

Raven Seals are designed to meet the most rigorous International Standards and Building Codes. Throughout, icons have been used to readily identify and make product selection easier. Raven Seals, in the main, have been tested to Australian, New Zealand, British, ISO and EN Standards. In many cases they are the same or similar to US Standards and Chinese Building Code requirements. Specifiers should determine the suitability of products shown or contact Raven's Technical Department for assistance.



AUS/NZ



UK/EU

Noise - Acoustic



NCC BCA
Sound Transmission & Insulation; Sect. F Parts F5.0, F5.5 (b),
Health & Amenity; Sect. 2 Part 2.4, O2.4.6,
Sound Insulation, F2.4.6, P2.4.6 V2.4.6, Sect. 3.8, 3.8.6 (appropriate performance requirements (a) (b)).
AS 1191 (ISO 140.3) Measurements of airborne sound transmission loss etc.,
AS 1276 Rating of sound insulation in buildings etc. (**ISO 717.1**),
AS 2253 Field measurement of the reduction in airborne sound transmission in buildings.
NZ BC Compliance Doc. G (airborne and impact sound).
ASTM E 336, ASTM E 413.

Building Regulations Approved Document E, Building Bulletin 93 - Special Acoustic Conditions for Schools,
BS EN ISO 140.3 Acoustics - Measurement of sound insulation in buildings and of building elements (previous **BS 2750**),
BS 5821 Rating the sound insulation in buildings and building elements (same as **ISO 717.1**).

Fire and Smoke



NCC BCA
Fire Resistance; Sect. C Parts C3, C3.0 - C3.11, Spec. C2.5, Spec. C3.4, Spec. D1.12 (d) (f), Sect. D Part D2.6,
Smoke Hazard Management; Sect. Part E.,
Bushfire Areas; Sect. G. Part G5,
Fire Safety; Part 2.3, **Bushfire Areas;** Part 2.3 F2.3.4, P2.3.4, SA 3.7.4.3 (c), Table SA 3.7.4.1 (external doors),
AS 3959 Construction of building in **bushfire-prone** areas.
AS 1530.4 Fire resistance tests of elements of building construction,
AS NZS 1905.1 Components for the protection of openings in fire resistant walls,
AS 1851-6 and **AS 1851** Section 17 & 18 Maintenance of fire protection equipment,
AS 1530.7 Smoke control door and shutter assemblies,
AS 1735.11 Lifts, escalators and moving walks - Fire rated landing doors,
AS 6905 Smoke Doors,
NZ BC Compliance Doc. C (Fire Safety),
NS 4520 Fire Doors.

Building Regulations Approved Document B,
ISO 834 Fire resistance test - Elements of building construction,
ISO 3008 Fire resistance test - Door and shutter assembly,
BS EN 1634-1 Fire resistance tests for doors and shutter assemblies,
BS EN 1634-3 Smoke control test for door and shutter assemblies,
BS 5588 Fire precautions in the design, construction & use of building,
BS 476 Part 20 Method for determination of the fire resistance of elements of construction,
BS 476 Section 31.1 Method for measuring smoke penetration through door sets & shutter assemblies,
BS 8214 Code of practice for fire door assemblies with non-metallic leaves,
ISO 5925-1 Ambient and medium temperature leakage test,
ISO DIS 12472 Fire test - Determination of the efficiency of the intumescent seals with respect to the fire resistance of timber door assemblies,
BS EN 13501-2 Fire classification of construction products and building elements. Classification using data from fire resistance tests, excluding ventilation services.

Weather and Energy



NCC BCA
Health & Amenity; Sect. F.,
Energy Efficiency Installations; Part I2,
Energy Efficiency - Building Sealing; Sect. J. JPI (f), Part J3. J3.4, Part 3.12.3.3,
Bushfire Areas; Sect. G. Part G5,
Fire Safety; Part 2.3, **Bushfire Areas;** Part 2.3 F2.3.4, P2.3.4, SA 3.7.4.3 (c), Table SA 3.7.4.1 (external doors),
Energy Efficiency; Sect. 2., Part 2.6 O2.6 F2.6 P2.6.1 (f),
Building Sealing; Part 3.12. contents 3.12.3.3.
AS 4420.4 Air infiltration test,
AS 4420.5 Water penetration test,
AS 2047 Windows & doors in buildings,
AS 1530.7 Smoke control door and shutter assemblies,
AS 3959 Construction of building in **bushfire-prone** areas.
NZ BC Compliance Doc. H (energy efficiency) air tightness H1.3.1, H1.3.3.

Building Regulations Approved Document L1 & L2,
BS 7386, BS 8104, CIBSE TM 23 Testing of building for leakage (Part L1 & L2 requirements),
BS 5368 Methods of testing windows (various parts - air permeability, watertightness, wind resistance),
BS EN 1634-3 Smoke control test for door and shutter assemblies,
BS EN 10077-1 Thermal performance of windows, doors, shutters,
ISO 8272 Air permeability test,
IEC 529 Degrees of protection provided by enclosures for electrical equipment,
ISO 9972 Thermal insulation - Determination of building air tightness - Fan pressurisation method,
ISO 5925-1 Evaluation of performance of smoke control door assemblies (Part I Ambient temperature test).

