



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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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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10	X	X	X		
11	X	X	X		
12	X	X	X		
13	X	X	X		
14	X	X	X		
15	X	X	X		
16	X	X	X		
17	X	X	X		
18	X	X	X		
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Page	V00	V01	V02	V03	V04
1					
2					
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6					
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8					
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12					
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(قرارداد ۰۳_۰۰۸-CO-GCS-BK)



INSTRUMENT DATASHEETS / CERTIFICATES

شماره صفحه: 3 از 42

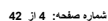
نسخه	سریال	نوع	رشته	تسهیلات	صادر کننده	بسته کاری	پروژه
V02	0001	DS	IN	120	HY	GCS	BK

Table of Content

Page	Content
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
27	Level gauge C-LG-2213A
28	Level gauge C-LG-2213B
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
36	Vibration & rod drop data sheet C-2101B
37	Vibration & rod drop data sheet C-2101C
38	Level Transmitter C-LT-2200A
39	Level Transmitter C-LT-2200B
40	Level Transmitter C-LT-2200C
41	Pressure switch data Sheet
42	Temp switch data Sheet
43	
44	

Page	V00	V01	V02	V03	V04
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
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44					

نگهداشت و افزایش تولید میدان نفتی بینک
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(قرارداد 03 BK-HD-GCS-CO-0008)



INSTRUMENT DATASHEETS / CERTIFICATES						
نوع مدرک	رشته	تسهیلات	صادرکننده	بسته کاری	پروژه	نسخه
DS	IN	120	HY	GCS	BK	V02 0001

Data Sheet for Pressure Gauge

1	Type :	Direct Rdg. ☒	Other liquid filled ☐	3-15 lb Reciever ☐
2	Mounting :	Surface ☐ Local ☒	Flush ☐	
3	Dial :	Diameter ☐ 160 mm	Color : White / Black Lettering , Aluminum Non Rusting Metal	
4	Case :	Cast Iron ☐ S.S ☐	Phenol ☐	
5	Ring :	Screwed ☒ Hinged ☐	Slip ☐	
6	Blow-out Protection :	None ☐	Back ☐ Disc ☒	
7	Lens :	Glass ☒ Plastic ☐	Other Safety Glass (shatter proof)	
8	Options :		As per List ☒	
9	Nominal Accuracy Required :	$\pm 0.5\%$ of full scale		
10	Over range protection :	1.3 times the maximum scale reading		

11	MFR.& Model No.	SANGAN PG-20		
12	Press Element : Bourdon	☒	Bellows ☐	
13	Element Mtl. :	Other Bronze ☐ Steel ☐		
14	Socket Mtl. :	SS ☒ Other 316SS ☐	Steel ☐	
15	Connection-NPT :	SS ☒ Other 316SS ☐	1/2 in. ☒ Other NPTM (refer to note)	
16	Movement:	Bottom ☒ Back ☐ SS ☒		
17	Diaphragm Seal	Naylon ☐ As per List ☐	Other Stainless Steel	
18	Ingress Protection :	IP 65		
19	Manifold S.S316 2 valve	☒		

