

Bus shelter Design Norman Foster



Technical description

JCDecaux

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Overview

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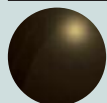
Colours



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

12 person capacity

5 seat capacity

6,8 m² covered area



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Structure

Frame

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

Post fitted with a trapdoor to facilitate the electrical connection

Calculated to resist winds of 180 km/h

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

Walls

A set of three glass plates at the back and a glass side panel

Made of tempered safety glass 10 mm thick

Stop a few centimetres above the ground to avoid waste building up inside the shelter

Provide perfect protection against bad weather while retaining excellent visibility

Display panel

Two backlit display sides each of 2 m²

Comprised of a structure with 2 glass doors and attached to 2 crossbars integrated with one of the shelter's posts

Lighting provided by 3 fluorescent tubes

Excellent lighting uniformity due to the use of diffuser plates

Contributes to the shelter's lighting

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

Inclined 3° so that rainwater flows backwards

Bench

Comprised of a seat for 5/6 persons:

- 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

Does not require any foundation

Lighting

Provided by two halogen spotlights located in the roof beam

Secured with tamper-proof fixings to prevent vandalism

Blends elegantly with the design

Illuminates the timetable case

Fed from the advertising case

Electricity

Power supply

220 V/240 V - 50 Hz

Connected to the public lighting network with a meter incorporated into the furniture

Protection

6A circuit breaker, 25A-30mA differential switch

	POWER RATING (VA)	AVERAGE CONSUMPTION* (KWH/D)
Roof	75	0,86
Display panel	210	2,41

* on the basis of 4200 hours lighting per year

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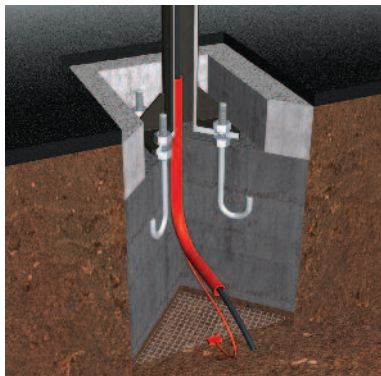
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Foundation

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

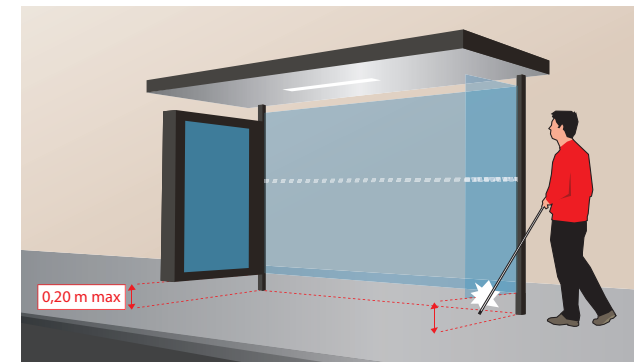
Design and manufacture certified ISO 9001 and ISO 14001

Mechanical
Mechanical engineering rules
Aluminium structures rules
Foundation calculatins DTU 13, 12
CM66 mechanical
Eurocode 2 and 3
BAEL 91 for concrete
DTU 39 for glass
NFE 25/27 for fastenings
Electrical
NFC 15-100
NFC 17-200
CE

Accessibility

Lower part of the shelter at least 20 cm from the ground so that it can be detected by a white cane

Sik-screen printed warning bands on return glass to avoid any risk of bumping into it



Height of the elements so that they can be detected by the visually impaired

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Safety

Materials

Materials	Anti-corrosion treatment	Finish	Main items
steel	hot dip galvanizing	paint	posts, bench support
	centrifugation galvanizing	rough	anchor bolts
stainless steel	passivation		screws, bolts and nuts
aluminium	chromate conversion	paint	display box
8 mm tempered glass		screen printing	display box windows
10 mm tempered glass			walls
glass fiber/polyester laminate		paint	base of bench
B25 concrete			sealing
tempered toughened glass		tainted	roof glass

Resistance to vandalism

Anti-impact protection index > IK 10 (corresponding to the impact of a 2 kg metal ball falling one metre)

Doors unlocked by means of a special designed key

A special designed screw is used for the visible fastenings (glass brackets, lighting, etc.) to avoid malicious dismantling

Glazing in tempered safety glass of the “Sécurit” type

In the event of it breaking, this type of glass breaks into small fragments thereby avoiding any risk of injury

No visible cables

Furniture made up of non-flammable materials

In sensitive areas, the rear glass panels may be replaced by walls in perforated sheet metal

Environmental aspects

Electric and electronic equipment recycled according to the WEEE regulations.

