JamesHardie™

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Best Practice
最佳施工守则

Working safely with James Hardie fibre cement products

安全使用 James Hardie 纤维水泥产品

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1 Introduction
关于本守则

James Hardie, a world leader in the manufacturing and development of fibre cement building products, has produced this best practice guide to help builders and installers work safely with fibre cement products.
作为一家全球纤维水泥建材产品研发的领军企业，James Hardie 制定了本最佳施工守则，以指导建筑商和安装工人安全使用纤维水泥产品。

This guide must be read in conjunction with project drawings and specifications, applicable in James Hardie technical and installation manuals. The details in this guide provide guidance on how to stay safe when installing James Hardie products and need to be reviewed by all parties who are responsible for installing James Hardie products on a site.
阅读本守则时，需同时参考适用于James Hardie技术和安装规范的工程图和技术说明书。本守则就如何安装James Hardie产品提供详尽指导，故所有负责现场安装James Hardie产品的各方都应仔细阅读。

This guide is subject to periodic re-examination and revision. For information on the current status of these documents please check the James Hardie website, www.jameshardie.co.nz. The reader is responsible for ensuring that they are using the most up-to-date information.
本守则会被定期重检和修订。如需了解相关文件的更新，请查看 James Hardie 网站：www.jameshardie.co.nz。本守则使用者有责任确保其使用的是最新信息。

2 Why should I read this?
为什么要阅读本安全守则?

To work safely, you need to understand the hazards and know how to minimise the risks.
为保证作业安全，请务必了解各种施工隐患，并清楚如何将风险降至最低。

At James Hardie Zero Harm is a key operating principle, and we believe safety should be of paramount importance to everyone. We are committed to providing you with information to work safely with our products.
James Hardie 秉承零伤害的核心操作原则，坚信作业安全为所有从业者的第一要义。我们致力于提供相关信息，以确保产品的安全使用。

This guide is a straightforward approach to jobsite safety through the use of best practices with James Hardie products.
本守则提供的适用于James Hardie产品的最佳施工方法可有效确保作业现场安全。

It's good to remember that 'Best Practice' is much more than simply a 'strong suggestion'. It is a work ethic that if followed has tangible benefits that will positively influence your quality of work and wellbeing, leading to greater efficiency, and importantly, improved worksite safety.
请您牢记，“最佳施工守则”不单是 一份“强烈建议”，更是一份“施工道德准则”。如能遵守，对施工质量和员工健康有切实的好处和积极的影响，不仅能提高施工效率，更能提升作业现场的施工安全。

3 Safe working practices
安全施工守则

WARNING - DO NOT BREATHE DUST AND CUT ONLY IN WELL VENTILATED AREA
警告 - 切勿吸入粉尘，请仅在通风良好的环境下进行切割

James Hardie products contain sand, a source of respirable crystalline silica. May cause cancer if dust from product is inhaled. Causes damage to lungs and respiratory system through prolonged or repeated inhalation of dust from product.
James Hardie 的产品中含有沙子，是可吸入结晶二氧化硅的来源。如吸入产品中的粉尘，可能会导致癌症，长期反复吸入产品中的粉尘，会对肺及呼吸系统造成损害。

Intact fibre cement products are not expected to result in any adverse toxic effects. The hazard associated with fibre cement arises from the respirable crystalline silica present in dust generated by activities such as cutting, rebating, drilling, routing, sawing, crushing, or otherwise abrading fibre cement, and when cleaning up, disposing of or moving dust.
完整的纤维水泥产品预期不会对人体造成有毒害的影响。与纤维水泥相关的有害物质是在切割，打磨，钻孔，铣削，锯切，压碎或其他方式研磨纤维水泥时，以及清理，处理或移动时产生的含有可吸入结晶二氧化硅的粉尘引起的。

When doing any of these activities in a manner that generates dust, follow James Hardie instructions and best practices to reduce or limit the release of dust.
在进行以上活动时，请遵循James Hardie的指导及安全施工守则，以降低及限制粉尘的散播。

If using a dust mask or respirator, use an AS/NZS1716 P1 filter and refer to Australian/New Zealand Standard 1715:2009 Selection, Use and Maintenance of Respiratory Protective Equipment for more extensive guidance and more options for selecting respirators for workplaces. For further information, refer to our installation instructions and Safety Data Sheets available at www.jameshardie.co.nz.
如使用防尘面罩或呼吸器，请使用AS/NZS 1716 P1滤芯，并参见《澳大利亚/新西兰1715:2009标准 - 选择，使用和维护呼吸防护设备》的全面指导及其提供的更丰富的作业用呼吸器选择。了解更多信息，请登陆www.jameshardie.co.nz.查看我们的安装说明及安全数据表。

FAILURE TO ADHERE TO OUR WARNINGS, SAFETY DATA SHEETS, AND INSTALLATION INSTRUCTIONS MAY LEAD TO SERIOUS PERSONAL INJURY OR DEATH.
如未遵守我们的警示、安全数据表和安装说明，可能会导致严重的人身伤害或死亡。

Crystalline Silica is
结晶二氧化硅是

- Commonly known as sand or quartz
  俗称沙子或石英
- Found in many building products e.g. concrete, bricks, grout, wallboard, ceramic tiles, and all fibre cement materials
  存在于众多建筑产品中，例如混凝土，砖，水泥浆，墙板，瓷砖和所有纤维水泥材料

Why is Crystalline Silica a health hazard?
为什么结晶二氧化硅会危害健康?

- Silica can be breathed deep into the lungs when present in the air as a very fine (respirable) dust
  二氧化硅以极细（可呼吸）的粉尘形式存在于空气中时，可深吸至肺部
- Exposure to silica dust without taking the appropriate safety measures to minimise the amount being breathed in, can lead to a potentially fatal lung disease – silicosis – and has also been linked with other diseases including cancer. Some studies suggest that smoking may increase these risks
  接触二氧化硅粉尘而未采取适当的安全措施以最大程度地减少吸入量，可能会导致致命的肺部疾病–矽肺病，且可能导致包括癌症在内的其他疾病。部分研究表明，吸烟也可能会增加此类风险
- The most hazardous dust is the dust you cannot see
  危害最大的粉尘是你看不见的粉尘

When is Crystalline Silica a health hazard?
结晶二氧化硅在何种情况下会危害健康?

