



نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض
احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR PRESSURE / DIFF. PRESSURE TRANSMITTER

شماره پیمان:

053 - 073 - 9184

پروژه

BK

بسته کاری

GCS

صادرکننده

PEDCO

تسهیلات

120

رشته

IN

نوع مدرک

DT

سریال

0004

نسخه

D02

شماره صفحه: ۱ از ۱۱

طرح نگهداشت و افزایش تولید 27 مخزن

DATA SHEETS FOR PRESSURE / DIFF. PRESSURE TRANSMITTER

نگهداشت و افزایش تولید میدان نفتی بینک

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

Class: 1

CLIENT Doc. Number: F9Z-708925

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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DATA SHEETS FOR PRESSURE / DIFF. PRESSURE TRANSMITTER

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

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REVISION RECORD SHEET

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2	X	X	X			66					
3	X	X				67					
4	X	X				68					
5	X	X	X			69					
6	X	X	X			70					
7	X	X	X			71					
8	X	X	X			72					
9	X	X	X			73					
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 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک							 مهرت تولید و پترو ایران	
	DATA SHEETS FOR PRESSURE / DIFF. PRESSURE TRANSMITTER							 HIRGAN ENERGY	
	شماره پیمان:	پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
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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 (Golghari)	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 Hand Held Communicator.

2 - Over range protection (at least 1.3 of full scale) shall be considered.

3 - 304 Stainless Steel name plate shall be supplied for all instruments specified in this document. Following details shall be engraved on them:

- Tag Number
- Range Limit
- Manufacture Model
- Manufacturer's Name
- Serial Number
- Supply Voltage
- Output Signal
- Hazardous Area Certification

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 followings:

Maximum ambient temperature: 50 (°C) (Note *)

Minimum ambient temperature: 5 (°C) (Note *)

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

Maximum summer dry bulb: 50 (°C) (Note *)

DB/RH for Summer HVAC Design: 41 °C / 61 % (Note **/ Note***)

DB FOR Winter HVAC Design: 6 °C (Note **)

* Refer to "Process Basis Of Design Doc No.: BK-GNRAL-PEDCO-000-PR-DB-0001".

** Refer to " HVAC Design Criteria; N.I.O.C. NO.: F-1-B-422001".

*** Refer to "NISOC Meteorological Studies Report".

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.

9 - This Data Sheets Has Been Prepared As Per Below Standard :

- IPS-M-IN-110 Material and equipment standard for pressure instruments
- IPS-E-IN-110 Engineering standard for pressure instruments
- IPS-C-IN-110 Construction standard for pressure instruments

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

11 - All PT/DPT shall meet the following Radio Frequency Immunity (RFI) requirements that shall be tested at the acceptance test stage. Basic reference standard is IEC 60801 (part 3) for design and manufacturing considerations.

12 - Tropicalization shall be applied to protect electrical circuits and electronic cards from being degraded by corrosion and/or fungus growth.



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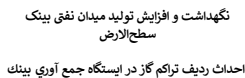
DCS PRESSURE TRANSMITTER

D02

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	
OPERATING CONDITIONS	6	Fluid	SEE NEXT PAGE	
	7	Phase	SEE NEXT PAGE	
	8	Operating Pressure (bar-g)	SEE NEXT PAGE	
	9	Design Pressure (bar-g)	SEE NEXT PAGE	
	10	Operating Temperature (°C)	SEE NEXT PAGE	
	11	Design Temperature (°C)	SEE NEXT PAGE	
TRANSMITTER	12	Element Type (NOTE 4)	SEE NEXT PAGE	
	13	Size of Process Connection	SEE NEXT PAGE	
	14	Rating of Process Connection	SEE NEXT PAGE	
	15	Element Material	SEE NEXT PAGE	
	16	Enclosure Material	Die cast aluminium	
	17	Instrument Range	SEE NEXT PAGE	
	18	Power Supply	24 VDC-Loop powered	
	19	Output Signal	4-20mA	
	20	Communication Protocol	SMART HART(4-20mA)	
	21	Electrical Connection	2* ISO M20 x 1.5	
	22	Electrical Certification	EEx "i"	
	23	Ingress Protection	IP-65 as minimum	
	24	Accuracy	0.1% F.S	
	25	Repeatability	+/- 0.1% or better	
	26	Span and Zero Adjustment	Required	
	27	Over Range Protection	Yes	
DIAPHRAGM SEAL	28	Type	N/A	
	29	Size (In)	N/A	
	30	Fill Fluid	N/A	
	31	Diaphragm Material	N/A	
	32	Capillary Material	N/A	
	33	Capillary Length	N/A	
OPTIONS	34	Integral Indicator	Display Unit	Required Bar-g
	35	Mounting Brackets	Required, 2" Support Pipe (Note 3)	
	36	Manifold	Body Material	2 Way Block & Bleed Manifold 316 S.S.L
	37	Connection	1/2 " NPT (Note 2,5,7)	
	38	Manifold Model	Manifold Manufacturer	VTA
	39	Integral Indicator Style	LCD TYPE	
	40	NACE Requirements	SEE NEXT PAGE	
PURCHASING DATA	41	Model	Manufacturer	Will Be Finilized Later
	42	Supplier	Order	Will Be Finilized Later

