



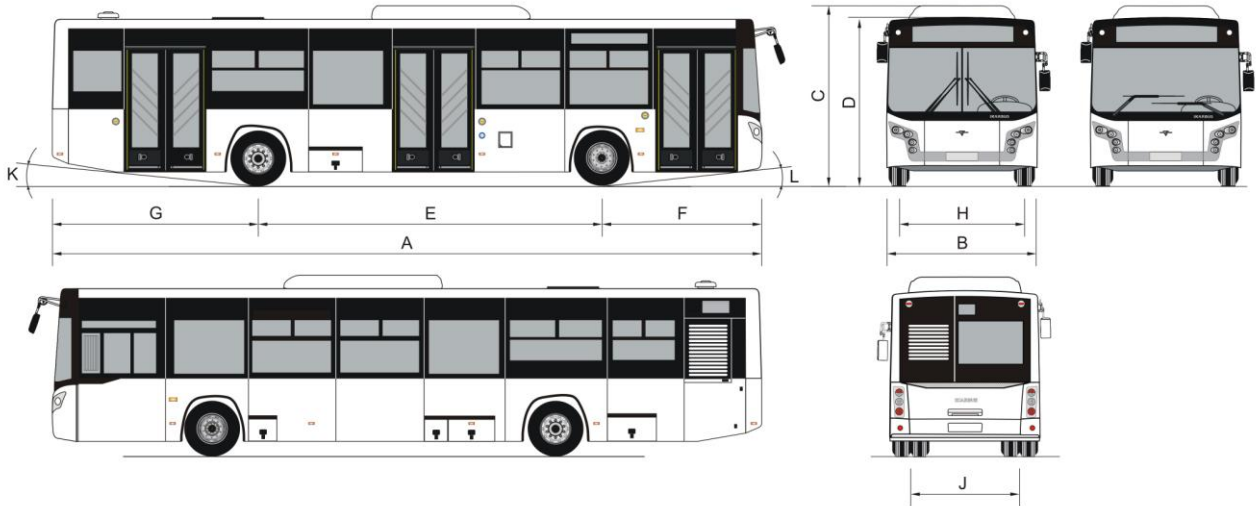
TECHNICAL SPECIFICATION

IK I I 2 N

**MAN D0836 LOH70 (EEV)
VOITH DIWA.5 / ZF EcoLife**

2016.

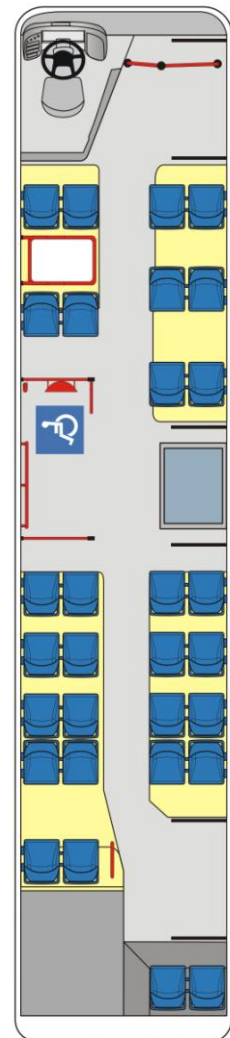
Technical specification - IK 112N (EEV)



A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	J [mm]	K [°]	L [°]
12041	2525	3050	2805	5795	2729	3517	2096	1836	7	7

Shown seats arrangement is example.

Other arrangements are possible.



