

ABOUT THE PRODUCT

The SD-Series offers security door & frame assemblies in swinging, sliding, flush or grilled construction. Lower range offerings include standard 1 3/4" thick door models with the possibility to use standard or slightly modified door hardware. Most doors resemble standard hollow metal door assemblies when installed.

SD-Series detention hollow metal products are used in prisons, jails, juvenile facilities and detention centers worldwide. Our hollow metal doors, frames and windows are appropriate for all types of correctional institutions, from minimum security through the most demanding maximum security applications.

PRODUCT RANGE:

- ▶ CSD: Commercial Security Doors (SBD / Secured By Design).
- ▶ DSD: Detention Security Hollow Metal Doors. Grades 1,2,3 & 4, high to medium security doors (graded according to HMMA 863-98).
- ▶ DSW: Detention Hollow Metal Vision Systems. Grades 1,2,3 & 4, high to medium security windows (graded according to HMMA 863-98).

In addition to pre-engineered door models, custom designed doors are available for ANY application. Extensive work has been done in this regard for government projects, chemical and pharmaceutical plants, as well as oil, gas and petrochemical projects.



TESTING & SPECIFICATIONS OF COMPLIANCE - Security & Fire

SD-Series Flush Doors are designed and manufactured to meet the international requirements of security and detention, based on design calculations and certified by independent consultancy offices in accordance with industry standards.

CSD-COMMERCIAL SECURITY DOORS

PURPOSE OF USE: Against forced entry.

CSD-Series range of security door sets offer high levels of protection against vandalism, casual and opportunist thieves in medium/low risk situations. Robust door constructions combine with high security hardware options to form an effective barrier against intrusion.

TYPICAL APPLICATIONS:

Social housing projects, domestic dwellings, hotels, perimeter protection, stores of high value goods, universities and hospitals.

SPECIFICATIONS OF COMPLIANCE:

CSD-Series doors are tested and certified by Chiltern-Dynamics-UK, according to BS PAS 23-1 (Fitness For Purpose) and BS PAS 24-1 (Enhanced Security) for commercial security standards (Product Assessment Specification / British Standards).

Listed and labeled by Intertek-Warnock Hersey according to UL 10C, UL 10B, UBC 7-2-1994/1997, NFPA 252-1995, ASTM E152-81a, CAN 4-1980, BS 476 Part 20 and ISO 3008, for fire rating up to 3 hours.

BS PAS 23-1 & 24-1 TEST CERTIFICATION:

Is a UKAS accredited test and is a new requirement - as part of the British Government's 'Secured by Design' initiative (SBD). This is the UK Police flagship initiative supporting the principles of 'designing out crime' by use of effective crime prevention and security standards for a range of applications.

Products certified to these security standards have resisted a series of professional attacks, each lasting up to 15 minutes using a variety of hand tools such as hammers, crowbars, chisels and hacksaws.



Testing includes manual manipulation, infill medium removal, mechanical loading, resistance to soft and hard body impact, resistance to vertical loads and static torsion, slamming resistance, closure against obstruction, abusive forces on handles, basic security test and cyclic operation for door and hardware.

Secured By Design (SBD):

All SBD developments must meet specified performance standards, to demonstrate appropriate levels of security and fitness for purpose, such as durability, suitability and use-ability. Secured by Design was developed by the association of Chief of Police Officers Crime Prevention Initiatives (ACPO CPI Ltd) and supports one of the British Government's key planning objectives; the creation of secure, quality places where people wish to live and work. For more information about the SBS scheme see: <http://www.securedbydesign.com/>

CSD-Series: DOOR CONSTRUCTION:

Feature	Description	Remarks
Leaf Facings (Inner/Outer)	Galvanized steel folded to form edge of leaf.	1.50 mm thick.
Joints	Pan and lid folded and seamed.	-
Frame	Galvanized Steel.	1.50 mm thick.
Fire Rating	Up to 3 hours for single leaf and double leaf swing doors.	Listed and labeled by Intertek-Warnock Hersey according to UL 10C, UL 10B, UBC 7-2-1994/1997, NFPA 252-1995, ASTM E152-81a, CAN 4-1980, BS 476 Part 20 and ISO 3008.
Core	43 mm thick foam-in-place Polyurethane thermal insulation core.	48 Kg/m ³ (DIN 53420). Thermal Resistance: R-Factor = 12.80 hr.ft ² . °F/Btu. (ASTM C518-63T).

