GENERAL ABBREVIATION/CODE

ABBREVIATION/CODE	DESCRIPTION
ACCU	AIR-COOLED CONDENSING UNIT
ACU	AIR CONDITIONING UNIT
ACC	AIR COOLED CONDENSER
AHU	AIR HANDLING UNIT
BDD	BACKDRAFT DAMPER
BH	BASEBOARD HEATER (WATER OR STEAM TYPE)
BF	BLEED FAN
BV	BLAST PROTECTION VALVE
C	CONVECTOR (WATER OR STEAM TYPE)
CAF	CHEMICAL AIR FILTER
CAV	CONSTANT AIR VOLUME
CC	COOLING COIL
CHP	CHILLED WATER PUMP
CHT	CHILLED WATER STORAGE TANK
CHU	WATER CHILLER UNIT
DHU	DEHUMIDIFIER
EAL	EXHAUST AIR LOUVRE
EHC	ELECTRICAL AIR HEATING COIL
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
ET	EXPANSION TANK
EUH	ELECTRIC UNIT HEATER
F/SD	FIRE/SMOKE DAMPER, COMBINATION
FAI	FRESH AIR INTAKE LOUVRE
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FF	FINAL FILTER
FSF	FRESH AIR SUPPLY FAN
FU	FILTER UNIT
HC	HEATING COIL
HUM	HUMIDIFIER
HVU	HEATING AND VENTILATING UNIT
HWP	HOT WATER PUMP
HWPU	HOT WATER PACKAGE UNIT
HX	HEAT EXCHANGER
IAF	INERTIAL AIR FILTER
MD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
MV	MOTORIZED VALVE
PAC	PACKAGED AIR CONDITIONING UNIT
PCC	PRECOOLING COIL
PF	PREFILTER
PHC	PREHEAT COIL
PRD	PRESSURE RELIEF DAMPER (COUNTER-WEIGHTED TYPE)
R	RADIATOR
RAC	ROOM AIR CONDITIONER (THROUGH-THE-WALL OR WINDOW TYPE)
REXF	ROOF TYPE EXHAUST FAN
RF	RETURN FAN
RHC	REHEAT COIL
SD	SMOKE DAMPER
SF	SUPPLY FAN
SPF	SUPPLY PURGE FAN
STL	SAND TRAP LOUVER
SUI	SPLIT TYPE ROOM AIR CONDITIONER – INDOOR UNIT
SUO	SPLIT TYPE ROOM AIR CONDITIONER – OUTDOOR CONDENSING UNIT
UH	UNIT HEATER (WATER OR STEAM TYPE)
VD	MANUAL VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
VIV	VARIABLE INLET VANES
WEXF	WALL TYPE EXHAUST FAN OR WINDOW TYPE
WMS(BS)	WIRE MESH SCREEN, WITH BIRD SCREEN
WMS(IS)	WIRE MESH SCREEN, WITH INSECT SCREEN

SYMBOLS USED FOR AIRFLOW DIAGRAMS

SYMBOL	DESCRIPTION
CHILLER	CHILLER
FANCOIL	FANCOIL
	CENTRIFUGAL FAN
	ROOF TYPE FAN
	AXIAL FAN
	PROPELLER FAN
	INERTIAL AIR FILTER
	PREFILTER
	PREFILTER (ROLL TYPE)
	FINAL FILTER
	FILTER UNIT
	HEATING COIL (WATER OR STEAM TYPE)
	HEATING COIL (ELECTRICAL TYPE)
	COOLING COIL (CHILLED WATER TYPE)
DX	COOLING COIL (DIRECT-EXPANSION TYPE)
H	HUMIDIFIER
	UNIT HEATER (WATER OR STEAM TYPE)
	ELECTRIC UNIT HEATER
	MOTORIZED DAMPER
	MANUAL VOLUME DAMPER
	FIRE DAMPER (MOTORIZED TYPE)
	FIRE DAMPER (NON-MOTORIZED TYPE)
	SMOKE DAMPER
	FIRE/SMOKE DAMPER, COMBINATION
	BLAST PROTECTION VALVE
	BACKDRAFT DAMPER OR PRESSURE RELIEF DAMPER
	FRESH AIR INTAKE LOUVRE
	EXHAUST AIR LOUVRE

