Product datasheet: PD21

RHINO-SI Insulated Sliding Doors



THE STRENGTH TO PROTECT

Rhino-SI Insulated Sliding Doors

Flexible large opening sliding access door, typically used for vehicular access. Standard door is fully insulated, options for fully glazed versions

Configurations:	Sliding (one way) and bi-parting sliding with single flat panel or multiple leaves running on up to 6 tracks.
Performance:	Panel U-Value 0.4W/m²/ºC Acoustic: R _w 25dB overall for door
Maximum Opening size:	30,000mm x 6,000mm (w x h) maximum for electric operation, up to 100,000mm wide openings for manual doors.
Door Panels:	52mm for leaf height up to 6000mm high, for leaf heights >6000mm, 62mm thick. Cold rolled galvanised steel internal frame 1.6 to 2mm thick, and 0.7 to 0.9mm thick skins, CFC-free polyurethane foam core.
Guides & Rails:	Top track (Top hung) is 5mm pressed steel 'C' section - painted, bottom guide track is 3mm thick galvanised pressing. Bottom rolling option uses 16mm wide bar with heavy duty rollers.
Operation:	Manual, semi-automatic or fully automatic electric operation.
Optional extras:	Fully glazed Vision panels Wicket door
Finishes:	'Colorcoat' sheets from a range of standard colours Galvanised steel Powder coated in a choice of RAL colours



Contact	t details	S	
Rhino Syst Maritime Ro Llewellyns (Port Talbot SA13 1RF	e ms Limi bad Quay	ted	
T: +44 (0) 1 info@rhinoo www.rhinod	639 888 1 doors.com oors.com	19	
- Achilles - UVDB	√dhf	Raising Standards Advancing Safety	Constructionline Metitemen
CFA® Certe Market 150 9001 202244 State	CEA ISO 14001 20105	CfA ⁶ ISO 45001 201900	RISCO Verified





Protecting People, Assets and Public Places

Phino	Detailed Rhino-SI product datasheet	
THE STRENGTH TO PROTECT	Manually operated door	Electrically operated door
Type of Door	Top Hung (THM) or Bottom Rolling (BRM), flat panelled straight sliding doors. Doors can be configured in single or multiple leaves running on up to 6 parallel tracks. Leaves can slide within or clear of the opening to create a completely versatile sliding door system. Doors are internally mounted.	Top Hung (THE) or Bottom Rolling (BRE), flat panelled, straight sliding doors. Doors can be configured in single or multiple leaves running on up to 6 parallel tracks. Leaves slide clear of the opening to one of both sides. Doors are internally mounted. Multiple track configurations are fitted with an internal cable sheaving system, which links the leading (Drive) leaf to each of the trailing (Idler) leaves, so that during operation, all leaves move at differential speeds and reach the fully open and closed positions at the same time.
	Rhino-SI star	ndard details
	Manually operated door	Electrically operated door
Technical Details	Max leaf width 4550mm. Leaf thickness 102mm. Max opening width 100000mm (100m) Max height 6000mm ⁽¹⁾ . Track centres 145mm. Panel U-value 0.40 W/m ² /°C. Headroom required - 180mm to 250mm. Weight of leaf 25kg/m ² .	Max leaf width 4550mm. Max opening width (1-way) 15000mm ⁽¹⁾ . Max opening width (bi-part) 30000mm ⁽¹⁾ . Max height 6000mm (THE), 7000mm (BRE) Leaf thickness 102mm <6m, 112mm >6m Track centres 145mm. Max door area (bottom rolling) 90m ² (1- way) 180m ² (bi-part) ⁽¹⁾ Max door area (top hung) 50m ² (1-way) 72m ² (bi-part) ⁽¹⁾ Panel U-value 0.40 W/m ² /°C. Headroom required 250mm. Weight 25kg/m ² . Power supply 415V, 50Hz, TPN. Opening speed up to 0.4m/s. (folding 1- way). 0.8m/s (bi-parting).
Performance	 Performance in accordance with BS EN 13241- Life expectancy – more than 20 years. Wind pressure⁽²⁾ - 0.7kN/m² (6m high door high door), 3.1kN/m² (3m high door). Acoustic performance of the panel – Average v Overall door untested. 	1:2003. or), 1.1kN/m ² (5m high door), 1.7kN/m ² (4m veighted SRI, RW Index tested at 29dB.
Panel Construction	Panels are constructed from 1.6mm thick cold with 5mm thick local reinforcement for hardwa 0.7mm or 0.9mm thick galvanised steel sheets polyurethane foam to form an extremely stron	rolled galvanised dovetail channel frames ire. The frame is covered on both sides with and pressure injected with CFC-free g, rigid, flat panel.
Leaf construction	Leaves are constructed from 1, 2, 3 or 4 equal to 100 x 50 x 5 RHS box sections, which carry Compressible EPDM gaskets are fitted betweer	width panels fixed together top and bottom the running gear. All leaf fixings are hidden. n panels.
Note (1) – Maximum width of 15000mm (1-w (1-way) and 120m ² (bi-part). Maximum widt (bi-part). Note (2) – Wind pressure capacities are base construction with 0.65mm skins, without cut- reinforcement. For further advice on wind pre-	ray) or 30000mm (bi-part) for bottom-rolling electrically operate h of 12000mm for top-hung electrically operated doors are sub d on panel strengths derived from physical tests carried out in outs for windows. Greater wind pressures can be withstood us essures please consult the manufacturer.	ted doors are subject to the maximum door area of 60m ² oject to a maximum 2 tracks and 50m ² (1-way) and 72m ² the factory. Calculations given are for standard panel sing thicker door skins, and with additional panel

