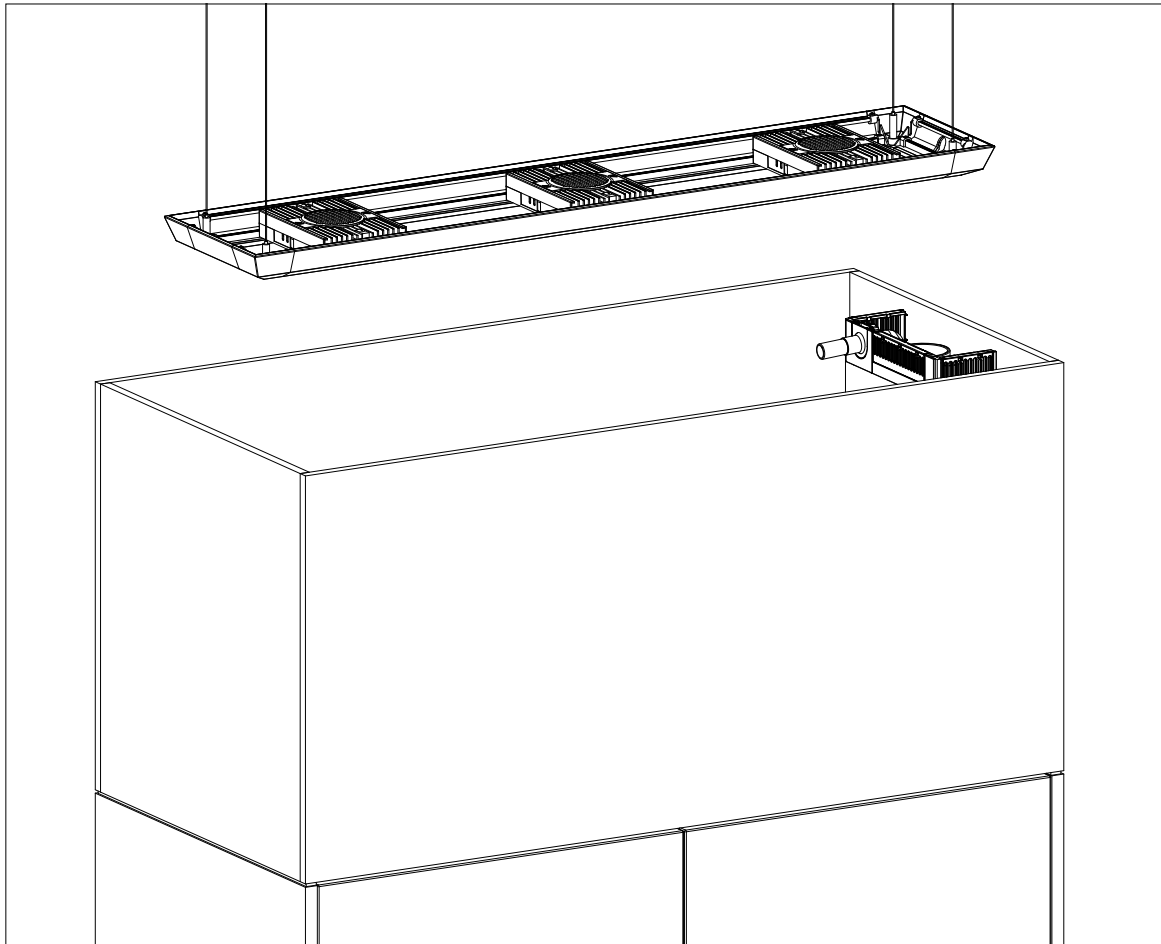
  
www.redseafish.com



## 打印提示

只打印水族箱和底柜安装指南，  
打印页面95-105。

# Red Sea REEFER™ Peninsula LED Pendant Assembly and installation instructions



Item:	Part No.	Part Name	P500 Black	P500 White	P650 Black	P650 White
<b>A</b>	6578-PB	Pendant Corner - Black	4		4	
	6578-PW	Pendant Corner - White		4		4
<b>B</b>	6568A-PB	LED Pendant Painted Profile - Rear - Black	1		1	
	6568A-PW	LED Pendant Painted Profile - Rear - White		1		1
<b>C</b>	6569A	LED Pendant Aluminum Profile - Rear	1	1	1	1
<b>D</b>	6568-PB	LED Pendant Painted Profile - Front - Black	1		1	
	6568-PW	LED Pendant Painted Profile - Front - White		1		1
<b>E</b>	6569	LED Pendant Aluminum Profile - Front	1	1	1	1
<b>F</b>	6570-PB	LED Pendant P500 Painted Profile - Black	2			
	6570-PW	LED Pendant P500 Painted Profile - White		2		
	6571-PB	LED Pendant P650 Painted Profile - Black			2	
	6571-PW	LED Pendant P650 Painted Profile - White				2
<b>G</b>	6572	LED Pendant P500 Aluminum Profile	2	2		
	6573	LED Pendant P650 Aluminum Profile			2	2
<b>H</b>	1333	Screw P3.5x8	16	16	16	16
<b>J</b>	5842	Hydra 26HD Fixing Plate	6	6	8	8
<b>K</b>	5844	Screw M3x8	6	6	8	8
<b>L</b>	5848	Screw #10UNFx20	6	6	8	8
<b>M</b>	6579	Suspension Kit for LED Pendant	4	4	4	4



