Information for Architects & Building Professionals

...windows that bring an extra dimension to architectural expression while achieving extraordinary energy efficiency.

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amm/er

The windows of the future today.

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makers of Australia's most energy-efficient windows and doors

Paarhammer Product Overview

Since 1990, Paarhammer have been setting the benchmark in energy efficient windows and doors in Australia.

Paarhammer have developed four product ranges - the energy efficient Architectural Timber Range, the economical Komfortline, the best of both worlds Wood-Alu Range, and the BAL-FZ compliant Bushfire Safe Range. Each range presents a practical solution while delivering our clients high performing windows and doors with superior results. Decades of experience manufacturing windows, doors & facades, highly qualified employees, and the use of cutting edge technology combine into products that meet the highest standards.

Paarhammer products feature double rebated timber frames in the dimensions of 80 x 68mm for windows, 120 x 68mm for doors and 95 x 68mm for sliding doors. All frames are dipped in timber preservative, sanded and spray painted twice with Adler water based and low VOC (Volatile Organic Compound) paint. For very dense timbers like FSC[®] (Forest Stewardship Council[®]) certified Manilkara, we use Cutek Wood preservative.

Every Paarhammer window and door is fitted with multi-point locking hardware, providing metal-to-metal security locking to guarantee close to zero air infiltration and maximum security. The German hardware is also engineered to withstand the added weight of double and triple glazing and extra large sliding, bi-fold and entrance door units. Motorisation and sensors are available on request.

The sealed double glazed units consist of glass panes with a 16mm air gap. Triple glazing has twice 12mm air gap. The air gaps are filled with argon gas to further improve thermal efficiency. All sealed glass units are in accordance with Australian Standard AS1288-2006. For alternative glazing options, including Low-E, Evergreen, and I-glass, please talk to us to get the best combination for your situation.

Paarhammer also manufacture bushfire safe windows and doors for all bushfire levels, including BAL-FZ (Bushfire Attack Level Flame Zone), tested and approved to all relevant Australian Standards.

Paarhammer operate in a purpose built 4000m2 manufacturing facility with many sustainable features, such as light and waste management, where briquettes are made from off-cuts and shavings which are used to heat the factory, offices and showroom, and thereby reduce landfill by around 2500m3 (or the equivalent of an Olympic size swimming pool) per year.

Paarhammer stands for superior quality through craftsmanship and an unwavering commitment to the environment.

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Paarhammer WERS rating Window Energy Rating System



The Window Energy Rating Scheme enables windows to be rated and labelled for their energy impact. To participate in WERS, window makers must obtain energy ratings for their products from a rating organisation that is accredited by the AFRC (Australian Fenestration Rating Council) and undergo annual audits to ensure compliance.

For further information on the Window Energy Rating Scheme go to <u>http://www.wers.net/wers-home</u>

Paarhammer Pty Ltd Updated 29-Aug-2013			Cool	Heat	Total Window - AFRC				
Window ID	Glazing	Cooling Stars	Heating Stars	- %	%	Uw	SHGC	Tvw	Aif Inf
Tilt and Turn	Window - Double Glazed							1	1
PAR-001-01	4/16/4	****	******	61%	72%	2.2	0.39	0.41	0.05
PAR-001-02	4/16Ar/4S500	****	*****	65%	75%	1.8	0.37	0.39	0.05
PAR-001-03	4EG/16Ar/4S500	*****	*****	75%	66%	1.8	0.21	0.32	0.05
Tilt and Turn	Window - Triple Glazed								
PAR-002-01	4/12/3/12/4	****	*****	66%	75%	1.8	0.35	0.38	0.05
PAR-002-02	4/12Ar/4S500/12Ar/4S500	*****	*****	71%	76%	1.4	0.31	0.33	0.05
PAR-002-03	4EG/12Ar/3/12Ar/4S500	******	******	78%	67%	1.5	0.19	0.29	0.05
PAR-002-04	4SB70XL/12Ar/3/12Ar/4ET	*****	*****	84%	65%	1.3	0.13	0.28	0.05
PAR-002-05	4SB70XL/12Ar/3SB70XL/12Ar/4SB70XL	******	*****	85%	65%	1.2	0.11	0.19	0.05
Bi-Fold Doors	- Double Glazed		1						
PAR-003-01	4/16/4	***	*****	52%	56%	2.4	0.51	0.54	0.21
PAR-003-02	4Clr/16Ar/4	***	*****	52%	57%	2.4	0.51	0.54	0.21
PAR-003-03	4EA/16Ar/4	****	*****	61%	60%	1.8	0.43	0.50	0.21
Bi-Fold Doors	- Triple Glazed		1						
PAR-004-01	4/12/3/12/4	****	*****	59%	60%	1.8	0.45	0.49	0.21
PAR-004-02	4EA/12Ar/3Clr/12Ar/4EA	****	*****	67%	62%	1.2	0.37	0.42	0.21
PAR-004-03	4SB70XL/12Ar/3/4ET	*****	****	82%	50%	1.1	0.17	0.36	0.21
PAR-004-04	4SB70XL/12Ar/3SB70XL/12Ar/4SB70XL	******	****	84%	49%	1.1	0.14	0.24	0.21
Sliding Door -	Double Glazed	1	1			1		1	
PAR-005-01	5/16/5	***	*****	53%	56%	2.4	0.50	0.54	0.31
PAR-005-02	5EA/16Ar/5	****	*****	61%	60%	1.7	0.43	0.50	0.31
Sliding Door -	Triple Glazed		1						
PAR-006-01	5/12/3/12/5	****	*****	60%	60%	1.8	0.45	0.49	0.31
PAR-006-02	5EA/12Ar/3Clr/12Ar/5EA	****	*****	67%	63%	1.2	0.38	0.43	0.31
PAR-006-03	4SB70XL/12Ar/3Clr/4ET	*****	****	82%	50%	1.1	0.17	0.37	0.31
PAR-006-04	4SB70XL/12Ar/3SB70XL/12Ar/4SB70XL	*****	****	84%	49%	1.0	0.15	0.25	0.31

