

* THIS DIMENSION WILL BE FINALIZED AFTER APPROVED OF MOTOR DATA SHEET

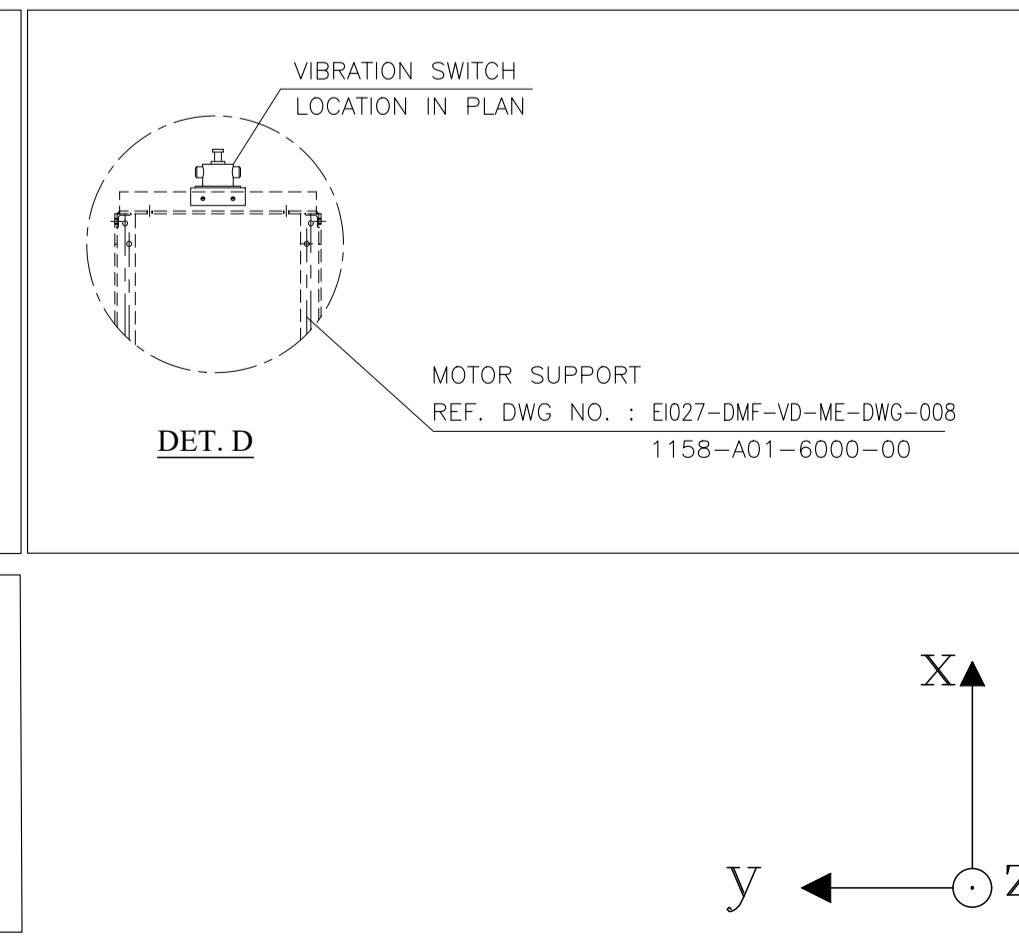
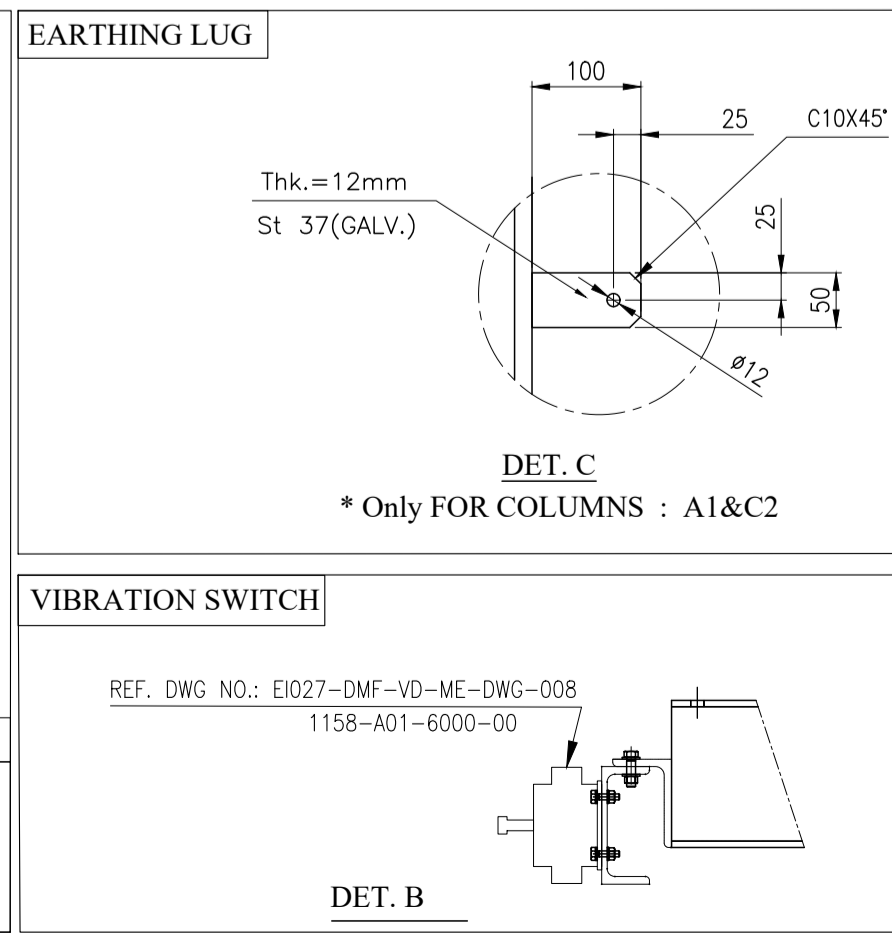
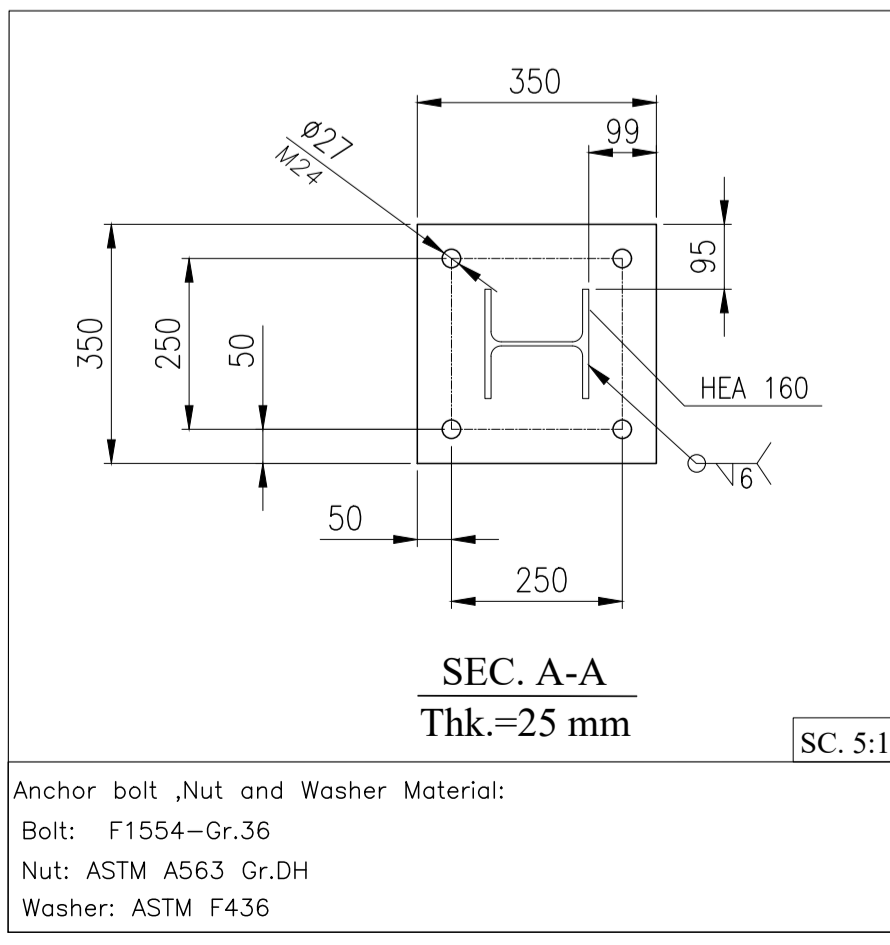
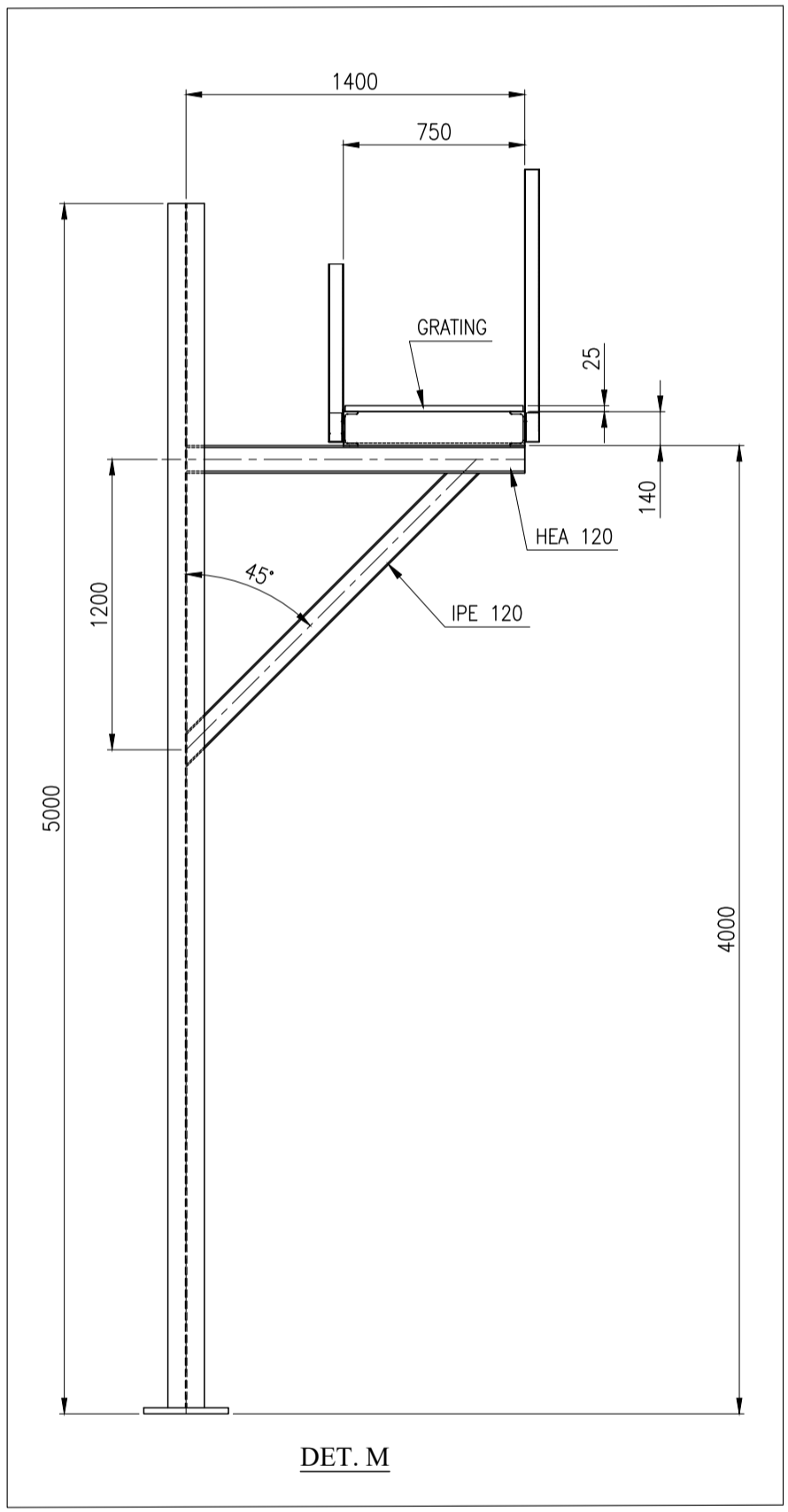
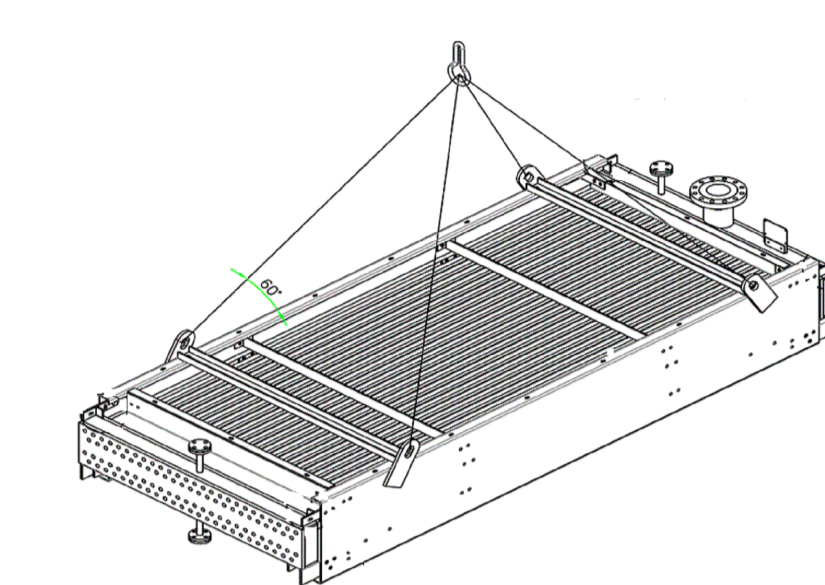
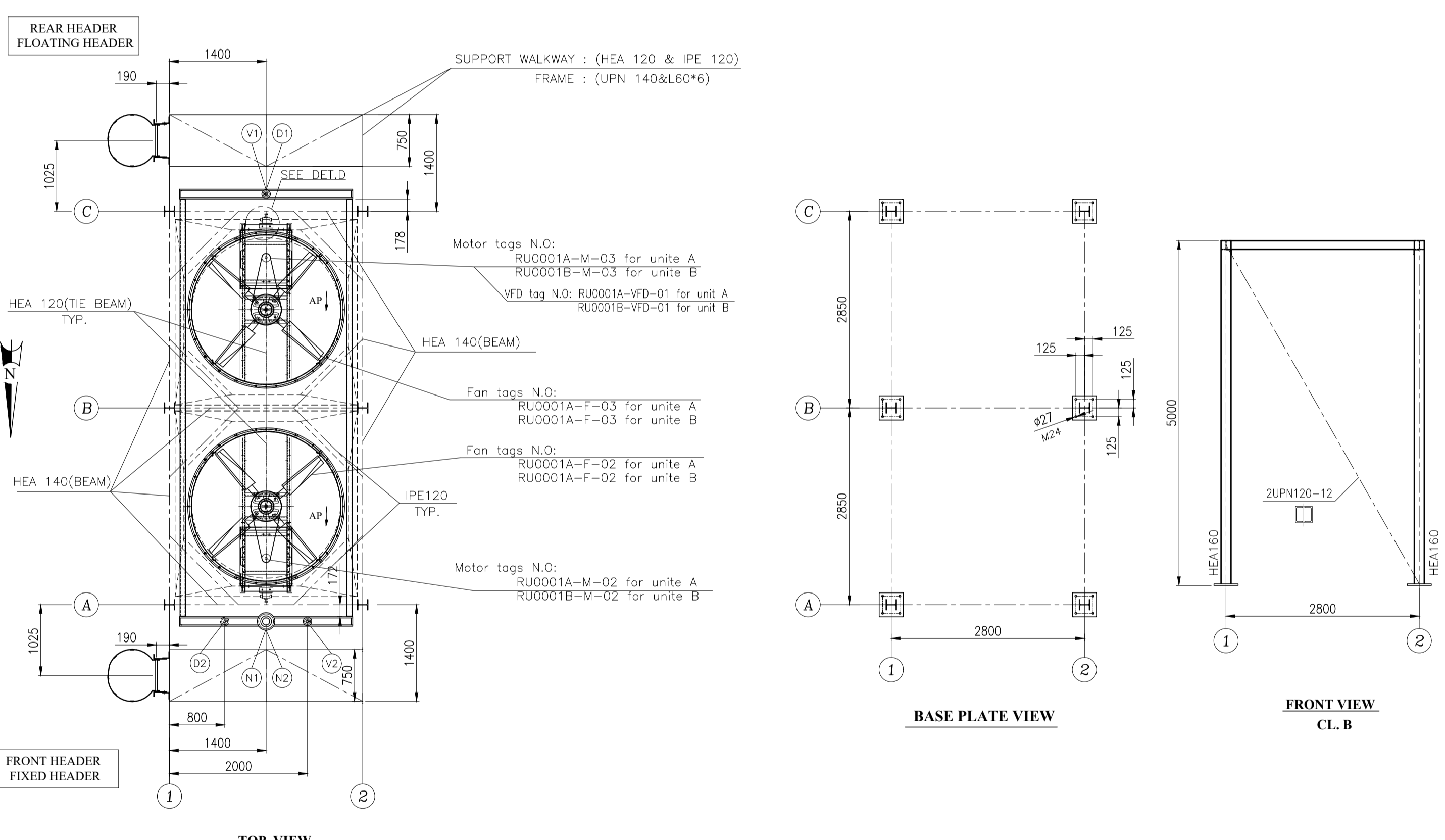


Table 1. Weight of equipments For 1 Units (Total Units = 2)

Equipment	Total No in one Unit	Unit Weight (tonf)	Total No. for one Bay	Weight for One Bay (kgf)
Bundle Frame	1	1.091	1	1091
Tube Bundle & Headers	1	2.922	1	2922
Bundle frame & tube bundle(DRY)	1	4.013	1	4013
Bundle frame & tube bundle (OP)	1	4.222	1	4222
Bundle frame & tube bundle(HYD)	1	4.493	1	4493
Water in Tubes & Headers	1	0.48	1	480
sum				2184
Fabrication Weight For 1 Units				11167
Operation Weight For 1 Units				11376
Hydrotest Weight For 1 Units				11647
Total Weight of Main structure, Ladder for 1 Units				4970

TABLE: Joint Reactions

Joint Text	Output Case	Fx Kgf	Fy Kgf	Fz Kgf
A-1	DEAD	16.65	-45	861.98
A-1	DEAD	49.34	-158.83	1640.14
A-1	DEAD_OP	4.08	-14.37	92.37
A-1	DEAD_N	-1631.93	429.16	-2881.5
A-1	LIVE	3.34	25.54	1383.73
A-1	WX	31.57	329.34	352.72
A-1	WY	-387.76	93.94	-669.09
A-1	SNOW	9.74	-24.99	547.61
A-1	EQX	106.43	1146.34	-1764.17
A-1	EQY	-1561.76	337	-3289.21
A-1	EQO	210.24	2295.43	-3528.78
A-1	EQVO	-3123.79	673.24	-6571.39
A-2	DEAD	-20.6	1.599E-13	380.54
A-2	DEAD	-33.06	-0.00000289	811.07
A-2	DEAD_OP	-10.59	-3.963E-07	55.37
A-2	DEAD_N	-76.47	6.353E-13	402.18
A-2	LIVE	-76.47	6.353E-13	402.18
A-2	WX	1.165E-12	49.87	8.288E-13
A-2	WY	-54.91	-1.269E-13	-353.83
A-2	SNOW	-19.58	-8.635E-07	221.21
A-2	EQX	0.004107	45.8	0.09216
A-2	EQY	-48.82	-0.38	-1465.12
A-2	EQO	0.00889	92.7	0.18
A-2	EQVO	-98.54	-0.78	-2927.34
A-3	DEAD	16.65	45	861.98
A-3	DEAD	49.34	158.83	1640.17
A-3	DEAD_OP	4.08	14.37	92.37
A-3	DEAD_N	39.17	235.02	482.86
A-3	LIVE	3.34	-25.54	1383.73
A-3	WX	-31.57	329.34	352.72
A-3	WY	-387.76	-93.94	-669.09
A-3	SNOW	9.74	24.99	547.61
A-3	EQX	-106.49	1146.49	1764.07
A-3	EQY	-1071.77	-428.48	-2570.23
A-3	EQO	-210.36	2295.75	3529.6
A-3	EQVO	-2144	-856.2	-5134.3
B-1	DEAD	34.11	-3.44	482.68
B-1	DEAD	174.23	-2.24	983.92
B-1	DEAD_OP	16.3	0.03128	81.45
B-1	DEAD_N	-670.87	1.33	2555.04
B-1	LIVE	-43.74	-6.51	64.14
B-1	WX	-255.25	0.99	-374.63
B-1	WY	-1.33	-70.96	504.74
B-1	SNOW	24.65	-1.56	193.87
B-1	EQX	-985.73	4.1	-1834.5
B-1	EQY	-51.12	-2.6	2619.38
B-1	EQO	-1968.03	8.18	-3558.39
B-1	EQVO	-102.38	-57.85	5233.15
B-2	DEAD	-3.76E-15	-9.82	342.79
B-2	DEAD	-1.168E-10	-61.15	847.79
B-2	DEAD_OP	-1.602E-11	-8.01	77.09
B-2	DEAD_N	-0.003857	-403.24	720.08
B-2	LIVE	8.844E-15	82.81	-147.91
B-2	WX	-56.07	3.583E-12	-6.399E-12
B-2	WY	-8.004E-14	-439.42	682.53
B-2	SNOW	-3.498E-11	3.21	131.34
B-2	EQX	0.02819	0.04229	-0.07544
B-2	EQY	0.006383	-1570.51	2804.88
B-2	EQO	0.2	0.08416	-0.15
B-2	EQVO	0.0007535	-3138.25	5603.81
B-3	DEAD	-34.11	-1.44	482.68
B-3	DEAD	-174.23	-2.24	983.9
B-3	DEAD_OP	-16.3	0.03128	81.45
B-3	DEAD_N	-670.07	1.26	1104.47
B-3	LIVE	43.74	-6.51	64.14
B-3	WX	-255.25	-0.99	374.63
B-3	WY	1.33	-70.96	504.74
B-3	SNOW	-24.65	-1.56	193.87
B-3	EQX	-985.73	-4.09	1834.58
B-3	EQY	-40.75	-28.68	1903.29
B-3	EQO	-1968.16	-8.15	3558.54
B-3	EQVO	-81.36	-57.83	3796.07

GENERAL DATA

ITEM NO.	-
DESIGN CODE BUNDLE/STRUCTURE	ASME SEC.VIII DIV.1(2019), API 661-7th EDITION R2018
INLET PRESSURE/PRESSURE DRG. (ALLOWABLE/CALC)	19.8 Bar / (0.1/0.016) Bar
DESIGN PRESSURE	22+F.V. (barg)
HYDROSTATIC TEST PRESSURE	28.6 (bar)
TEMPERATURE IN/OUT(TUBE SIDE)	73.5°C/56.3°C
DESIGN TEMPERATURE	120 °C
MINIMUM DESIGN METAL TEMPERATURE	-45°C
AIR INLET/OUTLET TEMPERATURE (AIR SIDE)	48 / 62.28 °C
MINIMUM DESIGN AMBIENT TEMPERATURE	5 °C
CORROSION ALLOWANCE	3 mm
ULTRASONIC TEST	YES(Full)[See note 8]
RADIOGRAPHY	YES(Full)[See note 8]
STRESS RELIEVING	YES
BARE/FINNED SURFACE PER UNIT	68.101/1579.2 m ²
NUMBER OF BUNDLE PER BAY	1
NUMBER OF UNIT	2
NUMBER OF BAY PER UNIT	1
NOZZLE SIZE(INLET/OUTLET/RATING/TYP)	1x4"/1x2"/SCH.160/#300
PROCESS FLUID NAME	PROPANE
SERVICE	PROPANE
PASSES PER BUNDLE	4
FINNED-TUBES/BUNDLE	NO.140 TUBES,OD=25.4,SEAMLESS MIN.W.#WG16,THK.=1.65,L=6096 mm
Tube to tube sheet joint	STRENGTH WELD + EXPANDED
Fin (Type,material, OD,PPI)	EXTRUDE.AL 1060,57,15,11
STEAM COIL	NO
LOUVER/TYP	NO/-
PLENUM / FAN RING	FORCED TYPE/CONICAL L/D=0.05
VIBRATION SWITCH	YES,(FOR EACHFAN) MANUAL & ELECTRIC RESET,Exd IC TS Gb,IP65
FAN SPECIFICATION (RPM/DIAMETER)	362/7 Ft
Pitch angle (for fan)	6.6°
BLADE NO./ MATERIAL	4/ALUMINIUM
AIR QUANTITY FOR FAN	26.879 m ³ /s
STATIC PRESSURE	102.95 Pa
AIR TEMPERATURE IN/OUT	48°C/52.28°C
SPEED REDUCER TYPE	V BELT
REDUCTION RATIO	3.75
MOTOR TYPE	ELECTRIC-Exhb.IIB-T4-IP55
VOLTAGE/Freq./PHASES	400/50/3
RPM/KW	1500/7.5 Kw
Motor VFD per unit	50%
VFD POWER	YES/11 Kw
S.P.L. 1m all side of fan:	<85 dB(A)/1m all sides

NOTES:

- Loading Data
WIND :ASCE7-16,VELOCITY :125Km/h, EXPOSURE : C
Earthquake: Standard No. 2800,A=0.3,B=2.75,I=1.4,R=3.5,SOIL TYPE=IV
- Fans
-100% AP(Adjustable pitch-manual)
- Miscellaneous
- The Inlet Header Boxes Are Fixed In The Direction Of Fin Tubes,
Refer To Table For The Lateral Displacement In Y Direction
- Flange Face Detail : ASME ANSI B16.5
- All Dimensions Are In Millimeter Unless Otherwise Specified.
- All Dimensions Tolerances Are According to API 661.(Figure 10)
- Bolts which are used for fixing headers to side frame , on sliding side should be removed after erection.
- PROTECTION(SEE Galvanizing Specification and Inspection Procedure: E1027-DMF-VD-QC-PRO-024
- RADIOGRAPHIC TEST (FULL/SPOT) SHALL BE IN COMPLIANCE WITH THE NDT PROCEDURE & WELD/NDT MAP E1027-DMF-VD-QC-PRO-023
- 50% motors per unit to be VFD.

LOAD DEFINITION*

DEAD	DEAD LOAD(PLENUMS+FAN RINGS+FAN GUARDS+FAN+MOTOR+SPEED REDUCERS+GRATING+TUBE BUNDLE EMPTY)+HEADER WALK WAY
DEAD OP	WEIGHT OF LIQUID WITHIN EACH TUBE BUNDLE& STEAM COIL(WATER)
DEADS	SELF WEIGHT OF STRUCTURE
DEADN	NOZZEL LOAD
LIVE	WALKWAY LOAD 250 Kg/m ²
EQX	SEISMIC LOAD DIR.X
EQY	SEISMIC LOAD DIR.Y
WX	WIND LOAD DIR.X
WY	WIND LOAD DIR.Y
SNOW	66 Kg/m ²

* Further Definition Check the Steel Structure Calculation.Doc No.: E1027-DMF-VD-ST-CAL-004 1158-A01-0030-00

THE MAXIMUM ALLOWABLE MOMENTS AND FORCES PER EACH NOZZLE (IF LOADS ARE DIVIDED EQUALLY FOR NOZZLES ACCORDING TO 3xAPI 661(7.1.10.1))

SIZE	Fx(N)	Fy(N)	Fz(N)	Mx(N.m)	My(N.m)	Mz(N.m)
4"	10020	8010	10020	2430	3660	2430
2"	3060	3990	3060	450	720	450

CONNECTIONS

NO.	REP.	QTY. PER BAY/UNIT	DIA	DESIGNATION
N1	INLET NOZZLE/FLANGE	1/2	4"	FLANGE ANSI B16.5,#300,WG#SCH.160,SA-353 Gr.B /SA-350 LF2 CL1,N,THK.=13.49
N2	OUTLET NOZZLE/FLANGE	1/2	2"	FLANGE ANSI B16.5,#300,LWN,RF,SA-350 LF2 CL1,N,THK.=16.6
V1&V2	VENT	2/4	1"	FLANGE ANSI B16.5,#300,LWN,RF,SA-350 LF2 CL1 N,THK.=14.3
D1&D2	DRAIN	2/4	1"	FLANGE ANSI B16.5,#300,LWN,RF,SA-350 LF2 CL1 N,THK.=14.3
1A	VIBRATION SWITCH	2/4	-	SEE FAN DRIVE ASSEMBLY DRAWING
2A	MOTOR(7.5Kw)	2/4	-	SEE FAN DRIVE ASSEMBLY DRAWING
3A	FAN	2/4	7ft	SEE FAN DRIVE ASSEMBLY DRAWING

LATERAL DISPLACEMENT OF HEADERS (DIRECTION X) INSIDE BUNDLE FRAME IN RELATION WITH EXPANSION FORCES ON NOZZLES (mm) (ACCORDING TO API661 7-1-1-2)

MAXIMUM DISPLACEMENT INLET/OUTLET : ±9

* FOR MORE DETAILS FOR EACH COMPONENT OF AIR COOLER REFER TO BELOW DRAWING & DOCUMENTS.

REFERENCED DWG&DOC.

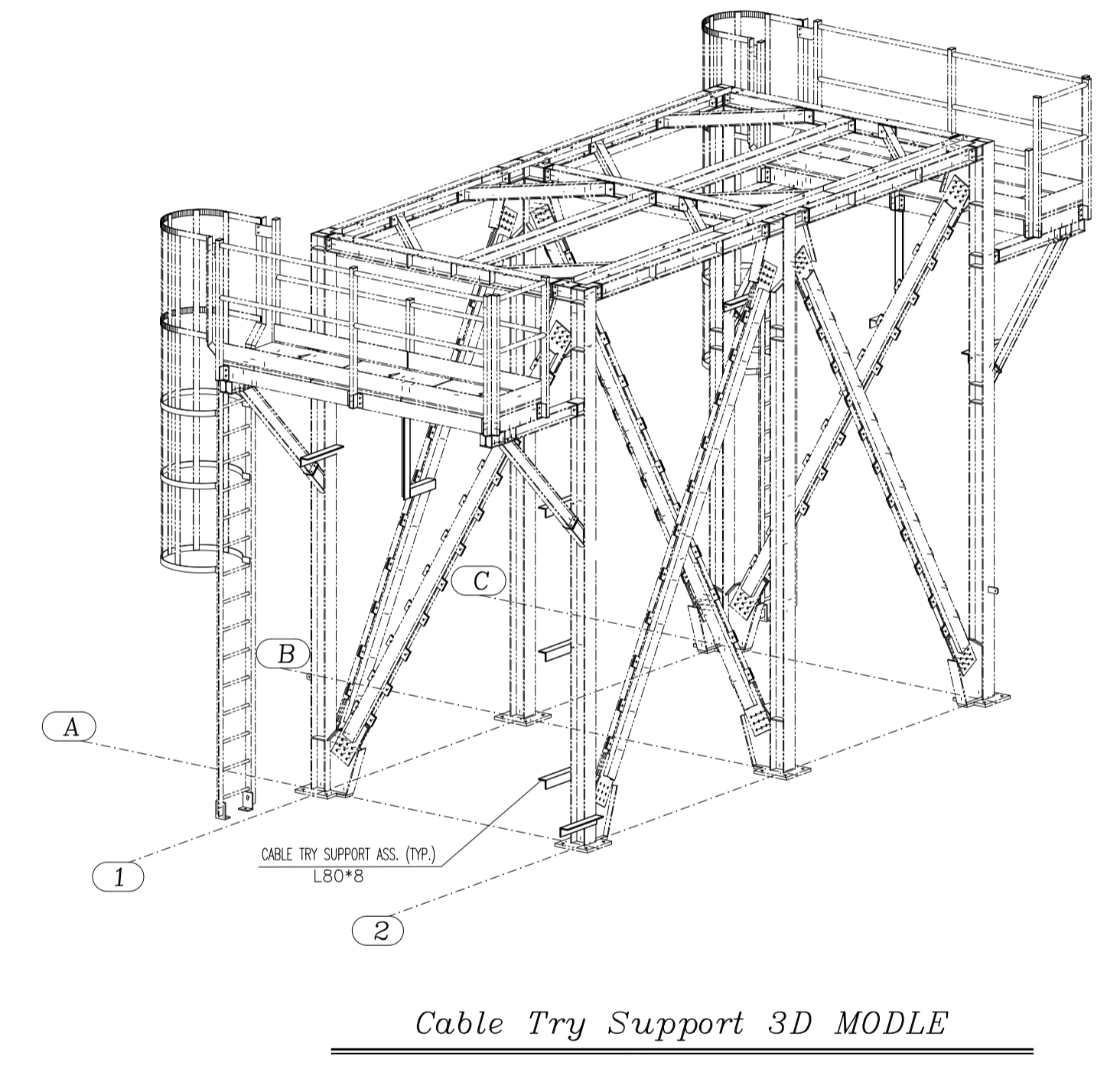
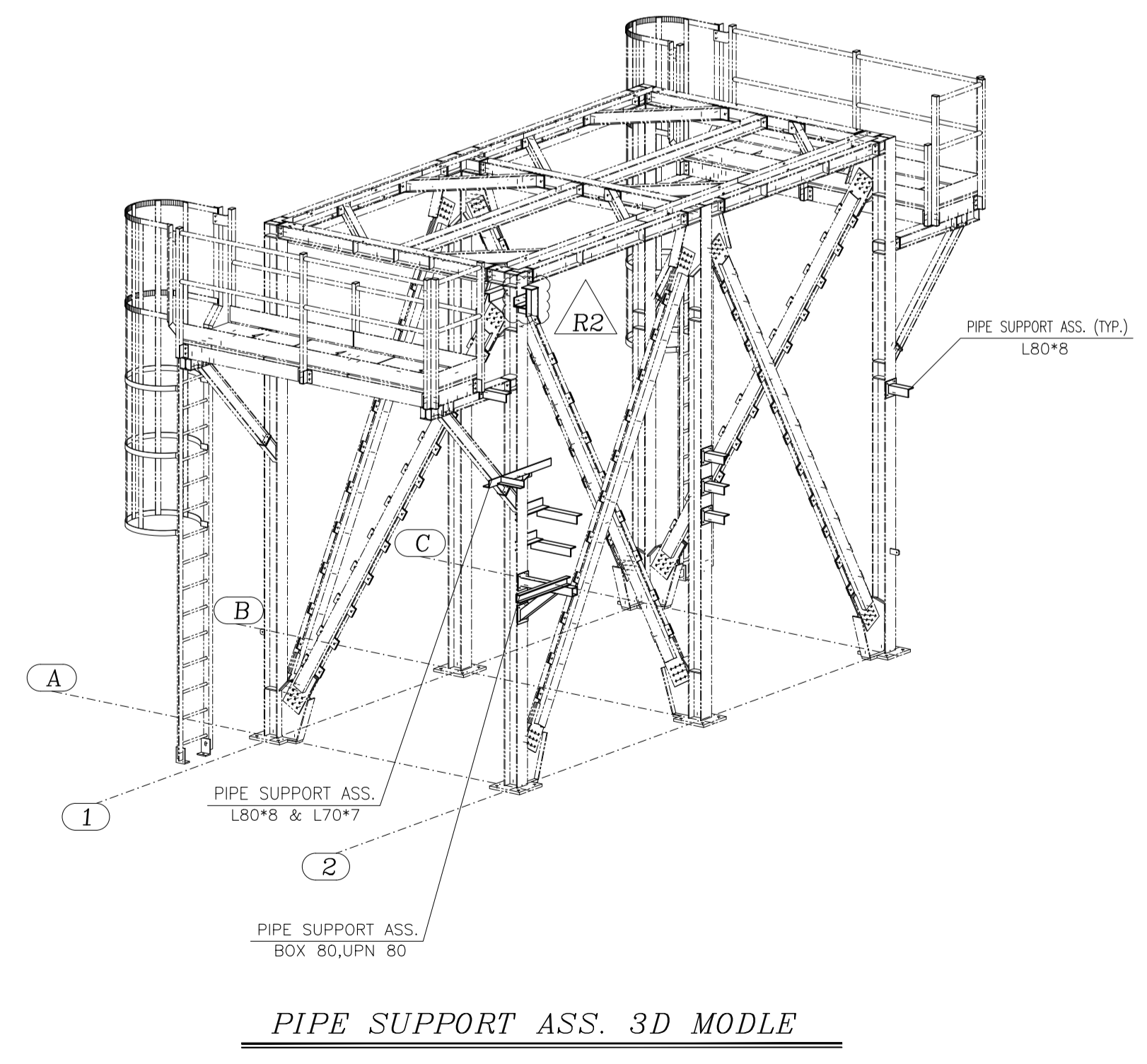
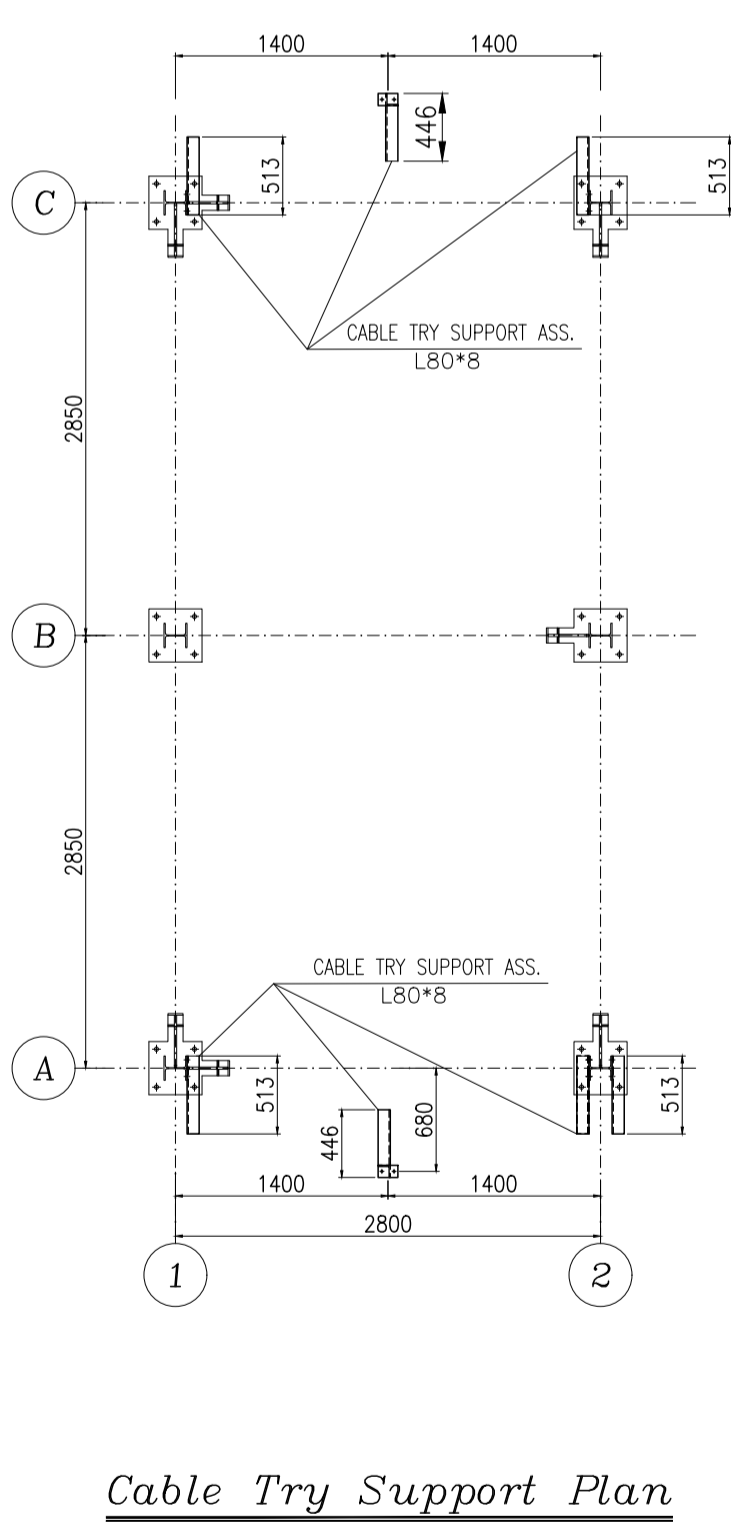
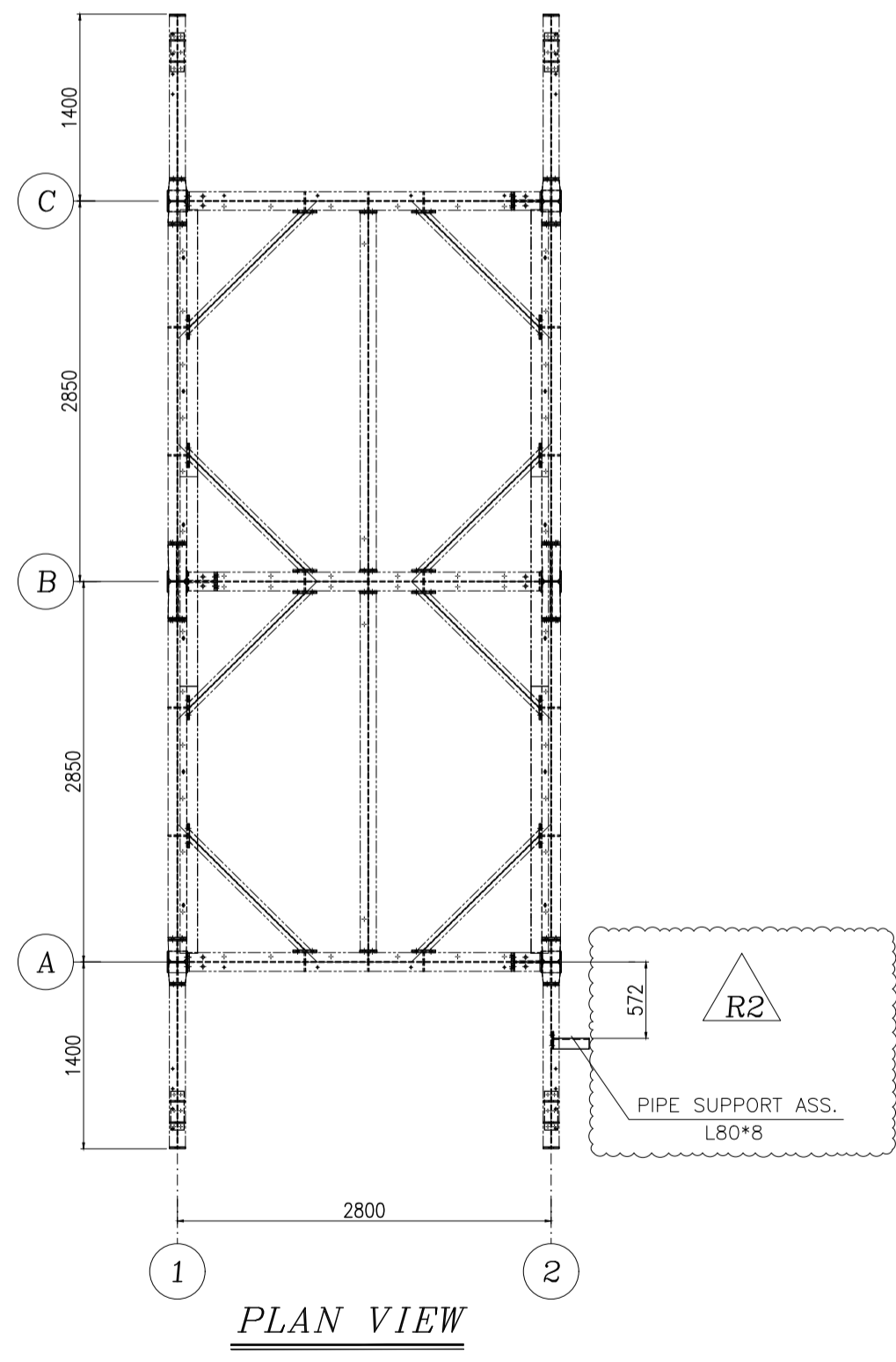
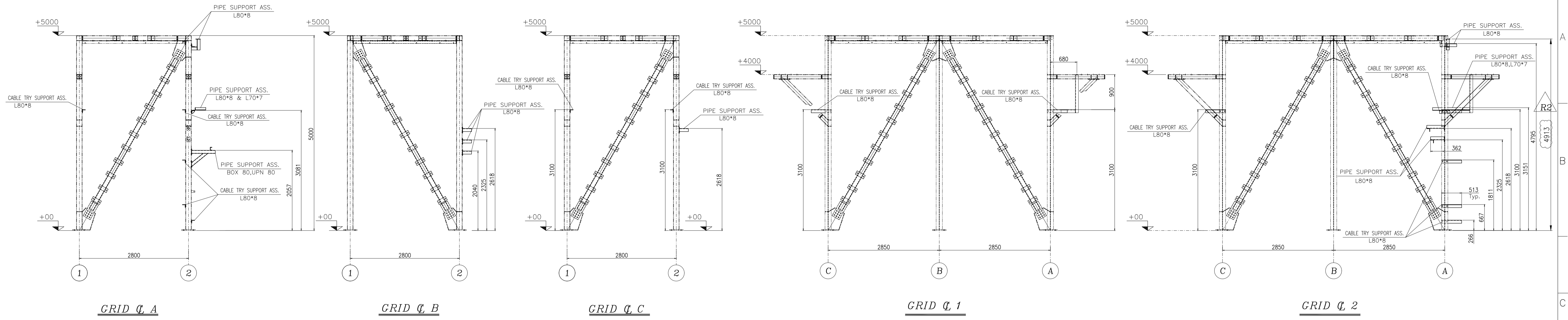
TITLE	VENDOR DOCUMENT NO.	CLIENT DOCUMENT NO.
Tube Bundle Drawing	1158-A01-2000-00	E1027-DMF-VD-ME-DWG-005
Bundle Frame Drawing	1158-A01-2400-00	E1027-DMF-VD-ME-DWG-007
Fan Drive Assembly Drawing	1158-A01-6000-00	E1027-DMF-VD-ME-DWG-008
Fan Ring Drawing	1158-A01-5087-00	E1027-DMF-VD-ME-DWG-009
Support Mechanism Drawing	1158-A01-5167-00	E1027-DMF-VD-ME-DWG-010
Plenum Drawing	1158-A01-5110-00	E1027-DMF-VD-ME-DWG-011
Steel Structure Drawing	1158-A01-1100-00	E1027-DMF-VD-ME-DWG-013
Header Walkway Drawing	1158-A01-1200-00	E1027-DMF-VD-ME-DWG-014
Ladder Drawing	1158-A01-1520-00	E1027-DMF-VD-ME-DWG-015
Surface Preparation and Painting Procedure for Air Cooler	1158-A01-GS01-00	E1027-DMF-VD-QC-PRO-024

