Renault Store - Technical specifications

Workshop bays

Contents

General requirements

General remarks

Technical principles

1
General technical requirements

General technical requirements

1.1 Preamble

RENAULT expects all those involved in the "Renault Store" programme to meet their obligations in terms of results as per the requirements of the Technical Specifications. The general rules and specificities set out below are to be considered as the minimum necessary that has to be done to achieve the expected result.

1.2. Safety of persons and property

The supplier shall be able to provide proof that it has analysed the risks related to the services it is to provide and that its personnel and any sub-contractors have undergone sufficient training. Strict compliance with legislation in terms of safety and protection of workers is required.

1.3. Respect for the environment

Materials and methods which make it possible to reduce harm to the environment shall be used wherever possible (recyclable materials, energy-saving technologies, toxicity of materials and products used, etc.).

The supplier shall be able to provide proof that it has the various administrative permits (operating permit, environmental permit) necessary to manufacture the various items of equipment and that it complies with the operating conditions required by the legislation in force or by the specific operating conditions in the countries concerned.

A global approach such as the ISO 14001 standard is recommended. e.

1.4. Quality

The supplier shall be able to provide proof that it works in accordance with ISO 9000 quality assurance standards, formal certification being particularly recommended in this regard. The signwriter shall attach a specific Quality Plan to its offer to assure RENAULT of its capacity to supply finished products and spare parts that are compliant with the contractual requirements, within the set time periods. It shall request its sub-contractors to do likewise.

The procedures applied must make it possible to:

- Be sure that the parts and products purchased, manufactured and supplied shall neither be used nor delivered before they have been checked and be recognized as compliant.
- Procedures shall be set out for identifying causes of non-compliance, which make it possible to provide sustainable solutions that can be applied more widely to resolve the non-compliance and prevent it reoccurring.

These operations shall be recorded in the appropriate documents and be approved by RENAULT prior to being applied more widely.

- Track changes in the quality of products and assembly and removal services using inspection and audit indicators (incidents, complaints, etc.).

This tracking shall result in preventive or corrective actions; they shall be approved by RENAULT before being applied.

General technical requirements

1.5. Compliance of messages and colours

Visuals must comply with the official images contained in this document.

All shades have a 40% satin finish unless specified otherwise. Particular attention should be paid to complying with the colour code.

Compliance with the tolerances for the L.a.b. is required.

2.1. General technical standards

The reference base to be followed for design and manufacturing shall, at the very least, be that required by Eurocode standards.

The regulations relating to the dimensioning of structures in force in each of the countries concerned shall be complied with taking climatic conditions into account.

The following obligations in terms of results must be met:

- Supported under their own weight, the equipment must appear perfectly horizontal and vertical.
- The parallel alignment of separate elements must be observed.
- Under normal wind conditions (Cf. NV65 and NF EN1991-1-4 (Eurocode 1)), the permissible bend between the fastening and the point most distant from the fastening (dimension "d") shall not exceed d/100.

2.1.1. CLIMATIC CONDITIONS

Wind loads to be considered for the design of structures shall be taken from the Eurocode 1 rules (EN 1991-1-3): zones 4 (28 m/s), roughness IIIb, force coefficient equal to 1.80.Any structure situated in an unfavorable geographical area with regard to this load case shall be subject to a special design basis in order to meet the applicable standards.

2.1.2. DESIGN RULES

2.1.2.1 Aluminium structures

Design rules for aluminium structures - most recent edition of DTU rules (currently, July 1976).

Applicable standard for the execution of structures: NF EN 1090-2 and Eurocode 9.

2.1.2.2 Steel structures

Design rules for steel structures CM 66 » - most recent edition.

Applicable standard for the execution of structures: EN 1093 and Eurocode 3.

2.1.2.3 Concrete blocks

Concrete blocks shall be of "weight" type with minimum reinforcement.

The concrete to be used shall have an ordinary Portland cement (OPC) content of 400 kg/m3 (s' 28=300 bars - s28=25 bars).

General technical requirements

2.1.2.4 Design calculations for plastic elements

Adapt the CM 66 rules using a safety coefficient of 2 for the stresses.

2.1.3. MATERIALS

2.1.3.1 General remarks

The materials used shall all be first-choice materials suitable for their envisaged use and they shall be used in accordance with the rules of best industry practice for the profession and in compliance with the standards and regulations in force in France and in the Countries in which they are intended to be used.

The materials used shall not have any defect that is likely to compromise the durability of the structures. The equipment shall be easy to clean, maintain and service.

The materials shall be capable of withstanding harsh climatic conditions such as rain, snow, hail, condensation, dust and salt spray.

Operation must be guaranteed between - 20 and + 80 ° C.

2.1.3.2 Steels

Steels shall be either "hot finished" as per NF EN 10210 or "cold finished" as per NF EN 10219-1 and 2. The quality of the steels shall be stated on the production drawings and it goes without saying that the mechanical properties of the different types of steels must be taken into account for stability calculations.

All elements shall be manufactured in a covered, sheltered location.

After machining, welding, drilling, notching, etc. the elements shall be prepared prior to anti-corrosion treatment: brushing of welds, careful deburring, cleaning, shot peening and sand blasting.

The anti-corrosion treatment shall be performed by hot galvanization of a minimum of 80 µm and shall provide fault-free protection for at least the period of the ten-year guarantee.

No machining may be carried out once the parts have undergone anti-corrosion treatment.

All fasteners and hardware (including hinges) shall be made of 18/10 stainless steel (NFE 25.033).

2.1.3.3. Aluminium

The reference standard is NF EN 573-1. Parts used in a supporting structure shall be chosen from the "6000" series. For parts which are not used in a supporting structure, the "1000" series shall be acceptable.

The alloys are to be weldable.

The parts shall be carefully deburred and the welds shall be brushed before any protective treatment.

The visible parts of equipment shall be treated by the application of paintwork performed according to a "Qualicoat"-type procedure.

General technical requirements

2.1.3.4. PMMA

The PMMA shall meet at least the following characteristics:

	Flat parts machined "cast" PMMA	Flat parts unmachined "extruded" PMMA
• Opal white (values for a test piece of 3mm thick)		
• Tensile strength	> 75 MPa	> 70 MPa
• Bending strength	> 130 MPa	> 120 MPa
• Bending modulus	> 3,250 MPa	> 3,000 MPa
• Unnotched CHARPY impact test strength	> 12 MPa	>10 MPa
• Expansion	< 1 mm / 1 m / 10°C	<1 mm / 1 m / 10°C
• Light transmittance	> 50 %	>33 %

The thermoformed panels shall be made of white, light diffusing, extruded PMMA in compliance with the sheet manufacturer's heating parameters.

Where parts made of PMMA are more than 100 cm high, they shall be hung from the top by an adhesive PMMA cleat.

The thickness of the sheets shall be calculated in compliance with the tensile strength standards set out above.

2.1.3.5. Polycarbonate

The polycarbonate sheet shall meet at least the following characteristics:

- Uncoloured appearance
- Density > 1.2 g/cm3
- Tensile strength: 60 Mpa
- Expansion < 0.7 mm / 1 m / 10°C
- Light transmittance > 90%

2.1.3.6. Expanded foam

These following characteristics must be met:

- Material 9010 white PVC
- Density > 50 g/cm3
- UV-stabilized: 14 MPa
- Shore hardness D > 75
- Expansion < 1 mm / 1 m / 10°C

2.1.3.7. Paint

Painted parts must have an even appearance across their entire surface.

Defects such as pores, fissures, grains of dust, runs or waves of paint shall not be tolerated.

General technical requirements

Samples of painted rough parts shall be tested and accepted by RENAULT, after having undergone the following tests performed by a certified body:

- Colour based on a LAB test with a MINOLTA 508 D colorimeter with D65 illuminant and the observer at 10° and specular component included (the tolerances in the CIELAB colour space are L +/- 1, a +/-1.5, b +/- 1.5).
- Gloss at 40 °: based on a test according to NF T 30064 standard.
- Gloss at 60 °: based on a test according to NF T 30064 standard
- Adhesion: resistance to peeling based on grid test.

  Class 1, as per P UW 150 1. NF T 30038 standard
- Colourfastness:

  QUV as per NF T 30036 after 200 hours of exposure.

Samples of each of the elements shall be supplied, upon request, to RENAULT for inspection.

2.1.4. ELECTRICAL EQUIPMENT

Assemblies with electrical equipment shall comply with the essential safety requirements of the European Union. Within this framework, the supplier shall obtain a certificate (for each type of equipment) which must clearly state the compliance of the assemblies, and thus of the components, with:

- requirements relating to the safety and protection of users and all other persons (directive 73/23/EEC without any lower voltage threshold)
- requirements relating to electromagnetic compatibility (directive 89/336/EEC).

The rating plate on each item of equipment shall display the CE mark indicating compliance with these requirements.

The regulations relating to low-voltage signage in force in each of the countries concerned shall be complied with taking climatic conditions into account.

In addition, the following requirements shall be met:

Electrical equipment shall be compliant with the standards in force from the series NFC 15-100, NFC 20-010 and NFC 20-030, NFC 71, NFC 32 for France and the IEC 60364 international standard.

This concerns the following in particular:

- Category one electrical installations and low-voltage illuminated signage installations.
- The fire behaviour of electrical equipment and the degree of protection of enclosures,
- Flexible and rigid low-voltage cables.

In addition, the equipment shall comply regulations relating to the suppression of interference in inhabited areas and shall thus be delivered with interference suppression.

General technical requirements

2.1.4.1 IP rating

All the electrical equipment shall have a protection rating of at least IP 44-D.

2.1.4.2 Protection against electric shock

All equipment shall be "class 1".

2.1.4.3 Fasteners

The converters shall be placed in areas not subject to standing water.

The cables and sheaths shall be fastened to structures at 50 cm intervals.

2.1.4.4 Cable routing

Every cable or sheath passing through a metal part shall be routed through a cable gland.

Connection boxes.

An IP 44 sealed plastic connection box shall be provided at the inlet to each assembly. This box shall be equipped with a 5-input connection pin for 4 mm wiring.

All the connection boxes shall have the markings P1+P2+P3+T+N.

2.1.4.5 LEDs

The white LEDs used shall have the following characteristics:

- Lifetime: 50,000 hours for a loss of initial luminous flux of 50 % at the end of the period
- 5 year guarantee for operation 10 hours per day with a maximum loss of luminous flux of 20 %
- Operating temperature of LEDs: between - 20° C and +50 °C.
- Minimum protection index: IP 67
- The LEDs used must comply with the following international standards: IEC 62504 TS Ed. 1, IEC 61231, IEC 62560 Ed 1, IEC 62031 LED module safety, IEC 61347-2-13 LED control gear.

2.1.4.6 Converters

The power supply converters for the LEDs shall have the following characteristics:

- Wide power supply voltage range (100 to 300 volts)
- Reversible protection against increase in temperature and overload
- Protection against short-circuits with automatic restart
- Minimum protection index: IP 67
- Operation compliant with: EN 55015, EN 61000-3-2, EN 61547, EN 61558-2-17

General technical requirements

2.1.5. FASTENERS AND HARDWARE

All fasteners and hardware used shall be made of stainless steel (non-magnetizable).

Aluminium "pop" rivets are accepted as long as the steel rods are systematically removed.

For welding, the wires and electrodes are to be compliant with NF 81.830.

2.1.6. ANCHORING SYSTEMS AND FASTENINGS

The plinths for all equipments shall be completely removable without having to remove another element of the assembly. The plinths shall cover the attachment plates or fastenings. The attachment plates shall be easily accessible once the plinths have been removed.

For each of the assemblies which require a foundation block or fastening to a separate structure, the signwriter shall provide the elements necessary, as well as the conditions to be used to make design calculations for these elements (wind conditions and design calculation methods).