- It's dangerous to health if safety protocols to control dust are not followed when cutting, drilling or rebating a product containing crystalline silica
  在切割，钻孔，打磨或清理含有结晶二氧化硅的产品时，如不遵守控制粉尘的安全守则，会危害健康
- Products containing silica are harmless if intact (e.g. an un-cut sheet of wall board)
  含硅的产品在完整的情况下是无害的（比如，未切割的墙板）

Avoid breathing in crystalline silica dust
避免吸入结晶二氧化硅粉尘

Safe working practices
安全施工守则

✗ NEVER use a power saw indoors or in a poorly ventilated area
切勿在室内或通风不佳的区域使用电锯

✗ NEVER dry sweep
切勿干扫

✓ ALWAYS use M Class or higher vacuum or damp down dust before sweeping up
始终使用M级或更高级别的吸尘器，或在清扫之前沾湿粉尘

✗ NEVER use grinders
切勿使用研磨机

✓ ALWAYS use a dust reducing circular saw equipped with a sawblade specifically designed to minimise dust creation when cutting fibre cement – preferably a sawblade that carries the HardieBlade™ logo or one with at least equivalent performance – connected to an M Class or higher vacuum
始终使用降尘圆锯，圆锯装有专为切割纤维水泥设计的可减少粉尘产生的锯片 – 最好是带有HardieBlade™商标的锯片或者至少具有同等功能 – 并与M级或更高级别的吸尘器相连接

✓ Before cutting warn others in the area to avoid dust
切割之前，警示他人离开周围区域

✓ ALWAYS follow tool manufacturers' safety recommendations
始终遵循工具制造商的安全建议

✓ ALWAYS expose only the minimum required depth of blade for the thickness of fibre cement to be cut
根据需要切割的纤维水泥板的厚度，始终仅露出所需最小的刀片深度

✓ ALWAYS wear a properly-fitted, approved dust mask or respirator P1 or higher in accordance with applicable government regulations and manufacturer instructions
始终根据适用的政府法规和制造商指导佩戴合适的、经过批准的P1或更高级别的防尘面罩或呼吸器

✓ Consider rotating personnel across cutting tasks to further limit respirable silica exposures
考虑轮换人员进行切割，进一步限制对可吸入二氧化硅的接触

Use one of the following methods for cutting panel and weatherboard products under 9mm
在切割厚度小于9毫米的面板和护墙板类产品时，应选用如下一种切割方法

Best
最佳方法

- HardieKnife™
  HardieKnife™ 切刀
- Hand guillotine
  手动铡刀
- Fibreshear
  纤维水泥剪

Better
次优方法

Dust reducing circular saw equipped with HardieBlade™ Saw Blade and connected to a M Class or higher vacuum.
锯片带有HardieBlade™商标的降尘圆锯，并与M级或更高级别的吸尘器相连接。

When cutting outdoors
在室外切割时

- ✓ Make sure you work in a well ventilated area
  确保您的作业环境通风良好
- ✓ Position cutting station so wind will blow dust away from yourself and others in the working area
  妥善放置切割工作台，便于风将粉尘吹离您和工作区域内的其他人
- ✓ Rotate employees across cutting task over duration of shift
  安排工作人员轮换进行切割任务
- ✓ Cut products with a HardieBlade Saw Blade (or equivalent) and a dust reducing circular saw connected to a M Class or higher vacuum
  使用HardieBlade锯片（或具有同等功能的锯片）切割产品，采用降尘圆锯连接M级或更高级别的吸尘器
- ✓ When sawing, sanding, rebating, drilling or machining fibre cement products, always:
  在锯切，砂磨，打磨，钻孔或加工纤维水泥产品时，请始终：
  - Wear your P1 or higher (correctly fitted in accordance with manufacturers' instructions), ask others to do the same.
    佩戴P1或更高级别的防护面罩（根据制造商指导正确佩戴），并要求他人也这样做
  - Keep persons on site at least 2 metres and as far as practicable away from the cutting station while the saw is in operation
    让施工现场的人在锯切过程中尽可能远离切割工作台或至少保持2米距离
  - If you are not clean shaven, then use a powered air respirator with a loose fitting head top
    如果您留有胡子，请佩戴带有宽松头戴式面罩的电动送风呼吸器
  - Wear safety glasses
    佩戴安全镜
  - Wear hearing protection
    佩戴护耳器
- ✓ Make sure you clean up BUT never dry sweep. Always hose down with water/wet wipe or use an M Class or higher vacuum
  确保清洁，但切勿干扫。始终用水管冲洗或用湿抹布清洁，又或使用M级或更高级别的吸尘器

When cutting indoors
在室内切割时

- ✗ Never cut using a circular saw indoors
  切勿在室内使用圆锯
- ✓ Position cutting station in a well ventilated area
  将切割工作台放置在通风良好的位置
- ✓ Cut ONLY using a HardieKnife™, hand guillotine or fibreshears (manual, electric or pneumatic)
  仅使用HardieKnife™、手动铡刀或（手动、电动或气动的）纤维水泥剪进行切割
- ✓ Make sure you clean up BUT never dry sweep. Always hose down with water/wet wipe or use an M Class or higher vacuum
  确保清洁，但切勿干扫。始终用水管冲洗或用湿抹布清洁，又或使用M级或更高级别的吸尘器

Use the following method for cutting panel and weatherboard products over 9mm
在切割厚度大于9毫米的面板和护墙板类产品时，应选用如下切割工具

Dust reducing circular saw equipped with HardieBlade Saw Blade and M Class or higher vacuum.
锯片带有HardieBlade™商标的降尘圆锯，并与M级或更高级别的吸尘器相连接