CLIENT:

PROJECT :
AIR COOLER FOR
Toase-che Park Sanati Gohar Ofogh Petrochemical Co.
General Arrangement Drawing
1158-A01-1000-00
(Sheet 1 of 2)

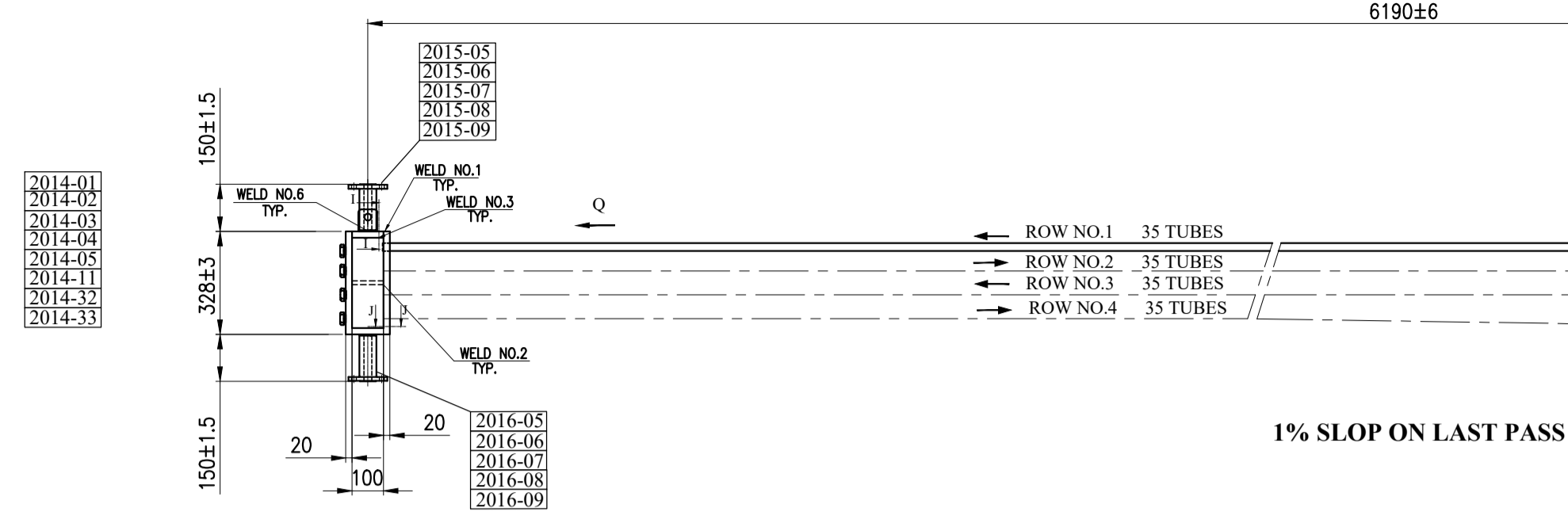
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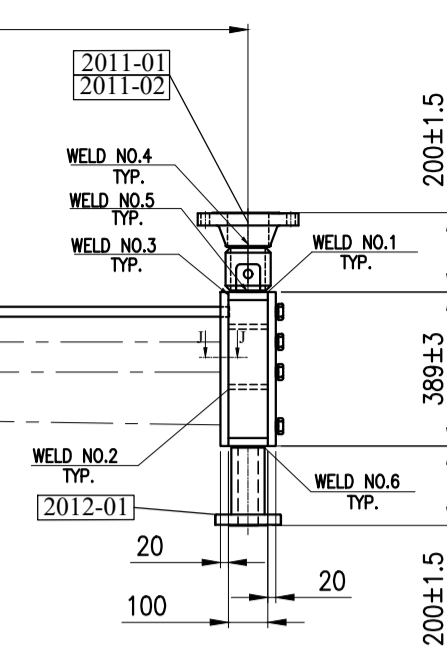


R2	12/30/2024	ISSUED FOR APPROVAL	F.SZ	J.M.	J.B.L	A.GHZ
R1	12/28/2024	ISSUED FOR APPROVAL	F.SZ	J.M.	J.B.L	A.GHZ
R0	11/13/2024	ISSUED FOR APPROVAL	F.SZ	J.M.	J.B.L	A.GHZ
REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	APPROVED BY	FINAL APPROVED BY
CLIENT:			CONTRACTOR:			
 			 			
PROJECT : AIR COOLER FOR Toase-che Park Sanati Gohar Ofogh Petrochemical Co. General Arrangement Drawing 1158-A01-1000-00 (Sheet 2 of 2)						
DWG. NO.		EI027-DMF-VD-ME-DWG-003				
SCALE:		N.T.S.		SIZE:		A1
				REV.:		R2
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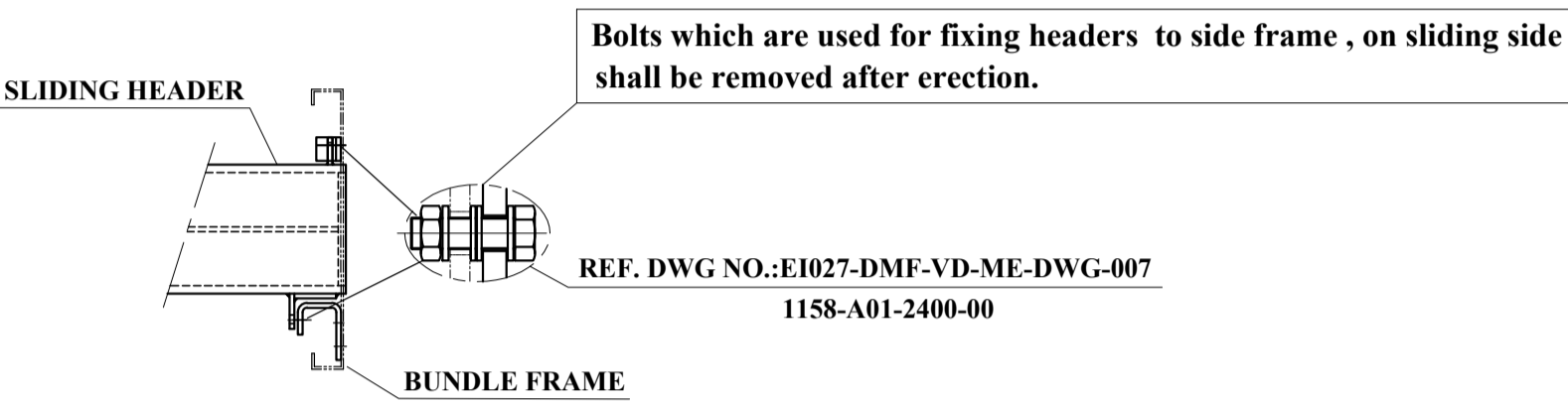
REAR HEADER (SLIDING HEADER)



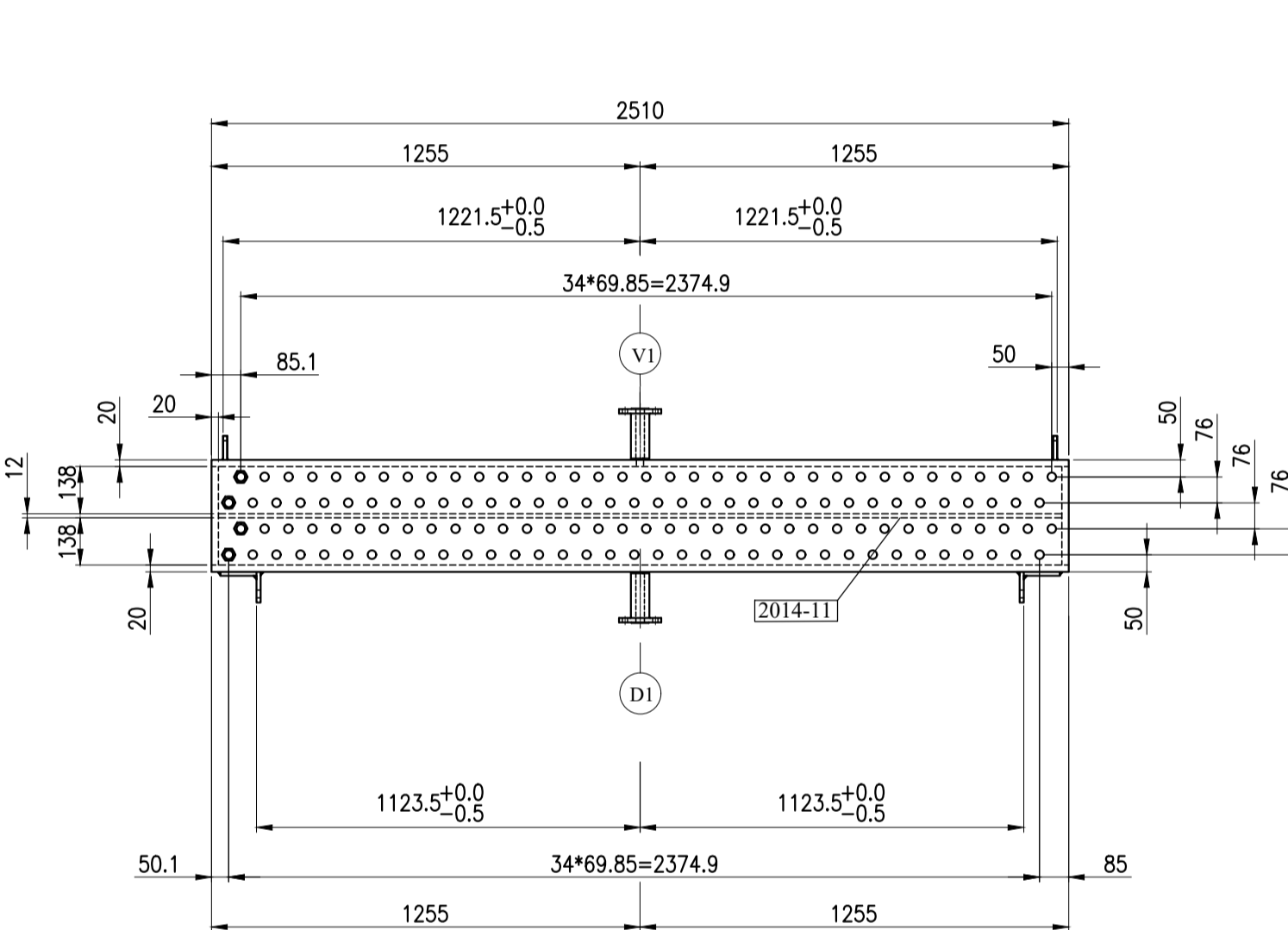
FRONT HEADER (FIXED HEADER)



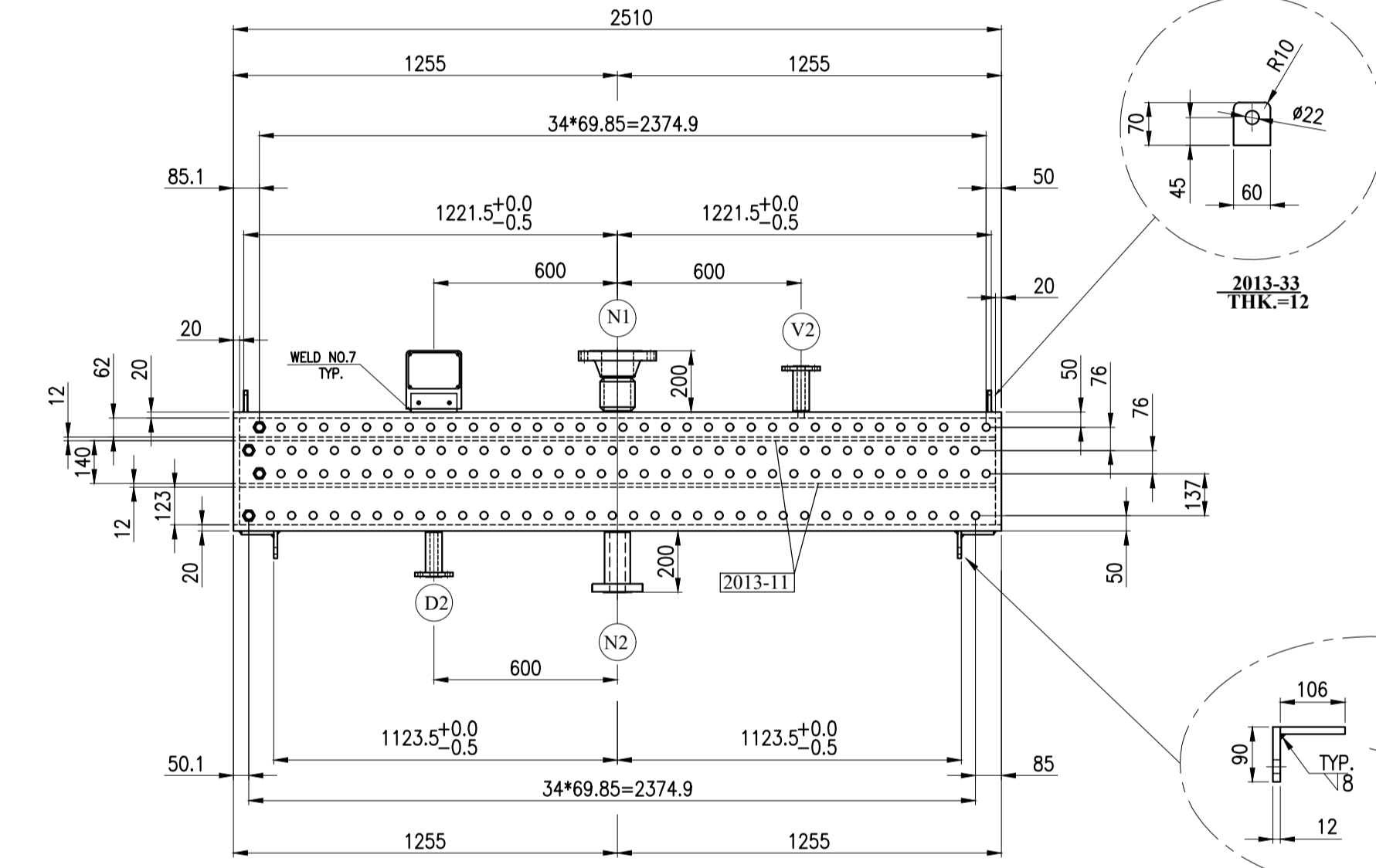
1% SLOP ON LAST PASS



DETAIL OF BOLTS FOR FIXING HEADER & TRANSPORTATION



VIEW FROM "Q" REAR HEADER



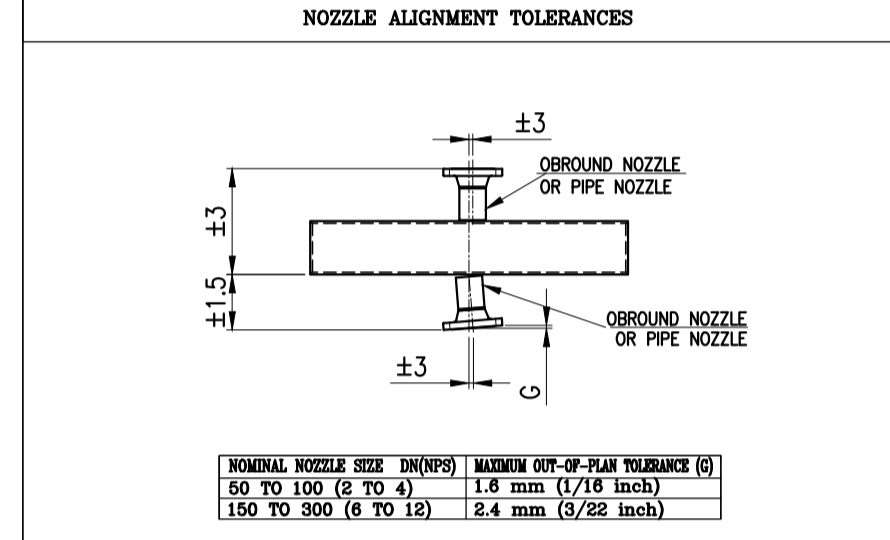
VIEW FROM "P" FRONT HEADER

NOTES: 1- ALL DIMENSIONS ARE IN MILLIMETERS. 2- ALL NOZZLE FACINGS SHALL BE PROTECTED BY COVER AND 4 BOLTS. 3- FLANGE CONTACT FACES SHALL BE COATED WITH GREASE. 4- ALL FLANGE BOLTS SHALL STRADDLE MAIN AXES. 5- ALL ENGINEERING AND MANUFACTURING CHARACTERISTICS NOT MENTIONED ON THIS DRAWING ARE INDICATED ON THE FOLLOWING APPLICABLE DOCUMENTS: A-CALCULATION BOOK B-WELDING PROCEDURE SPECIFICATION (W.P.S.) C-NON DESTRUCTIVE TEST CHECK LIST (N.D.T.) D-PAINTING & GALVANIZING SPECIFICATION SHEETS 6- HEADER PLUG THREADS SHALL BE COVERED BY ANTISEIZE GREASE PROPER FOR 200°C TEMPERATURE. 7- THE MATERIAL OF THE SLIDING PAD BETWEEN THE BUNDLE FRAME AND THE HEADER IS TEFLO(PTFE). FOR MORE INFORMATION, REFER TO DWG. NO. EI027-DMF-VD-ME-DWG-007 8- MATERIAL FOR PLATE(S) FOR PRESSURE PART) TO BE IMPACT TESTED.

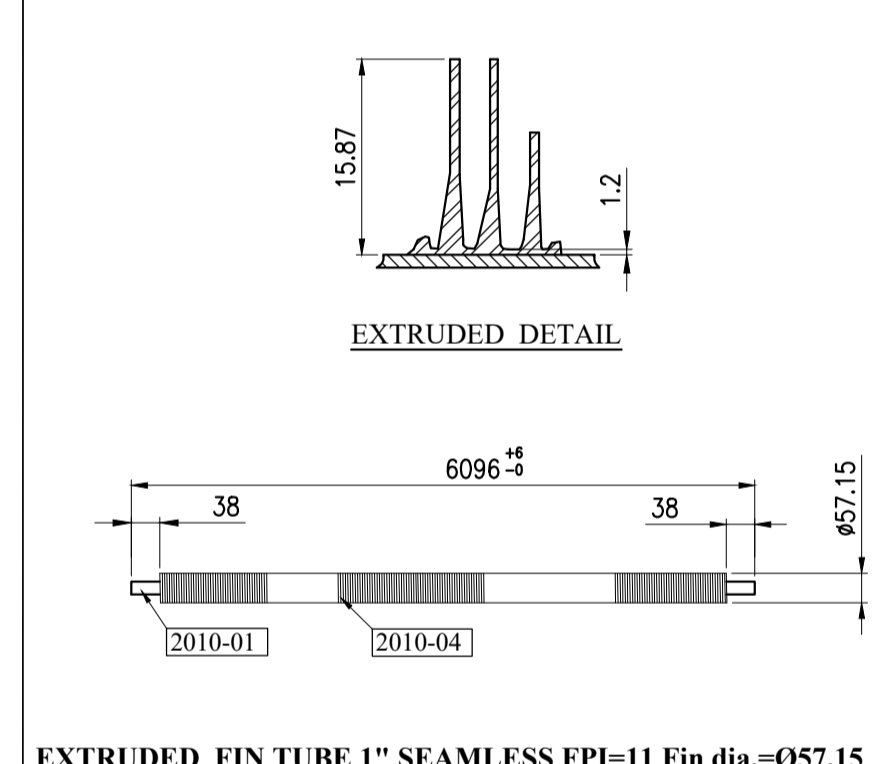
THE MAXIMUM ALLOWABLE MOMENTS AND FORCES PER EACH NOZZLE (IF LOADS ARE DIVIDED EQUALLY FOR NOZZLES ACCORDING TO 3xAPI 661(7.1.10.1))

Table with 5 columns: SIZE, Fx(N), Fy(N), Fz(N), Mx(N.m), My(N.m), Mz(N.m). Rows for 4" and 2" nozzle sizes.

LATERAL DISPLACEMENT OF HEADERS (DIRECTION Z) INSIDE BUNDLE FRAME IN RELATION WITH EXPANSION FORCES ON NOZZLES (mm) (ACCORDING TO API661 7-1-1-2) MAXIMUM DISPLACEMENT OF FRONT AND REAR HEADER(Z DIRECTION) INLET/OUTLET : ±9



FIN TUBE DETAIL EXTRUDED DETAIL



EXTRUDED FIN TUBE 1" SEAMLESS FPI=11 Fin dia.=Ø57.15

Material list table with columns: PART NO., DESCRIPTION, DIMENSIONS (DIA, LENGTH, WT), MATERIAL, QTY, UNIT WEIGHT, TOTAL WEIGHT, STD DWG, REV.

NOZZLES TABLE with columns: MARK NO., SERVICE, SIZE, NOZZLE MATERIAL, FLANGE MATERIAL, RATING, TYPE, FACING, SCH. THK., FLANGE FACE FINISHING, QTY. PER BUNDLE ITEM.

APPLICABLE CODES AND STANDARDS ASME VIII-DIV.1 2019, API 661. Includes SERVICE, MAXIMUM DESIGN TEMPERATURE, MINIMUM AMBIENT TEMPERATURE, DESIGN PRESSURE, TEST PRESSURE, CORROSION ALLOWANCE, WELD JOINT EFFICIENCY, HYDROTEST, POST WELD HEAT TREATMENT, N.D.T. EXAMINATION OF WELDED JOINTS, TUBE TO TUBE SHEET JOINT, BUNDLE CAPACITY, BUNDLE WEIGHT WITH FRAME (EMPTY), BUNDLE WEIGHT WITH FRAME (FULL OF WATER), ULTRASONIC TEST(NOZZLE TO HEADER).

REFERENCE DOCUMENTS table with columns: TITLE, VENDOR DOCUMENT NO., CLIENT DOCUMENT NO.

Revision table with columns: REV, DATE, DESCRIPTION, DRAWN BY, CHECKED BY, APPROVED BY, FINAL APPROVED BY.

Project information including logos for PSC and PDCU, project name 'AIR COOLER FOR Toase-che Park Sanati Gohar Ofogh Petrochemical Co.', drawing title 'TUBE BUNDLE DRAWING', and drawing details like DWG NO., SCALE, SIZE, REV.

