

# CERTIFICATE OF CONFORMITY

Product Listing Scheme: Scheme Type 5

**This certificate is issued to:** Promat Building System Pte Ltd  
10 Science Park Road  
#03-14 The Alpha  
Science Park II  
Singapore 117684

**Registration Number/UEN:** 199002185G

**Product:** Fire Rated Duct System

**Brand:** PROMATECT® H

**Model:** PH.41.60, PH.41.12, PH.41.24

**Country of Origin:** Singapore

**Product Details:** Horizontal and Vertical Duct System  
Board: PROMATECT® H  
Board Density: 1017kg/m<sup>3</sup> (±20%) (Classification: A1)  
See COC Appendix (1 page) for Fire Performance

**Standard(s):** BS 476-24:1987  
EN 13501-1:2018

**Report(s):** System Test: CSIRO No. FSH 1124, 1109  
LPC No. TE 5916, TE 87366, TE 5763, 6731A  
TÜV SÜD PSB No. 54S01100/OKB, 54S035420/NLH  
BRANZ No. FR 3682 Issue 2, FAR 3829 Issue 2, FAR 4106 Issue 2  
Material Test: KAS No. J210223004-4R1  
STS No. 01681-0221-00473-MEFT-01

APPROVED FOR  
DISTRIBUTION



Khoo Kim Leong

This certificate issued in accordance with SCDF Fire Code 2018 requirements.



Head of Certification



Certificate No.	Date of Original Issue	No. of Page(s)	Date of Last Revision	Date of Expiry
11A0030	01 October 2011	1 of 2	13 September 2022	30 September 2027

## APPENDIX

**Product Details: Fire Performance of Fire Rated Duct System**

For horizontal and vertical ventilation, smoke outlet & kitchen extract ducts of size up to 10m (wide) internally

System	Fire Resistance (mins)			Duct A		Duct B	
	Stability	Integrity	Insulation	Thickness of Promatect® H (mm)	Mineral Wool	Thickness of Promatect® H (mm)	Mineral Wool
SYSTEM NOT AVAILABLE IN SINGAPORE							
<b>4b</b>	120	120	60	12	25mm x 60kg/m <sup>3</sup>	12	2 x 25mm x 60kg/m <sup>3</sup>
<b>5a</b>	120	120	120	12	2 x 25mm x 100kg/m <sup>3</sup>	12	3 x 25mm x 60kg/m <sup>3</sup> or 1 x 50mm x 100kg/m <sup>3</sup>
<b>5b</b>	120	120	120	15	30mm x 100kg/m <sup>3</sup>	15	2 x 25mm x 100kg/m <sup>3</sup>
<b>6</b>	240	240	240	25	2 x 50mm x 100kg/m <sup>3</sup>	25	2 x 50mm x 100kg/m <sup>3</sup>

For more details, please refer to BRANZ No. FAR 4106 Issue 2.

APPROVED FOR  
DISTRIBUTION



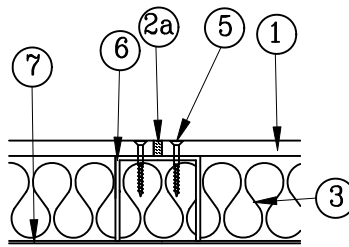
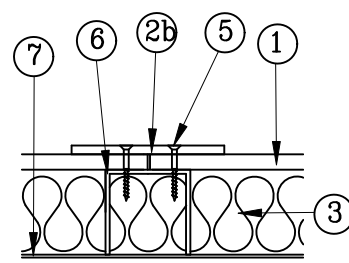
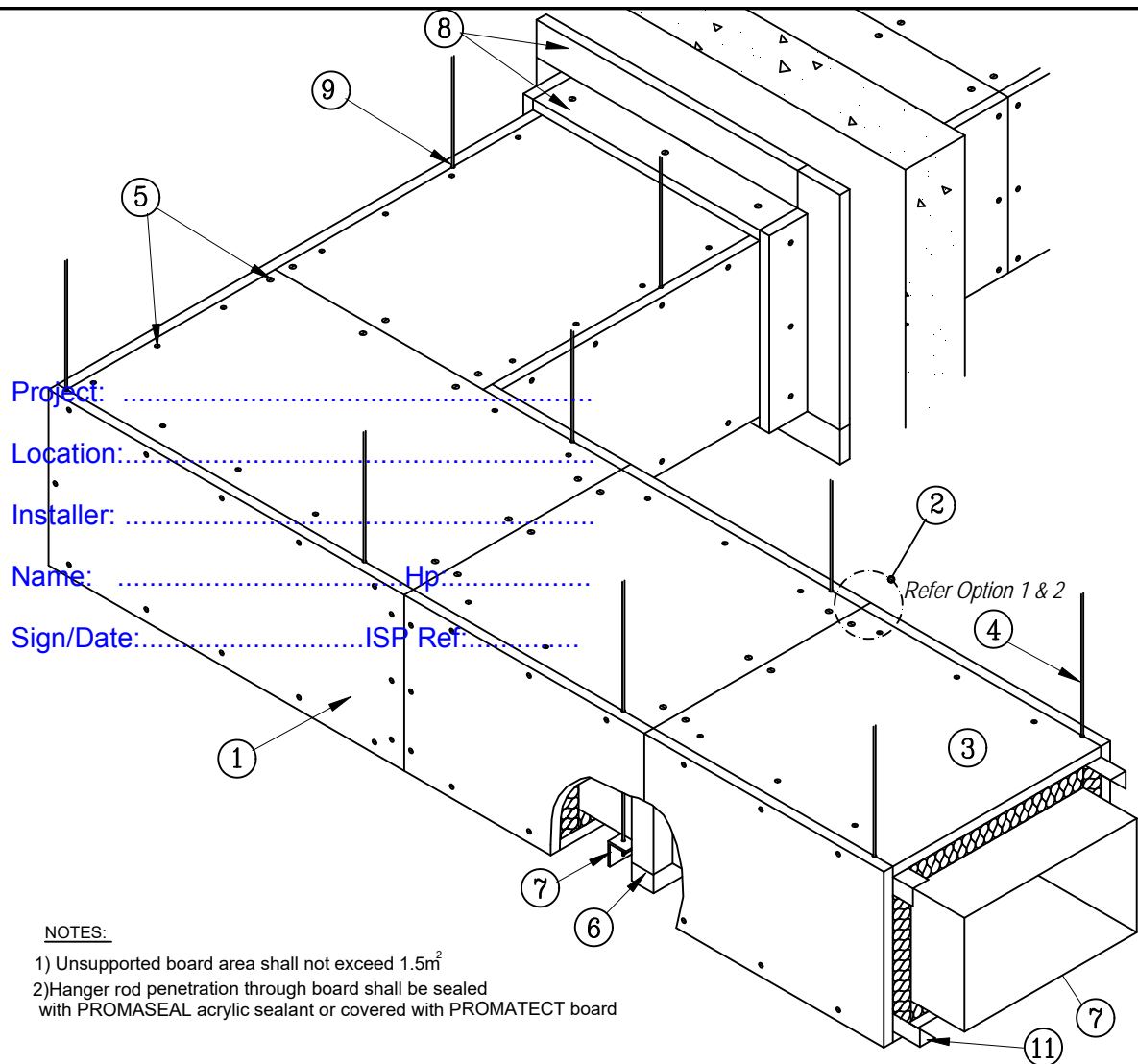
Khoo Kim Leong



Head of Certification

<b>Certificate No.</b>	<b>Date of Original Issue</b>	<b>No. of Page(s)</b>	<b>Date of Last Revision</b>	<b>Date of Expiry</b>
11A0030	01 October 2011	2 of 2	13 September 2022	30 September 2027

This Certificate is part of a full report and should be read in conjunction with it. This Certificate remains the property of Singapore Test Services Pte Ltd ("STS") and shall be returned upon request. The use of this Certificate is subjected to the terms and conditions of the Product Listing Scheme of STS. The above certified company is solely responsible for compliance of any product that has the same designation as the product type tested. Parties relying on this Certificate should verify its validity with STS.



Project: .....  
 Location: .....  
 Installer: .....  
 Name: ..... Hp  
 Sign/Date: ..... ISF Ref: .....