## 安全须知

请阅读并遵守以下安全须知

**危险:**对已经放入水的水族箱实施操作时，需特别注意，避免触电。当出现以下情况时请勿自己尝试修理设备；将故障设备返回授权服务处修理或者丢弃故障设备。

**安全提示:**为避免违规操作带来的伤害，请遵守以下基本安全操作规范：

请勿运行任何插头或电源线受损而不正常工作的设备。

如果外部电源线损坏，应由厂家更换。

为避免设备的插头或插座弄湿，请将水族箱一面靠墙，防止水滴到插头或插座上。你可以采用“滴水环”（见图1）的方式将水族箱设备电源线连接到插座上。“滴水环”就是电源线的一部分低于插座的水平，防止水沿着电源线流到插头或流入插座。如果不知道插头或插座是否弄湿，请不要拔出电源线。断开保险丝或电路后，再拔出插头从而检查插座内是否有水。

当孩子使用或有孩子可能接触设备时需要密切监视。

为避免不必要的伤害，请勿接触正在工作的设备。

在取出设备或放入设备时，请先拔掉插头。设备停用时也请拔出电源插头。切勿用拽拉电源线的方式拔出插头。正确的操作方式是握住插头并拔出。

切勿使用任何超过使用期限的设备。  
使用非制造商推荐的设备或配件会增加不安全因素。

切勿在露天环境或者温度低于0℃的环境下使用设备。

在使用前，请确保设备安装和放置已经牢固。

阅读并遵守所有安全注意事项。

