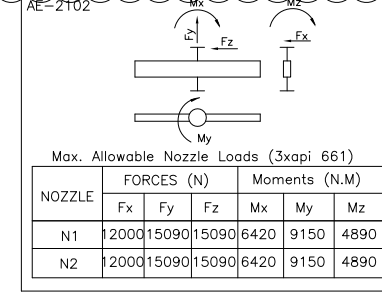


V01

MARK	QTY.	SIZE	FLANGE		TYPE	SCH/THK	SERVICE
			RATING	FACE			
N1a/b	2	4"	600#	RF/SERRATED	ANSI B16.5 W.N.	XXS	INLET
N2a/b	2	4"	600#	RF/SERRATED	ANSI B16.5 W.N.	XXS	OUTLET
TI	2	1"	600#	RF/SERRATED	ANSI B16.5 L.W.N.	14.3	TI (WITH BLIND)
PI	2	3/4"	600#	RF/SERRATED	ANSI B16.5 L.W.N.	14.5	PI (WITH BLIND)
V	1	2"	600#	RF/SERRATED	ANSI B16.5 L.W.N.	16.6	VENT (WITH BLIND)
D	1	2"	600#	RF/SERRATED	ANSI B16.5 L.W.N.	16.6	DRAIN (WITH BLIND)

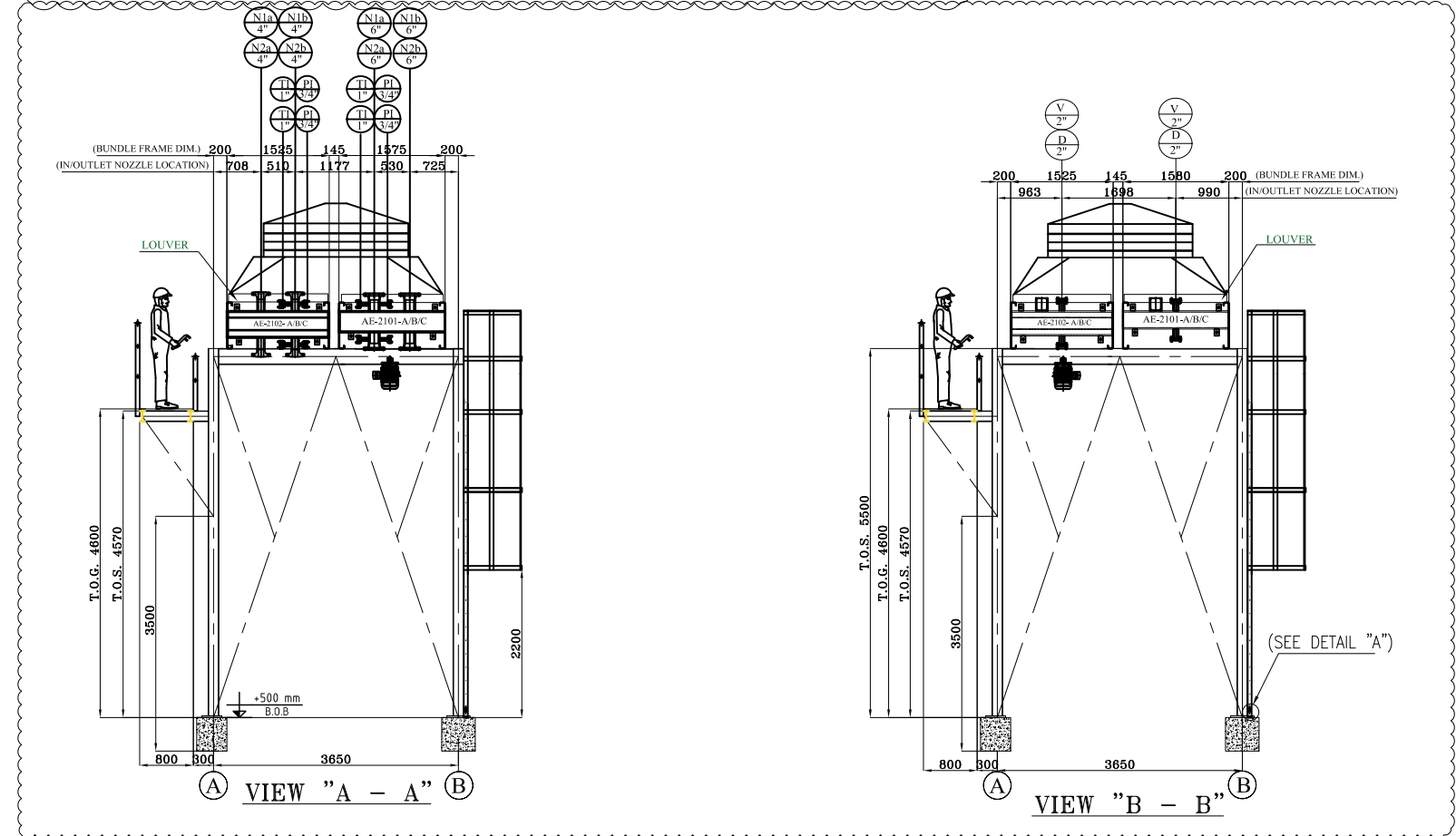
- NOTES
- ALL DIMENSIONS AND COORDINATES ARE IN MILLIMETER.
  - ALL ELEVATIONS ARE IN MILLIMETER.
  - DESIGNED PER API-661 SEVENTH ED. 2013 AND ASME Sec. VIII, Div. 1, Ed. 2017. OVERALL TOLERANCES PER API-661, FIG. 10 AND APPLICABLE SPECIFICATION.
  - SURFACE PROTECTION: PAINTING ACCORDING TO BK-GCS-AA-120-QC-PR-0003
  - BUNDLE ARE FITTED WITH SLIDING PAD AND INLET HEADERS ARE FIXED IN FINTUBE DIRECTION.
  - MECHANICAL EQUIPMENT: FAN-MANUALLY ADJUSTABLE BLADE PITCH (AP) 50% AUTO VARIABLE ADJUSTABLE PITCH (AVP) 50% SPEED REDUCER V Belts
  - FAN BLADE ANGLES: ACCORDING TO FAN DATA SHEET BK-GCS-AA-120-ME-DS-0001
  - TRANSPORTATION BOLTS SHALL BE REMOVED AFTER INSTALLATION.