	SUPPLY AND FRESH AIR FLOW
	RETURN AND EXHAUTS AIR FLOW
	EXHAUST AIR
	TRANSFER AIR
DG	DOOR GRILLE
M	ELECTRIC MOTOR
	SAND TRAP LOUVER
	PUMP
	CHILLED WATER STORAGE TANK
	EXPANSION TANK
	HEAT EXCHANGER – SHELL AND TUBE TYPE
	HEAT EXCHANGER – PLATE TYPE
	SOUND ATTENUATOR
	SUPPLY AIR DIFFUSER SQUARE
	SUPPLY AIR DIFFUSER RECTANGULAR
	SUPPLY AIR DIFFUSER ROUND
	RETURN/EXHAUST AIR GRILLE/REGISTER (SQUARE)
	RETURN/EXHAUST AIR GRILLE/REGISTER (RECTANGULAR)
	SUPPLY/RETURN LINEAR AIR GRILLE

SYMBOLS USED FOR DUCT

SYMBOL	DESCRIPTION
	SUPPLY AIR DUCT SECTION (FRESH AIR DUCT SECTION)
	RETURN AIR DUCT SECTION
	EXHAUST AIR DUCT SECTION
	RISED-UP DUCT
	GOING-DOWN DUCT
	RISED-UP DUCT
	GOING-DOWN DUCT
	CANVAS CONNECTION
500 X 250	DUCT SIZE (WIDTH X DEPTH)
	TURNING VANE
	BRANCH TAKE-OFF W/ SPLITTER DAMPER
VD	VOLUME DAMPER (MANUAL)
FD	FIRE DAMPER (MANUAL)
M MVD	VOLUME DAMPER (MOTORIZED)
M MFD	FIRE DAMPER (MOTORIZED)
A.D	ACCESS DOOR
	SQUARE TYPE DIFFUSER
	REGISTER
	GRILLE

ABBREVIATIONS USED FOR INSTRUMENTATION AND CONTROLS

ABBREVIATION	DESCRIPTION
AI	ANALOG INPUT
AO	ANALOG OUTPUT
DDC	DIRECT DIGITAL CONTROLLER
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
FAL	LOW FLOW ALARM
FSL	LOW FLOW SWITCH
KGD	GAS DETECTOR
MIC	HUMIDITY INDICATING CONTROLLER
MSH	HIGH-LIMIT HUMIDISTAT
MT	HUMIDITY TRANSMITTER
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
PDAH	HIGH PRESSURE DIFFERENTIAL ALARM
PDAL	LOW PRESSURE DIFFERENTIAL ALARM
PDI	PRESSURE DIFFERENTIAL INDICATOR
PDIC	PRESSURE DIFFERENTIAL INDICATING CONTROLLER
PDSH	HIGH PRESSURE DIFFERENTIAL SWITCH
PDSL	LOW PRESSURE DIFFERENTIAL SWITCH
PDT	PRESSURE DIFFERENTIAL TRANSMITTER
PI	PRESSURE INDICATOR
PIC	PRESSURE INDICATING CONTROLLER
PLC	PROGRAMMABLE LOGIC CONTROL
PT	PRESSURE TRANSMITTER
SC	SPEED CONTROLLER
TAH	HIGH TEMPERATURE ALARM
TC	TEMPERATURE CONTROLLER
TI	TEMPERATURE INDICATOR
TIC	TEMPERATURE INDICATING CONTROLLER
TSH	HIGH-LIMIT THERMOSTAT
TT	TEMPERATURE TRANSMITTER
TY	STEP CONTROLLER FOR ELECTRIC DUCT HEATER
XA	COMMON FAULT ALARM
YLH	MOTOR STATUS SIGNAL – RUN
YLL	MOTOR STATUS SIGNAL – STOP
YSHL	MOTOR STATUS RELAY – RUN/STOP
ZLH	LIMIT SWITCH POSITION SIGNAL – OPEN
ZLL	LIMIT SWITCH POSITION SIGNAL – CLOSED
ZSH	LIMIT SWITCH – OPEN POSITION
ZSL	LIMIT SWITCH – CLOSED POSITION

