

	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)						 	
	DATA SHEET (W/CURVE, DRAWING & CERTIFICATE) FOR COMPRESSOR MAIN MOTOR						11 از 1 شماره صفحه	
شماره پیمان: 053 - 073 - 9184	نسخه V02	سریال 0001	نوع مدرک DS	رشته EL	تسهیلات 120	صادر کننده HY	بسته کاری GCS	پروژه BK

طرح نگهداشت و افزایش تولید 27 مخزن

DATA SHEET (W/CURVE, DRAWING & CERTIFICATE) FOR COMPRESSOR MAIN MOTOR

نگهداشت و افزایش تولید میدان نفتی بینک

V02	Jan.2024	AFC	Havayar	M.Fakharian	S.Faramarzpour	
V01	Nov. 2023	IFR	Havayar	M.Fakharian	S.Faramarzpour	
V00	Feb. 2023	IFR	Havayar	M.Fakharian	M.Mehrshad	
Rev.	Date	Purpose of Issue/Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval

Status:

IFA: Issued for Approval
IFR: Issued for Review
IFI: Issued for Information
AFC: Approved for Construction

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)		 																
	DATA SHEET (W/CURVE, DRAWING & CERTIFICATE) FOR COMPRESSOR MAIN MOTOR <table border="1"> <tr> <td>نسخه</td> <td>سریال</td> <td>نوع مدرک</td> <td>رشته</td> <td>تسهیلات</td> <td>صادرکننده</td> <td>بسته کاری</td> <td>پروژه</td> </tr> <tr> <td>V02</td> <td>0001</td> <td>DS</td> <td>EL</td> <td>120</td> <td>HY</td> <td>GCS</td> <td>BK</td> </tr> </table>		نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه	V02	0001	DS	EL	120	HY	GCS	BK	11 از 2 شماره صفحه
نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه												
V02	0001	DS	EL	120	HY	GCS	BK												
شماره پیمان: 053 - 073 - 9184																			

REVISION RECORD SHEET

PAGE	V00	V01	V02	V03	V04	PAGE	V00	V01	V02	V03	V04
1	X	X	X			66					
2	X	X	X			67					
3	X	X	X			68					
4	X	X	X			69					
5	X	X	X			70					
6	X	X	X			71					
7	X	X	X			72					
8		X	X			73					
9		X	X			74					
10		X	X			75					
11			X			76					
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 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)								
شماره پیمان: 053 – 073 – 9184	DATA SHEET (W/CURVE, DRAWING & CERTIFICATE) FOR COMPRESSOR MAIN MOTOR							11 از 3 :شماره صفحه	
	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
	BK	GCS	HY	120	EL	DS	0001		V02

