



安装说明

INSTALLATION INSTRUCTIONS

D系列纸箱夹

D-Series Carton Clamps



官方微信号 天猫旗舰店



服务热线

Customer Service Hotline

40088 57315

目录 CONTENTS

	页码 Page
安装前对叉车的要求 Truck Requirements	2
安装 Installation	3
夹板曲度调整 Contact Pad Camber	10
故障排除 Contact Pad Camber(Continued)	14
操作前的检查 Prior to Operation	15

▲ 警告：安装不当是导致属具故障的第一要素，请在安装属具前认真阅读本《安装说明书》。

▲ **WARNING:** Incorrect installation is the main cause of Attachment malfunctioning. Please do read this INSTALLATION INSTRUCTION comprehensively before installation.

⚠ 重要提示：现场改动将减弱属具的性能和承载能力，并导致失去保修资格，任何需要对属具进行的改动，请事先与卡斯卡特公司协商。

⚠ **IMPORTANT:** Field alterations may impair performance or capability and could result in loss of warranty. Consult Cascade for any required modifications. Operating at pressures over 2300 psi (160bar) will void warranty.

▲ 注意：叉车/属具综合承载能力系由叉车主机厂确定，其值可能比属具铭牌上所示数值小，请参见叉车铭牌。

▲ **CAUTION:** Rated capacity of the truck/attachment combination is a responsibility of the original truck manufacturer and may be less than shown on the attachment nameplate. Consult the truck nameplate.

安装前对叉车的要求 **T** RUCK REQUIREMENTS

叉车供油压力 Truck Relief Setting

推荐压力值 (Recommended) : 140 bar (2000 psi)

最大压力值 (Maximum) : 160 bar (2300 psi)

叉车供油流量 Truck Flow Volume ①

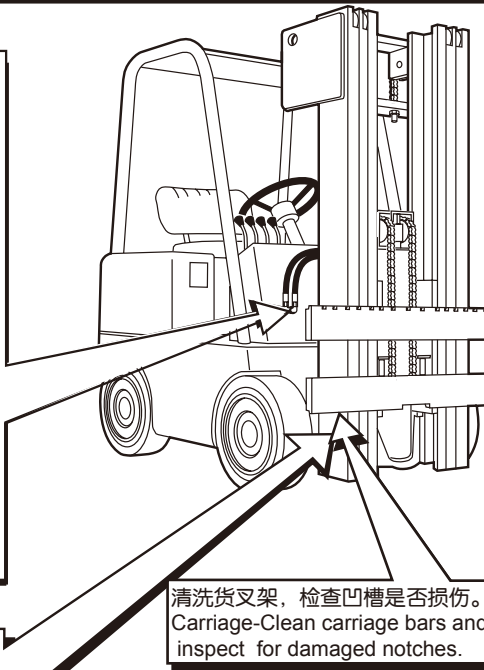
	最小值 ② Min.	推荐值 Recommended	最大值 ③ Max.
20G,28G,36G, 35D,X35D	19 L/min (5 GPM.)	26 L/min (7 GPM.)	38 L/min (10 GPM.)
X15D,X25D	19 L/min (5 GPM.)	21 L/min (6 GPM.)	30 L/min (8 GPM.)
50D	19 L/min (5 GPM.)	45 L/min (12 GPM.)	57 L/min (15 GPM.)

①流量低于最小值会导致属具动作失常。

Flow less than minimum will result in a rotate speed less than 2 rpm.

②流量高于最大值会导致过热，从而降低系统性能并缩短液压系统寿命。

Flow greater than maximum can result in excessive heating, reduced system performance and shortened hydraulic system life.



货叉架安装尺寸 (A) ITA (ISO)

Carriage Mount Dimension (A) ITA (ISO)

	最小值 Minimum	最大值 Maximum
ISO 2A	380.0 mm (14.94 in.)	381.0 mm (15.00 in.)
ISO 3A	474.5 mm (18.68 in.)	476.0 mm (18.74 in.)
ISO 4A	595.5 mm (23.44 in.)	597.0 mm (23.50 in.)

清洗货叉架，检查凹槽是否损伤。
Carriage-Clean carriage bars and inspect for damaged notches.

