




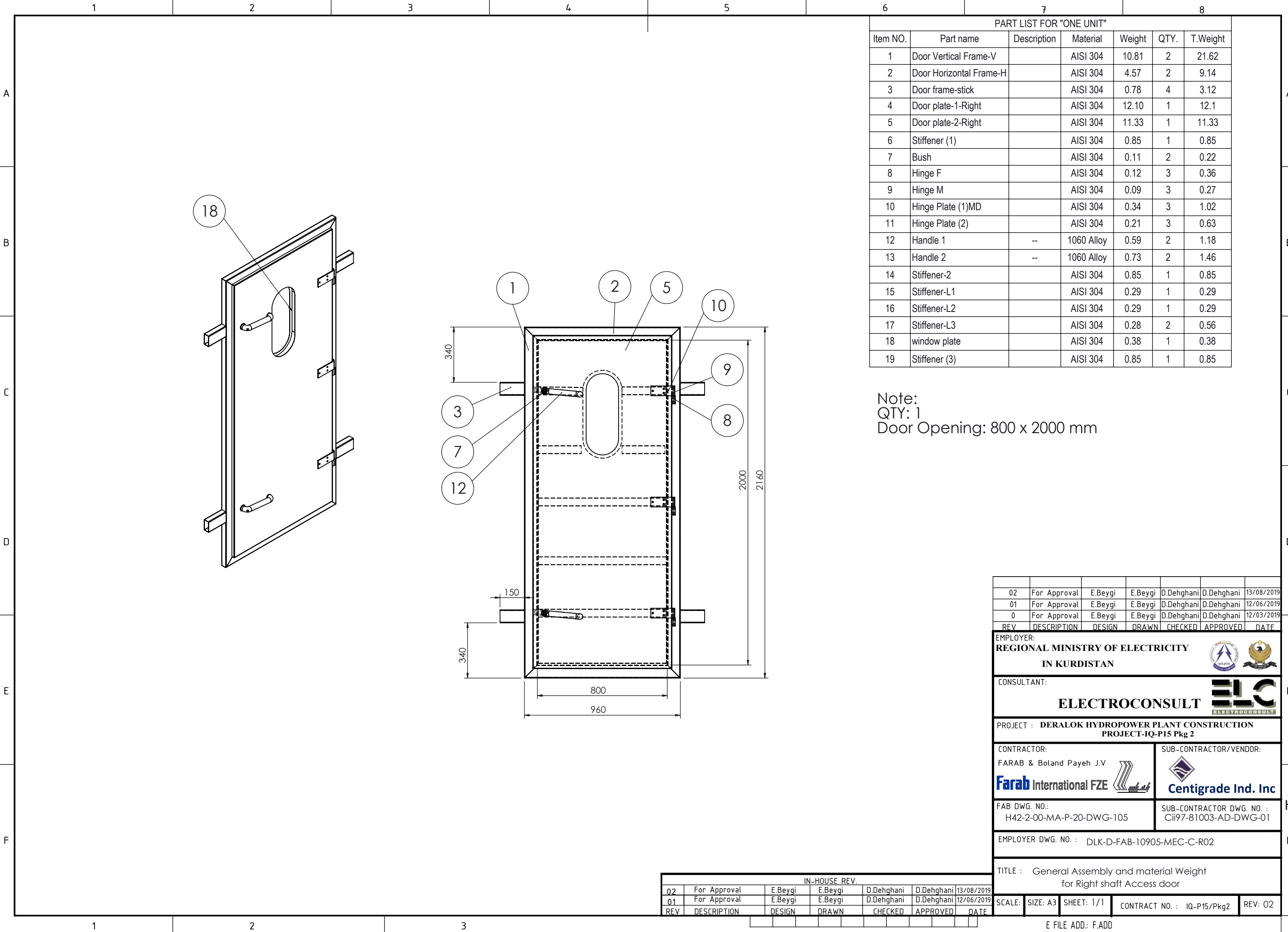


0	For Approval	E.Beygi	E.Beygi	D.Dehghani	D.Dehghani	26/12/2018
REV	DESCRIPTION	DESIGN	DRAWN	CHECKED	APPROVED	DATE
EMPLOYER:						
REGIONAL MINISTRY OF ELECTRICITY IN KURDISTAN						
CONSULTANT:						
ELECTROCONSULT						
PROJECT : DERALOK HYDROPOWER PLANT CONSTRUCTION PROJECT-IQ-P15 Pkg 2						
CONTRACTOR:				SUB-CONTRACTOR/VENDOR:		
FARAB & Boland Payeh J.V						
Farab International FZE 				 Centigrade Ind. Inc		
FAB DWG. NO.: H42-2-00-MA-P-20-DWG-104				SUB-CONTRACTOR DWG. NO. : Cii97-81003-NB-DWG-01		
EMPLOYER DWG. NO. : DLK-D-FAB-10904-MEC-C-R00						
TITLE : General Assembly and material Weight for Right Shaft Nozzle Bank						
SCALE:	SIZE: A3	SHEET: 1/1	CONTRACT NO. : IQ-P15/Pkg2			REV: 00