Item	Category	Required Specification	Vendor Data
1	Driven Machine	Electrical Motor	Confirmed
2	Driven Machine Tag No.	-	M-2101- A/B/C
3	Manufacturer		WOLONG NANYANG
4	Manufacturer's Number / Type		YBXKK 800-14
5	Manufacturing Standard	IEC 60034 & IPS-M-EL-132(2)	Confirmed
6	Location	☒ Outdoor (Under Shelter) ☐ Indoor	Outdoor-WHTF2
7	Area Classification	Acc. to requisition data	Zone 2 IIB
8	Ambient Temperature	5 to +55°C	5 to +50°C
9	Relative Humidity	100 %	100 %
10	Dust	☒ Yes ☐ No	Confirmed
11	Corrosion	☒ Yes ☐ No	Paint is manufacture standard
12	Elevation	12.5m Above Sea Level	Confirmed
13	Quantity	Acc. To Load List (BK-GCS-PEDCO-120-EL-LI-0001)	One each compressor
14	Tag Number	Acc. To Load List (BK-GCS-PEDCO-120-EL-LI-0001)	M-2101- A/B/C
15	Motor Type	Asynchronous, Squirrel Cage	Confirmed
16	Mounting	☐ Horizontal ☐ Vertical	Horizontal
17	Rotor Construction	☒ Brazed Copper Bars ☐ Aluminum Die Cast	IEC design
18	Stator Case Material	Cast Iron	Steel
19	Frame Material	Steel Sheet or Cast Iron	Steel
20	Cooling Method	According to IPS-M-EL-131(2)	IC511
21	Ingress Protection Degree for Motor	IP 54	IP55
22	Ingress Protection Degree for Terminal Box	IP 55	IP55
23	Explosion Protection of Motor	N/A for Safe Area Zone 2, IIB, T3	Zone 2, IIB, T3
24	Explosion Protection of Terminal Box	N/A for Safe Area Zone 2, IIB, T3	Zone 2, IIB, T3
25	Ex. Certificate Authority/Certificate No.	By Vendor	ECM-Atex after manufactured
26	Driven Machine Shaft Power Requirement (P _{mp})	As Per Related Mechanical Data sheet (to be Specified by Vendor)	963.9KW (PSV setting)
27	API Design Margin (Km)	1.10	Confirmed
28	Motor output shaft power requirement @ site condition (=Pmp/Km)	As Per Related Mechanical Data sheet (to be Specified by Vendor)	1070KW@ site condition

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شماره پیمان: 053 – 073 – 9184	DATA SHEET (W/CURVE, DRAWING & CERTIFICATE) FOR COMPRESSOR MAIN MOTOR							11 از 4 : شماره صفحه	
	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
	BK	GCS	HY	120	EL	DS	0001		V02

Item	Category	Required Specification	Vendor Data
29	De-rating factor due to Ambient Temperature (Kt)	0.85 (MFR Shall Advise The Value)	1070KW@ site condition
30	De-rating factor due to Altitude (Ka)	1 (MFR Shall Advise The Value)	1070KW@ site condition
31	Motor Power (Defined for IEC condition i.e. 40°C)	As Per Related Mechanical Data sheet (to be Specified by Vendor)	1070KW@ site condition
32	Standard Rated Motor Output = $K_m \times P_{mp} / (K_a K_t)$	By Vendor	1070KW@ site condition
33	Frame Size	By Vendor	800
34	Rated Voltage	11KV $\pm 10\%$ or 3.3KV $\pm 10\%$	11KV $\pm 10\%$
35	Rated Frequency	50 Hz $\pm 5\%$	50 Hz $\pm 5\%$
36	Voltage During Motor Start	80% Un	Confirmed
37	Synchronous Speed	By Vendor	428 rpm
38	Full Load Speed [RPM]	By Vendor	424 rpm Rated
39	Number of Poles	By Vendor	14
40	Starting Method	Direct on Line	Confirmed
41	Direction of Rotation (Viewed from coupling end)	Shall be Proposed by MFR Based on Driven Load Rotation of Direction	Bi direction
42	Stator Winding Connection	Star	Confirmed Y
43	Location of Terminal Box (Viewed from DE)	[] Right [] Left	Terminal box for main power supply: Right CT terminal box: Left
44	Insulation Class	Class F	Confirmed
45	Class of Temperature Rise	Class B	Confirmed
46	Max. Permissible Starting Time [s]	By Vendor	25S
47	Accelerating Time DOL starting, at 100% U_n [s]	By Vendor	9S
48	Accelerating Time DOL starting, at 80% U_n [s]	By Vendor	28S
49	Starting Torque at 100% U_n [N.m]	By Vendor	14460
50	Starting Torque at 80% U_n [N.m]	By Vendor	9254
51	Maximum Torque [N.m]	By Vendor	1.8 $\times$ Rated torque
52	Rated Torque [N.m]	By Vendor	24100
53	Rated Current [A]	By Vendor	81.7
54	No Load Current [A]	By Vendor	30.8
55	Locked Rotor Current [A]	$< 7I_n$	Confirmed
56	Torque-Speed Class	Shall be Selected Based on Driven Load Torque Requirement	[] A [] B [] C [] D
57	Permit to Start Times	3C2H	Confirmed

