



NISOC

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض و ابنیه تحت الارض
خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک
(قرارداد ۰۳_۰۰۰۸-CO-GCS-HD-BK)



INSTRUMENT DATASHEETS / CERTIFICATES

نسخه	سریال	نوع	رشته	تسهیلات	صادر کنند	بسته کاری	پروژه
V02	0001	DS	IN	120	HY	GCS	BK

شماره صفحه: 1 از 42

طرح نگهداشت و افزایش تولید ۲۷ مخزن

INSTRUMENT DATASHEETS / CERTIFICATES

نگهداشت و افزایش تولید میدان نفتی بینک

V02	Dec..2023	IFR	Havayar	M.Fakharian	S.Faramarzpour	
V01	Nov.2023	IFR	Havayar	M.Fakharian	S.Faramarzpour	
V00	SEP.2023	IFR	Havayar	M.Fakharian	M.Mehrshad	
Rev.	Date	Purpose of Issue/Status	Prepared By	Checked By	Approved By	Client Approval

CLIENT Doc. Number:

status:

IFA: Issued For Approval

IFR: Issued For Review

IFI: Issued For Information

AFC: Approved For Construction



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۰۵۳ - ۰۷۳ - ۹۱۸۴

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INSTRUMENT DATASHEETS / CERTIFICATES

شماره صفحه: 2 از 42

نسخه	سریال	نوع	رشته	تسهیلات	صادر کنند	بسته کاری	پروژه
V02	0001	DS	IN	120	HY	GCS	BK

REVISION RECORD SHEET

Page	V00	V01	V02	V03	V04
1	X	X	X		
2	X	X	X		
3	X	X	X		
4	X	X	X		
5	X	X	X		
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13	X	X	X		
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15	X	X	X		
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NISOC

شماره پیمان:

۰۵۳ - ۰۷۳ - ۹۱۸۴

نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض و ابنیه تحت الارض
خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک
(قرارداد ۰۳_۰۰۸-CO-GCS-BK)



INSTRUMENT DATASHEETS / CERTIFICATES

شماره صفحه: 3 از 42

نسخه	سریال	نوع	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه
V02	0001	DS	IN	120	HY	GCS	BK

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1	Cover
2	Revised Pages
3	Table of Content
4	Pressure Gauge
5	Pressure trasmitter data sheet
6	Pressure trasmitter List
7	Tempearture Gauge
8	Tempearture Trasmitter data sheet
9	Tempearture Trasmitter List
10	Diff Pressure trasmitter data sheet
11	Diff Pressure trasmitter List
12	Diff Pressure Gauge data sheet
13	Flow indicator Comp C-2101A
14	Flow indicator Comp C-2101B
15	Flow indicator Comp C-2101C
16	Sight Glass data sheet
17	Sight Glass data List
18	Flow transmitter 2121A
19	Flow transmitter 2131A
20	Flow transmitter C-2206A
21	Flow transmitter 2121B
22	Flow transmitter 2131B
23	Flow transmitter C-2206B
24	Flow transmitter 2121C
25	Flow transmitter 2131C
26	Flow transmitter C-2206C
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29	Level gauge C-LG-2213C
30	Level Transmitter C-LT-2213A
31	Level Transmitter C-LT-2213B
32	Level Transmitter C-LT-2213C
33	Solenoid Data sheet
34	Solenoid List
35	Vibration & rod drop data sheet C-2101A
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38	Level Transmitter C-LT-2200A
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شماره پیمان:
053 - 073 - 9184

تنگداشت و افزایش تولید میدان نفتی بینک
سطح الارض و ابنیه تحت الارض
خرید پکیج های کمپرسور گاز (رقت و برگشتی) بینک
(قرارداد BK-HD-GCS-CO-0008_03)



شماره صفحه: 4 از 42

INSTRUMENT DATASHEETS / CERTIFICATES

نسخه	سربرگ	نوع مدرک	رشته	تسهلات	صنعت کننده	پسته کاری	پروژه
0001	V02	DS	IN	120	HY	GCS	BK

Data Sheet for Pressure Gauge

1	Type :	Direct Rdg. ☒ Other ☐ liquid filled	3-15 lb Reciever ☐	11	MFR. & Model No.	SANGAN PG-20	
2	Mounting :	Surface ☐ Local ☒	Flush ☐	12	Press Element : Bourdon	☒ Bellows ☐	
3	Dial :	Diameter 160 mm Color : White / Black Lettering , Aluminum Non Rusting Metal	Phenol ☐	13	Element Mtl. :	Other ☐ IN: Over protector snubber to be clarified. this gauge needs over range protector .	
4	Case :	Cast Iron ☐ S.S ☒	Slip ☐	14	Socket Mtl. :	Other ☐ HY reply: modified to pressure limit valve.	
5	Ring :	Screwed ☒ Hinged ☐ Other ☐	Back ☐ Disc ☒	15	Connection-NPT :	1/4 in. ☐ Bottom ☒ Bronze ☐	
6	Blow-out Protection :	Solid Front ☒ Plastic ☐	Other ☐ Safety Glass (shatter proof)	16	Movement:	Nylon ☐ As per List	
7	Lens :	Glass ☒	As per List ☒	17	Diaphragm Seal	MFR. Wetted Part Mtl.	
8	Options :						
9	Nominal Accuracy Required :	± 0.5% of full scale					
10	Over range protection :	1.3 times the maximum scale reading					

PR: maximum temperature (winter/ summer) to be considered
HY reply: modified.

PR: should be changed to sheet no. for example: sheet 1A
HY reply: modified.

Item	Tag No.	Range (barg)	Process Fluid/State	Design		HY reply: modified.		HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	HY reply: modified.	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 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنيه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP			
شماره پیمان: 053 - 073 – 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 5 از 42		
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال			نسخه
		Bk	GCS	HY	120	IN	DS	0001			V02
Data Sheet for Pressure Transmitter											
GENERAL	1	Tag No.: (Refer to Next Page)	Service: (Refer to Next Page)								
	2	Function	Record ☐ Indicate ☒ Control ☐ Blind ☐ Trans ☒ Integ ☐ (Note1)								
	3	Case	MFR STD ☒ Nom Size ☐ Color MFR STD ☐ Other								
	4	Mounting	Flush ☐ Surface ☐ Yoke ☒ Other								
	5	Enclosure Class	General Purpose ☐ Weather Proof ☒ Explosion-Proof ☐ Class								
	6		For use in Intrinsically Safe System ☐ Other EExia, IIB, T4								
	7	Power Supply	Ingress Protection : IP 66 117 V 60 Hz ☐ Other: ac ☐ dc ☒ Volts : 24 VDC Loop Powered								
TRANSMITTER	8	Trans. Output	4-20mA ☒ 10-50mA ☐ 21-10 kpa(3-15 psig) ☐								
	9		4-20mA Smart HART								
UNIT	10	Service	Gage Press ☒ Vacuum ☐ Absolute ☐ Compound ☐								
	11	Element Type	Diaphragm ☒ Helix ☐ Bourdon ☐ Bellows ☐ Fill Fluid:Silicone								
	12	Material	Body Aluminum Element 316 S.S. as minimum								
	13	Range	Fixed ☐ Adj. Range ☒ Set At (Refer to Next Page)								
	14	Rating	Overrange Protection: at least 1.5 times the maximum range								
	15	Process Data	Press: Normal Max Element Range (Refer to Next Page)								
	16	Process Conn.	½ in. NPT ☒ Other Male with wrench flats								
	17		Location: Bottom ☒ Back ☐ Other								
18	Electrical Conn.	MFR STD ☐ Other ISO M20x1.5									
OPTIONS	19	Miscellaneous	Filt Reg. ☐ Sup. Gage ☐ Output Gage ☐ Charts								
	20	Diaphragm Seal	Diaph Seal ☐ Type : Capillary Length: Mtl. : Conn. Fill Fluid : shall be Suitable for Normal and Max. Operating Temp Flushing Connection :								
	21	Manifold	Valve Manifold : See list								
	22	MFR. & Model No.	See PT list								
Notes: 1- All transmitters shall be provided complete with LCD type integral indicator . 2- Repeatability of the transmitter shall be better than 0.1% of the span. 3- All transmitters shall be reverse polarity protected. 4- Each Instrument Shall Have a S.S. Tag Plate With Purchaser's Tag Number, The Tag Plate Shall Be Permanently Attached To The Instrument . 5- NACE MR-01-75 to be considered.											



نگهداشت و افزایش تولید میدان نفتی بینک
سطح افزایش و آبنیة تحت الارض

خرید پکیج های کمپرسور گاز (فیت و برگشتی) بینک
(فرماد BK-HD-GCS-CO-0008_03)

INSTRUMENT DATASHEETS / CERTIFICATES

according to Hiran PMS, the design pressure for AN05 is 18.2 barg so due to settle out pressure (which is 22 or 24.5 barg), CN05 shall be considered for piping class code of this line. Please correct Havayar's PID based on Hiran's PID
HY reply: modified.

Sheet 1A
HY reply: modified.

maximum temperature (which is winter in this case) should be considered
HY reply: Modified.

IN: Calibration range shall be cover design Pressure.
HY reply: Modified.

IN: Why different?
HY reply: modified.

IN: Calibration range shall be cover design Pressure.
HY reply: Modified. Design pressure N2 5barg is correct.

IN: Why different?
HY reply: modified.

IN: Calibration range shall be cover design Pressure.
HY reply: Modified.

IN: Why different?
HY reply: modified.

IN: Calibration range shall be cover design Pressure.
HY reply: modified as per last P&ID.

		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و انبساط تحت الارض خرید پکیج های کمپرسور گاز (فوت و برگشتی) بینک (BK-HD-GCS-00-0008_03 فراردا)										maximum temperature (which is winter in this case) should be considered HY reply: Modified.		IN: Calibration range shall be cover design Pressure. HY reply: Modified.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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 NSOC شماره پیمان: 053 - 073 - 9184		نگهداشت و افزایش مداوم تولید نفتی پهنک مسطح الارض و امنیه تحت الارض خرید پکیج های کمپرسور گاز (رقت و برکتش) پهنک (BK-HD-GCS-CO-0008_03 قرارداد) INSTRUMENT DATASHEETS / CERTIFICATES									
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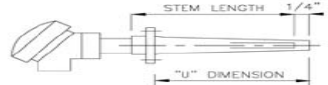
پروژه		بسته کاری		تسهیلات		صنعت کننده		تاریخ سرکاب		سریال		نسخه				
BK		GCS		HY		120		IN		DS		0001		V02		
شماره صفحه: 7 از 42																
BI-METALLIC THERMOMETER WITH WELL (Complete Assembly)																
THERMOMETER										WELL						
1 ELEMENT TYPE BI-METAL GAS FILLED CAPILLARY										15 NONE INCLUDED						
2 STEM THREADED (NPTM) UNION PLAIN										16 MATERIAL : 304 SS 316 SS OTHER						
3 MATERIAL S.S										17 CONSTRUCTION BUILT-UP DRILLED BAR STOCK						
4 STEM OR UNION THREADED : 1/2 IN. 3/4 IN.										OTHER						
5 STEM DIAMETER MFR. STD 6 mm. 8 mm.										TAPERED STRAIGHT						
6 CASE MATERIAL : MFR. STD OTHER S.S										18 INTERNAL CONNECTION NOMINAL SIZE 1/2" PIPE THREAD						
7 DIAL : SIZE 160 mm COLOR White / Black Lettering Aluminum,Non Rusting Metal										19						
8 SCALE TYPE : °C POINTER ADJUSTMENT YES										20						
9 SCALE LENGTH : MFR. STD. COLOR MFR.STD										21						
10 FORM : FIG NO. EVERY ANGLE										22 FLANGE RATING REFER TO BELOW TABLE						
11 EXTERNAL CALIBRATOR										23 MANUFACTURER SANGAN						
12 PROTECTION CLASS :										24 MODEL NO. TE18						
13 ACCURACY :																
14 WINDOW MATERIAL :																
15 RING TYPE/MATERIAL : S.S316																
Design Pressure should also be added																
HY reply: Design Pressure is here																
RANGE																
Screwed/S.S316																
ITEM NO TAG NO. LINE SIZE WELL "U" mm (*) (NOTE 1) STEM LENGTH (mm) (*) OPER. TEMP. (°C) DESIGN TEMP.(°C)/RESSURE (BAR/G) RANGE (°C) PRESSURE (bar/g) Norm./ Max. PROCESS/WELL CONNECTION & RATING (ANSI) Max. VISCOSITY (cP) SERVICE P&ID NO. NOTES																
1	C-TG-2190A	1ST STAGE SUCTION SNUBBER	400	450	37	180 / 24.5	0-200	4.9 / 22	2" #800 1/2" NPT Back	40	Process Gas Comp A	BK-GCS-HY-120-PR-Pi-0001-Page1	Thermowell Nace			
2	C-TG-2193A	2nd STAGE SUCTION SNUBBER	400	450	60	180 / 62	0-200	17.1 / 22	2" #600 1/2" NPT Back	40	Process Gas Comp A	BK-GCS-HY-120-PR-Pi-0001-Page1	Thermowell Nace			
3	C-TG-2204A	2" TO 4" (Expanded)	150	200	60	85 / 10	0-120	5 / 6	1 1/2" #300 1/2" NPT	40	Lube Oil Comp A	BK-GCS-HY-120-PR-Pi-0001-Page3				
4	C-TG-2205A	2" TO 4" (Expanded)	150	200	60	85 / 10	0-120	5 / 6	1 1/2" #300 1/2" NPT	40	Lube Oil Comp A	BK-GCS-HY-120-PR-Pi-0001-Page3				
5	C-TG-2206A	2" TO 4" (Expanded)	150	200	70	85 / 10	0-120	5 / 6	1 1/2" #300 1/2" NPT	40	Lube Oil Comp A	BK-GCS-HY-120-PR-Pi-0001-Page3				
6	C-TG-2210A	2" TO 4" (Expanded)	150	200	60	85 / 5	0-120	2 / 2.2	1 1/2" #300 1/2" NPT	40	N2 Gas Supply Comp A	BK-GCS-HY-120-PR-Pi-0001-Page4	Thermowell Nace			
7	C-TG-2211A	2" TO 4" (Expanded)	150	200	60	85 / 5	0-120	2 / 2.2	1 1/2" #300 1/2" NPT	40	N2 Gas Supply Comp A	BK-GCS-HY-120-PR-Pi-0001-Page4	Thermowell Nace			
8	C-TG-2217A	Water Reservoir	Hold	200	65	85 / 3.5	0-120	ATM / ATM	2" #800 1/2" NPT Back	40	Water console Comp A	BK-GCS-HY-120-PR-Pi-0001-Page5				
9	C-TG-2221A	3" TO 4" (Expanded)	150	200	65	85 / 7	0-120	3 / 4	1 1/2" #300 1/2" NPT	40	Water console Comp A	BK-GCS-HY-120-PR-Pi-0001-Page5				
10	C-TG-2215A	1" TO 4" (Expanded)	150	200	65	85 / 7	0-120	3 / 4	1 1/2" #300 1/2" NPT	40	Jacket Cooling Comp A	BK-GCS-HY-120-PR-Pi-0001-Page6				
11	C-TG-2216A	1/2" TO 4" (Expanded)	150	200	65	85 / 7	0-120	3 / 4	1 1/2" #300 1/2" NPT	40	Jacket Cooling Comp A	BK-GCS-HY-120-PR-Pi-0001-Page6				
12	C-TG-2212A	3" TO 4" (Expanded)	150	200	58	85 / 7	0-120	3 / 4	1 1/2" #300 1/2" NPT	40	Water console	BK-GCS-HY-120-PR-Pi-0001-Page5				
13	C-TG-2213A	1/2" TO 4" (Expanded)	150	200	65	85 / 7	0-120	3 / 4	1 1/2" #300 1/2" NPT	40	Jacket Cooling Comp A	BK-GCS-HY-120-PR-Pi-0001-Page6				
14	C-TG-2214A	2 1/2" TO 4" (Expanded)	150	200	65	85 / 7	0-120	3 / 4	1 1/2" #300 1/2" NPT	40	Jacket Cooling Comp A	BK-GCS-HY-120-PR-Pi-0001-Page6				
15	C-TG-2190B	1ST STAGE SUCTION SNUBBER	400	450	37	180 / 24.5	0-200	4.9 / 22	2" #800 1/2" NPT Back	40	Process Gas Comp B	BK-GCS-HY-120-PR-Pi-0001-Page1	Thermowell Nace			
16	C-TG-2193B	2nd STAGE SUCTION SNUBBER	400	450	60	180 / 62	0-200	17.1 / 22	2" #600 1/2" NPT Back	40	Process Gas Comp B	BK-GCS-HY-120-PR-Pi-0001-Page1				
17	C-TG-2204B	2" TO 4" (Expanded)	150	200	60	85 / 10	0-120	5 / 6	1 1/2" #300 1/2" NPT	40	Lube Oil Comp B	BK-GCS-HY-120-PR-Pi-0001-Page3				
18	C-TG-2205B	2" TO 4" (Expanded)	150	200	60	85 / 10	0-120	5 / 6	1 1/2" #300 1/2" NPT	40	Lube Oil Comp B	BK-GCS-HY-120-PR-Pi-0001-Page3				
19	C-TG-2206B															

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ایلیه تحت الارض خرید پکیج های کمپرسور گاز (رگت و برگشتی) بینک (قرارداد 03 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP		
	INSTRUMENT DATASHEETS / CERTIFICATES								
شماره پیمان: 053 - 073 - 9184	پروژه BK	بسته کاری GCS	صادر کننده HY	تسهیلات 120	رشته IN	نوع مدرک DS	سریال 0001	نسخه V02	شماره صفحه: 8 از 42