- NOTES:**
- 1) Unsupported board area shall not exceed 1.5m<sup>2</sup>
  - 2) Hanger rod penetration through board shall be sealed with PROMASEAL acrylic sealant or covered with PROMATECT board

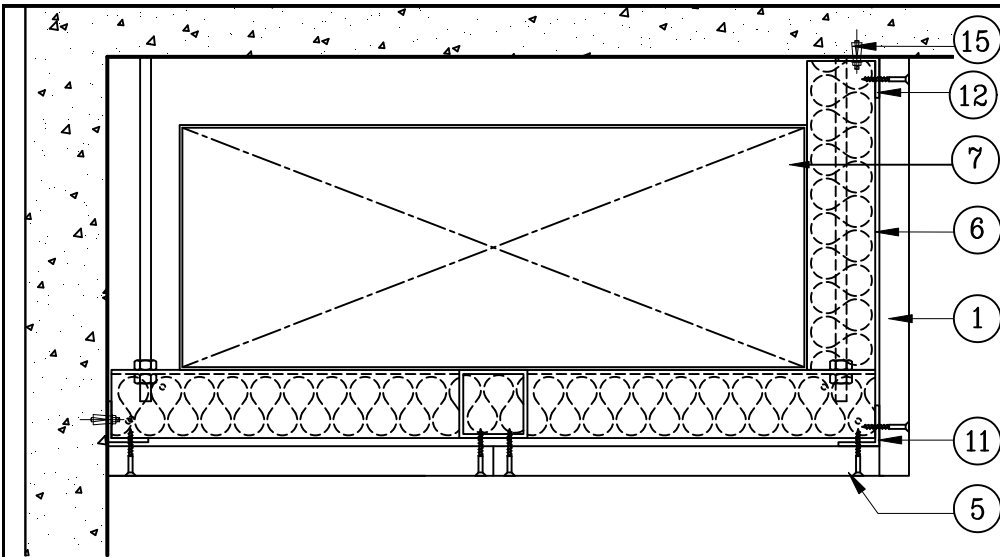
No.	Technical Specifications	Check
①	PROMATECT-H Board: i) 1-hr: 12mm thick ii) 2-hr: 15mm thick iii) 4-hr: 25mm thick	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
②	Treatment at board joints : a) PROMASEAL acrylic fire sealant / OR b) PROMATECT-H cover strip 100mm x 9mm at all butt joints	<input type="checkbox"/> <input type="checkbox"/>
③	Mineral wool: i)1-hr: 50mm x 60kg/m <sup>3</sup> ii)2-hr: 50mm x 100kg/m <sup>3</sup> iii)4-hr: 100mm x 100kg/m <sup>3</sup>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
④	Steel threaded rod preferred spacing at 1.22m intervals, and permissible tensile stress not exceeding: i)1hr: ≤ 15N/mm <sup>2</sup> ii)2hr: ≤ 10N/mm <sup>2</sup> iii)4hr: ≤ 6N/mm <sup>2</sup>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
⑤	M4 self-tapping screw at 200mm centres	<input type="checkbox"/>
⑥	Steel channel coincides with boards' butt-joint cavity fill with mineral wool: (refer note 1) i)1-hr & 2-hr: U-50 x 50 x 0.6mm ii)4-hr: U-100 x 50 x 0.6mm	<input type="checkbox"/> <input type="checkbox"/>
⑦	Sheet metal duct and support bracket	<input type="checkbox"/>
⑧	PROMATECT L-collar 100mm width at wall or floor penetration: i)1-hr: 12mm thick ii) 2-hr: 15mm thick iii) 4-hr: 25mm thick	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
⑨	Steel hanger rod penetration gap shall be sealed with PROMASEAL acrylic fire sealant (Refer note 2)	<input type="checkbox"/>
⑩	Intermediate steel channel i) 1&2 hr: U-50 x 50 x 0.6mm (refer note 1) ii) 4 hr: U-100 x 50 x 0.6mm	<input type="checkbox"/> <input type="checkbox"/>
⑪	Continuous L-angle 30 x 30 x 0.6mm	<input type="checkbox"/>
⑫	Continuous L-angle 50 x 50 x 1.5mm thk for fixing board to substrate.	<input type="checkbox"/>
⑬	Steel threaded rod spaced at 1.5m c/w large nut and washer	<input type="checkbox"/>
⑭	Angle stiffener according to DW/144 spec	<input type="checkbox"/>
⑮	M8 all steel anchor bolt at 600mm centres	<input type="checkbox"/>

This information is intended for approximate representations only. The user must determine the suitability of the design and requirements before undertaking or constructing any works relating to Promat's drawing details. Promat accepts no liability for aforementioned drawings and representations

	<b>Title:</b> PROMATECT-H 1, 2 & 4-HOUR FIRE RATED STEEL DUCT CLADDING SYSTEM		<b>Drawing no.:</b> PH4160-24/SD/1_10	
	<b>Subject/Project:</b> TYPICAL DRAWING		<b>Model no.:</b> PH.41.60 ,PH.41.12,PH.41.24	
<b>Drawn by:</b> BK		<b>Checked by:</b> 		<b>Test Standard:</b> BS 476: Part 24
<b>Date:</b> 24/07/23		<b>No Of Sheet:</b> 1 of 10		<b>CoC no.:</b> 11A0030/80553 0447
<b>Scale:</b> NTS		<b>Dimension:</b> mm		<b>Amendment no.:</b>

PROMAT BUILDING SYSTEM  
 10 Science Park Road  
 #03-14 The Alpha  
 Singapore Science Park II  
 Singapore 117684  
 Tel : 65-6776 7635  
 Fax : 65-6776 7624

- Standard Drawing
- Project Drawing



2-Sided Protection

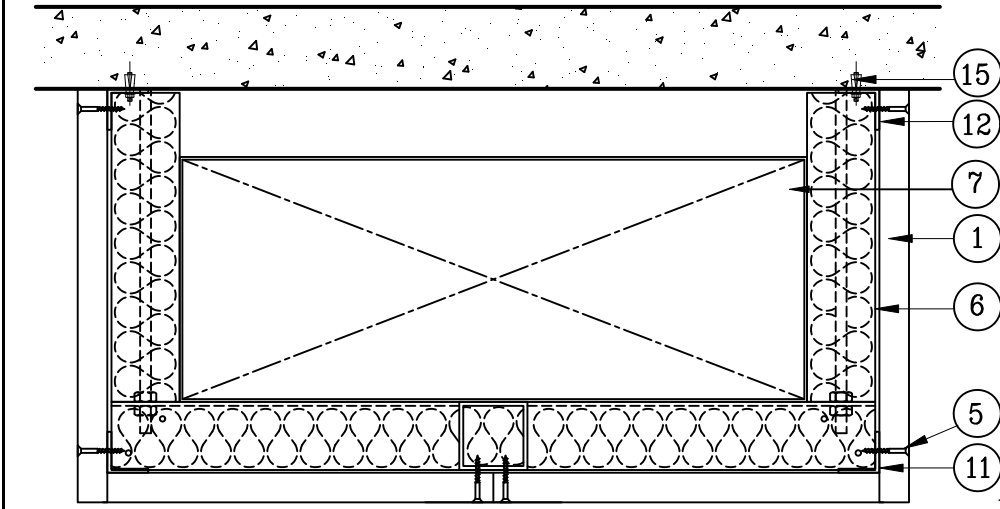
Project: .....

Location: .....

Installer: .....

Name: .....Hp: .....

Sign/Date: .....ISP Ref: .....



3-Sided Protection

NOTES:

1) Unsupported board area shall not exceed 1.5m<sup>2</sup>

2) Hanger rod penetration through board shall be sealed with PROMASEAL acrylic sealant or covered with PROMATECT board

