DEENN Engineering Pte Ltd
(A member of Lian Beng Group Ltd)
29 Harrison Road, Lian Beng Building Singapore 369648
Tel: 6283 1468 Fax: 6280 9360

Ref No	DE/DB/ACMV/BIK2/1004
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)							
		Slab Casting		Service Risers		Final Inspection
		Services in Wall	✓	Functional Test		Others

AC and MCV System operation and performance test

Type of Services (Tick One Only)							
		Electrical / Tel / SCV		Gas Installation	✓	ACMV
		Plumbing / Sanitary		Fire Protection		Others
		Swimming Pool		Lift Installation		

LOCATION Blk-2 level - 1

Gridline **Level** – 01

Drawing Ref: **Revision** **No. of Attachment**

1st Inspection				Passed / ~~Failed~~
Date/ Time Submitted	19/11/24			Comments by RTO (M&E)
Date/ Time Requested	20/11/24			
Inspection Date 20/11/24 TO 21/11/24	Time started			OK/.
	Time ended			
Name and signature of Contractors representative	J. Alex / J. Arif			
Name and signature of a Resident Technical Officer (M&E)	Moe Thauk Tun			

2nd Inspection				Passed / Failed
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)				

3rd Inspection				Passed / Failed
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 & FRESH AIR FAN FUNCTIONAL TEST

INTAC SYSTEMS SOLUTION PTE LTD

BLK2 level 1 #01-02

Project No.: D2019-00162/ISS/ACMV-BLK 2-01 Reference:

Project Site: DIEPPE BARRACK-BLK 2 Test Date: 20/11/24

	ACP/BLK2-L1-01	Observation	Result	Remarks
1.	**General**			
a.	Verify enclosure of system control panel			
	• Proper labelling of system control panel	Yes / ~~No~~		
b.	Turn on incoming power supply and check working			
	• Incoming power supply lights	Yes / ~~No~~		
2.	**Manual Operation**			
a.	Select AOM selector switch to 'M' position and verify the following system operations:			
	• Press 'Start' button, AC 'Run' indicator light 'On'	Yes / ~~No~~		
	• Press 'Stop' button, AC 'Stop' indicator light 'On'	Yes / ~~No~~		
3.	**Automatic Operation**			
a.	Select AOM selector switch 'A' position			
	• AC Duty 'On'	Yes / ~~No~~		
b.	Simulating Timer			
	• AC Changeover to Standby Unit 'On'	Yes / ~~No~~		
c.	Simulating AC Error / Trip Alarm			
	• AC Changeover to Standby Unit 'On'	Yes / ~~No~~		
	• Strobe Light Activated	Yes / ~~No~~		
d.	Simulating HighTemperature Alarm			
	• AC Stanby Unit 'On'	Yes / ~~No~~		1 Duty 1 Standby
	• Strobe Light Activated	Yes / ~~No~~		
4.	**Interlocking Operation**			
a.	Simulating Lighting 'On'			
	• Motorized Damper 'Open'	~~Yes / No~~ NA		
	• FAF 'On'	Yes / ~~No~~		CP/BLK2-L1-04
b.	Simulating Fire Alarm Signal Activated			
	• Motorized Damper 'Close'	~~Yes / No~~ NA		
	• FAF 'Off'	~~Yes / No~~ NA		
	• AC 'Off'	~~Yes / No~~ NA		
c.	Simulating Hydrogen Sensor Alarm Activated			
	• AC 'Off'	~~Yes / No~~ NA		
	• Motorized Damper 'Open'	~~Yes / No~~ NA		
	• EAF 'On'	~~Yes / No~~ NA		
	• FAF 'On'	~~Yes / No~~ NA		

TESTED BY / DATE: 18/11/24

J. Alex / J. Arf

ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE:

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE:

RTO

Mar Thauk Tun
20/11/2024

AIR CONDITIONING SYSTEM & FRESH AIR FAN FUNCTIONAL TEST

INTAC SYSTEMS SOLUTION PTE LTD

BLK2 level 1 #01-03

Project No.: D2019-00162/ISS/ACMV-BLK 2-01 Reference:

Project Site: DIEPPE BARRACK-BLK 2 Test Date: 20/11/24

	ACP/BLK2-L1-02	Observation	Result	Remarks
1.	**General**			
a.	Verify enclosure of system control panel			
	• Proper labelling of system control panel	Yes / ~~No~~		
b.	Turn on incoming power supply and check working			
	• Incoming power supply lights	Yes / ~~No~~		
2.	**Manual Operation**			
a.	Select AOM selector switch to 'M' position and verify the following system operations:			
	• Press 'Start' button, AC 'Run' indicator light 'On'	Yes / ~~No~~		
	• Press 'Stop' button, AC 'Stop' indicator light 'On'	Yes / ~~No~~		
3.	**Automatic Operation**			
a.	Select AOM selector switch 'A' position			
	• AC Duty 'On'	Yes / ~~No~~		
b.	Simulating Timer			
	• AC Changeover to Standby Unit 'On'	Yes / ~~No~~		
c.	Simulating AC Error / Trip Alarm			
	• AC Changeover to Standby Unit 'On'	Yes / ~~No~~		
	• Strobe Light Activated	Yes / ~~No~~		
d.	Simulating HighTemperature Alarm			
	• AC Stanby Unit 'On'	Yes / ~~No~~		1 Duty 1 Standby
	• Strobe Light Activated	Yes / ~~No~~		
4.	**Interlocking Operation**			
a.	Simulating Lighting 'On'			
	• Motorized Damper 'Open'	~~Yes / No~~ NA		
	• FAF 'On'	Yes / ~~No~~		CP/BLK2-L1-04
b.	Simulating Fire Alarm Signal Activated			
	• Motorized Damper 'Close'	Yes / No		
	• FAF 'Off'	Yes / No NA		
	• AC 'Off'	Yes / No		
c.	Simulating Hydrogen Sensor Alarm Activated			
	• AC 'Off'	Yes / No		
	• Motorized Damper 'Open'	Yes / No NA		
	• EAF 'On'	Yes / No		
	• FAF 'On'	Yes / No		

TESTED BY / DATE: 18/11/24

J. Alex / J. Raj

ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE:

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE:

RTO

Moe Thauk Tun
20/11/2024

AIR CONDITIONING SYSTEM & FRESH AIR FAN FUNCTIONAL TEST

INTAC SYSTEMS SOLUTION PTE LTD

BLK 2 level 1 # 01-05

Project No.: D2019-00162/ISS/ACMV-BLK 2-01 Reference:

Project Site: DIEPPE BARRACK-BLK 2 Test Date: 20/11/24

	ACP/BLK2-L1-03	Observation	Result	Remarks
1.	**General**			
a.	Verify enclosure of system control panel			
	• Proper labelling of system control panel	Yes / ~~No~~		
b.	Turn on incoming power supply and check working			
	• Incoming power supply lights	Yes / ~~No~~		
2.	**Manual Operation**			
a.	Select AOM selector switch to 'M' position and verify the following system operations:			
	• Press 'Start' button, AC 'Run' indicator light 'On'	Yes / ~~No~~		
	• Press 'Stop' button, AC 'Stop' indicator light 'On'	Yes / ~~No~~		
3.	**Automatic Operation**			
a.	Select AOM selector switch 'A' position			
	• AC Duty 'On'	Yes / ~~No~~		
b.	Simulating Timer			
	• AC Changeover to Standby Unit 'On'	Yes / ~~No~~		
c.	Simulating AC Error / Trip Alarm			
	• AC Changeover to Standby Unit 'On'	Yes / ~~No~~		
	• Strobe Light Activated	Yes / ~~No~~		
d.	Simulating HighTemperature Alarm			
	• AC Stanby Unit 'On'	Yes / ~~No~~		1 Duty 1 Standby
	• Strobe Light Activated	Yes / ~~No~~		
4.	**Interlocking Operation**			
a.	Simulating Lighting 'On'			
	• Motorized Damper 'Open'	~~Yes / No~~ NA		
	• FAF 'On'	Yes / ~~No~~		CP/BLK2-L1-04
b.	Simulating Fire Alarm Signal Activated			
	• Motorized Damper 'Close'	Yes / No		
	• FAF 'Off'	Yes / No NA		
	• AC 'Off'	Yes / No		
c.	Simulating Hydrogen Sensor Alarm Activated			
	• AC 'Off'	Yes / No		
	• Motorized Damper 'Open'	Yes / No NA		
	• EAF 'On'	Yes / No		
	• FAF 'On'	Yes / No		

TESTED BY / DATE: 18/11/24

J. Alex / J. Ady

ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE:

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE:

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20/11/2024

AIR CONDITIONING SYSTEM & FRESH AIR FAN FUNCTIONAL TEST

INTAC SYSTEMS SOLUTION PTE LTD

BLK2 level 1 #01-06

Project No.: D2019-00162/ISS/ACMV-BLK 2-01 Reference: _____

Project Site: DIEPPE BARRACK-BLK 2 Test Date: 20/11/24

	ACP/BLK2-L1-04	Observation	Result	Remarks
1.	**General**			
a.	Verify enclosure of system control panel			
	• Proper labelling of system control panel	Yes / ~~No~~		
b.	Turn on incoming power supply and check working			
	• Incoming power supply lights	Yes / ~~No~~		
2.	**Manual Operation**			
a.	Select AOM selector switch to 'M' position and verify the following system operations:			
	• Press 'Start' button, AC 'Run' indicator light 'On'	Yes / ~~No~~		
	• Press 'Stop' button, AC 'Stop' indicator light 'On'	Yes / ~~No~~		
3.	**Automatic Operation**			
a.	Select AOM selector switch 'A' position			
	• AC Duty 'On'	Yes / ~~No~~		
b.	Simulating Timer			
	• AC Changeover to Standby Unit 'On'	Yes / ~~No~~		
c.	Simulating AC Error / Trip Alarm			
	• AC Changeover to Standby Unit 'On'	Yes / ~~No~~		
	• Strobe Light Activated	Yes / ~~No~~		
d.	Simulating HighTemperature Alarm			
	• AC Stanby Unit 'On'	Yes / ~~No~~		1 Duty 1 Standby
	• Strobe Light Activated	Yes / ~~No~~		
4.	**Interlocking Operation**			
a.	Simulating Lighting 'On'			
	• Motorized Damper 'Open'	~~Yes / No~~ NA		
	• FAF 'On'	Yes / ~~No~~		CP/BLK2-L1-04
b.	Simulating Fire Alarm Signal Activated			
	• Motorized Damper 'Close'	Yes / No		
	• FAF 'Off'	Yes / No NA		
	• AC 'Off'	Yes / No		
c.	Simulating Hydrogen Sensor Alarm Activated			
	• AC 'Off'	Yes / No		
	• Motorized Damper 'Open'	Yes / No NA		
	• EAF 'On'	Yes / No		
	• FAF 'On'	Yes / No		

TESTED BY / DATE: 18/11/24

J. Alon / J. Ruf

ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE:

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE:

Moe

RTO Moe Thauk Tun
20/11/2024

AIR CONDITIONING SYSTEM & FRESH AIR FAN FUNCTIONAL TEST

INTAC SYSTEMS SOLUTION PTE LTD

BLK2-level 1
#01-08

Project No.: D2019-00162/ISS/ACMV-BLK 2-01 Reference:

Project Site: DIEPPE BARRACK-BLK 2 Test Date: 20/11/24

	ACP/BLK2-L1-05	Observation	Result	Remarks
1.	**General**			
a.	Verify enclosure of system control panel			
	• Proper labelling of system control panel	Yes / No		
b.	Turn on incoming power supply and check working			
	• Incoming power supply lights	Yes / ~~No~~		
2.	**Manual Operation**			
a.	Select AOM selector switch to 'M' position and verify the following system operations:			
	• Press 'Start' button, AC 'Run' indicator light 'On'	Yes / ~~No~~		
	• Press 'Stop' button, AC 'Stop' indicator light 'On'	Yes / ~~No~~		
3.	**Automatic Operation**			
a.	Select AOM selector switch 'A' position			
	• AC Duty 'On'	Yes / ~~No~~		
b.	Simulating Timer			
	• AC Changeover to Standby Unit 'On'	Yes / ~~No~~		
c.	Simulating AC Error / Trip Alarm			
	• AC Changeover to Standby Unit 'On'	Yes / ~~No~~		
	• Strobe Light Activated	Yes / ~~No~~		
d.	Simulating HighTemperature Alarm			
	• AC Stanby Unit 'On'	Yes / ~~No~~		1 Duty 1 Standby
	• Strobe Light Activated	Yes / ~~No~~		
4.	**Interlocking Operation**			
a.	Simulating Lighting 'On'			
	• Motorized Damper 'Open'	Yes / No		
	• FAF 'On'	Yes / No		
b.	Simulating Fire Alarm Signal Activated			
	• Motorized Damper 'Close'	~~Yes / No~~ NA		
	• FAF 'Off'	~~Yes / No~~ NA		
	• AC 'Off'	Yes / ~~No~~		
c.	Simulating Hydrogen Sensor Alarm Activated			
	• AC 'Off'	Yes / ~~No~~		
	• Motorized Damper 'Open'	Yes / ~~No~~		
	• EAF 'On'	Yes / ~~No~~		CP-EAF/BLK2-L1-01
	• FAF 'On'	~~Yes / No~~ NA		

TESTED BY / DATE: 18/11/24

J. Alex / J. Ary

ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE:

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Moe Thauk Tun
20/11/2024

WITNESSED BY / DATE:

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

AIR CONDITIONING SYSTEM & FRESH AIR FAN FUNCTIONAL TEST

INTAC SYSTEMS SOLUTION PTE LTD

BLK 2 level 1 #01-09

Project No.: D2019-00162/ISS/ACMV-BLK 2-01 Reference: _____

Project Site: DIEPPE BARRACK-BLK 2 Test Date: 20/11/24

	ACP/BLK2-L1-06	Observation	Result	Remarks
1.	**General**			
a.	Verify enclosure of system control panel			
	• Proper labelling of system control panel	Yes / ~~No~~		
b.	Turn on incoming power supply and check working			
	• Incoming power supply lights	Yes / ~~No~~		
2.	**Manual Operation**			
a.	Select AOM selector switch to 'M' position and verify the following system operations:			
	• Press 'Start' button, AC 'Run' indicator light 'On'	Yes / ~~No~~		
	• Press 'Stop' button, AC 'Stop' indicator light 'On'	Yes / ~~No~~		
3.	**Automatic Operation**			
a.	Select AOM selector switch 'A' position			
	• AC Duty 'On'	Yes / ~~No~~		
b.	Simulating Timer			
	• AC Changeover to Standby Unit 'On'	Yes / ~~No~~		
c.	Simulating AC Error / Trip Alarm			
	• AC Changeover to Standby Unit 'On'	Yes / ~~No~~		
	• Strobe Light Activated	Yes / ~~No~~		
d.	Simulating HighTemperature Alarm			
	• AC Stanby Unit 'On'	Yes / ~~No~~		1 Duty 1 Standby
	• Strobe Light Activated	Yes / ~~No~~		
4.	**Interlocking Operation**			
a.	Simulating Lighting 'On'			
	• Motorized Damper 'Open'	Yes / ~~No~~		
	• FAF 'On'	Yes / ~~No~~		CP/BLK2-L1-03
b.	Simulating Fire Alarm Signal Activated			
	• Motorized Damper 'Close'	Yes / ~~No~~		
	• FAF 'Off'	Yes / ~~No~~		
	• AC 'Off'	Yes / ~~No~~		
c.	Simulating Hydrogen Sensor Alarm Activated			
	• AC 'Off'	Yes / ~~No~~		
	• Motorized Damper 'Open'	~~Yes~~ / No NA		
	• EAF 'On'	~~Yes~~ / No		
	• FAF 'On'	~~Yes~~ / No		

TESTED BY / DATE: 18/11/24

J.Alex / J.Arif

ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE:

RTO
Moe Thauk Ton

WITNESSED BY / DATE:

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

AIR CONDITIONING SYSTEM & FRESH AIR FAN FUNCTIONAL TEST

INTAC SYSTEMS SOLUTION PTE LTD

BLK 2 level 1 #01-10

Project No.: D2019-00162/ISS/ACMV-BLK 2-01 Reference:

Project Site: DIEPPE BARRACK-BLK 2 Test Date: 20/11/24

	ACP/BLK2-L1-07	Observation	Result	Remarks
1.	**General**			
a.	Verify enclosure of system control panel			
	• Proper labelling of system control panel	Yes / ~~No~~		
b.	Turn on incoming power supply and check working			
	• Incoming power supply lights	Yes / ~~No~~		
2.	**Manual Operation**			
a.	Select AOM selector switch to 'M' position and verify the following system operations:			
	• Press 'Start' button, AC 'Run' indicator light 'On'	Yes / ~~No~~		
	• Press 'Stop' button, AC 'Stop' indicator light 'On'	Yes / ~~No~~		
3.	**Automatic Operation**			
a.	Select AOM selector switch 'A' position			
	• AC Duty 'On'	Yes / ~~No~~		
b.	Simulating Timer			
	• AC Changeover to Standby Unit 'On'	Yes / ~~No~~		
c.	Simulating AC Error / Trip Alarm			
	• AC Changeover to Standby Unit 'On'	Yes / ~~No~~		
	• Strobe Light Activated	Yes / ~~No~~		
d.	Simulating HighTemperature Alarm			
	• AC Stanby Unit 'On'	Yes / ~~No~~		1 Duty 1 Standby
	• Strobe Light Activated	Yes / ~~No~~		
4.	**Interlocking Operation**			
a.	Simulating Lighting 'On'			
	• Motorized Damper 'Open'	Yes / ~~No~~		
	• FAF 'On'	Yes / ~~No~~		CP/BLK2-L1-03
b.	Simulating Fire Alarm Signal Activated			
	• Motorized Damper 'Close'	Yes / ~~No~~		
	• FAF 'Off'	Yes / ~~No~~		
	• AC 'Off'	Yes / ~~No~~		
c.	Simulating Hydrogen Sensor Alarm Activated			
	• AC 'Off'	Yes / ~~No~~		
	• Motorized Damper 'Open'	Yes / ~~No~~ NA		
	• EAF 'On'	Yes / No		
	• FAF 'On'	Yes / No		

TESTED BY / DATE: 18/11/24

J. Alex / J. Ady

ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE:

RTO

Moe Thauk Tun
20/11/2024

WITNESSED BY / DATE:

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

AIR CONDITIONING SYSTEM & FRESH AIR FAN FUNCTIONAL TEST

INTAC SYSTEMS SOLUTION PTE LTD

BLK2 level-1 #01-07

Project No.: D2019-00162/ISS/ACMV-BLK 2-01 Reference: _____

Project Site: DIEPPE BARRACK-BLK 2 Test Date: 20/11/24

	ACP/BLK2-L1-08	Observation	Result	Remarks
1.	**General**			
a.	Verify enclosure of system control panel			
	• Proper labelling of system control panel	Yes / ~~No~~		
b.	Turn on incoming power supply and check working			
	• Incoming power supply lights	Yes / ~~No~~		
2.	**Manual Operation**			
a.	Select AOM selector switch to 'M' position and verify the following system operations:			
	• Press 'Start' button, AC 'Run' indicator light 'On'	Yes / ~~No~~		
	• Press 'Stop' button, AC 'Stop' indicator light 'On'	Yes / ~~No~~		
3.	**Automatic Operation**			
a.	Select AOM selector switch 'A' position			
	• AC Duty 'On'	Yes / ~~No~~		
b.	Simulating Timer			
	• AC Changeover to Standby Unit 'On'	Yes / ~~No~~		
c.	Simulating AC Error / Trip Alarm			
	• AC Changeover to Standby Unit 'On'	Yes / ~~No~~		
	• Strobe Light Activated	Yes / ~~No~~		
d.	Simulating HighTemperature Alarm			
	• AC Stanby Unit 'On'	Yes / ~~No~~		3 Duty 1 Standby
	• Strobe Light Activated	Yes / ~~No~~		
4.	**Interlocking Operation**			
a.	Simulating Lighting 'On'			
	• Motorized Damper 'Open'	Yes / ~~No~~		
	• FAF 'On'	Yes / ~~No~~		CP/BLK2-L1-04
b.	Simulating Fire Alarm Signal Activated			
	• Motorized Damper 'Close'	Yes / ~~No~~		
	• FAF 'Off'	Yes / ~~No~~		
	• AC 'Off'	Yes / ~~No~~		
c.	Simulating Hydrogen Sensor Alarm Activated			
	• AC 'Off'	Yes / No		
	• Motorized Damper 'Open'	Yes / ~~No~~ Na		
	• EAF 'On'	Yes / No		
	• FAF 'On'	Yes / No		

TESTED BY / DATE: 18/11/24

J. Alore / J. Ray

ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE:

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE:

RTO

Moe Thauk Tun
20/11/2024

AIR CONDITIONING SYSTEM & FRESH AIR FAN FUNCTIONAL TEST

INTAC SYSTEMS SOLUTION PTE LTD

BLK 2 level 1
#01-11

Project No.: D2019-00162/ISS/ACMV-BLK 2-01 Reference:

Project Site: DIEPPE BARRACK-BLK 2 Test Date:

	ACP/BLK2-L1-09	Observation	Result	Remarks
1.	**General**			
a.	Verify enclosure of system control panel			
	• Proper labelling of system control panel	Yes / ~~No~~		
b.	Turn on incoming power supply and check working			
	• Incoming power supply lights	Yes / ~~No~~		
2.	**Manual Operation**			
a.	Select AOM selector switch to 'M' position and verify the following system operations:			
	• Press 'Start' button, AC 'Run' indicator light 'On'	Yes / ~~No~~		
	• Press 'Stop' button, AC 'Stop' indicator light 'On'	Yes / ~~No~~		
3.	**Automatic Operation**			
a.	Select AOM selector switch 'A' position			
	• AC Duty 'On'	Yes / ~~No~~		
b.	Simulating Timer			
	• AC Changeover to Standby Unit 'On'	Yes / ~~No~~		
c.	Simulating AC Error / Trip Alarm			
	• AC Changeover to Standby Unit 'On'	Yes / ~~No~~		
	• Strobe Light Activated	Yes / ~~No~~		
d.	Simulating HighTemperature Alarm			
	• AC Stanby Unit 'On'	Yes / ~~No~~		1 Duty 1 Standby
	• Strobe Light Activated	Yes / ~~No~~		
4.	**Interlocking Operation**			
a.	Simulating Lighting 'On'			
	• Motorized Damper 'Open'	~~Yes / No~~ Na		
	• FAF 'On'	Yes / ~~No~~		CP/BLK2-L1-03
b.	Simulating Fire Alarm Signal Activated			
	• Motorized Damper 'Close'	Yes / ~~No~~		
	• FAF 'Off'	Yes / No Na		
	• AC 'Off'	~~Yes~~ / No		
c.	Simulating Hydrogen Sensor Alarm Activated			
	• AC 'Off'	Yes / ~~No~~		
	• Motorized Damper 'Open'	Yes / No Na		
	• EAF 'On'	~~Yes~~ / No		
	• FAF 'On'	~~Yes~~ / No		

TESTED BY / DATE: 18/11/24

J. Alex / J. Ady

ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE:

RTO

Moe Thauk Tun
20/11/2024

WITNESSED BY / DATE:

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

AIR-CONDITIONING SYSTEM PERFORMANCE TEST

INTAC SYSTEMS SOLUTION PTE LTD
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 2-01 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**	**ROOF**		**01-13 DC ROOM**	**01-14 DC ROOM**
	Identification No.	CU-2-1 (a)	CU-2-1 (b)	FCU-1-1	FCU-1-2
	Brand / Model	MITSUBISHI/ PUCY-P350YKD	MITSUBISHI/ PUCY-P300YKD	MITSUBISHI/ PLFY-P125VEM-PA	MITSUBISHI/ PLFY-P80VEM-PA
	Serial No.	41P-00015	2YP-00367	3XM00882	44M00276
2	**Current Measurement**				
	Running Ampere - L1	16.3	13.3		
	Running Ampere - L2	15.4	12.8		
	Running Ampere - L3	14.9	12.4		
3	**Pressure Setting**				
	Low Side (psi)	125			
	High Side (psi)	375			
4	**Temperature Measurement**				
	Thermostat Setting (°C)			24.0	24.0
	On-Coil Temperature (°C)			24.5	24.3
	Off-Coil Temperature (°C)			11.8	12.3
	Room Temperature:DB/WB(°C)			24.0 / 19.0	
	Relative Humidity (%)			62.2	
5	**Noise Measurement**				
	Equipment Off (dBA)	46.8		42.0	
	Equipment On (dBA)	51.2		44.8	

TESTED BY / DATE : 18/11/24
J.Alex / J.Ab

ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE :
Moe

RTO
Moe Thauk Tun
20/11/2024

AIR-CONDITIONING SYSTEM PERFORMANCE TEST

INTAC SYSTEMS SOLUTION PTE LTD
英特系统私人有限公司
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 2-01 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**	**01-15 DC ROOM**	**01-18 DC ROOM**	**01-17 DC ROOM**	**01-16 DC ROOM**
	Identification No.	FCU-1-3	FCU-1-4	FCU-1-5	FCU-1-6
	Brand / Model	MITSUBISHI/ PLFY-P80VEM-PA	MITSUBISHI/ PLFY-P63VEM-PA	MITSUBISHI/ PLFY-P63VEM-PA	MITSUBISHI/ PLFY-P80VEM-PA
	Serial No.	42M00153	43M00196	43M00232	42M00167
2	**Current Measurement**				
	Running Ampere - L1				
	Running Ampere - L2				
	Running Ampere - L3				
3	**Pressure Setting**				
	Low Side (psi)				
	High Side (psi)				
4	**Temperature Measurement**				
	Thermostat Setting (°C)	24.0	24.0	24.0	24.0
	On-Coil Temperature (°C)	24.6	24.1	24.2	24.3
	Off-Coil Temperature (°C)	12.7	12.4	11.8	11.9
	Room Temperature:DB/WB(°C)	24.0 / 19.0			
	Relative Humidity (%)	62.2			
5	**Noise Measurement**				
	Equipment Off (dBA)	42.0			
	Equipment On (dBA)	44.8			

TESTED BY / DATE : 18/11/24
J. Alex / J. Ad.
ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE :
RTO
Moe Thauk Tun
20/11/2024

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Project Site: DIEPPE BARRACK-BLOCK 2

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

27 °C Wet Bulb

		LOCATION			
1	**General**	**01-19 IDS ROOM**	**01-20 IDS ROOM**	**01-23 IDS ROOM**	**01-22 IDS ROOM**
	Identification No.	FCU-1-7	FCU-1-8	FCU-1-9	FCU-1-10
	Brand / Model	MITSUBISHI/ PLFY-P50VEM-PA	MITSUBISHI/ PLFY-P50VEM-PA	MITSUBISHI/ PLFY-P50VEM-PA	MITSUBISHI/ PLFY-P50VEM-PA
	Serial No.	3YM01301	3YM01281	3YM01283	3YM01298
2	**Current Measurement**				
	Running Ampere - L1				
	Running Ampere - L2				
	Running Ampere - L3				
3	**Pressure Setting**				
	Low Side (psi)				
	High Side (psi)				
4	**Temperature Measurement**				
	Thermostat Setting (°C)	24.0	24.0	24.0	24.0
	On-Coil Temperature (°C)	24.3	24.5	24.2	24.8
	Off-Coil Temperature (°C)	11.8	12.5	12.3	12.7
	Room Temperature:DB/WB(°C)	24.0 / 19.5			
	Relative Humidity (%)	65.6			
5	**Noise Measurement**				
	Equipment Off (dBA)	41.1			
	Equipment On (dBA)	44.5			

TESTED BY / DATE : 18/11/24
J. Alore / JAlt.
ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

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DEENN ENGINEERING PTE. LTD.

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Project Site: DIEPPE BARRACK-BLOCK 2

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

27 °C Wet Bulb

		LOCATION			
1	**General**	**ROOF**		**01-13 DC ROOM**	**01-14 DC ROOM**
	Identification No.	CU-2-2 (a)	CU-2-2 (b)	FCU-2-1	FCU-2-2
	Brand / Model	MITSIBISHI/ PUCY-P350YKD	MITSUBISHI/ PUCY-P300YKD	MITSUBISHI/ PLFY-P125VEM-PA	MITSUBISHI/ PLFY-P80VEM-PA
	Serial No.	1YP-00731	42P-00024	3XM00853	44M00277
2	**Current Measurement**				
	Running Ampere - L1	15.8	12.8		
	Running Ampere - L2	14.9	12.5		
	Running Ampere - L3	14.6	12.3		
3	**Pressure Setting**				
	Low Side (psi)	120			
	High Side (psi)	380			
4	**Temperature Measurement**				
	Thermostat Setting (°C)			24.0	24.0
	On-Coil Temperature (°C)			24.1	24.7
	Off-Coil Temperature (°C)			12.5	12.8
	Room Temperature:DB/WB(°C)			24.0 / 19.0	24.0 / 19.0
	Relative Humidity (%)			62.2	
5	**Noise Measurement**				
	Equipment Off (dBA)	46.8		42.0	
	Equipment On (dBA)	50.8		44.8	

TESTED BY / DATE : 18/11/24
J. Alex / J. Alex

ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

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DEENN ENGINEERING PTE. LTD.

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Project Site: DIEPPE BARRACK-BLOCK 2

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

27 °C Wet Bulb

		LOCATION			
1	**General**	**01-15 DC ROOM**	**01-18 DC ROOM**	**01-17 DC ROOM**	**01-16 DC ROOM**
	Identification No.	FCU-2-3	FCU-2-4	FCU-2-5	FCU-2-6
	Brand / Model	MITSUBISHI/ PLFY-P80VEM-PA	MITSUBISHI/ PLFY-P63VEM-PA	MITSUBISHI/ PLFY-P63VEM-PA	MITSUBISHI/ PLFY-P80VEM-PA
	Serial No.	42M00151	43M00203	43M00202	42M00149
2	**Current Measurement**				
	Running Ampere - L1				
	Running Ampere - L2				
	Running Ampere - L3				
3	**Pressure Setting**				
	Low Side (psi)				
	High Side (psi)				
4	**Temperature Measurement**				
	Thermostat Setting (°C)	24.0	24.0	24.0	24.0
	On-Coil Temperature (°C)	24.3	24.1	24.6	24.3
	Off-Coil Temperature (°C)	12.7	12.8	12.5	12.2
	Room Temperature:DB/WB(°C)	24.0 / 19.0			
	Relative Humidity (%)	62.2			
5	**Noise Measurement**				
	Equipment Off (dBA)	42.0			
	Equipment On (dBA)	44.8			

TESTED BY / DATE : 18/11/24
J. Alex / J. Art.
ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

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

27 °C Wet Bulb

		LOCATION			
1	**General**	**01-24 IDS ROOM**	**01-21 IDS ROOM**	**01-23 IDS ROOM**	**01-22 IDS ROOM**
	Identification No.	FCU-2-7	FCU-2-8	FCU-2-9	FCU-2-10
	Brand / Model	MITSUBISHI/ PLFY-P50VEM-PA	MITSUBISHI/ PLFY-P63VEM-PA	MITSUBISHI/ PLFY-P50VEM-PA	MITSUBISHI/ PLFY-P50VEM-PA
	Serial No.	3YM01296	3YM01283	43M00197	43M00203
2	**Current Measurement**				
	Running Ampere - L1				
	Running Ampere - L2				
	Running Ampere - L3				
3	**Pressure Setting**				
	Low Side (psi)				
	High Side (psi)				
4	**Temperature Measurement**				
	Thermostat Setting (°C)	24.0	24.0	24.0	24.0
	On-Coil Temperature (°C)	24.6	24.3	24.2	24.5
	Off-Coil Temperature (°C)	12.1	12.8	12.3	12.2
	Room Temperature:DB/WB(°C)	24.0 / 19.5			
	Relative Humidity (%)	65.6			
5	**Noise Measurement**				
	Equipment Off (dBA)	41.1			
	Equipment On (dBA)	44.5			

TESTED BY / DATE : 18/11/24
T.Alex / T.Alex
ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE :
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Project Site: DIEPPE BARRACK-BLOCK 2

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

27 °C Wet Bulb

		LOCATION			
1	**General**	**ROOF**		**01-07 OT S-ROOM**	
	Identification No.	CU-2-3A (a)	CU-2-3A (b)	FCU-3A-1	FCU-3A-2
	Brand / Model	MITSUBISHI/ PUCY-P350YKD	MITSUBISHI/ PUCY-P250YKD	MITSUBISHI/ PEFY-P200VMHS-E	MITSUBISHI/ PEFY-P200VMHS-E
	Serial No.	3XP-00460	42P-00093	31W25362	31W25380
2	**Current Measurement**				
	Running Ampere - L1	16.1	10.2		
	Running Ampere - L2	15.7	9.5		
	Running Ampere - L3	14.8	8.8		
3	**Pressure Setting**				
	Low Side (psi)	120			
	High Side (psi)	370			
4	**Temperature Measurement**				
	Thermostat Setting (°C)			22.0	22.0
	On-Coil Temperature (°C)			22.7	22.8
	Off-Coil Temperature (°C)			12.4	12.7
	Room Temperature:DB/WB(°C)			22.0 / 17.5	
	Relative Humidity (%)			64.0	
5	**Noise Measurement**				
	Equipment Off (dBA)	48.2		53.8	
	Equipment On (dBA)	51.2		61.1	

TESTED BY / DATE : 18/11/24
J. Alex / J. Alex

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INTAC SYSTEMS SOLUTION PTE LTD

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DEENN ENGINEERING PTE. LTD.

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

27 °C Wet Bulb

		LOCATION			
1	**General**	**01-07 OT S-ROOM**			
	Identification No.	FCU-3A-3			
	Brand / Model	MITSUBISHI/ PEFY-P200VMHS-E			
	Serial No.	31W25379			
2	**Current Measurement**				
	Running Ampere - L1				
	Running Ampere - L2				
	Running Ampere - L3				
3	**Pressure Setting**				
	Low Side (psi)				
	High Side (psi)				
4	**Temperature Measurement**				
	Thermostat Setting (°C)	22.0			
	On-Coil Temperature (°C)	22.5			
	Off-Coil Temperature (°C)	12.3			
	Room Temperature:DB/WB(°C)	22.0 / 17.5			
	Relative Humidity (%)	64.0			
5	**Noise Measurement**				
	Equipment Off (dBA)	53.8			
	Equipment On (dBA)	61.1			

TESTED BY / DATE : 18/11/24
J. Alex / J. Dd

ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE :

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INTAC SYSTEMS SOLUTION PTE LTD
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Project Site: DIEPPE BARRACK-BLOCK 2

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

27 °C Wet Bulb

		LOCATION			
1	**General**	**ROOF**	**01-07 OT S-ROOM**		
	Identification No.	CU-2-3B	FCU-3B-1		
	Brand / Model	MITSUBISHI/ PUCY-P200YKD	MITSUBISHI/ PEFY-P200VMHS-E		
	Serial No.	24P-00184	31W25361		
2	**Current Measurement**				
	Running Ampere - L1	7.8			
	Running Ampere - L2	7.4			
	Running Ampere - L3	7.2			
3	**Pressure Setting**				
	Low Side (psi)	125			
	High Side (psi)	370			
4	**Temperature Measurement**				
	Thermostat Setting (°C)		22.0		
	On-Coil Temperature (°C)		22.6		
	Off-Coil Temperature (°C)		12.2		
	Room Temperature:DB/WB(°C)		22.0 / 17.5		
	Relative Humidity (%)		64.0		
5	**Noise Measurement**				
	Equipment Off (dBA)	48.2	53.8		
	Equipment On (dBA)	51.2	61.1		

TESTED BY / DATE : 18/11/24
J. Alex / J. Ad.
ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

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Mok Thauk Tan
20/11/2024

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

27 °C Wet Bulb

		LOCATION			
1	**General**	**ROOF**		**01-02 NCR**	**01-03 SPARE**
	Identification No.	CU-2-4A (a)	CU-2-4A (b)	FCU-4A-1	FCU-4A-2
	Brand / Model	MITSUBISHI/ PUCY-P350YKD	MITSUBISHI/ PUCY-P300YKD	MITSUBISHI/ PKFY-P100VKM-E	MITSUBISHI/ PKFY-P100VKM-E
	Serial No.	3XP-00449	42P-00019	26M21030	35M20599
2	**Current Measurement**				
	Running Ampere - L1	15.7	13.2		
	Running Ampere - L2	14.7	12.5		
	Running Ampere - L3	14.2	12.0		
3	**Pressure Setting**				
	Low Side (psi)	125			
	High Side (psi)	380			
4	**Temperature Measurement**				
	Thermostat Setting (°C)			22.0	22.0
	On-Coil Temperature (°C)			22.4	22.8
	Off-Coil Temperature (°C)			12.4	12.8
	Room Temperature:DB/WB(°C)			22.0 / 17.5	22.0 / 17.5
	Relative Humidity (%)			64.0	64.0
5	**Noise Measurement**				
	Equipment Off (dBA)	48.2		45.8	45.6
	Equipment On (dBA)	52.9		52.1	51.8

TESTED BY / DATE : 18/11/24
J. Alex / J Ary

ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

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20/11/2024

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

27 °C Wet Bulb

		LOCATION			
1	**General**	**01-05 NCR**	**01-06 NCR**	**01-08 B-ROOM**	**01-09 NCR (S)**
	Identification No.	FCU-4A-3	FCU-4A-4	FCU-4A-5	FCU-4A-6
	Brand / Model	MITSUBISHI/ PKFY-P100VKM-E	MITSUBISHI/ PEFY-P140VMA-E	MITSUBISHI/ PEFY-P125VMA-E	MITSUBISHI/ PEFY-P125VMA-E
	Serial No.	35M20606	31M00119	25M00248	43M00347
2	**Current Measurement**				
	Running Ampere - L1				
	Running Ampere - L2				
	Running Ampere - L3				
3	**Pressure Setting**				
	Low Side (psi)				
	High Side (psi)				
4	**Temperature Measurement**				
	Thermostat Setting (°C)	22.0	22.0	22.0	22.0
	On-Coil Temperature (°C)	22.6	22.4	22.5	22.7
	Off-Coil Temperature (°C)	12.1	12.5	12.6	12.8
	Room Temperature:DB/WB(°C)	22.0 / 17.5	22.0 / 17.5	22.0 / 17.5	22.0 / 17.5
	Relative Humidity (%)	64.0	64.0	64.0	64.0
5	**Noise Measurement**				
	Equipment Off (dBA)	46.6	44.3	45.8	46.8
	Equipment On (dBA)	52.1	51.8	51.3	52.4

TESTED BY / DATE : 18/11/24
J. Alex / J. Ant.
ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

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DEENN ENGINEERING PTE. LTD.