Doors: 3
Seats: 30+1



DIMENSIONS

- (A) Overall length..... 12041 mm
- (B) Overall width..... 2525 mm
- (C) Overall height (with A-C)..... 3050 mm
- (D) Overall height..... 2805 mm
- (E) Wheelbase..... 5795 mm
- (F/G) Front/Rear overhang..... 2729/3517 mm
- (H/I) Front/Rear track..... 2096/1836 mm
- Interior saloon height..... 2395 mm
- Floor height at doors..... 340 mm
- Minimum turning circle..... 21862 mm
- Approach/Departure angle..... 7°/7°

WEIGHTS

- Max. front axle load (technically permissible)..... 8500 kg
- Max. rear axle load (technically permissible)..... 12000 kg
- Gross vehicle weight (GVW)..... 18000 kg

ENGINE

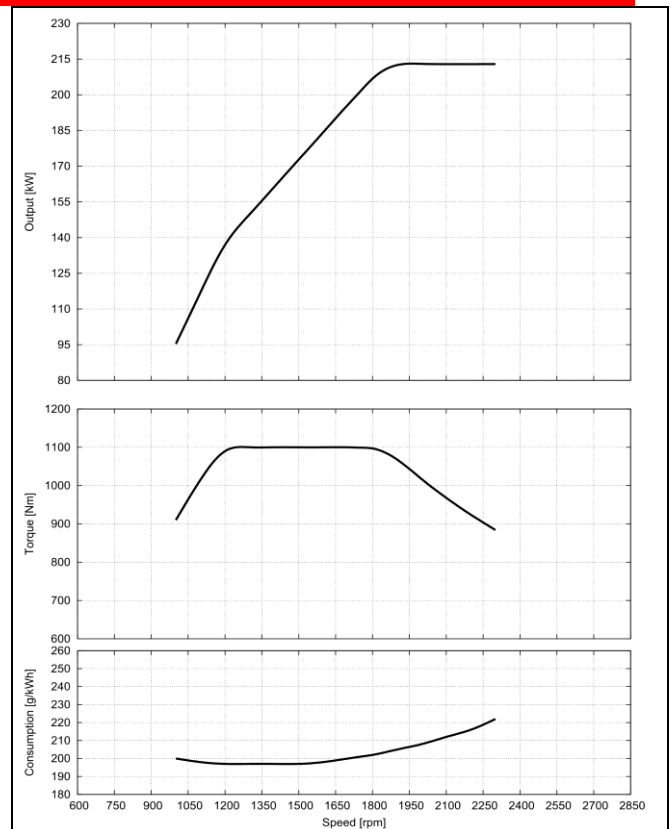
- Manufacturer..... MAN
- Type..... D0836 LOH70
- Emission level..... EEV
- Mounting..... vertical, rear
- Construction..... 4-stroke diesel engine
6 cylinders in line, with turbo and intercooler
- Swept volume (Displacement)..... 6871 cm³
- Bore x stroke..... 108 x 125 mm
- Compression ratio..... 16,5:1
- Rated power..... 213 kW (290 hp) / 2300 min⁻¹
- Maximum torque..... 1100 Nm / 1200-1800 min⁻¹
- Electronically controlled fuel-injection EDC 7 Common Rail with integrated speed limiting device

TRANSMISSION

- Gearbox..... automatic, VOITH DIWA.5 (D 854.5) with integrated retarder
- Number of gears..... 4+1(R)
- Ratios..... 1 : 6,1 - 0,7

Option:

- Gearbox..... automatic, ZF EcoLife (6 AP 1200 B) with integrated retarder
- Number of gears..... 6+1(R)
- Ratios..... 1 : 3,364 - 0,615



REAR AXLE

- Manufacturer..... ZF
- Type..... AV-132/87
- Ratio..... 7,38
- Friction disc brake with floating brake caliper and ventilated disc

STEERING GEAR

- Hydraulic power-assisted steering
- ZF 8098 Servocom
- Adjustable steering column with pneumatic lock

FRONT AXLE

- Manufacturer..... ZF
- Type..... rigid, RL-85A
- Friction disc brake with floating brake caliper and ventilated disc



SUSPENSION

- Electronically controled air suspension (ECAS)
- Front axle..... 2 roller bellows and 2 double-action shock absorbers
- Rear axle..... 4 roller bellows and 4 double-action shock absorbers