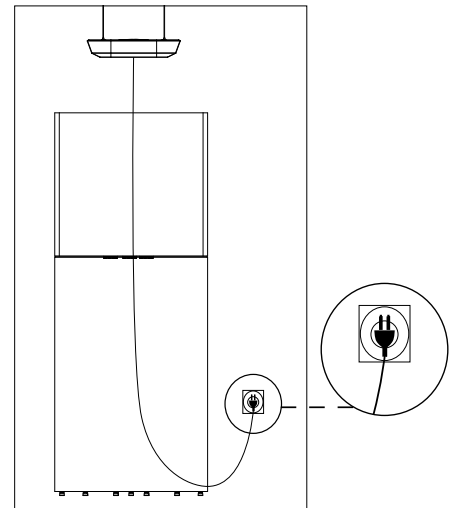
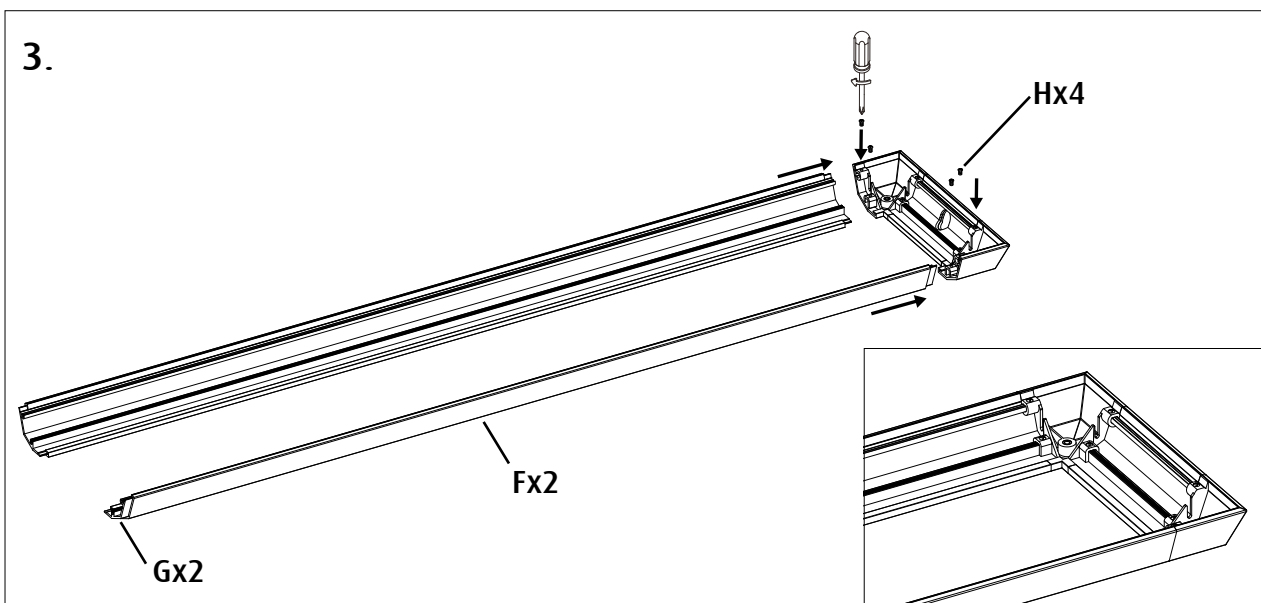
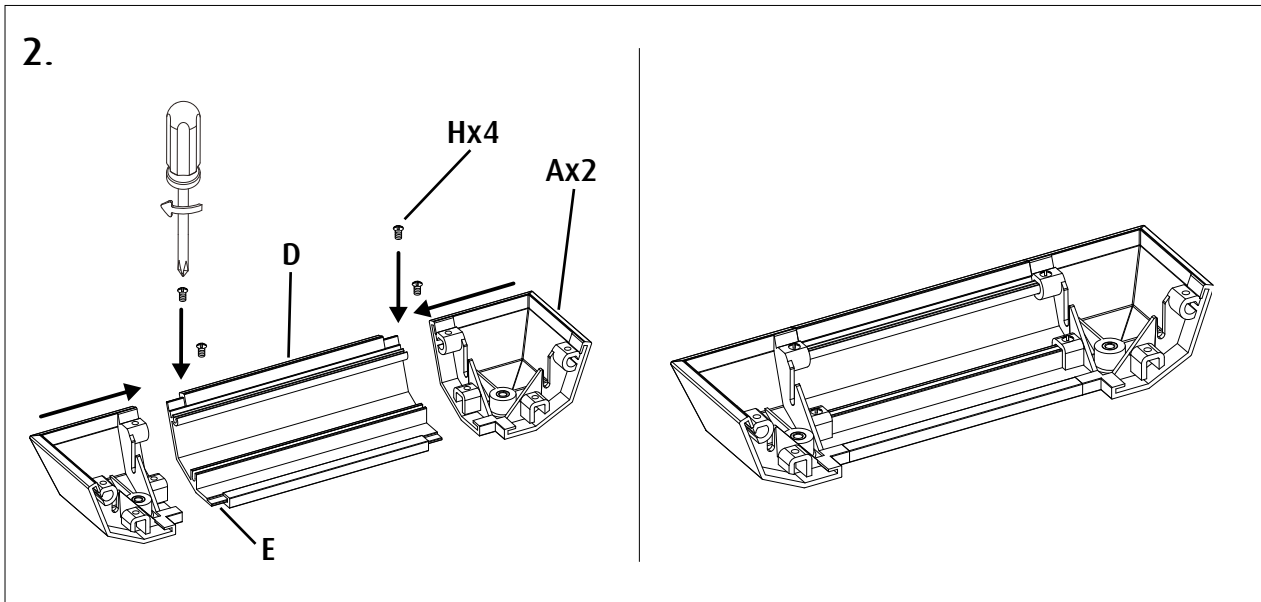
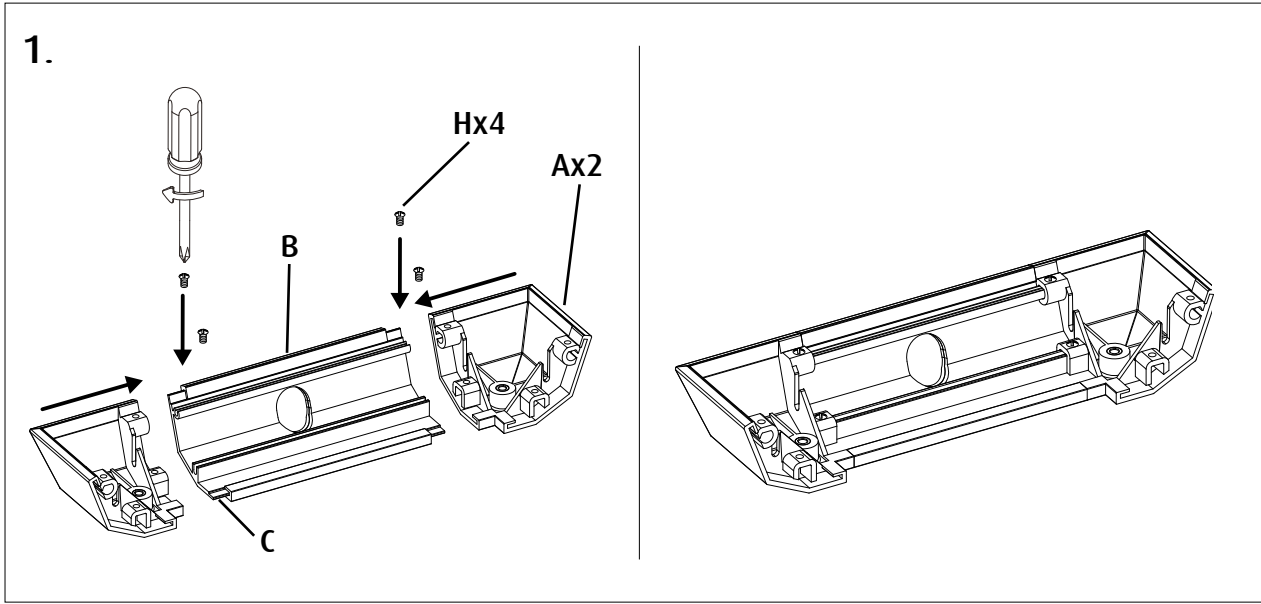
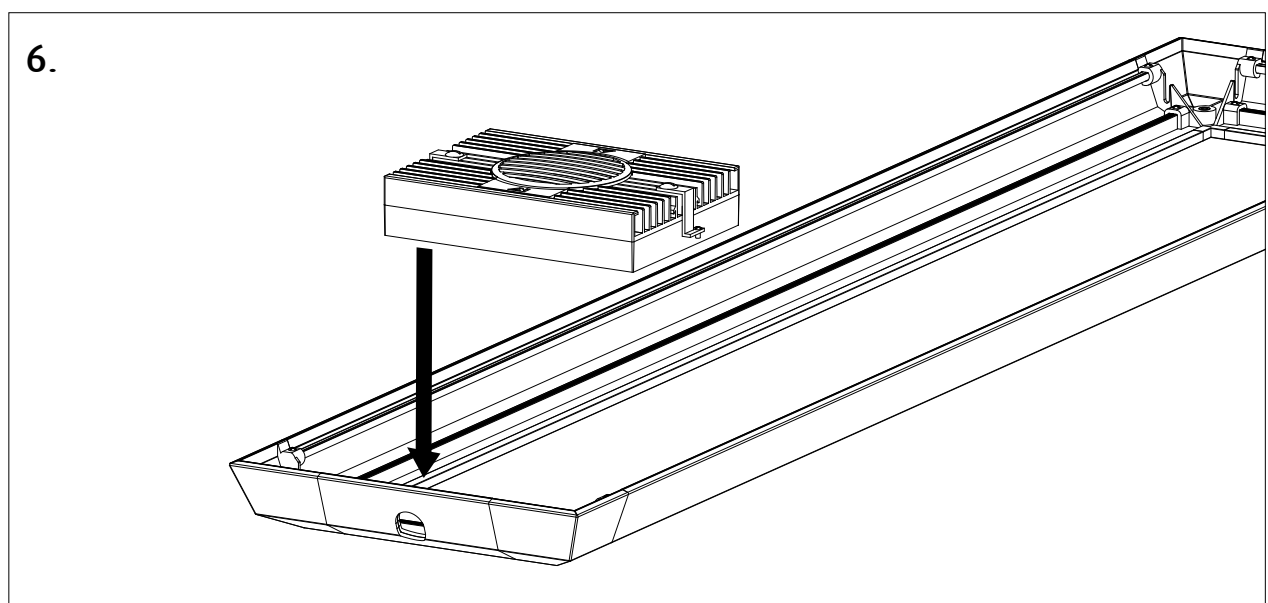
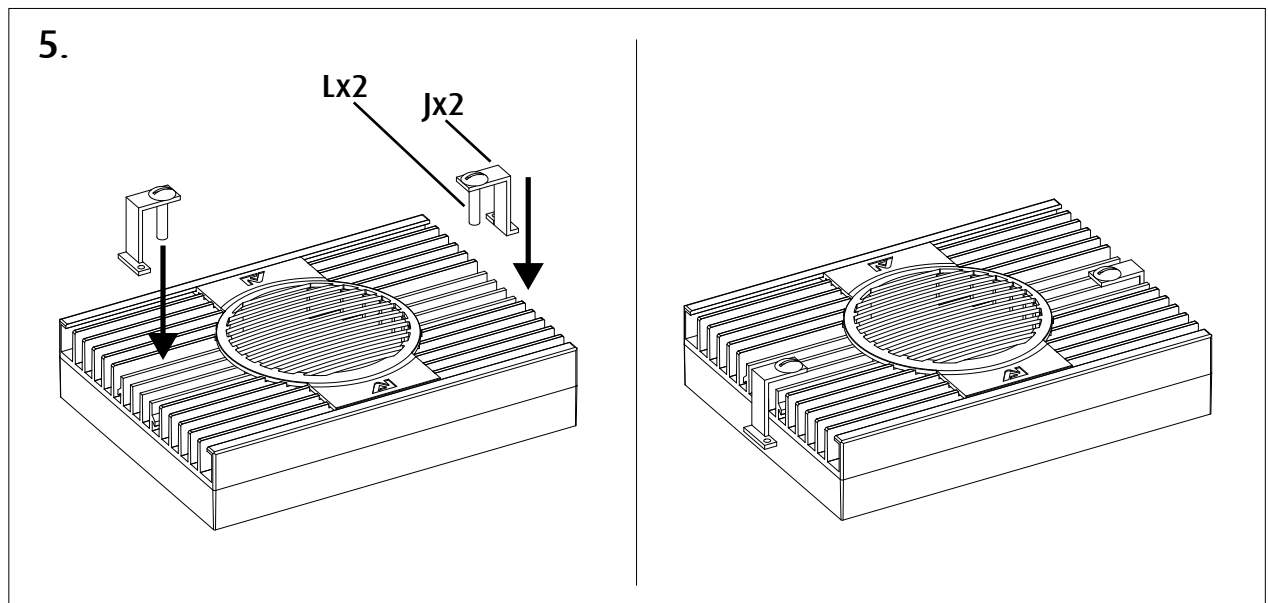
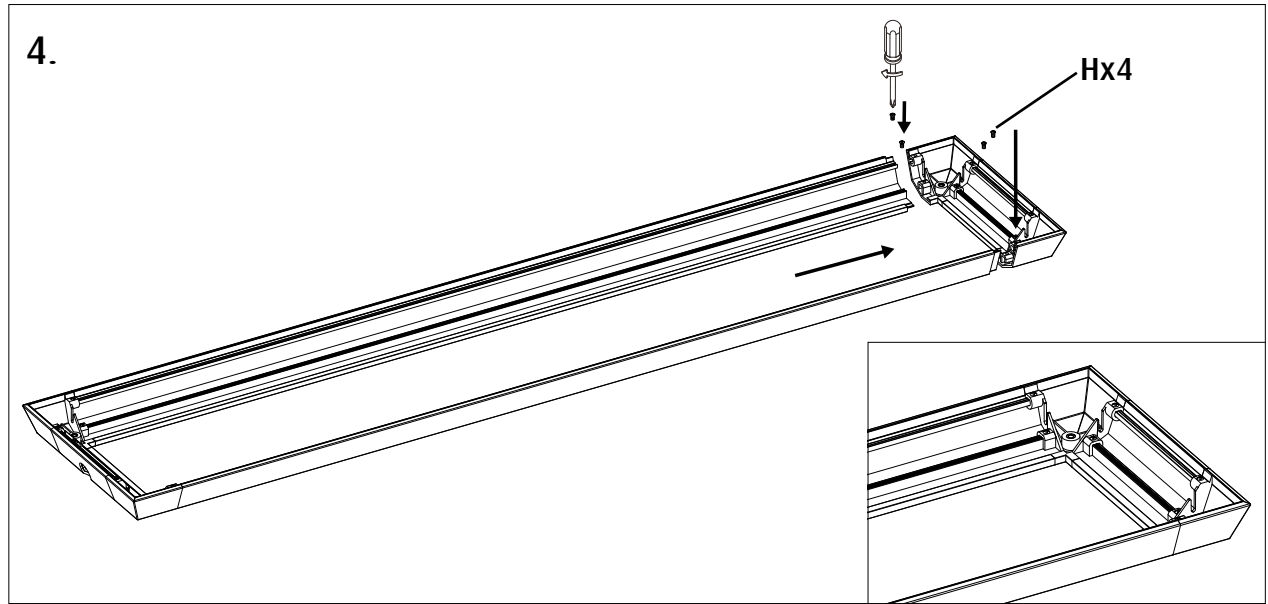