Furniture basically made from durable and recyclable materials



Expanded metal

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Safety

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A safe area conforming to standards for accessibility

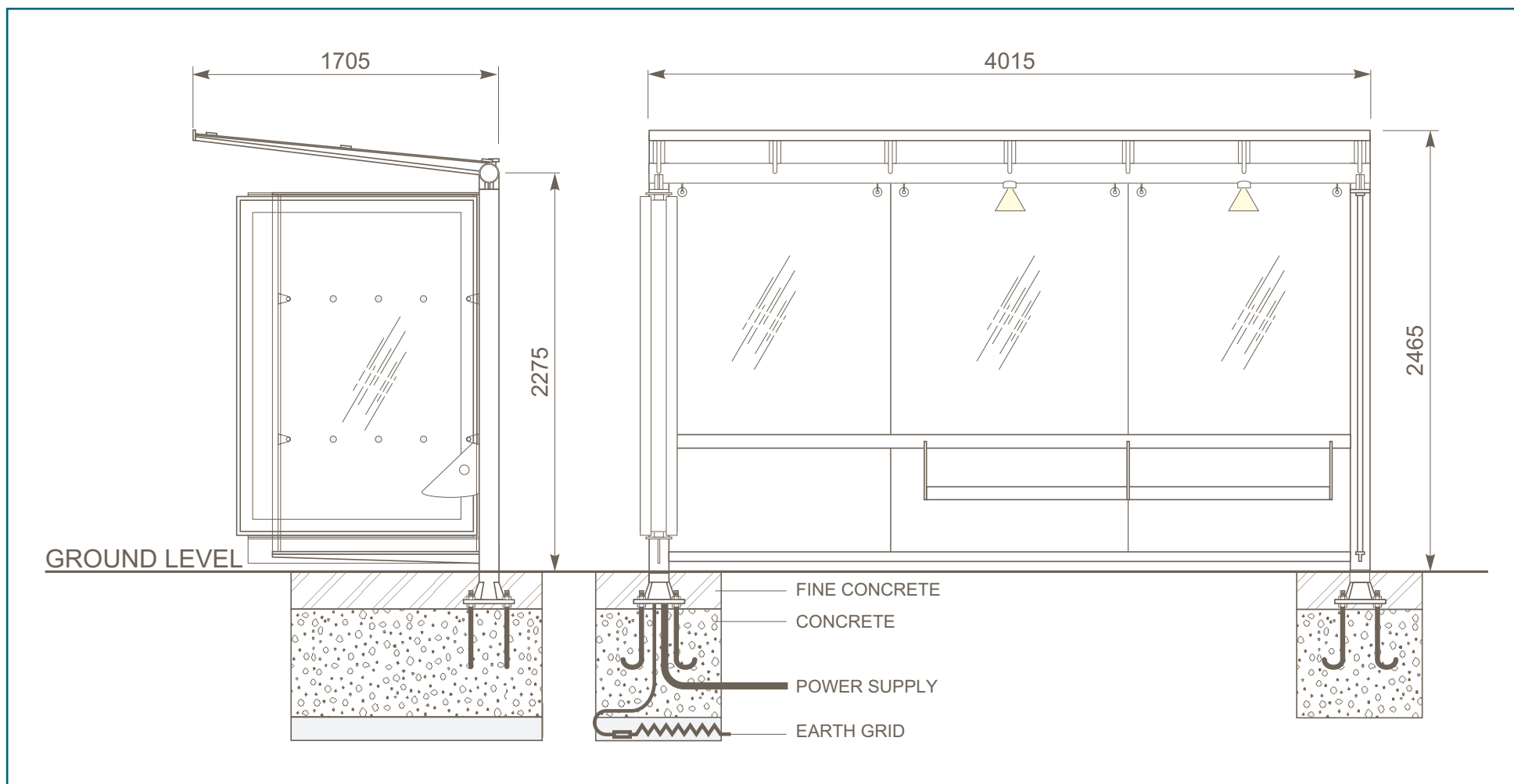
A design guaranteeing excellent resistance to vandalism

Any risk of injury avoided thanks to the use of Securit-type tempered safety glass