When cutting
切割时

- ✓ Work outdoors only
  仅在室外作业

- ✓ Make sure you work in a well ventilated area
  确保你的作业环境通风良好
- ✓ Position cutting station so wind will blow dust away from yourself and others in the working area
  妥善放置切割工作台，便于风将粉尘吹离你和在工作区域内的其他人
- ✓ Rotate employees across cutting task over duration of shift
  安排工作人员轮值进行切割任务
- ✓ Cut products with a HardieBlade Saw Blade (or equivalent) and a dust reducing circular saw connected to a M Class or higher vacuum
  使用HardieBlade锯片（或具有同等功能的锯片）切割产品，采用降尘圆锯连接M级或更高级别的吸尘器
- ✓ When sawing, sanding, rebating, drilling or machining fibre cement products, always:
  在锯切，砂磨，打磨，钻孔或加工纤维水泥产品时，请始终：
  - Wear your P1 or higher (correctly fitted in accordance with manufacturers' instructions), ask others to do the same.
    佩戴P1或更高级别的防护面罩（根据制造商指导正确佩戴），并要求他人也这样做
  - Keep persons on site at least 2 metres and as far as practicable away from the cutting station while the saw is in operation.
    让施工现场的人在锯切过程中尽可能远离切割工作台或至少保持2米距离
  - If you are not clean shaven, then use a powered air respirator with a loose fitting head top
    如果您留有胡子，请佩戴带有宽松头戴式面罩的电动送风呼吸器
  - Wear safety glasses
    佩戴安全镜
  - Wear hearing protection
    佩戴护耳器
  - When others are close by, ask them to do the same
    如有他人在旁，要求他们也这样做
- ✓ Make sure you clean up BUT never dry sweep. Always hose down with water/wet wipe or use an M Class or higher vacuum
  确保清洁，但切勿干扫。始终用水管冲洗或用湿抹布清洁，也可使用M级或更高级别的吸尘器

Use one of the following methods for cutting pre-finished panel products
在切割预加工的面板类产品时，应选用如下一种切割方法

Best
最佳方法

- HardieKnife™
  HardieKnife™ 切刀
- Fibreshear
  手动铡刀

Better
次优方法

Dust reducing circular saw equipped with HardieBlade™ Saw Blade and connected to a M Class or higher vacuum.
锯片带有HardieBlade™商标的降尘圆锯，并与M级或更高级别的吸尘器相连接

When cutting outdoors
在室外切割时

- ✓ Make sure you work in a well-ventilated area
  确保您的作业环境通风良好
- ✓ Position cutting station so wind will blow dust away from yourself and others in the working area
  妥善放置切割工作台，便于风将粉尘吹离您和在工作区域内的其他人
- ✓ Cut products with either a HardieKnife™ or fibre cement shears or, use a HardieBlade™ Saw Blade (or equivalent) and a dust reducing circular saw connected to a M Class or higher vacuum
  使用HardieKnife™切刀、纤维水泥剪或HardieBlade锯片（或具有同等功能的锯片）切割产品，采用降尘圆锯连接M级或更高级别的吸尘器

✓ When sawing, sanding, rebating, drilling or machining fibre cement products, always:
在锯切，砂磨，打磨，钻孔或加工纤维水泥产品时，请始终：

- Wear your P1 or P2 mask (correctly fitted in accordance with manufacturers' instructions), ask others to do the same.
佩戴P1或P2级别的防护面罩（根据制造商指导正确佩戴），并要求他人也这样做
- Keep persons on site at least 2 metres and as far as practicable away from the cutting station while the saw is in operation
让施工现场的人在锯切过程中尽可能远离切割工作台或至少保持2米距离
- If you are not clean shaven, then use a powered air respirator with a loose fitting head top
如果您留有胡子，请佩戴带有宽松头戴式面罩的电动送风呼吸器
- Wear safety glasses
佩戴安全镜
- Wear hearing protection
佩戴护耳器
- When others are close by, ask them to do the same
如有他人在旁，要求他们也这样做

✓ Make sure you clean up BUT never dry sweep. Always hose down with water/wet wipe or use an M Class or higher vacuum
确保清洁，但切勿干扫。始终用水管冲洗或用湿抹布清洁，也可使用M级或更高级别的吸尘器

When cutting indoors
在室内切割时

✗ Never cut using a circular saw indoors
切勿在室内使用圆锯

✓ Position cutting station in a well-ventilated area
将切割工作台放置在通风良好的地方

✓ Cut ONLY using a HardieKnife™ or fibreshears
仅使用HardieKnifeTM或纤维水泥剪进行切割

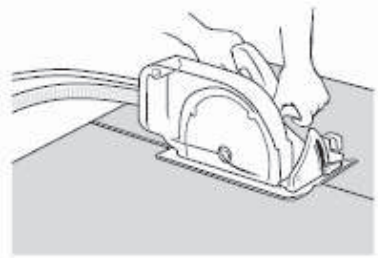
✓ Make sure you clean up BUT never dry sweep. Always hose down with water/wet wipe or use an M Class or higher vacuum
确保清洁，但切勿干扫。始终用水管冲洗或用湿抹布清洁，又或使用M级或更高级别的吸尘器

If concern still exists about exposure levels or you do not comply with the above practices, you should always consult a qualified industrial hygienist or contact James Hardie for further information.
如果仍然担心暴露水平，或者您不遵守上述惯例，则应始终咨询合格的工业卫生师或联系James Hardie以获取更多信息。

Working instructions
作业说明

HardieBlade™ Saw Blade
HardieBlade™ 锯片

The HardieBlade™ Saw Blade used with a dust-reducing saw is ideal for fast, clean cutting of James Hardie fibre cement products. A dust-reducing saw uses a dust collector connected to a M Class or higher vacuum. When sawing, clamp a straight edge to the sheet as a guide and run the saw base plate along the straight edge when making the cut.
HardieBlade锯片与降尘圆锯一起使用，可以快速干净的切割James Hardie纤维水泥产品。降尘圆锯配有粉尘收集器，可与M级或更高级别的吸尘器连接。锯切时，请将直线边缘夹在平板上作为导向，并让锯齿底部板沿直线进行切割。



Hole forming
成孔

For smooth clean cut circular holes:
形成平滑整齐的圆孔：

- Mark the centre of the hole on the sheet
在板上标记孔的中心
- Pre-drill a 'pilot' hole
预钻一个孔