NOTES : VTA : VENDOR TO ADVISE

- 1 : Wetted part shall be according to NACE MR0175/ISO 15156 as per list.
- 2 : All manifolds shall be suitable for connection to transmitter and process line.
- 3 : Mounting Yoke, U-bolt, Nuts and all accessories shall be supplied by vendor.
- 4 : Suitable element type to be confirmed by vendor.
- 5 : For manifold rating, refer to "Piping Material Specification Doc No.: BK-GCS-PEDCO-120-PI-SP-0001
- 6 : Burn out direction shall be capable to set.
- 7 : Instrument/Process connection to be as bellows:
 - Process Connection: 1/2" NPTF
 - Instrument Connection: 1/2" NPTF
 - Drain Connection: 1/4" NPTF



DATA SHEETS FOR PRESSURE / DIFF. PRESSURE TRANSMITTER

شماره صفحه: ۶ از ۱۱

DCS PRESSURE TRANSMITTERS																	D02						
Rev.	Item No.	Tag No.	SYSTEM/SIL Rated	P&ID No.	Equipment No. / Line No.	Piping Class/ Rating	Manifold Rating	Fluid	Phase	Design Pressure (Barg)	Operating Pressure (Barg)	Design Temp. (°C)	Operating Temp. (°C)	Calibration Range (Barg) (Note 2)	Instrument Range (Barg)	Element Material		Size of Process Connection / rate of process connection	Over Range Protection (Note 2)	Manifold Requirement (Block & Bleed)	NACE	Model	Remark
D02	1	PIT-2102	DCS	BK-GCS-PEDCO-120-PR-Pi-0002	GAS-111-0001-AN07-6"-PT	AN07 / 150#	6000#	PROCESS GAS	GAS	18.2	7.5	85	46.11/26.67	0-15	VTA	Diaphragm	SS 316L	1/2" NPT / 6000#	up to 1.3 times design pressure	2 Way Manifold	YES	VTA	
D02	2	PIT-2104	DCS	BK-GCS-PEDCO-120-PR-Pi-0003	GAS-111-0001-FN07-8"-PT	FN07 / 600#	6000#	PROCESS GAS	GAS	90	7.5	85	32/15.5	0-15	VTA	Diaphragm	SS 316L	1/2" NPT / 6000#	up to 1.3 times design pressure	2 Way Manifold	YES	VTA	
D02	3	PIT-2112	DCS	BK-GCS-PEDCO-120-PR-Pi-0004 (1 of 2)	V-2104	- / 150#	6000#	PROCESS GAS	GAS	FV/9	5.5	85	32/15.5	0-10	VTA	Diaphragm	SS 316L	1/2" NPT / 6000#	up to 1.3 times design pressure	2 Way Manifold	YES	VTA	
D02	4	PIT-2114	DCS/SIL 1	BK-GCS-PEDCO-120-PR-Pi-0004 (2 of 2)	CDH-112-0015-CN07-4"-PT	CN07 / 300#	3000#	WATER+HYDROCARBON	LIQUID	47.7	18.5	85	5/50	0-36	VTA	Diaphragm	SS 316L	1/2" NPT / 3000#	up to 1.3 times design pressure	2 Way Manifold	YES	VTA	
D02	5	PIT-2117	DCS	BK-GCS-PEDCO-120-PR-Pi-0005	V-2105	- / 150#	6000#	PROCESS GAS	GAS	FV/9	5.3	85	37.17/19.23	0-10	VTA	Diaphragm	SS 316L	1/2" NPT / 6000#	up to 1.3 times design pressure	2 Way Manifold	YES	VTA	
D02	6	PIT-2121A	DCS	BK-GCS-PEDCO-120-PR-Pi-0006 (1 of 3)	GAS-111-0031A-CN05-8"-ET	CN05 / 300#	3000#	PROCESS GAS	GAS	47.7	4.9	85	36.78/18.88	0-9	VTA	Diaphragm	SS 316L	1/2" NPT / 3000#	up to 1.3 times design pressure	2 Way Manifold	YES	VTA	
D02	7	PIT-2121B	DCS	BK-GCS-PEDCO-120-PR-Pi-0006 (2 of 3)	GAS-111-0031A-CN05-8"-ET	CN05 / 300#	3000#	PROCESS GAS	GAS	47.7	4.9	85	36.78/18.88	0-9	VTA	Diaphragm	SS 316L	1/2" NPT / 3000#	up to 1.3 times design pressure	2 Way Manifold	YES	VTA	
D02	8	PIT-2121C	DCS	BK-GCS-PEDCO-120-PR-Pi-0006 (3 of 3)	GAS-111-0031A-CN05-8"-ET	CN05 / 300#	3000#	PROCESS GAS	GAS	47.7	4.9	85	36.78/18.88	0-9	VTA	Diaphragm	SS 316L	1/2" NPT / 3000#	up to 1.3 times design pressure	2 Way Manifold	YES	VTA	
