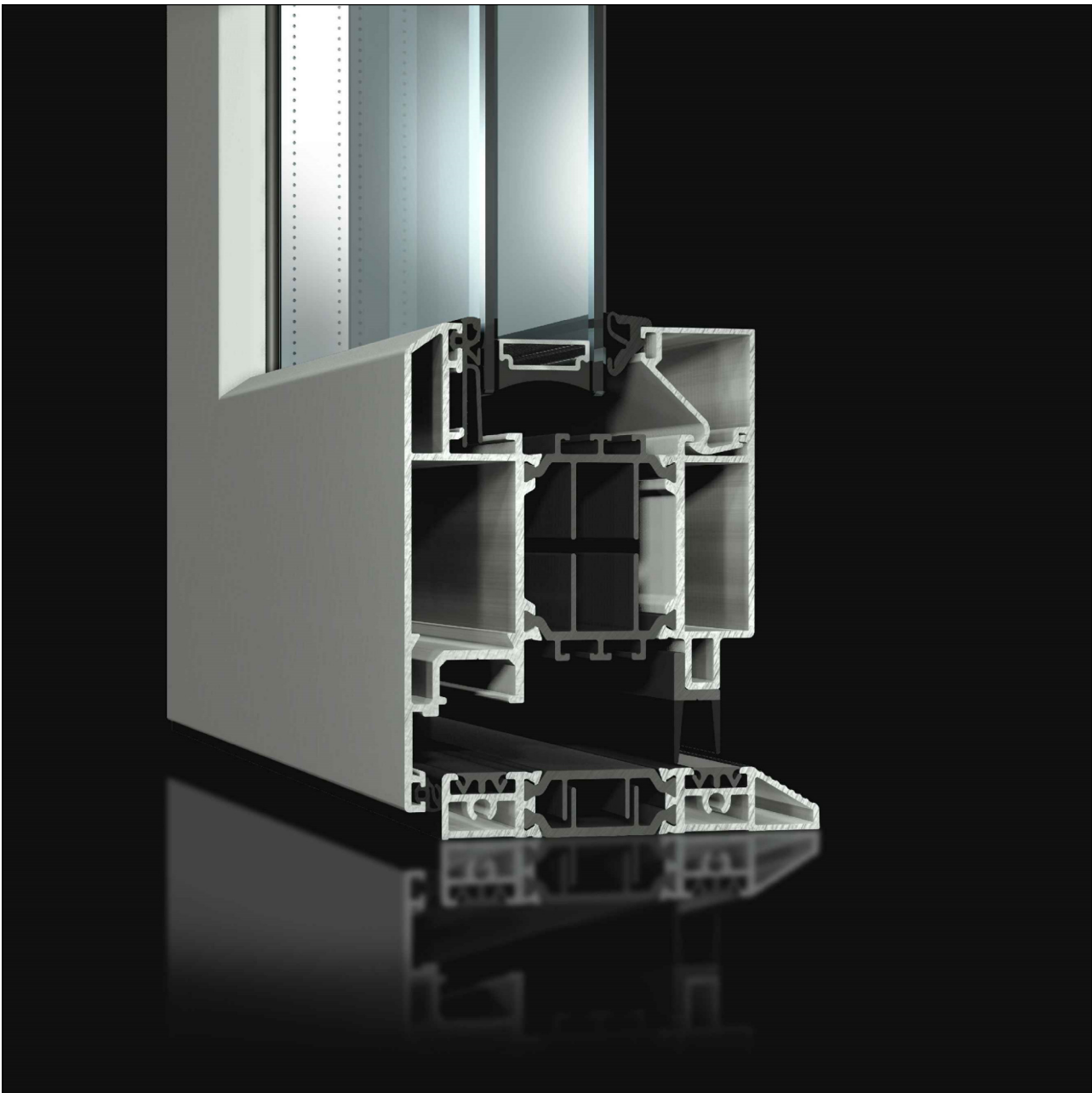
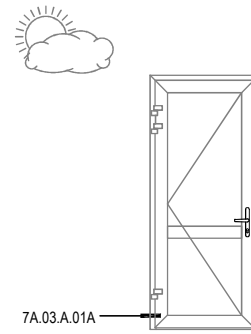


