

UNI CARRIERS[®]

□ FORKLIFT □

OP Series



Order Picker

24 Volt Battery-Powered
2,200 lbs. Capacity

S P E C I F I C A T I O N S

MAIN TRUCK SPECIFICATIONS

CHARACTERISTICS	1	Manufacturer's Name		UniCarriers	UniCarriers		
	2	Model	Model designation	OP22N216	OP22HN278		
	3	Long model code		OPC/100DTFV1550	OPS/100DTFV1705		
CHARACTERISTICS	4	Rated Load Capacity		lb (kg)	2200 (1000)	1650 (750)	
	5	Load Center	Distance	in (mm)	24 (600)	24 (600)	
	6	Power Type	Electric	voltage	24v	24v	
	7	Operator Orientation	Stockpicker		Stand Up	Stand Up	
	DIMENSIONS	8	Tire Type	Front & rear		Vulkollan	Vulkollan
		9	Wheels	Number front / rear (x=driven)		1x / 4	1x / 4
		10	Mast	Maximum platform height	in (mm)	See Mast Table	
11			Overall lowered height	in (mm)	See Mast Table		
12			Mast extended height	in (mm)	See Mast Table		
13			Standard freelif	in (mm)	See Mast Table		
14			Mast width (rail width)	in (mm)	38.6 (980)	38.6 (980)	
15		Ergolift Fork Carriage	Fork carriage lift height	in(mm)	30.9 (785)	30.9 (785)	
16			Top of raised fork to top of rail	in (mm)	13.4 (340)	13.4 (340)	
17		Forks	Length x width x thickness	in (mm)	39.4 x 4.0 x 1.5 (1000 x 100 x 40)		
18			Fork spread (OD) - maximum	in (mm)	31.5 (800)	31.5 (800)	
19			Fork lowered height (top of fork)	in (mm)	2.4 (60)	2.4 (60)	
20		Overall Dimensions	Length - to face of forks	in (mm)	87.8 (2230)	88.2 (2240)	
21			Width (standard tires)	in (mm)	42.1 (1070)	46.1 (1170)	
22			Height - top of OHG	in (mm)	91.0 (2310)	91.0 (2310)	
23		Straddle Legs	Height	in (mm)	6.9 (175)	6.9 (175)	
24			Width - outside to outside	in (mm)	42.1 (1070)	46.1 (1170)	
25		Turning Radius	Ramp breakover angle	%	82.5 (2095)	83.1 (2110)	
26		Min. Right Angle Stack	Departure angle	%	90.6 (2300)	90.9 (2310)	
PERFORMANCE	27	Speeds Maximum	Travel - loaded / unloaded <24 ^{*1}	mph (km/h)	5.0 (8.0) / 5.6 (9.0)		
	28		Travel - loaded / unloaded >24 ^{*1,2}	mph (km/h)	1.4 (2.2) / 1.5 (2.5)		
	29		Lift - loaded / unloaded	fpm (mm/sec)	39.4 (200) / 51.2 (260)		
	30		Lowering - loaded / unloaded	fpm (mm/sec)	98.4 (500) / 59.1 (300)		
	31	Gradeability Maximum	Loaded / unloaded	%	5 / 5	5 / 5	
CHASSIS & WHEELS	32	Truck Weight	No Load (min battery)	lb (kg)	5955 (2700)	6350 (2880)	
	33	Tire Size	Drive tire - diameter x width	in (mm)	9.8 x 3.9 (250 x 100)		
	34		Load wheels (dual) - diameter x width	in (mm)	5.9 x 2.4 (150 x 60)		
	35	Wheelbase		in (mm)	66.7 (1695)	66.7 (1695)	
	36	Power Unit Height		in (mm)	39.4 (1000)	39.4 (1000)	
	37	Platform	Length	in (mm)	28.7 (730)	28.7 (730)	
	38		Width	in (mm)	41.4 (1050)	45.3 (1150)	
	39		Rail height (top of platform to top of rail)	in (mm)	36.2 (920)	36.2 (920)	
	40	Step-in Height	Platform lowered	in (mm)	10.8 (275)	10.8 (275)	
	41	Headroom	Platform floor to bottom of OHG	in (mm)	78.7 (2000)	78.7 (2000)	
	42	Ground Clearance	Under frame, center of wheelbase	in (mm)	1.0 (25)	1.0 (25)	
	43	Service Brake	Type		Regen	Regen	
	44	Parking Brake	Type		Auto Spring-Applied / Electronic Release		
	DRIVE LINE	45	Steering	On-demand		Electric Servo	Electric Servo
46		Traction Motor	Type / control		DC / SepEx	DC / SepEx	
47			Rating - 60 minute	hp (kW)	2.8 (2.1)	2.8 (2.1)	
48		Pump Motor	Type / control		DC / Contactor	DC / Contactor	
49			Rating - 5 minute	hp (kW)	10.2 (7.6)	10.2 (7.6)	
BATTERY	50	Battery	Type		Lead Acid	Lead Acid	
	51	Compartment Size	L x W x H - maximum ³	in (mm)	36.6 x 15.3 x 26 (930 x 385 x 660)		
	52	Recommended Size	L x W x H - maximum ³	in (mm)	36.3 x 15 x 25.7 (922 x 381 x 652)		
	53		Capacity - min/max	Ah	330 / 720	330 / 720	
	54	Weight	Minimum / maximum	lb (kg)	995 (450) / 1430 (650)		
	55	Connector	Type		SBE160 Red	SBE160 Red	
	56	Roller Height	From floor to top of roller	in (mm)	9.2 (235)	9.2 (235)	

