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#### HIGH QUALITY

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**Leader in world-class  
security and detention products.**

[www.trussco.com.sg](http://www.trussco.com.sg)

# DETENTION-GRADE SECURITY SYSTEMS



Trussco offers a wide range and variety of detention-grade security systems designed, built and tested to meet or surpass the most stringent requirements for maximum-to-low security facilities<sup>1</sup> while ensuring safety and comfort. The full suite of Trussco Detention-Grade Security Systems include;

- 1) Security Doors
- 2) Detention Grille Doors
- 3) Security Sliding Doors Systems
- 4) Security Panels (Ceiling & Wall)
- 5) Security Padding

<sup>1</sup>Trussco Detention-Grade Security Systems are tested to meet or surpass the relevant ASTM standards, if applicable. For further details, please see the respective sections for the applicable standards and the testing of each product.

Trussco Detention-Grade Security Systems can be customized to meet the different requirements and needs of each customer. Please do not hesitate to contact and discuss with our sales representatives should you require any other specifications that deviate from the typical specifications.

- i. Trussco also offers value-added factory installation methods to minimize field and on-site costs such as pre-installed hardware, pre-installed glazing and pre-installed hanger and guides.

## 1. Security Doors

- a. Tested and proven to resist against multiple and consecutive high impact blows, heavy static loading, edge-crushing and hinge-racking, Trussco Detention-Grade Security Doors are the safest, most durable and highest quality Detention-Grade Security Doors that comply with ASTM F1450. Trussco has installed thousands of Trussco Security Doors in Prisons, Detention Centres, Lock-Ups, and other high security facilities throughout the globe. Designed to be operated with Trussco HSM series of locks.

### b. Typical Specifications:

- i. Frame Dimensions: 1141mm W x 2175mm H
- ii. Panel Dimensions: 850mm W x 2112mm H
- iii. Bullet resistance: NIJ level 4 (NIJ 0101.06)
- iv. Vision Panel Type: Double Laminated Polycarbonate glazing complies with H.P. White HPW-TP-0500.02 Forced Entry Level 1 standard
- v. Vision Panel Size: 250mm W x 150mm H (Clear view)

- vi. ASTM F1450 Grade 3 security level
- vii. Fire-rating: 4 Hours in compliance with SS332:2007
- viii. Handcuff Port: 325mm W x 150mm H, swing-out with flush-bolt locking mechanism
- ix. Foodpass Port: 325mm W x 150mm H, swing-out with flush-bolt locking mechanism
- x. Speaking Holes: 16 holes with diameter of 6 mm outside of the cell, 26 holes with 3 mm diameter inside of the cell, with offset of 3 mm horizontally
- xi. Hardware: Raised pull handle (HSM-701), Recessed handle (HSM-705), Hinges (HSM 745)



SECURITY DOORS





- b. Typical Specifications:
- i. Frame Dimensions: 1141mm W x 2175mm H
  - ii. Panel Dimensions: 850mm W x 2112mm H
  - iii. ASTM F1450 grade 3 level
  - iv. Grill Bars Type: Tool-Resistant Bars complying with ASTM A627-88 and ASTM A629-88
  - v. Hardware: Raised pull handle (HSM 701), Recessed Handle (HSM 705), Hinges (HSM 745)



## 2. Detention Grille Doors

- a. Tested also to meet and surpass the same standards as Trussco Security Doors, Trussco Detention Grille Doors are designed to incorporate tool-resistant bars complying with ASTM 627-88 and ASTM 629-88 and are resistant to tempering and provide for a safe and comfortable environment. Thousands of Trussco Detention Grille Doors are also installed in Prisons, Detention Centres, Lock-Ups, and other high security facilities throughout the globe. Designed to be operated with Trussco HSM series of locks.