D02	9	PIT-2135A	DCS	BK-GCS-PEDCO-120-PR-Pi-0011 (1 of 3)	GAS-111-0057A-F500-4"-NP	F500 / 600#	3000#	PROCESS GAS	GAS	62.4	54.1	175	60	0-100	VTA	Diaphragm	SS 316L	1/2" NPT / 3000#	up to 1.3 times design pressure	2 Way Manifold	NO	VTA	
D02	10	PIT-2135B	DCS	BK-GCS-PEDCO-120-PR-Pi-0011 (2 of 3)	GAS-111-0057B-F500-4"-NP	F500 / 600#	3000#	PROCESS GAS	GAS	62.4	54.1	175	60	0-100	VTA	Diaphragm	SS 316L	1/2" NPT / 3000#	up to 1.3 times design pressure	2 Way Manifold	NO	VTA	
D02	11	PIT-2135C	DCS	BK-GCS-PEDCO-120-PR-Pi-0011 (3 of 3)	GAS-111-0057C-F500-4"-NP	F500 / 600#	3000#	PROCESS GAS	GAS	62.4	54.1	175	60	0-100	VTA	Diaphragm	SS 316L	1/2" NPT / 3000#	up to 1.3 times design pressure	2 Way Manifold	NO	VTA	
D02	12	PIT-2151	DCS	BK-GCS-PEDCO-120-PR-Pi-0013 (1 of 3)	GAS-111-0179-FN05-6"-PT	FN05 / 600#	6000#	PROCESS GAS	GAS	90	52.92	90	60	0-100	VTA	Diaphragm	SS 316L	1/2" NPT / 6000#	up to 1.3 times design pressure	2 Way Manifold	YES	VTA	
D02	13	PIT-2161	DCS	BK-GCS-PEDCO-120-PR-Pi-0014	TK-2102	- / 150#	3000#	LEAN GLYCOL	LIQUID	ATM+FULL OF WATER+1600#barg/-2#barg	0.1	85	AMB	0-0.2	VTA	Diaphragm	SS 316L	1/2" NPT / 3000#	up to 1.3 times design pressure	2 Way Manifold	NO	VTA	
D02	14	PIT-2201	DCS	BK-GCS-PEDCO-120-PR-Pi-0015 (1 of 2)	PLA-112-0010-AN04-1 / 1/2"-PT	AN04 / 150#	3000#	PLANT AIR	GAS	18.2	9	90	65	0-18	VTA	Diaphragm	SS 316L	1/2" NPT / 3000#	up to 1.3 times design pressure	2 Way Manifold	NO	VTA	
D02	15	PIT-2203	DCS	BK-GCS-PEDCO-120-PR-Pi-0015 (2 of 2)	ISA-112-0012-A200-2"-NP	A200 / 150#	3000#	INSTRUMENT AIR	GAS	18.2	8	85	65	0-16	VTA	Diaphragm	SS 316L	1/2" NPT / 3000#	up to 1.3 times design pressure	2 Way Manifold	NO	VTA	
D02	16	PIT-2213	DCS	BK-GCS-PEDCO-120-PR-Pi-0016	NIT-112-0024-AN01-2"-PT	AN01 / 150#	3000#	NITROGEN RECEIVER	GAS	18.2	7.5	85	60	0-15	VTA	Diaphragm	SS 316L	1/2" NPT / 3000#	up to 1.3 times design pressure	2 Way Manifold	NO	VTA	
D02	17	PIT-2214	DCS	BK-GCS-PEDCO-120-PR-Pi-0016	NIT-112-0024-AN01-2"-PT	AN01 / 150#	3000#	NITROGEN RECEIVER	GAS	18.2	7.5	85	60	0-15	VTA	Diaphragm	SS 316L	1/2" NPT / 3000#	up to 1.3 times design pressure	2 Way Manifold	NO	VTA	
D02	18	PIT-2252	DCS	BK-GCS-PEDCO-120-PR-Pi-0020 (2 of 3)	FL-112-0004-AN07-12"-PT	AN07 / 150#	6000#	FLARE GAS	GAS	F.V/6	0.5	85	32	0-1	VTA	Diaphragm	SS 316L	1/2" NPT / 6000#	up to 1.3 times design pressure	2 Way Manifold	YES	VTA	
D02	19	PIT-2272	DCS	BK-GCS-PEDCO-120-PR-Pi-0022	FLG-112-0006-AN07-3"-PT	AN07 / 150#	6000#	FUEL GAS	GAS	18.2	4.9	85	19/37	0-9	VTA	Diaphragm	SS 316L	1/2" NPT / 6000#	up to 1.3 times design pressure	2 Way Manifold	YES	VTA	
D02	20	PIT-2271	DCS	BK-GCS-PEDCO-120-PR-Pi-0022	FLG-112-0110-AN07-4"-PT	AN07 / 150#	6000#	FUEL GAS	GAS	18.2	4.9	85	19/37	0-9	VTA	Diaphragm	SS 316L	1/2" NPT / 6000#	up to 1.3 times design pressure	2 Way Manifold	YES	VTA	
D02	21	PIT-2191	DCS	BK-GCS-PEDCO-120-PR-Pi-0025	V-2107	- / 150#	3000#	GLYCOL SUMP DRUM	LIQUID	F.V/3.5	0.01	85	AMB	0-0.2	VTA	Diaphragm	SS 316L	1/2" NPT / 3000#	up to 1.3 times design pressure	2 Way Manifold	NO	VTA	
D02-Added	22	PIT-2301	DCS	BK-GCS-PEDCO-120-SA-Pi-0001 (2 of 2)	FWA-113-0025-AN04-12"-PT	AN04 / 150#	3000#	FIRE WATER	LIQUID						VTA	Diaphragm	SS 316L	1/2" NPT / 3000#	up to 1.3 times design pressure	2 Way Manifold	NO	VTA	

