

BALDOYLE TRAINING CENTRE
SPECIFICATIONS FOR
EXTERNAL ALUMINIUM WINDOWS/CURTAIN WALLING
REPLACEMENTS
JUNE 2025

ELEMENT MATRIX

Element ID	Element Description	Spec Section	System
S7179-01	Roof Windows / Curtain Walling	L10	APS SV45
S7179-02	Ground Floor Aluminium Windows	L10	APS AP134 THERM+
S7135-01	Thermally Insulated Aluminium Doors	L20	APS AP200 THERM+
S7135-02	Commercial Aluminium Doors	L20	APS ACD
S7179/7135-03	Flashings & Perimeter Closures	L10 / L20	Folded Aluminium
S7179/7135-04	Glazing Systems	L10 / L20	Double/Triple Glazing
S7179/7135-05	Ironmongery & Hardware	L10 / L20	APS/Savio

architect:	POVAL WORTHINGTON ARCHITECTS		
project:	BALDOYLE PHASE 2	ref:	S7179
specification:	L10		
topic:	ALUMINIUM WINDOWS		

revision schedule and status

issue No.	amendments	date	checked
A	Clauses amended	3.6.2025	KF

L10 ALUMINIUM ROOF WINDOWS

To be read with preliminaries/manufactures conditions

TYPE OF ROOF WINDOWS INCORARATED INTO SLOPING CURTAIN WALLING

120 GENERAL:

- Drawing references: refer to plans, elevation, sections & schedules.
- Supporting structure: Steelwork / concrete as per drawings.

WINDOW SYSTEM:

- **APS (Aluminium and Plastic Systems Ltd)**

25-27Enterprise Crescent, Ballinderry Road.

Lisburn, BT28 2BP

Tel: 028 9266 0500 Fax: 028 9262 9491

Contact: Kenny Faulkner – 07810 151642

Email: kenny.faulkner@aps-group.co.uk

- Installation to include all above manufactures products, fixing and interfaces necessary to complete the fabrication and installation.
- Appointed fabricator (sub-contractor) must be approved by system supplier (APS Ltd), fabricator details available from APS Ltd.

- Performance criteria to comply with the design/performance requirements and testing subsections.

- Type: Extruded aluminium alloy mullions, transoms, sash and beads which incorporates a thermal break barrier and taken from APS Ltd “**SV45**” range
- Material: profiles extruded from aluminium alloy 6063 T6 and T5 to BS EN 12020-2:2001/BS 7559:2001
- Finish: Polyester powder coated, minimum film thickness 60 micros to BS 6496
- Colour/texture: Standard RAL colour (TBC by Architect)
- Construction: Corners and “T” joints to be constructed using extruded aluminium cleats and strengthened/sealed with jointing compound. All fabrication in accordance with “APS Ltd” details/recommendations.
- Ironmongery: Opening vents to be top hung with butt hinges. All opening vents to be fitted with Teleflex open gear to match existing.
- Flashings: All flashing in correspondence with Architects details. Flashings formed from 2mm folded aluminium and comes with polyester powder coated finish to match aluminium frames. No flashing to bridge the thermal break and be in accordance with “APS Ltd” details.
- Fixings: All strap/cleat fixings are as per manufacture strict guidelines and technical literature. All accessories and fixing brackets taken from manufacture range of accessories. All fixings taken back to firm load bearing stratum. Stratum to be capable of over supporting/accommodating applicable load from fabricated frames.

L10 Aluminium Roof Window continued...

- Glazing Details: Double glazed units glazed in situ using "snap-on" type aluminium glazing beads as per details/recommendations by "APS Ltd"
- Glazing Type: 28mm Hermetically sealed double glazed insulated units as per BS 5713
- Outer pane: 6mm Toughened Guardian Solar Controlled SunGaurd SN70/35 glass with 1.0W/m²K centre pane thermal performance, thickness/size to be adequate per design/performance requirements (consult glass supplier/fabricator). Cavity to be argon filled for added sound and energy efficiency. Safety glass to all critical areas as per current Building Regulations and must comply with BS 6262.
- Inner pane: 6.8mm Clear laminated glass, thickness and type adequate per design/performance requirements (consult glass supplier/fabricator). Safety glass to all critical areas as per current Building Regulations and must comply with BS6262
- Glazing system: Gaskets to DIN 7863 as per clause BS EN ISO 3994:2001

The fabricator/installer shall ensure total alignment of all systems gasketry. Joints of systems gasketry are to be adequately bonded together to produce a water tight joint. The "APS" range has been Static Air Permeability and fully weather tested to 600Pa and complies with BS 6375:PT1:1989

- All additional gasketry used with the system shall be EPDM supplied and approved by system manufacture (APS Ltd).

