

NISSAN
FORKLIFT

APX Series

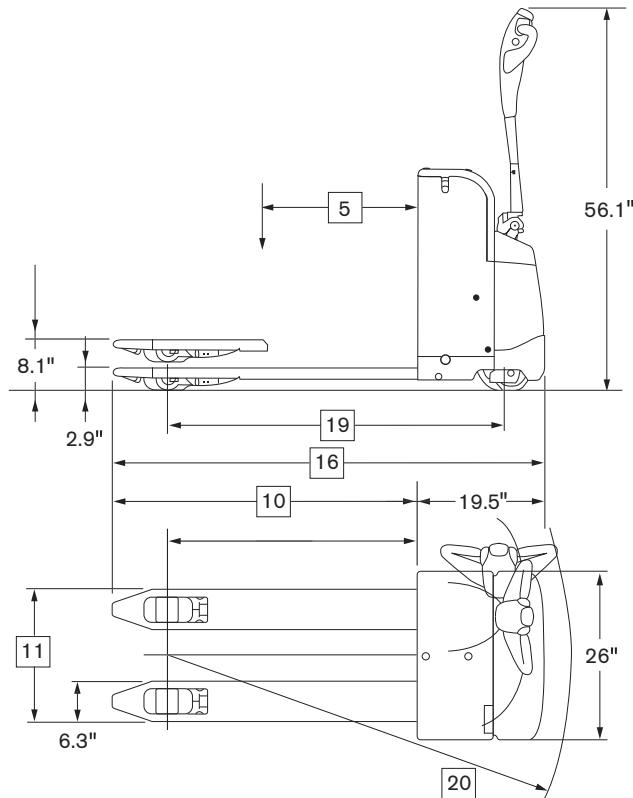
Advanced, AC Powered, Low-Lift Walkie Pallet Truck

4,400 lb.
Capacity



Dimensions

APX45N



Features



Control Handle Keypad The control handle keypad provides PIN codes access to turn the truck on without a key. Up to 100 driver ID numbers can be saved, with each assigned to one of four adjustable performance modes.



Compact Robust Design The APX Series features a compact, robust, ergonomic design. Its flexible connection between the drive-unit and load-unit provides optimized traction over dock plates or rough floors.



Offset Tiller Arm The offset tiller arm allows the operator to comfortably walk beside the truck for easy operation, while also providing an excellent view of the forks, especially with tall loads.

4-Point Chassis The 4-point chassis, with 2 wheels on the drive side (drive wheel and caster wheel) plus 2 wheels on the load side, provides enhanced stability.

4,400 lb. capacity

Main Truck Specifications

CHARACTERISTICS	1	Manufacturer's Name			Nissan	1
	2	Model	Model designation		APX45N	2
	3		Long model code		PLL200	3
	4	Load Capacity		lb (kg)	4400 (2000)	4
	5	Load Center		in (mm)	24 (600)	5
	6	Power Type	Electric	volt	24	6
	7	Operator Type			Walkie	7
	8	Tire Type	Drive / caster / load wheels		Rubber / Vulkollan / Vulkollan	8
	9	Wheels (x=driven)	Drive / caster / load wheels		1x / 1 / 2	9
FORKS	10	Size - Standard Fork	Nominal length	in (mm)	46.9 (1190)	10
	11		Outside spread	in (mm)	26.8 (680)	11
	12		Individual Fork Width	in (mm)	6.3 (160)	12
	13		Thickness	in (mm)	1.9 (48)	13
	14	Height - Standard Fork	Raised position	in (mm)	8.1 (205)	14
15	Lowered position		in (mm)	2.95 (75)	15	
DIMENSIONS	16	Overall Dimensions	Total length (to tip of forks)	in (mm)	66.3 (1685)	16
	17		Head length (to face of forks)	in (mm)	19.5 (495)	17
	18		Overall width	in (mm)	26 (660)	18
	19	Wheelbase	Forks lowered	in (mm)	51.9 (1320)	19
	20	Turning Radius	Minimum outside	in (mm)	61.4 (1560)	20
	21	Right Angle Stacking ¹	48" L x 40" W pallet	in (mm)	89 (2261)	21
PERFORMANCE	22	Speed - Travel	No load	mph (kph)	3.7 (6.0)	22
	23		Full load	mph (kph)	3.4 (5.5)	23
	24	Speed - Lift	No load	sec.	3.0	24
	25		Full load	sec.	4.5	25
	26	Gradeability - Max.	No load / Full load	%	10 / 8	26
	CHASSIS	27	Truck Weight	Standard forks (without battery)	lb (kg)	630 (285)
28		Tires / Wheels	Drive tire - dia. x width	in (mm)	9.1 x 2.8 (230 x 70)	28
29			Caster wheel - dia. x width	in (mm)	5.5 x 2.4 (140 x 60)	29
30			Load wheels - dia. x width	in (mm)	2.95 x 3.9 (75 x 100)	30
31		Drive system	Drive motor	HP (kW)	1.34 (1.0)	31
32			Drive controller	type	AC CAN	32
BATTERY	33	Battery Compartment Size	L x W x H	in (mm)	25.5 x 8.1 x 25.5 (645 x 205 x 645)	33
	34	Amp Hr Capacity	Maximum rate - 5-hr / 6-hr	Ah	250 / 260	34
	35	Weight	Minimum / maximum	lb (kg)	310 (140) / 470 (215)	35
	36	Lead Length	Position "B"	in (mm)	16.9 (430)	36
	37	Connector		type	80A DIN Red	37

¹ Add 6-8" for ease of operation. Includes 1" clearance on each side of load.