NOTE:

- 1- Instrument range shall be finalized by vendor.
- 2- Pressure limit value to be considered by vendor (as per project specification and related standards due to vendor selected instrument range)
- 3- Existing data to be submitted /confirmed by client.
- 4- For manifold rating (treaded connection), bolt & gasket material refer to "Piping Material Specification Doc No.: BK-GCS-PEDCO-120-PI-SP-0001"
- 5- Transmitters shall be of the smart transmitter type with HART communication protocol.



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ESD PRESSURE TRANSMITTER

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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	
OPERATING CONDITIONS	6	Fluid	SEE NEXT PAGE	
	7	Phase	SEE NEXT PAGE	
	8	Operating Pressure (bar-g)	SEE NEXT PAGE	
	9	Design Pressure (bar-g)	SEE NEXT PAGE	
	10	Operating Temperature (°C)	SEE NEXT PAGE	
	11	Design Temperature (°C)	SEE NEXT PAGE	
TRANSMITTER	12	Element Type (NOTE 4)	SEE NEXT PAGE	
	13	Size of Process Connection	SEE NEXT PAGE	
	14	Rating of Process Connection	SEE NEXT PAGE	
	15	Element Material	SEE NEXT PAGE	
	16	Enclosure Material	Die cast aluminium	
	17	Instrument Range	SEE NEXT PAGE	
	18	Power Supply	24 VDC-Loop powered	
	19	Output Signal	4-20mA	
	20	Communication Protocol	SMART HART(4-20mA)	
	21	Electrical Connection	2* ISO M20 x 1.5	
	22	Electrical Certification	EEx "i"	
	23	Ingress Protection	IP-65 as minimum	
	24	Accuracy	0.1% F.S	
	25	Repeatability	+/- 0.1% or better	
	26	Span and Zero Adjustment	Required	
	27	Over Range Protection	Yes	
DIAPHRAGM SEAL	28	Type	N/A	
	29	Size (In)	N/A	
	30	Fill Fluid	N/A	
	31	Diaphragm Material	N/A	
	32	Capillary Material	N/A	
	33	Capillary Length	N/A	
OPTIONS	34	Integral Indicator	Display Unit	Required Bar-g
	35	Mounting Brackets	Required, 2" Support Pipe (Note 3)	
	36	Manifold	Body Material	2 Way Block & Bleed Manifold 316 S.S.L
	37	Connection	1/2 " NPT (Note 2,5,7)	
	38	Manifold Model	Manifold Manufacturer	VTA
	39	Integral Indicator Style	LCD TYPE	
	40	NACE Requirements	SEE NEXT PAGE	
PURCHASING DATA	41	Model	Manufacturer	Will Be Finalized Later
	42	Supplier	Order	Will Be Finalized Later

NOTES : VTA : VENDOR TO ADVISE

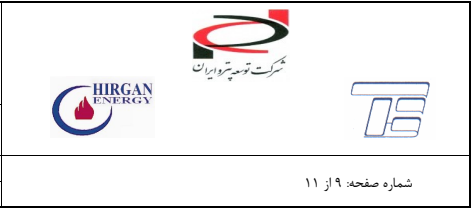
- 1 : Wetted part shall be according to NACE MR0175/ISO 15156 as per list.
- 2 : All manifolds shall be suitable for connection to transmitter and process line.
- 3 : Mounting Yoke, U-bolt, Nuts and all accessories shall be supplied by vendor.
- 4 : Suitable element type to be confirmed by vendor.
- 5 : For manifold rating, refer to "Piping Material Specification Doc No.: BK-GCS-PEDCO-120-PI-SP-0001
- 6 : Burn out direction shall be capable to set.
- 7 : Instrument/Process connection to be as bellows:
 - Process Connection: 1/2" NPTF
 - Instrument Connection: 1/2" NPTF
 - Drain Connection: 1/4" NPTF