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

27 °C Wet Bulb

		LOCATION			
1	**General**	**01-10 NCR (C)**	**01-11 E-ROOM**		
	Identification No.	FCU-4A-7	FCU-4A-8		
	Brand / Model	MITSUBISHI/ PEFY-P63VMA-E	MITSUBISHI/ PKFY-P50VLM-E		
	Serial No.	43M00579	31M00026		
2	**Current Measurement**				
	Running Ampere - L1				
	Running Ampere - L2				
	Running Ampere - L3				
3	**Pressure Setting**				
	Low Side (psi)				
	High Side (psi)				
4	**Temperature Measurement**				
	Thermostat Setting (°C)	22.0	22.0		
	On-Coil Temperature (°C)	22.8	22.3		
	Off-Coil Temperature (°C)	12.4	11.5		
	Room Temperature:DB/WB(°C)	22.0 / 17.5	22.0 / 17.5		
	Relative Humidity (%)	64.0	64.0		
5	**Noise Measurement**				
	Equipment Off (dBA)	45.8	45.3		
	Equipment On (dBA)	52.1	50.8		

TESTED BY / DATE : 18/11/24
J. Alex / J. Wt

ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE :

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Mok Thank Tim
20/11/2024

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Project Site: DIEPPE BARRACK-BLOCK 2

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

27 °C Wet Bulb

		LOCATION			
1	**General**	**ROOF**		**01-02 NCR**	**01-03 SPARE**
	Identification No.	CU-2-4B (a)	CU-2-4B (b)	FCU-4B-1	FCU-4B-2
	Brand / Model	MITSUBISHI/ PUCY-P350YKD	MITSUBISHI/ PUCY-P300YKD	MITSUBISHI/ PKFY-P100VKM-E	MITSUBISHI/ PKFY-P100VKM-E
	Serial No.	41P-00016	26P-00266	26M21027	35M20582
2	**Current Measurement**				
	Running Ampere - L1	16.0	12.9		
	Running Ampere - L2	14.9	11.8		
	Running Ampere - L3	14.2	11.7		
3	**Pressure Setting**				
	Low Side (psi)	120			
	High Side (psi)	370			
4	**Temperature Measurement**				
	Thermostat Setting (°C)			22.0	22.0
	On-Coil Temperature (°C)			22.2	22.6
	Off-Coil Temperature (°C)			12.7	12.2
	Room Temperature:DB/WB(°C)			22.0 / 17.5	22.0 / 17.5
	Relative Humidity (%)			64.0	64.0
5	**Noise Measurement**				
	Equipment Off (dBA)	48.2		45.8	45.6
	Equipment On (dBA)	52.0		52.1	51.8

TESTED BY / DATE : 18/11/24
J. Alex / J. Abd

ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE :

RTO
Moe Thauk Tun
20/11/2024

AIR-CONDITIONING SYSTEM PERFORMANCE TEST

INTAC SYSTEMS SOLUTION PTE LTD
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 2-01 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**	**01-05 NCR**	**01-06 NCR**	**01-08 B-ROOM**	**01-09 NCR (S)**
	Identification No.	FCU-4B-3	FCU-4B-4	FCU-4B-5	FCU-4B-6
	Brand / Model	MITSUBISHI/ PKFY-P100VKM-E	MITSUBISHI/ PEFY-P140VMA-E	MITSUBISHI/ PEFY-P125VMA-E	MITSUBISHI/ PEFY-P125VMA-E
	Serial No.	35M20583	31M00167	25M00253	43M00345
2	**Current Measurement**				
	Running Ampere - L1				
	Running Ampere - L2				
	Running Ampere - L3				
3	**Pressure Setting**				
	Low Side (psi)				
	High Side (psi)				
4	**Temperature Measurement**				
	Thermostat Setting (°C)	22.0	22.0	22.0	22.0
	On-Coil Temperature (°C)	22.4	22.5	22.9	22.4
	Off-Coil Temperature (°C)	12.4	12.5	12.3	12.7
	Room Temperature:DB/WB(°C)	22.0 / 17.5	22.0 / 17.5	22.0 / 17.5	22.0 / 17.5
	Relative Humidity (%)	64.0	64.0	64.0	64.0
5	**Noise Measurement**				
	Equipment Off (dBA)	46.6	44.3	45.8	46.8
	Equipment On (dBA)	52.3	52.0	51.8	52.1

TESTED BY / DATE : 18/11/24

J. Alex / J. Aly

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE :

RTO

Moe Thauk Tun

20/11/2024

AIR-CONDITIONING SYSTEM PERFORMANCE TEST

INTAC SYSTEMS SOLUTION PTE LTD
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 2-01 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**	**01-10 NCR (C)**	**01-11 E-ROOM**		
	Identification No.	FCU-4B-7	FCU-4B-8		
	Brand / Model	MITSUBISHI/ PEFY-P63VMA-E	MITSUBISHI/ PKFY-P50VLM-E		
	Serial No.	43M00577	31M00042		
2	**Current Measurement**				
	Running Ampere - L1				
	Running Ampere - L2				
	Running Ampere - L3				
3	**Pressure Setting**				
	Low Side (psi)				
	High Side (psi)				
4	**Temperature Measurement**				
	Thermostat Setting (°C)	22.0	22.0		
	On-Coil Temperature (°C)	22.4	22.6		
	Off-Coil Temperature (°C)	11.9	11.8		
	Room Temperature:DB/WB(°C)	22.0 / 17.5	22.0 / 17.5		
	Relative Humidity (%)	64.0	64.0		
5	**Noise Measurement**				
	Equipment Off (dBA)	45.8	45.3		
	Equipment On (dBA)	51.0	50.4		

TESTED BY / DATE : 18/11/24
J. Alex / J. Arif

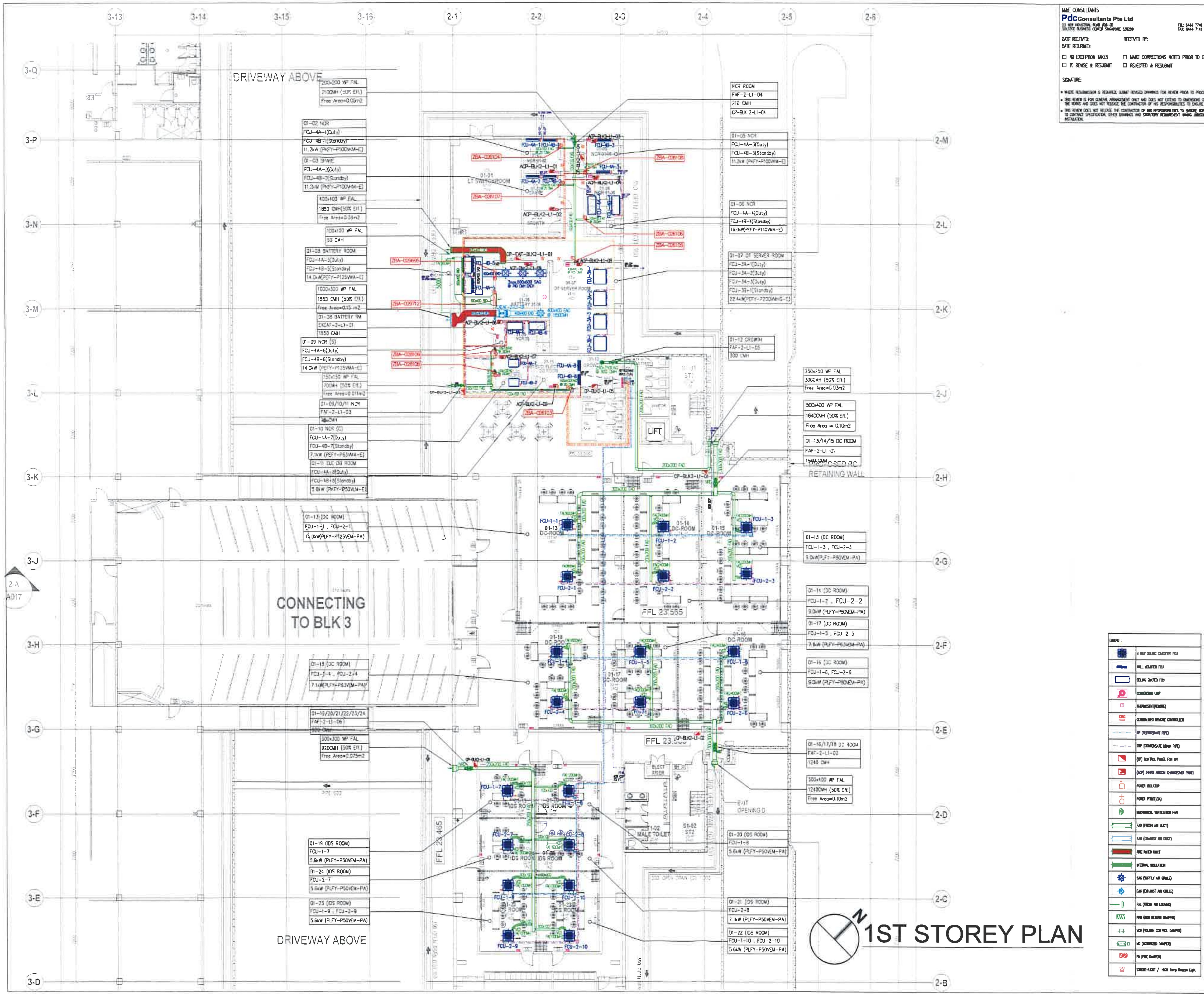
ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE :

RTO
Moe Thauk Tun
20/11/2024



M&E CONSULTANTS
Pdc Consultants Pte Ltd

DATE RECEIVED: RECEIVED BY:
DATE RETURNED:

- ☐ NO EXCEPTION TAKEN
- ☐ MAKE CORRECTIONS NOTED PRIOR TO GENERAL USE
- ☐ TO REVISE & RESUBMIT
- ☐ REJECTED & RESUBMIT

SIGNATURE:

AS-BUILT DRAWING

Project Ref. No. : A2105-00599-2022

DSTA
Defence Science & Technology Agency

PEH SEOH CHIN	EDMUND TEO XUAN WEI
HOD (Army Camps)	Senior Programme Manager

D&B Main Contractor:

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M&E Consultant:

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Sub Contractor:

INTAC SYSTEMS SOLUTION PTE LTD

Project No.:
D2019-00162

Project Title:

PROPOSED ADDITIONS OF 1 BLOCK OF 3-STOREY OFFICE BUILDING BLK 2, 1 BLOCK OF 6-STOREY ACCOMMODATION BUILDING BLK 3 (11), 1 BLOCK OF 4-STOREY ACCOMMODATION BUILDING BLK 4 (10), 1 BLOCK OF 2-STOREY TRAINING MULTIPLEX BLK 9 (6), 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 - 1ST STOREY ACMV LAYOUT PLAN

	Initial	Date		
Drawn	MS	13/11/24	Scale	1 : 150 (A1)
Checked	HK	13/11/24	Software	CAD

Drawing no.: D2019-00162/ISS/ACMV-BLK 2-01
Revision no.: 00

ACMV SCHEMATIC DIAGRAM

MAE CONSULTANTS
PDC Consultants Pte Ltd
11 UBI INDUSTRIAL ROAD #06-03
SINGAPORE 408723
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FAX: 6444 7161

DATE RECEIVED: RECEIVED BY:
DATE RETURNED:

☐ NO EXCEPTION TAKEN ☐ MAKE CORRECTIONS NOTED PRIOR TO GENERAL USE
☐ TO REVISE & RESUBMIT ☐ REJECTED & RESUBMIT

SIGNATURE:

- WHERE RESUBMISSION IS REQUIRED, SUBMIT REVISED DRAWINGS FOR REVIEW PRIOR TO PROCEEDING WITH WORK
- THIS REVIEW IS FOR GENERAL ARRANGEMENT ONLY AND DOES NOT EXTEND TO DIMENSIONS OR SETTING OUT OF THE WORKS AND DOES NOT RELEASE THE CONTRACTOR OF HIS RESPONSIBILITIES TO ENSURE FULL COMPLIANCE
- THIS REVIEW DOES NOT RELEASE THE CONTRACTOR OF HIS RESPONSIBILITIES TO ENSURE WORKS IN COMPLIANCE TO CONTRACT SPECIFICATION, OTHER DRAWINGS AND STATUTORY REQUIREMENT HAVING JURISDICTION OVER THE INSTALLATION.

AS-BUILT DRAWING

Project Ref. No. : A2105-00599-2022

DSTA
Defence Science & Technology Agency

PEH SEOK CHIN
MCE (Army Camps)

EDMUND TEO KUAN WEI
Senior Programme Manager

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Website : www.lianbeng.com.sg

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Email: intac@intac.com.sg

Project No.:
D2019-00162

Project Title:
PROPOSED ADDITIONS OF 1 BLOCK OF 3-STOREY OFFICE BUILDING BLK 2, 1 BLOCK OF 6-STOREY ACCOMMODATION BUILDING BLK 3 (11), 1 BLOCK OF 4-STOREY ACCOMMODATION BUILDING BLK 4 (10), 1 BLOCK OF 2-STOREY TRAINING MULTIPLEX BLK 9 (6), 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 SCHEMATIC DIAGRAM

