

British Standard

BS



*Classic Steel*<sup>®</sup>

The Industrial Standard



**Fire Steel Door Set**



**Luxury & Classic**

**Secure Stable Strong Lasting**

# Type : CSD

**2 Hours Fire Rating**

**British Standard Certified, BS 476 Part 20 : 1987 and Part 22 : 1987, 2 Hours Fire Rating**

**Thai Industrial Standard Certified, TIS 1288-2538, Steel Door Sets for using both Outdoor and Indoor**



# Type : FRD

## 4 Hours Fire Rating

British Standard Certified, BS 476 Part 20 : 1987 and Part 22 : 1987, 4 Hours Fire Rating

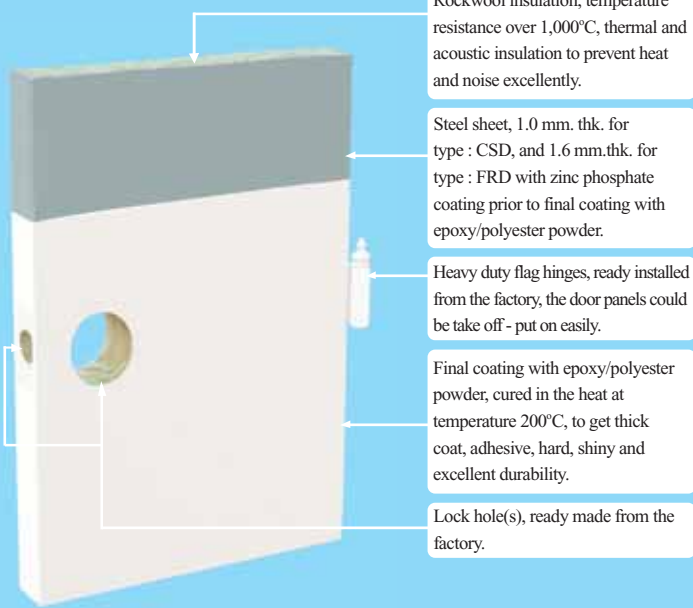
Thai Industrial Standard Certified, TIS 1220-2541, Class 240 ( Fire Proof not less than 240 minutes or 4 Hours Fire Rating )