210 DESIGN:

- Complete the detailed design of the systems and associated features shown on the general arrangement drawings to meet the requirements of this specification.
- Co-ordinate detailed design with that for all related works.

215 DESIGN PROPOSALS:

- The general arrangement drawings indicate design intent but do not preclude submission with tender of reasonable alternative proposals for consideration.

L10 ALUMINIUM WINDOWS TO GROUND FLOOR

To be read with preliminaries/manufactures conditions

TYPE OF WINDOWS

120 GENERAL:

- Drawing references: refer to plans, elevation, sections & schedules.
- Supporting structure: Steelwork / concrete etc as per drawings.

POLYAMIDE INSULATED WINDOW SYSTEM:

- **APS (Aluminium and Plastic Systems Ltd)**

25-27 Enterprise Crescent, Ballinderry Road

Lisburn, BT28 2BP

Tel: 028 9266 0500 Fax: 028 9262 9491

Contact: Kenny Faulkner - 07810 151642

Email: kenny.faulkner@aps-group.co.uk

- Installation to include all above manufactures products, fixing and interfaces necessary to complete the fabrication and installation.
- Appointed fabricator (sub-contractor) must be approved by system supplier (APS Ltd), fabricator details available from APS Ltd.
- Performance criteria to comply with the design/performance requirements and testing subsections.
- The windows shall be manufactured from APS AP134 **THERM+** windows system.
- Type: Extruded aluminium alloy mullions, transoms, sash and beads which incorporates a 34mm compartmentalized polyamide thermal break barrier and closed cell low density polyethylene thermal insulation all taken from APS Ltd "AP134 **THERM+**" range.
- Material: profiles extruded from aluminium alloy 6063 T6 and T5 to BS EN 12020-2:2001/BS7559:2001
- Finish: Polyester powder coated Class 2 powder, minimum film thickness 60 micros to BS 6496
- Colour/texture: Standard RAL colour (TBC by Architect)

- The "APS" range has been Static Air Permeability and fully weather tested to comply with BS 6375:Part1 + Part2 + Part3:2009. Water tightness 1500pa, air permeability 600pa, water penetration Zero, wind resistance 2400pa with wind safety at 3600pa
- The system has been enhance security test to PAS24 & BS:6375
- Construction: Corners and "T" joints to be constructed using extruded aluminium cleats and strengthened/sealed with jointing compound. All fabrication in accordance with "APS Ltd" details/recommendations.
- All structural profile are design with a maximum deflection so not member shall exceed L/200. Approved fabricator to check design layout in accordance with systems charts and calculations.
- Thermal performance of the windows, respective insert and glass shall comply with the Building Regulation as to U-value of "Area weight" and max. at "Any point". All insulation etc to be installed as per system manufactures details and parts.
- Ironmongery: Opening vents to be top hung with concealed friction hinges. All opening vents to be fitted with concealed tamper resistant restrictors to limit the window opening to 100mm Max. Espagnolette lockable handle engaging a multi-point locking system.

L10 Aluminium Insulated window continued...