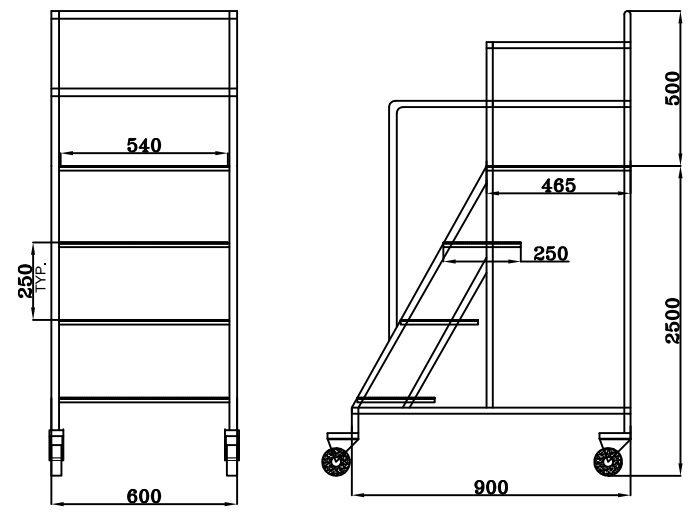
T.O.S.: Top Of Steel  
T.O.G.: Top Of Grating  
B.O.B.: Bottom of Base Plate  
F.O.F.: Face Of Flange