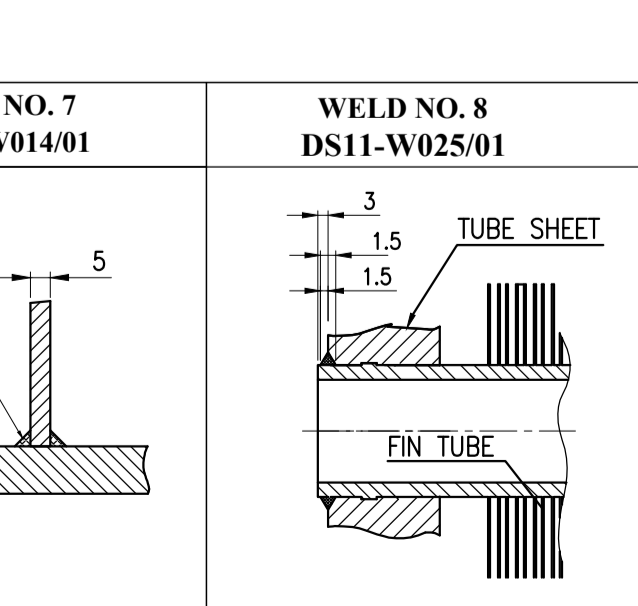
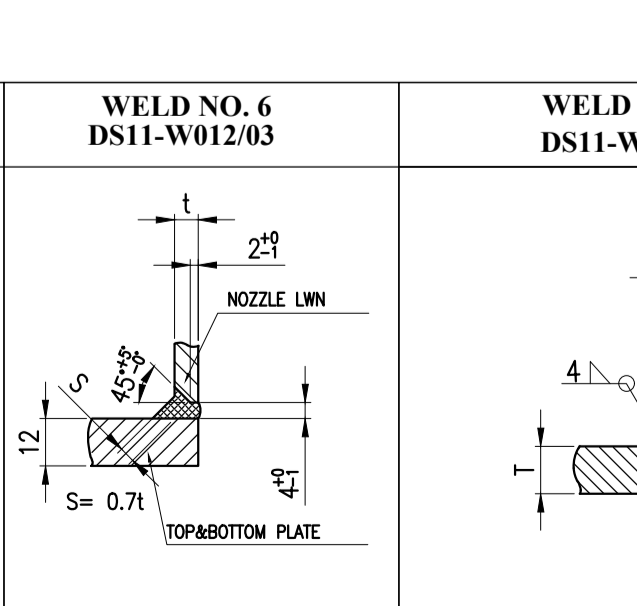
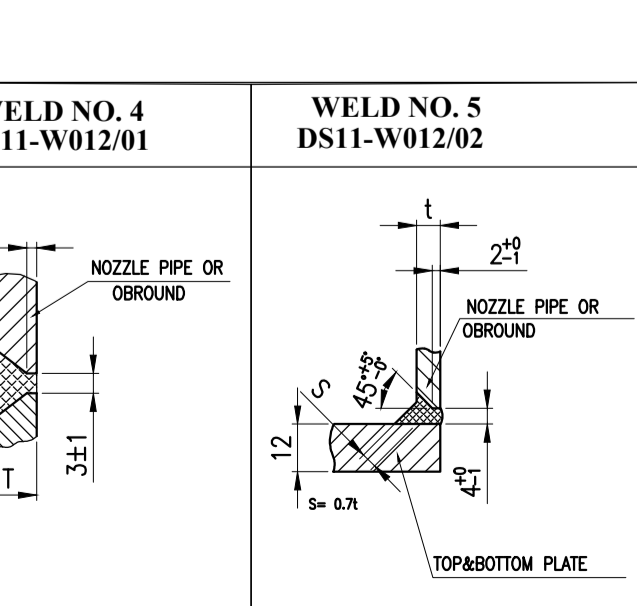
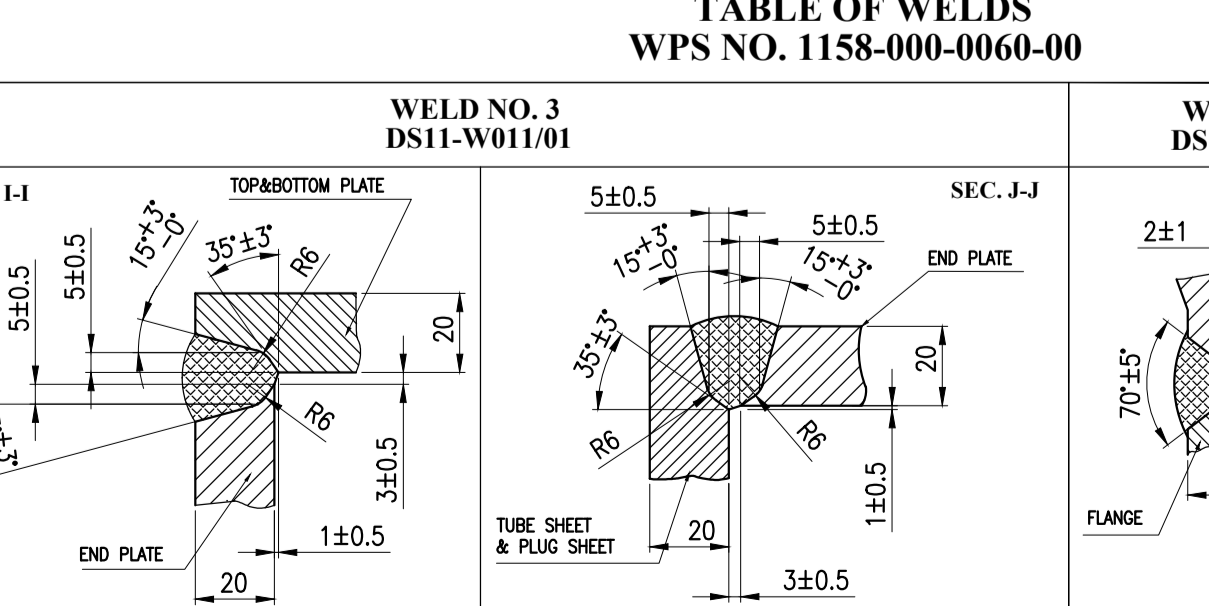
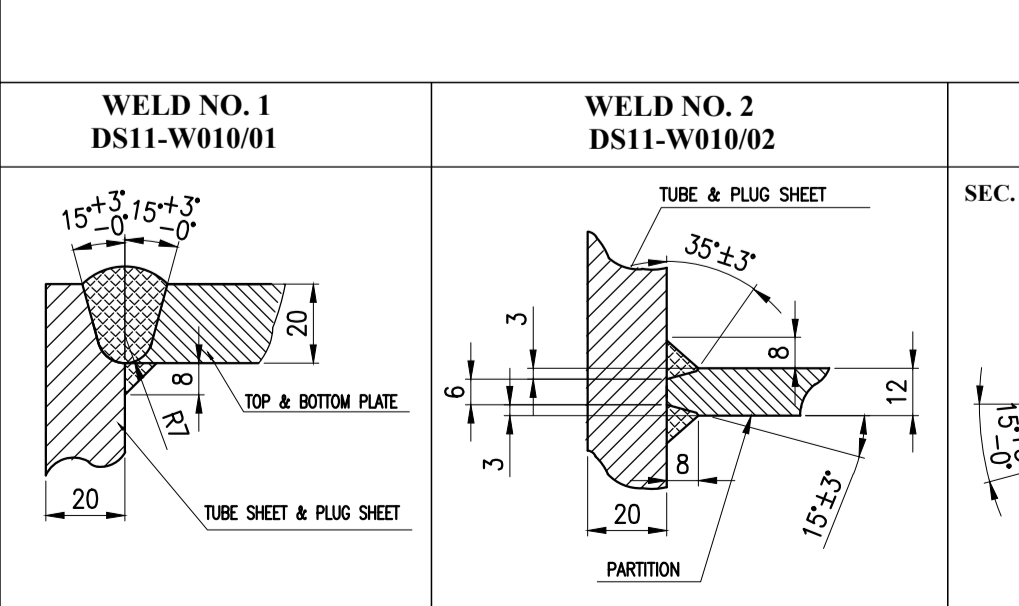
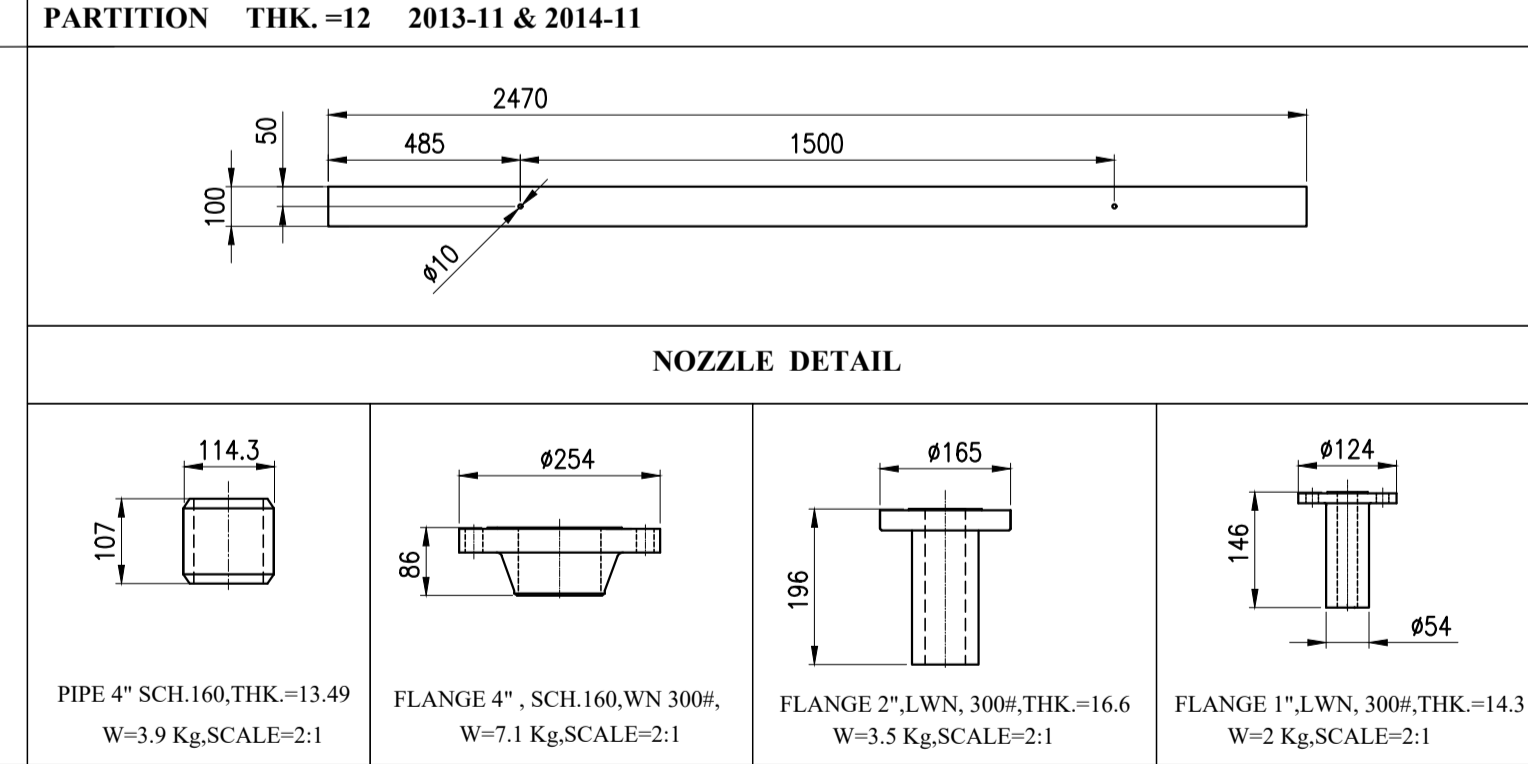
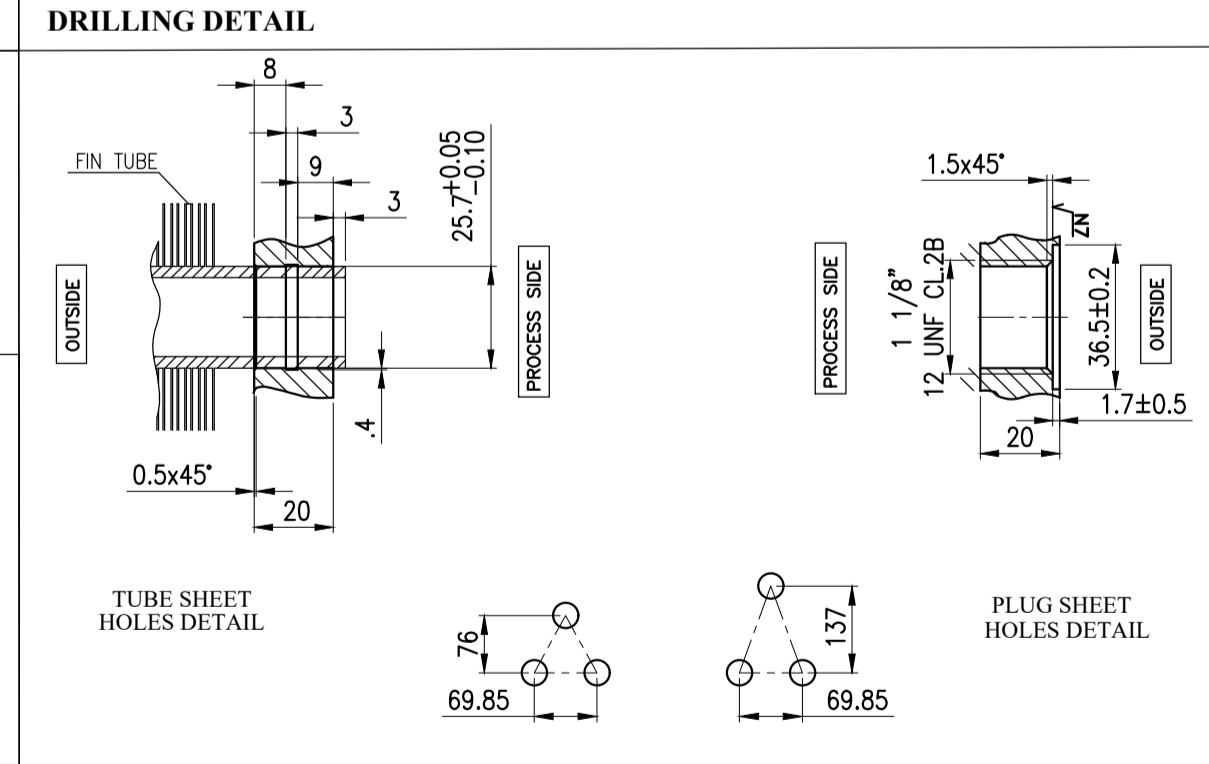
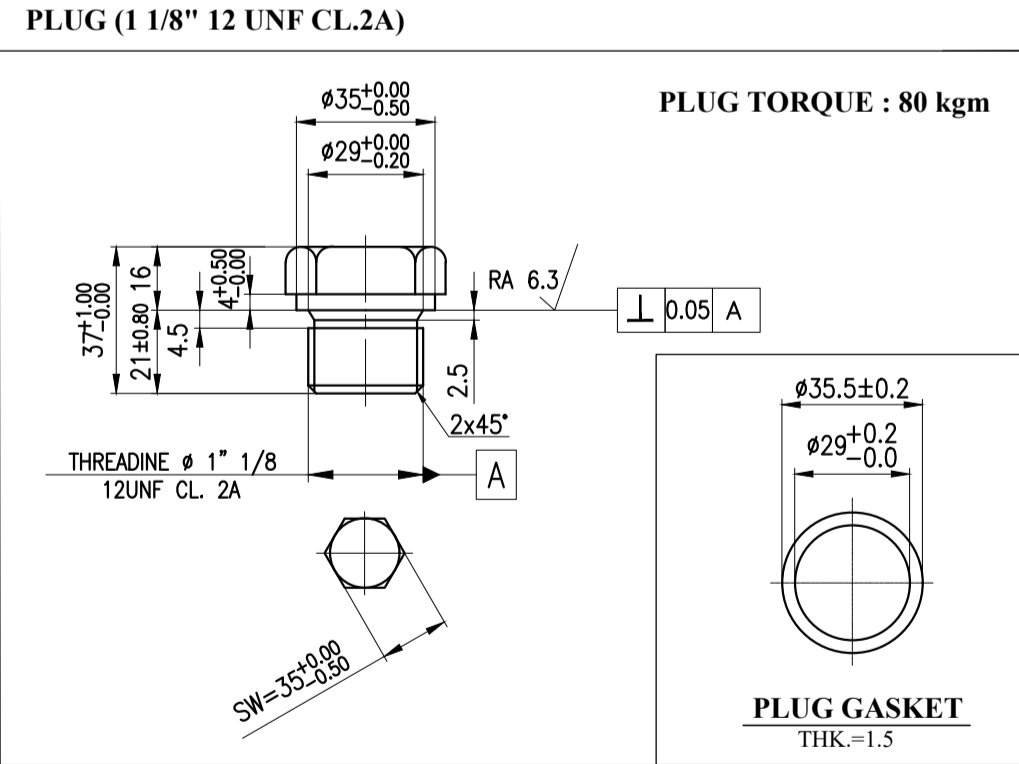
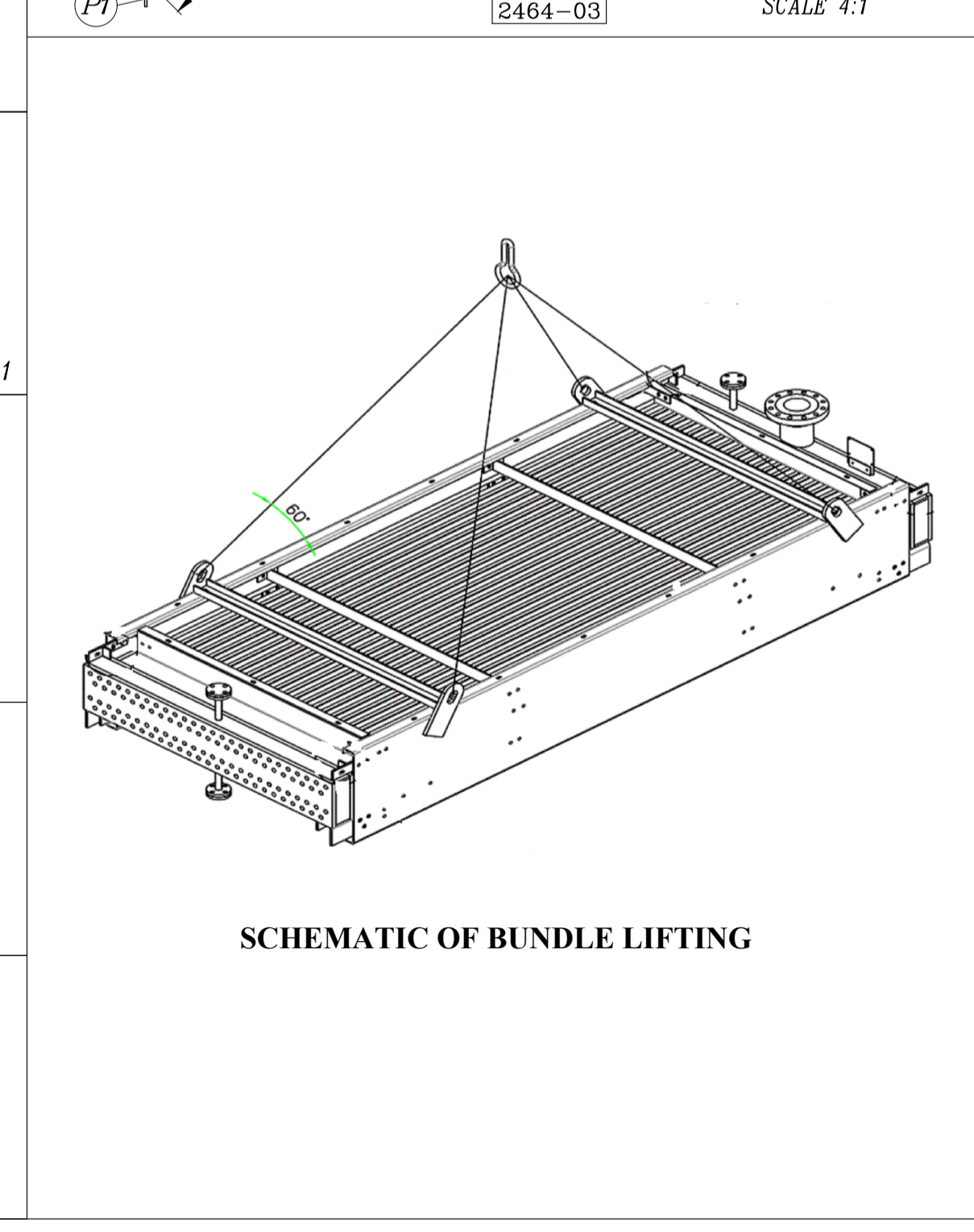
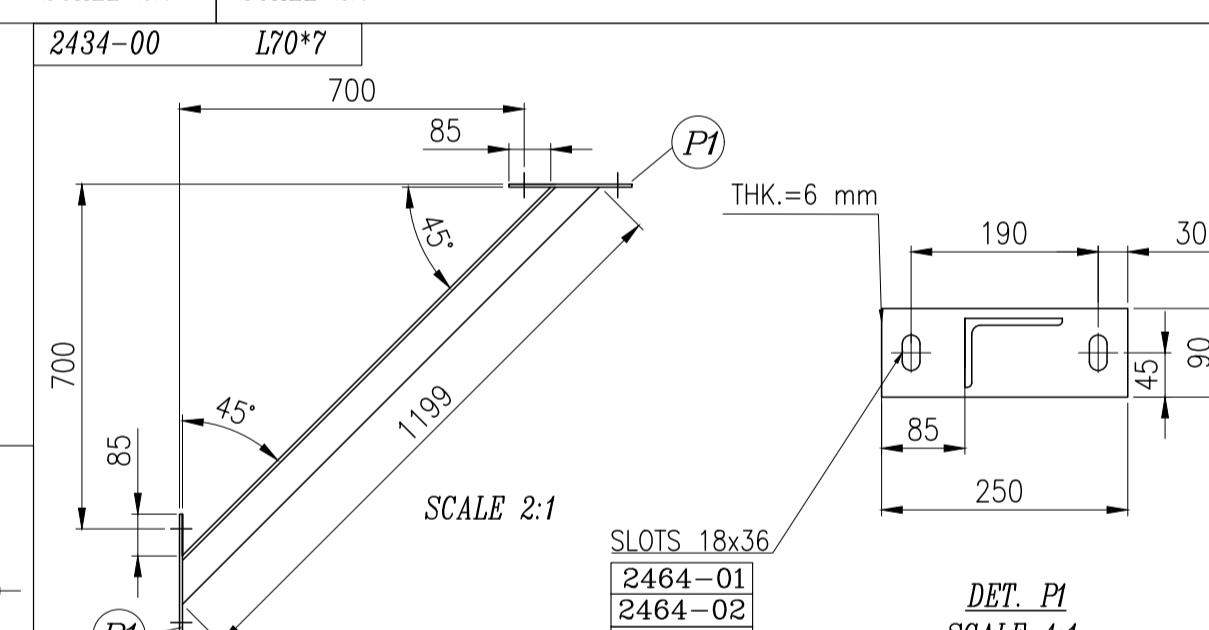
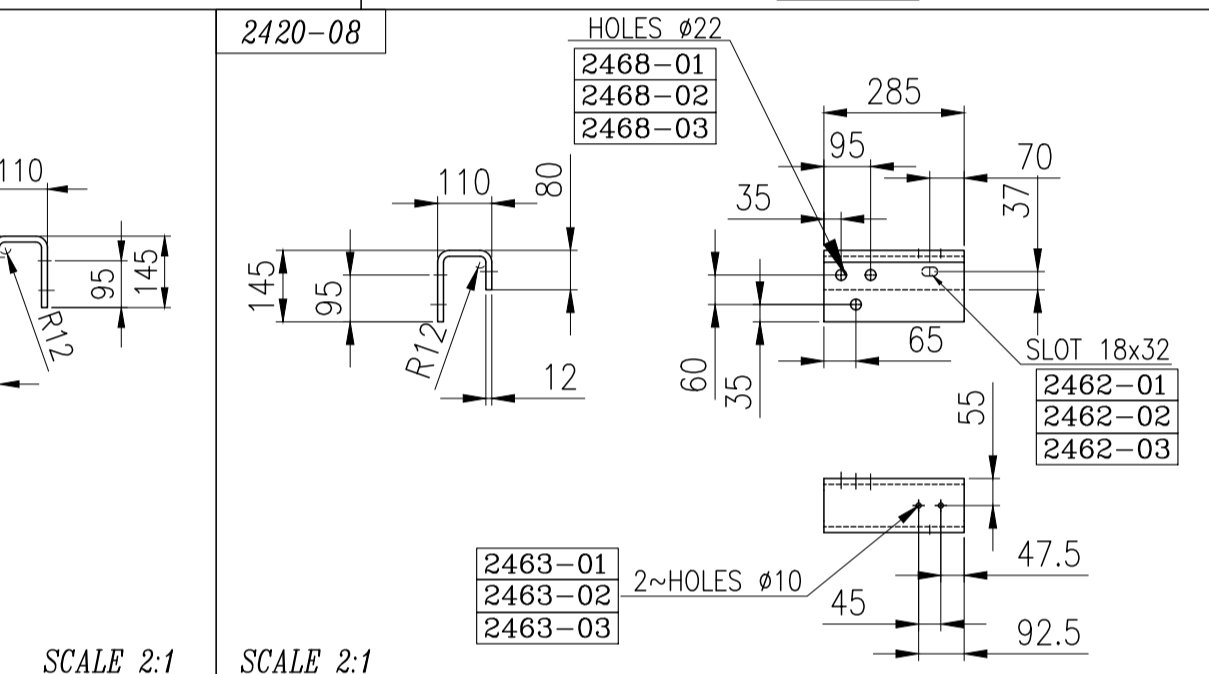
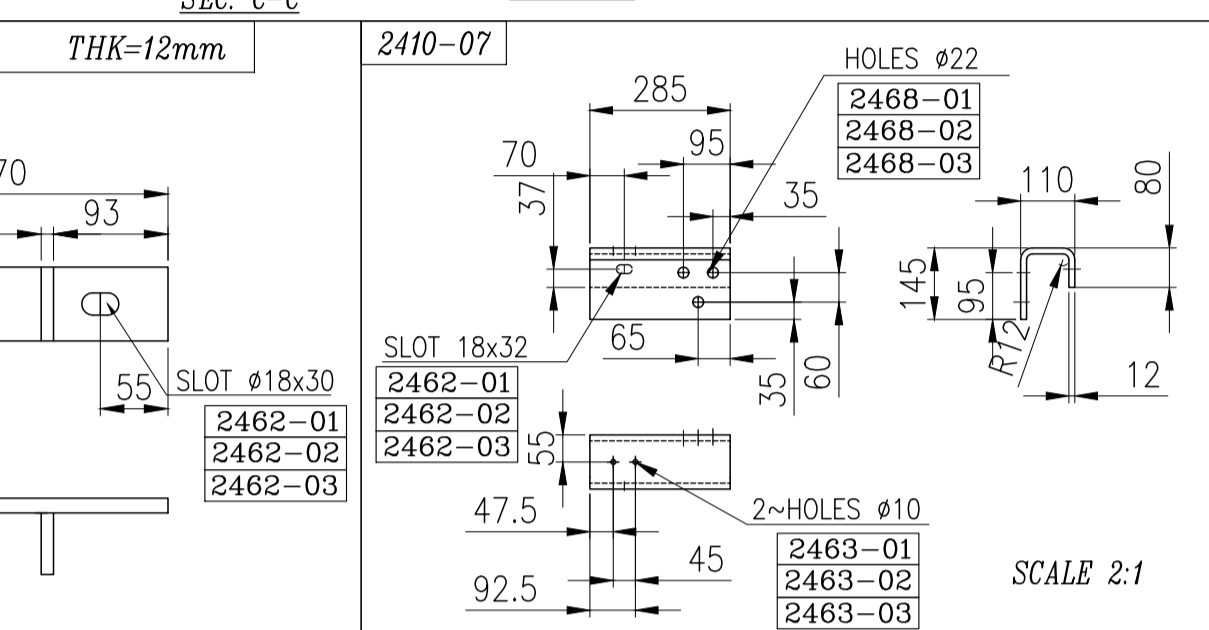
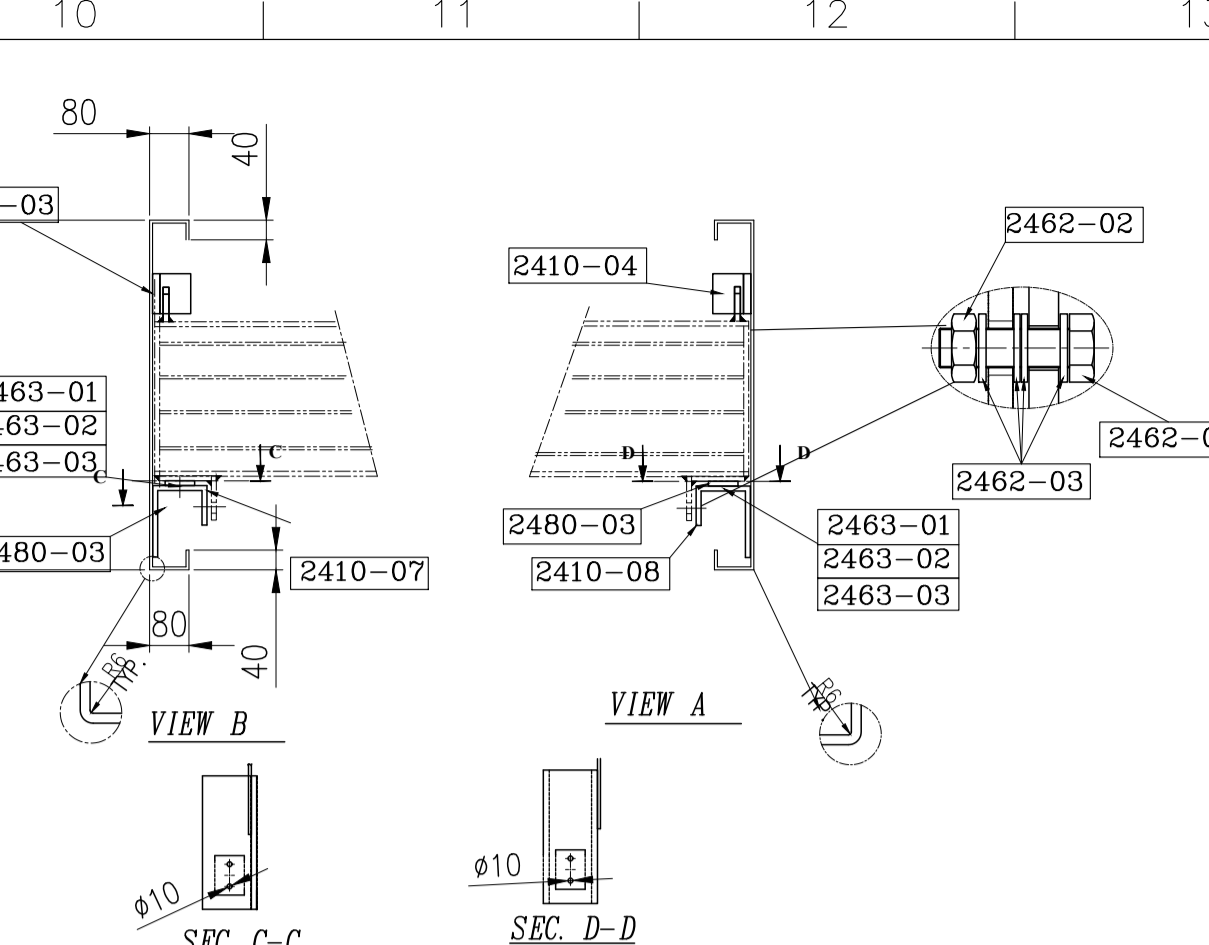
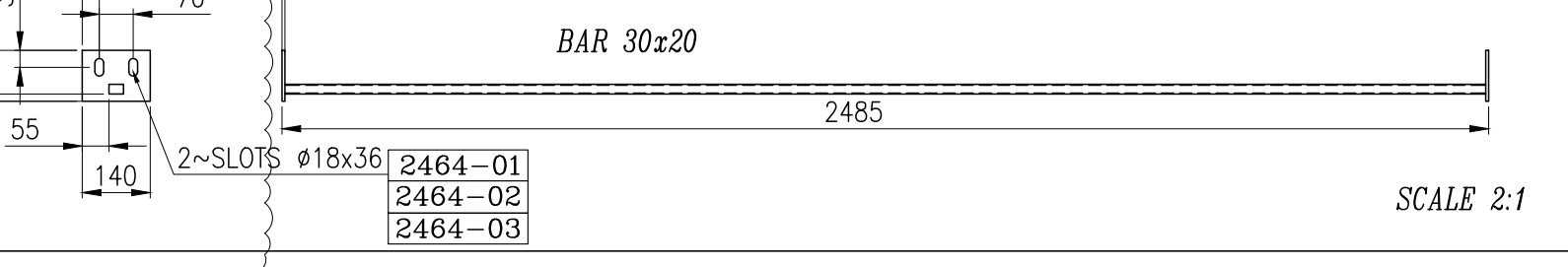
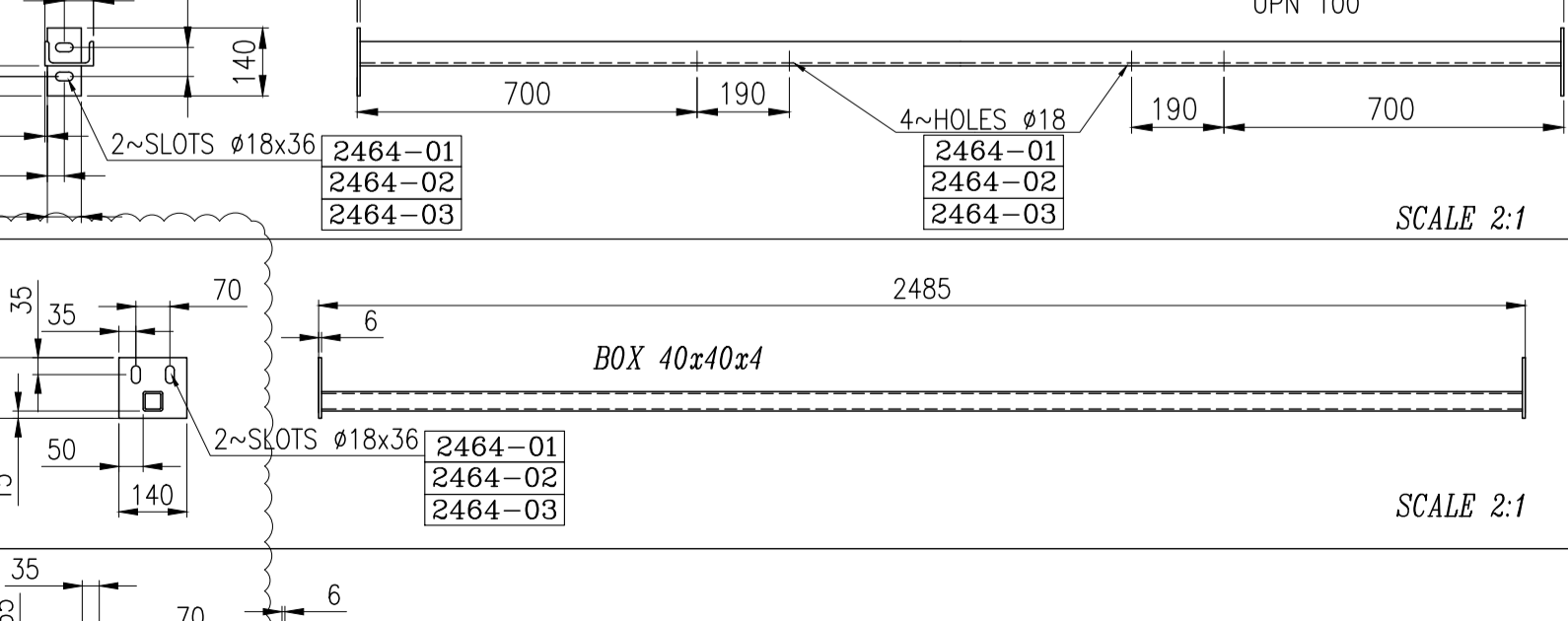
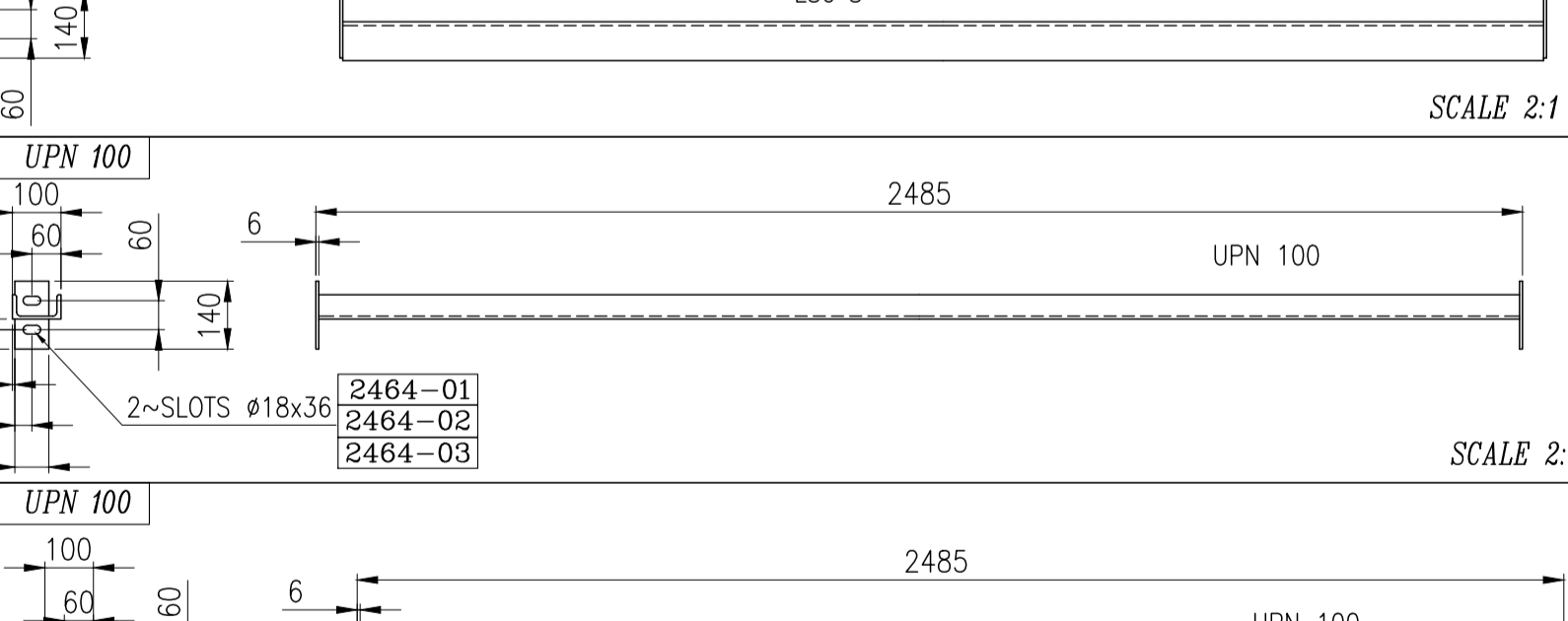
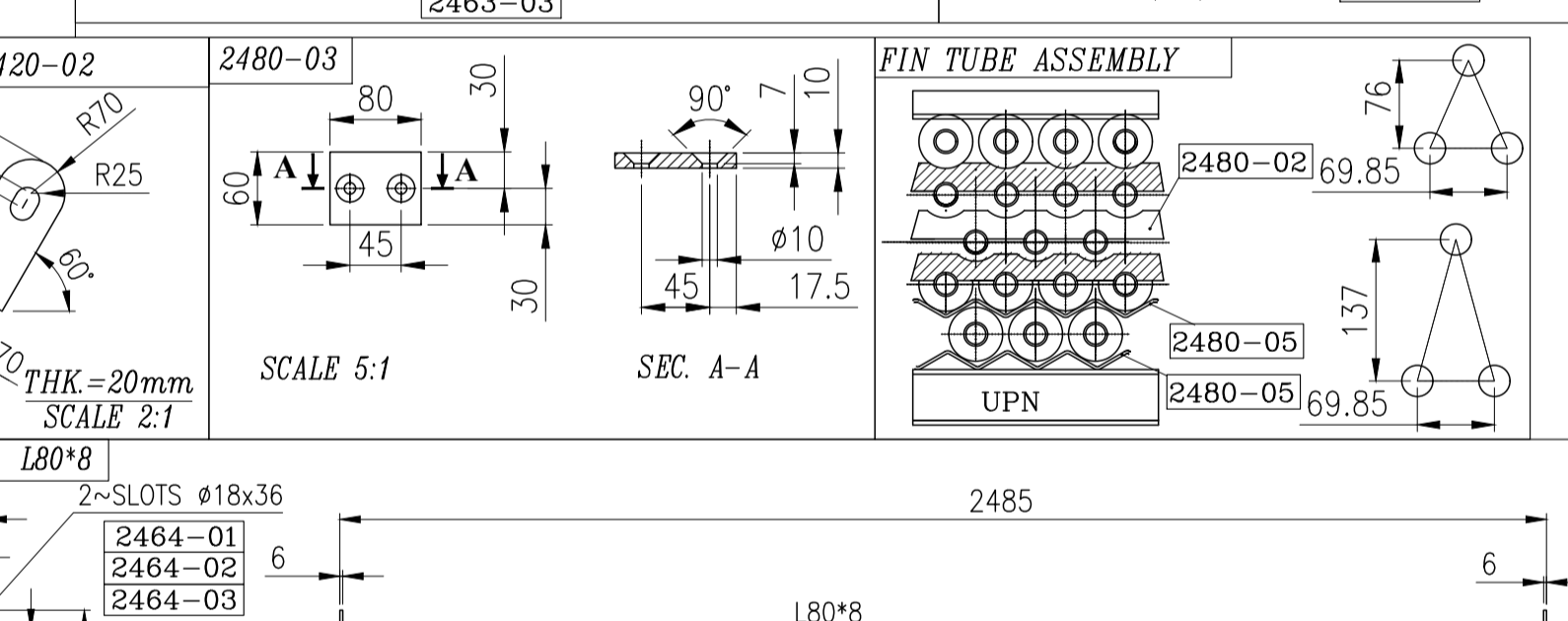
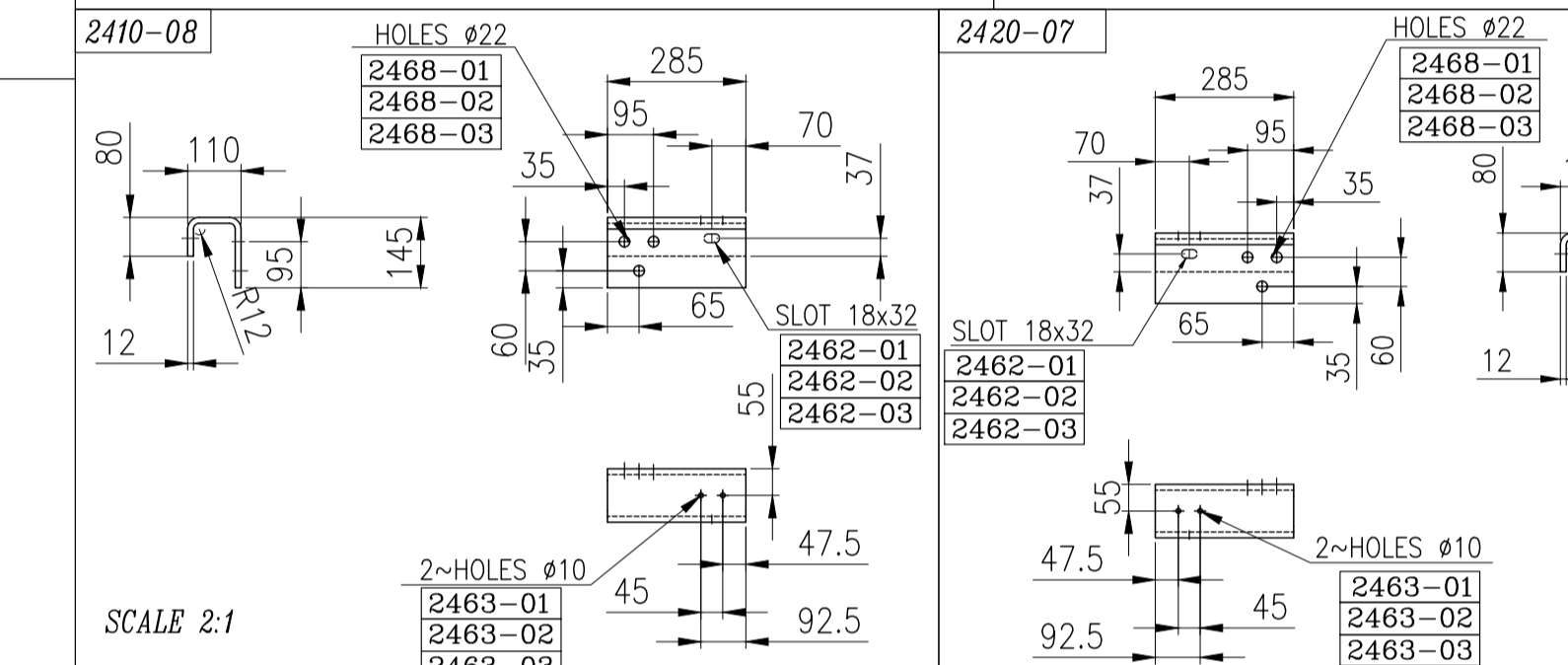
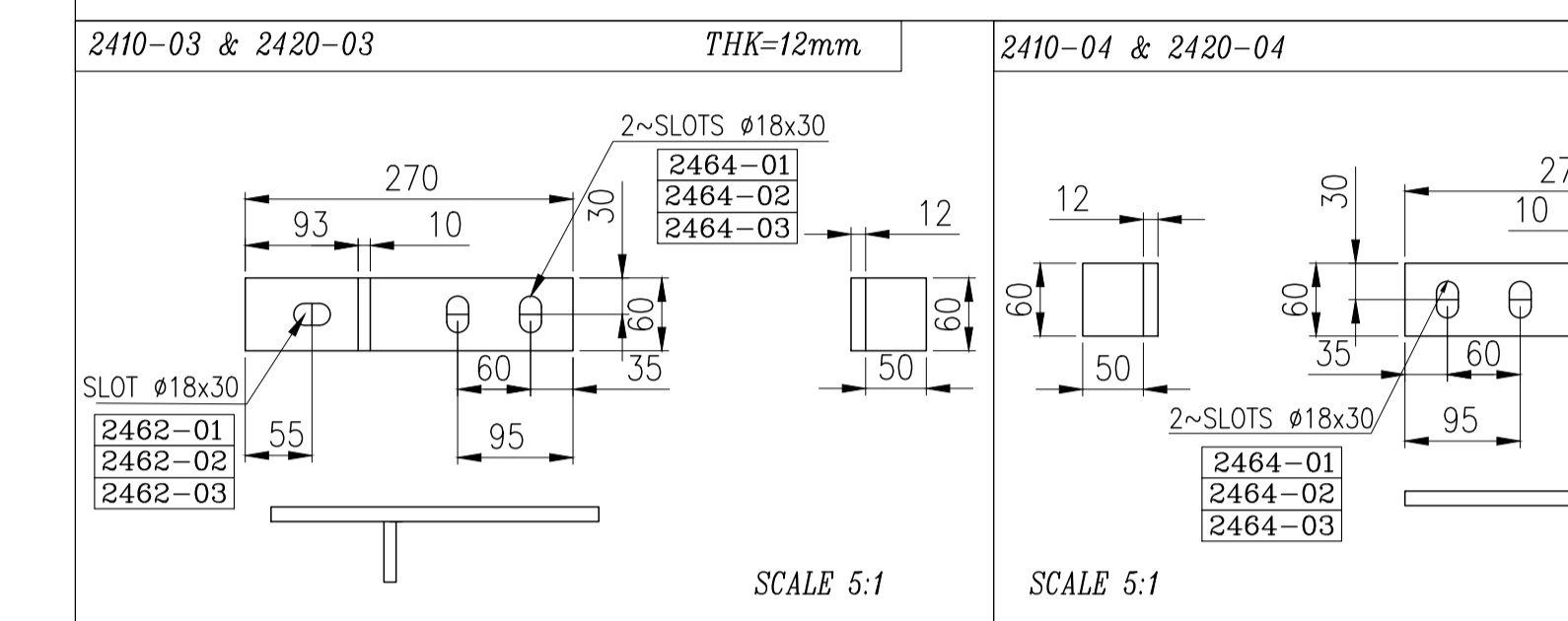
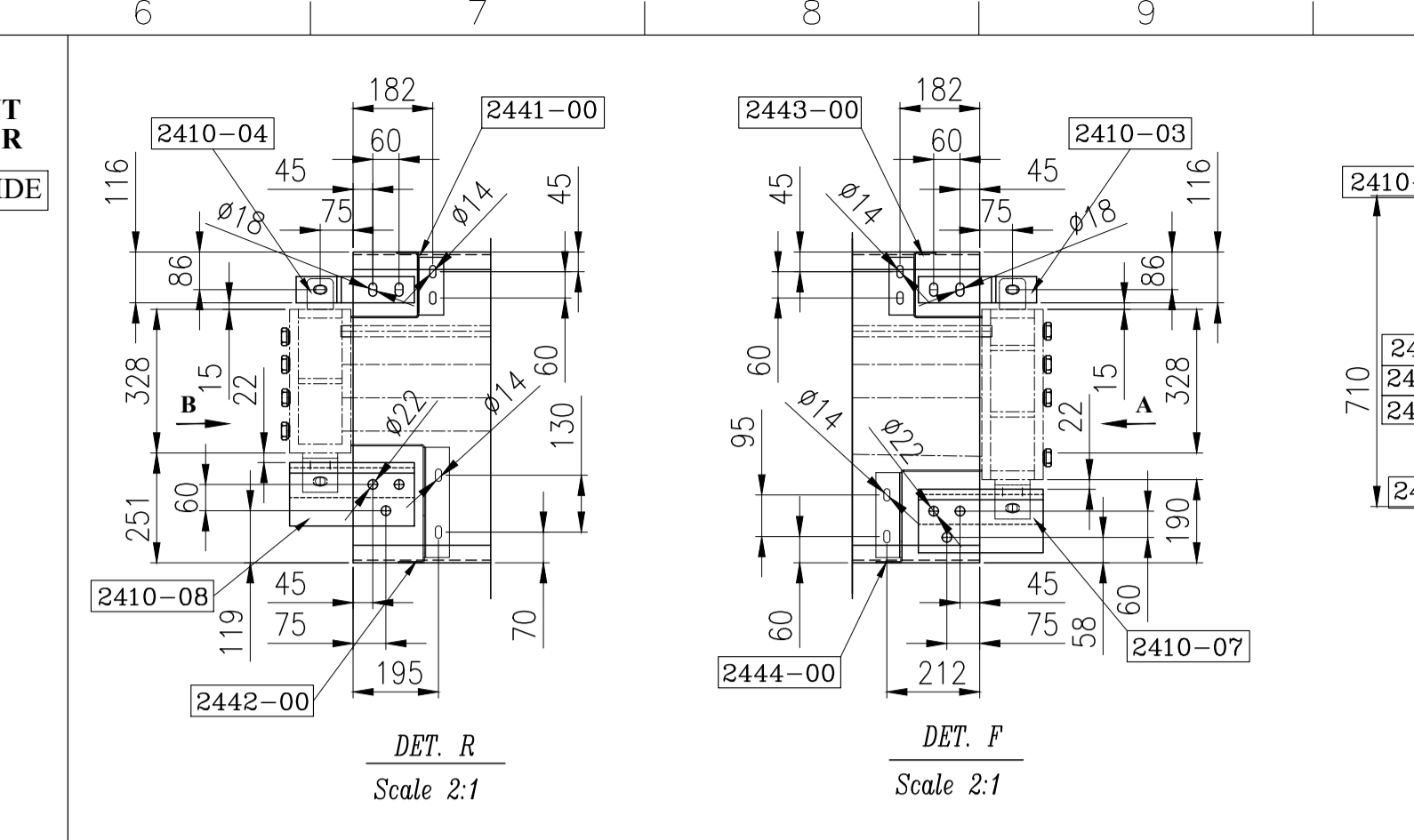
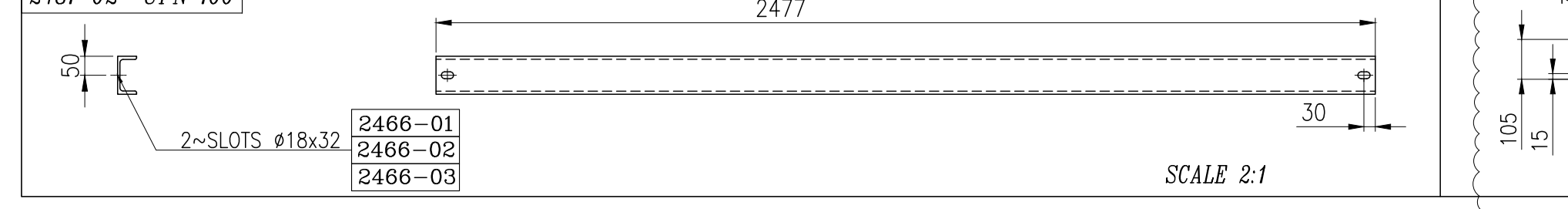
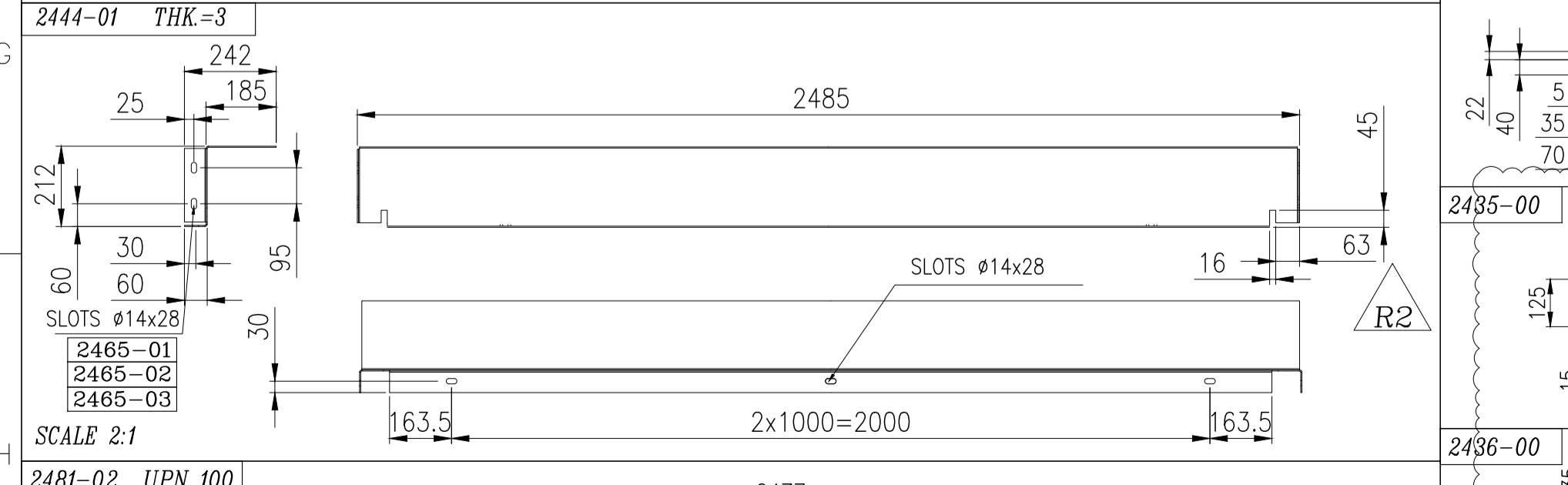
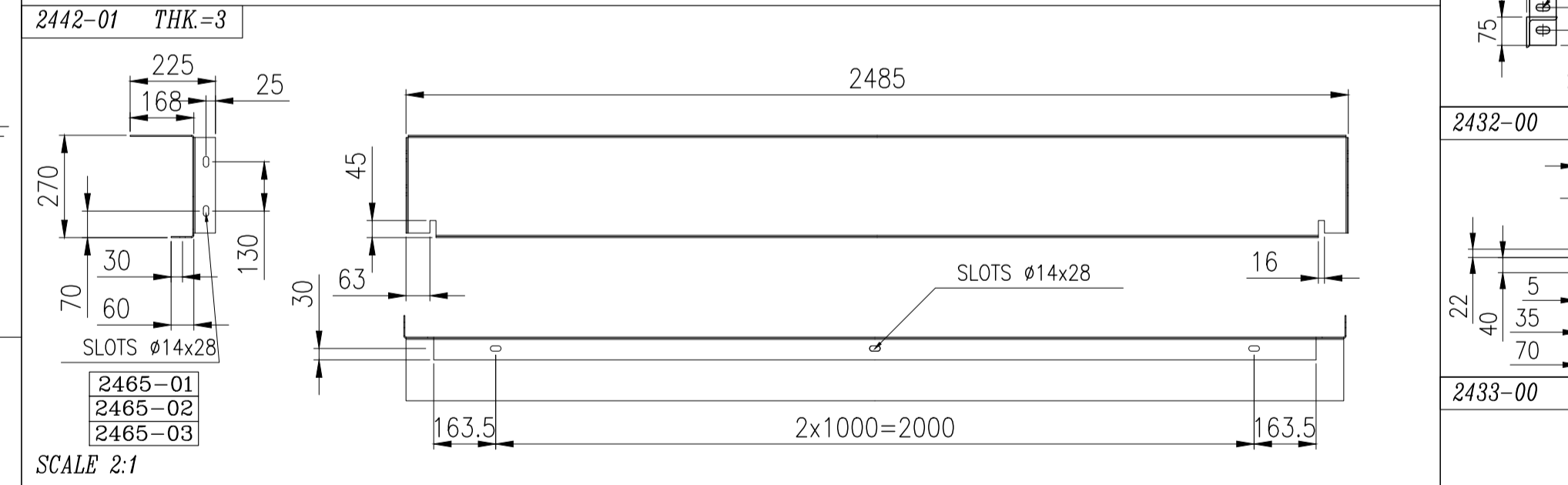
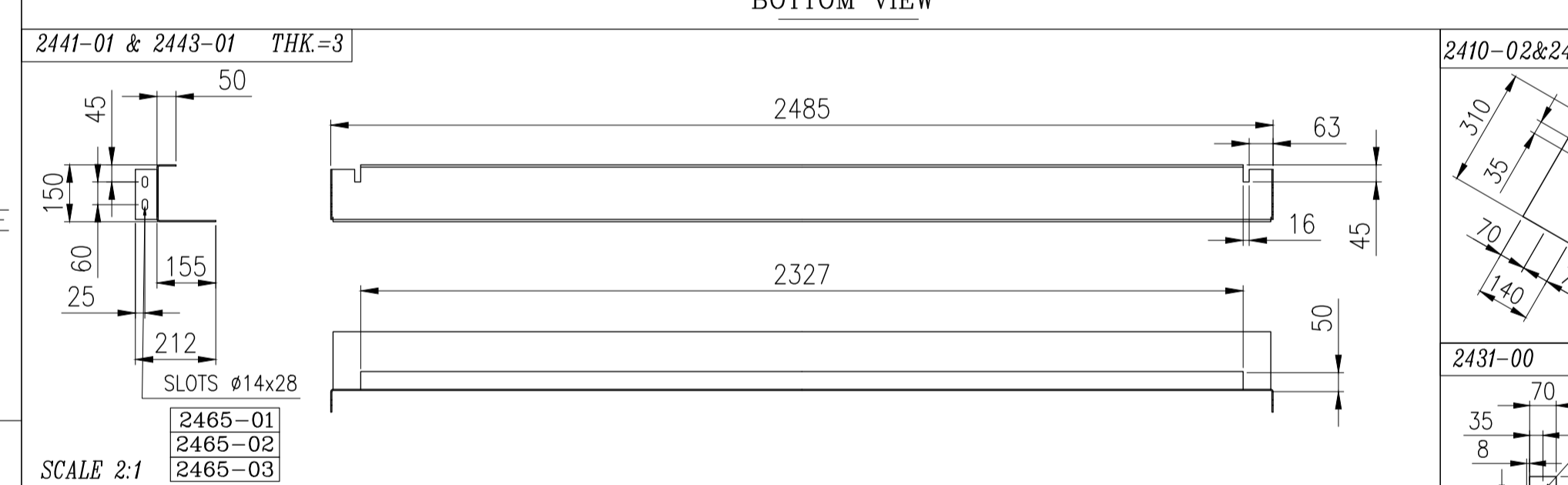
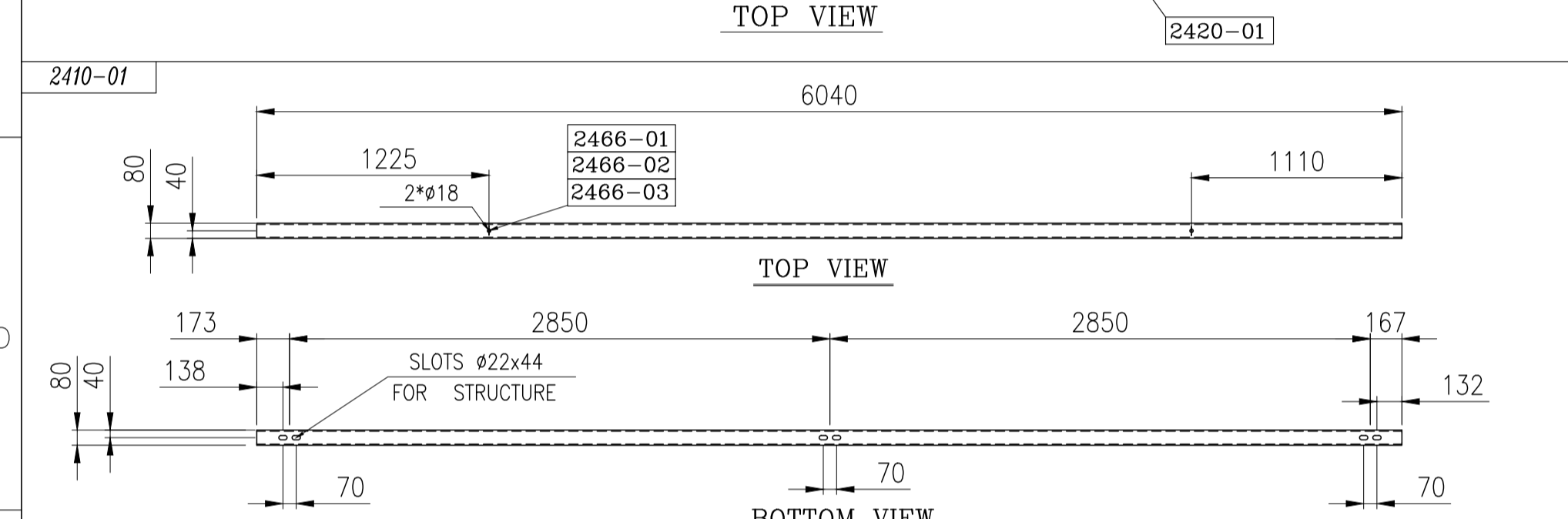
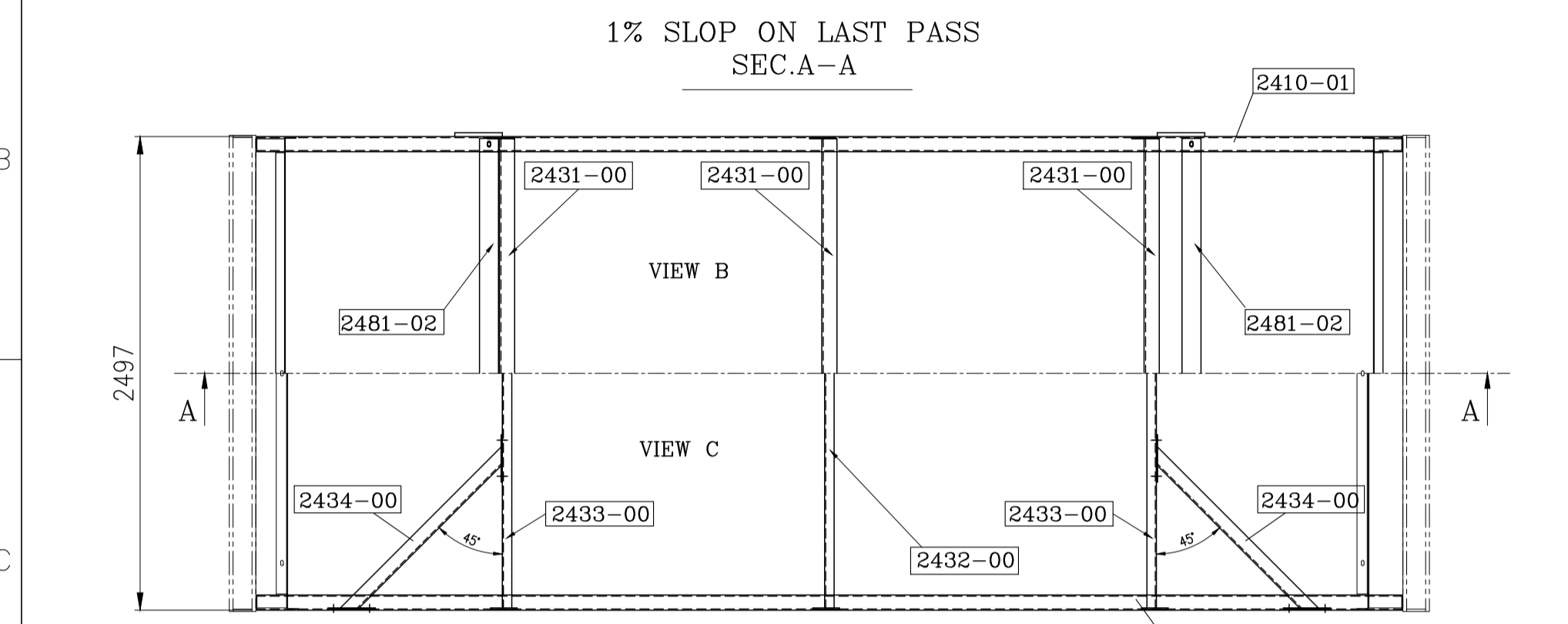
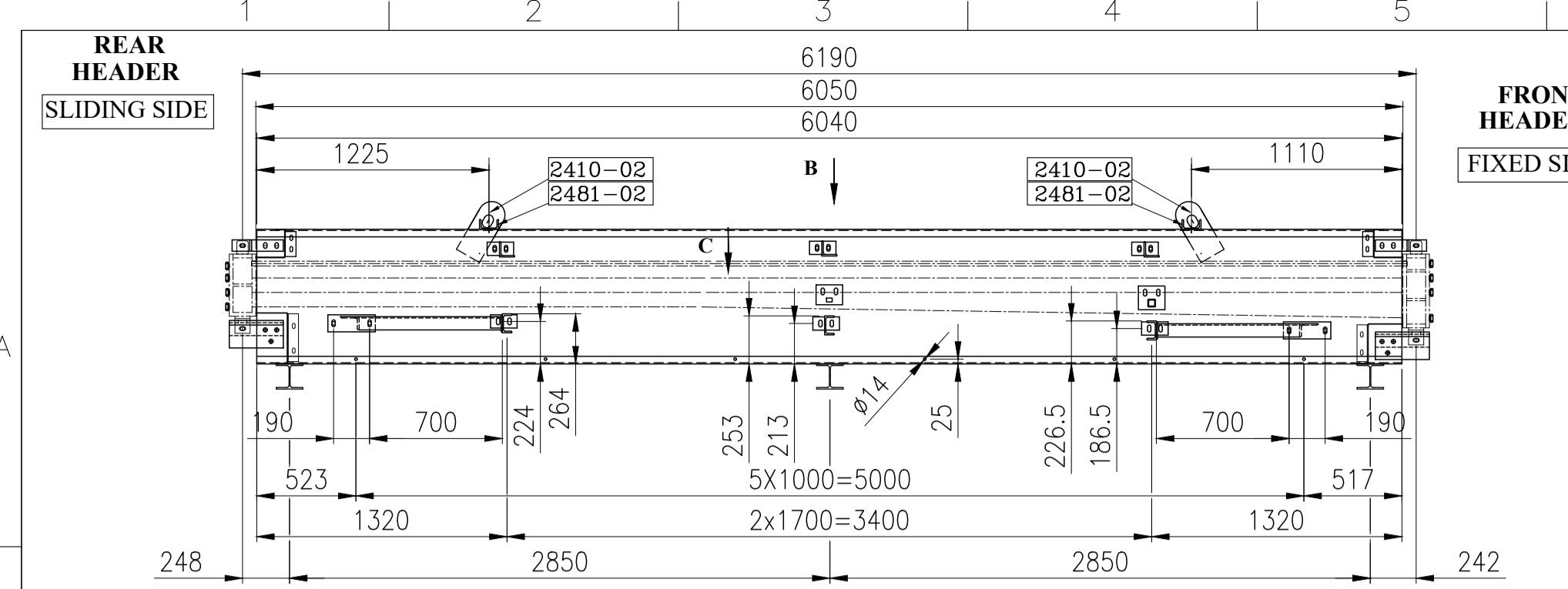