- Using the pilot hole as a guide, cut the hole to the appropriate diameter with a hole saw fitted to a heavy duty electric drill
  在该预钻孔的基础上，使用配在重型电钻上的孔钻，钻出所需直径的孔

For irregular holes:
不规则孔:

- Small rectangular or circular holes can be cut by drilling a series of small holes around the perimeter of the hole then tapping out the waste piece from the sheet face
  如需钻出小的长方形或圆形孔，可在周边钻一系列的小孔， 然后从表面将多余部分敲打掉
- Tap carefully to avoid damage to sheets, ensuring that the sheet edges are properly supported
  谨慎敲打，以防破坏板材，确保板材周边都有良好支撑

4 Handling and storage of James Hardie products 搬运和储存James Hardie产品

James Hardie building products should be stored in their original packaging, preferably under cover like a garage or in some other covered area protected from weather whenever possible. These products must be kept dry and should be kept covered on a pallet off the ground; they must never be stored in direct contact with the ground.
James Hardie 建筑产品应采用原始包装储存，并尽可能储存在如车库等有顶盖的地方，以避免受天气影响。这类产品必须保持干燥，且不可直接放在地面上，而是放在货板上，并以遮挡物覆盖；储存时，这类产品不可直接接触地面。

If James Hardie products become saturated, they must be laid on a flat surface and allowed to dry completely prior to installation.
如果 James Hardie 产品受潮，则必须将其放置在平坦的表面，直至完全风干后才可安装。

James Hardie is not responsible for damage due to improper storage and handling of its products.
因储存和搬运不当导致的产品损坏不在James Hardie 的责任范围内。

James Hardie products are robust and durable once installed. It is important to keep the product dry in storage and during installation.
James Hardie 产品安装后具有坚固耐用的特性。在储存和安装期间，务必保持产品干燥。

If product becomes saturated prior to installation the following can occur.
如果产品在安装前受潮，可能会出现如下情况：

- Shrinkage at joints.
  连接处收缩。
- Staining. A deposit of soluble salts, usually white in colour.
  出现污渍，通常为白色的可溶性盐沉积物。
- Difficulty in handling due to the increased weight and added flexibility once saturated.
  因受潮造成重量和弹性增加，进而造成搬运困难。

Storage
储存

James Hardie products should be stored:
James Hardie 产品的储存一定要

- ✓ In their original packaging
  储存至原包装
- ✓ Off the ground – either on a pallet or adequately supported on timber or other spacers (figure 1)
  不直接放在地面上——应放置在货板上或有充分支撑的木料和其他垫板上（如图1）

✓ Under cover where possible or otherwise protected with a waterproof covering to keep products dry (figure 2)
尽可能储存在有遮盖的地方或用防水层保护，保持产品干燥（如图2）

✓ Flat so as to minimise bending
尽可能平放以减少弯曲

Figure 1

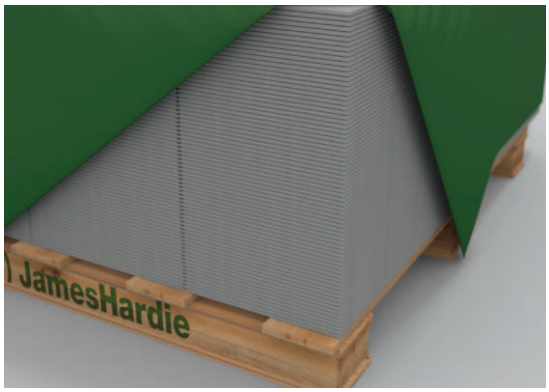
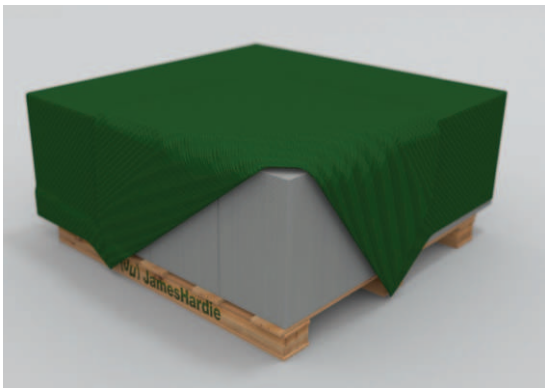


Figure 2



James Hardie products must not be stored:
James Hardie产品的储存一定不要：

✗ Directly on the ground
直接放置在地上

✗ In the open air exposed to the elements
暴露在空气中，接触到化学品

Off loading
卸货

✓ James Hardie products should be off-loaded carefully by hand or by forklift
James Hardie产品须手工搬运或使用叉车小心卸载

✓ James Hardie products should not be rolled or dumped off a truck during the delivery to the jobsite
James Hardie产品不应在运输至作业现场的过程中滚下或倾倒

James Hardie is not responsible for damage due to improper storage and handling.
因储存和搬运不当导致的产品损坏不在James Hardie 的负责任范围内。

4.1 Tips for safe and easy handling of weatherboard products
轻松安全搬运护墙板的小贴士

✕ Do not lift planked products flat and in the middle (figure 3)
不要只从中间或者只从两边抬举平板产品（如图3）。

✓ Carry the products on the edge (figure 4)
抬举产品的边缘处（如图4）

✓ If only one person is carrying the product, hold it in the middle and spread arms apart to better support the product (figure 5)
仅一人作业时，托住中部并展开双臂以更好的支撑产品（如图5）

✓ If two people are carrying the plank, hold it near each end and on edge (figure 6)
当两人作业搬运板条时，则从两端和边缘处抬起（如图6）

✓ Exercise care when handling weatherboard products to avoid damaging the edges/corners
对板材产品，须轻拿轻放，避免损坏边角处