PAS 23/24 testing at CHILTERN laboratories, UK.



MOJ Prison - Detention Doors - Thailand



DSD-DETENTION SECURITY HOLLOW METAL DOORS [Bullet Resistant When Required]

DSD-Series doors are part of our High Security production line. Designed & manufactured according to **HMMA-863 (98 & 04), and ASTM F1450-05** (Standard Test Methods for Hollow Metal Swinging Door Assemblies for Detention and Correctional Facilities), this series covers the whole line of doors specially designed for Detention Centers and Prisons, all tested and certified by **Intertek-Warnock Hersey-USA**.

Above Series includes:

- ▶ Detention Inmate Cell Doors with all possible options as food pass, speaker grill, vision panel, and preparation details of all types of detention hardware.
- ▶ Security Grilled Doors, swinging or sliding, manually or automatically operated.
- ▶ Security Garage Doors.

According to the security grade, the steel facings thickness varies between 1.5 mm for commercial security doors, 2.0 mm for grade 3 & 4 Detention Doors and 2.5 mm for grade 1 & 2 Detention Doors.

FIRE RATING

Fire labeling available as listed and labeled by **Intertek-Warnock Hersey** according to UL 10C, UL 10B, UBC 7-2-1997, NFPA 252-1995, ASTM E152-81a, CAN4-1980, and BS 476 Part 20.

FEATURES - CORE

- ▶ Spaces between stiffeners are insulated with fiberglass to the full height of the door.
- ▶ Standard infill nominal density 24 Kg/m³.
- ▶ Thermal Conductance (50 mm): $U = 0.123 \text{ Btu/hr.ft.}^{\circ}\text{F}$. (ASTM C177).
- ▶ Thermal Resistance: R-Factor = 8.11 hr.ft². °F/Btu. (ASTM C518-63T).
- ▶ Combustibility: None / IMO Resolution-ASTM E 136-82, BS 476 part 4, ISO R1182.

LEAF CONSTRUCTION

- ▶ Formed of heavy gauge steel face sheets constructed around a custom engineered steel rib core with interior construction as required to protect against specified security levels.
- ▶ Factory applied epoxy prime base coat.
- ▶ All other construction details, as skin & frame sheet thickness, reinforcement details, and frame anchoring details, depends on the security grading required and thus solely on **HMMA-863 (98 & 04), and ASTM F1450** recommendations.

HARDWARE

- ▶ **SD-Series** Swing door hardware includes modified builders hardware or factory manufactured locks and hinges as required by security rating. Slide door hardware includes low friction tracks and rollers, low voltage control circuitry for electrical operators, and a variety of operator actuation devices.



▶ Testing for Detention Windows at ITS U.S.A. (DSW-Series)



DSW-DETENTION SECURITY WINDOWS

DSW-Series windows are part of our High Security line. Designed and manufactured according to HMMA-863. Tested and certified in accordance with ASTM F 1592-05 (Standard Test Methods For Detention Hollow Metal Vision Systems) at Intertek-Warnek Hersey-USA.

