



Toase-ehe Park Sanati Gohar Ofogh Petrochemical Co.

**CONCEPTUAL, BASIC and DETAIL DESIGN  
ENGINEERING OF STYRENE PARK OFFSITE**

Document Title: P&ID for Cartridge Filter

Document No. : EI027-ENR-VD-PR-PID-003



Rev.: R1

Page 1 of 6

## STYRENE PARK OFFSITE

**Document Title:**

**P&ID for Cartridge Filter**

Rev.	Issued Date	DESCRIPTION	PREPARED	CHECKED	APPROVED
R1	07/04/2024	Issued for Comment	M.Tavakoli	E.Malek	H.Keshmiri
R0	20/02/2024	Issued for Comment	M.Tavakoli	E.Malek	H.Keshmiri



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CONCEPTUAL, BASIC and DETAIL DESIGN ENGINEERING OF STYRENE PARK OFFSITE



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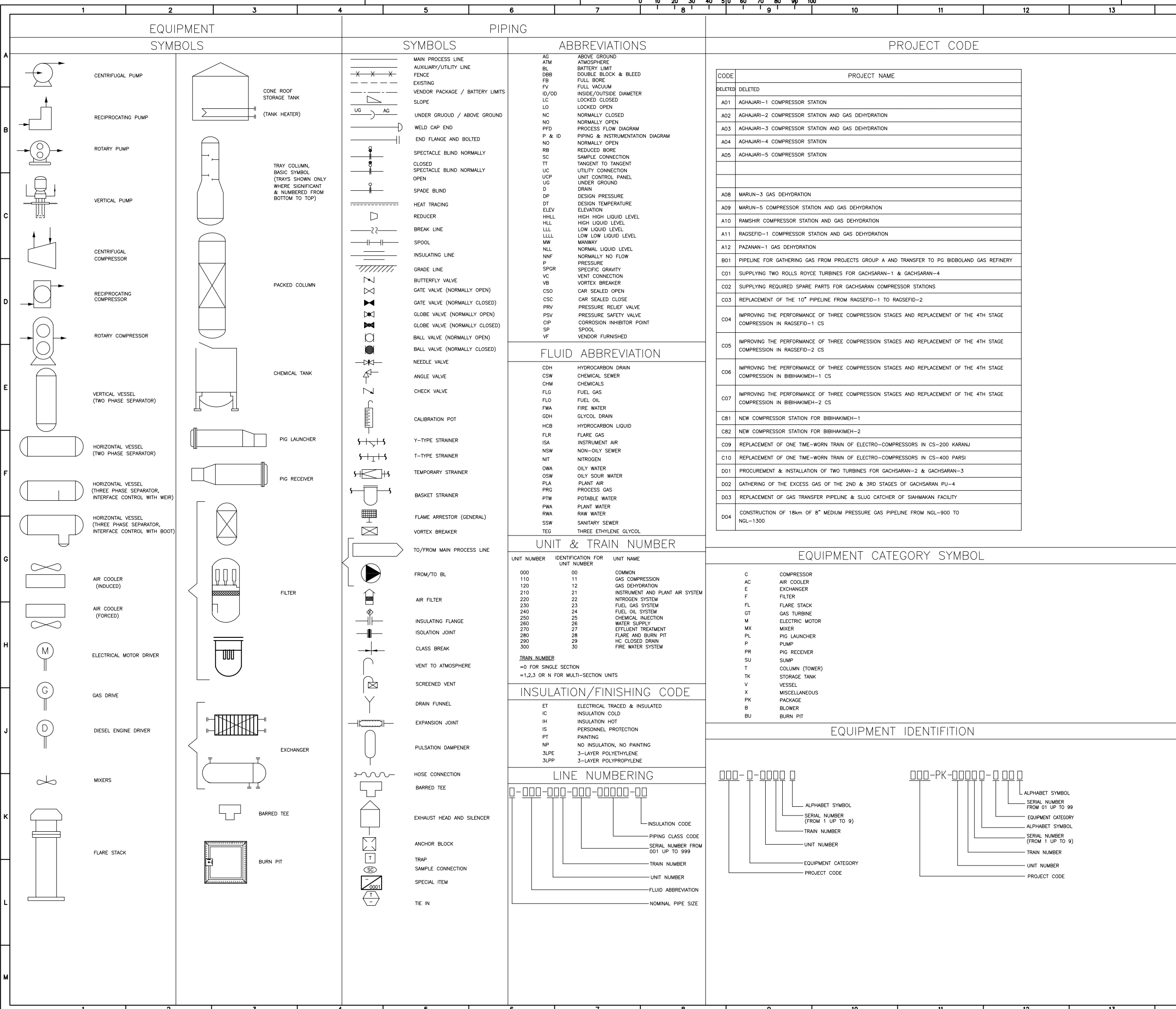
Document No. : EI027-ENR-VD-PR-PID-003

