

# Phoenix-VA2ST 2.7

## Product Data Sheet



**Dependent Type Stacker**

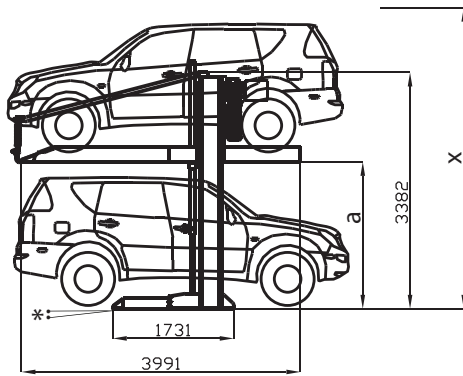
**2700kg Weight Capacity**

## Height Dimensions

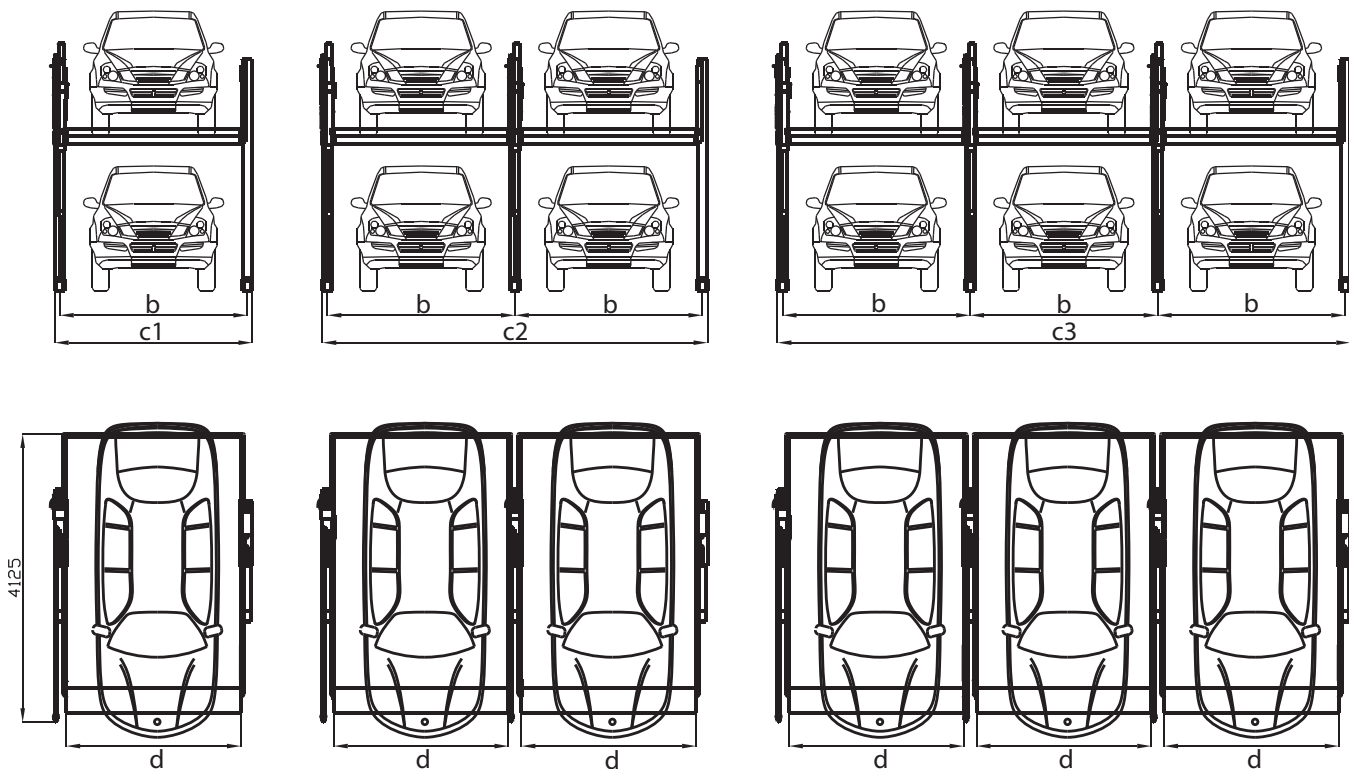
a = Min: 1500 • Max: 2100 (In increments of 100)  
 x = Clear ceiling height

When installed under a ceiling, the clear height distance from ground level to this ceiling will determine the height of the vehicle able to park on the upper platform. For example; if the clear ceiling height (x) is 4250 and the platform is set at 2100, then the maximum height of the vehicle parking in the upper level will be 1980:-

$$x = 4250, \text{ less} \\ a = 2100, \text{ less } 170 \\ \text{Vehicle Height} = 1980$$



