

 <p><b>DEENN Engineering Pte Ltd</b>          (A member of Lian Beng Group Ltd)          29 Harrison Road, Lian Beng Building Singapore 369648          Tel: 6283 1468 Fax: 6280 9360</p>		Ref No	DE/DB/ACM/BIK-2/002
		Date	20/11/24
Project : D2019-00162		To: Resident Engineer/ RTO (M&E)	

### REQUEST FOR INSPECTION OF M&E WORKS

We have checked and confirmed that the following works is completed and in order for your inspection

Type of Activity (Tick One Only)	<input type="checkbox"/> Slab Casting <input type="checkbox"/> Services in Wall	<input checked="" type="checkbox"/> Service Risers <input checked="" type="checkbox"/> Functional Test	<input type="checkbox"/> Final Inspection <input type="checkbox"/> Others
-------------------------------------	--	---	--

*AC&MV system operation and performance test.*

Type of Services (Tick One Only)	<input type="checkbox"/> Electrical / Tel / SCV <input type="checkbox"/> Plumbing / Sanitary <input type="checkbox"/> Swimming Pool	<input type="checkbox"/> Gas Installation <input type="checkbox"/> Fire Protection <input type="checkbox"/> Lift Installation	<input checked="" type="checkbox"/> ACMV <input type="checkbox"/> Others
-------------------------------------	---	---	---

LOCATION BIK2 - level - 2

<u>Gridline</u>	<u>Level -02</u>	
<u>Drawing Ref:</u>	<u>Revision</u>	<u>No. of Attachment</u>

<b>1st Inspection</b>			<u>Passed / Failed</u>
Date/ Time Submitted	19/11/24		Comments by RTO (M&E)
Date/ Time Requested	20/11/24		<i>OK</i>
Inspection Date	Time started 20/11/24 10:00	Time ended	

Name and signature of Contractors representative  
*J. Alex/J. Ray* *Nur Hernida*

Name and signature of a Resident Technical Officer (M&E)  
*Moe Thauk Tun*

<b>2nd Inspection</b>			<u>Passed / Failed</u>
Date/ Time Submitted			Comments by RTO (M&E)
Date/ Time Requested			
Inspection Date	Time started	Time ended	

Name and signature of Contractors representative

Name and signature of a Resident Technical Officer (M&E)

<b>3rd Inspection</b>			<u>Passed / Failed</u>
Date/ Time Submitted			Comments by RTO (M&E)
Date/ Time Requested			
Inspection Date	Time started	Time ended	

Name and signature of Contractors representative

Name and signature of a Resident Technical Officer (M&E)

**AIR-CONDITIONING SYSTEM  
PERFORMANCE TEST**



INTAC SYSTEMS SOLUTION PTE LTD

英 植 系 統 私 人 有 限 公 司

Buk 1, Kaki Bukit Avenue 3, KB 1, #04-03 (Main Office) /04/05/09, Singapore 416087

Tel: +65 6842 7318 | Fax: +65 6842 7319 | E-mail: intacss@intacss.com.sg

Company/GST Reg No: 200609771H | Website: www.intacss.com

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02 Date: \_\_\_\_\_  
Project Site: DIEPPE BARRACK-BLOCK 2

Ambient Air Conditions: 31 °C Dry Bulb Relative Humidity: 73.20%  
27 °C Wet Bulb

LOCATION				
<b>1 General</b>	<b>ROOF</b>		<b>02-01 GS &amp; OPS ROOM</b>	
Identification No.	CU-2-5 (a)	CU-2-5 (b)	FCU-5-1	FCU-5-2
Brand / Model	MITSUBISHI/ PUCY-P250YKD	MITSUBISHI/ PUCY-P200YKD	MITSUBISHI/ PLFY-P50VEM-PA	MITSUBISHI/ PLFY-P50VEM-PA
Serial No.	42P-00092	32P-00044	43M00219	42M00040
<b>2 Current Measurement</b>				
Running Ampere - L1	10.0	7.9		
Running Ampere - L2	9.7	7.4		
Running Ampere - L3	8.6	7.1		
<b>3 Pressure Setting</b>				
Low Side (psi)	125			
High Side (psi)	370			
<b>4 Temperature Measurement</b>				
Thermostat Setting (°C)			24.0	24.0
On-Coil Temperature (°C)			24.7	24.6
Off-Coil Temperature (°C)			12.2	11.9
Room Temperature:DB/WB(°C)			24.0 / 19.0	
Relative Humidity (%)			62.2	
<b>5 Noise Measurement</b>				
Equipment Off (dBA)	48.0		42.7	
Equipment On (dBA)	53.0		45.3	

TESTED BY / DATE : 18/11/24

J. Alery / J. Aky

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

WITNESSED BY / DATE :

ngue

RTO

Moe Thauk Tun  
20/11/2024

MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.

**AIR-CONDITIONING SYSTEM  
PERFORMANCE TEST**



INTAC SYSTEMS SOLUTION PTE LTD

英特系統私人有限公司

Blk 1, Kaki Bukit Avenue 3, KH-1, #04-03 (Main Office) /04/05/09, Singapore 416087

Tel: +65 6842 7318 | Fax: +65 6842 7319 | E-mail: intacss@intacss.com.sg

Company/GST Reg No: 200609771H | Website: www.intacss.com

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02 Date: \_\_\_\_\_  
Project Site: DIEPPE BARRACK-BLOCK 2

Ambient Air Conditions: 31 °C Dry Bulb Relative Humidity: 73.20%  
27 °C Wet Bulb

LOCATION					
<b>1 General</b>	02-01B Hd Ops	02-01A Hd GS	02-01 ATO	02-01 ARTY OPS	
Identification No.	FCU-5-3	FCU-5-4	FCU-5-5	FCU-5-6	
Brand / Model	MITSUBISHI/ PLFY-P32VFM-E	MITSUBISHI/ PLFY-P32VFM-E	MITSUBISHI/ PLFY-P32VFM-E	MITSUBISHI/ PLFY-P32VFM-E	
Serial No.	42M00944	42M00924	42M00923	2XM12773	
<b>2 Current Measurement</b>					
Running Ampere - L1					
Running Ampere - L2					
Running Ampere - L3					
<b>3 Pressure Setting</b>					
Low Side (psi)					
High Side (psi)					
<b>4 Temperature Measurement</b>					
Thermostat Setting (°C)	24.0	24.0	24.0	24.0	
On-Coil Temperature (°C)	24.7	24.6	24.7	24.6	
Off-Coil Temperature (°C )	12.2	11.9	11.1	11.9	
Room Temperature:DB/WB(°C)	24.0 / 19.5	24.0 / 19.5	24.0 / 19.0	24.0 / 19.0	
Relative Humidity (%)	65.6	65.6	62.2	62.2	
<b>5 Noise Measurement</b>					
Equipment Off (dBA)	42.7	42.7	42.7	42.7	
Equipment On (dBA)	44.5	45.0	45.3	45.3	

TESTED BY / DATE : 18/11/24

J. Alex/J. Q.Y.

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

*Moe*

RTO

*Moe Thank Tun*  
10/11/2024

WITNESSED BY / DATE :

MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.

# AIR-CONDITIONING SYSTEM PERFORMANCE TEST



**INTAC SYSTEMS SOLUTION PTE LTD**  
英特系統私人有限公司  
Blk 1, Kaki Bukit Avenue 3, KB 1, #04-03 (Main Office) / 04/05/09, Singapore 416087  
Tel: +65 6842 7318 | Fax: +65 6842 7319 | E-mail: intacsso@intacs.com.sg  
Company/GST Reg No: 20060971H | Website: www.intacs.com

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02 Date: \_\_\_\_\_  
Project Site: DIEPPE BARRACK-BLOCK 2

Ambient Air Conditions: 31 °C Dry Bulb      Relative Humidity: 73.20%  
27 °C Wet Bulb

LOCATION				
<b>1 General</b>	02-01 FMSO	02-02 O-ROOM	02-03 TRAINING	
Identification No.	FCU-5-7	FCU-5-8	FCU-5-9	
Brand / Model	MITSUBISHI/ PLFY-P32VFM-E	MITSUBISHI/ PLFY-P63VEM-PA	MITSUBISHI/ PLFY-P63VEM-PA	
Serial No.	41M00034	43M00257	43M00261	
<b>2 Current Measurement</b>				
Running Ampere - L1				
Running Ampere - L2				
Running Ampere - L3				
<b>3 Pressure Setting</b>				
Low Side (psi)				
High Side (psi)				
<b>4 Temperature Measurement</b>				
Thermostat Setting (°C)	24.0	24.0	24.0	
On-Coil Temperature (°C)	24.8	24.6	24.2	
Off-Coil Temperature (°C )	12.7	12.0	12.5	
Room Temperature:DB/WB(°C)	24.0 / 19.0	24.0 / 19.0	24.0 / 19.0	
Relative Humidity (%)	62.2	62.2	62.2	
<b>5 Noise Measurement</b>				
Equipment Off (dBA)	42.7	44.0	42.4	
Equipment On (dBA)	45.3	45.0	45.9	

TESTED BY / DATE: 18/11/24

J. Alex / J. Aly

**ACMV CONTRACTOR**

**WITNESSED BY / DATE:**

WITNESSED BY / DATE:

RTO

Moe Thank Tun  
20/11/2024

---

**MAIN CONTRACTOR**

DEFIN ENGINEERING

**AIR-CONDITIONING SYSTEM  
PERFORMANCE TEST**



INTAC SYSTEMS SOLUTION PTE LTD

英特系統私人有限公司

Blk 1, Kaki Bukit Avenue 3, KB 1, #04-03 (Main Office) /04/05/09, Singapore 416087

Tel: +65 6842 7318 | Fax: +65 6842 7319 | E-mail: intacss@intacss.com.sg

Company/GST Reg No: 200609771H | Website: www.intacss.com

Project / Drawing No.

D2019-00162/ISS/ACMV-BLK 2-02

Date:

Project Site:

DIEPPE BARRACK-BLOCK 2

Ambient Air Conditions: 31 °C Dry Bulb  
27 °C Wet Bulb

Relative Humidity: 73.20%

LOCATION				
<b>1 General</b>	<b>02-04 INT BRANCH</b>			
Identification No.	FCU-5-10	FCU-5-11	FCU-5-12	FCU-5-13
Brand / Model	MITSUBISHI/ PLFY-P32VFM-E	MITSUBISHI/ PLFY-P32VFM-E	MITSUBISHI/ PLFY-P32VFM-E	MITSUBISHI/ PLFY-P32VFM-E
Serial No.	42M00943	42M00938	41M00033	2XM12778
<b>2 Current Measurement</b>				
Running Ampere - L1				
Running Ampere - L2				
Running Ampere - L3				
<b>3 Pressure Setting</b>				
Low Side (psi)				
High Side (psi)				
<b>4 Temperature Measurement</b>				
Thermostat Setting (°C)	24.0	24.0	24.0	24.0
On-Coil Temperature (°C)	24.3	24.3	24.5	24.8
Off-Coil Temperature (°C)	11.4	12.4	12.8	12.2
Room Temperature:DB/WB(°C)	24.0 / 19.0	24.0 / 19.0	24.0 / 19.0	24.0 / 19.0
Relative Humidity (%)	62.2	62.2	62.2	62.2
<b>5 Noise Measurement</b>				
Equipment Off (dBA)		43.1		
Equipment On (dBA)		45.8		

TESTED BY / DATE : 18/11/24

S-Alex/7 Day

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

WITNESSED BY / DATE :

Moe

RTO

Moe Thank Ton  
20/11/2024

MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.

**AIR-CONDITIONING SYSTEM  
PERFORMANCE TEST**



**INTAC SYSTEMS SOLUTION PTE LTD**  
英特系統私人有限公司  
Blk 1, Kaki Bukit Avenue 3, KB 1, #04-03 (Main Office) /04/05/09, Singapore 416087  
Tel: +65 6842 7318 | Fax: +65 6842 7319 | E-mail: intacss@intacs.com.sg  
Company/GST Reg No: 200609771H | Website: www.intacs.com

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02 Date: \_\_\_\_\_  
Project Site: DIEPPE BARRACK-BLOCK 2

Ambient Air Conditions: 31 °C Dry Bulb  
27 °C Wet Bulb Relative Humidity: 73.20%

LOCATION				
<b>1 General</b>	ROOF		02-01 GS & OPS ROOM	02-01 NSF
Identification No.	CU-2-6 (a)	CU-2-6 (b)	FCU-6-1	FCU-6-2
Brand / Model	MITSUBISHI/ PUCY-P350YKD	MITSUBISHI/ PUCY-P300YKD	MITSUBISHI/ PLFY-P100VEM-PA	MITSUBISHI/ PLFY-P32VFM-E
Serial No.	42P-00036	26P-00272	42M00072	41M00037
<b>2 Current Measurement</b>				
Running Ampere - L1	16.3	13.2		
Running Ampere - L2	15.4	12.5		
Running Ampere - L3	14.9	12.0		
<b>3 Pressure Setting</b>				
Low Side (psi)	130			
High Side (psi)	370			
<b>4 Temperature Measurement</b>				
Thermostat Setting (°C)			24.0	24.0
On-Coil Temperature (°C)			24.3	24.4
Off-Coil Temperature (°C)			12.7	12.8
Room Temperature:DB/WB(°C)			24.0 / 19.0	
Relative Humidity (%)			62.2	
<b>5 Noise Measurement</b>				
Equipment Off (dBA)	48.0		42.7	
Equipment On (dBA)	53.0		45.3	

TESTED BY / DATE : 18/11/24

J. Alen / J. Dyl

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE :

RTO

Moe Thack Ton  
20/11/2024

**AIR-CONDITIONING SYSTEM  
PERFORMANCE TEST**



**INTAC SYSTEMS SOLUTION PTE LTD**  
英特系統私人有限公司  
Blk 1, Kaki Bukit Avenue 3, KB 1, #04-03 (Main Office) / 04/05/09, Singapore 416087  
Tel: +65 6842 7318 | Fax: +65 6842 7319 | E-mail: intacss@intacss.com.sg  
Company/GST Reg No: 200609771H | Website: www.intacss.com

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02 Date: \_\_\_\_\_  
Project Site: DIEPPE BARRACK-BLOCK 2

Ambient Air Conditions: 31 °C Dry Bulb  
27 °C Wet Bulb Relative Humidity: 73.20%

LOCATION				
<b>1 General</b>	02-01 GS & OPS ROOM	02-01 Hd Trg	02-01 OPS/TRG WO	02-01C HD AP
Identification No.	PFCU-6-3	FCU-6-4	FCU-6-5	FCU-6-6
Brand / Model	MITSUBISHI/ PEFY-P200VMHS-E-F	MITSUBISHI/ PLFY-P32VFM-E	MITSUBISHI/ PLFY-P32VFM-E	MITSUBISHI/ PLFY-P32VFM-E
Serial No.	3YW01264	41M00045	41M00036	42M00930
<b>2 Current Measurement</b>				
Running Ampere - L1				
Running Ampere - L2				
Running Ampere - L3				
<b>3 Pressure Setting</b>				
Low Side (psi)				
High Side (psi)				
<b>4 Temperature Measurement</b>				
Thermostat Setting (°C)	24.0	24.0	24.0	24.0
On-Coil Temperature (°C)		24.6	24.3	24.6
Off-Coil Temperature (°C )	18.3	12.0	12.8	11.9
Room Temperature:DB/WB(°C)		24.0 / 19.0		24.0 / 19.5
Relative Humidity (%)		62.2		65.6
<b>5 Noise Measurement</b>				
Equipment Off (dBA)	42.7	42.7		42.7
Equipment On (dBA)	45.0	45.3		46.0

TESTED BY / DATE : 18/11/24

J. Alex / J. Tay

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

WITNESSED BY / DATE :

roye

RTO

Moe Thanh Ton  
20/11/2024

MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.

**AIR-CONDITIONING SYSTEM  
PERFORMANCE TEST**



**INTAC SYSTEMS SOLUTION PTE LTD**  
英特系統私人有限公司  
Blk 1, Kaki Bukit Avenue 3, KB-1, #04-03 (Main Office) /04/05/09, Singapore 416087  
Tel: +65 6842 7318 | Fax: +65 6842 7319 | E-mail: intacss@intacs.com.sg  
Company/GST Reg No: 200609771H | Website: www.intacs.com

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02 Date: \_\_\_\_\_  
Project Site: DIEPPE BARRACK-BLOCK 2

Ambient Air Conditions: 31 °C Dry Bulb  
27 °C Wet Bulb Relative Humidity: 73.20%

LOCATION				
<b>1 General</b>	02-01 ENGR OPS	02-02 O-ROOM	02-03 TRAINING	
Identification No.	FCU-6-7	FCU-6-8	FCU-6-9	
Brand / Model	MITSUBISHI/ PLFY-P32VFM-E	MITSUBISHI/ PLFY-P32VFM-E	MITSUBISHI/ PLFY-P63VEM-PA	
Serial No.	2XM12783	42M00910	43M00239	
<b>2 Current Measurement</b>				
Running Ampere - L1				
Running Ampere - L2				
Running Ampere - L3				
<b>3 Pressure Setting</b>				
Low Side (psi)				
High Side (psi)				
<b>4 Temperature Measurement</b>				
Thermostat Setting (°C)	24.0	24.0	24.0	
On-Coil Temperature (°C)	24.4	24.1	24.8	
Off-Coil Temperature (°C)	11.9	11.8	12.3	
Room Temperature:DB/WB(°C)	24.0 / 19.0	24.0 / 18.5	24.0 / 18.5	
Relative Humidity (%)	62.2	58.8	58.8	
<b>5 Noise Measurement</b>				
Equipment Off (dBA)	42.7	43.2	42.9	
Equipment On (dBA)	45.3	45.8	46.5	

TESTED BY / DATE : 18/11/24

J. Alex/J. Ayt

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

WITNESSED BY / DATE :

ngel

RTO

Moe Thack Ton  
20/11/2024

MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.