SYMBOLS USED FOR INSTRUMENTATION AND CONTROLS

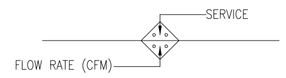
SYMBOL	DESCRIPTION
	FIELD DEVICE OR FUNCTION
	DEVICE OR FUNCTION IN PRIMARY HVAC CONTROL PANEL (QHVAC) (SEE NOTE 1)
	DEVICE OR FUNCTION IN SECONDARY HVAC LOCAL CONTROL PANEL (SEE NOTE 1)
	SHARED DISPLAY / SHARED CONTROL – FIELD LOCATION
	SHARED DISPLAY / SHARED CONTROL – PRIMARY LOCATION (SEE NOTE 1)
	SHARED DISPLAY / SHARED CONTROL – SECONDARY LOCATION (SEE NOTE 1)
	COMPUTER FUNCTION – FIELD LOCATION
	COMPUTER FUNCTION – PRIMARY LOCATION (SEE NOTE 1)
	COMPUTER FUNCTION – SECONDARY LOCATION (SEE NOTE 1)
	PROGRAMMABLE LOGIC CONTROL – FIELD LOCATION
	PROGRAMMABLE LOGIC CONTROL – PRIMARY LOCATION (SEE NOTE 1)
	PROGRAMMABLE LOGIC CONTROL – SECONDARY LOCATION (SEE NOTE 1)
	PILOT LIGHT – FIELD LOCATION
	PILOT LIGHT IN PRIMARY HVAC CONTROL PANEL (QHVAC)
	PILOT LIGHT IN SECONDARY HVAC LOCAL CONTROL PANEL
	UNDEFINED INTERLOCK LOGIC
	THREE-WAY MOTORIZED VALVE (ELECTRICAL)
	TWO-WAY MOTORIZED VALVE (ELECTRICAL)
	THREE-WAY VALVE – PNEUMATIC ACTUATOR
	TWO-WAY VALVE – PNEUMATIC ACTUATOR
	TWO-WAY SOLENOID VALVE
	ELECTRIC SIGNAL
	PNEUMATIC SIGNAL
	CAPILLARY TUBE
	INTERNAL SYSTEM LINK (SOFTWARE OR DATA LINK)

SYMBOLS USED FOR PIPING

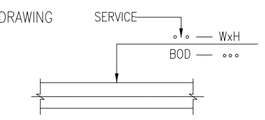
SYMBOL	DESCRIPTION
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
RL	REFRIGERANT LIQUID LINE
RG	REFRIGERANT GAS LINE
D	DRAIN LINE
DW	DOMESTIC COLD WATER LINE
DHWS	DOMESTIC HOT WATER SUPPLY LINE
DHWR	DOMESTIC HOT WATER RETURN LINE
V	VENT LINE
S	SEWAGE LINE
F.CO	FLOOR CLEANOUT
F.D	FLOOR DRAIN
V.T.R	VENT THROUGH ROOF
V.T.W	VENT THROUGH WALL
	UNION
	REDUCER (CONCENTRIC)
	REDUCER (ECCENTRIC)
	SAFETY VALVE
	AUTOMATIC AIR VENT
	PIPE ANCHOR
	90 ° ELBOW
	45 ° ELBOW
	ELBOW TURNED UP
	ELBOW TURNED DOWN
	DIRECTION OF FLOW
	GATE VALVE (NORMAL OPEN)
	GATE VALVE (NORMAL CLOSE)
	GLOBE VALVE
	3WAY MOTORIZE VALVE
	2WAY MOTORIZE VALVE
	CHECK VALVE (SWING TYPE)
	STRAINER (Y-TYPE)
	BALL VALVE
	DRAIN TO FUNNEL
	FILTER DRYER (FOR REFRIGERANT LINE)
	EXPANSION VALVE (FOR REFRIGERANT LINE)
	SIGHT GLASS (FOR REFRIGERANT LINT)
	SOLENOID VALVE (FOR REFRIGERAT LINE)
	VIBRATION ABSORBER
W C	WATER CLOSET
URI	URINAL
L V	LAVATORY
S S	SERVICE SINK
S	KITCHEN SINK