 NISOC			نگهداشت و افزایش تولید میدان نفتی بینک سطح‌الارض احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک										 HIRGAN ENERGY 											
			DATA SHEETS FOR PRESSURE / DIFF. PRESSURE TRANSMITTER																					
شماره پیمان: 053 - 073 – 9184			پروژه		بسته کاری	صادرکننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه		شماره صفحه: ۸ از ۱۱											
			BK		GCS	PEDCO	120	IN	DT	0004	D02													
ESD PRESSURE TRANSMITTERS																								
Rev.	Item No.	Tag No.	SYSTEM/SIL Rated	P&ID No.	Equipment No. / Line No.	Piping Class/ Rating	Manifold Rating	Fluid	Phase	Design Pressure (Barg)	Operating Pressure (Barg)	Design Temp. (°C)	Operating Temp. (°C)	Calibration Range (Barg) (Note 2)	Instrument Range (Barg)	D02		Element Material	Size of Process Connection / rate of process connection	Over Range protection (Note 2)	Manifold Requirement (Block & Bleed)	NACE	Model	Remark
D02	1	PIT-2111	ESD (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0004 (1 of 2)	GA5-111-0012-AN07-8"-PT	AN07 / 150W	6000W	PROCESS GAS	GAS	9	5.5	85	32/15.5	0-10	VTA	Diaphragm	SS 316L	1/2" NPT / 6000W	up to 1.3 times design pressure	2 Way Manifold	YES	VTA		
D02	2	PIT-2114A	ESD (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0004 (2 of 2)	CDH-111-0010-A500-4"-NP	A500 / 150W	3000W	WATER+HYDROCARBON	LIQUID	13.9	5.5	85	32/15.5	0-10	VTA	Diaphragm	SS 316L	1/2" NPT / 2000W	up to 1.3 times design pressure	2 Way Manifold	NO	VTA		
D02	3	PIT-2216A	ESD (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0004 (2 of 2)	CDH-112-0012-CN05-3"-PT	CN05 / 300W	3000W	WATER+HYDROCARBON	LIQUID	47.7	19.5	85	5/50	0-38	VTA	Diaphragm	SS 316L	1/2" NPT / 3000W	up to 1.3 times design pressure	2 Way Manifold	YES	VTA		
D02	4	PIT-2115	ESD (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0004 (2 of 2)	CDH-112-0015-CN07-4"-PT	CN07 / 300W	3000W	WATER+HYDROCARBON	LIQUID	47.7	18.5	85	5/50	0-36	VTA	Diaphragm	SS 316L	1/2" NPT / 3000W	up to 1.3 times design pressure	2 Way Manifold	YES	VTA		
D02	5	PIT-2116B	ESD (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0004 (2 of 2)	CDH-112-0013-CN05-3"-PT	CN05 / 300W	3000W	WATER+HYDROCARBON	LIQUID	47.7	19.5	85	5/50	0-10	VTA	Diaphragm	SS 316L	1/2" NPT / 3000W	up to 1.3 times design pressure	2 Way Manifold	YES	VTA		
D02	6	PIT-2114B	ESD (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0004 (2 of 2)	CDH-111-0011-A500-4"-NP	A500 / 150W	3000W	WATER+HYDROCARBON	LIQUID	13.9	5.5	85	32/15.5	0-38	VTA	Diaphragm	SS 316L	1/2" NPT / 2000W	up to 1.3 times design pressure	2 Way Manifold	NO	VTA		
D02	7	PIT-2116	ESD/SIL 2 (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0005	GA5-111-0005-AN07-10"-PT	AN07 / 150W	6000W	PROCESS GAS	GAS	18.2	5.3	85	37.17/19.23	0-10	VTA	Diaphragm	SS 316L	1/2" NPT / 6000W	up to 1.3 times design pressure	2 Way Manifold	YES	VTA		
D02	8	PIT-2122A	ESD/SIL 2 (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0007 (1 of 3)	GA5-111-0031A-CN05-8"-ET	CN05 / 300W	3000W	PROCESS GAS	GAS	47.7	4.9	85	36.78/18.88	0-9	VTA	Diaphragm	SS 316L	1/2" NPT / 2000W	up to 1.3 times design pressure	2 Way Manifold	YES	VTA		
D02	9	PIT-2125A	ESD (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0007 (1 of 3)	GA5-111-0036A-CN05-6"-NP	CN05 / 300W	3000W	PROCESS GAS	GAS	47.7	19	155	124.8/113.1	0-38	VTA	Diaphragm	SS 316L	1/2" NPT / 3000W	up to 1.3 times design pressure	2 Way Manifold	YES	VTA		
