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Errata 1

3.1.92: The definition of “supply pressure rating” shall be changed to the following:

Maximum hydraulic or pneumatic pressure specified to operate an actuator.

Section 4.3.3.2, 2nd paragraph: A comma shall be added as indicated by yellow highlight:

Material classes DD, EE, FF, and HH shall include as part of the designation and marking the maximum allowable partial pressure of hydrogen sulfide (H₂S), when a value is specified by NACE MR0175/ISO 15156, in units consistent with the rated working pressure markings and prefixes.

Table 4: The table shall be changed as indicated in the red box:

Equipment Category and Type (Reference Section)	Applicable PSLs
Plugs, Connectors, Gaskets	
Flanges (blind, test) ^a (see 14.1)	1, 2, 3, 4
Ring gaskets ^b (see 10.4.5 and 14.2)	NA
Threaded connectors ^a (see 14.3)	1, 2, 3, 4
Tees and crosses (see 14.4)	1, 2, 3 ^e , 4
Bullplugs ^b (see 14.5)	NA
Valve-removal plugs ^b (see 14.6)	NA
Top connectors (see 14.7)	1, 2, 3 ^e , 4
Crossover connectors (see 14.8)	1, 2, 3 ^e , 4
Other end connectors ^a (see 14.9)	1, 2, 3, 4
Spools (adapter, spacer) (see 14.10)	1, 2, 3 ^e , 4
Weld-neck flanges ^a (see J.1)	1, 2, 3, 4
Segmented flanges ^a (see L.1)	1, 2, 3, 4
Nonintegral metal seals ^a (see 10.4.5)	NA

Section 6.4.1: The 3rd paragraph shall be changed to the following:

For material heat treated in a batch furnace, the QTC shall qualify only material and parts produced from the same heat. For material heat treated in a continuous furnace, the QTC shall qualify only material and parts produced from the same heat and heat-treat lot.

Section 7.5.2: The second bullet shall be split into the following two bullets:

- Hard facing or other types of weld overlay for use in hydrogen-sulfide service shall conform to the requirements of NACE MR0175/ISO 15156.
- The base material shall retain the minimum mechanical property requirements after post-weld heat-treatment.

Table 16: The table shall be changed as indicated in the red boxes:

	Pressure Rating MPa (psi)	Nominal Size (in.)	ASTM Bolting Standard(s) and 0.2 % Offset Yield Strength			
			Nonexposed Bolting		H ₂ S-Exposed Bolting	
			A193 GR. B7 (≤ 2.5") A320 GR. L7 (≤ 2.5") A320 GR. L43 (≤ 4.0")	A193 GR. B7 (> 2.5")	A193 GR. B7M (≤ 4.0") A320 GR. L7M (≤ 2.5")	A453 GR. 660D (≤ 4.0") (See 8.2.3.2 and 8.2.3.5) CRA
			725 MPa (105 ksi)	655 MPa (95 ksi)	550 MPa (80 ksi)	725 MPa (105 ksi) ≤ 2.5" 655 MPa (95 ksi) > 2.5"
Studs, Bolts, and Cap Screws	13.8 (2000)	All sizes	✓	NA	✓	✓
	20.7 (3000)	All sizes	✓	NA	✓	✓
	34.5 (5000)	All sizes	✓	NA	✓	✓
	69.0 (10,000)	1 ¹³ / ₁₆ , 2 ¹ / ₁₆ , 2 ⁹ / ₁₆ , 3 ¹ / ₁₆	✓	NA	✓	✓
		4 ¹ / ₁₆	✓	NA	Unacceptable	✓
		5 ¹ / ₈	✓	NA	Unacceptable	✓
		7 ¹ / ₁₆	✓	NA	✓	✓
		9, 11, 13 ⁵ / ₈ , 16 ³ / ₄ , 18 ³ / ₄ , 21 ¹ / ₄	✓	NA	Unacceptable	✓
	103.5 (15,000)	1 ¹³ / ₁₆	✓	NA	✓	✓
		2 ¹ / ₁₆ , 2 ⁹ / ₁₆ , 3 ¹ / ₁₆ , 4 ¹ / ₁₆	✓	NA	Unacceptable	✓
		5 ¹ / ₈	✓	NA	✓	✓
		7 ¹ / ₁₆ , 9, 11, 13 ⁵ / ₈	✓	NA	Unacceptable	✓
		18 ³ / ₄	✓ Gr. L43 only	✓	Unacceptable	✓
	138.0 (20,000)	1 ¹³ / ₁₆ , 2 ¹ / ₁₆ , 2 ⁹ / ₁₆ , 3 ¹ / ₁₆ , 4 ¹ / ₁₆ , 7 ¹ / ₁₆ , 9	✓	NA	✓	✓
		11, 13 ⁵ / ₈	✓ Gr. L43 only	✓	✓ Gr. B7M only	✓
	Nuts	All pressure ratings	All sizes	ASTM A194/A194M GR. 2H, 2HM, 7, 7M		ASTM A194/A194M GR. 2HM, 7M
NOTE ✓ = acceptable.						