**AIR-CONDITIONING SYSTEM  
PERFORMANCE TEST**



INTAC SYSTEMS SOLUTION PTE LTD

英特系統私人有限公司

Blk 1, Kaki Bukit Avenue 3, KB 1, #04-03 (Main Office) /04/05/09, Singapore 416087

Tel: +65 6842 7318 | Fax: +65 6842 7319 | E-mail: intacss@intacss.com.sg

Company/GST Reg No: 200609771H | Website: www.intacss.com

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02 Date:

Project Site: DIEPPE BARRACK-BLOCK 2

Ambient Air Conditions: 31 °C Dry Bulb      Relative Humidity: 73.20%  
27 °C Wet Bulb

LOCATION				
<b>1 General</b>	<b>02-04 INT BRANCH</b>		<b>02-04A Hd INT OFFICE</b>	
Identification No.	FCU-6-10	FCU-6-11	FCU-6-12	FCU-6-13
Brand / Model	MITSUBISHI/ PLFY-P32VFM-E	MITSUBISHI/ PLFY-P32VFM-E	MITSUBISHI/ PLFY-P32VFM-E	MITSUBISHI/ PLFY-P32VFM-E
Serial No.	41M00040	42M00934	42M00918	41M00035
<b>2 Current Measurement</b>				
Running Ampere - L1				
Running Ampere - L2				
Running Ampere - L3				
<b>3 Pressure Setting</b>				
Low Side (psi)				
High Side (psi)				
<b>4 Temperature Measurement</b>				
Thermostat Setting (°C)	24.0	24.0	24.0	24.0
On-Coil Temperature (°C)	24.6	24.3	24.3	24.8
Off-Coil Temperature (°C )	12.6	12.3	12.2	11.9
Room Temperature:DB/WB(°C)	24.0 / 19.0			24.0 / 19.5
Relative Humidity (%)	62.2			65.6
<b>5 Noise Measurement</b>				
Equipment Off (dBA)	43.1			42.0
Equipment On (dBA)	45.8			44.0

TESTED BY / DATE : J. Alex / J. Day

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

WITNESSED BY / DATE :

RTO

Moe  
Moe Thank You  
20/11/2019

MAIN CONTRACTOR  
DEENN ENGINEERING PTE. LTD.

**AIR-CONDITIONING SYSTEM  
PERFORMANCE TEST**



INTAC SYSTEMS SOLUTION PTE LTD

英特系統私人有限公司

Bik 1, Kaki Bukit Avenue 3, KB 1, #04-03 (Main Office) /04/05/09, Singapore 416087

Tel: +65 6842 731R | Fax: +65 6842 7319 | E-mail: intacss@intacss.com.sg

Company/GST Reg No: 200609771H | Website: www.intacss.com

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02 Date:

Project Site: DIEPPE BARRACK-BLOCK 2

Ambient Air Conditions: 31 °C Dry Bulb  
27 °C Wet Bulb      Relative Humidity: 73.20%

LOCATION				
1 General	ROOF		02-05 BF ROOM	02-06 R-ROOM
Identification No.	CU-2-7 (a)	CU-2-7 (b)	FCU-7-1	FCU-7-2
Brand / Model	MITSUBISHI/ PUCY-P350YKD	MITSUBISHI/ PUCY-P250YKD	MITSUBISHI/ PLFY-P125VEM-PA	MITSUBISHI/ PLFY-P50VEM-PA
Serial No.	42P-00027	43P-00113	3XM00887	42M00118
2 Current Measurement				
Running Ampere - L1	15.6	10.1		
Running Ampere - L2	14.9	8.9		
Running Ampere - L3	14.2	9.6		
3 Pressure Setting				
Low Side (psi)	130			
High Side (psi)	365			
4 Temperature Measurement				
Thermostat Setting (°C)			24.0	24.0
On-Coil Temperature (°C)			24.7	24.3
Off-Coil Temperature (°C )			12.6	12.2
Room Temperature:DB/WB(°C)			24.0 / 19.0	24.0 / 19.5
Relative Humidity (%)			62.2	65.6
5 Noise Measurement				
Equipment Off (dBA)	48.0		43.5	44.3
Equipment On (dBA)	52.8		46.8	45.8

TESTED BY / DATE : 18/11/2014

J. Alex/J. Ray

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

WITNESSED BY / DATE :

Moe

RTO

Moe Thank Tan  
10/11/2014

MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.

**AIR-CONDITIONING SYSTEM  
PERFORMANCE TEST**



**INTAC SYSTEMS SOLUTION PTE LTD**  
英特系統私人有限公司  
Blk 1, Kaki Bukit Avenue 3, KB 1, #04-03 (Main Office) /04/05/09, Singapore 416087  
Tel: +65 6842 7318 | Fax: +65 6842 7319 | E-mail: intacss@intacss.com.sg  
Company/GST Reg No: 200609771H | Website: www.intacss.com

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02 Date: \_\_\_\_\_  
Project Site: DIEPPE BARRACK-BLOCK 2

Ambient Air Conditions: 31 °C Dry Bulb Relative Humidity: 73.20%  
27 °C Wet Bulb

LOCATION				
1 General	02-12 INTERVIEW ROOM	02-11 INTERVIEW ROOM	02-08 CAMP OPS	02-09 LOG BRANCH
Identification No.	FCU-7-3	FCU-7-4	FCU-7-5	FCU-7-6
Brand / Model	MITSUBISHI/ PLFY-P50VEM-PA	MITSUBISHI/ PLFY-P50VEM-PA	MITSUBISHI/ PLFY-P50VEM-PA	MITSUBISHI/ PLFY-P50VEM-PA
Serial No.	42M00141	42M00145	42M00042	42M00152
<b>2 Current Measurement</b>				
Running Ampere - L1				
Running Ampere - L2				
Running Ampere - L3				
<b>3 Pressure Setting</b>				
Low Side (psi)				
High Side (psi)				
<b>4 Temperature Measurement</b>				
Thermostat Setting (°C)	24.0	24.0	24.0	24.0
On-Coil Temperature (°C)	24.6	24.6	24.3	24.1
Off-Coil Temperature (°C )	12.0	12.0	12.8	12.5
Room Temperature:DB/WB(°C)	24.0 / 19.5	24.0 / 19.0	24.0 / 19.5	24.0 / 19.0
Relative Humidity (%)	65.6	62.2	65.6	62.2
<b>5 Noise Measurement</b>				
Equipment Off (dBA)	41.9	41.9	44.2	42.7
Equipment On (dBA)	44.8	44.0	45.7	46.0

TESTED BY / DATE : 18/11/24  
J. Alex/J. A.O.T.

ACMV CONTRACTOR  
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

WITNESSED BY / DATE : Moe

RTO  
Moe Thauk Ton  
20/11/2024

**MAIN CONTRACTOR**  
DEENN ENGINEERING PTE. LTD.

**AIR-CONDITIONING SYSTEM  
PERFORMANCE TEST**



**INTAC SYSTEMS SOLUTION PTE LTD**

英特系統私人有限公司

Blk 1, Kaki Bukit Avenue 3, KB 1, #04-03 (Main Office) /04/05/09, Singapore 416087

Tel: +65 6842 7318 | Fax: +65 6842 7319 | E-mail: intacss@intacs.com.sg

Company/GST Reg No: 20060971H | Website: www.intacs.com

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02 Date: \_\_\_\_\_

Project Site: DIEPPE BARRACK-BLOCK 2

Ambient Air Conditions: 31 °C Dry Bulb      Relative Humidity: 73.20%  
                                  27 °C Wet Bulb

LOCATION				
<b>1 General</b>	02-09 LOG BRANCH	02-07 STORE OUTSIDE	02-09 DY HD LOG	02-09 FMEO
Identification No.	FCU-7-7	PFCU-7-8	FCU-7-9	FCU-7-10
Brand / Model	MITSUBISHI/ PLFY-P50VEM-PA	MITSUBISHI/ PEFY-P125VMHS-E-F	MITSUBISHI/ PLFY-P32VFM-E	MITSUBISHI/ PLFY-P32VFM-E
Serial No.	42M00166	23W00975	42M00929	42M00932
<b>2 Current Measurement</b>				
Running Ampere - L1				
Running Ampere - L2				
Running Ampere - L3				
<b>3 Pressure Setting</b>				
Low Side (psi)				
High Side (psi)				
<b>4 Temperature Measurement</b>				
Thermostat Setting (°C)	24.0	24.0	24.0	24.0
On-Coil Temperature (°C)	24.3		24.5	24.2
Off-Coil Temperature (°C )	11.9	18.4	12.8	12.4
Room Temperature:DB/WB(°C)	24.0 / 19.0		24.0 / 19.0	24.0 / 19.0
Relative Humidity (%)	62.2		62.2	62.2
<b>5 Noise Measurement</b>				
Equipment Off (dBA)	42.7	44.0	42.7	42.7
Equipment On (dBA)	46.0	46.0	46.0	46.0

TESTED BY / DATE :

John Alex/ J. Alex

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

WITNESSED BY / DATE :

RTO

moe

moe Thauk Ton  
10/11/2024

MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.

**AIR-CONDITIONING SYSTEM  
PERFORMANCE TEST**



INTAC SYSTEMS SOLUTION PTE LTD

英 捷 系 統 私 人 有 限 公 司

Blk 1, Kaki Bukit Avenue 3, KB 1, #04-03 (Main Office) /04/05/09, Singapore 416087

Tel: +65 6842 7318 | Fax: +65 6842 7319 | E-mail: intacss@intacss.com.sg

Company/GST Reg No: 200609771H | Website: www.intacss.com

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02 Date:

Project Site: DIEPPE BARRACK-BLOCK 2

Ambient Air Conditions: 31 °C Dry Bulb  
27 °C Wet Bulb      Relative Humidity: 73.20%

LOCATION				
<b>1 General</b>	ROOF		02-05 BF ROOM	02-06 R-ROOM
Identification No.	CU-2-8 (a)	CU-2-8 (b)	FCU-8-1	FCU-8-2
Brand / Model	MITSUBISHI/ PUCY-P200YKD	MITSUBISHI/ PUCY-PUCY-P200YKD	MITSUBISHI/ PLFY-P125VEM-PA	MITSUBISHI/ PLFY-P50VEM-PA
Serial No.	32P-00068	24P-00207	3XM00884	42M00116
<b>2 Current Measurement</b>				
Running Ampere - L1	7.1	7.4		
Running Ampere - L2	6.9	6.9		
Running Ampere - L3	7.2	6.4		
<b>3 Pressure Setting</b>				
Low Side (psi)	130			
High Side (psi)	365			
<b>4 Temperature Measurement</b>				
Thermostat Setting (°C)			24.0	24.0
On-Coil Temperature (°C)			24.3	24.6
Off-Coil Temperature (°C)			12.1	12.7
Room Temperature:DB/WB(°C)			24.0 / 19.0	24.0 / 19.0
Relative Humidity (%)			62.2	62.2
<b>5 Noise Measurement</b>				
Equipment Off (dBA)	48.0		43.5	44.3
Equipment On (dBA)	52.8		46.8	45.8

TESTED BY / DATE : 18/11/24

J. Alex J. Day

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

WITNESSED BY / DATE :

RTO

moe Thauk Ton  
20/11/2024

MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.

**AIR-CONDITIONING SYSTEM  
PERFORMANCE TEST**



INTAC SYSTEMS SOLUTION PTE LTD

英特系統私人有限公司

Blk 1, Kaki Bukit Avenue 3, KB 1, #04-03 (Main Office) /04/05/09, Singapore 416087

Tel: +65 6842 7318 | Fax: +65 6842 7319 | E-mail: intacss@intacss.com.sg

Company/GST Reg No: 200609771H | Website: www.intacss.com

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02 Date:

Project Site: DIEPPE BARRACK-BLOCK 2

Ambient Air Conditions: 31 °C Dry Bulb      Relative Humidity: 73.20%  
                                  27 °C Wet Bulb

LOCATION				
<b>1 General</b>	02-08 CAMP OPS	02-10 SMC	<b>02-09 LOG BRANCH</b>	
Identification No.	FCU-8-3	FCU-8-4	FCU-8-5	FCU-8-6
Brand / Model	MITSUBISHI/ PLFY-P50VEM-PA	MITSUBISHI/ PLFY-P50VEM-PA	MITSUBISHI/ PLFY-P50VEM-PA	MITSUBISHI/ PLFY-P50VEM-PA
Serial No.	42M00135	42M00136	42M00138	42M00151
<b>2 Current Measurement</b>				
Running Ampere - L1				
Running Ampere - L2				
Running Ampere - L3				
<b>3 Pressure Setting</b>				
Low Side (psi)				
High Side (psi)				
<b>4 Temperature Measurement</b>				
Thermostat Setting (°C)	24.0	24.0	24.0	24.0
On-Coil Temperature (°C)	24.6	24.6	24.3	24.1
Off-Coil Temperature (°C )	12.0	12.0	12.8	12.5
Room Temperature:DB/WB(°C)	24.0 / 19.5	24.0 / 19.5	24.0 / 19.0	
Relative Humidity (%)	65.6	65.6	62.2	
<b>5 Noise Measurement</b>				
Equipment Off (dBA)	42.0	42.3	44.2	
Equipment On (dBA)	44.7	45.1	46.0	

TESTED BY / DATE :

**ACMV CONTRACTOR**

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

RTO

*moe*  
*moe Thauk Tun*  
*10/11/2019*

WITNESSED BY / DATE :

**MAIN CONTRACTOR**

DEENN ENGINEERING PTE. LTD.

**AIR-CONDITIONING SYSTEM  
PERFORMANCE TEST**



INTAC SYSTEMS SOLUTION PTE LTD

英特系統私人有限公司

Blk 1, Kaki Bukit Avenue 3, KB-1, #04-03 (Main Office) / 04/05/09, Singapore 416087

Tel: +65 6842 7318 | Fax: +65 6842 7319 | E-mail: intacss@intacss.com.sg

Company/GST Reg No: 200609771H | Website: www.intacss.com

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02 Date: \_\_\_\_\_

Project Site: DIEPPE BARRACK-BLOCK 2 \_\_\_\_\_

Ambient Air Conditions: 31 °C Dry Bulb  
27 °C Wet Bulb Relative Humidity: 73.20%

LOCATION				
<b>1 General</b>	02-09 FINANCE	02-09 RESOURCE	02-09 DY HD LOG	
Identification No.	FCU-8-7	FCU-8-8	FCU-8-9	
Brand / Model	MITSUBISHI/ PLFY-P32VFM-E	MITSUBISHI/ PLFY-P32VFM-E	MITSUBISHI/ PLFY-P50VEM-PA	
Serial No.	42M00942	41M00039	42M00039	
<b>2 Current Measurement</b>				
Running Ampere - L1				
Running Ampere - L2				
Running Ampere - L3				
<b>3 Pressure Setting</b>				
Low Side (psi)				
High Side (psi)				
<b>4 Temperature Measurement</b>				
Thermostat Setting (°C)	24.0	24.0	24.0	
On-Coil Temperature (°C)	24.8	24.2	24.6	
Off-Coil Temperature (°C )	12.3	12.7	12.3	
Room Temperature:DB/WB(°C)	24.0 / 19.0		24.0 / 19.5	
Relative Humidity (%)	62.2		65.6	
<b>5 Noise Measurement</b>				
Equipment Off (dBA)	42.7		41.8	
Equipment On (dBA)	46.0		45.0	

