



NISOC

نگهداشت و افزایش تولید میدان نفتی بینک  
سطح الارض

احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR DIFF. PRESSURE FLOW TRANSMITTER

شماره پیمان:

053 - 073 - 9184

پروژه

BK

بسته کاری

GCS

صادرکننده

PEDCO

تسهیلات

120

رشته

IN

نوع مدرک

DT

سریال

0012

نسخه

D02

شماره صفحه: 1 از 6

## طرح نگهداشت و افزایش تولید 27 مخزن

### DATA SHEETS FOR DIFF. PRESSURE FLOW TRANSMITTER

نگهداشت و افزایش تولید میدان نفتی بینک

Rev.	Date	Purpose of Issue / Status	Prepared by:	Checked by:	Approved by:	CLIENT Approval
D02	MAY.2023	IFA	P.Hajisadeghi	M.Fakharian	A.M.Mohseni	
D01	DEC.2022	IFA	P.Hajisadeghi	M.Fakharian	M.Mehrshad	
D00	APR.2022	IFC	P.Hajisadeghi	M.Fakharian	M.Mehrshad	

Class: : 1

CLIENT Doc. Number: F9Z-708933

status:

**IDC:** Inter-Discipline Check

**IFC:** Issued For Comment

**IFA:** Issued For Approval

**AFD:** Approved For Design

**AFC:** Approved For Construction

**AFP:** Approved For Purchase

**AFQ:** Approved For Quotation

**IFI:** Issued For Information

**AB-R:** As-Built for CLIENT Review

**AB-A:** As-Built -Approved



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REVISION RECORD SHEET

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**REFERENCE DOCUMENTS :**

Specification For Instrumentation	BK-GNRAL-PEDCO-000-IN-SP-0001
Process Basis Of Design	BK-GNRAL-PEDCO-000-PR-DB-0001
Piping Material Specification	BK-GCS-PEDCO-120-PI-SP-0001
Hazardous Area Classification Layout	BK-GCS-PEDCO-120-SA-PY-0002
Instrument & Control System Design Criteria	BK-GCS-PEDCO-120-IN-DC-0002
Symbol & Legend For PFD and P&ID	BK-GCS-PEDCO-120-PR-PI-0001
P&ID - Gas Compression Inlet Gas Pipeline (Binak)	BK-GCS-PEDCO-120-PR-PI-0002
P&ID - Gas Compression Inlet Gas Pipeline (Golkhari)	BK-GCS-PEDCO-120-PR-PI-0003
P&ID - Slug Catcher System	BK-GCS-PEDCO-120-PR-PI-0004
P&ID - Gas Compression Inlet Knock Out Drum	BK-GCS-PEDCO-120-PR-PI-0005
P&ID - 1st Stage Gas Compression Suction Drums	BK-GCS-PEDCO-120-PR-PI-0006
P&ID - 1st Stage Gas Compression Compressors	BK-GCS-PEDCO-120-PR-PI-0007
P&ID - 1st Stage Gas Compression Air Coolers	BK-GCS-PEDCO-120-PR-PI-0008
P&ID - 2nd Stage Gas Compression Suction Drums	BK-GCS-PEDCO-120-PR-PI-0009
P&ID - 2nd Stage Gas Compression Compressors	BK-GCS-PEDCO-120-PR-PI-0010
P&ID - 2nd Stage Gas Compression Air Coolers	BK-GCS-PEDCO-120-PR-PI-0011
P&ID - 2nd Stage Gas Compression Discharge Drum	BK-GCS-PEDCO-120-PR-PI-0012
P&ID - Gas Compression Dehydration Package	BK-GCS-PEDCO-120-PR-PI-0013
P&ID - Lean Glycol Storage Tank	BK-GCS-PEDCO-120-PR-PI-0014
P&ID - Instrument & Plant Air System	BK-GCS-PEDCO-120-PR-PI-0015
P&ID - Nitrogen Generation System	BK-GCS-PEDCO-120-PR-PI-0016
P&ID - Close Drain System	BK-GCS-PEDCO-120-PR-PI-0017
P&ID - Corrosion Inhibitor Package	BK-GCS-PEDCO-120-PR-PI-0018
P&ID - Methanol Injection Package	BK-GCS-PEDCO-120-PR-PI-0019
P&ID - LP Flare System	BK-GCS-PEDCO-120-PR-PI-0020
P&ID - Oily Water Sewer	BK-GCS-PEDCO-120-PR-PI-0021
P&ID - Fuel Gas System	BK-GCS-PEDCO-120-PR-PI-0022
P&ID - Diesel Oil System	BK-GCS-PEDCO-120-PR-PI-0023
P&ID - Potable Water System	BK-GCS-PEDCO-120-PR-PI-0024
P&ID - Glycol Sump Drum	BK-GCS-PEDCO-120-PR-PI-0025
P&ID - Fire Water Network	BK-GCS-PEDCO-120-SA-PI-0001
P&ID - Total Flooding System For Extension of Existing Elect. Building	BK-GCS-PEDCO-120-SA-PI-0002



