

VisionNav
Robotics

FULL SPECTRUM
LOGISTICS AUTOMATION

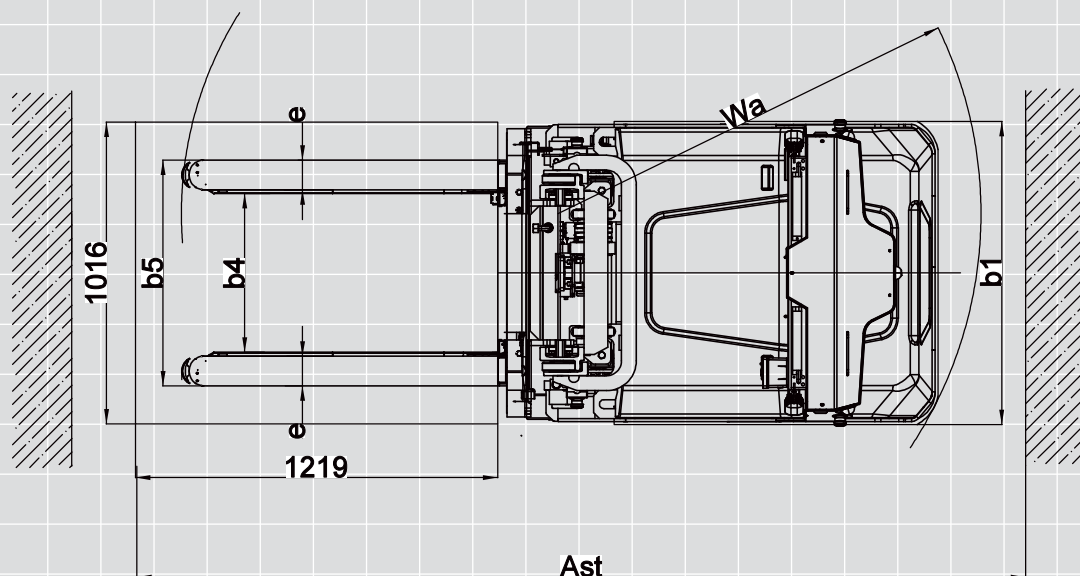
VNP15

COUNTERBALANCE STACKER AGV

ANSI B56.5 CE



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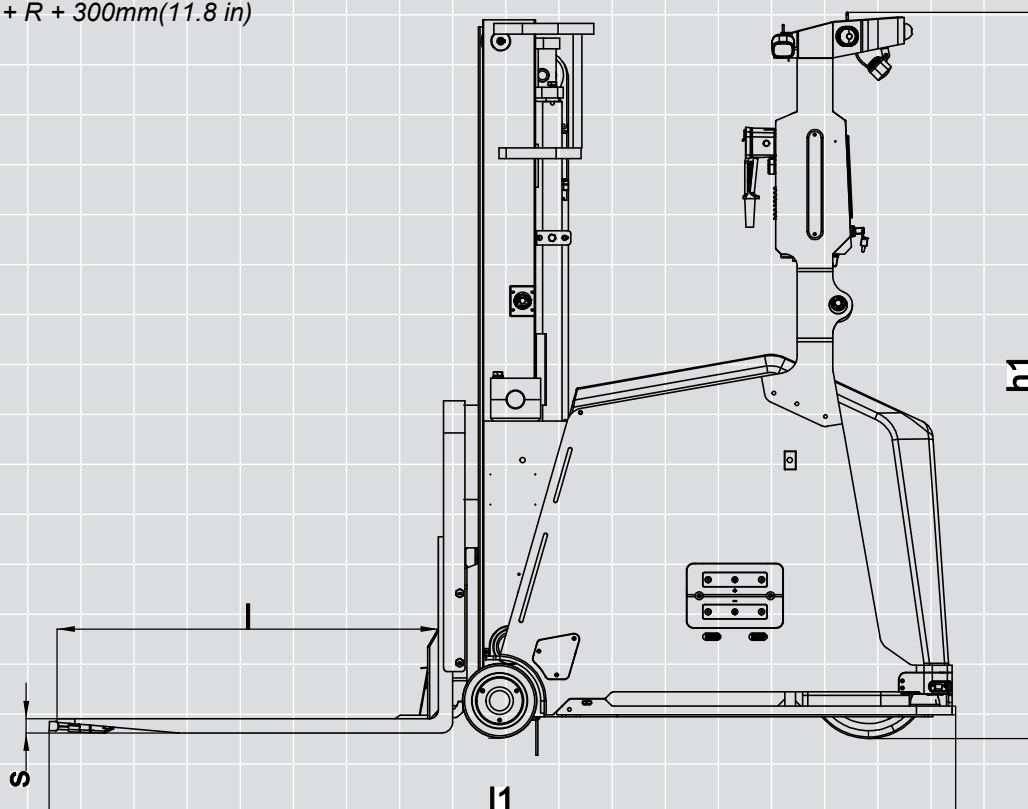