\*Maximum slope of 10%



## Configurations

01. **Single Unit:**  
Standalone installation, where either space is not available to install other units alongside, or if just one unit is all that is required.
02. **Double Unit:**  
Using the unique Phoenix "shared post" system, the Double Unit installation has the two stackers sharing a post. This reduces the space needed to install two stackers by 145mm or if space is not an issue, allows for the installation of wider platforms.
03. **Triple Unit:**  
Like the Double Unit, the unique Phoenix "shared post" system has the Triple Unit stackers reducing the space needed to install three stackers by 290mm. Again, this space saving can be used to install wider platforms or enable three stackers to be installed where other manufacturers cannot.
04. **Quadruple & more:**  
There is no limit to the number of stackers that can be installed in a row. The space required to install four stackers in a row is reduced by 435mm when sharing posts, five stackers in a row by 580mm and so on (add a saving of 145mm for each additional stacker).

## Width Dimensions

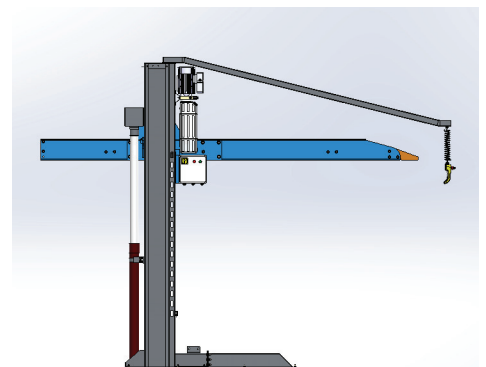
Width Dimensions								
Single Unit			Double Unit			Triple Unit		
Platform Width (d)	Overall Width (c1)	Columns Centre to Centre (b)	Platform Width (d)	Overall Width (c2)	Columns Centre to Centre (b)	Platform Width (d)	Overall Width (c3)	Columns Centre to Centre (b)
2100	2429	2284	2100	4713	2284	2100	6997	2284
2200	2529	2384	2200	4913	2384	2200	7297	2384
2300	2629	2484	2300	5113	2484	2300	7597	2484
2400	2729	2584	2400	5313	2584	2400	7897	2584
2500	2829	2684	2500	5513	2684	2500	8197	2684
2600	2929	2784	2600	5713	2784	2600	8497	2784
2700	3029	2884	2700	5913	2884	2700	8797	2884

01. Rows are not limited to three. There is no limitation to the number of stackers that can be installed in a connected (shared post) row.
02. As discussed on page 2, to calculate the overall width of any number of stackers in a connected row, you simply add the columns centre to centre (b) measurement (multiplied by the number of extra stackers you are adding) to the overall width (c3) measurement of the Triple Unit. This will then give you the total width require to install this number of stackers. See also the below table...

03.	Platform Width	Row of 4	Row of 5	Row of 6	Row of 7	Row of 8	Row of 9	Row of 10	Row of 11	Row of 12	Row of 13	Row of 14
	2100	9281	11565	13849	16133	18417	20701	22985	25269	27553	29837	32121
	2200	9681	12065	14449	16833	19217	21601	23985	26369	28753	31137	33521
	2300	10081	12565	15049	17533	20017	22501	24985	27469	29953	32437	34921
	2400	10481	13065	15649	17233	20817	23401	25985	28569	31153	33737	36321
	2500	10881	13565	16249	18933	21617	24301	26985	29669	32353	35037	37721
	2600	11281	14065	16849	19633	22417	26201	27985	30769	33553	36337	39121
	2700	11681	14565	17449	20333	23217	26101	28985	31869	34753	37637	40521

## Special Notes

01. We reserve the right to modify or alter any of the dimensions or specifications contained in this Data Sheet (VA2ST 2.7 : 11/18).
02. Local requirements (ISO 3864 and others) may require the floor to be marked with 100mm yellow and black stripes, 500mm from the front edge of the lowered platform. This is to be performed by others.
03. The time difference between lowering the platform when loaded and when empty can be considerable.
04. We recommend that the maximum width of vehicle(s) using the car stacker are no wider than 250mm narrower than the clear platform width. That is; if the clear platform width is 2500, then the maximum vehicle width should be 2250. Please note that the vehicle width measurement should include the side mirrors.
05. The car stacker is designed to operate between temperatures of +5 degrees Celsius and +45 degree Celsius.



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## Introduction

We have designed and engineered the Phoenix-VA2ST 2.7 model car stacker to meet the exacting requirements of the Australian market, therefore providing a safe, reliable and trouble-free car stacker. Calling on our vast experience, we have incorporated many new design features, as well as updating the wear and tear components to ensure that the new Phoenix-VA2ST 2.7 model car stacker will provide many, many years of trouble-free and safe use.