	Initial	Date		
Drawn	MB	13/11/21	Scale	NTS
Checked	HK	13/11/21	Software	CAD

Drawing no.: D2019-00162/ISS/ACMV-BLK 2-09
Revision no.: 00

Air Conditioning Equipment Schedule - Level 1

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-2-1	ROOF	MITSUBISHI	PUCY-EP650YSKD	VRF - 410A	72.10	73.5													
			PUCY-P300YKD				1		7.82	12.50	18.75	32A(3φ)	1	ø 12.70	ø 22.20	10500	1650 x 920 x 740		
			PUCY-P350YKD				1		9.66	15.40	23.10	32A(3φ)	1	ø 12.70	ø 28.58	12600	1650 x 1220 x 740		
FCU-1-1	01-13 DC ROOM	MITSUBISHI	PLFY-P125VEM-PA	4-WAY CEILING CASSETTE	12.58	14.0	1		0.11	1.06	1.59	13A(1φ)	1	ø 9.52	ø 15.88	2100	298 x 840 x 840		
FCU-1-2	01-14 DC ROOM	MITSUBISHI	PLFY-P80VEM-PA	4-WAY CEILING CASSETTE	8.86	9.0	1		0.05	0.50	0.75	13A(1φ)	1	ø 9.52	ø 15.88	1380	258 x 840 x 840		
FCU-1-3	01-15 DC ROOM	MITSUBISHI	PLFY-P80VEM-PA	4-WAY CEILING CASSETTE	8.82	9.0	1		0.05	0.50	0.75	13A(1φ)	1	ø 9.52	ø 15.88	1380	258 x 840 x 840		
FCU-1-4	01-18 DC ROOM	MITSUBISHI	PLFY-P63VEM-PA	4-WAY CEILING CASSETTE	6.89	7.1	1	1	0.03	0.36	0.54	13A(1φ)	1	ø 9.52	ø 15.88	1140	258 x 840 x 840		
FCU-1-5	01-17 DC ROOM	MITSUBISHI	PLFY-P63VEM-PA	4-WAY CEILING CASSETTE	6.98	7.1	1		0.03	0.36	0.54	13A(1φ)	1	ø 9.52	ø 15.88	1140	258 x 840 x 840		
FCU-1-6	01-16 DC ROOM	MITSUBISHI	PLFY-P80VEM-PA	4-WAY CEILING CASSETTE	8.92	9.0	1		0.05	0.50	0.75	13A(1φ)	1	ø 9.52	ø 15.88	1380	258 x 840 x 840		
FCU-1-7	01-19 IDS ROOM	MITSUBISHI	PLFY-P50VEM-PA	4-WAY CEILING CASSETTE	5.28	5.6	1		0.03	0.32	0.48	13A(1φ)	1	ø 6.35	ø 12.70	1140	258 x 840 x 840		
FCU-1-8	01-20 IDS ROOM	MITSUBISHI	PLFY-P50VEM-PA	4-WAY CEILING CASSETTE	5.42	5.6	1		0.03	0.32	0.48	13A(1φ)	1	ø 6.35	ø 12.70	1140	258 x 840 x 840		
FCU-1-9	01-23 IDS ROOM	MITSUBISHI	PLFY-P50VEM-PA	4-WAY CEILING CASSETTE	4.12	5.6	1		0.03	0.32	0.48	13A(1φ)	1	ø 6.35	ø 12.70	1140	258 x 840 x 840		
FCU-1-10	01-22 IDS ROOM	MITSUBISHI	PLFY-P50VEM-PA	4-WAY CEILING CASSETTE	4.24	5.6	1		0.03	0.32	0.48	13A(1φ)	1	ø 6.35	ø 12.70	1140	258 x 840 x 840		
CU-2-2	ROOF	MITSUBISHI	PUCY-EP650YSKD	VRF - 410A	73.14	73.5													
			PUCY-P300YKD				1		7.82	12.5	18.75	32A(3φ)	1	ø 12.70	ø 22.20	10500	1650 x 920 x 740		
			PUCY-P350YKD				1		9.66	15.40	23.10	32A(3φ)	1	ø 12.70	ø 28.58	12600	1650 x 1220 x 740		
FCU-2-1	01-13 DC ROOM	MITSUBISHI	PLFY-P125VEM-PA	4-WAY CEILING CASSETTE	12.58	14.0	1		0.11	1.06	1.59	13A(1φ)	1	ø 9.52	ø 15.88	2100	298 x 840 x 840		
FCU-2-2	01-14 DC ROOM	MITSUBISHI	PLFY-P80VEM-PA	4-WAY CEILING CASSETTE	8.86	9.0	1		0.05	0.50	0.75	13A(1φ)	1	ø 9.52	ø 15.88	1380	258 x 840 x 840		
FCU-2-3	01-15 DC ROOM	MITSUBISHI	PLFY-P80VEM-PA	4-WAY CEILING CASSETTE	8.82	9.0	1		0.05	0.50	0.75	13A(1φ)	1	ø 9.52	ø 15.88	1380	258 x 840 x 840		
FCU-2-4	01-18 DC ROOM	MITSUBISHI	PLFY-P63VEM-PA	4-WAY CEILING CASSETTE	6.89	7.1	1	1	0.03	0.36	0.54	13A(1φ)	1	ø 9.52	ø 15.88	1140	258 x 840 x 840		
FCU-2-5	01-17 DC ROOM	MITSUBISHI	PLFY-P63VEM-PA	4-WAY CEILING CASSETTE	6.98	7.1	1		0.03	0.36	0.54	13A(1φ)	1	ø 9.52	ø 15.88	1140	258 x 840 x 840		
FCU-2-6	01-16 DC ROOM	MITSUBISHI	PLFY-P80VEM-PA	4-WAY CEILING CASSETTE	8.92	9.0	1		0.05	0.50	0.75	13A(1φ)	1	ø 9.52	ø 15.88	1380	258 x 840 x 840		
FCU-2-7	01-24 IDS ROOM	MITSUBISHI	PLFY-P50VEM-PA	4-WAY CEILING CASSETTE	5.46	5.6	1		0.03	0.32	0.48	13A(1φ)	1	ø 6.35	ø 12.70	1140	258 x 840 x 840		
FCU-2-8	01-21 IDS ROOM	MITSUBISHI	PLFY-P63VEM-PA	4-WAY CEILING CASSETTE	6.41	7.1	1		0.03	0.36	0.54	13A(1φ)	1	ø 9.52	ø 15.88	1140	258 x 840 x 840		
FCU-2-9	01-23 IDS ROOM	MITSUBISHI	PLFY-P50VEM-PA	4-WAY CEILING CASSETTE	4.12	5.6	1		0.03	0.32	0.48	13A(1φ)	1	ø 6.35	ø 12.70	1140	258 x 840 x 840		
FCU-2-10	01-22 IDS ROOM	MITSUBISHI	PLFY-P50VEM-PA	4-WAY CEILING CASSETTE	4.24	5.6	1		0.03	0.32	0.48	13A(1φ)	1	ø 6.35	ø 12.70	1140	258 x 840 x 840		
CU-2-3A	ROOF	MITSUBISHI	PUCY-P600YSKD	VRF - 410A	63.74	68.0													
			PUCY-P250YKD				1		3.93	9.50	14.25	32A(3φ)	1	ø 9.52	ø 22.22	10500	1650 x 920 x 740		
			PUCY-P350YKD				1		9.66	15.40	23.10	32A(3φ)	1	ø 12.70	ø 28.58	12600	1650 x 1220 x 740		
FCU-3A-1	01-07 OT SEVER ROOM	MITSUBISHI	PEFY-P200VMHS-E	CEILING DUCTED	21.25	22.4	1	1	0.63	3.32	4.98	13A(1φ)	1	ø 9.52	ø 19.05	4320	470 x 1250 x 1120	DUTY	ACP-BLK 2-L1-08 (13A/1ø)
FCU-3A-2		MITSUBISHI	PEFY-P200VMHS-E	CEILING DUCTED	21.25	22.4	1		0.63	3.32	4.98	13A(1φ)	1	ø 9.52	ø 19.05	4320	470 x 1250 x 1120		
FCU-3A-3		MITSUBISHI	PEFY-P200VMHS-E	CEILING DUCTED	21.25	22.4	1		0.63	3.32	4.98	13A(1φ)	1	ø 9.52	ø 19.05	4320	470 x 1250 x 1120		
CU-2-3B	ROOF	MITSUBISHI	PUCY-P200YKD	VRF - 410A	21.25	22.4	1		4.66	7.40	11.10	20A(3φ)	1	ø 9.52	ø 22.22	10500	1650 x 920 x 740		
FCU-3B-1	01-07 OT SEVER ROOM	MITSUBISHI	PEFY-P200VMHS-E	CEILING DUCTED	21.25	22.4	1		0.63	3.32	4.98	13A(1φ)	1	ø 9.52	ø 19.05	4320	470 x 1250 x 1120	STANDBY	
CU-2-4A	ROOF	MITSUBISHI	PUCY-EP650YSKD	VRF - 410A	71.03	73.5													
			PUCY-P300YKD				1		7.82	12.50	18.75	32A(3φ)	1	ø 12.70	ø 22.20	10500	1650 x 920 x 740		
			PUCY-P350YKD				1		9.66	15.40	23.10	32A(3φ)	1	ø 12.70	ø 28.58	12600	1650 x 1220 x 740		
FCU-4A-1	01-02 NCR	MITSUBISHI	PKFY-P100VKM-E	WALL MOUNTED	8.78	11.2	1		0.08	0.58	0.87	13A(1φ)	1	ø 9.52	ø 15.88	1560	365 x 1170 x 295		ACP-BLK 2-L1-01 (13A/1ø)
FCU-4A-2	01-03 SPARE	MITSUBISHI	PKFY-P100VKM-E	WALL MOUNTED	8.58	11.2	1		0.20	1.34	2.01	13A(1φ)	1	ø 9.52	ø 15.88	2400	250 x 1600 x 732		ACP-BLK 2-L1-02 (13A/1ø)
FCU-4A-3	01-05 NCR	MITSUBISHI	PKFY-P100VKM-E	WALL MOUNTED	8.68	11.2	1	1	0.08	0.58	0.87	13A(1φ)	1	ø 9.52	ø 15.88	1560	365 x 1170 x 295	DUTY	ACP-BLK 2-L1-03 (13A/1ø)
FCU-4A-4	01-06 NCR	MITSUBISHI	PEFY-P140VMA-E	CEILING DUCTED	15.99	16.0	1		0.08	0.58	0.87	13A(1φ)	1	ø 9.52	ø 15.88	1560	365 x 1170 x 295		ACP-BLK 2-L1-04 (13A/1ø)
FCU-4A-5	01-08 BATTERY	MITSUBISHI	PEFY-P125VMA-E	CEILING DUCTED	12.52	14.0	1		0.20	1.23	1.85	13A(1φ)	1	ø 9.52	ø 15.88	2200	250 x 1400 x 732		ACP-BLK 2-L1-05 (13A/1ø)
FCU-4A-6	01-09 NCR (S)	MITSUBISHI	PEFY-P125VMA-E	CEILING DUCTED	12.43	14.0	1		0.20	1.23	1.85	13A(1φ)	1	ø 9.52	ø 15.88	2200	250 x 1400 x 732		ACP-BLK 2-L1-06 (13A/1ø)
FCU-4A-7	01-10 NCR (C)	MITSUBISHI	PEFY-P63VMA-E	CEILING DUCTED	6.89	7.1	1		0.03	0.36	0.54	13A(1φ)	1	ø 9.52	ø 15.88	1140	258 x 840 x 840		ACP-BLK 2-L1-07 (13A/1ø)
FCU-4A-8	01-11 ELEC ROOM	MITSUBISHI	PKFY-P50VLM-E	WALL MOUNTED	4.04	5.6	1		0.04	0.35	0.53	13A(1φ)	1	ø 6.35	ø 12.70	600	299 x 898 x 237		ACP-BLK 2-L1-09 (13A/1ø)
CU-2-4B	ROOF	MITSUBISHI	PUCY-EP650YSKD	VRF - 410A	71.03	73.5													
			PUCY-P300YKD				1		7.82	12.50	18.75	32A(3φ)	1	ø 12.70	ø 22.20	10500	1650 x 920 x 740		
			PUCY-P350YKD				1		9.66	15.40	23.10	32A(3φ)	1	ø 12.70	ø 28.58	12600	1650 x 1220 x 740		
FCU-4B-1	01-02 NCR	MITSUBISHI	PKFY-P100VKM-E	WALL MOUNTED	8.58	11.2	1		0.08	0.58	0.87	13A(1φ)	1	ø 9.52	ø 15.88	1560	365 x 1170 x 295		
FCU-4B-2	01-03 SPARE	MITSUBISHI	PKFY-P100VKM-E	WALL MOUNTED	8.58	11.2	1		0.20	1.34	2.01	13A(1φ)	1	ø 9.52	ø 15.88	2400	250 x 1600 x 732		
FCU-4B-3	01-05 NCR	MITSUBISHI	PKFY-P100VKM-E	WALL MOUNTED	8.68	11.2	1	1	0.08	0.58	0.87	13A(1φ)	1	ø 9.52	ø 15.88	1560	365 x 1170 x 295	STANDBY	
FCU-4B-4	01-06 NCR	MITSUBISHI	PEFY-P140VMA-E	CEILING DUCTED	15.99	16.0	1		0.08	0.58	0.87	13A(1φ)	1	ø 9.52	ø 15.88	1560	365 x 1170 x 295		
FCU-4B-5	01-08 BATTERY	MITSUBISHI	PEFY-P125VMA-E	CEILING DUCTED	12.52	14.0	1		0.20	1.23	1.85	13A(1φ)	1	ø 9.52	ø 15.88	2200	250 x 1400 x 732		
FCU-4B-6	01-09 NCR (S)	MITSUBISHI	PEFY-P125VMA-E	CEILING DUCTED	12.43	14.0	1		0.20	1.23	1.85	13A(1φ)	1	ø 9.52	ø 15.88	2200	250 x 1400 x 732		
FCU-4B-7	01-10 NCR (C)	MITSUBISHI	PEFY-P63VMA-E	CEILING DUCTED	6.89	7.1	1		0.03	0.36	0.54	13A(1φ)	1	ø 9.52	ø 15.88	1140	258 x 840 x 840		
FCU-4B-8	01-11 ELEC ROOM	MITSUBISHI	PKFY-P50VLM-E	WALL MOUNTED	4.04	5.6	1		0.04	0.35	0.53	13A(1φ)	1	ø 6.35	ø 12.70	600	299 x 898 x 237		

MAE CONSULTANTS
Pdc Consultants Pte Ltd
23 NEW INDUSTRIAL ROAD #06-03
SOLSTICE BUSINESS CENTER SINGAPORE 536209
TEL: 6444 7748
FAX: 6444 7141

DATE RECEIVED: RECEIVED BY:
DATE RETURNED:

☐ NO EXCEPTION TAKEN ☐ MAKE CORRECTIONS NOTED PRIOR TO GENERAL USE
☐ TO REVISE & RESUBMIT ☐ REJECTED & RESUBMIT

SIGNATURE

- WHERE RESUBMISSION IS REQUIRED, SUBMIT REVISED DRAWINGS FOR REVIEW PRIOR TO PROCEEDING WITH WORK
- THIS REVIEW IS FOR GENERAL ARRANGEMENT ONLY AND DOES NOT EXTEND TO DIMENSIONS, OR SETTING OUT OF THE WORKS AND DOES NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES TO ENSURE FULL COMPLIANCE
- THIS REVIEW DOES NOT RELEASE THE CONTRACTOR OF HIS RESPONSIBILITIES TO ENSURE WORKS IN COMPLIANCE TO CONTRACT SPECIFICATION, OTHER DRAWINGS AND STATUTORY REQUIREMENT HAVING JURISDICTION OVER THE INSTALLATION

AS-BUILT DRAWING

Project Ref. No. : A2105-00599-2022

DSTA
Defence Science & Technology Agency

PEH SEOK CHIN
HOD (Army Camps)

EDMUND TEO KUAN WEI
Senior Programme Manager

D&B Main Contractor:

DEENN ENGINEERING PTE LTD
29 Harrison Road, Lian Beng Building , Singapore 369648
TEL: No 6283 1468 FAX No. 6280 9360
e-mail : lianbengconstn@pacific.net.sg
Website: www.lianbeng.com.sg

Architect:

ID ARCHITECTS PTE LTD
3 HarbourFront Place, #03-01,
HarbourFront Tower Two,
Singapore 099254
Tel:6223 8011
Fax:6226 6022
general@idarchitects.com.sg
www.idarchitects.com.sg

Structure:

TW-ASIA Consultants Pte Ltd
NO. 28 SIN MING LANE #04-137 MIDVIEW CITY
SINGAPORE 573972 TEL : 62916292 FAX : 62932196

M&E Consultant:

Pdc Consultants Pte Ltd
MECHANICAL + ELECTRICAL
Paya Lebar Square
#10-17/18 (Office Lobby 1)
60 Paya Lebar Road Singapore 409051
t: 6444 7748 f: 6444 7141
e: contact@pdcengrs.com

Sub Contractor:

INTAC SYSTEMS SOLUTION PTE LTD
BLOCK 1 KAKI BUKIT AVENUE 3
#04-03/04-1, SINGAPORE 416087
Tel: +65 6842 7315 Fax: +65 6842 7316
Email: intacss@intacss.com.sg

Project No.:
D2019-00162

Project Title:
PROPOSED ADDITIONS OF 1 BLOCK OF 3-STOREY OFFICE BUILDING BLK 2, 1 BLOCK OF 6-STOREY ACCOMMODATION BUILDING BLK 3 (11), 1 BLOCK OF 4-STOREY ACCOMMODATION BUILDING BLK 4 (10), 1 BLOCK OF 2-STOREY TRAINING MULTIPLEX BLK 9 (6), 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-01

	Initial	Date		
Drawn	MB	13/11/20	Scale	NTS
Checked	HK	13/11/20	Software	CAD

Drawing no.: D2019-00162/ISS/ACMV-BLK 2-05
Revision no.: 00

CALTEK PTE LTD
23 Tagore Lane, #04-08/09/10/11 Tagore 23 Warehouse, Singapore 787601
Tel: (65) 6452 0300 I Fax: (65) 6452 0500
www.caltekgroup.com I 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 ± 5) °C
Manufacturer	: ZEAL	**Relative Humidity**	: (55 ± 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** Blk 1 Kaki Bukit Avenue 3 #04-03 KB-1 Singapore 416087	**Range** *(Tag No.)* **Page** **Status**	: — : — : 1 of 2 : 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)	SERIAL NO	DUE DATE
1. Digital Thermo-Hygrometer	72033235/20055608	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 "guarantee" 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.

CALIBRATION CERTIFICATE

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

JOB NUMBER : CCJR 24-7207

MEAN REFERENCE READING (% r.h.)	MEAN INSTRUMENTREADING (% r.h.) BEFORE ADJUSTMENT	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. Vauth

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

CERTIFICATE NUMBER	:	CTT 1919-24	**JR NO**	:	JR-16551
INSTRUMENT CODE	:	100024-14126	**PAGE NUMBER**	:	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 CTTM-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 :		**Approved By :**	
Kaartigeish Sivaraman	Kti	Mohan Vasanth	M Vasanth
EMP ID : 1112		EMP ID : 1124	

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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

CERTIFICATE NUMBER	:	CTT 1919-24	**JR NO**	:	JR-16551
INSTRUMENT CODE	:	100024-14126	**PAGE NUMBER**	:	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 Vasanth

EMP ID : 1124

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MECHANICAL VENTILATION SYSTEM FUNCTIONAL TEST

INTAC SYSTEMS SOLUTION PTE LTD

BLK 2 - level - 1
01 - 13
01 - 14
01 - 15

Project No.: D2019-00162/ISS/ACMV-BLK 2-01 Reference:

Project Site: DIEPPE BARRACK – BLOCK 2 Test Date: 20/11/24

	CP/BLK2-L1-01	Observation	Result	Remarks
1.	**General**			
a.	Verify enclosure of system control panel			
	• Proper labelling of system control panel	Yes / ~~No~~		
b.	Turn on incoming power supply and check working			
	• Incoming power supply lights	Yes / ~~No~~		
2.	**Manual Operation**			
a.	Select AOM selector switch to 'M' position and verify the following system operations:			
	• Press 'Start' button, Fan 'Run' indicator light 'On'	Yes / ~~No~~		
	• Press 'Stop' button, Fan 'Stop' indicator light 'On'	Yes / ~~No~~		
3.	**Automatic / Interlocking Operation**			
a.	Simulating Lighting 'On'			
	• Motorized Damper 'Open'	Yes / ~~No~~		
	• FAF 'On'	~~Yes~~ / No NA		
	• EAF 'On'	Yes / No		
	• TEAF 'On'	~~Yes~~ / No		
b.	Simulating AC 'On'			
	• FAF 'On'	Yes / ~~No~~		
c.	Simulating Fire Alarm Signal Activated			
	• Motorized Damper 'Close'	Yes / ~~No~~		
	• EAF 'Off'	~~Yes~~ / No NA		
	• FAF 'Off'	~~Yes~~ / No		
d.	Simulating Hydrogen Sensor Alarm Activated			
	• Motorized Damper 'Open'	Yes / ~~No~~		
	• EAF 'On'	~~Yes~~ / No NA		
	• FAF 'On'	~~Yes~~ / No		
4.	**System Protection**			
a.	Simulating Overload Trip			
	• Fan 'Trip', Fan 'Trip' indicator light 'On'	Yes / ~~No~~		
	• Clear the 'Trip', 'Trip' indicator light 'Off'	Yes / ~~No~~		

TESTED BY / DATE: 18/11/24

J. Alex / J. Ajit

ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE:

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE:

RTO

Moe Thauk Tun
20/11/2024

MECHANICAL VENTILATION SYSTEM FUNCTIONAL TEST

INTAC SYSTEMS SOLUTION PTE LTD

BLK2 level-2
01-16
01-17
01-18

Project No.: D2019-00162/ISS/ACMV-BLK 2-01 Reference:

Project Site: DIEPPE BARRACK – BLOCK 2 Test Date: 20/11/24

	CP/BLK2-L1-02	Observation	Result	Remarks
1.	**General**			
a.	Verify enclosure of system control panel			
	• Proper labelling of system control panel	Yes / ~~No~~		
b.	Turn on incoming power supply and check working			
	• Incoming power supply lights	Yes / ~~No~~		
2.	**Manual Operation**			
a.	Select AOM selector switch to 'M' position and verify the following system operations:			
	• Press 'Start' button, Fan 'Run' indicator light 'On'	Yes / ~~No~~		
	• Press 'Stop' button, Fan 'Stop' indicator light 'On'	Yes / ~~No~~		
3.	**Automatic / Interlocking Operation**			
a.	Simulating Lighting 'On'			
	• Motorized Damper 'Open'	Yes / No		
	• FAF 'On'	~~Yes~~ / No NA		
	• EAF 'On'	~~Yes~~ / No		
	• TEAF 'On'	~~Yes~~ / No		
b.	Simulating AC 'On'			
	• FAF 'On'	Yes / ~~No~~		
c.	Simulating Fire Alarm Signal Activated			
	• Motorized Damper 'Close'	Yes / No		
	• EAF 'Off'	~~Yes~~ / No NA		
	• FAF 'Off'	~~Yes~~ / No		
d.	Simulating Hydrogen Sensor Alarm Activated			
	• Motorized Damper 'Open'	Yes / ~~No~~		
	• EAF 'On'	~~Yes~~ / No NA		
	• FAF 'On'	~~Yes~~ / No		
4.	**System Protection**			
a.	Simulating Overload Trip			
	• Fan 'Trip', Fan 'Trip' indicator light 'On'	Yes / ~~No~~		
	• Clear the 'Trip', 'Trip' indicator light 'Off'	Yes / ~~No~~		