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شماره پیمان: 053 – 073 – 9184	DATA SHEET (W/CURVE, DRAWING & CERTIFICATE) FOR COMPRESSOR MAIN MOTOR							11 از 5 : شماره صفحه	
	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
	BK	GCS	HY	120	EL	DS	0001		V02

Item	Category	Required Specification	Vendor Data
58	Reacceleration	Capable for connection to 100% main voltage with 30%, 180° out of phase residual voltage.	Confirmed
59	Heating time Constant [minute]	By Vendor	120
60	Cooling Time Constant [minute]	By Vendor	240
61	Duty Cycle	S1	Confirmed
62	Rotor Moment of Inertia [kgm ²]	By Vendor	TBD
63	Driven Machine Moment of Inertia [kgm ²]	By Vendor	1471.85
64	Max. Allowable Load Moment of Inertia [kgm ²]	By Vendor	1600
65	Power Factor at ½ Rated Load	By Vendor	0.58
66	Power Factor at ¾ Rated load	By Vendor	0.67
67	Power factor at Rated Load	By Vendor	0.73
68	Efficiency at ½ Rated Load	By Vendor	93.4%
69	Efficiency at ¾ Rated Load	By Vendor	93.9%
70	Efficiency at Rated Load	By Vendor	94.2%
71	Bearing (DE)		
	Type (Detail Description by Vendor)	[] Antifriction (Ball Bearing) [] Antifriction (Roller Bearing) [X] Sleeve (Spherical Self Aligned)	Confirmed
	Manufacturer	By Vendor	Chinese not-specified brand
	Minimum Life Without Load	Minimum 100,000 Hours	Confirmed
	Minimum Life With Load	By Vendor	
	Lubrication	Oil (oil specification shall be specified by manufacturer)	Confirmed
	Lubrication system (To be advised by manufacturer considering ambient temperature)	[] Grease (anti friction bearings) [X] Air cooled oil reservoir with Lubricating ring [] Forced Oil Lubrication with air cooled radiator	Forced Oil Lubrication with air cooled radiator
	Oil Capacity [Liter]	By Vendor	9L/min
	Permissible Trust Force [N]	By Vendor	Will be filled
	Max. Normal Operating Temperature	By Vendor	90°C
72	Bearing (NDE)		
	Type (Detail Description by Vendor)	[] Anti friction (Ball Bearing) [] Antifriction (Roller Bearing) [X] Sleeve (Spherical self aligned)	Confirmed
	Manufacturer	By Vendor	Chinese not-specified brand
	Minimum Life Without Load	Minimum 100,000 Hours	Confirmed

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شماره پیمان: 053 – 073 – 9184	DATA SHEET (W/CURVE, DRAWING & CERTIFICATE) FOR COMPRESSOR MAIN MOTOR							11 از 6 : شماره صفحه	
	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
	BK	GCS	HY	120	EL	DS	0001		V02