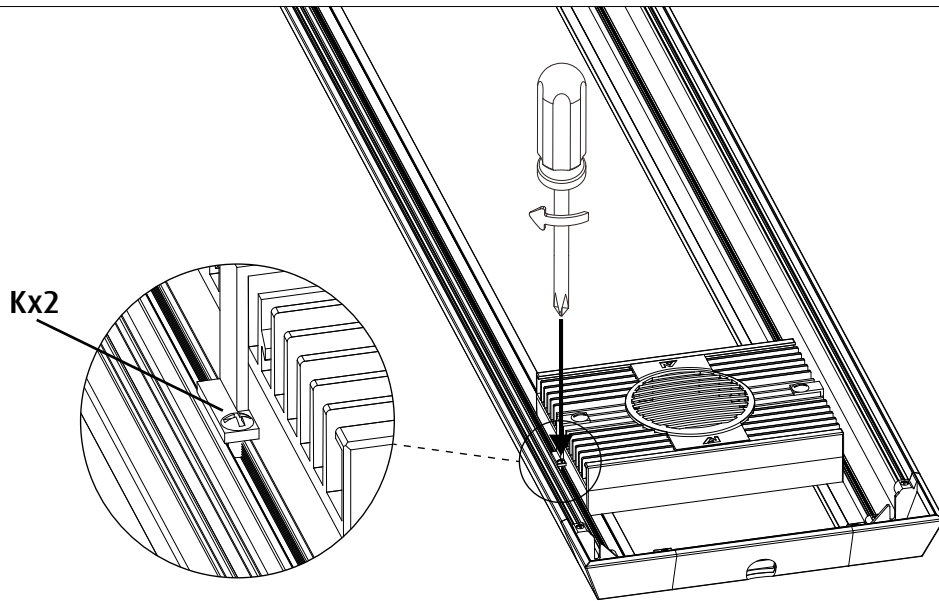
图 1: 滴水环

**注意:** 电源线额定电流和功率超过设备额定值会导致发热而加快电源线老化和损坏。请放置好电源线，防止被电源线绊到或牵拉电源线导致的事故。

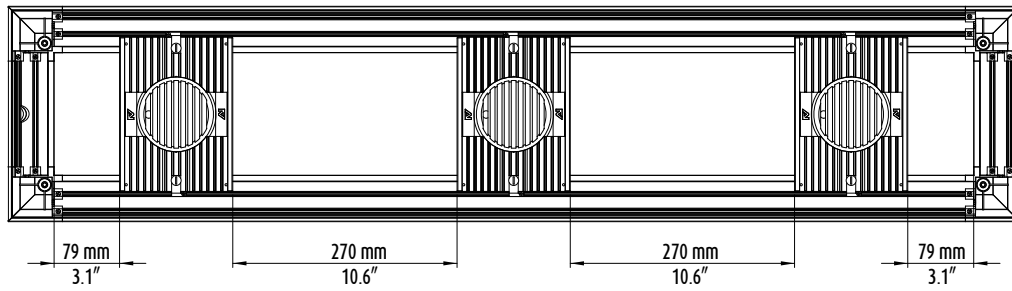




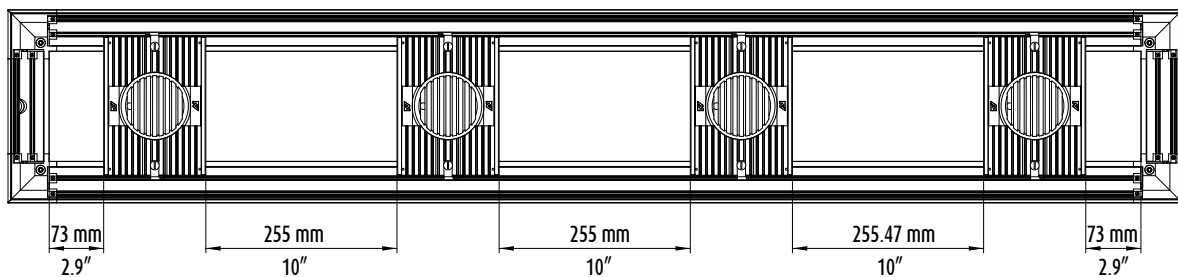
7.