BRAKING SYSTEM

- Dual-circuit braking system, pneumatic
- Friction disc brakes (with floating brake calipers and ventilated discs) at front and rear axle
- Anti-lock Braking System with Skid Reduction (ABS/ASR)
 - ABS (Anti-lock Braking System), and
 - ASR – TCS (Acceleration Skid Reduction - Traction Control System)
- Spring parking brake
- Bus stop brake: door-operated halt-brake on the rear axle in combination with ANS/NBS
- Auxiliary brakehydrodynamic retarder
 - integrated in automatic gearbox
 - hand and foot operated
- Air dryer..... single chamber with replaceable element and pressure regulator
- Oil seperator
- Compressor 2-cylinder, 490 cm³

FUEL TANK

- Capacity 350 liters
- Made of stainless materials
- Filler cap at right-hand side

WHEELS – TYRES

- Rims..... 7,5 x 22,5"
- Tyres 275/70 R22,5"

Option:

- Rims..... 8,25 x 22,5"



ELECTRICAL EQUIPMENT



- Multiplex Canbus system VDO Kibes
- Dashboard in accordance with VDV Standard
 - adjustable
 - with pneumatic lock
- Battery 2 x 180 Ah / 12 V
- Generator (Alternator)..... 3 x 120 A / 28 V
- Starter 5 kW / 24 V
- Tachograph digital (DTCO)
- Safety switch..... in accordance with ECE R36
- Water cooling with level sensor, buzzer and optic signal
- Engine protection with buzzer and optic signal for too low oil pressure and too high temperature
- Headlights..... halogen
- Front fog lights halogen
- Rear fog lights..... LED
- Reversing lights LED
- Stop lights LED
- End-outline lamps (front and rear) LED
- Interior lighting..... LED
- Doors area lighting..... halogen/LED
- Cash register lighting
- Stop indicators..... push buttons on handrails

PASSENGERS INFORMATION SYSTEM

Option:

- Information panels:
 - Front: route number + destination
 - Right side: route number + destination
 - Rear: route number
- Information panels – color:
 - Front: route number + destination
 - Right side: route number + destination
 - Rear: route number
- Information panels (interior)
- LCD monitor 19"
- Audio-system



HEATING – VENTILATION – AIR CONDITION

- Passenger compartment heating system:
 - convector type heaters
 - blower heaters
- Driver’s cab heating system:
 - heater mounted under driver’s control desk (front pult) which also serves for demisting/defrosting the windscreen
 - additional heater embedded in the cradle the driver's seat
- Liquid
- Autonomous heater, pre-start heating of engine
- Silicon rubber pipes
- Ventilation:
 - roof hatches
 - slide-windows
- Air-conditioner

Option:

- Air-conditioner with heating

INTERIOR

- Passenger seats single, plastic, vandal resistant
- Driver’s seat with air suspension and automatic weight adjustment
- Handrails powder painted steel pipes
- Roller blind for windscreen and driver’s window
- Folding ramp (wheelchair access ramp) at 2nd door, manually operated
- Heated exterior mirrors
- Interior mirrors

Option:

- Passenger seats single, plastic, vandal resistant city bus upholstered seats (easy upholstered seats)
- Folding ramp (wheelchair access ramp) at 2nd door, automatically (electrically) operated
- Central lubricating system
- Oil filling automatic system
- Automatic extinguisher system in engine compartment
- CCTV

STRUCTURE

- Steel frame tubular structure made of RHS and SHS beams
- Side panels in wheel arches area and lower side cavity made of stainless steel
- Wheel arches stainless steel
- Side panels aluminium
- All cavities are protected from inside and outside
- Roof and sidewalls with thermal insulation

Option:

- Cavities: ferrite – EN 1.4003)

DOORS

- Door arrangement 2-2-2
- 3 leaf inward swing door (Slide-Glide)
- Emergency door control valve inside/outside

GLAZING

- Windscreen (variant 1) laminated, 1-piece
- Windscreen (variant 2) laminated, 2-piece
- Side windows tempered, bonded
- Door glasses bonded