TABLE OF WELDS WPS NO. 1158-000-0060-00



PART NO.	DESCRIPTION	QTY.	UNIT	WEIGHT	TOTAL WEIGHT	STD	REV.
2400-00	BUNDLE FRAME INCLUDING :	2	2400	2400	4800		
2410-00	LEFT SIDE INCLUDING :	2	2410	2410	4820		
2410-01	PLATE	2	2410.01	2410.01	4820.02		
2410-02	PLATE (LIFTING LUG)	2	2410.02	2410.02	4820.04		
2410-03	FRONT TRANSPORTATION HEADER SUPPORT (ASSEMBLY)	2	2410.03	2410.03	4820.06		
2410-04	REAR TRANSPORTATION HEADER SUPPORT (ASSEMBLY)	2	2410.04	2410.04	4820.08		
2410-05	FRONT HEADER SUPPORT	1	2410.05	2410.05	4820.10		
2410-06	REAR HEADER SUPPORT	1	2410.06	2410.06	4820.12		
2420-00	RIGHT SIDE INCLUDING :	2	2420	2420	4820		
2420-01	PLATE	2	2420.01	2420.01	4820.02		
2420-02	PLATE (LIFTING LUG)	2	2420.02	2420.02	4820.04		
2420-03	FRONT TRANSPORTATION HEADER SUPPORT (ASSEMBLY)	2	2420.03	2420.03	4820.06		
2420-04	REAR TRANSPORTATION HEADER SUPPORT (ASSEMBLY)	2	2420.04	2420.04	4820.08		
2420-05	FRONT HEADER SUPPORT	1	2420.05	2420.05	4820.10		
2420-06	REAR HEADER SUPPORT	1	2420.06	2420.06	4820.12		
2430-00	CROSSPIECES INCLUDING :	2	2430	2430	4820		
2430-01	BRACKET SUPPORT ANGLE(ASSEMBLY)(L80*8)	2	2430.01	2430.01	4820.02		
2430-02	UPN 100 (ASSEMBLY)	2	2430.02	2430.02	4820.04		
2430-03	UPN 100 (ASSEMBLY)	2	2430.03	2430.03	4820.06		
2430-04	L TROT (ASSEMBLY)	2	2430.04	2430.04	4820.08		
2440-00	AIR SEAL INCLUDING :	2	2440	2440	4820		
2440-01	REAR UPPER AIR SEAL	2	2440.01	2440.01	4820.02		
2440-02	REAR LOWER AIR SEAL	2	2440.02	2440.02	4820.04		
2440-03	FRONT UPPER AIR SEAL	2	2440.03	2440.03	4820.06		
2440-04	FRONT LOWER AIR SEAL	2	2440.04	2440.04	4820.08		
2440-05	BOX 40x40x4	2	2440.05	2440.05	4820.10		
2440-06	FLAT 30x5	2	2440.06	2440.06	4820.12		
2460-00	BOLTS & NUTS FOR FIXING HEADER & TRANSPORTATION :						
2460-01	BOLT	M16	70				
2460-02	NUT	M16					
2460-03	WASHER FOR BOLT	A17					
2460-04	SCREWS & NUTS FOR TEFLON GALE :						
2460-05	SCREW	M8	40				
2460-06	NUT	M8					
2460-07	WASHER FOR BOLT	A8.4					
2460-08	BOLTS & NUTS FOR CROSS PIECE TO BUNDLE FRAME :						
2460-09	BOLT	M16	40				
2460-10	NUT	M16					
2460-11	WASHER FOR BOLT	A17					
2460-12	BOLTS & NUTS FOR BUNDLE FRAME TO STRUCTURE SEALING :						
2460-13	BOLT	M12	40				
2460-14	NUT	M12					
2460-15	WASHER FOR BOLT	A13					
2460-16	FIN TUBE SPACER FOR TUBE (TYPE 4)	1	40	32.5	32.5		
2460-17	SLIDING PAD	2	80	10	800		
2460-18	CORRUGATEDB STRIP(TYPE1)	2	45	1	90		
2460-19	UPN 100	2	2477	1	4954		

NOTES :

- All dimensions are in millimeters unless otherwise specified.
- All parts shall be hot dipped galvanized in accordance with ASTM-123
- Red Color Bolts which are used for fixing headers to side frame , on sliding side shall be removed after erection.
- Weld: Continuous weld.

Min. Height of fillet for thk.> 7mm to be welded = 0.8 thk.min
Min. Height of fillet for thk.< 7mm to be welded = 3.5mm.

TOLERANCES

THE FOLLOWING VALUES ARE APPLICABLE TO THE DIMENSIONS THAT ARE NOT PROVIDED WITH TOLERANCES ON DRAWINGS

NOMINAL DIMENSIONS PER MILLIMETER STEPS	800	801	5001
TOLERANCES	± 0.5	± 0.5	± 0.5
TOLERANCE ON CENTER DISTANCES	± 0.5	± 0.5	± 0.5

THE TOLERANCES SHOWN HERE ARE NOT CUMULATIVE

REFERENCE DOCUMENTS

TITLE	VENDOR DOCUMENT NO.	CLIENT DOCUMENT NO.
GENERAL ARRANGEMENT	1158-A01-1000-00	E1027-DMF-VD-ME-DWG-003
TUBE BUNDLE DRAWING	1158-A01-2000-00	E1027-DMF-VD-ME-DWG-005
Steel Structure Drawing	1158-A01-1100-00	E1027-DMF-VD-ST-DWG-013
WELDING PROCEDURE SPECIFICATION (W.P.S.)	1158-A01-0060-00	E1027-DMF-VD-QC-WPS-021
NON DESTRUCTIVE TEST CHECK LIST (N.D.T.)	1158-A01-0070-00	E1027-DMF-VD-QC-PRO-022
Surface Blasting & Painting & Galvanizing Specification & InspectionProcedure	1158-A01-0070-00	E1027-DMF-VD-QC-PRO-024

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	APPROVED BY	FINAL APPROVED BY
R2	01/04/2025	ISSUED FOR APPROVAL	SH.S	S.S	J.B.L	A.GHZ
R1	10/07/2024	ISSUED FOR APPROVAL	SH.S	S.S	J.B.L	A.GHZ
R0	08/11/2024	ISSUED FOR APPROVAL	SH.S	S.S	J.B.L	A.GHZ

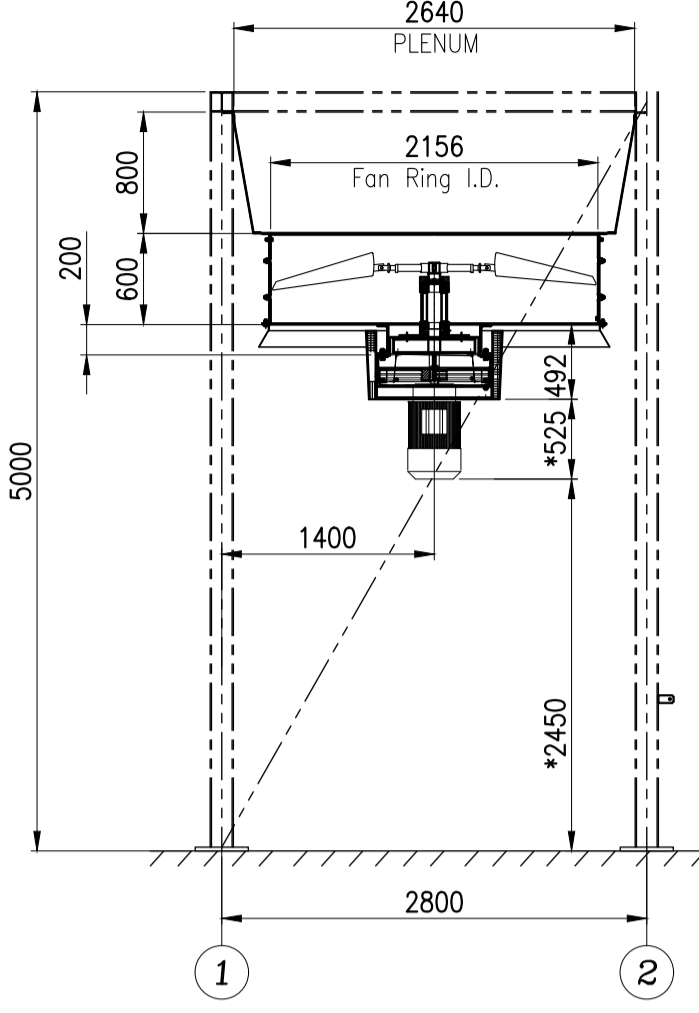
CLIENT: _____ CONTRACTOR: _____

PROJECT: **AIR COOLER FOR Toase-eh Park Sanati Gohar Ofogh Petrochemical Co.**

BUNDLE FRAME DRAWING
1158-A01-2400-00

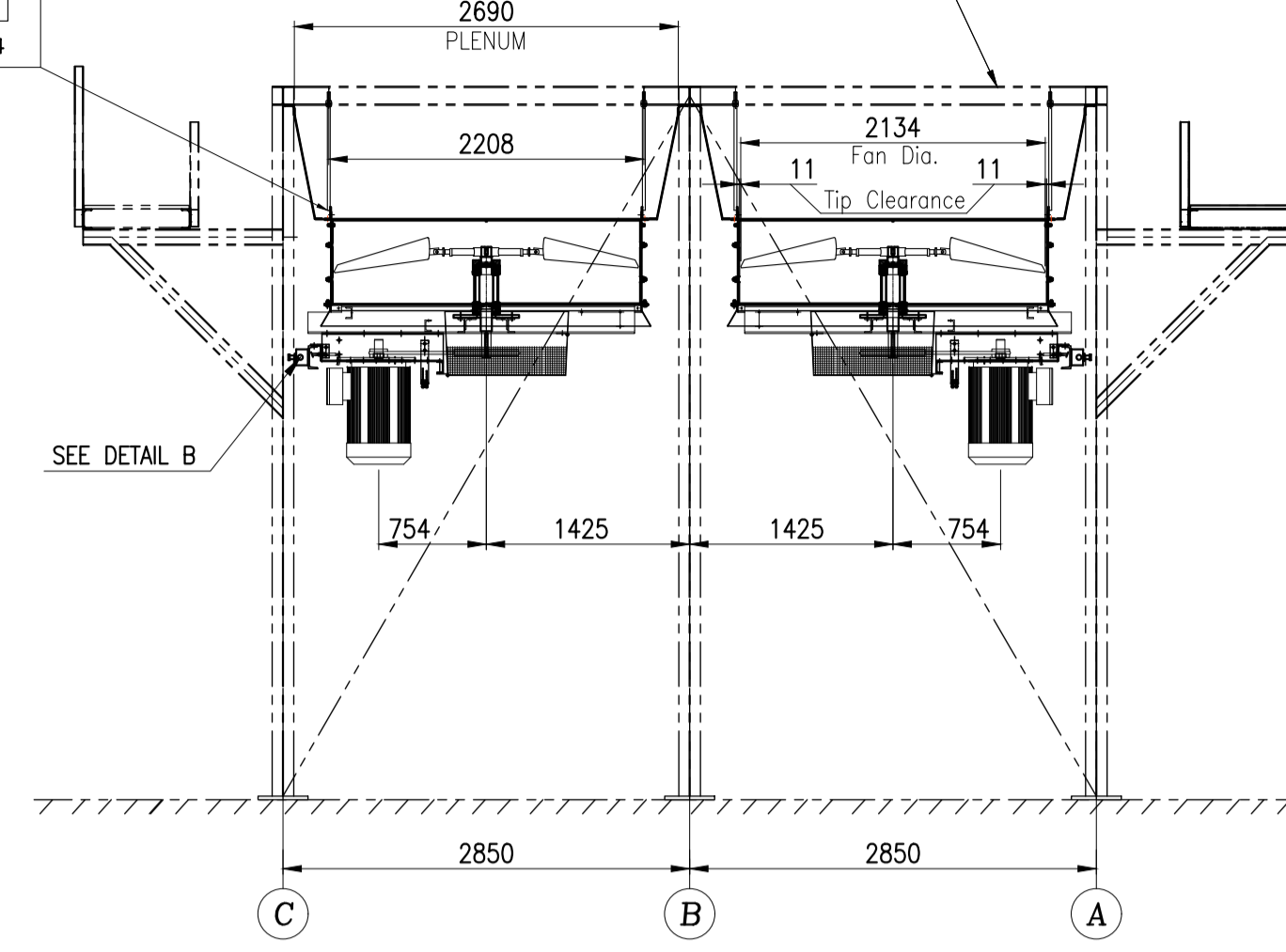
DWG. NO. E1027-DMF-VD-ME-DWG-007
SCALE: N.T.S. SIZE: A1 REV.: R2

THIS DOCUMENT IS A CONFIDENTIAL NATURE IS THE PROPERTY OF DAMAFIN AND SHALL NOT BE REPRODUCED IN ANY MANNER, NOR USED FOR ANY PURPOSE WHATSOEVER, EXCEPT BY WRITTEN PERMISSION OF DAMAFIN.

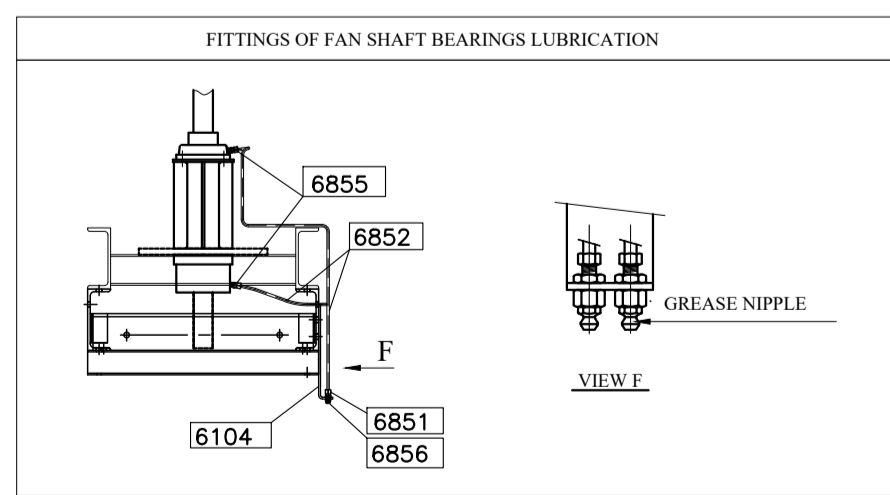
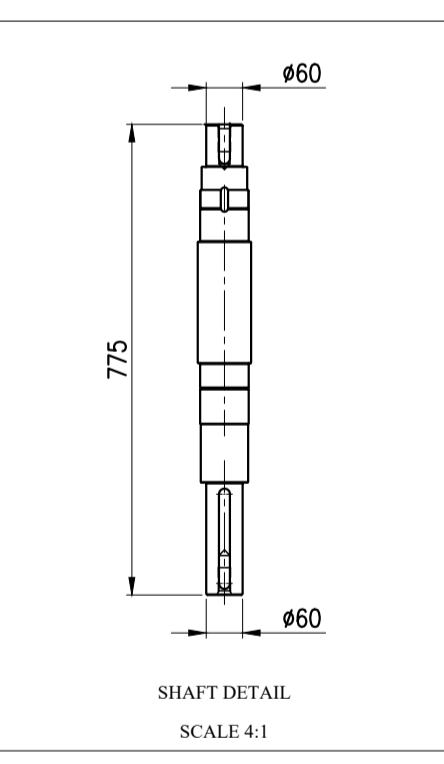
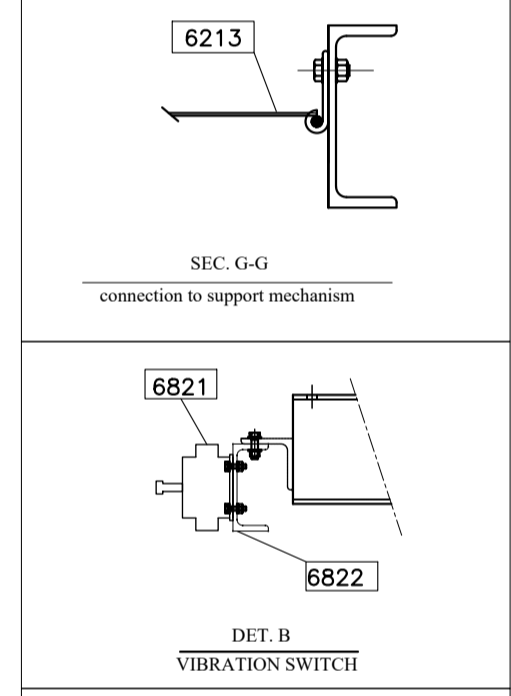
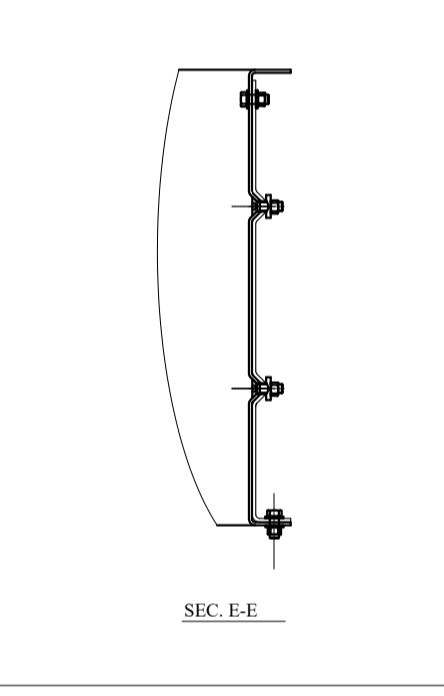
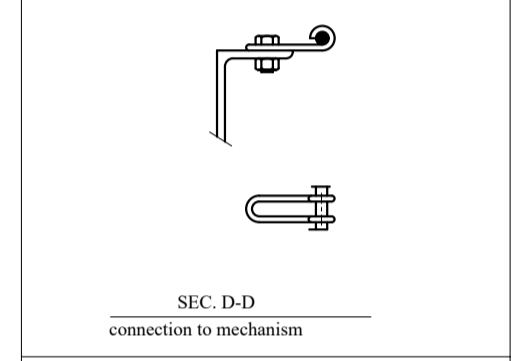
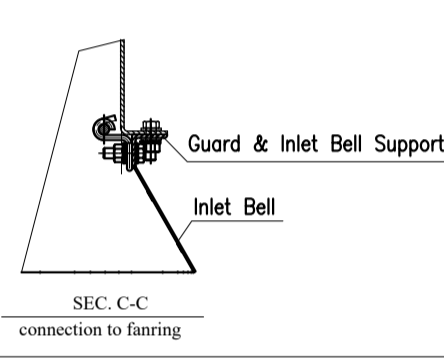
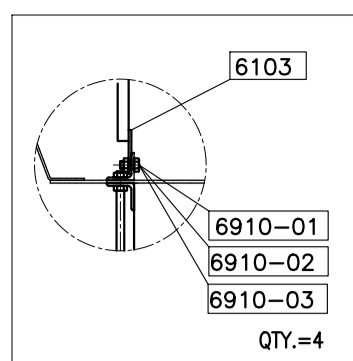


FRONT VIEW
CL. A-C

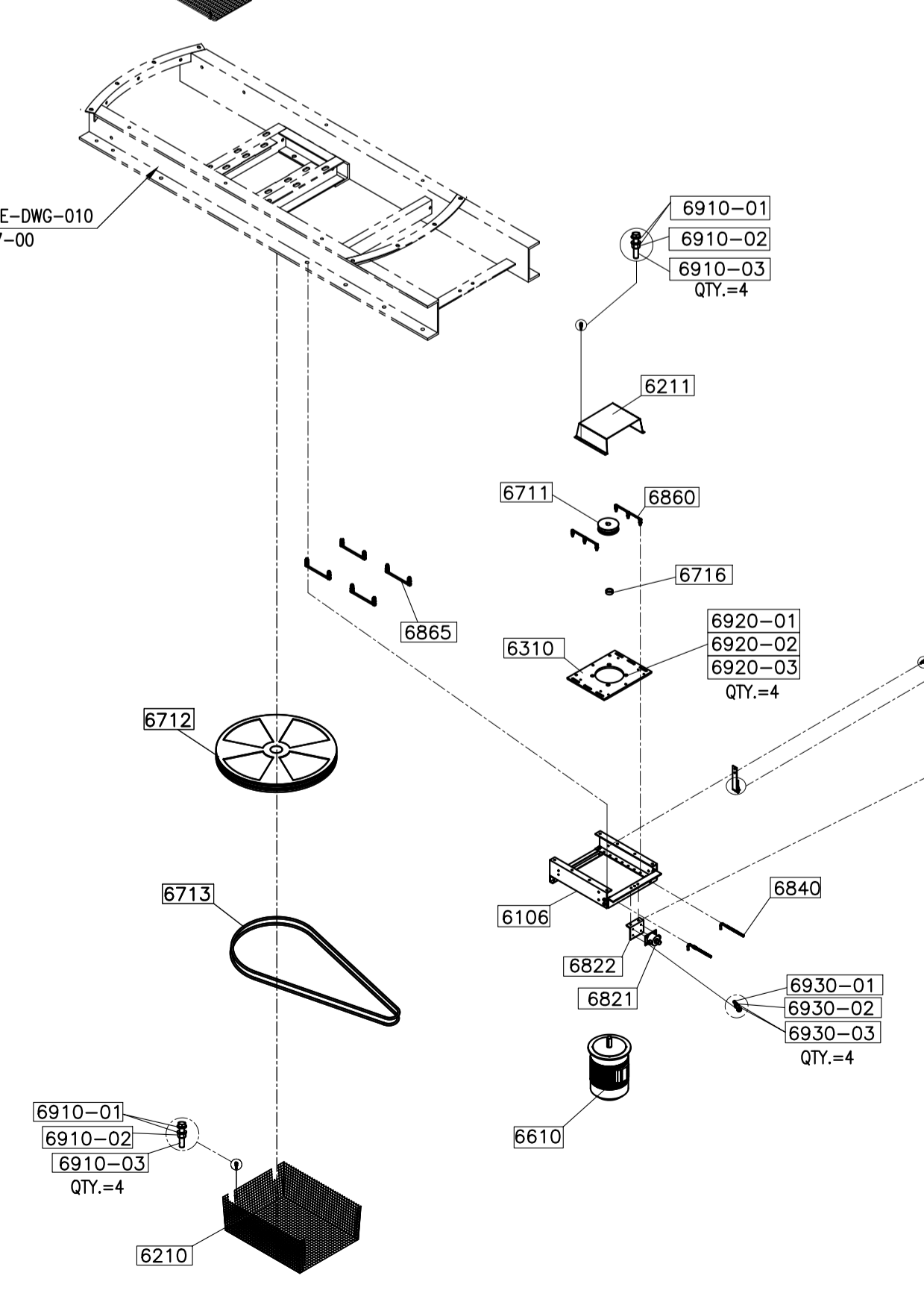
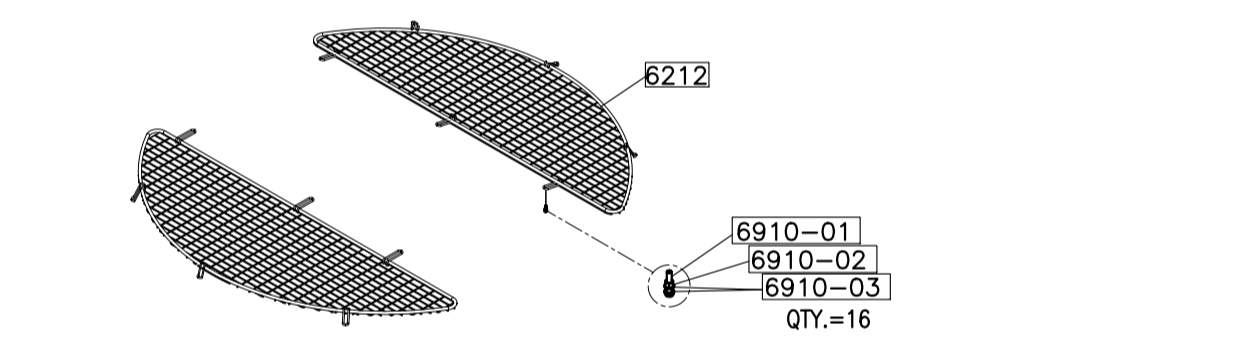
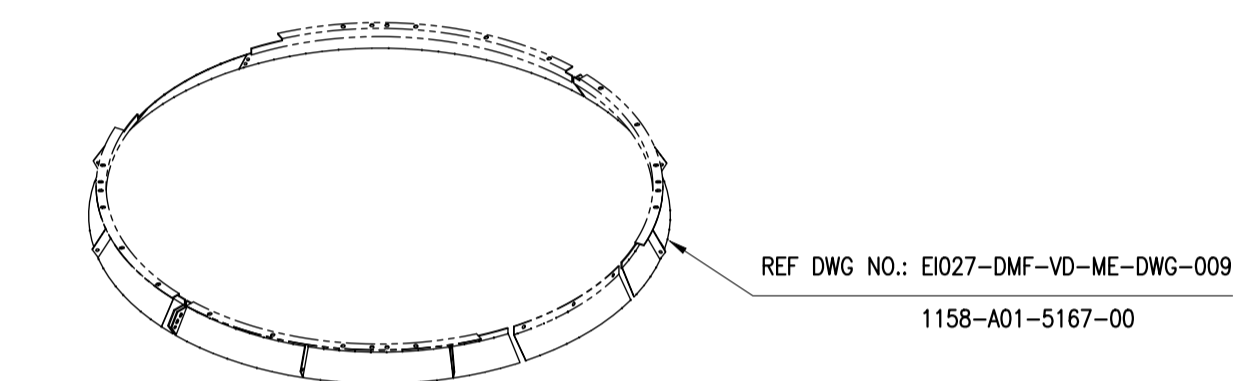
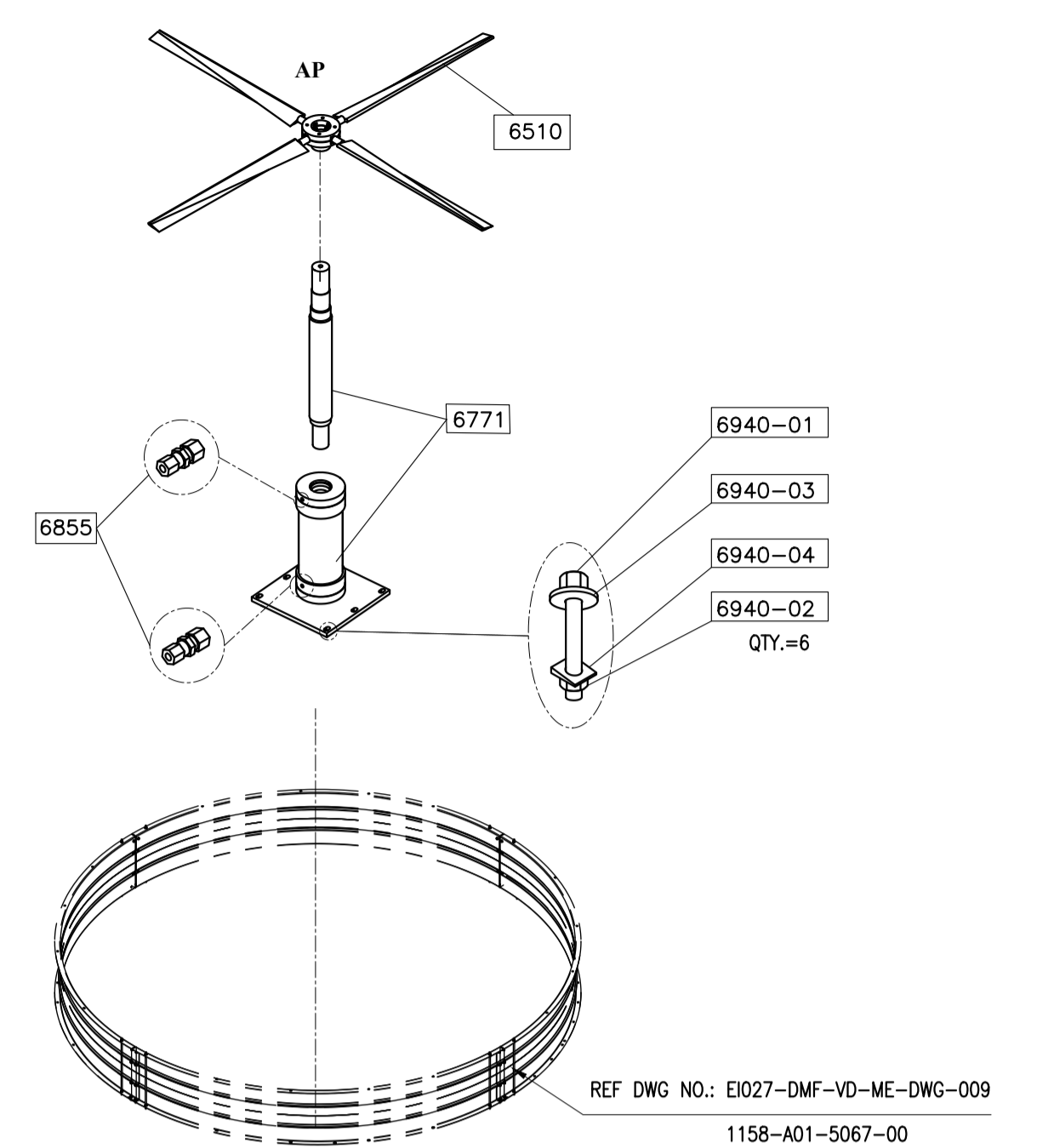
* THIS DIMENSION WILL BE FINALIZED AFTER APPROVED OF MOTOR DATA SHEET



SIDE VIEW



NOTE :
 1- ALL DIMENSION ARE IN MILLIMETERS.
 2- HOT DIP GALVANIZING SHALL BE DONE AS PER ASTM-123/ISO 1461.
 3- BOLTS, NUTS, WASHERS, THREADS, PARTS INCLUDES THREADS SHALL BE PROJECT SPECIFICATION DOC. NO. E1027-DMF-VD-QC-PRO-024
 4- DETAILS OF THE PARTS NO. 6822-00 & 6310-00 & 6716-00 WILL BE ADDED AFTER THE MANUFACTURER HAS FINALIZED.