Technical Information **APX Series**

Standard Equipment

1. AC drive motor and controller system
2. Infinitely variable forward/reverse drive control
3. 24-volt electrical system
4. Offset, ergonomic tiller arm
5. Wide steer head includes thumb operated butterfly speed control, with lift, lower and horn buttons, and safety reversing switch
6. Slow travel with the handle upright (crawl speed)
7. Control panel with key pad includes PIN access with 4 adjustable performance settings
8. Backlit LCD displays date, time, error codes hour meter, and battery discharge indicator (with lift cut out)
9. Adjustable auto power off
10. Chill storage protection to +34°F (+1°C)
11. 4-point chassis with cushioned caster wheel
12. 2-section chassis
13. Pallet entry rollers
14. 9.1" x 2.8" rubber drive tire
15. 5.5" x 2.4" Vulkollan caster wheel
16. 2.95" x 3.9" Vulkollan single load wheels
17. 46.9" x 6.3" forks

Optional Equipment

1. 36" or 42" long U.S. style forks
2. Industrial battery pack
3. 47.2" high load backrest
4. Key switch (bypasses PIN access)
5. Cold storage protection to -31°F (-35°C)
6. Antistatic ground strap
7. Vulkollan drive tire

Operator Control Features

The offset tiller arm allows the operator to comfortably walk beside the truck for easy operation, while also providing an excellent view of the forks, especially with tall loads. A wide steering arc allows exceptional turning radius with minimal effort. Spring-loaded handle and roomy steering control head promote effortless movement into the operating range. Large thumb or fingertip-actuated butterfly speed controls provide easy and precise operation. Ergonomic layout of lift, lower and

horn buttons deliver comfortable operation. Large switch on the end of the control head changes the truck's travel direction if operator contact is made. Maximum travel speed can be reduced through the creep switch in the control keypad.

For ease of operation in tight areas, a tiller-up drive switch allows the APX to be driven at creep speed with the handle in a vertical position.

The modern, contoured design, minimizing sharp edges to reduce damage to product. Short truck length and narrow width allow the APX to maneuver in narrow or restricted areas. Fork entry/exit slides provide easy access and positioning between pallet boards.

The control handle keypad provides PIN codes access to turn the truck on without a key. A stand-by mode allows temporary stops without the PIN codes needing re-entered to restart the truck. An optional key-switch bypasses the PIN codes to provide access to the truck. If the truck is left on, after a programmable time delay will enter the stand-by mode. After further time delay, the truck will power off to conserve energy.

The battery discharge indicator provides the operator with a graphical indication of the battery charge remaining and includes lift cut out when the battery level is low. On-board diagnostics and self-check at startup alert the operator if any error codes are encountered.

Efficient performance

Heavy-duty 1.3 Hp, three-phase AC drive motor provides high power and torque to handle tough applications, with peak performance throughout the battery range. Its advanced motor controller/AC FET inverter electronically distributes power, as needed, to the AC drive motor or DC pump motor for enhanced efficiency. Its AC design eliminates forward and reverse contactors, and uses electronic travel speed control for precise, efficient performance.

Battery

An optional battery pack, with built-in charger, features four maintenance-free, heavy-duty batteries with an 80A DIN red connector. Its automatic, built-in SCR charger features stop/start capability, LED display, and plugs into any grounded 110/120 volt AC outlet for easy charging.

- Battery compartment size: 25.5"L x 8.1"W x 25.5"H
- Maintenance-Free Battery Pack: 195 Ah/6h rating

Smart Electric Brake

Dual braking positions within the upper and lower handle movement range. The drive unit is equipped with an electrical disc brake system that utilizes regenerative motor torque prior to brake actuation for less component wear and longer life.

Frame and Chassis

The APX Series features a robust chassis with a patented linkage system. The 4-point chassis, with 2 wheels on the drive side (drive wheel and caster-wheel) plus 2 wheels on the load side, provides enhanced stability. A flexible connection between the drive-unit and load-unit provides constant ground contact and exceptional traction over dock plates and rough floors.

Fork Assembly

Forks are 46.9" long and 6.3" wide, with 26.8" wide outside fork spread. Optional 42" long forks are also available, as well as various length Euro style forks. Pallet entry rollers facilitate pallet entry and exit.

Wheels

9.1" diameter x 2.8" wide rubber drive wheel features tapered roller bearings in sealed oil filled case. Vulkollan caster and load wheels, with string guards, offer increased floor surface contact and help prevent debris from getting into axles and bearings.

Hydraulics

Heavy-duty integrated lift pump and DC motor features an overload valve to protect hydraulic components, and includes a check valve and flow regulator. Hydraulic system features an integrated motor, pump, fluid reservoir,

relief valves and filter, with a single hose connecting the pump to the lift cylinder.

Drive Unit

Quiet, beveled gear drive system with sealed ball bearings, provides solid performance with low steer effort. Five-nut removal of the drive tire simplifies replacement when needed. The entire power train is fully enclosed and operates in an oil bath, providing long life and minimal maintenance. Heavy-duty tapered roller bearings reduce steering effort and offer added durability.

Ease-of-Maintenance

Brushless AC drive motor uses fewer components and requires less maintenance for lower operating costs. CAN-Bus communication reduces the number of wires in the control harness, for reduced maintenance. On-board diagnostics and troubleshooting access through the control panel key pad, without the need for a separate handset tool.

Removable cover exposes all major mechanical and electrical components for inspection and maintenance. An emergency cut-out allows the magnetic brake to be released without power, to tow the truck if a power failure occurs. The APX's AC travel control system eliminates directional contactors; maintenance needs and associated costs are greatly reduced.



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