Data Sheet for Temprarure Transmitter/Element/Thermowell		
HEAD		
1 COMPLETE ASSEMBLY	YES	OTHER _____
2 SCREWED COVER ☒	OTHER _____	
3 PROTECTION CLASS	IP-66	
4 HAZ. AREA CLASSIFICATION	EXia IIB T4	
5 MATERIAL	316 S.S.	ELECTRICAL CONN. M20 X 1.5
6 NIPPLE SIZE	1/2"	DIM."N" UNION ☐
7 AMBIENT TEMPERATURE IN DIRECT SUNLIGHT		
ELEMENT		
8 PLATINUM ☒ 100/0°C	NICKEL ☐	OTHER _____
9 TYPE	PT100	
10 TEMPERATURE RANGE	-100°C to 500 °C	
11 LEADS	STD ☐	POTTED ☐ HERM. SEALED ☒
12 SHEAT MATERIAL	316 S.S.	O.D. 6 mm
13 TYPE	SINGLE ☒	DUPLEX ☐
14 SPRING LOADED	YES ☒	NO ☐
15 CONNECTION	2-WIRE ☐	3-WIRE ☒ 4-WIRE ☐
16 LEAD WIRES ☒	RECEPTACLE ☐	TERMINAL BLOCK ☒
OTHER _____		
WELL OR TUBE		
17 NONE ☐	INCLUDE ☒	BY OTHERS ☐
18 MATERIAL	AISI 316 S.S.	
19 CONSTRUCTION	TAPERED ☒	STRAIGHT ☐
20 SOILD BAR-STOCK ☒	BUILT-UP ☐	CLOSE-END TUBE ☐

21 BORE DIAMETER 6.6 mm (NOTE 4)	
22 OUTSIDE DIAMETER AT SUPPORT/TIP : 28/22 mm (NOTE 4)	
23 LAGGING EXTENTION "I" : VTA	
24 TEST : HYDROSTATIC AND PENETRANT TEST	
25 CONNECTION TO SENSOR	1/2" NPT F
26 PROCESS CONNECTION	See list
PERFORMANCE CHARACTERISTICS	
27 MIN/MAX. AMBIENT WORKING TEMPERATURE:	BY VENDOR
TRANSMITTER	
28 TRANSMITTER BODY MATERIAL	EXOPXY PAINTED DIE CAST ALUMINIUM
29 POWER SUPPLY	24 VDC, LOOP POWERED WITH HART
30 OUTPUT RANGE	4-20mA Smart Hart
31 TRANSMITTER MOUNTING	HEAD MOUNTED
32 ELECTRICAL CONNECTION	ISO M20
33 ACCURACY	± 0.1 % OF CALIBRATED SPAN
34 ENCLOSURE APPROVAL	ATEX
35 ZERO ADJUST: YES SPAN ADJUST: YES	
36 ISOLATION TYPE: Barrier	
37 NIPPLE & UNION MATERIAL: S.S	
38 LCD INDICATOR: YES	
39 MANUFACTURER: * See list	MODEL NO. : See list





NOTES :

* VENDOR TO CONFIRM

1) VENDOR SHALL FULLY SUPPLY & ASSEMBLE THERMOWELL WITH THERMOELEMENT AND HEAD MOUNTED TRANSMITTER.

2) SURFACE TEMPERATURE WILL REACH TO 85°C IN EXPOSURE OF DIRECT SUNLIGHT.

3) HEAD COVER SHALL BE FRONT GLASS TYPE FOR COMPATIBILITY OF INDICATOR REQUIREMENT

4) WAKE FREQUENCY CALCULATION SHALL BE SUBMITTED BY MANUFACTURE FOR FINALIZING ALL THERMOWELL SIZE. (ASME PTC 19.3)

5) THE LINE SIZE SHALL BE EXPANDED TO 4".

6) REFER TO IPS-D-IN-101" FOR THERMOWELL DIMENSION.

7) COMPABILITY WITH NACE MR0175/ISO 15156 TO BE CONSIDERED FOR WETTED EQUIPEMNT.

 شماره 3 - 9184		سطح الارض و اينه تحت الارض										خرید پمپ های کمپرسور گاز (رفت و برگشتی) بینک		INSTRUMENT DATASHEETS / CERTIFICATES		HY reply: Modified.	
		مورد	میتا	میتا	میتا	میتا	میتا	میتا	میتا	میتا	میتا						
BK	GCS	HY	120	EN	DS	0001	Y02	List of T/T/E/TW									
ITEM NO.	T/T/E/TW	WELL DEPTH (m)	OPR. TEMP. (°C)	DESIGN TEMP. (°C)	MAX. VELOCITY (m/s)	RANGE (°C)	PRESSURE No./Dwg. (Bar)	PROCESS CONNECTION & RATING (ANSI)	INDICATOR	TRANSMITTER MOUNTING	SERVICE	P&ID NO.	MTR. & Model No.	NOTES			
															U	STEM	
1	C-TT-2191A	250	290	37	180	0-100	4.9 / 24.5	1 1/2", 300#	Yes	REMOTE TYPE	Process Gas GAS-111-0031A-AN05-8"-ET	BK-GCS-HY-120-PR-P-0001-Page1		Loose Item U Size & rating to be checked by client Thermowell Nace			
2	C-TT-2191A	400	450	129	180	0-200	18 / 24.5	2", 300#	Yes	REMOTE TYPE	Process Gas 15TG DISCHARGE SNUBBER	BK-GCS-HY-120-PR-P-0001-Page1		Thermowell Nace			
3	TT-2123A	6"	250	290	129	180	4.0	0-200	18 / 24.5	1 1/2", 300#	Yes	REMOTE TYPE	Process Gas GAS-111-0036A-CN05-6"-PT	BK-GCS-HY-120-PR-P-0001-Page1	Loose Item U Size & rating to be checked by client Thermowell Nace		
4	TT-2132A	6"	200	240	60	180	8.0	0-120	17.1 / 24.5	1 1/2", 300#	Yes	REMOTE TYPE	Process Gas GAS-111-0044A-CN05-6"-ET	BK-GCS-HY-120-PR-P-0001-Page1	Loose Item U Size & rating to be checked by client Thermowell Nace		
5	TT-2133A	6"	200	240	148	180	3.5	0-200	54.9 / 62	1 1/2", 600#	Yes	REMOTE TYPE	Process Gas GAS-111-0051A-FN05-6"-IS	BK-GCS-HY-120-PR-P-0001-Page1	Loose Item U Size & rating to be checked by client Thermowell Nace		
6	C-TT-2194A	400	450	148	180	0-200	54.9 / 62	2", 600#	Yes	REMOTE TYPE	Process Gas 2nd STAGE DISCHARGE SNUBBER	BK-GCS-HY-120-PR-P-0001-Page1					
7	C-TT-2204A	2" to 6" (Expanded)	150	200	60	85	0.3	0-120	5 / 10	1 1/2", 300#	Yes	REMOTE TYPE	Lube Oil OIL-112-0008A-S.S.2"-IS	BK-GCS-HY-120-PR-P-0001-Page3			
8	C-TT-2203A	200	250	70	85	1.1	0-120	ATM / 10	1/2" NPT	Yes	REMOTE TYPE	crankcase Comp.C	BK-GCS-HY-120-PR-P-0001-Page3				
9	C-TT-2213A	HOLD	HOLD	65	85	-	0-120	ATM / 7	2", 300#	Yes	REMOTE TYPE	Water Reservoir	BK-GCS-HY-120-PR-P-0001-Page5				
10	C-TT-2214A	N/A	N/A	N/A	N/A	N/A	0-120	N/A	N/A	Yes	REMOTE TYPE	Main Motor NDE	BK-GCS-HY-120-PR-P-0001-Page7				
11	C-TT-2215A	N/A	N/A	N/A	N/A	N/A	0-120	N/A	N/A	Yes	REMOTE TYPE	Main Motor DE	BK-GCS-HY-120-PR-P-0001-Page7				
12	C-TT-2216A	N/A	N/A	N/A	N/A	N/A	0-200	N/A	3/4" NPT	Yes	REMOTE TYPE	Comp Bearing	BK-GCS-HY-120-PR-P-0001-Page7				
13	C-TT-2218A	N/A	N/A	N/A	N/A	N/A	0-200	N/A	N/A	Yes	REMOTE TYPE	Comp Bearing	BK-GCS-HY-120-PR-P-0001-Page7				
14	C-TT-2217A	N/A	N/A	N/A	N/A	N/A	0-200	N/A	N/A	Yes	REMOTE TYPE	Packing	BK-GCS-HY-120-PR-P-0001-Page7				
15	C-TT-2219A	N/A	N/A	N/A	N/A	N/A	0-200	N/A	N/A	Yes	REMOTE TYPE	Packing	BK-GCS-HY-120-PR-P-0001-Page7				
16	C-TT-2220A	N/A	N/A	N/A	N/A	N/A	0-200	N/A	3/4" NPT	Yes	REMOTE TYPE	Comp Bearing	BK-GCS-HY-120-PR-P-0001-Page7				
17	TE-2222A TE-2223A TE-2224A	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	N/A	Main Motor T sensor	BK-GCS-HY-120-PR-P-0001-Page7				
18	TE-2225A TE-2226A TE-2227A	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	N/A	Main Motor S sensor	BK-GCS-HY-120-PR-P-0001-Page7				
19	TE-2228A TE-2229A TE-2230A	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	N/A	Main Motor R sensor	BK-GCS-HY-120-PR-P-0001-Page7				
20	TT-2122B	8"	250	290	37	180	9.0	0-100	4.9 / 24.5	1 1/2", 300#	Yes	REMOTE TYPE	GAS-111-0031A-AN05-8"-ET	BK-GCS-HY-120-PR-P-0001-Page1	Loose Item U Size & rating to be checked by client Thermowell Nace		
21	C-TT-2191B	400	450	129	180	0-200	18 / 24.5	2", 300#	Yes	REMOTE TYPE	15TG DISCHARGE SNUBBER	BK-GCS-HY-120-PR-P-0001-Page1		Thermowell Nace			
22	TT-2123B	6"	250	290	129	180	4.0	0-200	18 / 24.5	1 1/2", 300#	Yes	REMOTE TYPE	Process Gas GAS-111-0036A-CN05-6"-PT	BK-GCS-HY-120-PR-P-0001-Page1	Loose Item U Size & rating to be checked by client Thermowell Nace		
23	TT-2197B	6"	200	240	60	180	8.0	0-120	17.1 / 24.5	1 1/2", 300#	Yes	REMOTE TYPE	GAS-111-0044A-CN05-6"-ET	BK-GCS-HY-120-PR-P-0001-Page1	Loose Item U Size & rating to be checked by client Thermowell Nace		
24	TT-2123B	6"	200	240	148	180	3.5	0-200	54.9 / 62	1 1/2", 600#	Yes	REMOTE TYPE	GAS-111-0051A-FN05-6"-IS	BK-GCS-HY-120-PR-P-0001-Page1	Loose Item U Size & rating to be checked by client Thermowell Nace		
25	C-TT-2194B	400	450	148	180	0-200	54.9 / 62	2", 600#	Yes	REMOTE TYPE	2nd STAGE DISCHARGE SNUBBER	BK-GCS-HY-120-PR-P-0001-Page1					
26	C-TT-2204B	2" to 6" (Expanded)	150	200	60	85	0.3	0-120	5 / 10	1 1/2", 300#	Yes	REMOTE TYPE	Lube Oil OIL-112-0008A-S.S.2"-IS	BK-GCS-HY-120-PR-P-0001-Page3			
27	C-TT-2203B	200	250	70	85	1.1	0-120	ATM / 10	1/2" NPT	Yes	REMOTE TYPE	crankcase Comp.C	BK-GCS-HY-120-PR-P-0001-Page3				
28	C-TT-2213B	HOLD	HOLD	65	85	-	0-120	ATM / 7	2", 300#	Yes	REMOTE TYPE	Water Reservoir	BK-GCS-HY-120-PR-P-0001-Page5				
29	C-TT-2214B	N/A	N/A	N/A	N/A	N/A	0-120	N/A	N/A	Yes	REMOTE TYPE	Main Motor NDE	BK-GCS-HY-120-PR-P-0001-Page7				
30	C-TT-2215B	N/A	N/A	N/A	N/A	N/A	0-120	N/A	N/A	Yes	REMOTE TYPE	Main Motor DE	BK-GCS-HY-120-PR-P-0001-Page7				
31	C-TT-2216B	N/A	N/A	N/A	N/A	N/A	0-200	N/A	3/4" NPT	Yes	REMOTE TYPE	Comp Bearing	BK-GCS-HY-120-PR-P-0001-Page7				
32	C-TT-2218B	N/A	N/A	N/A	N/A	N/A	0-200	N/A	N/A	Yes	REMOTE TYPE	Comp Bearing	BK-GCS-HY-120-PR-P-0001-Page7				
33	C-TT-2217B	N/A	N/A	N/A	N/A	N/A	0-200	N/A	N/A	Yes	REMOTE TYPE	Packing	BK-GCS-HY-120-PR-P-0001-Page7				
34	C-TT-2219B	N/A	N/A	N/A	N/A	N/A	0-200	N/A	N/A	Yes	REMOTE TYPE	Packing	BK-GCS-HY-120-PR-P-0001-Page7				
35	C-TT-2220B	N/A	N/A	N/A	N/A	N/A	0-200	N/A	3/4" NPT	Yes	REMOTE TYPE	Comp Bearing	BK-GCS-HY-120-PR-P-0001-Page7				
36	TE-2222B TE-2223B TE-2224B	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	N/A	Main Motor T sensor	BK-GCS-HY-120-PR-P-0001-Page7				
37	TE-2225B TE-2226B TE-2227B	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	N/A	Main Motor S sensor	BK-GCS-HY-120-PR-P-0001-Page7				
38	TE-2228B TE-2229B TE-2230B	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	N/A	Main Motor R sensor	BK-GCS-HY-120-PR-P-0001-Page7				
39	TT-2122C	8"	250	290	37	180	9.0	0-100	4.9 / 24.5	1 1/2", 300#	Yes	REMOTE TYPE	GAS-111-0031A-AN05-8"-ET	BK-GCS-HY-120-PR-P-0001-Page1	Loose Item U Size & rating to be checked by client Thermowell Nace		
40	C-TT-2191C	HOLD	HOLD	129	180	0-200	18 / 24.5	2", 300#	Yes	REMOTE TYPE	15TG DISCHARGE SNUBBER	BK-GCS-HY-120-PR-P-0001-Page1		Thermowell Nace			
41	TT-2123C	6"	250	290	129	180	4.0	0-200	18 / 24.5	1 1/2", 300#	Yes	REMOTE TYPE	Process Gas GAS-111-0036A-CN05-6"-PT	BK-GCS-HY-120-PR-P-0001-Page1	Loose Item U Size & rating to be checked by client Thermowell Nace		
42	TT-2197C	6"	200	240	60	180	8.0	0-120	17.1 / 24.5	1 1/2", 300#	Yes	REMOTE TYPE	GAS-111-0044A-CN05-6"-ET	BK-GCS-HY-120-PR-P-0001-Page1	Loose Item U Size & rating to be checked by client Thermowell Nace		
43	TT-2123C	6"	200	240	148	180	3.5	0-200	54.9 / 62	1 1/2", 600#	Yes	REMOTE TYPE	GAS-111-0051A-FN05-6"-IS	BK-GCS-HY-120-PR-P-0001-Page1	Loose Item U Size & rating to be checked by client Thermowell Nace		
44	C-TT-2194C	HOLD	HOLD	148	180	0-200	54.9 / 62	2", 600#	Yes	REMOTE TYPE	2nd STAGE DISCHARGE SNUBBER	BK-GCS-HY-120-PR-P-0001-Page1					
45	C-TT-2204C	2" to 6" (Expanded)	150	200	60	85	0.3	0-120	5 / 10	1 1/2", 300#	Yes	REMOTE TYPE	Lube Oil OIL-112-0008A-S.S.2"-IS	BK-GCS-HY-120-PR-P-0001-Page3			
46	C-TT-2203C	200	250	70	85	1.1	0-120	ATM / 10	1/2" NPT	Yes	REMOTE TYPE	crankcase Comp.C	BK-GCS-HY-120-PR-P-0001-Page3				
47	C-TT-2213C	HOLD	HOLD	65	85	-	0-120	ATM / 7	2", 300#	Yes	REMOTE TYPE	Water Reservoir	BK-GCS-HY-120-PR-P-0001-Page5				
48	C-TT-2214C	N/A	N/A	N/A	N/A	N/A	0-120	N/A	N/A	Yes	REMOTE TYPE	Main Motor NDE	BK-GCS-HY-120-PR-P-0001-Page7				
49	C-TT-2215C	N/A	N/A	N/A	N/A	N/A	0-120	N/A	N/A	Yes	REMOTE TYPE	Main Motor DE	BK-GCS-HY-120-PR-P-0001-Page7				
50	C-TT-2216C	N/A	N/A	N/A	N/A	N/A	0-200	N/A	3/4" NPT	Yes	REMOTE TYPE	Comp Bearing	BK-GCS-HY-120-PR-P-0001-Page7				
51	C-TT-2218C	N/A	N/A	N/A	N/A	N/A	0-200	N/A	N/A	Yes	REMOTE TYPE	Comp Bearing	BK-GCS-HY-120-PR-P-0001-Page7				
52	C-TT-2217C	N/A	N/A	N/A	N/A	N/A	0-200	N/A	N/A	Yes	REMOTE TYPE	Packing	BK-GCS-HY-120-PR-P-0001-Page7				
53	C-TT-2219C	N/A	N/A	N/A	N/A	N/A	0-200	N/A	N/A	Yes	REMOTE TYPE	Packing	BK-GCS-HY-120-PR-P-0001-Page7				
54	C-TT-2220C	N/A	N/A	N/A	N/A	N/A	0-200	N/A	3/4" NPT	Yes	REMOTE TYPE	Comp Bearing	BK-GCS-HY-120-PR-P-0001-Page7				
55	TE-2222C TE-2223C TE-2224C	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	N/A	Main Motor T sensor	BK-GCS-HY-120-PR-P-0001-Page7				
56	TE-2225C TE-2226C TE-2227C	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	N/A	Main Motor S sensor	BK-GCS-HY-120-PR-P-0001-Page7				
57	TE-2228C TE-2229C TE-2230C	N/A	N/A	N/A	N/A	N/A	RTD Range	N/A	N/A	Yes	N/A	Main Motor R sensor	BK-GCS-HY-120-PR-P-0001-Page7				

IN: Range to be rechecked. (to be applicable for all 3 Train)
HY reply: Modified.