DUCT WORK IDENTIFICATION

FLOW DIAGRAM :



ERECTION DRAWING



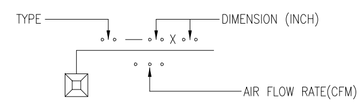
WHERE

"W"	DUCT WIDTH(INCH)
"H"	DUCT HEIGHT(INCH)
BOD	BOTTOM OF DUCT ELEVATION ABOVE BELOW FINISHED FLOOR(+0.00)

SERVICE

SA	SUPPLY AIR
RA	RETURN AIR
EA	EXHAUST AIR
OA	OUTSIDE AIR
TA	TRANSFER AIR
RLA	RELIEF AIR

AIR GRILLE ,REGISTER ,DIFFUSER



TYPE :

DG	DOOR GRILLE
EAL	EXHAUST AIR LOUVRE
EG	EXHAUST AIR GRILLE
ED	EXHAUST AIR DIFFUSER
IAL	INTAKE AIR LOUVER
RG	RETURN AIR GRILLE
RLG	RETURN AIR LINEAR GRILLE
SAD	SUPPLY AIR DIFFUSER
SAR	SUPPLY AIR REGISTER
SLG	SUPPLY AIR LINEAR GRILLE
TG	TRANSFER AIR GRILLE
TLG	TRANSFER AIR LINEAR GRILLE

HVAC EQUIPMENT NUMBERING PROCEDURE

YY-XXXX-ZZ-R

UNIT IDENTIFICATION NO. | EQUIPMENT CODE | SEQUENTIONAL NO. | DUTY/STANDBY

SEE ABBREVIATION IN THIS DRAWING

NOTES

LEGEND

REFERENCE DRAWING	DRG. No.
**********	******

KEY PLAN

REV.	DESCRIPTION	BY	DATE	BY	DATE
***	**********	**.**	***.****	**.**	***.****
		CHECKED		REV. APPR.	

REV.	DATE	P.O.I.S	PREP.	CHK.	APP.	AUT.
D01	SEP.2022	AFC	H.ADINEH	M.PAKHARIAN	M.MEHRSHAD	**.**
D00	AUG.2021	IFC	M.ASGHARNEJAD	M.PAKHARIAN	SH.GHALIKAR	**.**

PROJECT NAME: BINAK OILFIELD DEVELOPMENT GENERAL

PROJECT NO.: 971020

EPC CONTRACTOR: HIRGAN ENERGY – DESIGN & INSPECTION COMPANIES

EPD/EPC CONTRACTOR (GC): PEDCO — PETROIRAN DEVELOPMENT COMPANY

(VENDOR TITLE BLOCK)**

DRAWING TITLE: Symbol & Legend For HVAC & Plumbing

SCALE	SIZE	DRAWING NO.	SHEET NO.	REV.
NTS	A1	BK-GNRAL-PEDCO-000-HV-DW-0002	1 OF 1	D01

اصل و کلیه نسخ این نقشه و حق اقتباس متعلق به شرکت ملی مناطق نفت خیز جنوب میباشد.

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BINAK OILFIELD DEVELOPMENT GENERAL

DATE	SCALE	DRAWING BY	CHECKED BY	PROJECT ENG.

NO CONSTRUCTION PERMITTED UNLESS DRAWING APPROVED

APPROVED FOR CONSTRUCTION | BY: | DATE:

BUDGET REF.	LOCATION	SIZE	CLASS	SERIAL NO.	SHEET	REVISION
053-073-9184	F	4	B	707129	1 OF 1	D01