- Windows to all habitable room to have background trickle ventilation using overglass vents by "APS Ltd". Positioning and colour of vents to be confirmed by Architect prior to fabrication/installation. All to be in accordance with current Building Regulations.
- Sill liner profile AP134 100-125 with closer clip AP126 with 2mm folded aluminium sill mechanically fixed to liner.
- Flashings: All flashing in correspondence with Architects details. Flashings formed from 2mm folded aluminium and comes with polyester powder coated finish to match aluminium frames. No flashing to bridge the thermal break and be in accordance with "APS Ltd" details.
- Fixings: All strap/cleat fixings are as per manufacture strict guidelines and technical literature. All accessories and fixing brackets taken from manufacture range of accessories. All fixings taken back to firm load bearing stratum. Stratum to be capable of over supporting/accommodating applicable load from fabricated frames.
- Glazing Details: Triple glazed units glazed in situ using "snap-on" type aluminium glazing beads as per details/recommendations by "APS Ltd"
- Glazing Type: 36mm Hermetically sealed triple glazed insulated units as per BS 5713
- Inner & Middle pane: Climaguard A1.0 lowE float glass (soft coat for high efficiency) 1.0W/m²K, thickness/size to be adequate per design/performance requirements (consult glass supplier/fabricator).
- Cavity to be argon 90% gas filled for added sound and energy efficiency with thermal "Swisspacer" warm edge spacer.
- Outer pane: ExtraClear float glass, thickness and type adequate per design/performance requirements (consult glass supplier/fabricator).
- Safety glass to all critical area's as per current Building Regulation and must comply with BS 6262.
- Panels to be fabricated using 2mm sheet aluminium with external faces PPC finish. Bonded to 26mm high density polyurethane insulation sheet. Ral colour to be confirm by architect.
- Glazing system: Gaskets to DIN 7863 as per clause 760

The fabricator/installer shall ensure total alignment of all systems gasketry. Joints of systems gasketry are to be adequately bonded together to produce a water tight joint.

- All additional gasketry used with the system shall be EPDM supplied and approved by system manufacture (APS Ltd).

210 DESIGN:

- Complete the detailed design of the systems and associated features shown on the general arrangement drawings to meet the requirements of this specification.
- Co-ordinated detailed design drawing for all related works to be submitted before orders and fabrication commences.

215 DESIGN PROPOSALS:

- The general arrangement drawings indicate design intent but do not preclude submission with tender of reasonable alternative proposals for consideration.

architect:	POVALL WORTHINGTON ARCHITECTS		
project:	BALDOYLE TRAINING CENTRE DUBLIN	ref:	S7135
specification:	L20		
topic:	ALUMINIUM DOORS		

revision schedule and status

issue No.	amendments	date	checked
A	Clauses amended	9.10.2024	KF

L20 ALUMINIUM DOORS

To be read with preliminaries/manufactures conditions

TYPE OF DOORS

120 GENERAL:

- Drawing references: refer to plans, elevation, sections & schedules.
- Supporting structure: Steelwork / concrete etc as per drawings.

POLYAMIDE INSULATED DOOR SYSTEM:

- **APS (Aluminium and Plastic Systems Ltd)**

25-27 Enterprise Crescent, Ballinderry Road

Lisburn, BT28 2BP

Tel: 028 9266 0500 Fax: 028 9262 9491

Contact: Kenny Faulkner - 07810 151642

Email: kenny.faulkner@aps-group.co.uk

- Installation to include all above manufactures products, fixing and interfaces necessary to complete the fabrication and installation.
- Appointed fabricator (sub-contractor) must be approved by system supplier (APS Ltd), fabricator details available from APS Ltd.
- Performance criteria to comply with the design/performance requirements and testing subsections.
- The doors shall be manufactured from APS AP200 **THERM+** door system.

- Type: Extruded aluminium alloy mullions, transoms, stile and beads which incorporates a 24mm polyamide thermal break barrier and closed cell low density polyethylene thermal insulation all taken from APS Ltd "AP200 **THERM+**" range.
- Material: profiles extruded from aluminium alloy 6063 T6 and T5 to BS EN 12020-2:2001/BS7559:2001
- Finish: Polyester powder coated Class 2 powder, minimum film thickness 60 micros to BS 6496
- Colour/texture: Standard RAL colour (TBC by Architect)
- The "APS" range has been Static Air Permeability and fully weather tested to comply with BS 6375:Part1 & Part2:2009. Water tightness 300pa, air permeability 600pa, water penetration Zero, wind resistance 2400pa with wind safety at 3600pa
- The system is enhance security tested to PAS24
- Construction: Corners and "T" joints to be constructed using extruded aluminium cleats and strengthened/sealed with jointing compound. All fabrication in accordance with "APS Ltd" details/recommendations.
- All structural profiles are design with a maximum deflection so no member shall exceed L/200. Approved fabricator to check design layout in accordance with systems charts and calculations.
- Thermal performance of the doors, respective insert and glass shall comply with the Northern Ireland Building Regulation as to U-value of "Area weight" and max. at "Any point". All insulation etc to be installed as per system manufactures details and parts.
- Ironmongery: Doors to be mounted on "Savio" surface mounted, 2part, heavy duty hinges. Operation via lever handle using euro cylinder to engage multi-point locking system. Locking system includes 4qty rollers locks, 3qty hook direction rhino bolts and latch all with keepers, all operated via lever handle. Euro cylinder keyed both sides. Door fully rebated all round with gaskets and seals.