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Paarhammer WERS rating Window Energy Rating System



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Paarhammer Pty Ltd - continued Updated 29-Aug-2013			Cool %	Heat %	Total Window - AFRC				
Window ID	Glazing	Cooling Stars	Heating Stars			Uw	SHGC	Tvw	Aif Inf
Scandinavian	Fir Sliding Door - Triple Glazed								
PAR-007-01	4SB70XL/12Ar/3SB70XL/12Ar/4SB70XL	******	****	84%	50%	1.0	0.14	0.25	0.31
Scandinavian	Fir Bi-Fold Door - Triple Glazed								
PAR-008-01	4SB70XL/12Ar/3SB70XL/12Ar/4SB70XL	******	****	84%	49%	1.0	0.14	0.24	0.21
Scandinavian	Fir Fixed Window - Triple Glazed								
PAR-009-01	4/12Ar/3/12Ar/4	***	******	55%	65%	1.7	0.52	0.56	0.05
PAR-009-02	4PThrm/12Ar/3PThrm/12Ar/4PThrm	******	*****	79%	58%	0.8	0.23	0.40	0.05
PAR-009-03	4SB70XL/12Ar/3SB70XL/12Ar/4SB70XL	*****	****	83%	52%	0.9	0.16	0.28	0.05



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Architectural Timber Range

Outstanding quality, security features, design flexibility and extra large sizes ensure architects, developers and home owners achieve superior results, even for their most demanding projects, residential and commercial.

Our renowned windows and doors have helped architects and builders win numerous awards for energy efficiency in addition to winning industry awards in their own right.

Custom made here in Australia, Paarhammer windows and doors have an ultimate strength test of up to 2300+3300pa (N4) and water penetration of up to 200pa N4 (C2). Unique framing, sealing and the secure metal-to-metal locking system provide the highest energy efficiency (U-values from as low as 0.8, low air infiltration from 0.05) and very high sound protection up to 45dB.

Paarhammer products are double or triple glazed with argon filled spacing between the glass panes. Choose from a variety of Australian made glass options, including Low-E and switchable I-glass. Our products are suitable for passive houses.

Timber is well loved for its strength and versatility. It can enhance the feeling of wellbeing and contribute to a positive, relaxed atmosphere. Timber is also perfect for energy efficiency with its natural insulating properties. Our products are available in a variety of plantation grown timbers, including FSC[®] (Forest Stewardship Council[®]) certified, and are factory finished in your choice of stain or spray painted to suit your design. For aluminium exterior cladding please visit our *Wood-Alu Range*, for bushfire solutions please see 'No Fire' *Bushfire Safe Range*, or for paint-ready products see *Komfortline*.

With patented German hardware, the energy efficient *Architectural Timber Range* offers unparalleled security and strength. From European style tilt & turn windows to giant lift-slide doors, no matter what the design, Paarhammer can create it for you, and experienced staff will provide outstanding technical support.

Also, when replacing windows or doors, astute renovators choose Paarhammer products to vastly improve security, energy efficiency and noise reduction, and they appreciate that our products can fit sensitively into historic buildings.





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makers of Australia's most energy-efficient windows and doors

Komfortline

This is a great way for builders to add value and achieve superior energy savings for home buyers with paint-ready European style tilt & turn windows, fixed windows, French doors, bi-fold doors and lift-slide doors.