Rev.: R1

Page 2 of 6

Page	Revisions						
	R0	R1	R2	R3	R4	R5	R6
1	X	X					
2	X	X					
3	X	X					
4	X	X					
5	X	X					
6	X	X					
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Page	Revisions						
	R0	R1	R2	R3	R4	R5	R6
41							
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EQUIPMENT SYMBOLS	
	CENTRIFUGAL PUMP
	RECIPROCATING PUMP
	ROTARY PUMP
	VERTICAL PUMP
	CENTRIFUGAL COMPRESSOR
	RECIPROCATING COMPRESSOR
	ROTARY COMPRESSOR
	VERTICAL VESSEL (TWO PHASE SEPARATOR)
	HORIZONTAL VESSEL (TWO PHASE SEPARATOR)
	HORIZONTAL VESSEL (THREE PHASE SEPARATOR, INTERFACE CONTROL WITH WEIR)
	HORIZONTAL VESSEL (THREE PHASE SEPARATOR, INTERFACE CONTROL WITH BOOT)
	AIR COOLER (INDUCED)
	AIR COOLER (FORCED)
	ELECTRICAL MOTOR DRIVER
	GAS DRIVE
	DIESEL ENGINE DRIVER
	MIXERS
	FLARE STACK

PIPING SYMBOLS	
	MAIN PROCESS LINE
	AUXILIARY/UTILITY LINE
	FENCE
	EXISTING
	VENDOR PACKAGE / BATTERY LIMITS
	SLOPE
	UNDER GROUND / ABOVE GROUND
	WELD CAP END
	END FLANGE AND BOLTED
	SPECTACLE BLIND NORMALLY CLOSED
	SPECTACLE BLIND NORMALLY OPEN
	SPADE BLIND
	HEAT TRACING
	REDUCER
	BREAK LINE
	SPOOL
	INSULATING LINE
	GRADE LINE
	BUTTERFLY VALVE
	GATE VALVE (NORMALLY OPEN)
	GATE VALVE (NORMALLY CLOSED)
	GLOBE VALVE (NORMALLY OPEN)
	GLOBE VALVE (NORMALLY CLOSED)
	BALL VALVE (NORMALLY OPEN)
	BALL VALVE (NORMALLY CLOSED)
	NEEDLE VALVE
	ANGLE VALVE
	CHECK VALVE
	CALIBRATION POT
	Y-TYPE STRAINER
	T-TYPE STRAINER
	TEMPORARY STRAINER
	BASKET STRAINER
	FLAME ARRESTOR (GENERAL)
	VORTEX BREAKER
	TO/FROM MAIN PROCESS LINE
	FROM/TO BL
	AIR FILTER
	INSULATING FLANGE
	ISOLATION JOINT
	CLASS BREAK
	VENT TO ATMOSPHERE
	SCREENED VENT
	DRAIN FUNNEL
	EXPANSION JOINT
	PULSATION DAMPENERS
	HOSE CONNECTION
	BARRED TEE
	EXHAUST HEAD AND SILENCER
	ANCHOR BLOCK
	TRAP
	SAMPLE CONNECTION
	SPECIAL ITEM
	TIE IN