Figure 3



Figure 4

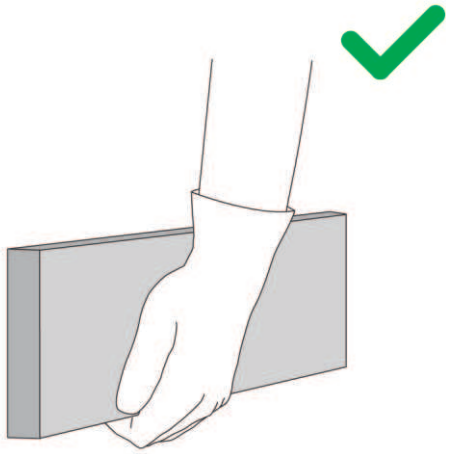


Figure 5

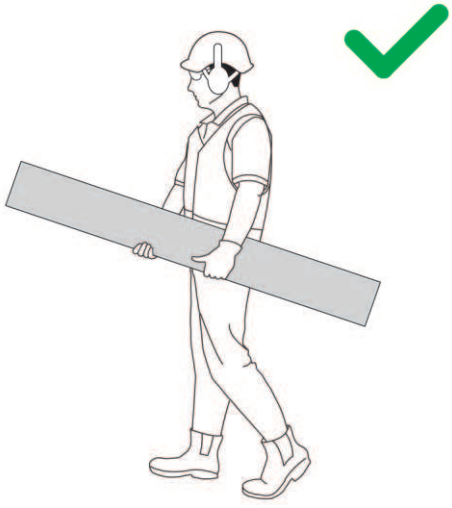
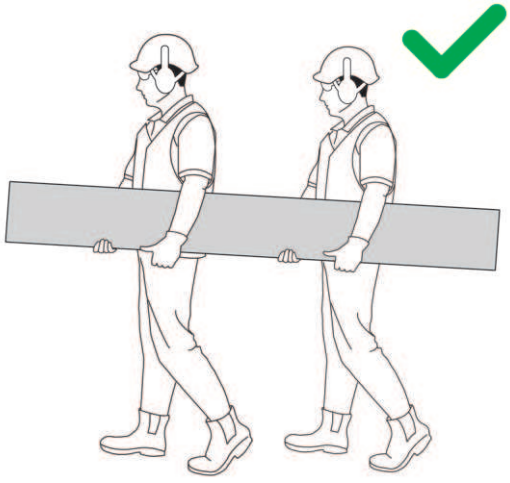


Figure 6



4.2 Tips for safe and easy handling of sheet products
轻松安全搬运板材产品的小贴士

- ✓ Carry with two people (figure 7)
  请两人一同搬运（如图7）
- ✓ Hold near each end and on edge
  别抓住产品两头边缘
- ✓ Exercise care when handling sheet products to avoid damaging the edges/corners
  轻拿轻放，以免损伤产品边角

Figure 7

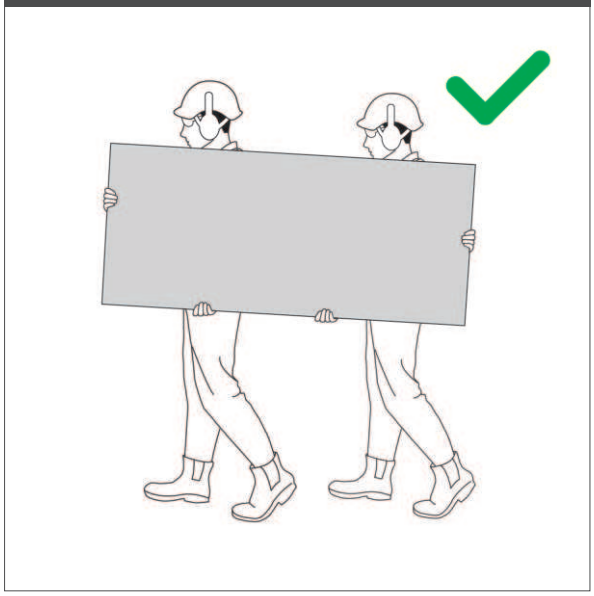
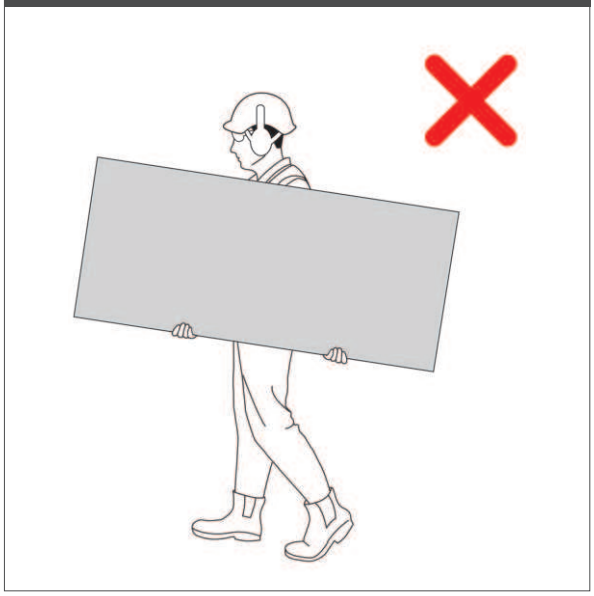


Figure 8



5 Jobsite best practice
作业现场最佳施工守则

Best practice information on all James Hardie products can be found in our installation manuals and technical specifications or at www.jameshardie.co.nz.
如需了解所有 James Hardie 产品的最佳施工守则，请翻阅安装说明及技术说明书，或登陆www.jameshardie.co.nz查看相关信息。

If there is additional concern about silica exposure levels, you should always consult a qualified industrial hygienist.
如果仍然担心暴露水平，或者您不遵守上述惯例，则应始终咨询合格的工业卫生师或联系James Hardie以获取更多信息。

5.1 Cutting indoors
室内切割

Cut only using HardieKnife before score and snap, hand guillotine or fibreshears (manual or electric). Position cutting station in a well-ventilated area.
仅使用HardieKnife™、手动铡刀或(手动或电动的)纤维水泥剪进行刻线切割。将切割工作台放置在通风良好的位置。

5.2 Sanding, rebating, drilling or other machining
抛光、打磨、钻孔或其他机器作业

When sanding, rebating, drilling or machining you should always wear a P1 or P2 respirator with the tool connected to a M Class or higher vacuum and warn others in the area to maintain a and minimum 2m distance from the work station.
进行抛光、打磨、钻孔或其他机器作业时，应始终佩戴P1或P2级别防尘面罩，将作业机器与M级或更高级别的吸尘器相连接，并要求其他人员与作业现场保持2米以上的距离。