6





E FILE ADD.: F.ADD

IN-HOUSE REV.						
1						
0	For Approval	E.Beygi	E.Beygi	D.Dezhgani	D.Dezhgani	26/12/2018
REV	DESCRIPTION	DESIGN	DRAWN	CHECKED	APPROVED	DATE



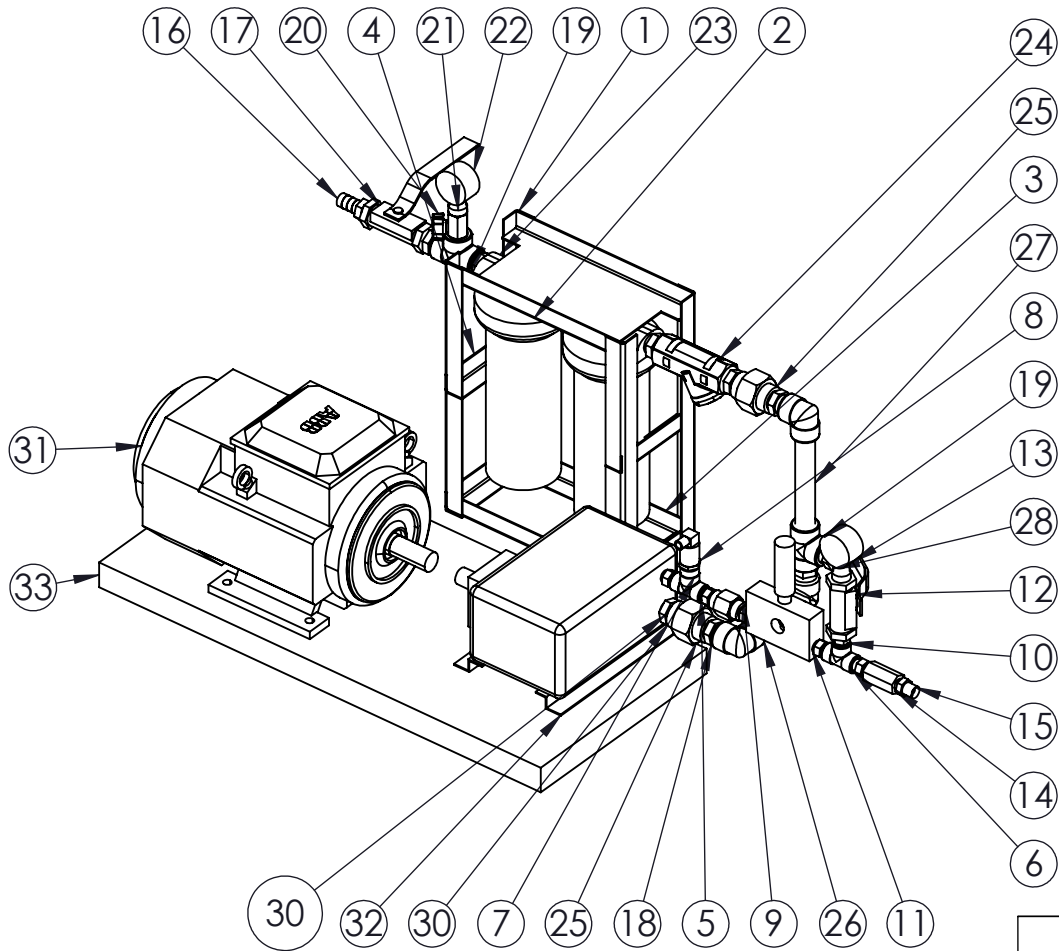
PART LIST FOR "ONE UNIT"						
Item NO.	Part name	Description	Material	Weight	QTY.	T.Weight
1	Door Vertical Frame-V		AISI 304	10.81	2	21.62
2	Door Horizontal Frame-H		AISI 304	4.57	2	9.14
3	Door frame-stick		AISI 304	0.78	4	3.12
4	Door plate-1-Right		AISI 304	12.10	1	12.1
5	Door plate-2-Right		AISI 304	11.33	1	11.33
6	Stiffener (1)		AISI 304	0.85	1	0.85
7	Bush		AISI 304	0.11	2	0.22
8	Hinge F		AISI 304	0.12	3	0.36
9	Hinge M		AISI 304	0.09	3	0.27
10	Hinge Plate (1)MD		AISI 304	0.34	3	1.02
11	Hinge Plate (2)		AISI 304	0.21	3	0.63
12	Handle 1	--	1060 Alloy	0.59	2	1.18
13	Handle 2	--	1060 Alloy	0.73	2	1.46
14	Stiffener-2		AISI 304	0.85	1	0.85
15	Stiffener-L1		AISI 304	0.29	1	0.29
16	Stiffener-L2		AISI 304	0.29	1	0.29
17	Stiffener-L3		AISI 304	0.28	2	0.56
18	window plate		AISI 304	0.38	1	0.38
19	Stiffener (3)		AISI 304	0.85	1	0.85