Section 9: The title of the section shall be changed to the following:

9 Packing Mechanisms, Pressure Boundary Penetrations, and Ports

Section 9.1: The title of the section shall be changed to the following:

9.1 Packing Mechanisms

Section 9.1.1 through 9.2.4 shall be changed to the following:

9.1.1 Performance Requirements

Packing mechanisms shall meet the general requirements of 4.2 and, when installed in equipment, shall be capable of performing their intended function to applicable PR1 or PR2 requirements for the equipment in which they are used.

9.1.2 Design

The packing mechanisms shall be capable of maintaining a leak-tight seal at the rated working pressure of the head.

9.2 Fittings and Pressure Boundary Penetrations

9.2.1 General

Pressure boundary penetrations shall be capable of maintaining a leak-tight seal at the rated working pressure and temperatures.

NOTE Fittings are a type of pressure boundary penetration.

9.2.2 Performance Requirements

Pressure boundary penetrations shall be capable of meeting the general requirements of 4.2 and, when installed in equipment, shall be capable of performing their intended function to applicable PR1 or PR2 requirements for the equipment in which they are used.

9.2.3 Design

9.2.3.1 General

NOTE The design of pressure boundary penetrations is outside the scope of this specification.

9.2.3.2 Lock Screws in Tubing Heads

Lock screws, if installed in tubing heads, shall have adequate number, size, and strength to hold a load equivalent to the working pressure of the spool acting on the full area of the largest tubing-hanger primary seal.

9.2.3.3 Penetrations

If penetrations are made in flanged connectors as specified in this specification, it shall be the responsibility of the manufacturer to ensure that the penetrations do not cause the flange stresses to exceed the design criteria.

9.2.3.4 Trapped Pressure

A means shall be provided in the wellhead installation such that any pressure behind a lock screw, alignment pin, and retainer screw can be vented prior to release.

9.2.4 Materials

Material requirements for pressure boundary penetrations shall be as specified by the manufacturer and shall be compatible with the body material. Pressure boundary penetrations used in material classes DD, EE, FF, and HH equipment shall meet the requirements of NACE MR0175/ISO 15156.

10.4.2.16.1: The section shall be changed to the following:

The volumetric weld examination requirements of 10.4.2.16 shall apply to PSL 2, PSL 3, and PSL 4.

NOTE The volumetric weld examination requirements do not apply to PSL 1.

10.4.2.16.6: The section shall be changed to the following:

For PSL 2, PSL 3, and PSL 4, 100 % of all pressure-containing welds shall be examined by either radiography or ultrasonic methods after all welding, post-weld heat-treatment, and machining operations but prior to machining operations that limit effective interpretation of the results of the examination. All repair welds where the repair is greater than 25 % of the original wall thickness or 25 mm (1 in.), whichever is less, shall be examined by either radiography or ultrasonic methods after all welding and post-weld heat-treatment. Examinations shall include at least 13 mm (1/2 in.) of adjacent base metal on all sides of the weld.

NOTE The following additional repair weld volumetric weld NDE requirement does not apply to PSL 2:

For PSL 3 and PSL 4 only, all repair welds, if the repair exceeds 20 % of the original wall thickness or 25 mm (1 in.), whichever is the smaller, or if the extent of the cavity exceeds approximately 65 cm² (10 in.²), shall be examined by either radiography or ultrasonic methods after all welding and post-weld heat-treatment.

10.4.3.1: The section shall be changed to the following:

Quality control requirements for stems shall be per Table 25 for PSL 1, PSL 2, PSL 3, and PSL 4. Where reference is made in 10.4.3 to requirements in 10.4.2, those shall be applicable to stems.

10.4.10.4 through 10.4.10.8: The sections shall be changed to the following:

10.4.10.4 Hardness Testing

Hardness testing of bodies shall be in accordance with 10.4.2.4 for PSL 1. Hardness testing of metallic valve seal mechanisms on back-pressure valves for material classes DD, EE, FF, and HH shall be performed in accordance with 10.4.1.4.