Item	Category	Required Specification	Vendor Data
	Minimum Life With Load	By Vendor	Will be filled
	Lubrication	Oil (Specification must be specified by manufacturer)	Forced Oil Lubrication with air cooled radiator
	Oil Capacity [Liter]	By Vendor	9L/min
	Permissible Trust Force [N]	Shall meet coupled machine trust	Will be filled
	Max. Normal Operating Temperature	By Vendor	90°C
73	DE Bearing Temperature Sensor / Meter	[] Not Required [] PTC [X] RTD [X] Thermometer (Dial) [] Temperature Switch	[X] RTD
74	NDE Bearing Temperature Sensor	[] Not Required [] PTC [X] RTD [X] Thermometer (Dial) [] Temperature Switch	[X] RTD
75	Winding Temperature Sensor	[] Not Required [] PTC [X] RTD (9 RTD's 3 per phase)	[X] RTD (9 RTD's 3 per phase)
76	Space Heater	Required	Yes
	Space Heater Voltage [V]	230VAC, 50Hz, 1Ph	Confirmed
	Space Heater Power [W]	By Vendor	1000
77	Terminal Boxes	[X] MV main Terminal Box [X] Space heater / RTD's / Switches Terminal Box	MV main Terminal Box Space heater and RTD Terminal Box
78	Main Power Cable Specification & Size & Orientation	According to BK-GCS-PEDCO-120-EL-CN-0003	M90
79	Method of Cable Entry	[X] Cable Gland [] Sealing Gasket	Confirmed
80	Short Circuit Capability of Terminal Box	25 kA for 0.2 S	N.A
81	Power terminal box connection method	Motor & Supply wires with cable shoe to be fixes on suitable post insulators	Confirmed
82	Sound Level at 1 distance (m) From Motor	Max. 85 dB(A)	≤85
83	Finish Color	Manufacturer Standard	RAL5012
84	Test & Inspection Routine tests including: a) Insulation resistance test on windings, heaters, temperature detectors and bearing insulations b) Measurement of winding resistance (cold) c) Measurement of winding resistance (hot)	For P≤500kW Witness on test of all motors[X] Report of test of all motors[X] For P>500kW Witness on test of all motors[X] Report of test of all motors[X]	As per ITP