5.3 Cutting outdoors
室外切割

Position cutting station so that the wind will blow dust away from the user and others present in the surrounding area (see Figures 9 and 10).
妥善放置切割工作台，便于风将粉尘吹离您本人和在工作区域内的其他人（见图9和图10）

Use one of the following methods based on the material to be cut:
根据切割材料不同，选择如下一种切割方法：

Cutting fibre cement under 9mm
切割9毫米以下的纤维水泥

- HardieKnife score and snap
  HardieKnife 刻线切割
- Hand guillotine
  手动铡刀
- Fibreshear
  纤维水泥剪

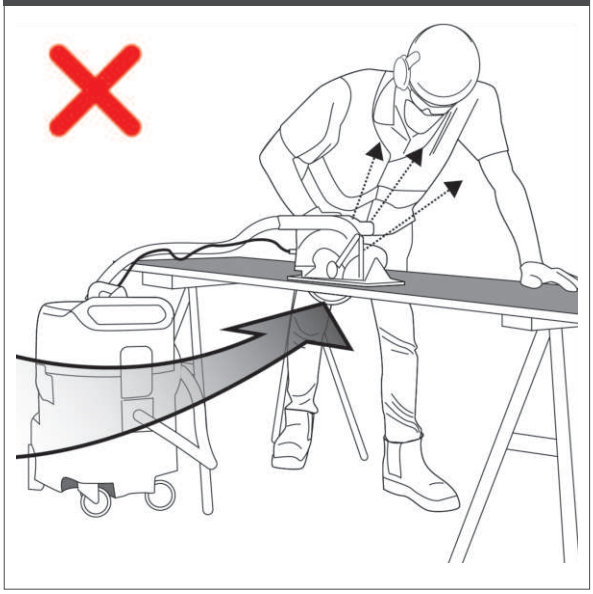
Cutting fibre cement over 9mm
切割厚度9毫米以上的纤维水泥

- Dust reducing circular saw equipped with HardieBlade™ Saw Blade connected to a M Class or higher vacuum
  锯片带有HardieBlade™商标的降尘圆锯，并与M级或更高级别的吸尘器相连接

Figure 9: Correct



Figure 10: Wrong



5.4 Important Notes
重要备注

- For maximum protection (lowest respirable dust production), James Hardie recommends using cutting methods that create minimial dust, and negligible levels of respiable silica such as HardieKnife, Hand Guillotine, and Fibreshears.
  为获取最大程度保护（即尽可能降低可吸入粉尘的产生），James Hardie 建议使用产生粉尘量较低的切割工具，如HardieKnife、手动铡刀和纤维水泥剪，这些工具产生的可吸入二氧化硅量可忽略不计。
- Never use a circular saw blade that does not carry the HardieBlade™ logo.
  切勿使用未带有HardieBlade™标志的圆锯。
- Never dry sweep - use a M Class or higher vacuum or wet sweep.
  切勿干扫。使用M级或更高级别的吸尘器，或用水清洁。
- Never use grinders.
  切勿使用研磨机。
- Always follow tool manufacturer's safety recommendations.
  始终遵循工具制造商的安全建议。
- P1 and P2 respirators should be used in conjunction with cutting practices to further reduce dust exposure.
  正确进行切割作业的同时，还应佩戴P1或P2级别的防护面罩，以进一步减少粉尘接触。



HardieBlade™ Saw Blade is designed specifically for fibre cement and produces less respirable dust compared to traditional masonary blades.

HardieBlade™ 锯片专为切割纤维水泥特制，与传统石工行业的锯片相比，作业时产生的可吸入粉尘更少。

⚠ WARNING 警示

Tools and blades are designed to reduce breathable silica and do not always result in safe levels by themselves. Many other factors can influence dust exposure including jobsite ventilation, the amount of material being cut and breathing protection being used. If uncertain about exposure or protection in a specific situation, always consult a qualified industrial hygienist to determine actual exposure levels.

虽然工具和锯片的设计旨在减少可吸入二氧化硅的产生，但其并不能完全保障相关作业的安全水平。诸多其他因素也会影响粉尘暴露，包括作业现场通风情况，被切割材料的总量和呼吸防护装置的使用。如不确定某特定环境下的粉尘暴露和保护措施，请咨询合格的工业卫生专家以确定粉尘暴露级别。

6 Tool Guide for James Hardie fibre cement products
James Hardie 纤维水泥产品处理工具使用指南

No matter what James Hardie building product you choose, using the correct tools is a critical step in helping to complete the installation faster, safer and more efficiently.
无论选择哪种James Hardie建筑产品，使用正确的工具总能帮助您更快、更安全、更高效地完成安装。

James Hardie actively promotes the use of the right tools with recommended best practices.
James Hardie积极倡导使用正确的工具并遵循最佳施工守则。

Using these tools should help with ease of correct installation and help to improve installation efficiency.
使用这类工具有助于正确的安装过程，并提高安装效率。

Our goal has been to source tools and accessories either specifically designed or otherwise suitable for use with James Hardie building products - these should help with ease of correct installation and help to improve installation efficiency and long lasting durability that James Hardie products offer.
我们的目标始终是提供专门设计或适用于 James Hardie 建筑产品的工具和配件，以助于正确安装，提高安装效率，确保James Hardie产品持久耐用。