说明：叉车属具的液压系统是按一定范围的压力和流量来设计的，属具能否正常工作取决于叉车供油系统是否符合要求。

Note: Attachment hydraulic system is designed on the basis of certain pressure and volumn value range. Excellent performance of attachment depends on a qualified truck supply system.

● 1.推荐的软管和管接头孔径:

Recommended hose and fitting size:

a.张夹油路 OPEN & CLOSE

-8# 软管, 内通径 $\geq\Phi 12\text{mm}$ 。

No.8 with 12 mm (13/32 in.) minimum ID.

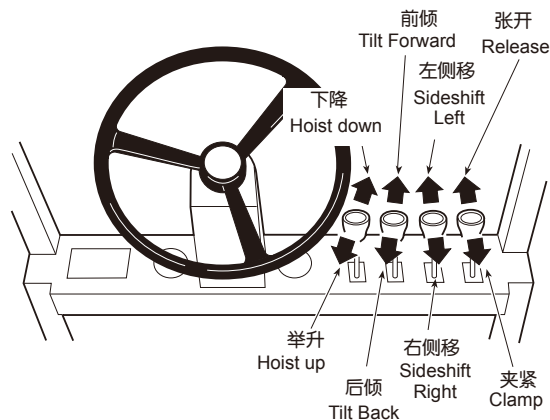
b.侧移油路 SIDESHIFTING

-6# 软管, 内通径 $\geq\Phi 10\text{mm}$ 。

No.6 with 10 mm (9/32 in.) minimum ID.

为了符合有关标准, 在属具管路与叉车多路换向阀联接时, 应符合下图所列动作方向的规定。

- In order to conform to industry standard practice, the hoses should be connected to the truck auxiliary valve as indicated below.



1. 安装快换式下钩（螺栓紧固式下钩从步骤2开始）

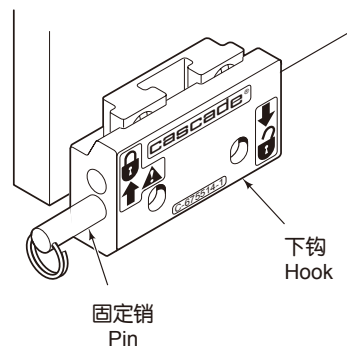
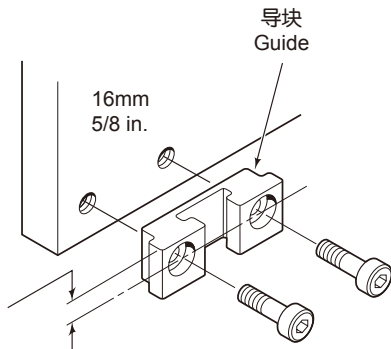
Install the Quick Change lower mounting hooks. For Bolt-On type hooks, proceed to step 2.

a. 在基板的安装孔上装上导块。导块的孔中心向上偏离16mm。

Install the guides to the baseplate mounting holes with the guide hole offset in the upward position-16mm (5/8 in.) from top of guide to hole center. Tighten the capscrews to a torque of 105-115 ft-lbs.

b. 将下钩从上滑入导块，在下孔处插入固定销。

Slide the hooks over the top of the guides. Install each locking pin through the hook lower hole.



2.把叉车开到属具背面，货叉架缓慢下降对中，前倾门架，使左上钩旁的定位凸块嵌入货叉架上横梁与之最近凹槽内，升起货叉架至靠上属具挂板背面，将属具提升至离托盘5cm。

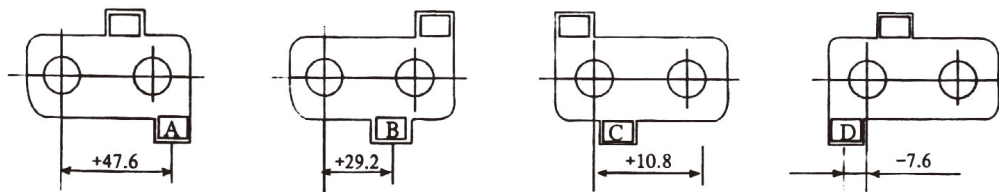
Center the lift truck behind the attachment, tilt the mast forward. Engage the mounting hook tab with the closest upper carriage bar notch and raise the truck carriage into position behind the attachment 5cm (2 in.) off the pallet.