# APA ST70 - Door Suite Architectural / Fabrication Manual



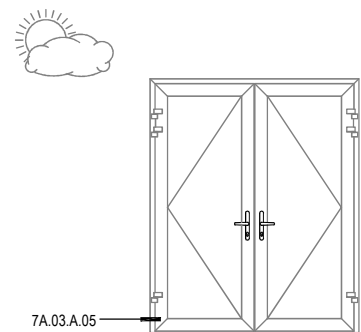
## Single Door - outward opening

• Uw Whole door value:	ST70 1.8/1.4W/m <sup>2</sup> K	EN ISO 1077-1
• Air:	Class 4	BS 6375-1:2009
• Water:	Class 9A	BS 6375-1:2009
• Wind:	Class A5	BS 6375-1:2009
• Operating Forces:	Class 1	BS 6375-2:2009
• Mechanical strength:	Class 4	BS 6375-2:2009
• Repeated opening & closing (200,000):	Class 6 (Medium Duty)	BS 6375-2:2009
• Security Classification:	Certisure	PAS 24:2007
• Maximum size	900x2100mm (contact APA FACADE SYSTEMS technical department for sizes over and above)	



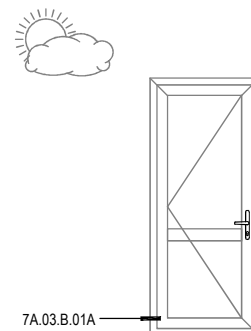
## Double Door- outward opening

• Uw Whole door value:	ST70 1.8/1.4W/m <sup>2</sup> K	EN ISO 1077-1
• Air:	Class 4	BS 6375-1:2009
• Water:	Class 9A	BS 6375-1:2009
• Wind:	Class A5	BS 6375-1:2009
• Operating Forces:	Class 1	BS 6375-2:2009
• Mechanical strength:	Class 4	BS 6375-2:2009
• Repeated opening & closing (200,000):	Class 6 (Medium Duty)	BS 6375-2:2009
• Security Classification:	Certisure	PAS 24:2007
• Maximum size	1800x2100mm (contact APA FACADE SYSTEMS technical department for sizes over and above)	



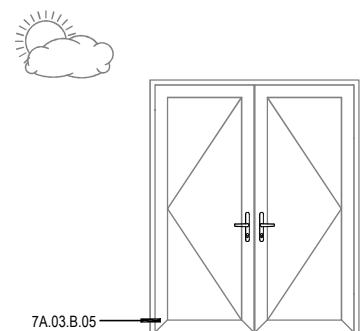
## Single Door - inward opening

• Uw Whole door value:	ST70 1.8/1.4W/m <sup>2</sup> K	EN ISO 1077-1
• Air:	Class 4	BS 6375-1:2009
• Water:	Class 9A	BS 6375-1:2009
• Wind:	Class A5	BS 6375-1:2009
• Operating Forces:	Class 1	BS 6375-2:2009
• Mechanical strength:	Class 4	BS 6375-2:2009
• Repeated opening & closing (200,000):	Class 6 (Medium Duty)	BS 6375-2:2009
• Security Classification:	Certisure	PAS 24:2007
• Maximum size	900x2100mm (contact APA FACADE SYSTEMS technical department for sizes over and above)	



## Double Door - inward opening




• Uw Whole door value:	ST70 1.8/1.4W/m <sup>2</sup> K	EN ISO 1077-1
• Air:	Class 4	BS 6375-1:2009
• Water:	Class 9A	BS 6375-1:2009
• Wind:	Class A5	BS 6375-1:2009
• Operating Forces:	Class 1	BS 6375-2:2009
• Mechanical strength:	Class 4	BS 6375-2:2009
• Repeated opening & closing (200,000):	Class 6 (Medium Duty)	BS 6375-2:2009
• Security Classification:	Certisure	PAS 24:2007
• Maximum size	1800x2100mm (contact APA FACADE SYSTEMS technical department for sizes over and above)	

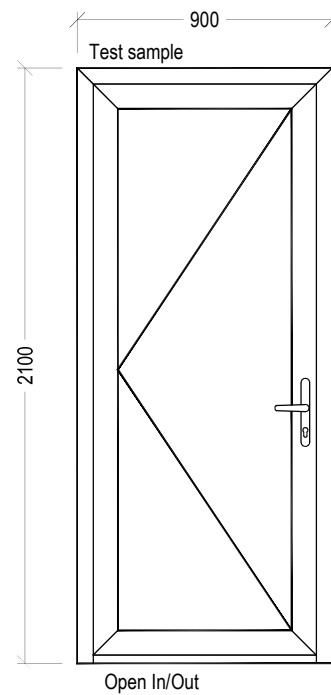
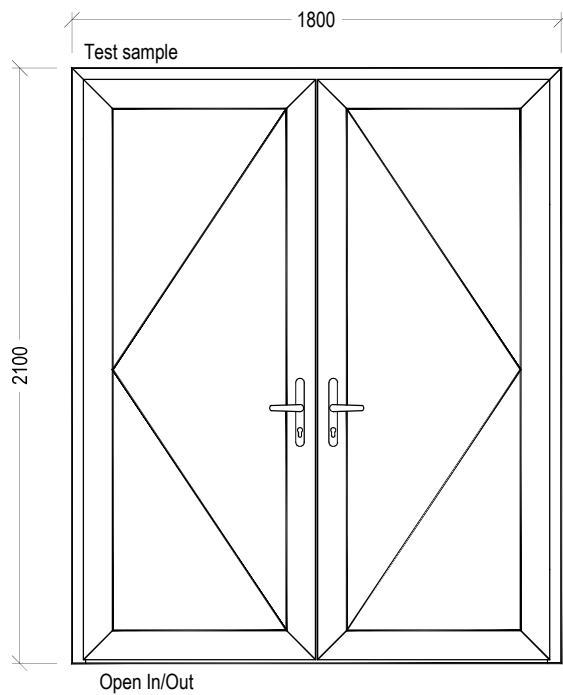