1 Measured at platform lift height.

2 At or above 177.1" (4500 mm) platform lift height, travel speed is 0 mph (0 kmh) for steer angles of 10° or greater.

3 Battery requires special case with 25.7" (652) high center dividing wall and special connector location.

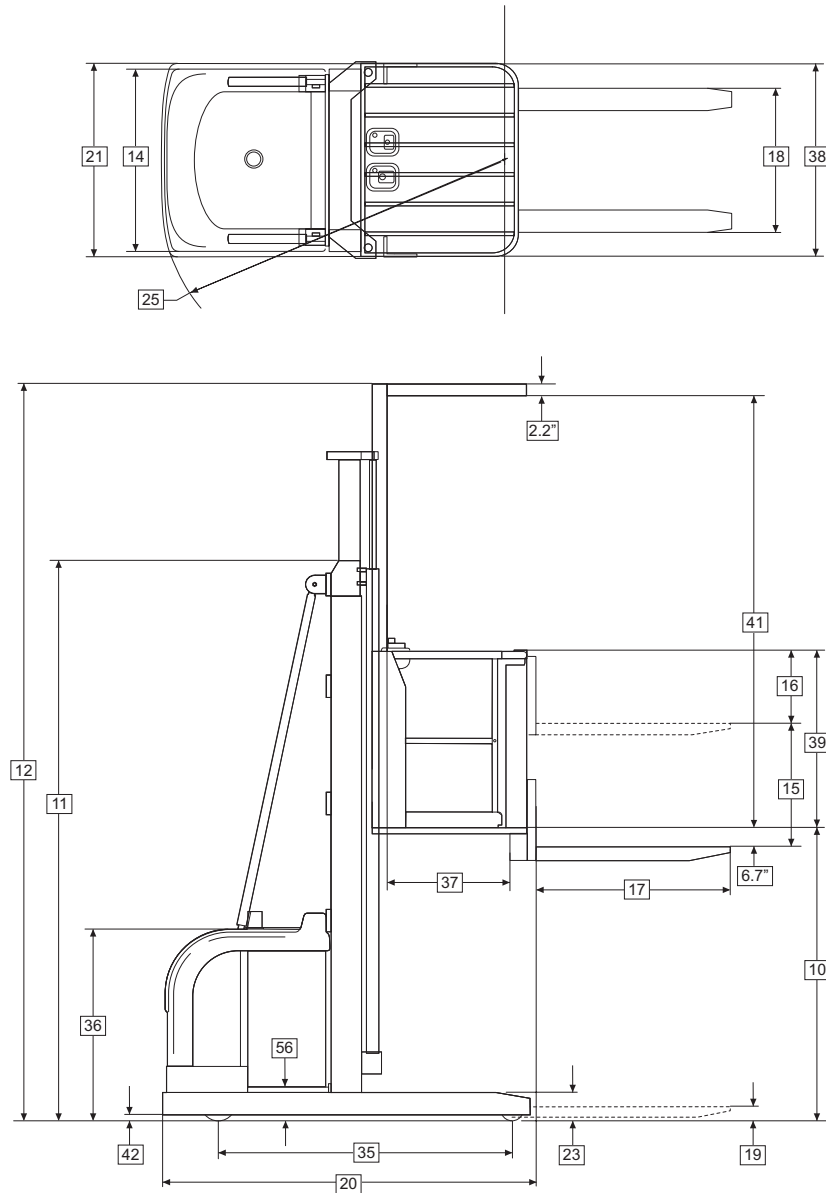
MAST SPECIFICATIONS & RATED CAPACITIES

Mast Type	Model	Maximum Platform Height in (mm)	Maximum Extended Height in (mm)	Overall Lowered Height in (mm)	Free Lift in (mm)	Rated Capacity** 24" (600mm) Load Center lb (kg)
		line 10*	line 11*	line 12*	line 13*	line 4*
THREE STAGE (Full Free)	OP22N163	163 (4150)	245 (6210)	91 (2315)	0 (0)	2200 (1000)
	OP22N181	181 (4600)	263 (6660)	91 (2315)	0 (0)	2200 (1000)
	OP22N204	204 (5200)	286 (7260)	98 (2475)	6 (160)	2200 (1000)
	OP22N216	216 (5500)	298 (7560)	102 (2575)	10 (260)	2200 (1000)
	OP22N240	240 (6100)	322 (8160)	110 (2775)	18 (460)	2090 (950)
	OP22HN258	258 (6550)	339 (8610)	116 (2925)	24 (610)	1870 (850)
	OP22HN278	278 (7050)	359 (9110)	122 (3090)	30 (775)	1650 (750)
	OP22HN305	305 (7750)	387 (9810)	131 (3325)	39 (1010)	1430 (650)
OP22HN324	324 (8250)	406 (10310)	138 (3490)	46 (1175)	1210 (550)	

* See chart on opposite page for line item.

** Account for operator weight when determining load capacity.

DIMENSIONS



ERGONOMICS & COMFORT

The OP Series offers a variety of operator conveniences for greater productivity including a low step height, ideal for operators whose daily tasks require repeatedly getting on and off the truck throughout the shift. Its floorboard floats on vibration isolators, to effectively dampen the effects of riding over floor joints. An anti-fatigue cushioned floor mat provides added comfort.

The OP's operator area is designed for maximum visibility and enhanced operator confidence, with a forward stance design, spacious platform, and smart operator controls. The ergonomic, dual control pods offer simultaneous control of drive, lift/lower, and horn functions.