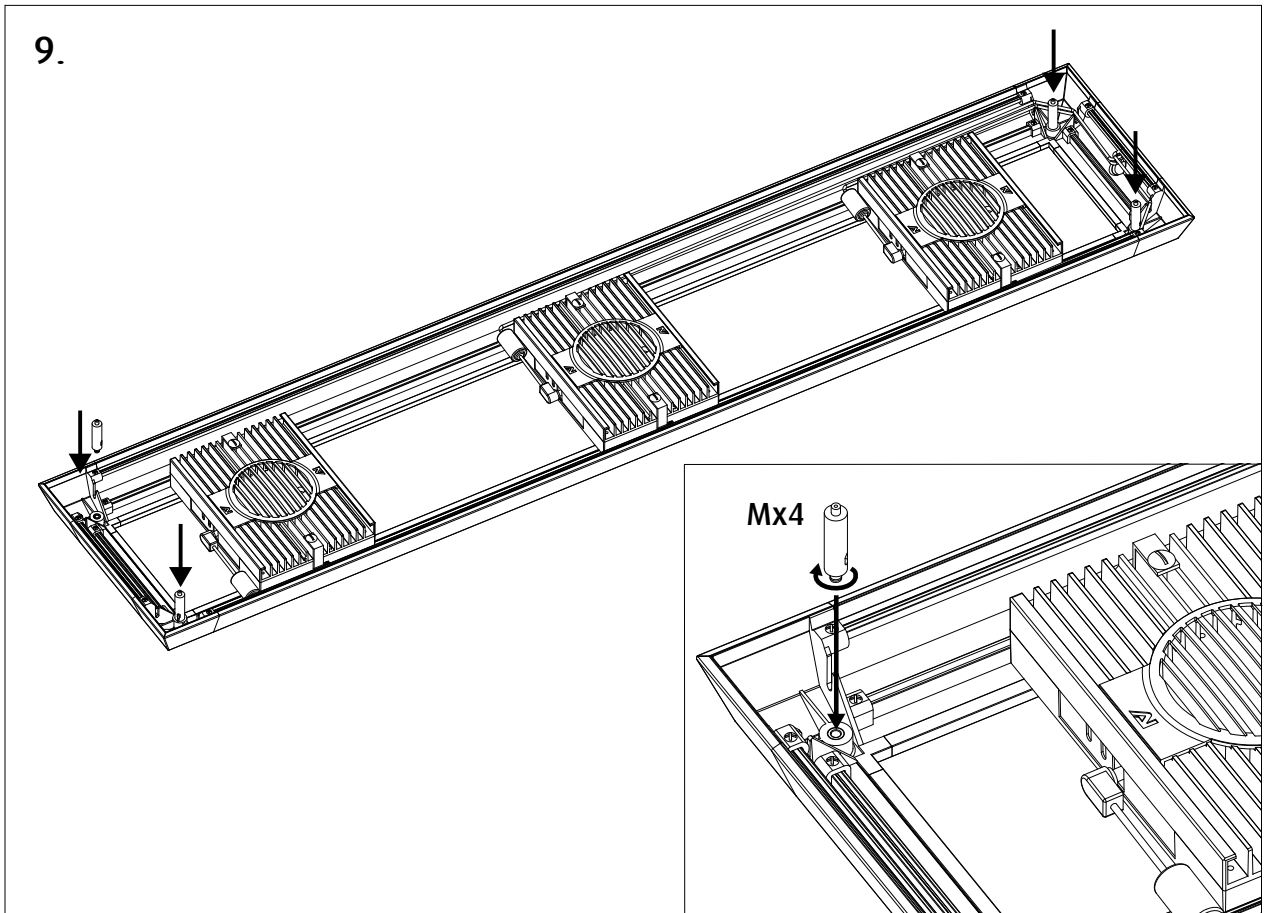
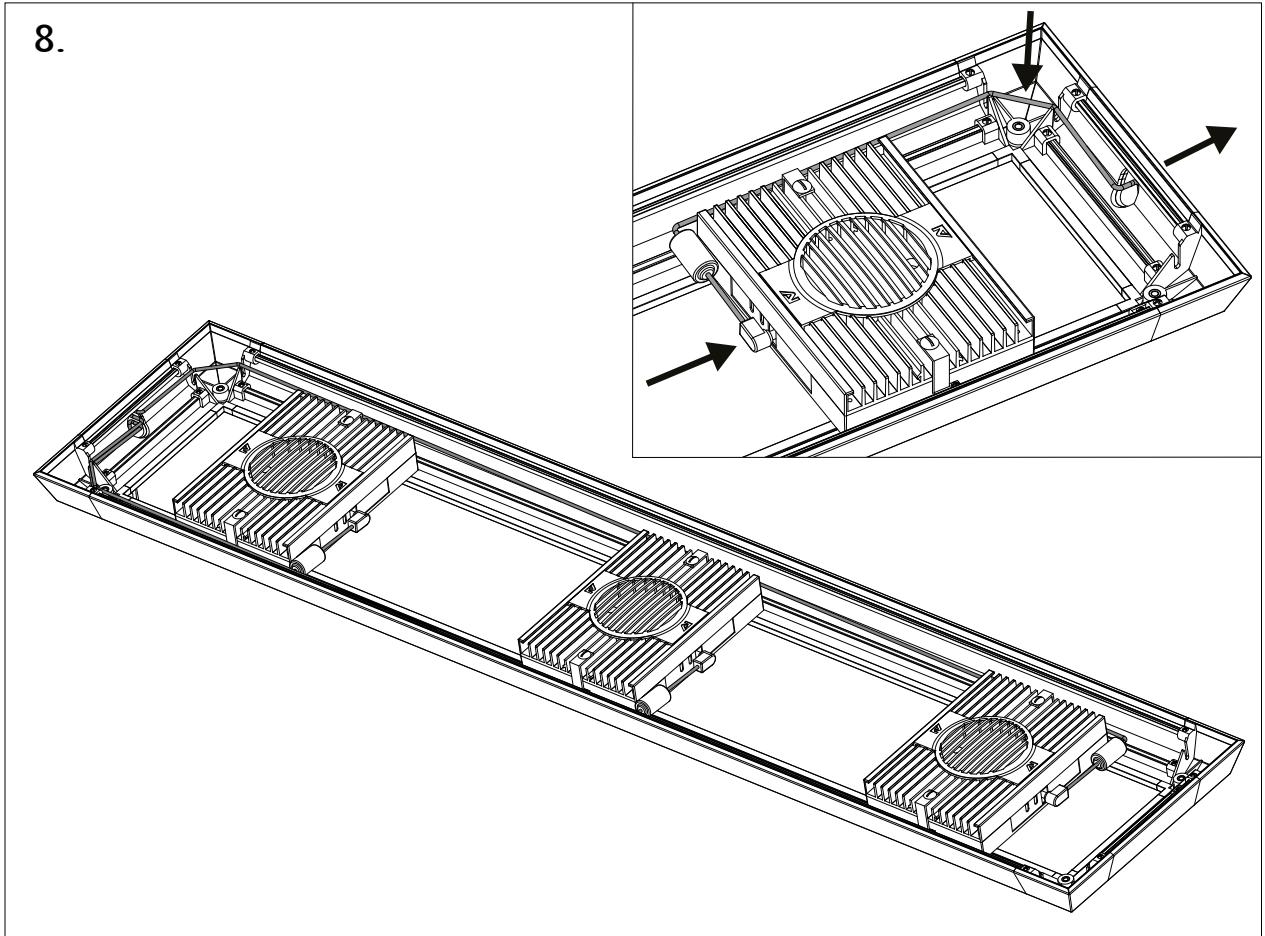