TESTED BY / DATE : 18/11/24

J. Alex / J. Day

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

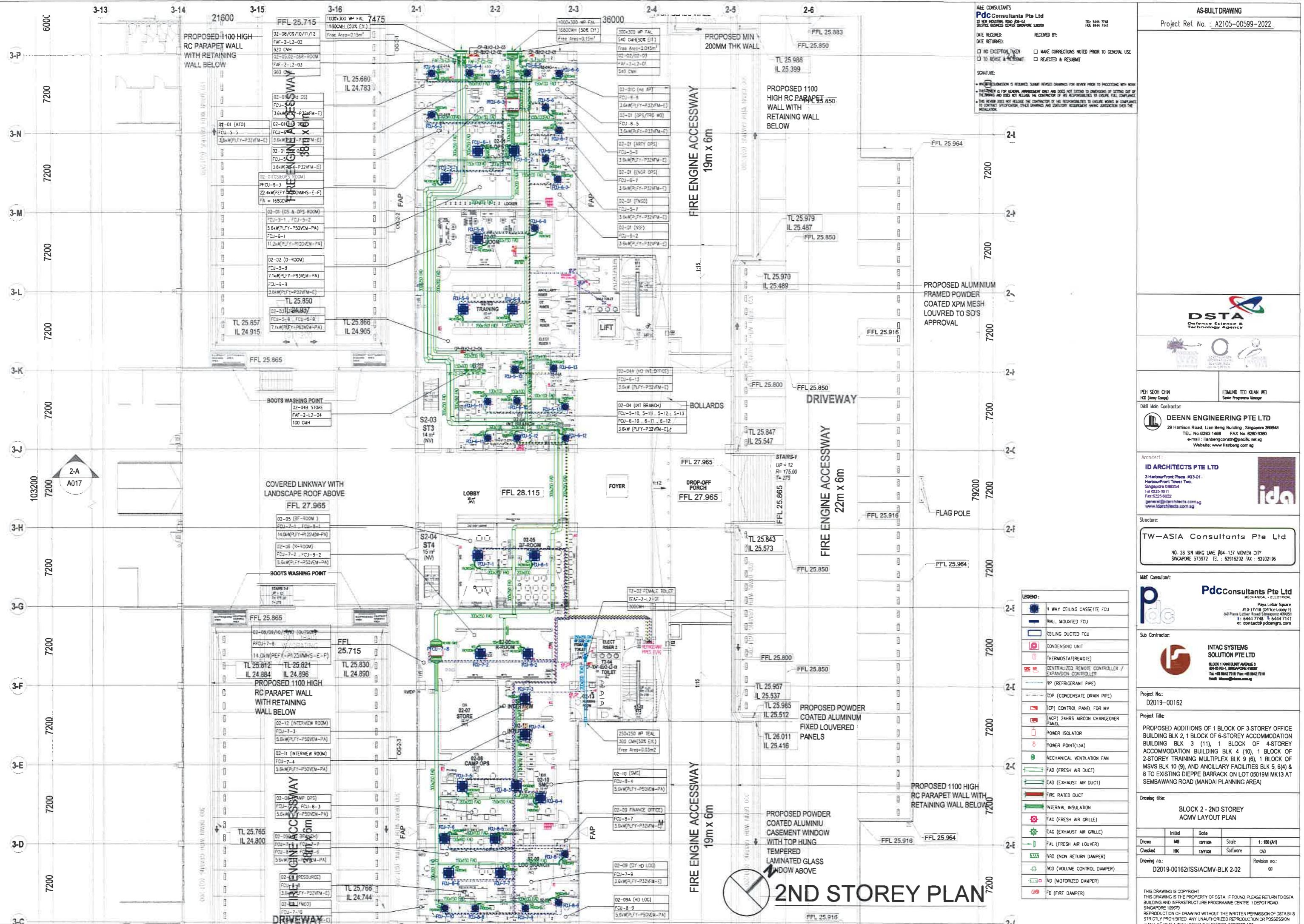
WITNESSED BY / DATE :

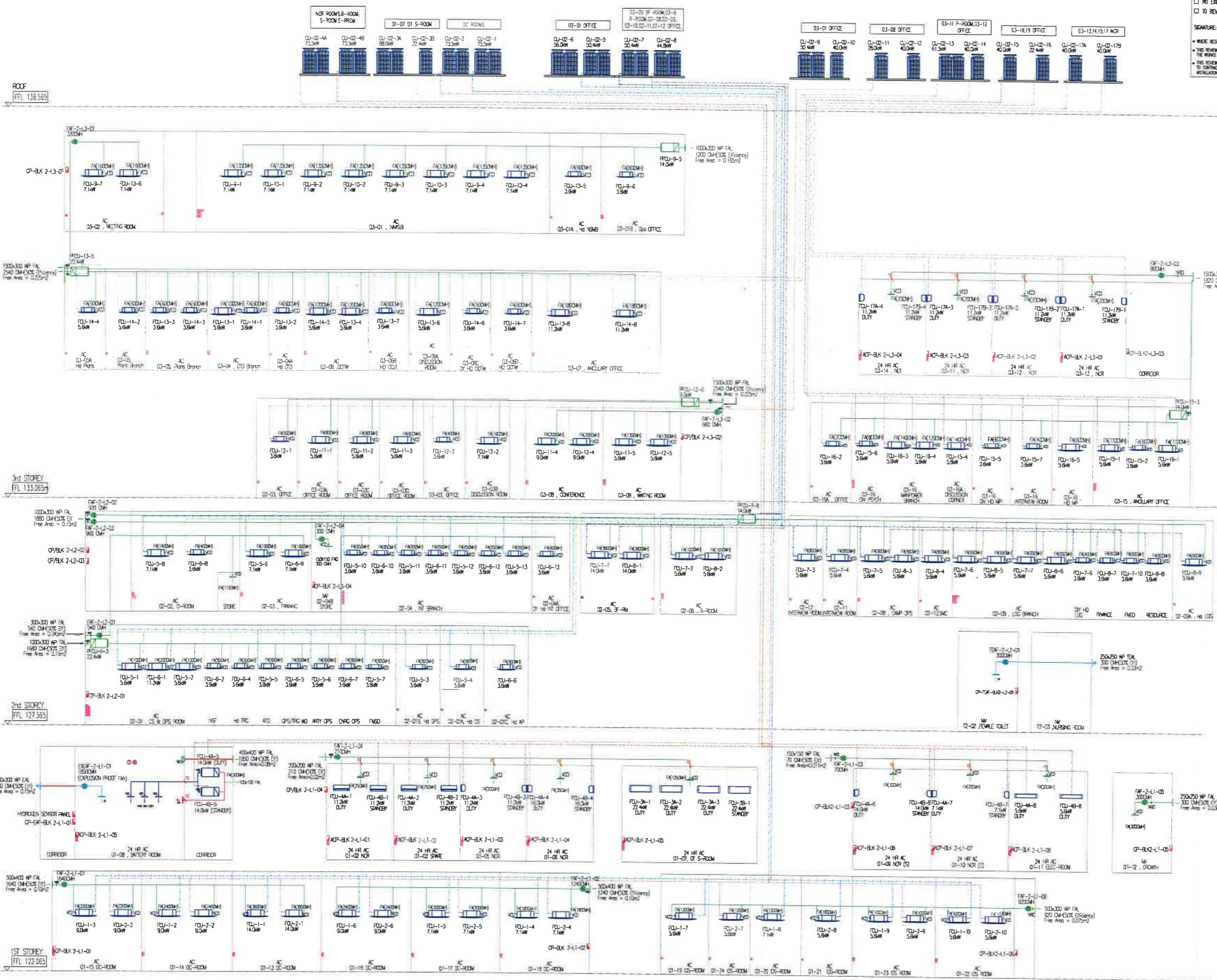
RTO

Moe Thank Tan  
20/11/2024

MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.





## ACMV SCHEMATIC DIAGRAM

## Air Conditioning Equipment Schedule - Level 2

Designation	Area Served	Brand / Model Offered	Type	Designed Capacity (kW)	Offered Capacity (kW)	Qty	No of Set	Power Input (kW)	Running Current (Amp)	Maximum Circuit (Amp)	Isolator Size (A/Ph)	Qty	Pipe Size Liquid	Pipe Size Gas	Airflow Rate (CMH)	Dimension (HxWxD)	Control Panel Designation	Control Panel Power Requirement	
CU-2-5	ROOF	MITSUBISHI	VRF - 410A	48.70	50.4	1			4.66	7.40	11.10	20A(3φ)	1	Φ 9.52	Φ 22.22	10500	1650 x 920 x 740		
FCU-5-1	02-01 CS & OPS ROOM	MITSUBISHI	PLFY-P50VEN-PA	4-WAY CEILING CASSETTE	5.20	5.6	1		0.03	0.32	0.48	13A(1φ)	1	Φ 6.35	Φ 12.70	1140	258 x 840 x 840		
FCU-5-2	02-01 CS & OPS ROOM	MITSUBISHI	PLFY-P50VEN-PA	4-WAY CEILING CASSETTE	5.20	5.6	1		0.03	0.32	0.48	13A(1φ)	1	Φ 6.35	Φ 12.70	1140	258 x 840 x 840		
FCU-5-3	02-01B Hd Ops	MITSUBISHI	PLFY-P32VFM-E	4-WAY CEILING CASSETTE	3.19	3.6	1		0.02	0.23	0.35	13A(1φ)	1	Φ 6.35	Φ 12.70	570	208 x 570 x 570		
FCU-5-4	02-01A Hd GS	MITSUBISHI	PLFY-P32VFM-E	4-WAY CEILING CASSETTE	3.26	3.6	1		0.02	0.23	0.35	13A(1φ)	1	Φ 6.35	Φ 12.70	570	208 x 570 x 570		
FCU-5-5	02-01 ATO	MITSUBISHI	PLFY-P32VFM-E	4-WAY CEILING CASSETTE	1.56	3.6	1		0.02	0.23	0.35	13A(1φ)	1	Φ 6.35	Φ 12.70	570	208 x 570 x 570		
FCU-5-6	02-01 ARTY OPS	MITSUBISHI	PLFY-P32VFM-E	4-WAY CEILING CASSETTE	2.95	3.6	1		0.02	0.23	0.35	13A(1φ)	1	Φ 6.35	Φ 12.70	570	208 x 570 x 570		
FCU-5-7	02-01 FMSO	MITSUBISHI	PLFY-P32VFM-E	4-WAY CEILING CASSETTE	2.36	3.6	1		0.02	0.23	0.35	13A(1φ)	1	Φ 6.35	Φ 12.70	570	208 x 570 x 570		
FCU-5-8	02-02 O-ROOM	MITSUBISHI	PLFY-P53VEM-PA	4-WAY CEILING CASSETTE	7.09	7.1	1		0.03	0.36	0.54	13A(1φ)	1	Φ 9.52	Φ 15.88	1140	258 x 840 x 840		
FCU-5-9	02-03 TRAINING	MITSUBISHI	PLFY-P53VEM-PA	4-WAY CEILING CASSETTE	7.07	7.1	1		0.03	0.35	0.54	13A(1φ)	1	Φ 9.52	Φ 15.88	1140	258 x 840 x 840		
FCU-5-10	02-04 INT BRANCH	MITSUBISHI	PLFY-P32VFM-E	4-WAY CEILING CASSETTE	2.58	3.6	1		0.02	0.23	0.35	13A(1φ)	1	Φ 6.35	Φ 12.70	570	208 x 570 x 570		
FCU-5-11									0.02	0.23	0.35	13A(1φ)	1	Φ 6.35	Φ 12.70	570	208 x 570 x 570		
FCU-5-12									0.02	0.23	0.35	13A(1φ)	1	Φ 6.35	Φ 12.70	570	208 x 570 x 570		
FCU-5-13									0.02	0.23	0.35	13A(1φ)	1	Φ 6.35	Φ 12.70	570	208 x 570 x 570		
CU-2-6	ROOF	MITSUBISHI	VRF - 410A	73.3	73.5	1			9.66	14.40	23.10	32A(3φ)	1	Φ 12.70	Φ 28.58	12600	1650 x 1220 x 740		
									7.82			32A(3φ)							
									0.07			13A(1φ)							
FCU-6-1	02-01 CS & OPS ROOM	MITSUBISHI	PLFY-P125VEM-PA	4-WAY CEILING CASSETTE	10.41	11.2	1		0.02	0.23	0.35	13A(1φ)	1	Φ 6.35	Φ 12.70	570	208 x 570 x 570		
FCU-6-2	02-01 NSF	MITSUBISHI	PLFY-P32VFM-E	4-WAY CEILING CASSETTE	3.26	3.6	1		0.26	1.66	2.49	13A(1φ)	1	Φ 9.52	Φ 19.05	1680	470 x 1250 x 1120		
PFCU-6-3	02-01 CS & OPS ROOM	MITSUBISHI	PEFY-P200VMHS-E-F	FRESH AIR INTAKE	11.55	22.4	1		0.02	0.23	0.35	13A(1φ)	1	Φ 6.35	Φ 12.70	570	208 x 570 x 570		
FCU-6-4	02-01 Hd TRG	MITSUBISHI	PLFY-P32VFM-E	4-WAY CEILING CASSETTE	1.90	3.6	1		0.02	0.23	0.35	13A(1φ)	1	Φ 6.35	Φ 12.70	570	208 x 570 x 570		
FCU-6-5	02-01 OPS/TRG WD	MITSUBISHI	PLFY-P32VFM-E	4-WAY CEILING CASSETTE	1.90	3.6	1		0.02	0.23	0.35	13A(1φ)	1	Φ 6.35	Φ 12.70	570	208 x 570 x 570		
FCU-6-6	02-01C Hd AP	MITSUBISHI	PLFY-P32VFM-E	4-WAY CEILING CASSETTE	3.14	3.6	1		0.02	0.23	0.35	13A(1φ)	1	Φ 6.35	Φ 12.70	570	208 x 570 x 570		
FCU-6-7	02-01 ENGR OPS	MITSUBISHI	PLFY-P32VFM-E	4-WAY CEILING CASSETTE	2.90	3.6	1		0.02	0.23	0.35	13A(1φ)	1	Φ 6.35	Φ 12.70	570	208 x 570 x 570		
FCU-6-8	02-02 O-ROOM	MITSUBISHI	PLFY-P32VFM-E	4-WAY CEILING CASSETTE	2.54	3.6	1		0.02	0.23	0.35	13A(1φ)	1	Φ 6.35	Φ 12.70	570	208 x 570 x 570		
FCU-6-9	02-03 TRAINING	MITSUBISHI	PLFY-P53VEM-PA	4-WAY CEILING CASSETTE	7.07	7.1	1		0.03	0.36	0.54	13A(1φ)	1	Φ 9.52	Φ 15.88	1140	258 x 840 x 840		
FCU-6-10	02-04 INT BRANCH	MITSUBISHI	PLFY-P32VFM-E	4-WAY CEILING CASSETTE	2.58	3.6	1		0.02	0.23	0.35	13A(1φ)	1	Φ 6.35	Φ 12.70	570	208 x 570 x 570		
FCU-6-11									0.02	0.23	0.35	13A(1φ)	1	Φ 6.35	Φ 12.70	570	208 x 570 x 570		
FCU-6-12									0.02	0.23	0.35	13A(1φ)	1	Φ 6.35	Φ 12.70	570	208 x 570 x 570		
FCU-6-13	02-04 DY Hd INT OFFICE	MITSUBISHI	PLFY-P32VFM-E	4-WAY CEILING CASSETTE	2.58	3.6	1		0.02	0.23	0.35	13A(1φ)	1	Φ 6.35	Φ 12.70	570	208 x 570 x 570		
CU-2-7	ROOF	MITSUBISHI	VRF - 410A	55.9	68.0	1			9.66	15.40	18.75	32A(3φ)	1	Φ 12.70	Φ 28.58	12600	1650 x 1220 x 740		
									5.95			32A(3φ)							
									0.11			1.59							



# CALTEK PTE LTD

23 Tagore Lane, #04-08/09/10/11 Tagore 23 Warehouse, Singapore 787601  
Tel: (65) 6452 0300 | Fax: (65) 6452 0500  
www.caltekgroup.com | info@caltekgroup.com

## CALIBRATION CERTIFICATE

**CERTIFICATE NUMBER** : CTT 1618M-24      **JOB NUMBER** : CCJR 24-7207  
**DATE RECEIVED** : 20-Sep-24      **ISSUE DATE** : 23-Sep-24

---

**Instrument** : SLING PSYCHROMETER      **Ambient Temperature** :  $(23 \pm 5)$  °C  
**Manufacturer** : ZEAL      **Relative Humidity** :  $(55 \pm 10)$  % r.h.  
**Model No.** : BS2842      **Date Calibrated** : 23-Sep-24  
**Serial No.** : —      **Recommended Due Date** : 23-Sep-25

---

**Customer** : INTAC SYSTEMS SOLUTIONS PTE LTD      **Range** : —  
Blk 1 Kaki Bukit Avenue 3      **( Tag No. )** : —  
#04-03 KB-1      **Page** : 1 of 2  
Singapore 416087      **Status** : As Found

---

The described instrument has been calibrated at **Caltek Laboratory** under the ambient conditions stated above.

This certificate provides traceability of measurement to the International System of Units (**SI**) and/or to units of measurement realised at the National Metrology Centre (**NMC**), Singapore or other recognized national metrology institutes.

**METHOD** : The calibration method was carried out according to In-house Technical Calibration Procedure CTTM -T10:2007 as a guide.

**REFERENCE INSTRUMENT(S)**

1. Digital Thermo-Hygrometer

**SERIAL NO**

72033235/20055608

**DUE DATE**

29-Aug-25

**RESULTS OF CALIBRATION**

1. The results of calibration are given on the attached calibration data sheet(s).
2. The expanded uncertainty of measurement associated with the calibration is 3% r.h. & 0.59 °C estimated at a level of confidence of approximately 95 % with a coverage factor of k=2.00.
3. The user should determine the suitability of the instrument for its intended use.

Calibrated by :

BHUVANESWARI MOHAN  
EMP ID : 1165

Approved by :

MOHAN VASANTH  
EMP ID : 1124

# TERMS AND CONDITIONS GOVERNING TECHNICAL SERVICES PROVIDED BY CALTEK PTE LTD

## 1. REQUEST PROCEDURES

- a. A Job receipt/ Works order, Purchase Order, Acknowledgement, Confirmation Letter or email from the client shall be submitted to Caltek on/or at the time the equipment/ service is delivered or requested to/or by Caltek Pte Ltd. This document shall provide clear instructions of the shipping, billing and reporting details and requirements.
- b. Caltek will assign a unique number to each item or service upon acceptance of the item or service by Caltek.

## 2. CLIENT'S UNDERTAKINGS

- a. The Client shall supply the necessary accessories and /or information or data if any to enable Caltek to perform the services stated in the document. Caltek shall be under no obligation to perform the services unless and until it has received confirmation from the Client.
- b. The Client warrants that all information and data supplied is accurate and correct in all respects and shall indemnify Caltek for all loss and damages suffered by Caltek due to any inaccuracy or error in the information and data.