The steering control pod includes a straight steering indicator, plus a mini steering wheel, providing precise and ergonomic steering. The proportional steering is automatically adjusted based on travel speed. The travel control pod includes a horn button, platform lift/lower control, speed/direction control, and an operator presence button. Both pods offer adjustable height and angle for customized operator comfort.

A battery discharge indicator provides a graphical indication of the battery charge remaining, and includes lift interrupt when the battery level is low.

Standard security features include: plexiglass mast guard, rugged cantilever overhead guard and hinged side gates, with lift and travel interlock if the gates are raised. A flashing amber light warns that the truck is operating in the area.

The mast and chassis design together with a long wheelbase, offer exceptional stability for operating at high picking heights. Travel speed is reduced when the platform is above transport height. An optional lift limit switch is ideal in applications with restrictive ceiling heights.

The motor is rigidly mounted and the gearbox rotates. An electric steer system offers a full 180° steering range for exceptional maneuverability in tight warehouse confines. A large 9.8" diameter drive tire helps absorb shock, for improved operator comfort during travel.

PRODUCTIVE PICKING

The OP offers operators an uncluttered environment for picking, thanks to its recessed controls, and flat platform floor with no protruding pedals. For increased comfort and productivity, heavy-duty railing and side gates provide an enclosed platform, allowing the operator to move freely within the platform confines, eliminating the requirement for an operator to wear an uncomfortable belt or harness, and without the interference of a tether mechanism. The platform's protective rail has a contoured, well rounded design to slide heavy cartons across, minimizing sharp edges, helping to reduce product damage.