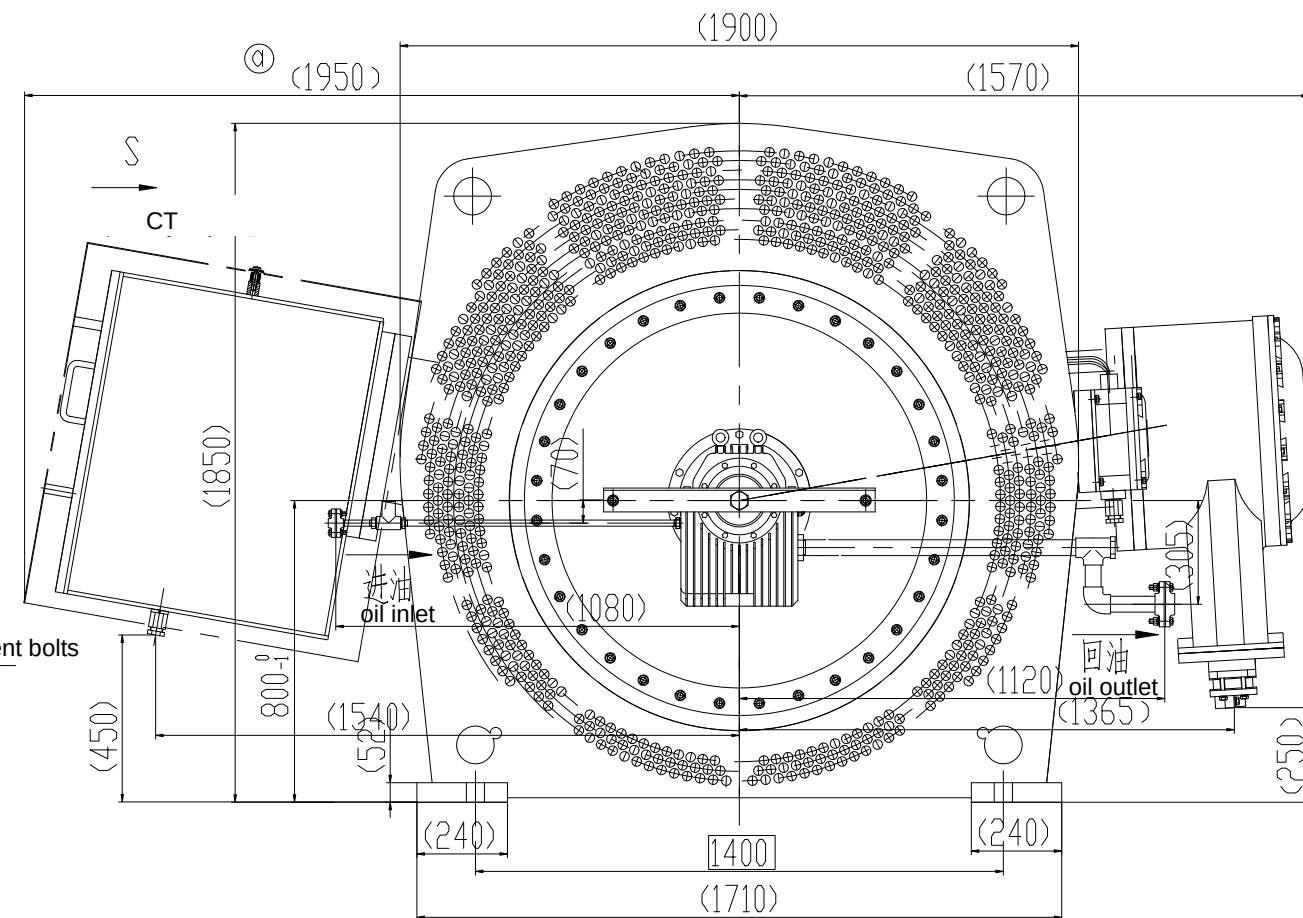
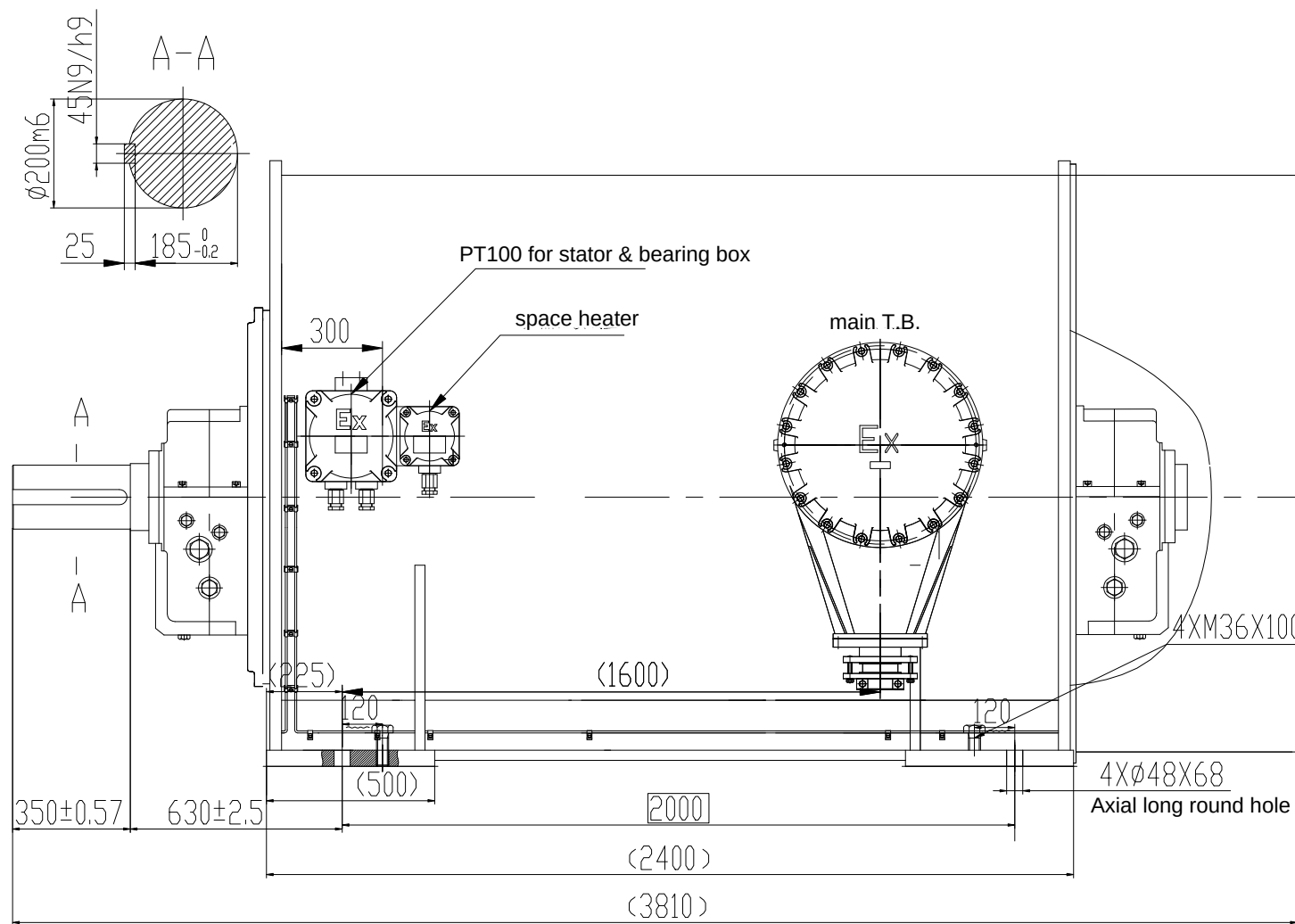
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شماره پیمان: 053 – 073 – 9184	DATA SHEET (W/CURVE, DRAWING & CERTIFICATE) FOR COMPRESSOR MAIN MOTOR							11 از 7 :شماره صفحه	
	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
	BK	GCS	HY	120	EL	DS	0001		V02