DETENTION GRILLE DOORS

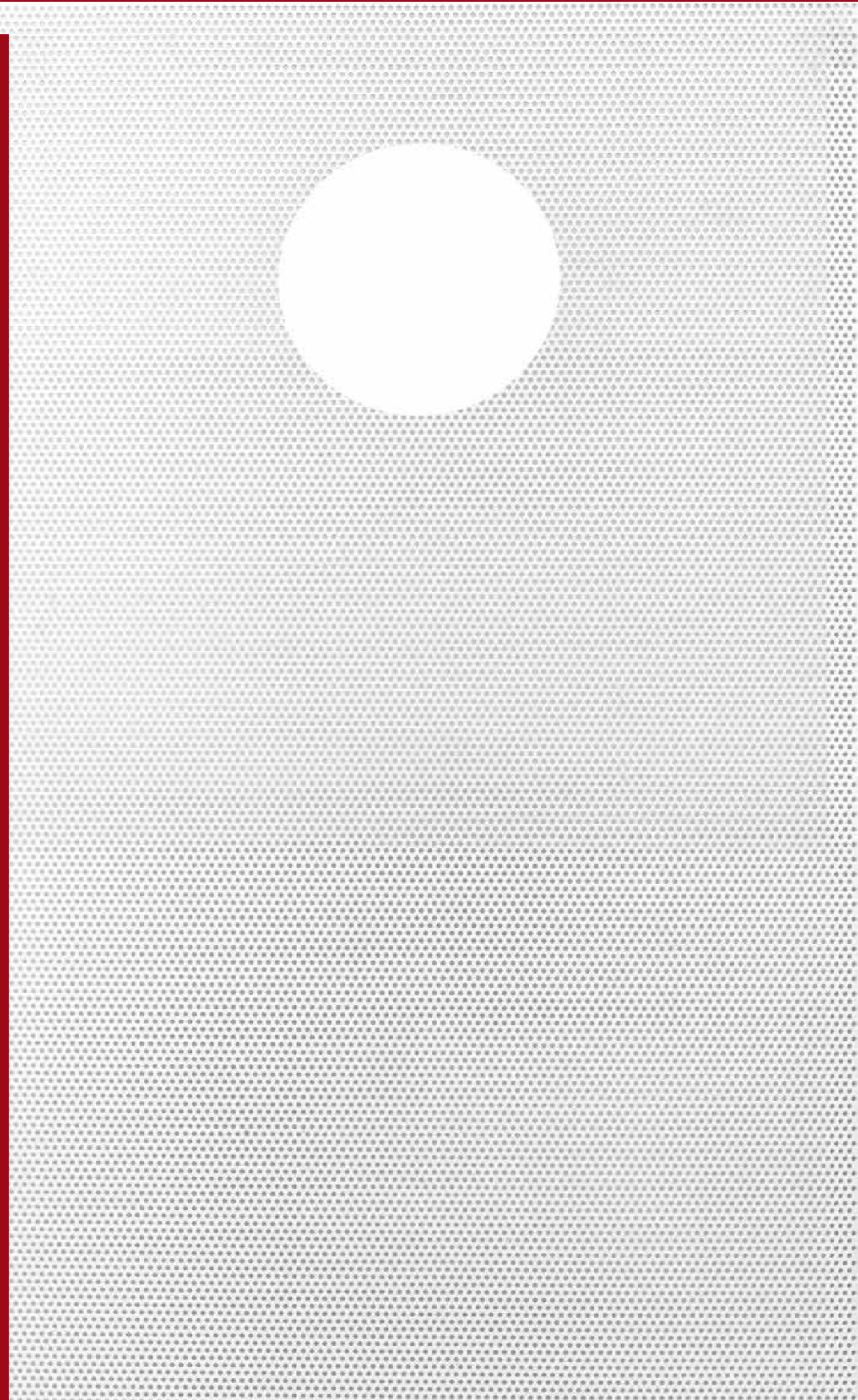
## 3. Sliding Door System

- a. Trussco Security Slider Door System offers the complete operation of sliding doors and complies with the ASTM F1450. This system features a three-layer safe locking mechanism with an emergency mechanical unlocking function from a control cabinet at the head of the door line.
- b. Typical Specifications
- i. Frame Dimensions: 1141mm W x 2175mm H
  - ii. Panel Dimensions: 850mm W x 2112mm H
  - iii. Bullet resistance: NIJ level 4 (NIJ 0101.06)
  - iv. Vision Panel Type: Double Laminated Polycarbonate glazing complies with H.P. White HPW-TP-0500.02 Forced Entry Level 1 standard
  - v. Vision Reinforcement: Wire mesh/Bar grille
  - vi. Vision Panel Size: 250mm W x 150mm H (Clear view)
  - vii. ASTM F1450 grade 3 level
  - viii. Fire-rating: With Vision Panel, No Fire-Rating. Without Vision Panel, 4 Hours in compliance with SS332:2007
  - ix. Handcuff Port: 325mm W x 150mm H, swing-out with flush-bolt locking mechanism
  - x. Foodpass Port: 325mm W x 150mm H, swing-out with flush-bolt locking mechanism
  - xi. Speaking Holes: 16 holes with diameter of 6 mm outside of the cell, 26 holes with 3 mm diameter inside of the cell, with offset of 3 mm horizontally
  - xii. Hardware: Recessed Handle(HSM 705)