2.1.7. IDENTIFICATION PLATE

Each finished product shall be marked with a metal identification plate on the structure which shall show at least the following information:

- Name of the signwriter
- Product code and batch
- Month and year of manufacturing
- The CE Marking if it is illuminated.

2.1.8. STORAGE

The finished products shall be stored in a dry and well-ventilated location.

RENAULT inspectors shall be able to have access to them at any time.

2.2. Guarantees

The suppliers undertake to offer the guarantee conditions below for their products:

- 2 year guarantee on the installation against defects and faulty workmanship,
- 5 year guarantee on the electrical equipment including the LEDs and converters,
- 5 year guarantee on the adhesive elements,
- 5 year guarantee on digital printing (anti UV treatment),
- 5 year guarantee on workshop-lacquered sheet metal,
- 5 year guarantee on the chrome-plated diamonds,
- 7 year guarantee on sheet metal and profiles pre-lacquered by the aluminium manufacturer,
- 10 year guarantee on the internal structures,
- 10 year guarantee on the PMMA acrylic panels.

2
General remarks

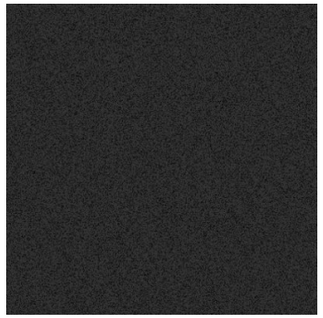
Overview

Description

The workshop bays accessible to customers (presence of a customer reception) are identified by a metallic dark gray cladding or trim bearing the identification of the reception and the numbering of the workshop doors.

This cladding integrates into the general façade which consists of white cladding.

Colours and materials



Metallic dark grey

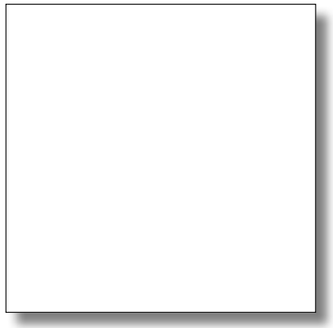
- Post-lacquered aluminium sheeting, 20/10 mm thick
- Satin finish with 30% gloss
- Metallic finish
- Ref. AXALTA - Alesta IP Anthracite Grey X930500089

Dark grey equivalent to RAL 7021

- Post-lacquered steel
- Pre-lacquered aluminium sheeting, 15/10 mm thick
- Satin finish with 40% gloss

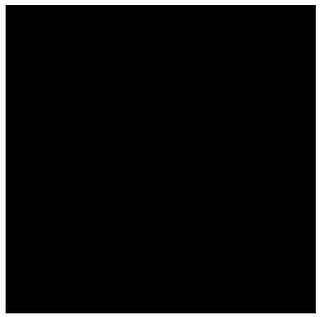
Pantone 7408 EC yellow

- Pre-lacquered Aluminium sheeting, 15/10 mm thick, with satin finish with 40% gloss



Pure White

- Satin or matt adhesive
- Light diffusing PMMA Light transmittance 50%



Black equivalent to RAL 9005

- Black & White PMMA

3
Technical principles

General presentation

Cladding principle

The workshop bays are cladded by door group (doors having the same function).

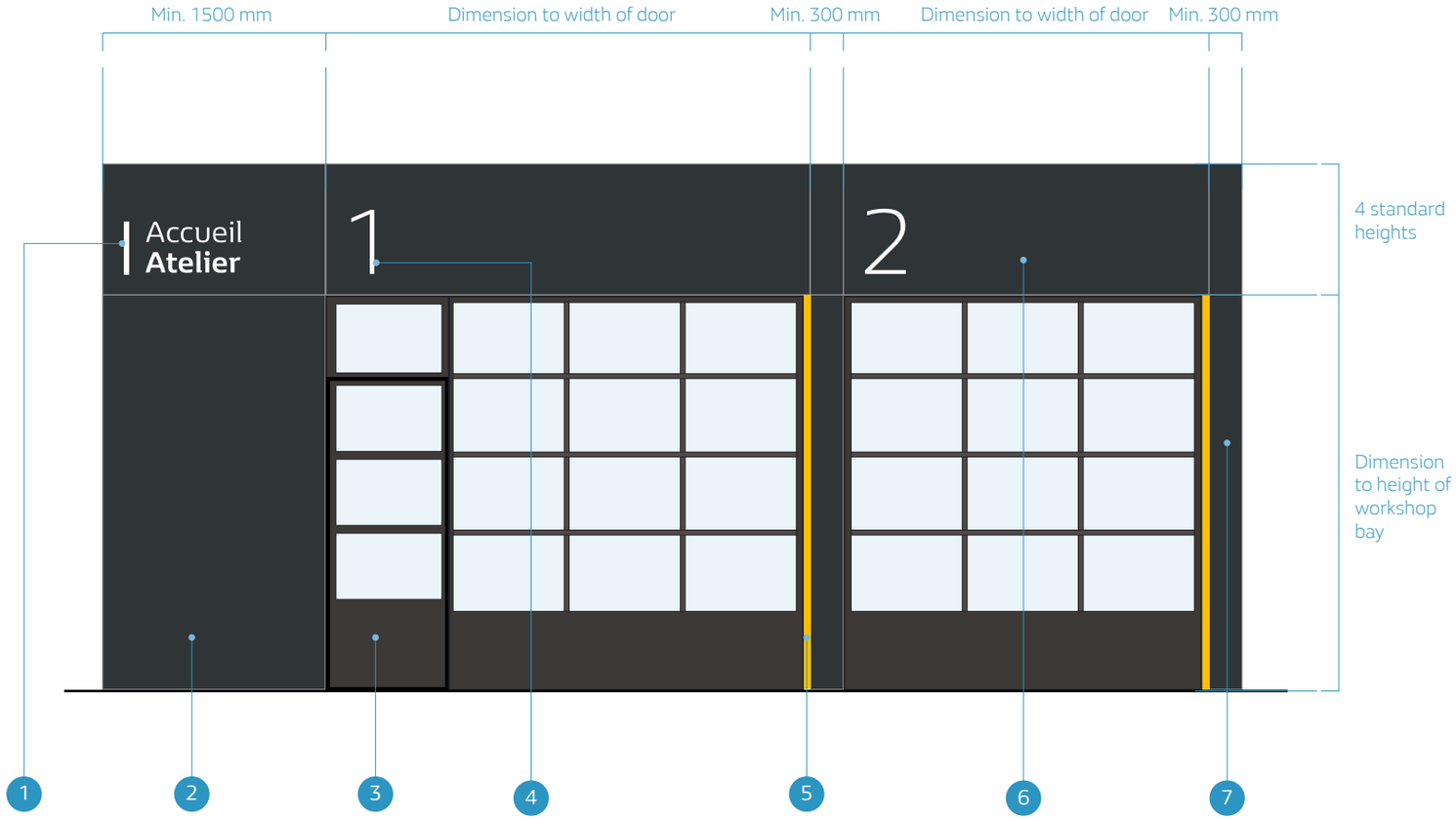
The cladding consists of panels with raised edges in metallic grey aluminium sheet.

On the right side, a yellow vertical strip accentuates the visibility of each of the workshop bays.

The identification of the workshop bays is completed with a text.

Key

1. Text identifying the group of workshop bays
2. Workshop bay cladding side panel
3. Workshop bay door painted with dark grey RAL 7021 with 40% gloss lacquer
4. Workshop bay numbering
5. Vertical strip, Pantone yellow 7408 EC with 40% gloss
6. Workshop bay cladding upper banner
7. Workshop bay cladding side panel with minimum width of 300 mm



Positioning of side panel

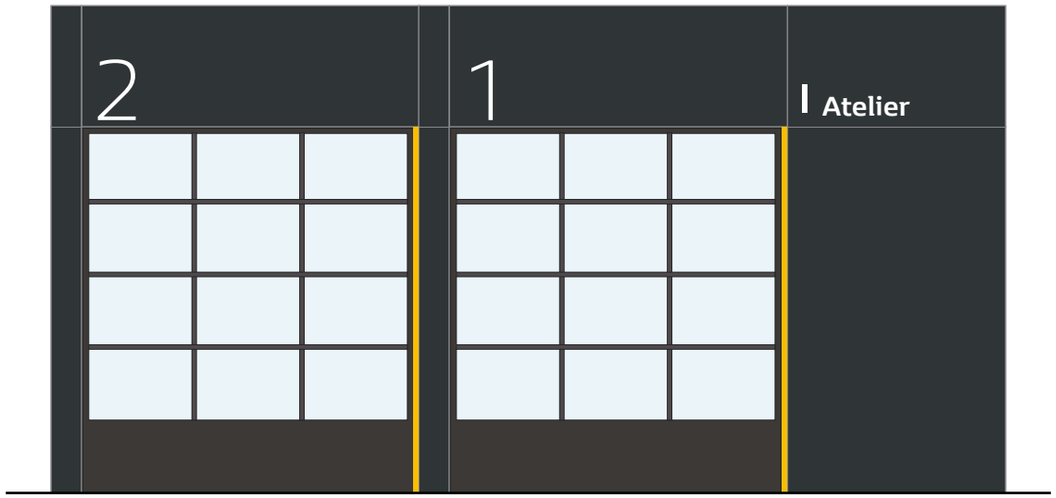
Principle

The cladding side panel can be positioned either on the right or the left of the workshop bay group.

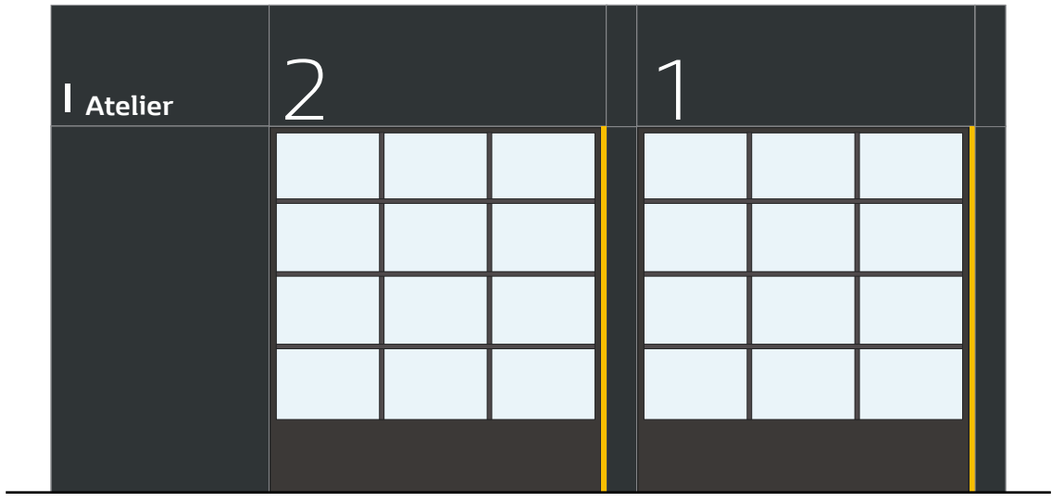
Key

1. Side panel with text positioned to right of workshop bay group
2. Side panel with text positioned to left of workshop bay group