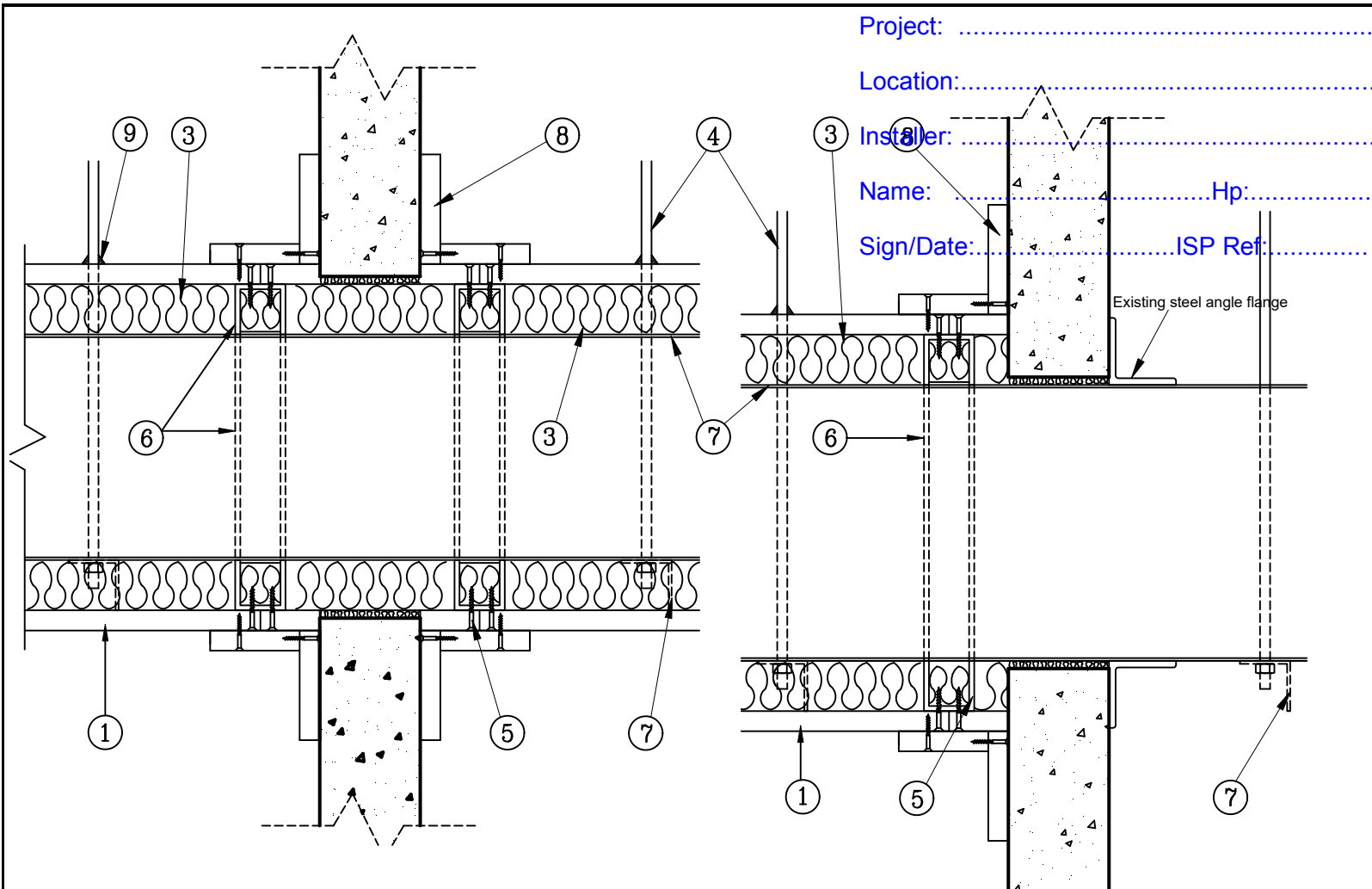
No.	Technical Specifications	Check
①	PROMATECT-H Board: i) 1-hr: 12mm thick ii) 2-hr: 15mm thick iii) 4-hr: 25mm thick	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
②	Treatment at board joints : a) PROMASEAL acrylic fire sealant / <u>OR</u> b) PROMATECT-H cover strip 100mm x 9mm at all butt joints	<input type="checkbox"/> <input type="checkbox"/>
③	Mineral wool: i)1-hr: 50mm x 60kg/m <sup>3</sup> ii)2-hr: 50mm x 100kg/m <sup>3</sup> iii)4-hr: 100mm x 100kg/m <sup>3</sup>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
④	Steel threaded rod preferred spacing at 1.22m intervals, and permissible tensile stress not exceeding: i)1hr: ≤ 15N/mm <sup>2</sup> ii)2hr: ≤ 10N/mm <sup>2</sup> iii)4hr: ≤ 6N/mm <sup>2</sup>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
⑤	M4 self-tapping screw at 200mm centres	<input type="checkbox"/>
⑥	Steel channel coincides with boards' butt-joint cavity fill with mineral wool: (refer note 1) i)1-hr & 2-hr: U-50x50x0.6mm ii)4-hr: U-100x50x0.6mm	<input type="checkbox"/> <input type="checkbox"/>
⑦	Sheet metal duct and support bracket	<input type="checkbox"/>
⑧	PROMATECT L-collar 100mm width at wall or floor penetration: i)1-hr: 12mm thick ii) 2-hr: 15mm thick iii) 4-hr: 25mm thick	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
⑨	Steel hanger rod penetration gap shall be sealed with PROMASEAL acrylic fire sealant (Refer note 2)	<input type="checkbox"/>
⑩	Intermediate steel channel i) 1&2 hr: U-50x50x0.6mm (refer note 1) ii) 4 hr: U-100x50x0.6mm	<input type="checkbox"/> <input type="checkbox"/>
⑪	Continuous L-angle 30 x 30 x 0.6mm	<input type="checkbox"/>
⑫	Continuous L-angle 50 x 50 x 1.5mm thk for fixing board to substrate.	<input type="checkbox"/>
⑬	Steel threaded rod spaced at 1.5m c/w large nut and washer	<input type="checkbox"/>
⑭	Angle stiffener according to DW/144 spec	<input type="checkbox"/>
⑮	M8 all steel anchor bolt at 600mm centres	<input type="checkbox"/>

This information is intended for approximate representations only. The user must determine the suitability of the design and requirements before undertaking or constructing any works relating to Promat's drawing details. Promat accepts no liability for aforementioned drawings and representations

	<b>Title:</b> PROMATECT-H 1, 2& 4-HOURS FIRE RATED STEEL DUCT CLADDING SYSTEM		Drawing no.: PH4160-24/SD/2_10	
	<b>Subject/Project:</b> TYPICAL DRAWING		Model no.: PH.41.60, PH.41.12, PH.41.24	
PROMAT BUILDING SYSTEM 10 Science Park Road #03-14 The Alpha Singapore Science Park II Singapore 117684 Tel : 65-6776 7635 Fax : 65-6776 7624	Drawing no.: BS 476: Part 24		Test Standard: CoC no.: 11A0030/80553 0447	
	Dimension: mm		Amendment no.:	
Drawn by: BK	Checked by: 	Date: 24/07/23	No Of Sheet: 2 of 10	Scale: NTS

Standard Drawing

Project Drawing



Project: .....  
 Location: .....  
 Installer: .....  
 Name: ..... Hp: .....  
 Sign/Date: ..... ISP Ref: .....

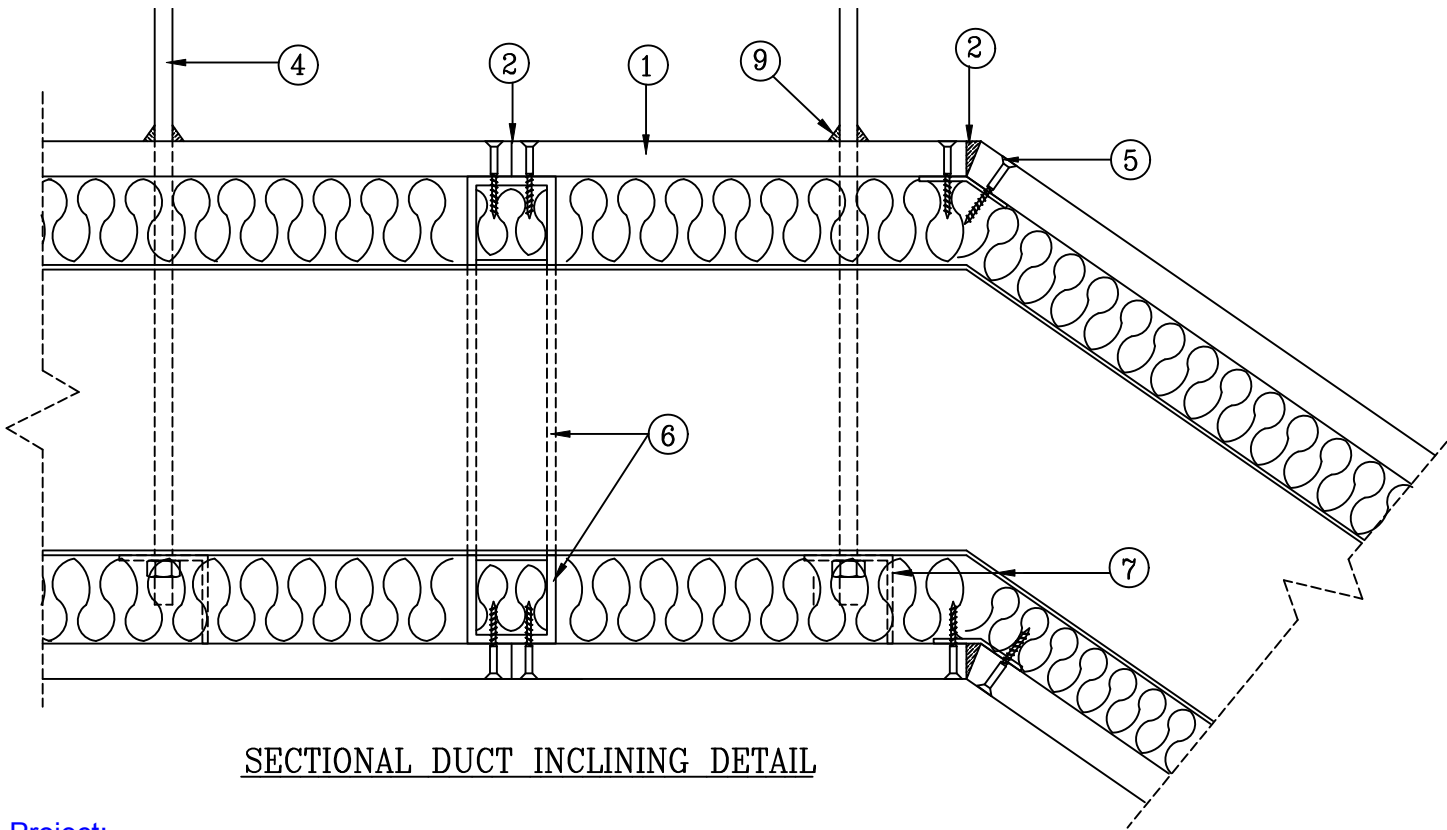
**WALL PENETRATION DETAIL**

- NOTES:**
- 1) Unsupported board area shall not exceed 1.5m<sup>2</sup>
  - 2) Hanger rod penetration through board shall be sealed with PROMASEAL acrylic sealant or covered with PROMATECT board