Item	Category	Required Specification	Vendor Data
	d) Bearing temperature rise e) No load current f) Current unbalance at full load g) Locked rotor current (at full or reduced voltage) h) Locked rotor torque (at full or reduced voltage) i) Torque speed curve j) No load losses k) Direction of rotation l) Slip and nominal speed and full load m) Vibration severity n) Noise test o) bearings inspection Type test: p) Heat run test	For P<=1000kW Report of test of one identical motor[X] For P>1000kW Witness on test of One project motor[X] Report of test of above mentioned test[X]	
Note1: Motor with differential protector, LZZBJ9-10A1- transformation ratio 400:5 0.5/5P10 15VA, 3 pieces/set.\			



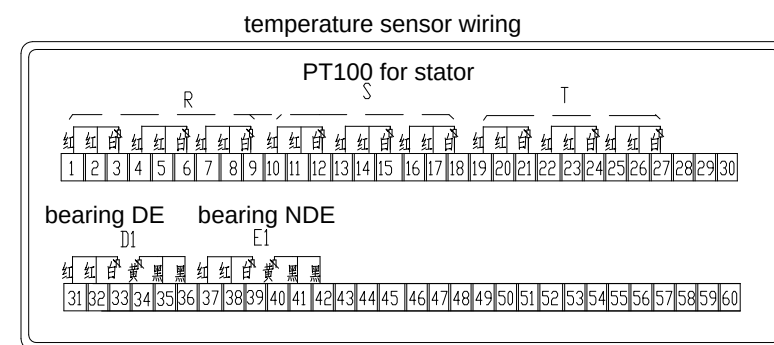
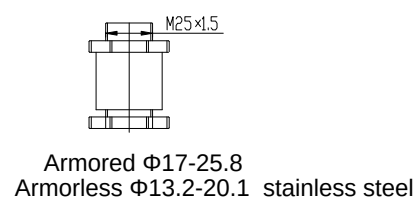
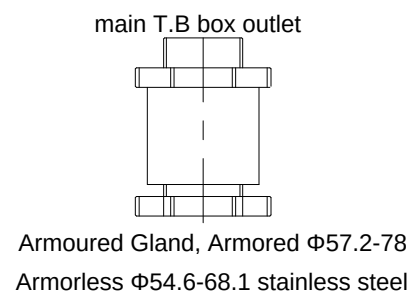
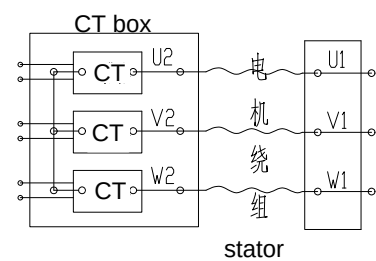
Data sheet