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**GENERAL NOTES:**

1 - Zero and span adjustment shall be included and be accessible from outside in addition to HHC.

2 - Over range protection (at least 30% full scale) shall be considered.

3 - Tag plate as per Specification for Instrumentation, shall be stainless steel 304 SS (VTC). Following details shall be engraved on them:

- Tag Number
- Range Limit
- Service
- Manufacture Model

4 - Painting shall be in accordance with manufacturer standard.

5 - VTA : Vendor To Advise

6 - N/A : Not Applicable

7 - Environmental condition for field instrumentation of Binak oilfield shall be considered as per the following (According to "BK-GNRL-PEDCO-000-PR-DB-0001: Process Basis Of Design"):

Maximum ambient temperature: 50 (°C)

Minimum ambient temperature: 5 (°C)

Maximum steel surface exposed to sun: 85 (°C)

Maximum summer dry bulb: 50 (°C)

DB/RH for Summer HVAC Design: 41 °C / 61 %

DB FOR Winter HVAC Design: 6 °C

**Relative Humidity:**

- Maximum Design relative humidity (%): 100
- Minimum Design relative humidity (%): 0

8 - Material Test Certificate and calibration Certificate for all transmitters to be submitted by Vendor.



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## DIFF. PRESSURE TYPE FLOW TRANSMITTER

GENERAL DATA	1	Tag No.	SEE NEXT PAGE		
	2	P&ID No.	SEE NEXT PAGE		
	3	Equipment No. / Line No.	SEE NEXT PAGE		
	4	Area Classification	ZONE 2, IIB T4		
	5	Piping Class	SEE NEXT PAGE		
	6	RFI Protection	Tropicalisation	NEEDED	Needed
OPERATING CONDITIONS	7	Fluid	SEE NEXT PAGE		
	8	Phase	SEE NEXT PAGE		
	9	Operating Pressure	(Barg)	SEE NEXT PAGE	
	10	Design Pressure	(Barg)	SEE NEXT PAGE	
	11	Operating Temperature	(°C)	SEE NEXT PAGE	
	12	Design Temperature	(°C)	SEE NEXT PAGE	
	13	Min./Normal/Max Flow Rate	(Kg/h)	SEE NEXT PAGE	
TRANSMITTER	14	Element Type	SEE NEXT PAGE		
	15	Size of Process Connection	SEE NEXT PAGE		
	16	Rating of Process Connection	-		
	17	Element Material	SEE NEXT PAGE		
	18	Enclosure Material	Die cast aluminium		
	19	Instrument Range	SEE NEXT PAGE		
	20	Power Supply	24 VDC-Loop powered		
	21	Output Signal	4-20 mA		
	22	Communication Protocol	SMART HART (4-20mA)		
	23	Electrical Connection	ISO M20 x 1.5		
	24	Electrical Certification	EEx "ia"		
	25	Ingress Protection	IP-65 as minimum		
	26	Accuracy	Write Protection	0.1% of F.S	Not Needed (Note 1)
	27	Repeatability	+/- 0.1% or better		
28	Span and Zero Adjustment	Required			
29	Over Range Protection	SEE NEXT PAGE (1.3 of F.S)			
DIAPHRAGM SEAL	30	Type	N/A		
	31	Size (In)	N/A		
	32	Fill Fluid	N/A		
	33	Diaphragm Material	N/A		
	34	Capillary Material	N/A		
	35	Capillary Length	N/A		
OPTIONS	36	Integral Indicator	Display Unit	Required	Barg
	37	Mounting Brackets	Required, 2" Support Pipe		
	38	Manifold	Body Material	SEE NEXT PAGE	316 S.S.L
	39	Connection	1/2 " NPT		
	40	Manifold Model	Manifold Manufacturer	-	
	41	Integral Indicator Style	LCD TYPE		
	42	NACE Requirements	SEE NEXT PAGE		
PURCHASING DATA	43	Model	Manufacturer	Will be finalized later	Will be finalized later
	44	Supplier	Order	Will be finalized later	Will be finalized later