CN05
HY reply: Modified.

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و اینیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 – 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 10 از 42	
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
		Bk	GCS	HY	120	IN	DS	0001		V02
Data Sheet for Differential Pressure Transmitter										
GENERAL	1	Tag No.: (Refer to Next Page)	Service: (Refer to Next Page)							
	2	Function	Record ☐	Indicate ☒	Control ☐	Blind ☐	Trans ☒	Integ ☐	(Note1)	
	3	Case	MFR STD ☒	Nom Size ☐	Color MFR STD ☒	Other				
	4	Mounting	Flush ☐	Surface ☐	Yoke ☒	Other				
	5	Enclosure Class	General Purpose ☐	Weather Proof ☒	Explosion-Proof ☐	Class				
	6		For use in Intrinsically Safe System ☒ Other EExia, IIB, T4							
	7	Power Supply	Ingress Protection : IP 66							
TRANSMITTER	8	Trans. Output	4-20mA ☒	10-50mA ☐	21-10 kpa(3-15 psig) ☐	Other 4-20mA Smart HART				
	9		Transmitter Accuracy : Better than 0.1% of Calibrated Span							
UNIT	10	Service	Flow ☐	Level ☐	Diff. Pressure ☒	Other				
	11	Element Type	Diaphragm ☒	Helix ☐	Bourdon ☐	Bellows ☐	Other			
	12	Material	Body Epoxy Painted Die Cast Aluminum Copper free				Element 316 S.S. as minimum			
	13	Range	Fixed ☐	Adj. Range ☒	Set At	(Refer to Next Page)				
	14	Rating	Overrange Protection: at least 1.5 times the maximum range							
	15	Process Data	Press: Normal	Max	Element Range	(Refer to Next Page)				
	16	Process Conn.	1/2 in. NPT ☒	Other Male with wrench flats						
	17		Location: Bottom ☒	Back ☐	Other					
OPTIONS	18	Electrical Conn.	MFR STD ☐	Other ISO M20x1.5						
	19	Miscellaneous	Filt Reg. ☐	Sup. Gage ☐	Output Gage ☐	Charts				
	20	Diaphragm Seal	Diaph Seal ☐ (N/A) Type : Capillary Length: Mtl :							
		Conn. Fill Fluid :								
		Flushing Connection :								
	21	Manifold	Valve Manifold : See List							
	22	MFR. & Model No.	See list							
Notes: 1- All transmitters shall be provided complete with LCD type integral indicator . 2- Repeatability of the transmitter shall be better than 0.1% of the span. 3- All transmitters shall be reverse polarity protected. 4- All components, particularly if containing electric contacts, shall be vibration resistant. 5- Each Instrument Shall Have a S.S. Tag Plate With Purchaser's Tag Number, The Tag Plate Shall Be Permanently Attached To The Instrument .										

Havayar's PID shall
also be corrected
based on Hirgan's PID
HY reply: Modified.



053 - 073 - 9184

خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک
(قرارداد BK-HD-GCS-CO-0008 03)



شماره صفحه: 11 از 42

INSTRUMENT DATASHEETS / CERTIFICATES

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده
V02	0001	DS	IN	120	HY

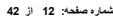
List of DPT

[illegible]



053 - 073 - 9184

خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک
(قرارداد BK-HD-GCS-CO-0008_03)



نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه
V02	0001	DS	IN	120	HY	GCS	BK

Data Sheet for Differential Pressure Gauge

1	Type :	Direct Rdg. ☒	Other ☐	liquid filled	3-15 lb Reciever ☐
2	Mounting :	Direct ☒	Local ☐		Yoke ☐ Other ☐
3	Dial :	Diameter	160 mm	Color : White / Black Lettering ,Aluminum Non Rusting Metal	
4	Case :	SS316 ☒	Cast Aluminum ☐		Phenol ☐
		Other ☐			
5	Ring :	Screwed ☒	Hinged ☐		Slip ☒
		Std ☐	Other ☐		
6	Blow-out Protection :	None ☐		Back ☒	Disc ☒
		Solid Front ☐		Other ☐	
7	Lens :	Glass ☒	Plastic ☐	Safety Glass (shatter proof)	
8	Options :	Pulsation Dampener ☐		Refer to note	
9	Nominal Accuracy Required :	±1.6% of full scale			
10	Over range protection :	1.3 times the maximum scale reading			

11	MFR. & Model No. :	SANGAN PG-13-700			
12	Press Element : Diaphragm	☒	Other	Belows	☐
			(Note6)		
13	Element Mtl. :	Other	☐	Steel	☐
		Bronze	☐		
		Other	☒	316SS	
14	Socket Mtl. :	Other	☐	Steel	☐
		Bronze	☐		
		Other	☒	316SS	
15	Connection-NPT :	1/4 in.	☐	1/2 in.	☒
		Bottom	☒	Back	☐
		Bronze	☐	SS	☒
16	Movement:	Nylon	☐	Other	Stainless Steel
17	Diaphragm Seal	N/A			
	MFR.		☐	Type	
	Wetted Part Mtl.			Other Mtl.	
	Fill Fluid :				
	Process Conn. :				
18	Ingress Protection :	IP 65			

Item	Tag No.	Range (barg)	Process Fluid/State	Design		Operating		Differential Pressure		LINE NO./EQUIPMENTNO.	P&ID NO.	Accessories	MFR.& Model	NOTES
				Press (barg)	Temp (C°)	Press (barg)	Temp (C°)	Norm. (bar)	Max. (bar)					
1	C-PDG-2204A	0~1	Lub Oil Filter	10	85	6	60	0.1	0.5	OIL-112-0004A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001-Page3	5 valve manifold S.S316		
2	C-PDG-2200A	0~1	N2 Gas Supply	10	85	7.5	60	0.15	0.5	OIL-112-0004A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001-Page4	5 valve manifold S.S316		
3	C-PDG-2205A	0~0.6	Jacket Cooling	10	85	3	58	0.1	0.2	CWS-112-0018A-C.S-1/2"-PT	BK-GCS-HY-120-PR-PI-0001-Page6	5 valve manifold S.S316		
4	C-PDG-2206A	0~0.6	Jacket Cooling	10	85	3	58	0.1	0.2	CWS-112-0017A-C.S-1/2"-PT	BK-GCS-HY-120-PR-PI-0001-Page6	5 valve manifold S.S316		
5	C-PDG-2204B	0~1	Lub Oil Filter	10	85	6	60	0.1	0.5	OIL-112-0004A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001-Page3	5 valve manifold S.S316		
6	C-PDG-2200B	0~1	N2 Gas Supply	10	85	7.5	60	0.15	0.5	OIL-112-0004A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001-Page4	5 valve manifold S.S316		
7	C-PDG-2205B	0~0.6	Jacket Cooling	10	85	3	58	0.1	0.2	CWS-112-0018A-C.S-1/2"-PT	BK-GCS-HY-120-PR-PI-0001-Page6	5 valve manifold S.S316		
8	C-PDG-2206B	0~0.6	Jacket Cooling	10	85	3	58	0.1	0.2	CWS-112-0017A-C.S-1/2"-PT	BK-GCS-HY-120-PR-PI-0001-Page6	5 valve manifold S.S316		
9	C-PDG-2204C	0~1	Lub Oil Filter	10	85	6	60	0.1	0.5	OIL-112-0004A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001-Page3	5 valve manifold S.S316		
10	C-PDG-2200C	0~1	N2 Gas Supply	10	85	7.5	60	0.15	0.5	OIL-112-0004A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001-Page4	5 valve manifold S.S316		
11	C-PDG-2205C	0~0.6	Jacket Cooling	10	85	3	58	0.1	0.2	CWS-112-0018A-C.S-1/2"-PT	BK-GCS-HY-120-PR-PI-0001-Page6	5 valve manifold S.S316		
12	C-PDG-2206C	0~0.6	Jacket Cooling	10	85	3	58	0.1	0.2	CWS-112-0017A-C.S-1/2"-PT	BK-GCS-HY-120-PR-PI-0001-Page6	5 valve manifold S.S316		

NOTES :

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رقت و برگشتی) بینک (قرارداد 03 0008 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP			
شماره پیمان: 053 - 073 – 9184		INSTRUMENT DATASHEETS / CERTIFICATES								شماره صفحه: 13 از 42	
		پروژه	پسته کاری	صادر کننده	تسهيلات	رشته	نوع مدرک	سریال	نسخه		
		BK	GCS	HY	120	IN	DS	0001	V02		
INSTRUMENT DATA SHEET FOR FLOW INDICATOR (ROTAMETER)											
GENERAL DATA											
1	TAG NO.		C-FI-2200A		C-FI-2201A		C-FI-2202A		C-FI-2203A		
2	QUANTITY		1		1		1		1		
3	P&ID NO.		BK-GCS-HY-120-PR-PI-0001-Page4		BK-GCS-HY-120-PR-PI-0001-Page4		BK-GCS-HY-120-PR-PI-0001-Page4		BK-GCS-HY-120-PR-PI-0001-Page4		
4	SERVICE		N2 Gas Supply		N2 Gas Supply		N2 Gas Supply		N2 Gas Supply		
5	LINE NUMBER		1/2" SS316L Tubing		1/2" SS316L Tubing		1/2" SS316L Tubing		1/2" SS316L Tubing		
6	FUNCTION		Local Indicator		Local Indicator		Local Indicator		Local Indicator		
7	MOUNTING		Inline		Inline		Inline		Inline		
FLUID DATA											
8	FLUID		N2 Gas		N2 Gas		N2 Gas		N2 Gas		
9	FLUID STATE		Gas		Gas		Gas		Gas		
10	MAXIMUM FLOW Nm3/h		3		3		3		3		
11	NORMAL FLOW Nm3/h		1.5		1.5		1.5		1.5		
12	PRESS. OPERATING / DESIGN (BARG)		2.2	12.5	1	12.5	1	12.5	2.2	12.5	
13	TEMP. OPERATING / DESIGN (°C)		60	85	60	85	60	85	60	85	
14	DENSITY AT ST. COND. (KG/m³)		1.183		1.183		1.183		1.183		
15	DENSITY AT OP.COND. (KG/m³)		3.251		2.037		2.037		3.251		
16	COMPRESSIBILITY FACTOR (Z)		1		1		1		1		
17	MOL. WEIGHT	CP/CV	28	1.40	28	1.40	28	1.40	28	1.40	
18	OPERATING VISCOSITY (Cp)		-		0.02		0.02		0.02		
19	MAX. PRESSURE DROP @ MAX. FLOW(BAR)		min (nil)		min (nil)		min (nil)		min (nil)		
ROTAMETER DETAIL											
20	TYPE		Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication		Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication		Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication		Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication		
21	FLANGE SIZE / RATING / FACING		1/2", 150# R.F		1/2", 150# R.F		1/2", 150# R.F		1/2", 150# R.F		
22	RANGE: FROM / TO (Kg/Hr)		3 Nm3/h		3 Nm3/h		3 Nm3/h		3 Nm3/h		
23	SCALE GRADUATION		Direct Scale		Direct Scale		Direct Scale		Direct Scale		
24	BODY / FLANGE MATERIAL		316 S.S	ASTM A182 F316	316 S.S	ASTM A182 F316	316 S.S	ASTM A182 F316	316 S.S	ASTM A182 F316	
25	FLOAT EXTENSION MATERIAL		316 S.S		316 S.S		316 S.S		316 S.S		
26	CONNECTION LAYOUT		Bottom-Top , Vertical		Bottom-Top , Vertical		Bottom-Top , Vertical		Bottom-Top , Vertical		
27	INGRESS PROTECTION		IP 65		IP 65		IP 65		IP 65		
28	ACCURACY		±1.6% of full scale or better.		±1.6% of full scale or better.		±1.6% of full scale or better.		±1.6% of full scale or better.		
ACCESSORIES											
29	NEEDLE VALVE		No		No		No		No		
30	SWITCH		No		No		No		No		
PURCHASE											
31	MODEL		H250		H250		H250		H250		
32	MANUFACTURE		KROHNE		KROHNE		KROHNE		KROHNE		

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رقت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)						 HAVAYAR INDUSTRIAL GROUP										
شماره پیمان: 053 - 073 – 9184		INSTRUMENT DATASHEETS / CERTIFICATES								شماره صفحه: 14 از 42								
		رشته		نوع مدرک		سریال		نسخه										
		BK		GCS		HY		120				IN		DS		0001		V02
INSTRUMENT DATA SHEET FOR FLOW INDICATOR (ROTAMETER)																		
GENERAL DATA																		
1	TAG NO.		C-FI-2200B			C-FI-2201B			C-FI-2202B			C-FI-2203B						
2	QUANTITY		1			1			1			1						
3	P&ID NO.		BK-GCS-HY-120-PR-PI-0001-Page4			BK-GCS-HY-120-PR-PI-0001-Page4			BK-GCS-HY-120-PR-PI-0001-Page4			BK-GCS-HY-120-PR-PI-0001-Page4						
4	SERVICE		N2 Gas Supply			N2 Gas Supply			N2 Gas Supply			N2 Gas Supply						
5	LINE NUMBER		1/2" SS316L Tubing			1/2" SS316L Tubing			1/2" SS316L Tubing			1/2" SS316L Tubing						
6	FUNCTION		Local Indicator			Local Indicator			Local Indicator			Local Indicator						
7	MOUNTING		Inline			Inline			Inline			Inline						
FLUID DATA																		
8	FLUID		N2 Gas			N2 Gas			N2 Gas			N2 Gas						
9	FLUID STATE		Gas			Gas			Gas			Gas						
10	MAXIMUM FLOW Nm3/h		3			3			3			3						
11	NORMAL FLOW Nm3/h		1.5			1.5			1.5			1.5						
12	PRESS. OPERATING / DESIGN (BARG)		2.2		12.5		1		12.5		1		12.5		2.2		12.5	
13	TEMP. OPERATING / DESIGN (°C)		60		85		60		85		60		85		60		85	
14	DENSITY AT ST. COND. (KG/m³)		1.183			1.183			1.183			1.183						
15	DENSITY AT OP.COND. (KG/m³)		3.251			2.037			2.037			3.251						
16	COMPRESSIBILITY FACTOR (Z)		1			1			1			1						
17	MOL. WEIGHT		CP/CV		28		1.40		28		1.40		28		1.40		28	
18	OPERATING VISCOSITY (Cp)		-			0.02			0.02			0.02						
19	MAX. PRESSURE DROP @ MAX. FLOW(BAR)		min (nil)			min (nil)			min (nil)			min (nil)						
ROTAMETER DETAIL																		
20	TYPE		Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication			Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication			Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication			Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication						
21	FLANGE SIZE / RATING / FACING		1/2", 150# R.F			1/2", 150# R.F			1/2", 150# R.F			1/2", 150# R.F						
22	RANGE: FROM / TO (Kg/Hr)		3 Nm3/h			3 Nm3/h			3 Nm3/h			3 Nm3/h						
23	SCALE GRADUATION		Direct Scale			Direct Scale			Direct Scale			Direct Scale						
24	BODY / FLANGE MATERIAL		316 S.S		ASTM A182 F316		316 S.S		ASTM A182 F316		316 S.S		ASTM A182 F316		316 S.S		ASTM A182 F316	
25	FLOAT EXTENSION MATERIAL		316 S.S			316 S.S			316 S.S			316 S.S						
26	CONNECTION LAYOUT		Bottom-Top , Vertical			Bottom-Top , Vertical			Bottom-Top , Vertical			Bottom-Top , Vertical						
27	INGRESS PROTECTION		IP 65			IP 65			IP 65			IP 65						
28	ACCURACY		±1.6% of full scale or better.			±1.6% of full scale or better.			±1.6% of full scale or better.			±1.6% of full scale or better.						
ACCESSORIES																		
29	NEEDLE VALVE		No			No			No			No						
30	SWITCH		No			No			No			No						
PURCHASE																		
31	MODEL		H250			H250			H250			H250						
32	MANUFACTURE		KROHNE			KROHNE			KROHNE			KROHNE						

		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رقت و برگشتی) بینک (قرارداد 03 0008-BK-HD-GCS-CO)									
شماره پیمان: 053 - 073 – 9184		INSTRUMENT DATASHEETS / CERTIFICATES								شماره صفحه: 15 از 42	
		نسخه		سریال		نوع مدرک		رشته			
		V02		0001		DS		IN			
پروژه		بسته کاری		صادر کننده		تسهیلات		BK		GCS	
HY		120									

