

## FOREWARD

This publication takes the form of a database which presents the National Board pressure relief device certification program and lists those device designs certified and those organizations authorized to apply the National Board "NB" symbol to devices of certified types.

This database is divided into a series of listings which can be filtered based on the user's search criteria. Companies which no longer hold certifications or device design certifications which are no longer in production are not listed. Information on these devices may be obtained by contacting the National Board Pressure Relief Department. This database is updated each business day and is available free of charge from the National Board Web site, [www.nationalboard.org](http://www.nationalboard.org).

The capacity rating values listed were determined from tests of samples of the relevant pressure relief device type at a National Board accepted testing laboratory under ideal conditions. Such capacities are certified only for the conditions under which obtained. Since the listed rating values were determined under atmospheric pressure discharge conditions, the calculated capacities may not be valid when discharge back-pressure conditions exist. The National Board has not tested each production device and makes no certification regarding its capacity, manufacturer, or application. Installation, operating conditions and manufacturer's recommendations must be considered in selecting a pressure relief device for service.

Every effort has been made to make the information contained within NB-18 as accurate and complete as possible. However, this data is subject to change without notice and is neither guaranteed nor warranted. The National Board, its members, and employees assume no liability for the use or misuse of any information contained herein.

Organizations with listings are urged to review their listed information for accuracy, and to bring any errors or omissions to the National Board's attention so that corrections can be made. For further information regarding the National Board "NB" symbol and this program contact:

**The National Board of Boiler and Pressure Vessel Inspectors**  
**1055 Crupper Avenue**  
**Columbus, Ohio 43229-1183**  
**Voice: 614.888.8320**  
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# LISTING OF ASSEMBLER AND MANUFACTURER CERTIFICATIONS AND CERTIFIED DEVICES

This database lists National Board pressure relief device certifications issued to device manufacturers and assemblers who hold National Board Certificates of Authorizations to use the "NB" symbol. The following is an example and a brief description of the listings in this database.

Manufacturers and Assemblers: Generate Report from Grid (ie11 not supported)

Company  
Admiral Valve Repair and Supply, Inc. (ASR)  
North Chicago, IL 60064 United States

**This Company Manufactures or Assembles:**

| Design Name | Cert Number | Manufacturer/Assembler | Code Sections  | Expiration Date |
|-------------|-------------|------------------------|----------------|-----------------|
| 300,600     | 36076       | Assembler              | I, VIII Div. 1 | 05/06/2021      |

Specifications:

Design Name [Cert Number] Design Type  
 [Safety Valve] 300,600  
 Capacity Tests: Sec. I, VIII Div. 1 at The National Board Test Lab on February 10, 1961  
 Method of Establishing Relieving Capacity: Flow Capacity, K  
 Certified Value: 0.878 Unitless  
 Media - Test: Steam; Certified: Air, Gas, Steam  
 Set Pressure Definition: Pop  
 Blowdown Characteristics: Adjustable ((none))  
 Designed by: Emerson Automation Solutions Final Control US LP {KBM}

| Inlet Size | Outlet Size | Flow Area             | Orifice [designator] dia. | Lift     | Set Pressure Range | Media | Code Section |
|------------|-------------|-----------------------|---------------------------|----------|--------------------|-------|--------------|
| 1.25 NPS   | 1.5 NPS     | 0.307 in <sup>2</sup> | [F] 0.625 in              | 0.156 in | 15-1000 psi        | Air   | VIII Div. 1  |
| 1.25 NPS   | 1.5 NPS     | 0.307 in <sup>2</sup> | [F] 0.625 in              | 0.156 in | 15-1000 psi        | Steam | I            |
| 1.25 NPS   | 1.5 NPS     | 0.307 in <sup>2</sup> | [F] 0.625 in              | 0.156 in | 15-1000 psi        | Steam | VIII Div. 1  |
| 1.25 NPS   | 1.5 NPS     | 0.503 in <sup>2</sup> | [G] 0.8 in                | 0.2 in   | 15-1000 psi        | Air   | VIII Div. 1  |
| 1.25 NPS   | 1.5 NPS     | 0.503 in <sup>2</sup> | [G] 0.8 in                | 0.2 in   | 15-1000 psi        | Steam | I            |
| 1.25 NPS   | 1.5 NPS     | 0.503 in <sup>2</sup> | [G] 0.8 in                | 0.2 in   | 15-1000 psi        | Steam | VIII Div. 1  |