BASE PLATE AND SETTING BOLTS ARE PRELIMINARY AND SHALL BE FINALIZED LATER

V01



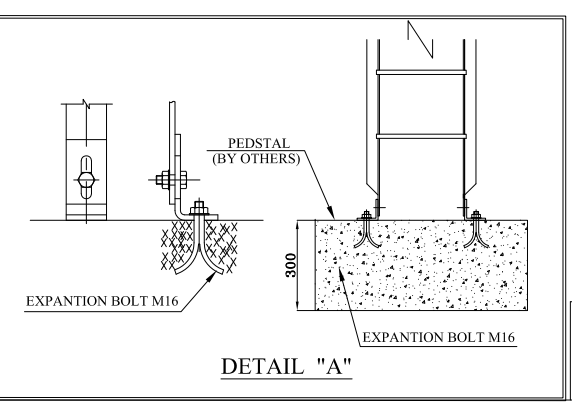
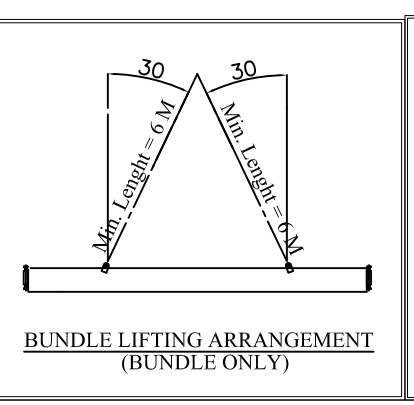
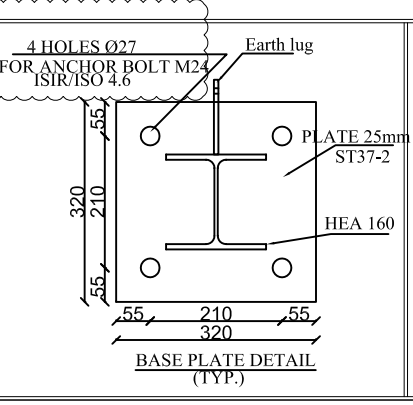
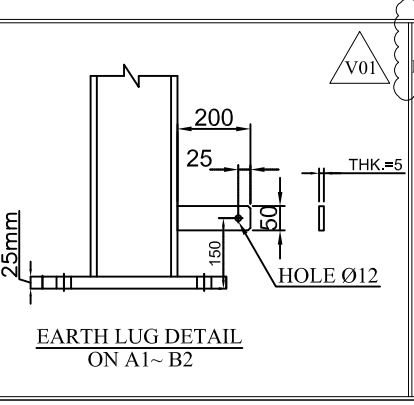
V01



LEGEND

REFERENCE DRAWING	DRG. No.
Process Data Sheet for AE-2101 (A/B/C)	BK-GCS-AA-120-PR-DS-0002
Bundle Frame Drawing	
Fan Data Sheets	BK-GCS-AA-120-ME-DS-0001
Steel Structure Calculation Books	BK-GCS-AA-120-ST-CN-0001
Motor Data Sheets	BK-GCS-AA-120-EL-DS-0001

