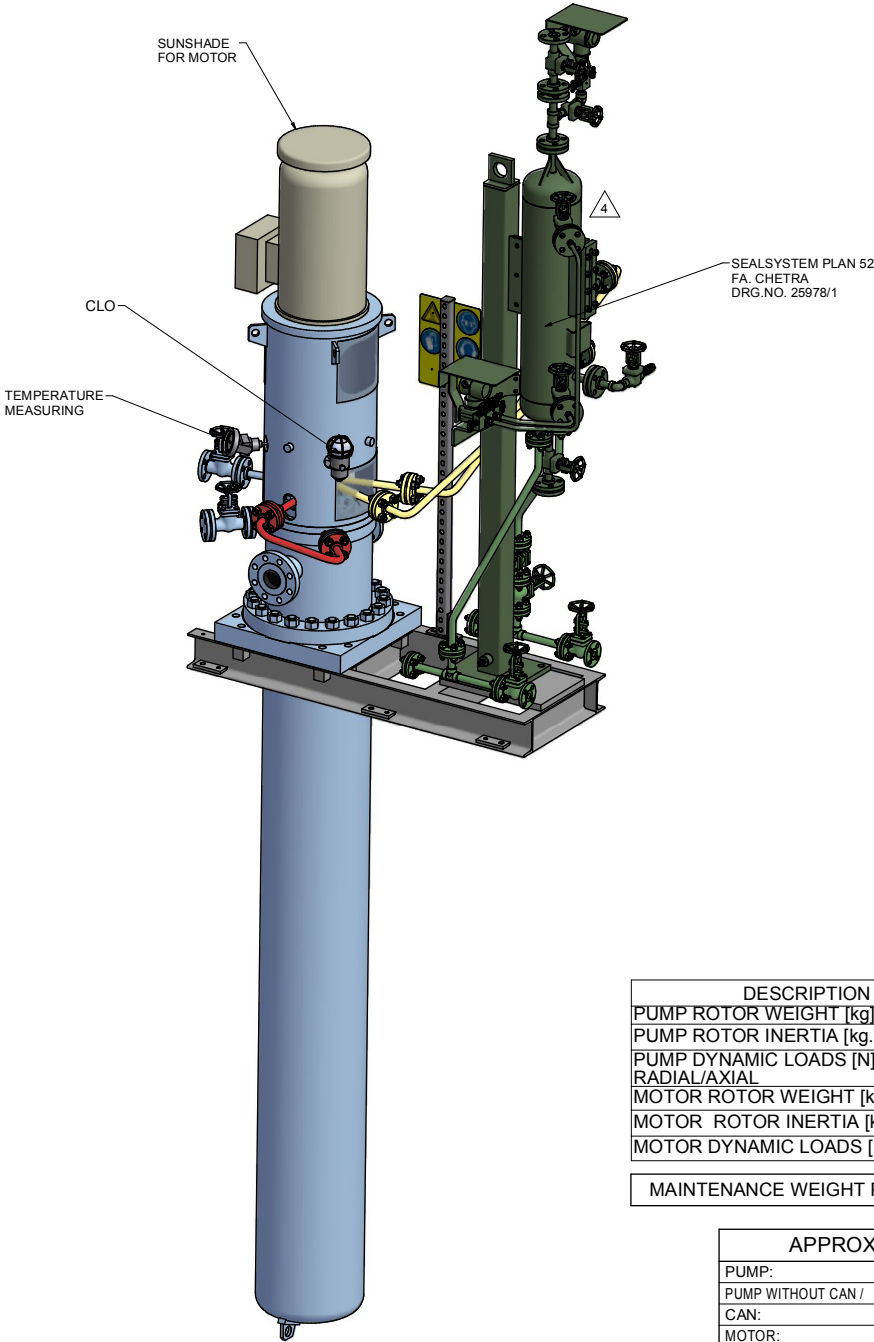


PUMP SPECIFICATIONS	
SIZE & TYPE:	TTMC40-160/7
SPEED:	(see MOTOR SPECIFICATIONS)
ROTATION:	CCW (AS VIEWED FROM DRIVER)
DISCH FLG:	1,5" CLASS: 300RF Standard: ASME B16.5
SUCT FLG:	3" CLASS: 300RF Standard: ASME B16.5
MECH SEAL TYPE:	CHETRA TYP 851TB-038
MECH SEAL DRG:	25514-16-10-P1688A API CODE: BDPHP/N
API PIPING PLANS:	13 + 52

