



OGDCL PAKISTAN:  
OIL & GAS DEVELOPMENT  
COMPANY LIMITED

## NASHPA COMPRESSION PROJECT PHASE-II

**ISSUED FOR TENDER**

0	9-Mar-2018	ISSUED FOR TENDER	WAS	SJA	NAS	MHQ	TH		
REV	DATE	DESCRIPTION	ORIG	CHKD	LE	QA	PM	LPE/TA	LA MFM MP

REVISIONS

APPROVAL

OWNER  
APPROVAL



**ENAR PETROTECH SERVICES (PVT.) LTD.**

7-B, KORANGI INDUSTRIAL AREA,  
KORANGI-KARACHI

TITLE :

**DOCUMENT TITLE:  
DATA SHEET OF FLOW ELEMENT (ORIFICE TYPE)**

DOCUMENT NO:

**0193**

**DS**

**6001**

**0**

PROJECT NO.  
**14-0193**

CODE

DOC. TYPE

SEQ. NO.

REV



**ENAR PETROTECH  
SERVICES (PVT.) LTD.**

**Flow Element  
(Orifice Type)**

DATA SHEET NO.	0193-DS-6001
SHEET	2 of 2
DATE	9/3/2018
REV.	0
PREPARED BY	WAS
CHECKED BY	SJA
APPROVED BY	NAS

**OWNER:** OIL & GAS DEVELOPMENT COMPANY LIMITED (OGDCL)  
**PROJECT:** NASHPA COMPRESSION PROJECT PHASE-II

1	Tag no	Note-5	FE-3002	
2	Service		Fuel gas knock-out pot V-3001 outlet flow	
3	Line No		8"-30-FG-006-A2	
4	P&ID No.		NGP-001-PCS-15.09-0024-14	
5	<b>PROCESS SERVICE CONDITIONS</b>			
6	Fluid		Fuel Gas	
7	State		Gas	
8	Flow Max.	(MMSCFD)	6.51	
9	Flow Oper.	(MMSCFD)	5.92	
10	Flow Min.	(MMSCFD)	3.34	
11	Pressure Max.	(psig)	90	
12	Pressure Oper.	(psig)	-	
13	Pressure Min.	(psig)	-	
14	Temperature Max.	(°F)	95	
15	Temperature Oper.	(°F)	-	
16	Temperature Min.	(°F)	-	
17	Density Gas at STP		-	
18	Specific Gravity at Oper. Cond.		-	
19	Density at Oper. Cond.	(lb/ft <sup>3</sup> )	0.32	
20	Super Comp. Factor at Oper. Cond. Zf (Gas)		-	
21	Vapor Pressure	(psia)	-	
22	Viscosity at Oper. Cond. (Liquid)		-	
23	Viscosity at Oper. Cond. (Gas)		0.012	
24	Steam Quality %		-	
25	K = Cp/Cv Isentropic Exponent		-	
26	Compressibility Factor		-	
27	Vapor/Liquid (Fraction)		-	
28	<b>MEASURING STATION DATA</b>			
29	Line size.	(Inches)	8"	
30	Line & Flange I.D.	(Inches)	8" Sch 40	
31	Calculated Orifice I.D.	(mm)	103.495 (VTA)	
32	Beta Ratio		0.51504 (VTA)	
33	Pressure Drop	(Inches W.C)	100	
34	<b>GENERAL SPECIFICATION</b>			
35	Orifice Plate	Note-9	Concentric	Orifice Flanges (Flange I.D. should match Line I.D.) Note-3
36	Plate Type		Square Edge	Rating & Facing ASME CL 150#, RF
37	Plate Material		316 SS	
38	Drain / Vent Hole (Yes/No)		Yes	Type & Material Not Required
39	Handle		As per Standard	Tap Type Not Required
40	Plate Thickness		ISO 5167 Standard.	Tap Size Not Required
41	Bore for Maximum Flow (Yes/No)		Yes	Gasket/Studs/Nuts Not Required
42	Make to ISO 5167 Standard and Stamp to ISA Standard.		Yes	Gasket Material Not Required
43	NACE Compliance		No	
44	<b>NOTES:</b> *VTA:- Vendor to Advise			
	1- All Threaded connection according to NPT B1.20.1 unless otherwise specified.			
	2- Vendor to submit calculation for review with Bid and also provide basis of calculation.			
	3- Existing Orifice plate will be replaced with new whereas existing Flange shall be re-used.			
	4- Orifice plate shall be compatible for installation with RF flanges.			
	5- Existing Flow Element tag # FE-3002 shall be replaced with New. However Existing DP-Type Flow Transmitter tag # FT-3002 shall be re-used.			
	6- Specification for General & Packaged Instrumentation # 0193-IMA-6000 shall be referred for details			
	7- This Data Sheet is developed based on preliminary information, Contractor shall develop detail Data Sheet and confirm all parameters during detail engineering stage.			
	8- Upstream side of the orifice shall be clearly marked/embossed on Orifice Plate as "INLET". Upstream side shall be square and sharp without any sort of defects.			
	9- Orifice plate handle is to be stamped with the following as minimum;			
	(i) Tag-No.		(iv) Material of construction	
	(ii) Job-No.		(v) Flange rating on the upstream side of the plate.	
	(iii) Orifice Bore		(vi) Pipe I.D and Schedule	