Seals	Flexible rubber seals are fitted to all edges of the are purpose-designed EPDM extrusions, which door panels. Each seal provides full finger trapagainst weather, dust and sand. On multiple track systems, pressings are fitted provide a sealing surface for the adjacent leaf. A steel slam post, painted black is supplied with	he door, and between door leaves. All seals press into, and blend seamlessly with the safeguarding, and excellent protection to the vertical edges of door leaves to Pressings are finished to match the door. h single leaf, single track doors only.	
	Top Hung The top track is a 5 mm thick pressed steel 'C' section for direct sidewall mounting. Pendant hangers are heavy-duty fabrications, each with a Ø72 mm sealed bearing wheel, two Ø40 mm side thrust sealed bearing wheels and a Ø20 mm toughened steel shaft. Each pendant is vertically adjustable. End stops are fitted within the top tracks.		
Door tracks and gear	The bottom guide channel is a 3 mm thick galvanised steel pressing with built in threshold and chamfered edges. Bottom guides are Ø35 mm nylon rollers running on Ø16 mm stainless steel shafts. Heavy-duty buffer stops are fitted at the far ends of bottom tracks.		
	Bottom Rolling The top guide track is purpose designed 3mm pressed galvanised 80 x 40 mm C track fabricated into a support tray to fix directly to the opening structure. Each leaf is fitted with a pair of top guide rollers, which are 72 mmØ x 30 mm nylatron guide wheels running on 20mmØ steel shafts, and fitted directly to the top beam. End stops are fitted within the top tracks. The top track system is able to accommodate +-40 mm vertical deflection within the support structure.		
	The bottom track is a 16 mm wide bright mild steel bar mounted on steel fishplates for bolting directly into the floor chase. Each leaf is fitted with a pair of bottom wheels, which are Ø120 mm machined hardened steel rollers mounted within the bottom beam and fitted with sealed for life, maintenance free bearings. Heavy-duty buffer stops are fitted at the end of bottom tracks.		
	Internally mounted doors recommended.	Top-hung - Internally mounted doors recommended. Externally mounted doors	
Installation / mounting	Externally mounted doors should be protected with a track canopy.	should be protected with a track canopy and drives will be internally mounted.	
	Canopies are not provided as standard equipment.	Bottom-rolling - Externally mounted doors are not available.	
Sheaving System	Double and multiple track configurations can be fitted with an internally mounted cable sheaving system, which links the leading (Drive) leaf to each of the trailing (Idler) leaves, so that during operation, all leaves move at differential speeds and reach the fully open and closed positions at the same time.	Standard for double and multiple track doors.	
	Rhino-SI standard detail	s and available options	
	Manually operated door	Electrically operated door	
	<u>Standard</u> Outside face - choice of 8 stock colours: Corus Ocean Blue ⁽³⁾ , Olive Green ⁽³⁾ , Goosewing Grey, Sirius Metallic Silver. Inside face - LG Plastisol Top and bottom RHS's beams to be grit blast, p powder coated in standard BS / RAL colour to p	5 LG Plastisol in Poppy Red, Solent Blue, Merlin Grey ⁽³⁾ and White, or HPS200 Ultra in in White. bowder coated in 60µ zinc primer and match door colour.	
Finish	Option 1 Outside faces of panels are polyester powder of Inside face in LG Plastisol in White. All hinges a powder coated in RAL 9005(M).	oated in a choice of 40 stock RAL colours. and drop bolt sleeves are black polyester	
	<u>Option 2</u> Inside and outside faces of panels are polyester powder coated in a choice of 40 stock RAL colours ⁽³⁾ . All hinges and drop bolt sleeves are black polyester powder coated in RAL 9005(M).		
Note (3) – Dark colours. It is recommended t colour. The insulation properties of the pane the outer skin may occasionally bubble or ripp phenomenon is purely aesthetic and does not	hat any door panel, which is exposed to direct sun, i.e., East, S are so good that, if darker colours are used, the surface temp ple due to tiny air pockets within the panel. Taller panels may affect the structural integrity of the door. For further advice of	South or West elevations, should be finished in a lighter erature of the panel can become unbearably hot, and temporarily bow slightly until the temperature falls. This on colour selection please consult the manufacturer.	