No.	Technical Specifications	Check
①	PROMATECT-H Board: i) 1-hr: 12mm thick ii) 2-hr: 15mm thick iii) 4-hr: 25mm thick	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
②	Treatment at board joints : a) PROMASEAL acrylic fire sealant / <u>OR</u> b) PROMATECT-H cover strip 100mm x 9mm at all butt joints	<input type="checkbox"/> <input type="checkbox"/>
③	Mineral wool: i)1-hr: 50mm x 60kg/m <sup>3</sup> ii)2-hr: 50mm x 100kg/m <sup>3</sup> iii)4-hr: 100mm x 100kg/m <sup>3</sup>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
④	Steel threaded rod preferred spacing at 1.22m intervals, and permissible tensile stress not exceeding: i)1hr: ≤ 15N/mm <sup>2</sup> ii)2hr: ≤ 10N/mm <sup>2</sup> iii)4hr: ≤ 6N/mm <sup>2</sup>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
⑤	M4 self-tapping screw at 200mm centres	<input type="checkbox"/>
⑥	Steel channel coincides with boards' butt-joint cavity fill with mineral wool: (refer note 1) i)1-hr & 2-hr: U-50x50x0.6mm ii)4-hr: U-100x50x0.6mm	<input type="checkbox"/> <input type="checkbox"/>
⑦	Sheet metal duct and support bracket	<input type="checkbox"/>
⑧	PROMATECT L-collar 100mm width at wall or floor penetration: i)1-hr: 12mm thick ii) 2-hr: 15mm thick iii) 4-hr: 25mm thick	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
⑨	Steel hanger rod penetration gap shall be sealed with PROMASEAL acrylic fire sealant (Refer note 2)	<input type="checkbox"/>
⑩	Intermediate steel channel i) 1&2 hr: U-50x50x0.6mm (refer note 1) ii) 4 hr: U-100x50x0.6mm	<input type="checkbox"/> <input type="checkbox"/>
⑪	Continuous L-angle 30 x 30 x 0.6mm	<input type="checkbox"/>
⑫	Continuous L-angle 50 x 50 x 1.5mm thk for fixing board to substrate.	<input type="checkbox"/>
⑬	Steel threaded rod spaced at 1.5m c/w large nut and washer	<input type="checkbox"/>
⑭	Angle stiffener according to DW/144 spec	<input type="checkbox"/>
⑮	M8 all steel anchor bolt at 600mm centres	<input type="checkbox"/>

This information is intended for approximate representations only. The user must determine the suitability of the design and requirements before undertaking or constructing any works relating to Promat's drawing details. Promat accepts no liability for aforementioned drawings and representations

	<b>Title:</b> PROMATECT-H 1, 2& 4-HOURS FIRE RATED STEEL DUCT CLADDING SYSTEM		<b>Drawing no.:</b> PH4160-24/SD/3_10	
	<b>Subject/Project:</b> TYPICAL DRAWING		<b>Model no.:</b> PH.41.60, PH.41.12 ,PH.41.24	
PROMAT BUILDING SYSTEM 10 Science Park Road #03-14 The Alpha Singapore Science Park II Singapore 117684 Tel : 65-6776 7635 Fax : 65-6776 7624	<b>Standard Drawing</b> <input checked="" type="checkbox"/>		<b>Test Standard:</b> BS 476: Part 24	
	<b>Project Drawing</b> <input type="checkbox"/>		<b>CoC no.:</b> 11A0030/80553 0447	
<b>Drawn by:</b> BK	<b>Checked by:</b> 	<b>Date:</b> 24/07/23	<b>No Of Sheet:</b> 3 of 10	<b>Scale:</b> NTS
			<b>Dimension:</b> mm	<b>Amendment no.:</b>



**SECTIONAL DUCT INCLINING DETAIL**

Project: .....

Location:.....

Installer: .....

Name: .....Hp:.....

Sign/Date:.....ISP Ref:.....

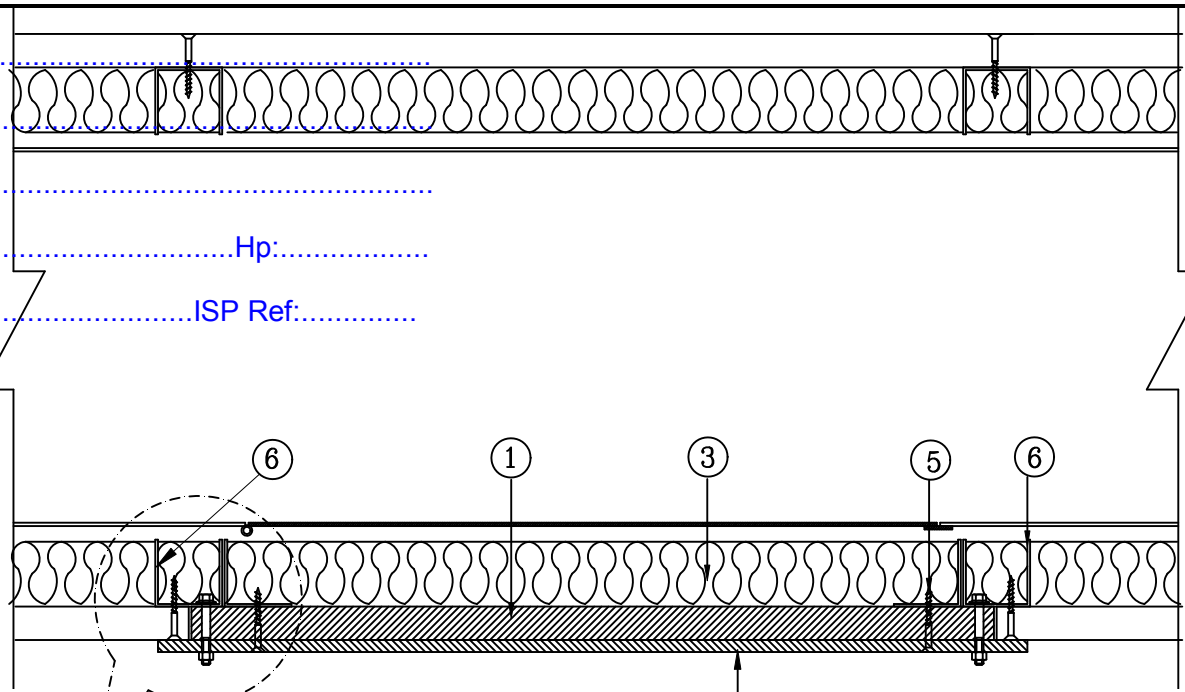
No.	Technical Specifications	Check
①	PROMATECT-H Board: i) 1-hr: 12mm thick ii) 2-hr: 15mm thick iii) 4-hr: 25mm thick	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
②	Treatment at board joints : a) PROMASEAL acrylic fire sealant / <u>OR</u> b) PROMATECT-H cover strip 100mm x 9mm at all butt joints	<input type="checkbox"/> <input type="checkbox"/>
③	Mineral wool: i)1-hr: 50mm x 60kg/m <sup>3</sup> ii)2-hr: 50mm x 100kg/m <sup>3</sup> iii)4-hr: 100mm x 100kg/m <sup>3</sup>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
④	Steel threaded rod preferred spacing at 1.22m intervals, and permissible tensile stress not exceeding: i)1hr: ≤ 15N/mm <sup>2</sup> ii)2hr: ≤ 10N/mm <sup>2</sup> iii)4hr: ≤ 6N/mm <sup>2</sup>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
⑤	M4 self-tapping screw at 200mm centres	<input type="checkbox"/>
⑥	Steel channel coincides with boards' butt-joint cavity fill with mineral wool: (refer note 1) i)1-hr & 2-hr: U-50x50x0.6mm ii)4-hr: U-100x50x0.6mm	<input type="checkbox"/> <input type="checkbox"/>
⑦	Sheet metal duct and support bracket	<input type="checkbox"/>
⑧	PROMATECT L-collar 100mm width at wall or floor penetration: i)1-hr: 12mm thick ii) 2-hr: 15mm thick iii) 4-hr: 25mm thick	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
⑨	Steel hanger rod penetration gap shall be sealed with PROMASEAL acrylic fire sealant (Refer note 2)	<input type="checkbox"/>
⑩	Intermediate steel channel i) 1&2 hr: U-50x50x0.6mm (refer note 1) ii) 4 hr: U-100x50x0.6mm	<input type="checkbox"/> <input type="checkbox"/>
⑪	Continuous L-angle 30 x 30 x 0.6mm	<input type="checkbox"/>
⑫	Continuous L-angle 50 x 50 x 1.5mm thk for fixing board to substrate.	<input type="checkbox"/>
⑬	Steel threaded rod spaced at 1.5m c/w large nut and washer	<input type="checkbox"/>
⑭	Angle stiffener according to DW/144 spec	<input type="checkbox"/>
⑮	M8 all steel anchor bolt at 600mm centres	<input type="checkbox"/>