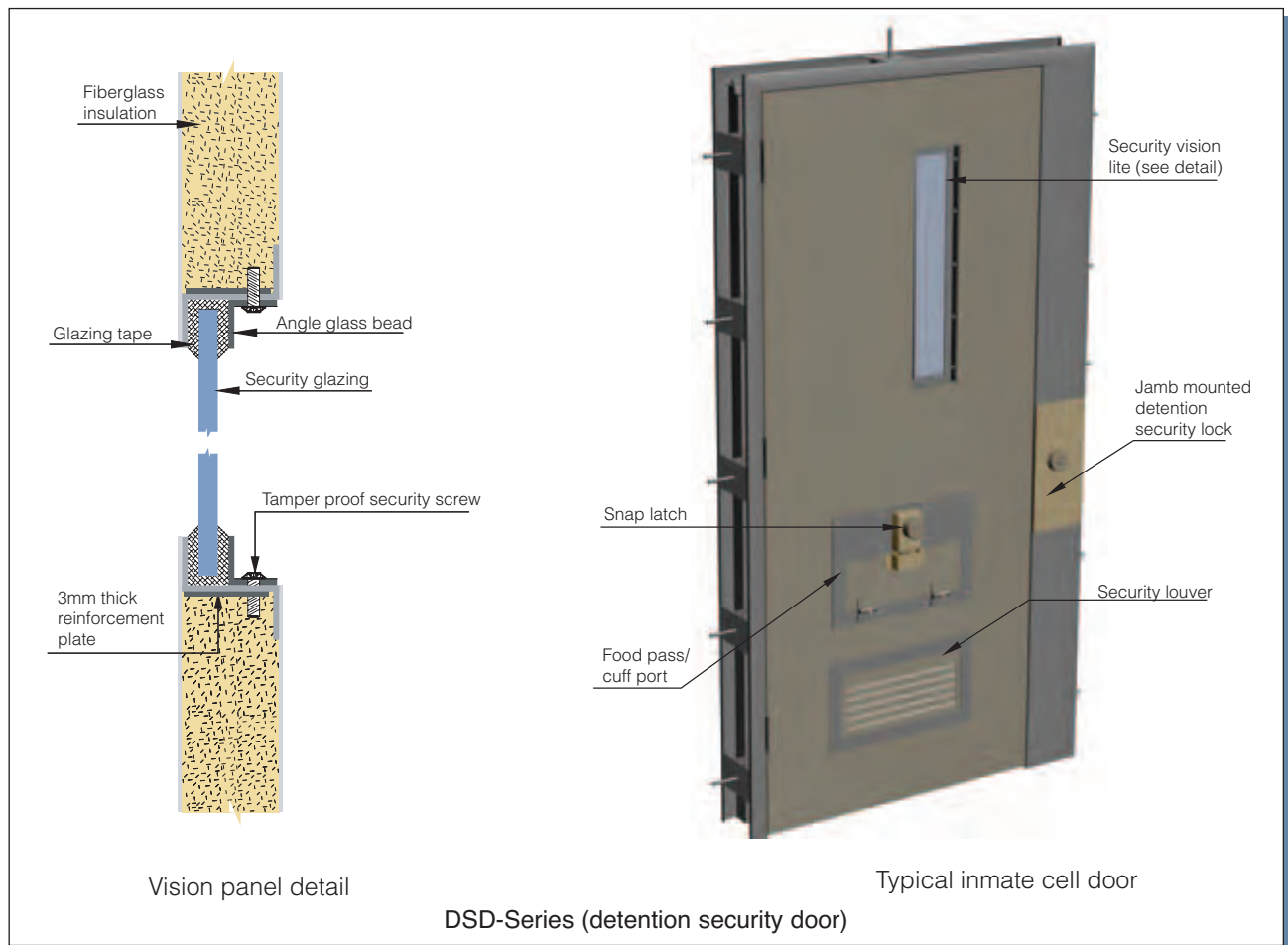
Available in grades 1 & 2. Tested for side light with door frame and a borrowed light with four glazing panes.

Window frames are made of 2 mm thick steel sheets and glazing stops of 3 mm thick steel angles.

SD-Series GENERAL OPTIONS

- ▶ Alkyd or polyurethane RAL color paint finish (factory applied).
- ▶ Supplied with or without hardware.
- ▶ Sliding assemblies are available manual or power operated.
- ▶ Can be manufactured for multiple performance requirements including acoustical, bullet resistance, blast resistance, thermal protection, radio frequency shielding or any combination thereof.

- ▶ SD-Series doors are offered with standard frame designs and can engineer special frame profiles to complement wall construction and architectural style.
- ▶ Doors and Frames are available in mild or galvanized steel. Stainless steel cladding is also possible.
- ▶ Available with all possible options of food pass, speaker grill, vision panel, single and double leaf custom made frames and preparation details of all types of detention or security hardware.



For further clarifications about our detention door systems, please contact directly our technical department at info@roots-group.com. General specifications are available at: <http://www.naamm.org/hmma/pdfs/HMMA863-04.pdf>