- 1 Full Name of the Manufacturer or Assembler who holds the certification.
- 2 National Board Three Letter Designation. This is part of the National Board certification number and is derived from the manufacturer or assemblers company name.
- 3 Location of the organization. The country or province for companies located outside the United States is also listed.
- 4 The design type name is the commercial designation specified by the manufacturer.
- 5 The National Board capacity certification number given solely to this valve type. See description below on its use.
- 6 The certification category of either "M" for Manufacturer or "A" for Assembler
- 7 The Code Section indicates the Construction Code requirements which were met to obtain National Board certification.
- 8 The expiration date is the date when the certification expires for the listed type. National Board certification is valid for a period of six years. Please note that when the index indicates an expiration date which is close to the present date, it will be necessary to consult with the National Board Pressure Relief Department for more information.
- 9 The Classification of the pressure relief device type as defined in ASME PTC 25.

- 10 This indicates the requirements of the Construction Code used during the initial certification testing. Also listed, the National Board accepted testing laboratory where the testing was performed. In some cases, the device may be certified for additional Code Section as noted in the tables.
- 11 There are several methods of establishing a certified value used to determine capacity:
- the valve average capacity method is used when a manufacturer has only one size and one set pressure to be certified (Flow Capacity, 1 or 3 Valve Method).
  - the slope (flow factor for liquid) method is used when a manufacturer has one valve design of one size to be certified for a range of set pressures (Flow Capacity, Flow Factor or Flow Capacity, Slope).
  - the coefficient of discharge method is used when a manufacturer has one design type and wishes to have it certified for a range of sizes and set pressures (Flow Capacity, K).
  - the flow resistance method is used to certify non-reclosing devices such as rupture disk devices (Resistance Factor,  $K_r$ ).
- 12 The quantitative value and applicable unit used to determine device relieving capacity. This line may also include special provisions of rules, such as Code Cases, and special applications that apply to the device
- 13 The test medium listed is the medium that was used during the initial testing. Either air, gas, steam or water could be indicated as the test medium. The certified mediums are the mediums for which the device may be used in service.
- 14 Set pressure is the valve of increasing inlet static pressure at which a pressure relief device displays an operational characteristic. These characteristics are defined in ASME PTC-25.
- 15 Blowdown is the difference between actual popping pressure of a pressure relief valve and actual reseating pressure expressed as a percentage of set pressure or in pressure units. This indicates whether the valve has a fixed or adjustable blowdown construction.
- 16 The Manufacturer who has design control of the device.
- 17 The NPS (DN) inlet and outlet size or range of sizes of a pressure relief device.
- 18 For pressure relief valves, flow area is the measured minimum flow area through the valve. For non-reclosing pressure relief devices (e.g. rupture disk devices), flow area is the minimum net flow area to be marked on the device.
- 19 The orifice diameter is the minimum diameter of the nozzle.
- 20 The minimum lift is the lift that the valve is expected to have to meet its rated capacity.
- 21 This column indicates the minimum and maximum set pressures valid for the size, Code Section and medium.
- 22 This column lists the medium of the certified capacity and is associated with the minimum and maximum set pressures in column 21.
- 23 This column lists the Code Section associated with the minimum and maximum set pressures in column 21.

The National Board certification number is used in all National Board correspondence with manufacturers and assemblers. The following is an example of how the number is presented in correspondence:

(NB Cap Cert No IVC<sup>1</sup>-M<sup>2</sup>50005<sup>3</sup>)

- 1 This is a three letter designation which is derived from the manufacturer or assemblers name. In this example, the designation is the company's initials.
- 2 This portion of the number will always be either an "M" or an "A", indicating whether the company is a manufacturer or an assembler.
- 3 Each individual valve type has been given its own number (it is this number that is indicated on the index). We have devised a "check-sum" concept for this number. For example, we have issued the number for the valve type listed above as 50005. If you add the first four digits of this number, the sum is 5. The last number of the designation is then 5. Should the sum of the first four numbers be greater than 10, we always use the second number