1



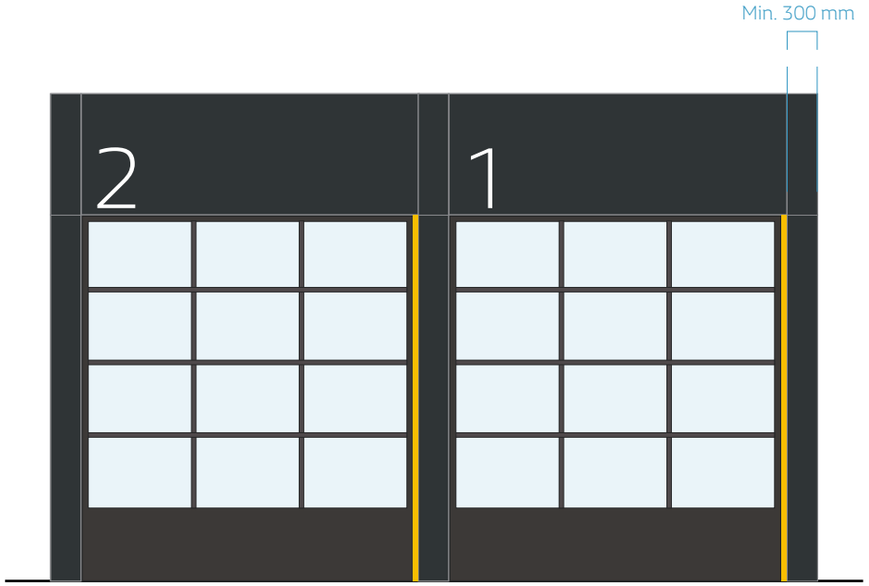
2

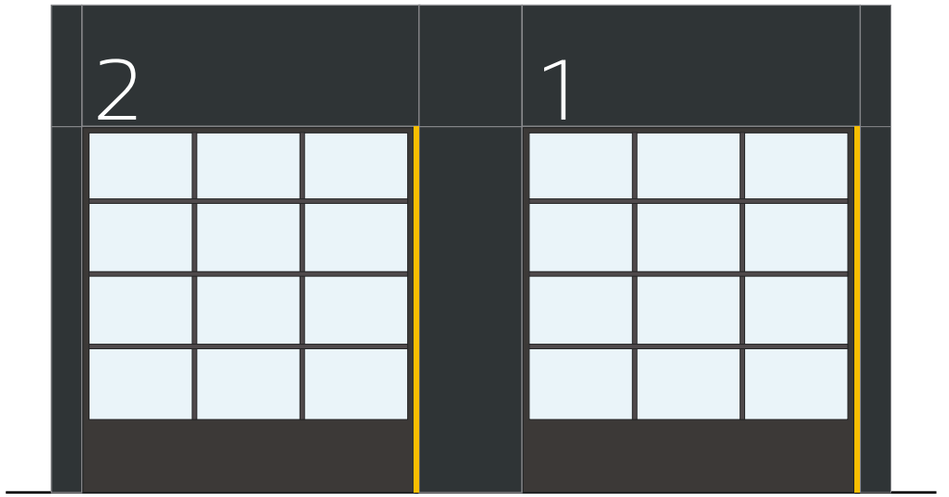


Minimum width of side panel

Principle

The cladding side panel shall have a minimum width of 300 mm.



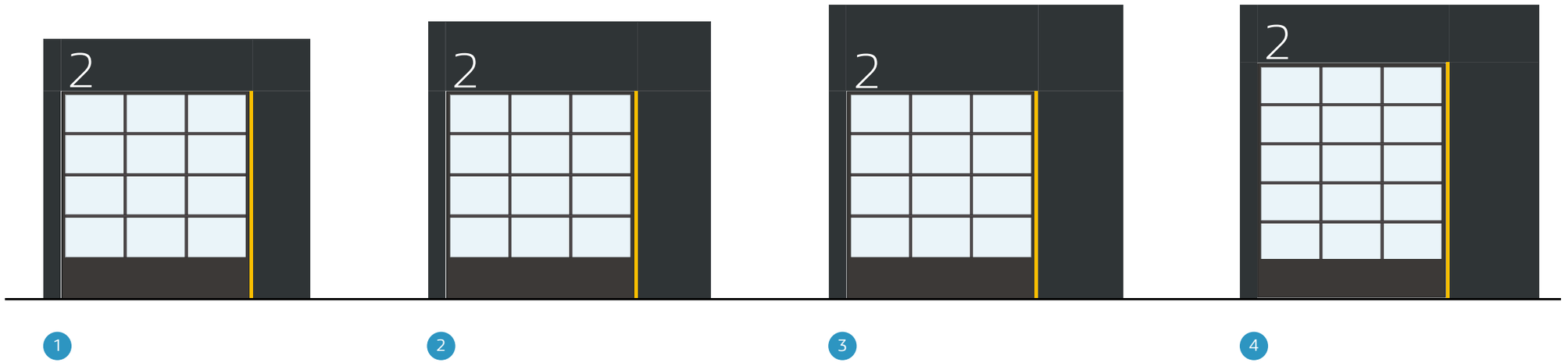


Range of banner heights

Principle

4 different standard heights of banners are provided, adapted to different situations:

1. 900 mm banner for < 6 m façade,
2. 1,200 mm banner for 6 m façade,
3. 1,500 mm banner for > 6.6 m façade,
4. 1,000 mm banner for high Renault Pro+ workshop bays, requiring a façade height > 6.6 m.



Height of the workshop bay banner

Principles

- The height of the workshop bay banner shall be adapted according to the height of the façade.
- The banner height must be less than the height of the upper part of the white cladding.
- The width of the side panel shall be proportional to the height of the banner.
- The façade consists of white cladding, the perceived quality of which should be verified when installing the new bay signage.

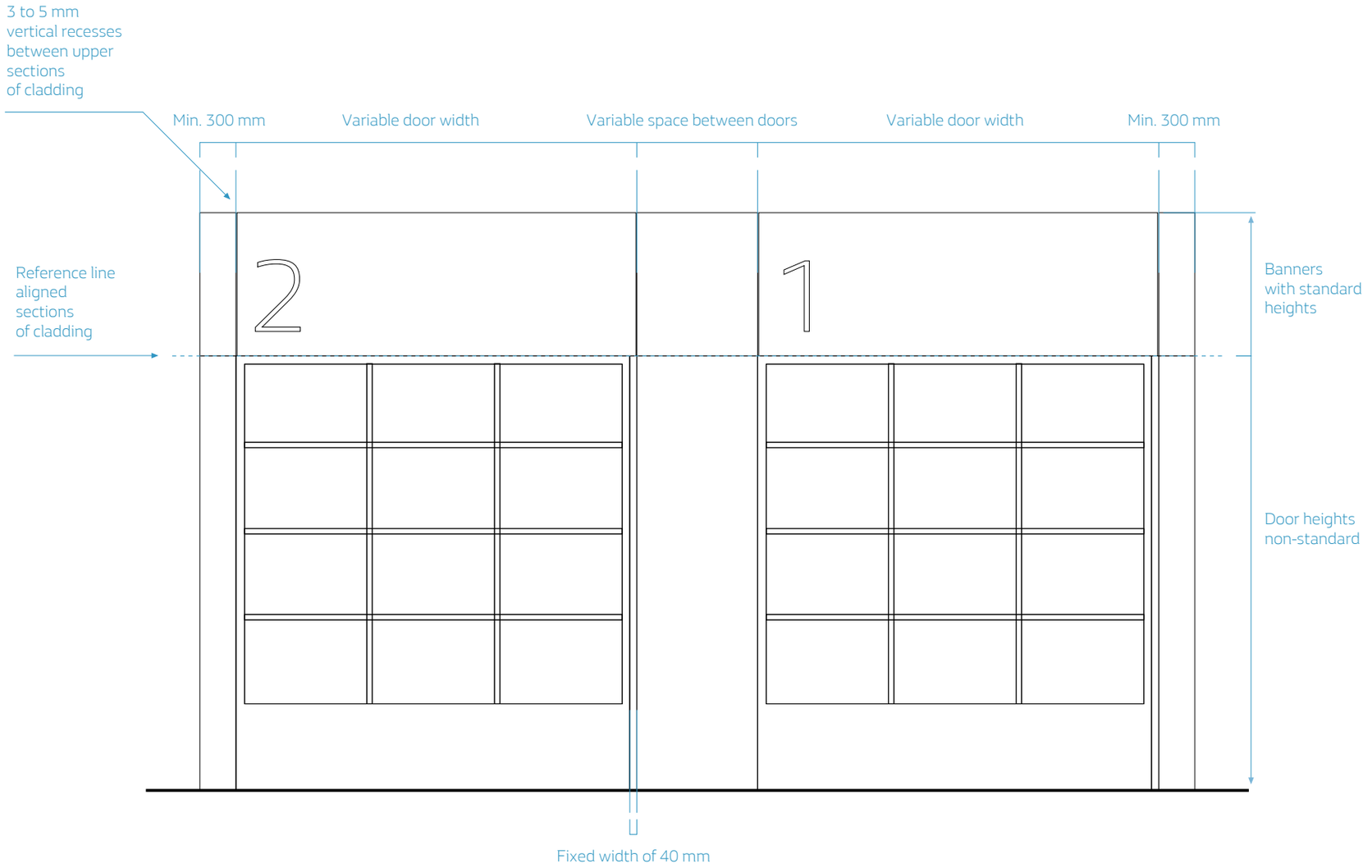
Key

1. High façades over 6.6 m
2. Standard façades 6 m high
3. Low façades less than 6 m high

Breakdown of surfaces

Principles

- The different parts are aligned with respect to a reference line: that of the bottom of the lintel of the group of workshop doors.
- The cladding side panels shall have a minimum width of 300 mm. They shall be dimensioned to the specific height of each group of workshop doors.
- The upper cladding banners have standard heights.
- The yellow vertical strip is dimensioned to the height of the workshop door. It is always 40 mm in width.
- The width of the workshop doors is non-standard and requires adaptation to the length of each upper banner.
- The space between 2 workshop doors is also variable.
- Horizontal joints are edge to edge.
- Vertical joints between banner elements include a 3 to 5 mm recess to allow for expansion.



Positioning of markings

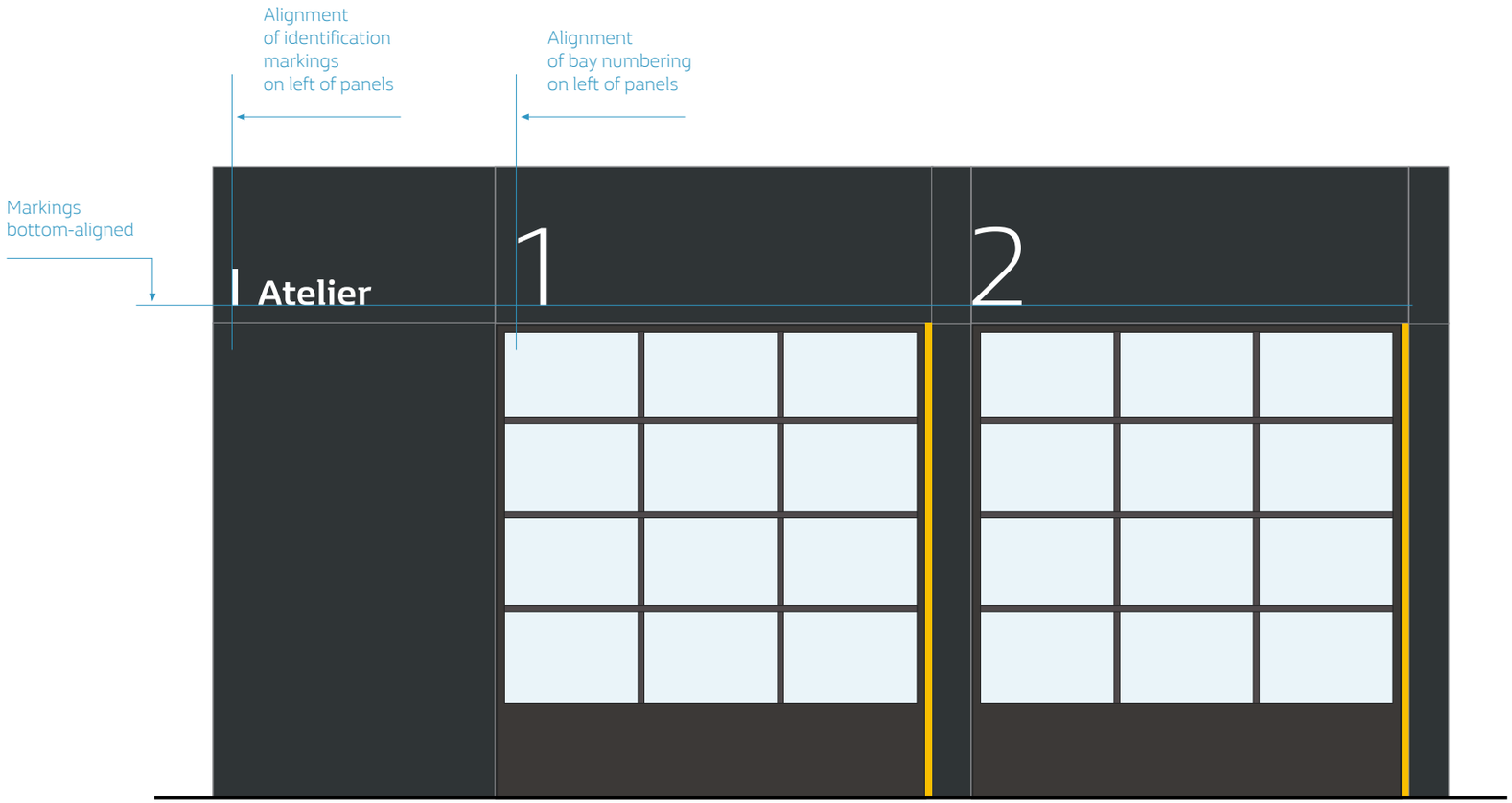
Principle

The markings follow the rules set out below:

- Bottom alignment of all markings,
- Alignment of identification marking on left of panels,
- Alignment of bay numbering on left of panels.