ABBREVIATIONS	
AG	ABOVE GROUND
ATM	ATMOSPHERE
BL	BATTERY LIMIT
DBB	DOUBLE BLOCK & BLEED
FB	FULL BORE
FV	FULL VACUUM
ID/OD	INSIDE/OUTSIDE DIAMETER
LC	LOCKED CLOSED
LO	LOCKED OPEN
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
PFD	PROCESS FLOW DIAGRAM
P & ID	PIPING & INSTRUMENTATION DIAGRAM
NO	NORMALLY OPEN
RB	REDUCED BORE
SC	SAMPLE CONNECTION
TT	TANGENT TO TANGENT
UC	UTILITY CONNECTION
UCP	UNIT CONTROL PANEL
UG	UNDER GROUND
D	DRAIN
DP	DESIGN PRESSURE
DT	DESIGN TEMPERATURE
ELEV	ELEVATION
HLL	HIGH HIGH LIQUID LEVEL
HLL	HIGH LIQUID LEVEL
LLL	LOW LIQUID LEVEL
LLL	LOW LOW LIQUID LEVEL
MW	MANWAY
NLL	NORMAL LIQUID LEVEL
NNF	NORMALLY NO FLOW
P	PRESSURE
SPGR	SPECIFIC GRAVITY
VC	VENT CONNECTION
VB	VORTEX BREAKER
CSO	CAR SEALED OPEN
CSC	CAR SEALED CLOSE
PRV	PRESSURE RELIEF VALVE
PSV	PRESSURE SAFETY VALVE
CIP	CORROSION INHIBITOR POINT
SP	SPOOL
VF	VENDOR FURNISHED

FLUID ABBREVIATION	
CDH	HYDROCARBON DRAIN
CSW	CHEMICAL SEWER
CHM	CHEMICALS
FLG	FUEL GAS
FLO	FUEL OIL
FWA	FIRE WATER
GDH	GLYCOL DRAIN
HCB	HYDROCARBON LIQUID
FLR	FLARE GAS
ISA	INSTRUMENT AIR
NSW	NON-OILY SEWER
NIT	NITROGEN
OWA	OILY WATER
OSW	OILY SOUR WATER
PLA	PLANT AIR
PRG	PROCESS GAS
PTW	POTABLE WATER
PWA	PLANT WATER
RWA	RAW WATER
SSW	SANITARY SEWER
TEG	THREE ETHYLENE GLYCOL

UNIT & TRAIN NUMBER		
UNIT NUMBER	IDENTIFICATION FOR UNIT NUMBER	UNIT NAME
000	00	COMMON
110	11	GAS COMPRESSION
120	12	GAS DEHYDRATION
210	21	INSTRUMENT AND PLANT AIR SYSTEM
220	22	NITROGEN SYSTEM
230	23	FUEL GAS SYSTEM
240	24	FUEL OIL SYSTEM
250	25	CHEMICAL INJECTION
260	26	WATER SUPPLY
270	27	EFFLUENT TREATMENT
280	28	FLARE AND BURN PIT
290	29	HC CLOSED DRAIN
300	30	FIRE WATER SYSTEM

INSULATION/FINISHING CODE	
ET	ELECTRICAL TRACED & INSULATED
IC	INSULATION COLD
IH	INSULATION HOT
IS	PERSONNEL PROTECTION
PT	PAINTING
NP	NO INSULATION, NO PAINTING
3LPE	3-LAYER POLYETHYLENE
3LPP	3-LAYER POLYPROPYLENE

LINE NUMBERING	
000-000-000-0000-00	INSULATION CODE
000-000-000-0000-00	PIPING CLASS CODE
000-000-000-0000-00	SERIAL NUMBER FROM 001 UP TO 999
000-000-000-0000-00	TRAIN NUMBER
000-000-000-0000-00	UNIT NUMBER
000-000-000-0000-00	FLUID ABBREVIATION
000-000-000-0000-00	NOMINAL PIPE SIZE