## 3. CALTEK SERVICES

- a. The equipment/ service submitted for calibration/testing shall be compatible with the client's specifications, upon receipt. When equipment is received it will be inspected physically, and if found to be faulty or below a certain standard the Client will be informed accordingly. The Client or his representative may be present at the time of the inspection, failing which; Caltek's findings will be final.
- b. If equipment defects necessitating repair are found after Services has commenced, the Client will be notified and Caltek shall be under no obligation to continue further until the defects are rectified by the Client. A fee will be charged by Caltek for the work done.

## 4. CALIBRATION/ TEST REPORTS

- a. The report shall not be used in any publicity material without prior consent of Caltek. The report may not be reproduced in part or in full unless approved in writing has been given by Caltek.
- b. The report issued hereunder is not a Certificate of Quality. It only applies to the sample of the specific equipment or service given at the time of its calibration or testing. The results shall not be used to indicate or imply that they are applicable to the similar items.
- c. In addition, such results must not be used to indicate or imply that Caltek approves, recommends or endorses the manufacturer, supplier or user of such equipment or that Caltek in any way "guarantees" the later performance of the equipment.

## 5. METHOD OF CALIBRATION/ TESTING

- a. The Laboratory will perform according to published certified standards or any other approved standards as discussed and agreed between the Client and Caltek. When it is necessary to employ Calibration or Test methods and procedures that

are non-standard, these shall be fully documented so as to provide traceability in case of dispute or replicated work when required.

## 6. SUB-CONTRACT

- a. The Company may delegate the performance of the whole or any part of the services contracted for with the Client to any Agent or Sub-Contractor due to temporary incapability, further expertise or heavy workload.

## 7. CALTEK'S LIABILITY

- a. Caltek shall not under any circumstances be responsible for any loss or damage to the equipment during transit while in the custody of Caltek.
- b. All reasonable case(s) will be taken when the equipment is in Caltek's custody, however insurance against accidental loss or damage, either on transit or at Caltek shall be arranged by the Client.
- c. Caltek shall under no circumstances be liable to the client or its agents, servants or representatives in contract including negligence or breach of statutory duty or otherwise for any direct or indirect loss or damage suffered by the client, its agents, servants or representatives howsoever arising or whether connected with the services provided by Caltek herein.

## 8. LIEN

- a. In addition to any right or lien to which Caltek may be entitled by law, Caltek shall be entitled to a general lien on all equipment or service with the client.

## 9. INDEMNIFY

- a. The Client shall indemnify Caltek fully against all damages suffered and cost and expenses incurred by Caltek and all claims by any third parties as a result of any breach of the terms and conditions of this agreement by the Client including but not limited to the improper use of the reports and for any promotional or advertising activities, and supply of inaccurate information and date to Caltek, or any claim by third party for infringement of intellectual property rights and/or discovery of information and/or delivery of documents or equipment sample.

## 10. COURT ATTENDANCE

- a. In the event any of the employees of Caltek is requested by the Client or summoned by the court upon application by the Client or any other parties for his attendance in court as an expert witness on the subject of this agreement, the Client agrees and shall pay Caltek for the attendance in court based on the Caltek prevailing rate for court attendance.

## 11. GOVERNING LAW

- a. This agreement shall be deemed to be made in Singapore and shall be subject to governed by and interpreted in accordance with the domestic laws of the Republic of Singapore for every purpose.



## CALIBRATION CERTIFICATE

CERTIFICATE NUMBER : CTT 1618M-24  
ISSUE DATE : 23-Sep-24

JOB NUMBER : CCJR 24-7207  
PAGE : 2 of 2

MEAN REFERENCE READING ( % r.h. )	MEAN INSTRUMENT READING ( % r.h. ) BEFORE ADJUSTMENT	MEAN INSTRUMENT READING ( % r.h. ) AFTER ADJUSTMENT	CORRECTION ( % r.h. )
--------------------------------------	---	--	--------------------------

### RELATIVE HUMIDITY MEASUREMENT @ FIXED TEMPERATURE OF 23°C

49.51	51	—	-1.49
55.74	58	—	-2.26
59.61	62	—	-2.39

M. VaJuth  






# CALTEK PTE. LTD.

23 Tagore Lane, #04-08/09/10/11 Tagore 23 Warehouse, Singapore 787601  
Tel: (65) 64520300 Fax: (65) 64520500  
Email: info@caltekgroup.com Website: www.caltekgroup.com

## CALIBRATION CERTIFICATE

<b>CERTIFICATE NUMBER</b>	: CTT 1919-24	<b>JR NO</b>	: JR-16551
<b>INSTRUMENT CODE</b>	: 100024-14126	<b>PAGE NUMBER</b>	: 1 of 2

Instrument	: IR THERMOMETER	Ambient Temperature	: (23±5)°C
Manufacturer	: -	Relative Humidity	: (55±10)%r.h.
Model No	: -	Received Date	: 20-Sep-24
Part No	: -	Date of Calibration	: 23-Sep-24
Serial No	: 201506021759	Recommended Due Date	: 23-Sep-25
Range	: -	Issue Date	: 23-Sep-24
Asset/Tag/Id/Code	: -	Job Number	: CCJR24-7207
Customer	: INTAC SYSTEMS SOLUTION PTE LTD, Blk 1, Kaki Bukit Avenue 3, #04-03 KB-1, Singapore, 416087		

The described instrument has been calibrated at Caltek laboratory under the ambient conditions stated above.

This certificate provides traceability of measurement to the International System of Units (SI) and/or to units of measurement realised at the National Metrology Centre (NMC) , Singapore or other recognized national metrology Institutes.

The calibration method was carried out according to In-house Technical Calibration Procedure CTM-T05:2008, as guide.

S.No.	REFERENCE INSTRUMENT(S)	SERIAL NO	DUE DATE
1	Blackbody Calibrator	DYHT2M712	17-May-25

### Results of Calibration

- 1 The expanded uncertainty of measurement associated with the calibration is estimated at a level of confidence of approximately 95% with a coverage factor of  $k=2.00$ .
- 2 The user should determine the suitability of the instrument for its intended use.
- 3 No Adjustments done.

### Calibrated By :

Kaartigeish Sivaraman

EMP ID : 1112

### Approved By :

Mohan Vasanth

EMP ID : 1124

# TERMS AND CONDITIONS GOVERNING TECHNICAL SERVICES PROVIDED BY CALTEK PTE LTD

## 1. REQUEST PROCEDURES

- a. A Job receipt/ Works order, Purchase Order, Acknowledgement, Confirmation Letter or email from the client shall be submitted to Caltek on/or at the time the equipment/ service is delivered or requested to/or by Caltek Pte Ltd. This document shall provide clear instructions of the shipping, billing and reporting details and requirements.
- b. Caltek will assign a unique number to each item or service upon acceptance of the item or service by Caltek.

## 2. CLIENT'S UNDERTAKINGS

- a. The Client shall supply the necessary accessories and /or information or data if any to enable Caltek to perform the services stated in the document. Caltek shall be under no obligation to perform the services unless and until it has received confirmation from the Client.
- b. The Client warrants that all information and data supplied is accurate and correct in all respects and shall indemnify Caltek for all loss and damages suffered by Caltek due to any inaccuracy or error in the information and data.

## 3. CALTEK SERVICES

- a. The equipment/ service submitted for calibration/testing shall be compatible with the client's specifications, upon receipt. When equipment is received it will be inspected physically, and if found to be faulty or below a certain standard the Client will be informed accordingly. The Client or his representative may be present at the time of the inspection, failing which; Caltek's findings will be final.
- b. If equipment defects necessitating repair are found after Services has commenced, the Client will be notified and Caltek shall be under no obligation to continue further until the defects are rectified by the Client. A fee will be charged by Caltek for the work done.

## 4. CALIBRATION/ TEST REPORTS

- a. The report shall not be used in any publicity material without prior consent of Caltek. The report may not be reproduced in part or in full unless approved in writing has been given by Caltek.
- b. The report issued hereunder is not a Certificate of Quality. It only applies to the sample of the specific equipment or service given at the time of its calibration or testing. The results shall not be used to indicate or imply that they are applicable to the similar items.
- c. In addition, such results must not be used to indicate or imply that Caltek approves, recommends or endorses the manufacturer, supplier or user of such equipment or that Caltek in any way "guarantees" the later performance of the equipment.

## 5. METHOD OF CALIBRATION/ TESTING

- a. The Laboratory will perform according to published certified standards or any other approved standards as discussed and agreed between the Client and Caltek. When it is necessary to employ Calibration or Test methods and procedures that

are non-standard, these shall be fully documented so as to provide traceability in case of dispute or replicated work when required.

## 6. SUB-CONTRACT

- a. The Company may delegate the performance of the whole or any part of the services contracted for with the Client to any Agent or Sub-Contractor due to temporary incapability, further expertise or heavy workload.

## 7. CALTEK'S LIABILITY

- a. Caltek shall not under any circumstances be responsible for any loss or damage to the equipment during transit while in the custody of Caltek.
- b. All reasonable case(s) will be taken when the equipment is in Caltek's custody, however insurance against accidental loss or damage, either on transit or at Caltek shall be arranged by the Client.
- c. Caltek shall under no circumstances be liable to the client or its agents, servants or representatives in contract including negligence or breach of statutory duty or otherwise for any direct or indirect loss or damage suffered by the client, its agents, servants or representatives howsoever arising or whether connected with the services provided by Caltek herein.

## 8. LIEN

- a. In addition to any right of lien to which Caltek may be entitled by law, Caltek shall be entitled to a general lien on all equipment or service with the client.

## 9. INDEMNIFY

- a. The Client shall indemnify Caltek fully against all damages suffered and cost and expenses incurred by Caltek and all claims by any third parties as a result of any breach of the terms and conditions of this agreement by the Client including but not limited to the improper use of the reports and for any promotional or advertising activities, and supply of inaccurate information and date to Caltek, or any claim by third party for infringement of intellectual property rights and or/ discovery of information and /or delivery of documents or equipment sample.

## 10. COURT ATTENDANCE

- a. In the event any of the employees of Caltek is requested by the Client or summoned by the court upon application by the Client or any other parties for his attendance in court as an expert witness on the subject of this agreement, the Client agrees and shall pay Caltek for the attendance in court based on the Caltek prevailing rate for court attendance.

## 11. GOVERNING LAW

- a. This agreement shall be deemed to be made in Singapore and shall be subject to governed by and interpreted in accordance with the domestic laws of the Republic of Singapore for every purpose.



# CALTEK PTE. LTD.

23 Tagore Lane, #04-08/09/10/11 Tagore 23 Warehouse, Singapore 787601  
Tel: (65) 64520300 Fax: (65) 64520500  
Email: info@caltekgroup.com Website: www.caltekgroup.com

## CALIBRATION CERTIFICATE

<b>CERTIFICATE NUMBER</b>	: CTT 1919-24	<b>JR NO</b>	: JR-16551
<b>INSTRUMENT CODE</b>	: 100024-14126	<b>PAGE NUMBER</b>	: 2 of 2

### Calibration Results(As Found)

#### Temperature Measurement(Non-Contact Method)

Emissivity : 0.95  
Distance (mm) : 300

Unit	Mean Reference Reading	Mean Instrument Reading	Error	Expanded Uncertainty
°C	100.00	98.6	-1.40	1.6
°C	300.00	296.1	-3.90	3.3
°C	400.00	394.7	-5.30	4.7

#### Calibrated By :

Kaartigeish Sivaraman  
EMP ID : 1112

#### Approved By :

Mohan Vasantha  
EMP ID : 1124

# **TERMS AND CONDITIONS GOVERNING TECHNICAL SERVICES PROVIDED BY CALTEK PTE LTD**

## **1. REQUEST PROCEDURES**

- a. A Job receipt/ Works order, Purchase Order, Acknowledgement, Confirmation Letter or email from the client shall be submitted to Caltek on/or at the time the equipment/ service is delivered or requested to/or by Caltek Pte Ltd. This document shall provide clear instructions of the shipping, billing and reporting details and requirements.
- b. Caltek will assign a unique number to each item or service upon acceptance of the item or service by Caltek.

## **2. CLIENT'S UNDERTAKINGS**

- a. The Client shall supply the necessary accessories and /or information or data if any to enable Caltek to perform the services stated in the document. Caltek shall be under no obligation to perform the services unless and until it has received confirmation from the Client.
- b. The Client warrants that all information and data supplied is accurate and correct in all respects and shall indemnify Caltek for all loss and damages suffered by Caltek due to any inaccuracy or error in the information and data.

## **3. CALTEK SERVICES**

- a. The equipment/ service submitted for calibration/testing shall be compatible with the client's specifications, upon receipt. When equipment is received it will be inspected physically, and if found to be faulty or below a certain standard the Client will be informed accordingly. The Client or his representative may be present at the time of the inspection, failing which; Caltek's findings will be final.
- b. If equipment defects necessitating repair are found after Services has commenced, the Client will be notified and Caltek shall be under no obligation to continue further until the defects are rectified by the Client. A fee will be charged by Caltek for the work done.

## **4. CALIBRATION/ TEST REPORTS**

- a. The report shall not be used in any publicity material without prior consent of Caltek. The report may not be reproduced in part or in full unless approved in writing has been given by Caltek.
- b. The report issued hereunder is not a Certificate of Quality. It only applies to the sample of the specific equipment or service given at the time of its calibration or testing. The results shall not be used to indicate or imply that they are applicable to the similar items.
- c. In addition, such results must not be used to indicate or imply that Caltek approves, recommends or endorses the manufacturer, supplier or user of such equipment or that Caltek in any way "guarantees" the later performance of the equipment.

## **5. METHOD OF CALIBRATION/ TESTING**

- a. The Laboratory will perform according to published certified standards or any other approved standards as discussed and agreed between the Client and Caltek. When it is necessary to employ Calibration or Test methods and procedures that

are non-standard, these shall be fully documented so as to provide traceability in case of dispute or replicated work when required.

## **6. SUB-CONTRACT**

- a. The Company may delegate the performance of the whole or any part of the services contracted for with the Client to any Agent or Sub-Contractor due to temporary incapability, further expertise or heavy workload.

## **7. CALTEK'S LIABILITY**

- a. Caltek shall not under any circumstances be responsible for any loss or damage to the equipment during transit while in the custody of Caltek.
- b. All reasonable case(s) will be taken when the equipment is in Caltek's custody, however insurance against accidental loss or damage, either on transit or at Caltek shall be arranged by the Client.
- c. Caltek shall under no circumstances be liable to the client or its agents, servants or representatives in contract including negligence or breach of statutory duty or otherwise for any direct or indirect loss or damage suffered by the client, its agents, servants or representatives howsoever arising or whether connected with the services provided by Caltek herein.

## **8. LIEN**

- a. In addition to any right of lien to which Caltek may be entitled by law, Caltek shall be entitled to a general lien on all equipment or service with the client.

## **9. INDEMNIFY**

- a. The Client shall indemnify Caltek fully against all damages suffered and cost and expenses incurred by Caltek and all claims by any third parties as a result of any breach of the terms and conditions of this agreement by the Client including but not limited to the improper use of the reports and for any promotional or advertising activities, and supply of inaccurate information and date to Caltek, or any claim by third party for infringement of intellectual property rights and/or discovery of information and /or delivery of documents or equipment sample.

## **10. COURT ATTENDANCE**

- a. In the event any of the employees of Caltek is requested by the Client or summoned by the court upon application by the Client or any other parties for his attendance in court as an expert witness on the subject of this agreement, the Client agrees and shall pay Caltek for the attendance in court based on the Caltek prevailing rate for court attendance.

## **11. GOVERNING LAW**

- a. This agreement shall be deemed to be made in Singapore and shall be subject to governed by and interpreted in accordance with the domestic laws of the Republic of Singapore for every purpose.

