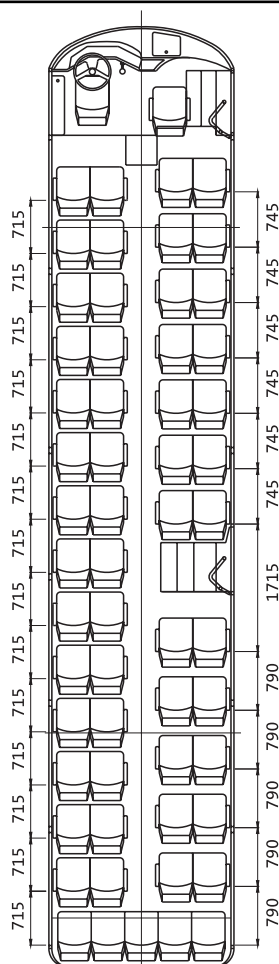
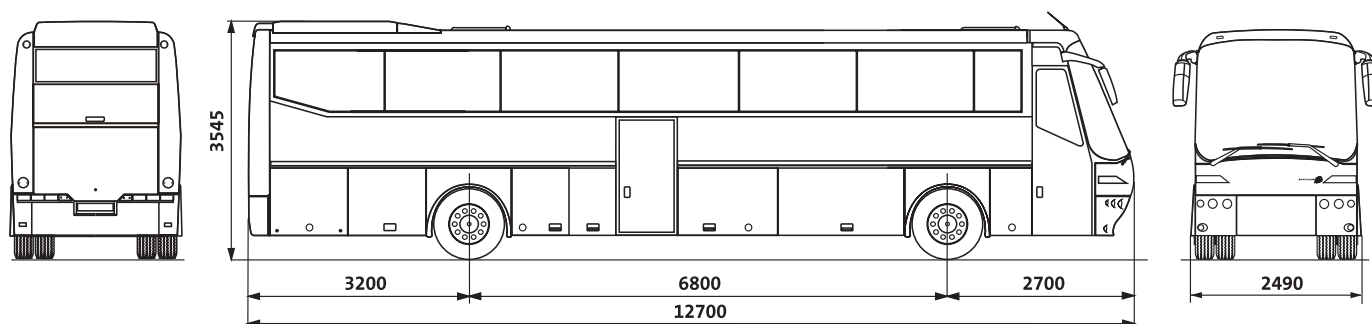


