

M4K-CF

Hybrid Fork Vehicle

4,000 lbs Pallet Capacity

Introducing the M4K-CF – a hybrid counterbalance fork AGV built on DAIFUKU’s robust AGV technology, yet capable of manual operation when necessary for production needs.

With a capacity of 4,000 pound (1814 kg), the M4K-CF is ready to move heavy pallets from the floor to 6’ (1825 mm) off the floor.

FEATURES

Safe: The M4K-CF offers safety rated 360 degree planar coverage for detection of obstructions and personnel. Additional vertical sensing is also available.

Efficient: The M4K-CF operates on battery power and is equipped with automatic charging technology, this provides up to 24/7 fully automatic operation.

Integration: With DAIFUKU’s System Automation Manager™ (SAM) software providing traffic control and fleet coordination, AGV operations may be integrated with Plant Control Systems.

Simple: DAIFUKU’s proven CartTools™ and AGV Tools software products provide a user-friendly interface for AGV system programming and configuration.



NAVIGATION 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.

Inertial Navigation: Odometry data and in-floor waypoints are used by the vehicle computer to determine location.

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

- Automatic Charging, 300 amps
- Wi-fi Communications 802.11 a/b/g
- Front & Rear Video Camera
- Warning Light/Horn
- Blue Warning Light
- Sleep/Auto-wake

General Specifications

Safety Standard	ANSI B56.5-2019, UL 3100
Weight without battery	9,700 lbs (4400 kg)
Dimensions (less forks)	W: 57" (1447 mm) L: 76" (1930 mm) H: 87" (2209 mm)
Capacity	4000 lbs (1814 kg) at 24" (609 mm) load center, maximum
Lift Range	Floor to 72" (1828 mm)
Safety – Front Laser Bumper	ANSI B56.5 compliant (16 Pattern) x 2
Safety – Side Laser Bumpers	ANSI B56.5 compliant (16 Pattern) x 2
Pedestrian Awareness	Blue Warning Light, Front & Rear Stack light and horn, per ANSI B56.5
Speed	15 to 360 fpm, 6 speeds, 1 FPM increments
Battery/Charge Options	36VDC, 2600 lbs (1182 kg)
840 AH, TPPL/AGM	300-amp charge rate
700-900 AH, LiION	300-amp charge rate
Manual Charge	Up to 300 amp

Environment

Atmosphere	0 to 40° C, 25% to 95% non-condensing humidity
Dust/Water-proof	No
Floor Specs – Edges/Debris	¼" abrupt elevation change maximum, smoothed
Expansion Joints	¼" minimum
Grade Rating	3%
Friction	0.6 coefficient of friction between wheels and floor, minimum
Floor Conductivity	Static dissipative, less than 3.5 x 10 ⁷ Ω
Radio Communications	IEEE 802.11a/b/g standard

Detailed Specifications

Drive Direction – Automatic	Forward and Reverse
Drive Unit – Wheels	16" diameter x 7" wide, Solid Rubber (Shore X, durometer X)
Motor	4.0 kw AC induction x 2
Brake	Spring actuated (fail-safe)
Steering – Wheels	10" diameter x 5" wide, Poly (Shore X, durometer X)
Motor	0.7 kw AC induction
Brake	Spring actuated (fail-safe)
Navigation	Laser – Natural Feature Navigation – Inertial
Steer Angle Sensor Encoder	Yes
Steering/Stopping Accuracy	+/- ½"
HMI Display	5.7" color touch screen – errors & destinations
Video Camera	Front/rear, 1080P, supports up to 128GB microSD card
Manual Movement	Joystick – Operator-aboard
Minimum Path Radius	5' @ 100 FPM + Pivot turn capable
Drive Stalled Detection	Yes
Distance Initiated Functions	Yes – in 1" increments
Program Method	PC and Wireless
Obstacle Detection	360°, programmable up to 2.8 meters
Emergency Stop	2 – Left/Right side
Wiring	Per NEC ampacity guidelines

CARTTOOLS SOFTWARE

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