INSTRUMENT DATA SHEET FOR FLOW INDICATOR (ROTAMETER)										
GENERAL DATA										
1	TAG NO.		C-FI-2200C		C-FI-2201C		C-FI-2202C		C-FI-2203C	
2	QUANTITY		1		1		1		1	
3	P&ID NO.		BK-GCS-HY-120-PR-PI-0001-Page4		BK-GCS-HY-120-PR-PI-0001-Page4		BK-GCS-HY-120-PR-PI-0001-Page4		BK-GCS-HY-120-PR-PI-0001-Page4	
4	SERVICE		N2 Gas Supply		N2 Gas Supply		N2 Gas Supply		N2 Gas Supply	
5	LINE NUMBER		1/2" SS316L Tubing		1/2" SS316L Tubing		1/2" SS316L Tubing		1/2" SS316L Tubing	
6	FUNCTION		Local Indicator		Local Indicator		Local Indicator		Local Indicator	
7	MOUNTING		Inline		Inline		Inline		Inline	
FLUID DATA										
8	FLUID		N2 Gas		N2 Gas		N2 Gas		N2 Gas	
9	FLUID STATE		Gas		Gas		Gas		Gas	
10	MAXIMUM FLOW Nm3/h		3		3		3		3	
11	NORMAL FLOW Nm3/h		1.5		1.5		1.5		1.5	
12	PRESS. OPERATING / DESIGN (BARG)		2.2		12.5		1		12.5	
13	TEMP. OPERATING / DESIGN (°C)		60		85		60		85	
14	DENSITY AT ST. COND. (KG/m³)		1.183		1.183		1.183		1.183	
15	DENSITY AT OP.COND. (KG/m³)		3.251		2.037		2.037		3.251	
16	COMPRESSIBILITY FACTOR (Z)		1		1		1		1	
17	MOL. WEIGHT		CP/CV		28		1.40		28	
18	OPERATING VISCOSITY (Cp)		`		0.02		0.02		0.02	
19	MAX. PRESSURE DROP @ MAX. FLOW(BAR)		min (nil)		min (nil)		min (nil)		min (nil)	
ROTAMETER DETAIL										
20	TYPE		Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication		Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication		Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication		Metal Type Rotameter-Shall be fitted with Magnetic Follower System For Indication	
21	FLANGE SIZE / RATING / FACING		1/2", 150# R.F		1/2", 150# R.F		1/2", 150# R.F		1/2", 150# R.F	
22	RANGE: FROM / TO (Kg/Hr)		3 Nm3/h		3 Nm3/h		3 Nm3/h		3 Nm3/h	
23	SCALE GRADUATION		Direct Scale		Direct Scale		Direct Scale		Direct Scale	
24	BODY / FLANGE MATERIAL		316 S.S		ASTM A182 F316		316 S.S		ASTM A182 F316	
25	FLOAT EXTENSION MATERIAL		316 S.S		316 S.S		316 S.S		316 S.S	
26	CONNECTION LAYOUT		Bottom-Top , Vertical		Bottom-Top , Vertical		Bottom-Top , Vertical		Bottom-Top , Vertical	
27	INGRESS PROTECTION		IP 65		IP 65		IP 65		IP 65	
28	ACCURACY		±1.6% of full scale or better.		±1.6% of full scale or better.		±1.6% of full scale or better.		±1.6% of full scale or better.	
ACCESSORIES										
29	NEEDLE VALVE		No		No		No		No	
30	SWITCH		No		No		No		No	
PURCHASE										
31	MODEL		H250		H250		H250		H250	
32	MANUFACTURE		KROHNE		KROHNE		KROHNE		KROHNE	

 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)						 HAVAYAR INDUSTRIAL GROUP			
شماره پیمان: 053 - 073 – 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 16 از 42		
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال			نسخه
		BK	GCS	HY	120	IN	DS	0001			V02
INSTRUMENT DATA SHEET FOR SIGHT GLASS											
DESIGN DATA											
1	Tag Numbers					See Next Page					
2	Pipe Material Class					C.S					
3	Service					Cooling Water					
4	Operating Pressure					See List					
5	Operating Temperature					See List					
6	Rating					See List					
7	Size Range					See List					
9	P&ID Reference					See List					
SPECIFICATIONS											
10	TYPE					Rotary					
11	End Connection					Flanged R.F					
12	Cover Type					Tempered					
13	Installation Requirements					Horizontal or Vertical					
MATERIALS											
15	Body					C.S					
16	Glass Cover					TEMPERED GLASS					
17	Gasket					KLINGRIT					
18	Bolts / Studs					C.S					



خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک
(قرارداد 03 BK-HD-GCS-CO-0008)

شماره پیمان:
9184 - 073 - 53

INSTRUMENT DATASHEETS / CERTIFICATES

شماره صفحه: 17 از 42

0192

بسته کاری

صاد: کننده

تسهيلات

و شته

نوع مدرک

سرمای

نقد

12

DK

666

LIV

120

IN

DC

0001

22

List of Sight Glass

[illegible]

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنيه تحت الارض خرید پکیج های کمپرسور گاز (رگفت و برگشتی) بینک (قرارداد 03-BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES								شماره صفحه: 18 از 42
		پروژه	پسند کاری	صادر کننده	تسهيلات	رشته	نوع مدرک	سریال	نسخه	
		BK	GCS	HY	120	IN	DS	0001	V02	
INSTRUMENT DATA SHEET FOR FLOW TRANSMITTER										
	1	Tag Number	P&ID No.		FT-2121A		BK-GCS-HY-120-PR-PI-0001-Page1			
	2	Service	Pipe No.		Process gas		GAS-111-0031A- AN05 -8-ET			
	3	Pipe O. D. /I. D. mm	Pipe Sch./Thk.		8"		SCH.20			
	4	Pipe Material	Pipe Insulation		ASTM A106 Gr.B		N/A			
Process Conditions	5	Fluid	State		Sour Hydrocarbon		Gas			
	6	Operating Pressure bar(g)	Design Pressure bar(g)		4.9		24.5			
	7	Operating Temperature °C	Design Temperature °C		36.8		180			
	8	Flow Rate	Unit		Min. Flow	Nor. Flow	Max. Flow			
		kg/h(Liquid,Steam),Nm3/h(Gas)	Nm3/h		1971	7918	8710			
	9	Operating Density kg/m3	Standard Density kg/Nm3		5.771		-			
	10	Kinetic Viscosity(mm2/s)	Dynamic Viscosity (cP)		-		0.0115			
	11	Specific Heat Ratio Cp/Cv	Compress Factor		1.245		0.975			
	12	Vapor Pressure	Vapor Density kg/m3		NA		-			
	13	Molecular Weight	Relative Humidity		24.52		97%			
	14	Allowable Pressure Drop @ Max. Flow				0.1				
Element	15	Tag Number			FE-2121A					
	16	Measure Element Type			Orifice					
	17	Measure Element Material	Thickness		S.S316-Nace		6mm			
	18	Bore Diameter			Hold					
	19	Connection Type	Size		Flange Weld neck		8"			
	20	Flange Standard	Flange Rating		ASME B16.5		ANSI 300#			
	21	Flange Material	Facing		C.S. (Nace)		RF			
	22	Bolt /Nut Material	Bolt /Nut Standard		ASTMB7M/2HM		ASME B18.2.1/ASME B18.2.2			
	23	Gasket Type & Material				Spiral Wound,S.S 316 Winding /Graphite Filler, C.S. Outer& S.S 316L Inner Ring				
Transmitter Unit	24	Model			Diff pressure					
	25	Available Range			-623 to 623 mbar					
	26	Flowmeter Scale			0~8668Nm3/h					
	27	Full Scale Differential Pressure (bar)			0~100 mbar					
	28	Output Signal			4-20mA Smart Hart					
	29	Accuracy			0.2 %					
	30	Load Resistance			minimum loop resistance of 250 ohms					
	31	Scale Factor			Square Root					
	32	Housing Material			Cast aluminum					
	33	Allowable Static Pressure			250Barg					
	34	Power Supply			24 V DC Loop Powered					
	35	Electrical Connection			ISO M20x1.5					
	36	Explosion Proof			Exia IIB T3					
	37	Enclosure Protection			IP66					
	38	Diaphragm Material			Nace					
	38	Wetted Part Material			Nace					
	39	Drains/Vents Material			316SS					
40	Integral Indicator / Mounting type			Yes / Direct						
Accessories	41	Valve Manifold			5 valve-S.S316					
	42	Upstream Straight Run			10X					
	43	Downstream Straight Run			5X					
Miscell.	44	Manufacturer								
	45	Requisition No.								
NOTES:										
1) Spiral Wound as per API 601, 316+Graf or CS, Thk 4.5mm with stainless steel winding and flexible graphite filter.										
2) Integral orifice with dual D.P Transmitter										
VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable										

CN05

HY reply:
Modified.

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنيه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03 0008 BK-HD-GCS-CO)						 HAVAYAR INDUSTRIAL GROUP		
		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 19 از 42		
شماره پیمان: 053 - 073 - 9184		پروژه BK	بسته کاری GCS	صادر کننده HY	تسهیلات 120	رشته IN	نوع مدرک DS	سریال 0001	نسخه V02	
INSTRUMENT DATA SHEET FOR FLOW TRANSMITTER										
Process Conditions	1	Tag Number	P&ID No.		FT-2131A		BK-GCS-HY-120-PR-PI-0001-Page1			
	2	Service	Pipe No.		Process gas		GAS-111-0044A-CN05-6"-ET			
	3	Pipe O. D. / I. D. mm	Pipe Sch./Thk.		6"		SCH.20			
	4	Pipe Material	Pipe Insulation		ASTM A106 Gr.B		N/A			
	5	Fluid	State		Sour Hydrocarbon		Gas			
	6	Operating Pressure bar(g)	Design Pressure bar(g)		17.1		24.5			
	7	Operating Temperature °C	Design Temperature °C		59.9		180			
	8	Flow Rate	Unit	Min. Flow	Nor. Flow	Max. Flow				
		kg/h(Liquid,Steam),Nm3/h(Gas)	Nm3/h	1971	7918	8710				
	9	Operating Density kg/m3	Standard Density kg/Nm3		17.35		-			
	10	Kinetic Viscosity(mm2/s)	Dynamic Viscosity (cP)		-		.0126			
	11	Specific Heat Ratio Cp/Cv	Compress Factor		1.275		0.964			
	12	Vapor Pressure	Vapor Density kg/m3		19.76		-			
13	Molecular Weight	Relative Humidity		24.52		89%				
14	Allowable Pressure Drop @ Max. Flow				0.1					
Element	15	Tag Number			FE-2197A					
	16	Measure Element Type			Orifice					
	17	Measure Element Material	Thickness		S.S316-Nace		3mm			
	18	Bore Diameter			Hold					
	19	Connection Type	Size		Flange Weld neck		6"			
	20	Flange Standard	Flange Rating		ASME B16.5		ANSI 300#			
	21	Flange Material	Facing		C.S. (Nace)		RF			
	22	Bolt /Nut Material	Bolt /Nut Standard		ASTMB7M/2HM		ASME B18.2.1/ASME B18.2.2			
	23	Gasket Type & Material		Spiral Wound,S.S 316 Winding /Graphite Filler, C.S. Outer& S.S 316L Inner Ring						
	24	Model	Diff pressure							
25	Available Range	-623 to 623 mbar								
26	Flowmeter Scale	0-8668Nm3/h								
27	Full Scale Differential Pressure (bar)	0-100 mbar								
Transmitter Unit	28	Output Signal	4-20mA Smart Hart							
	29	Accuracy	0.2 %							
	30	Load Resistance	minimum loop resistance of 250 ohms							
	31	Scale Factor	Square Root							
	32	Housing Material	Cast aluminum							
	33	Allowable Static Pressure	250Barg							
	34	Power Supply	24 V DC Loop Powered							
	35	Electrical Connection	ISO M20x1.5							
	36	Explosion Proof	Exia IIB T3							
	37	Enclosure Protection	IP66							
	38	Diaphragm Material	Nace							
	38	Wetted Part Material	Nace							
	39	Drains/Vents Material	316SS							
40	Integral Indicator / Mounting type	Yes / Direct								
Accessories	41	Valve Manifold	5 valve-S.S316							
	42	Upstream Straight Run	10X							
	43	Downstream Straight Run	5X							
Miscell.	44	Manufacturer								
	45	Requisition No.								
NOTES:										
1) Spiral Wound as per API 601, 316+Graf or CS, Thk 4.5mm with stainless steel winding and flexible graphite filter.										
2) Integral orifice with dual D.P Transmitter										
VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable										

IN: to be considered according to project spec.
 HY reply: confirm.

IN: to be clarified.
 HY reply: Allowable pressure for one leg.
 Example:
 Inlet 200bar
 Outlet: 190bar
 200bar < 250bar
 That is ok for using the transmitter.

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنيه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03 0008 BK-HD-GCS-CO)					 HAVAYAR INDUSTRIAL GROUP			
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 20 از 42	
		پروژه	پسته کاری	صنایر کننده	تسهیلات	رشته	نوع مدرک	سریال		
		BK	GCS	HY	120	IN	DS	0001	V02	
INSTRUMENT DATA SHEET FOR FLOW TRANSMITTER										
	1	Tag Number	P&ID No.		C-FT-2206A		BK-GCS-HY-120-PR-PI-0001-Page6			
	2	Service	Pipe No.		Water Console		CWR-112-0010A-C.S-3"-IS			
	3	Pipe O. D. / I. D. mm	Pipe Sch./Thk.		3"		SCH.20			
	4	Pipe Material	Pipe Insulation		ASTM A106 Gr.B		N/A			
Process Conditions	5	Fluid	State		Water		Liquid			
	6	Operating Pressure bar(g)	Design Pressure bar(g)		3		7			
	7	Operating Temperature °C	Design Temperature °C		58		85			
	8	Flow Rate			Unit	Min. Flow	Nor. Flow		Max. Flow	
		kg/h(Liquid,Steam),Nm3/h(Gas)			m3/h		16000			
	9	Operating Density kg/m3	Standard Density kg/Nm3		976.6		-			
	10	Kinetic Viscosity(mm2/s)	Dynamic Viscosity (cP)		-		0.4298			
	11	Specific Heat Ratio Cp/Cv	Compress Factor		1.166		0.0026			
	12	Vapor Pressure	Vapor Density kg/m3		0.25		-			
	13	Molecular Weight	Relative Humidity		18.02		-			
	14	Allowable Pressure Drop @ Max. Flow				0.2				
Element	15	Tag Number				C-FE-2206A				
	16	Measure Element Type				Orifice				
	17	Measure Element Material	Thickness			316SS		3mm		
	18	Bore Diameter				Hold				
	19	Connection Type	Size			Flange Weld neck		3"		
	20	Flange Standard	Flange Rating			ASME B16.5		ANSI 300#		
	21	Flange Material	Facing			C.S.		RF		
	22	Bolt /Nut Material	Bolt /Nut Standard			ASTM A193 Gr.B7 / ASTM A194 Gr.2H Galvanized		ASME B1.1		
	23	Gasket Type & Material								
Transmitter Unit	24	Model				Diff pressure				
	25	Available Range				-623 to 623 mbar				
	26	Flowmeter Scale				0~20000m3/h				
	27	Full Scale Differential Pressure (bar)				0~200 mbar				
	28	Output Signal				4-20mA Smart Hart				
	29	Accuracy				0.2 %				
	30	Load Resistance				minimum loop resistance of 250 ohms				
	31	Scale Factor				Square Root				
	32	Housing Material				Cast aluminum				
	33	Allowable Static Pressure				250Barg				
	34	Power Supply				24 V DC Loop Powered				
	35	Electrical Connection				ISO M20x1.5				
	36	Explosion Proof				Exia IIB T3				
	37	Enclosure Protection				IP66				
	38	Diaphragm Material				S.S316				
	38	Wetted Part Material				S.S316				
	39	Drains/Vents Material				S.S316				
	40	Integral Indicator / Mounting type				Yes / Direct				
Accessories	41	Valve Manifold				5 valve-S.S316				
	42	Upstream Straight Run				10X				
	43	Downstream Straight Run				5X				
Miscell.	44	Manufacturer								
	45	Requisition No.								
NOTES:										
1) Spiral Wound as per API 601, 316+Graf or CS, Thk 4.5mm with stainless steel winding and flexible graphite filter.										
2) Integral orifice with dual D.P Transmitter										
VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable										