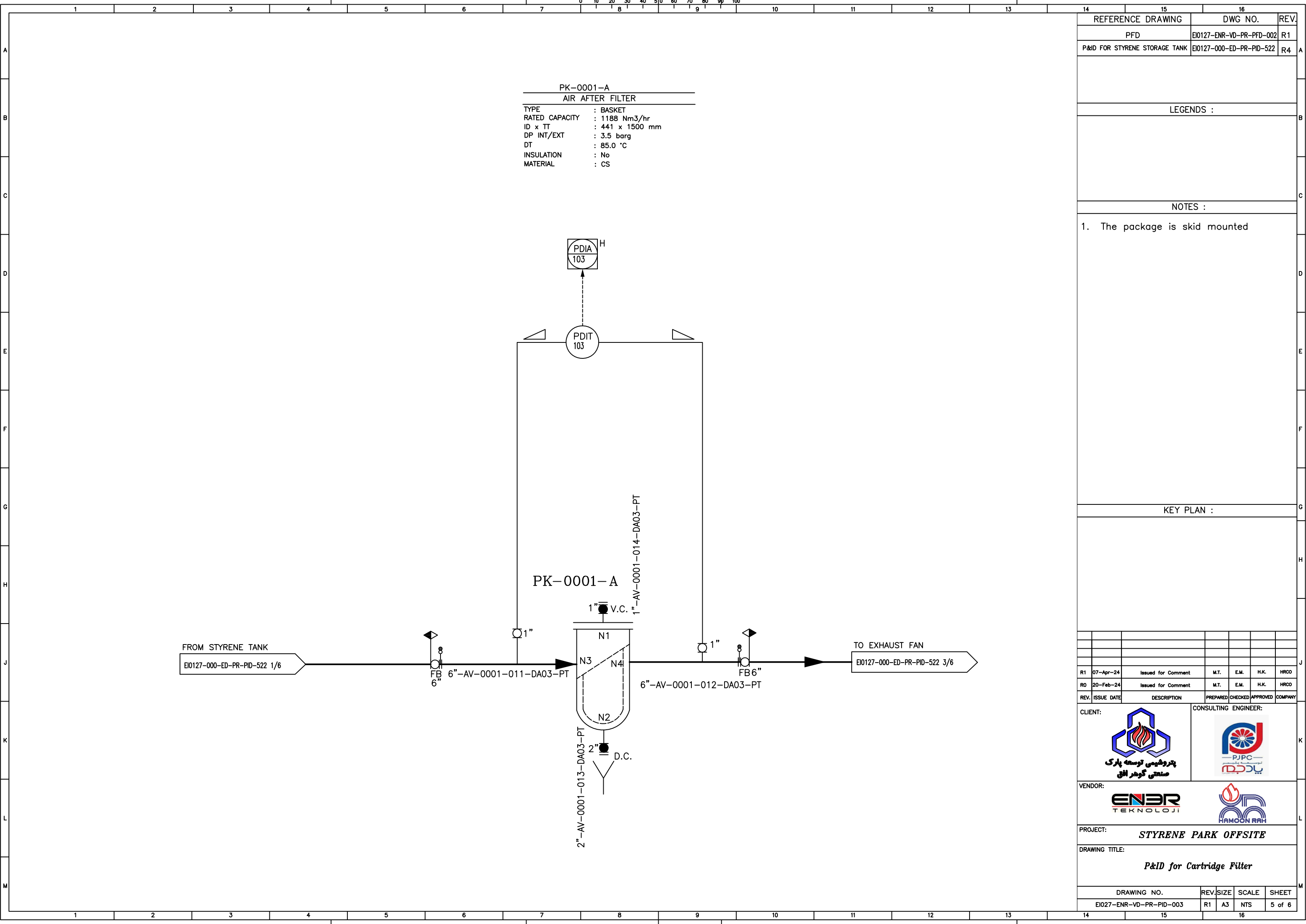
EQUIPMENT CATEGORY SYMBOL	
C	COMPRESSOR
AC	AIR COOLER
E	EXCHANGER
F	FILTER
FL	FLARE STACK
GT	GAS TURBINE
M	ELECTRIC MOTOR
MX	MIXER
PL	PIG LAUNCHER
P	PUMP
PR	PIG RECEIVER
SU	SUMP
T	COLUMN (TOWER)
TK	STORAGE TANK
V	VESSEL
X	MISCELLANEOUS
PK	PACKAGE
B	BLOWER
BU	BURN PIT