NOTE Hardness testing is not required for those materials that have no hardness restriction specified by NACE MR0175/ISO 15156 or are excluded by NACE MR0175/ISO 15156, or for those materials that are not heat-treated to obtain a minimum specified strength level.

10.4.10.5 Dimensional Inspection

Dimensional inspection shall be in accordance with 10.4.2.5 for PSL 1. In addition, all threads or retention profiles shall be gauged.

10.4.10.6 Visual Examination

Visual examination shall be in accordance with 10.4.2.6 for PSL 1.

10.4.10.7 Chemical Analysis

Chemical analysis requirements shall be in accordance with 10.4.2.7 for PSL 2.

10.4.10.8 Traceability

Traceability requirements shall be in accordance with 10.4.2.8 for PSL 2.

Table 31: The "Tree assemblies" row shall be changed as indicated in the red boxes:

Equipment Type	Hydrostatic Testing (PSL)			Gas Testing (PSL)			Drift Test (PSL)
	Shell Test	Seat Test	Function Test	Body ^c Test	Valve Seat Test	Backseat Test	
Valves (<i>flowline</i>)	1, 2, 3, 4	1, 2, 3, 4	2, 3, 4	3G, 4	3G, 4	3G ^d , 4	1, 2, 3, 4
Chokes	1, 2, 3, 4	—	—	3G, 4	—	—	—
Tree assemblies	√ ^b	—	—	—	—	—	✓

Section 11.2.2: Item a) shall be changed to the following:

- a) The equipment shall show no visible leakage while subjected to test pressure, except as specified otherwise in 11.2.2.d).

Section 11.2.2: The following shall be added as item d):

- d) For metal seating check valves, the maximum allowable through-bore leakage in hydrostatic seat testing shall be in accordance with ISO 5208 Rate E.

Table 33: The table shall be changed as indicated in the red boxes:

Working Pressure Rating	Hydrostatic Shell Test Pressure					
	Nominal Size of Flange mm (in.)		Line Pipe and Tubing Threads	Casing Threads mm (in.)		
	346 (13 ⁵ / ₈) and smaller	425 (16 ³ / ₄) and larger		114.3 to 273.1 (4 ¹ / ₂ to 10 ³ / ₄)	298.5 to 339.7 (11 ³ / ₄ to 13 ³ / ₈)	406.5 to 508.0 (16 to 20)
MPa (psi)	MPa (psi)	MPa (psi)	MPa (psi)	MPa (psi)	MPa (psi)	
13.8 (2000)	27.6 (4000)	20.7 (3000)	27.6 (4000)	27.6 (4000)	27.6 (4000)	15.5 (2250)
20.7 (3000)	41.4 (6000)	31.0 (4500)	41.4 (6000)	41.4 (6000)	31.0 (4500)	— —

Table 34: The table title shall be changed to the following:

Table 34—Drift Dimensions for Individual Valves and Trees

Table 34: The table shall be changed as indicated in the red boxes:

Nominal Bore Size	L_1 minimum		D_1 $+0.69$ -0 mm ($+0.027$ -0 in.)		D_2 $+0.69$ -0 mm ($+0.027$ -0 in.)	
	in.	mm (in.)	mm (in.)	mm (in.)	mm (in.)	mm (in.)
1 ³ / ₁₆	76	(3.00)	45.21	(1.78)	38.6	(1.52)
2 ¹ / ₁₆	76	(3.00)	51.56	(2.03)	48.3	(1.90)
2 ⁹ / ₁₆	76	(3.00)	64.26	(2.53)	59.7	(2.35)
3 ¹ / ₁₆	78	(3.06)	76.96	(3.03)	73.2	(2.88)
3 ¹ / ₈	79	(3.12)	78.49	(3.09)	73.2	(2.88)
4 ¹ / ₁₆	103	(4.06)	102.36	(4.03)	97.3	(3.83)
4 ¹ / ₈	105	(4.12)	103.89	(4.09)	100.8	(3.97)
4 ¹ / ₄	108	(4.25)	108.09	(4.22)	101.6	(4.00)

Section 14.1.1.2 (NOTE): The NOTE shall be replaced with the following:

NOTE Studded outlet connections are of the ring-joint type and are designed with a flat face. Studded outlet connections with rated working pressure of 13.8 MPa, 20.7 MPa, and 34.5 MPa (2000 psi, 3000 psi, and 5000 psi) are intended for assembly to 6B through-bolted flanges and to Type 6BX flange sizes shown in Table D.7/Table E.7. Studded outlet connections with rated working pressure of 69.0 MPa, 103.5 MPa, and 138.0 MPa (10,000 psi, 15,000 psi, and 20,000 psi) are intended for assembly to 6BX through-bolted flanges.