## Notes:

(1) According to Specification For Instrumentation, If smart type transmitters are selected for **ESD application** they shall be configured as "write protected". There is no Flow Transmitter for ESD.



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DATA SHEETS FOR DIFF. PRESSURE FLOW TRANSMITTER

شماره پیمان:	پروژه	منه کاری	سازنده	تجهیزات	رشته	نوع مدارک	سریال	نوع
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D02

DIFF. PRESSURE TYPE FLOW TRANSMITTER LIST

Rev.	Item No.	Tag No.	P&ID No.	Equipment No. / Line No.	Service	Fluid	Connection Rating	Phase	Design Pressure (Bar-g)	Operating Pressure (Bar-g)	Design Temp. (°C)	Operating Temp. (°C)	Calibration Range (mBarg)	Instrument Range (mBarg)	Flow Rate (Kg/h)			Element Type	Element Material	Size of Process Connection (Orifice Flange Tapping)	Over Range Protection	5-Way Valve (1/2"NPTx 1/4"NPT)	NACE	Model	Remark
															Min.	Normal	Max.								
D01 MODIFIED	1	FIT-2101	BK-GCS-PEDCO-120-PR-PI-0002-D06	GAS-111-0101-AN07-6'-PT	Gas Compression Inlet Gas Pipeline (Binak)	GAS	300#	Vapour	18.2	7.5	85	46 / 26.67	0-250	0-250	2297.4 (Kg/hr)	6564 (Kg/hr)	7220.4 (Kg/hr)	Diaphragm	SS 316L	2 x 1/2" NPTF	X 1.3 Full Scale	Yes	Yes	VTA	
D01 MODIFIED	2	FIT-2102	BK-GCS-PEDCO-120-PR-PI-0003-D06	GAS-111-0001-FN07-8'-PT	Gas Compression Inlet Gas Pipeline (Golkhan)	GAS	300#	Vapour	41.4	7.5	85	32/15.5	0-250	0-250	3944.1605 (Kg/hr)	11269.03 (Kg/hr)	12395.933 (Kg/hr)	Diaphragm	SS 316L	2 x 1/2" NPTF	X 1.3 Full Scale	Yes	Yes	VTA	
D01 MODIFIED	3	FIT-2111	BK-GCS-PEDCO-120-PR-PI-0004-D06 (2 of 2)	CDH-112-0014-CN05-4'-PT	Slug Catcher System	GAS	300#	LIQUID	23.3	19.5	85	15.2	0-250	0-250	3 (m3/h)	10 (m3/h)	11 (m3/h)	Diaphragm	SS 316L	2 x 1/2" NPTF	X 1.3 Full Scale	Yes	Yes	VTA	
D01 ADDED	4	FIT-2211	BK-GCS-PEDCO-120-PR-PI-0016-D06	NIT-112-0024-AN01-2'-PT	Nitrogen Package Outlet	GAS	300#	GAS	12.5	8	85	60	0-250	0-250	10.85 (Nm3/hr)	31 (Nm3/hr)	34.10 (Nm3/hr)	Diaphragm	SS 316L	2 x 1/2" NPTF	X 1.3 Full Scale	Yes	No	VTA	
D01 MODIFIED	5	FIT-2271	BK-GCS-PEDCO-120-PR-PI-0022-D06	FLG-112-0110-AN07-2'-PT	Fuel Gas System	Fuel Gas	300#	GAS	F.V/9	4.9	85	48	0-250	0-250	177.1 (Kg/hr)	506 (Kg/hr)	556.6 (Kg/hr)	Diaphragm	SS 316L	2 x 1/2" NPTF	X 1.3 Full Scale	Yes	Yes	VTA	