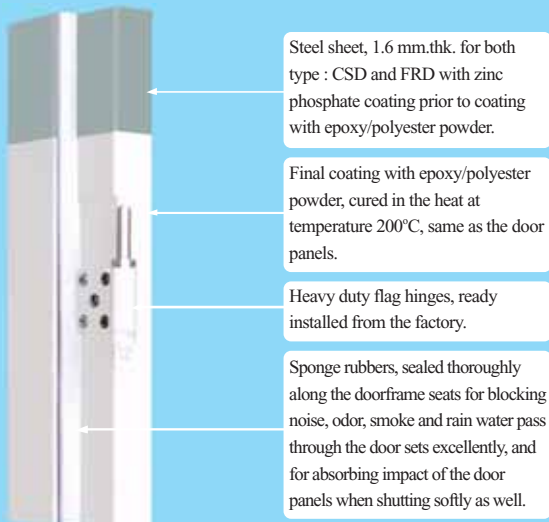


## Powder Coating Styles, both type : CSD and FRD

### Door panels

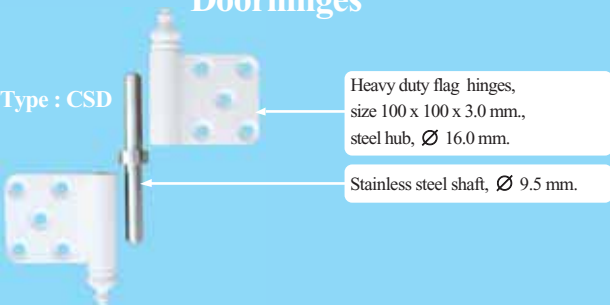


### Doorframes

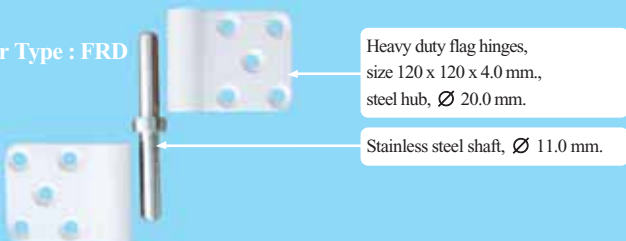


### Doorhinges

For Type : CSD



For Type : FRD

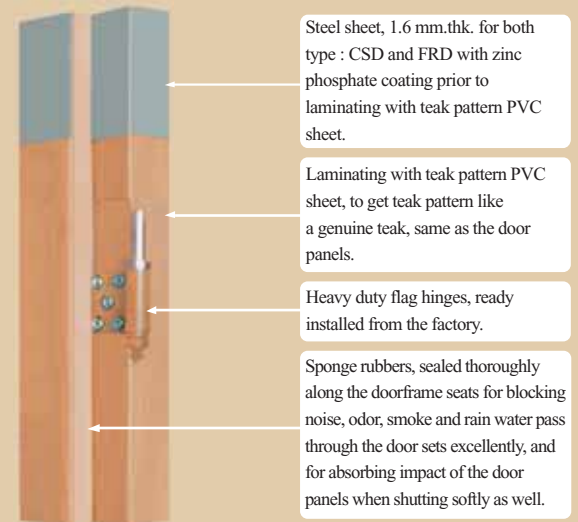


## Teak Pattern Styles, both type : CSD and FRD

### Door panels

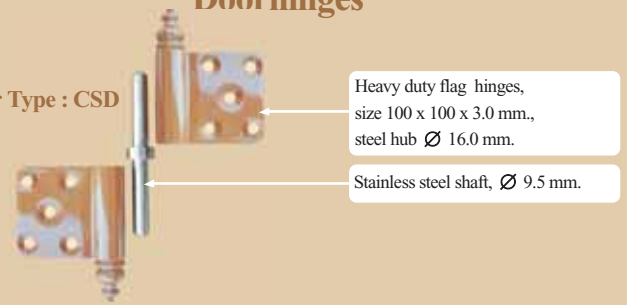


### Doorframes

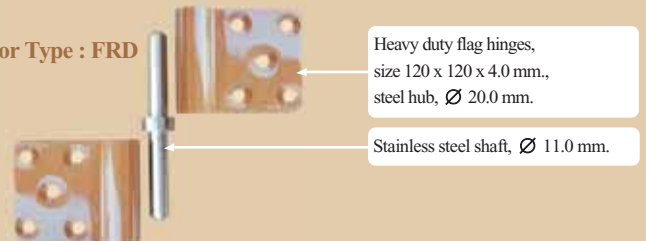


### Doorhinges

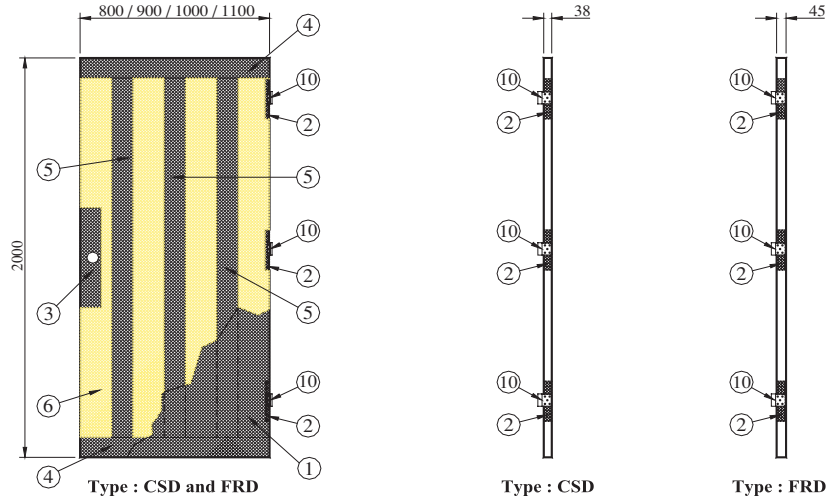
For Type : CSD



For Type : FRD



# Door Panels



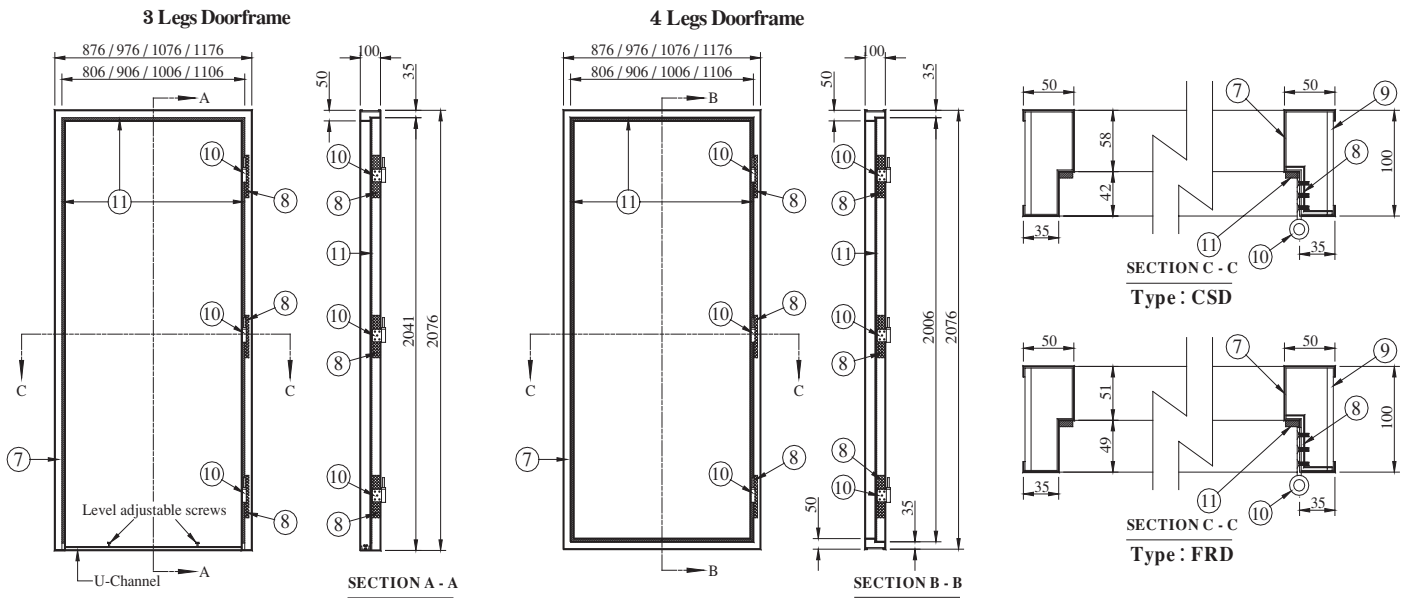
(Measure Unit : mm.)

**The Door Panels** are made of steel sheet 1.0 mm. thk. for type : CSD, and 1.6 mm. thk. for type FRD (Fig. ①). Both type : CSD and FRD, reinforcement extra strength inside the door panels with steel plate on the position of installing of doorhinges three positions (Fig. ②), and with steel plate at the area of installing of door lock (Fig. ③), and with steel beams at the top and bottom edges of the door panels (Fig. ④) that cause excellent strength. In addition, for flush style only, reinforcement extra strength inside the door panel with three steel columns along the vertical area of the door panel (Fig. ⑤) to ensure the strength and rigidity of flush style door panel.

Both type : CSD and FRD, surface of the door panels are coated of zinc phosphate prior to final coating with epoxy/polyester powder cured in the heat at temperature 200° C, to get thick coat, adhesive, hard, shiny and excellent durability. In addition, teak pattern styles are also available, by laminating with teak pattern PVC sheet on the surface coated of zinc phosphate of the door panels, to get teak pattern like a genuine teak with the same excellent durability as powder coating styles.