L20 Aluminium Insulated door continued...

- Emergency exit doors with Savio 6000.2 gear locking top and bottom, full width green push bar.
- Low level AP55 drained threshold.
- Windows to all habitable room to have background trickle ventilation using overglass vents by "APS Ltd". Positioning and colour of vents to be confirmed by Architect prior to fabrication/installation. All to be in accordance with current Building Regulations.
- Flashings: All flashing in correspondence with Architects details. Flashings formed from 2mm folded aluminium and comes with polyester powder coated finish to match aluminium frames. No flashing to bridge the thermal break and be in accordance with "APS Ltd" details.
- Fixings: All strap/cleat fixings are as per manufacture strict guidelines and technical literature. All accessories and fixing brackets taken from manufacture range of accessories. All fixings taken back to firm load bearing stratum. Stratum to be capable of over supporting/accommodating applicable load from fabricated frames.
- Glazing Details: Triple glazed units glazed in situ using "snap-on" type aluminium glazing beads as per details/recommendations by "APS Ltd"
- Glazing Type: 36mm Hermetically sealed triple glazed insulated units as per BS 5713
- Inner & Middle: Climaguard A1.0 lowE float glass (soft coat for high efficiency) 1.0W/m²K, thickness/size to be adequate per design/performance requirements (consult glass supplier/fabricator).
- Cavity to be argon 90% gas filled for added sound and energy efficiency with thermal "Swisspacer" warm edge spacer.
- Outer pane: ExtraClear float glass, thickness and type adequate per design/performance requirements (consult glass supplier/fabricator).
- Safety glass to all critical area's as per current Building Regulation and must comply with BS 6262.
- Panels to be fabricated using 2mm sheet aluminium with external faces PPC finish. Bonded to 26mm high density polyurethane insulation sheet. Ral colour to be confirm by architect.
- Glazing system: Gaskets to DIN 7863 as per clause 760

The fabricator/installer shall ensure total alignment of all systems gasketry. Joints of systems gasketry are to be adequately bonded together to produce a water tight joint.

- All additional gasketry used with the system shall be EPDM supplied and approved by system manufacture (APS Ltd).

210 DESIGN:

- Complete the detailed design of the systems and associated features shown on the general arrangement drawings to meet the requirements of this specification.
- Co-ordinated detailed design drawing for all related works to be submitted before orders and fabrication commences.

215 DESIGN PROPOSALS:

- The general arrangement drawings indicate design intent but do not preclude submission with tender of reasonable alternative proposals for consideration.

architect:	POVALL WORTHINGTON ARCHITECTS		
project:	BALDOYLE TRAINING CENTRE DUBLIN	ref:	S7135
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L20 ALUMINIUM DOORS

To be read with preliminaries/manufactures conditions

TYPE OF DOORS

120 GENERAL:

- Drawing references: refer to plans, elevation, sections & schedules.
- Supporting structure: Steelwork / concrete as per drawings.

COMMERICAL DOOR SYSTEM:

- **APS (Aluminium and Plastic Systems Ltd)**

25-27 Enterprise Crescent, Ballinderry Road,

Lisburn, BT28 2BP

Tel: 028 9266 0500 Fax: 028 9262 9491

Contact: Kenny Faulkner - 07810 151642

Email: kenny.faulkner@aps-group.co.uk

- Installation to include all above manufactures products, fixing and interfaces necessary to complete the fabrication and installation.
- Appointed fabricator (sub-contractor) must be approved by system supplier (APS Ltd), fabricator details available from APS Ltd.
- Performance criteria to comply with the design/performance requirements and testing subsections.
- Type: Extruded aluminium alloy frame, stiles, rails and beads are taken from APS Ltd "ACD" range