	Standard - None fitted.		
Vision Panels	Option 1 Black thermoplastic 'snap-lock' window with int RS UV (scratch and UV resistant) outside, PMM 430mm. ⁽⁴⁾ Option 2 Thermally broken aluminium window frame wit are double glazed (4~20~4), argon filled, low B powder coated in matt black to RAL 9005(M), f frame sizes as follows:	egral double-glazed units (2.5~15~2.5) SAN A UV inside. Overall frame size 770mm x h one-piece inner liner tray. Window units E toughened glass. Frames are polyester ully sealed, and available in a choice of	
	400mm x 600mm, 600mm x 600mm, 400mm x	1200mm, 600mm x 1200mm.	
	<u>Standard</u> None fitted.		
Wicket Door Locking and Handles	Option 1 Lever furniture. Wicket door opens outwards. Hardware comprises a Briton 5520 mortise sash lock, 25mm low-profile anodised aluminium lever handles, external Europrofile cylinder with internal thumb turn, 1 ¹ / ₂ pairs of stainless steel butt hinges and a hidden door limiting stay. 85mm high step with 40mm wide aluminium threshold strip.		
	Option 2 Emergency escape furniture. Wicket door opens outwards. Hardware comprises a Briton 379 panic bar, external override cylinder and finger latch, 1 ¹ / ₂ pairs stainless steel butt- hinges and a hidden overhead door limiting stay. 85mm high step with 40mm wide aluminium threshold strip.		
	Single leaf area <=12m ² Each leaf fitted internally with a drop bolt and a pair of black thermoplastic easy-grip pull handles.	Single track doors Each leaf fitted internally with a pair of black thermoplastic easy-grip pull handles.	
	Single leaf area $> 12m^2$ Each leaf fitted internally with a waist height lever handle, which engages a 30 x 10 mm steel bar into a socket in the bottom track, and a pair of black thermoplastic easy-grip pull handles.	<u>Multiple track doors</u> Each Drive leaf fitted internally with a pair of black thermoplastic easy-grip pull handles. Drive motors automatically locks the door in the closed position.	
	Rhino-SI stan (electrically opera	ated doors only)	
Drive System (top- hung)	A GfA 91RDU or Safedrive Fi digitally controlled variable speed drive motor operates the door. The motor is mounted at the end of the top track and is connected to the leading edge pendant hanger(s) via a continuous overhead drive chain. The folding action of the leaves is achieved via a built in throw out track arrangement fixed to the top track.		
	A TS971 digital control system featuring digital limits set from ground level, variable speed opening and closing, slow-down on opening and closing, cycle counter and door status / fault display is supplied as standard. Open / close / stop push buttons are mounted on the control panel lid.		
	Larger bi-parting doors (>50m2) are fitted with two motors and two control panels. Each motor and control panel will operate one door half independently of the other. Please specify if simultaneous operation is required.		
	Drive motors are fitted with low-level haul chains for instant manual operation in the event of power failure.		
	Drive motors and control panels are pre-wired with a 3m, 5m or 7m SWA cable, and fitted with a 5-pin euro-socket to plug directly into a 5-pin socket.		