Both type : CSD and FRD, inside the door panels are compressed firmly with rockwool insulation (Fig. ⑥) that has property of temperature resistance over 1,000 °C, and has property of thermal and acoustic insulation to prevent heat and noise excellently. In addition, it give feeling of thickness of the door panels as well.

# Doorframes



(Measure Unit : mm.)

**The Doorframes**, both type : CSD and FRD, are made of steel sheet 1.6 mm. thk. (Fig. ⑦). Reinforcement extra strength with steel plates on the position of installing of doorhinges three positions (Fig. ⑧), and with round steel rods welded at the outer edge of doorframe as doorframe hooks around the doorframe (Fig. ⑨) for welding to fix on to round steel rods stuck tightly inside of the wall blank edges to installing the doorframe that cause excellent strength.

Surface of the doorframes are coated of zinc phosphate prior to coating with epoxy/polyester powder cured in the heat at temperature 200°C, or laminating with teak pattern PVC sheet on the surface coated of zinc phosphate of the doorframes, same as the door panels.


They have sponge rubbers sealed thoroughly along the doorframe seats for blocking noise, odor, smoke and rain water pass through the door sets excellently, and for absorbing impact of the door panels when shutting softly as well (Fig. ⑪).

**Classic Steel** Fire Steel Door Sets are luxury, classic, secure, stable, strong, and lasting, they are very excellent in providing the safety for lives and properties. They have ability to prevent harmful from smoke and fire confidently. For type : CSD, it can withstand fire over 1,000°C for 2 hours, British Standard Certified, BS 476 Part 20 : 1987 and Part 22 : 1987, 2 Hours Fire Rating, and Thai Industrial Standard Certified, TIS 1288-2538, Steel Door Sets for using both Outdoor and Indoor as well. And for type : FRD, it can withstand fire over 1,000°C for 4 hours, British Standard Certified, BS 476 Part 20 : 1987 and part 22 : 1987, 4 Hours Fire Rating, and Thai Industrial Standard Certified, TIS 1220-2541, Class 240 ( Fire Proof not less than 240 minutes or 4 Hours Fire Rating ) as well. In addition, both type : CSD and FRD, they can prevent heat, noise, odor, smoke and rain water pass through the door sets excellently, and they can be shut softly without making loud noise as well.

Both type : CSD and FRD, they are easy to installing, because various works are entirely made from the factory, such as lock hole(s), coating or laminating, doorhinges, especially, doorhinges are heavy duty flag hinges (Fig. ⑩), and installed at the steel plates three positions (Fig. ②, ⑧) that cause excellent strength, the door panels could be take off - put on easily, and the doorhinges are ready installed from the factory as well.

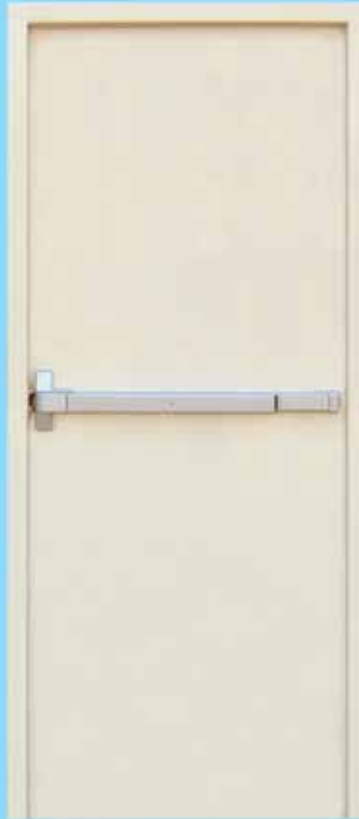
Very suitable for using as house front doors, house back doors, bedroom doors, various room doors, fire escape doors, etc.