KEY PLAN



REV.	DATE	BY	DATE	BY	DATE
V01	APR. 2024	IPF	AC	M.PAKHARIAN	S.FARAMARZPOR
V00	FEB. 2024	IPF	AC	M.PAKHARIAN	S.FARAMARZPOR

PROJECT NAME: BINAK OILFIELD DEVELOPMENT/SURFACE FACILITIES GAS & GAS-CONDENSATE PIPELINES

PROJECT NO.: 971020

EPC CONTRACTOR: HIRGAN ENERGY - DESIGN & INSPECTION COMPANIES

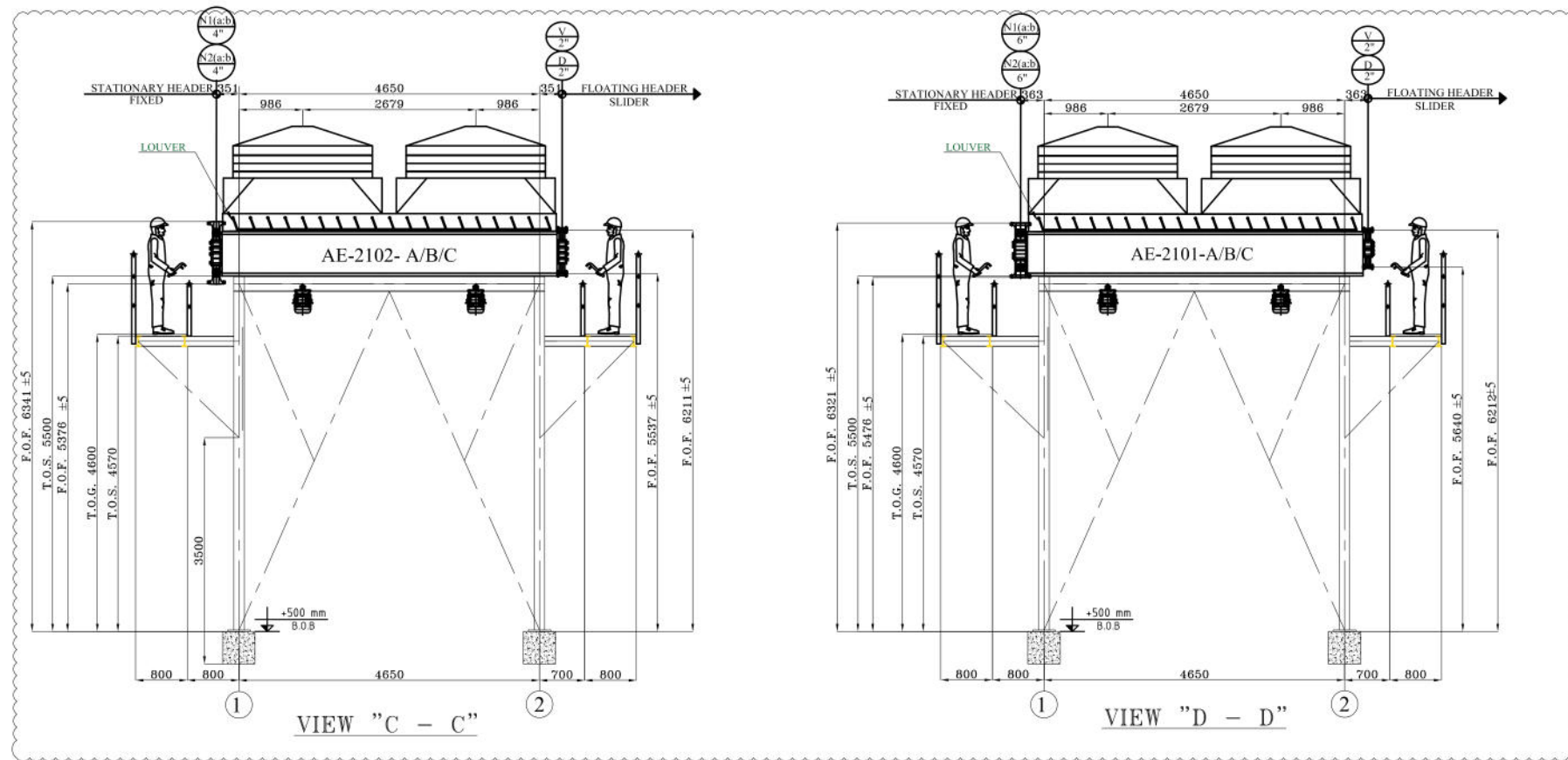
EPD/EPC CONTRACTOR (GC): PETROIRAN DEVELOPMENT COMPANY

DRAWING TITLE: General Arrangement Drawings

NO CONSTRUCTION PERMITTED UNLESS DRAWING APPROVED

APPROVED FOR CONSTRUCTION BY: DATE:

BUDGET REF.	LOCATION	SIZE	CLASS	SERIAL NO.	SHEET	REVISION
NC	AS	BK-GCS-AA-120-ME-DW-0001		1 OF 2	V01	



NOZZLE DATA-AE-2101						
MARK	QTY.	SIZE	FLANGE		SCH/THK	SERVICE
			RATING	FACE		
N1(a,b)	1	6"	300#	RF	ANSI B16.5 W.N.	xxs INLET
N2(a,b)	1	6"	300#	RF	ANSI B16.5 W.N.	xxs OUTLET
TI	2	1"	300#	RF	ANSI B16.5 L.W.N.	14.25 TI (WITH BLIND)
PI	2	3/4"	300#	RF	ANSI B16.5 L.W.N.	14.3 PI (WITH BLIND)
V	1	2"	300#	RF	ANSI B16.5 L.W.N.	16.6 VENT (WITH BLIND)
D	1	2"	300#	RF	ANSI B16.5 L.W.N.	16.6 DRAIN (WITH BLIND)

Max. Allowable Nozzle Loads (api 661)

NOZZLE	FORCES (N)			Moments (N.M)		
	Fx	Fy	Fz	Mx	My	Mz
N1	4000	5030	5030	2140	3050	1630
N2	4000	5030	5030	2140	3050	1630

GENERAL DATA	AE-2101-A/B/C	AE-2102-A/B/C
DRAFT TYPE	INDUCED	INDUCED
NUMBER OF BAY/UNIT	1/3	1/3
NUMBER OF BUNDLE/BAY	1	1
STRUCTURAL MOUNTING	Ground	Ground
DESIGN PRESSURE	22 (Barg)	62 (Barg)
TEST PRESSURE	28.60 (Barg)	78 (Barg)
DESIGN TEMPERATURE	155 °C	175 °C
FLUID NAME	Hydrocarbon	Hydrocarbon
TEMPERATURE IN /OUT	129/60 °C	147/60 °C
FOULING RESIST.	0.0002 (m2.k/w)	0.0002 (m2.k/w)
MATERIAL OF TUBE	SA-213 TP316L	SA-213 TP316L
OUTSIDE DIAMETER OF TUBE	25.4 mm	25.4 mm
Min. Wall Thickness OF TUBE	1.651 mm	1.651 mm
TJWB*QT*BSHEET JOINT*XP*	*Expanded+Strengthjwel	Expanded+Strengthjwel
NUMBER OF TUBES / BUNDLE	96	92
TYPE OF FIN	EXTRUDED	EXTRUDED
MATERIAL OF FIN	ALUMINUM ALLOY 1060-0	ALUMINUM ALLOY 1060-0
OUTSIDE DIAMETER OF FIN	57.15 mm	57.15 mm
STOCK / TIP THIK.	0.48 / 0.48 mm	0.48 / 0.48 mm
FPI	10	10
BARE / FINNED SURFACE PER UNIT	33.078/691.54 m2	47.399/988.27 m2
TYPE OF HEADER	PLUG	PLUG
MATERIAL OF HEADER	SA-240 TP316L	SA-240 TP316L
PLUG MATERIAL	SA-182 F316L	SA-182 F316L
GASKET MATERIAL	Spiral wound +S.S 316 iner ring	Spiral wound +S.S 316 inner ring
COR*QSIQAIQXANC*	0 mm	0 mm
FAN SPECIFICATION : RPM / DIAMETER	447.5 / 7 FT	447.5 / 7 FT
FAN ABSORBED POWER	9.9(Kw)	9.9(Kw)
NUMBER OF BLADE/BLADE MATERIAL	6/ALUMINIUM	6/ALUMINIUM
AIR QUANTITY / FAN	34.591 m3/s	34.591 m3/s
STATIC PRESSURE	152.13 Pa	152.13 Pa
AIR TEMPERATURE IN/OUT*	5X26*60X°C*	5X50*60X°C*
Fan nois level @ 1m from fan in any direction	< 85 [dB]	< 85 [dB]
ELECTRIC MOTOR	EExd IIB T3 .IP55	EExd IIB T3 .IP55
VOLTS / CYCLES / PHASE	400-50-3	400-50-3
RPM / MOTOR POWER (Kw)	1500/15	1500/15
SPEED REDUCER TYPE	W-BELT	V-BELT
REDUCTION RATIO	3.35	3.35
Steam coil	NO	NO
LOUVER	YES	YES
I/P CONVERTER	YES (Zone 2, IIC, Exia, IP 65)	YES (Zone 2, IIC, Exia, IP 65)
VIBRATION SWITCH/NUMBER	YES - EExd IIB T3 .IP55	YES - EExd IIB T3 .IP55
FIREPROOFING	YES	YES

AAC Reply: Noted.

air outlet temp. shall be finalized ACC. to data sheet

AAC Reply: 2-1 Noted. 2-2 Not acceptable 2-3 Noted.