# MECHANICAL VENTILATION SYSTEM FUNCTIONAL TEST



INTAC SYSTEMS SOLUTION PTE LTD  
新嘉坡通訊有限公司  
66 Yishun Street 1A-13 #04-05/06 Singapore 600627  
Tel: +65 6842 7374 | Fax: +65 6842 7379 | Email: info@intacsolution.com  
Company GST Reg No: 200507114 | Website: www.intacsolution.com

Bk2 level-2

#02-02  
02-03

Project No.: D2019-00162/ISS/ACMV-BLK 2-02  
Project Site: DIEPPE BARRACK – BLOCK 2

Reference: \_\_\_\_\_  
Test Date: \_\_\_\_\_

CP/BLK2-L2-01	Observation	Result	Remarks
<b>1. General</b>			
a. Verify enclosure of system control panel <ul style="list-style-type: none"> <li>• Proper labelling of system control panel</li> </ul>	Yes / <b>No</b>		
b. Turn on incoming power supply and check working <ul style="list-style-type: none"> <li>• Incoming power supply lights</li> </ul>	Yes / <b>No</b>		
<b>2. Manual Operation</b>			
a. Select AOM selector switch to 'M' position and verify the following system operations: <ul style="list-style-type: none"> <li>• Press 'Start' button, Fan 'Run' indicator light 'On'</li> <li>• Press 'Stop' button, Fan 'Stop' indicator light 'On'</li> </ul>	Yes / <b>No</b> Yes / <b>No</b>		
<b>3. Automatic / Interlocking Operation</b>			
a. Simulating Lighting 'On' <ul style="list-style-type: none"> <li>• Motorized Damper 'Open'</li> <li>• FAF 'On'</li> <li>• EAF 'On'</li> <li>• TEAF 'On'</li> </ul>	Yes / <b>No</b> Yes / <b>No</b> Yes / <b>No</b> Yes / <b>No</b>		
b. Simulating AC 'On' <ul style="list-style-type: none"> <li>• FAF 'On'</li> </ul>	Yes / <b>No</b>		
c. Simulating Fire Alarm Signal Activated <ul style="list-style-type: none"> <li>• Motorized Damper 'Close'</li> <li>• EAF 'Off'</li> <li>• FAF 'Off'</li> </ul>	Yes / <b>No</b> Yes / <b>No</b> Yes / <b>No</b>		
d. Simulating Hydrogen Sensor Alarm Activated <ul style="list-style-type: none"> <li>• Motorized Damper 'Open'</li> <li>• EAF 'On'</li> <li>• FAF 'On'</li> </ul>	Yes / <b>No</b> Yes / <b>No</b> Yes / <b>No</b>		
<b>4. System Protection</b>			
a. Simulating Overload Trip <ul style="list-style-type: none"> <li>• Fan 'Trip', Fan 'Trip' indicator light 'On'</li> <li>• Clear the 'Trip', 'Trip' indicator light 'Off'</li> </ul>	Yes / <b>No</b> Yes / <b>No</b>		

TESTED BY / DATE: 18/11/24

J. Alex / J. Aye  
ACMV CONTRACTOR  
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE:

WITNESSED BY / DATE:

RTO

Moe  
Moe Thawng Tun  
21/11/2024

MAIN CONTRACTOR  
DEENN ENGINEERING PTE. LTD.

# MECHANICAL VENTILATION SYSTEM FUNCTIONAL TEST



INTAC SYSTEMS SOLUTION PTE LTD  
新嘉坡系統有限公司  
681 Kallang Avenue 3, #03-01, Kallang Office, 546619 Singapore 415687  
Tel: +65 6842 7373 | Fax: +65 6842 7359 | Email: intacs@intacs.com.sg  
Company GST Reg No: 2013051119 | Website: www.intacs.com

BLK 2 - level - 2

\$02 - 05  
02 - 06

Project No.: D2019-00162/ISS/ACMV-BLK 2-02  
Project Site: DIEPPE BARRACK – BLOCK 2

Reference: \_\_\_\_\_  
Test Date: \_\_\_\_\_

CP/BLK2-L2-02	Observation	Result	Remarks
<b>1. General</b>			
a. Verify enclosure of system control panel <ul style="list-style-type: none"> <li>• Proper labelling of system control panel</li> </ul>	Yes / <input checked="" type="checkbox"/>		
b. Turn on incoming power supply and check working <ul style="list-style-type: none"> <li>• Incoming power supply lights</li> </ul>	Yes / <input checked="" type="checkbox"/>		
<b>2. Manual Operation</b>			
a. Select AOM selector switch to 'M' position and verify the following system operations: <ul style="list-style-type: none"> <li>• Press 'Start' button, Fan 'Run' indicator light 'On'</li> <li>• Press 'Stop' button, Fan 'Stop' indicator light 'On'</li> </ul>	Yes / <input checked="" type="checkbox"/> Yes / <input checked="" type="checkbox"/>		
<b>3. Automatic / Interlocking Operation</b>			
a. Simulating Lighting 'On' <ul style="list-style-type: none"> <li>• Motorized Damper 'Open'</li> <li>• FAF 'On'</li> <li>• EAF 'On'</li> <li>• TEAF 'On'</li> </ul>	Yes / No Yes / No <input checked="" type="checkbox"/> Yes / No Yes / No		
b. Simulating AC 'On' <ul style="list-style-type: none"> <li>• FAF 'On'</li> </ul>	Yes / <input checked="" type="checkbox"/>		
c. Simulating Fire Alarm Signal Activated <ul style="list-style-type: none"> <li>• Motorized Damper 'Close'</li> <li>• EAF 'Off'</li> <li>• FAF 'Off'</li> </ul>	Yes / No Yes / No <input checked="" type="checkbox"/> Yes / No		
d. Simulating Hydrogen Sensor Alarm Activated <ul style="list-style-type: none"> <li>• Motorized Damper 'Open'</li> <li>• EAF 'On'</li> <li>• FAF 'On'</li> </ul>	Yes / No Yes / No Yes / No		
<b>4. System Protection</b>			
a. Simulating Overload Trip <ul style="list-style-type: none"> <li>• Fan 'Trip', Fan 'Trip' indicator light 'On'</li> <li>• Clear the 'Trip', 'Trip' indicator light 'Off'</li> </ul>	Yes / <input checked="" type="checkbox"/> Yes / <input checked="" type="checkbox"/>		

TESTED BY / DATE: 18/11/24

J. Alex / J. Axt  
ACMV CONTRACTOR  
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE:

WITNESSED BY / DATE:

RTO

Moe Thank Tun  
21/11/2024

MAIN CONTRACTOR  
DEENN ENGINEERING PTE. LTD.

# MECHANICAL VENTILATION SYSTEM FUNCTIONAL TEST



INTAC SYSTEMS SOLUTION PTE LTD  
INTEC SYSTEMS SOLUTION PTE LTD  
1A, Buah Avenue 2, #04-03 (Main Office), 54 05 00, Singapore 415627  
Tel: +65 6842 7318 | Fax: +65 6842 7319 | E-mail: intac@intacsol.com.sg  
Company GST Reg No: 20950211H | Website: www.intacsol.com

B1K2 level-2  
\$2000/- do r

Project No.: D2019-00162/ISS/ACMV-BLK 2-02

Reference: \_\_\_\_\_

Project Site: DIEPPE BARRACK – BLOCK 2

Test Date: \_\_\_\_\_

CP/BLK2-L2-03	Observation	Result	Remarks
<b>1. General</b>			
a. Verify enclosure of system control panel <ul style="list-style-type: none"> <li>• Proper labelling of system control panel</li> </ul>	Yes / <input checked="" type="checkbox"/>		
b. Turn on incoming power supply and check working <ul style="list-style-type: none"> <li>• Incoming power supply lights</li> </ul>	Yes / <input checked="" type="checkbox"/>		
<b>2. Manual Operation</b>			
a. Select AOM selector switch to 'M' position and verify the following system operations: <ul style="list-style-type: none"> <li>• Press 'Start' button, Fan 'Run' indicator light 'On'</li> <li>• Press 'Stop' button, Fan 'Stop' indicator light 'On'</li> </ul>	Yes / <input checked="" type="checkbox"/> Yes / <input checked="" type="checkbox"/>		
<b>3. Automatic / Interlocking Operation</b>			
a. Simulating Lighting 'On' <ul style="list-style-type: none"> <li>• Motorized Damper 'Open'</li> <li>• FAF 'On'</li> <li>• EAF 'On'</li> <li>• TEAF 'On'</li> </ul>	Yes / <input type="checkbox"/> Yes / <input type="checkbox"/> Na Yes / <input type="checkbox"/> Yes / <input type="checkbox"/>		
b. Simulating AC 'On' <ul style="list-style-type: none"> <li>• FAF 'On'</li> </ul>	Yes / <input type="checkbox"/>		
c. Simulating Fire Alarm Signal Activated <ul style="list-style-type: none"> <li>• Motorized Damper 'Close'</li> <li>• EAF 'Off'</li> <li>• FAF 'Off'</li> </ul>	Yes / <input type="checkbox"/> Yes / <input type="checkbox"/> Na Yes / <input type="checkbox"/>		
d. Simulating Hydrogen Sensor Alarm Activated <ul style="list-style-type: none"> <li>• Motorized Damper 'Open'</li> <li>• EAF 'On'</li> <li>• FAF 'On'</li> </ul>	Yes / <input type="checkbox"/> Yes / <input type="checkbox"/> Na Yes / <input type="checkbox"/>		
<b>4. System Protection</b>			
a. Simulating Overload Trip <ul style="list-style-type: none"> <li>• Fan 'Trip', Fan 'Trip' indicator light 'On'</li> <li>• Clear the 'Trip', 'Trip' indicator light 'Off'</li> </ul>	Yes / <input type="checkbox"/> Yes / <input checked="" type="checkbox"/>		

TESTED BY / DATE: 18/11/24

J. Alex / J. Duf  
ACMV CONTRACTOR  
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE:

WITNESSED BY / DATE:

RTO

Moe Thank Tun  
21/11/2019

MAIN CONTRACTOR  
DEENN ENGINEERING PTE. LTD.

# MECHANICAL VENTILATION SYSTEM FUNCTIONAL TEST



INTAC SYSTEMS SOLUTION PTE LTD  
新特思系统有限公司  
8A, Tiong Bahru Avenue 1, #01-04/05/06, Singapore 415687  
Tel: +65 66427719 | Fax: +65 66427719 | Email: INTAC@INTAC.COM.SG  
Company GST Reg No: 209500714 | Website: www.intac.com

BLK2 - Level - 2

Project No.: D2019-00162/ISS/ACMV-BLK 2-03  
Project Site: DIEPPE BARRACK – BLOCK 2

Reference: \_\_\_\_\_  
Test Date: \_\_\_\_\_

CP/TEAF-BLK2-L2-01	Observation	Result	Remarks
<b>1. General</b>			
a. Verify enclosure of system control panel <ul style="list-style-type: none"> <li>• Proper labelling of system control panel</li> </ul>	Yes / <b>No</b>		
b. Turn on incoming power supply and check working <ul style="list-style-type: none"> <li>• Incoming power supply lights</li> </ul>	Yes / <b>No</b>		
<b>2. Manual Operation</b>			
a. Select AOM selector switch to 'M' position and verify the following system operations: <ul style="list-style-type: none"> <li>• Press 'Start' button, Fan 'Run' indicator light 'On'</li> <li>• Press 'Stop' button, Fan 'Stop' indicator light 'On'</li> </ul>	Yes / <b>No</b> Yes / <b>No</b>		
<b>3. Automatic / Interlocking Operation</b>			
a. Simulating Lighting 'On' <ul style="list-style-type: none"> <li>• Motorized Damper 'Open'</li> <li>• FAF 'On'</li> <li>• EAF 'On'</li> <li>• TEAF 'On'</li> </ul>	Yes / No Yes / No <b>Na</b> Yes / No Yes / No		
b. Simulating AC 'On' <ul style="list-style-type: none"> <li>• FAF 'On'</li> </ul>	Yes / No <b>Na</b>		
c. Simulating Fire Alarm Signal Activated <ul style="list-style-type: none"> <li>• Motorized Damper 'Close'</li> <li>• EAF 'Off'</li> <li>• FAF 'Off'</li> </ul>	Yes / No Yes / No <b>Na</b> Yes / No		
d. Simulating Hydrogen Sensor Alarm Activated <ul style="list-style-type: none"> <li>• Motorized Damper 'Open'</li> <li>• EAF 'On'</li> <li>• FAF 'On'</li> </ul>	Yes / No Yes / No <b>Na</b> Yes / No		
<b>4. System Protection</b>			
a. Simulating Overload Trip <ul style="list-style-type: none"> <li>• Fan 'Trip', Fan 'Trip' indicator light 'On'</li> <li>• Clear the 'Trip', 'Trip' indicator light 'Off'</li> </ul>	Yes / <b>No</b> Yes / <b>No</b>		

TESTED BY / DATE: 18/11/24

M. Alor / J. Ast.  
ACMV CONTRACTOR  
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE:

WITNESSED BY / DATE:

RTO

Moe  
Moe Thank-Tun  
21/11/2024

MAIN CONTRACTOR  
DEENN ENGINEERING PTE. LTD.

**VENTILATION FAN  
PERFORMANCE TEST**



**INTAC SYSTEMS SOLUTION PTE LTD**  
 BLOCK 1 KAKI BUKIT AVENUE 3  
 #04-03 KB-1, SINGAPORE 416087  
 Tel: +65 6842 7318 Fax: +65 6842 7319  
 Email: intacs@intacs.com.sg

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02 Test Date : \_\_\_\_\_  
 Project Site DIEPPE BARRACK-BLOCK 2

Location	02-01 GS & OPS ROOM		
<b>1. General</b>			
Type of Equipment	CIL		
Identification No.	FAF-2-L2-01		
Brand / Model	SYSTEMAIR/K200 L SILEO		
<b>2. Current Measurement (1Ø)</b>			
Motor Rating (kW)	0.155		
Running Ampere (Amp) (Actual)	0.500		
<b>3. Air Flow</b>			
Airflow (CMH) (Design)	655		
Airflow (CMH) (Actual)	664		
<b>4. Noise Measurement</b>			
Motor RPM	2,638		
Equipment Off (dBA)	42.3		
Equipment On (dBA)	44.8		

TESTED BY / DATE : 18/11/24

J. Alex / J. Axt

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE :

RTO

Moe  
Moe Thanh Tun  
21/11/2024

## AIR BALANCING REPORT



INTAC SYSTEMS SOLUTION PTE LTD  
 BLOCK 1 KAKI BUKIT AVENUE 3  
 #04-03 KB-1, SINGAPORE 416087  
 Tel: +65 6842 7318 Fax: +65 6842 7319  
 Email: intacss@intacss.com.sg

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02  
 Project Site DIEPPE BARRACK-BLOCK 2 Test Date : \_\_\_\_\_

1. General			
Type of Equipment	CIL	Identification No.	FAF-2-L2-01
Brand / Model	SYSTEMAIR/K200 L SILEO	Capacity	655 CMH

2. Description							
Location / Room No.	Grille Designation	Flexible Duct (Ø100mm)	Designed Air Velocity (m/s)	Designed Air Flow (m³/h)	Actual Air Velocity (m/s)	Actual Air Flow (m³/h)	
02-02 O ROOM	1 (m²) =====>	0.00785	5.66	160	5.70	161	
	2 (m²) =====>	0.00785	2.12	60	2.20	62	
	3 (m²) =====>	150 x 150 0.01575	2.03	115	2.10	119	
02-03 TRAINING ROOM	4 (m²) =====>	0.00785	5.66	160	5.70	161	
	5 (m²) =====>	0.00785	5.66	160	5.70	161	
			Total	655		664	

REMARKS:

TESTED BY / DATE : 18/11/24

J. Alex J. Ray

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

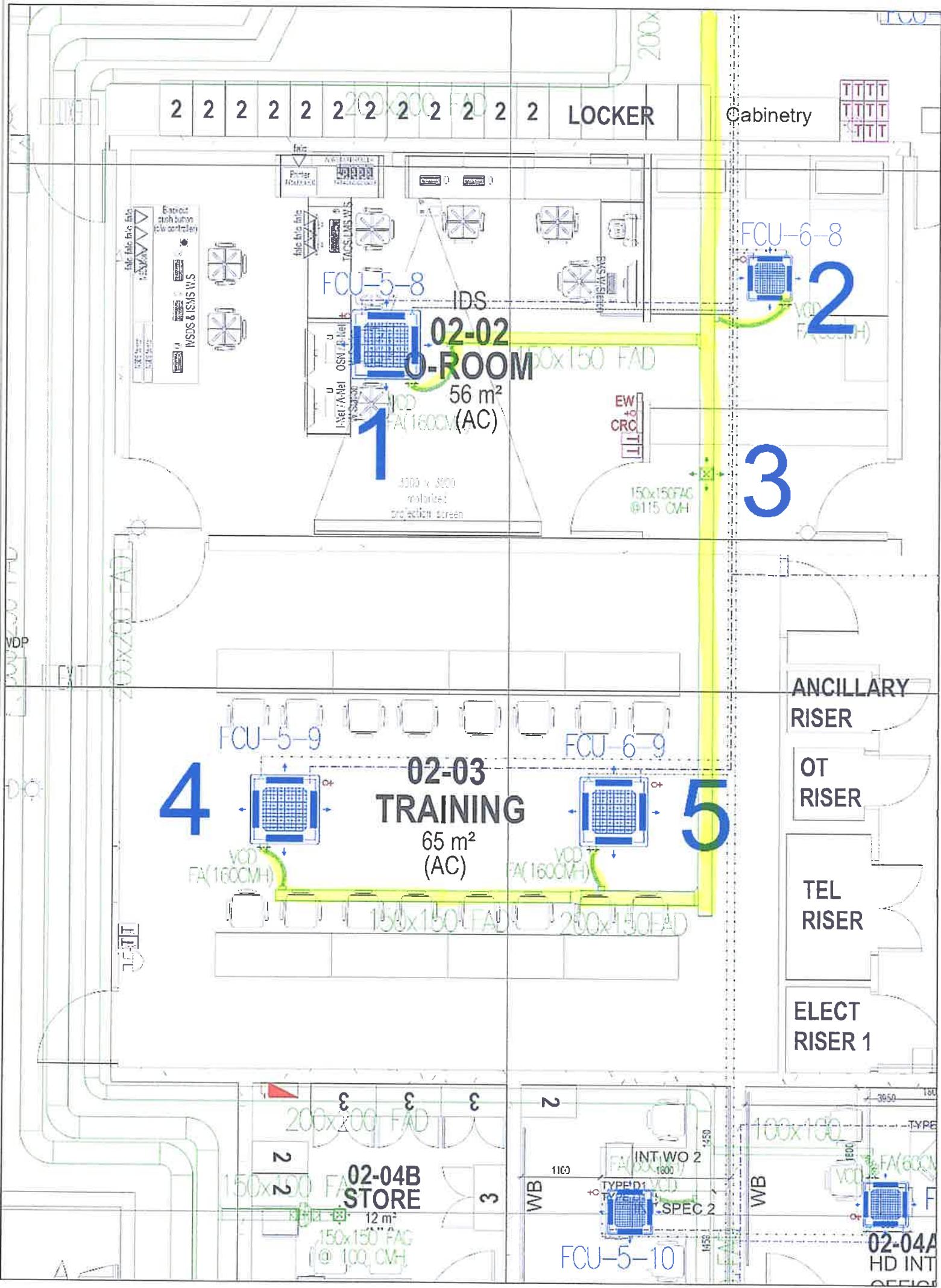
RTO

ngue  
 Moe Thauk Tun  
 21/11/2024

WITNESSED BY / DATE :

MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.