D02	10	PIT-2122B	ESD (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0007 (2 of 3)	GA5-111-0031B-CN05-8"-ET	CN05 / 300W	3000W	PROCESS GAS	GAS	47.7	4.9	85	36.78/18.88	0-9	VTA	Diaphragm	SS 316L	1/2" NPT / 2000W	up to 1.3 times design pressure	2 Way Manifold	YES	VTA		
D02	11	PIT-2125B	ESD (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0007 (2 of 3)	GA5-111-0036B-CN05-6"-NP	CN05 / 300W	3000W	PROCESS GAS	GAS	47.7	19	155	124.8/113.1	0-38	VTA	Diaphragm	SS 316L	1/2" NPT / 3000W	up to 1.3 times design pressure	2 Way Manifold	YES	VTA		
D02	12	PIT-2122C	ESD (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0007 (3 of 3)	GA5-111-0031C-CN05-8"-ET	CN05 / 300W	3000W	PROCESS GAS	GAS	47.7	4.9	85	36.78/18.88	0-9	VTA	Diaphragm	SS 316L	1/2" NPT / 2000W	up to 1.3 times design pressure	2 Way Manifold	YES	VTA		
D02	13	PIT-2125C	ESD (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0007 (3 of 3)	GA5-111-0036C-CN05-6"-NP	CN05 / 300W	3000W	PROCESS GAS	GAS	47.7	19	155	124.8/113.1	0-38	VTA	Diaphragm	SS 316L	1/2" NPT / 3000W	up to 1.3 times design pressure	2 Way Manifold	YES	VTA		
D02	14	PIT-2131A	ESD/SIL 2 (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0010 (1 of 3)	GA5-111-0044A-CN05-6"-ET	CN05 / 300W	3000W	PROCESS GAS	GAS	47.7	18.1	115.4	59.88	0-36	VTA	Diaphragm	SS 316L	1/2" NPT / 3000W	up to 1.3 times design pressure	2 Way Manifold	YES	VTA		
D02	15	PIT-2134A	ESD/SIL 2 (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0010 (1 of 3)	GA5-111-0051A-FN05-6"-IS	FN05 / 600W	6000W	PROCESS GAS	GAS	90	54.8	175	142.3/149.5	0-100	VTA	Diaphragm	SS 316L	1/2" NPT / 6000W	up to 1.3 times design pressure	2 Way Manifold	YES	VTA		
D02	16	PIT-2131B	ESD (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0010 (2 of 3)	GA5-111-0044B-CN05-6"-ET	CN05 / 300W	3000W	PROCESS GAS	GAS	47.7	18.1	115.4	59.88	0-36	VTA	Diaphragm	SS 316L	1/2" NPT / 3000W	up to 1.3 times design pressure	2 Way Manifold	YES	VTA		
D02	17	PIT-2134B	ESD (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0010 (2 of 3)	GA5-111-0051B-FN05-6"-IS	FN05 / 600W	6000W	PROCESS GAS	GAS	90	54.8	175	142.3/149.5	0-100	VTA	Diaphragm	SS 316L	1/2" NPT / 6000W	up to 1.3 times design pressure	2 Way Manifold	YES	VTA		
D02	18	PIT-2131C	ESD (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0010 (3 of 3)	GA5-111-0044C-CN05-6"-ET	CN05 / 300W	3000W	PROCESS GAS	GAS	47.7	18.1	115.4	60	0-36	VTA	Diaphragm	SS 316L	1/2" NPT / 3000W	up to 1.3 times design pressure	2 Way Manifold	YES	VTA		
D02	19	PIT-2134C	ESD (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0010 (3 of 3)	GA5-111-0051C-FN05-6"-IS	FN05 / 600W	6000W	PROCESS GAS	GAS	90	54.8	175	142.3/149.5	0-100	VTA	Diaphragm	SS 316L	1/2" NPT / 6000W	up to 1.3 times design pressure	2 Way Manifold	YES	VTA		
D02	20	PIT-2202	ESD (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0015 (1 of 2)	PLA-112-0010-AN04-1 1/2"-PT	AN04 / 150W	3000W	PLANT AIR	GAS	18.2	9	90	65	0-18	VTA	Diaphragm	SS 316L	1/2" NPT / 2000W	up to 1.3 times design pressure	2 Way Manifold	NO	VTA		
D02	21	PIT-2201A	ESD/SIL 1 (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0015 (2 of 2)	ISA-112-0012-AZ00-2"-NP	AZ00 / 150W	3000W	INSTRUMENT AIR	GAS	18.2	8	85	65	0-16	VTA	Diaphragm	SS 316L	1/2" NPT / 2000W	up to 1.3 times design pressure	2 Way Manifold	NO	VTA		
D02	22	PIT-2201B	ESD/SIL 1 (NOTE 5)	BK-GCS-PEDCO-120-PR-PI-0015 (2 of 2)	ISA-112-0012-AZ00-2"-NP	AZ00 / 150W	3000W	INSTRUMENT AIR	GAS	18.2	8	85	65	0-16	VTA	Diaphragm	SS 316L	1/2" NPT / 2000W	up to 1.3 times design pressure	2 Way Manifold	NO	VTA		



نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض
احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک

DATA SHEETS FOR PRESSURE / DIFF. PRESSURE TRANSMITTER



Rev.	Item No.	Tag No.	SYSTEM/SIL Rated	P&ID No.	Equipment No. / Line No.	Piping Class/ Rating	Manifold Rating	Fluid	Phase	Design Pressure (Barg)	Operating Pressure (Barg)	Design Temp. (°C)	Operating Temp. (°C)	Calibration Range (Barg) (Note 2)	Instrument Range (Barg) (Note 2)	D02 Element Material	Size of Process Connection / rate of process connection	Over Range protection (Note 2)	Manifold Requirement (Block & Bleed)	NACE	Model	Remark
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D02

- 1- Instrument range shall be finalized by vendor.
- 2- Pressure limit valve to be considered by vendor (as per project specification and related standards due to vendor selected instrument range)
- 3- Existing data to be submitted /confirmed by client.
- 4- For manifold rating (treaded connection), bolt & gasket material refer to "Piping Material Specification DOC No.: BK-GCS-PEDCO-120-PI-SP-0001

5- Transmitters shall be of the smart transmitter type with HART communication protocol, SIL rated also write protected



نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض
احداث ردیف تراکم گاز در ایستگاه جمع آوری بینک



DATA SHEETS FOR PRESSURE / DIFF. PRESSURE TRANSMITTER

شماره پیمان:

053 - 073 - 9184

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	پسته کاری	پروژه
D02	0004	DT	IN	120	PEDCO	GCS	BK

شماره صفحه: ۱۰ از ۱۱

DIFF. PRESSURE TRANSMITTER

D02

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	
OPERATING CONDITIONS	6	Fluid	SEE NEXT PAGE	
	7	Phase	SEE NEXT PAGE	
	8	Operating Pressure (bar-g)	SEE NEXT PAGE	
	9	Design Pressure (bar-g)	SEE NEXT PAGE	
	10	Operating Temperature (°C)	SEE NEXT PAGE	
	11	Design Temperature (°C)	SEE NEXT PAGE	
TRANSMITTER	12	Element Type (NOTE 4)	SEE NEXT PAGE	
	13	Size of Process Connection	SEE NEXT PAGE	
	14	Rating of Process Connection	SEE NEXT PAGE	
	15	Element Material	SEE NEXT PAGE	
	16	Enclosure Material	Die cast aluminium	
	17	Instrument Range	SEE NEXT PAGE	
	18	Power Supply	24 VDC-Loop powered	
	19	Output Signal	4-20mA	
	20	Communication Protocol	SMART HART(4-20mA)	
	21	Electrical Connection	2" ISO M20 x 1.5	
	22	Electrical Certification	EEx "i"	
	23	Ingress Protection	IP-65 as minimum	
	24	Accuracy	0.1% F.S	
	25	Repeatability	+/- 0.1% or better	
	26	Span and Zero Adjustment	Required	
	27	Over Range Protection	Yes	
DIAPHRAGM SEAL	28	Type	N/A	
	29	Size (In)	N/A	
	30	Fill Fluid	N/A	
	31	Diaphragm Material	N/A	
	32	Capillary Material	N/A	
	33	Capillary Length	N/A	
OPTIONS	34	Integral Indicator	Display Unit	Required Bar-g
	35	Mounting Brackets	Required, 2" Support Pipe (Note 3)	
	36	Manifold	Body Material	5 Way Block & Bleed Manifold 316 S.S.L
	37	Connection	1/2 " NPT (Note 2,5,7)	
	38	Manifold Model	Manifold Manufacturer	- VTA
	39	Integral Indicator Style	LCD TYPE	
	40	NACE Requirements	SEE NEXT PAGE	
PURCHASING DATA	41	Model	Manufacturer	Will Be Finalized Later Will Be Finalized Later
	42	Supplier	Order	Will Be Finalized Later Will Be Finalized Later

NOTES : VTA : VENDOR TO ADVISE

- Wetted part shall be according to NACE MR0175/ISO 15156 as per list.
- All manifolds shall be suitable for connection to transmitter and process line.
- Mounting Yoke, U-bolt, Nuts and all accessories shall be supplied by vendor.
- Suitable element type to be confirmed by vendor.
- For manifold rating, refer to "Piping Material Specification Doc No.: BK-GCS-PEDCO-120-PI-SP-0001
- Burn out direction shall be capable to set.
- Instrument/Process connection to be as follows:
 - Process Connection: 1/2" NPTF
 - Instrument Connection: 1/2" NPTF
 - Drain Connection: 1/4" NPTF