EQUIPMENT IDENTIFICATION	
000-0-0000-0	ALPHABET SYMBOL
000-0-0000-0	SERIAL NUMBER (FROM 1 UP TO 9)
000-0-0000-0	EQUIPMENT CATEGORY
000-0-0000-0	ALPHABET SYMBOL
000-0-0000-0	SERIAL NUMBER (FROM 1 UP TO 9)
000-0-0000-0	TRAIN NUMBER
000-0-0000-0	UNIT NUMBER
000-0-0000-0	EQUIPMENT CATEGORY
000-0-0000-0	PROJECT CODE

REFERENCE DRAWING	DWG NO.	REV.				
LEGENDS :						
NOTES :						
KEY PLAN :						
R1	07-Apr-24	Issued for Comment	M.T.	E.M.	H.K.	HRCO
R0	20-Feb-24	Issued for Comment	M.T.	E.M.	H.K.	HRCO
REV.	ISSUE DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED	COMPANY
CLIENT:			CONSULTING ENGINEER:			
VENDOR:						
PROJECT: <b>STYRENE PARK OFFSITE</b>						
DRAWING TITLE: <b>P&amp;ID for Cartridge Filter</b>						
DRAWING NO. EIO27-ENR-VD-PR-PID-003			REV. R1	SIZE A3	SCALE NTS	SHEET 3 of 6





PK-0001-A  
 AIR AFTER FILTER  
 TYPE : BASKET  
 RATED CAPACITY : 1188 Nm3/hr  
 ID x TT : 441 x 1500 mm  
 DP INT/EXT : 3.5 barg  
 DT : 85.0 °C  
 INSULATION : No  
 MATERIAL : CS

REFERENCE DRAWING	DWG NO.	REV.
PFD	EI0127-ENR-VD-PR-PFD-002	R1
P&ID FOR STYRENE STORAGE TANK	EI0127-000-ED-PR-PID-522	R4

LEGENDS :

NOTES :

- The package is skid mounted

KEY PLAN :

REV.	ISSUE DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED	COMPANY
R1	07-Apr-24	Issued for Comment	M.T.	E.M.	H.K.	HRCO
R0	20-Feb-24	Issued for Comment	M.T.	E.M.	H.K.	HRCO