Section 14.1.2.2.3: The section shall be changed to the following:

14.1.2.2.3 Flange Face

The flange face shall be flat or raised on the ring-joint side and shall be fully machined.

NOTE The flange back face may be fully machined or spot-faced at the bolt holes.

The flange back face or spot faces shall be parallel to the front face within 1° and the thickness after facing shall conform to the dimensions of Table D.1 (13.8 MPa)/Table E.1 (2000 psi), Table D.2 (20.7 MPa)/Table E.2 (3000 psi), Table D.3 (34.5 MPa)/Table E.3 (5000 psi).

Section 14.16.2.3: The second paragraph shall be changed to the following:

Hydraulic and pneumatic actuators shall be designed to withstand actuator shell test pressure.

Section 14.16.4.1: The first and second paragraphs shall be changed to the following:

Actuator parts that retain pneumatic or hydraulic control fluid and pressure (e.g. pressure cylinders, pistons, and diaphragm housings) shall be subjected to a shell test to demonstrate structural integrity.

...

In case the bonnet for the mating valve or choke forms an integral part of a loose actuator, the bonnet shall satisfy the requirements of 14.11 or 14.15, respectively. Testing of the bonnet stem packing shall not be required as part of the actuator shell test.

Section 14.18.4: The second paragraph shall be changed to the following:

Trees shall successfully complete the hydrostatic body and drift tests required by and described in Section 11. For trees assembled with components having different PSLs, hold period requirements for the highest PSL shall apply.

Section C.1.1: The following sentence shall be deleted:

Annex C provides dimensions and data expressed in USC units, which may be used as alternative units to those SI units used in the body of this specification, while maintaining complete interchangeability.

Section C.2.3: Item f) shall be changed to the following:

f) For the hub dimensions J_1 , J_2 , J_3 , and X , round to the nearest 0.1 mm.

Section C.2.3: Item j) shall be changed to the following:

j) For the bolt hole diameter, round up to the next 1 mm.

Table C.2: The table shall be changed as indicated in the red box:

Millimeters	Inches
3	0.12
10	0.38
16	0.62
19	0.75
21	0.81
25	1.00

Table D.1: The figure shall be changed as indicated in the red box:

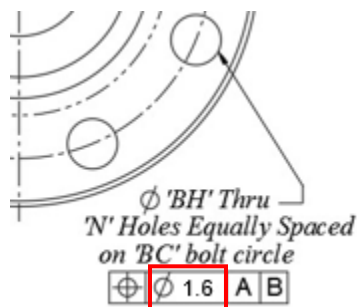


Table D.1: The table shall be changed as indicated in the red boxes:

Nominal Size of Flange ^a	Maximum Bore	Outside Diameter of Flange	Max. Chamfer	Diameter of Raised Face	Total Thickness of Flange	Basic Thickness of Flange	Diameter of Hub	Counter-bore Depth
in.	<i>B</i>	<i>OD</i>	<i>C</i>	<i>K</i>	<i>T</i>	<i>Q</i>	<i>X</i>	<i>E</i>
Tolerance>	max.	As noted	max.	min.	+3.0/-0	min.	Reference	+0.5/-0
2 ¹ / ₁₆	53.1	165 ±2	3	108	33.3	25.4	84.1	7.9
2 ⁹ / ₁₆	65.8	191 ±2	3	127	36.6	28.4	100.1	7.9
3 ¹ / ₈	81.8	210 ±2	3	146	39.6	31.8	117.2	7.9
4 ¹ / ₁₆	108.7	273 ±2	3	175	46.0	38.1	152.4	7.9
5 ¹ / ₈	131.1	330 ±2	3	210	52.3	44.5	189.0	7.9
7 ¹ / ₁₆	181.9	356 ±3	6	241	55.6	47.8	222.3	7.9
9	229.4	419 ±3	6	302	63.5	55.6	273.1	7.9
11	280.2	508 ±3	6	356	71.4	63.5	342.9	7.9
13 ⁵ / ₈	347.0	559 ±3	6	413	74.7	66.5	400.1	7.9
16 ³ / ₄	426.2	686 ±3	6	508	84.1	76.2	495.3	7.9
21 ¹ / ₄	540.5	813 ±3	6	635	98.6	88.9	609.6	9.7

FOOTNOTE
^a For flange sizes 26³/₄ in. and 30 in., see Table D.7.