## Comparison between General Teak Door Sets and Fire Steel Door Sets “ Classic Steel ”

Item	Description	General Teak Door Sets	Fire Steel Door Sets “  Classic Steel ”
1	Luxury and Classic	Excellent	Excellent, there are various types of embossed styles, same as general teak door sets. In addition, there are powder coating styles, and teak pattern styles that are luxury and classic like genuine teak door sets.
2	Stretch, Shrink, Twist and Flex depends on weather conditions	Some	None
3	Strength and Long Last	Medium	Excellent, because the door panels and doorframes are entirely made of thick steel sheet and coated with zinc phosphate prior to final coating with epoxy/polyester powder cured in the heat at temperature 200°C for powder coating styles, or laminating with teak pattern PVC sheets for teak pattern styles.
4	Security from Intruder	Poor	Excellent, because the door panels and doorframes are entirely made of thick steel sheet and reinforcement extra strength inside the door panels thoroughly that cause excellent strength.
5	Fire Resistance	None	Yes, 2 Hours Fire Rating ( British Standard Certified, BS 476 ), and 4 Hours Fire Rating, ( British Standard Certified, BS 476, and Thai Industrial Standard Certified, TIS 1220-2541 as well ).
6	Rainproof, Outdoor Use	None, because rain water can leak through the gap between the door panels and the doorframes	Yes, because sponge rubbers sealed thoroughly along the doorframe seats to block rain water leak through excellently that is tested and certified by Thai Industrial Standard, TIS 1288-2538, Steel Door Sets for using both Outdoor and Indoor.
7	Blocking Noise, Odor, Smoke	Medium	Excellent, because rockwool insulation is compressed firmly inside the door panels that has property of thermal and acoustic insulation to prevent heat and noise excellently, in addition, they have sponge rubbers sealed thoroughly along the doorframe seats for blocking noise, odor, smoke excellently, and for absorbing impact of the door panels when shutting softly as well.
8	Standard Certificate of Product	None	Yes, - British Standard Certificate, BS 476 Part 20 : 1987 and Part 22 : 1987 ( 2 Hours Fire Rating, and 4 Hours Fire Rating ). - Thai Industrial Standard Certificate, TIS 1220-2541, Class 240 ( Fire Proof not than 240 minutes or 4 Hours Fire Rating ). - Thai Industrial Standard Certificate, TIS 1288-2538 ( Steel Door Sets for using both Outdoor and Indoor ).
9	Installation	Complicated, because there are a lot of works have to be done at job site, such as drilling lock hole(s), chipping hinge grooves, installing hinges, installing the door panels to the doorframes, including coating.	Easy, because various works are entirely made from the factory, such as lock hole(s), coating or laminating, doorhinges, especially, doorhinges are heavy duty flag hinges that the door panels could be take off - put on easily, and the doorhinges are ready installed from the factory as well.
10	Weight	Heavier	Lighter
11	Price	Higher	Lower



Flush Style  
(Creamy White Color)



Flush Style  
(Pearl White Color)



Flush Style with Glass Window  
(White Color)



Flush Style with Glass Window  
(Pearl White Color)



Embossed Style 5 Panels, Type 3  
(All panels are horizontal panels)  
(Red Oak Color, Teak Pattern)



Embossed Style 6 Panels  
(Creamy White Color)



Embossed Style 8 Panels  
(Cream Color)



Embossed Style 10 Panels  
(Black Oak Color, Teak Pattern)





Flush Style with Glass Window and Louver  
(Cream Color)



Embossed Style 4 Panels  
(White Color)



Embossed Style 5 Panels, Type 1  
(The horizontal panel is on the middle)  
(Creamy White Color)



Embossed Style 5 Panels, Type 2  
(The horizontal panel is on the top)  
(Pearl White Color)



Embossed Style 11 Panels  
(White Color)



Embossed Style 12 Panels  
(Cream Color)



Embossed Style 13 Panels  
(Golden Teak Color, Teak Pattern)



Embossed Style 18 Panels  
(Creamy White Color)

# Standard Accessories for Fire Steel Door Sets “”

## Door Locks



Cylindrical Lock, Knob Type



Cylindrical Lock, Lever Type



Deadbolt Lock



Handle Lock



Handle with Deadbolt Lock



Mortise Lock



Exit Lock, Knob Type  
(used together with push bar)