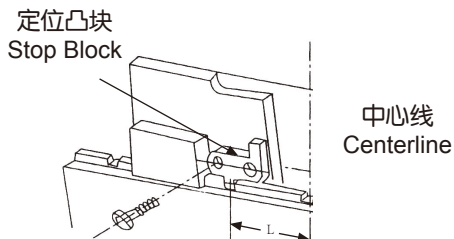
①上钩凸块嵌入货叉架横梁凹槽时，属具可能与货叉架不完全对中。为了使属具挂装后尽量靠近货叉架中位，请根据不同的货叉架上横梁缺口分布形式，调整左上钩侧的定位凸块（共可获得四种形式A、B、C、D），如上图所示。

The attachment may not be perfectly centered on the carriage bar when the mounting hook tab is engaged in the closest carriage notch. For the best centered condition, please select the right tab form as shown according to different carriage notch location. There are 4 tabs available (A、B、C、D)

备注：A、B、C、D分别对应左上钩侧定位凸块的四种形式。

Note: Choose 1 type of stop Block positioning out of the 4 possible options to mount the clamps as close as possible to the central position.





型号 Model	安装等级 Mounting	L(mm)			
		A	B	C	D
35D		370	407	444	480
50D	2级 ISO 2A	365	402	438	476
	3级 ISO 3A	510	547	584	620

- ②上钩必须很好地挂入货叉架上横梁，左上钩侧的定位凸块应嵌入货叉架上横梁相应的凹槽中。
The mounting hooks must be properly engaged with the upper carriage bar. The tab on the left mounting hook must be engaged in a mating notch on the upper carriage bar.
- ③若上钩定位凸块没嵌入货叉架上横梁凹槽，则下钩无法安装。
The Lower hooks cannot be properly installed if the upper hook tab is not engaged in the carriage notch.

安装 / INSTALLATION

3. 将下钩与货叉架下横梁接合。

Engage the lower hooks with the truck lower carriage bar.

- a. 螺栓紧固式下钩：装上下钩和螺栓，拧紧螺栓。按箭头方向用锤子轻击下钩使下钩与货叉架下横梁完全接合。最后锁紧螺栓。扭矩为：

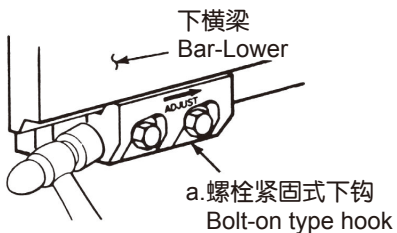
ISO 2A/3A: 150 Nm(110 ft. lbs.)

ISO 4A: 257 Nm(190 ft. lbs.)

- a. Bolt On Type-Install the hooks and capscrews. Tighten the capscrews finger tight. Tap the end of the hooks with a hammer in the direction of the adjust arrow for maximum engagement with the carriage bar. Tighten the capscrews to a torque of:

ISO 2A/3A: 150 Nm(110 ft. lbs.)

ISO 4A: 257 Nm(190 ft. lbs.)

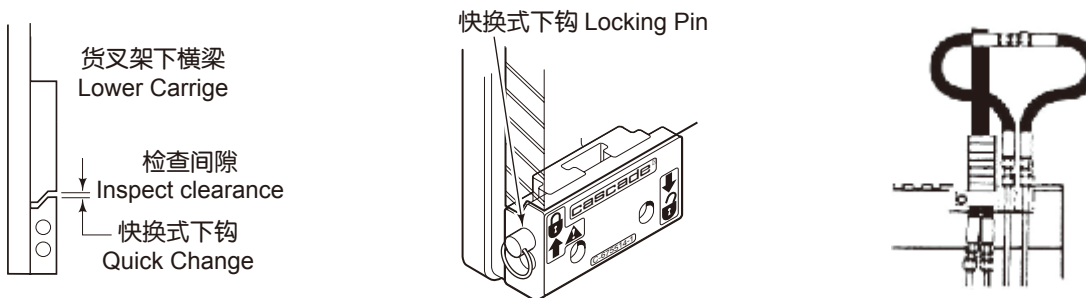


b.快换式下钩：卸下插销，向上滑动下钩与下横梁接合，在钩的上孔装上插销。

Quick Change Type- Remove the locking pins. Slide the hooks up to engage with the carriage bar. Install the locking pins through the upper holes.