Table D.2: The figure shall be changed as indicated in the red box:

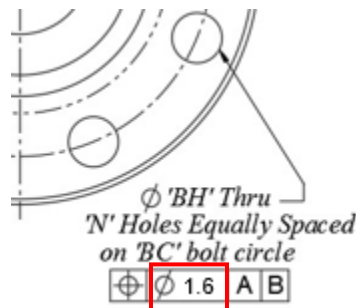


Table D.2: The table shall be changed as indicated in the red box:

Nominal Size of Flange ^a	Maximum Bore	Outside Diameter of Flange	Max. Chamfer	Diameter of Raised Face	Total Thickness of Flange	Basic Thickness of Flange	Diameter of Hub	Counter-bore Depth
in.	<i>B</i>	<i>OD</i>	<i>C</i>	<i>K</i>	<i>T</i>	<i>Q</i>	<i>X</i>	<i>E</i>
Tolerance>	max.	As noted	max.	min.	+3.0/-0	min.	Reference	+0.5/-0
16 ³ / ₄	426.2	705 ±3	6	524	100.1	88.9	508.0	11.2

Table D.3: The figure shall be changed as indicated in the red box:

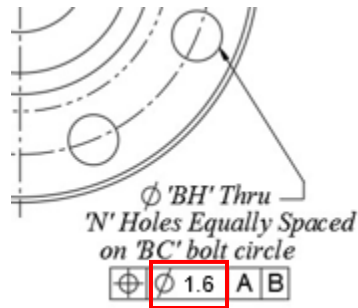


Table D.3: The table shall be changed as indicated in the red box:

Nominal Size of Flange ^a	Maximum Bore	Outside Diameter of Flange	Max. Chamfer	Diameter of Raised Face	Total Thickness of Flange	Basic Thickness of Flange	Diameter of Hub	Counter-bore Depth
in.	<i>B</i>	<i>OD</i>	<i>C</i>	<i>K</i>	<i>T</i>	<i>Q</i>	<i>X</i>	<i>E</i>
Tolerance>	max.	As noted	max.	min.	+3.0/-0	min.	Reference	+0.5/-0
9	229.4	483 ±3	6	318	103.2	91.9	292.1	11.2
11	280.2	584 ±3	6	371	119.2	108.0	368.3	11.2

Table D.4: The figure shall be changed as indicated in the red box:

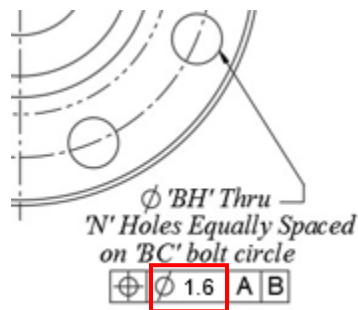


Table D.4: Footnote b) shall read as follows:

Q'' max = E ; Q'' min = 3 mm. See Table D.11 for value of E if not listed. Raised face (ϕK) may be omitted on studded connectors, but thickness T shall still apply.

Table D.4: The table shall be changed as indicated in the red boxes:

Nominal Size in.	Radius of Hub <i>R</i>	Bolt Circle <i>BC</i>	Number of Bolts <i>N</i>	Bolt Size and TPI in.	Bolt Holes		Counterbore Depth		Ring Groove
					<i>BH</i>		<i>E</i>	<i>p</i> ^h	
Tolerance >	± 1	See figure for GDT		(Ref.)	Diameter	Tolerance	max.	max. ^h	
1 ¹³ / ₁₆	10	146.1	8	3/4-10	23	+2/-0.5	6.1	48.0	BX 151
2 ¹ / ₁₆	10	158.8	8	3/4-10	23	+2/-0.5	6.4	51.3	BX 152
2 ⁹ / ₁₆	10	184.2	8	7/8-9	26	+2/-0.5	7.2	61.5	BX 153
3 ¹ / ₁₆	10	215.9	8	1-8	29	+2/-0.5	8.1	71.9	BX 154
4 ¹ / ₁₆	10	258.8	8	1 ¹ / ₈ -8	32	+2/-0.5	8.9	87.6	BX 155
5 ¹ / ₈	10	300.0	12	1 ¹ / ₈ -8	32	+2/-0.5	9.5	98.0	BX 169
7 ¹ / ₁₆	16	403.4	12	1 ¹ / ₂ -8	42	+2.5/-0.5	11.1	—	BX 156
9	16	476.3	16	1 ¹ / ₂ -8	42	+2.5/-0.5	12.7	—	BX 157
11	16	565.2	16	1 ³ / ₄ -8	48	+2.5/-0.5	14.3	—	BX 158
13 ⁵ / ₈	16	673.1	20	1 ⁷ / ₈ -8	51	+2.5/-0.5	15.9	—	BX 159
16 ³ / ₄	19	776.2	24	1 ⁷ / ₈ -8	51	+2.5/-0.5	8.3	—	BX 162
18 ³ / ₄	16	925.6	24	2 ¹ / ₄ -8	61	+2.5/-0.5	18.3	—	BX 164
21 ¹ / ₄	21	1022.4	24	2 ¹ / ₂ -8	67	+2.5/-0.5	19.1	—	BX 166