Note:
QTY: 1
Door Opening: 800 x 2000 mm

02	For Approval	E.Beygi	E.Beygi	D.Deoghani	D.Deoghani	13/08/2019
01	For Approval	E.Beygi	E.Beygi	D.Deoghani	D.Deoghani	12/06/2019
0	For Approval	E.Beygi	E.Beygi	D.Deoghani	D.Deoghani	12/03/2019
REV	DESCRIPTION	DESIGN	DRAWN	CHECKED	APPROVED	DATE
EMPLOYER: REGIONAL MINISTRY OF ELECTRICITY IN KURDISTAN						
				 		
CONSULTANT: ELECTROCONSULT						
						
PROJECT : DERALOK HYDROPOWER PLANT CONSTRUCTION PROJECT-IQ-P15 Pkg 2						
CONTRACTOR: FARAB & Boland Payeh J.V Farab International FZE 				SUB-CONTRACTOR/VENDOR:  Centigrade Ind. Inc		
FAB DWG. NO.: H42-2-00-MA-P-20-DWG-105				SUB-CONTRACTOR DWG. NO. : Cii97-81003-AD-DWG-01		
EMPLOYER DWG. NO. : DLK-D-FAB-10905-MEC-C-R02						
TITLE : General Assembly and material Weight for Right shaft Access door						
SCALE:	SIZE: A3	SHEET: 1/1	CONTRACT NO. : IQ-P15/Pkg2		REV: 02	

IN-HOUSE REV.						
02	For Approval	E.Beygi	E.Beygi	D.Deoghani	D.Deoghani	13/08/2019
01	For Approval	E.Beygi	E.Beygi	D.Deoghani	D.Deoghani	12/06/2019
REV	DESCRIPTION	DESIGN	DRAWN	CHECKED	APPROVED	DATE

1		2			3	
PART LIST FOR "ONE UNIT"						
Item NO.	Part name	Description	Material	Weight	QTY.	T.Weight
1	filter frame-V		AISI 304	0.80	4	3.2
2	filter frame-H Plate		AISI 304	1.92	1	1.92
3	filter frame-H-B		AISI 304	0.56	2	1.12
4	filter frame-stiffner		AISI 304	0.28	4	1.12
5	Hex nipple-0.375-2	#2000	AISI 316		2	0
6	threaded tee-0.75 inch	#2000	AISI 316		2	0
7	Reducer-Male Female-0.25-0.375	#2000	AISI 316		2	0
8	Pressure Transmitter	100 Bar	AISI 316		1	0
9	threaded union-0.375	#2000	AISI 316		1	0
10	Hex nipple-0.375 inch	#2000	AISI 316		5	0
11	Pressure relief valve-0.375	100 Bar			1	0
12	ball-valve-0.375 inch	#2000	AISI 304	0.6	1	0.6
13	Pressure Gauge-0.375	100 Bar			1	0
14	Non Return valve-0.375	#2000	AISI 316		1	0
15	Hex nipple-0.375-conical	0.5" #2000	AISI 316	0.12	1	0.12
16	Hose Nipple 0.75 in		AISI 316		1	0
17	ball-valve-0.75		AISI 304	0.6	1	0.6
18	Hex nipple-0.75 inch		AISI 316		8	0
19	Threaded tee-0.75-inch		AISI 316		2	0
20	valve_93411-1_2-0.75		AISI 316		1	0
21	Reducer-Male Female-0.25-0.75	#2000	AISI 316		1	0
22	Pressure Gauge-0.25-10 Bar	10 Bar			1	0
23	filter-0.75 inch	10"			2	0
24	chek valve-0.75 inch		AISI 316		1	0
25	THREADED UNION, .750		AISI 316		2	0
26	THREADED ELBOW, .750 IN		AISI 316		3	0
27	pipe 0.75 inch-03		AISI 316		1	0
28	Hex nipple-reducer-0.375-0.75 inch		AISI 316		1	0
29	pipe 0.75 inch-01		AISI 316		1	0
30	Reducer-nipple-0.75-0.5 inch		AISI 316		1	0
31	Electromotor	4 kW			1	0
32	Pump-TAM				1	0
33	motor support				1	0




