

Bus shelter: Design Norman Foster



Technical Description

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Modular design with standard roof sizes.

Single, double or passageway variants.

With or without full or half returns.

86" Digital Advertising screen.

Double or Single sided.

Shelter with maximum transparency and reduced glass size

Colours



Black
RAL 9005



Chain metal grey
JCD 7002



Pale grey
JCD 7006



Green khaki bronze
JCD 6004



Bellini grey
JCD 7032



Pine green
RAL 6009

Other colours from our range by customer choice.

Designed by Norman Foster and developed by JCDecaux

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Structure

Main Frame

Comprised of two cylindrical posts that support the bench cross member and the whole roof

Post fitted with a trapdoor to facilitate electrical connections and cable management.

Calculated to resist winds of 180 km/h

Enables inclines of up to 4% to be absorbed without any specific part.

Glass

The Non Ad variant comprises 6 back glasses to the rear of the shelter resulting reduced weight of individual glasses to ease maintenance operations. Return glasses are usually full width of the shelter or half. They can have tailored screen printing to identify the shelters which also improves identifying they are there if contrasting colours are chosen

All glass is tempered safety glass 10 mm thick.

Glasses maintain a gap with the ground to prevent debris collecting.

Excellent visibility of oncoming traffic and buses and keeping any concealed areas to a minimum.

Roof

A welded steel construction, supporting 6 panels of toughened laminated glass, which cannot fall in the event of breakage

The glass is specially treated to reduce the heat of the sun rays by more than 50%

Waterproofing is ensured by seals fitted in the glazing bars

Maximum acceptable weight of 180 kg/m²

Sloped at 3° so that rainwater flows towards the rear of the shelter.

Bench

Comprised of a seat for 2 to 6 people

Fixed to the shelter's structure by means of a bar acting as a backrest in an ergonomic shape

Central separation prevent misuse of the bench.

An ergonomically designed seat.

In the case of back glass breakage reduced trip hazards.

Does not require a foundation.

Secured with tamper-proof fixings to prevent vandalism

Examples of materials used:

MATERIALS	ANTI-CORROSION TREATMENT	FINISH	MAIN ITEMS
steel	shot dip galvanizing spun galvanizing	80 micron powder coating	posts bench arms roof glasslegs foundation anchors
stainless steel	passivation	beadblasting and electropolishing	bench seats fixings
aluminium	anodisation	80 micron powder coating	adcase Timetable case
toughened glass		silk screen printed enamel	vertical glass
aluminium composite			roof
synthetic rubber		mass pigmented	seals
B25 concrete			foundations

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Ad case.

The ad case can be paper, digital or a combination of the 2.

Digital

86" LCD screen.

Purposefully designed for outdoor use.

Number of colours 1,064 Billion.

Visible screen area: 1066mm x 1895mm.

Ambient temperature: -30 to +50°C.

Direct LED back-illumination with local dimming.

Vertical and horizontal viewing angle: 178°.

13mm Antireflective glass toughened glass.

Up to 2500cd/m² with dynamic or forced dimming.

CE certification

Life expectancy: 10 years.

Operating hours: up to 24h/day.

Max Power Single sided digital with paper

advertising to rear: 2660W

Average Power consumption: 23.4kWh/day

Paper advertising to rear of digital screen

Edgelit LED display.

Standard 6 sheet poster display.

Unique and proven paper poster retention design.

Double sided paper advertising

x4 LED tubes

Scrolling versions are also available.

Lighting

Provided by a LED array located in the shelter roof.

Low power consumption 9W.

Excellent levels of illumination within the shelter.

Lighting designed to be easily visible when on to

provide a safe and reassuring environment.

PIR sensor can be installed.

Solar variants exist.

Electricity

Power supply

Single phase 220 V/240 V - 50 Hz

Can be fed via a feeder pillar or in certain scenarios all ele switch gear can be housed in the touchscreen enclosure.

Standard Protection:

16A-32A circuit breaker.

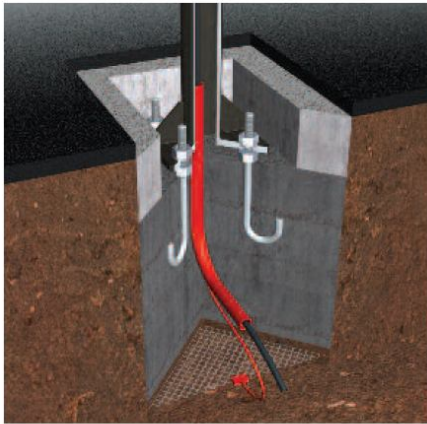
25A-30mA RCD.



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Foundation

Unit anchored on solid concrete fittings buried to conceal fasteners
Fitted with an electricity input duct and an earth grid
Calculated according to the region where it is installed



Foundation principle

Standards

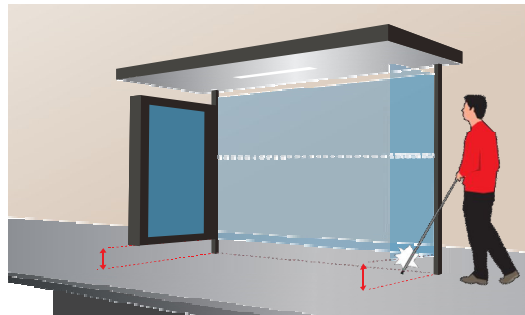
Design and manufacture certified ISO 9001 and ISO 14001.

Environmental aspects

Electric and electronic equipment recycled according to WEEE regulations.
Furniture made from durable and recyclable materials.
Full product life cycle analysis available.

Visibility

The lowest parts of the shelter no more than 20 cm from the ground so that it can be detected with a white cane.
Silk-screen printed warning bands on return glass are available to reduce risk of bumping into the glass.



Resistance to vandalism

Anti-impact protection index > IK 10 (corresponding to the impact of a 2 kg metal ball falling one metre)
All doors and access hatches are unlocked by means of a special designed key.
Standard anti-vandal and JCDecaux specific fixings.
A special designed screw is used for the visible fastenings (glass brackets, lighting, etc.) to avoid malicious dismantling of the glazing.
In the event of it smashes the glass is designed to fragment into small pieces reducing the risk of injury.
No visible cables or ducting.
Furniture made up of non-flammable materials
In sensitive areas, the rear glass panels may be replaced by walls in perforated sheet metal



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