TESTED BY / DATE: 18/11/24

J. Alex / J. Aby

ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE:

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE:

RTO

Moe Thauk Tun
20/11/2024

MECHANICAL VENTILATION SYSTEM FUNCTIONAL TEST

INTAC SYSTEMS SOLUTION PTE LTD

Blk2 level-2
#01-09
01-10
01-11

Project No.: D2019-00162/ISS/ACMV-BLK 2-01 Reference:

Project Site: DIEPPE BARRACK – BLOCK 2 Test Date: 20/11/24

	CP/BLK2-L1-03	Observation	Result	Remarks
1.	**General**			
a.	Verify enclosure of system control panel			
	• Proper labelling of system control panel	Yes / ~~No~~		
b.	Turn on incoming power supply and check working			
	• Incoming power supply lights	Yes / ~~No~~		
2.	**Manual Operation**			
a.	Select AOM selector switch to 'M' position and verify the following system operations:			
	• Press 'Start' button, Fan 'Run' indicator light 'On'	Yes / ~~No~~		
	• Press 'Stop' button, Fan 'Stop' indicator light 'On'	Yes / ~~No~~		
3.	**Automatic / Interlocking Operation**			
a.	Simulating Lighting 'On'			
	• Motorized Damper 'Open'	Yes / ~~No~~		
	• FAF 'On'	Yes / ~~No~~		
	• EAF 'On'	~~Yes / No~~ Na		
	• TEAF 'On'	~~Yes / No~~		
b.	Simulating AC 'On'			
	• FAF 'On'	~~Yes / No~~ Na		
c.	Simulating Fire Alarm Signal Activated			
	• Motorized Damper 'Close'	Yes / ~~No~~		For #01-09 & #01-10
	• EAF 'Off'	~~Yes / No~~ Na		
	• FAF 'Off'	Yes / ~~No~~		
d.	Simulating Hydrogen Sensor Alarm Activated			
	• Motorized Damper 'Open'	Yes / ~~No~~		
	• EAF 'On'	Yes / No Na		
	• FAF 'On'	~~Yes~~ / No		
4.	**System Protection**			
a.	Simulating Overload Trip			
	• Fan 'Trip', Fan 'Trip' indicator light 'On'	Yes / ~~No~~		
	• Clear the 'Trip', 'Trip' indicator light 'Off'	Yes / ~~No~~		

TESTED BY / DATE: 18/11/24

J. Alex / J. Duy

ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE:

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE:

RTO

Moe Thauk Tun
20/11/2024

MECHANICAL VENTILATION SYSTEM FUNCTIONAL TEST

INTAC SYSTEMS SOLUTION PTE LTD

BLK2 level-1
#01-02
01-03
01-05
01-06
01-07

Project No.: D2019-00162/ISS/ACMV-BLK 2-01 Reference:

Project Site: DIEPPE BARRACK – BLOCK 2 Test Date: 20/11/24

	CP/BLK2-L1-04	Observation	Result	Remarks
1.	**General**			
a.	Verify enclosure of system control panel			
	• Proper labelling of system control panel	Yes / ~~No~~		
b.	Turn on incoming power supply and check working			
	• Incoming power supply lights	Yes / ~~No~~		
2.	**Manual Operation**			
a.	Select AOM selector switch to 'M' position and verify the following system operations:			
	• Press 'Start' button, Fan 'Run' indicator light 'On'	Yes / ~~No~~		
	• Press 'Stop' button, Fan 'Stop' indicator light 'On'	Yes / ~~No~~		
3.	**Automatic / Interlocking Operation**			
a.	Simulating Lighting 'On'			
	• Motorized Damper 'Open'	Yes / ~~No~~		
	• FAF 'On'	Yes / ~~No~~		
	• EAF 'On'	~~Yes / No~~ Na		
	• TEAF 'On'	~~Yes / No~~		
b.	Simulating AC 'On'			
	• FAF 'On'	~~Yes / No~~ Na		
c.	Simulating Fire Alarm Signal Activated			
	• Motorized Damper 'Close'	Yes / ~~No~~		Only for #01-07
	• EAF 'Off'	~~Yes / No~~ Na		
	• FAF 'Off'	Yes / ~~No~~		
d.	Simulating Hydrogen Sensor Alarm Activated			
	• Motorized Damper 'Open'	Yes / ~~No~~		
	• EAF 'On'	Yes / No Na		
	• FAF 'On'	~~Yes~~ / No		
4.	**System Protection**			
a.	Simulating Overload Trip			
	• Fan 'Trip', Fan 'Trip' indicator light 'On'	Yes / ~~No~~		
	• Clear the 'Trip', 'Trip' indicator light 'Off'	Yes / ~~No~~		

TESTED BY / DATE: 18/11/24

J. Alex / J. Arif

ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE:

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

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20/11/2024

MECHANICAL VENTILATION SYSTEM FUNCTIONAL TEST

INTAC SYSTEMS SOLUTION PTE LTD

Blk Level-1 #01-12

Project No.: D2019-00162/ISS/ACMV-BLK 2-01 Reference:

Project Site: DIEPPE BARRACK – BLOCK 2 Test Date: 20/11/24

	CP/BLK2-L1-05	Observation	Result	Remarks
1.	**General**			
a.	Verify enclosure of system control panel			
	• Proper labelling of system control panel	Yes / ~~No~~		
b.	Turn on incoming power supply and check working			
	• Incoming power supply lights	Yes / ~~No~~		
2.	**Manual Operation**			
a.	Select AOM selector switch to 'M' position and verify the following system operations:			
	• Press 'Start' button, Fan 'Run' indicator light 'On'	Yes / ~~No~~		
	• Press 'Stop' button, Fan 'Stop' indicator light 'On'	Yes / ~~No~~		
3.	**Automatic / Interlocking Operation**			
a.	Simulating Lighting 'On'			
	• Motorized Damper 'Open'	~~Yes / No~~ Na		
	• FAF 'On'	Yes / ~~No~~		
	• EAF 'On'	~~Yes / No~~ Na		
	• TEAF 'On'	~~Yes / No~~ Na		
b.	Simulating AC 'On'			
	• FAF 'On'	~~Yes / No~~		
c.	Simulating Fire Alarm Signal Activated			
	• Motorized Damper 'Close'	Yes / No		
	• EAF 'Off'	Yes / No Na		
	• FAF 'Off'	Yes / No		
d.	Simulating Hydrogen Sensor Alarm Activated			
	• Motorized Damper 'Open'	Yes / No		
	• EAF 'On'	Yes / No Na		
	• FAF 'On'	Yes / No		
4.	**System Protection**			
a.	Simulating Overload Trip			
	• Fan 'Trip', Fan 'Trip' indicator light 'On'	Yes / ~~No~~		
	• Clear the 'Trip', 'Trip' indicator light 'Off'	Yes / ~~No~~		

TESTED BY / DATE: 18/11/24

J. Alex / J. Ady

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INTAC SYSTEMS SOLUTION PTE LTD

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DEENN ENGINEERING PTE. LTD.

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20/11/2024

MECHANICAL VENTILATION SYSTEM FUNCTIONAL TEST

INTAC SYSTEMS SOLUTION PTE LTD

Blk2 level - 1
#01-19
01-20
01-21
01-22
01-23
01-24

Project No.: D2019-00162/ISS/ACMV-BLK 2-01 Reference:

Project Site: DIEPPE BARRACK – BLOCK 2 Test Date: 20/11/24

	CP/BLK2-L1-06	Observation	Result	Remarks
1.	**General**			
a.	Verify enclosure of system control panel			
	• Proper labelling of system control panel	Yes / ~~No~~		
b.	Turn on incoming power supply and check working			
	• Incoming power supply lights	Yes / ~~No~~		
2.	**Manual Operation**			
a.	Select AOM selector switch to 'M' position and verify the following system operations:			
	• Press 'Start' button, Fan 'Run' indicator light 'On'	Yes / ~~No~~		
	• Press 'Stop' button, Fan 'Stop' indicator light 'On'	Yes / ~~No~~		
3.	**Automatic / Interlocking Operation**			
a.	Simulating Lighting 'On'			
	• Motorized Damper 'Open'	Yes / No		
	• FAF 'On'	Yes / No		
	• EAF 'On'	~~Yes~~ / No Na		
	• TEAF 'On'	Yes / No		
b.	Simulating AC 'On'			
	• FAF 'On'	Yes / ~~No~~		
c.	Simulating Fire Alarm Signal Activated			
	• Motorized Damper 'Close'	Yes / ~~No~~		
	• EAF 'Off'	~~Yes~~ / No Na		
	• FAF 'Off'	Yes / No		
d.	Simulating Hydrogen Sensor Alarm Activated			
	• Motorized Damper 'Open'	Yes / ~~No~~		
	• EAF 'On'	~~Yes~~ / No Na		
	• FAF 'On'	Yes / No		
4.	**System Protection**			
a.	Simulating Overload Trip			
	• Fan 'Trip', Fan 'Trip' indicator light 'On'	Yes / ~~No~~		
	• Clear the 'Trip', 'Trip' indicator light 'Off'	Yes / ~~No~~		

TESTED BY / DATE: 18/11/24

J. Alex / J. Arul

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INTAC SYSTEMS SOLUTION PTE LTD

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DEENN ENGINEERING PTE. LTD.

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20/11/2024

MECHANICAL VENTILATION SYSTEM FUNCTIONAL TEST

INTAC SYSTEMS SOLUTION PTE LTD

BLK 2 Level-1
01-08

Project No.: D2019-00162/ISS/ACMV-BLK 2-03 Reference:

Project Site: DIEPPE BARRACK – BLOCK 2 Test Date: 20/11/24

	CP-EXEAF-BLK2-L1-01	Observation	Result	Remarks
1.	**General**			
a.	Verify enclosure of system control panel			
	• Proper labelling of system control panel	Yes / ~~No~~		
b.	Turn on incoming power supply and check working			
	• Incoming power supply lights	Yes / ~~No~~		
2.	**Manual Operation**			
a.	Select AOM selector switch to 'M' position and verify the following system operations:			
	• Press 'Start' button, Fan 'Run' indicator light 'On'	Yes / ~~No~~		
	• Press 'Stop' button, Fan 'Stop' indicator light 'On'	Yes / ~~No~~		
3.	**Automatic / Interlocking Operation**			
a.	Simulating Lighting 'On'			
	• Motorized Damper 'Open'	Yes / ~~No~~		
	• FAF 'On'	Yes / ~~No~~ Na		
	• EAF 'On'	Yes / No		
	• TEAF 'On'	Yes / No		
b.	Simulating AC 'On'			
	• FAF 'On'	~~Yes / No~~ Na		
c.	Simulating Fire Alarm Signal Activated			
	• Motorized Damper 'Close'	Yes / ~~No~~		
	• EAF 'Off'	Yes / ~~No~~		
	• FAF 'Off'	~~Yes / No~~ Na		
d.	Simulating Hydrogen Sensor Alarm Activated			
	• Motorized Damper 'Open'	Yes / ~~No~~		
	• EAF 'On'	Yes / ~~No~~		
	• FAF 'On'	~~Yes / No~~ Na		
4.	**System Protection**			
a.	Simulating Overload Trip			
	• Fan 'Trip', Fan 'Trip' indicator light 'On'	Yes / ~~No~~		
	• Clear the 'Trip', 'Trip' indicator light 'Off'	Yes / ~~No~~		

TESTED BY / DATE: 18/11/24

J. Alex / J. Ang

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INTAC SYSTEMS SOLUTION PTE LTD

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DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE:

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Moe Thauk Tun
20/11/2024

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 2-01 Test Date : _____

Project Site DIEPPE BARRACK-BLOCK 2

Location	01-13 / 14 / 15 DC ROOM		
1. General			
Type of Equipment	CIL		
Identification No.	FAF-2-L1-01		
Brand / Model	SYSTEMAIR/ PRIO 250 E2		
2. Current Measurement (1Ø)			
Motor Rating (kW)	0.194		
Running Ampere (Amp) (Actual)	0.780		
3. Air Flow			
Airflow (CMH) (Design)	1,640		
Airflow (CMH) (Actual)	1,648		
4. Noise Measurement			
Motor RPM	2,692		
Equipment Off (dBA)	45.3		
Equipment On (dBA)	56.8		

TESTED BY / DATE : 18/11/24
J. Alex / J. Dy

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INTAC SYSTEMS SOLUTION PTE LTD

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WITNESSED BY / DATE :

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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 2-01
Project Site DIEPPE BARRACK-BLOCK 2 Test Date :

1. General			
Type of Equipment	CIL	Identification No.	FAF-2-L1-01
Brand / Model	SYSTEMAIR/ PRIO 250 E2	Capacity	1640 CMH

2. Description

Location / Room No.	Grille Designation	Flexible Duct (Ø100mm)	Designed Air Velocity (m/s)	Designed Air Flow (m^3/h)	Actual Air Velocity (m/s)	Actual Air Flow (m^3/h)	
01-13 DC ROOM	1 (m^2) =====>	0.00785	12.74	360	12.80	362	
	2 (m^2) =====>	0.00785	12.74	360	12.80	362	
01-14 DC ROOM	3 (m^2) =====>	0.00785	8.49	240	8.50	240	
	4 (m^2) =====>	0.00785	8.49	240	8.60	243	
01-15 DC ROOM	5 (m^2) =====>	0.00785	7.78	220	7.80	220	
	6 (m^2) =====>	0.00785	7.78	220	7.80	220	
			Total	1640		1648	

REMARKS:

TESTED BY / DATE : 18/11/24
J.Alex / J.Arut
ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE :
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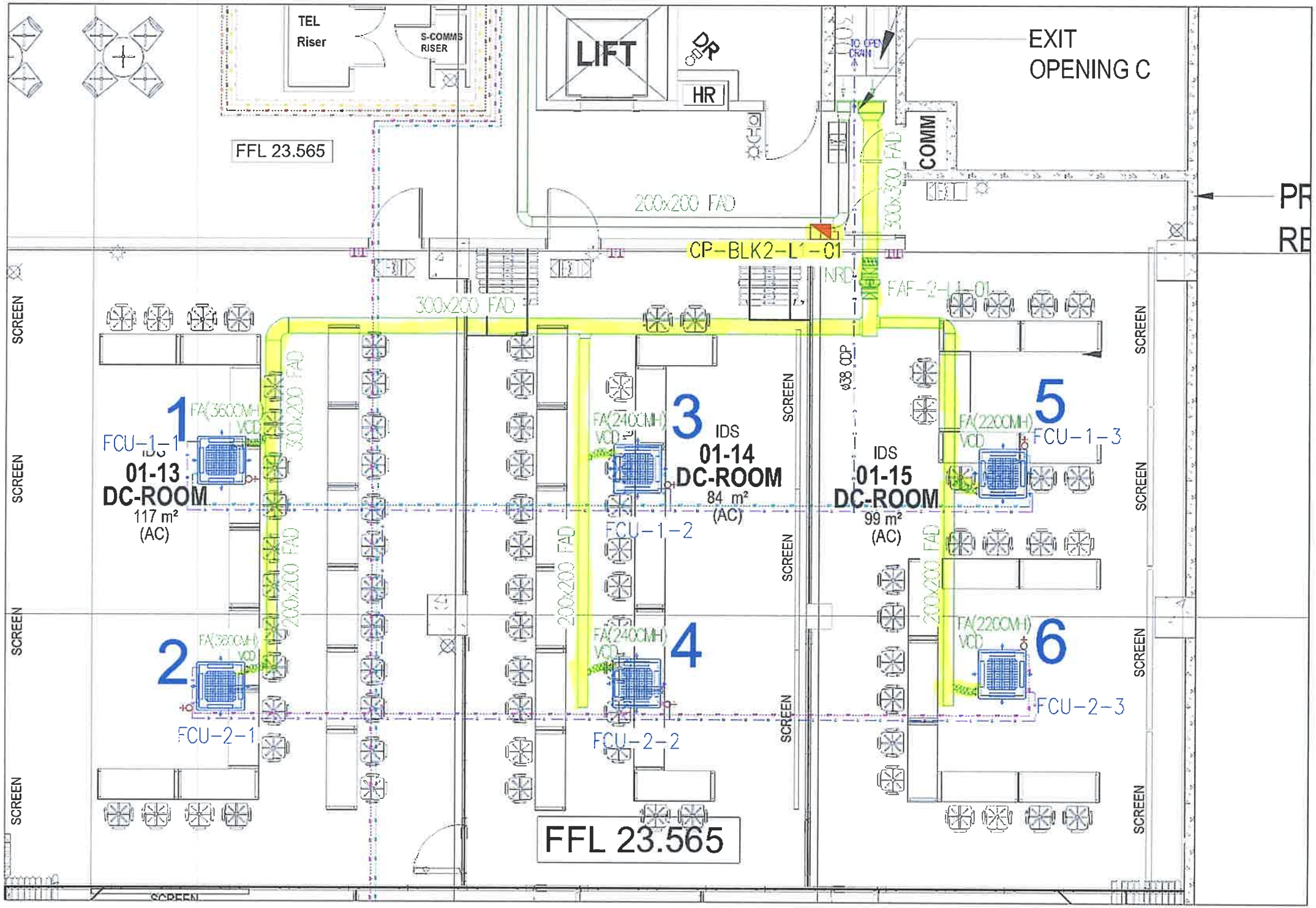
Moe Thauk Tun
21/11/2024


TEL
Riser
S-COMMS
RISER
LIFT
DR
HR
EXIT
OPENING C
COMM
FFL 23.565
200x200 FAD
300x300 FAD
CP-BLK2-L1-01
300x200 FAD
FAF-2-L1-01
SCREEN
1
FA(3600M³/H)
VCD
FCU-1-1
IDS
01-13
DC-ROOM
117 m²
(AC)
2
FA(3600M³/H)
VCD
FCU-2-1
3
FA(2400M³/H)
VCD
FCU-1-2
IDS
01-14
DC-ROOM
84 m²
(AC)
4
FA(2400M³/H)
VCD
FCU-2-2
ø38 CDP
IDS
01-15
DC-ROOM
99 m²
(AC)
5
FA(2200M³/H)
VCD
FCU-1-3
6
FA(2200M³/H)
VCD
FCU-2-3
FFL 23.565

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 2-01 Test Date : _____

Project Site DIEPPE BARRACK-BLOCK 2

Location	01-16 / 17 / 18 DC ROOM		
1. General			
Type of Equipment	CIL		
Identification No.	FAF-2-L1-02		
Brand / Model	SYSTEMAIR/K315 L SILEO		
2. Current Measurement (1Ø)			
Motor Rating (kW)	0.318		
Running Ampere (Amp) (Actual)	1.280		
3. Air Flow			
Airflow (CMH) (Design)	1,240		
Airflow (CMH) (Actual)	1,297		
4. Noise Measurement			
Motor RPM	3,218		
Equipment Off (dBA)	44.7		
Equipment On (dBA)	58.2		