شماره صفحه: ۱۱ از ۱۱

DIFF. PRESSURE TRANSMITTERS LIST

D02

Rev.	Item No.	Tag No.	SYSTEM/SIL Rated	P&ID No.	Equipment No. / Line No.	Piping Class/ Rating	Manifold Rating	Fluid	Phase	Design Pressure (Bar-g)	Operating Pressure (Bar-g)	Design Temp. (°C)	Operating Temp. (°C)	Calibration Range (Bar-g) (Note 2)	Instrument Range (Bar-g) (Note 1)	Element Type	Element Material	Size of Process Connection / rate of process connection	Over Range Protection (Note 2)	Manifold Requirement (Block & Bleed)	NACE	Model	Remark
D02	1	PDIT-2111	DCS	BK-GCS-PEDCO-120-PR-PI-0004 (1 of 2)	GAS-111-0019-AN07-8"-PT	AN07 / 150#	300#	SLUG CATCHER	GAS	FV/9	5.3	85	31.86/15.35	0-10	VTA	Diaphragm	SS 316L	1/2" NPT / 6000#	up to 1.3 times design pressure	5-Way Valve (1/2"NPTx1/2"NPTF)	YES	VTA	
D02	2	PDIT-2112	DCS	BK-GCS-PEDCO-120-PR-PI-0005	V-2105	- / 150#	300#	PROCESS GAS	GAS	FV/9	5.1	85	19/37	0-10	VTA	Diaphragm	SS 316L	1/2" NPT / 6000#	up to 1.3 times design pressure	5-Way Valve (1/2"NPTx1/2"NPTF)	YES	VTA	
D02	3	PDIT-2121A	DCS	BK-GCS-PEDCO-120-PR-PI-0006 (1 of 3)	V-2101-A	- / 150#	300#	PROCESS GAS	GAS	FV/22	4.9	85	36.78/18.88	0-9	VTA	Diaphragm	SS 316L	1/2" NPT / 6000#	up to 1.3 times design pressure	5-Way Valve (1/2"NPTx1/2"NPTF)	YES	VTA	
D02	4	PDIT-2121B	DCS	BK-GCS-PEDCO-120-PR-PI-0006 (2 of 3)	V-2101-B	- / 150#	300#	PROCESS GAS	GAS	FV/22	4.9	85	36.78/18.88	0-9	VTA	Diaphragm	SS 316L	1/2" NPT / 6000#	up to 1.3 times design pressure	5-Way Valve (1/2"NPTx1/2"NPTF)	YES	VTA	
D02	5	PDIT-2121C	DCS	BK-GCS-PEDCO-120-PR-PI-0006 (3 of 3)	V-2101-C	- / 150#	300#	PROCESS GAS	GAS	FV/22	4.9	85	36.78/18.88	0-9	VTA	Diaphragm	SS 316L	1/2" NPT / 6000#	up to 1.3 times design pressure	5-Way Valve (1/2"NPTx1/2"NPTF)	YES	VTA	
D02	6	PDIT-2131A	DCS	BK-GCS-PEDCO-120-PR-PI-0009 (1 of 3)	V-2102-A	- / 300#	300#	PROCESS GAS	GAS	FV/22	18.1	115.5	60	0-36	VTA	Diaphragm	SS 316L	1/2" NPT / 3000#	up to 1.3 times design pressure	5-Way Valve (1/2"NPTx1/2"NPTF)	YES	VTA	
D02	7	PDIT-2131B	DCS	BK-GCS-PEDCO-120-PR-PI-0009 (2 of 3)	V-2102-B	- / 300#	300#	PROCESS GAS	GAS	FV/22	18.1	115.5	60	0-36	VTA	Diaphragm	SS 316L	1/2" NPT / 3000#	up to 1.3 times design pressure	5-Way Valve (1/2"NPTx1/2"NPTF)	YES	VTA	
D02	8	PDIT-2131C	DCS	BK-GCS-PEDCO-120-PR-PI-0009 (3 of 3)	V-2102-C	- / 300#	300#	PROCESS GAS	GAS	FV/22	18.1	115.5	60	0-36	VTA	Diaphragm	SS 316L	1/2" NPT / 3000#	up to 1.3 times design pressure	5-Way Valve (1/2"NPTx1/2"NPTF)	YES	VTA	
D02	9	PDIT-2143	DCS	BK-GCS-PEDCO-120-PR-PI-0012	GAS-111-0366-FN05-6"-PT	FN05 / 600#	600#	PROCESS GAS	GAS	90	53.9	130	59.9	0-100	VTA	Diaphragm	SS 316L	1/2" NPT / 6000#	up to 1.3 times design pressure	5-Way Valve (1/2"NPTx1/2"NPTF)	YES	VTA	
D02	10	PDIT-2141	DCS	BK-GCS-PEDCO-120-PR-PI-0012	V-2103	- / 600#	6000#	PROCESS GAS	GAS	FV/62	53.9	130	59.9	0-100	VTA	Diaphragm	SS 316L	1/2" NPT / 6000#	up to 1.3 times design pressure	5-Way Valve (1/2"NPTx1/2"NPTF)	YES	VTA	

NOTE:

1- Instrument range shall be finalized by vendor.

2- Pressure limit valve to be considered by vendor (as per project specification and related standards due to vendor selected instrument range)

3- Existing data to be submitted /confirmed by client

4- For manifold rating (treaded connection), bolt & gasket material refer to "Piping Material Specification DOC No.: BK-GCS-PEDCO-120-PI-SP-0001"

5- Transmitters shall be of the smart transmitter type with HART communication protocol