



- NOTES:
1. PRESSURE RELIEF VALVE, ITEM 40, IS LOCATED AS SHOWN AND IS SET TO 90 PSI.
 2. ALL ELBOWS, TEES, AND REDUCERS COMPLY WITH ASME B16.9.
 3. THREADOLET WELD TO BE FULL-PENETRATION GROOVE & FILLET THROAT TO BE THE SMALLER OF 1/4" OR 0.7" (BRANCH THICKNESS).
 4. ALL PIPE CONNECTIONS & FLANGE ATTACHMENTS ARE FULL PENETRATION BUTT WELDS, UNLESS OTHERWISE SPECIFIED.
 5. ALL PIPING FLANGES TO BE ASME B16.5 150#.
 6. ALL FITTINGS & INSTRUMENTATION HAVE CRN APPROVAL FROM THE APPLICABLE CANADIAN PROVINCIAL JURISDICTION.
 7. FLUIDS HANDLED ARE PROPRIETARY XYZ LIQUID AND XYZ GAS.

Design Data	
Design Code:	ASME B31.3-2008
Design Conditions:	90 psi @ 150F
Operating Conditions:	65 psi @ 150F
MDMT:	-20F @ 150psi
Hydrotest Pressure:	135 psi @ ambient, 10 minutes
PWHT:	None
NDE:	100% VISUAL
C.A.:	0.00"

NAME	DATE
DRAWN	MDR 06/08/2010
APPROVAL	MDR 06/08/2010

UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES
 TOLERANCES DECIMAL ±0.1
 FRACTIONS ±0.01
 THREE PLACE DECIMAL ±0.005
 ANGULAR ±0.1°

THIRD ANGLE PROJECTION:

KEY DESIGN ENGINEERING
 194-55 Northfield Dr. E
 Waterloo, ON N2K 3T6
 CANADA
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 www.keydesigneng.com

KEY DESIGN ENGINEERING

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NOTES:

TITLE: Sample P&ID	
SIZE: B	DWG. NO. KEY-026 P&ID
REV	A
SCALE: 1:10	SHEET 1 OF 1

ITEM	DESCRIPTION	MATL
1	1/2" SCH 80 Pipe	A312 TP316
2	1" SCH 80 Pipe	A312 TP316
3	2" SCH 80 Pipe	A312 TP316
4	3" SCH 40 Pipe	A312 TP316
5	4" SCH 40 Pipe	A312 TP316
6	1/2" x 0.035" SMLS Tube	A269 TP316
7	1/2" Elbow 90 Thd. 2M	A403 WP316
8	1" on 2" Threadolet 3M	A403 WP316
9	1" on 3" Threadolet 3M	A403 WP316
10	1" Elbow 90	A403 WP316
11	1" Tee	A403 WP316
12	1" 150# RF Flange B16.5	A182 F316
13	1" Railway Union 2M	A403 WP316
14	2" 150# RF Blind Flange	A182 F316
15	2" Elbow 90 LR SCH 80	A403 WP316
16	3" SCH 40 x 2" SCH 80 Conc Reducer	A403 WP316
17	3" 150# RFWN Flange B16.5	A182 F316
18	3" Elbow 90 LR SCH 40	A403 WP316
19	3" Elbow 90 SR SCH 40	A403 WP316
20	3" 150# RF Blind Flange	A182 F316
21	3" Tee SCH 40	A403 WP316
22	4" x 3" Conc Reducer SCH 40	A403 WP316
23	4" x 3" Hex Bushing Thd. 3M	A403 WP316
24	4" 150# RF Blind Flange	A182 F316
25	4" Elbow 90 Sch40	A403 WP316
26	4" 150# RFWN Flange B16.5	A182 F316
27	4" 150# Blind Flange	A182 F316
28	1/2" Ball Valve	A182 F316
29	1" Ball Valve	A182 F316
30	2" 150# RF Ball Valve,	A182 F316
31	3" 150# RF Ball Valve,	A182 F316
32	4" 150# Butterfly Valve, Lug, 316SS Disc, Buna	A182 F316
33	4" 150# Dump Valve	A182 F316
34	3" 150# Metre Run, SCH 40-1" Bypass	A182 F316
35	3" MNPT x 3" FNPT Relief Valve	A182 F316
36	1/2" Thermometre	CRN
37	3" 150# Back Pressure Valve	CRN
38	Drip Pot	CRN
39	Trunion Assembly	CRN
40	Safety Relief Valve	CRN
41	1/2" 100psi Pressure Gauge	CRN

Piping

Fittings

Instruments

1 2 3 4 5 6 7 8

1 2 3 4 5 6 7 8