Access and Mobility



NCC BCA
 Sect. D Part D2, D2.15,
Housing Provisions Performance Provisions; Sect. 2. Part 2.5 (thresholds at door ways).
AS 1428 Design for access & mobility.
NZ BC Compliance Doc. D (Access routes),
NSZ 4121 Design for access & mobility.

Building Regulations Approved Document M,
 'Access and Facilities for 'Disabled People' and 'Accessible Thresholds in New Housing: Guidelines for House Builders and Designers'.
BS 8300 Design of buildings and their approaches to meet the needs of disabled people. Code of Practice.



USA



CHINA

Noise - Acoustic



IBC International Building Code,
ASTM E 90 Standard method for laboratory measurement of airborne sound transmission loss of door panels and door systems,
ASTM E 413 Classification for rating sound insulation,
ASTM E 336 Standard test for measurement of airborne sound insulation in buildings,
ASTM E 1408-91 Standard Test Method for Laboratory Measurement of the Sound Transmission Loss of Door Panels and Door Systems.

GBJ 118 - 88 《民用建築隔音設計規範》
GBJ 87 - 85 《工業企業噪音控制設計規範》
GB 8485 《建築外窗空氣隔聲性能分級及其檢測方法》
JGJ 57 - 2000 《劇場建築設計規範》
JGJ 58 - 88 《電影院建築設計規範》
JGJ 67 - 89 《辦公建築設計規範》
JGJ 62 - 90 《旅館建築設計規範》
GB 50096 - 99 《住宅 設計規範》
GB 50073 - 2001 《潔淨廠房設計規範》

Fire and Smoke



IBC International Building Code,
NFPA 101 Life safety Code,
NFPA 105 Recommended practice for the installation of smoke and draft control door assemblies,
ASTM E 2074 Standard Test Method for Fire Tests of Door Assemblies, Including Positive Pressure Testing of Side Hinged and Pivoted Swinging Door Assemblies,
UL 10B Fire tests of door assemblies,
UL 10C Fire tests of door assemblies under positive pressure,
UBC Fire tests,
UBC 7.210 Smoke and draft control door assemblies,
UL 1784 Standard for safety for air leakage tests for door assemblies,
ASTM E 152 Methods of fire test of door assemblies,
NFPA 252 Standard method of fire tests of door assemblies,
NFPA 80 Installation standard for fire doors & windows, Compatibility of related standards with minor wording differences,
ASTM E 136 = UBC 43-I, ASTM E 84 = UL 723 = UBC 42-I = NFPA 255, ASTM E 110 = UL 263 = UBC 43-I = NFPA 251.

GBJ 16 - 87 《建築設計防火規範》
JGJ 49 - 88 《綜合醫院建築設計防火規範》
GB 50045 - 95 《高層民用建築設計防火規範》
JGJ 39 - 87 《托兒所, 幼兒園建築設計規範》
GB 50226 - 95 《鐵路旅客車站建築設計規範》
JGJ 60 - 99 《汽車客運站建築設計規範》
JGJ 86 - 92 《港口客運站建築設計規範》
GBJ 39 - 90 《村鎮建築設計防火規範》
JGJ 38 - 99 《圖書館建築設計規範》
JGJ 25 - 2000 《檔案館建築設計規範》
JGJ 66 - 91 《博物館設計規範》
JGJ 57 - 2000 《劇場建築設計規範》
JGJ 58 - 88 《電影院建築設計規範》
JGJ 62 - 90 《旅館建築設計規範》
JGJ 41 - 81 《文化館建築設計規範》
GB 50073 - 2001 《潔淨廠房設計規範》

Weather and Energy



IBC International Building Code,
ANSI/ASHRAE/IESNA Standard 90 P Energy conservation in new building design Section 4,
ASTM E283 Rate of air leakage through exterior windows, curtain walls and doors,
NFRC 400 Procedure for Determining Fenestration Product Air Leakage.

JGJ 37 - 87 《民用建築設計通則》
GBJ 301 - 88 《關於鋁合金門窗安裝工程檢驗評定標準》
《鋼結構施工質量驗收規範》
JGJ 102 - 96 《玻璃幕牆工程技術規範》
GB 7106 《建築外窗抗風壓分級及檢測方法》
GB 7108 《建築外窗雨水滲透性能分級及檢測方法》
GB 50096 - 99 《住宅 設計規範》
JGJ 26 - 95 《民用建築節能設計標準》
GB 50176 - 93 《民用建築熱工設計規範》
JGJ 38 - 99 《圖書館建築設計規範》
JGJ 25 - 2000 《檔案館建築設計規範》
JGJ 66 - 91 《博物館設計規範》
JGJ 41 - 81 《文化館建築設計規範》
GB 50073 - 2001 《潔淨廠房設計規範》
GB 50176 - 93 《民用建築熱工設計規範》

Access and Mobility



IBC International Building Code, Residential Code & **ADAAG**,
ANSI 117 Building access for people with disability,
ANSI/BHMA A156.21 American National standard for Thresholds.

88 建標字第204號 《方便殘疾人使用的城市道路和建築物設計規範》