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03 0008 BK-HD-GCS-CO)						 HAVAYAR INDUSTRIAL GROUP		
		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 21 از 42		
شماره پیمان: 053 - 073 - 9184		پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک			سریال
		BK	GCS	HY	120	IN	DS	0001	V02	
INSTRUMENT DATA SHEET FOR FLOW TRANSMITTER										
	1	Tag Number	P&ID No.		FT-2121B		BK-GCS-HY-120-PR-PI-0001-Page1			
	2	Service	Pipe No.		Process gas		GAS-111-0031A-AN05-8"-ET			
	3	Pipe O. D. / I. D. mm	Pipe Sch./Thk.		8"		SCH.20			
	4	Pipe Material	Pipe Insulation		ASTM A106 Gr.B		N/A			
Process Conditions	5	Fluid	State		Sour Hydrocarbon		Gas			
	6	Operating Pressure bar(g)	Design Pressure bar(g)		4.9		24.5			
	7	Operating Temperature °C	Design Temperature °C		36.8		180			
	8	Flow Rate	Unit		Min. Flow	Nor. Flow	Max. Flow			
		kg/h(Liquid,Steam),Nm3/h(Gas)	Nm3/h		7887	7918	8668.6			
	9	Operating Density kg/m3	Standard Density kg/Nm3		5.771		-			
	10	Kinetic Viscosity(mm2/s)	Dynamic Viscosity (cP)		-		0.0115			
	11	Specific Heat Ratio Cp/Cv	Compress Factor		1.245		0.975			
	12	Vapor Pressure	Vapor Density kg/m3		5.102		-			
	13	Molecular Weight	Relative Humidity		24.52		97%			
	14	Allowable Pressure Drop @ Max. Flow				0.1				
	Element	15	Tag Number		FE-2121B					
		16	Measure Element Type		Orifice					
17		Measure Element Material	Thickness		S.S316-Nace		6mm			
18		Bore Diameter		Hold						
19		Connection Type	Size		Flange Weld neck		8"			
20		Flange Standard	Flange Rating		ASME B16.5		ANSI 300#			
21		Flange Material	Facing		C.S. (Nace)		RF			
22		Bolt /Nut Material	Bolt /Nut Standard		ASTMB7M/2HM		ASME B18.2.1/ASME B18.2.2			
23	Gasket Type & Material		Spiral Wound,S.S 316 Winding /Graphite Filler, C.S. Outer& S.S 316L Inner Ring							
Transmitter Unit	24	Model		3051CD						
	25	Available Range		-623 to 623 mbar						
	26	Flowmeter Scale		0~8668Nm3/h						
	27	Full Scale Differential Pressure (bar)		0~100 mbar						
	28	Output Signal		4-20mA Smart Hart						
	29	Accuracy		0.2 %						
	30	Load Resistance		minimum loop resistance of 250 ohms						
	31	Scale Factor		Square Root						
	32	Housing Material		Cast aluminum						
	33	Allowable Static Pressure		250Barg						
	34	Power Supply		24 V DC Loop Powered						
	35	Electrical Connection		ISO M20x1.5						
	36	Explosion Proof		Exia IIB T3						
	37	Enclosure Protection		IP66						
	38	Diaphragm Material		Nace						
	38	Wetted Part Material		Nace						
	39	Drains/Vents Material		316SS						
40	Integral Indicator / Mounting type		Yes / Direct							
Accessories	41	Valve Manifold		5 valve-S.S316						
	42	Upstream Straight Run		10X						
	43	Downstream Straight Run		5X						
Miscell.	44	Manufacturer								
	45	Requisition No.								
NOTES:										
1) Spiral Wound as per API 601, 316+Grafi or CS, Thk 4.5mm with stainless steel winding and flexible graphite filter.										
2) Integral orifice with dual D.P Transmitter										
VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable										

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03 0008 BK-HD-GCS-CO)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 22 از 42		
		پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
		BK	GCS	HY	120	IN	DS	0001	V02	
INSTRUMENT DATA SHEET FOR FLOW TRANSMITTER										
	1	Tag Number	P&ID No.		FT-2197B		BK-GCS-HY-120-PR-PI-0001-Page1			
	2	Service	Pipe No.		Process gas		GAS-111-0044A-CN05-6"-ET			
	3	Pipe O. D. /I. D. mm	Pipe Sch./Thk.		6"		SCH.20			
	4	Pipe Material	Pipe Insulation		ASTM A106 Gr.B		N/A			
Process Conditions	5	Fluid	State		Sour Hydrocarbon		Gas			
	6	Operating Pressure bar(g)	Design Pressure bar(g)		17.1		62			
	7	Operating Temperature °C	Design Temperature °C		59.9		180			
	8	Flow Rate	Unit		Min. Flow	Nor. Flow	Max. Flow			
		kg/h(Liquid,Steam),Nm3/h(Gas)	Nm3/h		7887	7918	8668.6			
	9	Operating Density kg/m3	Standard Density kg/Nm3		17.35		-			
	10	Kinetic Viscosity(mm2/s)	Dynamic Viscosity (cP)		-		.0126			
	11	Specific Heat Ratio Cp/Cv	Compress Factor		1.275		0.964			
	12	Vapor Pressure	Vapor Density kg/m3		19.76		-			
	13	Molecular Weight	Relative Humidity		24.52		89%			
	14	Allowable Pressure Drop @ Max. Flow				0.1				
	Element	15	Tag Number			FE-2197B				
		16	Measure Element Type			Orifice				
17		Measure Element Material	Thickness		S.S316-Nace		3mm			
18		Bore Diameter			Hold					
19		Connection Type	Size		Flange Weld neck		6"			
20		Flange Standard	Flange Rating		ASME B16.5		ANSI 300#			
21		Flange Material	Facing		C.S. (Nace)		RF			
22		Bolt /Nut Material	Bolt /Nut Standard		ASTMB7M/2HM		ASME B18.2.1/ASME B18.2.2			
23	Gasket Type & Material				Spiral Wound,S.S 316 Winding /Graphite Filler, C.S. Outer& S.S 316L Inner Ring					
Transmitter Unit	24	Model			3051CD					
	25	Available Range			-623 to 623 mbar					
	26	Flowmeter Scale			0~8668Nm3/h					
	27	Full Scale Differential Pressure (bar)			0~100 mbar					
	28	Output Signal			4-20mA Smart Hart					
	29	Accuracy			0.2 %					
	30	Load Resistance			minimum loop resistance of 250 ohms					
	31	Scale Factor			Square Root					
	32	Housing Material			Cast aluminum					
	33	Allowable Static Pressure			250Barg					
	34	Power Supply			24 V DC Loop Powered					
	35	Electrical Connection			ISO M20x1.5					
	36	Explosion Proof			Exia IIB T3					
	37	Enclosure Protection			IP66					
	38	Diaphragm Material			Nace					
	38	Wetted Part Material			Nace					
	39	Drains/Vents Material			316SS					
	40	Integral Indicator / Mounting type			Yes / Direct					
Accessories	41	Valve Manifold			5 valve-S.S316					
	42	Upstream Straight Run			10X					
	43	Downstream Straight Run			5X					
Miscell.	44	Manufacturer								
	45	Requisition No.								
NOTES:										
1) Spiral Wound as per API 601, 316+Graf or CS, Thk 4.5mm with stainless steel winding and flexible graphite filter.										
2) Integral orifice with dual D.P Transmitter										
VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable										

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنيه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03 0008 BK-HD-GCS-CO)						 HAVAYAR INDUSTRIAL GROUP			
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES								شماره صفحه: 23 از 42	
		پروژه	پسینه کاری	صادر کننده	تسهيلات	رشته	نوع مدرک	سریال	نسخه		
		BK	GCS	HY	120	IN	DS	0001	V02		
INSTRUMENT DATA SHEET FOR FLOW TRANSMITTER											
	1	Tag Number	P&ID No.		C-FT-2206B		BK-GCS-HY-120-PR-PI-0001-Page6				
	2	Service	Pipe No.		Water Console		CWR-112-0010A-C.S-3"-IS				
	3	Pipe O. D. /I. D. mm	Pipe Sch./Thk.		3"		SCH.20				
	4	Pipe Material	Pipe Insulation		ASTM A106 Gr.B		N/A				
Process Conditions	5	Fluid	State		Water		Liquid				
	6	Operating Pressure bar(g)	Design Pressure bar(g)		3		7				
	7	Operating Temperature °C	Design Temperature °C		58		85				
	8	Flow Rate	Unit		Min. Flow	Nor. Flow		Max. Flow			
		kg/h(Liquid, Steam), Nm3/h(Gas)	m3/h			16000					
	9	Operating Density kg/m3	Standard Density kg/Nm3		976.6		-				
	10	Kinetic Viscosity(mm2/s)	Dynamic Viscosity (cP)		-		0.4298				
	11	Specific Heat Ratio Cp/Cv	Compress Factor		1.166		0.0026				
	12	Vapor Pressure	Vapor Density kg/m3		0.25		-				
	13	Molecular Weight	Relative Humidity		18.02		-				
	14	Allowable Pressure Drop @ Max. Flow				0.2					
	Element	15	Tag Number			C-FE-2206B					
		16	Measure Element Type			Orifice					
17		Measure Element Material	Thickness		316SS		3mm				
18		Bore Diameter			Hold						
19		Connection Type	Size		Flange Weld neck		3"				
20		Flange Standard	Flange Rating		ASME B16.5		ANSI 300#				
21		Flange Material	Facing		C.S		RF				
22		Bolt /Nut Material	Bolt /Nut Standard		ASTM A193 Gr.B7 / ASTM A194 Gr.2H Galvanized		ASME B1.1				
23		Gasket Type & Material									
Transmitter Unit	24	Model			3051CD						
	25	Available Range			-623 to 623 mbar						
	26	Flowmeter Scale			0~20000m3/h						
	27	Full Scale Differential Pressure (bar)			0~200 mbar						
	28	Output Signal			4-20mA Smart Hart						
	29	Accuracy			0.2 %						
	30	Load Resistance			minimum loop resistance of 250 ohms						
	31	Scale Factor			Square Root						
	32	Housing Material			Cast aluminum						
	33	Allowable Static Pressure			250Barg						
	34	Power Supply			24 V DC Loop Powered						
	35	Electrical Connection			ISO M20x1.5						
	36	Explosion Proof			Exia IIB T3						
	37	Enclosure Protection			IP66						
	38	Diaphragm Material			S.S316						
	39	Wetted Part Material			S.S316						
	40	Drains/Vents Material			S.S316						
	41	Integral Indicator / Mounting type			Yes / Direct						
	Accessories	42	Valve Manifold			5 valve-S.S316					
		43	Upstream Straight Run			10X					
44		Downstream Straight Run			5X						
Miscell.	45	Manufacturer									
	46	Requisition No.									
NOTES:											
1) Spiral Wound as per API 601, 316+Graf or CS, Thk 4.5mm with stainless steel winding and flexible graphite filter.											
2) Integral orifice with dual D.P Transmitter											
VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable											

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03 0008 BK-HD-GCS-CO)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 24 از 42		
		پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
		BK	GCS	HY	120	IN	DS	0001	V02	
INSTRUMENT DATA SHEET FOR FLOW TRANSMITTER										
	1	Tag Number	P&ID No.		FT-2121C		BK-GCS-HY-120-PR-PI-0001-Page1			
	2	Service	Pipe No.		Process gas		GAS-111-0031A-AN05-8"-ET			
	3	Pipe O. D. / I. D. mm	Pipe Sch./Thk.		8"		SCH.20			
	4	Pipe Material	Pipe Insulation		ASTM A106 Gr.B		N/A			
Process Conditions	5	Fluid	State		Sour Hydrocarbon		Gas			
	6	Operating Pressure bar(g)	Design Pressure bar(g)		4.9		24.5			
	7	Operating Temperature °C	Design Temperature °C		36.8		180			
	8	Flow Rate	Unit		Min. Flow	Nor. Flow	Max. Flow			
		kg/h(Liquid,Steam),Nm3/h(Gas)	Nm3/h		7887	7918	8668.6			
	9	Operating Density kg/m3	Standard Density kg/Nm3		5.771		-			
	10	Kinetic Viscosity(mm2/s)	Dynamic Viscosity (cP)		-		0.0115			
	11	Specific Heat Ratio Cp/Cv	Compress Factor		1.245		0.975			
	12	Vapor Pressure	Vapor Density kg/m3		5.102		-			
	13	Molecular Weight	Relative Humidity		24.52		97%			
	14	Allowable Pressure Drop @ Max. Flow				0.1				
	Element	15	Tag Number			FE-2121C				
		16	Measure Element Type			Orifice				
17		Measure Element Material	Thickness		S.S316-Nace		6mm			
18		Bore Diameter			Hold					
19		Connection Type	Size		Flange Weld neck		8"			
20		Flange Standard	Flange Rating		ASME B16.5		ANSI 300#			
21		Flange Material	Facing		C.S. (Nace)		RF			
22		Bolt /Nut Material	Bolt /Nut Standard		ASTMB7M/2HM		ASME B18.2.1/ASME B18.2.2			
23	Gasket Type & Material				Spiral Wound,S.S 316 Winding /Graphite Filler, C.S. Outer& S.S 316L Inner Ring					
Transmitter Unit	24	Model			3051CD					
	25	Available Range			-623 to 623 mbar					
	26	Flowmeter Scale			0~8668Nm3/h					
	27	Full Scale Differential Pressure (bar)			0~100 mbar					
	28	Output Signal			4-20mA Smart Hart					
	29	Accuracy			0.2 %					
	30	Load Resistance			minimum loop resistance of 250 ohms					
	31	Scale Factor			Square Root					
	32	Housing Material			Cast aluminum					
	33	Allowable Static Pressure			250Barg					
	34	Power Supply			24 V DC Loop Powered					
	35	Electrical Connection			ISO M20x1.5					
	36	Explosion Proof			Exia IIB T3					
	37	Enclosure Protection			IP66					
	38	Diaphragm Material			Nace					
	38	Wetted Part Material			Nace					
	39	Drains/Vents Material			316SS					
40	Integral Indicator / Mounting type			Yes / Direct						
Accessories	41	Valve Manifold			5 valve-S.S316					
	42	Upstream Straight Run			10X					
	43	Downstream Straight Run			5X					
Miscell.	44	Manufacturer								
	45	Requisition No.								
NOTES:										
1) Spiral Wound as per API 601, 316+Graf or CS, Thk 4.5mm with stainless steel winding and flexible graphite filter.										
2) Integral orifice with dual D.P Transmitter										
VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable										

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03 0008 BK-HD-GCS-CO)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 25 از 42		
		پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
		BK	GCS	HY	120	IN	DS	0001	V02	
INSTRUMENT DATA SHEET FOR FLOW TRANSMITTER										
	1	Tag Number	P&ID No.		FT-2197C		BK-GCS-HY-120-PR-PI-0001-Page1			
	2	Service	Pipe No.		Process gas		GAS-111-0044A-CN05-6"-ET			
	3	Pipe O. D. / I. D. mm	Pipe Sch./Thk.		6"		SCH.20			
	4	Pipe Material	Pipe Insulation		ASTM A106 Gr.B		N/A			
Process Conditions	5	Fluid	State		Sour Hydrocarbon		Gas			
	6	Operating Pressure bar(g)	Design Pressure bar(g)		17.1		62			
	7	Operating Temperature °C	Design Temperature °C		59.9		180			
	8	Flow Rate	Unit		Min. Flow	Nor. Flow	Max. Flow			
		kg/h(Liquid,Steam),Nm3/h(Gas)	Nm3/h		7887	7918	8668.6			
	9	Operating Density kg/m3	Standard Density kg/Nm3		17.35		-			
	10	Kinetic Viscosity(mm2/s)	Dynamic Viscosity (cP)		-		.0126			
	11	Specific Heat Ratio Cp/Cv	Compress Factor		1.275		0.964			
	12	Vapor Pressure	Vapor Density kg/m3		19.76		-			
	13	Molecular Weight	Relative Humidity		24.52		89%			
	14	Allowable Pressure Drop @ Max. Flow				0.1				
	Element	15	Tag Number			FE-2197C				
		16	Measure Element Type			Orifice				
17		Measure Element Material	Thickness		S.S316-Nace					
18		Bore Diameter			Hold					
19		Connection Type	Size		Flange Weld neck		6"			
20		Flange Standard	Flange Rating		ASME B16.5		ANSI 300#			
21		Flange Material	Facing		C.S. (Nace)		RF			
22		Bolt /Nut Material	Bolt /Nut Standard		ASTMB7M/2HM		ASME B18.2.1/ASME B18.2.2			
23	Gasket Type & Material				Spiral Wound,S.S 316 Winding /Graphite Filler, C.S. Outer& S.S 316L Inner Ring					
Transmitter Unit	24	Model			3051CD					
	25	Available Range			-623 to 623 mbar					
	26	Flowmeter Scale			0-8668Nm3/h					
	27	Full Scale Differential Pressure (bar)			0-100 mbar					
	28	Output Signal			4-20mA Smart Hart					
	29	Accuracy			0.2 %					
	30	Load Resistance			minimum loop resistance of 250 ohms					
	31	Scale Factor			Square Root					
	32	Housing Material			Cast aluminum					
	33	Allowable Static Pressure			250Barg					
	34	Power Supply			24 V DC Loop Powered					
	35	Electrical Connection			ISO M20x1.5					
	36	Explosion Proof			Exia IIB T3					
	37	Enclosure Protection			IP66					
	38	Diaphragm Material			Nace					
	38	Wetted Part Material			Nace					
	39	Drains/Vents Material			316SS					
	40	Integral Indicator / Mounting type			Yes / Direct					
Accessories	41	Valve Manifold			5 valve-S.S316					
	42	Upstream Straight Run			10X					
	43	Downstream Straight Run			5X					
Miscell.	44	Manufacturer								
	45	Requisition No.								
NOTES:										
1) Spiral Wound as per API 601, 316+Graf or CS, Thk 4.5mm with stainless steel winding and flexible graphite filter.										
2) Integral orifice with dual D.P Transmitter										
VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable										

