

Product Specification

Butetown Doorset

SPECIFICATION

The Butetown has been specified for various safety critical infrastructure applications, in which environmental conditions impact operation over time. Originally conceived as a product providing dual-egress in road tunnel environments, it's stainless steel composition reduces the maintenance requirements of the doorset. The Butetown's key performance characteristics include:

- FD240 (Fire Integrity)
- EI30 (Fire Insulation)
- +/-2kPa (Static Pressure Fluctuations)
- Dual (two-way) Egress/ Escape

*All performance values are subject to product configuration



KEY FEATURES & BENEFITS

- Provides flexibility for site fire egress strategy via dual escape functionality. Changes in fire egress strategies do not impact product specification.
- Safe protection from alternating pressure environments (+/-2kPa static).
- Compliant with BD 78/99 (Design of Road Tunnels)
- Manufactured in 316L stainless steel for longevity in application.
- Optimised maintenance inspection schedule.
- Welded door leaf construction for complete peace of mind.
- Resistant to a rapid variation in temperature (up to 35°C).
- Humidity resistant (up to 100% at 25°C).
- Provision in the frame arrangement for the inclusion of monitoring equipment (reed switches), translating open/ closed signals via a SCADA system.
- Insulated core providing thermal resistance against fire for a period in excess of 30 minutes.
- Operational against an incident pressure differential of up to +100Pa.
- 95% recyclable materials used throughout construction.
- 25 year design life.

FIRE RATING

The Butetown was fire tested by WarringtonFire in accordance with BS 476-22:1987, and achieved a maximum integrity performance of 265 minutes before discontinuation at our request. The original demand on the doorset was for a 2-hour rating, however this was far exceeded, and has given the product more flexibility in scope for dimensional increase in accordance with The Field of Direct Application Rules, and PFPF Assessment Rules for Metallic Doorsets (as described on the following page). The below table references the destructive test undertaken:

Test Reference	Structural Opening (mm)		Performance (mins)			Notes
	Height	Width	E	I ₂	I ₁	
415758 (172h)	2156	1956	265	50	-	316L double egress



FD240		S/O Width (mm)								
		1956	1991.75	2027.5	2063.25	2099	2134.75	2170.5	2206.25	2242
S/O Height (mm)	2156	Y	Y	Y	Y	Y	Y	Y	Y	Y
	2195.5	Y	Y	Y	Y	Y	Y	Y	Y	Y
	2235	Y	Y	Y	Y	Y	Y	Y	Y	Y
	2274.5	Y	Y	Y	Y	Y	Y	Y	Y	N
	2314	Y	Y	Y	Y	Y	Y	Y	N	N
	2353.5	Y	Y	Y	Y	Y	Y	N	N	N
	2393	Y	Y	Y	Y	Y	N	N	N	N
	2432.5	Y	Y	Y	Y	N	N	N	N	N
	2472	Y	Y	Y	N	N	N	N	N	N

Note, the table above indicates certified structural opening (S/O) dimensions for an FD240 Butetown doorset (Y = certified, N = un-certified). Further dimensional increases are permitted for lower fire performance requirements; please enquire with our sales team as to whether your desired configuration remains within the limits of our product certification.

SUPPORTING PERFORMANCE CAPABILITIES

Pressure Rating	+/-2kPa induced static pressure fluctuations (<i>enquire for more information</i>)
U-Value	Unknown/ Un-tested
Air Leakage	Unknown/ Un-tested
Acoustic	Unknown/ Un-Tested
Opening Force	< 80N (<i>in the absence of differential pressure</i>)

LEAF CONSTRUCTION

Leaf Thickness	78mm
Leaf Material	2mm 316L, pressed skins, with 34mm returns 66 x 30 x 2mm 316L pressed stiffeners (vertical & horizontal), plug welded to skins
Insulation	Firebatt 825
Hinge	1606 continuous piano hinge
Astragal	40 x 23 x 2mm 316L PSA (full height)
Lifting Points	Hinge lifting points throughout height

FRAME CONSTRUCTION

Frame Profile	215 x 50mm "P" shaped 316L single rebate profile
Frame Material	6mm 316L pressed frame, packed local to fixings
Reinforcement	None
Construction Method	Four piece construction screwed/ bolted together
Threshold Detail	6mm x 214mm flat (tapered option available for Part M compliance)

OTHER DETAILS

Finish	Polished to 180 grit (<i>see SF001 datasheet</i>)
Leaf Mass	80kg/m ²
Furniture	SM Slimline SL204-05, 2-point, no entry, panic exit (outward)
Closers & Stays	LCN4116 closers on each leaf. No door stays.
Vision Panel Sizes	700mm(h) x 150mm(w) clear vision
Seals	15/30mm x 2mm graphite intumescent
Supporting Structure	Brickwork, Blockwork, Concrete, Steelwork (<i>any rigid form of structure retains certification</i>)
Other Options	Earthing straps, contacts, door stops, signage.

TYPICAL DETAILS

The key interfacing and operational details have been included below for reference. Please enquire with our sales team should you require further information on the Butetown product.