Product number	: YBXKK800-14
Product group	: Explosion-proof motor
Standard	: IEC/GB IE3
Frame construction	: Casting steel
Rated output	: 1070kW
Rated speed	: 424rpm (Synchronous speed 428r/min)
Number of poles	: 14
Rated voltage	: 11000V $\pm 10\%$
Current	: 81.7A
Stator connection	: Y
Rated frequency	: 50Hz $\pm 5\%$
Service factor	: 1
Duty	: S1
Efficiency	: 94.2% @ full load
Power factor	: 0.73 @ full load
Locked torque / rated torque	: 0.6
Locked current / rated current	: 6
Max torque / rated torque	: 2.0
Start	: DOL start
Thermal class	: F(155°C) and temp. rise B @ site condition
Ambient temperature	: 5~55°C
Altitude	: $\leq 1000\text{m}$
Type of construction	: IM B3
Degree of protection	: IP55
Cooling method	: IC511
Bearing design	: Sleeve bearing (Chinese brand)
Bearing model	: DQ18-200A(DE), DQ18-200AJ(NDE)
Grease	: ISO VG100#
Lubrication	: forced lubrication oil consumption: 9L/min; bearing oil inlet temperature: $\leq 60^\circ\text{C}$; pressure 4-6barg
Direction of rotation	: CW/CCW/bi-direction
Temperature sensor-winding Temperature sensor-bearings	: 3RTD for each phase. alarm 135°C, stop 145°C 2RTD for each bearing. alarm 90°C, stop 95°C
Space heater	: 1000W, 230V
Weight	: 16.5t
Ex grade	: Ex db IIB T4 Gb (no purging device)
Environment	: Outdoors WHTF2
Noise	: 85dB(A) 1m from motor surface
Color	: RAL5012 or specified by client
Static load	: 39.2kN
Dynamic load	: 43kN
Vibration sensor	: N/A
CT	: suggested 150:5 0.5/5P10 15VA)
Rated torque	: 24100Nm



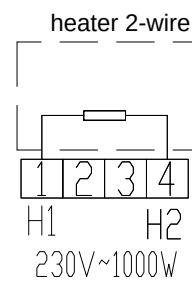
① Rotor axial float $\pm 5\text{mm}$

Temperature measurement junction box outlet*2
Vibration measurement junction box outlet*2
Heater junction box outlet*1
Transformer junction box outlet*1



OIL INLET FFLANGE: ASME B16.5 150LB NPS1/2 SW/RF
OIL OUTLET FLANGE: ASME B16.5 150LB NPS3/2 SW/RF

oil inlet flange: HG/T20592-2009 SO15-6 RF
oil outlet flange: HG/T20592-2009 SO40-6 RF
① : $\leq 60^\circ\text{C}$ oil inlet temperature



					202311ZX-B061					
					YBXKK800-14 1070kW		图 样 标 记			重 量 比 例
α	6	按 要 求	刘聪帅	20231206						见 表
标 记 处 数		更 改 文 件 号	签 字	更 改 日 期						
设 计		刘聪帅	标 准 化	顾秀珍	11kV dIIB IP55		共 1 页		第 1 页	
校 核		李玲鸽	审 定				卧龙电气南阳防爆集团股份有限公司			
审 核			批 准	王鑫成						
会 签			日 期	20231122						