 NISOC	نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنيه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03_0008-BK-HD-GCS-CO)							 HAVAYAR INDUSTRIAL GROUP	
شماره پیمان: 053 - 073 - 9184	INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 26 از 42	
	پروژه	بسته کاری	صادر کننده	تسهيلات	رشته	نوع مدارک	سریال		نسخه
	BK	GCS	HY	120	IN	DS	0001		V02
INSTRUMENT DATA SHEET FOR FLOW TRANSMITTER									
	1	Tag Number	P&ID No.		C-FT-2206C		BK-GCS-HY-120-PR-PI-0001-Page6		
	2	Service	Pipe No.		Water Console		CWR-112-0010A-C.S-3"-IS		
	3	Pipe O. D. /I. D. mm	Pipe Sch./Thk.		3"				
	4	Pipe Material	Pipe Insulation						
Process Conditions	5	Fluid	State		Water		Liquid		
	6	Operating Pressure bar(g)	Design Pressure bar(g)		3		7		
	7	Operating Temperature °C	Design Temperature °C		58		85		
	8	Flow Rate	Unit	Min. Flow	Nor. Flow	Max. Flow			
		kg/h(Liquid,Steam),Nm3/h(Gas)	m3/h		16000				
	9	Operating Density kg/m3	Standard Density kg/Nm3		976.6		-		
	10	Kinetic Viscosity(mm2/s)	Dynamic Viscosity (cP)		-		0.4298		
	11	Specific Heat Ratio Cp/Cv	Compress Factor		1.166		0.0026		
	12	Vapor Pressure	Vapor Density kg/m3		0.25		-		
	13	Molecular Weight	Relative Humidity		18.02		-		
	14	Allowable Pressure Drop @ Max. Flow			0.2				
	Element	15	Tag Number			C-FE-2206C			
		16	Measure Element Type			Orifice			
		17	Measure Element Material	Thickness		316SS		3mm	
18		Bore Diameter			Hold				
19		Connection Type	Size		Flange Weld neck		3"		
20		Flange Standard	Flange Rating		ASME B16.5		ANSI 300#		
21		Flange Material	Facing		C.S		RF		
22		Bolt /Nut Material	Bolt /Nut Standard		ASTM A193 Gr.B7 / ASTM A194 Gr.2H Galvanized		ASME B18.2.1/ASME B18.2.2		
23	Gasket Type & Material			Spiral Wound,S.S 316 Winding /Graphite Filler, C.S. Outer& S.S 316L Inner Ring					
Transmitter Unit	24	Model			3051CD				
	25	Available Range			-623 to 623 mbar				
	26	Flowmeter Scale			0~20000m3/h				
	27	Full Scale Differential Pressure (bar)			0~200 mbar				
	28	Output Signal			4-20mA Smart Hart				
	29	Accuracy			0.2 %				
	30	Load Resistance			minimum loop resistance of 250 ohms				
	31	Scale Factor			Square Root				
	32	Housing Material			Cast aluminum				
	33	Allowable Static Pressure			250Barg				
	34	Power Supply			24 V DC Loop Powered				
	35	Electrical Connection			ISO M20x1.5				
	36	Explosion Proof			Exia IIB T3				
	37	Enclosure Protection			IP66				
	38	Diaphragm Material			S.S316				
	38	Wetted Part Material			S.S316				
	39	Drains/Vents Material			S.S316				
	40	Integral Indicator / Mounting type			Yes / Direct				
Accessories	41	Valve Manifold			5 valve-S.S316				
	42	Upstream Straight Run			10X				
	43	Downstream Straight Run			5X				
Miscell.	44	Manufacturer							
	45	Requisition No.							
NOTES:									
1) Spiral Wound as per API 601, 316+Graf or CS, Thk 4.5mm with stainless steel winding and flexible graphite filter.									
2) Integral orifice with dual D.P Transmitter									
VTA:Vendor to Advise VTC:Vendor to Confirm N/A:Not Applicable									

 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)						 HAVAYAR INDUSTRIAL GROUP		
		INSTRUMENT DATASHEETS / CERTIFICATES								
شماره پیمان: 053 - 073 - 9184		شماره صفحه: 27 از 42								
		پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
		BK	GCS	HY	120	IN	DS	0001	V02	
General	1	Instrument Name				Level gauge				
	2	Tag Number	P&ID No.		C-LG-2213A			BK-GCS-HY-120-PR-PI-0001-Page5		
	3	Service	Equipment No.					TK-2101-WR A		
	4	Pipe Class	Vessel Material							
	5	Vessel Class								
Process Conditions	6	Upper Fluid	Lower Fluid		Air			Water / Glycol		
	7	Upper Density kg/m3	Lower Density kg/m3		1.225			1063		
	8	Operating Pressure bar(g)	Design Pressure bar(g)		ATM			3.5		
	9	Operating Temperature °C	Design Temperature °C		65			85		
	10	Upper/Lower Kinetic Viscosity (mm2/S)								
	11	Upper/Lower Dynamic Viscosity (cP)				0.0209 / 2.084				
Body & Cage	12	Model/Type				Magnetic				
	13	C to C mm				HOLD				
	14	Allowable Oper. Temp. °C	Pressure Rating							
	15	Mounting Style	Connection Orientation		External			Side-Side		
	16	Visible Length mm			HOLD					
	17	Scale Unit/Material	Accuracy		Cm			5mm		
	18	Indicator Type	Indicator Colour		Magnetic			Flag/White & red		
	19	Chamber Material	Float Material		S.S			S.S		
	20	Connection Type	Connection Size		Flange			2"		
	21	Flange Standard	Flange Rating		ASME			300		
	22	Flange Material	Facing		C.S			RF		
	23	Other Wetted Parts Material				S.S				
	24	Float Dimension	Indicator Housing Material		HOLD			S.S		
	Transmitter/Switch	25	Output Signal	Load Resistance		N/A			N/A	
26		Switch Type	Switch Quantity		N/A			N/A		
27		Contact Form	Contact Rating		N/A			N/A		
28		Switch 1 Contact Action				N/A				
29		Switch 2 Contact Action				N/A				
30		Calibration Value (for Switch)				N/A				
31		Power Supply	Electrical Connection		N/A			N/A		
32		Explosion Proof	Enclosure Protection		N/A			N/A		
33		Housing Material	Integral Indicator		N/A			N/A		
34										
35										
Accessories	36	Drain Valve	Drain Valve Material		1/2"NPT			S.S		
	37	Vent Valve	Vent Valve Material		N/A			N/A		
	38	Vent Valve Connection	Vent Valve Size		N/A			N/A		
	39	Drain Plug	Vent Plug		N/A			N/A		
	40	Protective Heat Shield				N/A				
	41	Steam Jacket	Jacket Connection Size		N/A			N/A		
	42	Steam Pressure bar(g)				N/A				
	43	Non Frosting Extension				N/A				
	44	Stilling Well				N/A				
	45	Surge Protection Device				N/A				
Miscell	46									
	47	Manufacturer				AZARSAM (Eyvaz Technic)				
	48	Requisition No.								
NOTES: VTA : Vendor to advise VTC : Vendor to confirm N/A : Not Applicable 1. Vendor shall supply and install Swage Nipple 1 1/2"THREAD(L) × 3/4" PE(S) for vent and drain connections 2. COMPABILITY WITH NACE MR0175/ISO 15156 TO BE CONSIDERED FOR WETTED EQUIPEMNT.										

IN: To be specified.
HY reply: After taking the vendor data.

 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)						 HAVAYAR INDUSTRIAL GROUP	
		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 28 از 42	
شماره پیمان: 053 - 073 - 9184		پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک		
		BK	GCS	HY	120	IN	DS	0001	V02
General	1	Instrument Name				Level gauge			
	2	Tag Number	P&ID No.		C-LG-2213B		BK-GCS-HY-120-PR-PI-0001-Page5		
	3	Service	Equipment No.				TK-2101-WR B		
	4	Pipe Class	Vessel Material						
	5	Vessel Class							
Process Conditions	6	Upper Fluid	Lower Fluid		Air		Water / Glycol		
	7	Upper Density kg/m3	Lower Density kg/m3		1.225		1063		
	8	Operating Pressure bar(g)	Design Pressure bar(g)		ATM		3.5		
	9	Operating Temperature °C	Design Temperature °C		65		85		
	10	Upper/Lower Kinetic Viscosity (mm2/S)				-			
Body & Cage	11	Upper/Lower Dynamic Viscosity (cP)				0.0209 / 2.084			
	12	Model/Type				Magnetic			
	13	C to C mm				HOLD			
	14	Allowable Oper. Temp. °C	Pressure Rating						
	15	Mounting Style	Connection Orientation		External		Side-Side		
	16	Visible Length mm			HOLD				
	17	Scale Unit/Material	Accuracy		Cm		5mm		
	18	Indicator Type	Indicator Colour		Magnetic		Flag/White & red		
	19	Chamber Material	Float Material		S.S		S.S		
	20	Connection Type	Connection Size		Flange		2"		
	21	Flange Standard	Flange Rating		ASME		300		
	22	Flange Material	Facing		C.S		RF		
	23	Other Wetted Parts Material				S.S			
	24	Float Dimension	Indicator Housing Material		HOLD		S.S		
	Transmitter/Switch	25	Output Signal	Load Resistance		N/A		N/A	
26		Switch Type	Switch Quantity		N/A		N/A		
27		Contact Form	Contact Rating		N/A		N/A		
28		Switch 1 Contact Action				N/A			
29		Switch 2 Contact Action				N/A			
30		Calibration Value (for Switch)				N/A			
31		Power Supply	Electrical Connection		N/A		N/A		
32		Explosion Proof	Enclosure Protection		N/A		N/A		
33		Housing Material	Integral Indicator		N/A		N/A		
34									
Accessories		35							
	36	Drain Valve	Drain Valve Material		1/2"NPT		S.S		
	37	Vent Valve	Vent Valve Material		N/A		N/A		
	38	Vent Valve Connection	Vent Valve Size		N/A		N/A		
	39	Drain Plug	Vent Plug		N/A		N/A		
	40	Protective Heat Shield				N/A			
	41	Steam Jacket	Jacket Connection Size		N/A		N/A		
	42	Steam Pressure bar(g)				N/A			
	43	Non Frosting Extension				N/A			
	44	Stilling Well				N/A			
	45	Surge Protection Device				N/A			
Miscell	46								
	47	Manufacturer				AZARSAM (Eyvaz Technic)			
	48	Requisition No.							
NOTES: VTA : Vendor to advise VTC : Vendor to confirm N/A : Not Applicable 1. Vendor shall supply and install Swage Nipple 11/2"THREAD(L) × 3/4" PE(S) for vent and drain connections 2. COMPABILITY WITH NACE MR0175/ISO 15156 TO BE CONSIDERED FOR WETTED EQUIPEMNT.									

 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)						 HAVAYAR INDUSTRIAL GROUP	
		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 29 از 42	
شماره پیمان: 053 - 073 - 9184		پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک		
		BK	GCS	HY	120	IN	DS	0001	V02
General	1	Instrument Name				Level gauge			
	2	Tag Number	P&ID No.		C-LG-2213C		BK-GCS-HY-120-PR-PI-0001-Page5		
	3	Service	Equipment No.				TK-2101-WR C		
	4	Pipe Class	Vessel Material						
	5	Vessel Class							
Process Conditions	6	Upper Fluid	Lower Fluid		Air		Water / Glycol		
	7	Upper Density kg/m3	Lower Density kg/m3		1.225		1063		
	8	Operating Pressure bar(g)	Design Pressure bar(g)		ATM		3.5		
	9	Operating Temperature °C	Design Temperature °C		65		85		
	10	Upper/Lower Kinetic Viscosity (mm2/S)				-			
	11	Upper/Lower Dynamic Viscosity (cP)				0.0209 / 2.084			
Body & Cage	12	Model/Type				Magnetic			
	13	C to C mm				HOLD			
	14	Allowable Oper. Temp. °C	Pressure Rating						
	15	Mounting Style	Connection Orientation		External		Side-Side		
	16	Visible Length mm			HOLD				
	17	Scale Unit/Material	Accuracy		Cm		5mm		
	18	Indicator Type	Indicator Colour		Magnetic		Flag/White & red		
	19	Chamber Material	Float Material		S.S		S.S		
	20	Connection Type	Connection Size		Flange		2"		
	21	Flange Standard	Flange Rating		ASME		300		
	22	Flange Material	Facing		C.S		RF		
	23	Other Wetted Parts Material				S.S			
Transmitter/Switch	24	Float Dimension	Indicator Housing Material		HOLD		S.S		
	25	Output Signal	Load Resistance		N/A		N/A		
	26	Switch Type	Switch Quantity		N/A		N/A		
	27	Contact Form	Contact Rating		N/A		N/A		
	28	Switch 1 Contact Action				N/A			
	29	Switch 2 Contact Action				N/A			
	30	Calibration Value (for Switch)				N/A			
	31	Power Supply	Electrical Connection		N/A		N/A		
	32	Explosion Proof	Enclosure Protection		N/A		N/A		
	33	Housing Material	Integral Indicator		N/A		N/A		
	34								
	35								
Accessories	36	Drain Valve	Drain Valve Material		1/2"NPT		S.S		
	37	Vent Valve	Vent Valve Material		N/A		N/A		
	38	Vent Valve Connection	Vent Valve Size		N/A		N/A		
	39	Drain Plug	Vent Plug		N/A		N/A		
	40	Protective Heat Shield				N/A			
	41	Steam Jacket	Jacket Connection Size		N/A		N/A		
	42	Steam Pressure bar(g)				N/A			
	43	Non Frosting Extension				N/A			
	44	Stilling Well				N/A			
	45	Surge Protection Device				N/A			
Miscell	46								
	47	Manufacturer				AZARSAM (Eyvaz Technic)			
	48	Requisition No.							

NOTES: VTA : Vendor to advise VTC : Vendor to confirm N/A : Not Applicable
 1. Vendor shall supply and install Swage Nipple 11/2"THREAD(L) × 3/4" PE(S) for vent and drain connections
 2. COMPABILITY WITH NACE MR0175/ISO 15156 TO BE CONSIDERED FOR WETTED EQUIPEMNT.

 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)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 30 از 42	
		نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری		پروژه
		V02	0001	DS	IN	120	HY	GCS	BK	
General	1	Instrument Name			Diff. Press. Level Transmitter					
	2	Tag Number	P&ID No.		C-LT-2213A		BK-GCS-HY-120-PR-PI-0001-Page5			
	3	Service	Pipe / Equipment No.		1601-CC-001A		TK-2101-WR C			
	4	Pipe Class	Vessel Material		-					
	5	Vessel Class								
	6	Upper Fluid / Phase	Lower Fluid / Phase		Air / Gas		Water-Glycol / Liquid			
	7	Upper Density(kg/m3)	Lower Density(kg/m3)		1.225		1063			
	8	Operating Pressure bar(g)	Design Pressure bar(g)		ATM		3.5			
	9	Operating Temperature °C	Design Temperature °C		65		85			
	10	Upper/Lower Dynamic Viscosity (cP)				0.0209 / 2.084				
	11	C to C mm				-				
Transmitter	12	Model			3051					
	13	Type	Accuracy		DP level Transmitter		+/- 0.1% Full Scale			
	14	Available Range	Calibration Range (bar)		HOLD		HOLD			
	15	Output Signal	Power Supply		4-20mA Smart Hart		24VDC Loop Powered			
	16	Load Resistance(Ω)			250 ohms					
	17	Zero Elevation & Suppression				Yes				
	18	Electrical Connection			ISO M20					
	19	Explosion Proof	Enclosure Protection		EXia (Zone 2 IIB T4)		IP65			
	20	Response Time	Housing Material		N/A		Epoxy Painted Die Cast Aluminum Copper Free			
	21	Failure Mode Alarm			Up Scale					
Sensing & Body	22	Element Type	Element Material		Diaphragm (VTC)		316SS			
	23	Max. Static Pressure (barg)	Allowable Oper. Temp. °C		250barg		85 °C			
	24	Body Material	Flange Material		316SS		ASTM A105			
	25	Process Connection	Flange Standard		2"		ASME B16.5			
	26	Overrange Protection	Connector Material		130 %		316SS			
	27	Vent/Drain Type&Size	Vent/Drain Material		1/4"NPT		316SS			
	28	Gasket/O-Ring Material	Bolts Material		PTFE		ASTM A449			
	29	Seal Type			N/A		N/A			
Diaphragm Seal	30	Extended Length	Extended Material		N/A		N/A			
	31	Diaphragm Diameter	Diaphragm Material		N/A		N/A			
	32	Capillary Material	Capillary Length H/L		N/A		N/A			
	33	Capillary Armor Material	Fill Fluid		N/A		N/A			
	34	Fill Fluid Temperature Limits	Fill Fluid Density		N/A		N/A			
	35	Connection Type	Size		N/A		N/A			
	36	Flange Standard	Flange Rating		N/A		N/A			
	37	Flange Material	Facing		N/A		N/A			
	38	Flushing Connection			N/A		N/A			
	39	Indicator Type	Display		Integral LCD type		Digital			
Indicator	40	Mounting Bracket	Remo. Indic. Connection		No		YES			
	41	Manifold Model	Manifold Type		VTA		5 Way			
Manifold	42	Manifold Rating	Manifold Material		Min. CL 3000		316 SS			
	43	Manifold Connection			1/2" PROCESS SIDE/FLANG INST SIDE					
Accessories	44	Mounting Bracket	Bracket Material		Yes / 2" Pipe		316SS			
	45	Add Corrosive Envir. Enclosure	Surge Protected Device		N/A		N/A			
Miscell	46									
	47	Manufacturer								
	48	Requisition No.								
NOTES: VTA : Vendor To Advise VTC : Vendor To Confirm N/A : Not Applicable										

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03-BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP	
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 31 از 42
		نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	
		V02	0001	DS	IN	120	HY	GCS	BK
General	1	Instrument Name			Diff. Press. Level Transmitter				
	2	Tag Number	P&ID No.		C-LT-2213B		BK-GCS-HY-120-PR-PI-0001-Page5		
	3	Service	Pipe / Equipment No.				TK-2101-WR B		
	4	Pipe Class	Vessel Material		-				
	5	Vessel Class							
	6	Upper Fluid / Phase	Lower Fluid / Phase		Air / Gas		Water-Glycol / Liquid		
	7	Upper Density(kg/m3)	Lower Density(kg/m3)		1.225		1063		
	8	Operating Pressure bar(g)	Design Pressure bar(g)		ATM		3.5		
	9	Operating Temperature °C	Design Temperature °C		65		85		
	10	Upper/Lower Dynamic Viscosity (cP)				0.0209 / 2.084			
	11	C to C mm				-			
Transmitter	12	Model			3051				
	13	Type	Accuracy		DP level Transmitter		+/- 0.1% Full Scale		
	14	Available Range	Calibration Range (bar)		HOLD		HOLD		
	15	Output Signal	Power Supply		4-20mA Smart Hart		24VDC Loop Powered		
	16	Load Resistance(Ω)			250 ohms				
	17	Zero Elevation & Suppression				Yes			
	18	Electrical Connection			ISO M20				
	19	Explosion Proof	Enclosure Protection		EXia (Zone 2 IIB T4)		IP65		
	20	Response Time	Housing Material		N/A		Epoxy Painted Die Cast Aluminum Copper Free		
	21	Failure Mode Alarm			Up Scale				
Sensing & Body	22	Element Type	Element Material		Diaphragm (VTC)		316SS		
	23	Max. Static Pressure (barg)	Allowable Oper. Temp. °C		250barg		85 °C		
	24	Body Material	Flange Material		316SS		ASTM A105		
	25	Process Connection	Flange Standard		2"		ASME B16.5		
	26	Overrange Protection	Connector Material		130 %		316SS		
	27	Vent/Drain Type&Size	Vent/Drain Material		1/4"NPT		316SS		
	28	Gasket/O-Ring Material	Bolts Material		PTFE		ASTM A449		
	29	Seal Type			N/A		N/A		
Diaphragm Seal	30	Extended Length	Extended Material		N/A		N/A		
	31	Diaphragm Diameter	Diaphragm Material		N/A		N/A		
	32	Capillary Material	Capillary Length H/L		N/A		N/A		
	33	Capillary Armor Material	Fill Fluid		N/A		N/A		
	34	Fill Fluid Temperature Limits	Fill Fluid Density		N/A		N/A		
	35	Connection Type	Size		N/A		N/A		
	36	Flange Standard	Flange Rating		N/A		N/A		
	37	Flange Material	Facing		N/A		N/A		
	38	Flushing Connection			N/A		N/A		
	39	Indicator Type	Display		Integral LCD type		Digital		
Indicator	40	Mounting Bracket	Remo. Indic. Connection		No		YES		
	41	Manifold Model	Manifold Type		VTA		5 Way		
Manifold	42	Manifold Rating	Manifold Material		Min. CL 3000		316 SS		
	43	Manifold Connection			1/2" PROCESS SIDE/FLANG INST SIDE				
Accessories	44	Mounting Bracket	Bracket Material		Yes / 2" Pipe		316SS		
	45	Add Corrosive Envir. Enclosure	Surge Protected Device		N/A		N/A		
Miscell	46								
	47	Manufacturer							
	48	Requisition No.							