This information is intended for approximate representations only. The user must determine the suitability of the design and requirements before undertaking or constructing any works relating to Promat's drawing details. Promat accepts no liability for aforementioned drawings and representations

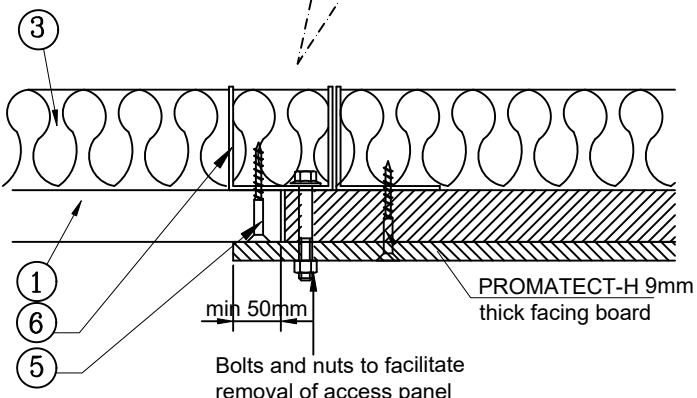
	<b>Title:</b> PROMATECT-H 1, 2& 4-HOURS FIRE RATED STEEL DUCT CLADDING SYSTEM		Drawing no.: PH4160-24/4_10	
	<b>Subject/Project:</b> TYPICAL DRAWING		Model no.: PH.41.60,PH.41.12,PH.41.24	
PROMAT BUILDING SYSTEM 10 Science Park Road #03-14 The Alpha Singapore Science Park II Singapore 117684 Tel : 65-6776 7635 Fax : 65-6776 7624	<b>Standard Drawing</b> <input checked="" type="checkbox"/>		Test Standard: BS 476: Part 24	
	<input type="checkbox"/> <b>Project Drawing</b>		CoC no.: 11A0030/80553 0447	
<b>Drawn by:</b> BK	<b>Checked by:</b> 	<b>Date:</b> 24/07/23	<b>No Of Sheet:</b> 4 of 10	<b>Scale:</b> NTS
		<b>Dimension:</b> mm	<b>Amendment no.:</b>	



Project: .....  
 Location: .....  
 Installer: .....  
 Name: ..... Hp: .....  
 Sign/Date: ..... ISP Ref: .....



**ACCESS/MAINTENANACE PANEL DETAIL**



**Access Hatch Fixing Detail**

- NOTES:**
- 1) Unsupported board area shall not exceed 1.5m<sup>2</sup>
  - 2) Hanger rod penetration through board shall be sealed with PROMASEAL acrylic sealant or covered with PROMATECT board

No.	Technical Specifications	Check
①	PROMATECT-H Board: i) 1-hr: 12mm thick ii) 2-hr: 15mm thick iii) 4-hr: 25mm thick	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
②	Treatment at board joints : a) PROMASEAL acrylic fire sealant / OR b) PROMATECT-H cover strip 100mm x 9mm at all butt joints	<input type="checkbox"/> <input type="checkbox"/>
③	Mineral wool: i)1-hr: 50mm x 60kg/m <sup>3</sup> ii)2-hr: 50mm x 100kg/m <sup>3</sup> iii)4-hr: 100mm x 100kg/m <sup>3</sup>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
④	Steel threaded rod preferred spacing at 1.22m intervals, and permissible tensile stress not exceeding: i)1hr: ≤ 15N/mm <sup>2</sup> ii)2hr: ≤ 10N/mm <sup>2</sup> iii)4hr: ≤ 6N/mm <sup>2</sup>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
⑤	M4 self-tapping screw at 200mm centres	<input type="checkbox"/>
⑥	Steel channel coincides with boards' butt-joint cavity fill with mineral wool: (refer note 1) i)1-hr & 2-hr: U-50x50x0.6mm ii)4-hr: U-100x50x0.6mm	<input type="checkbox"/> <input type="checkbox"/>
⑦	Sheet metal duct and support bracket	<input type="checkbox"/>
⑧	PROMATECT L-collar 100mm width at wall or floor penetration: i)1-hr: 12mm thick ii) 2-hr: 15mm thick iii) 4-hr: 25mm thick	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
⑨	Steel hanger rod penetration gap shall be sealed with PROMASEAL acrylic fire sealant (Refer note 2)	<input type="checkbox"/>
⑩	Intermediate steel channel i) 1&2 hr: U-50x50x0.6mm (refer note 1) ii) 4 hr: U-100x50x0.6mm	<input type="checkbox"/> <input type="checkbox"/>
⑪	Continuous L-angle 30 x 30 x 0.6mm	<input type="checkbox"/>
⑫	Continuous L-angle 50 x 50 x 1.5mm thk for fixing board to substrate.	<input type="checkbox"/>
⑬	Steel threaded rod spaced at 1.5m c/w large nut and washer	<input type="checkbox"/>
⑭	Angle stiffener according to DW/144 spec	<input type="checkbox"/>
⑮	M8 all steel anchor bolt at 600mm centres	<input type="checkbox"/>

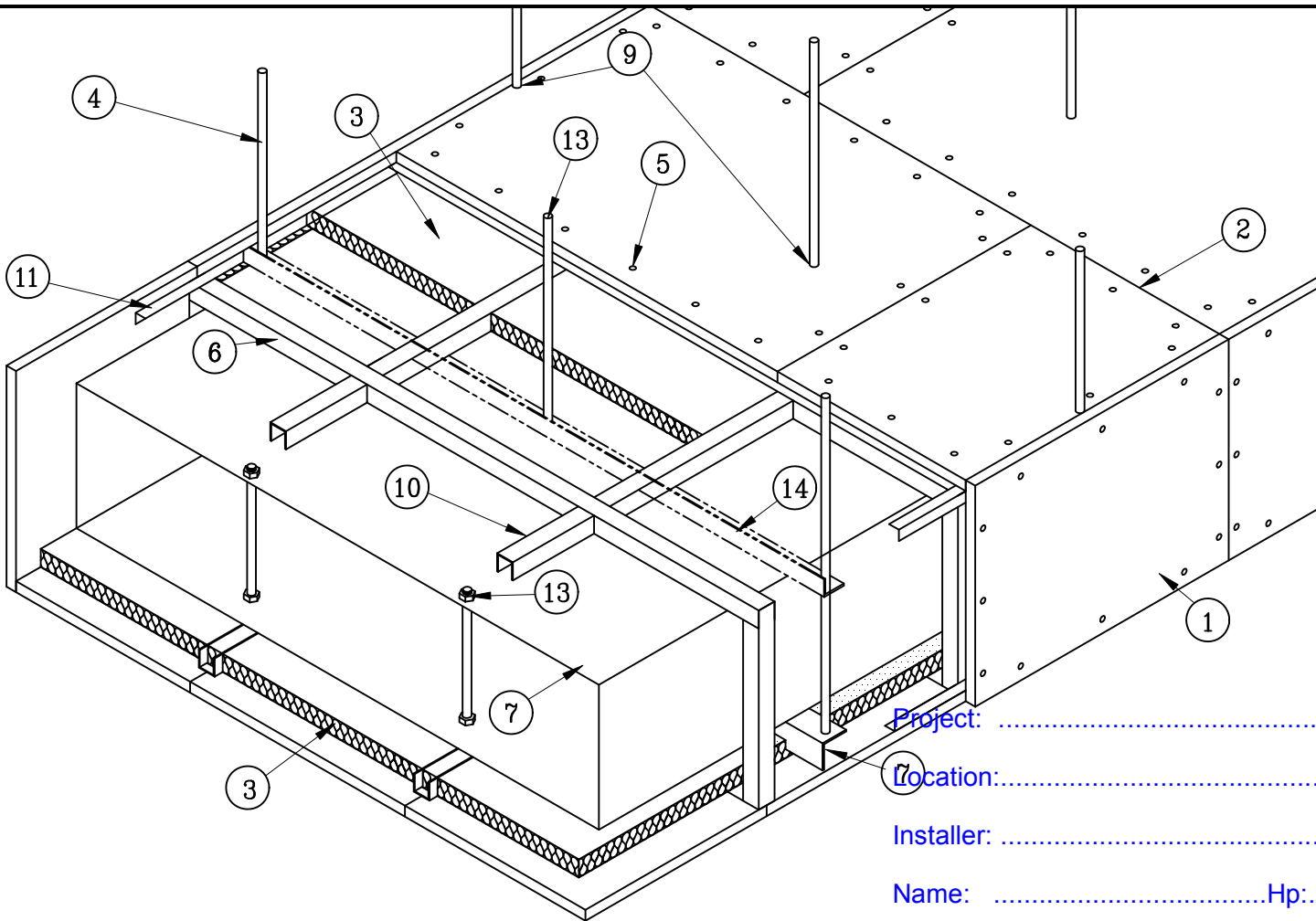
This information is intended for approximate representations only. The user must determine the suitability of the design and requirements before undertaking or constructing any works relating to Promat's drawing details. Promat accepts no liability for aforementioned drawings and representations

**Promat**  
 PROMAT BUILDING SYSTEM  
 10 Science Park Road  
 #03-14 The Alpha  
 Singapore Science Park II  
 Singapore 117684  
 Tel : 65-6776 7635  
 Fax : 65-6776 7624

Title: <b>PROMATECT-H 1, 2&amp; 4-HOURS FIRE RATED STEEL DUCT CLADDING SYSTEM</b>		Drawing no.: PH4160-24/SD/5_10	
Subject/Project: <b>TYPICAL DRAWING</b>		Model no.: PH.41.60,PH.41.12,PH.41.24	
Drawn by: BK		Test Standard: BS 476: Part 24	
Checked by: <i>[Signature]</i>		CoC no.: 11A0030/80553 0447	
Date: 24/07/23		Amendment no.:	
No Of Sheet: 5 of 10		Dimension: mm	
Scale: NTS		<input checked="" type="checkbox"/> Standard Drawing <input type="checkbox"/> Project Drawing	







### INTERNAL DUCT SIZE ABOVE 6m

Project: .....