Exit Lock, Lever Type  
(used together with push bar)

## Push Bars (Panic Exit Devices)



Rim Type



Vertical Rod Type

## Door Closers



Non Hold-Open Standard Arm Type



Hold-Open Standard Arm Type

# How to Order

## Ordering Code for Fire Steel Doors Sets “ Classic Steel”

**XXX XX XX XX-XX**

### Type :-

- CSD** = 2 Hours Fire Rating, Fire Steel Door Set, completed with Steel Door Panel, Steel Doorframe and Steel Doorhinges.
- FRD** = 4 Hours Fire Rating, Fire Steel Door Set, completed with Steel Door Panel, Steel Doorframe and Steel Doorhinges.

### Style :-

- 00** = Flush Style
- G0** = Flush Style with Glass Window, without Glass
- G1** = Flush Style with Glass Window, completed with Ordinary Glass 6 mm. thk.
- G2** = Flush Style with Glass Window, completed with Temper Glass 6 mm. thk.
- G3** = Flush Style with Glass Window, completed with Safety Glass 6 mm. thk.
- G4** = Flush Style with Glass Window, completed with Wired Glass 6 mm. thk.
- 0L** = Flush Style with Louver
- G0L** = Flush Style with Glass Window and Louver, without Glass
- G1L** = Flush Style with Glass Window and Louver, completed with Ordinary Glass 6 mm. thk.
- G2L** = Flush Style with Glass Window and Louver, completed with Temper Glass 6 mm. thk.
- G3L** = Flush Style with Glass Window and Louver, completed with Safety Glass 6 mm. thk.
- G4L** = Flush Style with Glass Window and Louver, completed with Wired Glass 6 mm. thk.
- 04** = Embossed Style 4 Panels
- 51** = Embossed Style 5 Panels, Type 1 (The horizontal panel is on the middle)
- 52** = Embossed Style 5 Panels, Type 2 (The horizontal panel is on the top)
- 53** = Embossed Style 5 Panels, Type 3 (All panels are horizontal panels)
- 06** = Embossed Style 6 Panels
- 08** = Embossed Style 8 Panels
- 10** = Embossed Style 10 Panels
- 11** = Embossed Style 11 Panels
- 12** = Embossed Style 12 Panels
- 13** = Embossed Style 13 Panels
- 18** = Embossed Style 18 Panels

### Color :-

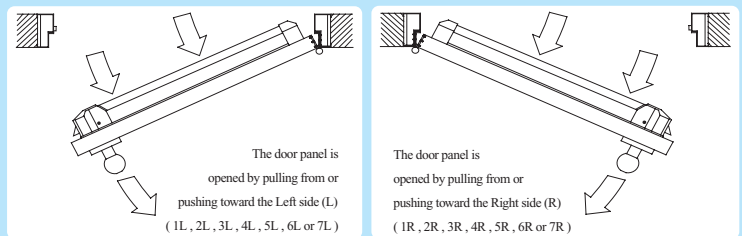
- CR** = Cream Color
- WH** = White Color
- CW** = Creamy White Color
- PW** = Pearl White Color
- GT** = Golden Teak Color, Teak Pattern
- BT** = Black Oak Color, Teak Pattern
- RT** = Red Oak Color, Teak Pattern

### Door Panel Size (mm.) :-

CSD				FRD			
	Width	Height	Thick		Width	Height	Thick
<b>80</b>	= 800	x 2000	x 38	<b>80</b>	= 800	x 2000	x 45
<b>90</b>	= 900	x 2000	x 38	<b>90</b>	= 900	x 2000	x 45
<b>100</b>	= 1000	x 2000	x 38	<b>100</b>	= 1000	x 2000	x 45
<b>110</b>	= 1100	x 2000	x 38	<b>110</b>	= 1100	x 2000	x 45