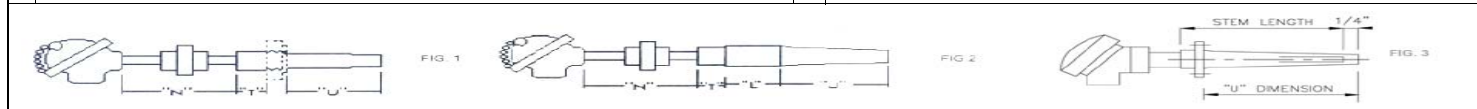
Item	Tag No.	Range (barg)	Process Fluid/State	Design		Operating		LINE NO./EQUIPMENTNO.	P&ID NO.	Accessories	NOTE
				Press (barg)	Temp (C°)	Press (barg)	Temp (C°)				
1	C-PG-2190A	0-10	Process gas Comp A	24.5	180	4.9	36.8	1ST STAGE SUCTION SNUBBER	BK-GCS-HY-120-PR-PI-0001 Page1	Nace material Over protector Snubber Set point 10 barg	
2	C-PG-2191A	0-40	Process gas Comp A	24.5	180	18	129	1ST STAGE DISCHARGE SNUBBER	BK-GCS-HY-120-PR-PI-0001 Page1	Nace material	
3	C-PG-2193A	0-40	Process gas Comp A	62	180	17.1	59.9	2nd STAGE SUCTION SNUBBER	BK-GCS-HY-120-PR-PI-0001 Page1	Nace material Over protector Snubber Set point 40 barg	
4	C-PG-2194A	0-100	Process gas Comp A	62	180	54.9	148	2nd STAGE DISCHARGE SNUBBER	BK-GCS-HY-120-PR-PI-0001 Page1	Cooling Element Nace material	
5	C-PG-2200A	0-16	Instrument Air Comp A	12.5	85	8	65	ISA-112-0002A-AZ00-2"-IS	BK-GCS-HY-120-PR-PI-0001 Page2		
6	C-PG-2201A	0-16	Lube Oil Comp A	10	85	6	70	OIL-112-0004A-S.S-1.1/2"-NP	BK-GCS-HY-120-PR-PI-0001 Page3		
7	C-PG-2202A	0-16	Lube Oil Comp A	10	85	6	70	OIL-112-0003A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001 Page3		
8	C-PG-2204A	0-16	Lube Oil Comp A	10	85	6	60	OIL-112-0008A-S.S-2"-IS	BK-GCS-HY-120-PR-PI-0001 Page3		
9	C-PG-2205A	0-6	GAS	5	85	1.5	65	FLR-112-0009A-AN07-1"-IS	BK-GCS-HY-120-PR-PI-0001 Page1	Nace material	
10	C-PG-2206A	0-6	Water console Comp A	7	85	3	65	CWS-112-0003A-C.S-3"-IS	BK-GCS-HY-120-PR-PI-0001 Page5	Pulsation Damper (Snubber)	
11	C-PG-2207A	0-6	Water console Comp A	7	85	3	65	CWS-112-0004A-C.S-3"-IS	BK-GCS-HY-120-PR-PI-0001 Page5	Pulsation Damper (Snubber)	
12	C-PG-2208A	0-6	Water console Comp A	7	85	3	58	CWS-112-0002A-C.S-3"-IS	BK-GCS-HY-120-PR-PI-0001 Page5		
13	C-PG-2190B	0-10	Process gas Comp B	24.5	180	4.9	36.8	1ST STAGE SUCTION SNUBBER	BK-GCS-HY-120-PR-PI-0001 Page1	Nace material Over protector Snubber Set point 10barg	
14	C-PG-2191B	0-40	Process gas Comp B	24.5	180	18	129	1ST STAGE DISCHARGE SNUBBER	BK-GCS-HY-120-PR-PI-0001 Page1	Nace material	
15	C-PG-2193B	0-40	Process gas Comp B	62	180	17.1	59.9	2nd STAGE SUCTION SNUBBER	BK-GCS-HY-120-PR-PI-0001 Page1	Nace material Over protector Snubber Set point 40 barg	
16	C-PG-2194B	0-100	Process gas Comp B	62	180	54.9	148	2nd STAGE DISCHARGE SNUBBER	BK-GCS-HY-120-PR-PI-0001 Page1	Cooling Element Nace material	