Location: .....

Installer: .....

Name: ..... Hp: .....

Sign/Date: ..... ISP Ref: .....

**NOTES:**

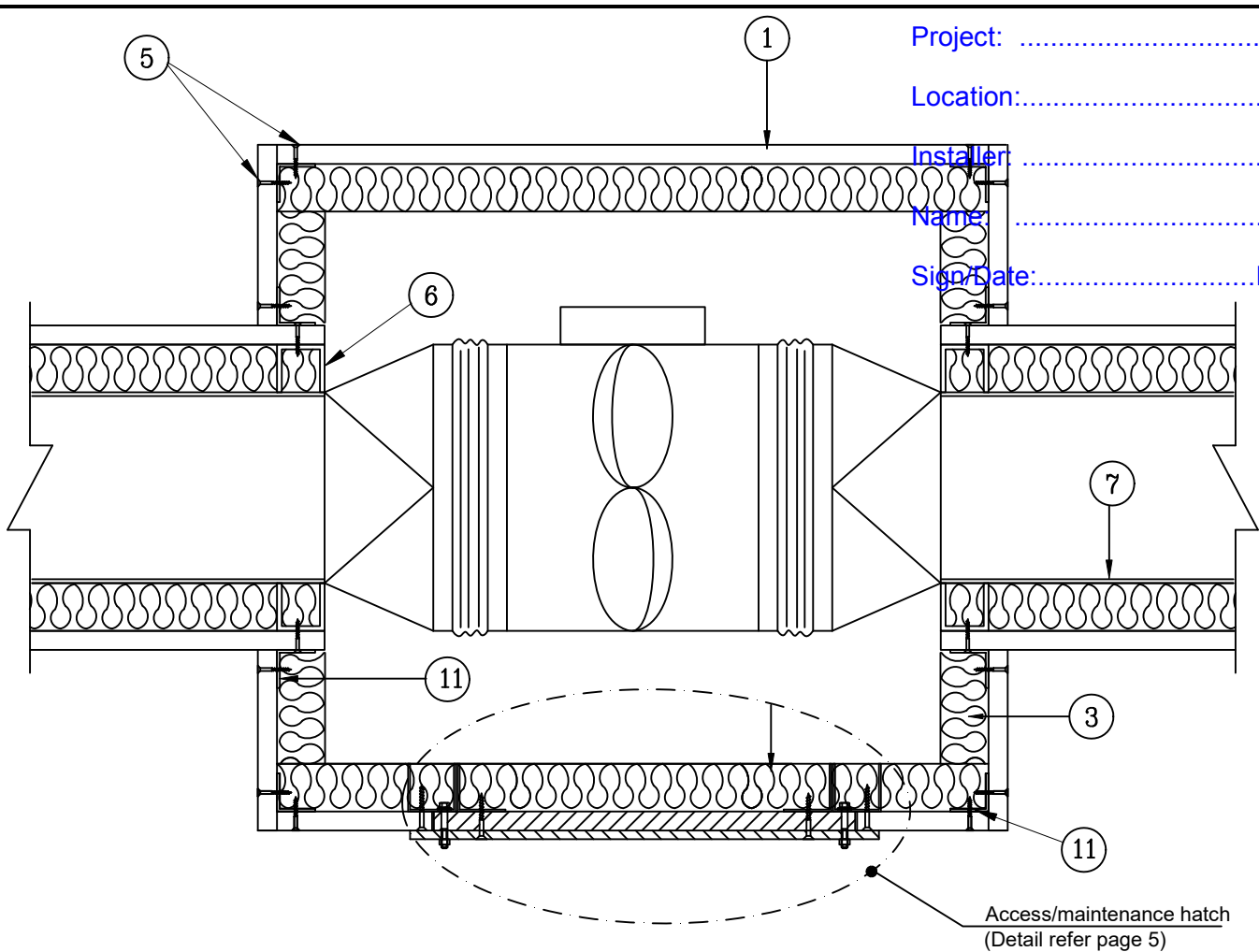
- 1) Unsupported board area shall not exceed 1.5m<sup>2</sup>
- 2) Hanger rod penetration through board shall be sealed with PROMASEAL acrylic sealant or covered with PROMATECT board

No.	Technical Specifications	Check
①	PROMATECT-H Board: i) 1-hr: 12mm thick ii) 2-hr: 15mm thick iii) 4-hr: 25mm thick	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
②	Treatment at board joints : a) PROMASEAL acrylic fire sealant / OR b) PROMATECT-H cover strip 100mm x 9mm at all butt joints	<input type="checkbox"/> <input type="checkbox"/>
③	Mineral wool: i)1-hr: 50mm x 60kg/m <sup>3</sup> ii)2-hr: 50mm x 100kg/m <sup>3</sup> iii)4-hr: 100mm x 100kg/m <sup>3</sup>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
④	Steel threaded rod preferred spacing at 1.22m intervals, and permissible tensile stress not exceeding: i)1hr: ≤ 15N/mm <sup>2</sup> ii)2hr: ≤ 10N/mm <sup>2</sup> iii)4hr: ≤ 6N/mm <sup>2</sup>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
⑤	M4 self-tapping screw at 200mm centres	<input type="checkbox"/>
⑥	Steel channel coincides with boards' butt-joint cavity fill with mineral wool: (refer note 1) i)1-hr & 2-hr: U-50x50x0.6mm ii)4-hr: U-100x50x0.6mm	<input type="checkbox"/> <input type="checkbox"/>
⑦	Sheet metal duct and support bracket	<input type="checkbox"/>
⑧	PROMATECT L-collar 100mm width at wall or floor penetration: i)1-hr: 12mm thick ii) 2-hr: 15mm thick iii) 4-hr: 25mm thick	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
⑨	Steel hanger rod penetration gap shall be sealed with PROMASEAL acrylic fire sealant (Refer note 2)	<input type="checkbox"/>
⑩	Intermediate steel channel i) 1&2 hr: U-50x50x0.6mm (refer note 1) ii) 4 hr: U-100x50x0.6mm	<input type="checkbox"/> <input type="checkbox"/>
⑪	Continuous L-angle 30 x 30 x 0.6mm	<input type="checkbox"/>
⑫	Continuous L-angle 50 x 50 x 1.5mm thk for fixing board to substrate.	<input type="checkbox"/>
⑬	Steel threaded rod spaced at 1.5m c/w large nut and washer	<input type="checkbox"/>
⑭	Angle stiffener according to DW/144 spec	<input type="checkbox"/>
⑮	M8 all steel anchor bolt at 600mm centres	<input type="checkbox"/>

This information is intended for approximate representations only. The user must determine the suitability of the design and requirements before undertaking or constructing any works relating to Promat's drawing details. Promat accepts no liability for aforementioned drawings and representations

	<b>Title:</b> PROMATECT-H 1, 2& 4-HOURS FIRE RATED STEEL DUCT CLADDING SYSTEM		Drawing no.: PH4160-24/SD/7_10	
	<b>Subject/Project:</b> TYPICAL DRAWING		Model no.: PH.41.60, PH.41.12, PH.41.24	
Drawn by: BK		Checked by: 		Test Standard: BS 476: Part 24
Date: 24/07/23		No Of Sheet: 7 of 10		CoC no.: 11A0030/80553 0447
Scale: NTS		Dimension: mm		Amendment no.:

PROMAT BUILDING SYSTEM  
 10 Science Park Road  
 #03-14 The Alpha  
 Singapore Science Park II  
 Singapore 117684  
 Tel : 65-6776 7635  
 Fax : 65-6776 7624



Project: .....  
 Location:.....  
 Installer:.....  
 Name: ..... Hp:.....  
 Sign/Date:..... ISP Ref:.....