Thanks to the OP's Ergolift design, the pallet is always at the right height for increased productivity. The Ergolift provides ease of picking, by utilizing a secondary mast (with 30.9" lift) on the fork side, allowing the load to raise to a more convenient height for the picker. Ergolift increases productivity by making the lift from picking position to pallet easier, reducing the need for the operator to repeatedly bend down to stack goods on the pallet. The compact lift unit takes very little space and does not interfere with the layout of the cab. With the Ergolift design, the picking pallet is at the ideal height to place picked items, providing enhanced ergonomics, resulting in increased picking productivity.

LOWER OPERATING COSTS

The OP's vertically mounted drive unit assembly features a spiral bevel and helical gear drive train, operating in an oil bath, for quieter operation and longer life. Motor brushes are positioned with convenient access for inspection and service. Power transmission through gearwheels gives enhanced performance.

Daily inspection of the battery through a top hatch is simple. Daily checks are made through a flip-top panel, while the battery sits on rollers for rapid changeover. Fault code history and automatic motor braking, to minimize brake wear, contribute to maximum uptime. Access to the truck's major components is easy, so service is quick and simple. The hydraulic motor/pump and the electric/steering controller systems tilt-down conveniently for rapid, practical servicing.

EFFICIENT PERFORMANCE & GREATER UPTIME

The OP Series' 24-volt electrical system incorporates a transistor drive controller, eliminating forward and reverse contactors, and providing electronic travel speed control for precise, infinitely variable forward/reverse travel speeds. All electrical circuits and major components are fuse protected. An emergency power disconnect is located on the display console.

Its heavy-duty 2.8 HP, separately excited (SepEx) drive motor provides high power and torque to handle tough applications. Quick acceleration, combined with rapid lifting and lowering while traveling between picking positions, contribute to truck and operator efficiency. The OP Series' drive system provides maximum efficiency in all load ranges, in addition to recycling of braking energy to the battery.

A spring applied and electrically released, electric disc brake assembly is integrally mounted on the drive motor armature shaft, multiplying braking force through the double reduction transmission gearing. While the operator presence switch is depressed, (located in the travel control pod) the brake is electrically released, ensuring operator presence during travel. When the switch is released, the regenerative braking function within the truck controller is activated prior to brake engagement to assure a smooth, complete stop.

RUGGED & DURABLE

The modern styling of the OP's chassis includes a low profile power unit for improved visibility. The three stage, rugged, high visibility mast, with full free lift, incorporates an interlocking I-beam, and uses heavy duty ball bearing rollers for durability and long life. An upper attachment joint enables the mast to be pivoted down to a horizontal position for easier truck transport and delivery.

STANDARD EQUIPMENT

- SepEx drive control
- 2.8 HP drive motor
- 10.2 HP hydraulic pump motor
- 24-volt electrical system
- Ergolift independent fork lift
- Travel and steering control pods on mast side
- Key switch, electronic horn, and hand operated presence switch
- Spyglass display providing hour meter and battery discharge indicator with lift interrupt
- Straight steering indicator
- Electronic power steering
- Emergency power disconnect
- Cantilever overhead guard with plexiglass mast guard
- Amber flashing light on drive unit
- Spacious operator platform with cushioned floor mat
- Rounded operator platform railing
- Hinged platform side gates with lift and travel interlock
- Chill storage ready: for temperatures down to 34°F (1°C)
- Battery compartment rollers
- 39.4" long forks
- Adjustable fork width: maximum 31.5" O.D. fork spread
- Vulkollan® poly drive tire
- Vulkollan® poly load wheels

OPTIONAL EQUIPMENT

- 31.5" or 45.3" long forks
- Adjustable fork width: maximum 55.1" O.D. fork spread
- Travel and steering control pods on fork side
- Lift limit switch
- Lift limit switch with override
- Drive stop at specified mast height
- Cold storage ready: for temperatures down to -31°F (-35°C), includes wire screen mast guard
- Rubber bumper on bottom front of drive unit
- Left and right side work lights
- Clip board document holder
- Various platform widths



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