Futura

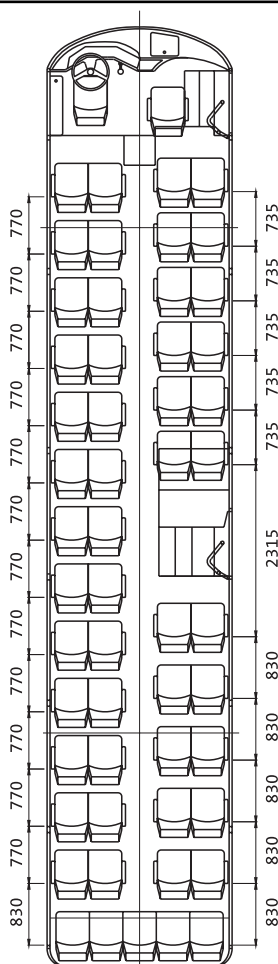


FHD 13-380XE

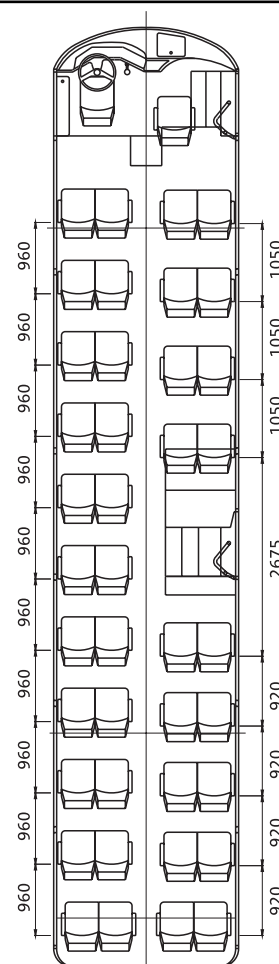
Technical specifications FHD 13-380XE



57+1+1



53+1+1 with toilet



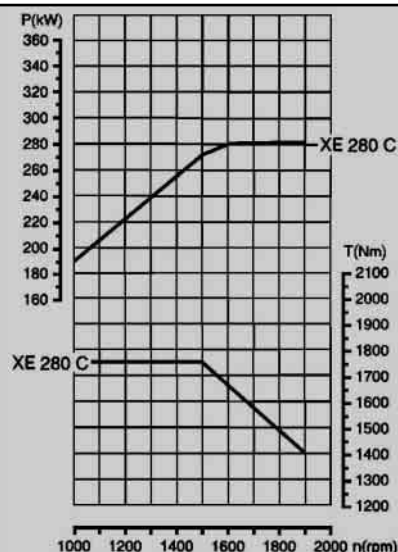
40+1+1 with toilet + kitchen

MEASUREMENTS - WEIGHTS

- | | | | |
|-------------------------------|-----------|---------------------------------|---------------------------|
| • Overall length | 12,700 mm | • Floor height above front axle | 1,410 mm |
| • Overall width | 2,490 mm | • Floor height above rear axle | 1,447 mm |
| • Overall height | 3,545 mm | • Turning circle | 23,600 mm |
| • Wheel base | 6,800 mm | • Max. front axle load | 6,900 kg |
| • Front overhang | 2,700 mm | • Max. rear axle load | 11,500 kg |
| • Rear overhang | 3,200 mm | • Max. total weight | 18,000 kg |
| • Interior saloon height | 1,900 mm | • Luggage locker capacity | approx. 11 m ³ |
| • Entrance step height front | 379 mm | | |
| • Entrance step height centre | 413 mm | | |

ENGINE

- Make DAF
- Type XE 280 C1
rear mounted, vertical 4-stroke diesel engine
with direct injection, 6 cylinders in line
turbocharged and air to air aftercooled
- Stroke 158 mm
- Bore 130 mm
- Swept volume 12.58 litres
- Compression ratio 16.0:1
- Max. power 280 kW (380 bhp) 1999/99/EC at 1900 rpm
- Max. torque 1750 Nm at 1000-1500 rpm
- Min. specific fuel consumption 199 g/kWh
- Total engine oil capacity 31.5 litres
- Speed limiter DAF 100 km/h
- Emission level Euro 3 97/20/EC - 2001/27/EC



TRANSMISSION

- Clutch single dry plate
..... hydraulically operated, air assisted
430 mm diameter
- Gearbox ZF 6 S 1600 + ZF intarder, HGS
- Ratios

1	2	3	4	5	6	R
7.72	4.42	2.66	1.79	1.28	1.00	7.10

REAR AXLE

- Rear axle ZF A-131
- Ratio 2.93:1

FRONT AXLE

- Front axle ZF RL-85/E
independent front suspension

STEERING GEAR

- Steering box ZF 8098
- Ratio 17.0 / 20.0:1
- Steering wheel 500 mm soft grip
- Steering column adjustable

SUSPENSION

- Front full air by means of 2 air bellows
2 Koni shock absorbers
2 levelling valves
- Rear full air by means of 4 air bellows
4 Koni shock absorbers
1 levelling valve
1 anti-roll bar

BRAKES

- ZF disc brakes at front axle, ZF drum brakes at rear axle
- Full air, dual circuit braking system, non-asbestos brake linings
- Wearing indicators to brake linings
- Air operated hand brake on rear wheels
- Air operated exhaust brake
- Air dryer with heated element
- ZF intarder
- ABS (WABCO D)
- ASR

FUEL TANK

- 380 Litres in front of front axle (near-side)

WHEELS - TYRES

- Wheels 7x Michelin 8.25 x 22.5
- Tyres 7x Michelin 295/80 R22.5 XZA2 Energy
- Stainless steel wheel trims
- Spare wheel in front underframe with pull-out device and sliding roller system