COUPLING SPECIFICATIONS	
MFR:	Metastream
TYPE:	TSKS
SIZE:	0013
COUPLING-GUARD MATERIAL:	BRASS

DRIVER SPECIFICATIONS	
MOTOR:	Schorch
FRAME:	KD1160L-AA45P-M
ENCLOSURE:	ZONE 2,IIB,T3
kW:	18,5
SPEED:	2929 rpm
PHASE:	3
VOLTAGE:	400
FURNISHED BY:	SULZER
CYCLE:	50 Hz



Costs:	<input type="checkbox"/> Approved: No comment and the document is released for manufacturing.
Costs:	<input type="checkbox"/> Approved with comment: Vendor shall correct, review and resubmit the document. The document can be released for manufacturing if image is acceptable.
Costs:	<input type="checkbox"/> Commented: Vendor shall correct, review and resubmit the document to the site engineer. The document shall be released under the status of "To be released issue". At completion documents shall be resubmitted before manufacturing.
Costs:	<input type="checkbox"/> Not Accepted (Rejected): Vendor shall re-work/re-design/re-specify the contents within the time specified in the comments. Request for quotation. At completion documents shall be resubmitted before manufacturing.
Notes: Check the results for ESD and in the way of the vendor. Vendor of any liability, integrity and responsibility out of the purchase order and the material, equipment, etc. is not.	
DATE : DGP : Signature :	
Only for internal review	
DV	PI
ST	AB
IR	SA
MC	HW
MA	TL

DESCRIPTION	VALUE
PUMP ROTOR WEIGHT [kg]	100
PUMP ROTOR INERTIA [kg.m²]	0.082
PUMP DYNAMIC LOADS [N]	228 / 44
MOTOR ROTOR WEIGHT [kg]	27.5
MOTOR ROTOR INERTIA [kg.m²]	0.052
MOTOR DYNAMIC LOADS [N]	27

MAINTENANCE WEIGHT PUMP:	810 kg
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APPROXIMATE WEIGHTS	
PUMP:	1220 kg
PUMP WITHOUT CAN /	810 kg
CAN:	410 kg
MOTOR:	190 kg
BASEPLATE:	100 kg
AUXILIARY:	150 kg
TOTAL:	1660 kg


CONTRACT DATA	
PURCHASER:	AIOTEC GmbH
USER:	Kangan Petro-Refining Co.
JOB/PROJECT:	Kangan C2 Recovery and Fractionation Plant
CUST. P.O. NO.:	KP-10-00-PS-MA-PO-0003
SERVICE:	BUTANE COOL DOWN PUMP
INSTALLED AT:	KANGAN- ASSALUYEH - IRAN
PUMP OEM:	Sulzer Pumpen (Deutschland) GmbH
SULZER ORDER NO.:	100247188-0190

IDENTIFICATION NUMBERS		
SULZER SERIAL NO.	CUSTOMER TAG NO'S	
	PUMP	DRIVER
583657	10-P-1688	10-M-1688

<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

04	15.11.17	"R"	For Approval	TR	RS	CH	PL
03	08.08.17	"R"	For Approval	TR	RS	CH	PL
02	21.06.17	"R"	For Approval	TR	RS	CH	PL
01	03.03.17	"R"	For Approval	TR	RS	CH	PL
00	22.12.16	"F"	For Approval	TR	RS	CH	PL
REV.	DATE	Status	Purpose of issue	PREP.	CHK'D.	APP'D.	AUTH'D.

KANGAN C2 RECOVERY & FRACTIONATION PLANT		 KANGAN PETRO REFINING CO.
P.O. No.:	KP-10-00-PS-MA-PO-0003	SCALE : 1 : 10

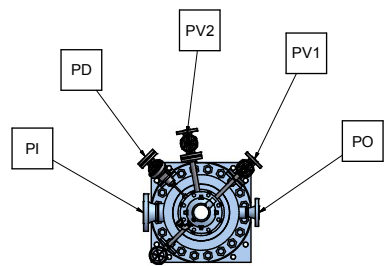
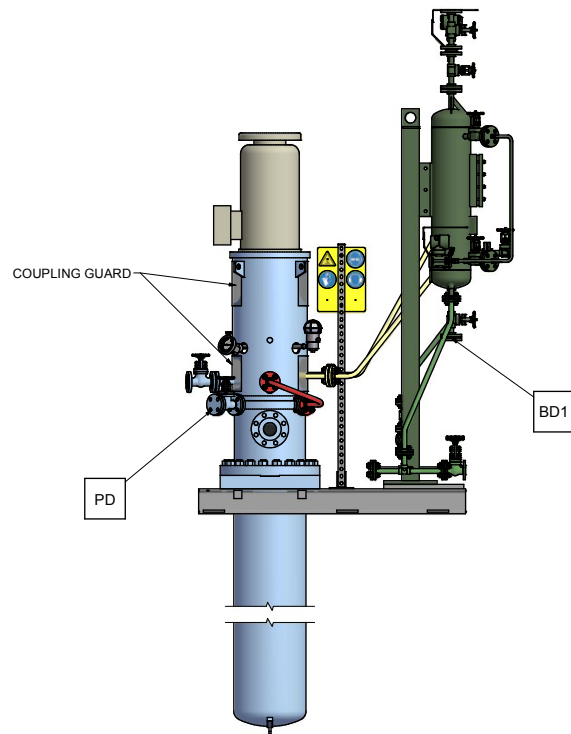
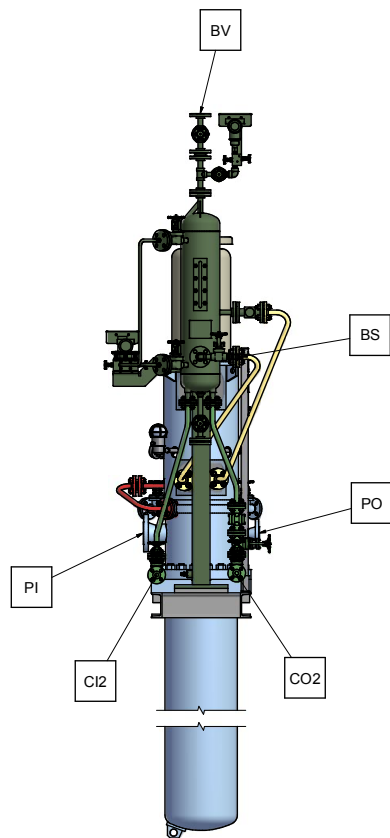
SULZER	
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DRAWING TITLE:	
General Arrangement drawings for Item 10-P-1688	
DRAWING No.	VP-10-00-MA-0003-1914
SHEET No.	1 OF 3
REV.	04

REV. MODIFICATION	MODIFIED	CHECKED	APPROVED
SEP. PARTS LIST:	NO	FORMAT: A1	DESIGN GROUP: -
REPLACED BY:	-	SUBSTITUTE FOR:	ORIGINAL SCALE: -
TTMC	GENERAL ARRANGEMENT	DRAWN:	15-Dec-2016
40-160/7	GA ISOMETRIC AND DATA SHEET	T. Ratzel	
-	-	CHECKED:	15-Dec-2016
100247188-0190	GENERAL ARRANGEMENT DRAWING	R. Scherban	
APPROVED:			
SULZER	PART NO.	EN	PGA1002471880190-01
			1 / 3

- NOTES:
- CAUTION!** CAREFULLY CHECK ALIGNMENT BEFORE STARTING UNIT. ALL HOLES IN FLANGES STRADDLE CENTERLINES. **THE CONNECTION OF PIPES TO THE UNIT HAS TO BE STRESS FREE.**
 - COLORS ARE NOT INTENDED TO REPRESENT "AS SHIPPED" PAINT REQUIREMENTS. THEY ARE FOR QUICK IDENTIFICATION OF PIPING AND EQUIPMENT.
 - PIPING AND EQUIPMENT ARE MODELED REPRESENTATIONS ONLY. ACTUAL LOCATION AND ORIENTATION MAY VARY PER SHOP STANDARDS, UNLESS OTHERWISE DIMENSIONED.
 - THE SUCTION PIPING OR INTAKE DESIGN SHALL MEET THE HYDRAULIC INSTITUTE STANDARDS ANSI/HI 9.8-1998 "PUMP INTAKE DESIGN" REQUIREMENTS.

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NOZZLE ORIENTATION



CONNECTION LEGEND			
ITEM	DESCRIPTION	SIZE	TYPE
PI	PUMP SUCTION NOZZLE	3"	ASME B16.5 300 RF
PO	PUMP DISCHARGE NOZZLE	1.5"	ASME B16.5 300 RF
PD	PUMP DRAIN WITH GATE VALVE	3/4"	ASME B16.5 300 RF / GATE VALVE 300 RF
PV1	PUMP VENT WITH GATE VALVE -SUCTION -PERMANENT VENT	3/4"	ASME B16.5 300 RF / GATE VALVE 300 RF
PV2	PUMP VENT WITH GATE VALVE VENT BEFORE START UP	3/4"	ASME B16.5 300 RF / GATE VALVE 300 RF
CI2	COOLING HEADER - INLET	3/4"	ASME B16.5 150 RF
CO2	COOLING HEADER - OUTLET	3/4"	ASME B16.5 150 RF
BS	PLAN 52 -FILLING CONNECTION	1/2"	NPT-F WITH QUICK COUPLING
BD1	PLAN 52 -DRAIN	3/4"	ASME B16.5 300 RF WITH BLIND FLANGE
BV	PLAN 52 -VENT	3/4"	ASME B16.5 300 RF

CONTRACT DATA

PURCHASER:	AIOTEC GmbH
USER:	Kangan Petro-Refining Co.
JOB/PROJECT:	Kangan C2 Recovery and Fractionation Plant
CUST. P.O. NO.:	KP-10-00-PS-MA-PO-0003
SERVICE:	BUTANE COOL DOWN PUMP
INSTALLED AT:	KANGAN- ASSALUYEH - IRAN
PUMP OEM:	Sulzer Pumpen (Deutschland) GmbH
SULZER ORDER NO.:	100247188-0190

IDENTIFICATION NUMBERS

SULZER SERIAL NO.	CUSTOMER TAG NO'S	
	PUMP	DRIVER
583657	10-P-1688	10-M-1688

<input checked="" type="checkbox"/> CERTIFIED FINAL	DO NOT SCALE. DIMENSIONS: mm
<input type="checkbox"/> CERTIFIED FOR NOZZLE & FOUNDATION ONLY	UNLESS OTHERWISE SPECIFIED TOLERANCES
<input type="checkbox"/> PRELIMINARY ONLY	≤ 500 mm ± 3mm
	> 500 mm ± 12mm
	AUXILIARY CUSTOMER CONNECTION DIMENSIONS ± 25

04	15.11.17	"R"	For Approval	TR	RS	CH	PL
03	08.08.17	"R"	For Approval	TR	RS	CH	PL
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01	03.03.17	"R"	For Approval	TR	RS	CH	PL
00	22.12.16	"F"	For Approval	TR	RS	CH	PL
REV.	DATE	Status	Purpose of Issue	PREP.	CHK'D.	APP'D.	AUTH'D.

KANGAN C2 RECOVERY & FRACTIONATION PLANT	 KANGAN PETRO REFINING CO.
P.O. No.: KP-10-00-PS-MA-PO-0003	SCALE : 1 : 15

SULZER



DRAWING TITLE: General Arrangement drawings for Item 10-P-1688			
DRAWING No.	VP-10-00-MA-0003-1914	SHEET No.	3 OF 3 REV. 04

0									
REV. MODIFICATION				MODIFIED		CHECKED		APPROVED	
SEP. PARTS LIST: NO		FORMAT: A1		DESIGN GROUP: -		FIRST ANGLE PROJECTION			
REPLACED BY:		-		SUBSTITUTE FOR:		ORIGINAL SCALE: -			
TTMC 40-160/7		GENERAL ARRANGEMENT CONNECTION LAYOUT				DRAWN: 15-Dec-2016 T. Ratzel			
100247188-0190		GENERAL ARRANGEMENT DRAWING				CHECKED: 15-Dec-2016 R. Scherban			
						APPROVED:			
SULZER		PART NO.		EN PGA1002471880190-01		3 / 3			