

SELECTION GUIDE FOR PC2 TO PC4 DOORSETS

DOORSETS FOR USE IN BIO-CONTAINMENT FACILITIES:

By utilising 30 years experience in designing and manufacturing specialist doorsets and by working closely with leading consultants and architects, Sealeck are proud to introduce our range of PC2, PC3 and PC4 doorsets.



Sealeck Bio-Containment Doorsets have been developed with varying options to enable performance, functional, aesthetic & budgetary requirements to be matched with tailor made doorset solutions.

This brochure describes doorsets that are suitable for use in containment facilities where the various containment levels are described as PC2 (BSL2) and PC3, (BSL3) and PC4 (BSL4) doorsets.

The AS/NZ-2243.3 Standard does not provide the architect or engineer with exact details of:

- Type of door to be used,
- materials of construction,
- finish,
- hardware to be used,

It does however specify the performance required for laboratories to meet the various requirements of PC2, PC3 & PC4 and over time this has led to the design of doorsets that meet the needs of these facilities.

Doorset Selection Chart

Sealeck have developed the following door selection chart to assist designers to choose relevant doorset options and features suitable for the various openings within a Bio-containment facility.

Doorset Description:	Door Type:	PC2 - BSL2			PC3 - BSL3 to PC4 - BSL4			
		LAB:	PLANT ANIMAL:	INVERTA -BRATES:	AIRLOCK OUTER:	AIRLOCK INNER DOOR AND/OR INTERNAL LAB DOORS:	INVERTA -BRATES, + INNER AND OUTER ANTE ROOM DOORS:	FREQUENT GASEOUS DECONTAMINATION:
Bioguard P/C steel door in P/C steel frame:	A:	R	X	X	X	O	X	X
Uniguard seamless SS door in SS frame:	B:	O	R	R	R	R	R	X
Inflatable seal door & frame system:	C:	O	O	O	O	O	O	M
Doorset Options:	Option No:	Options:	Options:	Options:	Options:	Options:	Options:	Options:
SS clad seamed edge Leaf in place of P/C steel:	1	O	X	X	X	O(b)	X	X
Fully sealed p/c steel frame:	2	O	X	X	X	O(b)	X	X
Fully Sealed SS frame:	3	O	X	X	X	O(b)	X	X
Flush to floor SS threshold - only with SS Frame	4	O	O	X	O	O	X	X
Step over Invertebrate threshold & 4th side seals:	5	X	O(a)	M	X	O(a)	M	X
Adjustable seals to jambs & head:	6	O	O	M	M	R	M	X
Drop down seal to threshold:	7	O	O	X	M	R	X	X
Mortice lock or latch:	8	O	X	X	X	X	X	X
Electromagnetic lock & "D" handle:	9	O	M	M	M	M	M	M
30 series VP round 495mm diam:	10	O	O	O	O	O	O	X
20/25 series VP square/rectangular:	11	O	O	O	X	X	X	X
40/45 series VP d/glazed:	12	O	O	O	O	O	O	R
Flush frameless VP d/glazed - only for door B:	13	O	O	O	O	O	O	X
Doorset Specifications:								
Doorset Type A: Bioguard P/C steel door seamed edge leaf with P/C steel frame unsealed, without jamb head or drop down seals, no locks, no closer or vision panel: Allows the following Options to be fitted: Options 1, 2, 3, 5, 6, 7, 8, 9, 10, & 11								
Doorset Type B: Uniguard seamless SS door leaf, and fully sealed 3 sided SS frame with fully adjustable jamb and head seals and drop down threshold seals: Allows the following Options to be fitted: Options: 4, 5, 9, 10, 12 & 13								
Doorset Type C Inflatable seal SS door & Frame: (for further information refer to BCD30/40 data sheet) Allows the following Options to be fitted: Options 12 only all other items are standard.								

Note: (a) Would only be required for specialist animal research facilities where small vermin pose potential hazard:
 (b) Only an option if door type A is chosen

Key:

- Not Available: **X** Unnecessary, will not suit the PC level or cannot be made:
- Optional: **O** Optional to suit design or user requirements:
- Recommended: **R** Recommended to suit the PC level requirements:
- Mandatory: **M** To meet the PC level requirements or for health, safety reasons:

Doorset Specifications

Doorset type A

Bioguard model sealed seemed edge door leaf [BCD2-3](#) as used in Doorset Type A can be supplied as standard in powder coated Galvanised steel (lower cost) or stainless steel (Option 1 at higher cost), the door leaf has a seemed joint along the edge which is silicon sealed for cleanliness.

This model doorset is suitable for PC2 and some PC3 applications.