**VENTILATION FAN  
PERFORMANCE TEST**



**INTAC SYSTEMS SOLUTION PTE LTD**  
 BLOCK 1 KAKI BUKIT AVENUE 3  
 #04-03 KB-1, SINGAPORE 416087  
 Tel: +65 6842 7318 Fax: +65 6842 7319  
 Email: intacss@intacss.com.sg

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02 Test Date : \_\_\_\_\_  
 Project Site DIEPPE BARRACK-BLOCK 2

Location	02-01 GS & OPS ROOM		
<b>1. General</b>			
Type of Equipment	CIL		
Identification No.	FAF-2-L2-02		
Brand / Model	SYSTEMAIR/K315 M SILEO		
<b>2. Current Measurement (1Ø)</b>			
Motor Rating (kW)	0.201		
Running Ampere (Amp) (Actual)	0.790		
<b>3. Air Flow</b>			
Airflow (CMH) (Design)	920		
Airflow (CMH) (Actual)	927		
<b>4. Noise Measurement</b>			
Motor RPM	2,520		
Equipment Off (dBA)	41.7		
Equipment On (dBA)	44.9		

TESTED BY / DATE : 18/11/24

J. Alex/J. D.Y.  
ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

WITNESSED BY / DATE :

RTO

Moe Thanh Ton  
21/11/2024

**MAIN CONTRACTOR**

DEENN ENGINEERING PTE. LTD.

## AIR BALANCING REPORT



INTAC SYSTEMS SOLUTION PTE LTD

BLOCK 1 KAKI BUKIT AVENUE 3  
#04-03 KB-1, SINGAPORE 416087  
Tel: +65 6842 7318 Fax: +65 6842 7319  
Email: intacss@intacss.com.sg

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02  
Project Site DIEPPE BARRACK-BLOCK 2 Test Date : \_\_\_\_\_

1. General			
Type of Equipment	CIL	Identification No.	FAF-2-L2-02
Brand / Model	SYSTEMAIR/K315 M SILEO	Capacity	920 CMH

Location / Room No.	Grille Designation	Flexible Duct (Ø100mm)	Designed Air Velocity (m/s)	Designed Air Flow (m³/h)	Actual Air Velocity (m/s)	Actual Air Flow (m³/h)	
02-05 BF ROOM	1 (m²) =====>	0.00785	12.74	360	12.80	362	
	2 (m²) =====>	0.00785	12.74	360	12.80	362	
02-06 R ROOM	3 (m²) =====>	0.00785	3.54	100	3.60	102	
	4 (m²) =====>	0.00785	3.54	100	3.60	102	
			Total	920		927	

REMARKS:

TESTED BY / DATE : 18/11/24

J. Alex/ T. Day

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

RTO

Moe Thauk Ton  
21/11/2024

WITNESSED BY / DATE :

MAIN CONTRACTOR

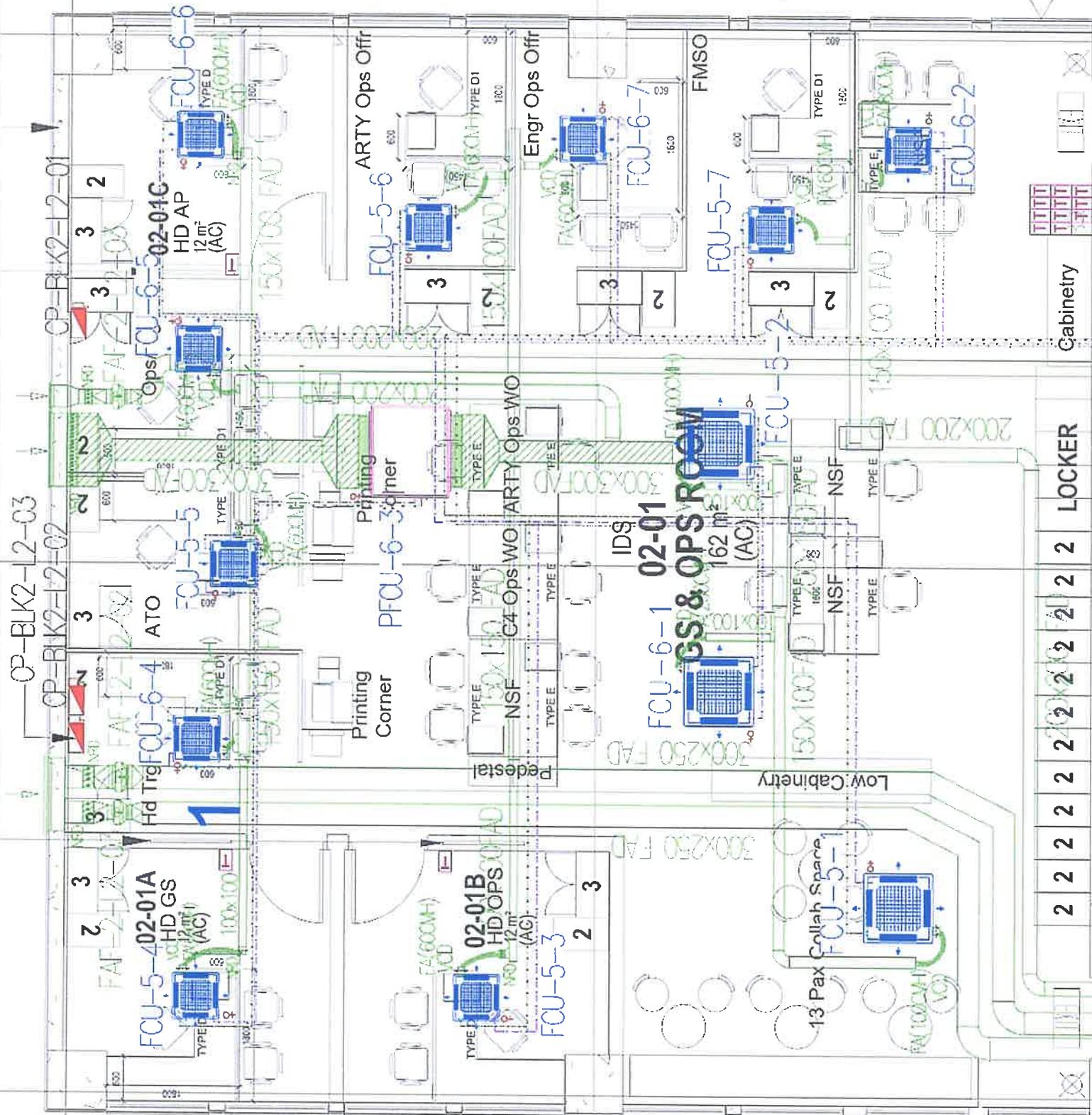
DEENN ENGINEERING PTE. LTD.

FAP

Cabinetry

LOCKER

FAP



**VENTILATION FAN  
PERFORMANCE TEST**



**INTAC SYSTEMS SOLUTION PTE LTD**  
BLOCK 1 KAKI BUKIT AVENUE 3  
#04-03 KB-1, SINGAPORE 416087  
Tel: +65 6842 7318 Fax: +65 6842 7319  
Email: intacs@intacs.com.sg

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02 Test Date : \_\_\_\_\_  
Project Site DIEPPE BARRACK-BLOCK 2

Location	02-01 GS & OPS ROOM		
<b>1. General</b>			
Type of Equipment	CIL		
Identification No.	FAF-2-L2-03		
Brand / Model	SYSTEMAIR/K315 M SILEO		
<b>2. Current Measurement (1Ø)</b>			
Motor Rating (kW)	0.201		
Running Ampere (Amp) (Actual)	0.790		
<b>3. Air Flow</b>			
Airflow (CMH) (Design)	960		
Airflow (CMH) (Actual)	972		
<b>4. Noise Measurement</b>			
Motor RPM	2,520		
Equipment Off (dBA)	41.7		
Equipment On (dBA)	44.9		

TESTED BY / DATE : 18/11/24

J. Alex / J. D.Y

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

WITNESSED BY / DATE :

RTO

Moe Thauk Tun  
21/11/2024

MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.

## AIR BALANCING REPORT



INTAC SYSTEMS SOLUTION PTE LTD  
 BLOCK 1 KAKI BUKIT AVENUE 3  
 #04-03 KB-1, SINGAPORE 416087  
 Tel: +65 6842 7318 Fax: +65 6842 7319  
 Email: intacss@intacss.com.sg

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02  
 Project Site DIEPPE BARRACK-BLOCK 2 Test Date : \_\_\_\_\_

1. General			
Type of Equipment	CIL	Identification No.	FAF-2-L2-03
Brand / Model	SYSTEMAIR/K315 M SILEO	Capacity	960 CMH

Location / Room No.	Grille Designation	Duct Size	Designed Air Velocity (m/s)	Designed Air Flow (m³/h)	Actual Air Velocity (m/s)	Actual Air Flow (m³/h)	
02-01 GS & OPS ROOM	1 (m²) =====>	300 x 250 0.07500	3.56	960	3.60	972	
			Total	960		972	

REMARKS:

TESTED BY / DATE : 18/11/24

J-Alex/J-Ary.

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

RTO

Moe Thank Tun  
21/11/2024

WITNESSED BY / DATE :

MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.

1000mm height Full G751

1000mm height

Shallow panel back

S2-04  
ST4  
15 m<sup>2</sup>  
(NV)

2x2 door cabinet

02-05  
BF-ROOM

UP=31  
R=175.00  
T=275

WB

WB

Movable partition

AV1 AV2

PI

PI

PI

PI

PI

PI

WB

</div

**VENTILATION FAN  
PERFORMANCE TEST**



**INTAC SYSTEMS SOLUTION PTE LTD**  
BLOCK 1 KAKI BUKIT AVENUE 3  
#04-03 KB-1, SINGAPORE 416087  
Tel: +65 6842 7318 Fax: +65 6842 7319  
Email: intacss@intacss.com.sg

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02 Test Date : \_\_\_\_\_  
Project Site DIEPPE BARRACK-BLOCK 2

Location	02-04B STORE		
<b>1. General</b>			
Type of Equipment	CIL		
Identification No.	FAF-2-L2-04		
Brand / Model	SYSTEMAIR/K100 XL SILEO		
<b>2. Current Measurement (1Ø)</b>			
Motor Rating (kW)	0.052		
Running Ampere (Amp) (Actual)	0.180		
<b>3. Air Flow</b>			
Airflow (CMH) (Design)	100		
Airflow (CMH) (Actual)	103		
<b>4. Noise Measurement</b>			
Motor RPM	2,418		
Equipment Off (dBA)	42.3		
Equipment On (dBA)	45.8		

TESTED BY / DATE : 18/11/24

J. Alex/J. Day  
ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE :

RTO

Moe Thauk Tun  
Moe Thauk Tun  
21/11/2024

## AIR BALANCING REPORT



INTAC SYSTEMS SOLUTION PTE LTD

BLOCK 1 KAKI BUKIT AVENUE 3  
#04-03 KB-1, SINGAPORE 416087  
Tel: +65 6842 7318 Fax: +65 6842 7319  
Email: intacss@intacss.com.sg

Project / Drawing No.	D2019-00162/ISS/ACMV-BLK 2-02	Test Date :
Project Site	DIEPPE BARRACK-BLOCK 2	

1. General			
Type of Equipment	CIL	Identification No.	FAF-2-L2-04
Brand / Model	SYSTEMAIR/K100 XL SILEO	Capacity	100 CMH

Location / Room No.	Grille Designation	Grille Size (70% Free Area)	Designed Air Velocity (m/s)	Designed Air Flow (m³/h)	Actual Air Velocity (m/s)	Actual Air Flow (m³/h)	
02-04B STORE	1 (m²) =====>	100 x 100 0.00700	3.97	100	4.10	103	
			Total	100		103	

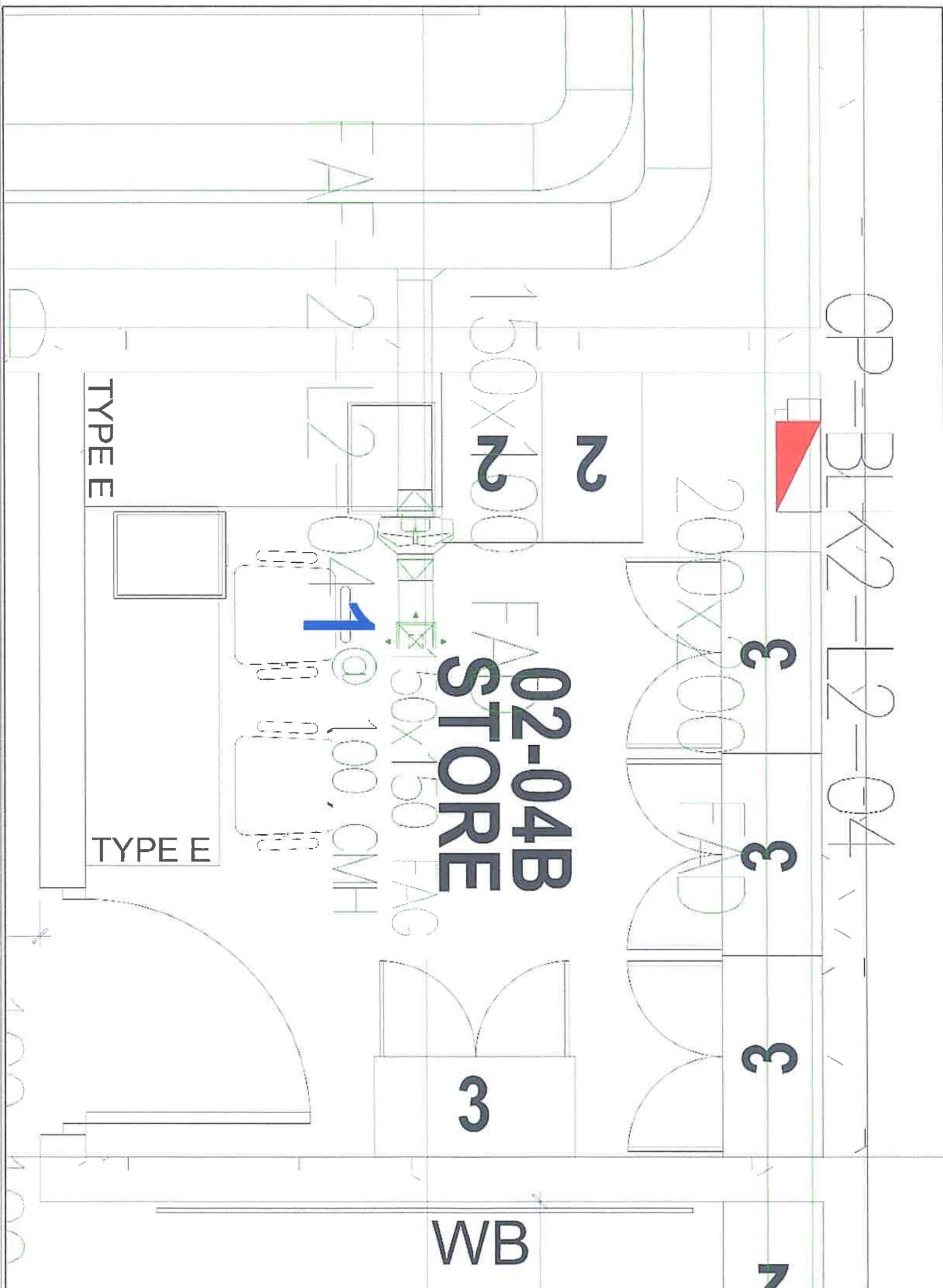
REMARKS:

TESTED BY / DATE : 18/11/24  
Tan J. Alon/J. Jay  
 ACMV CONTRACTOR  
 INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

WITNESSED BY / DATE :  
Moe Thank Tun  
 RTO  
 21/11/2024

MAIN CONTRACTOR  
 DEENN ENGINEERING PTE. LTD.



**VENTILATION FAN  
PERFORMANCE TEST**



**INTAC SYSTEMS SOLUTION PTE LTD**  
BLOCK 1 KAKI BUKIT AVENUE 3  
#04-03 KB-1, SINGAPORE 416087  
Tel: +65 6842 7318 Fax: +65 6842 7319  
Email: intacss@intacss.com.sg

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02 Test Date : \_\_\_\_\_  
Project Site DIEPPE BARRACK-BLOCK 2

Location	T2-02 FEMALE TOILET		
<b>1. General</b>			
Type of Equipment	CIL		
Identification No.	TEAF-2-L2-01		
Brand / Model	SYSTEMAIR/K100 XL SILEO		
<b>2. Current Measurement (1Ø)</b>			
Motor Rating (kW)	0.052		
Running Ampere (Amp) (Actual)	0.180		
<b>3. Air Flow</b>			
Airflow (CMH) (Design)	300		
Airflow (CMH) (Actual)	324		
<b>4. Noise Measurement</b>			
Motor RPM	2,418		
Equipment Off (dBA)	42.3		
Equipment On (dBA)	45.8		

TESTED BY / DATE : 18/11/24

J. Alex / J. Ay  
ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

RTO Moe  
Moe Thauk Tun  
21/11/2024

WITNESSED BY / DATE :

**MAIN CONTRACTOR**

DEENN ENGINEERING PTE. LTD.