**Recommended Calculation Method of
Min. Stacking Aisle Width:**

$$Ast = \max(Ast1, Ast2)$$

$$Ast1 = \text{Vehicle Length Overall} + 600\text{mm}(23.6 \text{ in})$$

$$Ast2 = Wa + R + 300\text{mm}(11.8 \text{ in})$$



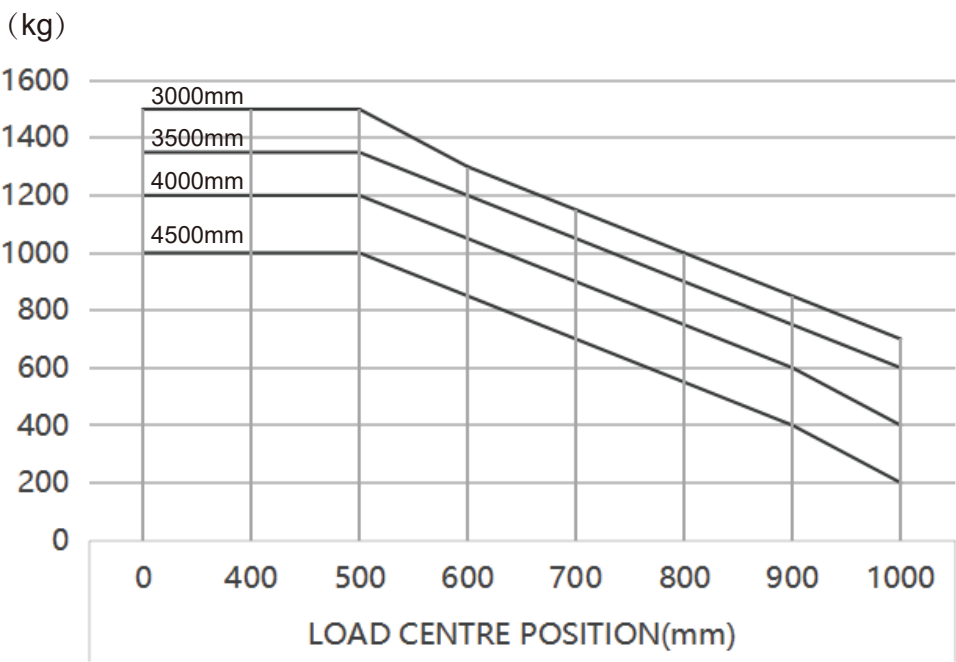
		<i>Metric</i>		<i>Imperial</i>
POSITIONING AND PERCEPTION	1	Positioning Method	3D SLAM	
	2	Perception Method	3D LiDAR	
	3	Localization Precision	±10mm/±0.5°	±0.39in/±0.5°
	4	Loading Adaptability	±100mm/±10°	±3.94in/±10°
GENERAL SPECIFICATIONS	5	Operation Mode	Auto/Manual	
	6	Overall Dimensions (L*W*H)	2700x1020x2040mm	106x40x80in
	7	Max. Fork Lifting Height	3000mm, see Mast Chart for more options	118in, see Mast Chart for more options
	8	Weight	3000kg	6613lb
	9	Rated Load Capacity	1500kg	3300lb
	10	Load Center	500mm	19.7in
	11	Fork Dimensions (L*W*H, excl. slots)	1190x100x40mm	43x3.9x1.6in
	12	Optional Fork Length	890/1190/1340/1490/1640/1790mm	35/47/53/59/65/70in
	13	Width Across Forks (incl. wire slots)	560/680mm	22.0/26.8in
	14	Width Inside Straddle (incl. wire slots)	336/456mm	13.2/18.0in
	15	Min. Turning Radius	1424mm	56in
BATTERY	16	Battery Type	Lithium Iron Phosphate (LiFePO ₄)	
	17	Voltage/Battery Capacity	48V200Ah	
	18	Charging Mode	Manual/ Automatic Charging	
PERFORMANCE	19	Max Forward Speed (Loaded/Empty)	2.1m/s, 2.5m/s	4.7 mph, 5.6 mph
	20	Max Reverse Speed (Loaded/Empty)	0.6m/s, 0.6m/s	1.3 mph, 1.3 mph
	21	Max Turning Forward Speed (Loaded/Empty)	0.3m/s, 0.6m/s	0.7 mph, 1.3 mph
	22	Max Turning Reverse Speed (Loaded/Empty)	0.3m/s, 0.6m/s	0.7 mph, 1.3 mph
	23	Max. Fork Lifting Speed (Loaded/Empty)	140mm/s, 200mm/s	0.3 mph, 0.4 mph
	24	Max. Fork Lowering Speed (Loaded/Empty)	300mm/s, 250mm/s	0.7 mph, 0.6 mph
