

Key Design Engineering ABSA Pressure Piping Quick-Guide:

General Requirements: When does a Piping system require CRN registration in Alberta?

1. For a new pressure piping system fabricated in Alberta:
 - **Fluid:** It must contain an expansible fluid.¹
 - **Design Pressure:** Pressure must be greater than 103 kPa (15 PSI)
 - **Volume:** total internal capacity must be greater than 0.5 cubic metres (500 liters, 132 gallon US, 17.6 cu.ft)
2. For an addition or modification to a registered system:
 - When the enclosed volume to be added or modified is greater than 0.5 cubic metres.
3. For a pressure piping system fabricated outside of Alberta:
 - *“Design registration is required for all pressure piping fabricated outside Alberta, regardless of its volume”.*

Additional requirements:

- Form AB-83 must be completed and kept by the owner/user for at least 5 years.
- Form AB-81 must be completed by the contractor upon completion of the project and submitted to ABSA.
- Skid units:
 - The CRN for a skid system is not transferable between jurisdictions, since it is still linked to one particular installation.
 - They must be registered in Alberta when they form part of a CRN-registered system (over 0.5 cubic metres), even when their own volume is less than 0.5 metres.

Exemptions: A piping system is exempt from registration when all of the following conditions are met:

- Size:** Pipe nominal size is less than or equal to DN 50, and
- Pressure:** Design Pressure is less than or equal to 1035 kPa (150 PSI), and
- Temperature:** Design Temperature is between minus 29 degrees Celsius and 186 degrees Celsius ($-20 < T < 366^{\circ}\text{F}$), and
- Fluid:** fluid must be either air, nitrogen, argon, carbon dioxide, steam or hot water, and
- Code Compliance:** is constructed to the applicable ASME Code,

Please note that Section 35 of Regulation 49/2006 is still in force.²

Notes:

1. As an example of what this means: this statement excludes registration of a hydraulic system.
2. Section 35 in the Alberta Regulation 49/2006 touches on the owner's duty to report to ABSA *“any unsafe condition, accident, or fire that occurs with respect to that pressure equipment.”*