Standard Equipment/Optional Equipment

Standard Equipment

Modular designed truck for perfect customisation
Navigation module on a robust frame with lighting signals, control panel, touchscreen, communication module, navigational laser (horizontal and vertical)
Front and rear safety scanner
Laser curtain module
Traction and lifting software management

Robot Manager
Rack Editor
L Head forks
Redundant traction motor for K-MATIC
Automatic fork cycle
Overreach of forks
LSC with weight and load recognition
Energy recovery when braking or lowering the cabin

Optional Equipment

Side Safety Sensor (left and right) for aisle changes
Standard masts available up to 12m
Triplex masts available up to 12m. Higher masts available on request
Different battery (compartment) sizes
Battery roller for lateral change
Battery carrier
Electrical verification for battery lock
Side covering for battery
Antistatic guide rollers
Hydraulic oil filling assistance

Safety
Thanks to its smart safety management, the K-MATIC anticipates and reacts autonomously to its direct environment. Due to the robotic usage there are less rack and pallet damages. Therefore the K-MATIC is ideal, if high value goods are handled and damage costs are causing problems.

Performance
The unique infrastructure-free geoguidance system provides gently aisle changes when recommended by the supervisor. The supervisor is interacting with the WMS/ERP. The in the supply chain flow installed K-MATIC interacts with customer’s environment (conveyers, PND stations…) to ensure an optimised and steady process.

Comfort
The K-MATIC is natively designed to work in a shared environment (people and trucks). The user-friendly interface provides all needed controls & information at a glance. Moreover, the dual driving mode makes the K-MATIC intuitive to switch automatic and manual modes.

Reliability
Fully integrated in the warehouse product range, the K-MATIC benefits from all Linde quality standards, and the robust "SMART IN SAFE" navigation technology. Always available, the K-MATIC supports your business 24/7 while offering significant cost-savings.

Productivity
Efficiency at work, efficiency in servicing. With a computerized & remote diagnostics system, combined with predictive maintenance program, the K-MATIC remains available at any time.

Features

Driving system
  + Standard truck converted into a robotic truck
  + Dual driving mode - automatic/manual
  + Navigation lasers (horizontal and vertical), safety lasers (front and rear), optional on side for aisle changes
  + Embedded computer, emergency stop button, light and sound warning indicators

Geoguidance Navigation
  + Navigation infrastructure free technology (no reflector)
  + Relies on existing structural features (trucks, walls, columns…)
  + Local lane mapping and localization
  + Seamless integration in existing layouts, gradual extension or global deployment

Robotic very narrow aisle truck

Capacity up to 1500 kg

K-MATIC

Linde Material Handling

Series 011

Safety
  + Real time speed adaptive detection
  + Unique dynamic cornering detection
  + Autonomous decision making capabilities with 3D false camera
  + Robust collaboration with operators and other trucks
  + Pulls or obstacles detection thanks to the rear laser scanner

Great Safety
  + 7” LCD touch screen
  + Robot truck, battery and system health
  + Unique dynamic cornering detection
  + Service mode with PIN access
  + Log extraction via USB

User Interface
  + 4A pallet identification
  + Fused balance detection control
  + Secure RFID controlled manager
  + Task management with WMS/ERP interface
  + Back checker

Operations Management

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Phone: +49 6021 199-0, Fax: +49 6021 199-1570, www.linde-mh.com, info@linde-mh.com

Subject to modification in the interest of progress. Illustrations and technical details could include options and not binding for actual constructions. All dimensions subject to usual tolerances.
## Technical Data according to VDI 2198

### Characteristics

1. **Manufacturer**
   - LINDE

2. **Manufacturer’s type designations**
   - K-MATIC Example 0.7
   - K-MATIC Example 1.0
   - K-MATIC Example 1.5

3. **Series**
   - 011

4. **Power unit**
   - Battery

5. **Operation**
   - Stand/Sitz

6. **Load capacity/Load Q (t)**
   - 0.7
   - 1.0
   - 1.5

7. **Load centre distance c (mm)**
   - 600

8. **Wheelbase y (mm)**
   - 1586
   - 1874
   - 2108

### Weights

9. **Service weight (kg)**
   - 7163
   - 8801
   - 10625

10. **Axle load with load, front/rear (kg)**
    - 2251 / 5612
    - 2963 / 6838
    - 3503 / 8622