SECURITY SLIDING DOORS SYSTEMS

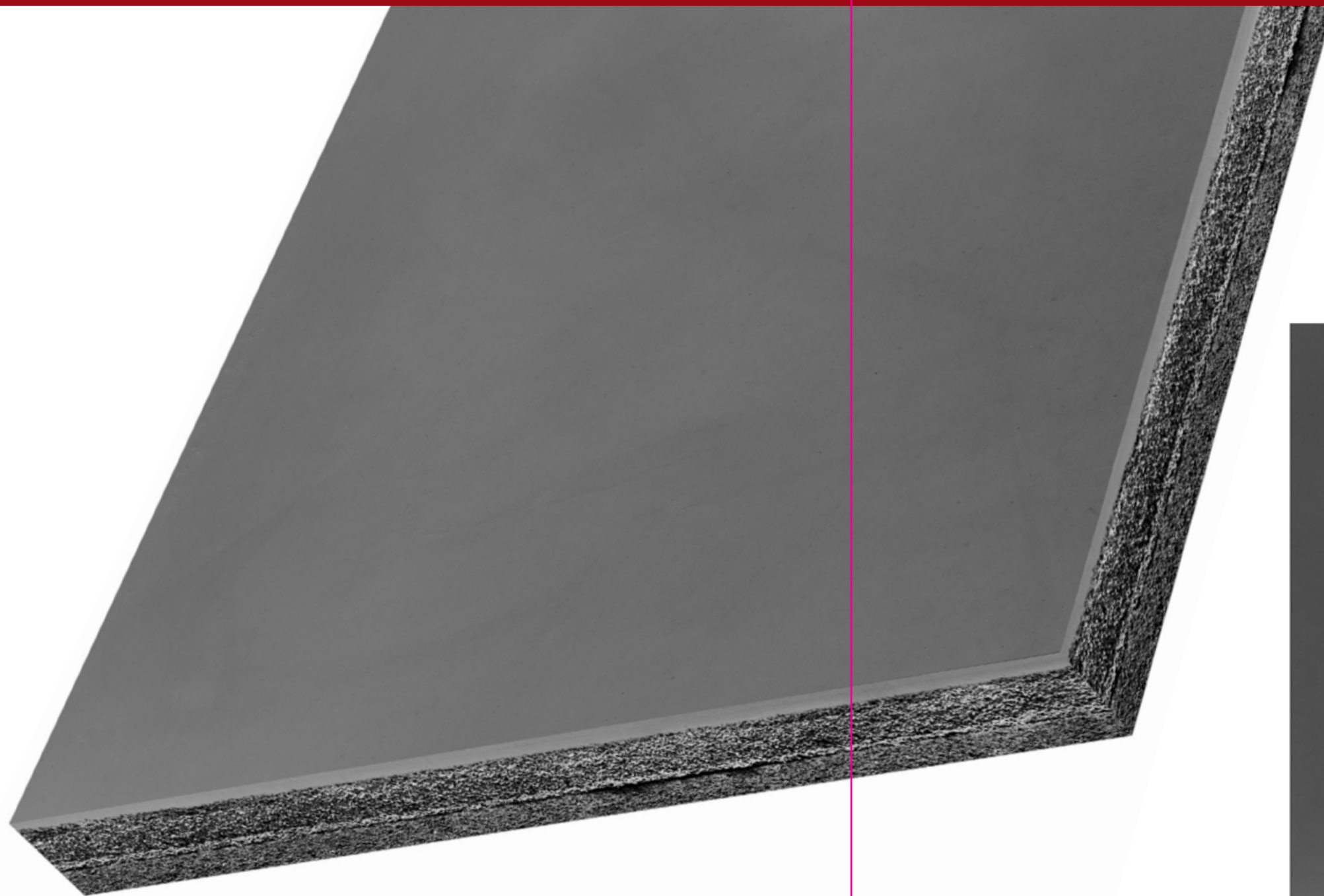




#### 4. Security Panel (Security Ceilings & Walls)

- a. Available either in standard panels or composite configuration. Specially designed to meet the needs of secure construction; such as; Cells, Dayrooms, Soffit Enclosures, Security Corridors, Wall Separators. Also available; Acoustical Wall Panels and Composite Flooring.





## 5. Padded System

- a. A tough, resilient padding system for Prisons, Police Stations, Court Houses or Remand Centers with maximum safety. Fire resistant, fungal resistant with minimum maintenance required. For the protection of mental patients or inmates.

- b. Typical Specifications:

### i. Mechanical / Physical Properties for the Top Layer

• Shore A Hardness	~85 (14 days / +23°C)	(DIN 53505)
• Tensile Strength	~6.0 N/mm <sup>2</sup> (14 days / +23°C)	(DIN 53504)
• Elongation at Break	~70% (14 days / +23°C)	(DIN 53504)
• Tensile Adhesion Strength	>1.5 N/mm <sup>2</sup> (failure in concrete)	(EN 13892-8)
• Tear Strength	~28 N/mm (14 days / +23°C)	(ISO 34-1)



SECURITY PADDING

### ii. Resistance

- Fungus – Completely resistant to fungus
- Chemical – Resistant to many chemicals including crude oil, urine, etc
- UV Resistance – Medium to High UV stability.

### iii. Thermal Resistance/Stability

- Exposure - Dry Heat
- Permanent - +50°C
- Short-Term max. 7 days - +80°C
- Short-Term max. 8 h - +100°C