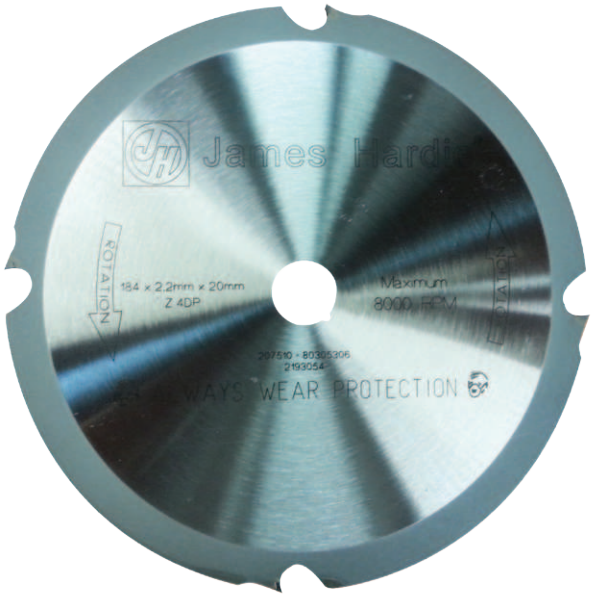
James Hardie actively promotes the use of the right tools with recommended best practices. Also refer to the 'Safe Working Practices' section published in the product installation manuals which contains information on silica, including its potential hazards and how these can be safely managed using best working practices.
James Hardie 积极倡导使用正确的工具并遵从最佳施工守则。另请参阅产品安装手册中“安全施工守则”章节内与二氧化硅相关的信息，包括其潜在危险及如何根据安全施工守则妥善应对这些危险。

It is important to note that this guide needs to be read in conjunction with the technical specification or installation manual, for each specific James Hardie product you are working with. These manuals provide specific information relating to the product you are using.
阅读本守则时，需同时参考适用于指定James Hardie产品的技术说明书和安装手册。这些手册为您使用的产品提供有针对性的信息。

You must read and follow the tooling manufacturer's instructions/specifications for using the tools recommended in this guide. Also contact them for routine maintenance or for any trouble-shooting with these tools.
使用本守则推荐的工具时，请您务必阅读并遵循工具制造商的说明或指南。如需进行日常维护或排除工具故障，请与制造商联系。

James Hardie has worked with tool and blade manufacturers to develop tools to specifically minimise dust exposure.

James Hardie与工具和刀片制造商合作研发工具，以专门减少粉尘接触



6.1 HardieBlade™ Saw Blade
HardieBlade™ 锯片

The only blade recommended by James Hardie.
James Hardie唯一推荐锯片。

NEVER USE A CARBIDE SAW BLADE DESIGNED FOR TIMBER, OR CONTINUOUS RIM DIAMOND BLADE
切勿使用切割木材的硬质合金锯片或连续齿烧金刚石锯片

The HardieBlade saw blade generates larger dust particles and reduces the risk of respirable silica when used with an M Class or higher vacuum system.
配合M级或更高级别的吸尘器使用时，HardieBlade锯片会产生较大的尘粒，进而降低可吸入二氧化硅带来的风险。

The 185mm diamond tip HardieBlade saw blade fits a dust reducing 185mm circular saw.
185毫米的HardieBlade金刚石尖锯片与185毫米的降尘圆锯配套使用。

The 254mm diamond tip HardieBlade fits a dust reducing drop saw.
254毫米的HardieBlade金刚石尖锯片与降尘斜切锯配套使用。

Always use circular saws outdoors and in a well ventilated area.
始终在户外且通风条件良好的地方使用圆锯。

Blades are available through your local merchant.
可通过当地供货商购买锯片。

7 Dustless cutting tools
无尘切割工具

HardieKnife™ Score and Snap Knife
HardieKnife™ 刻线剪切刀

For use with James Hardie products up to 9mm thick.
适用于不超过9毫米厚的James Hardie产品

- SCRAPE - Smooth any rough edges resulting from scoring and snapping.
  打磨-打磨任何因刻线剪切而造成的毛边，使之光滑。
- SCORE - It is recommended to score on the face side of the product. Score against a straight edge and repeat the action if required to obtain adequate depth for clean break. Snap upwards to achieve break.
  刻线-建议在产品正面刻线。反复沿着一条直边刻划，直至达到所需深度。后向上弯折使其断裂。
- SHAVE - Shave the edge of the sheet to form a clean edge.
  修剪-修建板材边缘，使之光滑。

Hand guillotine
手动铡刀

For effective cutting of fibre cement up to 9mm in thickness.
适用于不超过9毫米厚的纤维水泥

- The hand guillotine is a low dust solution for cutting fibre cement. Ideal for use indoors.
  使用手动铡刀剪切纤维水泥产生粉尘较少。较适用于室内。

HardieKnife Score and Snap Knife
HardieKnife 刻线剪切刀



Hand guillotine 手动铡刀



8 Snapper shear
水泥切割剪

For use with James Hardie products up to 16mm in thickness.
适用于不超过16毫米厚的James Hardie产品。

Hikoki Snapper Shear – MODEL: SS10A (GAZ)
Hikoki 水泥切割剪-型号：SS10A (GAZ)

- The snapper shear is a solution for cutting James Hardie fibre cement products up to 16mm thickness.
  此水泥切割剪适用于不超过 16 毫米厚的 James Hardie 产品。
- Impressive straight edge performance, the Snapper Shear will also cut accurate notches, gentle curves, and internal corners with ease.
  水泥切割剪不仅在剪切直边上性能突出，且能轻松切出准确的凹槽、柔和的曲线和内角。

Hikoki Snapper Shear 2 – Model SS10A (GAZ)
Hikohi水泥切割剪 2 -型号：SS10A (GAZ)



9 Dust extraction equipment
除尘设备

James Hardie recommends the use of a M Class or higher vacuum fitted with a dust bag for efficient dust collection and performance.
为有效除尘并提高效用，James Hardie建议使用M级或更高级别的吸尘器，并配备相应的集尘袋。

Using an M Class or higher vacuum prolongs the lifespan of your power tools by limiting the amount of dust entering your power tools and reducing the risk of breakdowns.
使用M级或更高级别的吸尘器，可减少粉尘被吸入机器，进而降低故障风险，延长机器的使用寿命。



James Hardie recommend tools that have the following features:
James Hardie 建议使用带有如下功能的工具：

- M Class or higher vacuum bearing the label below
  贴有如下标签的M级或更高级别的吸尘器
- Capable of auto-start when tool trigger is depressed - either corded or Bluetooth
  通过线缆或蓝牙连接，按下按钮后可自动启动
- Wet/dry capability
  吸收干/湿粉尘的能力
- Self-cleaning filter
  有自动清洁功能的过滤器
- Able to be fitted with a dust collection bag for safe and easy dust disposal
  可与集尘袋配套使用，以安全轻松地处理灰尘