PART NO.	DESCRIPTION	DIMENTION	MATERIAL	QTY.	UNIT WEIGHT (Kg)	TOTAL WEIGHT (Kg)	REV.
6000-00	FAN DRIVE ASSEMBLY FOR TWO UNITS	-	-	4	-	906	-
6000-00	FAN DRIVE ASSEMBLY FOR ONE UNITS	-	-	2	-	453	-
EACH FAN DRIVE WITH AP FAN FOR ONE SET INCLUDES :				1AP	226.5	226.5	-
6103-00	TIE BEAM	REF. SHEET 2	ST-37(Hot Dip Galv.)	2	2.5	5	-
6104-00	LUBRICATION PIPING SUPPORT	REF. SHEET 2	ST-37(Hot Dip Galv.)	1	1	1	-
6106-00	MOTOR SUPPORTING STRUCTURE	REF. SHEET 2	ST-37(Hot Dip Galv.)	1	61	61	-
6210-00	DRIVEN PULLEY GUARD	REF. SHEET 2	ST-37(Hot Dip Galv.)	1	10	10	-
6211-00	DRIVER PULLEY GUARD	REF. SHEET 2	ST-37(Hot Dip Galv.)	1	8	8	-
6212-00	FAN GUARD, 7(Ft)			20	-	-	-
6212-001	TRIANGULAR MESH			1	5	5	-
6212-002	TRIANGULAR MESH			1	5	5	-
6212-003	TRIANGULAR MESH	REF. SHEET 2	ST-37(Hot Dip Galv.)	1	5	5	-
6212-004	TRIANGULAR MESH			1	5	5	-
6213-00	DRIVE SUPPORTING STRUCTURE GUARD, 7(Ft)	REF. SHEET 2	ST-37(Hot Dip Galv.)	1	3	3	-
6214-00	FAN GUARD SUPPORT	REF. SHEET 2	ST-37(Hot Dip Galv.)	2	3	5	-
6310-00	MOTOR PLATE	REF. SHEET 2	ST-37(Hot Dip Galv.)	1	-	-	-
6510-00	FAN UNIT DIA (7 Ft) BLADE NO=4	REF. DSH.	Manufacturer standard	1	-	-	-
6610-00	MOTOR (7.5 KW -ELECTRIC-Exdb JB-T4-IP55)	REF. DSH.	Manufacturer standard	1	-	-	R4
6711-00	DRIVER PULLEY PT106SPA2/PBT106SPA2	REF. DSH.	G20/ ASTM A48-94a	1	-	-	-
6712-00	DRIVEN PULLEY PT400SPA2/PBT400SPA2	REF. DSH.	G20/ ASTM A48-94a	1	-	-	-
6713-00	BELT CAPXPA2332 CD-754.3	REF. DSH.	Manufacturer standard	2	-	-	-
6716-00	SPACER BETWEEN MOTOR&PULLEY	REF. SHEET 2	ST-37(Galv.)	1	0.3	0.3	-
6771-00	SHAFT & BEARING BLOCK	REF. DSH.	Manufacturer standard	1	103	103	-
6821-00	VIBRATION SWITCH(SAM)	REF. DSH.	Manufacturer standard	1	-	-	R4
6822-00	VIBRATION SWITCH SUPPORT (L. 100*10)	REF. SHEET 2	ST-37(Hot Dip Galv.)	1	2	2	R4
6840-00	TENSIONING BOLT	M16	C.S CL. 8.8(GALV J/A36)	2	1	2	-
6851-00	UNION FEMALE CONECTOR(1/8" NPT-8mm(TUBE))	REF. SHEET 2	S.S/304L	2	0.1	0.2	-
6852-00	TUBE (OD=8 mm, ID=6)	4000	S.S/304L	1	-	-	-
6855-00	UNION MALE CONECTOR(1/4" NPT-8mm(TUBE))	REF. DSH.	S.S/304L	2	-	-	-
6856-00	GREASE NIPPLE (1/8" NPT)	REF. DSH.	S.S/304L	2	-	-	-
6860-00	CLAMP	REF. SHEET 2	C.S(GALV J/A36)	2	1	2	-
6865-00	CLAMP	REF. SHEET 2	C.S(GALV J/A36)	4	1	4	-
BOLT & NUT & WASHER FOR ASSEMBLY PARTS AP FAN:				1SET	4SET		
6103-03	NUT FOR TIE BEAM	M16	DN 934 CL. 8 (Dacromet.)	4	16		
6103-04	WASHER	A17	DN 125 A17 S1 (Dacromet.)	4	16		
6106-05	BOLT FOR FAN GUARD SUPPORT	M16x40	DN 933 CL. 8.8 (Dacromet.)	6	24		
6106-06	NUT	M16	DN 934 CL. 8 (Dacromet.)	12	48		
6106-07	WASHER	A17	DN 125 A17 S1 (Dacromet.)	6	24		
6840-02	NUT FOR TENSIONING BOLT	M16	DN 934 CL. 8 (Dacromet.)	4	16		
6840-03	WASHER	A17	DN434-18-ST(8%) (Dacromet.)	2	8		
6840-04	WASHER	A17	DN 125 A17 S1 (Dacromet.)	2	8		
6860-02	BOLT FOR CLAMP	M16x55	DN 933 CL. 8.8 (Dacromet.)	6	24		
6860-03	NUT	M16	DN 934 CL. 8 (Dacromet.)	6	24		
6860-04	WASHER	A17	DN 125 A17 S1 (Dacromet.)	12	48		
6865-02	BOLT FOR CLAMP	M16x55	DN 933 CL. 8.8 (Dacromet.)	8	32		
6865-03	NUT	M16	DN 934 CL. 8 (Dacromet.)	16	64		
6865-04	WASHER	A17	DN 125 A17 S1 (Dacromet.)	16	64		
BOLT & NUT & WASHER FOR ASSEMBLY PART (FAN DRIVE TO PROJECT LAGATION)				1SET	4SET		
6910-01	BOLT	M12x40	DN 933 CL. 8.8 (Dacromet.)	36	144		
6910-02	NUT	M12	DN 934 CL. 8 (Dacromet.)	36	144		
6910-03	WASHER	A13	DN 125 A17 S1 (Dacromet.)	72	288		
6920-01	BOLT FOR MOTOR TO MOTOR PLATE	M16*70	DN 933 CL. 8.8 (Dacromet.)	4	16		
6920-02	NUT	M16	DN 934 CL. 8 (Dacromet.)	4	16		
6920-03	WASHER	A17	DN 125 A17 S1 (Dacromet.)	4	16		
6930-01	BOLT FOR VIBRATION SWITCH SUPPORT	M8*30	DN 933 CL. 8.8 (Dacromet.)	4	16		
6930-02	NUT	M8	DN 934 CL. 8 (Dacromet.)	4	16		
6930-03	WASHER	A9	DN 125 A17 S1 (Dacromet.)	8	32		
6940-01	BOLT FOR BEARING BLOCK TO SUPPORT MECHANISM	M16x65	DN 933 CL. 8.8 (Dacromet.)	6	24		
6940-02	NUT	M16	DN 934 CL. 8 (Dacromet.)	6	24		
6940-03	WASHER	A17	DN 125 A17 S1 (Dacromet.)	6	24		
6940-04	WASHER	A17	DN434-18-ST(8%) (Dacromet.)	6	24		

* FOR MORE DETAILS FOR EACH COMPONENT OF AIR COOLER REFER TO BELOW DRAWING & DOCUMENTS.

REFERENCED DWG&DOC.		
TITLE	VENDOR DOCUMENT NO.	CLIENT DOCUMENT NO.
General Arrangement Drawing	1158-A01-1000-00	E1027-DMF-VD-ME-DSH-016
Plenum Drawing	1158-A01-5110-00	E1027-DMF-VD-ME-DWG-011
Fan Ring Drawing	1158-A01-5067-00	E1027-DMF-VD-ME-DWG-009
Support Mechanism Drawing	1158-A01-6307-00	E1027-DMF-VD-ME-DWG-010
Steel Structure Drawing	1158-A01-1100-00	E1027-DMF-VD-ST-DWG-013
Surface Preparation and Painting Procedure	1158-A01-QS01-00	E1027-DMF-VD-QC-PRO-024

REFERENCE DSH		
TITLE	VENDOR DOCUMENT NO.	CLIENT DOCUMENT NO.
Axial Fan Data Sheet	1158-A01-6510-00	E1027-DMF-VD-ME-DSH-016
Electrical Motor Data Sheet	1158-A01-6610-00	E1027-DMF-VD-EL-DSH-017
Belt & Pulley Data Sheet	1158-A01-6710-00	E1027-DMF-VD-ME-DSH-018
Vibration Switch Data Sheet	1158-A01-6800-00	E1027-DMF-VD-IN-DSH-019

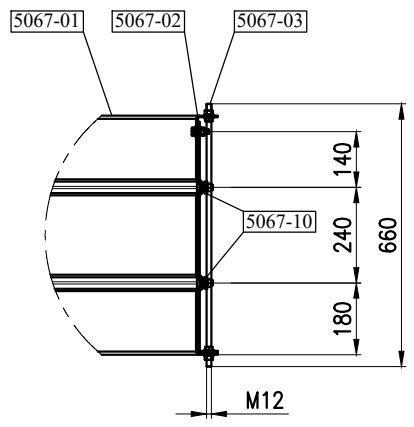
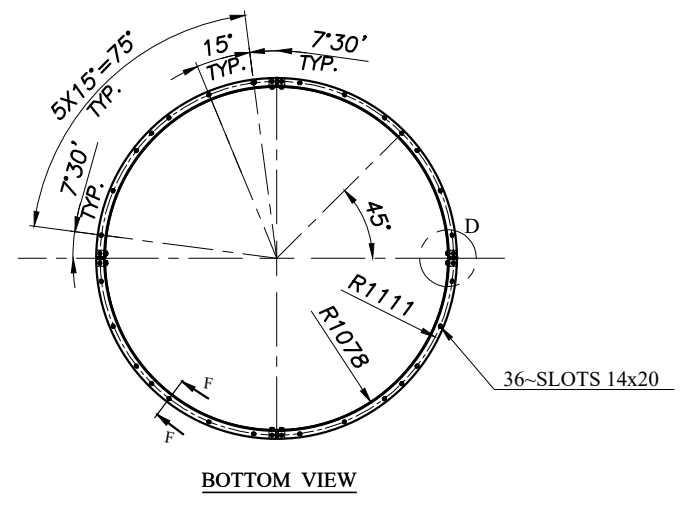
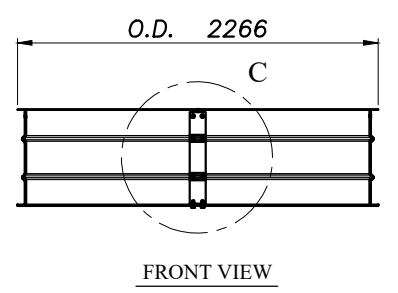
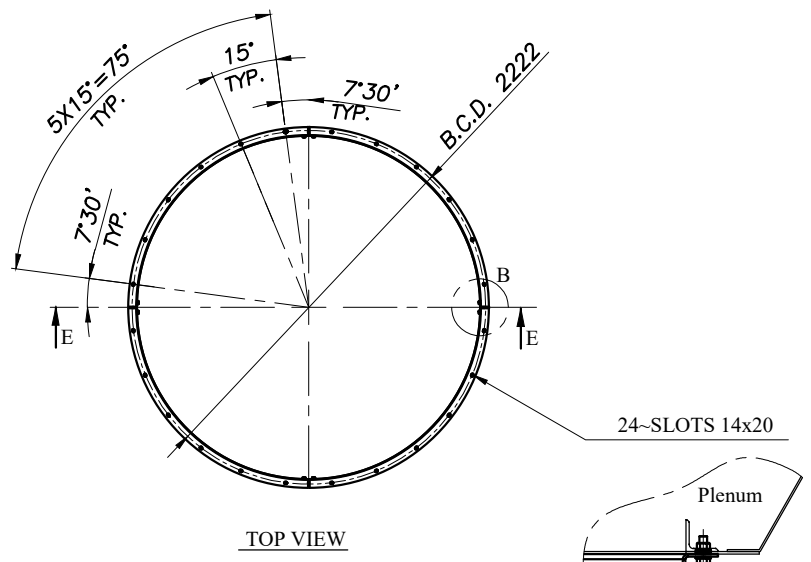
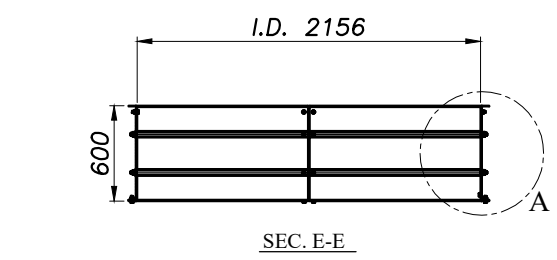
REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	APPROVED BY	FINAL APPROVED BY
R4	10/13/2024	ISSUED FOR APPROVAL	F.SZ	F.A	J.B.L	A.GHZ
R3	09/07/2024	ISSUED FOR APPROVAL	F.SZ	F.A	J.B.L	A.GHZ
R2	08/31/2024	ISSUED FOR APPROVAL	F.SZ	F.A	J.B.L	A.GHZ
R1	08/20/2024	ISSUED FOR APPROVAL	F.SZ	F.A	J.B.L	A.GHZ
R0	08/07/2024	ISSUED FOR APPROVAL	F.SZ	F.A	J.B.L	A.GHZ

CLIENT:			CONTRACTOR:		

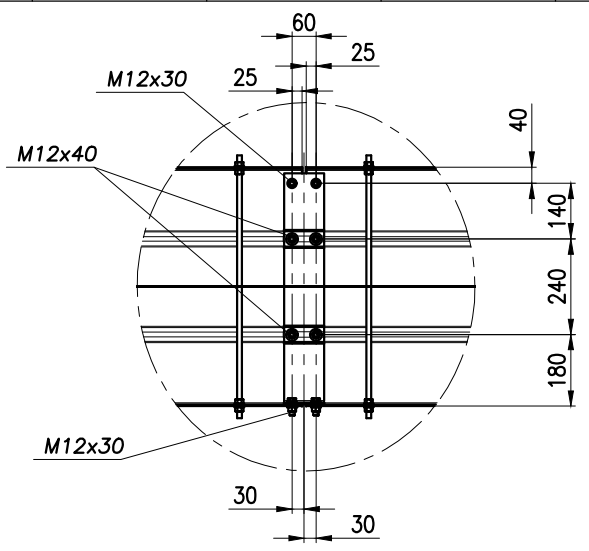
PROJECT :
AIR COOLER FOR
Toase-che Park Sanati Gohar Ofogh Petrochemical Co.
Fan Drive Assembly Drawing
1158-A01-6000-00
(SHEET 1 OF 2)

DWG. NO. E1027-DMF-VD-ME-DWG-008
 SCALE: N.T.S. SIZE: A1 REV.: R4

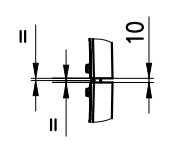
THIS DOCUMENT OF A CONFIDENTIAL NATURE IS THE PROPERTY OF DAMAFIN AND SHALL NOT BE REPRODUCED IN ANY MANNER, NOR USED FOR ANY PURPOSE WHATSOEVER, EXCEPT BY WRITTEN PERMISSION OF DAMAFIN.



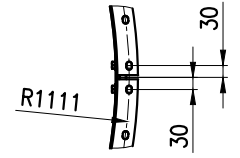
DET. A
SCALE 2.5 : 1



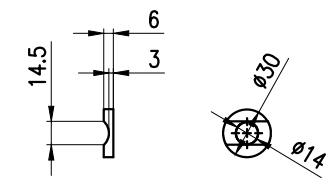
DET. C
SCALE 2.5 : 1



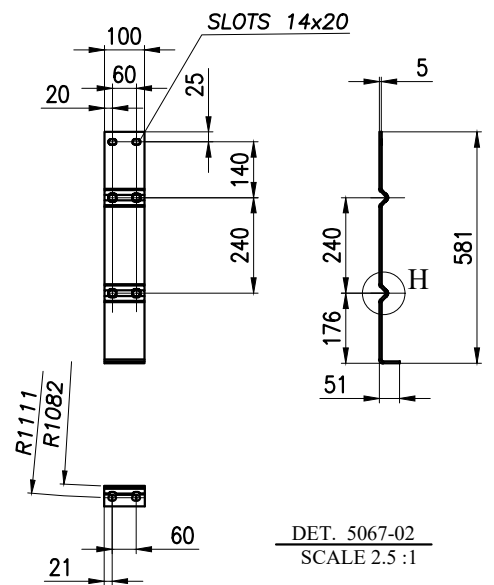
DET. B
SCALE 2.5 : 1



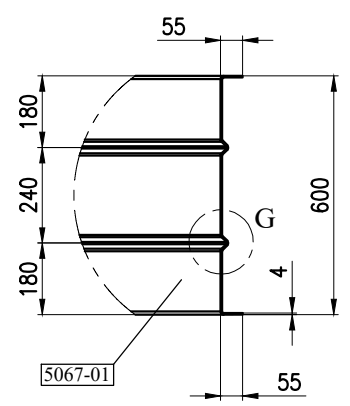
DET. D
SCALE 2.5 : 1



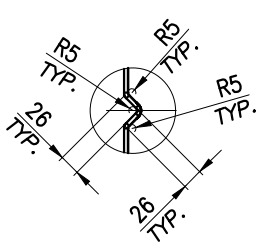
DET. 5067-10
SCALE 10 : 1



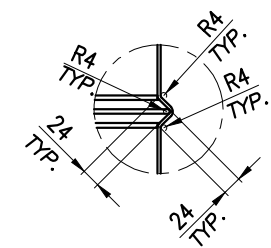
DET. 5067-02
SCALE 2.5 : 1



SEC. F-F
SCALE 2.5 : 1

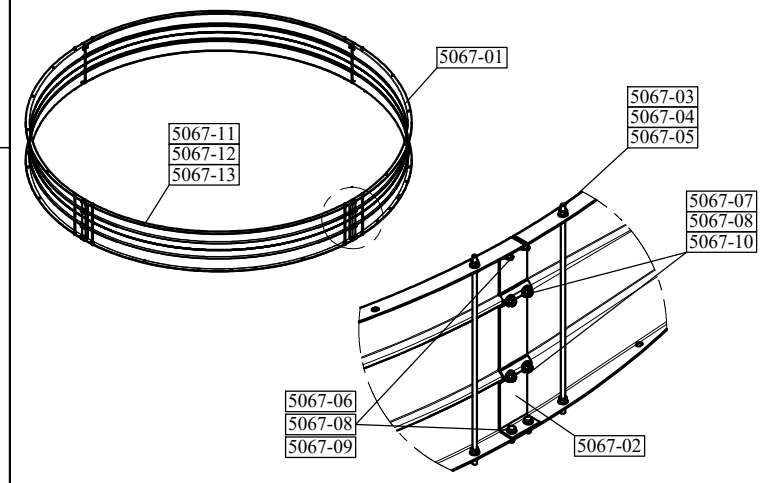


DET. H
SCALE 5 : 1



DET. G
SCALE 5 : 1

PART LIST										
PART NO.	DESCRIPTION	DA	LENGTH	WIDTH	THK.	MATERIAL	QTY.	Unit Weight	Total Weight	REV.
5067-00	FAN RING INCLUDING:	-	-	-	-	-	4	168	670	
5067-01	SHEET 1/4 RING	-	1690	714	4	St-37(Hot Dip Galv.)	4	38	152	R2
5067-02	FIXING PLATE (BRACKET)	-	648	100	5	St-37(Hot Dip Galv.)	4	2	8	R2
5067-03	BOLT FOR TIE ROD	M12	680	-	-	DIN-976-1(Dacromet)	8	1	8	
5067-04	NUT FOR TIE ROD	M12	-	-	-	DIN-934-CL.8(Dacromet)	32			
5067-05	WASHER FOR TIE ROD	A13	-	-	-	DIN-125A-ST(Dacromet)	32			
5067-06	BOLT FOR FIXING PLATE	M12	30	-	-	DIN-933-CL.8(Dacromet)	18			
5067-07	BOLT FOR FIXING PLATE	M12	40	-	-	DIN-7991(Dacromet)	18			
5067-08	NUT FOR FIXING PLATE	M12	-	-	-	DIN-934-CL.8(Dacromet)	32			
5067-09	WASHER FIXING PLATE	A13	-	-	-	DIN-125A-ST(Dacromet)	32			
5067-10	WASHER FIXING PLATE	30	-	-	6	St-37(Hot Dip Galv.)	18			R2
5067-11	BOLT FOR CONNECTION FAN RING TO PLENUM	M12	40	-	-	DIN-933-CL.8(Dacromet)	24			
5067-12	NUT	M12	-	-	-	DIN-934-CL.8(Dacromet)	24			
5067-13	WASHER	A13	-	-	-	DIN-125A-ST(Dacromet)	48			



* FOR MORE DETAILS FOR EACH COMPONENT OF AIR COOLER REFER TO BELOW DRAWING & DOCUMENTS.

REFERENCED DWG&DOC.

TITLE	VENDOR DOCUMENT NO.	CLIENT DOCUMENT NO.
General Arrangement Drawing	1158-A01-1000-00	EI027-DMF-VD-ME-DWG-003
Fan Drive Assembly Drawing	1158-A01-6000-00	EI027-DMF-VD-ME-DWG-008
Plenum Drawing	1158-A01-5110-00	EI027-DMF-VD-ME-DWG-011
Support Mechanism Drawing	1158-A01-6307-00	EI027-DMF-VD-ME-DWG-010
Axial Fan Data Sheet	1158-A01-6510-00	EI027-DMF-VD-ME-DSH-016
Surface Preparation and Painting Procedure for Air Cooler	1158-000-QS01-00	EI027-DMF-VD-QC-PRO-024

- NOTES:
- ALL DIMENSION ARE IN MILLIMETERS.
 - BOLTS, NUTS, WASHERS, THREADS, PARTS INCLUDES THREADS SHALL BE AS PER PROJECT SPECIFICATION DOC. NO. EI027-DMF-VD-QC-PRO-024
 - ALL PARTS HOT DIP GALVANIZING SHALL BE DONE AS PER ASTM-123/ISO 1461.
 - THIS DRAWING IS COMPATIBLE WITH FAN DATA SHEET DOCUMENT NUMBER EI027-DMF-VD-ME-DSH-016 AND IT SHALL BE READ IN CONJUNCTION WITH RELEVANT DATA SHEET.

GENERAL DATA	
FAN DIA.	2134
FAN RING TYPE	CONICAL L/D=0.05
TIP CLEARANCE	11 mm

TOLERANCES			
THE FOLLOWING VALUES ARE APPLICABLE TO THE DIMENSIONS THAT ARE NOT PROVIDED WITH TOLERANCES ON DRAWING			
MINIMAL DIMENSIONS FOR MILLIMETER SIZES	0	0.01	0.001
TOLERANCES	1	2	3
TOLERANCE ON CENTER DISTANCES & 0.0			
THE TOLERANCES SHOWN HERE ARE NOT CUMULATIVE			

REV.	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	APPROVED BY	FINAL APPROVED BY
R2	08/31/2024	ISSUED FOR APPROVAL	F.SZ	F.A.	J.B.L	A.GHZ
R1	08/20/2024	ISSUED FOR APPROVAL	F.SZ	F.A.	J.B.L	A.GHZ
R0	08/10/2024	ISSUED FOR APPROVAL	F.SZ	F.A.	J.B.L	A.GHZ

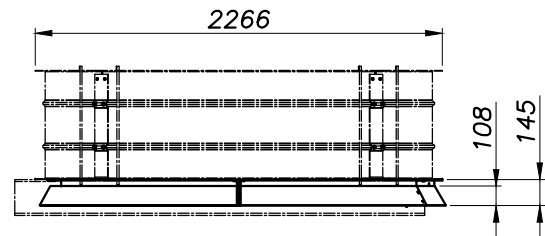
CLIENT:

CONTRACTOR:

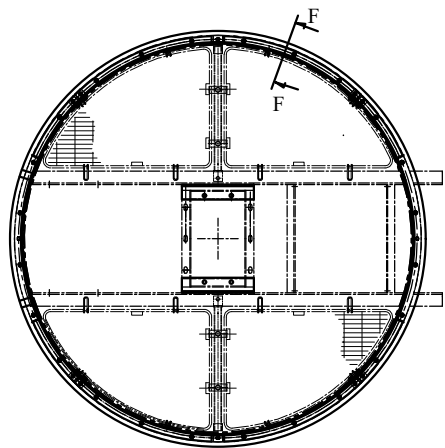
PROJECT: AIR COOLER FOR Toase-eh Park Sanati Gohar Ofogh Petrochemical Co.
Fan Ring & Conical Drawing
1158-A01-5067-00
(Sheet 1 of 2)

DWG. NO.	EI027-DMF-VD-ME-DWG-009
SCALE:	N.T.S. SIZE: A3 REV.: R2

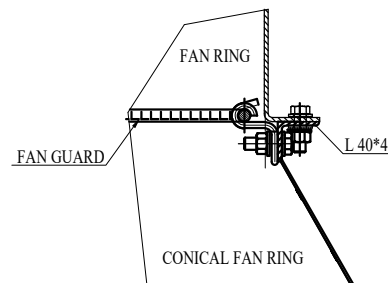
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FRONT VIEW

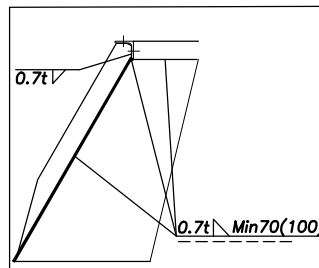


TOP VIEW



SEC. F-F

Connection Fan Guard to Conical Fan Ring(L40*4)



A

B

C

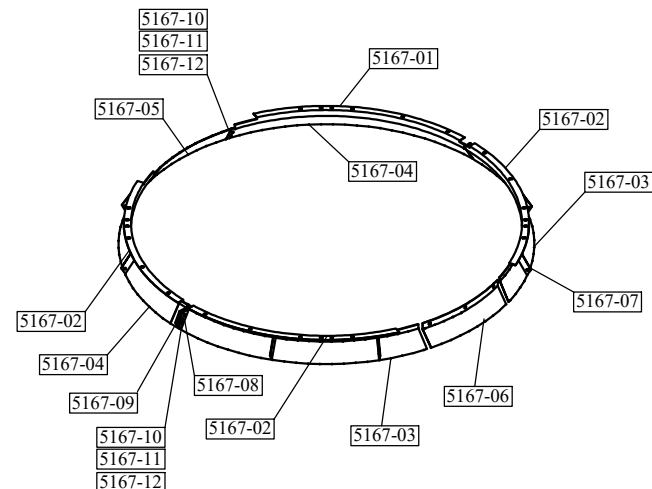
D

E

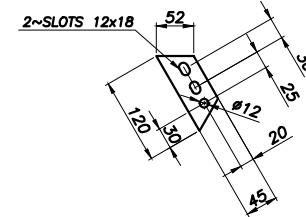
F

G

H

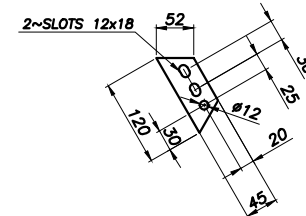


5167-09 THK.=10mm



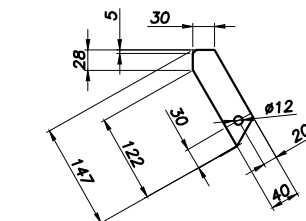
SC. 4:1

5167-08 THK.=5mm



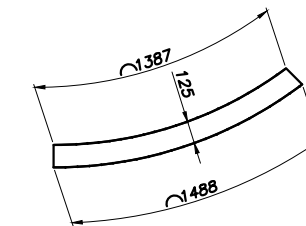
SC. 4:1

5167-07 THK.=3mm



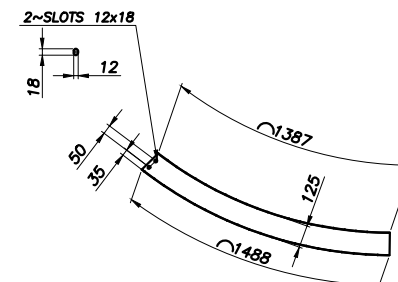
SC. 4:1

5167-03 THK.=2mm

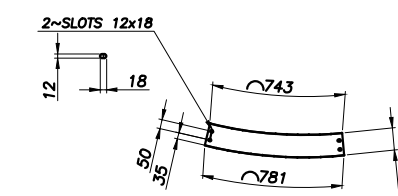


FLAT PATTERN

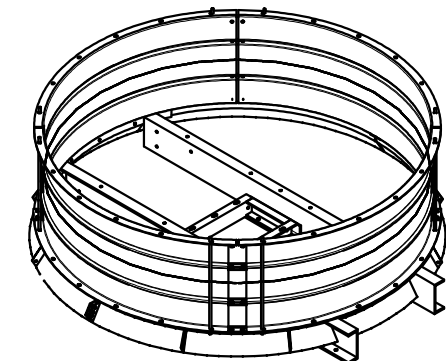
5167-04 THK.=2mm



5167-05 THK.=2mm



PART LIST										
PART NO.	DESCRIPTION	DA	LENTH	WIDTH	THK.	MATERIAL	QTY	Unit Weight	Total Weight	REV.
5167-01	CONICAL FAN RING FOR ONE SET INCLUDING	-	-	-	-	-	4	29	115	
5167-02	L 40*4	-	1300	-	-	SL-370x4(Dp Galv)	2	3	6.7	R3
5167-03	PLATE	-	-	-	2	SL-370x4(Dp Galv)	2	2.8	5.6	R3
5167-04	PLATE	-	-	-	2	SL-370x4(Dp Galv)	2	2.7	4.0	R3
5167-05	PLATE	-	-	-	2	SL-370x4(Dp Galv)	1	1.5	1.5	R3
5167-06	PLATE ASSEMBLY	-	-	-	-	-	1	1.30	1.4	
5167-07	PLATE	-	-	-	2	SL-370x4(Dp Galv)	1	0.39	0.4	R3
5167-08	PLATE	-	-	-	2	SL-370x4(Dp Galv)	1	1	1.0	R3
5167-09	PLATE	-	-	-	2	SL-370x4(Dp Galv)	6	6.1	1.1	R3
5167-10	PLATE	-	120	45	5	SL-370x4(Dp Galv)	4	6.2	9.8	R3
5167-11	BOLT	-	120	45	10	DIN 125A-ST04crNiMo	2	6.4	9.8	
5167-12	NUT	-	30	-	-	DIN 934-CL 8.8Dacromb	6	-	-	
5167-13	WASHER	-	10	-	-	DIN 125A-ST04crNiMo	18	-	-	
5167-14	BOLT FOR CONNECTING TO SUPPORT MECHANISM	-	30	-	-	DIN 934-CL 8.8Dacromb	3	-	-	
5167-15	NUT	-	30	-	-	DIN 934-CL 8.8Dacromb	3	-	-	
5167-16	WASHER	-	10	-	-	DIN 125A-ST04crNiMo	6	-	-	
5167-17	BOLT FOR CONNECTING TO FAN RING	-	40	-	-	DIN 934-CL 8.8Dacromb	24	-	-	
5167-18	NUT	-	30	-	-	DIN 934-CL 8.8Dacromb	24	-	-	
5167-19	WASHER	-	10	-	-	DIN 125A-ST04crNiMo	48	-	-	



A

B

C

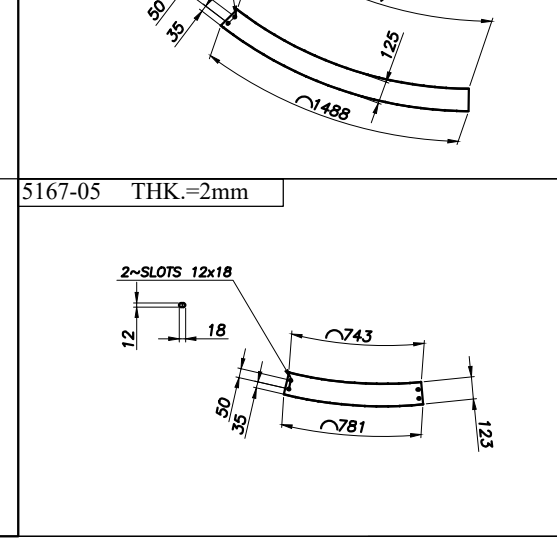
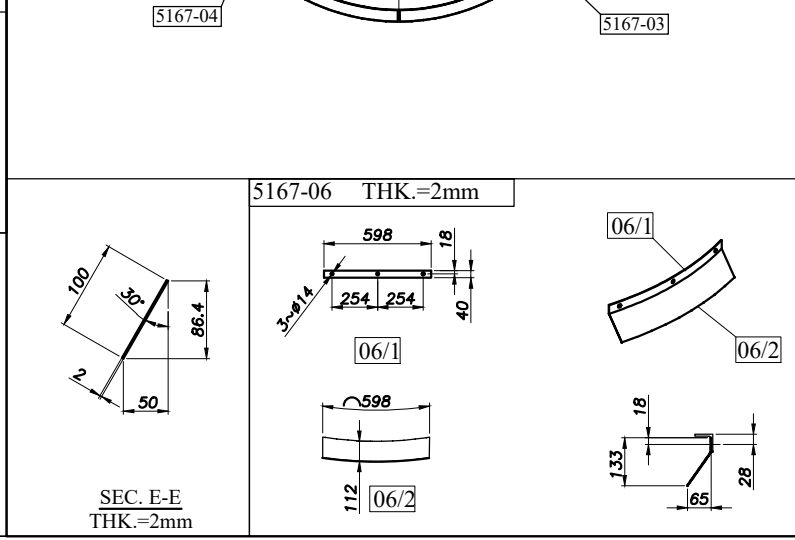
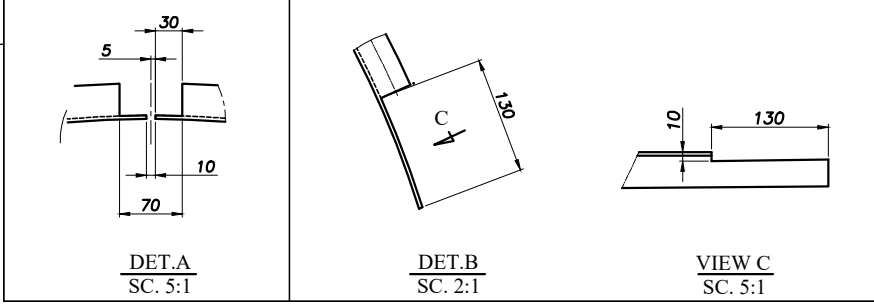
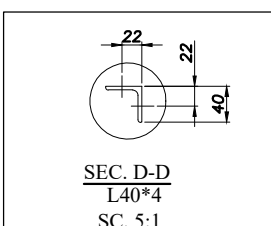
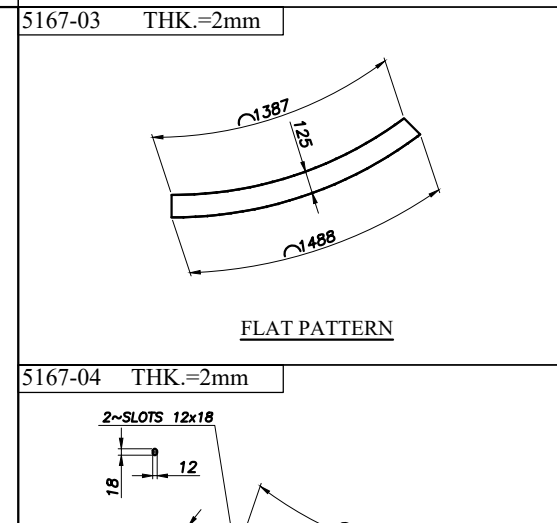
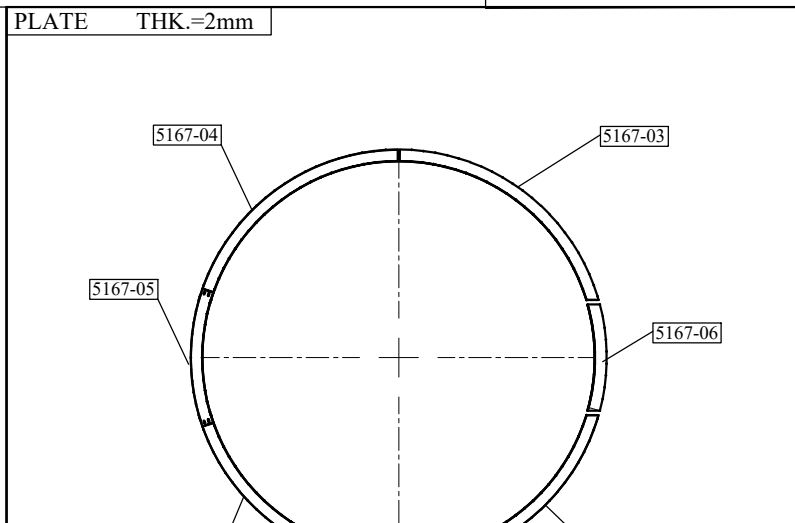
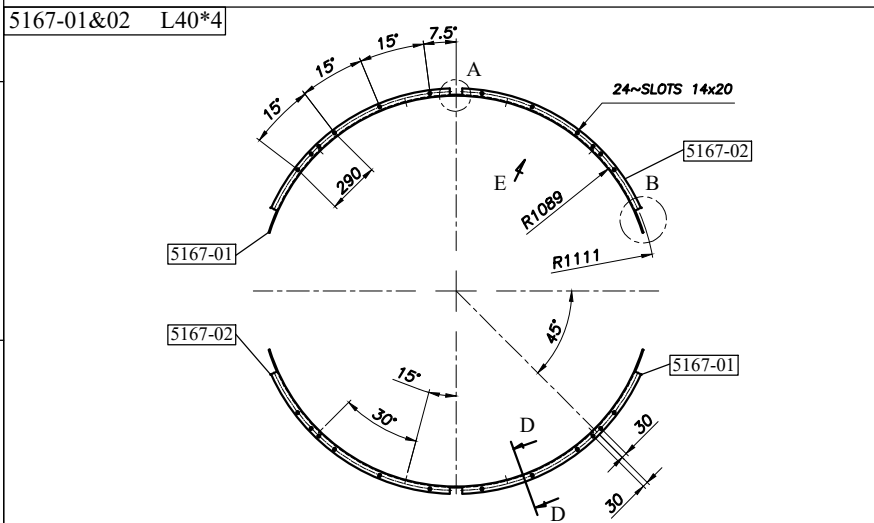
D

E

F

G

H



REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	APPROVED BY	FINAL APPROVED BY
R2	08/31/2024	ISSUED FOR APPROVAL	F.SZ	F.A.	J.B.L	A.GHZ
R1	08/20/2024	ISSUED FOR APPROVAL	F.SZ	F.A.	J.B.L	A.GHZ
R0	08/10/2024	ISSUED FOR APPROVAL	F.SZ	F.A.	J.B.L	A.GHZ

CLIENT:

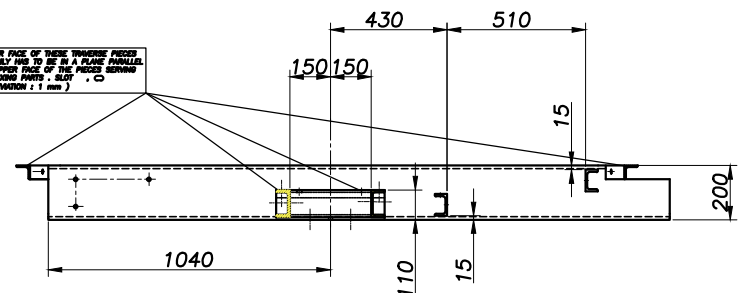
CONTRACTOR:

PROJECT: AIR COOLER FOR Toase-eh Park Sanati Gohar Ofogh Petrochemical Co.
Fan Ring & Conical Drawing
1158-A01-5167-00
(Sheet 2 of 2)

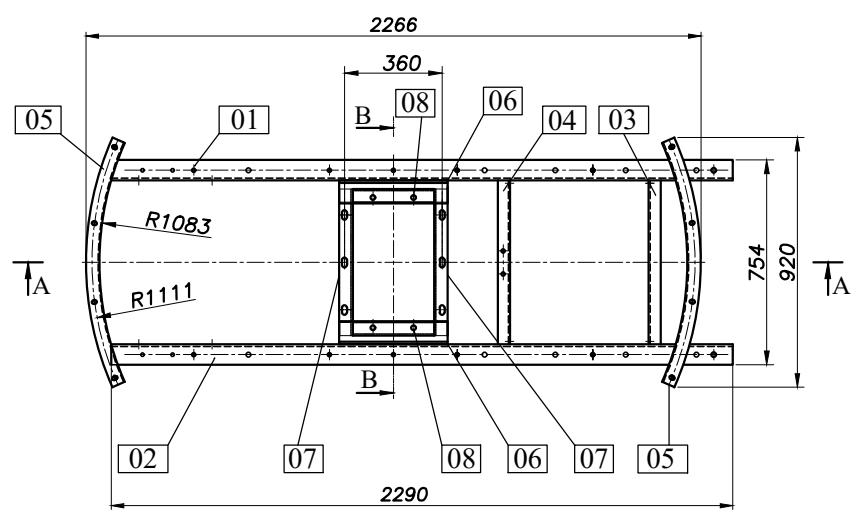
DWG. NO. E1027-DMF-VD-ME-DWG-009
SCALE: N.T.S. SIZE: A3 REV.: R2

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THE UPPER FACE OF THESE BRASS FEET SHOULD BE FINISHED TO BE A PLANE PARALLEL TO THE UPPER FACE OF THE PIPES BEARING ON THE FOUNDATION. (SEE DET. C)
(MAX. DEVIATION ± 1 mm)



SECTION A-A



R2

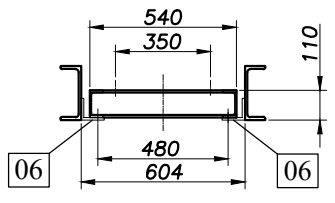
NOTES :
1- ALL DIMENSIONS ARE IN MILLIMETERS.
2- BOLTS, NUTS, WASHERS, THREADS, PARTS INCLUDES THREADS SHALL BE AS PER PROJECT SPECIFICATION DOC. NO. EI027-DMF-VD-QC-PRO-024
3- COATING SHALL BE AS PER PROJECT SPECIFICATION.
4- MIN HEIGHT OF FILLET WELD=0.7xMIN THK.