### iv. Standard Size

- 1,200mm X 2,400mm X 28mm (Before Installation)





# HSM-SERIES ELECTRO-MECHANICAL LOCKS

## MOTOR OPERATED ELECTRO- MECHANICAL DEADLATCH

### HSM 120

- i. Electro-Mechanical Dead-latch Series are pin tumbler, motor operated locks for swinging doors. HSM 120 Dead-latch lock can be widely applied in medium to maximum security detention doors suitable for use in cells, corridors, entrances and sally-ports etc, for remotely controlled electric unlocking.
- ii. The lock mechanism can be accessed without removal from the door frame by opening the access cover plate on the non-secure side of the frame.
- iii. Standard features of HSM 120 are deadlock indication switch, mogul cylinder, and mechanical latch-back, strike with security fasteners, mounting fasteners, high powered motor, plug connector and fail secure. 2 models available: HSM 120-1 (Single Cylinder) and HSM 120-2 (Double Cylinder).

## SPRING AND DEADLOCK

### HSM 70

- i. HSM 70 are paracentric keyed lever tumbler mechanical locks with dead latch for swinging doors. HSM 70 Auto Slam Shut Deadlatch locks are designed for use on cell, dormitory and corridor doors, dayrooms and other large doors where security of a deadlock with auto-slam shut function is required.
- ii. Standard features of HSM 70 are mechanical operation, corrosion resistant, heavy duty level tumblers, and keyed on one side (K1) or two sides (K2).