DEPLOYMENT ENVIRONMENT	25	Min. Stacking Aisle Width	3300mm	130.0 in
	26	Min. Turning Aisle Width	2200mm	86.6 in
	27	Ambient Temperature	-5°C~ 40°C	23°F~ 104°F
	28	Ambient Humidity	20%~95%	
	29	Ground Flatness	±5mm/m ²	±0.07in/ft ²
	30	Max. Climbing Capability	5%(3°), 5%(3°)	
	31	Max. Gap Width	30mm	1.9in
	32	Max. Obstacle Height	10mm	0.4in
SAFETY PROTECTION	33	Laser Scanning Height	145mm	4.3in
	34	Forward Safety	3D LiDAR+Safety laser Scanner+Anti-collision Bumper	
	35	Reverse Safety	3D LiDAR+Safety laser Scanner+Contact Sensor	
	36	Top Safety	3D LiDAR	
	37	Side Safety	3D LiDAR+Safety laser Scanner+Anti-collision Bumper	
	38	Others	Emergency Stop Button+Acousto-Optic Alarm	

* Performance Specifications: Specifications are based on the model equipped with a 118in (3000 mm) duplex mast, a 1219x1016mm load size, and with across forks on width.across forks on width.

Appendix I: Mast Chart

DIMENSIONS	Options	Option 1		Option 2		Option 3		Option 4		Option 5	
	1 Mast stages	Duplex mast		Duplex mast		Duplex mast		Duplex mast		Triple mast	
	2 Lifting height	3000mm	118in	3500mm	138in	4000mm	157in	4500mm	177in	4500mm	177in
	3 Mast deployment height	3910mm	151in	4410mm	174in	4910mm	193in	5410mm	213in	5720mm	225in
	4 Gantry retracted dimensions	2020mm	79in	2270mm	89in	2570mm	101in	2820mm	111in	2100mm	83in

Appendix II: Load Chart



Additional Inforamtion

- 1.Fork Accessories: Optional side shifter and Fork Positioner; Customizable fork length, fork width.
- 2.Optional Accessories: Battery Heating Module, Battery Trolley, Cargo Overheight Detection, UWB Kit, Bar Code Scanner, RFID Reader, Dashcam, among others.
- 3.Load Capacity variation: Optional masts, attachments, longer load dimensions or higher lifting heights may result in a derating of capacity.