Note (4) – Due to the hydroscopic nature of the SAN sheets, used in 'Option 1' Vision Panels, moisture condensation and possible water accumulation may develop within double glazed units during certain atmospheric conditions. These effects should reverse during a change of weather conditions; however, water leakage through the window unit will not occur.

Drive System (bottom- rolling)	A suitably rated SEW Eurodrive motor operates the door. The motor is enclosed within a 400mm W x 330mm D x 1350mm H drive mullion box mounted on the inside face of the Drive leaf, and drives along an Ø8mm steel cable set in a secondary floor track. Power is fed to the Drive leaf via a high level catenary cable system. An inverter control panel, with soft start / stop is mounted within the drive mullion, and is fully wired to the motor. Parameters are factory set. Proximity sensors mounted in the base of the drive mullion automatically slow down and stop the door in the fully open and closed positions. An open-close-stop push button is mounted on the drive mullion. Bi-parting doors are fitted with two drive mullions. Each door half is independently operated.
	<u>Standard</u> Deadman - continuous push to open, continuous push to close. This logic must be used unless a Safety Edge is installed.
Control Logic (top- hung)	Option 1 Semi-automatic - Single push to open, Single push to close. Stop button stops door. ⁽⁵⁾
	Option 2 Automatic – Single push to open, automatic closing after pre-set pause time (between 1 – 240 seconds). Stop button stops, and holds doors. ⁽⁵⁾
	Standard Deadman - continuous push to open, continuous push to close. This logic must be used unless a Safety Edge is installed.
Control Logic (bottom- rolling)	<u>Option 1</u> Semi-automatic - Single push to open, Single push to close. Stop button stops door. ⁽⁵⁾ (not recommended for doors >12m wide)
	Option 2 Automatic – Single push to open, automatic closing after pre-set pause time (between 1 – 240 seconds). Stop button stops, and holds doors. ⁽⁵⁾ (not recommended for doors >12m wide)
	Rhino-SI available options (electrically operated doors only)
	Safety Edges A full height wireless opto-electronic safety edge is mounted within the leading edge seal(s) of the door. An impact on the edge during closing will automatically stop and re- open the door. The safety edge is continuously monitored so the door cannot close automatically in the event of damage or failure of the edge. A low-battery warning audible alarm will advise when the battery needs to be replaced.
Safety Features	<u>Photocells</u> (max 20m W) A FAAC XP15W send / receive photocell is fitted across the opening. The receiver unit is fitted with a long-life battery to avoid hard wiring. Photocells can be fitted for closing safety, opening safety, or a combination of opening and closing. If a closing safety beam is broken during the closing cycle, the door will automatically stop and re-open. If an opening safety beam is broken during the opening cycle, the door will automatically stop.
	Traffic Lights A red and green 24V DC LED traffic light unit is fitted. The unit is sized 370mm x 190mm with 24 LEDs to each light. Sequence of operation is Red light on when door closed or part closed, Green light on when door fully open.
	<u>Photocell / Traffic Light Posts</u> (max 12m W) A pair of 100x100 RHS right angle steel posts are fitted at the far end of the bottom tracks, and on the inside of the open door to mount an internal photocell and / or traffic lights. Posts are painted yellow for maximum visibility.

Note (5) – Control logic. In accordance with BS EN 12453:2001, a safety edge and photocell, or safety edge must be installed for semi-automatic (Option 1) or automatic closing (Option 2).

	Push Button – Additional Open / Close / Captive Stop push button unit.
	Key switch – Sprung return key switch in separate enclosure for operation of the door by keyholders only. For internal or external use.
	<u>Digi-key</u> – Bewator K42 stainless steel code lock digi-key pad for operation of the door by authorised persons only. For internal or external use.
Additional Controls	<u>Radio Control</u> – 868MHz radio control system for remote operation of the door from a vehicle or control room. FAAC Plug-in radio receiver supplied with 1 twin channel transmitter. Additional transmitters available for multi-user systems.
	<u>Movement Sensor</u> – A Falcon radar movement sensor is mounted at high level, which will open the door on detection approaching traffic, or close the door on detection of retreating traffic. Using microwave technology, the sensor is adjustable so as to ignore pedestrians, or parallel traffic. <i>Please note: maximum opening height is 5m for microwave sensors.</i> <i>Additional sensors may be required for openings >5m wide.</i>