DEADLOCK

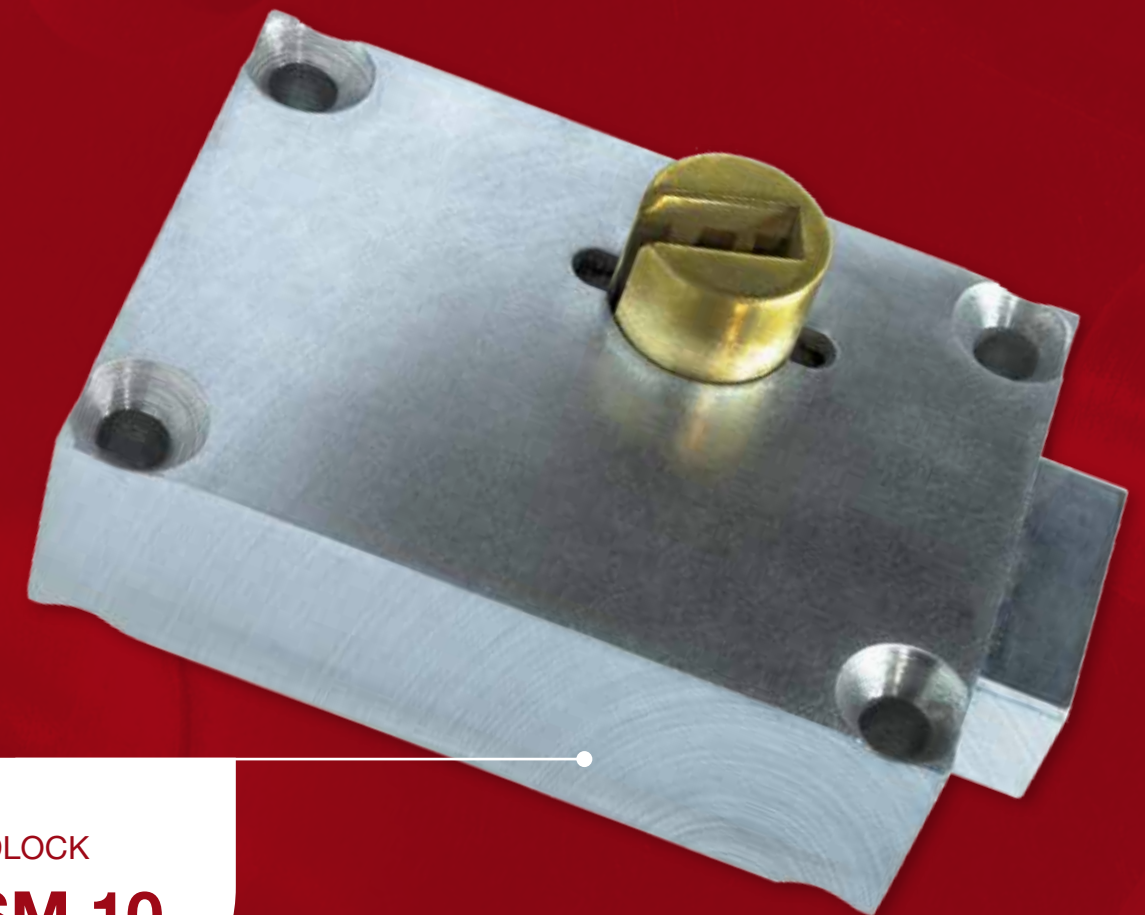
## HSM 80



- i. HSM 80 are paracentric keyed lever tumbler deadbolt mechanical locks for swinging doors. HSM 80 Deadlocks are designed for use on cell, dormitory and corridor doors, dayrooms and other large doors where security of a deadbolt is required.
- ii. Standard features of HSM 80 are mechanical operation, corrosion resistant, heavy duty level tumblers, and keyed on one side (K1) or two sides (K2).

DEADLOCK

## HSM 10



- i. HSM 10 are paracentric keyed lever tumbler deadbolt mechanical locks for small swinging doors. HSM 10 Deadlocks are designed for use on small swinging doors such as access and control panels, plumbing chases or hatches doors. These are not intended for use on cell doors.
- ii. Standard features of HSM 10 are mechanical operation, corrosion resistant, heavy duty level tumblers, and keyed on one side (K1) or two sides (K2).



# HSM-SERIES

## DETENTION- GRADE HARDWARE



KNOB PULL  
**HSM 775**

**Specifications:**

- i. Size: 2 1/4" Dia. Knob, 2 1/4"
- ii. Projection, 3 1/4" Dia. Base
- iii. Material: Stainless steel
- iv. Style: Knob
- v. Finish: US32D, US4 Finish upon request
- vi. Mounting screws: 10 – 24 x 1/2" Flat Head, Security Torx



RECESSED PULL  
**HSM 705**

**Specifications:**

- i. Size: 4" x 5" x 1" Deep
- ii. Material: Investment cast stainless steel
- iii. Style: Recessed (Flush)
- iv. Finish: Hairline finish, US32D
- v. Mounting screws: 1/4 - 20 x 1/2" Flat Head, Security Torx