Custom made up to 2.4m in height, and supplied sanded and ready for painting, the economical *Komfortline* represents a substantial saving for the builder while suiting their workflow and contractor arrangements on site.

Key features are the unique framing, sealing and secure metal-to-metal locking system which all work together to provide the highest energy efficiency (U-values from as low as 1.8, low air infiltration from 0.05) and very high sound protection up to 38dB. Australian made from plantation grown Victorian Ash timber from Gippsland, *Komfortline* products are double glazed with a 16mm argon filled gap (Australian made glass) and feature high-tech German hardware.

Trade range inclusions

These products feature superior Paarhammer energy savings but are limited to domestic sizes and double glazing, including:

secure tilt and turn locking; restricted tilt function for child safety; timely delivery - installer training; sanded only - ready for painting; 10 year warranty on glass; optional 17mm ply reveal or flyscreen available at a surcharge.

As members of the Australian Window Association (AWA), our quality control is backed by a 6 year warranty on workmanship.





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Wood-Alu Range

Get the best of both worlds with low maintenance energy efficient timber windows - with no exterior painting. The engineered exterior aluminium framing is powder coated, with a wide range of colours to choose from. The internal timber can be factory spray painted in a variety of stains or solid colours to suit your design. A revolutionary back-vented clip-on technique provides ventilation between the outer aluminium and inner timber frame, extending the durability of the window or door.

With a very narrow aluminium strip on the sash, the design presents a modern look and is suitable for residential and commercial applications. These Wood-Alu composite products can also be used in conjunction with the Paarhammer ECO-Façade.

Available with double or triple glazing, there is a variety of glass to choose from. Patented German hardware provides unparalleled security and strength, and the highest energy efficiency with U-values from a low 0.8, no drafts with low air infiltration from 0.05, and an astonishing noise reduction of up to 42dB. The Wood-Alu Range includes tilt & turn windows, fixed windows, hinged doors, French doors, and both sliding doors and bi-fold doors are available up to 6m wide.



Paarhammer ECO Facade (curtain wall) is constructed with the strength, warmth and energy efficiency of timber inside and aluminium clad for zero maintenance outside. The visible aluminium powder coated profile is clipped onto the outside, is only 50mm wide, available in a variety of colours, and guarantees a hardwearing and maintenance free outer skin.

Custom made to size, each glass panel can operate independently, enabling the ECO Façade to accommodate inserts of doors and openable windows to be operated manually or motorised.



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Bushfire Safe Range

Bushfire safety is the winner with our BAL-40 and BAL-FZ windows and doors.

Many Australians love living in a bush setting but have to constantly cope with the threat of bushfires. In addition, strict new building regulations for building or renovating in bushfire hazard designated Bushfire Attack Level (BAL) zones have put many conditions on all aspects of the external built environment.

After extensive testing, Paarhammer has obtained approval for the Bushfire Safe Range of special fire resistant windows and doors. As such, Paarhammer is the first company in Australia to receive approval for BAL-40 and even BAL-FZ designated areas. These fire resistant windows and doors meet Australian Standards AS 3959-2009, AS 1530.8.1 and AS 1530.8.2. The bushfire safe products make it possible to combine aesthetics and design freedom with safety - a high-quality window that can withstand ravaging bushfires without the need for additional shutters.

Whatever your rating, you can trust Paarhammer to provide you with bushfire safe windows and doors that will perform like no other.

To find out more about the BAL ratings in your area, consult your local council, building inspectors, government or local fire authority.









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Paarhammer Windows

As a leader in high energy-rated timber windows, we understand that our clients are as individual as their projects. Our customized solutions adapt to any situation and provide a versatile energy saving solution for your project.

Paarhammer Windows, including fixed, tilt & turn, sliding, bi-fold and clerestory windows achieve top energy ratings with U-values from 0.8, that's energy savings of up to 85%, and superior noise reduction of up to 45dB. In addition to superior thermal qualities, our frames also have an ultimate strength test of 2300+3300pa (N4), and water penetration of 200pa N4 (C2), giving our window systems unparalleled strength and security. Multi-point metal-to-metal security hardware is standard, with automation also available.



With **Paarhammer Double Hung Look-Alike Windows** re-create the look of yesteryear with all the advantages of modern technology including increased security, high energy efficiency and sound protection. Made to order, they are essentially tilt & turn windows featuring two opening positions and secure multi-point locking.

Residential or commercial clients can rest easy with **Paarhammer -/60/- Fire Rated Party Wall Windows** for shared or adjoining walls. Accredited in accordance with Australian Standard AS1530.4-2005, these 60 minute fire windows are made from FSC[®] (Forest Stewardship Council[®]) certified Manilkara Bidentata (Pacific Jarrah) timber combined with Schott Pyran S[®] glass.