Table D.5: The figure shall be changed as indicated in the red box:

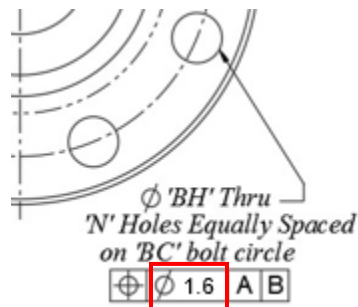


Table D.5: Footnote b) shall read as follows:

Q'' max = E ; Q'' min = 3 mm. See Table D.11 for value of E if not listed. Raised face ($\emptyset K$) may be omitted on studded connectors, but thickness T shall still apply.

Table D.5: The table shall be changed as indicated in the red box:

Nominal Size of Flange in.	Radius of Hub R	Bolt Circle BC	Number of Bolts N	Bolt Size and TPI in.	Bolt Holes		Blind Flange		Ring Groove
					Diameter	Tolerance	Counter-bore Depth E	Hub Height J_4	
Tolerance >	± 1	See figure for GDT	(Ref.)				max.	min.	
...									
$7\frac{1}{16}$	16	428.7	16	$1\frac{1}{2}$ -8	42	+2.5/-0.5	11.1	7.9	BX 156

Table D.6: The figure shall be changed as indicated in the red box:

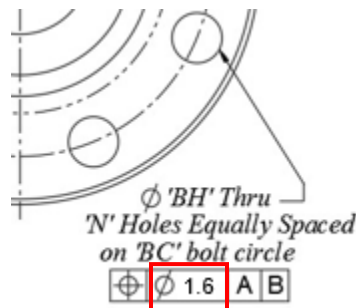


Table D.6: Footnote b) shall read as follows:

Q'' max. = E ; Q'' min. = 3 mm. See Table D.11 for value of E if not listed. Raised face (ϕK) may be omitted on studed connectors, but thickness T shall still apply.

Table D.6: The table shall be changed as indicated in the red boxes:

Nominal Size of Flange in.	Maximum Bore B	Outside Diameter of Flange OD	Diameter of Raised Face K	Total Thickness of Flange T	Max. Chamfer C	Large Hub Diameter J_1	Small Hub Diameter J_2	Hub Length J_3	Test Flange C-bore Depth P^h
Tolerance >	max.	As noted	± 1.5	+3.0/-0	max.	+0/-3.0	min.	min.	max. ^h
$1\frac{13}{16}$	46.7	257 ± 2	117	63.5	3	133.4	109.5	49.3	63.5
$2\frac{1}{16}$	53.1	287 ± 2	132	71.4	3	153.9	127.0	52.3	63.5
$2\frac{9}{16}$	65.8	325 ± 2	151	79.3	3	173.0	144.5	58.7	63.5
$3\frac{1}{16}$	78.5	357 ± 2	171	85.9	3	192.0	160.3	63.5	63.5
$4\frac{1}{16}$	103.9	446 ± 2	219	106.5	3	242.8	206.2	73.2	63.5
$7\frac{1}{16}$	180.1	656 ± 3	353	165.1	6	385.8	338.1	96.8	—
9	229.4	805 ± 3	441	204.8	6	481.1	428.8	107.9	—
11	280.2	883 ± 3	505	223.8	6	566.7	508.0	103.1	—
$13\frac{5}{8}$	347.0	1162 ± 3	614	292.1	6	693.7	628.6	133.3	—

Table D.7 (figure): The figure shall be changed as indicated in the red boxes:

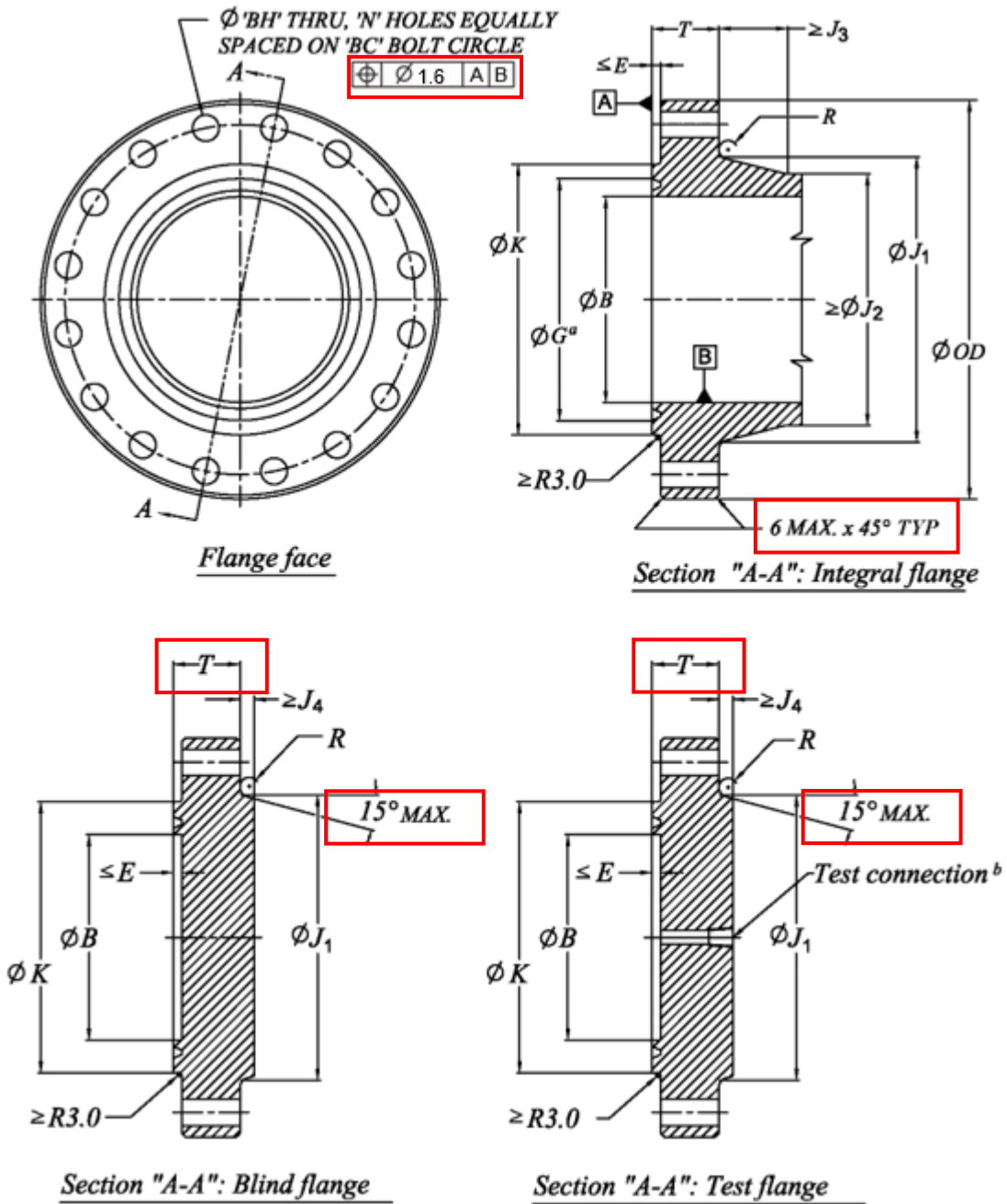


Table D.7: The table shall be changed as indicated in the red box:

Nominal Size	Maximum Bore	OD of Flange	Raised Face Depth	Raised Face Diameter	Total Thickness	Large Hub Diameter	Small Hub Diameter	Length of Hub
in.	<i>B</i>	<i>OD</i>	<i>Q</i> "	<i>K</i>	<i>T</i>	<i>J</i> ₁	<i>J</i> ₂	<i>J</i> ₃
Tolerance>	max.	As noted	max.	± 1.5	+3.0/-0	+0/-3.0	min.	min.

...

34.5 MPa								
13 ⁵ / ₈	347.0	673 ±3	6.4	457	112.8	481.1	423.9	114.3
16 ³ / ₄	426.2	772 ±3	6.4	535	130.1	555.8	527.1	76.2
18 ³ / ₄	477.0	905 ±3	6.4	627	165.9	674.6	598.4	152.4

Table D.10: The table shall be changed as indicated in the red box:

Gasket Number	Outside Diameter	Width of Ring	Width of Flat	Height of Ring	Height of OD Bevel	Radius on Ring	Distance between Flanges
	<i>OD</i>	<i>A</i> ^a	<i>C</i>	<i>H</i> ^a	<i>D</i>	<i>R</i> ₁	<i>S</i>
Tolerance>	+0.50/-0	+0.20/-0	+0.15/-0	+0.20/-0	+0/-0.80	± 0.5	(Approx.)