2-1 vibration switch NO.'s shall be added. 2-2 gas group shall be considered " IIC" 2-3 IP 65 is acceptable.

نیروهای زلزله و باد ارائه گردد

AAC Reply: پارامترهای زلزله و باد در جدول مقابل آورده شده، جزئیات مربوط به بارگذاری باد و زلزله در Steel Structure Cal. ارائه می گردد.

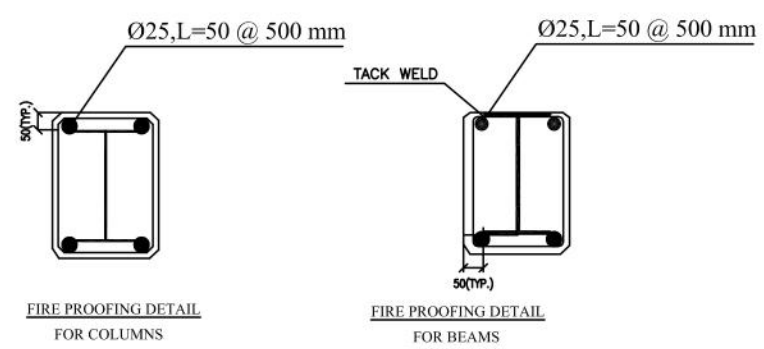
DESIGN DATA TABLE	
WIND DATA	SEISMIC DATA
CODE	ASCE7-10
WIND SPEED	34 m/s
EXPOSURE	C
IMPORTANCE FACTOR	1.0
CODE	ASCE7-10
ZONE/SOIL TYPE	D
IMPORTANCE FACTOR	1.25

WEIGHT (KG)	
SIDE FRAME+BUNDLE(DRY) /BAY	2190
SIDE FRAME+BUNDLE(OPERATION) /BAY	2390
SIDE FRAME+BUNDLE(HYDRO TEST) /BAY	2700
PENUM+ FAN RING /BAY	780
FAN+ FAN GUARD /BAY	300
REDUCTION SYSTEM /BAY	320
MOTOR+ MOTOR SUPPORT /BAY	900
LOUVER /BAY	1000
TOTAL EQUIPMENT WEIGHT PER BAY (KG)	
WEIGHT (FABRICATED)	7810
WEIGHT (OPERATING)	8370
WEIGHT (HYDROTEST)	8820

STEEL STRUCTURE WEIGHT (KG)	
MAIN STRUCTURE	
LADDER & PLATFORM	
MOTOR PLATFORM	
WEIGHT SUMMARY (KG)	
TOTAL WEIGHT (FABRICATED)	
TOTAL WEIGHT (OPERATING)	
TOTAL WEIGHT (HYDROTEST)	



Fire proofing operation is performed for all beams, columns  
USE Ø20 mm. STEEL BAR SPACER WELDED TO STRUCTURAL STEEL SHAPES LENGTH 50 mm

REV.	DATE	P.O.I.S	PREP.	CHK.	APP.	AUT.
V01	APR. 2024	IFI	AAC	MFAKHARIAN	SFARAMARZPOUR	
V00	FEB. 2024	IFI	AAC	MFAKHARIAN	SFARAMARZPOUR	

DATE	SCALE	DRAWING BY	CHECKED BY	PROJECT ENG.

SCALE	SIZE	DRAWING NO.	SHEET NO.	REV.
NC	A3	BK-GCS-AA-120-ME-DW-0001	2 OF 2	V01