警告：对于快换式下钩的安装，若发现货叉架下横梁与下钩的间隙超过6mm，则导块应反装，使固定孔中心下偏（导块底部到中心距离为16mm）以减小间隙。

CAUTION: if the clearance between the carriage bar and the hooks exceeds 6 mm(3/16 in.), the guides(refer to step2)should be inverted and installed with the hole offset downward (16mm /5/8 in.from bottom of guide to hole center) to minimize the gap.



4.如图示冲洗软管：将软管一端与多路换向阀连接，另一端按图示管接头相连，启动叉车并操纵叉车多路换向阀手柄在两个方向各30秒，以便把留在管内的脏物冲到叉车液压油箱和滤油器中。

Connect hoses to the truck hose terminal kits or internal reeving fittings. Connect the hoses together using union fittings. Start the truck and actuate the truck control valves in both directions for about 30 seconds to carry any debris left in the hoses to the truck hydraulic tank and filter.

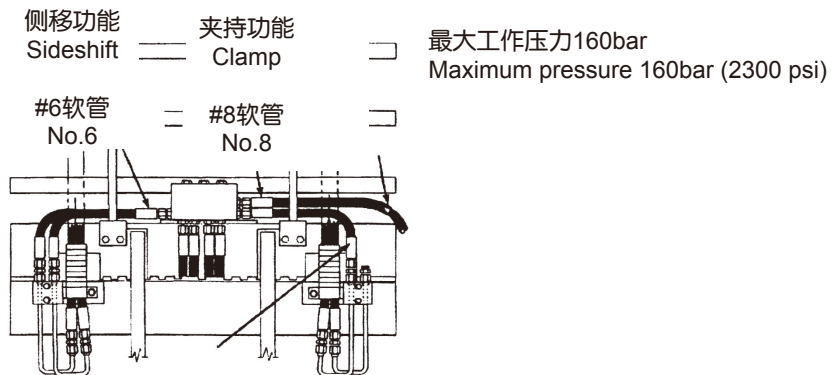


注意：必须按以上步骤冲洗管路，以防损坏属具液压件。

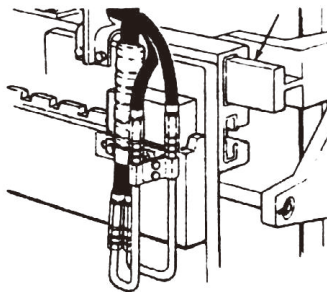
WARNING: Flush the hoses as follows to prevent damage to the attachment hydraulic components.

安装 / INSTALLATION

5. 卸下连接管接头，将软管接于属具进油接头上。
Remove the union fittings and disconnect hoses from the hose terminal kits.
Connect hoses to the attachment fittings.



6. 在四根滑杆（即T型杆）表面涂一层润滑油脂。
Apply a coating to the four arm bars.



测量并调整夹板曲度

- 1 调整夹臂在框架宽度方向的位置。将纸箱夹降低至夹板刚好可以接触到地板为止。
- 2 测量从夹板底部中心线（与铰接的销轴一致）到高于夹板底部中心线73cm（如第11页图所示）处的距离。两种测量方法的区别在于夹板曲度不同。
正曲度：夹板顶部比底部更向外侧倾斜。
零曲度：夹板上下端平齐。
负曲度：夹板底部比顶部更向外侧倾斜。
- 3 所夹持货物的种类决定了正确的夹板曲度。（参见第12页的表格）
- 4 松开夹板上的螺栓和螺母。在不卸下螺栓和螺母的情况下，在夹板和稳定架之间塞入垫片。在组装时，采用65Nm的力矩锁紧螺栓。
- 5 根据需要安装垫片以实现最小或者最大限度地调整夹板曲度。将垫片安装至夹板的顶部和中部可以将夹板调整到负曲度。