TOLERANCES

THE FOLLOWING VALUES ARE APPLICABLE TO THE DIMENSIONS THAT ARE NOT PROVIDED WITH TOLERANCES ON DRAWING

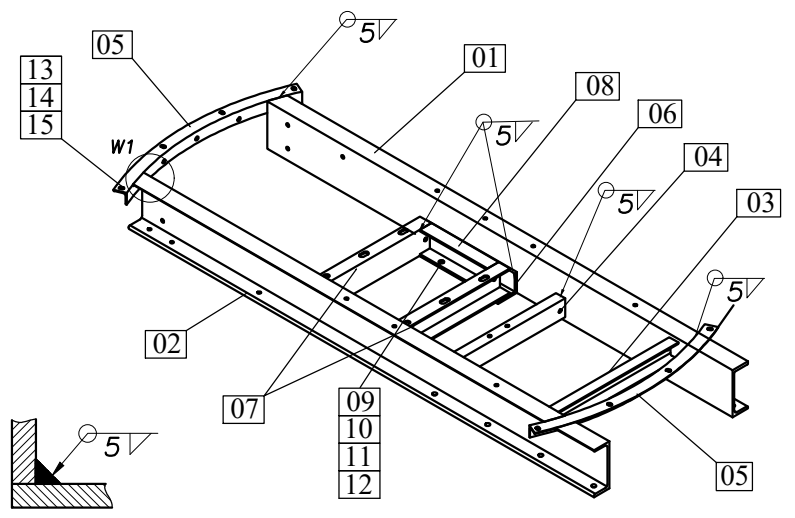
NOMINAL DIMENSIONS FOR MILLIMETER STEPS	0	801	5001
TOLERANCES ±	1	2	3
TOLERANCE ON CENTER DISTANCES ±	0.5	0.5	0.5

THE TOLERANCES SHOWN HERE ARE NOT CUMULATIVE



SEC. B-B

PART LIST										
PART NO	DESCRIPTION	DIA. (mm)	LENGTH (mm)	WIDTH (mm)	THK. (mm)	MATERIAL	QTY.	Unit Weight	Total Weight	REV.
6307-00	SUPPORT MECHANISM INCLUDING:	-	-	-	-	-	4	151	606	
6307-00/1	SUPPORT MECHANISM FRAME ASSEMBLY:	-	-	-	-	-	1	142	142	
6307-01	UPN 200	-	2290	-	-	SI-37(Hot Dip Galv.)	1	58	58	
6307-02	UPN 200	-	2290	-	-	SI-37(Hot Dip Galv.)	1	58	58	
6307-03	UPN 80	-	604	-	-	SI-37(Hot Dip Galv.)	1	5	5	
6307-04	UPN 80	-	604	-	-	SI-37(Hot Dip Galv.)	1	5	5	
6307-05	L50*5	-	920	-	-	SI-37(Hot Dip Galv.)	2	3	7	
6307-06	L- SHAPE 85*80*10	-	400	-	10	SI-37(Hot Dip Galv.)	2	5	9	
6307-00/2	BEARING BLOCK SUPPORT ASSEMBLY:	-	-	-	-	-	1	18	18	
6307-07	UPN 100	-	540	-	-	SI-37(Hot Dip Galv.)	2	6	11	
6307-08	UPN 100	-	300	-	-	SI-37(Hot Dip Galv.)	2	3	6	
BOLT & NUT & WASHER INCLUDING :										
6307-09	BOLT FOR CONNECTING B.B. SUPPORT TO SUPPORT MECHA	M16	50	-	-	DIN-933-CL.8.8(Dacromet)	4			
6307-10	NUT	M16	-	-	-	DIN-934-CL.8(Dacromet)	4			
6307-11	WASHER	A17	-	-	-	DIN-125A-ST(Dacromet)	4			
6307-12	TAPER WASHER	-	-	-	-	DIN-434-18-ST-8%(Dacromet)	4			
6307-13	BOLT FOR CONNECTING SUPPORT MECHANISM TO FAN RING	M12	40	-	-	DIN-933-CL.8.8(Dacromet)	8			
6307-14	NUT	M12	-	-	-	DIN-934-CL.8(Dacromet)	8			
6307-15	WASHER	A13	-	-	-	DIN-125A-ST(Dacromet)	16			

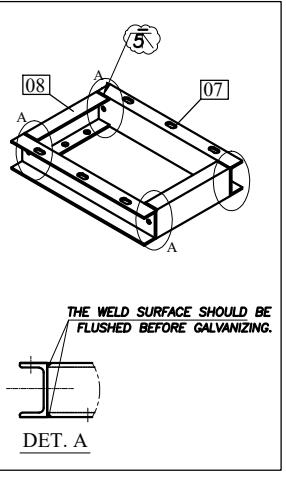
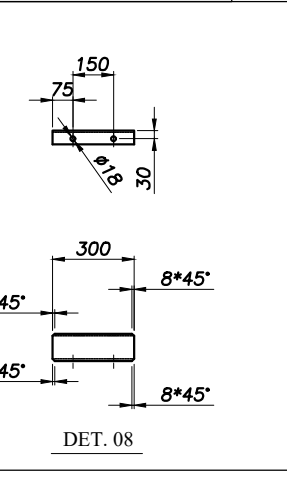
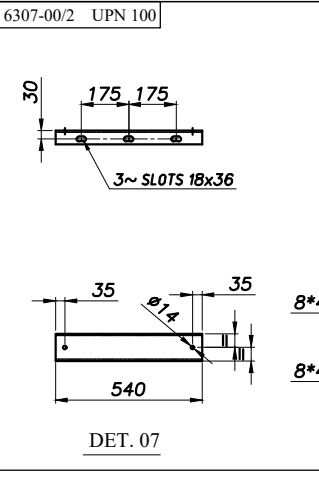
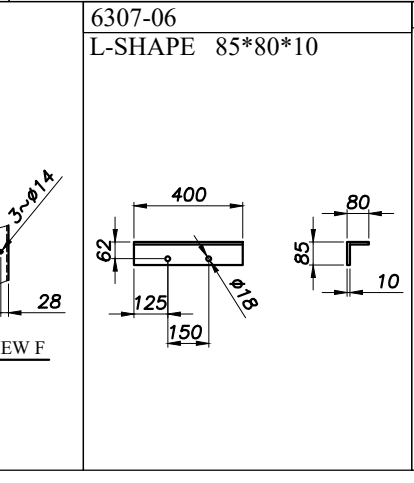
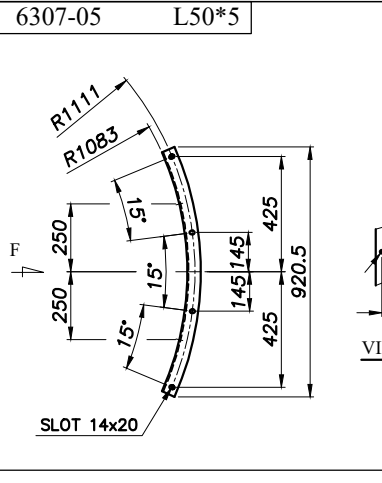
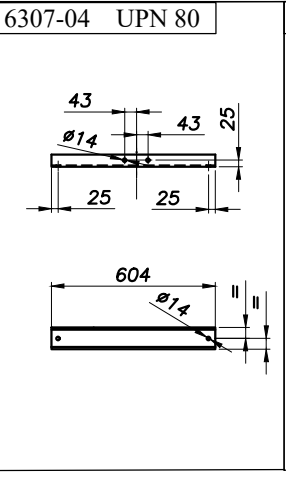
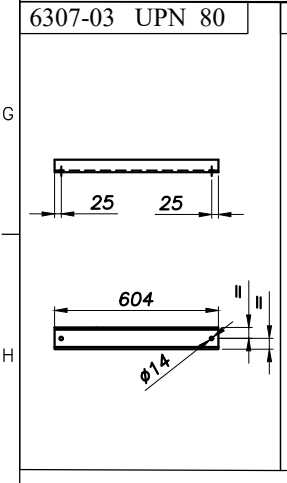
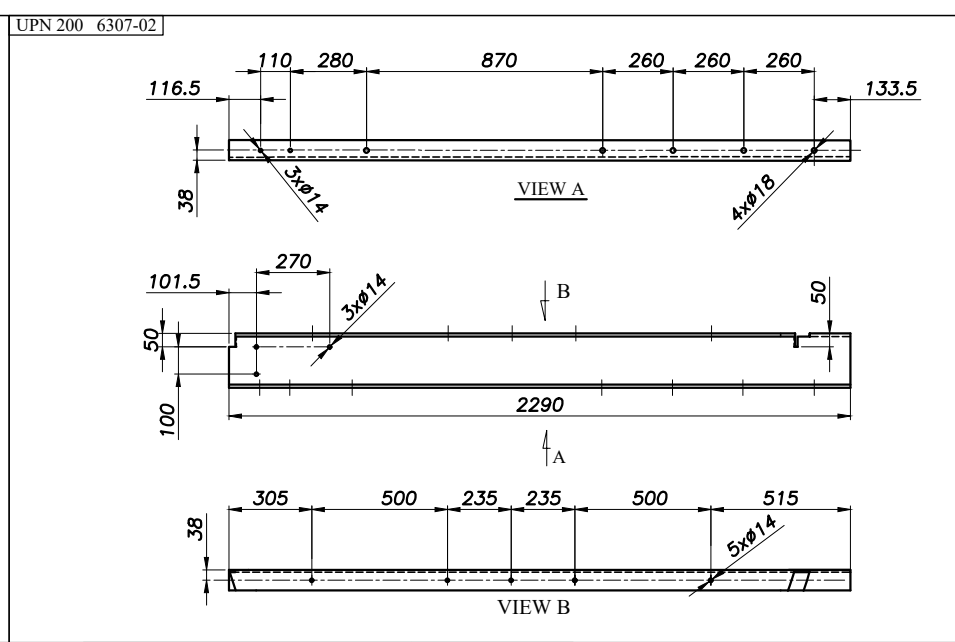
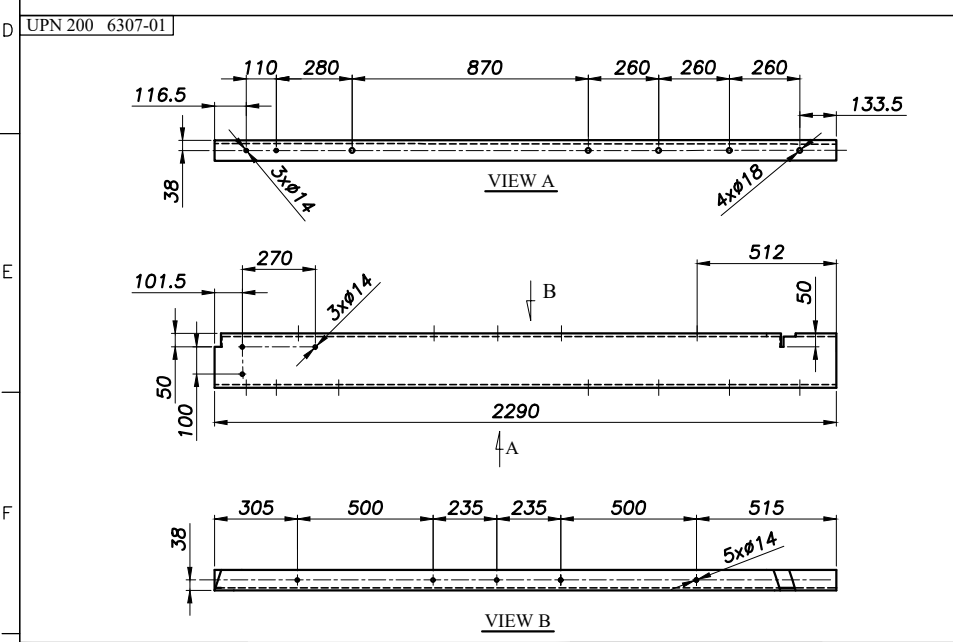


DET. W1 TYP.

* FOR MORE DETAILS FOR EACH COMPONENT OF AIR COOLER REFER TO BELOW DRAWING & DOCUMENTS.

REFERENCED DWG&DOC.

TITLE	VENDOR DOCUMENT NO.	CLIENT DOCUMENT NO.
General Arrangement Drawing	1158-A01-1000-00	EI027-DMF-VD-ME-DWG-003
Fan Drive Assembly Drawing	1158-A01-6000-00	EI027-DMF-VD-ME-DWG-008
Plenum Drawing	1158-A01-5110-00	EI027-DMF-VD-ME-DWG-011
Fan Ring Drawing	1158-A01-5067-00	EI027-DMF-VD-ME-DWG-009
Surface Preparation and Painting Procedure for Air Cooler	1158-A01-QS01-00	EI027-DMF-VD-QC-PRO-024



REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	APPROVED BY	FINAL APPROVED BY
R2	08/31/2024	ISSUED FOR APPROVAL	F.SZ	F.A.	J.B.L	A.GHZ
R1	08/20/2024	ISSUED FOR APPROVAL	F.SZ	F.A.	J.B.L	A.GHZ
R0	08/10/2024	ISSUED FOR APPROVAL	F.SZ	F.A.	J.B.L	A.GHZ

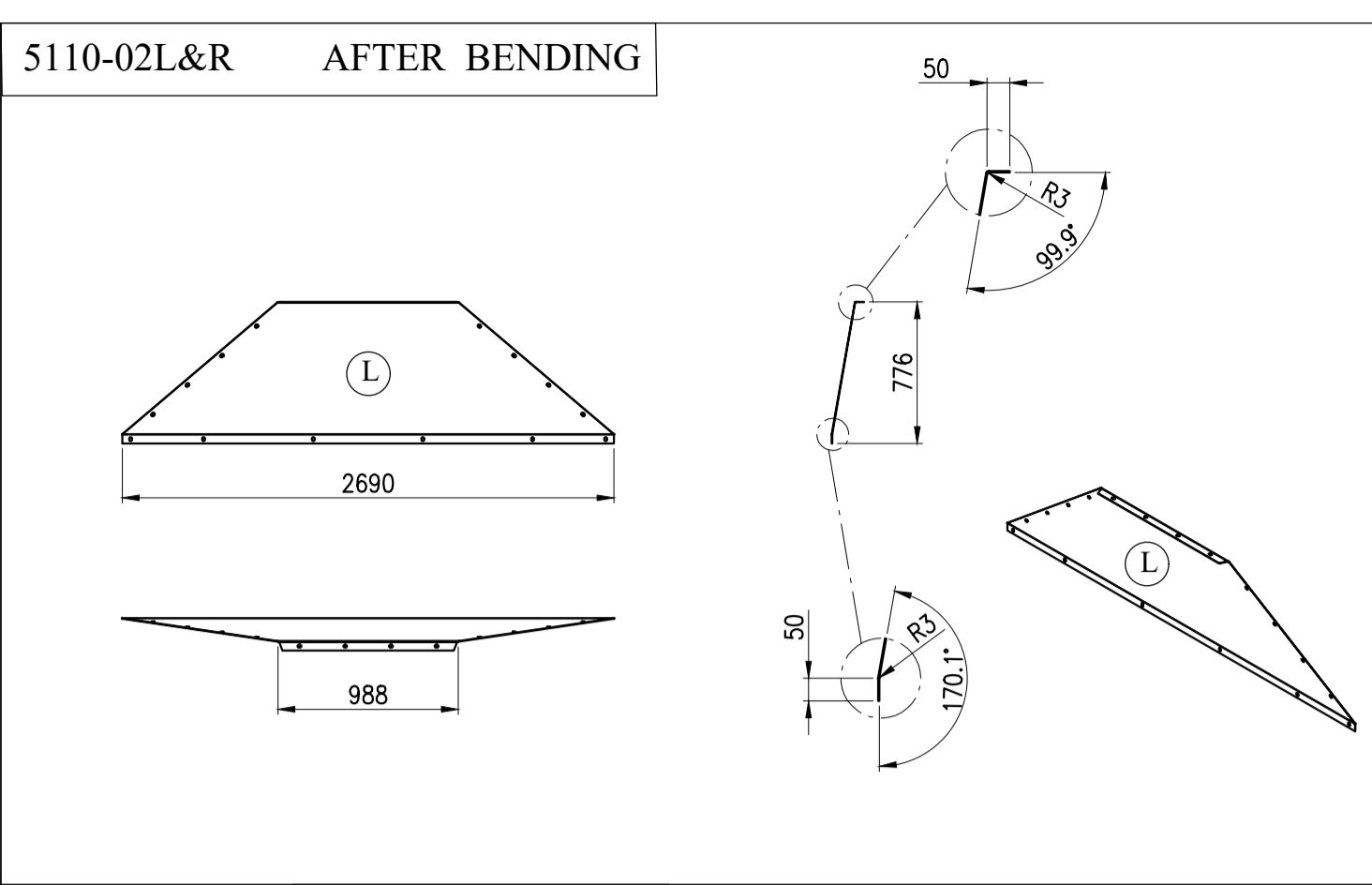
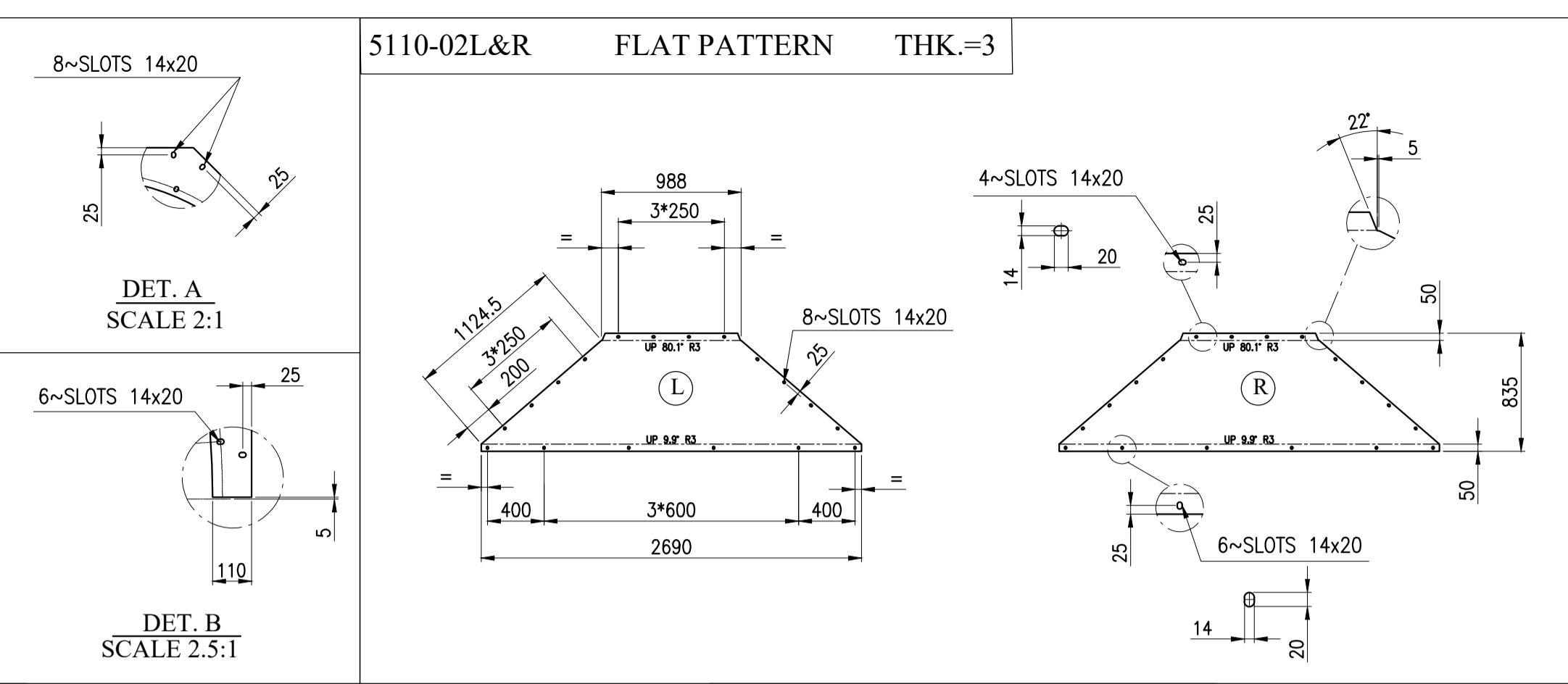
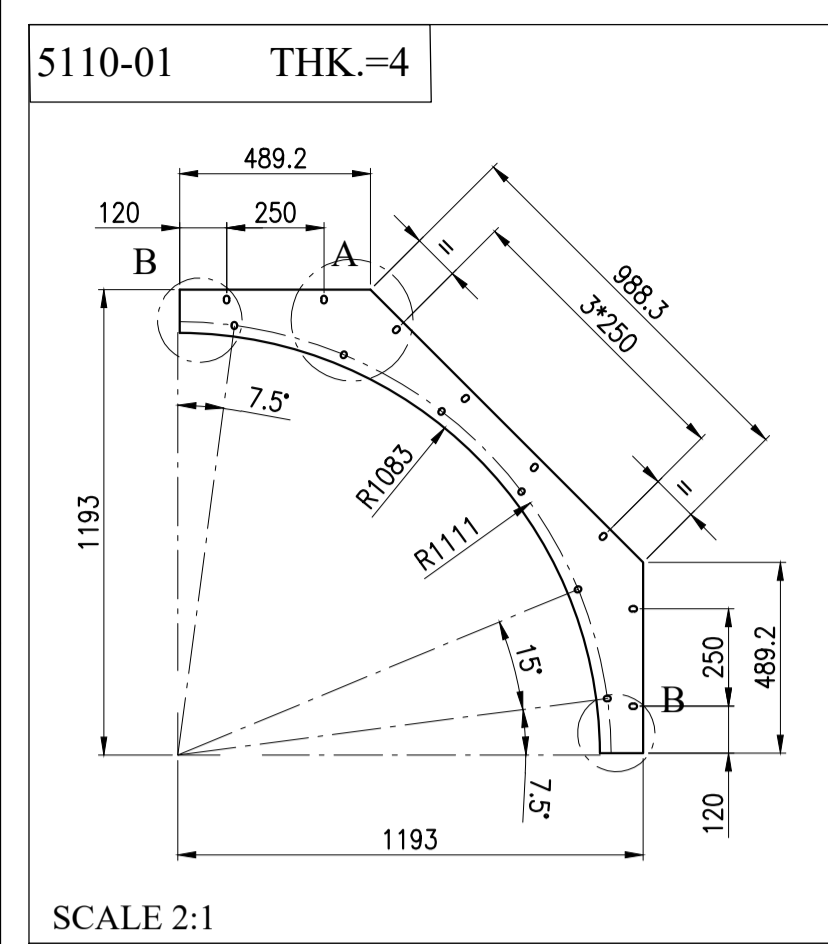
CLIENT:

CONTRACTOR:

PROJECT : AIR COOLER FOR Toase-che Park Sanati Gohar Ofogh Petrochemical Co. Support Mechanism Drawing 1158-A01-6037-00

DWG. NO. EI027-DMF-VD-ME-DWG-010
SCALE : N.T.S. SIZE : A3 REV. : R2

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PART LIST

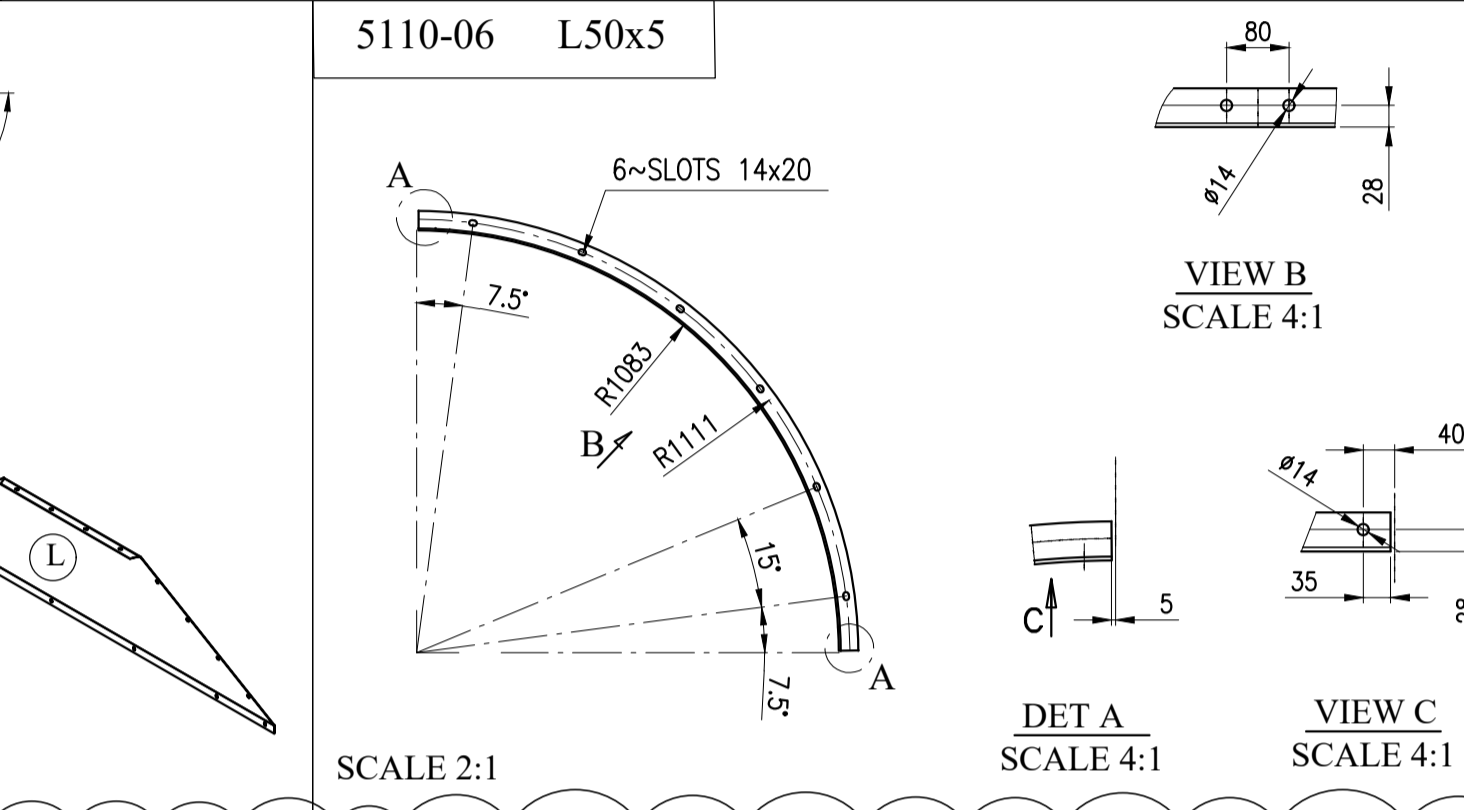
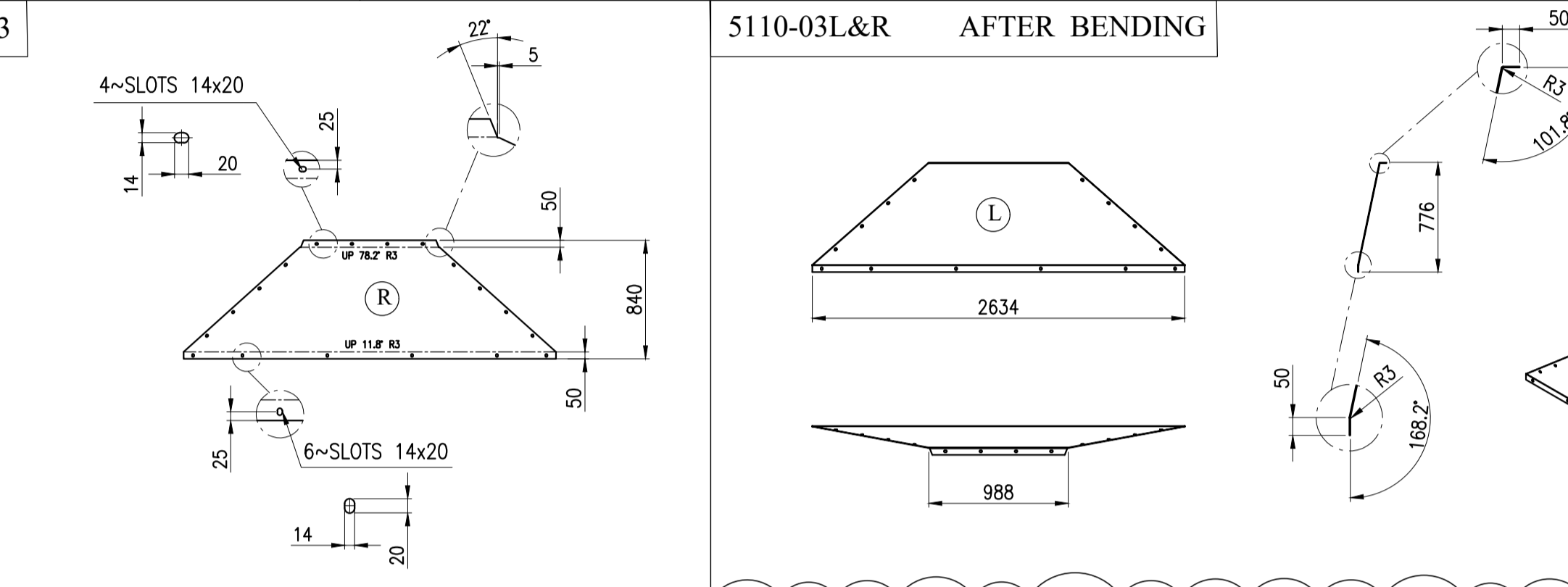
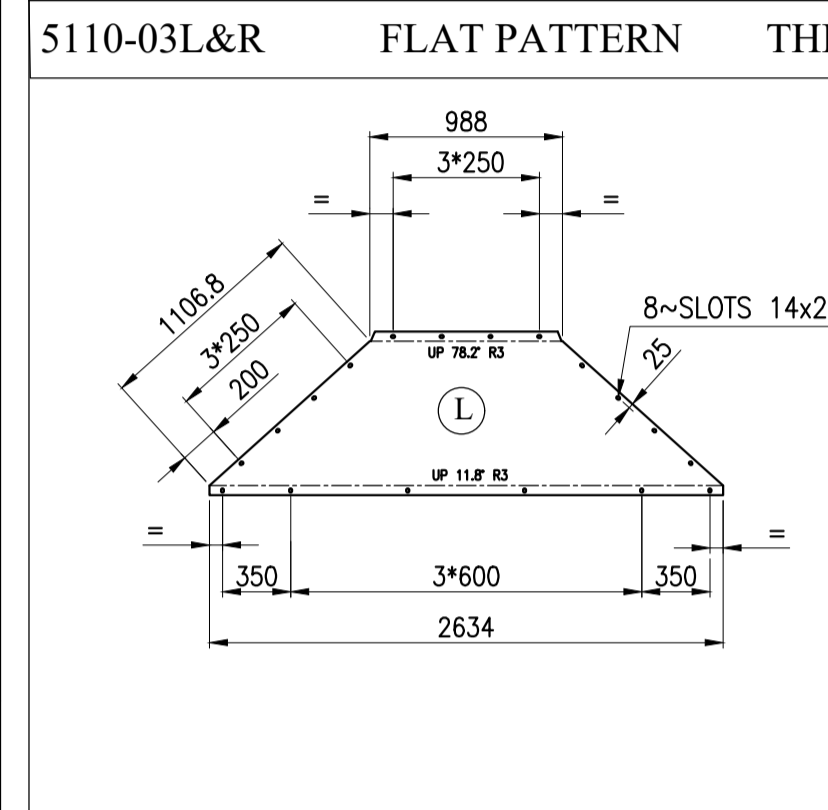
PART NO	DESCRIPTION	DIA. (mm)	LENGT H (mm)	WIDTH (mm)	THK. (mm)	MATERIAL	QTY	Unr Weight(kg)	Total Weight(kg)	REV.
5110-00	PLENUM TRANSITION INCLUDING:	-	-	-	-	-	4	262	1048	
5110-01	OCTAGONAL PLATE ASSEMBLY	-	-	-	4	Sk-37(+Ht Dip Galv)	4	8	32	R1
5110-02	TRAPEZOID PLATE (LEFT&RIGHT)	-	-	-	3	Sk-37(+Ht Dip Galv)	2	36	72	R1
5110-03	TRAPEZOID PLATE (LEFT&RIGHT)	-	-	-	3	Sk-37(+Ht Dip Galv)	2	36	72	R1
5110-04	TRIANGULAR PLATE	-	-	-	3	Sk-37(+Ht Dip Galv)	2	15.5	31	R1
5110-05	TRIANGULAR PLATE	-	-	-	3	Sk-37(+Ht Dip Galv)	2	15.5	31	R1
5110-06	ANGLE FAN RING SUPPORT(L 50°)	-	-	-	-	Sk-37(+Ht Dip Galv)	4	6	24	R1
5120-00	BOLT/NUT/WASHER:	-	-	-	-	-	-	-	-	
5120-01	BOLT	M12	40	-	-	DIN-933-CL 8.8(Dacromet)	64	-	-	
5120-02	NUT	M12	-	-	-	DIN-934-CL 8(Dacromet)	64	-	-	
5120-03	WASHER	A13	-	-	-	DIN-125A-ST(Dacromet)	128	-	-	
5120-04	BOLT FOR PLENUM TO STRUCTURE	M12	40	-	-	DIN-933-CL 8.8(Dacromet)	24	-	-	
5120-05	NUT	M12	-	-	-	DIN-934-CL 8(Dacromet)	24	-	-	
5120-06	WASHER	A13	-	-	-	DIN-125A-ST(Dacromet)	48	-	-	

NOTES:

1-ALL DIMENSION ARE IN MILLIMETERS.

2-BOLTS, NUTS,WASHERS,THREADS,PARTS INCLUDES THREADS SHALL BE AS PER PROJECT SPECIFICATION DOC. NO.: EI027-DMF-VD-QC-PRO-024