NOTE: The incrementation works from the identification marking. In the case of several bay groups, the numbering picks up where the previous bay left off, so as never to have two bays on the same site with the same number.

In the absence of identification marking, numbering is done in the direction of the main customer flow.



Identification markings

Principle

4 designations have been selected to identify workshop bays. These correspond to cases where a customer reception is present (or not).

Atelier (worshop)

identifies workshops without a pedestrian access door or a customer reception specific to the group of workshop bays in question.

Accueil Atelier (Workshop Reception)

identifies workshops featuring an integrated reception.

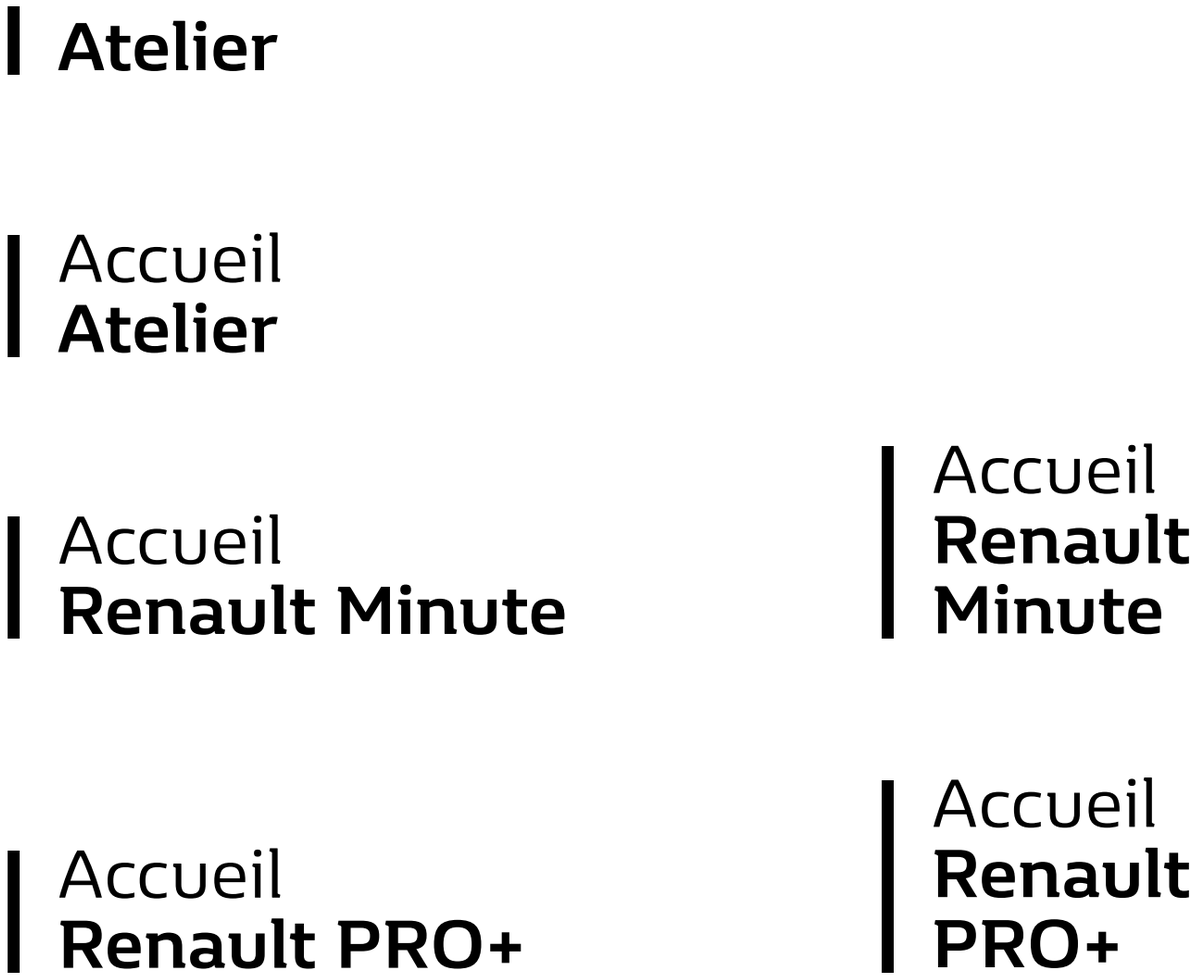
Accueil Renault Minute (Renault Minute Reception)

identifies Renault Minute bays featuring a dedicated reception (exceptionally on 3 lines).

Accueil Renault Pro+ (Renault Pro+ Reception)

identifies Renault Pro+ bays featuring a dedicated reception (exceptionally on 3 lines).

NOTE: These designations, brief and limited in number, are to be adapted by each country.

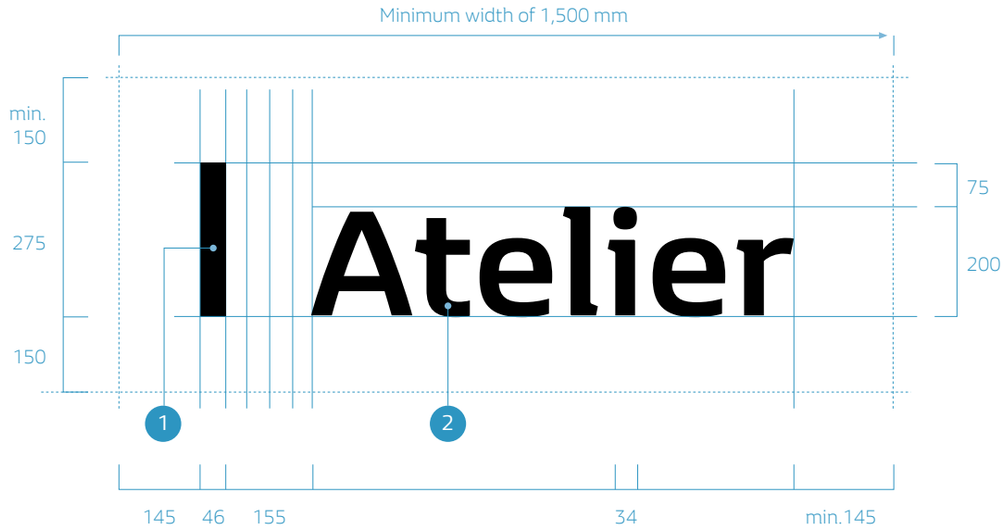


Layout of identification markings on one line

Key

1. Strip
2. The word "Atelier", Renault Life Bold typeface, left-aligned, tracking +20%

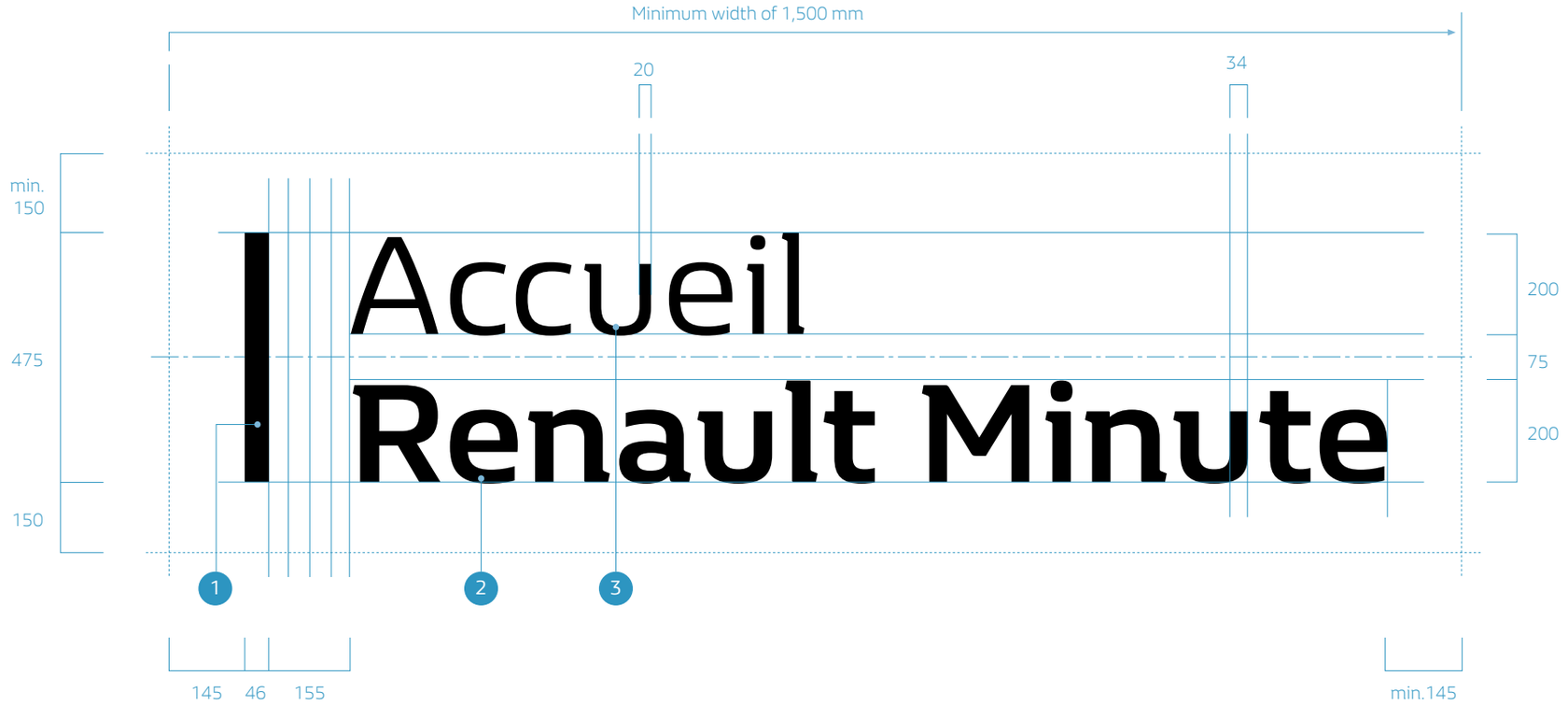
NOTE: This size of marking offers optimal legibility at up to 60 m from the façade.