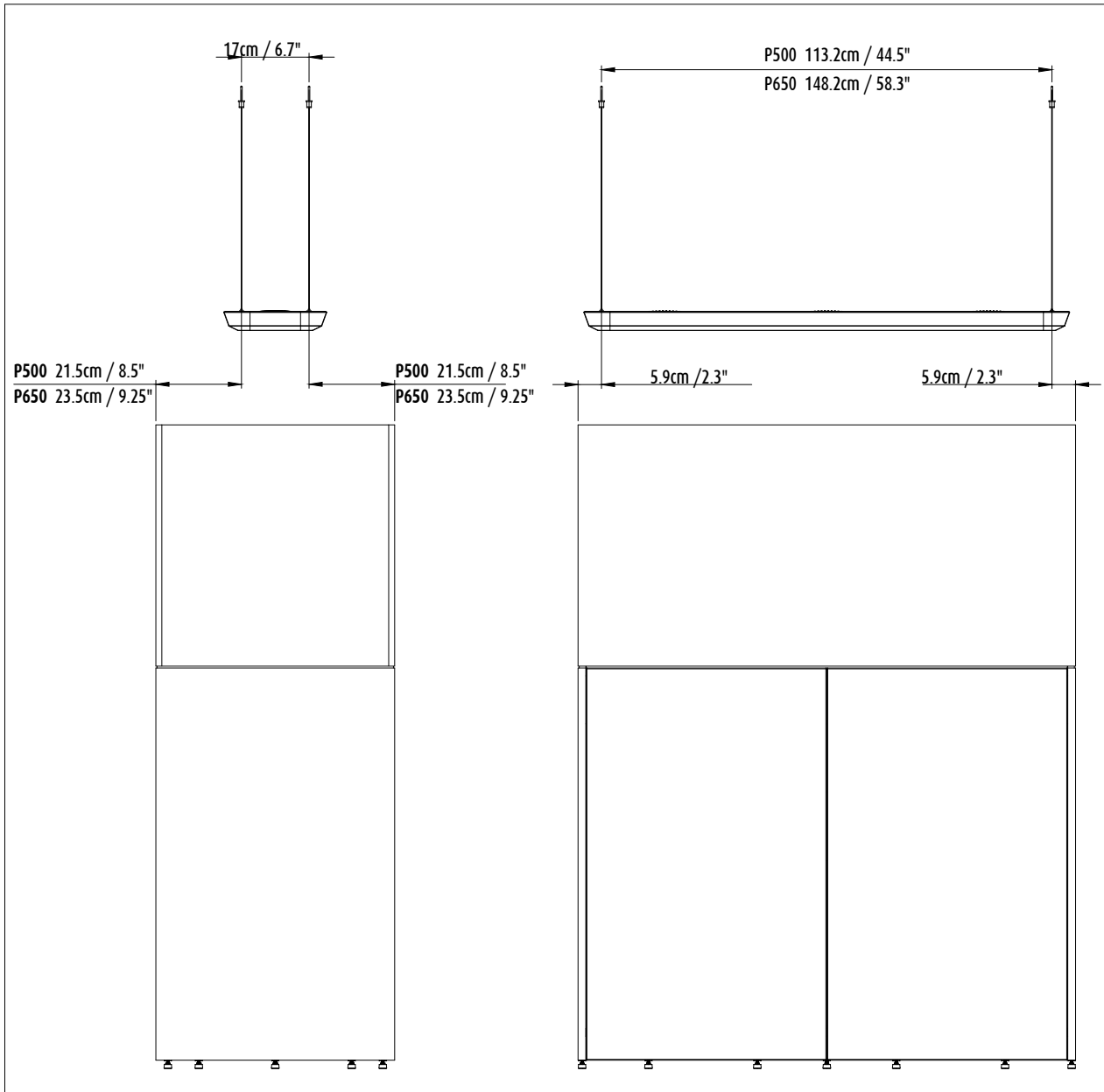
## PENINSULA 500



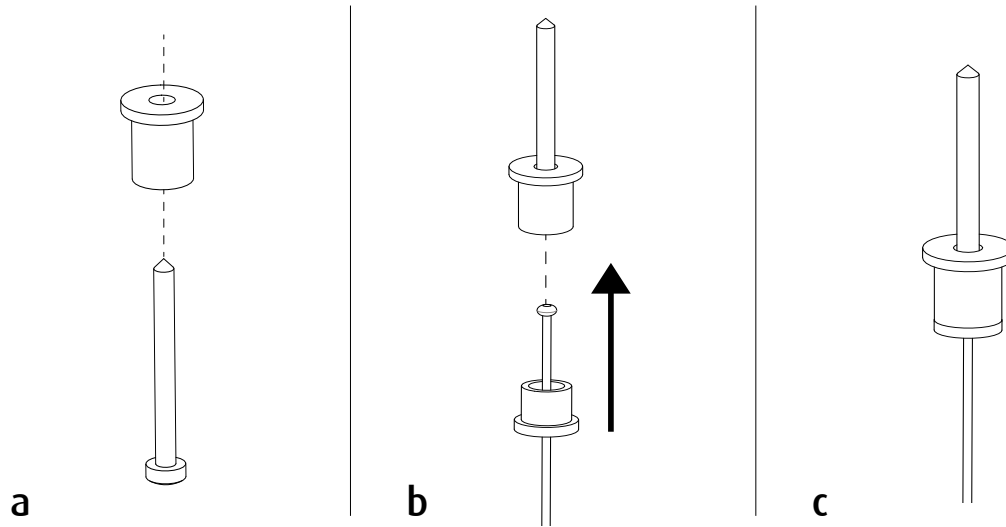
## PENINSULA 650



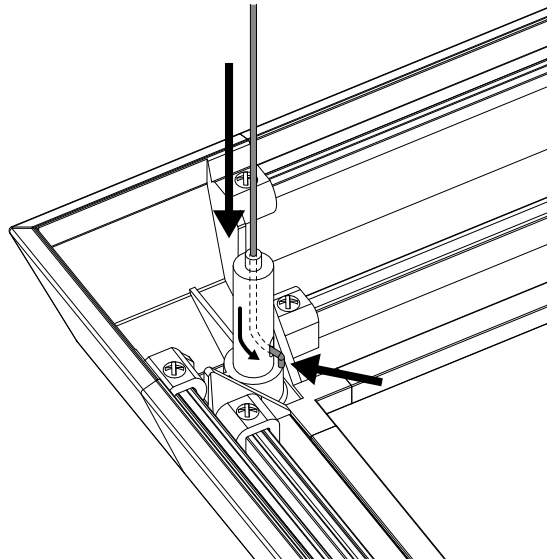




10.



11.



## 照明设备

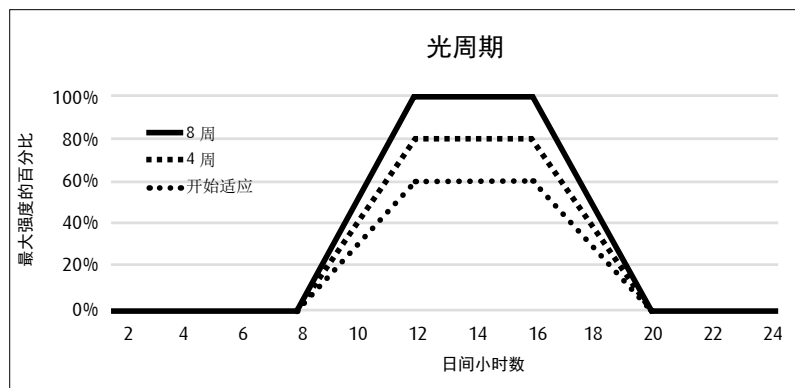
LED 设有内置wifi, 需要使用智能电话或备有WiFi功能的电脑才能享受对所有功能进行操作。 请按照LED随带说明书进行设置程序编辑。

### 程序编辑指导:

光周期: 日光/夜光

日光周期应该介于8到12小时。最大光照强度不超出4小时。升/降光照强度的比率大约在每小时达最大光照强度的25%。

珊瑚和鱼都需要有黑暗的周期。 LED夜光应该被限制在最大光照强度的1%，最长长达6小时。



### 适应周期

为避免因LED灯的高强度导致光抑制作用，针对新水族箱或当引进新珊瑚建议一个适应周期。

适应周期会因不同种类的珊瑚而变化。无论怎样新设置建议使用一个周期达8小时，如下所述：

如上面所述设置白天光周期。不管怎样，长达4小时的强度最高峰不应该超过最大值的60%。每两个星期提高10%的强度高峰值。

在适应期间寻找光应力和光抑制的现象比如：

- 组织部分的上层变白/褪色（下层部分会继续展现颜色和虫黄藻）。
- 水螅生物退缩。
- 软组织体内的气泡。

万一发生以上任何症状，立即减少20%的强度峰值维持4个星期，以及从此之后每个星期提高5%直到到达最大的强度。

当引进新的珊瑚到已经适应的系统，先把它们放置在水族箱的最低值。然后经过几个星期后逐渐把他们提升到所期待的位置，保持观看光抑制作用的迹象/压力。如果有必要的话，把受到影响的珊瑚返回到最低值，让它们复原。

**备注：**红色和绿色波长不推荐使用在珊瑚礁岩系统，正因他们有可能促进有害藻类的爆发或蓝藻细菌。

**警告：**LED模块是不防水的。切勿弄湿单元以及它的任何部分及电源线 切勿浸入到水族箱水体中。

**警告：**LED灯会产生非常强烈的光能输出，可能会损害或伤害到您的眼睛。当设备亮起的时候，切勿直视LED灯。



## *North America*

**Red Sea U.S.A & Canada**  
4687 World Houston  