17	C-PG-2200B	0-16	Instrument Air Comp B	12.5	85	8	65	ISA-112-0002A-AZ00-2"-IS	BK-GCS-HY-120-PR-PI-0001 Page2		
18	C-PG-2201B	0-16	Lube Oil Comp B	10	85	6	70	OIL-112-0004A-S.S-1.1/2"-NP	BK-GCS-HY-120-PR-PI-0001 Page3		
19	C-PG-2202B	0-16	Lube Oil Comp B	10	85	6	70	OIL-112-0003A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001 Page3		
20	C-PG-2204B	0-16	Lube Oil Comp B	10	85	6	60	OIL-112-0008A-S.S-2"-IS	BK-GCS-HY-120-PR-PI-0001 Page3		
21	C-PG-2205B	0-6	GAS	5	85	1.5	65	FLR-112-0009A-AN07-1"-IS	BK-GCS-HY-120-PR-PI-0001 Page1	Nace material	
22	C-PG-2206B	0-6	Water console Comp B	7	85	3	65	CWS-112-0003A-C.S-3"-IS	BK-GCS-HY-120-PR-PI-0001 Page5	Pulsation Damper (Snubber)	
23	C-PG-2207B	0-6	Water console Comp B	7	85	3	65	CWS-112-0004A-C.S-3"-IS	BK-GCS-HY-120-PR-PI-0001 Page5	Pulsation Damper (Snubber)	
24	C-PG-2208B	0-6	Water console Comp B	7	85	3	58	CWS-112-0002A-C.S-3"-IS	BK-GCS-HY-120-PR-PI-0001 Page5		
25	C-PG-2190C	0-10	Process gas Comp C	24.5	180	4.9	36.8	1ST STAGE SUCTION SNUBBER	BK-GCS-HY-120-PR-PI-0001 Page1	Nace material Over protector Snubber Set point 10barg	
26	C-PG-2191C	0-40	Process gas Comp C	24.5	180	18	129	1ST STAGE DISCHARGE SNUBBER	BK-GCS-HY-120-PR-PI-0001 Page1	Nace material	
27	C-PG-2193C	0-40	Process gas Comp C	62	180	17.1	59.9	2nd STAGE SUCTION SNUBBER	BK-GCS-HY-120-PR-PI-0001 Page1	Nace material Over protector Snubber Set point 40 barg	
28	C-PG-2194C	0-100	Process gas Comp C	62	180	54.9	148	2nd STAGE DISCHARGE SNUBBER	BK-GCS-HY-120-PR-PI-0001 Page1	Cooling Element Nace material	
29	C-PG-2200C	0-16	Instrument Air Comp C	12.5	85	8	65	ISA-112-0002A-AZ00-2"-IS	BK-GCS-HY-120-PR-PI-0001 Page2		
30	C-PG-2201C	0-16	Lube Oil Comp C	10	85	6	70	OIL-112-0004A-S.S-1.1/2"-NP	BK-GCS-HY-120-PR-PI-0001 Page3		
31	C-PG-2202C	0-16	Lube Oil Comp C	10	85	6	70	OIL-112-0003A-S.S-2"-NP	BK-GCS-HY-120-PR-PI-0001 Page3		
32	C-PG-2204C	0-16	Lube Oil Comp C	10	85	6	60	OIL-112-0008A-S.S-2"-IS	BK-GCS-HY-120-PR-PI-0001 Page3		
33	C-PG-2205C	0-6	GAS	5	85	1.5	65	FLR-112-0009A-AN07-1"-IS	BK-GCS-HY-120-PR-PI-0001 Page1	Nace material	
34	C-PG-2206C	0-6	Water console Comp C	7	85	3	65	CWS-112-0003A-C.S-3"-IS	BK-GCS-HY-120-PR-PI-0001 Page5	Pulsation Damper (Snubber)	
35	C-PG-2207C	0-6	Water console Comp C	7	85	3	65	CWS-112-0004A-C.S-3"-IS	BK-GCS-HY-120-PR-PI-0001 Page5	Pulsation Damper (Snubber)	
36	C-PG-2208C	0-6	Water console Comp C	7	85	3	58	CWS-112-0002A-C.S-3"-IS	BK-GCS-HY-120-PR-PI-0001 Page5		