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Drawings

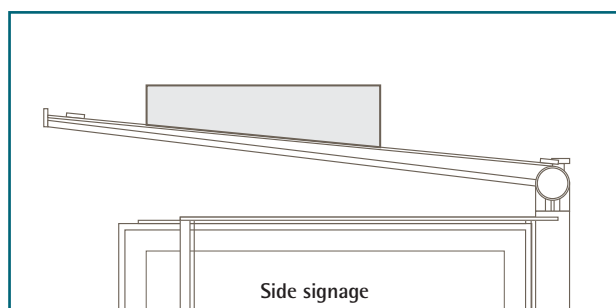
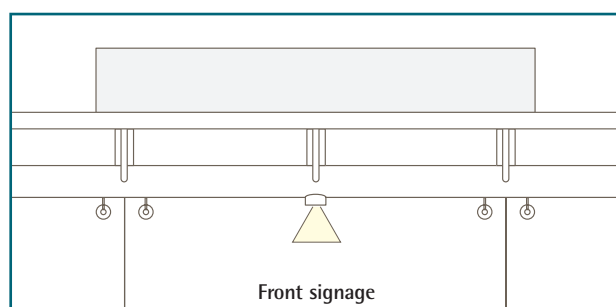


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Drawings

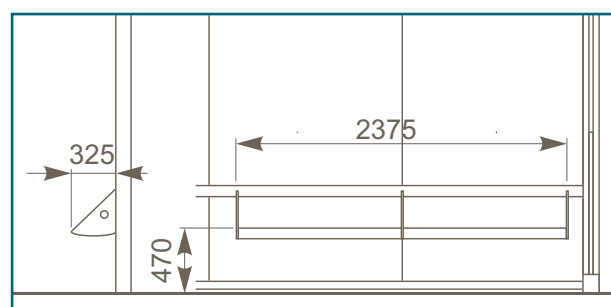
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Signage

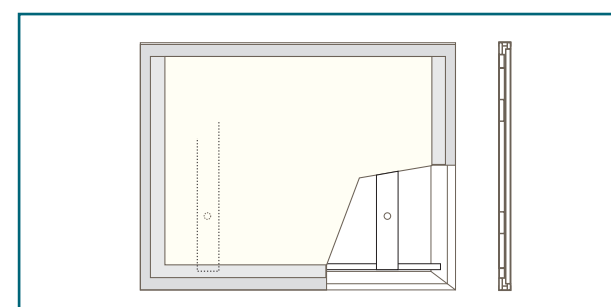


Plates in painted aluminium fastened to the roof
 Lettering attached by adhesive
 Dimensions adapted according to needs

Bench



Information panel

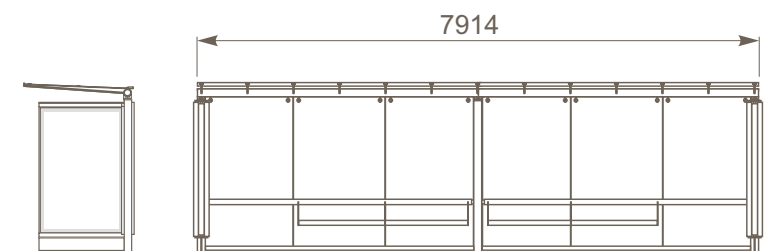


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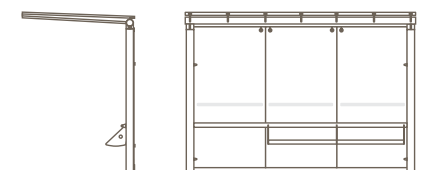
Adaptability

Modularity

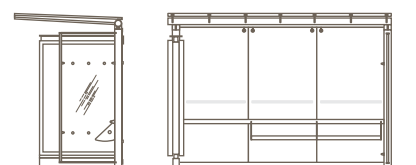
Various configurations depending on how often it is used, urban requirements and installation constraints



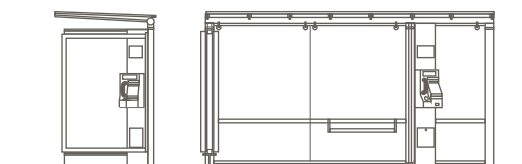
Double shelter



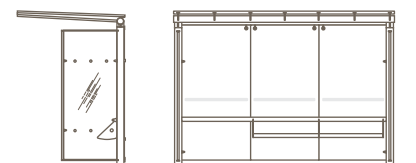
Non-advertising passenger shelter without return glasses



Passenger shelter



Bus shelter with phone booth



Non-advertising passenger shelter



Bus shelter with automatic public toilet