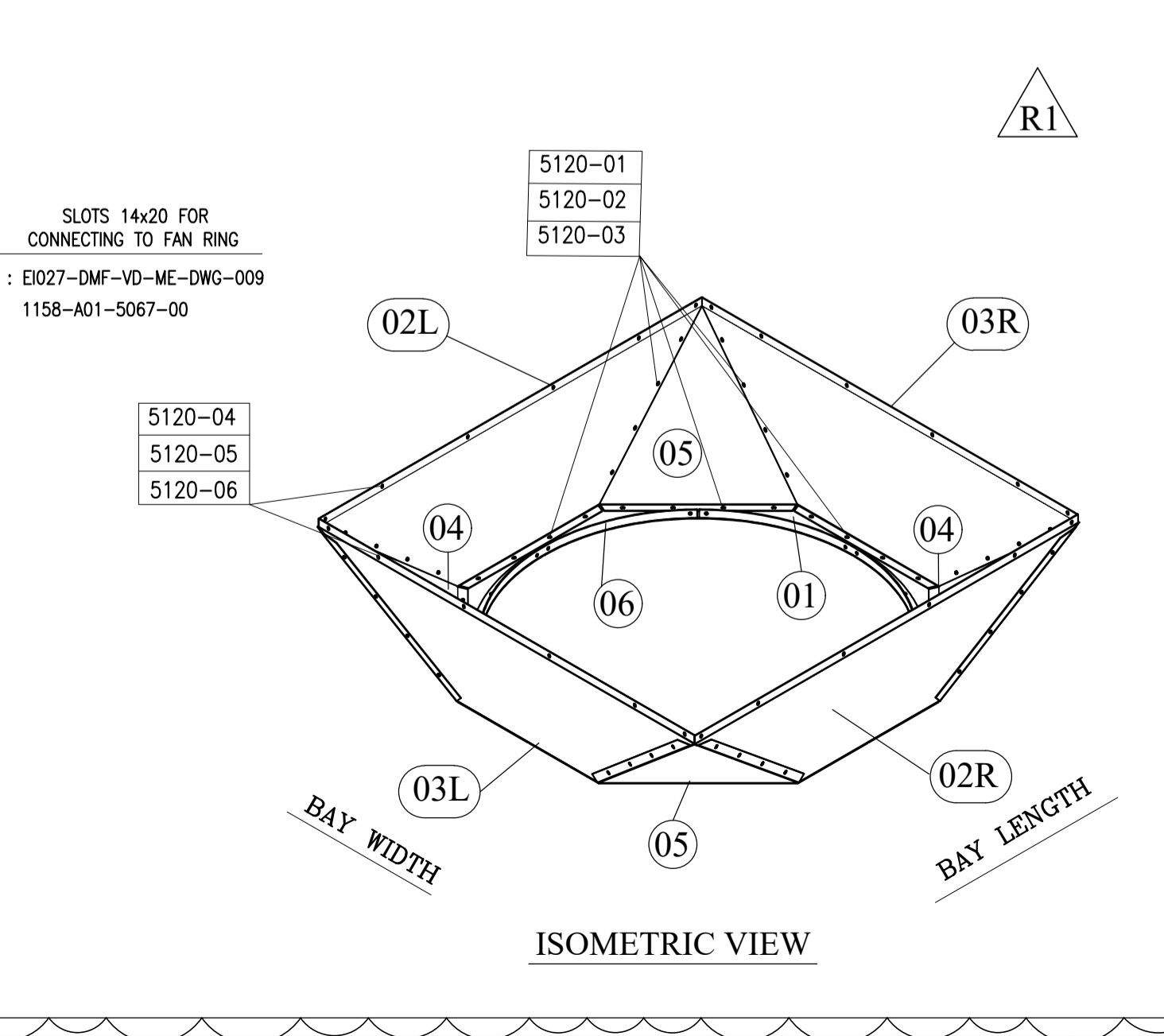
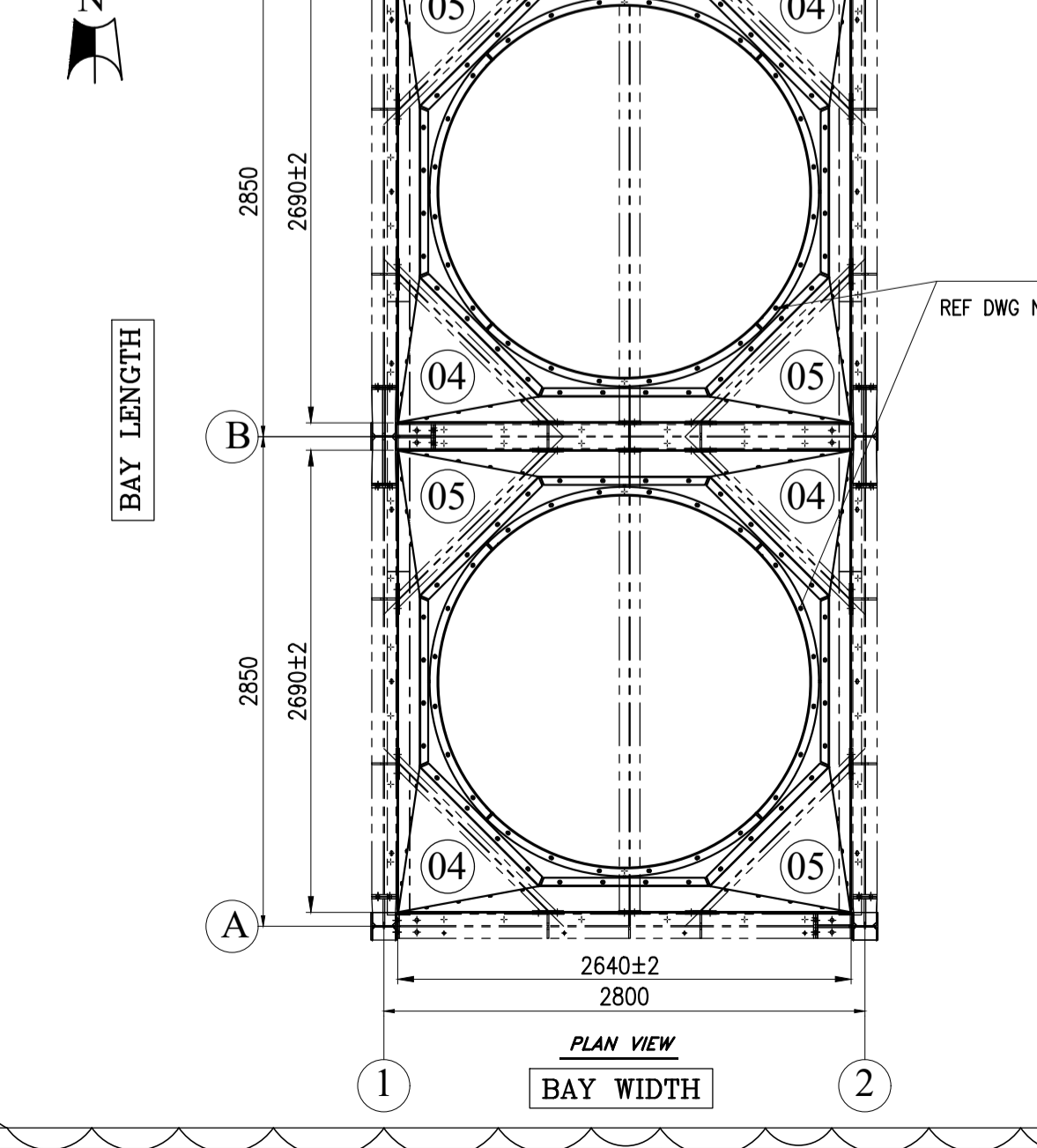
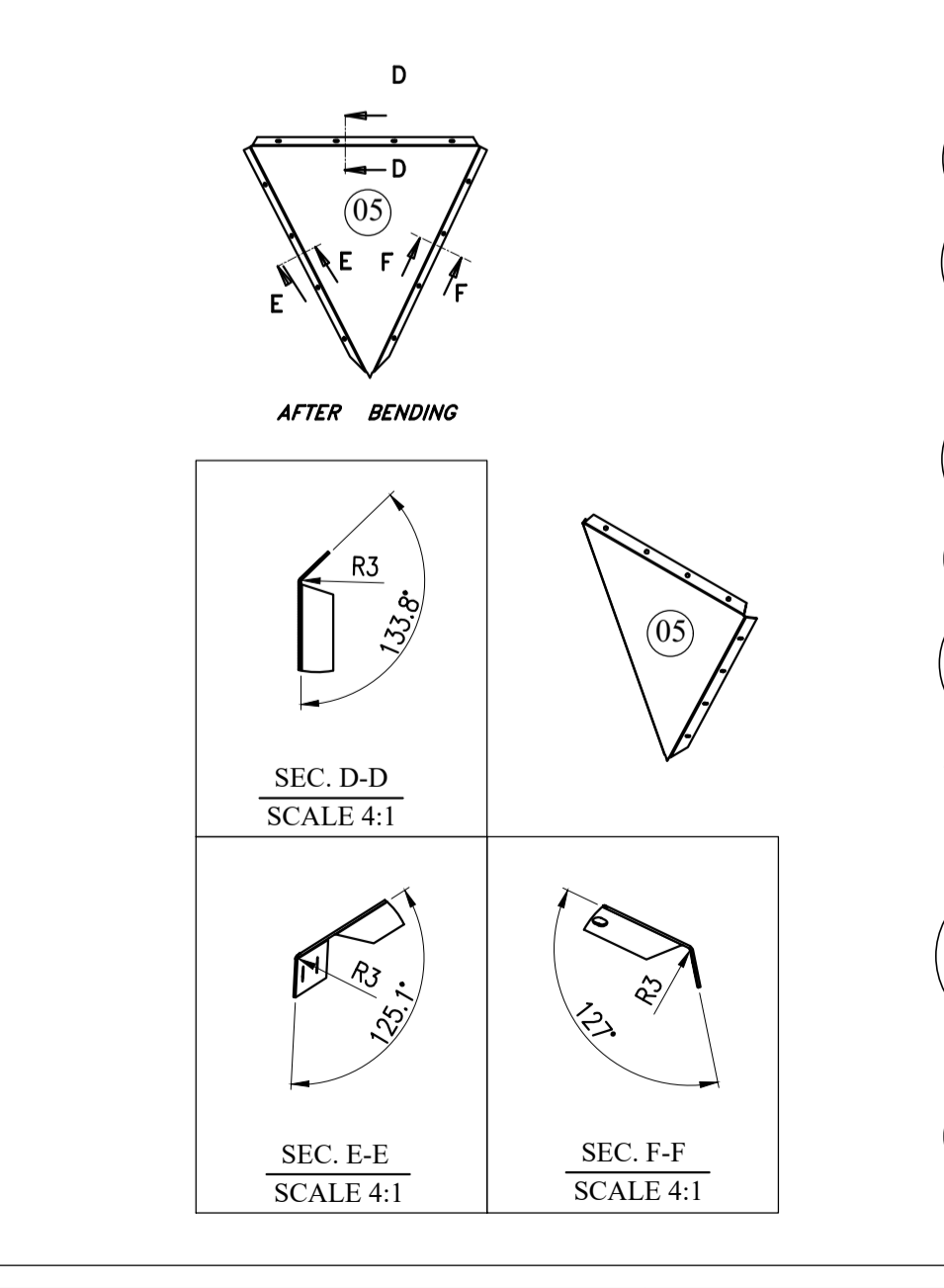
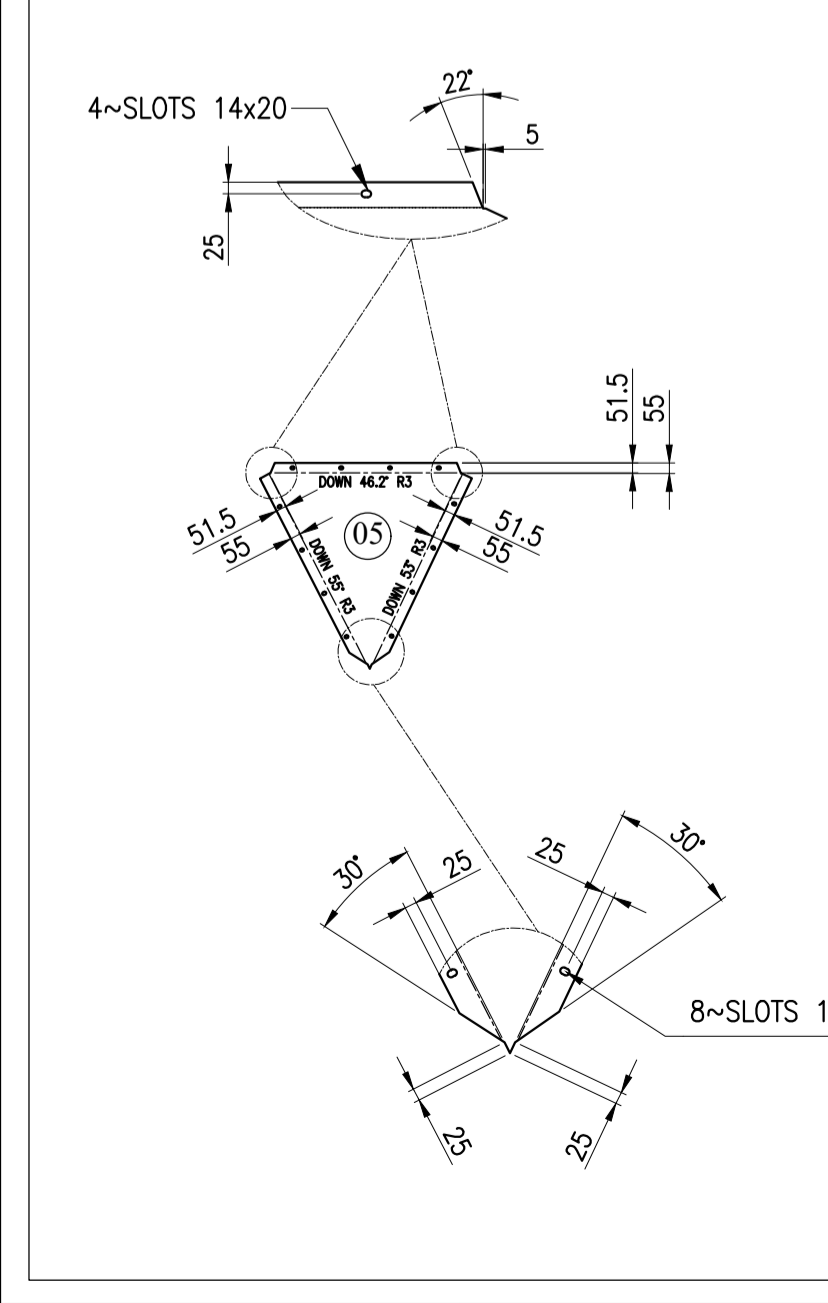
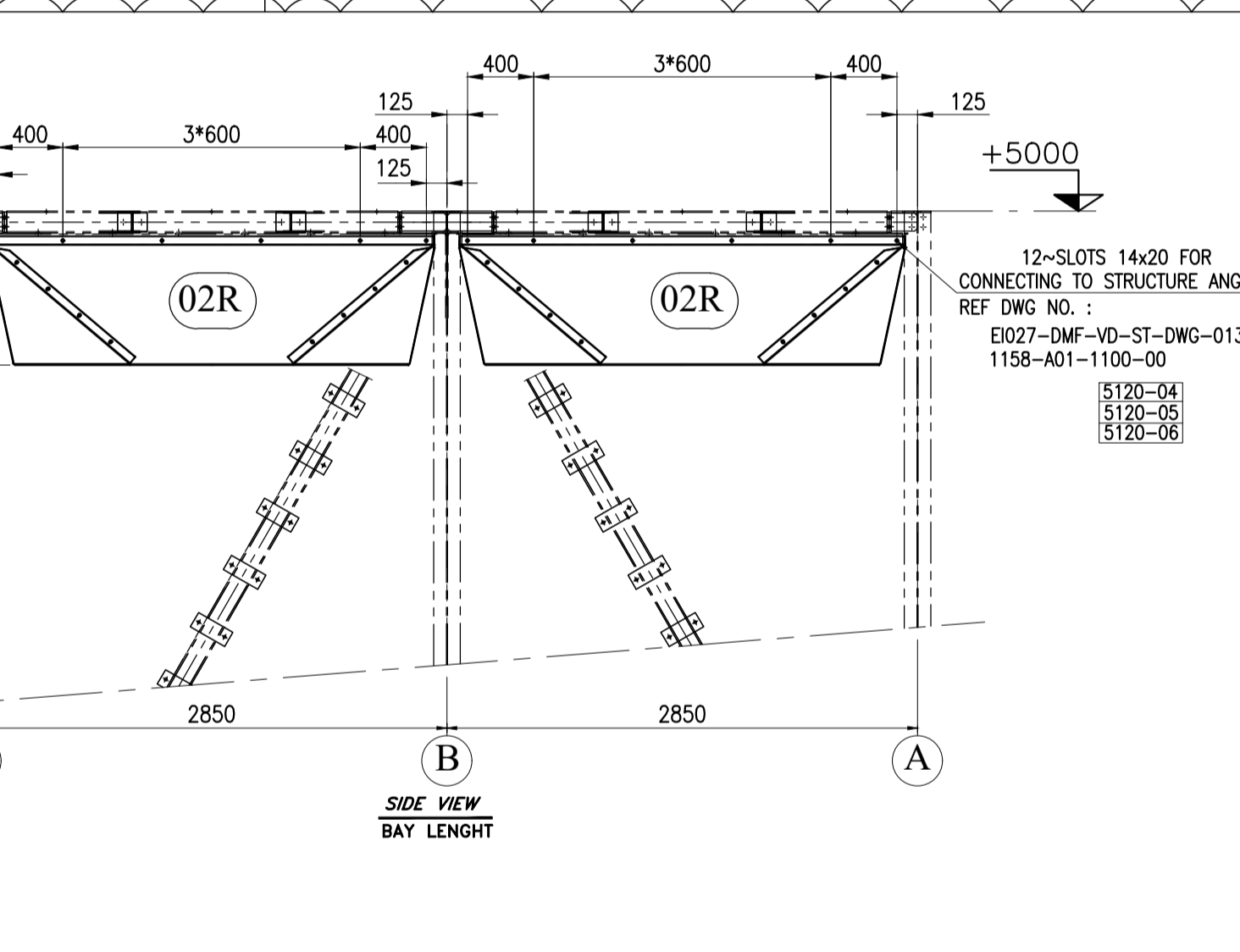
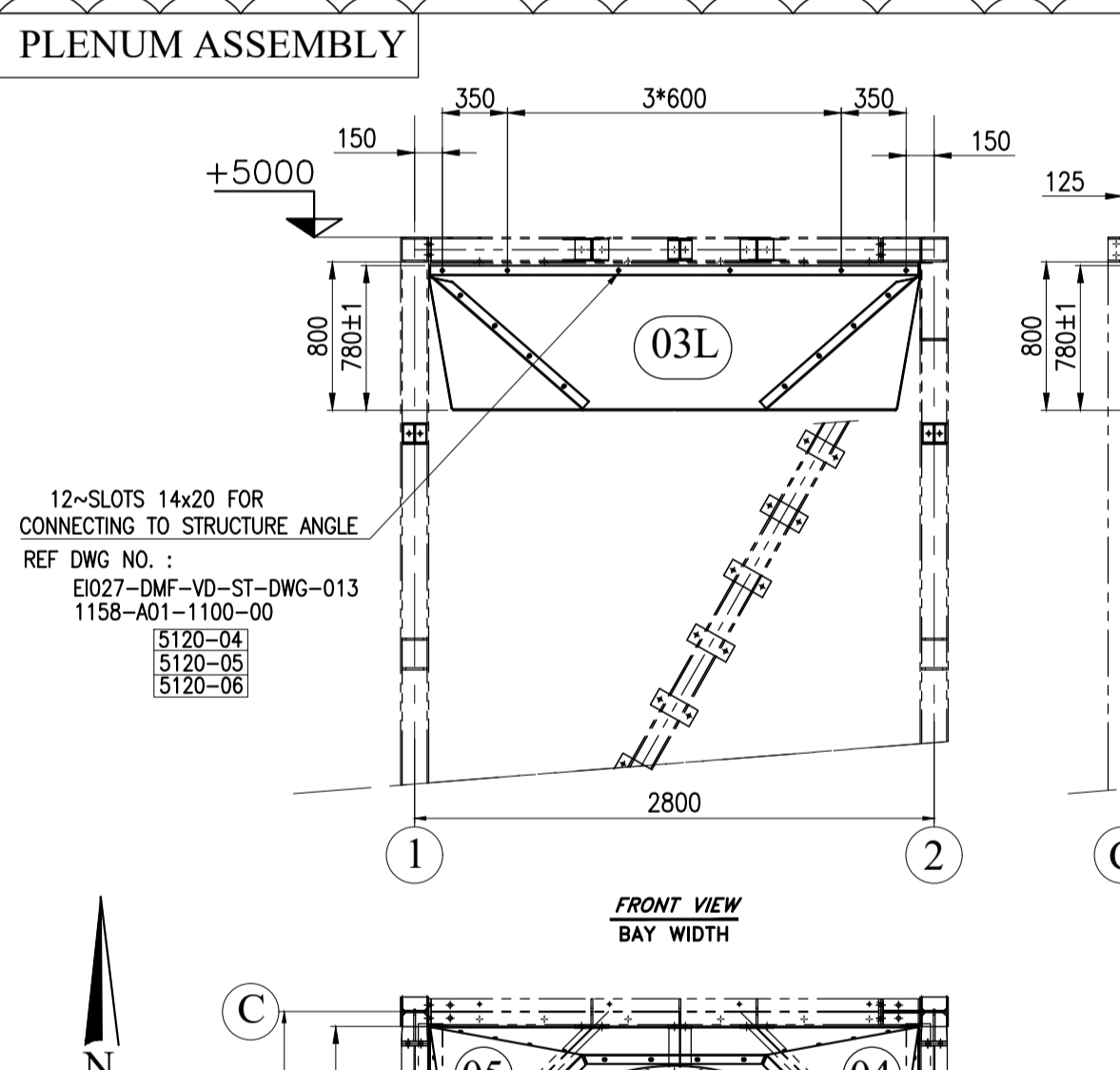
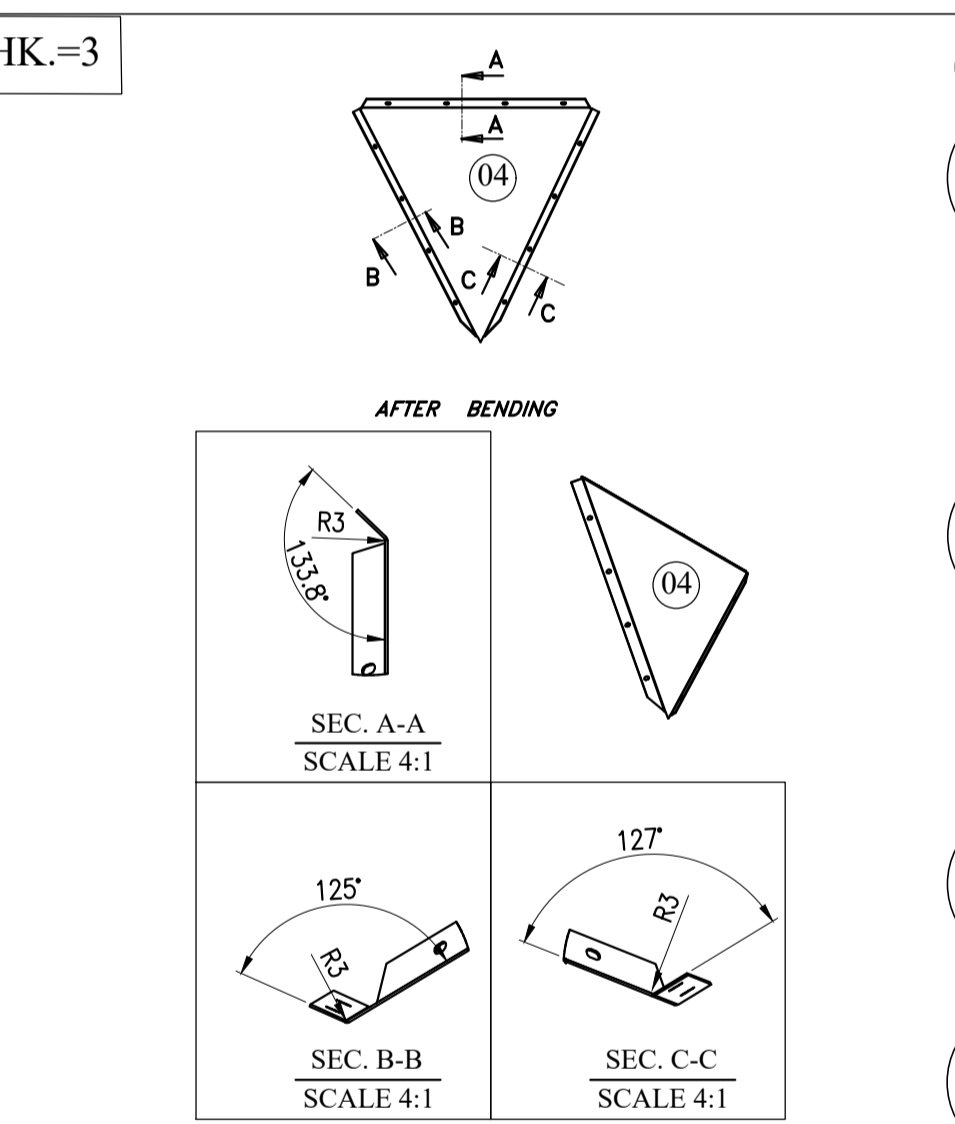
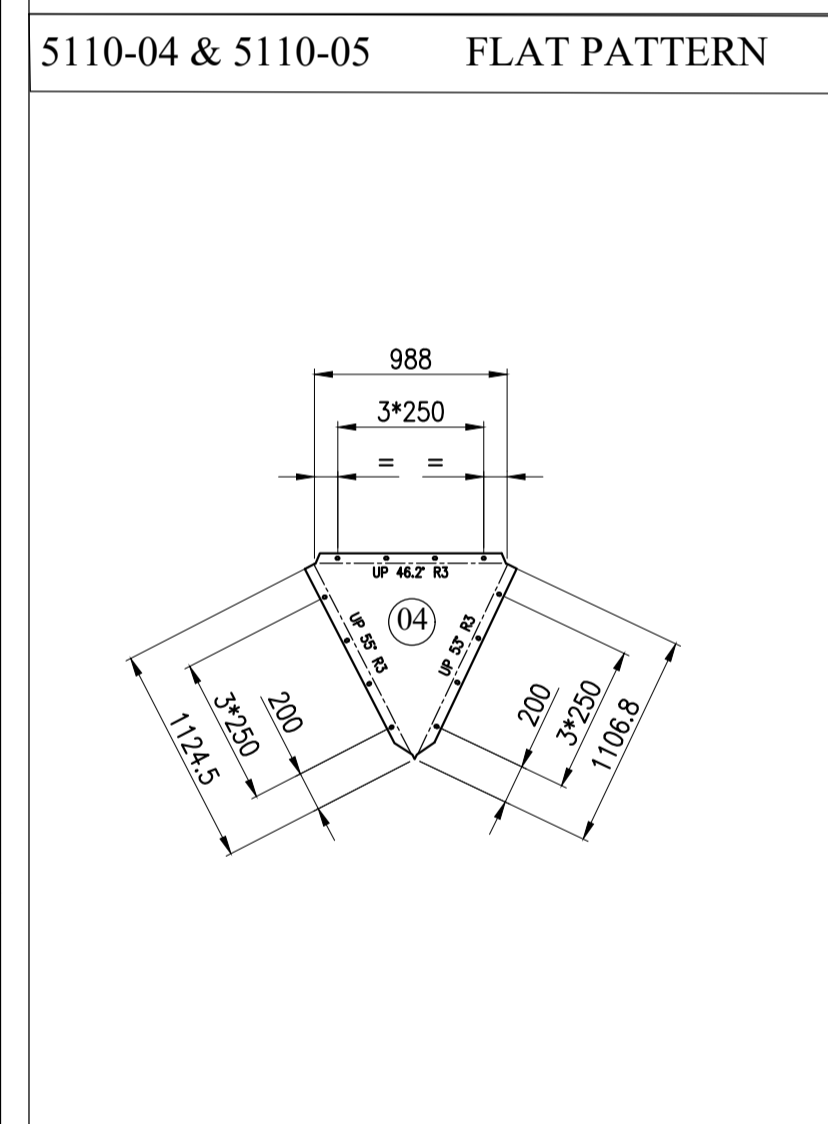
3- ALL PARTS HOT DIP GALVANIZING SHALL BE DONE AS PER ASTM-123/ISO 1461.



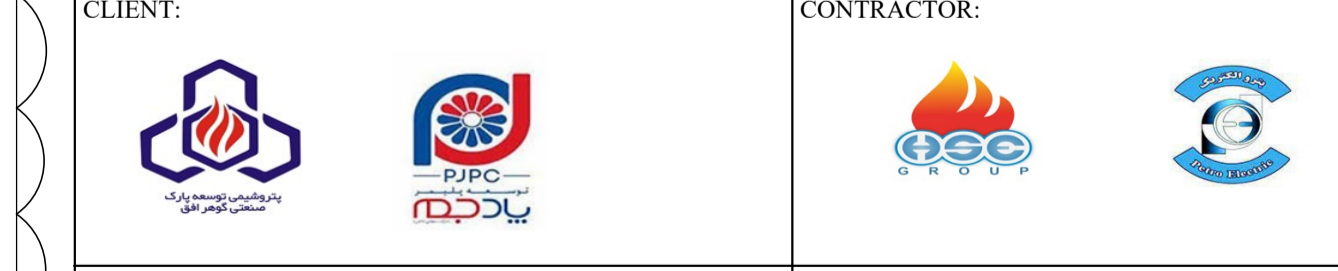
* FOR MORE DETAILS FOR EACH COMPONENT OF AIR COOLER REFER TO BELOW DRAWING & DOCUMENTS.

REFERENCED DWG&DOC.

TITLE	VENDOR DOCUMENT NO.	CLIENT DOCUMENT NO.
General Arrangement Drawing	1158-A01-1000-00	EI027-DMF-VD-ME-DWG-003
Fan Drive Assembly Drawing	1158-A01-6000-00	EI027-DMF-VD-ME-DWG-008
Fan Ring Drawing	1158-A01-5067-00	EI027-DMF-VD-ME-DWG-009
Steel Structure Drawing	1158-A01-1100-00	EI027-DMF-VD-ST-DWG-013
Surface Blasting & Painting & Galvanizing Specification and InspectionProcedure	1158-000-QS01-00	EI027-DMF-VD-QC-PRO-024



REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	APPROVED BY	FINAL APPROVED BY
R1	08/31/2024	ISSUED FOR APPROVAL	F.SZ	F.A.	J.B.L	A.GHZ
R0	08/14/2024	ISSUED FOR APPROVAL	F.SZ	F.A.	J.B.L	A.GHZ

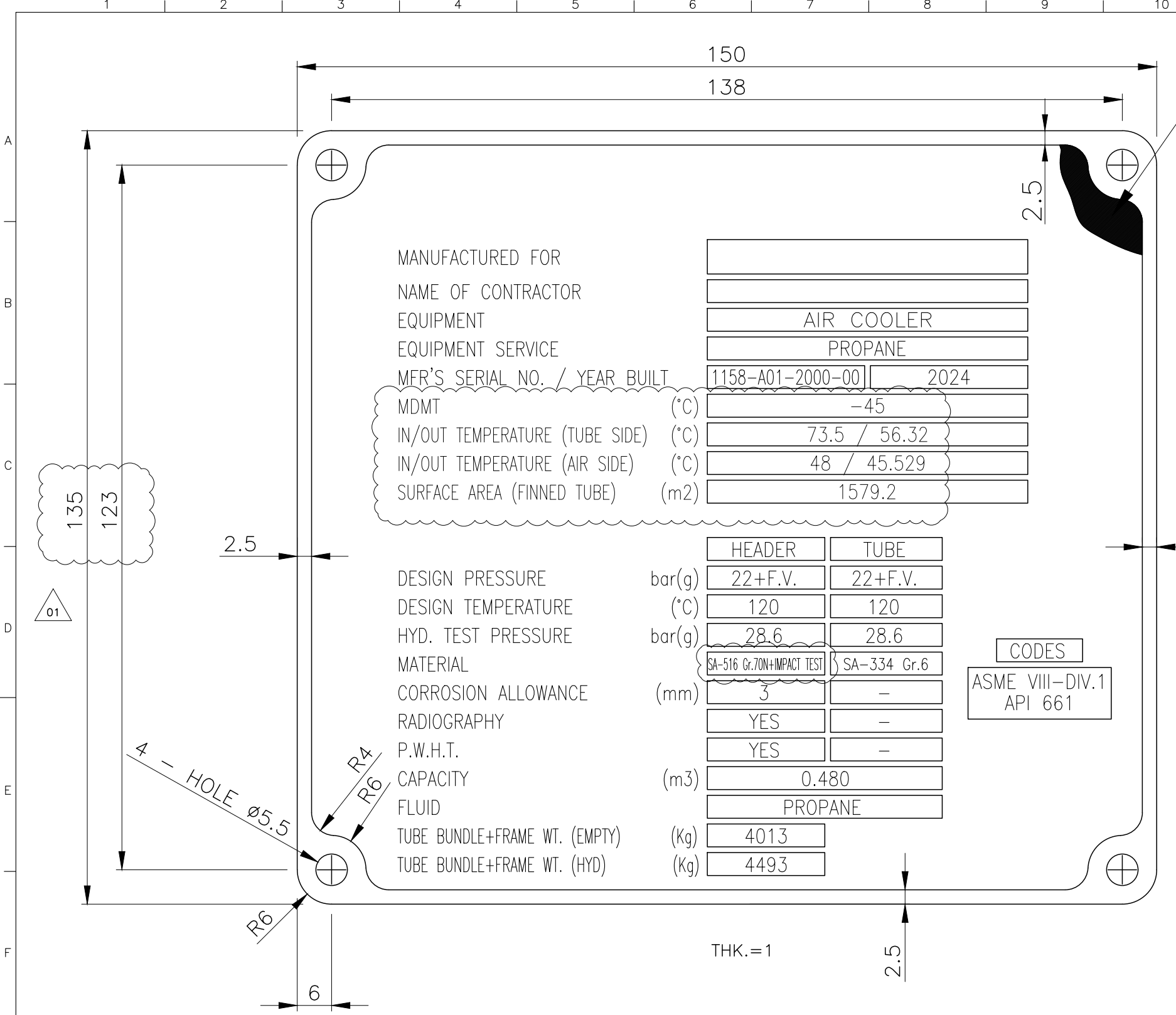


PROJECT:
AIR COOLER FOR
Toase-che Park Sanati Gohar Ofogh Petrochemical Co.

Plenum Drawing
1158-A01-5110-00

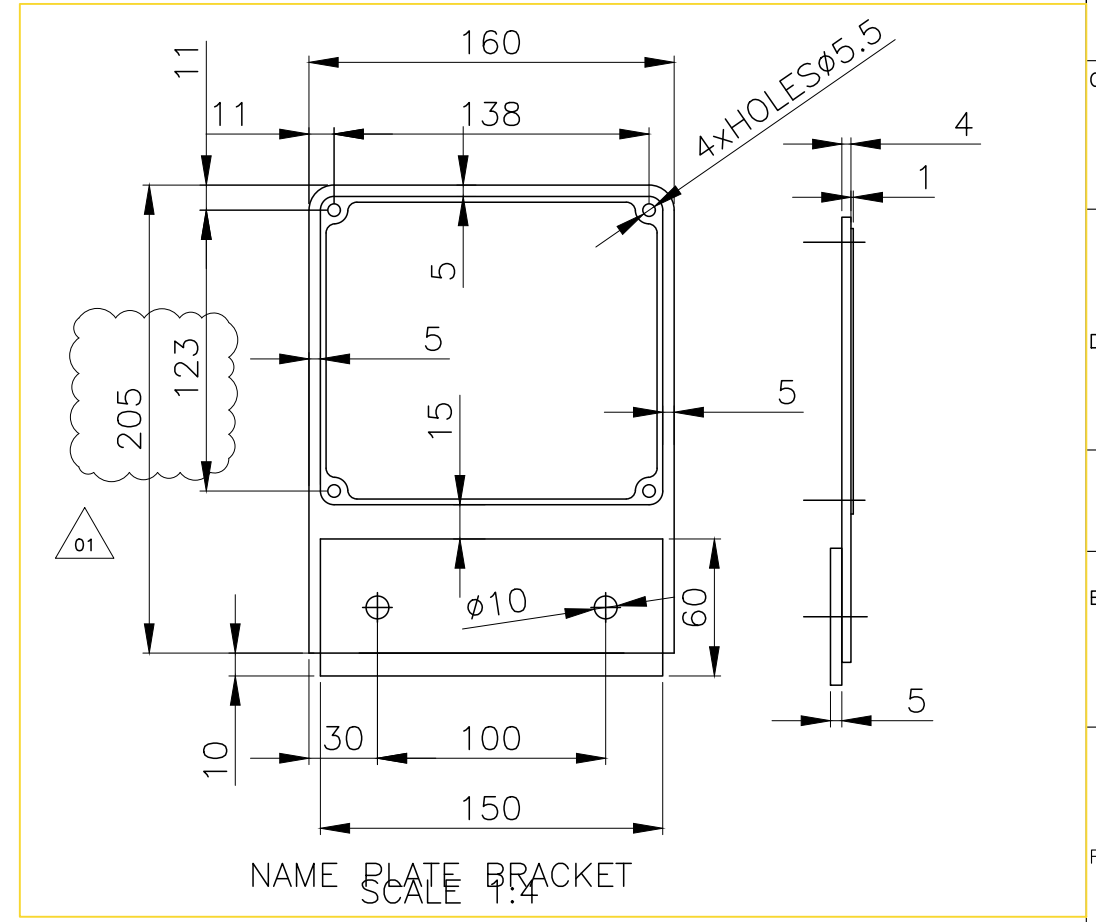
DWG. NO. EI027-DMF-VD-ME-DWG-011
SCALE: N.T.S. SIZE: A1 REV.: R1

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PART NO.	DESCRIPTION	DIMENSIONS				MATERIAL	QTY.	UNIT WEIGHT (Kg)	TOTAL WEIGHT (Kg)
		DIA. (mm)	LENGTH (mm)	WIDTH (mm)	THK. (mm)				
2020-01	NAME PLATE	-	150	135	1	S.S.304	2	0.16	0.3
2020-03	NAME PLATE BRACKET	-	160	205	4	C.S	2	1.03	2.1
2020-04	RIVET FOR NAME PLATE	5	11	-	-	AL-S.S	8	-	-
2020-06	BOLT	-	M8	22	-	DIN-933-CL.8.8(GALV.)	4	-	-
2020-07	NUT	-	M8	-	-	DIN-934-CL.8(GALV.)	4	-	-
2020-08	WASHER	-	A9	-	-	DIN-128A-ST(GALV.)	8	-	-

NOTE
 1-ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.
 2-ALL LETTERS , BLOCKS , AS WELL AS EDGES , SHALL HAVE RAISED POLISHED FACE - RELIEF 0.5mm APPROX.
 3-BLACK BACKGROUND



REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	APPROVED BY	FINAL APPROVED BY
R1	10/15/2024	ISSUED FOR APPROVAL	SH.S	J.B.L	J.B.L	A.GHZ
R0	10/07/2024	ISSUED FOR APPROVAL	F.SZ	F.A	J.B.L	A.GHZ

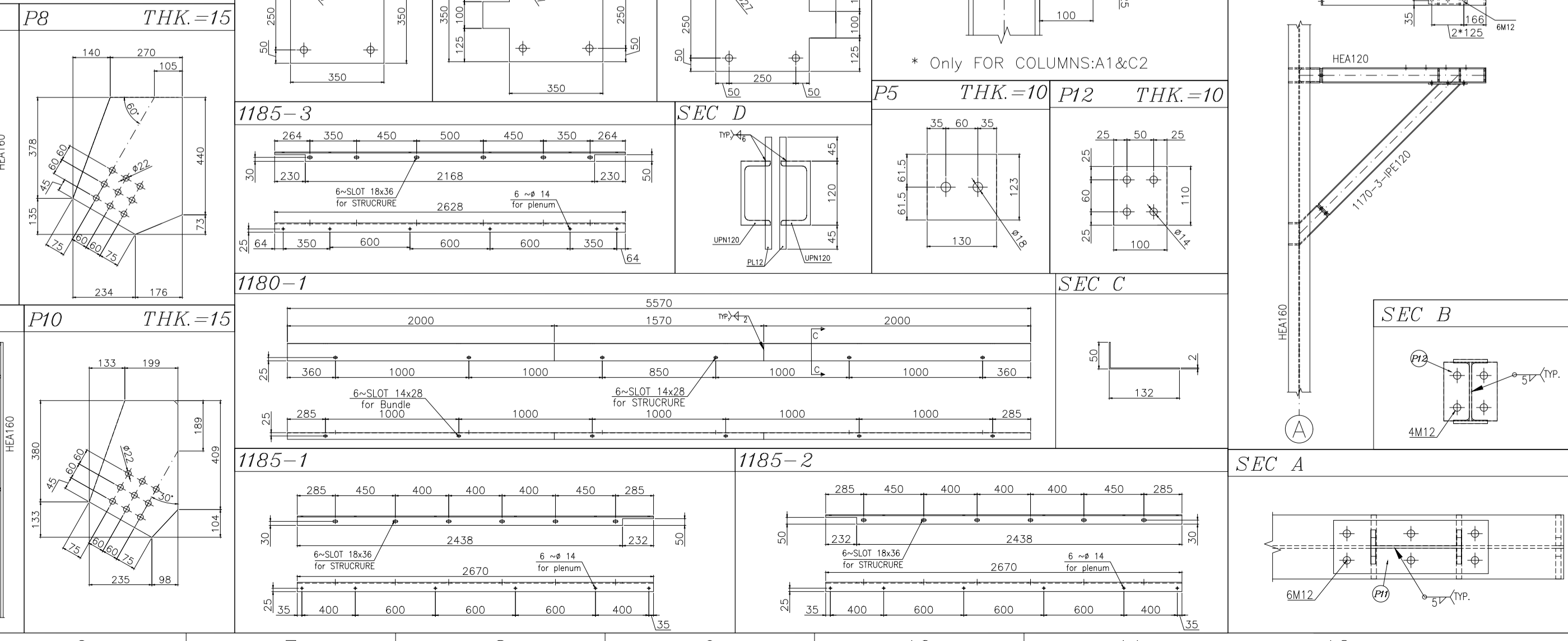
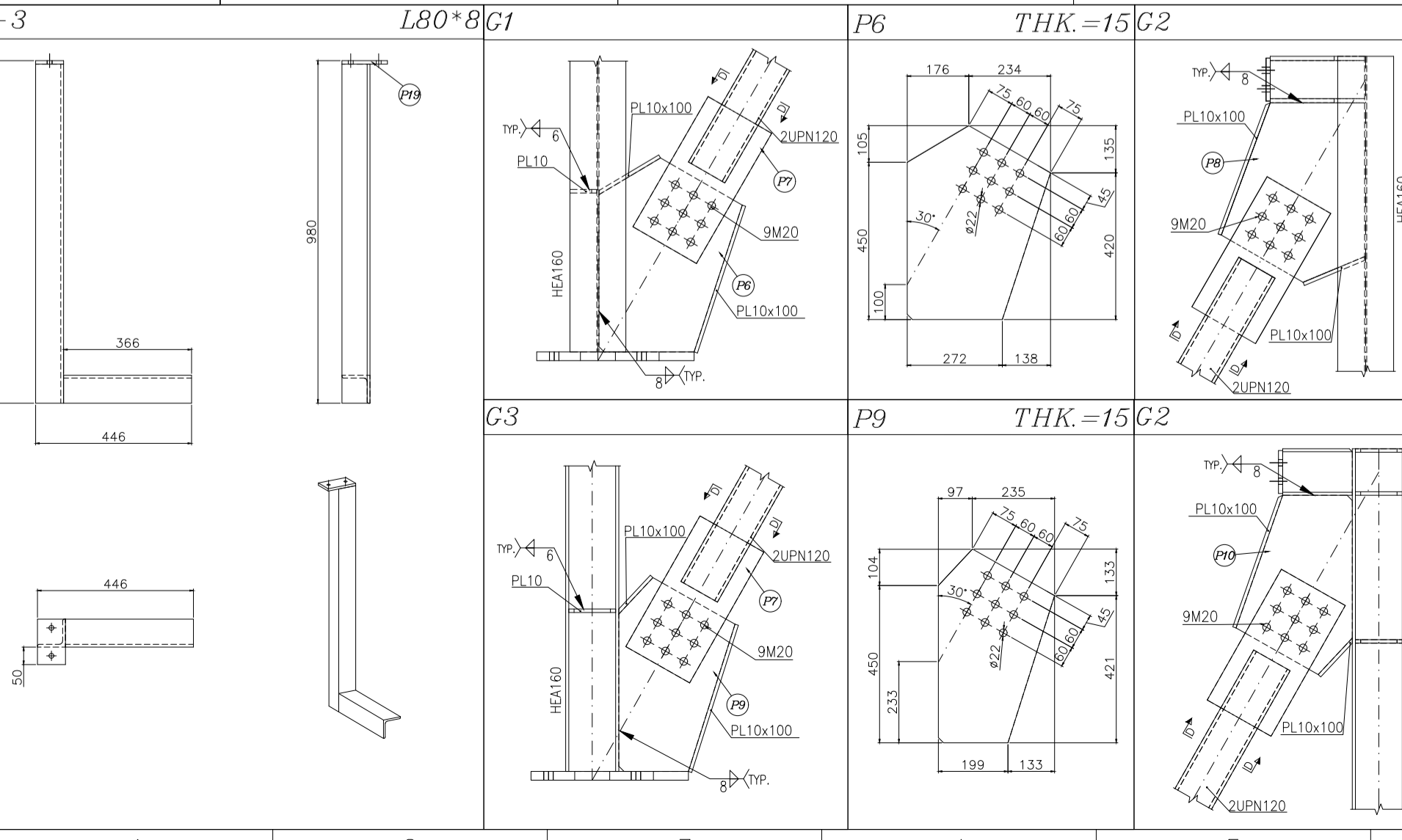
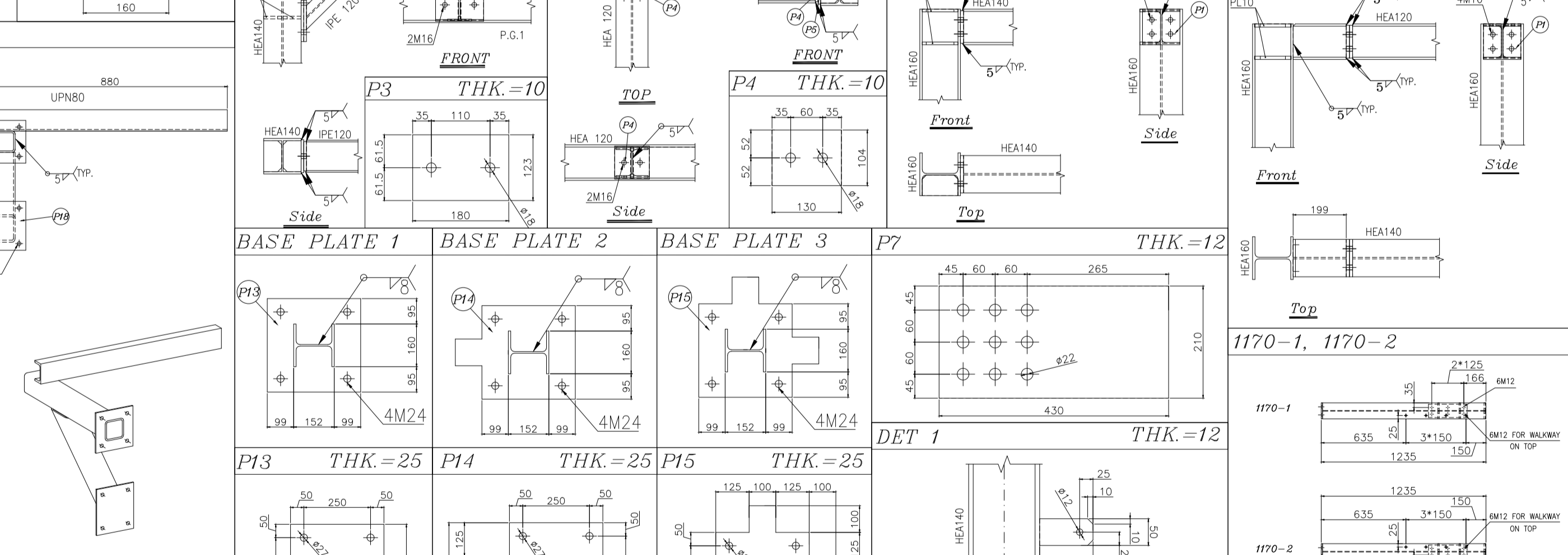
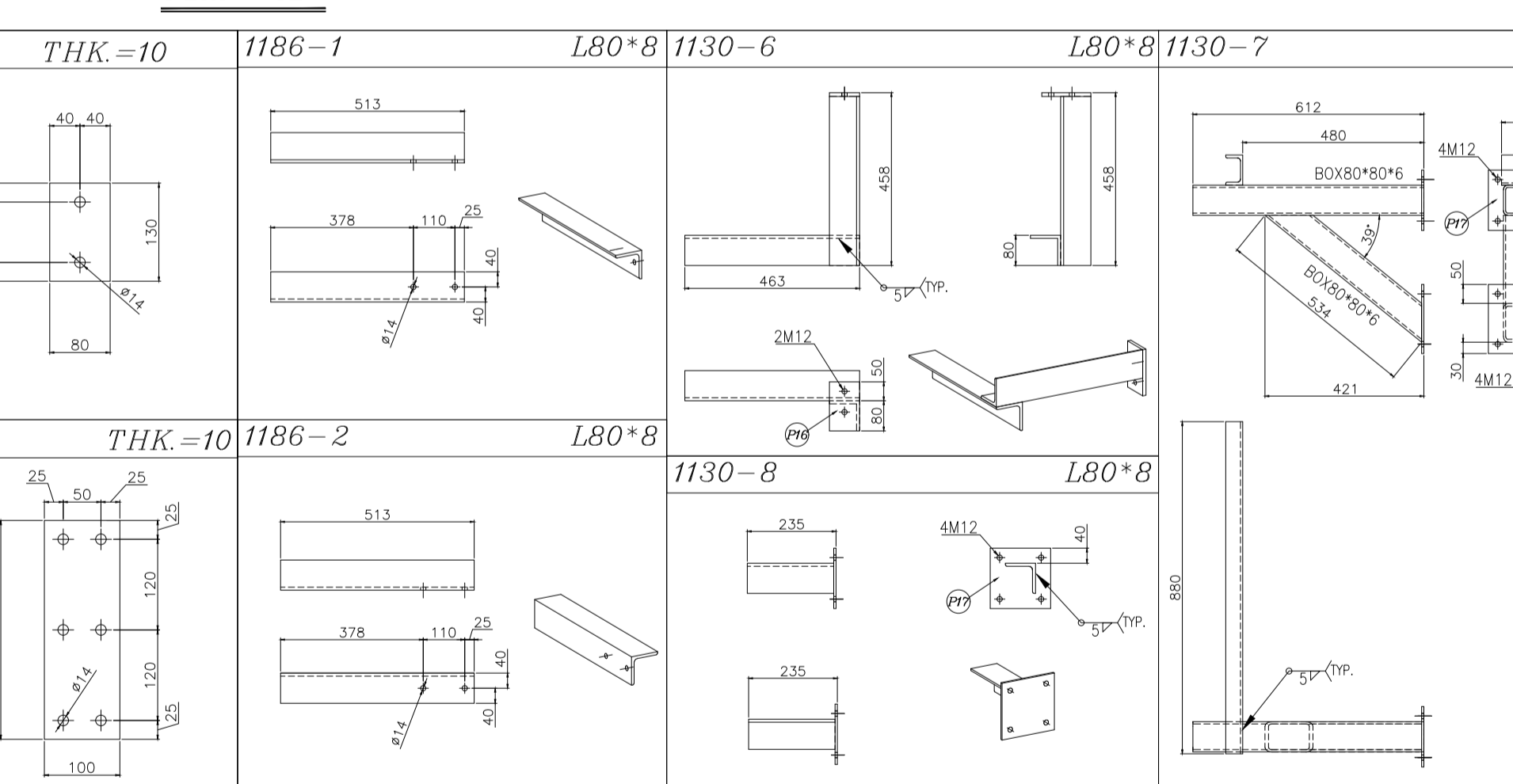
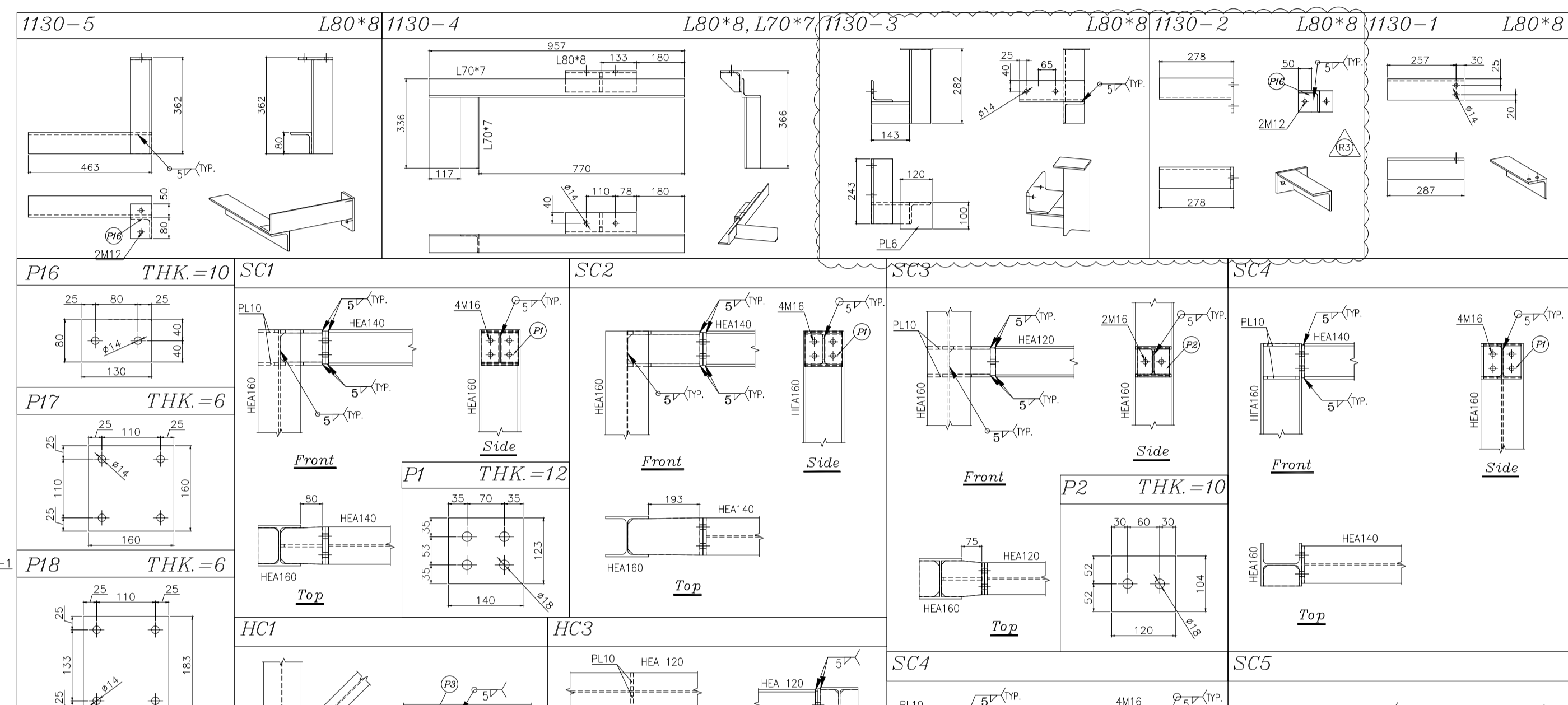
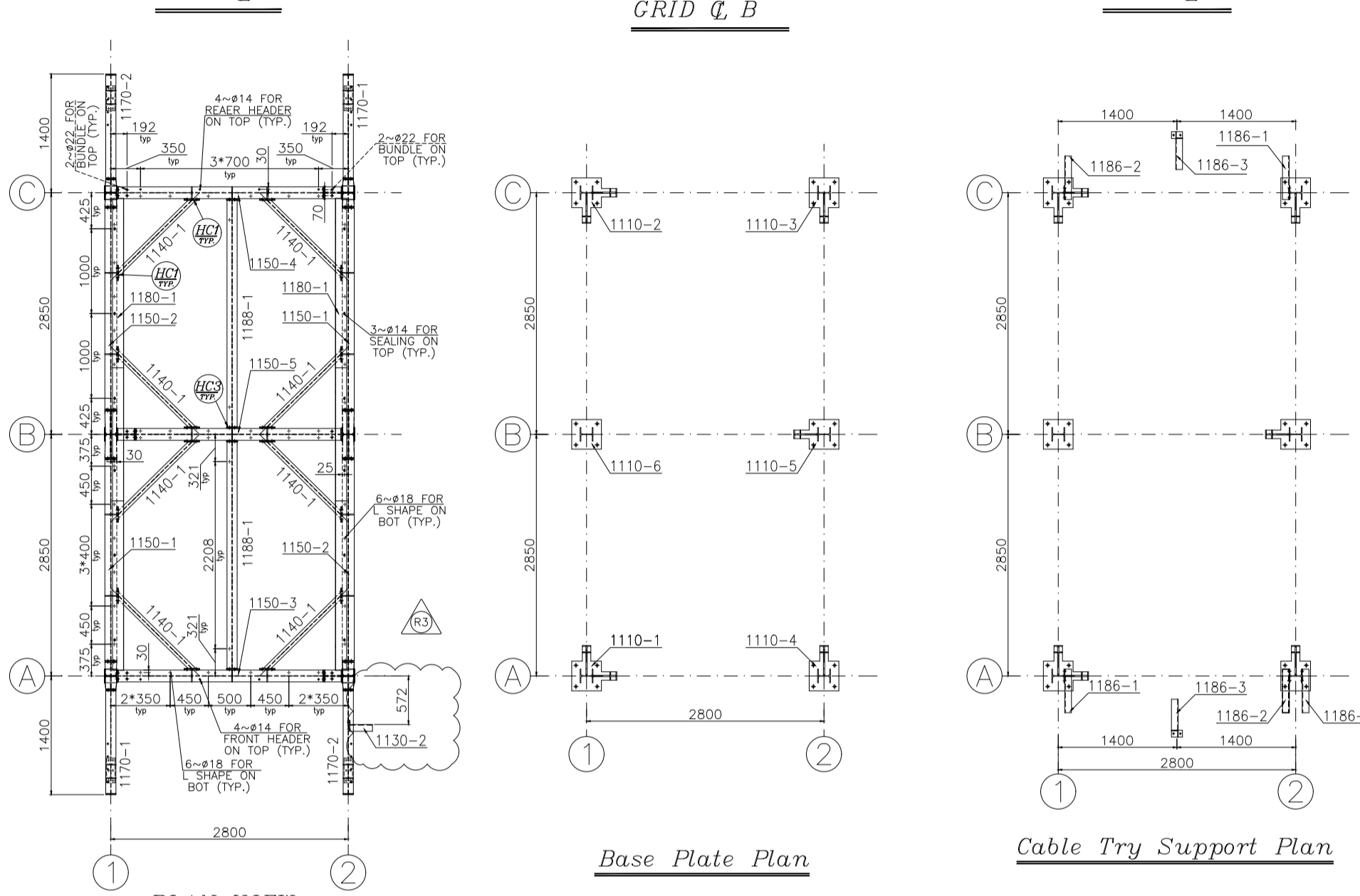
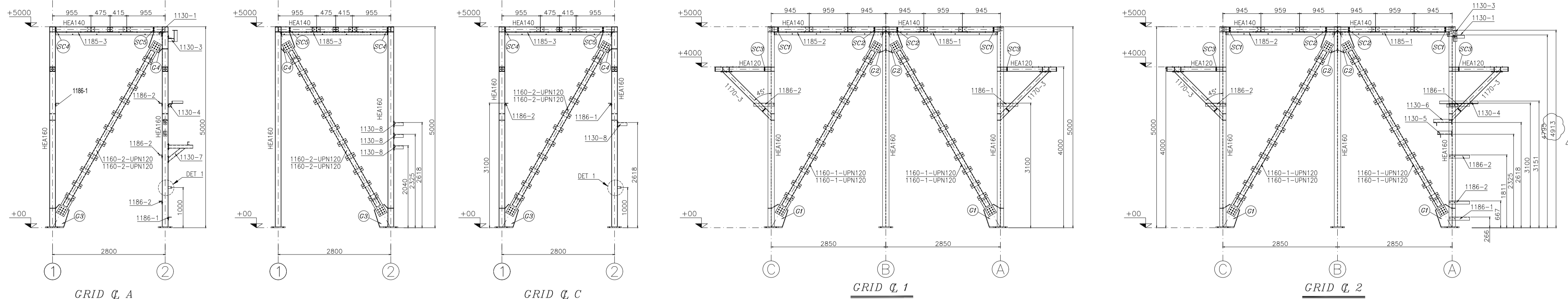
CLIENT: [Logos]