 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: 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) ☐ 4-20mA Smart HART							
	9		Transmitter Accuracy : 0.1% of full scale.							
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							
OPTIONS	18	Electrical Conn.	MFR STD ☐ Other ISO M20x1.5							
	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 : Valve Manifold : See list							
	21	Manifold								
	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.										

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	INSTRUMENT DATASHEETS / CERTIFICATES								
	شماره پیمان: 053 - 073 - 9184	پروژه	بسته کاری	صادر کننده	تجهیزات	رشته	نوع مدرک	سریال	نسخه
	BK	GCS	HY	120	IN	DS	0001	V02	شماره صفحه: 8 از 42

Data Sheet for Temprarure Transmitter/Element/Thermowell

HEAD					21	BORE DIAMETER 6.6 mm (NOTE 4)	
1	COMPLETE ASSEMBLY		YES	OTHER	22	OUTSIDE DIAMETER AT SUPPORT/TIP : 28/22 mm (NOTE 4)	
2	SCREWED COVER			OTHER	23	LAGGING EXTENTION "T" : VTA	
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		
					22		
					23		
					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.

 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 .



شماره پیمان:
053 - 073 - 9184

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

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



شماره صفحه: 11 از 42

INSTRUMENT DATASHEETS / CERTIFICATES

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List of DPT

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



شماره صفحه: 12 از 42

INSTRUMENT DATASHEETS / CERTIFICATES							
سریال	نوع مترک	رشته	تجهیزات	صادرکننده	پسته کاری	پروژه	
V02	0001	DS	IN	120	HY	GCS	BK

Data Sheet for Differential Pressure Gauge									
--	--	--	--	--	--	--	--	--	--

1	Type :	Direct Rdg. ☒	3-15 lb Receiver ☐	11	MFR. & Model No. SANGAN PG-13-700
2	Mounting :	Other ☒ liquid filled	Local ☐	12	Press Element : Diaphragm ☒ (Note6) Bellows ☐
3	Dial :	Diameter 160 mm	Color : White / Black Lettering , Aluminum Non Rusting Metal	13	Element Mtl. : ☐ Other ☐ Steel ☐
4	Case :	SS316 ☒	Cast Aluminum ☐ Phenol ☐	14	Socket Mtl. : ☒ SS ☐ Other ☐ 316SS ☐ Steel ☐
5	Ring :	Screwed ☒ Hinged ☐	Slip ☒	15	Connection-NPT : ☒ SS ☐ Other ☐ 316SS ☐ Steel ☐
6	Blow-out Protection :	Std ☐ Other ☐	Back ☒ Disc ☒	16	Movement : ☐ 1/4 in. ☒ 1/2 in. ☒ Other ☐ NPTM
7	Lens :	Solid Front ☐	Other ☐	17	Diaphragm Seal : ☐ Nylon ☐ Other ☐ Stainless Steel
8	Options :	Glass ☒	Safety Glass (shatter proof)	18	MFR. : ☐ Wetted Part Mtl. : ☐ Other Mtl. : ☐
9	Nominal Accuracy Required :	±1.6% of full scale			
10	Over range protection :	1.3 times the maximum scale reading			

Item	Tag No.	Range (barg)	Process Fluid/State	Design		Operating		Differential Pressure		LINE NO./EQUIPMENTNO.	P&ID NO.	Accessories	MFR.& Model	NOTE
				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	تسهیلات	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. WEIGH T	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	تسهیلات	صادرکننده	بسته کاری			پروژه
		V02	0001	DS	IN	120	HY	GCS			BK
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	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		

		نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)									
شماره پیمان: 053 - 073 – 9184		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)



053 - 073 - 9184

INSTRUMENT DATASHEETS / CERTIFICATES

شماره صفحه: 17 از 42

0192

بستہ کاری

صادق کنند

تسهيلات

رشته

نوع مدرسی

سوال

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444

BK

GCS

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120

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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_0008-BK-HD-GCS-CO)						 HAVAYAR INDUSTRIAL GROUP				
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES								شماره صفحه: 18 از 42		
		پروژه	پسند 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-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												