## AIR BALANCING REPORT



INTAC SYSTEMS SOLUTION PTE LTD

BLOCK 1 KAKI BUKIT AVENUE 3  
#04-03 KB-1, SINGAPORE 416087  
Tel: +65 6842 7318 Fax: +65 6842 7319  
Email: intacss@intacss.com.sg

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-02  
Project Site DIEPPE BARRACK-BLOCK 2 Test Date : \_\_\_\_\_

1. General			
Type of Equipment	CIL	Identification No.	TEAF-2-L2-01
Brand / Model	SYSTEMAIR/K150 XL SILEO	Capacity	300 CMH

2. Description							
Location / Room No.	Grille Designation	Grille Size (80% Free Area)	Designed Air Velocity (m/s)	Designed Air Flow (m³/h)	Actual Air Velocity (m/s)	Actual Air Flow (m³/h)	
T2-02 FEMALE TOILET	1 (m²) =====>	250x250 0.0500	1.67	300	1.80	324	
			Total	300		324	

REMARKS:

TESTED BY / DATE : 18/11/2019  
J. Alor / J. Ong  
ACMV CONTRACTOR  
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE : Moe Thanh Tun  
RTO Moe Thanh Tun  
21/11/2019

WITNESSED BY / DATE :

MAIN CONTRACTOR  
DEENN ENGINEERING PTE. LTD.

250x250 EAG  
@ 200 CMH

**T2-02**  
**FEMALE 1**  
**TOILET**

6 m<sup>2</sup>  
(MV)

25

Ø38 CDP  
TO FT

CP-IEAF-BLK2-L2-01

**ELECT  
RISER 2**

**T2-04**  
1

**TOILET**

13 m<sup>2</sup>  
(NV)

25

200x200 TEAD

Ø38 CDP  
TO FT

**02-13**  
**FT**

**NURSING  
ROOM**

8 m<sup>2</sup>  
(NV)

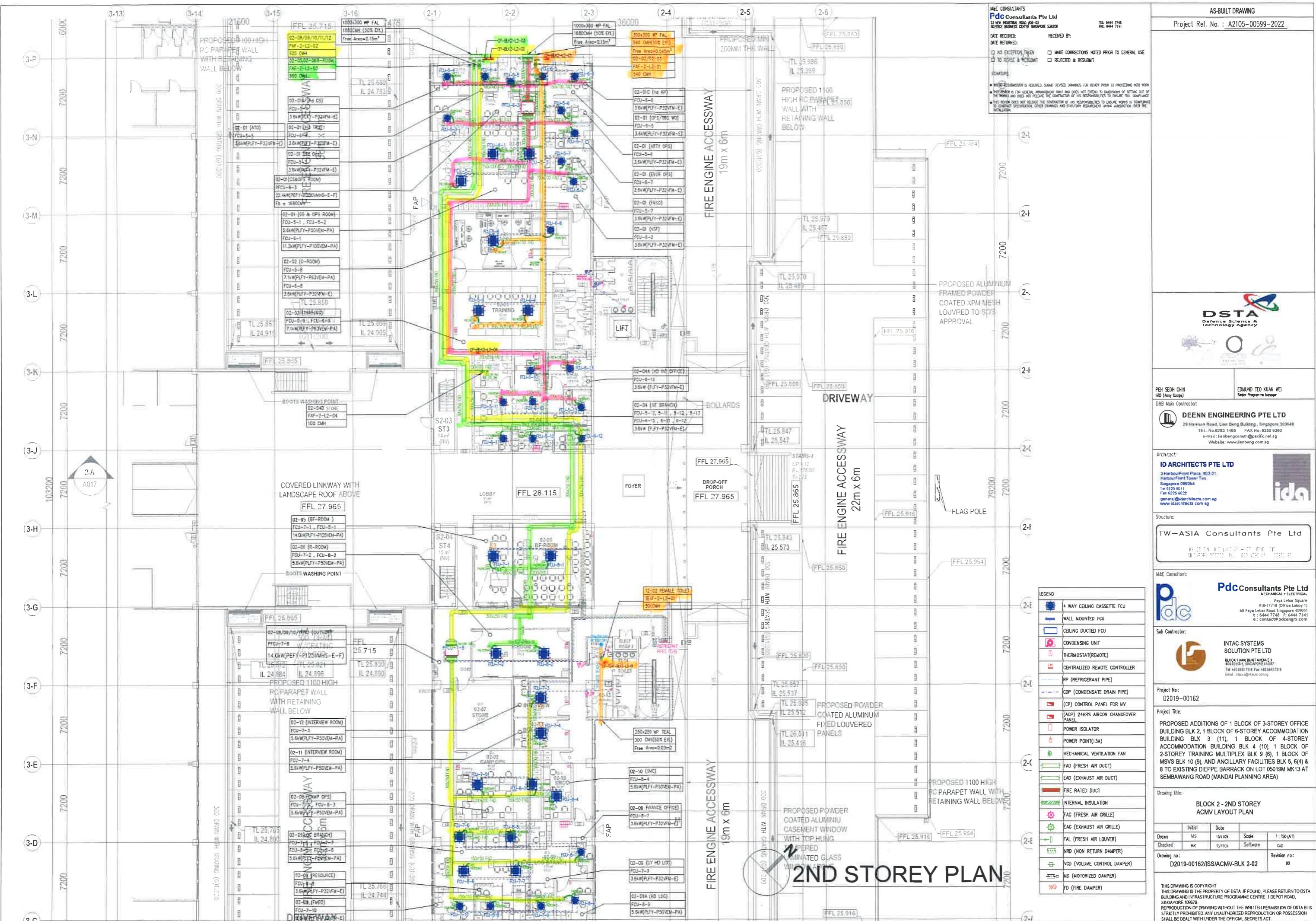
25

400

400

400

RWDP-



Mechanical Ventilation Equipment Schedule																							
S/N	Fan Reference	Area Served	Capacity (CMH)	SP (Pa)	Brand / Model Offered		Type	Fan Dimension	Motor Rating (kW)	Full Load Current (Amp)	Fan Speed (rpm)	Supply (V/Ph/Hz)	Class	dBA (3m)	Wt. (kg)	Qty	Silencer Model	Silencer Qty	Spring Isolator Model	Spring Isolator Qty	Control Logic	Control Panel Designation	Power Requirement
1	FAF-2-L1-01	DC ROOM (01-13,01-14&01-15)	1640	150	SYSTEMAIR	PRI0 250E2	CIL	250	0.194	0.845	2692	230/1φ/50	F/44	48	5.55	1	-	-	-	-	Interlock With FCU's	CP-BLK2-L1-01	20A(1φ)
2	FAF-2-L1-02	DC ROOM(01-16, 01-17 & 01-18)	1240	150	SYSTEMAIR	K315 L SILEO	CIL	315	0.324	1.41	2403	230/1φ/50	F/44	52	7	1	-	-	-	-	Interlock With FCU's	CP-BLK2-L1-02	20A(1φ)
3	FAF-2-L1-03	01-09 NCR(S),01-10 NCR (C) & 01-11 ELE-ROOM	70	100	SYSTEMAIR	K100 M SILEO	CIL	100	0.031	0.177	2407	230/1φ/50	B/44	38	2.3	1	-	-	-	-	Interlock With Lighting	CP-BLK2-L1-03	20A(1φ)
4	FAF-2-L1-04	NCR (01-02,01-03,01-05,01-06)	210	150	SYSTEMAIR	K150 XL SILEO	CIL	150	0.100	0.443	2523	230/1φ/50	F/44	48	4.1	1	-	-	-	-	Interlock With Lighting	CP-BLK2-L1-04	20A(1φ)
5	FAF-2-L1-05	01-12 GROWTH	300	100	SYSTEMAIR	K150 XL SILEO	CIL	150	0.100	0.443	2523	230/1φ/50	F/44	48	4.1	1	-	-	-	-	Interlock With Lighting	CP-BLK2-L1-05	20A(1φ)
6	FAF-2-L1-06	IOS ROOM (01-19 TO 01-24)	920	150	SYSTEMAIR	K315 M SILEO	CIL	315	0.201	0.882	2520	230/1φ/50	F/44	48	5.5	1					Interlock With FCU's	CP-BLK2-L1-06	20A(1φ)
7	EXAF-2-L1-01	01-08 BATTERY ROOM	1850	100	SYSTEMAIR	KTEX 50-30-4 EX PROOF		520x340	0.888	1.770	2552	400/3φ/50	F/44	57	22.8	1	-	-	-	-	Interlock With Hydrogen Sensor & Fire Alarm	CP-EXAF-BLK2-L1-01	20A(3φ)
8	FAF-2-L2-01	02-02 O-ROOM, 02-03 TRAINING	540	150	SYSTEMAIR	K200 L SILEO	CIL	200	0.155	0.682	2638	230/1φ/50	F/44	43	4.8	1	-	-	-	-	Interlock With FCU's	CP-BLK2-L2-01	20A(1φ)
9	FAF-2-L2-02	02-05 BF ROOM, 02-06 R-ROOM	920	150	SYSTEMAIR	K315 M SILEO	CIL	315	0.201	0.882	2520	230/1φ/50	F/44	48	5.5	1	-	-	-	-	Interlock With FCU's	CP-BLK2-L2-02	20A(1φ)
10	FAF-2-L2-03	02-08 TO 02-12 OFFICE	960	150	SYSTEMAIR	K315 M SILEO	CIL	315	0.201	0.882	2520	230/1φ/50	F/44	48	5.5	1	-	-	-	-	Interlock With FCU's	CP-BLK2-L2-03	20A(1φ)
11	FAF-2-L2-04	02-04B STORE	100	100	SYSTEMAIR	K100 XL SILEO	CIL	100	0.052	0.227	2418	230/1φ/50	F/44	45	3	1	-	-	-	-	Interlock With Lighting	CP-BLK2-L2-04	20A(1φ)
12	TEAF-2-L2-01	T2-02 FEMALE TOILET	300	100	SYSTEMAIR	K150 XL SILEO	CIL	150	0.100	0.443	2523	230/1φ/50	F/44	48	4.1	1	-	-	-	-	Interlock With Lighting	CP-TEAF-BLK2-L2-01	20A(1φ)
13	FAF-2-L3-01	03-02 MEETING	320	150	SYSTEMAIR	K150 XL SILEO	CIL	150	0.100	0.443	2523	230/1φ/50	F/44	48	4.1	1	-	-	-	-	Interlock With FCU's	CP-BLK2-L3-01	20A(1φ)
14	FAF-2-L3-02	03-08 CONFERENCE, 03-09 WAITING ROOM	660	150	SYSTEMAIR	K200 L SILEO	CIL	200	0.155	0.682	2638	230/1φ/50	F/44	43	4.8	1	-	-	-	-	Interlock With FCU's	CP-BLK2-L3-02	20A(1φ)
15	FAF-2-L3-03	NCR (03-11 TO 03-14)	80	100	SYSTEMAIR	K100 M SILEO	CIL	100	0.031	0.177	2407	230/1φ/50	B/44	38	2.3	1					Interlock With Lighting	CP-BLK2-L3-03	20A(1φ)

**M&E CONSULTANTS**  
**Pdc Consultants Pte Ltd**  
100 BENTLEY ROAD #06-01  
SINGAPORE BUSINESS CENTRE SINGAPORE 399677  
TEL: 6444 7711 FAX: 6444 7711

DATE RECEIVED:  NO EXCEPTION FAMCH  
DATE RETURNED:  RECEIVED BY:  
 MAKE CORRECTIONS NOTED PRIOR TO GENERAL USE  
 TO RESEND & RESUBMIT  REJECTED & RESUBMIT

**SIGNATURE**

• MORE INFORMATION IS REQUIRED. SUBMIT REVISED DRAWINGS FOR REVIEW PRIOR TO PROCEEDING WITH WORK.  
• THIS REVIEW IS FOR GENERAL ARRANGEMENT ONLY AND DOES NOT EXTEND TO DRAFTERS OR DESIGNERS OF SETTING OUT OF THE WORKS AND DOES NOT RELATE THE CONTRACTOR OR HIS RESPONSIBILITIES TO ENSURE FULL COMPLIANCE.  
• HIS REVIEW DOES NOT RELEASE THE CONTRACTOR OR HIS RESPONSIBILITIES TO ENSURE WORKS IN COMPLIANCE WITH CONTRACT SPECIFICATION, OTHER DRAWINGS AND STANDING REQUIREMENT HAVING JURISDICTION OVER THE INSTALLATION.

**AS-BUILT DRAWING**  
Project Ref. No.: A2105-00599-2022

**DSTA**  
Defence Science & Technology Agency

PEH SEOH CHIN (Army Corps)  
Serial Programming Manager

EDMUNDO TEO KUAN WEI

048 Main Contractor:  
**DEENN ENGINEERING PTE LTD**  
29 Harrison Road, Lian Bang Building, Singapore 399648  
TEL: 6283 1468 FAX: 6280 9380  
e-mail: lianbang@deenn.com.sg  
Website: www.lianbang.com.sg

Architect:  
**ID ARCHITECTS PTE LTD**  
3 HarbourFront Place, #03-01, HarbourFront Tower Two, Singapore 099254  
Tel: 6225 0111 Fax: 6225 0122  
general@idarchitects.com.sg  
www.idarchitects.com.sg

Structure:  
**TW-ASIA Consultants Pte Ltd**  
NO. 28 SIN MING LANE #04-137 MIDVIEW CITY  
SINGAPORE 373972 TEL: 62916292 FAX: 52932196

M&E Consultant:  
**PdcConsultants Pte Ltd**  
MECHANICAL + ELECTRICAL  
#10-17/18 (Office Lobby 1)  
60 Paya Lebar Square, Singapore 399677  
Tel: 6444 7711 Fax: 6444 7711  
e-mail: contact@pdcbangrs.com

Sub Contractor:  
**INTAC SYSTEMS SOLUTION PTE LTD**  
BLOCK 1 KANG BLUET MURGE 3  
#04-05-01, SINGAPORE 399677  
Tel: +65 6842 7216 Fax: +65 6842 7216  
Email: info@intacsolutions.com

Project No.: D2019-00162

Project Title:  
PROPOSED ADDITIONS OF 1 BLOCK OF 3-STORY OFFICE BUILDING BLK 2, 1 BLOCK OF 6-STORY ACCOMMODATION BUILDING BLK 3 (11), 1 BLOCK OF 4-STORY ACCOMMODATION BUILDING BLK 4 (10), 1 BLOCK OF 2-STORY TRAINING MULTIPLEX BLK 9 (5), 1 BLOCK OF MSVS BLK 10 (9), AND ANCILLARY FACILITIES BLK 5, 6(4) & 8 TO EXISTING DIEPPE BARRACK ON LOT 05019M MK13 AT SEMBAWANG ROAD (MANDAI PLANNING AREA)

Drawing title:  
BLOCK 2 - ACMV EQUIPMENT SCHEDULE-04

Initial	Date
Drawn: NB	19/10/20
Checked: HK	19/10/20
Approved: CAO	
Drawing no.: D2019-00162/ISS/ACMV-BLK 2-08	Revision no.: 00

THIS DRAWING IS COPYRIGHT.  
THIS DRAWING IS THE PROPERTY OF DSTA. IF FOUND, PLEASE RETURN TO DSTA  
BUILDING AND INFRASTRUCTURE PROGRAMME CENTRE, 1 DEPOT ROAD  
SINGAPORE 399677.  
REPRODUCTION OF DRAWING WITHOUT THE WRITTEN PERMISSION OF DSTA IS  
STRICTLY PROHIBITED. ANY UNAUTHORIZED REPRODUCTION OR POSSESSION  
SHALL BE DEALT WITH UNDER THE OFFICIAL SECRETS ACT.



# CALTEK PTE. LTD.

23 Tagore Lane, #04-08/09/10/11 Tagore 23 Warehouse, Singapore 787601  
Tel: (65) 64520300 Fax: (65) 64520500  
Email: info@caltekgroup.com Website: www.caltekgroup.com

## CALIBRATION CERTIFICATE

<b>CERTIFICATE NUMBER</b>	: CTP 1836-24	<b>JR NO</b>	: JR-11536
<b>INSTRUMENT CODE</b>	: 100024-10180	<b>PAGE NUMBER</b>	: 1 of 2

Instrument	: SOUND METER	Ambient Temperature	: (23±5)°C
Manufacturer	: UNI-T	Relative Humidity	: (55±10)%r.h.
Model No	: UT353	Received Date	: 18-Apr-24
Part No	: -	Date of Calibration	: 22-Apr-24
Serial No	: C203058495	Recommended Due Date	: 22-Apr-25
Range	: -	Issue Date	: 22-Apr-24
Asset/Tag/Id/Code	: -	Job Number	: CCJR24-3432
Customer	: INTAC SYSTEMS SOLUTION PTE LTD, Blk 1, Kaki Bukit Avenue 3, #04-03 KB-1, Singapore, 416087		

The described instrument has been calibrated at Caltek laboratory under the ambient conditions stated above.

