



Energy Industries
Engineering & Design Co.

Kangan Utility & Offsite Project



Kangan Petro Refining Co.



P.O. No.: KP-80-00-PS-MA-PO-0001-00

Document Title: Equipment Outline (GAD) includig nozzle location for 83-P-1001 A/K

Rev.: 02

Document No.: VP-80-00-MA-0001-0015

Page 1 of 5

Equipment Outline (GAD) including nozzle location for 83-P-1001 A/K

Code1	<input type="checkbox"/> Approved No comment and the document is released for Manufacturing.
Code2	<input type="checkbox"/> Approved with comment Vendor shall correct, revise and resubmit the document. The document can be released for Manufacturing if changes incorporated.
Code3	<input type="checkbox"/> Commented Vendor shall correct, revise and resubmit the document by the date specified. The document shall be revised under the Status of "R: Revised Issue". All corrected documents shall be resubmitted before starting the Manufacturing.
Code4	<input type="checkbox"/> Not Accepted (Rejected) Vendor shall re-work/re-design/re-specify the contents of the documents according to the comments/ reasons for rejection. All corrected documents shall be resubmitted before starting the Manufacturing.
Above checking results by EIED shall in no way relieve Vendor of any liability, obligation and responsibility out of the purchase order and the mutual agreement in writing.	
 EIED	
Date: Dept: Signature:	
<i>Only for internal review</i>	
CV PI EL IN ME MA	
ST AR PR SA HV TL	

	20-mar-2018						
02	13-03-18	R	For Approval	F. Toneto	A. Madeira	F. Toneto	A. Madeira
01	14-12-17	R	For Approval	F. Toneto	A. Madeira	F. Toneto	A. Madeira
00	18-09-17	F	For Approval	F. Toneto	A. Madeira	F. Toneto	A. Madeira
Rev.	Date	Status	POI	PRE'D	CHK'D	APR'D	AUZ'D



Kangan Utility & Offsite Project



Kangan Petro Refining Co.



Document Title: Equipment Outline (CAE)

Rev.: 02

Location for 83-F-1001 A/R

Document No.: VP-80-00-MA-0001-0015

Page 2 of 5

Tabulation of Revised Pages

PUMP SPECIFICATIONS	
SIZE & TYPE:	HPDM500-750-1d/31
SPEED:	(see MOTOR SPECIFICATIONS)
ROTATION: CCW (AS VIEWED FROM DRIVER)	
DISCH FLG:	20" CLASS: 300RF Standard: ASME B16.5
SUCT FLG:	24" CLASS: 300RF Standard: ASME B16.5
MECH SEAL TYPE:	BURGMANN
MECH SEAL DRG:	H75S2/170-E1 API CODE: 21A-LFN-160-11/61
API PIPING PLANS:	11+61

COUPLING SPECIFICATIONS	
MFR:	J. CRANE
TYPE:	METASTREAM
COUPLING-GUARD MATERIAL:	BRASS
SIZE: TLKS 2000	

DRIVER SPECIFICATIONS	
MOTOR:	SCHORCH
FRAME:	KA2 569X-CJ04E
kW:	1200
PHASE:	3
FURNISHED BY:	SULZER
SPEED:	996 rpm
VOLTAGE:	6000
CYCLE:	50 Hz

CONTRACT DATA		
PURCHASER:	Sulzer Pumps Spain SA	
USER:	Kangan Petro Refining Co	
JOB/PROJECT:	Kangan Utility and Offsite Project	
CUST. P.O. NO.:	-	
SERVICE:	Cooling Tower Pumps	
INSTALLED AT:	Iran	
PUMP OEM:	Sulzer Pumpen (Deutschland) GmbH	
SULZER ORDER NO.:	100263244-0120	

IDENTIFICATION NUMBERS

SULZER SERIAL NO.	CUSTOMER TAG NO'S	
	PUMP	DRIVER
587591	83-P-1001 A	83-M-1001 A
587592	83-P-1001 B	83-M-1001 B
587593	83-P-1001 C	83-M-1001 C
587594	83-P-1001 D	83-M-1001 D
587595	83-P-1001 E	83-M-1001 E
587596	83-P-1001 F	83-M-1001 F
587597	83-P-1001 G	83-M-1001 G
587598	83-P-1001 H	83-M-1001 H
587599	83-P-1001 I	83-M-1001 I
587600	83-P-1001 J	83-M-1001 J
587601	83-P-1001 K	83-M-1001 K

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

AUXILIARY CUSTOMER CONNECTION DIMENSIONS ± 25

DRAWING CONTENT	
SHEET DESCRIPTION	SHEET NO.
GA ISOMETRIC DATA SHEET	1
FOUNDATION AND NOZZLE	2
CONNECTION LAYOUT	3

02	06.03.18	"R"	For Approval	TR	RS	CH	PL
01	04.12.17	"R"	For Approval	TR	RS	CH	PL
00	13.09.17	"F"	For Approval	TR	RS	CH	PL
REV.	DATE	Status	Purpose of Issue	PREP.	CHC'D.	APP'D.	AUTH'D.

KANGAN
C2 RECOVERY & FRACTIONATION PLANT



P.O. No.: KP-80-00-PS-MA-PO-0001-00 SCALE : 1 : 15

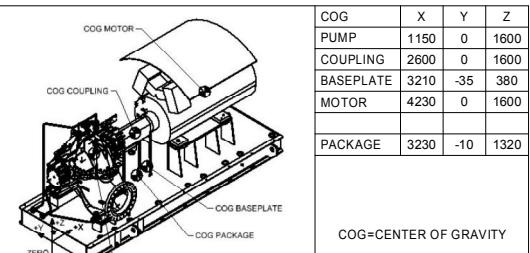
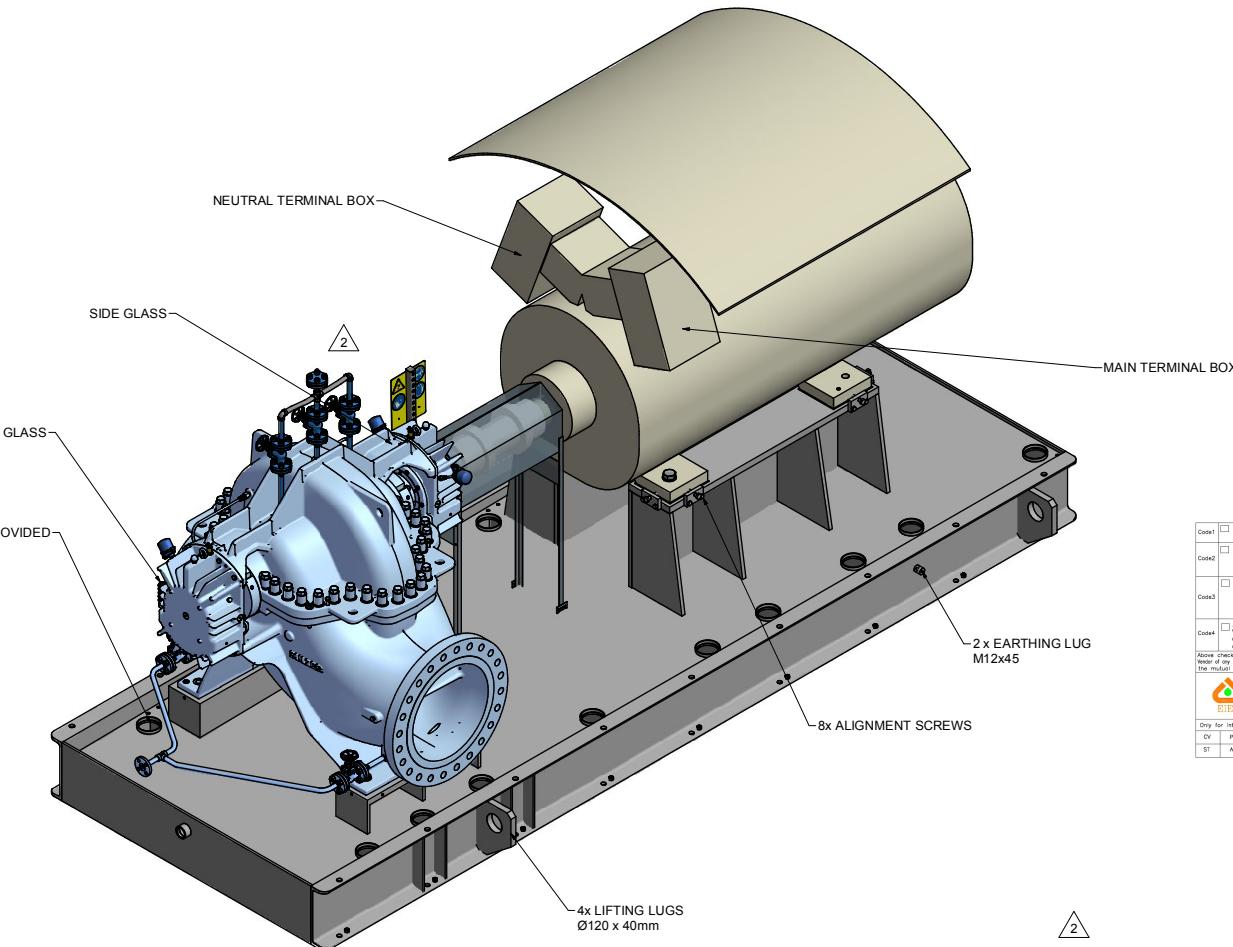
SULZER

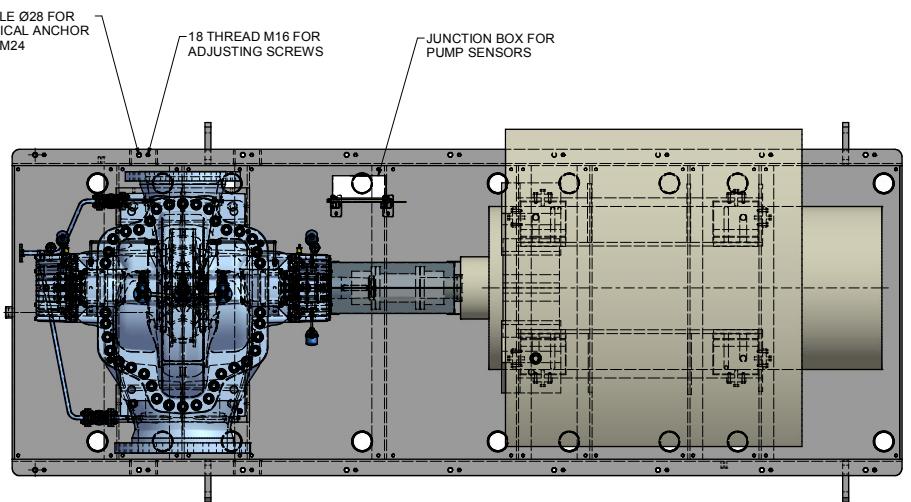
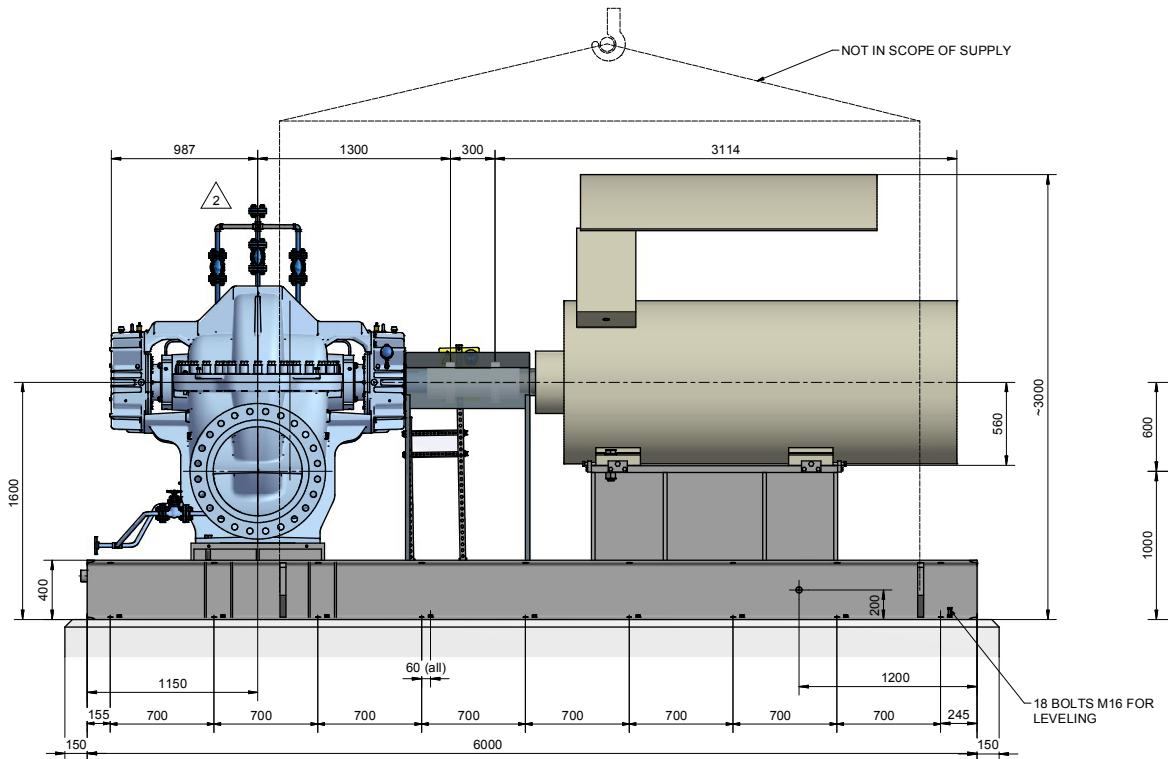


DRAWING TITLE:
Equipment Outline (GAD) including nozzle location

DRAWING NO. VP-80-00-MA-0001-0015 SHEET NO. 1 OF 3 REV. 02

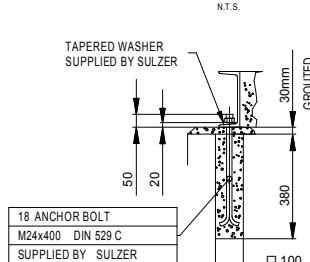
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REPLACED BY:	-	-	SUBSTITUTE FOR:	ORIGINAL SCALE: 1:10
HPDM	500-750-1d/31	GENERAL ARRANGEMENT		DRAWN: 14-Jun-2017
Kangan	-	GA ISOMETRIC AND DATA SHEET		T.Ratzel
100263244-0120		GENERAL ARRANGEMENT DRAWING		CHECKED: 14-Jun-2017 R.Scherban
				APPROVED:
SULZER	PART NO.	EN	PGA100263244120-01	1 / 3





P.N.
↑

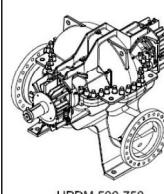
ANCHOR BOLT DETAIL



MAXIMUM NOZZLE LOADINGS

Forces do comply with 2.0 times of the forces shown in API 610

FORCE IN (N) MOMENTS IN (Nm)

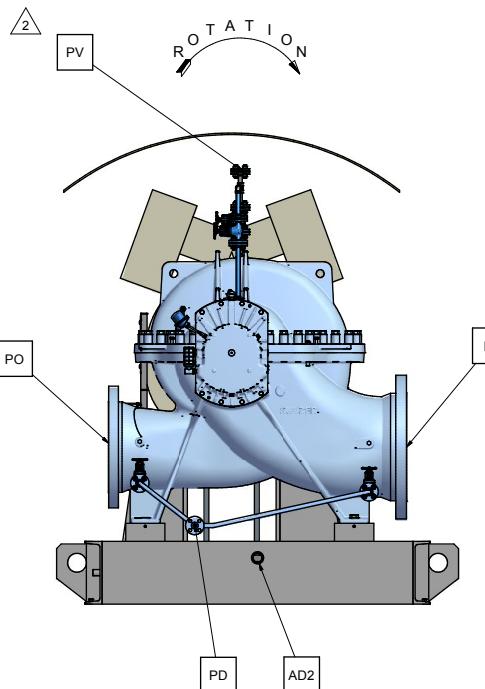
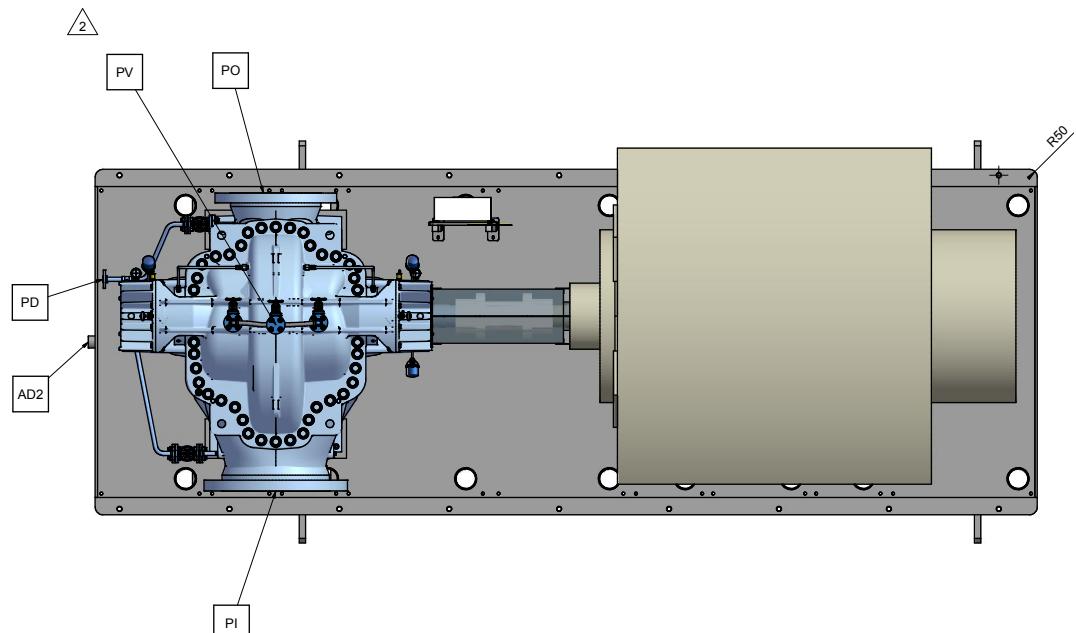
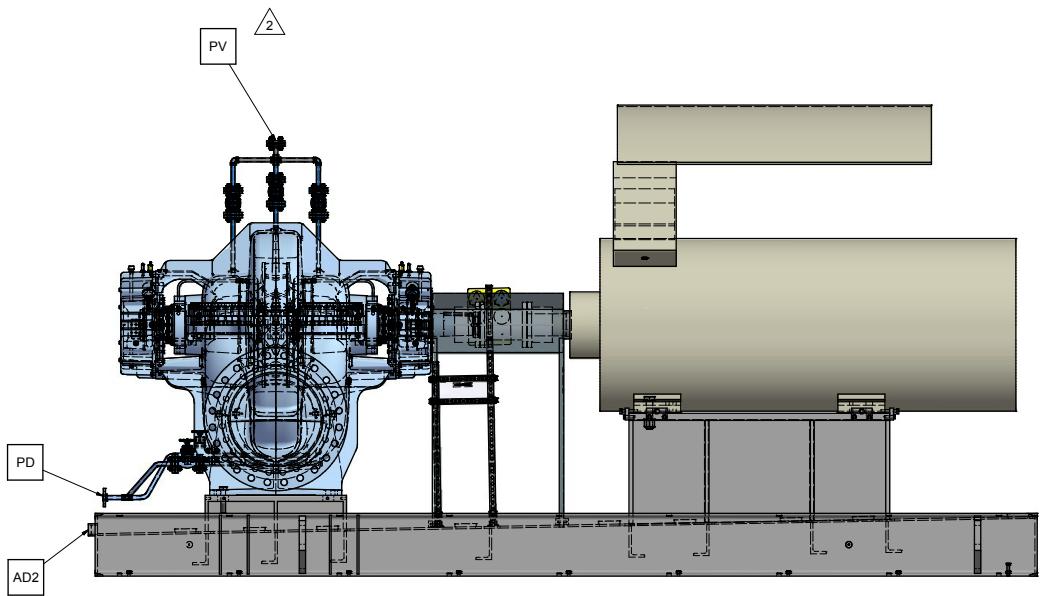


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FORCE	Fx Fy Fx Fr	26273 31727 26087 17013	21587 26093 HPDM 500-750-1d/31	NO	FORMAT: A1 DESIGN GROUP: - - SUBSTITUTE FOR:	FIRST ANGLE PROJECTION: <input checked="" type="checkbox"/>	
MOMENTS	Mx My Mz	22627 11293 16733	18633 9307 13787	Kangan 100263244-0120	GENERAL ARRANGEMENT FOUNDATION AND NOZZLE -	ORIGINAL SCALE: 1:15 DRAWN: 14-Jun-2017 T.Raziel R.Scherban	CHECKED: 14-Jun-2017 R.Scherban APPROVED: R.Scherban
					GENERAL ARRANGEMENT DRAWING		
	SULZER		PART NO.: EN	PGA1002632440120-01		2 / 3	

SULZER PART NO. EN PGA1002632440120-01 2 / 3

CONTRACT DATA		
PURCHASER:	Sulzer Pumps Spain SA	
USER:	Kangan Petro Refining Co	
JOB/PROJECT:	Kangan Utility and Offsite Project	
CUST. P.O. NO.:	-	
SERVICE:	Cooling Tower Pumps	
INSTALLED AT:	Iran	
PUMP OEM:	Sulzer Pumpen (Deutschland) GmbH	
SULZER ORDER NO.:	100263244-0120	
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587599	83-P-1001 I	83-M-1001 I
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587601	83-P-1001 K	83-M-1001 K
<input type="checkbox"/> CERTIFIED FINAL		DO NOT SCALE. DIMENSIONS: mm
<input checked="" 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		

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PHOTOCOPYING AND RECORDING, WITHOUT THE
EXPRESS PRIOR WRITTEN CONSENT OF SULZER
PLM LTD.



CONNECTION LEGEND				
ITEM	DESCRIPTION	SIZE	TYPE	
PI	PUMP SUCTION NOZZLE	24"	ASME B16.5 300 RF	
PO	PUMP DISCHARGE NOZZLE	20"	ASME B16.5 300 RF	
PD	PUMP DRAIN	3/4"	ASME B16.5 300 RF VALVE	
AD2	BASE DRAIN	2"	NPT FEMALE	
PV	PUMP VENT	3/4"	ASME B16.5 300 RF VALVE	

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01	04.12.17	"R"	For Approval	TR	RS	CH	PL
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C2 RECOVERY & FRACTIONATION PLANT



P.O. No.: KP-80-00-PS-MA-PO-0001-00 SCALE : 1 : 15

SULZER



DRAWING TITLE:
Equipment Outline (GAD) including nozzle location

DRAWING No. VP-80-00-MA-0001-015 SHEET No. 3 OF 3 REV. 02

REV.	MODIFICATION	MODIFIED	CHECKED	APPROVED
SEP. PARTS LIST:	NO	FORMAT: A1	DESIGN GROUP: -	FIRST ANGLE PROJECTION: <input checked="" type="checkbox"/>
REPLACED BY:	-	-	SUBSTITUTE FOR:	ORIGINAL SCALE: 1:15
HPDM	GENERAL ARRANGEMENT	DRAWN: 14-Jun-2017 T.Ratzel		
500-750-1d/31	CONNECTION LAYOUT	CHECKED: 14-Jun-2017 R.Scherban		
Kangan	-	APPROVED:		
100263244-0120	GENERAL ARRANGEMENT DRAWING			

SULZER PART NO. EN PGA100263244120-01 3 / 3