The Phoenix-VA2ST 2.7 model car stacker is a dependent type car stacker parking system and is suitable for both commercial and residential buildings, including single dwellings.

Dependant type car stackers are basically tandem parking, but done vertically, rather than horizontally. In order to access the vehicle parked in the upper level of the car stacker, the vehicle parked in the lower level must be moved. This is exactly the same with horizontal tandem parking; the vehicle parked behind the one in front must be moved in order to access the one in front.

All types of vehicles, up to a maximum weight of 2700kg, can be parked in the upper level, with no restriction on the vehicle parked in the lower level.

The space saved using the Phoenix-VA2ST 2.7 model car stacker is enormous when compared to the space required for horizontal tandem parking. And this is done at very low cost.

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## Product Description

01. The Phoenix-VA2ST 2.7 model car stacker is not designed for use by the public. It is designed for fixed users only, in either apartment buildings, commercial buildings or a combination of both. Users are trained, by Phoenix Car Stackers staff, in the safe operation of the equipment.
  02. It is possible for the Phoenix-VA2ST 2.7 model car stacker to be used in a hotel or motel environment. Special conditions apply. Please contact Phoenix Car Stackers for more information about the use of this model stacker for this purpose.
  03. The Phoenix-VA2ST 2.7 model car stacker is a two-high system, that does not use a pit. Both levels are above the ground and therefore requires a minimum clear ceiling height. This clear ceiling height ultimately governs the height of the vehicles that are able to park on the car stacker.
  04. The Phoenix-VA2ST 2.7 model car stacker operates with very little noise. The best description of the noise level is, "it creates far less noise than a standard garage door makes" and this is only when the platform is being raised. When the platform is being lowered, it is almost silent.
  05. All surfaces are power coated, except for the platform deck sheets. These are galvanised to the highest standards.
  06. Anti-slip deck sheet surface, to protect both the user, the vehicle and it is high-heel shoes friendly.
  07. High quality single hydraulic cylinder. No hydraulic lines run along the floor or on the walls.
  08. Individual hydraulic power pack and control panel.
  09. Self-standing. No requirement to "tie" to the building.
  10. Symmetric column design.
  11. Synchronization chain, assuring the platform remains level at all times during operation.
  12. 2700kg capacity.
  13. Middle post sharing system. Saves on space and cost.
  14. Key switch operation for security and safety.
  15. Emergency Stop Button.
  16. Automatic shut-off if the operator releases the key switch.
  17. Adjustable upper limit switch.
  18. Dynamic mechanical locks used to prevent the platform from falling in the event of a hydraulic or electrical failure. The lock releases are low voltage (24 volt) to remove any possibility of danger to the operator.
  19. Hydraulic and electrical overload protected.
  20. Lock-down button, so that the platform is lowered onto its mechanical locks, which protects the hydraulic cylinder from damage.
  21. Optional photocell sensor is available, to prevent the accidental lowering of the platform onto a vehicle below.
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## Safety

01. If there is any person or animal that enters the stacker area during operation, the operator must stop all functions.
02. Doors or gates can be used to prevent access to the stacker but are not usually recommended as necessary with this type of equipment.
02. Safety markings, such as those required as per ISO 3864, are the responsibility of others.
03. Regular maintenance and servicing of this equipment is required by WorkSafe. Phoenix Car Stackers Maintenance Pty Ltd can provide this on a bi-annual basis with our Service & Maintenance Contract.

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## Construction / Installation

01. The Phoenix-VA2ST 2.7 can be installed outdoors, as all parts are either high quality galvanised or powder coated for rust protection. Addition protection for the Power Pack may need to be supplied. There is also regular cleaning and inspection required for outdoor installations that can be done by the user/owner. Please discuss this with Phoenix Car Stackers.
02. It is best that the area where the Phoenix-VA2ST 2.7 model car stacker is to be installed be even and flat. However, a 2-3% run-off or fall can be tolerated, but will impact how the platform sits on the ground level, when lowered.
03. The concrete slab in the stacker area must be a minimum of 200 mm thick. The concrete quality of the slab must be a minimum C20/25, as we can use chemical dowel fixings.
04. There can be nothing protruding into the stacker area, either from above, the sides or the rear. If there must be utilities like water, hydraulics, electrical, fire sprinklers, etc., please discuss the location of these with us.
05. No access to the stacker area is permitted during the operation of the stacker. We recommend that the sides and/or the rear be protected by walls, fences, railings, etc., as per local regulations. This protection is to be provided by others, but with our assistance.
06. There are various fixing points on the concrete slab that cannot have a join or an expansion joint within proximity. Therefore, if there is to be any joins or expansion joints in the concrete slab, then these need to be discussed with us **prior** to the construction commencing.
07. The electrical supply to the agreed locations must be completed prior to installation commencing.