This certificate provides traceability of measurement to the International System of Units (SI) and/or to units of measurement realised at the National Metrology Centre (NMC), Singapore or other recognized national metrology institutes.

The calibration method was carried out according to In-house Technical Calibration Procedure CTTM-M16:2007, as guide.

S.No.	REFERENCE INSTRUMENT(S)	SERIAL NO	DUE DATE
1	Acoustical Calibration System	278827	18-Jul-24

### Results of Calibration

- 1 The expanded uncertainty of measurement associated with the calibration is estimated at a confidence level of approximately 95 %.
- 2 The user should determine the suitability of the instrument for its intended use.
- 3 No Adjustments done.

### Calibrated By :

Puthanpuraparumbu  
Majeed Shanavas

EMP ID : 1250

### Approved By :

Ananthakumar  
Sivasamy

EMP ID : 1007

# TERMS AND CONDITIONS GOVERNING TECHNICAL SERVICES PROVIDED BY CALTEK PTE LTD

## 1. REQUEST PROCEDURES

- a. A Job receipt/ Works order, Purchase Order, Acknowledgement, Confirmation Letter or email from the client shall be submitted to Caltek on/or at the time the equipment/ service is delivered or requested to/or by Caltek Pte Ltd. This document shall provide clear instructions of the shipping, billing and reporting details and requirements.
- b. Caltek will assign a unique number to each item or service upon acceptance of the item or service by Caltek.

## 2. CLIENT'S UNDERTAKINGS

- a. The Client shall supply the necessary accessories and /or information or data if any to enable Caltek to perform the services stated in the document. Caltek shall be under no obligation to perform the services unless and until it has received confirmation from the Client.
- b. The Client warrants that all information and data supplied is accurate and correct in all respects and shall indemnify Caltek for all loss and damages suffered by Caltek due to any inaccuracy or error in the information and data.

## 3. CALTEK SERVICES

- a. The equipment/ service submitted for calibration/testing shall be compatible with the client's specifications, upon receipt. When equipment is received it will be inspected physically, and if found to be faulty or below a certain standard the Client will be informed accordingly. The Client or his representative may be present at the time of the inspection, failing which; Caltek's findings will be final.
- b. If equipment defects necessitating repair are found after Services has commenced, the Client will be notified and Caltek shall be under no obligation to continue further until the defects are rectified by the Client. A fee will be charged by Caltek for the work done.

## 4. CALIBRATION/ TEST REPORTS

- a. The report shall not be used in any publicity material without prior consent of Caltek. The report may not be reproduced in part or in full unless approved in writing has been given by Caltek.
- b. The report issued hereunder is not a Certificate of Quality. It only applies to the sample of the specific equipment or service given at the time of its calibration or testing. The results shall not be used to indicate or imply that they are applicable to the similar items.
- c. In addition, such results must not be used to indicate or imply that Caltek approves, recommends or endorses the manufacturer, supplier or user of such equipment or that Caltek in any way "guarantees" the later performance of the equipment.

## 5. METHOD OF CALIBRATION/ TESTING

- a. The Laboratory will perform according to published certified standards or any other approved standards as discussed and agreed between the Client and Caltek. When it is necessary to employ Calibration or Test methods and procedures that

are non-standard, these shall be fully documented so as to provide traceability in case of dispute or replicated work when required.

## 6. SUB-CONTRACT

- a. The Company may delegate the performance of the whole or any part of the services contracted for with the Client to any Agent or Sub-Contractor due to temporary incapability, further expertise or heavy workload.

## 7. CALTEK'S LIABILITY

- a. Caltek shall not under any circumstances be responsible for any loss or damage to the equipment during transit while in the custody of Caltek.
- b. All reasonable case(s) will be taken when the equipment is in Caltek's custody, however insurance against accidental loss or damage, either on transit or at Caltek shall be arranged by the Client.
- c. Caltek shall under no circumstances be liable to the client or its agents, servants or representatives in contract including negligence or breach of statutory duty or otherwise for any direct or indirect loss or damage suffered by the client, its agents, servants or representatives howsoever arising or whether connected with the services provided by Caltek herein.

## 8. LIEN

- a. In addition to any right of lien to which Caltek may be entitled by law, Caltek shall be entitled to a general lien on all equipment or service with the client.

## 9. INDEMNIFY

- a. The Client shall indemnify Caltek fully against all damages suffered and cost and expenses incurred by Caltek and all claims by any third parties as a result of any breach of the terms and conditions of this agreement by the Client including but not limited to the improper use of the reports and for any promotional or advertising activities, and supply of inaccurate information and date to Caltek, or any claim by third party for infringement of intellectual property rights and/or discovery of information and /or delivery of documents or equipment sample.

## 10. COURT ATTENDANCE

- a. In the event any of the employees of Caltek is requested by the Client or summoned by the court upon application by the Client or any other parties for his attendance in court as an expert witness on the subject of this agreement, the Client agrees and shall pay Caltek for the attendance in court based on the Caltek prevailing rate for court attendance.

## 11. GOVERNING LAW

- a. This agreement shall be deemed to be made in Singapore and shall be subject to governed by and interpreted in accordance with the domestic laws of the Republic of Singapore for every purpose.



# CALTEK PTE. LTD.

23 Tagore Lane, #04-08/09/10/11 Tagore 23 Warehouse, Singapore 787601  
Tel: (65) 64520300 Fax: (65) 64520500  
Email: info@caltekgroup.com Website: www.caltekgroup.com

## CALIBRATION CERTIFICATE

<b>CERTIFICATE NUMBER</b>	: CTP 1836-24	<b>JR NO</b>	: JR-11536
<b>INSTRUMENT CODE</b>	: 100024-10180	<b>PAGE NUMBER</b>	: 2 of 2

### Calibration Results(As Found)

#### Function Test @ 1kHz

Reference Reading	Unit	Mean Instrument Reading	Error	K Factor	Expanded Uncertainty
94.0	dBA	94.0	0.00	2.00	0.3
114.0	dBA	114.0	0.00	2.00	0.4

#### Calibrated By :

Puthanpuraparumbu  
Majeed Shanavas

EMP ID : 1250

#### Approved By :

Ananthakumar  
Sivasamy

EMP ID : 1007

# TERMS AND CONDITIONS GOVERNING TECHNICAL SERVICES PROVIDED BY CALTEK PTE LTD

## 1. REQUEST PROCEDURES

- a. A Job receipt/ Works order, Purchase Order, Acknowledgement, Confirmation Letter or email from the client shall be submitted to Caltek on/or at the time the equipment/ service is delivered or requested to/or by Caltek Pte Ltd. This document shall provide clear instructions of the shipping, billing and reporting details and requirements.
- b. Caltek will assign a unique number to each item or service upon acceptance of the item or service by Caltek.

## 2. CLIENT'S UNDERTAKINGS

- a. The Client shall supply the necessary accessories and /or information or data if any to enable Caltek to perform the services stated in the document. Caltek shall be under no obligation to perform the services unless and until it has received confirmation from the Client.
- b. The Client warrants that all information and data supplied is accurate and correct in all respects and shall indemnify Caltek for all loss and damages suffered by Caltek due to any inaccuracy or error in the information and data.

## 3. CALTEK SERVICES

- a. The equipment/ service submitted for calibration/testing shall be compatible with the client's specifications, upon receipt. When equipment is received it will be inspected physically, and if found to be faulty or below a certain standard the Client will be informed accordingly. The Client or his representative may be present at the time of the inspection, failing which; Caltek's findings will be final.
- b. If equipment defects necessitating repair are found after Services has commenced, the Client will be notified and Caltek shall be under no obligation to continue further until the defects are rectified by the Client. A fee will be charged by Caltek for the work done

## 4. CALIBRATION/ TEST REPORTS

- a. The report shall not be used in any publicity material without prior consent of Caltek. The report may not be reproduced in part or in full unless approved in writing has been given by Caltek.
- b. The report issued hereunder is not a Certificate of Quality. It only applies to the sample of the specific equipment or service given at the time of its calibration or testing. The results shall not be used to indicate or imply that they are applicable to the similar items.
- c. In addition, such results must not be used to indicate or imply that Caltek approves, recommends or endorses the manufacturer, supplier or user of such equipment or that Caltek in any way "guarantees" the later performance of the equipment.

## 5. METHOD OF CALIBRATION/ TESTING

- a. The Laboratory will perform according to published certified standards or any other approved standards as discussed and agreed between the Client and Caltek. When it is necessary to employ Calibration or Test methods and procedures that

are non-standard, these shall be fully documented so as to provide traceability in case of dispute or replicated work when required.

## 6. SUB-CONTRACT

- a. The Company may delegate the performance of the whole or any part of the services contracted for with the Client to any Agent or Sub-Contractor due to temporary incapability, further expertise or heavy workload.

## 7. CALTEK'S LIABILITY

- a. Caltek shall not under any circumstances be responsible for any loss or damage to the equipment during transit while in the custody of Caltek.
- b. All reasonable case(s) will be taken when the equipment is in Caltek's custody, however insurance against accidental loss or damage, either on transit or at Caltek shall be arranged by the Client.
- c. Caltek shall under no circumstances be liable to the client or its agents, servants or representatives in contract including negligence or breach of statutory duty or otherwise for any direct or indirect loss or damage suffered by the client, its agents, servants or representatives howsoever arising or whether connected with the services provided by Caltek herein.

## 8. LIEN

- a. In addition to any right of lien to which Caltek may be entitled by law, Caltek shall be entitled to a general lien on all equipment or service with the client.

## 9. INDEMNIFY

- a. The Client shall indemnify Caltek fully against all damages suffered and cost and expenses incurred by Caltek and all claims by any third parties as a result of any breach of the terms and conditions of this agreement by the Client including but not limited to the improper use of the reports and for any promotional or advertising activities, and supply of inaccurate information and date to Caltek, or any claim by third party for infringement of intellectual property rights and/or discovery of information and /or delivery of documents or equipment sample.

## 10. COURT ATTENDANCE

- a. In the event any of the employees of Caltek is requested by the Client or summoned by the court upon application by the Client or any other parties for his attendance in court as an expert witness on the subject of this agreement, the Client agrees and shall pay Caltek for the attendance in court based on the Caltek prevailing rate for court attendance.

## 11. GOVERNING LAW

- a. This agreement shall be deemed to be made in Singapore and shall be subject to governed by and interpreted in accordance with the domestic laws of the Republic of Singapore for every purpose.



# CALTEK PTE LTD

23 Tagore Lane, #04-08/09/10/11 Tagore 23 Warehouse, Singapore 787601  
Tel: (65) 6452 0300 | Fax: (65) 6452 0500  
www.caltekgroup.com | info@caltekgroup.com

## CALIBRATION CERTIFICATE

**CERTIFICATE NUMBER** : CTP 1617M-24  
**DATE RECEIVED** : 20-Sep-24

**JOB NUMBER** : CCJR 24-7207  
**ISSUE DATE** : 20-Sep-24

<b>Instrument</b>	: VANE ANEMOMETER	<b>Ambient Temperature</b>	: $(23 \pm 5)^\circ\text{C}$
<b>Manufacturer</b>	: TESTO	<b>Relative Humidity</b>	: $(55 \pm 10)\%$ r.h.
<b>Model No.</b>	: 416	<b>Date Calibrated</b>	: 20-Sep-24
<b>Part No.</b>	: ---	<b>Recommended Due Date</b>	: 20-Sep-25
<b>Serial No.</b>	: 84211700		
<b>Customer</b>	<b>INTAC SYSTEMS SOLUTION PTE LTD</b> Blk 1 Kaki Bukit Avenue 3 #04-03 KB-1 Singapore 416087	<b>Range</b> ( Tag No. )	: ---
		<b>Page</b>	: 1 of 2
		<b>Status</b>	: As Found

The described instrument has been calibrated at **Caltek Laboratory** under the ambient conditions stated above.

This certificate provides traceability of measurement to the International System of Units (**SI**) and/or to units of measurement realised at the National Metrology Centre (**NMC**) , Singapore or other recognized national metrology institutes.

**METHOD** : The calibration method was carried out according to In-house Technical Calibration Procedure CTTM - M19:2007 as a guide.

<b>REFERENCE INSTRUMENT(S)</b>	<b>SERIAL NO</b>	<b>DUE DATE</b>
1. Air Speed Calibration System	83042938/20696948	9-Nov-24

### RESULTS OF CALIBRATION

1. The results of calibration are given on the attached calibration data sheet(s).
2. The expanded uncertainty of measurement associated with the calibration is 2.0 % of reading estimated at a level of confidence of approximately 95 % with a coverage factor of  $k=2.00$ .
3. The user should determine the suitability of the instrument for its intended use.

Calibrated by:  
SHANAVAS P.M.  
EMP ID: 1250

Approved by:  
PREMKUMAR. S  
EMP ID: 1303

# TERMS AND CONDITIONS GOVERNING TECHNICAL SERVICES PROVIDED BY CALTEK PTE LTD

## 1. REQUEST PROCEDURES

- a. A Job receipt/ Works order, Purchase Order, Acknowledgement, Confirmation Letter or email from the client shall be submitted to Caltek on/or at the time the equipment/ service is delivered or requested to/for by Caltek Pte Ltd. This document shall provide clear instructions of the shipping, billing and reporting details and requirements.
- b. Caltek will assign a unique number to each item or service upon acceptance of the item or service by Caltek.

## 2. CLIENT'S UNDERTAKINGS

- a. The Client shall supply the necessary accessories and /or information or data if any to enable Caltek to perform the services stated in the document. Caltek shall be under no obligation to perform the services unless and until it has received confirmation from the Client.
- b. The Client warrants that all information and data supplied is accurate and correct in all respects and shall indemnify Caltek for all loss and damages suffered by Caltek due to any inaccuracy or error in the information and data.

## 3. CALTEK SERVICES

- a. The equipment/ service submitted for calibration/testing shall be compatible with the client's specifications, upon receipt. When equipment is received it will be inspected physically, and if found to be faulty or below a certain standard the Client will be informed accordingly. The Client or his representative may be present at the time of the inspection, failing which; Caltek's findings will be final.
- b. If equipment defects necessitating repair are found after Services has commenced, the Client will be notified and Caltek shall be under no obligation to continue further until the defects are rectified by the Client. A fee will be charged by Caltek for the work done.

## 4. CALIBRATION/ TEST REPORTS

- a. The report shall not be used in any publicity material without prior consent of Caltek. The report may not be reproduced in part or in full unless approved in writing has been given by Caltek.
- b. The report issued hereunder is not a Certificate of Quality. It only applies to the sample of the specific equipment or service given at the time of its calibration or testing. The results shall not be used to indicate or imply that they are applicable to the similar items.
- c. In addition, such results must not be used to indicate or imply that Caltek approves, recommends or endorses the manufacturer, supplier or user of such equipment or that Caltek in any way "guarantees" the later performance of the equipment.

## 5. METHOD OF CALIBRATION/ TESTING

- a. The Laboratory will perform according to published certified standards or any other approved standards as discussed and agreed between the Client and Caltek. When it is necessary to employ Calibration or Test methods and procedures that

are non-standard, these shall be fully documented so as to provide traceability in case of dispute or replicated work when required.

## 6. SUB-CONTRACT

- a. The Company may delegate the performance of the whole or any part of the services contracted for with the Client to any Agent or Sub-Contractor due to temporary incapability, further expertise or heavy workload.

## 7. CALTEK'S LIABILITY

- a. Caltek shall not under any circumstances be responsible for any loss or damage to the equipment during transit while in the custody of Caltek.
- b. All reasonable care(s) will be taken when the equipment is in Caltek's custody, however insurance against accidental loss or damage, either on transit or at Caltek shall be arranged by the Client.
- c. Caltek shall under no circumstances be liable to the client or its agents, servants or representatives in contract including negligence or breach of statutory duty or otherwise for any direct or indirect loss or damage suffered by the client, its agents, servants or representatives howsoever arising or whether connected with the services provided by Caltek herein.

## 8. LIEN

- a. In addition to any right of lien to which Caltek may be entitled by law, Caltek shall be entitled to a general lien on all equipment or service with the client.

## 9. INDEMNIFY

- a. The Client shall indemnify Caltek fully against all damages suffered and cost and expenses incurred by Caltek and all claims by any third parties as a result of any breach of the terms and conditions of this agreement by the Client including but not limited to the improper use of the reports and for any promotional or advertising activities, and supply of inaccurate information and date to Caltek, or any claim by third party for infringement of intellectual property rights and/or discovery of information and/or delivery of documents or equipment sample.

## 10. COURT ATTENDANCE

- a. In the event any of the employees of Caltek is requested by the Client or summoned by the court upon application by the Client or any other parties for his attendance in court as an expert witness on the subject of this agreement, the Client agrees and shall pay Caltek for the attendance in court based on the Caltek prevailing rate for court attendance.

## 11. GOVERNING LAW

- a. This agreement shall be deemed to be made in Singapore and shall be subject to governed by and interpreted in accordance with the domestic laws of the Republic of Singapore for every purpose.



## CALIBRATION CERTIFICATE

CERTIFICATE NUMBER : CTP 1617M-24  
ISSUE DATE : 20-Sep-24

JOB NUMBER : CCJR 24-7207  
PAGE : 2 of 2

MEAN REFERENCE READING ( m/s )	MEAN INSTRUMENT READING ( m/s )	CORRECTION ( m/s )
	Before adjustment	After adjustment
2.50	2.5	—
5.00	4.9	—
10.00	9.9	—

A handwritten signature in blue ink, appearing to read 'Rr'.