CONTRACTOR: [Logos]

PROJECT: AIR COOLER FOR
 Toase-eh Park Sanati Gohar Ofogh Petrochemical Co.
 Name Plate Drawing
 1158-A01-2403-00

DWG. NO. EI027-DMF-VD-ME-DWG-012
 SCALE: N.T.S. SIZE: A3 REV: R1

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TOTAL UNIT'S - 2

PART NO.	DESCRIPTION	PROFILE	HEA (mm)	HEA (mm)	HEA (mm)	HEA (mm)	HEA (mm)	HEA (mm)	HEA (mm)	HEA (mm)	MATERIAL	QTY.	UNIT WEIGHT (kg)	TOTAL WEIGHT (kg)	REV.
1110.1	COLUMN ASS.	HEA400	400	400	400	400	400	400	400	400	ST.PAINTED	1	247.3	247.3	
1110.2	COLUMN ASS.	HEA400	400	400	400	400	400	400	400	400	ST.PAINTED	1	246.8	246.8	
1110.3	COLUMN ASS.	HEA400	400	400	400	400	400	400	400	400	ST.PAINTED	1	251.8	251.8	
1110.4	COLUMN ASS.	HEA400	400	400	400	400	400	400	400	400	ST.PAINTED	1	249.8	249.8	
1110.5	COLUMN ASS.	HEA400	400	400	400	400	400	400	400	400	ST.PAINTED	1	271.4	271.4	
1110.6	COLUMN ASS.	HEA400	400	400	400	400	400	400	400	400	ST.PAINTED	1	209.6	209.6	
1110.7	PIPE SUPPORT ASS.	L80*8	257	257	257	257	257	257	257	257	ST.PAINTED	1	2.8	2.8	
1110.8	PIPE SUPPORT ASS.	L80*8	278	278	278	278	278	278	278	278	ST.PAINTED	1	3.4	3.4	
1110.9	PIPE SUPPORT ASS.	L80*8	282	282	282	282	282	282	282	282	ST.PAINTED	1	6.9	6.9	
1110.10	PIPE SUPPORT ASS.	L80*8	297	297	297	297	297	297	297	297	ST.PAINTED	1	11.9	11.9	
1110.11	PIPE SUPPORT ASS.	L80*8	305	305	305	305	305	305	305	305	ST.PAINTED	1	8.7	8.7	
1110.12	PIPE SUPPORT ASS.	L80*8	445	445	445	445	445	445	445	445	ST.PAINTED	1	9.6	9.6	
1110.13	PIPE SUPPORT ASS.	BOX80*80*6	80	80	80	80	80	80	80	80	ST.PAINTED	1	25.2	25.2	
1110.14	PIPE SUPPORT ASS.	L80*8	235	235	235	235	235	235	235	235	ST.PAINTED	4	3.4	13.6	
1110.15	HORIZONTAL BRACING ASS.	HEA120	120	120	120	120	120	120	120	120	ST.PAINTED	8	16.4	131.2	
1110.16	BEAM ASS.	HEA400	203	203	203	203	203	203	203	203	ST.PAINTED	2	47.5	95	
1110.17	BEAM ASS.	HEA400	203	203	203	203	203	203	203	203	ST.PAINTED	2	47.5	95	
1110.18	BEAM ASS.	HEA400	247	247	247	247	247	247	247	247	ST.PAINTED	1	71.1	71.1	
1110.19	BEAM ASS.	HEA400	247	247	247	247	247	247	247	247	ST.PAINTED	1	75.8	75.8	
1110.20	BEAM ASS.	HEA400	247	247	247	247	247	247	247	247	ST.PAINTED	1	71.1	71.1	
1110.21	BRACING ASS.	UPN120	120	120	120	120	120	120	120	120	ST.PAINTED	8	97.2	777.6	
1110.22	BRACING ASS.	UPN120	120	120	120	120	120	120	120	120	ST.PAINTED	6	96.9	581.4	
1110.23	WALKWAY SUPPORT ASS.	HEA120	125	125	125	125	125	125	125	125	ST.PAINTED	2	27.9	55.8	
1110.24	WALKWAY SUPPORT ASS.	HEA120	125	125	125	125	125	125	125	125	ST.PAINTED	2	27.9	55.8	
1110.25	WALKWAY SUPPORT ASS.	HEA120	149	149	149	149	149	149	149	149	ST.PAINTED	4	17.5	70	
1110.26	SEALING ASS.	PLATE	870	182	2	2	2	2	2	2	ST.PAINTED	2	15.7	31.4	
1110.27	L-SHAPE PLENUM	L70*7	2670	70	70	70	70	70	70	70	ST.PAINTED	4	19.7	78.8	
1110.28	L-SHAPE PLENUM	L70*7	2670	70	70	70	70	70	70	70	ST.PAINTED	2	18.7	37.4	
1110.29	L-SHAPE PLENUM	L70*7	2628	70	70	70	70	70	70	70	ST.PAINTED	4	19.4	77.6	
1110.30	CABLE TRY SUPPORT ASS.	L80*8	513	513	513	513	513	513	513	513	ST.PAINTED	3	5	15	
1110.31	CABLE TRY SUPPORT ASS.	L80*8	513	513	513	513	513	513	513	513	ST.PAINTED	4	5	20	
1110.32	CABLE TRY SUPPORT ASS.	L80*8	500	500	500	500	500	500	500	500	ST.PAINTED	2	13.7	27.4	
1110.33	TRUSS BEAM ASS.	HEA120	209	209	209	209	209	209	209	209	ST.PAINTED	2	55.2	110.4	

TOTAL MATERIAL LIST OF BOLTS & NUTS & WASHERS FOR UNIT

PART NO.	DESCRIPTION	PROFILE	HEA (mm)	HEA (mm)	HEA (mm)	HEA (mm)	HEA (mm)	HEA (mm)	HEA (mm)	HEA (mm)	MATERIAL	QTY.	UNIT WEIGHT (kg)	TOTAL WEIGHT (kg)	REV.
1190.1	BEAM ASS.	M16	16	16	16	16	16	16	16	16	BN 534.8 (DACROMET)	56	0.18	10.08	
1190.2	BEAM ASS.	M16	16	16	16	16	16	16	16	16	BN 125A.5 (DACROMET)	112	0.12	13.44	
1190.3	BEAM ASS.	M16	16	16	16	16	16	16	16	16	BN 535.8.8 (DACROMET)	126	0.12	15.12	
1190.4	BEAM ASS.	M16	16	16	16	16	16	16	16	16	BN 535.8.8 (DACROMET)	126	0.12	15.12	
1190.5	BEAM ASS.	M16	16	16	16	16	16	16	16	16	BN 535.8.8 (DACROMET)	126	0.12	15.12	
1190.6	BEAM ASS.	M16	16	16	16	16	16	16	16	16	BN 125A.5 (DACROMET)	252	0.12	30.24	
1190.7	BEAM ASS.	M16	16	16	16	16	16	16	16	16	BN 534.8 (DACROMET)	154	0.18	27.72	
1190.8	BEAM ASS.	M16	16	16	16	16	16	16	16	16	BN 534.8 (DACROMET)	154	0.18	27.72	
1190.9	BEAM ASS.	M16	16	16	16	16	16	16	16	16	BN 125A.5 (DACROMET)	308	0.12	36.96	
1190.10	BEAM ASS.	M16	16	16	16	16	16	16	16	16	BN 534.8 (DACROMET)	32	0.18	5.76	
1190.11	BEAM ASS.	M16	16	16	16	16	16	16	16	16	BN 125A.5 (DACROMET)	64	0.12	7.68	
1190.12	BEAM ASS.	M16	16	16	16	16	16	16	16	16	BN 534.8 (DACROMET)	8	0.18	1.44	
1190.13	BEAM ASS.	M16	16	16	16	16	16	16	16	16	BN 534.8 (DACROMET)	8	0.18	1.44	
1190.14	BEAM ASS.	M16	16	16	16	16	16	16	16	16	BN 125A.5 (DACROMET)	16	0.12	1.92	
1190.15	BEAM ASS.	M16	16	16	16	16	16	16	16	16	BN 534.8 (DACROMET)	40	0.18	7.2	
1190.16	BEAM ASS.	M12	12	12	12	12	12	12	12	12	BN 534.8 (DACROMET)	16	0.1	1.6	
1190.17	BEAM ASS.	M12	12	12	12	12	12	12	12	12	BN 534.8 (DACROMET)	40	0.1	4	
1190.18	BEAM ASS.	M12	12	12	12	12	12	12	12	12	BN 125A.5 (DACROMET)	80	0.1	8	
1190.19	BEAM ASS.	M12	12	12	12	12	12	12	12	12	BN 534.8 (DACROMET)	8	0.1	0.8	
1190.20	BEAM ASS.	M16	16	16	16	16	16	16	16	16	BN 534.8 (DACROMET)	8	0.18	1.44	
1190.21	BEAM ASS.	M12	12	12	12	12	12	12	12	12	BN 125A.5 (DACROMET)	16	0.1	1.6	
1190.22	BEAM ASS.	M12	12	12	12	12	12	12	12	12	BN 534.8 (DACROMET)	36	0.1	3.6	
1190.23	BEAM ASS.	M12	12	12	12	12	12	12	12	12	BN 534.8 (DACROMET)	36	0.1	3.6	
1190.24	BEAM ASS.	M12	12	12	12	12	12	12	12	12	BN 125A.5 (DACROMET)	72	0.1	7.2	
1190.25	BEAM ASS.	M12	12	12	12	12	12	12	12	12	BN 534.8 (DACROMET)	18	0.1	1.8	
1190.26	BEAM ASS.	M12	12	12	12	12	12	12	12	12	BN 534.8 (DACROMET)	18	0.1	1.8	
1190.27	BEAM ASS.	M12	12	12	12	12	12	12	12	12	BN 125A.5 (DACROMET)	36	0.1	3.6	
1190.28	BEAM ASS.	M16	16	16	16	16	16	16	16	16	BN 534.8 (DACROMET)	48	0.18	8.64	
1190.29	BEAM ASS.	M16	16	16	16	16	16	16	16	16	BN 534.8 (DACROMET)	48	0.18	8.64	
1190.30	BEAM ASS.	M12	12	12	12	12	12	12	12	12	BN 125A.5 (DACROMET)	96	0.1	9.6	
1190.31	BEAM ASS.	M12	12	12	12	12	12	12	12	12	BN 534.8 (DACROMET)	12	0.1	1.2	
1190.32	BEAM ASS.	M12	12	12	12	12	12	12	12	12	BN 534.8 (DACROMET)	12	0.1	1.2	
1190.33	BEAM ASS.	M12	12	12	12	12	12	12	12	12	BN 125A.5 (DACROMET)	24	0.1	2.4	

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETER.
- ALL PARTS SHALL PAINTED ACCORDING TO EI027-DMF-VQ-PRO-024
- BOLTS & NUTS & WASHERS SHALL BE DACROMET IN ACCORDANCE WITH ASTM - A153 OR EN ISO 1461
- WELD: CONTINUOUS WELD.
MIN. HEIGHT OF FILLET WELD = 0.7 x MIN. THK.
< MAX. THK. , IF MAX. THK. < 7mm
< MAX. THK. -1.5 , IF MAX. THK. > 7mm

TOLERANCES			
THE FOLLOWING VALUES ARE APPLICABLE TO THE DIMENSIONS THAT ARE NOT PROVIDED WITH TOLERANCES ON DRAWING			
NOMINAL DIMENSIONS	0	201	801
PER MILLIMETER STEPS	200	800	2000
TOLERANCES	± 0.2	± 0.3	± 0.5
	± 0.5	± 0.6	± 0.7
TOLERANCE ON CENTER DISTANCES ± 1.5			
THE TOLERANCES SHOWN HERE ARE NOT CUMULATIVE			

General Arrangement Drawing	1158-A01-1000-00	EI027-DMF-VQ-DMG-003
Bundle Frame Drawing	1158-A01-2400-00	EI027-DMF-VQ-DMG-007
Plenum Drawing	1158-A01-5110-00	EI027-DMF-VQ-DMG-011
Header Walkway Drawing	1158-A01-1200-00	EI027-DMF-VQ-ST-DWG-014
Ladder Drawing	1158-A01-1520-00	EI027-DMF-VQ-ST-DWG-015

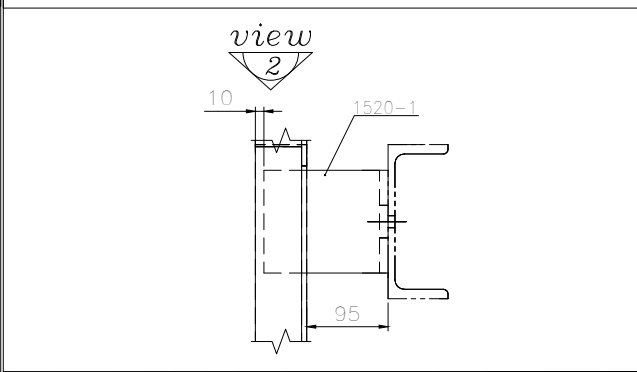
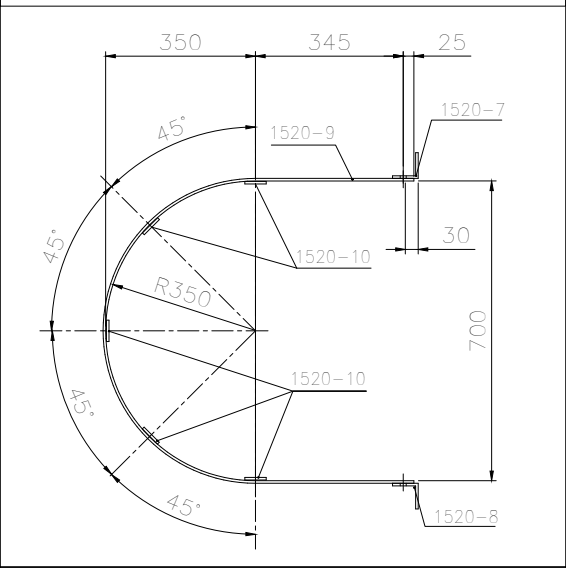
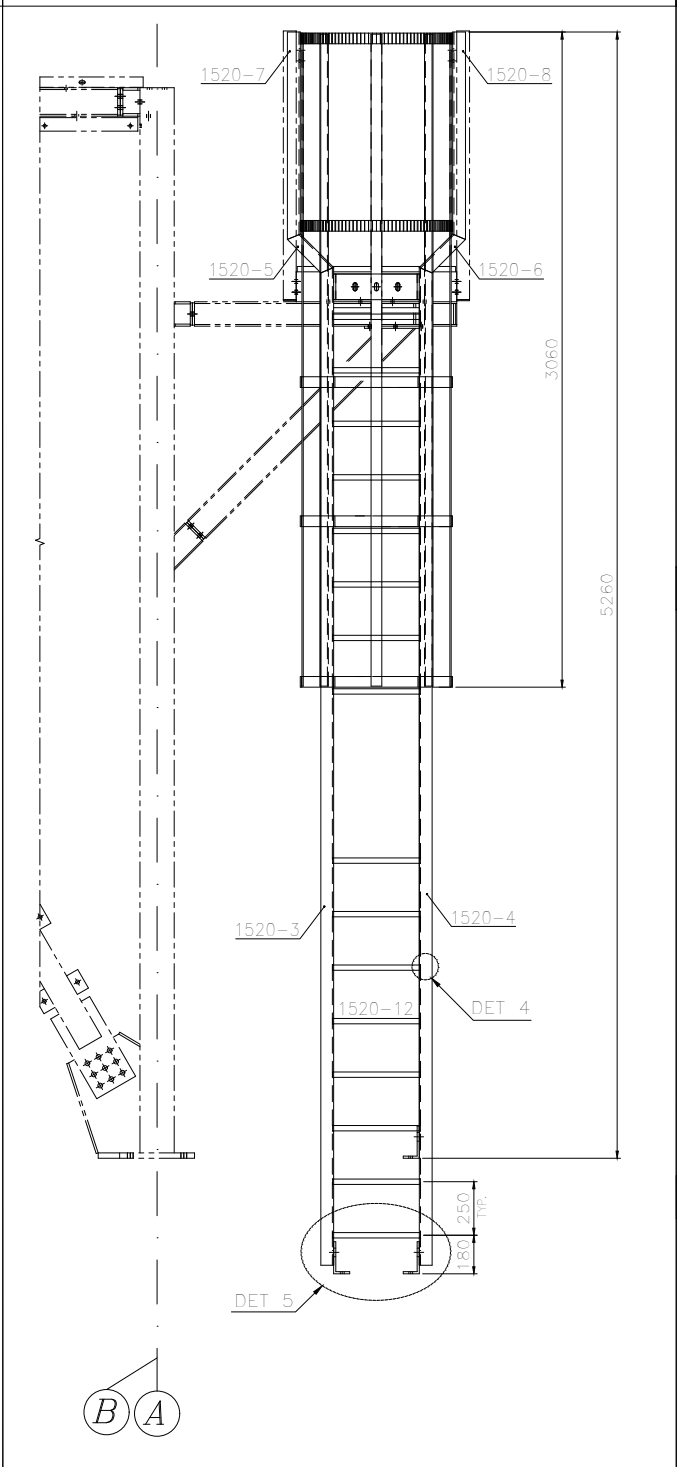
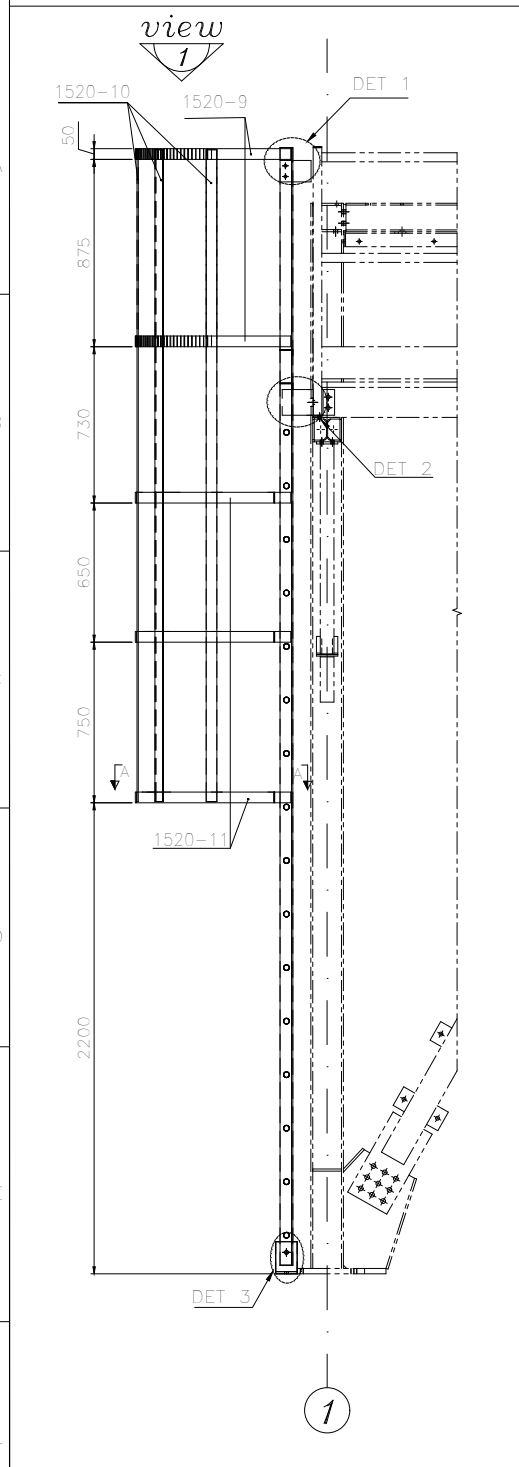
R3	12/30/2024	ISSUED FOR APPROVAL	J.M.	J.B.L	J.B.L	AGHZ
R2	12/28/2024	ISSUED FOR APPROVAL	J.M.	J.B.L	J.B.L	AGHZ
RI	11/13/2024	ISSUED FOR APPROVAL	J.M.	J.B.L	J.B.L	AGHZ
R0	09/01/2024	ISSUED FOR APPROVAL	J.M.	J.B.L	J.B.L	AGHZ
REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	APPROVED BY	FINAL APPROVED BY

FRONT VIEW

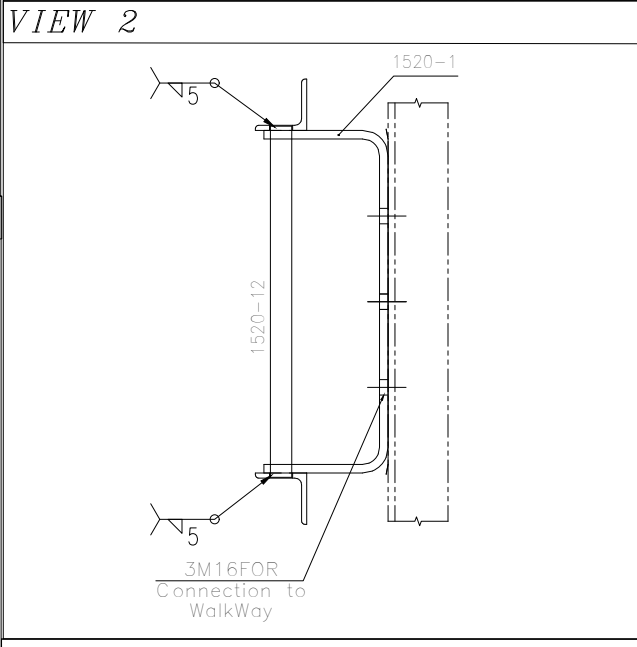
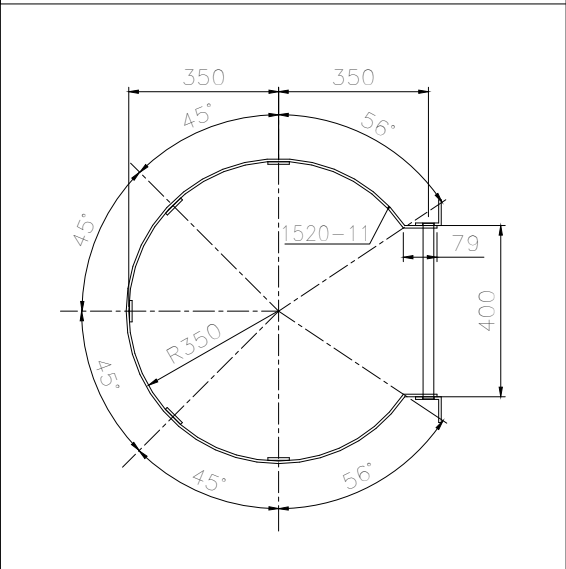
SIDE VIEW

VIEW 1

DET 2

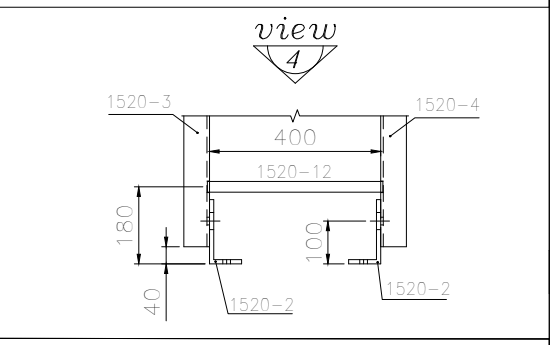
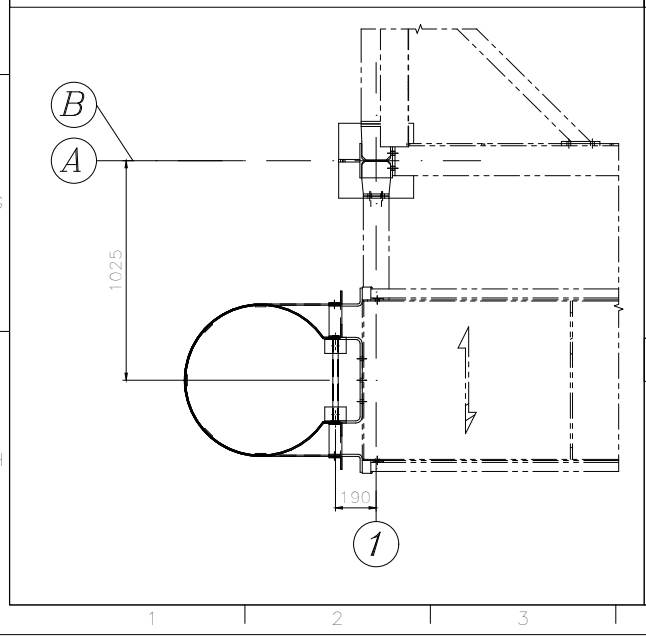


SEC A

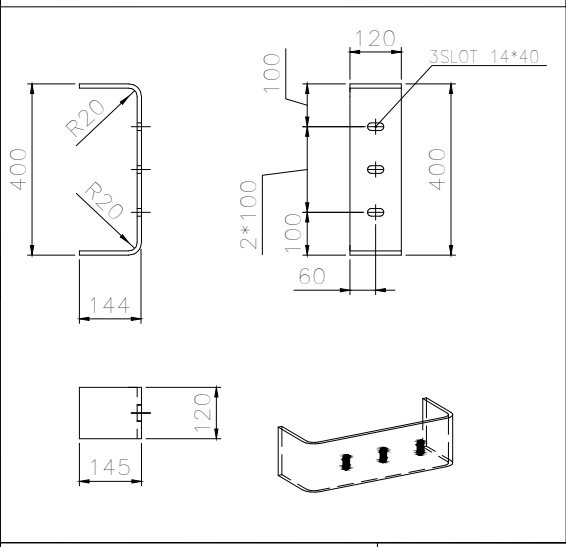


TOP VIEW

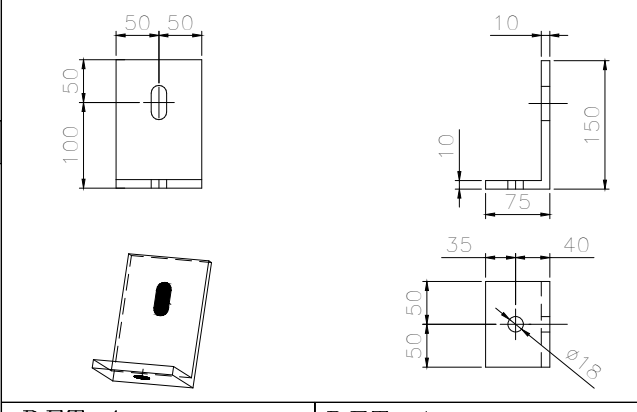
DET 5



1520-1 THK.=10

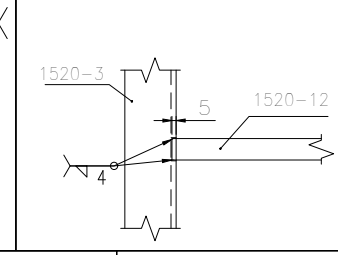
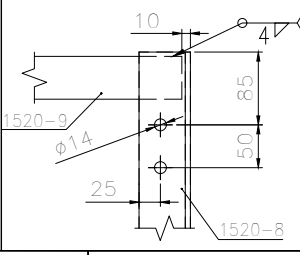


1520-2 THK.=10



DET 1

DET 4

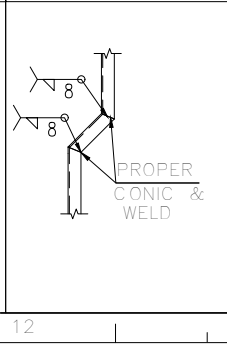
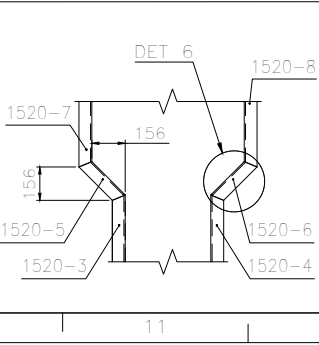
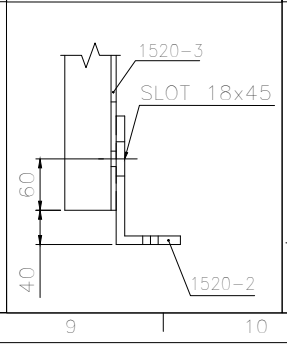
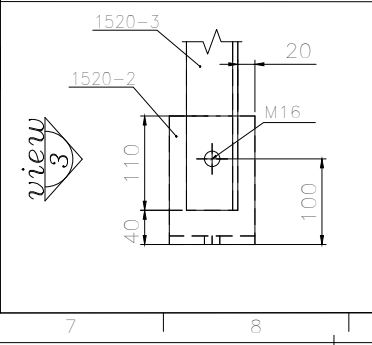


DET 3

VIEW 3

VIEW OF STRINGER

DET 6



total ladder : 4
PART LIST For 1 ladder

PART NO	DESCRIPTION	PROFILE	DIMENTION				MATERIAL	QTY.	UNIT WEIGHT (kg)	TOTAL WEIGHT (kg)	REV.
			DIA (mm)	LENGT H (mm)	WIDTH (mm)	THK (mm)					
1520-1	CONCTION TO WALKWAY	PLATE	633	120	10	ST-37(Painted)	1	6.1	6.1		
1520-2	EARTH SUPPORT	PLATE	215	100	10	ST-37(Painted)	2	1.7	3.4		
1520-3	STRINGER	PLATE	4120	-	-	ST-37(Painted)	1	22.3	22.3		
1520-4	STRINGER	PLATE	4120	-	-	ST-37(Painted)	1	22.3	22.3		
1520-5	STRINGER	PLATE	245	-	-	ST-37(Painted)	1	1.3	1.3		
1520-6	STRINGER	PLATE	245	-	-	ST-37(Painted)	1	1.3	1.3		
1520-7	STRINGER	PLATE	969	-	-	ST-37(Painted)	1	5.3	5.3		
1520-8	STRINGER	PLATE	969	-	-	ST-37(Painted)	1	5.3	5.3		
1520-9	TOP HOOP	PLATE	1849	50	6	ST-37(Painted)	2	4.4	8.8		
1520-10	VERTICAL BAR	PLATE	3045	50	6	ST-37(Painted)	5	7.2	36		
1520-11	BOT HOOP	PLATE	1939	50	6	ST-37(Painted)	3	4.6	13.8		
1520-12	RUNG	ROD25	25	410	-	ST-37(Painted)	16	1.5	24		
Total weight(kg)									149.9		

LIST of bolts & nuts washer For 1 ladder

DESCRIPTION	PROFILE	DIMENTION				MATERIAL	QTY.	UNIT WEIGHT (kg)	TOTAL WEIGHT (kg)	REV.
		DIA (mm)	LENGT H (mm)	WIDTH (mm)	THK (mm)					
1590-1	-	M12	40	-	-	DIN 934-8 (Chromet)	4	-	-	
1590-2	for HANDRAIL CONNECTION	M12	-	-	-	DIN 934-8 (Chromet)	4	-	-	
1590-3	-	A13	-	-	-	DIN 125 A5T (Chromet)	8	-	-	
1590-4	-	M16	45	-	-	DIN 934-8 (Chromet)	3	-	-	
1590-5	for WALKWAY FRAME CONNECTION	M16	-	-	-	DIN 934-8 (Chromet)	3	-	-	
1590-6	-	A17	-	-	-	DIN 125 A5T (Chromet)	6	-	-	
1590-7	-	M16	45	-	-	DIN 934-8 (Chromet)	2	-	-	
1590-8	for CONNECTION to EARTH SUPPORT	M16	-	-	-	DIN 934-8 (Chromet)	2	-	-	
1590-9	-	A17	-	-	-	DIN 125 A5T (Chromet)	4	-	-	

NOTES:
 1- ALL DIMENSIONS ARE IN MILLIMETER.
 2- ALL PARTS SHALL PAINTED ACCORDING TO EIQ27-DMF-VD-QC-PRO-024
 3- BOLTS & NUTS & WASHERS SHALL BE DACROMENT IN ACCORDANCE WITH ASTM - A153 OR EN ISO 1461
 4- WELD: CONTINUOUS WELD.
 MIN. HEIGHT OF FILLET WELD = 0.7 x MIN. THK.
 < MAX. THK. < 7mm
 < MAX. THK. > 7mm

TOLERANCES
 THE FOLLOWING VALUES ARE APPLICABLE TO THE DIMENSIONS THAT ARE NOT PROVIDED WITH TOLERANCES ON DRAWING

NOMINAL DIMENSIONS PER MILLIMETER STEPS	0 200	201 800	801 2000	2001 5000	5000 & +
TOLERANCES	± 2	± 3	± 5	± 6	± 7

TOLERANCE ON CENTER DISTANCES
 THE TOLERANCES SHOWN HERE ARE NOT CUMULATIVE

General Arrangement Drawing	1158-A01-1000-00	EI027-DMF-VD-ME-DWG-003
Steel Structure Drawing	1158-A01-1100-00	EI027-DMF-VD-ST-DWG-013
Header Walkway Drawing	1158-A01-1210-00	EI027-DMF-VD-ST-DWG-014

RI	11/13/2024	ISSUED FOR APPROVAL	J.M.	J.R.L.	J.R.L.	AGHZ
RD	10/06/2024	ISSUED FOR APPROVAL	J.M.	J.R.L.	J.R.L.	AGHZ
REV	DATE	DESCRIPTION	DRAWN BY CHECKED BY APPROVED BY FINAL APPROVED BY			

CLIENT:

CONTRACTOR:

PROJECT:
 AIR COOLER FOR
 Toase-ehe Park Sanati Goh
 Ladder Drawin
 1158-A01-

DWG. NO.: EI027-
SCALE: NTS **SIZE:** A3 **REV.:** RI

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