- Material: profiles extruded from aluminium alloy 6063 T6 and T5 to BS EN 12020-2:2001/BS 7559:2001
- Finish: Polyester powder coated Class 2 powder, minimum film thickness 60 micros to BS 6496
- Colour/texture: Standard RAL colour (TBC by Architect)
- LRV colours and positioning along with Min. widths for DDA as per architects drawings, instruction and approval.
- Construction: Joints to be assembled using stainless steel screws. Doors mechanically secured using cleats, bolts and tie rods. All fabrication in accordance with "APS Ltd" details/recommendations.
- ACD26 & ACD27 anti-finger trap stiles to hinge side of leaf
- Ironmongery: concealed over head door closer, stainless steel Savio "D" crank cam tubular handles 1802.1, hook locks with euro cylinder keyed both sides. Slave leaf to have flush bolts top and bottom.
- Emergency exit doors to be rebated all round with low rise threshold. Door mounted on 3No. SV hap hinge with over head surface door closer, Axim 7100 touch bar emergency exit gear. Comes with concealed operation gear locking top and bottom with full width bar across door.
- Flashings: All flashing in correspondence with Architects details. Flashings formed from 2mm folded aluminium and comes with polyester powder coated finish to match aluminium frames.
- Fixings: All strap/cleat/plate fixings are as per manufacture strict guidelines and technical literature. All accessories and fixing brackets taken from manufacture range of accessories. All fixings taken back to firm load bearing stratum. Stratum to be capable of over supporting/accommodating applicable load from fabricated frames.

L20 Aluminium doors continued...

- Glazing Details: Triple glazed units glazed in situ using "snap-on" type aluminium glazing beads as per details/recommendations by "APS Ltd"
- Glazing Type: 36mm Hermetically sealed double glazed insulated units as per BS 5713
- Inner & Middle pane: Climaguard A1.0 lowE float glass (soft coat for high efficiency) 1.0W/m²K, thickness/size to be adequate per design/performance requirements (consult glass supplier/fabricator).
- Cavity to be argon 90% gas filled for added sound and energy efficiency with thermal "Swisspacer" warm edge spacer.
- Outer pane: ExtraClear float glass, thickness and type adequate per design/performance requirements (consult glass supplier/fabricator).
- Safety glass to all critical area's as per current Building Regulation and must comply with BS 6262.
- Panels to be fabricated using 2mm sheet aluminium with external faces PPC finish. Bonded to 26mm high density polyurethane insulation sheet. Ral colour to be confirm by architect.
- Glazing system: Gaskets to DIN 7863 as per BS EN ISO 3994:2001

The fabricator/installer shall ensure total alignment of all systems gasketry. Joints of systems gasketry are to be adequately bonded together to produce a water tight joint. The "APS" range has been Static Air Permeability and fully weather tested to 600Pa and complies with BS 6375:PT1:1989

- All additional gasketry used with the system shall be EPDM supplied and approved by system manufacture (APS Ltd).

210 DESIGN:

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215 DESIGN PROPOSALS:

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Make-up Name	Glass 1 & Coating	Glass 2 & Coating	Visible Light			Solar Energy				Thermal Properties	Embodied CO ₂
			Transmittance	Reflectance		Transmittance	Reflectance	Solar Factor (g%)	Secondary Heat Transfer (qg)	U-Value	[eq. kg/m ² A1-A3]
			Visible (t _v %)	p _v % out	p _v % in	Solar (t _s %)	p _s % out			U _g W/m ² ·K	
Default Make-up 01	SunGuard® SN 70/35 HT (CE) on Guardian ExtraClear (CE)	Guardian ExtraClear (CE)	69.0	14.6	15.8	32.9	41.0	35.0	2.1	1.0	34.85

Calculation Standard: EN 410:2011 / EN 673:2011

Default Make-up 01

Outdoors

GLASS 1	Guardian ExtraClear (CE)		#1 ----
	Thickness = 6mm		#2 SunGuard® SN 70/35 HT (CE)
GAP 1		10% Air, 90% Argon, 16mm	
GLASS 2	Guardian ExtraClear (CE)		#3 ----
	Thickness = 6mm		#4 ----
Total Unit (Nominal) = 28 mm			Slope = 90°
Estimated Nominal Glazing Weight: 29.19 kg/m²			

Indoors