 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: 19 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 TRANSMITTER										
	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			
Process Conditions	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				
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					
	Accessories	40	Integral Indicator / Mounting type			Yes / Direct				
41		Valve Manifold			5 valve-S.S316					
42		Upstream Straight Run			10X					
Miscell.	43	Downstream Straight Run			5X					
	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 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	نسخه	
		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		-			
Element	14	Allowable Pressure Drop @ Max. Flow				0.2				
	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			
Transmitter Unit	22	Bolt /Nut Material	Bolt /Nut Standard		ASTM A193 Gr.B7 / ASTM A194 Gr.2H Galvanized		ASME B1.1			
	23	Gasket Type & Material								
	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							
	Accessories	40	Integral Indicator / Mounting type	Yes / Direct						
41		Valve Manifold	5 valve-S.S316							
42		Upstream Straight Run	10X							
Miscell.	43	Downstream Straight Run	5X							
	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: 21 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-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+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 ابدیه 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	تسهيلات	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-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		
		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 24 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										
	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 ابدیه 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
		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
		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							
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 27 از 42							
		پروژه	پسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک			سریال	نسخه	BK	GCS	HY	120
General	1	Instrument Name						Level gauge							
	2	Tag Number	P&ID No.						C-LG-2213A						
	3	Service	Equipment No.						BK-GCS-HY-120-PR-PI-0001-Page5						
	4	Pipe Class	Vessel Material						TK-2101-WR A						
	5	Vessel Class													
Process Conditions	6	Upper Fluid	Lower Fluid						Air						
	7	Upper Density kg/m3	Lower Density kg/m3						1.225						
	8	Operating Pressure bar(g)	Design Pressure bar(g)						ATM						
	9	Operating Temperature °C	Design Temperature °C						65						
	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						
	16	Visible Length mm							HOLD						
	17	Scale Unit/Material	Accuracy						Cm						
	18	Indicator Type	Indicator Colour						Magnetic						
	19	Chamber Material	Float Material						S.S						
	20	Connection Type	Connection Size						Flange						
	21	Flange Standard	Flange Rating						ASME						
	22	Flange Material	Facing						C.S						
	23	Other Wetted Parts Material						S.S							
	24	Float Dimension	Indicator Housing Material						HOLD						
	Transmitter/Switch	25	Output Signal	Load Resistance						N/A					
26		Switch Type	Switch Quantity						N/A						
27		Contact Form	Contact Rating						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						
32		Explosion Proof	Enclosure Protection						N/A						
33		Housing Material	Integral Indicator						N/A						
34															
Accessories		36	Drain Valve	Drain Valve Material						1/2"NPT					
	37	Vent Valve	Vent Valve Material						N/A						
	38	Vent Valve Connection	Vent Valve Size						N/A						
	39	Drain Plug	Vent Plug						N/A						
	40	Protective Heat Shield						N/A							
	41	Steam Jacket	Jacket Connection Size						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	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: 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 BK	پسته کاری GCS	صادر کننده HY	تسهیلات 120	رشته IN	نوع مدرک DS	سریال 0001	نسخه 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)				-			
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		
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					
	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			
Sensing & Body	28	Gasket/O-Ring Material	Bolts Material		PTFE		ASTM A449			
	29	Seal Type			N/A		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			
Diaphragm Seal	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		
	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 03-BK-HD-GCS-CO-0008)						 HAVAYAR INDUSTRIAL GROUP	
		INSTRUMENT DATASHEETS / CERTIFICATES							
شماره پیمان: 053 - 073 - 9184		نسخه: 32 از 42							
		پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه
		BK	GCS	HY	120	IN	DS	0001	V02
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	
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 (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	
Diaphragm Seal	28	Gasket/O-Ring Material		Bolts Material		PTFE		ASTM A449	
	29	Seal Type				N/A		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	
	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: 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/DESIGN PRESSURE (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				
	- Proximitior	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: 37 از 42
		BK	GCS	HY	120	IN	DS	0001	V02	
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				
	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							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				
	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				
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		
	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		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				
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		
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 (رفت و برگشتی) بینک (قرارداد BK-HD-GCS-CO-0008_03)							
شماره پیمان: 053 - 073 - 9184		INSTRUMENT DATASHEETS / CERTIFICATES						شماره صفحه: 41 از 42	
		پروژه	بسته کاری	صادر کننده	تجهیزات	رشته	نوع مدارک	سریال	نسخه
		BK	GCS	HY	120	IN	DS	0001	V02

Instrument Data Sheet For Pressure Switch										
GENERAL					SWITCH					
1	Press.	●	Vacuum	○	8	Type:	Mercury	○	Snap	●
	Comp.	○	Diff. Press.	○			Other :			
2	Set In Field	●	Factory Set		9	Quantity:	Single	○	Dual	●
	Internal	●	External	○	10	Form:	SPST	○	SPDT	○
3	Fixed		Adj.	●			Other:			
			Min.	○	11	Max Rating:	10 Amps		24vdc	
4	Diaphragm	●	Bourdon	○			Other:			
			Bellows	○	12	Load:	Inductive	○	Non-Inductive	●
5	Material		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	

		تکهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض خرید پکیج های کمپرسور گاز (رفت و برگشتی) بینک (فراردهاد 03 0008-BK-HD-GCS-CO)															
شماره پیمان: 053 - 073 – 9184		INSTRUMENT DATASHEETS / CERTIFICATES							شماره صفحه: 42 از 42								
		پروژه		پسینه کاری		صاندر کننده		رشته			نوع مدرک		سریال		نسخه		
		BK		GCS		HY		120			IN		DS		0001		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					
5.RANGE		0-200C		0-200'C		0-200'C		0-200'C		0-200'C		0-200'C					
6.Ingress Protection		IP 66/Exd-IIB-T4 SIL Certified															
THERMOWELL																	
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		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		M20*1.5			
23.Accuracy		1% Of Spna		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 'C		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					