Layout of identification markings on 2 lines

Key

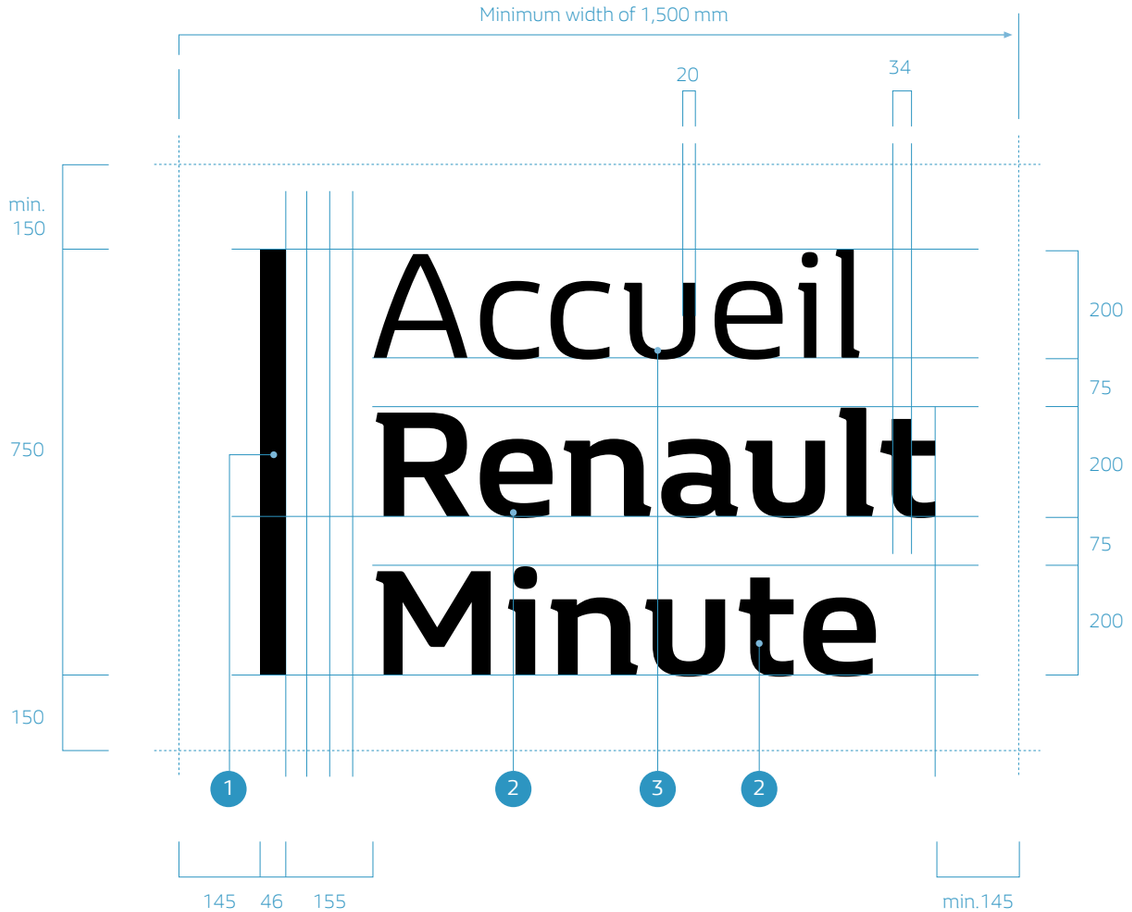
1. Strip
2. The word "Accueil", Renault Life typeface, left-aligned, tracking +20%
3. The term "Renault Minute", Renault Life Bold typeface, left-aligned, tracking +20%



Layout of identification markings on 3 lines

Key

1. Strip
2. The word "Accueil", Renault Life typeface, left-aligned, tracking +20%
3. The term "Renault Minute", Renault Life Bold typeface, left-aligned, tracking +20%

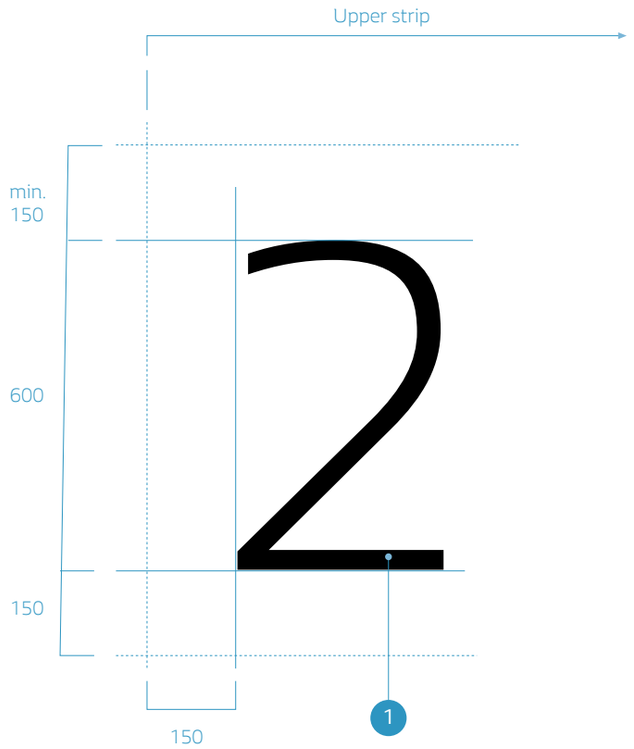


Layout of door numbering

Key

1. Number, Renault Life light typography, left aligned, tracking + 20%, bottom aligned

NOTE: This size of marking offers optimal legibility at up to 180 m from the façade.



Special case of marking alignment

Principle

The markings are bottom aligned.

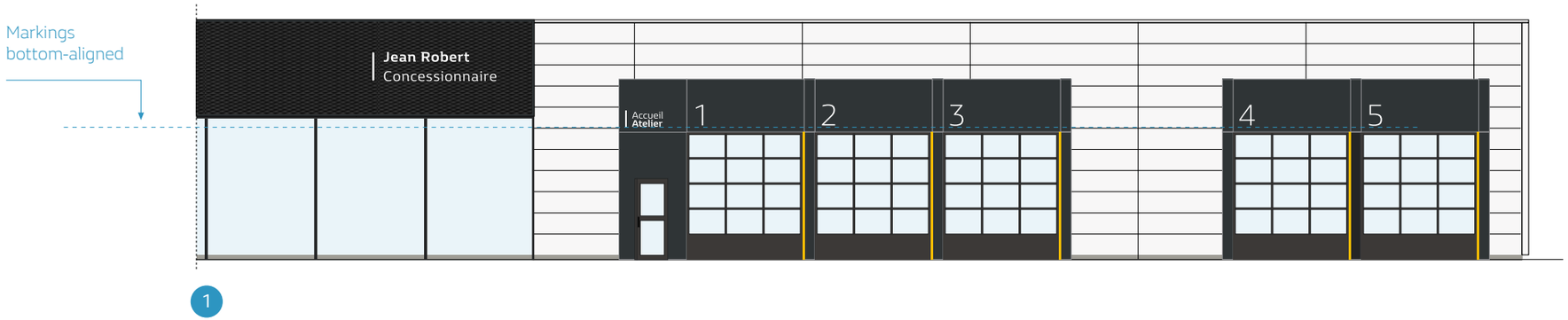
When workshop bays of different heights are juxtaposed on the same façade, the bottom alignment is carried over from the highest of the markings.

This rule applies on façade by façade.

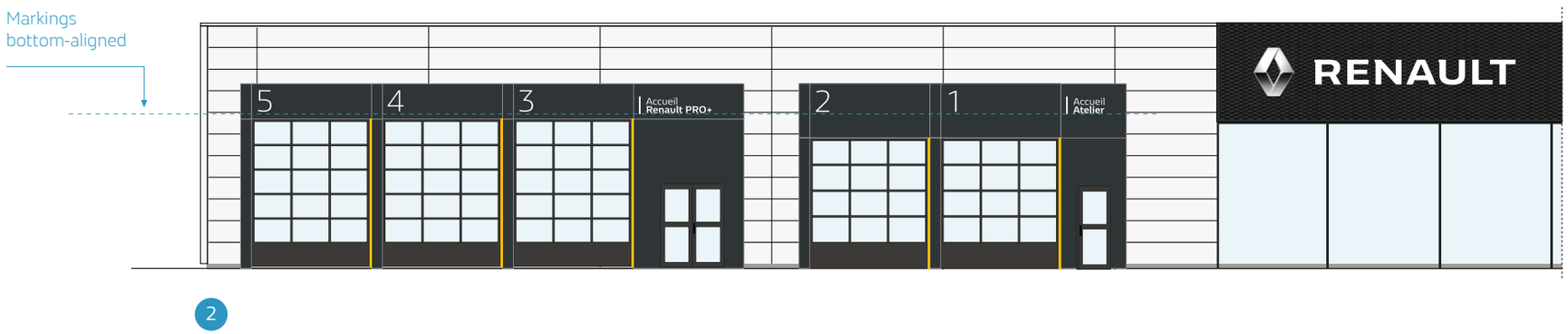
Alignments may be variable between main façade and secondary façades, but must be the same along the same façade.

Key

1. Building height 4,800 mm, marking features on 600 mm high banner.
2. Building height 4,200 mm, marking moves onto side panel while upper banner has a height of 300 mm.



1



2

Specific cases of low buildings

Markings in the side panel

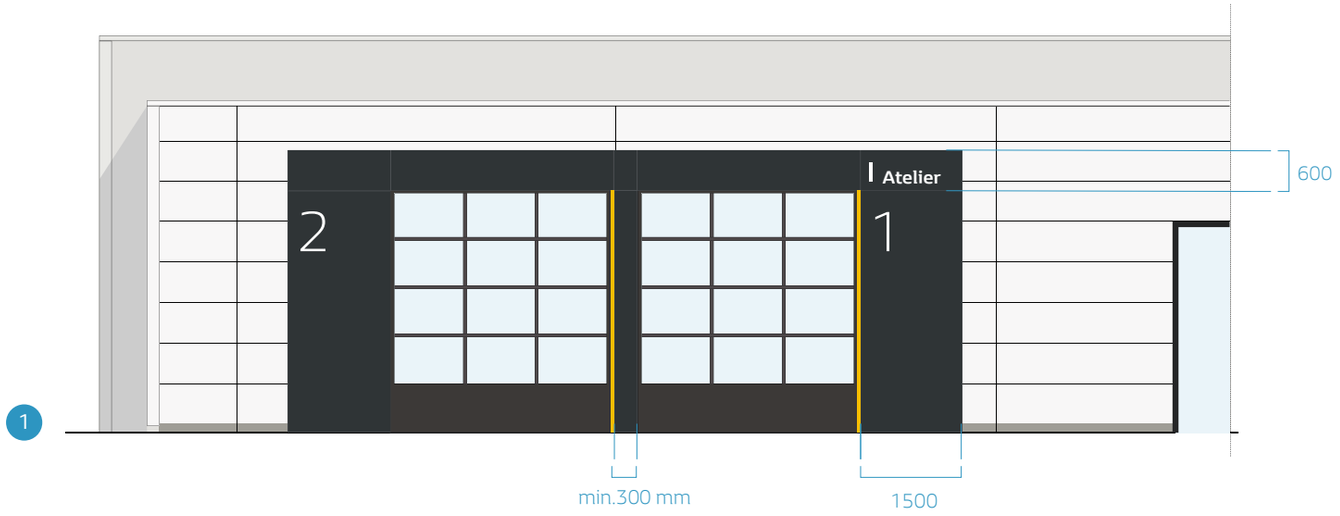
- Certain circumstances preclude the usage of a standard upper banner