TESTED BY / DATE : 18/11/24
J. Alex / J. Arif

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE :

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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 2-01
Project Site DIEPPE BARRACK-BLOCK 2 Test Date :

1. General			
Type of Equipment	CIL	Identification No.	FAF-2-L1-02
Brand / Model	SYSTEMAIR/K315 L SILEO	Capacity	1240 CMH

2. Description

Location / Room No.	Grille Designation	Flexible Duct (Ø100mm)	Designed Air Velocity (m/s)	Designed Air Flow (m^3/h)	Actual Air Velocity (m/s)	Actual Air Flow (m^3/h)	
01-16 DC ROOM	1 (m^2) =====>	0.00785	8.49	240	8.50	240	
	2 (m^2) =====>	0.00785	8.49	240	8.70	246	
01-17 DC ROOM	3 (m^2) =====>	0.00785	7.08	200	7.30	206	
	4 (m^2) =====>	0.00785	7.08	200	7.70	218	
01-18 DC ROOM	5 (m^2) =====>	0.00785	6.37	180	6.80	192	
	6 (m^2) =====>	0.00785	6.37	180	6.90	195	
			Total	1240		1297	

REMARKS:

TESTED BY / DATE : 18/11/24
J. Alex / J. Duf
ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

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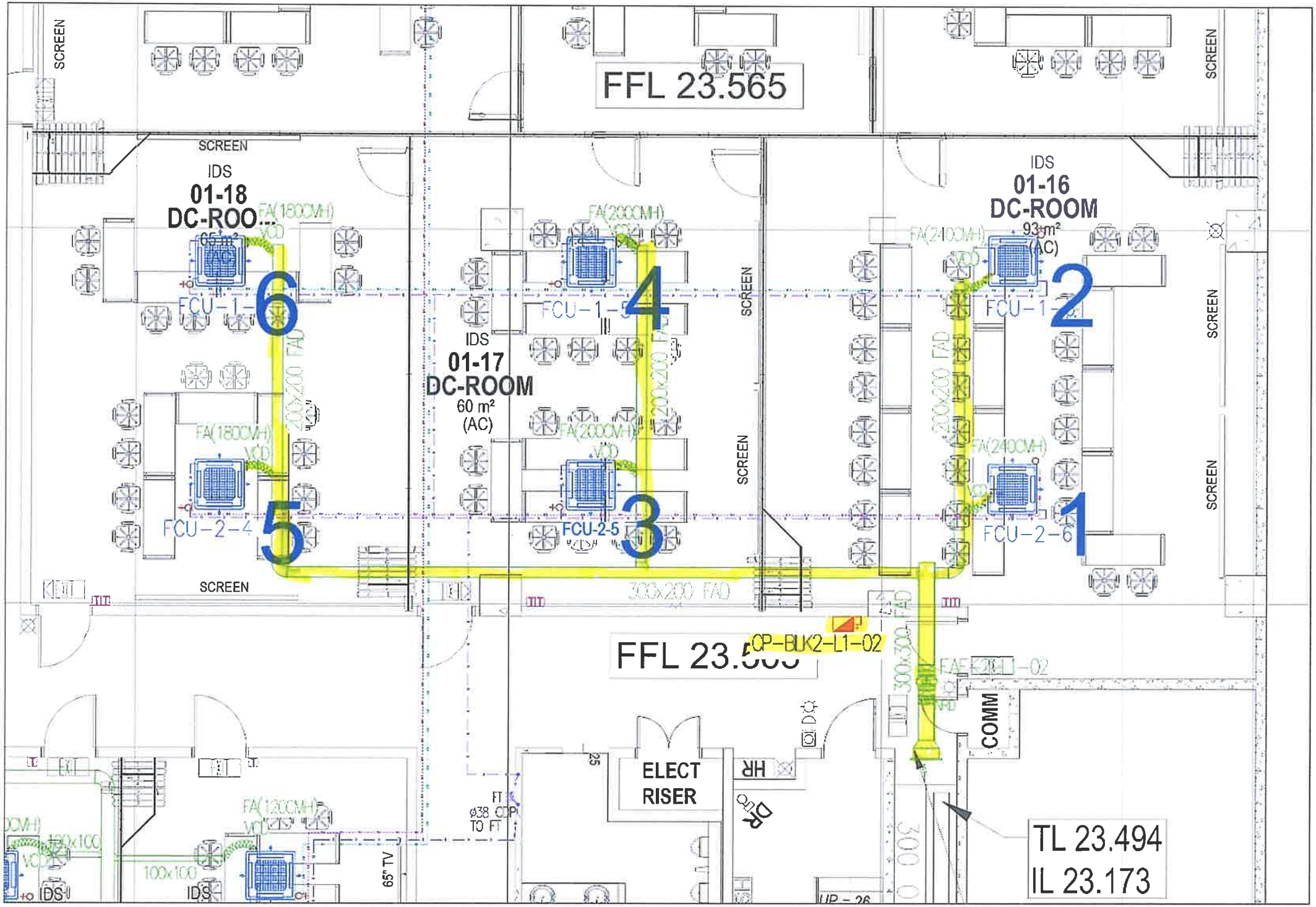
DEENN ENGINEERING PTE. LTD.

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


FFL 23.565
SCREEN
IDS
01-18
DC-ROO...
65 m²
(AC)
FCU-1-6
FCU-2-4
IDS
01-17
DC-ROOM
60 m²
(AC)
FCU-1-4
FCU-2-5
IDS
01-16
DC-ROOM
93 m²
(AC)
FCU-1-2
FCU-2-6
6
5
4
3
2
1
FA(180CMH)
FA(200CMH)
FA(240CMH)
VCD
200x200 FAD
300x200 FAD
300x300 FAD
CP-BUK2-L1-02
FFL 23.5
ELECT
RISER
HR
DP
COMM
FAE-2-L1-02
FA(120CMH)
100x100
IDS
65" TV
FT
ø38 CDP
TO FT
TL 23.494
IL 23.173

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 2-01 Test Date : _____

Project Site DIEPPE BARRACK-BLOCK 2

Location	01-09 / 10 / 11 NCR ROOM		
1. General			
Type of Equipment	CIL		
Identification No.	FAF-2-L1-03		
Brand / Model	SYSTEMAIR/K100 M SILEO		
2. Current Measurement (1Ø)			
Motor Rating (kW)	0.031		
Running Ampere (Amp) (Actual)	0.156		
3. Air Flow			
Airflow (CMH) (Design)	70		
Airflow (CMH) (Actual)	73		
4. Noise Measurement			
Motor RPM	2,407		
Equipment Off (dBA)	47.8		
Equipment On (dBA)	54.0		

TESTED BY / DATE : 18/11/24
J. Alex / J Ary

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INTAC SYSTEMS SOLUTION PTE LTD

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MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE :

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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 2-01
Project Site DIEPPE BARRACK-BLOCK 2 Test Date :

1. General			
Type of Equipment	CIL	Identification No.	FAF-2-L1-03
Brand / Model	SYSTEMAIR/K100 M SILEO	Capacity	70 CMH

2. Description

Location / Room No.	Grille Designation	Grille Size (70% Free Area)	Designed Air Velocity (m/s)	Designed Air Flow (m^3/h)	Actual Air Velocity (m/s)	Actual Air Flow (m^3/h)	
01-09 NCR (S) ROOM	1 (m^2) =====>	100 x 100 0.00700	1.19	30	1.20	30	
01-10 NCR (C) ROOM	2 (m^2) =====>	100 x 100 0.00700	0.79	20	0.80	20	
01-11 ELE ROOM	3 (m^2) =====>	100 x 100 0.00700	0.79	20	0.90	23	
			Total	70		73	

REMARKS:

TESTED BY / DATE : 18/11/24
J. Alex / J. Arul
ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

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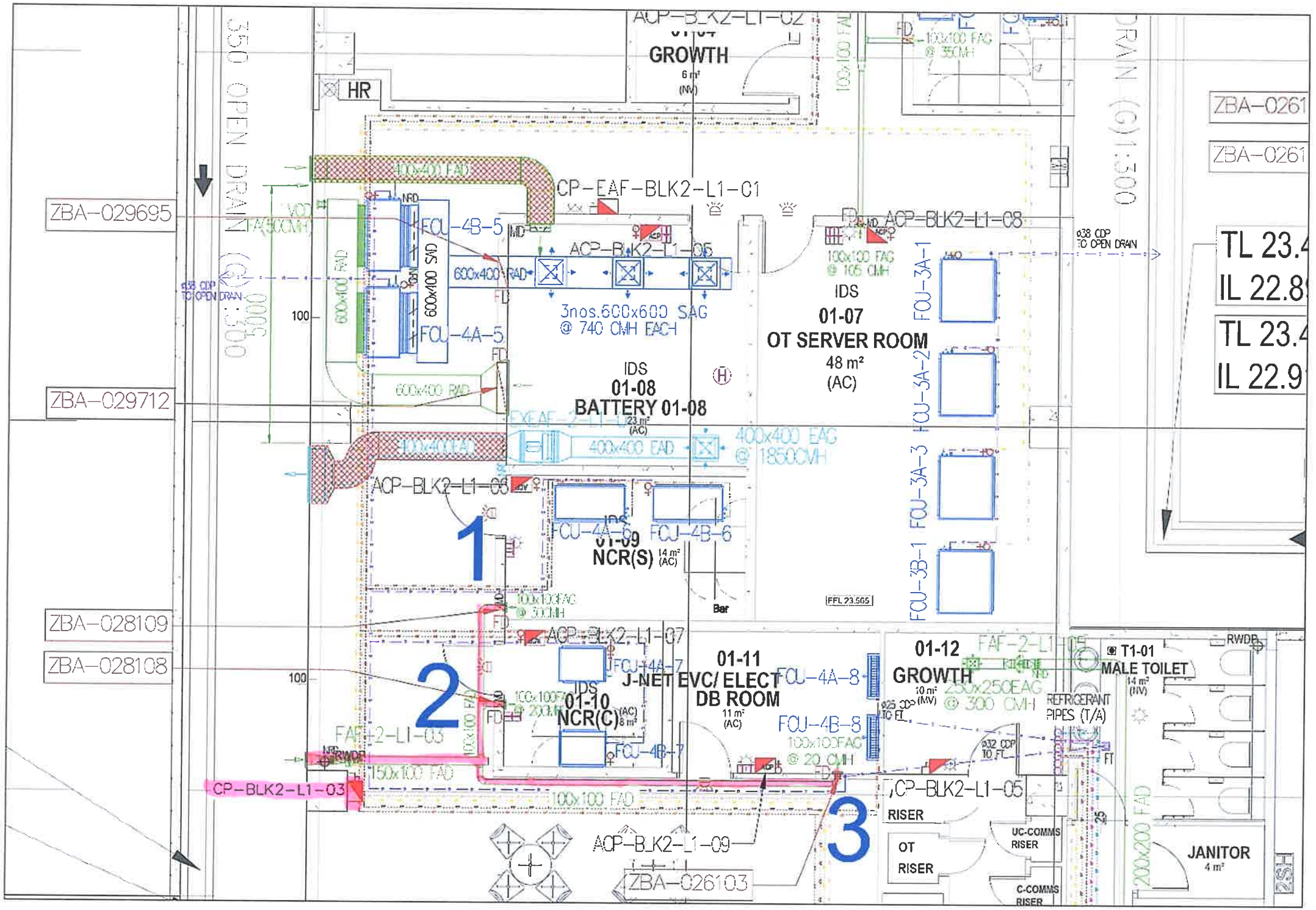
21/11/2024


ZBA-029695
ZBA-029712
ZBA-028109
ZBA-028108
ZBA-026103
ZBA-0261
ZBA-0261
HR
GROWTH
6 m²
(NV)
CP-EAF-BLK2-L1-01
ACP-BLK2-L1-08
ACP-BLK2-L1-06
FCU-4B-5
FCU-4A-5
600x400 SAD
600x400 RAD
3nos.600x600 SAG
@ 740 CMH EACH
IDS
01-07
OT SERVER ROOM
48 m²
(AC)
IDS
01-08
BATTERY 01-08
23 m²
(AC)
FCU-3A-1
FCU-3A-2
FCU-3A-3
FCU-3B-1
400x400 EAD
400x400 EAG
@ 1850CMH
ACP-BLK2-L1-05
FCU-4A-6
FCU-4B-6
01-09
NCR(S) 14 m²
(AC)
FFL 23.565
Bar
1
2
3
ACP-BLK2-L1-07
FCU-4A-7
FCU-4B-7
IDS
01-10
NCR(C) 8 m²
(AC)
01-11
J-NET EVC/ ELECT
DB ROOM
11 m²
(AC)
FCU-4A-8
FCU-4B-8
01-12
GROWTH
10 m²
(MV)
250x250EAG
@ 300 CMH
REFRIGERANT
PIPES (T/A)
T1-01
MALE TOILET
14 m²
(HV)
RWDB
JANITOR
4 m²
ACP-BLK2-L1-05
RISER
OT
RISER
UC-COMMS
RISER
C-COMMS
RISER
ACP-BLK2-L1-09
CP-BLK2-L1-03
FAF-2-L1-03
150x100 FAD
100x100 FAD
200x200 FAD
550 OPEN DRAIN (G) 1:500
TL 23.4
IL 22.8
TL 23.4
IL 22.9

VENTILATION FAN PERFORMANCE TEST

INTAC SYSTEMS SOLUTION PTE LTD
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Tel: +65 6842 7318 Fax: +65 6842 7319
Email: intacss@intacss.com.sg

Project / Drawing No. D2019-00162/ISS/ACMV-BLK 2-01 Test Date : _____

Project Site DIEPPE BARRACK-BLOCK 2

Location	01-02 / 03 / 05 / 06 / 07 NCR ROOM		
1. General			
Type of Equipment	CIL		
Identification No.	FAF-2-L1-04		
Brand / Model	SYSTEMAIR/K150 XL SILEO		
2. Current Measurement (1Ø)			
Motor Rating (kW)	0.100		
Running Ampere (Amp) (Actual)	0.390		
3. Air Flow			
Airflow (CMH) (Design)	210		
Airflow (CMH) (Actual)	217		
4. Noise Measurement			
Motor RPM	2,523		
Equipment Off (dBA)	49.0		
Equipment On (dBA)	54.9		

TESTED BY / DATE : 18/11/24
J. Alex / J. Aby

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE :

RTO

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 2-01
Project Site DIEPPE BARRACK-BLOCK 2 Test Date :

1. General			
Type of Equipment	CIL	Identification No.	FAF-2-L1-04
Brand / Model	SYSTEMAIR/K150 XL SILEO	Capacity	210 CMH

2. Description

Location / Room No.	Grille Designation	Grille Size (70% Free Area)	Designed Air Velocity (m/s)	Designed Air Flow (m^3/h)	Actual Air Velocity (m/s)	Actual Air Flow (m^3/h)	
01-02 NCR ROOM	1 (m^2) =====>	100 x 100 0.00700	0.99	25	1.20	30	
01-03 SPARE ROOM	2 (m^2) =====>	100 x 100 0.00700	0.99	25	1.00	25	
01-05 NRC ROOM	3 (m^2) =====>	100 x 100 0.00700	0.79	20	0.80	20	
01-06 NRC ROOM	4 (m^2) =====>	100 x 100 0.00700	1.39	35	1.40	35	
01-07 OT SERVER	5 (m^2) =====>	100 x 100 0.00700	4.17	105	4.20	106	
			Total	210		217	

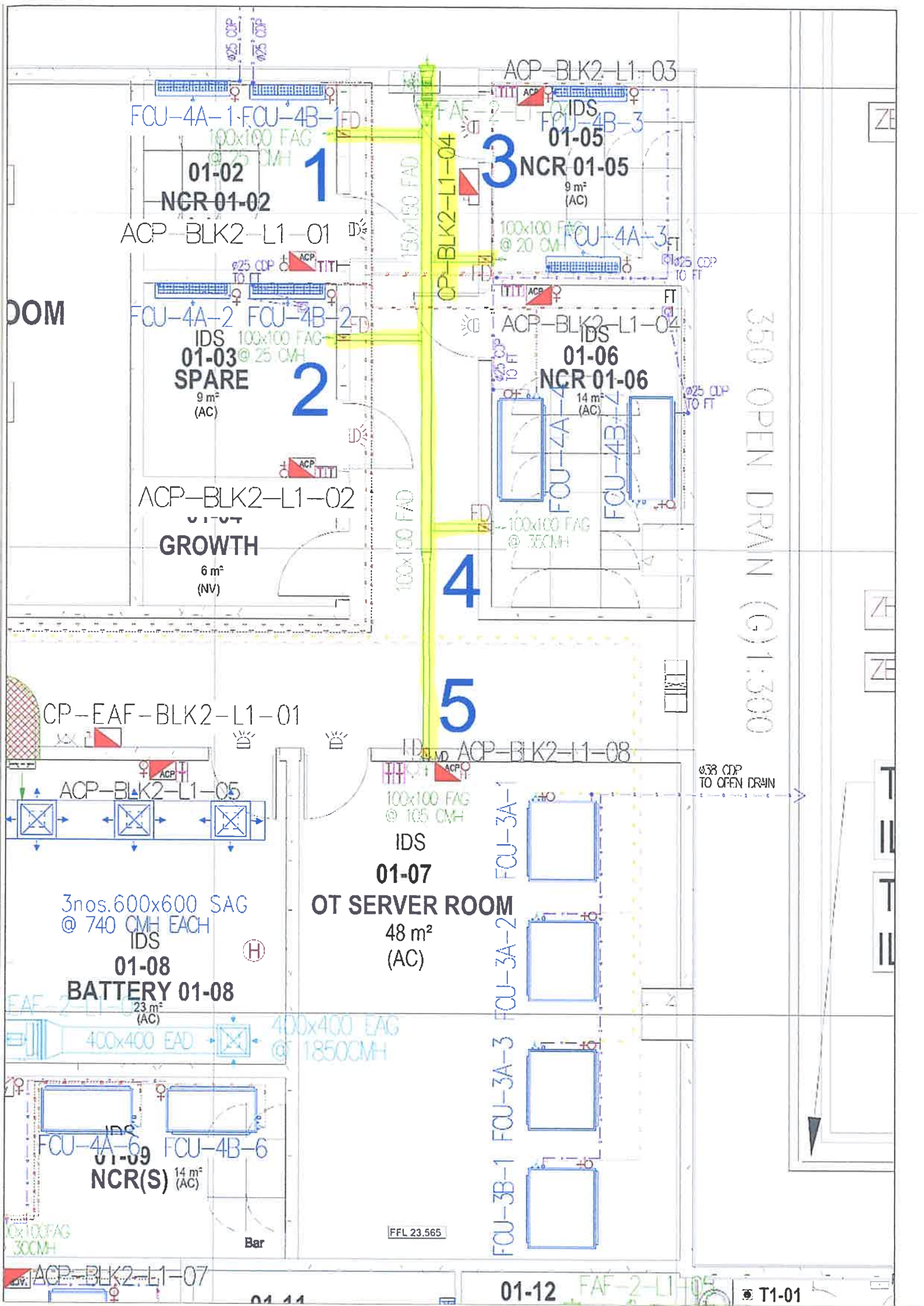
REMARKS:

TESTED BY / DATE : 18/11/24
J. Alore / J. Ant
ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

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


ACP-BLK2-L1-03
FCU-4A-1 FCU-4B-1
100x100 FAG @ 25 CMH
01-02
NCR 01-02
1
ACP-BLK2-L1-01
CP-BLK2-L1-04
150x150 FAD
3
01-05
NCR 01-05
9 m²
(AC)
100x100 FAG @ 20 CMH
FCU-4A-3
ø25 CDP TO FT
FCU-4A-2 FCU-4B-2
IDS
100x100 FAG @ 25 CMH
01-03
SPARE
9 m²
(AC)
2
ACP-BLK2-L1-04
IDS
01-06
NCR 01-06
14 m²
(AC)
FCU-4A-4
FCU-4B-4
100x100 FAG @ 35CMH
ACP-BLK2-L1-02
GROWTH
6 m²
(NV)
4
350 OPEN DRAIN (G) 1:300
5
CP-EAF-BLK2-L1-01
ACP-BLK2-L1-05
ACP-BLK2-L1-08
100x100 FAG @ 105 CMH
IDS
01-07
OT SERVER ROOM
48 m²
(AC)
ø38 CDP TO OPEN DRAIN
FCU-3A-1
FCU-3A-2
FCU-3A-3
FCU-3B-1
3nos.600x600 SAG @ 740 CMH EACH
IDS
01-08
BATTERY 01-08
23 m²
(AC)
400x400 EAD
400x400 EAG @ 1850CMH
IDS
01-09
NCR(S) 14 m²
(AC)
FCU-4A-6
FCU-4B-6
Bar
FFL 23.565
ACP-BLK2-L1-07
01-12
FAF-2-L1-05
T1-01

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 2-01 Test Date : _____

Project Site DIEPPE BARRACK-BLOCK 2

Location	01-12 GROWTH		
1. General			
Type of Equipment	CIL		
Identification No.	FAF-2-L1-05		
Brand / Model	SYSTEMAIR/K150 XL SILEO		
2. Current Measurement (1Ø)			
Motor Rating (kW)	0.100		
Running Ampere (Amp) (Actual)	0.380		
3. Air Flow			
Airflow (CMH) (Design)	300		
Airflow (CMH) (Actual)	306		
4. Noise Measurement			
Motor RPM	2,523		
Equipment Off (dBA)	46.8		
Equipment On (dBA)	54.5		

TESTED BY / DATE : 18/11/24
J. Alex / J. Alex

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE :

RTO Moe Thauk Tun
20/11/2024

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 2-01
Project Site DIEPPE BARRACK-BLOCK 2 Test Date :

1. General			
Type of Equipment	CIL	Identification No.	FAF-2-L1-05
Brand / Model	SYSTEMAIR/K150 XL SILEO	Capacity	300 CMH

2. Description

Location / Room No.	Grille Designation	Grille Size (70% Free Area)	Designed Air Velocity (m/s)	Designed Air Flow (m^3/h)	Actual Air Velocity (m/s)	Actual Air Flow (m^3/h)	
01-12 GROWTH	1 (m^2) =====>	250x250 0.0438	1.90	300	1.94	306	
			Total	300		306	

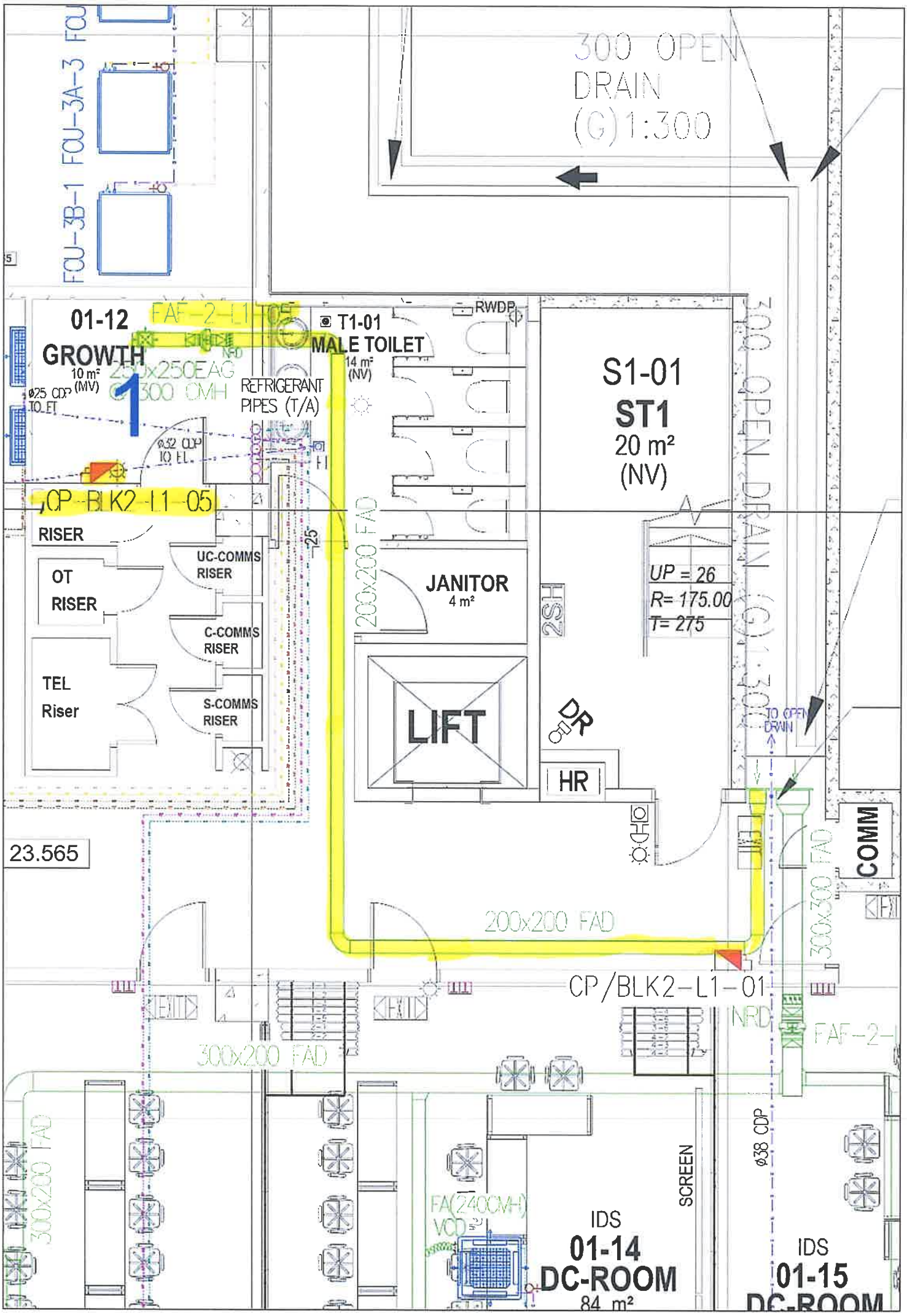
REMARKS:

TESTED BY / DATE : 18/11/24
J. Alex / J. Aly
ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE :
RTO
Moe Thauk Tun
20/11/2024


300 OPEN DRAIN (G) 1:300
FCU-3B-1 FCU-3A-3 FCU
01-12
GROWTH
10 m² (MV)
250x250EAG
300 CMH
REFRIGERANT PIPES (T/A)
T1-01
MALE TOILET
14 m² (NV)
RWDP
S1-01
ST1
20 m²
(NV)
300 OPEN DRAIN (G) 1:300
CP-BLK2-L1-05
RISER
OT RISER
TEL Riser
UC-COMMS RISER
C-COMMS RISER
S-COMMS RISER
200x200 FAD
JANITOR
4 m²
LIFT
DR
HR
UP = 26
R= 175.00
T= 275
TO OPEN DRAIN
COMM
23.565
200x200 FAD
CP/BLK2-L1-01
NRD
300x300 FAD
300x200 FAD
300x200 FAD
FA(2400MH)
VCD
IDS
01-14
DC-ROOM
84 m²
SCREEN
Ø38 CDP
IDS
01-15
DC-ROOM

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 2-01 Test Date : _____

Project Site DIEPPE BARRACK-BLOCK 2

Location	01-19/ 20/ 21/ 2 / 23/ 24 IDS ROOM		
1. General			
Type of Equipment	CIL		
Identification No.	FAF-2-L1-06		
Brand / Model	SYSTEMAIR/K315 M SILEO		
2. Current Measurement (1Ø)			
Motor Rating (kW)	0.201		
Running Ampere (Amp) (Actual)	0.780		
3. Air Flow			
Airflow (CMH) (Design)	860		
Airflow (CMH) (Actual)	882		
4. Noise Measurement			
Motor RPM	2,692		
Equipment Off (dBA)	45.3		
Equipment On (dBA)	56.8		

TESTED BY / DATE : 18/11/24

J. Alex / J Ad

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

_____

MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE :

RTO Moe Thauk Tun

20/11/2024

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 2-01
Project Site DIEPPE BARRACK-BLOCK 2 Test Date :

1. General			
Type of Equipment	CIL	Identification No.	FAF-2-L1-06
Brand / Model	SYSTEMAIR/K315 M SILEO	Capacity	860 CMH

2. Description

Location / Room No.	Grille Designation	Flexible Duct (Ø100mm)	Designed Air Velocity (m/s)	Designed Air Flow (m^3/h)	Actual Air Velocity (m/s)	Actual Air Flow (m^3/h)	
01-19 IDS ROOM	1 (m^2) =====>	0.00785	4.25	120	4.30	122	
01-20 IDS ROOM	2 (m^2) =====>	0.00785	4.25	120	4.40	124	
01-24 IDS ROOM	3 (m^2) =====>	0.00785	4.25	120	4.30	122	
01-21 IDS ROOM	4 (m^2) =====>	0.00785	3.54	100	3.60	102	
01-23 IDS ROOM	5 (m^2) =====>	0.00785	3.54	100	3.60	102	
	6 (m^2) =====>	0.00785	3.54	100	3.70	105	
01-22 IDS ROOM	7 (m^2) =====>	0.00785	3.54	100	3.60	102	
	8 (m^2) =====>	0.00785	3.54	100	3.70	105	
			Total	860		882	

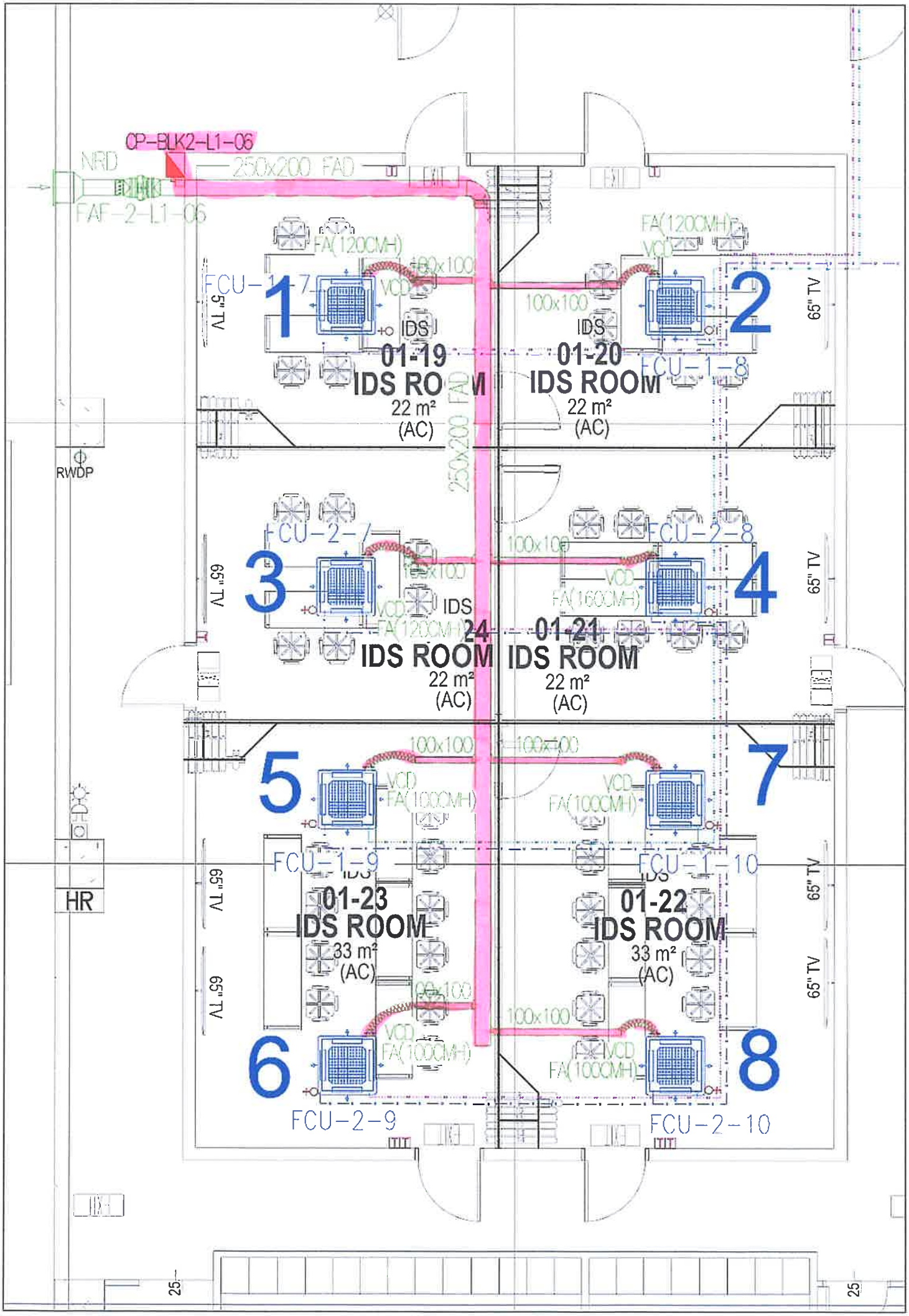
REMARKS:

TESTED BY / DATE : 18/11/24
J.Alex / J.Ay
ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE :
RTO
Mac Thack Ton
20/11/2024


CP-BLK2-L1-06
NRD
250x200 FAD
FAF-2-L1-06
FA(1200CMH)
VCD
100x100
FCU-1-7
1
IDS
01-19
IDS ROOM
22 m²
(AC)
65" TV
FA(1200CMH)
VCD
100x100
IDS
2
01-20
IDS ROOM
22 m²
(AC)
FCU-1-8
65" TV
250x200 FAD
RWDP
FCU-2-7
3
65" TV
IDS
24
01-21
IDS ROOM
22 m²
(AC)
FCU-2-8
100x100
VCD
FA(1600CMH)
4
65" TV
100x100
VCD
FA(1000CMH)
5
FCU-1-9
IDS
01-23
IDS ROOM
33 m²
(AC)
65" TV
65" TV
HR
100x100
VCD
FA(1000CMH)
7
FCU-1-10
IDS
01-22
IDS ROOM
33 m²
(AC)
65" TV
65" TV
100x100
VCD
FA(1000CMH)
6
FCU-2-9
100x100
VCD
FA(1000CMH)
8
FCU-2-10
25
25

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 2-01 Test Date : _____

Project Site DIEPPE BARRACK-BLOCK 2

Location	01-08 BATTERY ROOM		
1. General			
Type of Equipment	EX PROOF		
Identification No.	EXEAF-2-L1-01		
Brand / Model	SYSTEMAIR/KTEX 50-30-4		
2. Current Measurement (1Ø)			
Motor Rating (kW)	0.888		
Running Ampere (Amp) (Actual)	1.300		
3. Air Flow			
Airflow (CMH) (Design)	1,850		
Airflow (CMH) (Actual)	1,895		
4. Noise Measurement			
Motor RPM	2,552		
Equipment Off (dBA)	44.5		
Equipment On (dBA)	59.0		

TESTED BY / DATE : 18/11/24
J. Alex / J. Ay.

ACMV CONTRACTOR

INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR

DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE :
Moe

RTO Moe Thauk Ton
20/11/2024

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 2-01
Project Site DIEPPE BARRACK-BLOCK 2 Test Date :

1. General			
Type of Equipment	CIL	Identification No.	EXEAF-BLK 2-L1-01
Brand / Model	SYSTEMAIR/KTEX 50-30-4	Capacity	1850 CMH

2. Description

Location / Room No.	Grille Designation	Grille Size (70% Free Area)	Designed Air Velocity (m/s)	Designed Air Flow (m^3/h)	Actual Air Velocity (m/s)	Actual Air Flow (m^3/h)	
01-08 BATTERY ROOM	1 (m^2) =====>	400x400 0.1120	4.59	1850	4.70	1895	
			Total	1850		1895	

REMARKS:

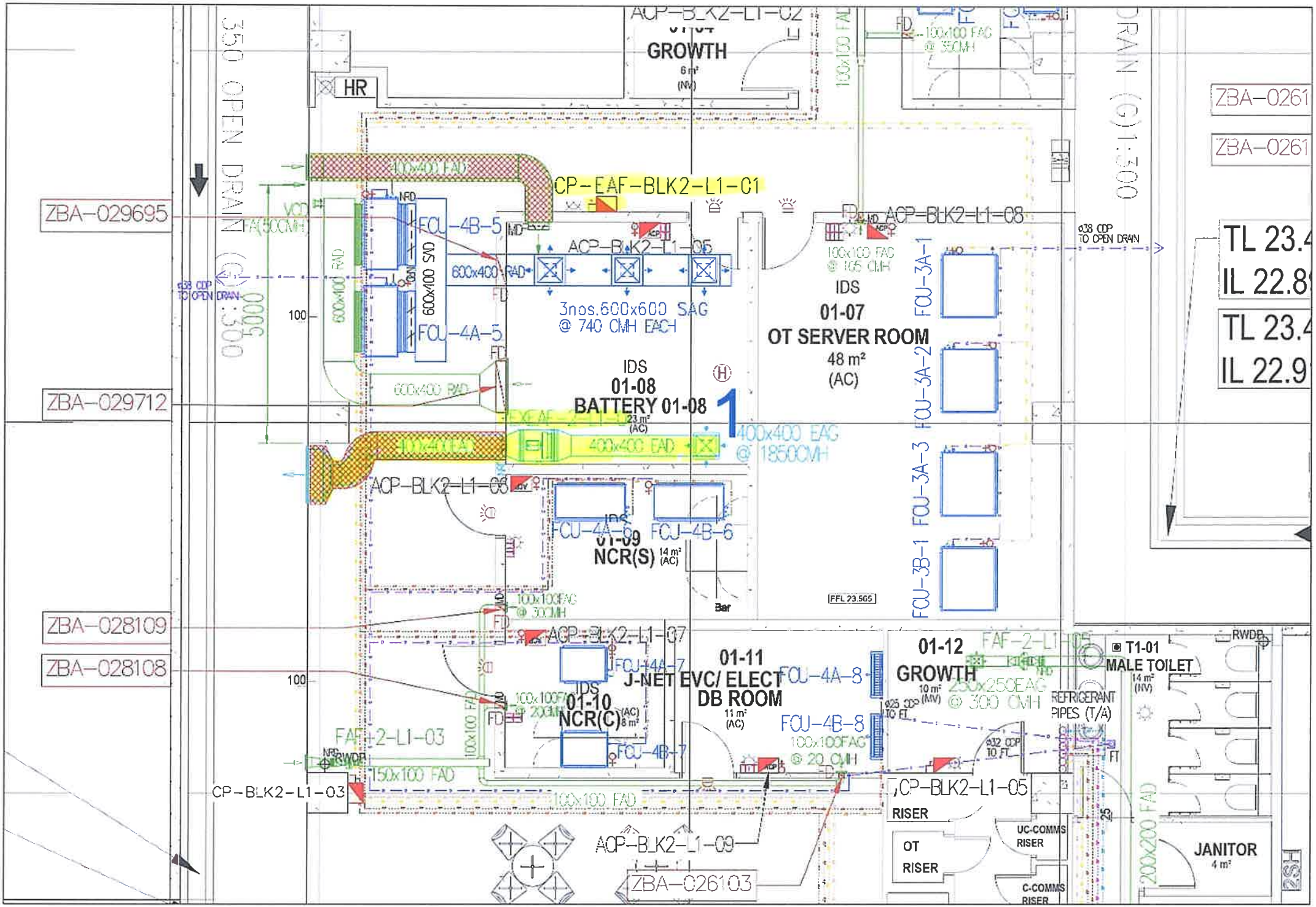
TESTED BY / DATE : 18/11/24
J.Alex / J.Arul
ACMV CONTRACTOR
INTAC SYSTEMS SOLUTION PTE LTD

WITNESSED BY / DATE :

MAIN CONTRACTOR
DEENN ENGINEERING PTE. LTD.