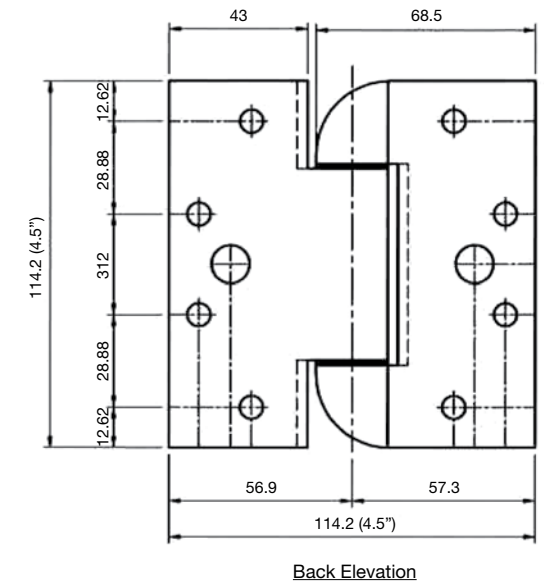
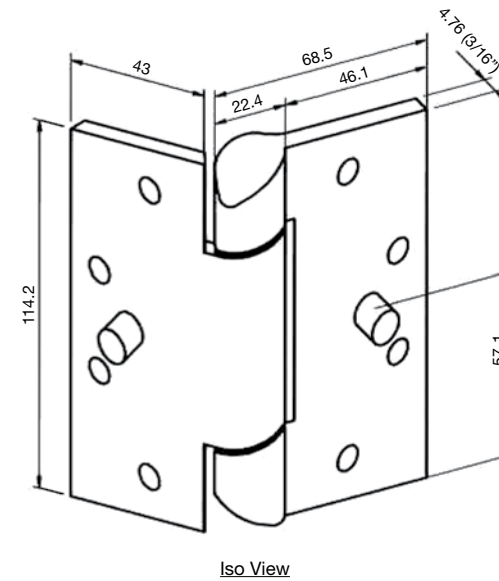
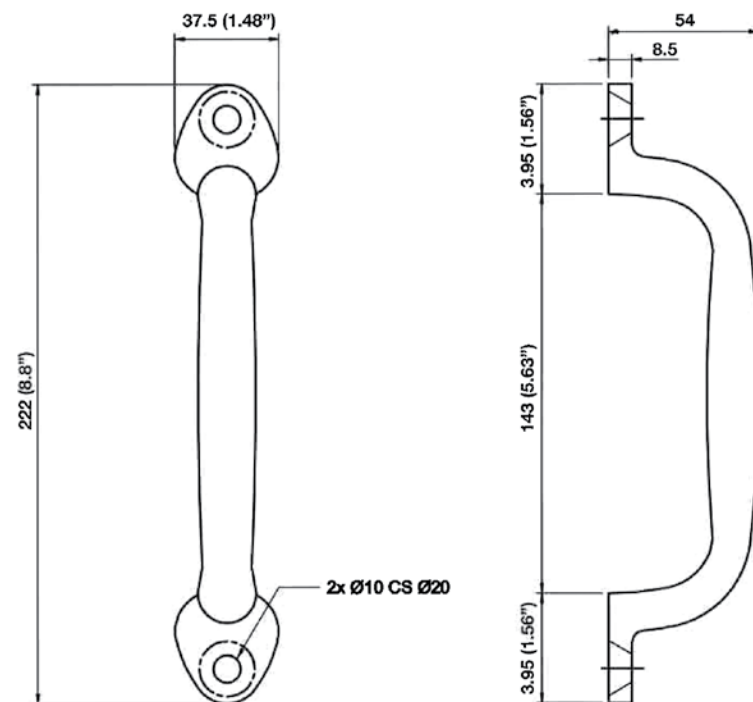




RAISED PULL  
**HSM 701**

**Specifications:**

- i. Size: 2 1/4" Dia. Knob, 2 1/4"
- ii. Projection, 3 1/4" Dia. Base
- iii. Material: Stainless steel
- iv. Style: Knob
- v. Finish: US32D, US4 Finish upon request
- vi. Mounting screws: 10 – 24 x 1/2" Flat Head, Security Torx



