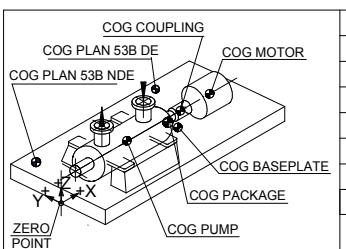
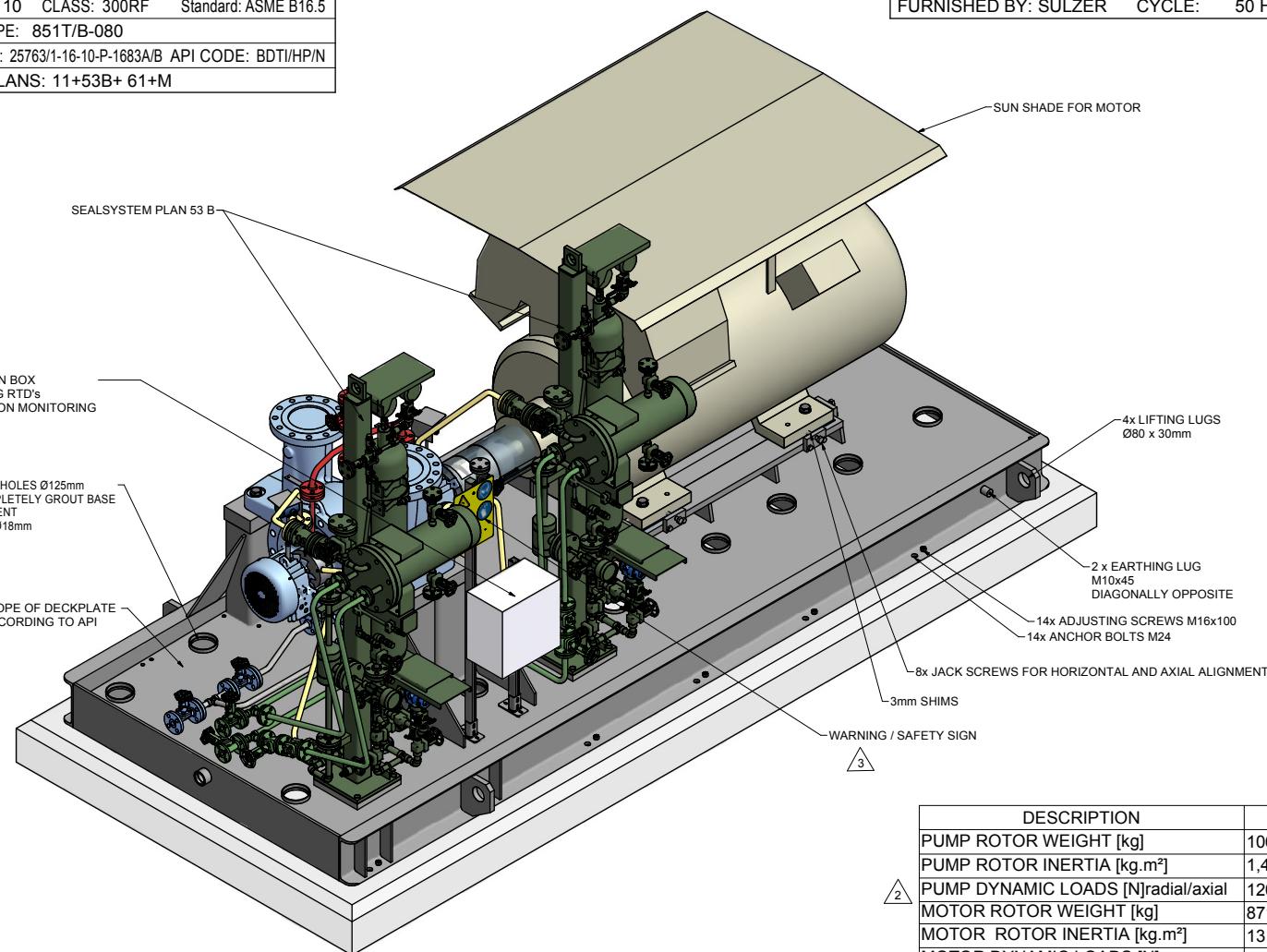


PUMP SPECIFICATIONS	
SIZE & TYPE:	BBS-sc 8x10x18J
SPEED:	(see MOTOR SPECIFICATIONS)
ROTATION:	CCW (AS VIEWED FROM DRIVER)
DISCH FLG:	8 CLASS: 300RF Standard: ASME B16.5
SUCT FLG:	10 CLASS: 300RF Standard: ASME B16.5
MECH SEAL TYPE:	851T/B-080
MECH SEAL DRG:	25763/1-16-10-P-1683A/B API CODE: BDTI/HP/N
API PIPING PLANS:	11+53B+ 61+M

COUPLING SPECIFICATIONS	
MFR:	Metastream
TYPE:	TSKS
COUPLING-GUARD MATERIAL:	Brass
SIZE:	0230

DRIVER SPECIFICATIONS	
MOTOR:	SCHORCH
FRAME:	450
KW:	375
PHASE:	3
FURNISHED BY:	SULZER
ENCLOSURE:	Zone 2, IIB, T3
SPEED:	2985 rpm
VOLTAGE:	6000 V
CYCLE:	50 Hz



COG	X	Y	Z
PUMP	1300	0	825
COUPLING	2134	0	800
BASEPLATE	2356	-195	228
MOTOR	3454	0	810
PLAN 53B DE	2010	-820	1465
PLAN 53B NDE	528	-820	1465
PACKAGE	2728	-94	707
COG=CENTRE OF GRAVITY			

DESCRIPTION	VALUE
PUMP ROTOR WEIGHT [kg]	106
PUMP ROTOR INERTIA [kg.m ²]	1,48
PUMP DYNAMIC LOADS [N]radial/axial	1200 / 0
MOTOR ROTOR WEIGHT [kg]	871
MOTOR ROTOR INERTIA [kg.m ²]	13
MOTOR DYNAMIC LOADS [N]	681

MAINTENANCE WEIGHT PUMP : 520 kg	
APPROXIMATE WEIGHTS	
PUMP: 1356 kg	
MOTOR: 4800 kg	
COUPLING + GUARD: 40 kg	
BASEPLATE: 2156 kg	
RESERVOIR / COOLER: 500 kg	
AUXILIARY: 200 kg	
TOTAL: 9052 kg	

CONTRACT DATA	
PURCHASER:	AIOTEC GmbH
USER:	KANGAN PETRO REFINING COMPANY (KPRC)
JOB/PROJECT:	KANGAN C2 RECOVERY AND FRACTIONATION PLANT
CUST. P.O. NO.:	KP-10-00-PS-MA-PO-0003
SERVICE:	C5+ Product Loading Pump
INSTALLED AT:	IRAN
PUMP OEM:	Sulzer Pumpen (Deutschland) GmbH
SULZER ORDER NO.:	1002471880110

IDENTIFICATION NUMBERS	
SULZER SERIAL NO.	CUSTOMER TAG NO'S
	PUMP DRIVER
583646	10-P-1683A 10-M-1683A
583647	10-P-1683B 10-M-1683B
<input checked="" type="checkbox"/> CERTIFIED FINAL	DO NOT SCALE. DIMENSIONS: mm
<input type="checkbox"/> CERTIFIED FOR NOZZLE & FOUNDATION ONLY	UNLESS OTHERWISE SPECIFIED TOLERANCES ≤ 500 mm ± 3mm > 500 mm ± 12mm
<input type="checkbox"/> PRELIMINARY ONLY	AUXILIARY CUSTOMER CONNECTION DIMENSIONS ± 25

DRAWING CONTENT	
SHEET DESCRIPTION	SHEET NO.
GA ISOMETRIC DATA SHEET	1
FOUNDATION AND NOZZLE	2
CONNECTION LAYOUT	3
<p>Code1 <input type="checkbox"/> Approved <input type="checkbox"/> Approved with comment: Code2 <input type="checkbox"/> Version is correct, revise and resubmit the document. <input type="checkbox"/> The document can be released for Manufacturing if changes incorporated. Code3 <input type="checkbox"/> Commented <input type="checkbox"/> Water and correct, revise and resubmit the document by date specified. The document shall be revised under the status of "Re-Review issue". All comments must be resolved before starting the Manufacturing. Code4 <input type="checkbox"/> Not Accepted (Rejected) <input type="checkbox"/> Vendor shall re-work/re-design/re-specify the contents and resubmit the document for review. <input type="checkbox"/> All correct documents shall be resubmitted before starting the Manufacturing. Above checking results by EIED shall in no way relieve Vendor of all quality, design and responsibility out of the purchase order and the related order contract writing. DATE :  DRAFT : Signature : Only for internal review CV PI EL IN ME MA ST AR PR SA TL REV. DATE Status Purpose of Issue PRE'P. CH'C'D. APP'D. AUTH'D.</p>	

05	31.01.18	"R"	For Approval-as built	KE	AM	SW	CH
04	20.09.17	"R"	For Approval	KE	AM	SW	CH
03	27.07.17	"R"	For Approval	KE	AM	SW	CH
02	30.05.17	"R"	For Approval	KE	AM	SW	CH
01	02.03.17	"R"	For Approval	KE	AM	SW	CH
00	09.01.17	"F"	For Approval	KE	AM	SW	CH

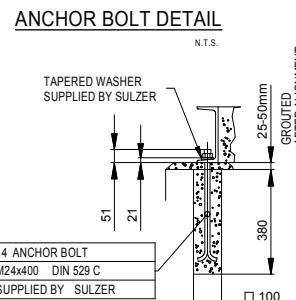
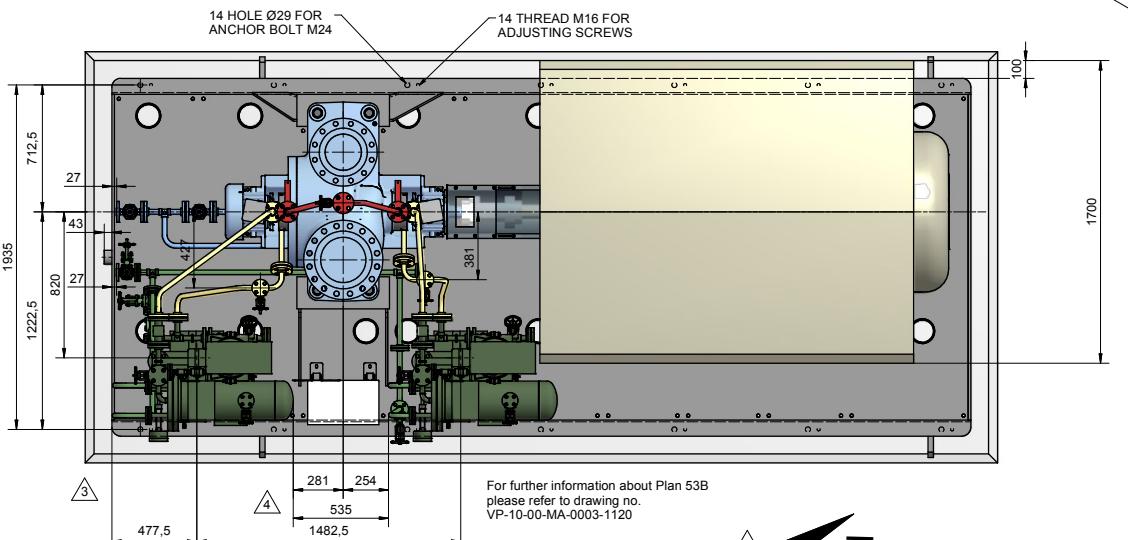
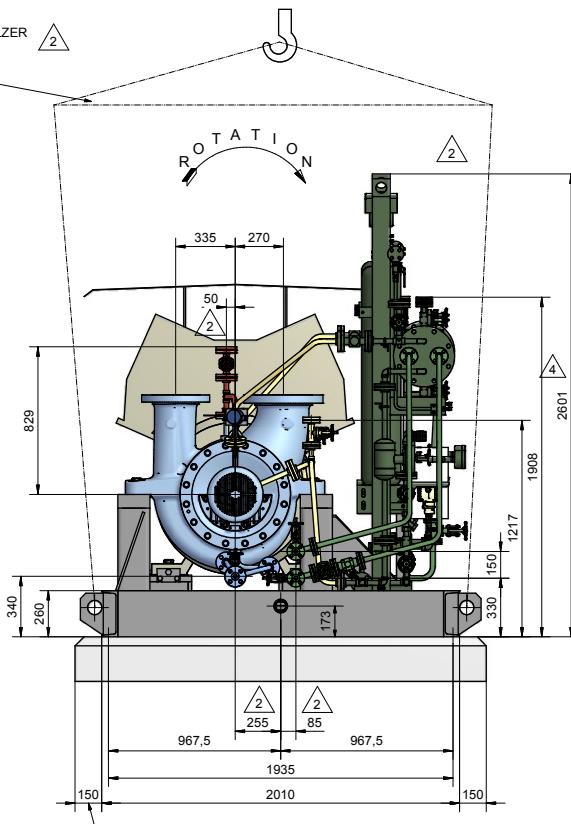
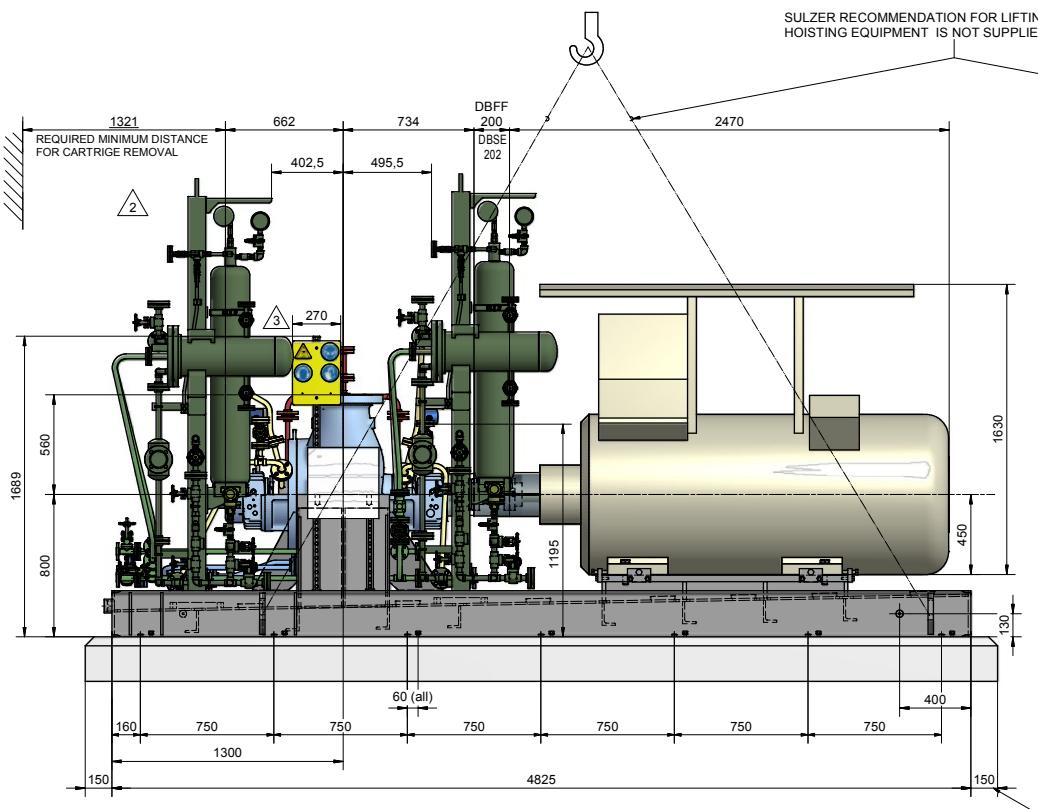
KANGAN
C2 RECOVERY & FRACTIONATION PLANT


P.O. No.: KP-10-00-PS-MA-PO-0003 SCALE : 1:12

SULZER 

DRAWING TITLE:
General Arrangement Drawing for Item 10-P-1683 A/B

DRAWING NO.	VP-10-00-MA-0003-1114	sheet no.	1 OF 3	REV. 05
SEP. PARTS LIST:	NO	FORMAT: A1	DESIGN GROUP:	FIRST ANGLE PROJECTION
REPLACED BY:	-	SUBSTITUTE FOR:	ORIGINAL SCALE:	1:12
BBS-SC 8x10x18J	-	-	DRAWN:	09-Jan-2017 K.Engel
KANGAN	-	-	CHECKED:	09-Jan-2017 A.M.
1002471880110	-	-	APPROVED:	09-Jan-2017 S.W.
GENERAL ARRANGEMENT DRAWING				
PART NO. XXX EN PGA1002471880110-01 1 / 3				



© SULZER Ltd 2015 (Date of Drawing)
ALL RIGHTS RESERVED. NO PART OF THIS DRAWING MAY BE REPRODUCED OR DISTRIBUTED OR
TRANSMITTED IN ANY FORM OR BY ANY MEANS,
ELECTRONIC OR MECHANICAL, INCLUDING
PHOTOCOPYING AND RECORDING, WITHOUT THE
EXPRESS PRIOR WRITTEN CONSENT OF SULZER
PUMPS

Grout material:
Select a non-shrinking grout that is compatible with the highest and lowest temperatures to which it may be exposed.
Use concrete from a concrete company with a final strength of 25 N/mm² (B25) or better.

CONTRACT DATA	
PURCHASER:	AIOTECH GmbH
USER:	KANGAN PETRO REFINING COMPANY (KPRC)
JOB/PROJECT:	KANGAN C2 RECOVERY AND FRACTIONATION PLANT
CUST. P.O. NO.:	KP-10-00-PS-MA-PO-0003
SERVICE:	C5+ Product Loading Pump
INSTALLED AT:	IRAN
PUMP OEM:	Sulzer Pumpen (Deutschland) GmbH
SULZER ORDER NO.:	1002471880110

IDENTIFICATION NUMBERS

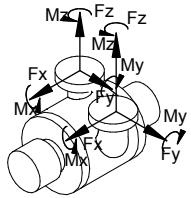
SULZER SERIAL NO.	CUSTOMER TAG NO'S	
	PUMP	DRIVER
583646	10-P-1683A	10-M-1683A
583647	10-P-1683B	10-M-1683B
-	-	-

■ CERTIFIED FINAL	DO NOT SCALE. DIMENSIONS: mm	
	UNLESS OTHERWISE SPECIFIED	
	TOLERANCES	
	$\leq 500 \text{ mm} \pm 3\text{mm}$	
	$> 500 \text{ mm} \pm 12\text{mm}$	
AUXILIARY CUSTOMER CONNECTION DIMENSIONS ± 25		

MAXIMUM NOZZLE LOADINGS

Forces do comply with 2 times of the forces shown in API 610^{11th}

FORCE IN (N) MOMENTS IN (Nm)



FORCE	SUCT	DISCH
F _x	10680	7560
F _y	8900	6220
F _z	13340	9780
Fr	19260	13840
M _x	10040	7060
My	4880	3520
M _z	7600	5160
Mr	13500	9420

05	31.01.18	"R"	For Approval-as built	KE	AM	SW	CH
04	20.09.17	"R"	For Approval	KE	AM	SW	CH
03	27.07.17	"R"	For Approval	KE	AM	SW	CH
02	30.05.17	"R"	For Approval	KE	AM	SW	CH
01	02.03.17	"R"	For Approval	KE	AM	SW	CH
00	09.01.17	"R"	For Approval	KE	AM	SW	CH

REV.	DATE	STATUS	PURPOSE OF ISSUE	PRE'P.	CH'C'D.	APP'D.	AUTH'D.
------	------	--------	------------------	--------	---------	--------	---------

KANGAN
C2 RECOVERY & FRACTIONATION PLANT



P.O. No.: KP-10-00-PS-MA-PO-0003 SCALE : 1 : 15

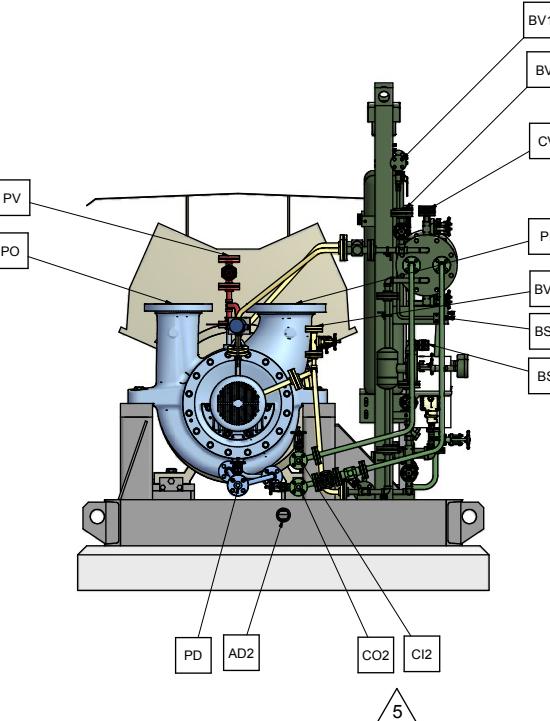
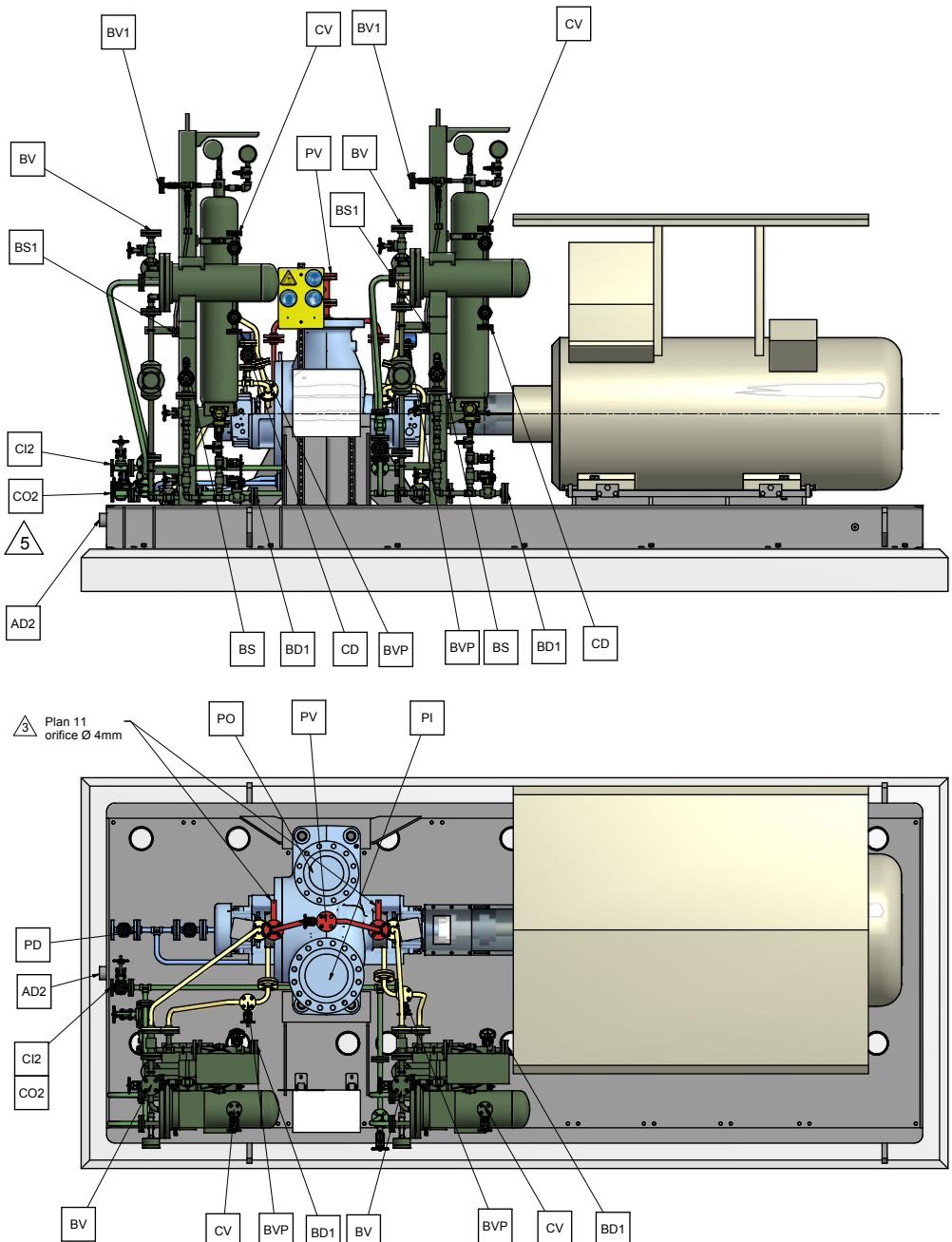
SULZER



DRAWING TITLE:
General Arrangement Drawing for Item 10-P-1683 A/B

DRAWING NO.	VP-10-00-MA-0003-1114	sheet no.	2 OF 3 REV. 05
SEP. PARTS LIST:	NO	FORMAT: A1 DESIGN GROUP:	FIRST ANGLE PROJECTION
REPLACED BY:	-	SUBSTITUTE FOR:	ORIGINAL SCALE: 1 : 15
BBS-SC	8x10x18J		DRAWN: 09-Jan-2017 K.Engel
KANGAN	-		CHECKED: 09-Jan-2017 A.M.
1002471880110			APPROVED: 09-Jan-2017 S.W.

CONTRACT DATA		
PURCHASER:	AIOTEC GmbH	
USER:	KANGAN PETRO REFINING COMPANY (KPRC)	
JOB/PROJECT:	KANGAN C2 RECOVERY AND FRACTIONATION PLANT	
CUST. P.O. NO.:	KP-10-00-PS-MA-PO-0003	
SERVICE:	C5+ Product Loading Pump	
INSTALLED AT:	IRAN	
PUMP OEM:	Sulzer Pumpen (Deutschland) GmbH	
SULZER ORDER NO.:	1002471880110	
IDENTIFICATION NUMBERS		
SULZER SERIAL NO.	CUSTOMER TAG NO'S	
	PUMP	DRIVER
583646	10-P-1683A	10-M-1683A
583647	10-P-1683B	10-M-1683B
-	-	-
<input checked="" type="checkbox"/> CERTIFIED FINAL	DO NOT SCALE. DIMENSIONS: mm	
<input type="checkbox"/> CERTIFIED FOR NOZZLE & FOUNDATION ONLY	UNLESS OTHERWISE SPECIFIED TOLERANCES ≤ 500 mm ± 3mm > 500 mm ± 12mm	
<input type="checkbox"/> PRELIMINARY ONLY	AUXILIARY CUSTOMER CONNECTION DIMENSIONS ± 25	



CONNECTION LEGEND			
ITEM	DESCRIPTION	SIZE	TYPE (FLANGES ACC. ASME B 16.5)
PI	PUMP SUCTION NOZZLE	10"	300 RF
PO	PUMP DISCHARGE NOZZLE	8"	300 RF
PD	PUMP DRAIN WITH GATE VALVE	3/4"	300 RF
PV	PUMP VENT WITH GATE VALVE	3/4"	300 RF
AD2	BASE DRAIN	2"	NPT FEMALE
CI2	COOLING HEADER - INLET	3/4"	150 RF
CO2	COOLING HEADER - OUTLET	3/4"	150 RF
BS	PLAN 53B RESERVOIR FILL	1/2"	NPT f Quick Coupling
BS1	PLAN 53B NITROGEN CHARGE	1/4"	NPT f Quick Coupling
BD1	PLAN 53B HIGH POINT VENT	3/4"	300 RF - BLIND FLANGE
BV	PLAN 53B PIPING VENT	3/4"	300 RF - BLIND FLANGE
BVP	PLAN 53B ACCUMULATOR VENT	TBA	300 RF - BLIND FLANGE
CV	PLAN 53B COOLER VENT	1/2"	150 RF - BLIND FLANGE
CD	PLAN 53B COOLER Drain	1/2"	150 RF - BLIND FLANGE

05	31.01.18	"R"	For Approval-as built	KE	AM	SW	CH
04	20.09.17	"R"	For Approval	KE	AM	SW	CH
03	27.07.17	"R"	For Approval	KE	AM	SW	CH
02	30.05.17	"R"	For Approval	KE	AM	SW	CH
01	02.03.17	"R"	For Approval	KE	AM	SW	CH
00	09.01.17	"F"	For Approval	KE	AM	SW	CH
REV.	DATE	Status	Purpose of Issue	PRE'P.	CH'C'D.	APP'D.	AUTH'D.

KANGAN
C2 RECOVERY & FRACTIONATION PLANT



P.O. No.: KP-10-00-PS-MA-PO-0003 SCALE : 1 : 15

SULZER



DRAWING No.	VP-10-00-MA-0003-1114	SHEET No.	3 OF 3	REV. 05
SEP. PARTS LIST:	NO	FORMAT: A1	DESIGN GROUP:	FIRST ANGLE PROJECTION
REPLACED BY:				ORIGINAL SCALE: 1 : 15
BBS-SC	GENERAL ARRANGEMENT			
8x10x18J	CONNECTION LAYOUT			
KANGAN	-			
1002471880110	GENERAL ARRANGEMENT DRAWING			

SULZER PART NO. XXX EN PGA1002471880110-01 3 / 3