NOTES:
 VTA : Vendor To Advise VTC : Vendor To Confirm N/A : Not Applicable

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03-BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP	
		INSTRUMENT DATASHEETS / CERTIFICATES							
شماره پیمان: 053 - 073 - 9184		نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه
		V02	0001	DS	IN	120	HY	GCS	BK
شماره صفحه: 32 از 42									
General	1	Instrument Name			Diff. Press. Level Transmitter				
	2	Tag Number	P&ID No.		C-LT-2213C		BK-GCS-HY-120-PR-PI-0001-Page5		
	3	Service	Pipe / Equipment No.				TK-2101-WR C		
	4	Pipe Class	Vessel Material		-				
	5	Vessel Class							
	6	Upper Fluid / Phase	Lower Fluid / Phase		Air / Gas		Water-Glycol / Liquid		
	7	Upper Density(kg/m3)	Lower Density(kg/m3)		1.225		1063		
	8	Operating Pressure bar(g)	Design Pressure bar(g)		ATM		3.5		
	9	Operating Temperature °C	Design Temperature °C		65		85		
	10	Upper/Lower Dynamic Viscosity (cP)				0.0209 / 2.084			
	11	C to C mm				-			
Transmitter	12	Model			3051				
	13	Type	Accuracy		DP level Transmitter		+/- 0.1% Full Scale		
	14	Available Range	Calibration Range (bar)		HOLD		HOLD		
	15	Output Signal	Power Supply		4-20mA Smart Hart		24VDC Loop Powered		
	16	Load Resistance(Ω)			250 ohms				
	17	Zero Elevation & Suppression				Yes			
	18	Electrical Connection			ISO M20				
	19	Explosion Proof	Enclosure Protection		EXia (Zone 2 IIB T4)		IP65		
	20	Response Time	Housing Material		N/A		Epoxy Painted Die Cast Aluminum Copper Free		
	21	Failure Mode Alarm			Up Scale				
Sensing & Body	22	Element Type	Element Material		Diaphragm (VTC)		316SS		
	23	Max. Static Pressure (barg)	Allowable Oper. Temp. °C		250barg		85 °C		
	24	Body Material	Flange Material		316SS		ASTM A105		
	25	Process Connection	Flange Standard		2"		ASME B16.5		
	26	Overrange Protection	Connector Material		130 %		316SS		
	27	Vent/Drain Type&Size	Vent/Drain Material		1/4"NPT		316SS		
	28	Gasket/O-Ring Material	Bolts Material		PTFE		ASTM A449		
	29	Seal Type			N/A		N/A		
Diaphragm Seal	30	Extended Length	Extended Material		N/A		N/A		
	31	Diaphragm Diameter	Diaphragm Material		N/A		N/A		
	32	Capillary Material	Capillary Length H/L		N/A		N/A		
	33	Capillary Armor Material	Fill Fluid		N/A		N/A		
	34	Fill Fluid Temperature Limits	Fill Fluid Density		N/A		N/A		
	35	Connection Type	Size		N/A		N/A		
	36	Flange Standard	Flange Rating		N/A		N/A		
	37	Flange Material	Facing		N/A		N/A		
	38	Flushing Connection			N/A		N/A		
	39	Indicator Type	Display		Integral LCD type		Digital		
Indicator	40	Mounting Bracket	Remo. Indic. Connection		No		YES		
	41	Manifold Model	Manifold Type		VTA		5 Way		
Manifold	42	Manifold Rating	Manifold Material		Min. CL 3000		316 SS		
	43	Manifold Connection			1/2" PROCESS SIDE/FLANG INST SIDE				
Accessories	44	Mounting Bracket	Bracket Material		Yes / 2" Pipe		316SS		
	45	Add Corrosive Envir. Enclosure	Surge Protected Device		N/A		N/A		
Miscell	46								
	47	Manufacturer							
	48	Requisition No.							
NOTES: VTA : Vendor To Advise VTC : Vendor To Confirm N/A : Not Applicable									

 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)						 HAVAYAR INDUSTRIAL GROUP		
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 33 از 42	
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال		نسخه
		BK	GCS	HY	120	IN	DS	0001		V02
Data Sheet for Solenoid Valve										
GENERAL	1	TAG NO .		See List						
	2	SERVICE		Instrument Air						
	3	LINE NO,		See List						
	4	QUANTITY		See List						
VALVE BODY	5	TYPE		For single acting						
	6	SIZE- BODY /PORT		See List						
	7	RATING & TYPE CONN.		NPTF						
	8	MATERIAL -BODY		Brass						
	9	MATERIAL -SEAT		MFR STD						
	10	MATERIAL -DIAPHRAGM		N/A						
	11	OPERATION DIRECT / PILOT		Pilot operated						
	12	MANUAL RESET		N/A						
	13	MANUAL OPERATOR		N/A						
	14	PAINTING		N/A						
WHEN DEENERGIZED	15	2 WAY VALVE : OPEN/CLOSE		YES						
	16	3 WAY		N/A						
	17	VENT PORT : OPEN/CLOSE		N/A						
	18	PRESS PORT : OPEN/CLOSE		OPEN						
	19	EXTERNAL OVERRIDE		No						
SOLENOID	20	ENCLOSURE		IP 66						
	21	VOLTAGE/POWER		24 VDC /11W						
	22	STYLE OF COIL		MFR STD						
	23	SINGLE OR DOUBLE COIL		SINGLE						
	24	INSULATION CLASS		F						
	25	ENCLOSURE MATERIAL		ALUMINUM						
	26	CERTIFICATION		Eex 'd'-IIB-T4						
	27	ELEC. ENTRY		M20x1.5 ISO						
SERVICE CONDITIONS	28	FLUID		Instrument Air						
	29	OPER.DIFF.MIN (BAR)		See List						
	30	OPER.DIFF.MAX (BAR)		See List						
	31	TEMP. NORMAL /MAX		See List						
	32	SP.GR		1.0						
	33	VISCOSITY		N/A						
	34	VALVE CV		V.T.A						
	35	MANUFACTURER		V.T.A						
	36	MODEL NO.		V.T.A						
	37									
NOTE: VTA:Vendor To Advise N/A:Not Applicable										

 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)							 HAVAYAR INDUSTRIAL GROUP	
شماره پیمان: 053 – 073 – 9184		INSTRUMENT DATASHEETS / CERTIFICATES								شماره صفحه: 34 از 42
		پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	
		BK	GCS	HY	120	IN	DS	0001	V02	
List of SOV										
ITEM NO.	TAG NO.	SERVICE	LINE NO. / EQUIPMENT NO.	P&ID No.	OPERATING/DESIG NPRESSURE (Barg)	TEMPERATURE (C)	SOLENOID VALVE SIZE	REMARKS		
					Min. / Des.	Norm. / Design				
1	C-SV-2201A	Instrument Air	1/2" SS316L Tubing	BK-GCS-HY-120-PR-PI-0001-Page2	6 / 12.5	65 / 85	1/2"			
2	C-SV-2202A	Instrument Air	1/2" SS316L Tubing	BK-GCS-HY-120-PR-PI-0001-Page2	6 / 12.5	65 / 85	1/2"			
3	C-SV-2203A	Instrument Air	1/2" SS316L Tubing	BK-GCS-HY-120-PR-PI-0001-Page2	7 / 12.5	65 / 85	1/2"			
4	C-SV-2201B	Instrument Air	1/2" SS316L Tubing	BK-GCS-HY-120-PR-PI-0001-Page2	8 / 12.5	65 / 85	1/2"			
5	C-SV-2202B	Instrument Air	1/2" SS316L Tubing	BK-GCS-HY-120-PR-PI-0001-Page2	9 / 12.5	65 / 85	1/2"			
6	C-SV-2203B	Instrument Air	1/2" SS316L Tubing	BK-GCS-HY-120-PR-PI-0001-Page2	10 / 12.5	65 / 85	1/2"			
7	C-SV-2201C	Instrument Air	1/2" SS316L Tubing	BK-GCS-HY-120-PR-PI-0001-Page2	11 / 12.5	65 / 85	1/2"			
8	C-SV-2202C	Instrument Air	1/2" SS316L Tubing	BK-GCS-HY-120-PR-PI-0001-Page2	12 / 12.5	65 / 85	1/2"			
9	C-SV-2203C	Instrument Air	1/2" SS316L Tubing	BK-GCS-HY-120-PR-PI-0001-Page2	6 / 12.5	65 / 85	1/2"			

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP	
		INSTRUMENT DATASHEETS / CERTIFICATES							
شماره پیمان: 053 - 073 – 9184		شماره صفحه: 35 از 42							
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
		BK	GCS	HY	120	IN	DS	0001	V02
SERVICE	Tag Number	C-VE-2200A C-VE-2201A C-VE-2202A				C-ZE-2200A C-ZE-2201A			
	Service	Frame vibration				Cylinder Rod Drop Detector			
	P&ID No.	BK-GCS-HY-120-PR-PI-0001-Page7				BK-GCS-HY-120-PR-PI-0001-Page7			
	Q'TY	3				2			
OPERATING CONDITION	Press. Nor(Kg/cm ²)	N/A				N/A			
	Temp. Nor(°C)	- 40°C to +100°C				- 40°C to +100°C			
	Humidity								
	Explosion Class & Cert.	Ex ia IIC, T4				Ex ia IIB, T4			
GENERAL	Description	Frame vibration				Cylinder Rod Drop Detector			
	Manufacturer	Metrix				SHINKAWA			
	Model No. - Probe					FL-452F11L-M9-00-09-10/E50/Z05			
	- Ext. Cable	N/A				FW-452FT-80/E50			
	- Proximitor	N/A				FK-452F2-1-2/E50			
	Piston Rod Material	N/A				N/A			
PROBE	Type	Seismic Vibration				Proximity			
	Range	25.4mm/SEC, RMS				4.0 mm			
	Material	316 Stainless Steel				316 Stainless Steel			
	Conduit size	N/A				N/A			
	Probe Cable Length	N/A				1.0 Meter + Ext 9 Meter			
	Sealing	IP66				IP66			
	Sensor Mounting	M8 x P1.25				Internal of Bare block			
	Mounting Housing	N/A				N/A			
	Mounting Thread	N/A				M16x1.5			
	Sensitivity	100 mV/g				100 mV/g			
	Standard	API 670				API 670			
	TRANSMITTER	Input Power	24 VDC(Loop Powered)				24 VDC(Loop Powered)		
Output		4~20 mA				4~20 mA			
Enclosure Class		IP66				Without			
Model No.		VST5484E				VM-21T1-22C012-1			
Notes :									

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03 BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP		
		INSTRUMENT DATASHEETS / CERTIFICATES								
شماره پیمان: 053 - 073 – 9184		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 36 از 42
		BK	GCS	HY	120	IN	DS	0001	V02	
SERVICE	Tag Number	C-VE-2200B C-VE-2201B C-VE-2202B				C-ZE-2200B C-ZE-2201B				
	Service	Frame vibration				Cylinder Rod Drop Detector				
	P&ID No.	BK-GCS-HY-120-PR-PI-0001-Page7				BK-GCS-HY-120-PR-PI-0001-Page7				
	Q'TY	3				2				
OPERATING CONDITION	Press. Nor(Kg/cm ²)	N/A				N/A				
	Temp. Nor(°C)	- 40°C to +100°C				- 40°C to +100°C				
	Humidity									
	Explosion Class & Cert.	Ex ia IIC, T4				Ex ia IIB, T4				
GENERAL	Description	Frame vibration				Cylinder Rod Drop Detector				
	Manufacturer	Metrix				SHINKAWA				
	Model No. - Probe					FL-452F11L-M9-00-09-10/E50/Z05				
	- Ext. Cable	N/A				FW-452FT-80/E50				
	- Proximitor	N/A				FK-452F2-1-2/E50				
	Piston Rod Material	N/A				N/A				
PROBE	Type	Seismic Vibration				Proximity				
	Range	25.4mm/SEC, RMS				4.0 mm				
	Material	316 Stainless Steel				316 Stainless Steel				
	Conduit size	N/A				N/A				
	Probe Cable Length	N/A				1.0 Meter + Ext 9 Meter				
	Sealing	IP66				IP66				
	Sensor Mounting	M8 x P1.25				Internal of Bare block				
	Mounting Housing	N/A				N/A				
	Mounting Thread	N/A				M16x1.5				
	Sensitivity	100 mV/g				100 mV/g				
	Standard	API 670				API 670				
	TRANSMITTER	Input Power	24 VDC(Loop Powered)				24 VDC(Loop Powered)			
Output		4~20 mA				4~20 mA				
Enclosure Class		IP66				Without				
Model No.		VST5484E				VM-21T1-22C012-1				
Notes :										



NISOC

نگهداشت و افزایش تولید میدان نفتی بینک
سطح الارض و ابنیه تحت الارض

خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک
(قرارداد 03 BK-HD-GCS-CO-0008)

HAVAYAR
INDUSTRIAL GROUP

شماره پیمان:

053 - 073 - 9184

INSTRUMENT DATASHEETS / CERTIFICATES

نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه
V02	0001	DS	IN	120	HY	GCS	BK

شماره صفحه: 37 از 42

SERVICE	Tag Number	C-VE-2200C C-VE-2201C C-VE-2202C	C-ZE-2200C C-ZE-2201C
	Service	Frame vibration	Cylinder Rod Drop Detector
	P&ID No.	BK-GCS-HY-120-PR-PI-0001-Page7	BK-GCS-HY-120-PR-PI-0001-Page7
	QTY	3	2
	Weight (kg)	N/A	N/A
OPERATING CONDITION	Temp. Nor(°C)	- 40°C to +100°C	- 40°C to +100°C
	Humidity		
	Explosion Class & Cert.	Ex ia IIC, T4	Ex ia IIB, T4
GENERAL	Description	Frame vibration	Cylinder Rod Drop Detector
	Manufacturer	Metrix	SHINKAWA
	Model No. - Probe		FL-452F11L-M9-00-09-10/E50/Z05
	- Ext. Cable	N/A	FW-452FT-80/E50
	- Proximitor	N/A	FK-452F2-1-2/E50
	Piston Rod Material	N/A	N/A
PROBE	Type	Seismic Vibration	Proximity
	Range	25.4mm/SEC, RMS	4.0 mm
	Material	316 Stainless Steel	316 Stainless Steel
	Conduit size	N/A	N/A
	Probe Cable Length	N/A	1.0 Meter + Ext 9 Meter
	Sealing	IP66	IP66
	Sensor Mounting	M8 x P1.25	Internal of Bare block
	Mounting Housing	N/A	N/A
	Mounting Thread	N/A	M16x1.5
	Sensitivity	100 mV/g	100 mV/g
	Standard	API 670	API 670
TRANSMITTER	Input Power	24 VDC(Loop Powered)	24 VDC(Loop Powered)
	Output	4-20 mA	4-20 mA
	Enclosure Class	IP66	Without
	Model No.	VST5484E	VM-21T1-22C012-1

Notes :

?
HY reply: Modified.