STAINLESS  
STEEL HINGE  
**HSM 745**



**Specifications:**

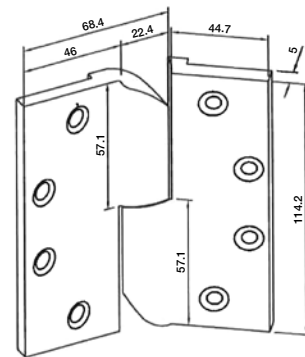
- i. Size: 4 1/2" x 4 1/2" x 3/16" Deep
- ii. Material: Investment cast stainless steel
- iii. Style: Full mortise, hospital tip, security stud
- iv. Finish: US32D, Hairline finish
- v. Pin: Full welded, concealed & non-removable
- vi. Bearing: Anti-friction bearings, maintenance-free
- vii. Capacity: 300 LB Door (3 Hinges)
- viii. Mounting screws: 1/4 – 20 x 1/2" Flat Head, Security Torx
- ix. Template: ASTM.BHMA A 156.7



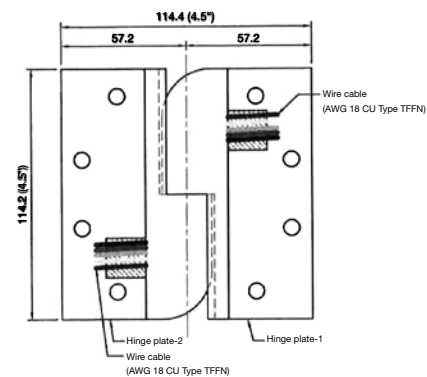
## STAINLESS STEEL WIRED HINGE HSM 745E

### Specifications:

- Size: 4 1/2" x 4 1/2" x 3/16" Deep
- Material: Investment cast stainless steel
- Style: Full mortise, hospital tip, security stud
- Finish: US32D, Hairline finish
- Pin: Full welded, concealed & non-removable
- Bearing: Anti-friction bearings, maintenance-free
- Capacity: 300 IB Door (3 Hinges)
- Mounting screws: 1/4 - 20 x 1/2" Flat Head, Security Torx
- Template: ASTM.BHMA A 156.7



Iso View



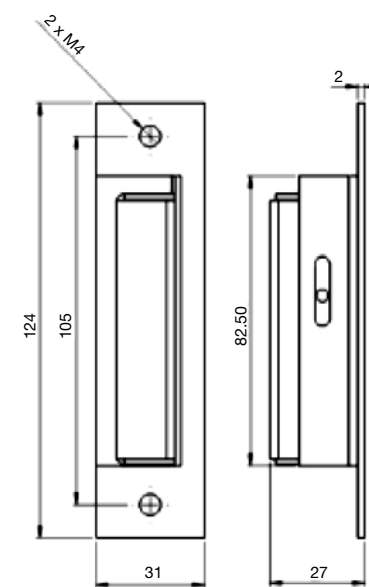
Back Elevation



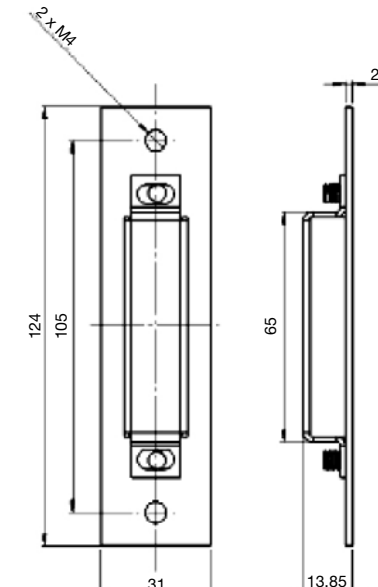
## DOOR POSITION SWITCH HSM RS 13-1

### Specifications:

- Size: 4.88" x 1.22" x 1.06" deep
- Material: Stainless steel
- Style: Fully concealed and tempered proven
- Finish: US32D, Hairline finish
- Voltage: 24 VAC/VDC
- Current: 0.5 max
- Power: 12 W max
- Loop type: Open or Closed
- Gap distance: up to 4 mm
- Mounting screws: M4x12 Pin Flat Head, Security Torx
- Template: ANSI 4 7/8" strike cutout



Frame Mounted Switch Module



Panel Mounted Magnetic Pack