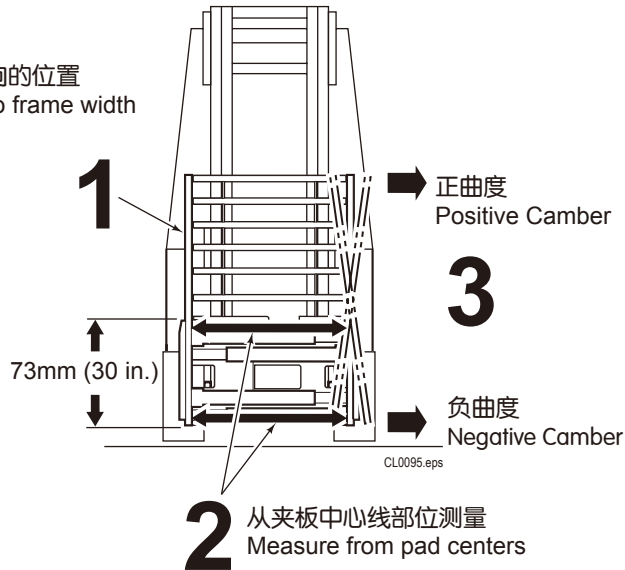
注意：每一片夹板使用的垫片数量必须相同。在纸箱夹正确地搬运货物时，必须确保每一边的夹板曲度相等。

MEASURING AND ADJUSTING CONTACT PAD CAMBER

- 1 Position the arms at the width of the frame. Lower the clamp so the pads just touch the floor.
- 2 Measure the distance between the pad bottom centers (in line with the pivot pins), and 30 in. (73 cm) above the pad bottom centers as shown. The difference between the two measurements is the pad camber:
Positive Camber: Top of pads farther apart than bottom.
Neutral Camber: Pads equal distance apart.
Negative Camber: Bottom of pads farther apart than top.
- 3 Determine the correct camber needed for the case loads being handled (See Chart on Page 12 of sheet).
- 4 Loosen the contact pad capscrews and nuts. Shims are designed to slip into place between the pad and stabilizer without removing the capscrews and nuts. For reassembly, tighten the capscrews to 50 ft.-lbs. (65 Nm).
- 5 Install shims as required to obtain a minimum or maximum camber adjustment. Installing shims at the pad bottom and middle provide positive camber. Installing shims at the pad top and middle provide negative camber.

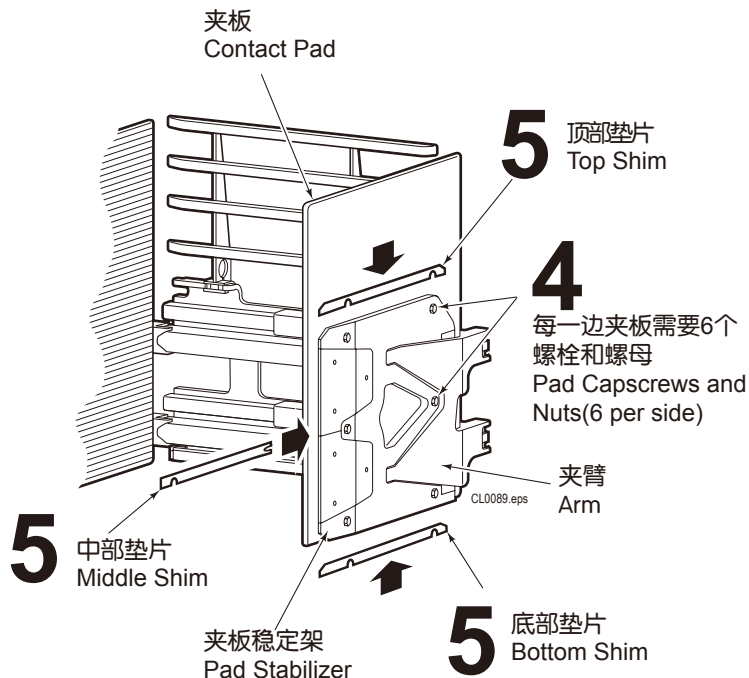
CAUTION: Use an equal number of shims on each contact pad. Pad camber must be the same on each side of the Clamp for proper load handling.

调整夹板在框架宽度方向的位置
Position contact pads to frame width

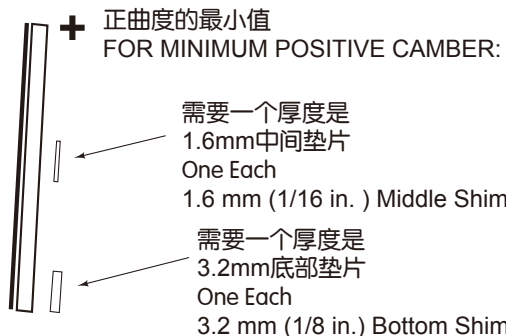


夹板曲度调整

C ONTACT PAD CAMBER


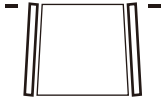
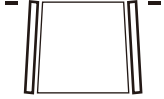



主视图
Front View



注意：如需要调整成负曲度，在夹板的顶部安装厚的垫片。

NOTE: For negative camber adjustment, install thick shims at top of pad.