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## Weight

01. Total of 2700 kg per platform (forward or reverse parked)
02. The maximum load allowed over each wheel is 675kg
03. There is no weight limitations for the lower level.

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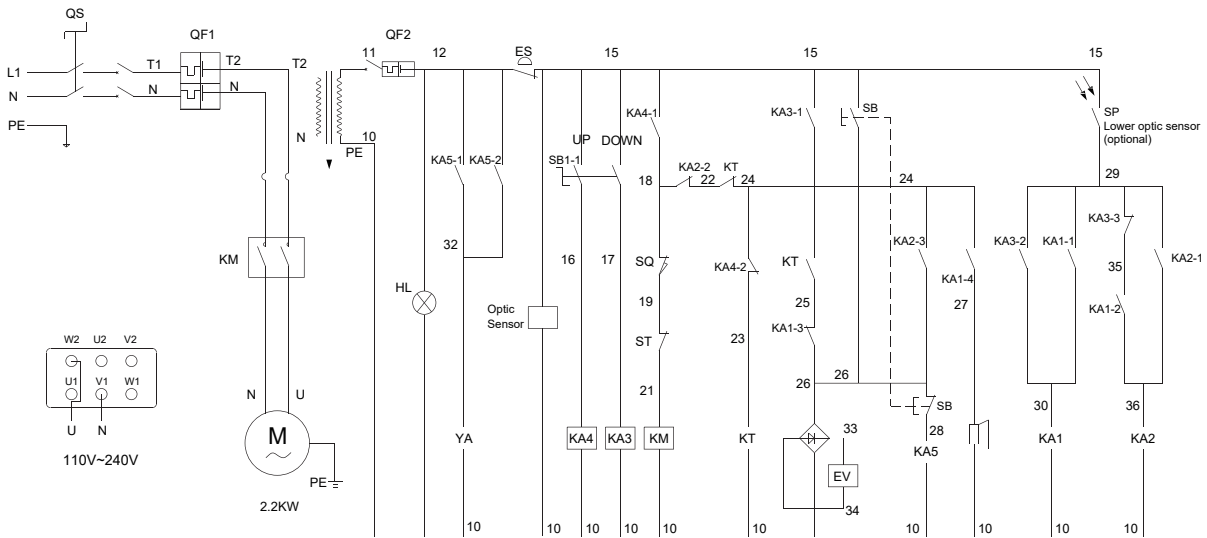
## Design

01. If space is available, we recommend that the widest possible platform size is installed. Platform widths start at 2100mm and increase in width in increments of 100mm, to a maximum of 2700mm
02. The Phoenix-VA2ST 2.7 model car stacker is designed for fixed users only. Each user has their own allocated parking space and platform. This platform is set up for the same vehicle to be parked each time. It is usual for this parking space to be allocated to the user by the owner of the building or the building manager.
03. The Phoenix-VA2ST 2.7 model car stacker is a dependent type stacker. Each stacker should only ever be shared with a common tenant.
04. The Phoenix-VA2ST 2.7 model car stacker cannot be operated by remote control. It can only be operated using the fixed user control panel.
05. The user control panel is fixed to the stacker. If space, or a building column interferes with where this is located on the stacker, it can be relocated and fixed to the building, a post, or some other structure. This needs to be decided prior to installation.
06. Lighting is not provided as part of the car stacker. This needs to be considered during the design phase.
07. The Phoenix-VA2ST 2.7 model car stacker stacker meets or exceeds the exacting Australian Standards AS 5124:2014
08. The Phoenix-VA2ST 2.7 model car stacker stacker also meets or exceeds the European Community Standard EN 14010

## Electrical

01. A separately isolated 3 phase, 15-amp power supply (by supplied the customer) is required for each Phoenix-VA2ST 2.7 model car stacker. This can be increased to a maximum of six Phoenix-VA2ST 2.7 model car stacker in a group, but special conditions apply. Please discuss this option with Phoenix Car Stackers.
02. If individual power monitoring is required, then above (line 01.) needs to be supplied for each stacker.
03. Each Phoenix-VAST 2.7 has its own hydraulic power pack with a 2.2kw motor.
04. In compliance with the Australian Electrical Standards, each stacker must be connected directly to the building earthed equipotential bonding.

## Electrical Schematic



## Static Loads

$$P1 = 5.5 \text{ kN}$$

$$P2 = 15 \text{ kN}$$

$$P3 = 2.5 \text{ kN}$$