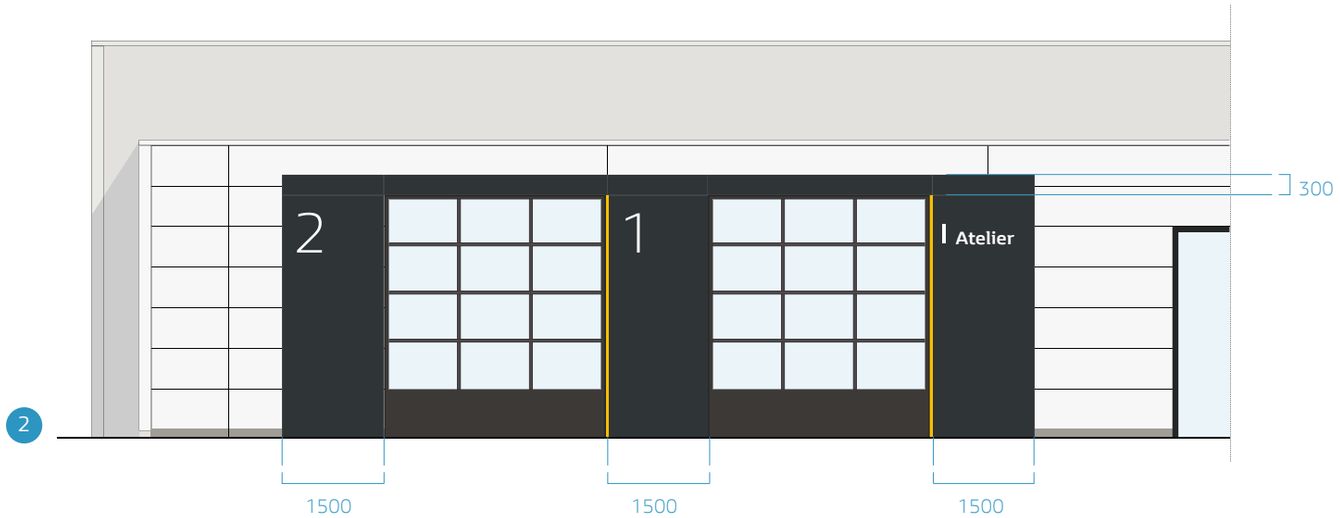
  In this case the side panel is used for bay numbering.

- The markings use the standard guideline (dimensions and positioning) insofar as the minimum panel width is 1,500 mm.
- For these low building applications, the upper banners shall be of standard height: 300 or 600 mm.

Key

1. Building height 4,800 mm, marking features on 600 mm high banner.
2. Building height 4,200 mm, marking moves onto side panel while upper banner has a height of 300 mm.





Manufacturing details

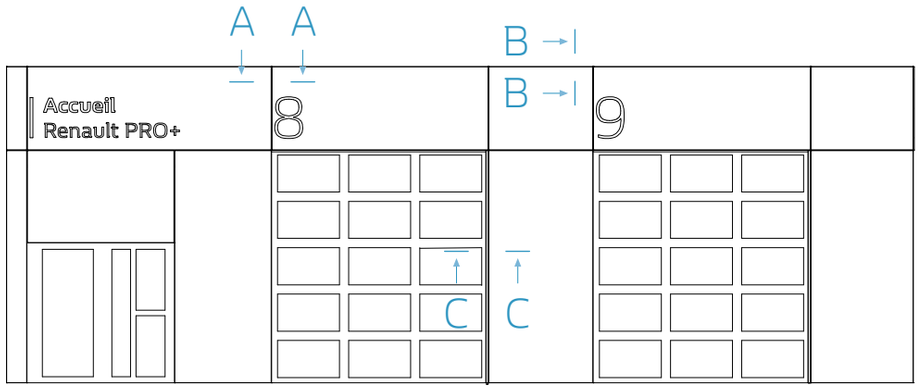
General principle

The workshop bay cladding is made with aluminium panels fixed to a wall mounted aluminium frame.

These panels feature cut-outs corresponding to the markings for illumination purposes.

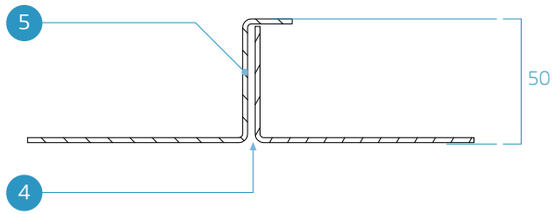
The markings are illuminated by chain-LEDs mounted perpendicular to the panels.

The yellow vertical strip protrudes by 40 mm with respect to the cladding panels.



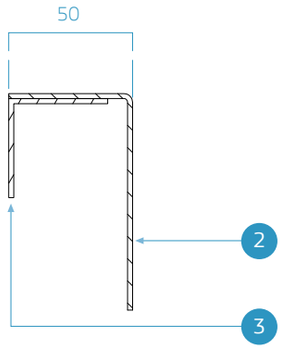
Key

1. Non-illuminated yellow vertical strip
2. Aluminium sheet cladding with raised edges
3. Aluminium panel mounting bracket
4. 4 to 5 mm recess
5. Fitting between elements



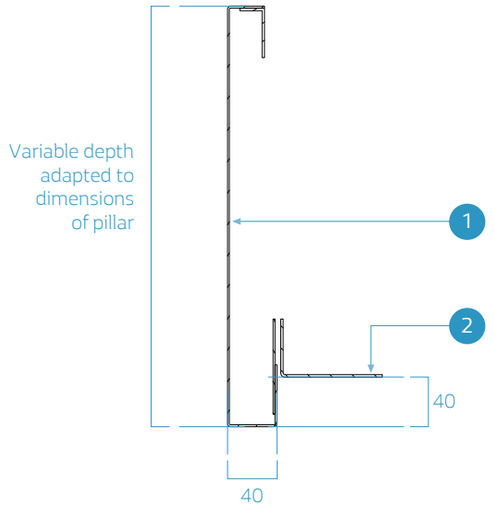
A-A

Vertical junction between panels



B-B

Horizontal junction between panels



C-C

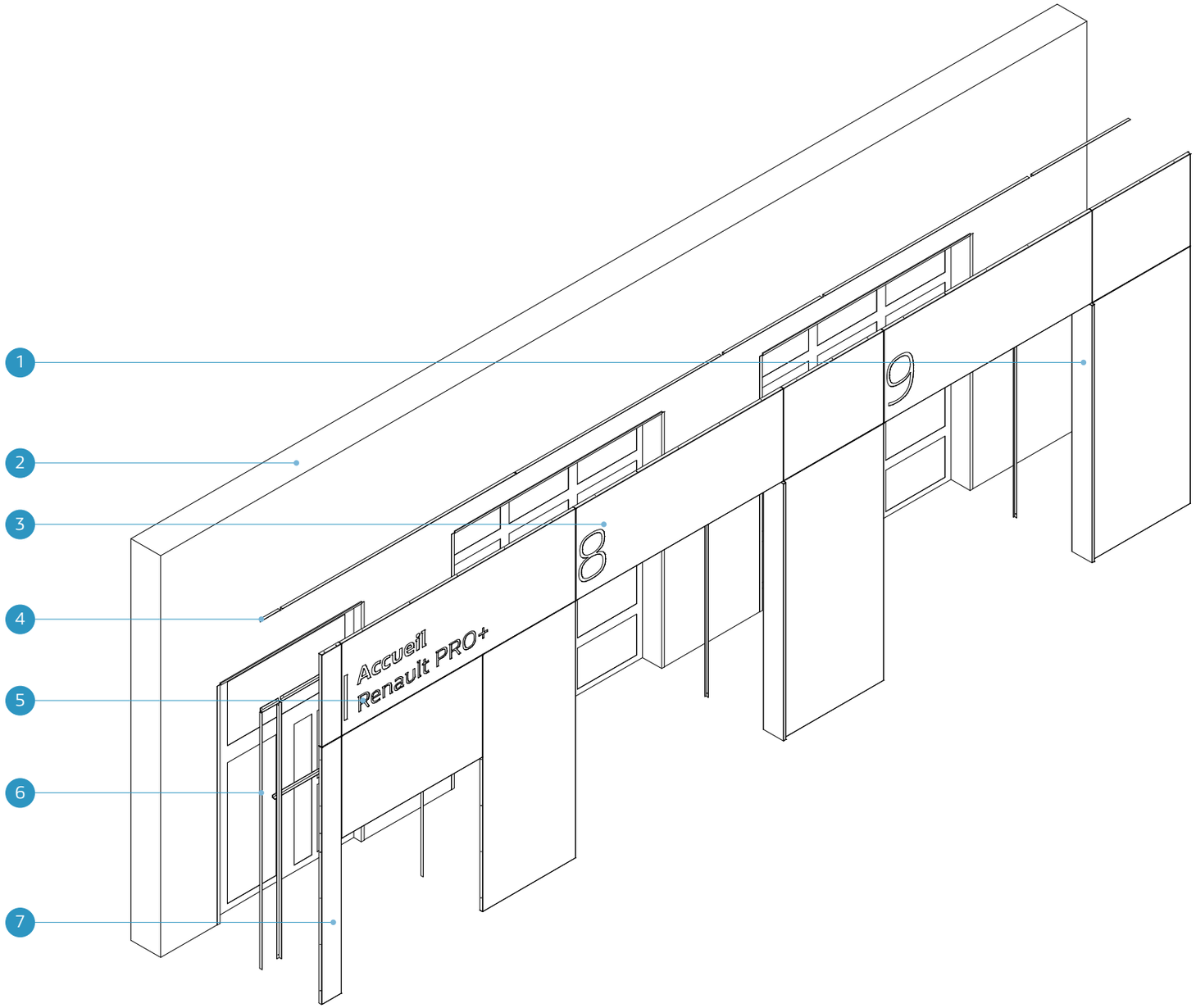
Horizontal junction on yellow strip

Exploded view

Key

1. Non-illuminated yellow vertical strip
2. Wall
3. Upper banner with illuminated door number, aluminium sheet with raised edges, in metallic dark grey, white PMMA pasted on the back of the front panel
4. Aluminium horizontal rail
5. Upper banner with illuminated identification marking, aluminium sheet with raised edges, in metallic dark grey, white PMMA pasted on the back of the front panel
6. Aluminium panel mounting bracket
7. Side panels, aluminium sheet with raised edges in metallic dark grey

NOTE: Unpanelled vertical and horizontal door sections and the doors themselves shall be painted dark grey RAL 7021 with 40% gloss lacquer.



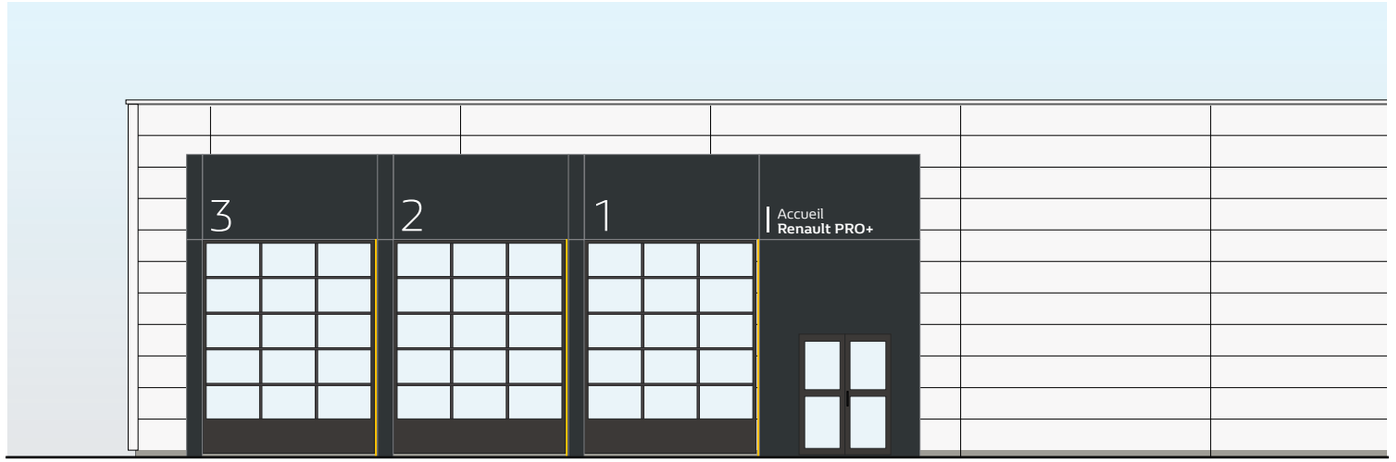
Lighting for identification markings

Principle

Identification markings are backlit.