CLIENT:  **پتروشیمی توسعه پارک**  
 صنعتی گوهر الماس

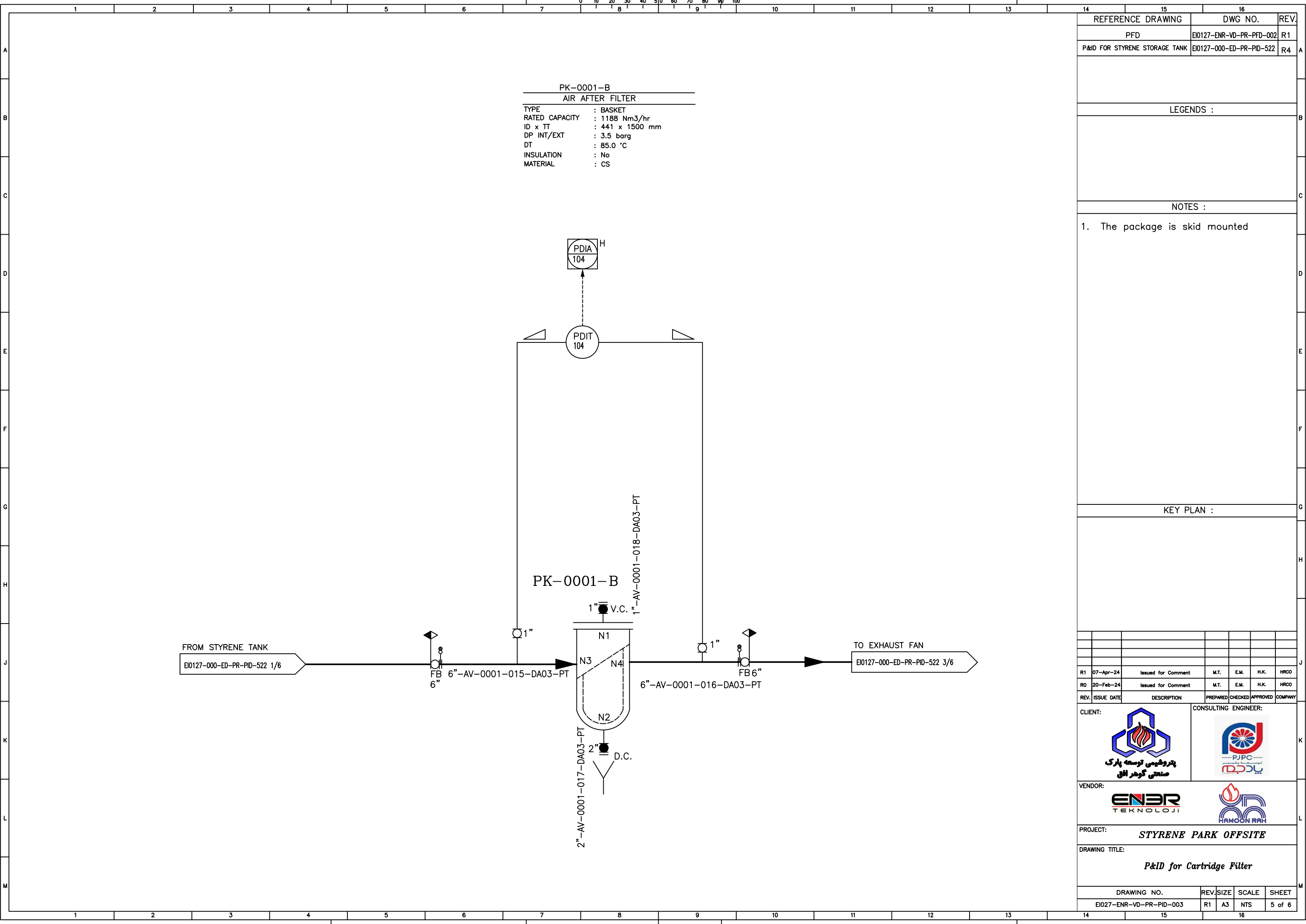
CONSULTING ENGINEER:  **پروجکشن**

VENDOR:  **EN3R TEKNOLOJI**  **HAMOON RAH**

PROJECT: **STYRENE PARK OFFSITE**

DRAWING TITLE: **P&ID for Cartridge Filter**

DRAWING NO.	REV.	SIZE	SCALE	SHEET
EI027-ENR-VD-PR-PID-003	R1	A3	NTS	5 of 6



PK-0001-B  
 AIR AFTER FILTER

TYPE : BASKET  
 RATED CAPACITY : 1188 Nm<sup>3</sup>/hr  
 ID x TT : 441 x 1500 mm  
 DP INT/EXT : 3.5 barg  
 DT : 85.0 °C  
 INSULATION : No  
 MATERIAL : CS

REFERENCE DRAWING	DWG NO.	REV.
PFD	EI0127-ENR-VD-PR-PFD-002	R1
P&ID FOR STYRENE STORAGE TANK	EI0127-000-ED-PR-PID-522	R4

LEGENDS :

NOTES :

- The package is skid mounted

KEY PLAN :

REV.	ISSUE DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED	COMPANY
R1	07-Apr-24	Issued for Comment	M.T.	E.M.	H.K.	HRCO
R0	20-Feb-24	Issued for Comment	M.T.	E.M.	H.K.	HRCO

CLIENT:



پتروشیمی توسعه پارک  
 صنعتی گوهر الماس

CONSULTING ENGINEER:



پروجکشن  
 PJPC

VENDOR:




PROJECT: **STYRENE PARK OFFSITE**

DRAWING TITLE: **P&ID for Cartridge Filter**

DRAWING NO.	REV.	SIZE	SCALE	SHEET
EI027-ENR-VD-PR-PID-003	R1	A3	NTS	5 of 6