

M300-CF

Counterbalance Forklift 635 kg at 508 mm load centre

The M300-CF is a light-duty fork vehicle with high value features for today's demanding material handling solutions.

FEATURES

Fork Lift: 635 kg load capacity at a 508 mm load center or 558 kg at 610 mm load center. Perfect for picking up and dropping off pallets from conveyors, stretch wrappers, or floor.

Safe: A 16-pattern laser detects obstructions and personnel.

Efficient: The M300-CF operates on battery power, while also automatically charging, yielding up to 24/7 fully automatic operation.

Integration: Can integrate with Plant Control Systems via Wi-fi communications and our System Automation Manager™ (SAM) software providing traffic control.

Affordable: Many applications can demonstrate Return On Investment in three months or less.

Simple: CartTools™ and AGV Tools software provide a user-friendly interface to implement/make changes.



NAVIGATION AND GUIDANCE OPTIONS

Natural Feature Navigation (NFN): Environmental feature data is collected by on-vehicle sensors and used by the vehicle computer to determine location.

Laser Navigation: Field of reflective targets seen by on-vehicle sensors and used by vehicle computer to determine location.

Magnetic Tape/Bar Guidance: Magnetic path is followed using sensors.

NAVIGATION ENHANCEMENTS

Enhanced Navigation: Additional sensors can be added to augment the vehicle's navigation technology.

Co-Navigation Technology: Multiple navigation packages may be used on a vehicle in challenging environments

FEATURES AND OPTIONS

- Wi-fi Communications 802.11 a/b/g/n/ac
- Automatic Shut Off
- Sleep/Auto-wake
- Automatic Charging
- Lithium Battery Pack
- Wheel Brushes
- Side Swipe Optics
- Warning Light/Horn
- Cab Side Covers

This product is available with Magnetic Guidance Technology



“The Best Magnetic Guidance on the Market.”

General Specifications

Weight / with batteries	1173 kg
Dimensions	W: 1041 mm L: 2819 mm H: 2134 mm
Maximum Load	635 kg at 508 mm load centre 558 kg at 610 mm load centre
Lift Range	Floor to 1219 mm
Safety: Front/Rear Laser Bumper	CE/UKCA rated safety bumper (16 Pattern)
Speed	4.6 to 73.2 MPM, (48.8 MPM with laser guidance) 6 speeds, 0.3 MPM increments
Battery Options	AGM 210 AH 24 VDC Battery Pack AGM/TPPL 204 AH 24 VDC Battery Pack Lithium 180AH 24VDC battery pack
Automatic Charge	80 amp charge rate
Fast Automatic Charge	140 amp charge rate
Manual Charge	Up to 25 amp charge rate

Environment

Environment – Atmosphere	0 to 40° C, 25% to 95% non-condensing humidity
Dust/Water-proof	No
Floor Specs – Edges/Debris	6 mm abrupt elevation change maximum, smoothed
Expansion Joints	6 mm maximum
Grade Rating	0%
Flatness	1% and 6 mm variation in 127 mm or less
Friction	0.6 coefficient of friction between wheels and floor, minimum
Floor Conductivity	Static dissipative, less than $3.5 \times 10^7 \Omega$
Radio Communication	IEEE 802.11a/b/g/n/ac, plus security encryption (if equipped)

Detailed Specifications

Drive Direction – Automatic	Forward and Reverse (if equipped)
Duty Cycle	95% @ Maximum Load Rating
Drive Unit – Wheel	Vulkolan 210 mm diameter x 70 mm wide
Drive Type	Gear driven steerable turntable
Motor	1000 watts 24VAC
Brake	10Nm, spring actuated (fail-safe)
Navigation	Daifuku AGV - Natural Feature Navigation and Laser
Steering Angle Encoder	Yes
Steering/Stopping Accuracy	+/- 13 mm
Guidance	Magnetic Tape/Bar SmartCart AGV
Steer Angle Sensor	Analog 10 turn potentiometer
Steering Accuracy	+/- 25 mm from physical path
Guide Loss Error	Error generated within 152 mm of path loss
Hunt for Path	Not offered
Sensor	16 millisecond data rate, 50 updates per second
SmartSteer Accuracy	+/- 76 mm @ 3m
Stopping Accuracy	13 mm proximity sensor, 38 mm transponder reader @ 9.1 mpm
Location Method	Transponder tags, 5 data bytes including checksum Virtual Locations via distance initiated functions
Program Capacity	5000 program steps
HMI Display	145 mm color touch screen – errors & destinations
Manual Movement	Pendant – via pendant plug receptacle, Fork Pockets
Minimum Path Radius	610 mm – 90° turn, 1219 mm – 180° turn
Drive Stalled Detection	Yes
Distance Initiated Functions	Yes – in 25 mm increments
Obstacle Detection	Front and rear programmable up to 2.8 meters
Emergency Stop	3 – Front, Top Left/Right
Side swipe optics	Both sides near floor
Wiring	Per CE/UKCA ampacity guidelines

CARTTOOLS SOFTWARE

Simple, standardized toolbox of commands that make configuration a snap.



Pendant Control – When manual movement is required, it's as simple as driving the AGV where it needs to go.



SmartSteer – CartTools directing the AGV to intentionally leave the magnetic tape path. It allows maneuvers like pivot turns and ignoring floor problems when in full automatic operation.

System Automation Manager – (SAM) is a robust, easily-configured control system option for Automatic Guided Vehicles (AGVs) and SmartCart® Automatic Guided Carts (AGCs). SAM is the result of more than 60 years of experience engineering, manufacturing and installing more than 20,000 vehicles. SAM's framework can be easily customized to meet our customers' individual needs and improve the efficiency of our AGV and AGC systems.