Tools with these features can be purchased from tool or building merchant suppliers. Manufacturers include, but are not limited to Makita, Nilfisk, Hilti, DeWalt, and Festool
带有如上功能的工具可以从工具商或建材供应商处购买。工具制造商包括但不限于Makita, Nilfisk, Hilti, DeWalt和Festool。



10 Circular saws 圆锯

Dust reducing circular saws fitted with a HardieBlade Saw Blade are suitable for cutting James Hardie fibre cement products. Before cutting any product, you should review the installation recommendations in the technical information for that specific product.
锯片带有HardieBlade™商标的降尘圆锯适用于剪切James Hardie纤维水泥产品。在剪切产品前，请查阅该产品技术信息中的安装建议。

A circular saw can be used when a high rate of cutting is required. A circular saw is only suitable for use outdoors, in well-ventilated areas.
圆锯适用于高频度切割。圆锯仅可在通风条件良好的室外使用。

James Hardie recommend tools that have the following features:
James Hardie建议使用带有如下功能的工具：



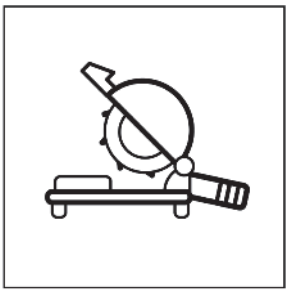
- Specific dust reducing features
  特定的降尘功能
- Fully enclosed upper guard
  上半部有全封闭式防护装置
- Fits James Hardie HardieBlade
  适用于James Hardie旗下的HardieBlade锯片
- Large dust extraction port
  较大的吸尘口
- Able to connect with cord or Bluetooth to M Class or higher vacuums to make use of vacuum auto-start functions
  可通过线缆或蓝牙连接M级或更高级别的吸尘器，以使用其自动启动功能。

Tools with these features can be purchased from tool or building merchant suppliers. Manufacturers include, but are not limited to Makita, HiKoki, and Festool.
带有如上功能的工具可以从工具商或建材供应商处购买。工具制造商包括但不限于Makita, HiKoki和Festool。

11 Compound mitre saws
复合斜切锯

Use with Linea™ Weatherboard, Linea™ Oblique™ Weatherboard, and James™ Hardie Weatherboards
适用于Linea™护墙板，Linea™ Oblique™护墙板和James™ Hardie护墙板

A Compound mitre saw is only suitable for use outdoors, in well-ventilated areas.
复合斜切锯仅适于在通风条件良好的室外使用。



James Hardie recommend tools that have the following features:
James Hardie推荐使用带有如下功能的工具：

- Specific dust reducing features
  特定的降尘功能
- Large dust extraction ports beside and behind the blade, as well as within the base
  在锯片侧面、背面和底部有较大的吸尘口
- Fits James Hardie HardieBlade
  适用于James Hardie旗下HardieBlade锯片
- Able to connect with cord or Bluetooth to M Class or higher vacuum to make use of vacuum auto-start function
  可通过线缆或蓝牙连接M级或更高级别的吸尘器，以使用其自动启动功能

Tools with these features can be purchased from tool or building merchant suppliers. Manufacturers include, but are not limited to Makita, HiKoki, DeWalt, and Festool
带有如上功能的工具可以从工具商或建材供应商处购买。工具制造商包括但不限于Makita, HiKoki, DeWalt和Festool。

12 Accessories
配件

James Hardie tungsten carbide drill bits
James Hardie 碳化钨硬质合金钻头

9mm drill bit suitable for Titan™ Facade Panel and ExoTec™ Facade Panel.
9毫米钻头，适用于Titan™面板和ExoTec™面板

- 18mm drill bit suitable for HardiePanel™ Compressed Sheet.
  18毫米钻头，适用于HardiePanel™压缩板
- A solid tungsten carbide drill for drilling and countersinking of fibre cement panels in one operation.
  硬质碳化钨钻头，单次操作即可同时完成纤维水泥面板的钻孔和沉孔。
- Suitable for 10 gauge screws.
  适用于规格为10的螺丝。

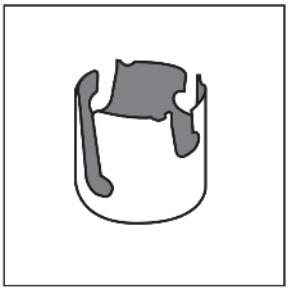
James Hardie tungsten carbide drill bits
James Hardie 碳化钨硬质合金钻头



13 Solid carbide tipped hole saws
硬质合金尖孔锯

- Carbide last significantly longer than bi-metal
  硬质合金工具的使用寿命明显长于双金属材料工具

Tools with these features can be purchased from tool or building merchant suppliers. Manufacturers include, but are not limited to Sarrett, BlueMol, Lenox, and Milwaukie
带有如上功能的工具可从工具商或建材供应商处购买。工具制造商包括但不限于Sarrett, BlueMol, Lenox和Milwaukie。



Accessories/tools supplied by James Hardie
James Hardie提供的配件和工具

Accessories 配件金	Description 说明	Code 编码
	**HardieBlade™ Saw Blade** **HardieBlade™ 圆锯** Diamond tip 185mm diameter fibre cement circular saw blade. 用于切割纤维水泥的185毫米孔径金刚石尖圆锯片。	300660
	**HardieBlade™ Saw Blade** **HardieBlade™ 圆锯** Diamond tip 254mm diameter fibre cement circular saw blade. 用于切割纤维水泥的254毫米孔径金刚石尖圆锯片。	303375
	**HardieKnife™** **HardieBlade™ 刻线剪切刀** Scoring tool for easy cutting. 轻松完成刻线剪切的刀具。	305926
	**Tungsten Carbide Drill Bit** 9mm **碳化钨硬质合金钻头** 9毫米	300567
	**Tungsten Carbide Drill Bit** 18mm **碳化钨硬质合金钻头** 18毫米	300566

Notes 备注

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