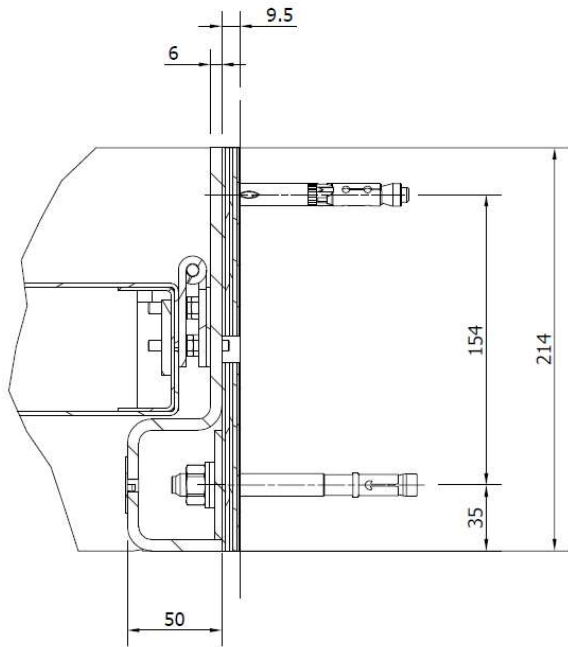


Fig. 1 – Frame Detail

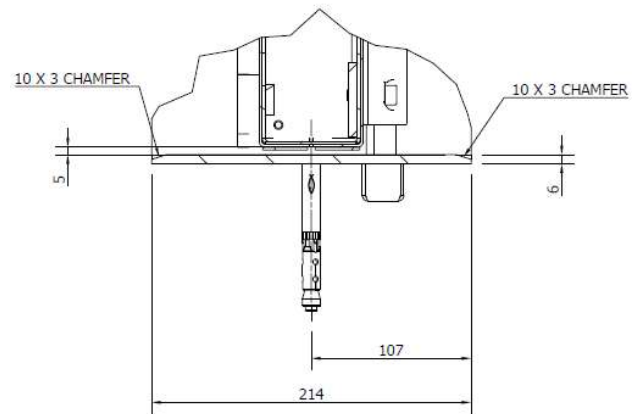
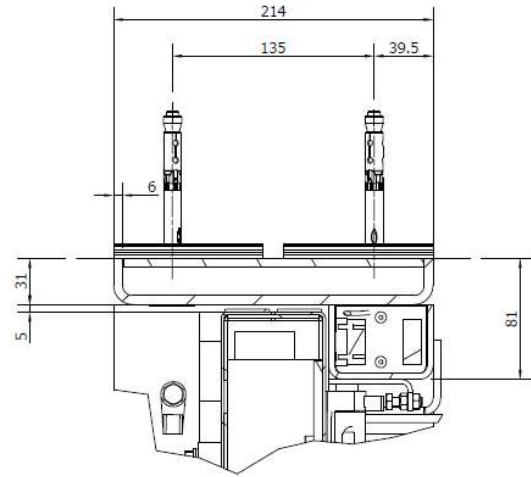


Fig. 2 – Threshold and Header Details

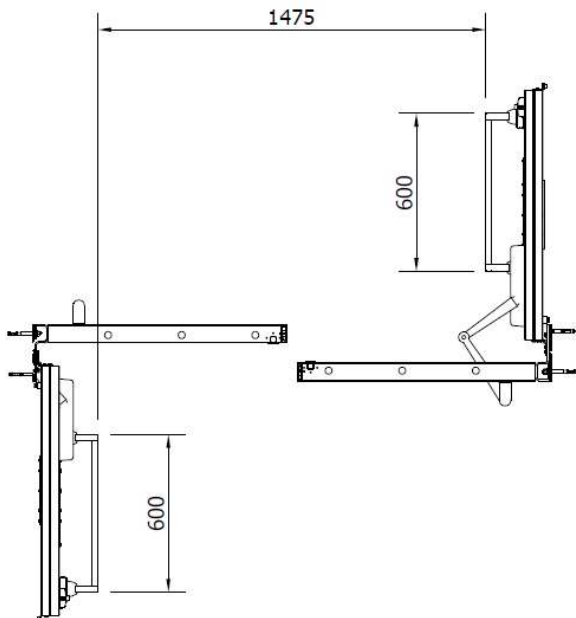


Fig. 3 – Clear Opening; both leaves in operation
(S/O = 1975mm(w) @ max. 90°)

(Note, 871mm single leaf clear opening width covered by fire test evidence to FD240)

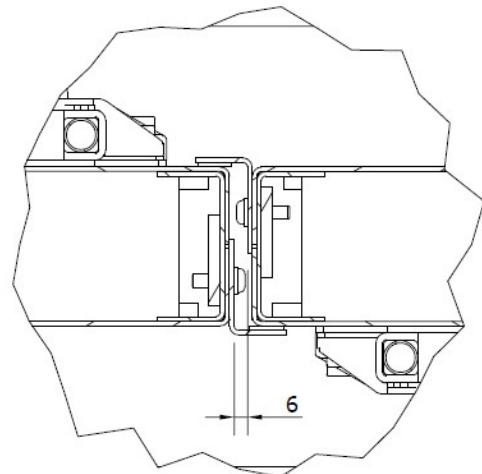


Fig. 4 – Meeting Edge Detail