REV	DESCRIPTION	DESIGN	DRAWN	CHECKED	APPROVED	DATE
01	For Approval	E.Beygi	E.Beygi	D.Deighani	D.Deighani	12/02/2019
00	For Approval	E.Beygi	E.Beygi	D.Deighani	D.Deighani	23/10/2018

EMPLOYER:	
REGIONAL MINISTRY OF ELECTRICITY IN KURDISTAN	

CONSULTANT:	
ELECTROCONSULT	

PROJECT :	DERALOK HYDROPOWER PLANT CONSTRUCTION PROJECT-IQ-P15 Pkg 2
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CONTRACTOR:	SUB-CONTRACTOR/VENDOR:
FARAB & Boland Payeh J.V	
Farab International FZE	Centigrade Ind. Inc

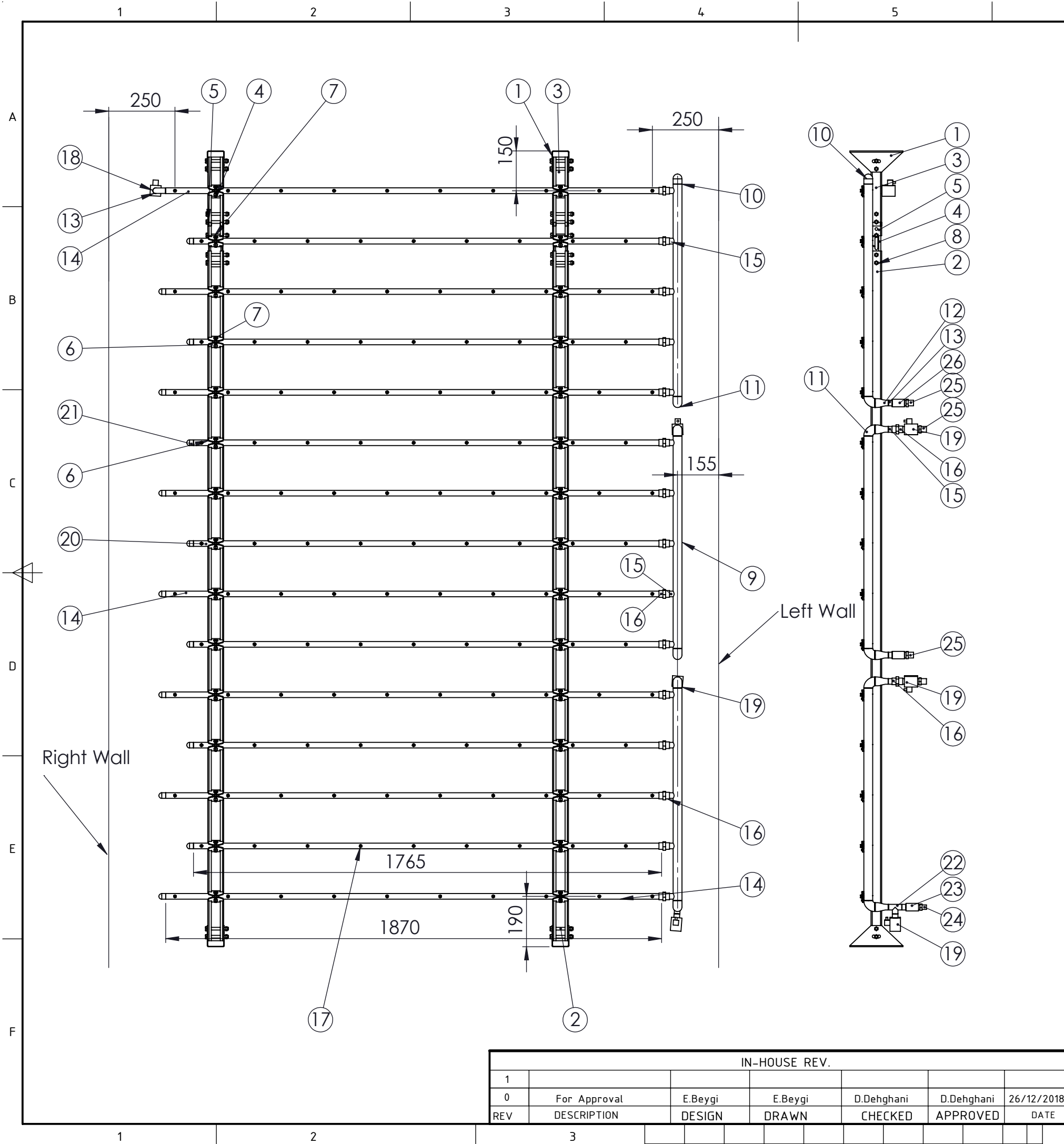
FAB DWG. NO.:	SUB-CONTRACTOR DWG. NO. :
H42-2-00-MA-P-20-DWG-106	Cii97-81003-PU-DWG-01

EMPLOYER DWG. NO. :	DLK-D-FAB-10906-MEC-C-R01
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TITLE :		General Assembly and material Weight for Right shaft Pump Unit			
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IN-HOUSE REV.						
1	For Approval	E.Beygi	E.Beygi	D.Deighani	D.Deighani	12/02/2019
0	For Approval	E.Beygi	E.Beygi	D.Deighani	D.Deighani	23/10/2018
REV	DESCRIPTION	DESIGN	DRAWN	CHECKED	APPROVED	DATE

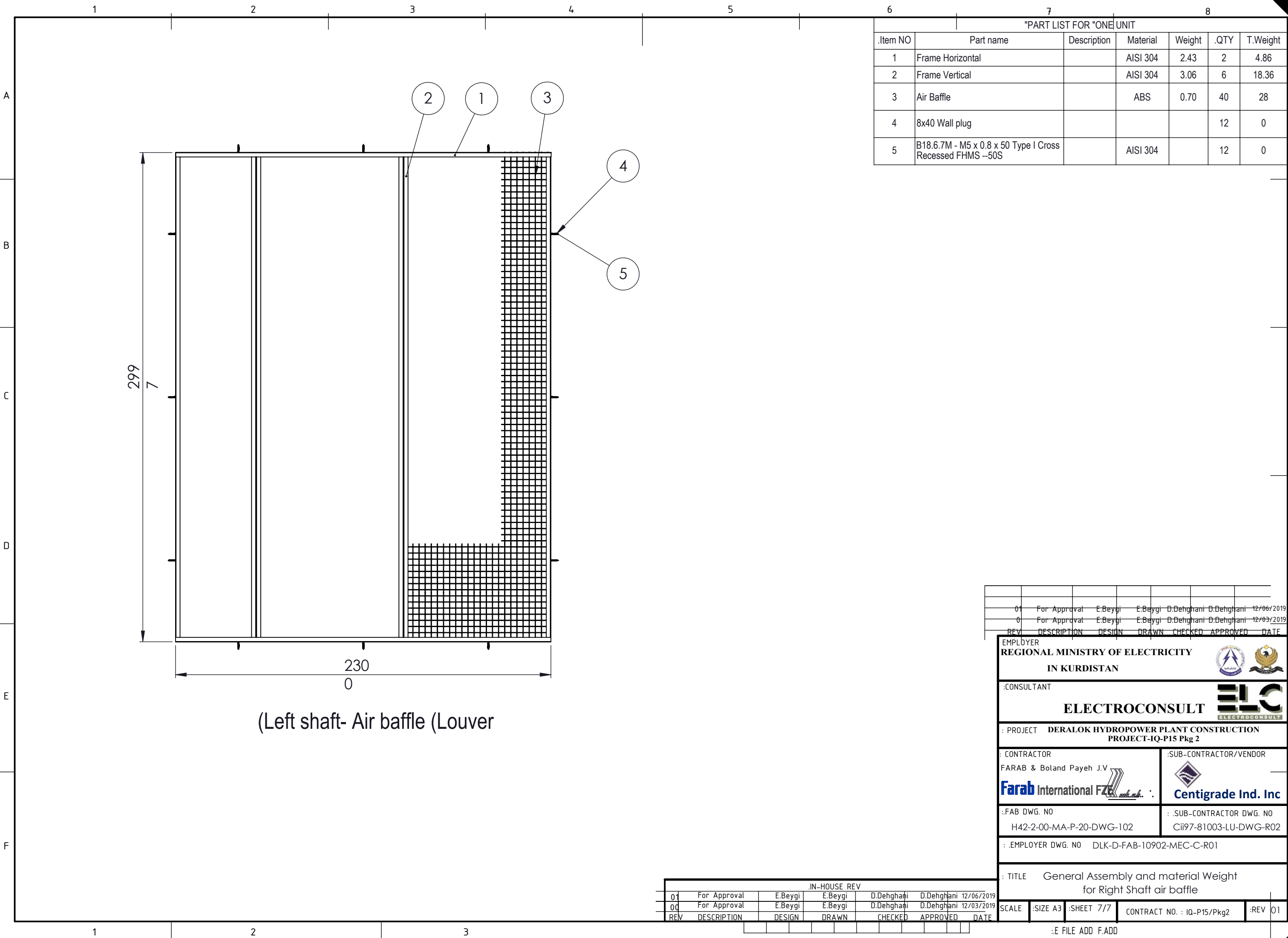
SCALE:	SIZE: A3	SHEET: 1/1	CONTRACT NO. : IQ-P15/Pkg2	REV: 01
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Item NO.	Part name	0.5" sch40	Material	Weight	QTY.	weight
1	Top base	2 mm thk.	AISI 304	0.48	4	1.92
2	Main column-L	2 mm thk.	AISI 304	6.31	2	12.62
3	Main column-M	2 mm thk.	AISI 304	0.62	2	1.24
4	Column-UPN	3 mm thk.	AISI 304	0.59	2	1.18
5	clmn-L	2 mm thk.	AISI 304	0.12	2	0.24
6	Clamp	3 mm thk.	AISI 304	0.07	60	4.2
7	Clamp Bolting	M8*35	AISI 304		30	0
8	Column Bolting-M10x80	M10x80	AISI 304		18	0
9	CollectorPipe-Left	1" sch40	AISI 316 (SS)	2.0	3	6
10	Collector end cap	1" sch40	AISI 316 (SS)	0.1	1	0.1
11	90deg Sr inch elbow	1" sch40	AISI 316 (SS)	0.10	5	0.5
12	REDUCER 1 x 0.5 SCH 40	sch 40	AISI 316 (SS)	0.10	5	0.5
13	Close Nipple 0.5 in, Sch 80	0.5" sch80	AISI 316 (SS)	0.012	7	0.084
14	Riser Pipe-Left-1	0.5" sch40	AISI 316 (SS)	2.4	8	19.2
15	Nipple-0.5-sch40	0.5" sch40	AISI 316 (SS)	0.0	17	0
16	universal-joint-0.5-sch.40	0.5" sch40	AISI 316 (SS)	0.1	17	1.7
17	Nozzle		AISI 316 (SS)	0.0	143	0
18	90L LR Metric 0.5 Sch 40	0.5" sch40	AISI 316 (SS)	0.08	1	0.08
19	solenoid valve0.5	0.5"-80 Bar	AISI 316 (SS)	0.6	4	2.4
20	Riser Pipe-Left-2	0.5" sch40	AISI 316 (SS)	2.3	7	16.1
21	end cap 0.5	0.5" sch40	AISI 316 (SS)	0.0	14	0
22	Straight tee-0.5	0.5" sch40	AISI 316 (SS)	0.08	1	0.08
23	Threaded Reducer	0.5"-0.375	AISI 316 (SS)	0.06	1	0.06
24	Hex nipple-0.375-conical	0.5" #2000	AISI 316 (SS)	0.05	1	0.05
25	Hex nipple-0.5-conical	0.5" #2000	AISI 316 (SS)	0.09	4	0.36
26	CLASS 3000 COUPLING, .50 IN	0.5" #3000	AISI 316 (SS)	0.13	2	0.26

0	For Approval	E.Beygi	E.Beygi	D.Dehghani	D.Dehghani	26/12/2018
REV	DESCRIPTION	DESIGN	DRAWN	CHECKED	APPROVED	DATE
EMPLOYER:						
REGIONAL MINISTRY OF ELECTRICITY IN KURDISTAN						
CONSULTANT:						
ELECTROCONSULT						
PROJECT : DERALOK HYDROPOWER PLANT CONSTRUCTION PROJECT-IQ-P15 Pkg 2						
CONTRACTOR:				SUB-CONTRACTOR/VENDOR:		
FARAB & Boland Payeh J.V						
Farab International FZE				Centigrade Ind. Inc		
FAB DWG. NO.: H42-2-00-MA-P-20-DWG-109				SUB-CONTRACTOR DWG. NO. : Cii97-81003-NB-DWG-02		
EMPLOYER DWG. NO. : DLK-D-FAB-10909-MEC-C-R00						
TITLE : General Assembly and material Weight for Left Shaft Nozzle Bank						
SCALE:	SIZE: A3	SHEET: 1/1	CONTRACT NO. : IQ-P15/Pkg2			REV: 00
6		E FILE ADD.: F.ADD				

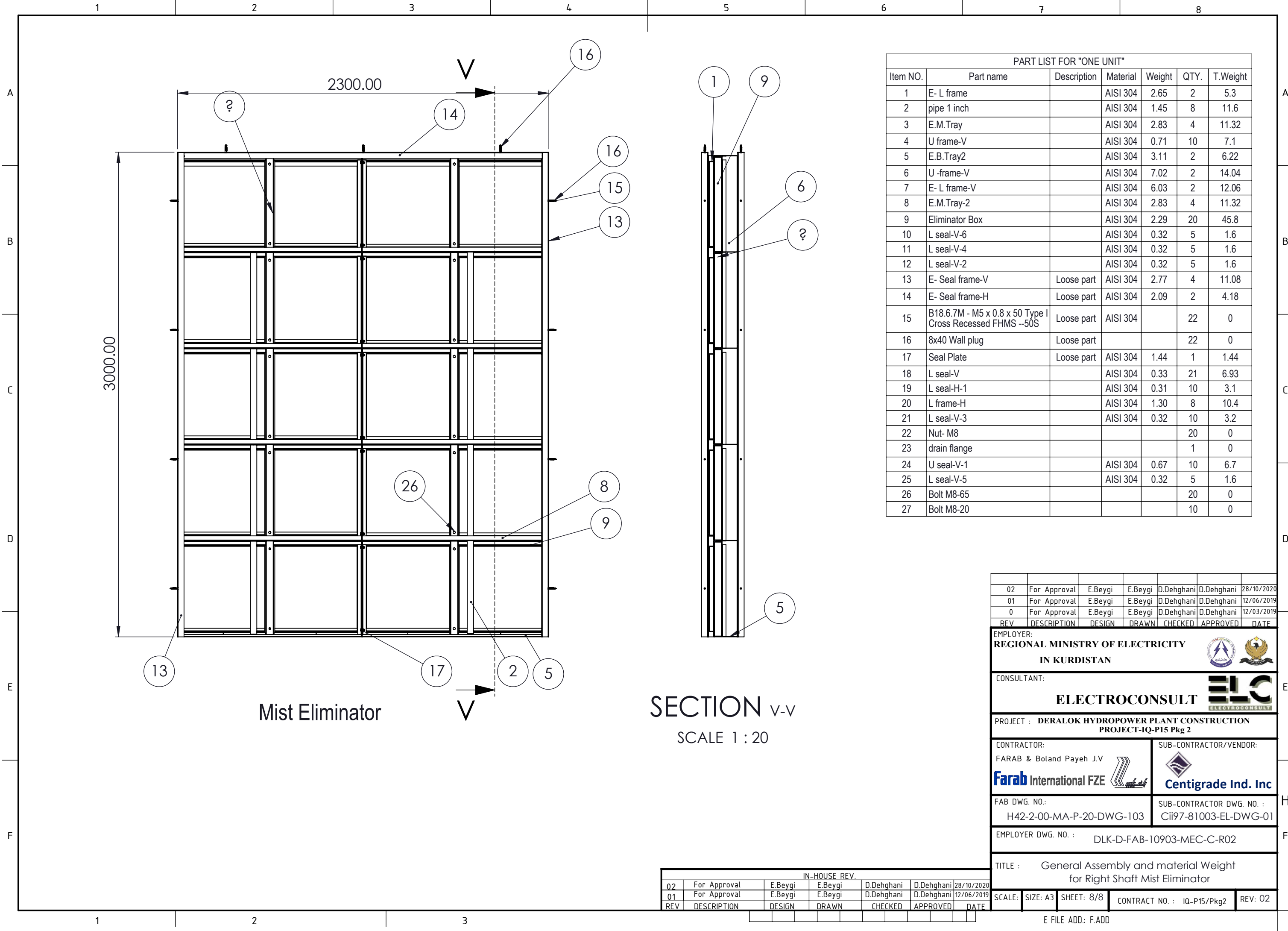
IN-HOUSE REV.						
1						
0	For Approval	E.Beygi	E.Beygi	D.Dezhgani	D.Dezhgani	26/12/2018
REV	DESCRIPTION	DESIGN	DRAWN	CHECKED	APPROVED	DATE







"PART LIST FOR "ONE" UNIT						
.Item NO	Part name	Description	Material	Weight	.QTY	T.Weight
1	Frame Horizontal		AISI 304	2.43	2	4.86
2	Frame Vertical		AISI 304	3.06	6	18.36
3	Air Baffle		ABS	0.70	40	28
4	8x40 Wall plug				12	0
5	B18.6.7M - M5 x 0.8 x 50 Type I Cross Recessed FHMS --50S		AISI 304		12	0

01	For Approval	E.Beygi	E.Beygi	D.Deighani	D.Deighani	12/06/2019
00	For Approval	E.Beygi	E.Beygi	D.Deighani	D.Deighani	12/03/2019
REV	DESCRIPTION	DESIGN	DRAWN	CHECKED	APPROVED	DATE
<div>EMPLOYER</div> <div>REGIONAL MINISTRY OF ELECTRICITY</div> <div>IN KURDISTAN</div> <div></div>						
<div>:CONSULTANT</div> <div>ELECTROCONSULT</div> <div></div>						
: PROJECT DERALOK HYDROPOWER PLANT CONSTRUCTION PROJECT-IQ-P15 Pkg 2						
: CONTRACTOR				:SUB-CONTRACTOR/VENDOR		
FARAB & Boland Payeh J.V						
Farab International FZE 				Centigrade Ind. Inc		
:FAB DWG. NO				: .SUB-CONTRACTOR DWG. NO		
H42-2-00-MA-P-20-DWG-102				Cii97-81003-LU-DWG-R02		
: .EMPLOYER DWG. NO DLK-D-FAB-10902-MEC-C-R01						
: TITLE General Assembly and material Weight for Right Shaft air baffle						
SCALE	:SIZE A3	:SHEET 7/7	CONTRACT NO. : IQ-P15/Pkg2		:REV 01	

.IN-HOUSE REV						
01	For Approval	E.Beygi	E.Beygi	D.Deighani	D.Deighani	12/06/2019
00	For Approval	E.Beygi	E.Beygi	D.Deighani	D.Deighani	12/03/2019
REV	DESCRIPTION	DESIGN	DRAWN	CHECKED	APPROVED	DATE



PART LIST FOR "ONE UNIT"						
Item NO.	Part name	Description	Material	Weight	QTY.	T.Weight
1	E- L frame		AISI 304	2.65	2	5.3
2	pipe 1 inch		AISI 304	1.45	8	11.6
3	E.M.Tray		AISI 304	2.83	4	11.32
4	U frame-V		AISI 304	0.71	10	7.1
5	E.B.Tray2		AISI 304	3.11	2	6.22
6	U -frame-V		AISI 304	7.02	2	14.04
7	E- L frame-V		AISI 304	6.03	2	12.06
8	E.M.Tray-2		AISI 304	2.83	4	11.32
9	Eliminator Box		AISI 304	2.29	20	45.8
10	L seal-V-6		AISI 304	0.32	5	1.6
11	L seal-V-4		AISI 304	0.32	5	1.6
12	L seal-V-2		AISI 304	0.32	5	1.6
13	E- Seal frame-V	Loose part	AISI 304	2.77	4	11.08
14	E- Seal frame-H	Loose part	AISI 304	2.09	2	4.18
15	B18.6.7M - M5 x 0.8 x 50 Type I Cross Recessed FHMS --50S	Loose part	AISI 304		22	0
16	8x40 Wall plug	Loose part			22	0
17	Seal Plate	Loose part	AISI 304	1.44	1	1.44
18	L seal-V		AISI 304	0.33	21	6.93
19	L seal-H-1		AISI 304	0.31	10	3.1
20	L frame-H		AISI 304	1.30	8	10.4
21	L seal-V-3		AISI 304	0.32	10	3.2
22	Nut- M8				20	0
23	drain flange				1	0
24	U seal-V-1		AISI 304	0.67	10	6.7
25	L seal-V-5		AISI 304	0.32	5	1.6
26	Bolt M8-65				20	0
27	Bolt M8-20				10	0

02	For Approval	E.Beygi	E.Beygi	D.Dehghani	D.Dehghani	28/10/2020
01	For Approval	E.Beygi	E.Beygi	D.Dehghani	D.Dehghani	12/06/2019
0	For Approval	E.Beygi	E.Beygi	D.Dehghani	D.Dehghani	12/03/2019
REV	DESCRIPTION	DESIGN	DRAWN	CHECKED	APPROVED	DATE
EMPLOYER: REGIONAL MINISTRY OF ELECTRICITY IN KURDISTAN						
				 		
CONSULTANT: ELECTROCONSULT						
						
PROJECT : DERALOK HYDROPOWER PLANT CONSTRUCTION PROJECT-IQ-P15 Pkg 2						
CONTRACTOR: FARAB & Boland Payeh J.V Farab International FZE				SUB-CONTRACTOR/VENDOR:  Centigrade Ind. Inc		
FAB DWG. NO.: H42-2-00-MA-P-20-DWG-103				SUB-CONTRACTOR DWG. NO. : Cii97-81003-EL-DWG-01		
EMPLOYER DWG. NO. : DLK-D-FAB-10903-MEC-C-R02						
TITLE : General Assembly and material Weight for Right Shaft Mist Eliminator						
SCALE:	SIZE: A3	SHEET: 8/8	CONTRACT NO. : IQ-P15/Pkg2		REV: 02	

IN-HOUSE REV.						
02	For Approval	E.Beygi	E.Beygi	D.Deoghani	D.Deoghani	28/10/2020
01	For Approval	E.Beygi	E.Beygi	D.Deoghani	D.Deoghani	12/06/2019
REV	DESCRIPTION	DESIGN	DRAWN	CHECKED	APPROVED	DATE