

BETECTEMET BLAST DOOR SO-3

Applications

The SO-3 blast doors are designed to stop the advance of blast waves through the passage ways into the protected area of blast hardened Civil Defence and military shelters. The SO-3 blast doors are possible to open and close manually from both sides. The latching device tightens the door plate against the frame so that the maximum clearance between the load bearing surfaces of the door plate and the frame is 2.0 mm. Design of the doors enables opening by disassembly even if the door plate has undergone permanent deformations. The door plate can be dismantled from either side without any special emergency opening devices.

Specification

The SO-3 doors are fabricated from structural steel with a door plate of solid homogenous steel plate. The door frame is of flush design for easy installations in the reinforced concrete wall, and the door plate / frame assembly has an optimized pattern for transfer of the blast forces into surrounding wall.

Design Criteria

The SO-3 blast doors are made in accordance with specific provisions issued by the Finnish Ministry of Interior. The SO-3 blast doors are approved for use on the basis of structural calculations approved by the Technical Research Centre of Finland / VTT Building Technology, an Independent Testing Authority mandated to perform type inspection for shelter equipment and systems by the Finnish Ministry of Interior.

SO-3 Door Protection Capability

The SO-3 doors are designed to withstand multiple long duration blast loads having peak reflected overpressure of 8.0 bar (800 kPa) within the elastic range of the materials used. The door frame design enables uniform distribution of the positive blast load into the surrounding wall. Rebound load is received by the latching system.

The SO-3 doors also resist a mechanical shock transmitting through the installation wall with a rapid change in velocity of 1.5 m/s corresponding to acceleration force of 30 g.

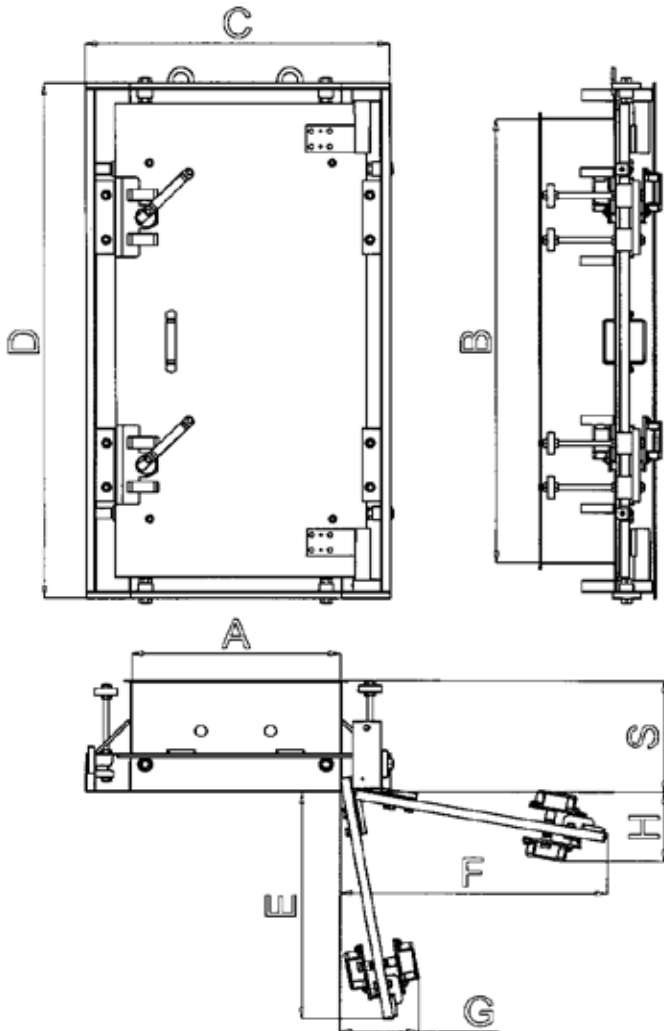
The SO-3 doors are designed to function within the operating temperature range of -30 ... +80 °C.



Example of a Betec Temet SO-3 Blast Door

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Standard SO-3 Blast Resistant Door



Door hinges

Hinges are provided with maintenance free slide bearings or optionally with roller bearings.

SO-3 Blast Door gas tightness

BetecTemet SO-3 blast doors are provided with a gasket for tightness against entry of gases in such a way that the allowable leakage through the door is not more than 0.2 dm³/s (0,72 m³/h) for each square metre of the opening when the external overpressure is 150Pa.

Surface treatment

Betec Temet SO-3 doors are surface treated with durable shop primer resisting corrosion during transportation and storage.

Other documents related to SO-3 blast door:

Installation Instructions
Operation & Maintenance Instructions

Examples of SO-3 Door sizes available

Single wing door sizes with main dimensions in mm:

Code	A	B	C	D	E	F	G	H	Min. S	Weight (kg)
OC505	900	2000	1315	2330	1100	1200	300	400	450	1200
OC506	1200	2000	1615	2330	1400	1500	300	400	450	1400
OC507	1500	2000	1915	2330	1700	1800	300	400	450	1950
N05887	2000	2200	2415	2530	2200	2300	300	400	450	2600
N02947	2200	2700	2600	3100	2400	2500	300	400	450	4700

Contact the manufacturer for the availability of different door sizes. Sizes shown in a table are just examples of our wide selection. All the information contained in this brochure agrees with the information available at the time of its printing and only serves as advance information.