Door leaf options:

Standard – Powder coated galvanised steel 0.6mm skin thickness options to 1.6mm

Option 1: - Stainless steel No 4 lished finish 1.0mm skin thickness options to 1.6mm & 316 grade

Door frame options:

Standard – Powder coated galvanised steel – frame is not sealed to prevent leakage into wall spaces and frame is supplied complete with fully adjustable head jamb and threshold seals.

Option 2: - Frame is fully sealed to prevent leakage into wall space - powder coated galvanised steel frame 1.6mm options to 2.0mm.

Option 3: - Frame is fully sealed to prevent leakage into wall space - Stainless steel No 4 lished finish, 1.6mm thick options to 316 grade and thickness to 2.0mm.

Option 4: - Full width flush to floor threshold recessed into floor for greater threshold sealing and frame support. Only available with Option 3.

Option 5: - Full width 4th side step over invertebrate threshold with extended jamb seal and 3mm stainless steel screw fixed cover plate to protect the seal. Available in powder coated steel or stainless steel to suit standard or optional SS frames.

Refer frame profiles to suit various wall types.

Doorset type B

Uniguard model fully welded and lished seamless door leaf [BCD3-4](#) as used in Doorset Type B is our premium grade door leaf and is suited for more stringent PC3 and some PC4 applications. The Sealeck fully sealed stainless steel frame is supplied standard with this model doorset and the doorset is fitted with fully adjustable head and jamb seals and drop down threshold seals in silicon rubber.

This model doorset is suitable for PC3 and some PC4 applications.

Door leaf:

Standard – Stainless steel 304 grade No 4 lished finish 1.2/1.6mm skin thickness options to 316 grade.

Door frame:

Standard – Frame is fully sealed to prevent leakage into wall space - Stainless steel No 4 lished finish, 1.6mm thick options to 316 grade and thickness to 2.0mm.

Refer frame profiles to suit various wall types.

Doorset type C

For doorset type C: inflatable seal SS door & frame refer [BCD30/40](#)

Hardware specifications

Doorset selection chart suggests options 8 or 9 for various applications. However if leak tightness is critical we recommend only electromagnetic locks and push/pull handles: Certain door hardware suited to timber doors are not suited to steel or stainless steel doors. Generally, for all doorsets other than PC2 labs we recommend:

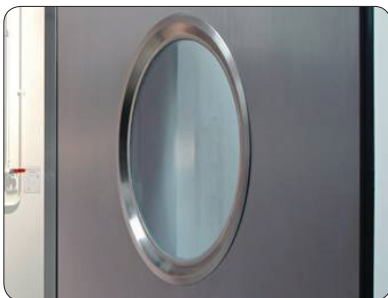
- Heavy duty TS83 or TS93 door closers in std finish or full SS trim,
- Electromagnetic lock with reed switch and hall effect monitoring capability - Refer Sealeck standard FSH MEM2400 Type
- Stainless steel 'D' pull handle and internal push plate

Vision panel specifications **Vision panels to suit bio-containment doors:**

Doorset Type A&B

Sealeck 30 series
centrally glazed porthole: (single glazed)
495mm diam only

[Link to BVP15/30 data sheet](#)

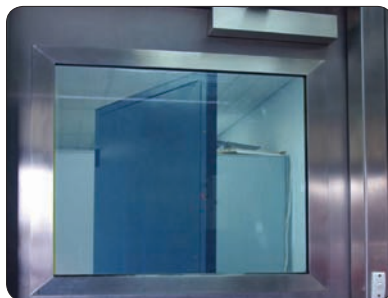


Powder coated steel or stainless steel 304 to match door leaf
- Glazed 6.38 clear laminated
- Clear view of 495mm dia

Doorset Type A&B (PC2 only)

Sealeck 20 & 25 series
square or rectangular: (single glazed)
Sizes as required:

[Link to BVP20/25 data sheet](#)



Powder coated steel or stainless steel 304 (316) to match door leaf
- 6.38 clear laminated (option to 12mm)
- Size can vary

Doorset Type A,B&C

Sealeck 40 & 45 series
flush: (double glazed)
Sizes as required:

[Link to BVP40/45 data sheet](#)

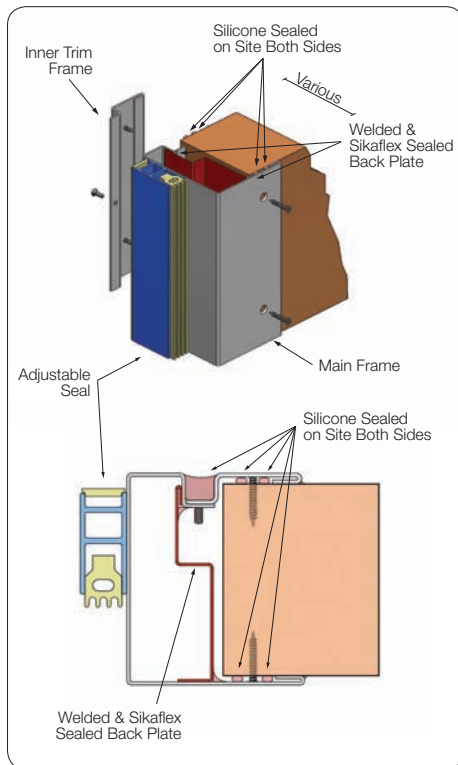


Stainless steel 304 (316) to match door leaf
- Double or triple insulated glass
- Size can vary