WITNESSED BY / DATE :

RTO
Moe Thauk Tun
20/11/2024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ZBA-028109
ZBA-028108
ZBA-0261
ZBA-0261
ZBA-026103
CP-EAF-BLK2-L1-01
CP-BLK2-L1-03
ACP-BLK2-L1-02
ACP-BLK2-L1-05
ACP-BLK2-L1-06
ACP-BLK2-L1-07
ACP-BLK2-L1-08
ACP-BLK2-L1-09
FCU-4B-5
FCU-4A-5
FCU-4A-9
FCU-4B-6
FCU-4A-7
FCU-4B-7
FCU-4A-8
FCU-4B-8
FCU-3A-1
FCU-3A-2
FCU-3A-3
FCU-3B-1
GROWTH
6 m²
(NV)
HR
IDS
01-07
OT SERVER ROOM
48 m²
(AC)
IDS
01-08
BATTERY 01-08
23 m²
(AC)
IDS
01-09
NCR(S)
14 m²
(AC)
IDS
01-10
NCR(C)
8 m²
(AC)
01-11
J-NET EVC/ ELECT
DB ROOM
11 m²
(AC)
01-12
GROWTH
10 m²
(NV)
T1-01
MALE TOILET
14 m²
(NV)
JANITOR
4 m²
RISER
OT
RISER
UC-COMMS
RISER
C-COMMS
RISER
REFRIGERANT
PIPES (T/A)
3nos.600x600 SAG
@ 740 CMH EACH
400x400 EAG
@ 1850CMH
250x250EAG
@ 300 CMH
FFL 23.565
DRAIN (G) 1:500
350 OPEN DRAIN (G) 1:500
TL 23.4
IL 22.8
TL 23.4
IL 22.9

FAF-2-L1-03

Designation	Point a	Point b	Point c	Point d	Average
1	1.30	1.20	0.90	1.40	1.20
2	0.90	0.20	1.40	0.70	0.80
3	1.00	0.50	1.40	0.70	0.90

FAF-2-L1-04

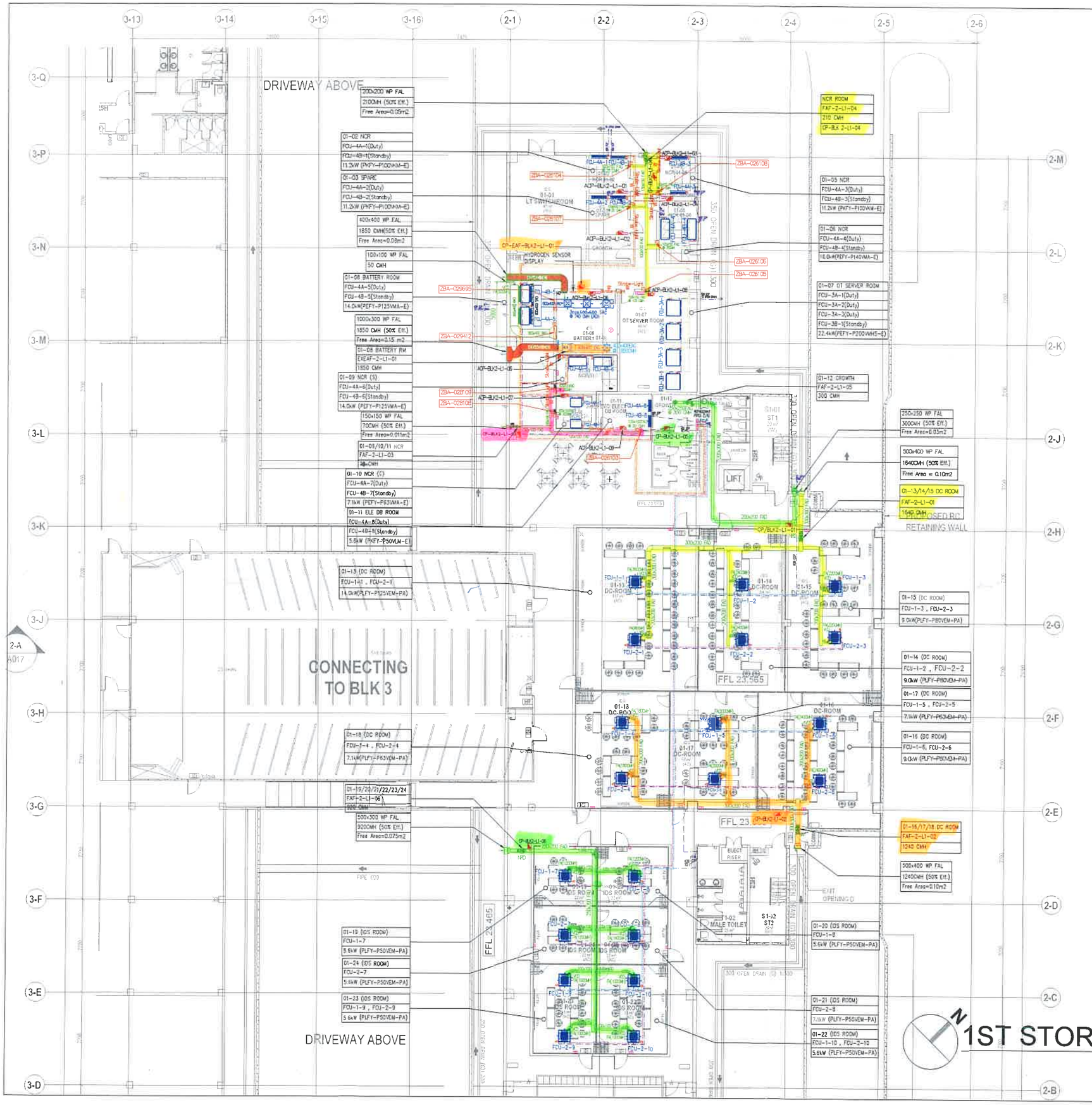
Designation	Point a	Point b	Point c	Point d	Average
1	1.40	1.00	0.80	1.60	1.20
2	1.00	0.80	1.40	0.80	1.00
3	0.20	0.90	1.40	0.70	0.80
4	1.40	0.80	1.80	1.60	1.40
5	4.38	4.00	4.00	4.40	4.20

FAF-2-L1-05

Designation	Point a	Point b	Point c	Point d	Average
1	2.00	1.80	2.40	1.56	1.94

EXEAF-2-L1-01

Designation	Point a	Point b	Point c	Point d	Average
1	5.00	5.60	4.60	3.60	4.70



LEGEND :	
	4 WAY CEILING CASSETTE FCU
	WALL MOUNTED FCU
	CEILING DUCTED FCU
	CONDENSING UNIT
	THERMOSTAT(REMOTE)
	CENTRALIZED REMOTE CONTROLLER
	RP (REFRIGERANT PIPE)
	CDP (CONDENSATE DRAIN PIPE)
	(CP) CONTROL PANEL FOR MV
	(ACP) 24HRS AIRCON CHANGEOVER PANEL
	POWER ISOLATOR
	POWER POINT(13A)
	MECHANICAL VENTILATION FAN
	FAD (FRESH AIR DUCT)
	EAD (EXHAUST AIR DUCT)
	FIRE RATED DUCT
	INTERNAL INSULATION
	SAG (SUPPLY AIR GRILLE)
	EAG (EXHAUST AIR GRILLE)
	FAL (FRESH AIR LOUVER)
	NRD (NON RETURN DAMPER)
	VCD (VOLUME CONTROL DAMPER)
	MD (MOTORIZED DAMPER)
	FD (FIRE DAMPER)

M&E CONSULTANTS
Pdc Consultants Pte Ltd
22 NEW INDUSTRIAL ROAD #06-03, SOLTICE BUSINESS CENTER SINGAPORE 536209
TEL: 6444 7748
FAX: 6444 7141

DATE RECEIVED: RECEIVED BY:
DATE RETURNED:

☐ NO EXCEPTION TAKEN ☐ MAKE CORRECTIONS NOTED PRIOR TO GENERAL USE
☐ TO REVISE & RESUBMIT ☐ REJECTED & RESUBMIT

SIGNATURE:

- WHERE RESUBMISSION IS REQUIRED, SUBMIT REVISED DRAWINGS FOR REVIEW PRIOR TO PROCEEDING WITH WORK.
- THIS REVIEW IS FOR GENERAL ARRANGEMENT ONLY AND DOES NOT EXTEND TO DIMENSIONS OF SETTING OUT OF THE WORKS AND DOES NOT RELEASE THE CONTRACTOR OF HIS RESPONSIBILITIES TO ENSURE FULL COMPLIANCE.
- THIS REVIEW DOES NOT RELEASE THE CONTRACTOR OF HIS RESPONSIBILITIES TO ENSURE WORKS IN COMPLIANCE TO CONTRACT SPECIFICATION, OTHER DRAWINGS AND STATUTORY REQUIREMENT HAVING JURISDICTION OVER THE INSTALLATION.

AS-BUILT DRAWING

Project Ref. No. : A2105-00599-2022

DSTA
Defence Science & Technology Agency

PEH SEOH CHIN	EDMUND TEO KUAN WEI
HOD (Army Camps)	Senior Programme Manager

D&B Main Contractor:

DEENN ENGINEERING PTE LTD
29 Harrison Road, Lian Beng Building , Singapore 369648
TEL: No 6283 1468 FAX No :6280 9360
e-mail : lianbengconstn@pacific.net.sg
Website: www.lianbeng.com.sg

Architect:

ID ARCHITECTS PTE LTD
3 HarbourFront Place #03-01, HarbourFront Tower Two, Singapore 099254
Tel 6225 6011
Fax 6225 6022
general@idarchitects.com.sg
www.idarchitects.com.sg

Structure:

TW-ASIA Consultants Pte Ltd

M&E Consultant:

Pdc Consultants Pte Ltd
MECHANICAL + ELECTRICAL
Paya Lebar Square
#10-17/18 (Office Lobby 1)
60 Paya Lebar Road Singapore 409051
t: 6444 7748 f: 6444 7141
e: contact@pdcengrs.com

Sub Contractor:

INTAC SYSTEMS SOLUTION PTE LTD
BLOCK 1 KAKI BUKIT AVENUE 2
#04-01/03-1 SINGAPORE 415881
Tel +65 6842 7318 Fax +65 6842 7319
Email intacss@intacs.com.sg

Project No:
D2019-00162

Project Title:
PROPOSED ADDITIONS OF 1 BLOCK OF 3-STOREY OFFICE BUILDING BLK 2, 1 BLOCK OF 6-STOREY ACCOMMODATION BUILDING BLK 3 (11), 1 BLOCK OF 4-STOREY ACCOMMODATION BUILDING BLK 4 (10), 1 BLOCK OF 2-STOREY TRAINING MULTIPLEX BLK 9 (6), 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 - 1ST STOREY ACMV LAYOUT PLAN

	Initial	Date		
Drawn	MS	13/11/24	Scale	1 : 150 (A1)
Checked	HK	13/11/24	Software	CAD

Drawing no.: D2019-00162/ISS/ACMV-BLK 2-01
Revision no.: 00

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	PRIO 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	IDS 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	EXEAF-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-EAF-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-BLK 2-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
23 ADA INDUSTRIAL ROAD #06-03
SOLSTICE BUSINESS CENTER SINGAPORE 536209
TEL: 6444 7748
FAX: 6444 7141

DATE RECEIVED: RECEIVED BY:
DATE RETURNED:

☐ NO EXCEPTION TAKEN ☐ MAKE CORRECTIONS NOTED PRIOR TO GENERAL USE
☐ TO REVISE & RESUBMIT ☐ REJECTED & RESUBMIT

SIGNATURE

- WHERE RESUBMISSION IS REQUIRED, SUBMIT REVISED DRAWINGS FOR REVIEW PRIOR TO FABRICATING NEW WORK.
- THIS REVIEW IS FOR GENERAL ARRANGEMENT ONLY AND DOES NOT EXTEND TO DIMENSIONS OF SETTING OUT OF THE WORKS AND DOES NOT RELEASE THE CONTRACTOR OF HIS RESPONSIBILITIES TO ENSURE FULL COMPLIANCE.
- THIS REVIEW DOES NOT RELEASE THE CONTRACTOR OF HIS RESPONSIBILITIES TO ENSURE WORKS IN COMPLIANCE TO GENUINE SPECIFICATION, OTHER DRAWINGS AND STATUTORY REQUIREMENT HAVING JURISDICTION OVER THE INSTALLATION.

AS-BUILT DRAWING

Project Ref. No. : A2105-00599-2022

DSTA
Defence Science & Technology Agency

PEH SEOH CHIN
HOD (Army Camps)

EDMUND TEO KUAN WEI
Senior Programme Manager

D&B Main Contractor:
DEENN ENGINEERING PTE LTD
29 Harrison Road, Lian Beng Building , Singapore 369648
TEL No.6283 1488 FAX No. 6280 9380
e-mail : lianbengconstr@pacific.net.sg
Website: www.lianbeng.com.sg

Architect:
ID ARCHITECTS PTE LTD
3 HarbourFront Place, #03-01,
HarbourFront Tower Two,
Singapore 099254
Tel:6275 6011
Fax:6275 6022
general@idarchitects.com.sg
www.idarchitects.com.sg

Structure:
TW-ASIA Consultants Pte Ltd
NO. 28 SIN MING LANE #04-137 MIDVIEW CITY
SINGAPORE 573972 TEL : 62915232 FAX : 62932196

M&E Consultant:
PdcConsultants Pte Ltd
MECHANICAL • ELECTRICAL
Paya Lebar Square
#10-17/18 (Office Lobby 1)
60 Paya Lebar Road Singapore 409051
T: 6444 7748 F: 6444 7141
e: contact@pdcengrs.com

Sub Contractor:
INTAC SYSTEMS SOLUTION PTE LTD
BLOCK 1 KAKI BUKIT AVENUE 3
#04-09 KB-1, SINGAPORE 416087
Tel: +65 6842 7218 Fax: +65 6842 7269
Email: intacss@intacss.com.sg

Project No:
D2019-00162

Project Title:
PROPOSED ADDITIONS OF 1 BLOCK OF 3-STOREY OFFICE BUILDING BLK 2, 1 BLOCK OF 6-STOREY ACCOMMODATION BUILDING BLK 3 (11), 1 BLOCK OF 4-STOREY ACCOMMODATION BUILDING BLK 4 (10), 1 BLOCK OF 2-STOREY TRAINING MULTIPLEX BLK 9 (6), 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	MB	13/11/24	Scale	NTS
Checked	HK	13/11/24	Software	CAD

Drawing no.: D2019-00162/ISS/ACMV-BLK 2-08
Revision no.: 00

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

CERTIFICATE NUMBER	:	CTP 1836-24	**JR NO**	:	JR-11536
INSTRUMENT CODE	:	100024-10180	**PAGE NUMBER**	:	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 :		**Approved By :**	
Puthanpuraparumbu Majeed Shanavas		Ananthakumar Sivasamy	
EMP ID : 1250		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 "guarantee" 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

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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 data 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.

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CALIBRATION CERTIFICATE

CERTIFICATE NUMBER	:	CTP 1836-24	**JR NO**	:	JR-11536
INSTRUMENT CODE	:	100024-10180	**PAGE NUMBER**	:	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

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Tel: (65) 6452 0300 I Fax: (65) 6452 0500
www.caltekgroup.com I info@caltekgroup.com

CALIBRATION CERTIFICATE

CERTIFICATE NUMBER	: CTP 1617M-24	**JOB NUMBER**	: CCJR 24-7207
DATE RECEIVED	: 20-Sep-24	**ISSUE DATE**	: 20-Sep-24

Instrument	: **VANE ANEMOMETER**	**Ambient Temperature**	: (23 ± 5) ° C
Manufacturer	: TESTO	**Relative Humidity**	: (55 ± 10) % r.h.
Model No.	: 416	**Date Calibrated**	: 20-Sep-24
Part No.	: ---	**Recommended Due Date**	: 20-Sep-25
Serial No.	: 84211700		
Customer	: **INTAC SYSTEMS SOLUTION PTE LTD** Blk 1 Kaki Bukit Avenue 3 #04-03 KB-1 Singapore 416087	**Range** *(Tag No.)* **Page** **Status**	: --- : — : 1 of 2 : 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.

REFERENCE INSTRUMENT(S)	SERIAL NO	DUE DATE
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

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CALIBRATION CERTIFICATE

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

JOB NUMBER : CCJR 24-7207

MEAN REFERENCE READING (m/s)	MEAN INSTRUMENT READING (m/s)		CORRECTION (m/s)
	Before adjustment	After adjustment	
2.50	2.5	—	0.00
5.00	4.9	—	0.10
10.00	9.9	—	0.10