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03-BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP	
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 38 از 42
		نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	
		V02	0001	DS	IN	120	HY	GCS	BK
General	1	Instrument Name			Diff. Press. Level Transmitter				
	2	Tag Number	P&ID No.		C-LT-2200A		BK-GCS-HY-120-PR-PI-0001-Page3		
	3	Service	Pipe / Equipment No.		crankcase				
	4	Pipe Class	Vessel Material		-				
	5	Vessel Class							
	6	Upper Fluid / Phase	Lower Fluid / Phase		Air / Gas		Lubricant Oil / Liquid		
	7	Upper Density(kg/m3)	Lower Density(kg/m3)		1.225		890		
	8	Operating Pressure bar(g)	Design Pressure bar(g)		6		10		
	9	Operating Temperature °C	Design Temperature °C		70		85		
	10	U/L Dynamic Viscosity (cP)	0.021/0.89						
Transmitter	11	C to C mm	-						
	12	Model	3051						
	13	Type	Accuracy		DP level Transmitter		+/- 0.1% Full Scale		
	14	Available Range	Calibration Range (bar)		-635~635mmH2O		300mmH2O		
	15	Output Signal	Power Supply		HART 4-20MA		24VDC Loop Powered		
	16	Load Resistance(Ω)	250 ohms						
	17	Zero Elevation & Suppression	Yes						
	18	Electrical Connection	ISO M20x1.5						
	19	Explosion Proof	Enclosure Protection		EXia (Zone 2 IIB T4)		IP65		
	20	Response Time	Housing Material		N/A		Epoxy Painted Die Cast Aluminum Copper Free		
Sensing & Body	21	Failure Mode Alarm	Up Scale						
	22	Element Type	Element Material		Diaphragm		316SS		
	23	Max. Static Pressure (barg)	Allowable Oper. Temp. °C		250barg		85 °C		
	24	Body Material	Flange Material		316SS		ASTM A105		
	25	Process Connection	Flange Standard		2"		ASME B16.5		
	26	Overrange Protection	Connector Material		130 %		316SS		
	27	Vent/Drain Type&Size	Vent/Drain Material		1/4"NPT		316SS		
	28	Gasket/O-Ring Material	Bolts Material		PTFE		ASTM A449		
Diaphragm Seal	29	Seal Type	N/A						
	30	Extended Length	Extended Material		N/A		N/A		
	31	Diaphragm Diameter	Diaphragm Material		N/A		N/A		
	32	Capillary Material	Capillary Length H/L		N/A		N/A		
	33	Capillary Armor Material	Fill Fluid		N/A		N/A		
	34	Fill Fluid Temperature Limits	Fill Fluid Density		N/A		N/A		
	35	Connection Type	Size		N/A		N/A		
	36	Flange Standard	Flange Rating		N/A		N/A		
	37	Flange Material	Facing		N/A		N/A		
	38	Flushing Connection	N/A						
Indicator	39	Indicator Type	Display		Integral LCD type		Digital		
	40	Mounting Bracket	Remo. Indic. Connection		No		YES		
Manifold	41	Manifold Model	Manifold Type		VTA		5 Way		
	42	Manifold Rating	Manifold Material		Min. CL 3000		316 SS		
	43	Manifold Connection	1/2" PROCESS SIDE/FLANG INST SIDE						
Miscell Accessories	44	Mounting Bracket	Bracket Material		Yes / 2" Pipe		316SS		
	45	Add Corrosive Envir. Enclosure	Surge Protected Device		N/A		N/A		
	46								
Miscell	47	Manufacturer							
	48	Requisition No.							

NOTES:
 VTA : Vendor To Advise VTC : Vendor To Confirm N/A : Not Applicable

 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)						 HAVAYAR INDUSTRIAL GROUP	
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 39 از 42
		نسخه	سریال	نوع مدرک	رشته	تسهیلات	صادر کننده	بسته کاری	
		V02	0001	DS	IN	120	HY	GCS	BK
General	1	Instrument Name			Diff. Press. Level Transmitter				
	2	Tag Number	P&ID No.		C-LT-2200B		BK-GCS-HY-120-PR-PI-0001-Page3		
	3	Service	Pipe / Equipment No.		crankcase				
	4	Pipe Class	Vessel Material		-				
	5	Vessel Class							
	6	Upper Fluid / Phase	Lower Fluid / Phase		Air / Gas		Lubricant Oil / Liquid		
	7	Upper Density(kg/m3)	Lower Density(kg/m3)		1.225		890		
	8	Operating Pressure bar(g)	Design Pressure bar(g)		6		10		
	9	Operating Temperature °C	Design Temperature °C		70		85		
	10	U/L Dynamic Viscosity (cP)			0.021/0.89				
	11	C to C mm			-				
Transmitter	12	Model			3051				
	13	Type	Accuracy		DP level Transmitter		+/- 0.1% Full Scale		
	14	Available Range	Calibration Range (bar)		-635~635mmH2O		300mmH2O		
	15	Output Signal	Power Supply		HART 4-20MA		24VDC Loop Powered		
	16	Load Resistance(Ω)			250 ohms				
	17	Zero Elevation & Suppression			Yes				
	18	Electrical Connection			ISO M20x1.5				
	19	Explosion Proof	Enclosure Protection		EXia (Zone 2 IIB T4)		IP65		
Sensing & Body	20	Response Time	Housing Material		N/A		Epoxy Painted Die Cast Aluminum Copper Free		
	21	Failure Mode Alarm			Up Scale				
	22	Element Type	Element Material		Diaphragm		316SS		
	23	Max. Static Pressure (barg)	Allowable Oper. Temp. °C		250barg		85 °C		
	24	Body Material	Flange Material		316SS		ASTM A105		
	25	Process Connection	Flange Standard		2"		ASME B16.5		
	26	Overrange Protection	Connector Material		130 %		316SS		
	27	Vent/Drain Type&Size	Vent/Drain Material		1/4"NPT		316SS		
Diaphragm Seal	28	Gasket/O-Ring Material	Bolts Material		PTFE		ASTM A449		
	29	Seal Type			N/A				
	30	Extended Length	Extended Material		N/A		N/A		
	31	Diaphragm Diameter	Diaphragm Material		N/A		N/A		
	32	Capillary Material	Capillary Length H/L		N/A		N/A		
	33	Capillary Armor Material	Fill Fluid		N/A		N/A		
	34	Fill Fluid Temperature Limits	Fill Fluid Density		N/A		N/A		
	35	Connection Type	Size		N/A		N/A		
	36	Flange Standard	Flange Rating		N/A		N/A		
	37	Flange Material	Facing		N/A		N/A		
	38	Flushing Connection			N/A		N/A		
Indicator	39	Indicator Type	Display		Integral LCD type		Digital		
	40	Mounting Bracket	Remo. Indic. Connection		No		YES		
Manifold	41	Manifold Model	Manifold Type		VTA		5 Way		
	42	Manifold Rating	Manifold Material		Min. CL 3000		316 SS		
	43	Manifold Connection			1/2" PROCESS SIDE/FLANG INST SIDE				
Accessories	44	Mounting Bracket	Bracket Material		Yes / 2" Pipe		316SS		
	45	Add Corrosive Envir. Enclosure	Surge Protected Device		N/A		N/A		
Miscell	46	Manufacturer							
	47	Requisition No.							
NOTES: VTA : Vendor To Advise VTC : Vendor To Confirm N/A : Not Applicable									

 NISOC		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد 03-BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP		
		INSTRUMENT DATASHEETS / CERTIFICATES								
شماره پیمان: 053 - 073 - 9184		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	شماره صفحه: 40 از 42
		BK	GCS	HY	120	IN	DS	0001	V02	
General	1	Instrument Name				Diff. Press. Level Transmitter				
	2	Tag Number		P&ID No.		C-LT-2200B		BK-GCS-HY-120-PR-PI-0001-Page3		
	3	Service		Pipe / Equipment No.				crankcase		
	4	Pipe Class		Vessel Material		-				
	5	Vessel Class								
	6	Upper Fluid / Phase		Lower Fluid / Phase		Air / Gas		Lubricant Oil / Liquid		
	7	Upper Density(kg/m3)		Lower Density(kg/m3)		1.225		890		
	8	Operating Pressure bar(g)		Design Pressure bar(g)		6		10		
	9	Operating Temperature °C		Design Temperature °C		70		85		
	10	U/L Dynamic Viscosity (cP)						0.021/0.89		
	11	C to C mm						-		
Transmitter	12	Model				3051				
	13	Type		Accuracy		DP level Transmitter		+/- 0.1% Full Scale		
	14	Available Range		Calibration Range (bar)		-635~635mmH2O		300mmH2O		
	15	Output Signal		Power Supply		HART 4-20MA		24VDC Loop Powered		
	16	Load Resistance(Ω)				250 ohms				
	17	Zero Elevation & Suppression						Yes		
	18	Electrical Connection				ISO M20x1.5				
	19	Explosion Proof		Enclosure Protection		EXia (Zone 2 IIB T4)		IP65		
	20	Response Time		Housing Material		N/A		Epoxy Painted Die Cast Aluminum Copper Free		
	21	Failure Mode Alarm				Up Scale				
	22	Element Type		Element Material		Diaphragm		316SS		
Sensing & Body	23	Max. Static Pressure (barg)		Allowable Oper. Temp. °C		250barg		85 °C		
	24	Body Material		Flange Material		316SS		ASTM A105		
	25	Process Connection		Flange Standard		2"		ASME B16.5		
	26	Overrange Protection		Connector Material		130 %		316SS		
	27	Vent/Drain Type&Size		Vent/Drain Material		1/4"NPT		316SS		
	28	Gasket/O-Ring Material		Bolts Material		PTFE		ASTM A449		
Diaphragm Seal	29	Seal Type				N/A				
	30	Extended Length		Extended Material		N/A		N/A		
	31	Diaphragm Diameter		Diaphragm Material		N/A		N/A		
	32	Capillary Material		Capillary Length H/L		N/A		N/A		
	33	Capillary Armor Material		Fill Fluid		N/A		N/A		
	34	Fill Fluid Temperature Limits		Fill Fluid Density		N/A		N/A		
	35	Connection Type		Size		N/A		N/A		
	36	Flange Standard		Flange Rating		N/A		N/A		
	37	Flange Material		Facing		N/A		N/A		
	38	Flushing Connection				N/A		N/A		
Indicator	39	Indicator Type		Display		Integral LCD type		Digital		
	40	Mounting Bracket		Remo. Indic. Connection		No		YES		
Manifold	41	Manifold Model		Manifold Type		VTA		5 Way		
	42	Manifold Rating		Manifold Material		Min. CL 3000		316 SS		
	43	Manifold Connection				1/2" PROCESS SIDE/FLANG INST SIDE				
Miscell. Accessories	44	Mounting Bracket		Bracket Material		Yes / 2" Pipe		316SS		
	45	Add Corrosive Envir. Enclosure		Surge Protected Device		N/A		N/A		
Miscell.	46	Manufacturer								
	47	Requisition No.								
NOTES: VTA : Vendor To Advise VTC : Vendor To Confirm N/A : Not Applicable										

		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنيه تحت الارض خرید پکیج های کمپرسور گاز (رقت و برگشتی) بینک (فرار داد BK-HD-GCS-CO-0008_03)							
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 41 از 42	
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدارک	سریال	نسخه
		BK	GCS	HY	120	IN	DS	0001	V02
Instrument Data Sheet For Pressure Switch									
GENERAL					SWITCH				
1	Press. ●	Vaccum ○			8	Type:	Mercury ○	Snap ●	
	Comp. ○	Diff. Press. ○					Other :		
2	Set In Field ●	Factory Set			9	Quantity:	Single ○	Dual ●	
	Internal ●	External ○	Dial		10	Form:	SPST ○	SPDT ○	DPDT ●
3	Fixed	Adj. ●	Min. ○			Other:			
ELEMENT					11	Max Rating:	10 Amps	24vdc	
	Bourdon ○	Bellows ○				Other:			
					12	Load:	Inductive ○	Non-Inductive ●	
	Aluminum				13	IP	IP66 Exd/IIB T4	SIL Certified	
6	Connection 1/2"NPT ●	Other Size :			14	Electrical Connection:	M20x1.5		
	Bottom ●	Back			15	Manufacturer & Model No.			
7	Local ●	Surface ○	Flush		16	Accessories	Manifold 2Valve		
Tag No.	Process Connection	Adj. Range (Bar G)	Set Point (Bar G)	Pressure		Service or Line Number		Remark	
				Design	Working				
PS-2133A	1 " NPT	0~80	HOLD	62Bar	54.9Bar	GAS-111-0051A-FN05-6"-IS		Nace material Loose item	
C-PS-2204A	1 " NPT	0~10	1.2	10Bar	5 Bar	OIL-112-0008A-S.S-2"-IS			
C-PS-2220A	1 " NPT	0~10	1	10Bar	3 Bar	CWS-112-0002A-C.S-3"-IS			
PS-2133B	1 " NPT	0~80	HOLD	62Bar	54.9Bar	GAS-111-0051A-FN05-6"-IS		Nace material Loose item	
C-PS-2204B	1 " NPT	0~10	1.2	10Bar	5 Bar	OIL-112-0008A-S.S-2"-IS			
C-PS-2220B	1 " NPT	0~10	1	10Bar	3Bar	CWS-112-0002A-C.S-3"-IS			
PS-2133C	1 " NPT	0~80	HOLD	62Bar	54.9Bar	GAS-111-0051A-FN05-6"-IS		Nace material Loose item	
C-PS-2204C	1 " NPT	0~10	1.2	10Bar	5 Bar	OIL-112-0008A-S.S-2"-IS			
C-PS-2220C	1 " NPT	0~10	1	10Bar	3Bar	CWS-112-0002A-C.S-3"-IS			

Tag no. should be changed to PS-2195A
 There is no pressure switch In Hiran's PID

To be specified

		تگه‌داشت 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		INSTRUMENT DATASHEETS / CERTIFICATES					شماره صفحه: 42 از 42		
		پروژه BK	بسته کاری GCS	صادر کننده HY	تسهیلات 120	رشته IN	نوع مدارک DS	سریال 0001	نسخه V02
Instrument Data Sheet For Temperature Switch									
GENERAL									
1.TAG.NO		C-TS-2191A	C-TS-2194A	C-TS-2191B	C-TS-2194B	C-TS-2191C	C-TS-2194C		
2.Equipment		1ST STAGE DISCHARGE SNUBBER	2ND STAGE DISCHARGE SNUBBER	1ST STAGE DISCHARGE SNUBBER	2ND STAGE DISCHARGE SNUBBER	1ST STAGE DISCHARGE SNUBBER	2ND STAGE DISCHARGE SNUBBER		
3.ENCLOSURE MATERIAL		Cast Aluminum	Cast Aluminum	Cast Aluminum	Cast Aluminum	Cast Aluminum	Cast Aluminum		
4.SERVICE		Gas	Gas	Gas	Gas	Gas	Gas		
		0-200C	0-200°C	0-200°C	0-200°C	0-200°C	0-200°C		
IP 66/Exd-IIB-T4 SIL Certified									
7.TYPE SYSTEM		Flnage	Flange	Flange	Flange	Flange	Flange		
8 MATERIAL		AISI 316/Nace	AISI 316/Nace	AISI 316/Nace	AISI 316/Nace	AISI 316/Nace	AISI 316/Nace		
9.CONNECTION LOCATION		Bottom	Bottom	Bottom	Bottom	Bottom	Bottom		
10.TUBING LENGTH		N/A	N/A	N/A	N/A	N/A	N/A		
11.TUBING TYPE & MATERIAL		N/A	N/A	N/A	N/A	N/A	N/A		
12.WELL CONN.SIZE & TYPE		2"#300	2"#600	2"#300	2"#600	2"#300	2"#600		
13.WELL MATERIAL		316 S.S	316 S.S	316 S.S	316 S.S	316 S.S	316 S.S		
14.'U' DIMENSION(NOMINAL)		400mm	400mm	400mm	400mm	400mm	400mm		
SWITCH									
15.TYPE		Snap Action	Snap Action	Snap Action	Snap Action	Snap Action	Snap Action		
16.QUANTITY	FORM	1/DPDT	1/DPDT	1/DPDT	1/DPDT	1/DPDT	1/DPDT		
17.ENCLOSURE		IP66	IP66	IP66	IP66	IP66	IP66		
18.RATING:VOLTS		24 VDC	24 VDC	24 VDC	24 VDC	24 VDC	24 VDC		
19.AMPS		2	2	2	2	2	5		
20.LOAD TYPE		INDUCTIVE	INDUCTIVE	INDUCTIVE	INDUCTIVE	INDUCTIVE	INDUCTIVE		
21.DIFF.:FIXED	ADJUST	YES/-	YES/-	YES/-	YES/-	YES/-	YES/-		
22.ELECTRICAL CONNECTION		M20*1.5	M20*1.5	M20*1.5	M20*1.5	M20*1.5	M20*1.5		
23.Accuracy		1% Of Spna	1% Of Spna	1% Of Spna	1% Of Spna	1% Of Spna	1% Of Spna		
SERVICE CONDITIONS									
27.TEMP.:OPER 'C		129°C	148°C	129°C	148°C	129°C	148°C		
28.PRESS.:OPER		18	54.9	18	54.9	18	54.9		
29.TRIP POINT 'C		159	178	159	178	159	178		
30.MANUFACTURER		HOLD	Hold	Hold	Hold	Hold	Hold		
31.MANUFACTURER'S MODEL NO.		HOLD	HOLD	HOLD	HOLD	HOLD	HOLD		

IN: Flange face to be considered.
HY: RF

oarg
HY:Modifie
d

design pressure should also be mentioned

trip points are not compatible with Horgan design temperatures, in other words, the switches shall be activated before the design conditions to protect system. Please check them