Flanged Steel Pressure-relief Valves

API STANDARD 526
SEVENTH EDITION, SEPTEMBER 2017

ERRATA 1, SEPTEMBER 2018
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Errata 1

Table of Contents: Added the following line:

5   Spring-loaded Pressure-relief Valves “G” Orifice (Effective Orifice Area = 0.503 in.²)           10

Table of Contents: Changed “Effective Area” to “Effective Orifice Area” in the following lines:

6   Spring-loaded Pressure-relief Valves “J” Orifice (Effective Orifice Area = 1.287 in.²)           12
7   Spring-loaded Pressure-relief Valves “K” Orifice (Effective Orifice Area = 1.838 in.²)           13
8   Spring-loaded Pressure-relief Valves “L” Orifice (Effective Orifice Area = 2.83 in.²)            14
9   Spring-loaded Pressure-relief Valves “M” Orifice (Effective Orifice Area = 3.60 in.²)            15
10  Spring-loaded Pressure-relief Valves “N” Orifice (Effective Orifice Area = 4.34 in.²)            16
11  Spring-loaded Pressure-relief Valves “P” Orifice (Effective Orifice Area = 6.38 in.²)            17
12  Spring-loaded Pressure-relief Valves “Q” Orifice (Effective Orifice Area = 11.05 in.²)           18
13  Spring-loaded Pressure-relief Valves “R” Orifice (Effective Orifice Area = 16.00 in.²)           19
14  Spring-loaded Pressure-relief Valves “T” Orifice (Effective Orifice Area = 25.00 in.²)           20

Table of Contents: Changed “Limits” to “Limits” in the following lines:

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Table 3: The boxed sections below reflect changes made to the table:

<table>
<thead>
<tr>
<th>Temperature Range Inclusive 900°F to 1000°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Steel</td>
</tr>
<tr>
<td>1 1/2 D2 100 100</td>
</tr>
<tr>
<td>1 1/2 D2 100 100</td>
</tr>
<tr>
<td>1 1/2 D2 1200 500</td>
</tr>
<tr>
<td>1 1/2 D2 2000 500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Temperature Range Inclusive 1000°F to 1200°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austenitic Stainless Steel</td>
</tr>
<tr>
<td>1 1/2 D2 150 150</td>
</tr>
<tr>
<td>1 1/2 D2 150 150</td>
</tr>
<tr>
<td>1 1/2 D2 1200 500</td>
</tr>
<tr>
<td>1 1/2 D2 2000 500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Temperature Range Inclusive 1200°F to 1400°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alloy 20</td>
</tr>
<tr>
<td>1 1/2 D2 150 150</td>
</tr>
<tr>
<td>1 1/2 D2 150 150</td>
</tr>
<tr>
<td>1 1/2 D2 1200 500</td>
</tr>
<tr>
<td>1 1/2 D2 2000 500</td>
</tr>
</tbody>
</table>

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¹ Limits refer to the values specified in the table.

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**Date of Issue:** September 2018

**Affected Publication:** API Standard 526, *Flanged Steel Pressure-relief Valves*, September 2017
Table 7: The boxed section below reflects changes made to the table:

<table>
<thead>
<tr>
<th>Temperature Range Inclusive</th>
<th>20 °F to 900 °F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel-Copper-Aloy</td>
<td>1 1/2</td>
</tr>
<tr>
<td>1 1/2</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>20</td>
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<tr>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>50</td>
<td>70</td>
</tr>
</tbody>
</table>

Table 8: The title was changed to the following:

Table 8—Spring-loaded Pressure-relief Valves “J” Orifice
(Effective Orifice Area = 1.287 in.²)

Table 9: The title was changed to the following:

Table 9—Spring-loaded Pressure-relief Valves “K” Orifice
(Effective Orifice Area = 1.838 in.²)

Table 9: The boxed section below reflects changes made to the table:

Table 10: The title was changed to the following:

Table 10—Spring-loaded Pressure-relief Valves “L” Orifice
(Effective Orifice Area = 2.853 in.²)

Table 10: The boxed section below reflects changes made to the table:

Table 11: The title was changed to the following:

Table 11—Spring-loaded Pressure-relief Valves “M” Orifice
(Effective Orifice Area = 3.60 in.²)

Table 12: The title was changed to the following:

Table 12—Spring-loaded Pressure-relief Valves “N” Orifice
(Effective Orifice Area = 4.34 in.²)
Table 12: The boxed section below reflects changes made to the table:

<table>
<thead>
<tr>
<th>Temperature Range Inclusive -20°F to 300°F</th>
<th>4N6</th>
<th>4NF</th>
<th>4NH</th>
<th>4NF6</th>
<th>4N6</th>
<th>4NF</th>
<th>4NH</th>
</tr>
</thead>
<tbody>
<tr>
<td>150</td>
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<td>150</td>
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<td>1000</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
</tr>
</tbody>
</table>

Table 13: The title was changed to the following:

Table 13—Spring-loaded Pressure-relief Valves “P” Orifice (Effective Orifice Area = 6.38 in.²)

Table 14: The title was changed to the following:

Table 14—Spring-loaded Pressure-relief Valves “Q” Orifice (Effective Orifice Area = 11.05 in.²)

Table 15: The title was changed to the following:

Table 15—Spring-loaded Pressure-relief Valves “R” Orifice (Effective Orifice Area = 16.00 in.²)

Table 15: The boxed sections below reflects changes made to the table:

<table>
<thead>
<tr>
<th>Conventional and Balanced Bellows Valves</th>
<th>Flange Rating Limit</th>
<th>Bellows Rating Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>-450°F to 450°F</td>
<td>100°F</td>
<td>100°F</td>
</tr>
<tr>
<td>-20°F to -75°F</td>
<td>100°F</td>
<td>100°F</td>
</tr>
<tr>
<td>-20°F to 100°F</td>
<td>100°F</td>
<td>100°F</td>
</tr>
<tr>
<td>880°F</td>
<td>100°F</td>
<td>100°F</td>
</tr>
<tr>
<td>1000°F</td>
<td>100°F</td>
<td>100°F</td>
</tr>
</tbody>
</table>

Table 16: The title was changed to the following:

Table 16—Spring-loaded Pressure-relief Valves “T” Orifice (Effective Orifice Area = 26.00 in.²)

Figure B.1: The title was changed to the following:

Figure B.1—Pressure–temperature Limits¹ to be Used with Table 3 to Table 30 of This Standard
Figure B.2: The title was changed to the following:

Figure B.2—Pressure–temperature Limits\textsuperscript{1} to be Used with Table 3 to Table 30 of This Standard

Figure B.3: The title was changed to the following:

Figure B.3—Pressure–temperature Limits\textsuperscript{1} to be Used with Table 3 to Table 30 of This Standard

Figure B.4: The title was changed to the following:

Figure B.4—Pressure–temperature Limits\textsuperscript{1} to be Used with Table 3 to Table 30 of This Standard

Figure B.5: The title was changed to the following:

Figure B.5—Pressure–temperature Limits\textsuperscript{1} to be Used with Table 3 to Table 30 of This Standard
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Flanged Steel Pressure-relief Valves

1 Scope

This standard is a purchase specification for flanged steel pressure-relief valves. Basic requirements are given for direct spring-loaded pressure-relief valves and pilot-operated pressure-relief valves as follows:

— orifice designation and area;
— valve size and pressure rating, inlet and outlet;
— materials;
— pressure-temperature limits;
— center-to-face dimensions, inlet and outlet.

Nameplate nomenclature and requirements for stamping are detailed in Annex A.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

API Recommended Practice 520 (all parts), Sizing, Selection, and Installation of Pressure-relieving Devices in Refineries

API Standard 527, Seat Tightness of Pressure Relief Valves

ASME B16.5, Pipe Flanges and Flanged Fittings

ASME B16.34, Valves-Flanged, Threaded and Welding End

ASME Boiler and Pressure Vessel Code (BPVC), Section VIII: Pressure Vessels, Division 1 and Division 2

ASME BPVC, Section II: Materials:

- ASME SA-216, Carbon-Steel Castings Suitable for Fusion Welding for High-Temperature Service
- ASME SA-217, Martensitic Stainless Steel and Alloy Steel Castings for Pressure-Containing Parts, Suitable for High-Temperature Service
- ASME SA-351, Specification for Castings, Austenitic, Austenitic-Ferritic (Duplex), for Pressure-Containing Parts
- ASME SA-494, Specification for Castings, Nickel and Nickel Alloy

3 Terms and Definitions

Pressure-relief valve terminology is defined in API 520, Part I.