搬运纸箱货物时的典型夹板曲度调整方案 TYPICAL PAD CAMBER FOR HANDLING CARTON CASE LOADS		
货物 PRODUCT	曲度 CAMBER	夹板示意图（面对纸箱夹方向 观测） Front View – Pads
听装/瓶装/密度较高的箱状货物 CANNED / BOTTLED / DENSE CASE GOODS	零——正 Neutral-to-Positive	
较松软的箱状货物 SOFT CASE GOODS	零——负 Neutral-to-Negative	
家电/大型箱状货物 APPLIANCE / LARGE CASE GOODS	零——负 Neutral-to-Negative	
其他未知状态箱状货物 UNKNOWN LOADS	预设为中位/零曲度。后 根据夹持情况来调整夹 板曲度。 Start with neutral, look for creases and adjust camber as required.	 CL0093.eps

故障处理

货物堆垛向前倾斜:

- 1 将货物倚靠住挡货架。
- 2 检测倾斜夹板或者稳定架。
- 3 调整位于夹板铰接点与挡货架之间的载荷中心的位置。

位于底层的货物倾倒或滑落

- 1 用夹板的底部重新调整位于下方的货物。
- 2 检测夹板是否变形。
- 3 检测夹板位于下方的表面是否磨损。
- 4 检测供油压力是否太低。
- 5 加大或增加正曲度。

位于底层的货物变形

- 1 始终用夹板夹住货物。
- 2 用夹板的底部重新调整位于下方的货物。
- 3 检测夹板是否变形。
- 4 检测供油压力是否太低。
- 5 加大或增加负曲度。

TROUBLESHOOTING

Front stack of load tilts out:

- 1 Position Load against backrest.
- 2 Check for bent pads or stabilizers.
- 3 Position load center between pad pivot and backrest.

Lower tier of load bridges down or slides out:

- 1 Position bottom of load even with bottom of pads.
- 2 Check for bent pads.
- 3 Check for worn lower pad surfaces.
- 4 Check hydraulics for too low supply pressure.
- 5 Add or increase positive camber.

Lower tier of load is creased:

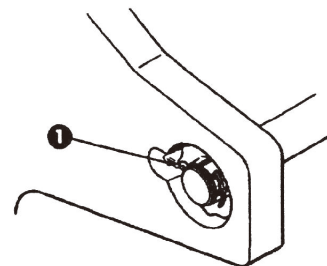
- 1 Clamp load squarely between pads.
- 2 Position bottom of load even with bottom of pads.
- 3 Check for bent pads.
- 4 Check hydraulics for too high supply pressure.
- 5 Add or increase negative camber.

操作前的检查

P

RIOR TO OPERATION

1. 检查油缸固定螺母，看锁紧帽和开口销是否装好。
Check the cylinder anchor nuts for properly installed locking caps and cotter pins.
2. 油箱是否有干涉现象。
Check for external leaks at the fittings and cylinder rod ends.
3. 检查接头和活塞杆端部是否外泄露。
Before picking up a load, operate the clamp through several full cycles to force any air from the system to the hydraulic tank.
4. 夹持货物前，先使夹臂工作几个空循环，将系统中的空气排到油箱。
Holding the goods before the first clamping arm, making work for air circulation, the air in the system is discharged into the tank.



注意：搬动货物时，确保属具周边没有人站立。
WARNING: Make sure there are no people in the vicinity of the attachment when picking up a load.

卡斯卡特（厦门）叉车属具有限公司

Cascade Xiamen Forklift Truck Attachment Co.Ltd

地址：厦门市海沧区阳光路668号 邮编：361026

No. 668 Yangguang Road, Haicang, Xiamen, Fujian, 361026 P.R China

电话/Tel: 0592-6512500 传真/Fax: 0592-6512571

cascade corporation

www.cascorp.com.cn

卡斯卡特（厦门）公司保留对本手册修改的权利，如有修改，恕不另行通知。

Cascade Xiamen reserves the rights to make change without notice.

1210945 R4 XM CN 11/2015