STRUCTURE - DOORS

- Full integral all metal framing
- 1 Piece stretched galvanised steel panel extending from window to floor line
- Front and rear panels in GRP
- Wheel arch panels in GRP
- Locker doors in aluminium, with individual locks
- Heavy anti-corrosion treatment
- Thermal insulation to roof and bodyside cavities
- Engine insulation
- Power operated, single leaf outward gliding passenger entrance door

GLAZING

- Windscreen 1 piece, tinted laminated, bonded to frame
- Driver's signalling window tinted, toughened, single glazed
- Entrance door tinted, toughened, single glazed
- Side windows tinted, toughened, double glazed
- Rear window tinted, toughened, double glazed

ELECTRICAL EQUIPMENT

- Batteries 2x 230 Amp hour, 12 Volt
- 2x Bosch alternator 100 Amp (included alternator for air conditioning)
- Tachograph, two-crew electronic
- Windscreen wiper with intermittent function
- Spraying device on wiper arm
- Airhorn
- Digital clock
- Revolution counter
- Air pressure gauge with buzzer and optic signal
- Oil pressure warning indicator
- Water temperature gauge with buzzer and optic signal
- Temperature sensor in engine compartment and warning light on dashboard
- Fuel tank capacity gauge
- Illuminated switches on dashboard
- Warning lights to all important functions
- Stereo radio/cd player Blaupunkt Classic Line CRD 41
- Stereo control unit with integrated amplifier Blaupunkt Classic Line CCA 41
- Handmicrophone in dashboard for courier
- Driver's microphone on swan-neck
- Cassette/CD box in driver's locker
- 12 Saloon radio speakers
- Radio speaker next to driver
- Cigarette lighter

- 2 DE H1 headlamps
- 2 High beam H1 driving lamps
- 2 H3 front fog lamps
- 2 Rear fog lamps
- 2 Rear tail lamps
- 3rd Brake light
- 2 Reverse lamps
- 2 Front marker lights
- 2 Rear marker lights
- Side marker lights
- Indicator lamps
- 2 Multi-function direction indicator/side lamps
- 2 Multi-function direction indicator/tail lamps
- 2 Rear reflectors
- Illuminated licence plate
- Illuminated luggage and engine compartment
- Illumination to stepwell
- Saloon illumination via 2 full length strip light units
- Individual reading lamps
- Fusebox schedule in language

HEATING - VENTILATION

The BOVA 'Futurair' heating and ventilation system consists of:

- 4 Powerful underfloor heaters with recirculation
- Full length ducts adjacent to side casings
- Permanent ventilation outlet in roof to gangway
- Ventilation outlets via entrance floor and luggage compartment floor
- Roof heating and ventilation through 2 roof elements with changeable Viledon filters
- Adjustable individual ventilation outlets also for driver and courier
- Powerful front heating and demisting equipment to driver's area
- Air conditioning
- 'Futurair' system:
 - electronic control with front and rear saloon temperature independently adjustable
 - digital display for time, interior and exterior temperature readout

INTERIOR

- Flat saloon floor
- Heavy duty Taraflex to saloon floor
- Driver's ashtray in dashboard
- Couriers ashtray in entrance door
- Ergonomic dashboard in ABS
- Roller blind to driver's window
- Roller sun blinds to windscreen left and right
- Lockable driver's locker next to driver's seat
- Ashtrays to side casings front
- 1 Coat hook to each side window pillar
- Interior mirror to windscreen
- Step mats to entrance door steps
- Grab handle on dashboard
- Grab handle on entrance partition
- Grab handle on entrance door front pillar
- Annabel Cougar trimming to side casings and doors
- Cord trimming to parcel rack interiors
- Moquette trimming to gangway roof
- Partitions behind driver and courier moquette trimmed
- Full draw curtains to side and rear windows
- Cup holder for driver and courier
- Ejectable roofhatches

Typical options:

A large variety of options are available to personalise the coach, for example; servery units, coolboxes, toilets and super luxury seats etc.

The options mentioned here are just a selection from our comprehensive range - if you do not see the option you require please check availability.

EXTERIOR

- 2 Power operated and heated exterior mirrors
- Mud flaps rear
- 1 Standard base colour
- Alu waist moulding, in vehicle base colour
- Lockable fuel flap
- Roof mounted aerial



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