### Lock Hole :-


- 1R** = 1 lock hole for installing cylindrical lock only, without deadbolt lock, and it was set on the position in order that the door panel is opened by pulling from or pushing toward the Right side.
- 2R** = 2 lock holes for installing cylindrical lock and deadbolt lock, and they were set on the position in order that the door panel is opened by pulling from or pushing toward the Right side.
- 3R** = 2 lock holes for installing handle lock, and they were set on the position in order that the door panel is opened by pulling from or pushing toward the Right side.
- 4R** = 2 lock holes for installing handle with deadbolt lock, and they were set on the position in order that the door panel is opened by pulling from or pushing toward the Right side.
- 5R** = 2 lock holes for installing mortise lock, and they were set on the position in order that the door panel is opened by pulling from or pushing toward the Right side.
- 6R** = No lock hole for installing push bar (panic exit device) only, without exit lock, and it was set on the position in order that the door panel is opened by pushing toward the Right side.
- 7R** = 1 lock hole for installing push bar (panic exit device) with exit lock, and it was set on the position in order that the door panel is opened by pulling from or pushing toward the Right side.
- 1L** = 1 lock hole for installing cylindrical lock only, without deadbolt lock, and it was set on the position in order that the door panel is opened by pulling from or pushing toward the Left side.
- 2L** = 2 lock holes for installing cylindrical lock and deadbolt lock, and they were set on the position in order that the door panel is opened by pulling from or pushing toward the Left side.
- 3L** = 2 lock holes for installing handle lock, and they were set on the position in order that the door panel is opened by pulling from or pushing toward the Left side.
- 4L** = 2 lock holes for installing handle with deadbolt lock, and they were set on the position in order that the door panel is opened by pulling from or pushing toward the Left side.
- 5L** = 2 lock holes for installing mortise lock, and they were set on the position in order that the door panel is opened by pulling from or pushing toward the Left side.
- 6L** = No lock hole for installing push bar (panic exit device) only, without exit lock, and it was set on the position in order that the door panel is opened by pushing toward the Left side.
- 7L** = 1 lock hole for installing push bar (panic exit device) with exit lock, and it was set on the position in order that the door panel is opened by pulling from or pushing toward the Left side.



- Example :** **CSDG1CW80-2R** = 2 Hours Fire Rating, Fire Steel Door Set, completed with Steel Door Panel, Steel Doorframe and Steel Doorhinges, Flush Style with Glass Window, completed with Ordinary Glass 6 mm.thk. Creamy White Color, Size 800 x 2000 x 38 mm., 2 lock holes for installing cylindrical lock and deadbolt lock, and they were set on the position in order that the door panel is opened by pulling from or pushing toward the Right side.
- FRD00PW90-7L** = 4 Hours Fire Rating, Fire Steel Door Set, completed with Steel Door Panel, Steel Doorframe and Steel Doorhinges, Flush Style, Pearl White Color, Size 900 x 2000 x 45 mm., 1 lock hole for installing push bar (panic exit device) with exit lock, and it was set on the position in order that the door panel is opened by pulling from or pushing toward the Left side.

## PCJ INDUSTRIES Factory



 **PCJ INDUSTRIES CO.,LTD.** was established in 1998, specialize in the production of Fire Steel Door Sets, Air Outlets, Duct Dampers, Duct Silencers, Acoustic Louvers, and Cable Trunks. Most of our products have been certified by International Standard, such as **British Standard (BS), Thai Industrial Standard (TIS), Australian Standard (AS), Air Diffusion Council Standard (ADC), Underwriter Laboratories Standard (UL)**. We have our own factory established on our own land area over 38,000 sq.m. at Kaengkhroi, Saraburi, Thailand. We have complete line of Fire Steel Door Set, Air Outlet, Duct Damper, Duct Silencer, Acoustic Louver, and Cable Trunk Products.

Our Policy has always been, and will continue to be, the production and on time schedule delivery of quality, reliability and competitively priced products. We have invested for instruments, machines and we have experience engineer teams take full time to research and develop our product lines continuously, including new product designs to meet our policy.



Surface Pretreatment Process



Powder Coating Spraying Process



Powder Coating Curing Process



Production Line







*Classic Steel*®