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Tilt & Turn Window Operation

The tilt & turn fittings are precision made in Germany and give you the flexibility of two

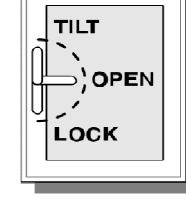
handle. These fittings have several locking pins all around the window, which lock the sash into the frame to provide multi-point metal-to-metal security locking. This means that the

opening positions (side opening casement or top opening hopper) operated with one

energy saved through double-glazing is not lost through the frame.

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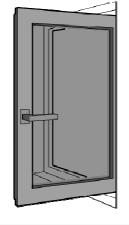
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Turn the handle up vertically and you have a top opening hopper window

Turn the same locking handle horizontal and open a side opening casement window

Turn the handle down to activate the built in metal to metal locking mechanism



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Turned (opened sideways to the inside) the windows can be cleaned from inside, which is an advantage especially in multi-storey buildings



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Tilted, our windows allow for excellent ventilation and are much more secure than conventional windows









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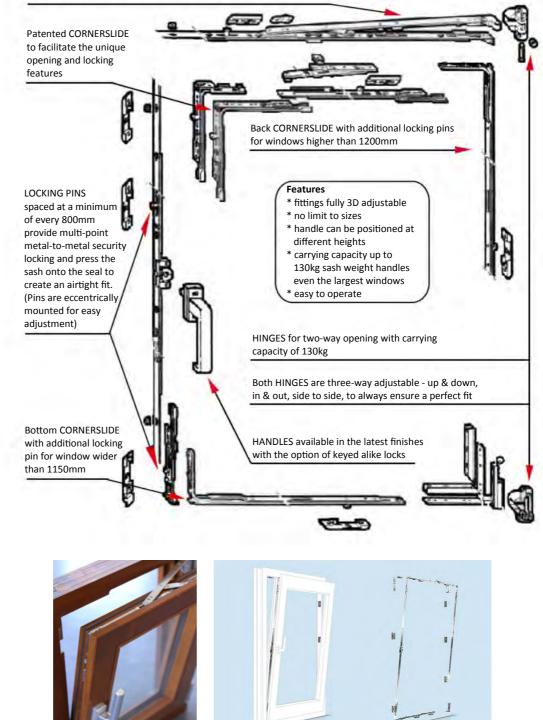
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Tilt & Turn Window Hardware

TILTING ARM tilts sash to the inside for secure ventilation



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Paarhammer Doors

Custom made in Australia, Paarhammer doors have an ultimate strength test of 2000pa and water penetration of 150pa. Unique framing, sealing and the secure multi-point metal-to-metal locking system provide the highest energy efficiency (U-values from as low as 1.1, low air infiltration from 0.05) and very high sound protection up to 45dB.

Paarhammer doors, including lift-slide sliding doors, corner sliders, giant sliders, stacker sliders, bi-fold, French, entrance and pivot doors, are double or triple glazed with an argon filled spacing between the glass panes. Choose from a variety of Australian made glass options, including Low-E and switchable I-glass. Patented German hardware provides unparalleled security and strength. Automation and integration into home security systems are also available.



Our products are available in plantation grown timbers, including FSC[®] (Forest Stewardship Council®) certified, and can be factory finished in your choice of stain or paint colours to suit your design.

For customised energy efficiency solutions see our Architectural Timber Range, for economical paint-ready products in standard sizes see Komfortline, for timber products with aluminium exterior cladding see our best of both worlds Wood-Alu Range, and for bushfire solutions visit our Bushfire Safe Range.



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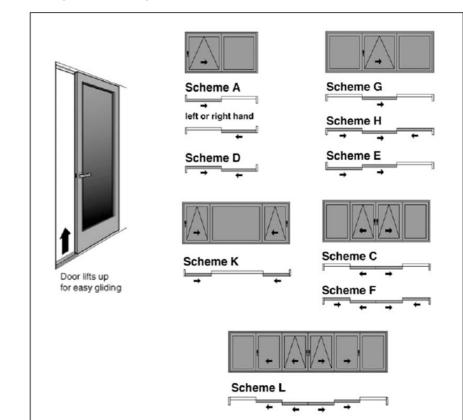
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Sliding Door Hardware



Paarhammer custom make sliding doors, stacker doors, corner sliders, and giant sliders (up to 3m high or 5m wide per leaf, and up to 400kg per slider). The German engineered lift-slide hardware lifts and frees the slider to ensure easy gliding and also facilitates floor level installation for step-free access. Outstanding security is provided through the multi-point locking system. A variety of timbers are used to create the unique airtight framing design that incorporates multi-level rubber seals. Many different configurations of sliding schemes and glass options are possible. Also ideal for areas with high wind loading.



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