Key

1. Day view
2. Lighting for identification markings



1

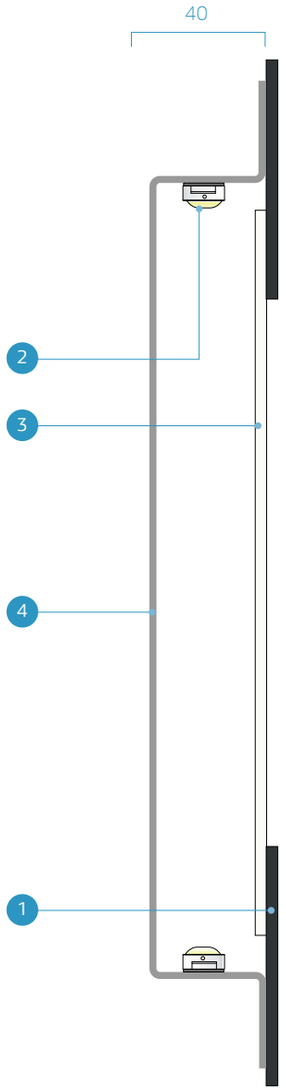
2

Details for lighting of identification markings

Key

Given the shallow cladding depth on the façade, the LED lighting shall be installed perpendicular to the markings.

This requires an independent light box for each of the markings.



Key

1. Front of façade cladding in sheet metal
2. White chain LEDs, IP65 rated, 6,500° K, luminance 250 cd/m2
3. Front face in white light-diffusing PMMA, thk. 3 mm, bonded to the back of the sheet
4. Light box with in pre-lacquered white aluminium sheet, 15/10th mm thick, fixed to the back of the sheet metal

Lighting for identification markings

Description

The face is lit with chain LEDs.

The converter can be common for a group of markings. It shall be mounted so as to be easily accessible for repairs.

Performance characteristics

Performance characteristics

Chain LED with minimum IP65 protection rating.

Temperature: 6,500° K Cool White.

Mean luminance: 250 cd/m2 with a maximum of 300 cd/m2.

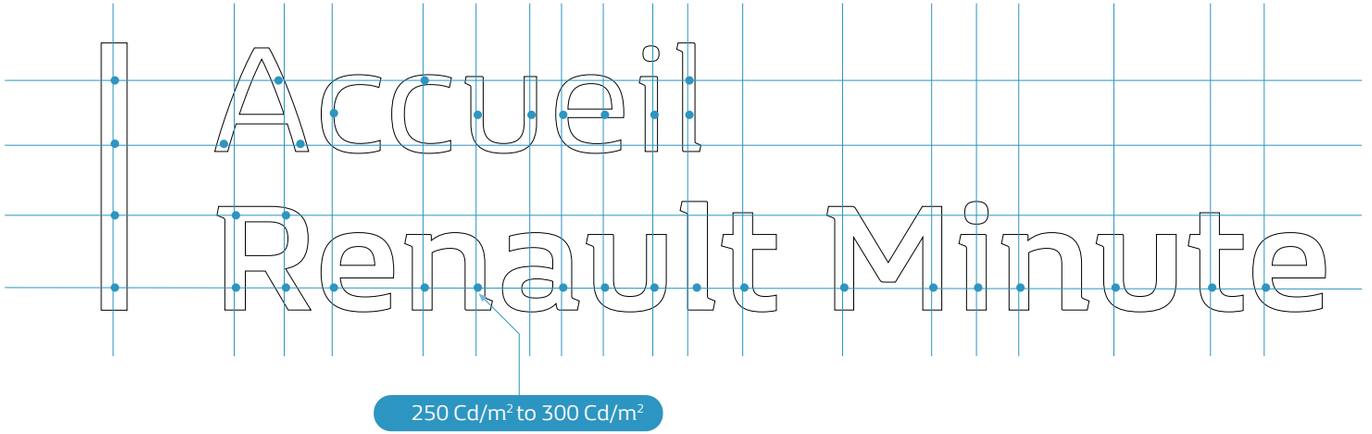
The warranty for all LED lighting systems and parts is 5 years, subject to compliance with conditions of use and maintenance.

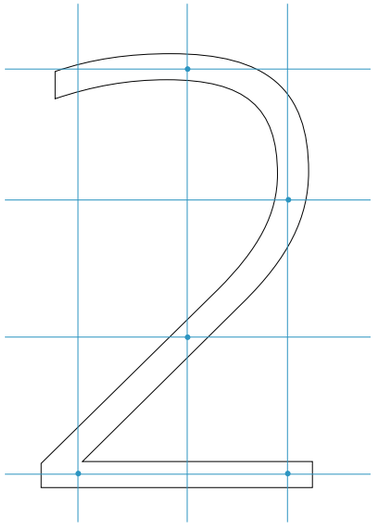
Light output reduced by 50% after 50,000 hours operation.

Minimum guaranteed lifetime: 50,000 hours.

Supply: 220 volts

12 volt converter with regulated voltage, IP 68 protection.





The dots are a schematic representation of the measurement points that should present similar light intensity values in order to obtain even lighting across each of each of the marking components.

The readings, performed with a calibrated luminance meter, should ideally be performed without light interference and at a distance of between 1 and 2 m from the letter face.

"Atelier" façade signage

Principle

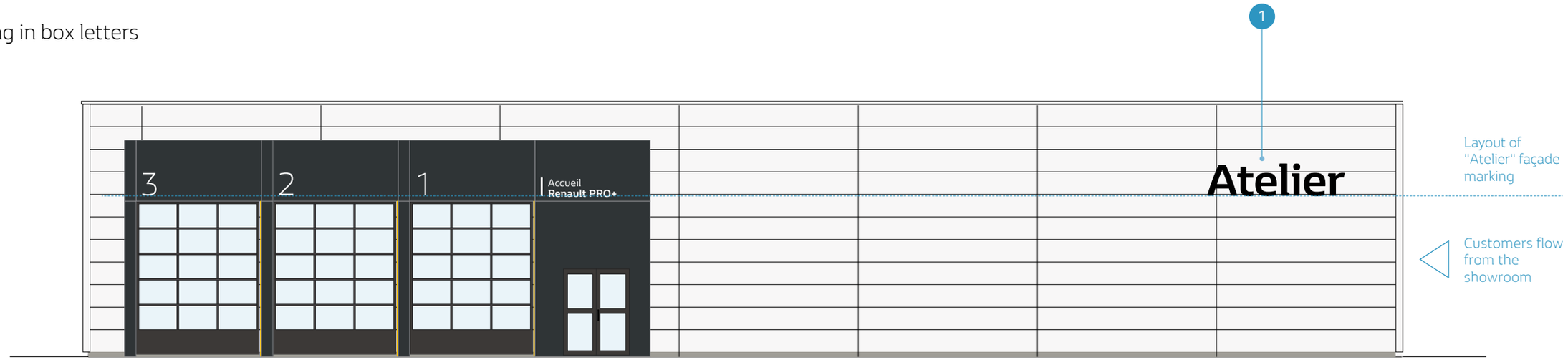
When the workshop bays are located on a secondary façade and remote from the showroom or the movement flows, it is necessary to identify the activity of the secondary façade with a "Atelier" marking.

This marking is reserved for secondary façades. Its use is not permitted on the main façade.

The "Atelier" designation shall be adapted by the country according to the local usage.

Key

1 "Atelier" marking in box letters



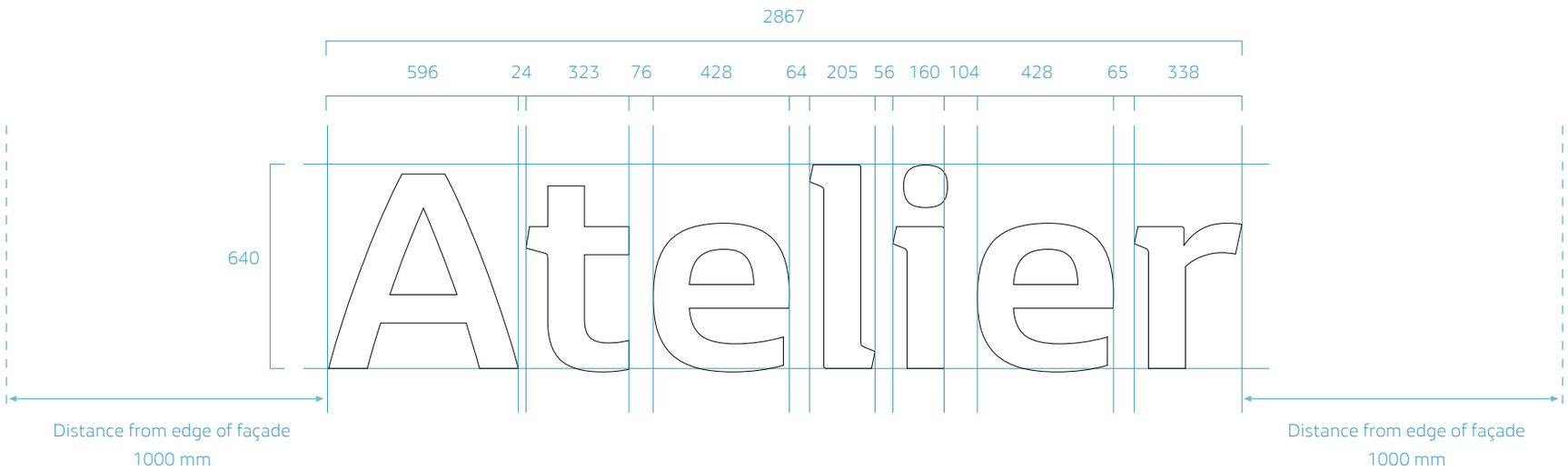
Layout of "Atelier" façade marking

Description

The "Workshop" façade marking is executed in Black & White box letters.

It is located at a distance of 1,000 mm from the edge of the façade and is bottom aligned with the height of the bay markings.