No.	Technical Specifications	Check
①	PROMATECT-H Board: i) 1-hr: 12mm thick ii) 2-hr: 15mm thick iii) 4-hr: 25mm thick	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
②	Treatment at board joints : a) PROMASEAL acrylic fire sealant / OR b) PROMATECT-H cover strip 100mm x 9mm at all butt joints	<input type="checkbox"/> <input type="checkbox"/>
③	Mineral wool: i)1-hr: 50mm x 60kg/m <sup>3</sup> ii)2-hr: 50mm x 100kg/m <sup>3</sup> iii)4-hr: 100mm x 100kg/m <sup>3</sup>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
④	Steel threaded rod preferred spacing at 1.22m intervals, and permissible tensile stress not exceeding: i)1hr: ≤ 15N/mm <sup>2</sup> ii)2hr: ≤ 10N/mm <sup>2</sup> iii)4hr: ≤ 6N/mm <sup>2</sup>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
⑤	M4 self-tapping screw at 200mm centres	<input type="checkbox"/>
⑥	Steel channel coincides with boards' butt-joint cavity fill with mineral wool: (refer note 1) i)1-hr & 2-hr: U-50x50x0.6mm ii)4-hr: U-100x50x0.6mm	<input type="checkbox"/> <input type="checkbox"/>
⑦	Sheet metal duct and support bracket	<input type="checkbox"/>
⑧	PROMATECT L-collar 100mm width at wall or floor penetration: i)1-hr: 12mm thick ii) 2-hr: 15mm thick iii) 4-hr: 25mm thick	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
⑨	Steel hanger rod penetration gap shall be sealed with PROMASEAL acrylic fire sealant (Refer note 2)	<input type="checkbox"/>
⑩	Intermediate steel channel i) 1&2 hr: U-50x50x0.6mm (refer note 1) ii) 4 hr: U-100x50x0.6mm	<input type="checkbox"/> <input type="checkbox"/>
⑪	Continuous L-angle 30 x 30 x 0.6mm	<input type="checkbox"/>
⑫	Continuous L-angle 50 x 50 x 1.5mm thk for fixing board to substrate.	<input type="checkbox"/>
⑬	Steel threaded rod spaced at 1.5m c/w large nut and washer	<input type="checkbox"/>
⑭	Angle stiffener according to DW/144 spec	<input type="checkbox"/>
⑮	M8 all steel anchor bolt at 600mm centres	<input type="checkbox"/>

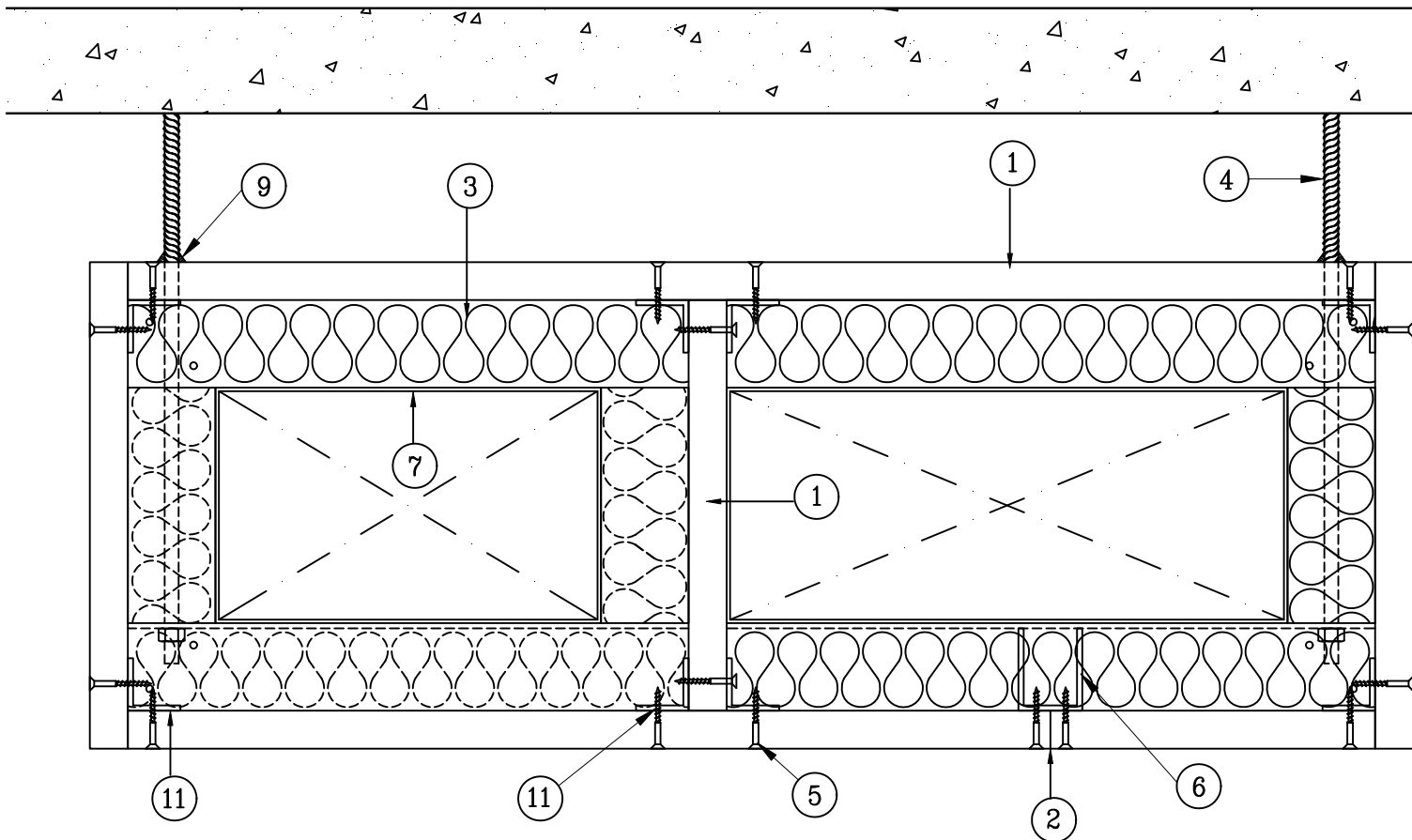
### FAN ENCLOSURE DETAIL

- NOTES:**
- 1) Unsupported board area shall not exceed 1.5m<sup>2</sup>
  - 2) Hanger rod penetration through board shall be sealed with PROMASEAL acrylic sealant or covered with PROMATECT board

This information is intended for approximate representations only. The user must determine the suitability of the design and requirements before undertaking or constructing any works relating to Promat's drawing details. Promat accepts no liability for aforementioned drawings and representations

PROMAT BUILDING SYSTEM  
 10 Science Park Road  
 #03-14 The Alpha  
 Singapore Science Park II  
 Singapore 117684  
 Tel : 65-6776 7635  
 Fax : 65-6776 7624

Title: <b>PROMATECT-H 1, 2&amp; 4-HOURS FIRE RATED STEEL DUCT CLADDING SYSTEM</b>		Drawing no.: PH4160-24/SD/8_10	
Subject/Project: <b>TYPICAL DRAWING</b>		Model no.: PH.41.60, PH.41.12, PH.41.24	
Drawn by: BK		Test Standard: BS 476: Part 24	
Checked by: <i>[Signature]</i>		CoC no.: 11A0030/80553 0447	
Date: 24/07/23		Amendment no.:	
No Of Sheet: 8 of 10		Scale: NTS	
Dimension: mm		<input checked="" type="checkbox"/> Standard Drawing <input type="checkbox"/> Project Drawing	



## MULTIPLE DUCT CLADDING

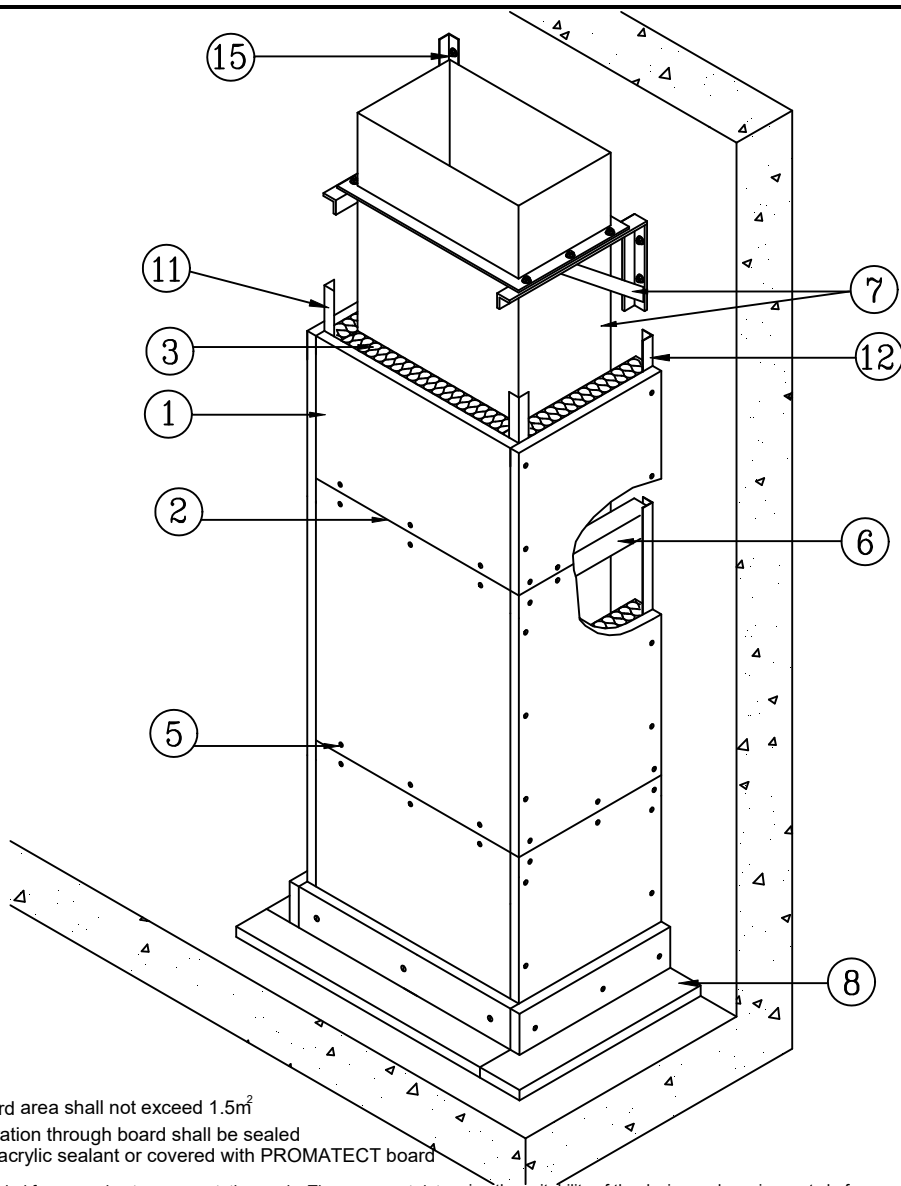
### NOTES:

- 1) Unsupported board area shall not exceed 1.5m<sup>2</sup>
- 2) Hanger rod penetration through board shall be sealed with PROMASEAL acrylic sealant or covered with PROMATECT board

No.	Technical Specifications	Check
①	PROMATECT-H Board: i) 1-hr: 12mm thick ii) 2-hr: 15mm thick iii) 4-hr: 25mm thick	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
②	Treatment at board joints : a) PROMASEAL acrylic fire sealant / OR b) PROMATECT-H cover strip 100mm x 9mm at all butt joints	<input type="checkbox"/> <input type="checkbox"/>
③	Mineral wool: i)1-hr: 50mm x 60kg/m <sup>3</sup> ii)2-hr: 50mm x 100kg/m <sup>3</sup> iii)4-hr: 100mm x 100kg/m <sup>3</sup>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
④	Steel threaded rod preferred spacing at 1.22m intervals, and permissible tensile stress not exceeding: i)1hr: ≤ 15N/mm <sup>2</sup> ii)2hr: ≤ 10N/mm <sup>2</sup> iii)4hr: ≤ 6N/mm <sup>2</sup>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
⑤	M4 self-tapping screw at 200mm centres	<input type="checkbox"/>
⑥	Steel channel coincides with boards' butt-joint cavity fill with mineral wool: (refer note 1) i)1-hr & 2-hr: U-50x50x0.6mm ii)4-hr: U-100x50x0.6mm	<input type="checkbox"/> <input type="checkbox"/>
⑦	Sheet metal duct and support bracket	<input type="checkbox"/>
⑧	PROMATECT L-collar 100mm width at wall or floor penetration: i)1-hr: 12mm thick ii) 2-hr: 15mm thick iii) 4-hr: 25mm thick	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
⑨	Steel hanger rod penetration gap shall be sealed with PROMASEAL acrylic fire sealant (Refer note 2)	<input type="checkbox"/>
⑩	Intermediate steel channel i) 1&2 hr: U-50x50x0.6mm (refer note 1) ii) 4 hr: U-100x50x0.6mm	<input type="checkbox"/> <input type="checkbox"/>
⑪	Continuous L-angle 30 x 30 x 0.6mm	<input type="checkbox"/>
⑫	Continuous L-angle 50 x 50 x 1.5mm thk for fixing board to substrate.	<input type="checkbox"/>
⑬	Steel threaded rod spaced at 1.5m c/w large nut and washer	<input type="checkbox"/>
⑭	Angle stiffener according to DW/144 spec	<input type="checkbox"/>
⑮	M8 all steel anchor bolt at 600mm centres	<input type="checkbox"/>

This information is intended for approximate representations only. The user must determine the suitability of the design and requirements before undertaking or constructing any works relating to Promat's drawing details. Promat accepts no liability for aforementioned drawings and representations

	<b>Title:</b> PROMATECT-H 1, 2& 4-HOURS FIRE RATED STEEL DUCT CLADDING SYSTEM		<b>Drawing no.:</b> PH4160-24/SD/9_10	
	<b>Subject/Project:</b> TYPICAL DRAWING		<b>Model no.:</b> PH.41.60,PH.41.12,PH.41.24	
PROMAT BUILDING SYSTEM 10 Science Park Road #03-14 The Alpha Singapore Science Park II Singapore 117684 Tel : 65-6776 7635 Fax : 65-6776 7624	<b>Drawn by:</b> BK		<b>Test Standard:</b> BS 476: Part 24	
	<b>Checked by:</b> 		<b>CoC no.:</b> 11A0030/80553 0447	
<b>Date:</b> 24/07/23		<b>No Of Sheet:</b> 9 of 10		<b>Amendment no.:</b> 5
<b>Scale:</b> NTS		<b>Dimension:</b> mm		



**NOTES:**

- 1) Unsupported board area shall not exceed 1.5m<sup>2</sup>
- 2) Hanger rod penetration through board shall be sealed with PROMASEAL acrylic sealant or covered with PROMATECT board

This information is intended for approximate representations only. The user must determine the suitability of the design and requirements before undertaking or constructing any works relating to Promat's drawing details. Promat accepts no liability for aforementioned drawings and representations

No.	Technical Specifications	Check
①	PROMATECT-H Board: i) 1-hr: 12mm thick ii) 2-hr: 15mm thick iii) 4-hr: 25mm thick	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
②	Treatment at board joints : a) PROMASEAL acrylic fire sealant / <u>OR</u> b) PROMATECT-H cover strip 100mm x 9mm at all butt joints	<input type="checkbox"/> <input type="checkbox"/>
③	Mineral wool: i)1-hr: 50mm x 60kg/m <sup>3</sup> ii)2-hr: 50mm x 100kg/m <sup>3</sup> iii)4-hr: 100mm x 100kg/m <sup>3</sup>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
④	Steel threaded rod preferred spacing at 1.22m intervals, and permissible tensile stress not exceeding: i)1hr: ≤ 15N/mm <sup>2</sup> ii)2hr: ≤ 10N/mm <sup>2</sup> iii)4hr: ≤ 6N/mm <sup>2</sup>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
⑤	M4 self-tapping screw at 200mm centres	<input type="checkbox"/>
⑥	Steel channel coincides with boards' butt-joint cavity fill with mineral wool: (refer note 1) i)1-hr & 2-hr: U-50x50x0.6mm ii)4-hr: U-100x50x0.6mm	<input type="checkbox"/> <input type="checkbox"/>
⑦	Sheet metal duct and support bracket	<input type="checkbox"/>
⑧	PROMATECT L-collar 100mm width at wall or floor penetration: i)1-hr: 12mm thick ii) 2-hr: 15mm thick iii) 4-hr: 25mm thick	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
⑨	Steel hanger rod penetration gap shall be sealed with PROMASEAL acrylic fire sealant (Refer note 2)	<input type="checkbox"/>
⑩	Intermediate steel channel i) 1&2 hr: U-50x50x0.6mm (refer note 1) ii) 4 hr: U-100x50x0.6mm	<input type="checkbox"/> <input type="checkbox"/>
⑪	Continuous L-angle 30 x 30 x 0.6mm	<input type="checkbox"/>
⑫	Continuous L-angle 50 x 50 x 1.5mm thk for fixing board to substrate.	<input type="checkbox"/>
⑬	Steel threaded rod spaced at 1.5m c/w large nut and washer	<input type="checkbox"/>
⑭	Angle stiffener according to DW/144 spec	<input type="checkbox"/>
⑮	M8 all steel anchor bolt at 600mm centres	<input type="checkbox"/>



PROMAT BUILDING SYSTEM  
10 Science Park Road  
#03-14 The Alpha  
Singapore Science Park II  
Singapore 117684  
Tel : 65-6776 7635  
Fax : 65-6776 7624

Title: PROMATECT-H 1, 2& 4-HOURS FIRE RATED STEEL DUCT CLADDING SYSTEM

Subject/Project: TYPICAL DRAWING

Drawn by: BK

Checked by: *[Signature]*

Date: 24/07/23

No Of Sheet: 10 of 10

Scale: NTS

Dimension: mm

Standard Drawing  
 Project Drawing

Drawing no.: PH4160-24/SD/10\_10  
Model no.: PH.41.60 ,PH.41.12 ,PH.41.24  
Test Standard: BS 476: Part 24  
CoC no.: 11A0030/80553 0447  
Amendment no.: