


REFERENCE DRAWING	DWG. NO.
Seal System Drawing and BOM For Wet Closed HC Drain Pump P-3190-03	NGL-V-0014-ME-DW-7405
Motor Outline Drawing For Wet Closed HC Drain Pump P-3190-03	NGL-V-0014-ME-DW-7407
Coupling Drawing and BOM For Wet Closed HC Drain Pump P-3190-03	NGL-V-0014-ME-DW-7406
Pump Data Sheet For Wet Closed HC Drain Pump P-3190-03	NGL-V-0014-ME-DT-7411
Pump Cross Section Drawing and BOM For Wet Closed HC Drain Pump P-3190-03	NGL-V-0014-ME-DW-7403
Pump PID Drawing For Wet Closed HC Drain Pump P-3190-03	NGL-V-0014-ME-PD-7416

PUMP INFORMATION

Item No.:	P-3190-03
Service:	Wet Closed HC Drain Pump
Model:	LDB 60-90X6-BV
Seal Plan:	14+53B
Flow/Head	26m <sup>3</sup> /h & (125.9+4.06)m
Motor:	22KW - 4P
Rotation:	Anti-clockwise viewed from the drive-end
No of Stages:	6
Rotor weight:	290kg
Rotor speed:	1470 rpm

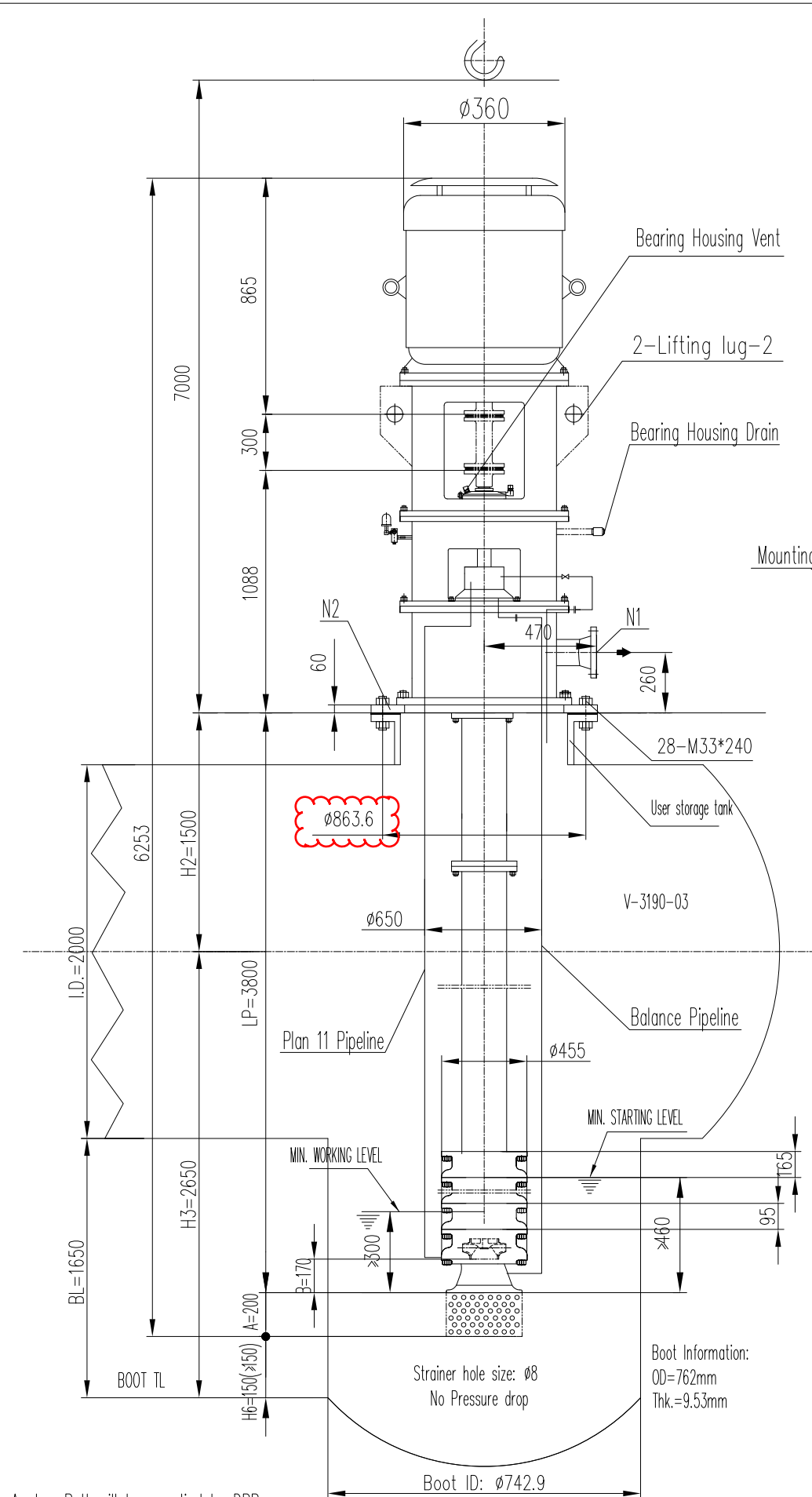
Code1	<input type="checkbox"/> (Approved): No comment and release for Manufacturing (Document to be stamped as Final for considering in Vendor Data Book)
Code2	<input type="checkbox"/> (Approved with Comments): VENDOR/Sub-Contractor shall correct/revise document and issue it as "FOR APPROVAL" (Work May Be Proceeded)
Code3	<input type="checkbox"/> (Commented): VENDOR/Sub-Contractor shall correct /revise and resubmit it as "FOR APPROVAL" of the date documents specified (Corrected to be resubmitted before starting to manufacture.
No Code	<input type="checkbox"/> CONSULTANT and PURCHASER check results on Class 2 documents will be returned without any CODE. VENDOR/Sub-Contractor shall correct/revise document and issue it as "FOR INFORMATION"
The above checking result by OIEC shall in no way relieve Vendor of any liability, obligation and responsibility out of the purchase order and the mutual agreement in writing	
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Static loading calculation results			Dynamic loading calculation results		
FXstatic=	2140/-2140	N	FXdynamic=	205/-205	N
FYstatic=	2660/-2660	N	FYdynamic=	205/-205	N
FZstatic=	-20883/-24443	N	FZdynamic=	0/0	N
MXstatic=	3561/-3561	N*m	MXdynamic=	268/-268	N*m
MYstatic=	1603/-1603	N*m	MYdynamic=	268/-268	N*m
MZstatic=	2446/-2446	N*m	MZdynamic=	148/145	N*m

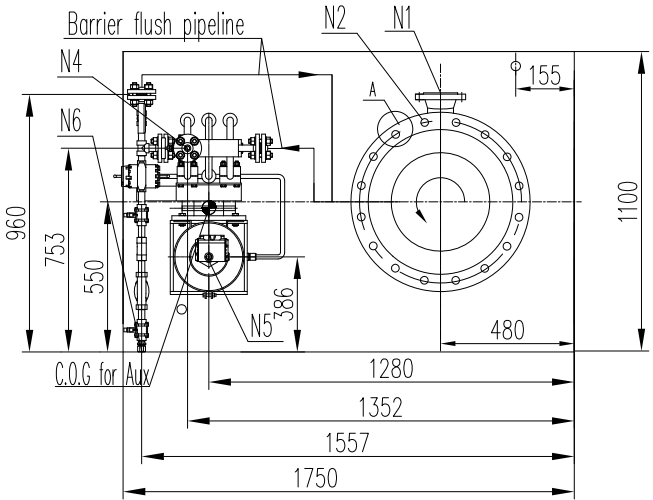
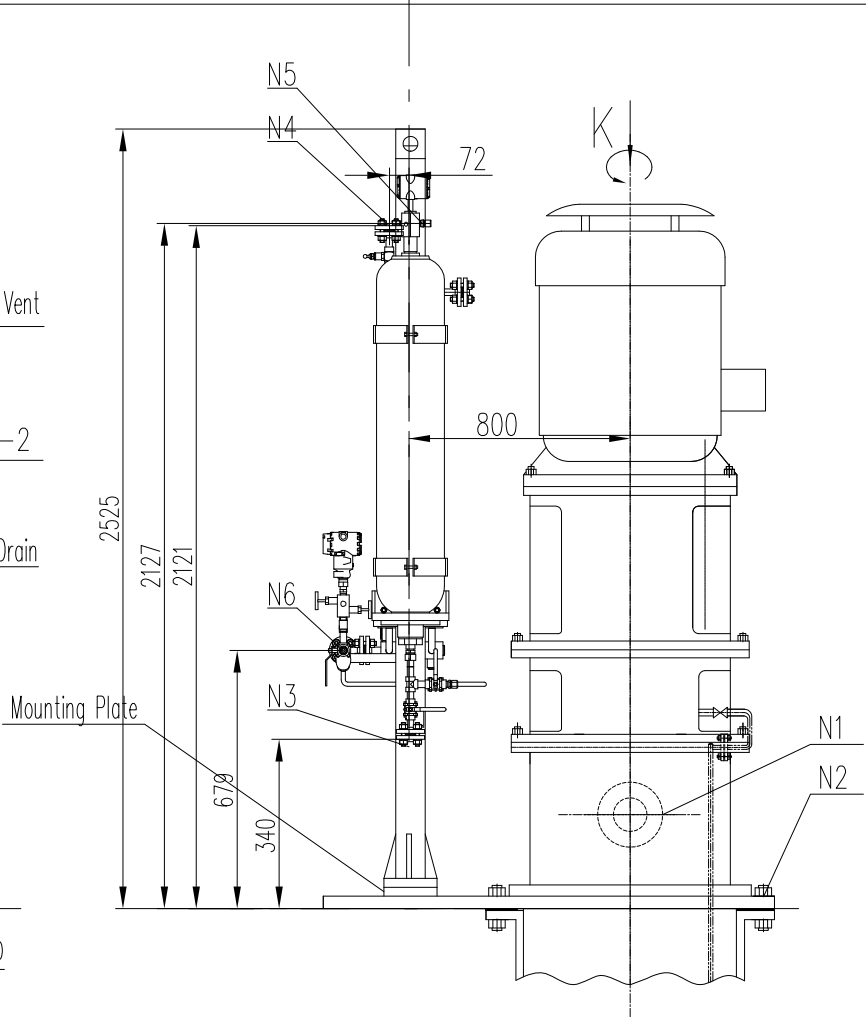
Note:  
Location of Loads & Moments Calculation is the geometric center of baseplate lower surface.

D4	15.Aug.19	ISSUED FOR APPROVAL	N-Z	T.H	R.C	A. ALIPOUR
D3	31.Jul.19	ISSUED FOR APPROVAL	N-Z	T.H	R.C	A. ALIPOUR
D2	17.Jun.19	ISSUED FOR APPROVAL	N-Z	T.H	R.C	A. ALIPOUR
D1	20.May.19	ISSUED FOR APPROVAL	N-Z	T.H	R.C	A. ALIPOUR
D0	03.Apr.19	ISSUED FOR APPROVAL	N-Z	T.H	R.C	BKHODADADEH
REV.	DATE	DESCRIPTION	PREP	CHECK	APPROVAL	OIEC APP

Project Title:						NGL 3100 PROJECT					
Contractor:						<div><div> ...building trust شرکت مهندسی و ساختمان صنعت نفت</div><div>STATUS CODE: A=Comment/Review B=Approval C=Final Issue</div></div>					
Pump General Arrangement DrawingFor Wet Closed HC Drain Pump P-3190-03						OWNER DRAWING NUMBER					
Project Name	Originator	PO Serial No.	Disc.	Doc. Type	Seq No.	Rev.	Sheet No.	Status	Class	Size	
NGL	V	0014	ME	DW	7401	D4	1 OF 1	B	I	A3	
OIEC DRAWING NUMBER						Project Code					
Source		Unit & Section		Phase		Disc.		Doc. Type		Serial No.	

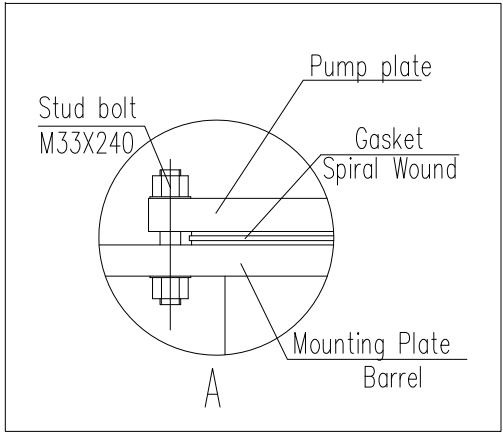


WEIGHT	Earthring bolt detail	PUMP END	LIFTING LUG
Total	2972		
Skid weight	800		
Aux. weight	200		
Motor weight	300		
Pump weight	1672		



Plan View

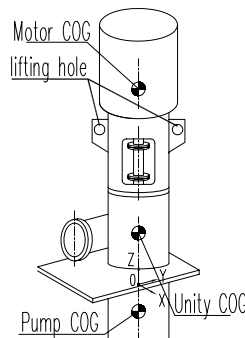
Nozzle information					
6	Plan 53B Filling	N6	1/2" NPT Quikly connection		
5	Plan 53B N2 Charging	N5	M14X1.5		
4	Plan 53B Vent	N4	1/2" ASME B16.5-09 Class600	RF	
3	Plan 53B Drain	N3	1/2" ASME B16.5-09 Class600	RF	
2	Baseplate	N2	28" ASME B16.47 SERIE A Class150	RF	
1	Pump Discharge	N1	3" ASME B16.5-09 Class300	RF	
N0.	Nozzle	Sign	NPS	Standard	Rating



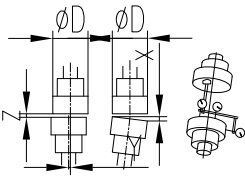
Note:

- The weight of maximum maintenance part is 1650 kg
- Required bolts and nuts, gasket and mounting plate for installation of pump on drum nozzle will be supplied DEEP BLUE. Spare bolts and nuts, gasket will also be supplied accordingly.

LIFTING INFORMATION



Pump COG	AX	0
	AY	-30
	AZ	60
Motor COG	BX	0
	BY	0
	BZ	195
Unity COG	CX	0
	CY	-30
	CZ	38
COG		



Nozzle load,Force(N)/Moment(N.m)		
D≤200	X	≤0.05
	Y	≤0.05
200<D≤300	Z	Z±0.1
	X	≤0.08
300<D≤400	Y	≤0.08
	Z	Z±0.15
D1	X	≤0.10
	Y	≤0.10
D1	Z	Z±0.2
	Fx	2140
	Fy	1780
	Fz	2660
	Mx	1900
	My	940
	Mz	1440

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