Parkway #150  
Houston, TX 77032, U.S.A  
Tel. : +1-888-RED-SEA9  
usa.info@redseafish.com

## *UK & Ireland*

**Red Sea Aquatics (UK) Ltd**  
PO Box 1237  
Cheddar, BS279AG  
Tel. : +44 (0) 203 3711437  
Fax : +44 (0) 800 0073169  
uk.info@redseafish.com

## *Europe*

**Red Sea Europe**  
ZA de la St-Denis  
F-27130 Verneuil s/Avre,  
France  
Tel: (33) 2 32 37 71 37  
eur.info@redseafish.com

## *Germany & Austria*

**Red Sea Deutschland**  
Büro Deutschland  
Prinzenallee 7 (Prinzenpark)  
40549 Düsseldorf  
Tel: 0211-52391 481  
info.de@redseafish.com

## *Asia Pacific*

**Red Sea Aquatics Ltd**  
2310 Dominion Centre  
43-59 Queen's Road East  
Hong Kong  
Tel: +86-020-6625 3828  
info.china@redseafish.com

## *China*

**Red Sea Aquatics (GZ) Ltd.**  
Block A3, No.33 Hongmian Road,  
Xinhua Industrial Park,  
Huadu District, Guangzhou City,  
China, Postal code 510800.  
Tel: +86-020-6625 3828  
info.china@redseafish.com