Atelier



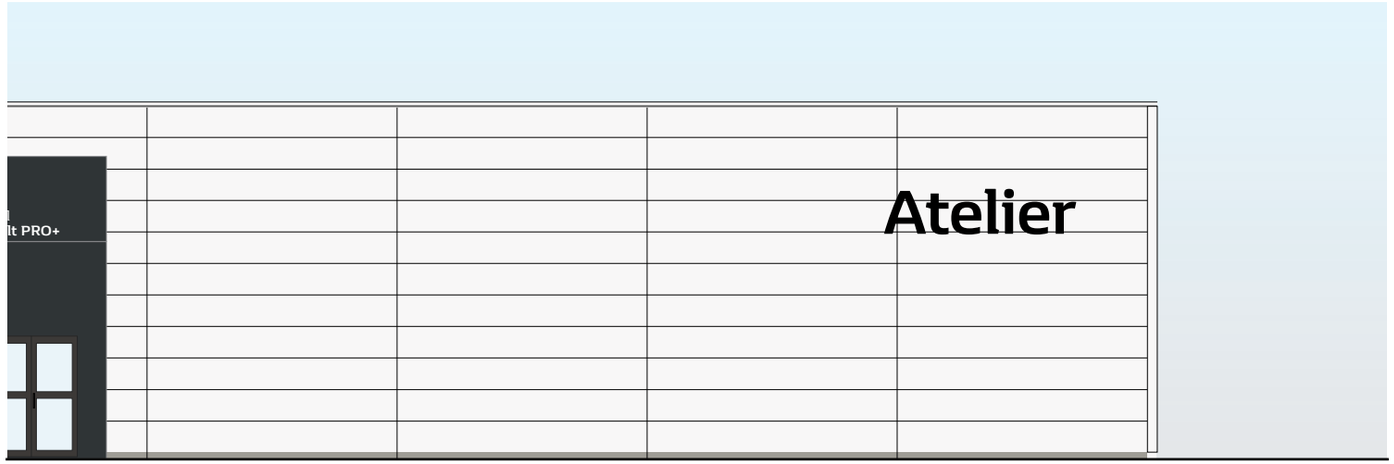
Lighting for "Atelier" façade signage

Principle

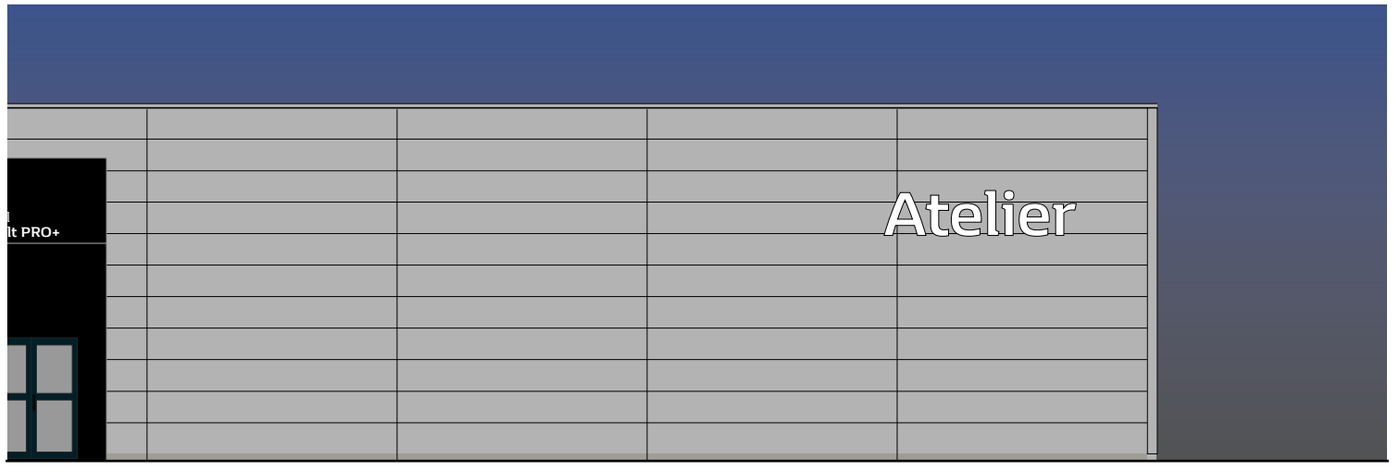
The “Atelier” word lettering is backlit, becoming white when illuminated.

Key

1. Day view
2. Lighting of text



1

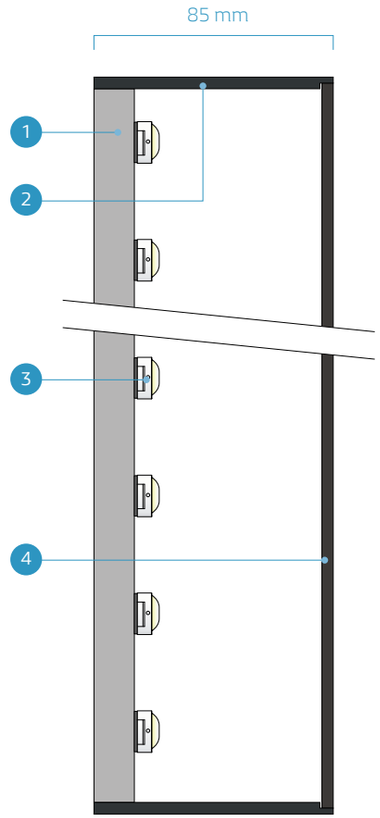


2

Manufacturing principle of the "Atelier" facade marking

Key

1. Backing in 10 or 13 mm expanded PVC
2. Edging in opaque black 30/10th mm thick PMMA, internal finish in matt white adhesive, with shoulder for flush mounting letter face
3. White chain LEDs, IP65 rated, 6,500° K, luminance 250 cd/m2
4. Letter face in white PMMA Black & White, thk. 3 mm, bonded along the edge



Lighting for "Atelier" façade signage

Description

Illumination of the lettering face by chain LEDs mounted on the letter backing.

The converter, which is common for all the letters, is mounted outside the lettering.

Performance characteristics

Chain LED with minimum IP65 protection rating.

Temperature: 6,500° K Cool White.

Mean luminance: 250 cd/m2 with a maximum of 300 cd/m2 .

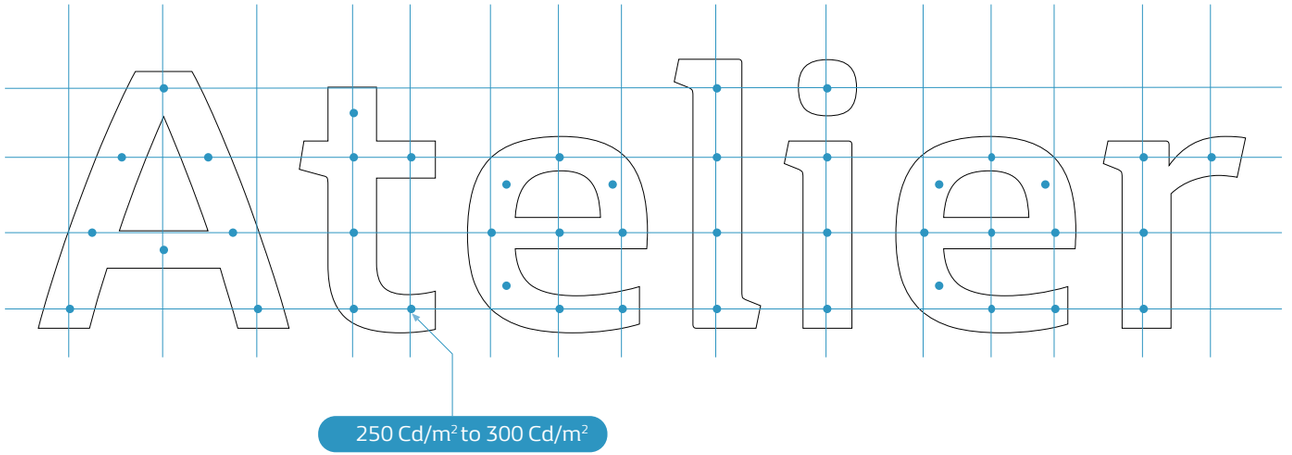
The warranty for all LED lighting systems and parts is 5 years, subject to compliance with conditions of use and maintenance.

Light output reduced by 50% after 50,000 hours operation.

Minimum guaranteed lifetime: 50,000 hours.

Supply: 220 volts

12 volt converter with regulated voltage, IP 68 protection.



The dots are a schematic representation of the measurement points that should present similar light intensity values in order to obtain even lighting across each of each of the letter of the word "Workshop".

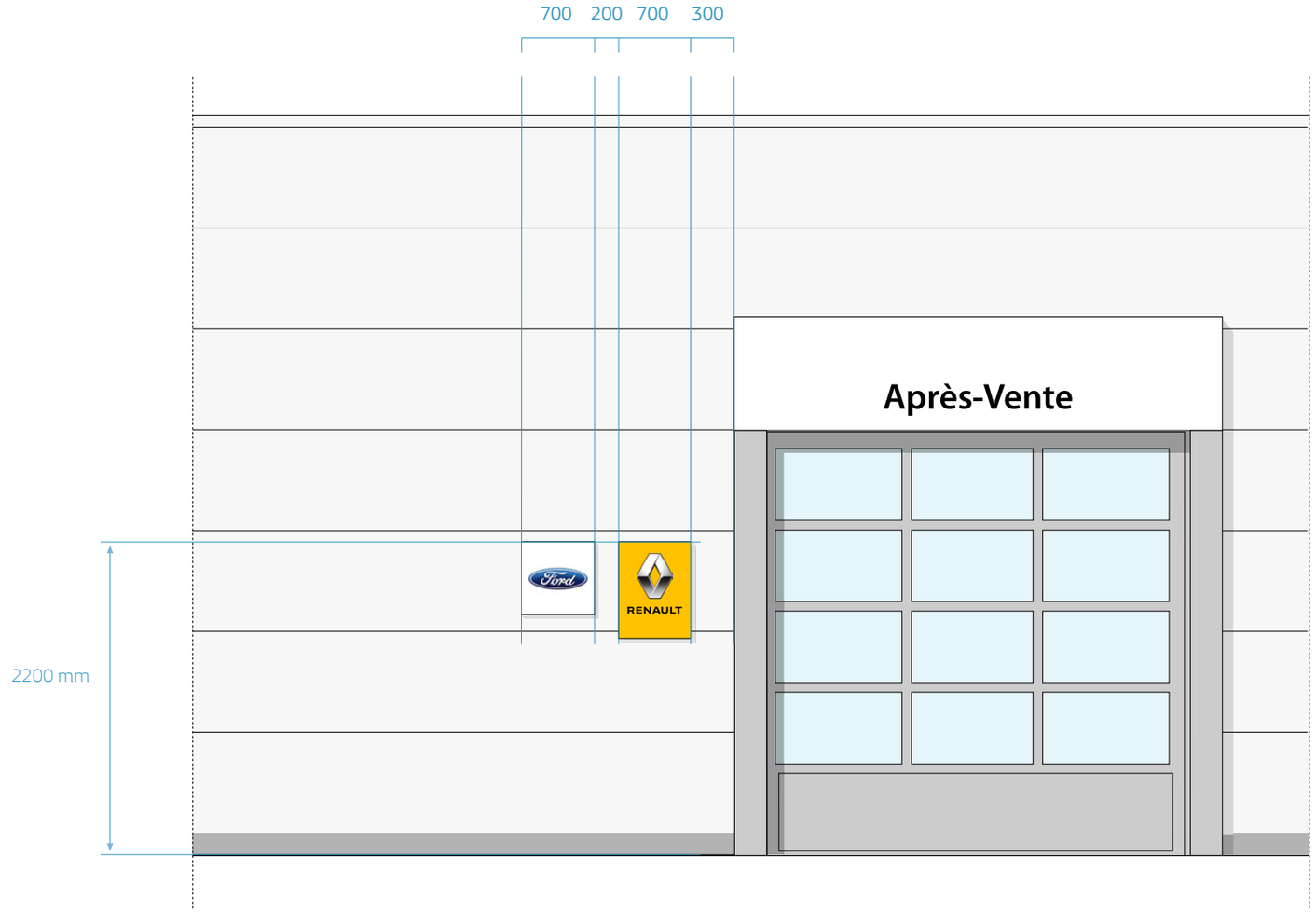
The readings, performed with a calibrated luminance meter, should ideally be performed without light interference and at a distance of between 1 and 2 m from the letter face.

Renault wall sign

Principle

On multibrand sites with neutral workshop bays (which are not dedicated to a brand), Renault After-Sales Identification is done by a wall plate located next to the workshop bay.

This wall plate is made by digital printing on a prelaquered aluminum sheet with raised edges.



Outline of Renault wall sign

Key

1. Front panel in aluminum sheet 15/10 ème, with raised edges, prelaquered Pantone 7408 EC yellow, fitted on 2 brackets in natural aluminum
2. Printed diamond
3. Renault word printed
4. Rivets on upper and lower edges