11. **Axle load without load, front/rear (kg)**
    - 2692 / 4471
    - 3496 / 5305
    - 4214 / 6411

### Wheels/Tyres

12. **Tyres rubber, SE, pneumatic, polyurethane**
    - Vulkollan

13. **Tyre size, front**
    - Ø 406 x 170

14. **Tyre size, rear**
    - Ø 370 x 170

15. **Wheels, number front/rear (x = driven)**
    - 1x / 2

16. **Track width, front b10 (mm)**
    - 1490

17. **Track width, rear b11 (mm)**
    - 0

### Dimensions

18. **Height of mast, lowered h1 (mm)**
    - 2900
    - 4900
    - 6900

19. **Height of mast, extended h4 (mm)**
    - 5755
    - 9755
    - 13355

20. **Height of overhead guard (cabin) h6 (mm)**
    - 2555

21. **Height of seat/stand on platform h7 (mm)**
    - 460

22. **Supplementary lift h9 (mm)**
    - 755 + 920

23. **Platform height, raised h12 (mm)**
    - 3660
    - 7660
    - 11260

24. **Height, lowered h13 (mm)**
    - 60

25. **Overall length l1 (mm)**
    - 3206 + 200
    - 3494 + 200
    - 3728 + 200

26. **Overall width b1/b2 (mm)**
    - 1160 / 1700
    - 1160 / 1750
    - 1160 / 1750

27. **Fork dimensions DIN ISO 2331 s/e/l (mm)**
    - 50 x 120 x 1200

28. **Width of fork carriage b3 (mm)**
    - 710

29. **Fork spread b5 (mm)**
    - 470 / 640

30. **Width over side guide rollers b6 (mm)**
    - 1825

31. **Reach, lateral b7 (mm)**
    - 1500

32. **Ground clearance, below mast m1 (mm)**
    - 40

33. **Ground clearance, centre of wheelbase m2 (mm)**
    - 87

34. **Aisle width, travelling Ast (mm)**
    - 1830
    - 1850
    - 1870

35. **Turning radius Wa (mm)**
    - 2052
    - 2340
    - 2574

36. **Centre of axle to fork pivot l8 (mm)**
    - 999

37. **Head centre A (mm)**
    - 480

38. **Width of reach carriage B (mm)**
    - 1650

39. **Head width F (mm)**
    - 240

40. **End aisle width, with/without load Au (mm)**
    - 3625
    - 3913
    - 4150

### Performance

41. **Travel speed, with/without load (km/h)**
    - 10.5 / 10.5
    - 12 / 12
    - 12 / 12

42. **Lifting speed, with/without load (m/s)**
    - 0.46 / 0.47
    - 0.6 / 0.6
    - 0.39 / 0.39

43. **Lowering speed, with/without load (m/s)**
    - 0.45 / 0.45
    - 0.45 / 0.45
    - 0.43 / 0.43

44. **Reach speed, with/without load (m/s)**
    - 0.3 / 0.45
    - 0.3 / 0.45
    - 0.3 / 0.45

45. **Acceleration time, with/without load (s)**
    - 6.0 / 6.0
    - 6.0 / 6.0
    - 7.0 / 6.0

### Drive

46. **Service brake**
    - Regenerative

47. **Drive motor rating S2 60 min (kW)**
    - 7

48. **Lift motor rating at S3 15% (kW)**
    - 20
    - 24

49. **Battery according to DIN 43531/35/36 A,B,C, no 43536 / A**

50. **Battery voltage/rated capacity (5h) (V)/(Ah)**
    - 80 / 465
    - 80 / 775
    - 80 / 930

51. **Battery weight (± 5%) (kg)**
    - 1238
    - 1863
    - 2178

### Drive unit

52. **Type of drive unit**
    - Microprocessor

53. **Sound pressure level LpAZ (at the driver’s seat) (dB(A))**
    - 68

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1) Delta Q = 100 kg; from 500-1500 kg with L-Head model.
2) Figures with battery, see line 6.4/6.5.
3) Picking height = h12 + 1600 mm = h28
4) Step for b2; 50 mm from 1160 - 1800 mm