# Weather Performance

## BS 6375-1:2009. Part 1: Classification for weathertightness

The purpose of BS 6375-1 is to measure the air permeability, watertightness and wind load resistance respectively.

 <p><b>Air Permeability</b></p> <p><b>Class 4</b> for the average of positive &amp; negative test result</p>	 <p><b>Watertightness</b></p> <p><b>Class 9A</b></p>	 <p><b>Wind Load Resistance</b></p> <p>P1 = 2000Pa P2 = 1000Pa P3 = 3000Pa Met requirements for <b>Class 5</b></p>
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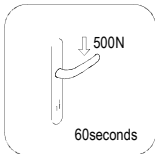

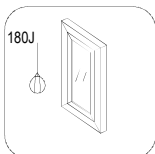
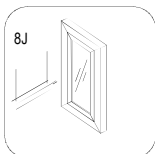


DATE: 22/06/2015	REVISION: A	TITLE: Weather Performance	SYSTEM: ST70 Door Suite	NTS <b>A4</b>	7A.01.A.01
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# Operational Performance

## BS 6375-2:2009. Part 2: Classification for operation and strength characteristics

Defines the performance Class for operating forces, mechanical strength, load-bearing capacity of safety devices, impact resistance and repeated opening and closing

 <p>Operating Forces</p> <p><b>Class 1</b> Lever handle operation &lt;10Nm</p>	 <p>Vertical Load</p> <p><b>Class 4</b> No damage or permanent deformation &amp; remain functional</p>	 <p>Resistance to repeated opening &amp; closing</p> <p><b>Class 6 (Medium Duty)</b> Maintain fit for purpose after 200,000 cycles</p>
 <p>Slamming resistance test</p> <p><b>Class 1</b> No damage or permanent deformation &amp; remain functional</p>	 <p>Closure against an obstruction</p> <p><b>Class 1</b> No damage or permanent deformation &amp; remain functional</p>	 <p>Abusive force on handles</p> <p><b>Class 1</b> No damage or permanent deformation &amp; remain functional</p>
 <p>Static Torsion</p> <p><b>Class 4</b> No damage or permanent deformation &amp; remain functional</p>	 <p>Soft &amp; heavy body impact</p> <p><b>Class 4</b> No damage or permanent deformation &amp; remain functional</p>	 <p>Hard body impact</p> <p><b>Class 4</b> No permanent deformation &amp; remain functional</p>

# Security Classification

## PAS 24: 2016: Enhanced security performance requirements for doorsets and assemblies



Security Classification

**Certisure**

Certificate

No CS 5022

### **Manipulation Test**

Multiple attempts to open the doors are made with progressive hand tools for approx. 5 to 6 minutes.

### **Glazing removal test**

Manual: For approximately 3 minutes hand tools (small and large chisels) are used to try and remove the glazing to gain entry.

Mechanical: 200Kgs load is applied to each external corner of the glazing.

### **Mechanical load test**

A 1.5KN parallel load is applied in each of the opposing directions plus a 4.5KN perpendicular load is applied to all of the locking point including the hinges. No entry should be gained after the sequence of applied loads. This particular test sample was subject to 10 load tests per opening sash.

### **Manual check test**

Subsequent to the mechanical load test the door is attacked with 2 levers around the perIMETERS to try and open the window.

### **Security hardware test 1**

Attacks were made with the Norbar(hook), mole grips and small chisel to try and cut a hole behind the handle and lever off, attacks were also made to grip the lever furniture and try and snap, but entry was not achieved in 3 minutes.

### **Security hardware test 2**

Attacks were made with a 3.5mm traction screw and a Norbar(hook), the screw was inserted into the cylinder then attempts were made to pull the cylinder out for 3 minutes, but entry was not achieved.

DATE: 11/10/2018	REVISION: B	TITLE: Security Classification	SYSTEM: ST70 Door Suite	1:1	<b>A4</b>	7A.01.A.03
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