Frame Profiles are available to suit the following - Wall Type Options:

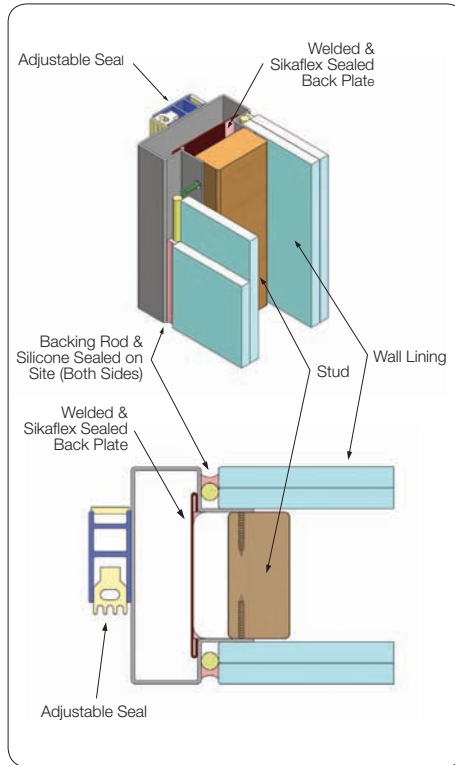
Sandwich panel:

Frame in two parts with inner trim.



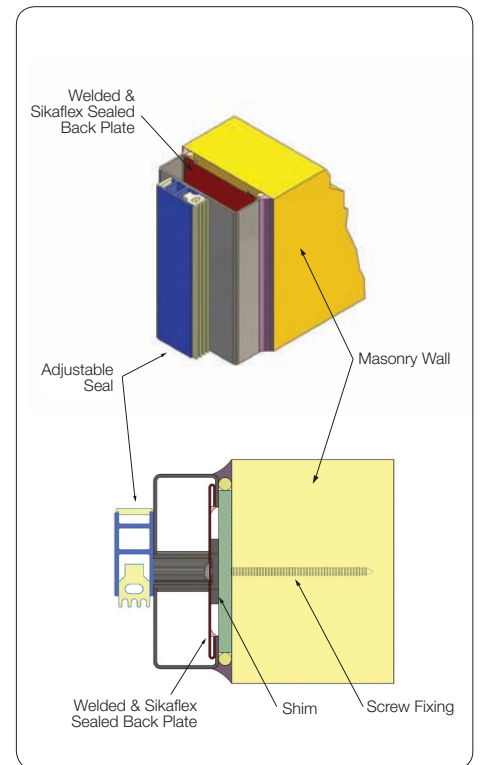
Stud wall:

Single part frame designed to fix beneath wall cladding for improved wall sealing.



Masonry wall:

Single part frame with hidden fixings.

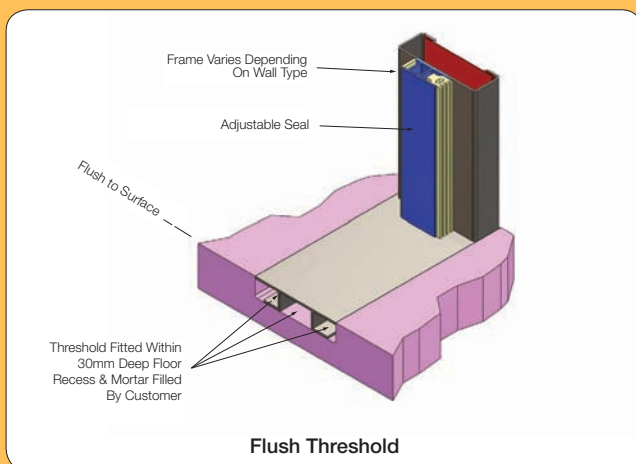


Threshold Options:

Our standard frame is supplied three sided without threshold. However, the following options are available: -

Option 4 (Refer to section chart for suitability)

As shown with recessed 5mm thick stainless steel threshold mortar filled on site into 30mm floor recess to maintain flatness, assists with door leaf to floor sealing, suitable for stainless steel frames only.



Option 5 (Refer to section chart for suitability)

As shown with full frame jamb profile for step over threshold and adjustable seal protected with screw fixed 3mm thick stainless steel cover plate. Suitable for insectory applications and for stainless steel (SS) frames only.