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RX 49	280.59	11.91	6.45	25.40	4.24	1.5	11.9
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Table D.12: The following footnote shall be added to the table as indicated below:

Groove Number	Outside Diameter	Width of Ring ^a	Height of Ring ^a	Diameter of Flat	Width of Flat	Hole Size	Radius on Ring	
	<i>OD</i>	<i>A</i>	<i>H</i>	<i>ODT</i>	<i>C</i>	<i>D</i>	<i>R</i> ₁	
Tolerance>	+0/-0.15	+0.20/-0	+0.20/-0	± 0.05	+0.15/-0	± 0.5	min.	max.

...

FOOTNOTE

^a The variation of width *A* or height *H* of any ring shall not exceed 0.10 mm throughout its entire circumference.

Table D.13: The table shall be changed as indicated in the red boxes:

Nominal Sizes	Bore Diameter		Center-to-face Vertical Run HH_V	Center-to-face Horizontal Run HH_O
	Vertical Run B_V	Horizontal Run B_O		
Tolerance>	+0.8/-0	+0.8/-0	± 0.8	± 0.8
13.8 MPa				
$2^{1/16} \times 2^{1/16}$	52.3	52.3	147.5	147.5
$2^{9/16} \times 2^{1/16}$	65.0	52.3	151.0	160.5
$2^{9/16} \times 2^{9/16}$	65.0	65.0	166.5	166.5
$3^{1/8} \times 2^{1/16}$	79.3	52.3	154.0	170.0
$3^{1/8} \times 2^{9/16}$	79.3	65.0	166.5	173.0
$3^{1/8} \times 3^{1/8}$	79.3	79.3	179.5	179.5

...

69.0 MPa				
$2^{1/16} \times 1^{13/16}$	52.3	46.0	169.5	174.0
$2^{1/16} \times 2^{1/16}$	52.3	52.3	176.0	176.0
$2^{9/16} \times 1^{13/16}$	65.0	46.0	176.5	189.5
$2^{9/16} \times 2^{1/16}$	65.0	52.3	183.0	191.5
$2^{9/16} \times 2^{9/16}$	65.0	65.0	199.0	199.0
$3^{1/16} \times 1^{13/16}$	77.7	46.0	183.5	209.0
$3^{1/16} \times 2^{1/16}$	77.7	52.3	190.0	210.5
$3^{1/16} \times 2^{9/16}$	77.7	65.0	206.0	218.0
$3^{1/16} \times 3^{1/16}$	77.7	77.7	225.0	225.0
$4^{1/16} \times 1^{13/16}$	103.1	46.0	198.5	235.0
$4^{1/16} \times 2^{1/16}$	103.1	52.3	205.0	237.0
$4^{1/16} \times 2^{9/16}$	103.1	65.0	220.5	244.0
$4^{1/16} \times 3^{1/16}$	103.1	77.7	239.5	251.0
$4^{1/16} \times 4^{1/16}$	103.1	103.1	262.5	262.5
$5^{1/8} \times 1^{13/16}$	130.1 ^a	46.0	208.0	255.5
$5^{1/8} \times 2^{1/16}$	130.1 ^a	52.3	214.5	257.0
$5^{1/8} \times 2^{9/16}$	130.1 ^a	65.0	230.0	264.5
$5^{1/8} \times 3^{1/16}$	130.1 ^a	77.7	249.0	271.5

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103.5 MPa				
$2^{1/16} \times 1^{13/16}$	52.3	46.0	186.5	188.0
$2^{1/16} \times 2^{1/16}$	52.3	52.3	193.5	193.5
$2^{9/16} \times 1^{13/16}$	65.0	46.0	193.0	204.0
$2^{9/16} \times 2^{1/16}$	65.0	52.3	200.0	209.5
$2^{9/16} \times 2^{9/16}$	65.0	65.0	216.0	216.0
$3^{1/16} \times 1^{13/16}$	77.7	46.0	199.5	220.5
$3^{1/16} \times 2^{1/16}$	77.7	52.3	207.0	226.0
$3^{1/16} \times 2^{9/16}$	77.7	65.0	223.0	232.5
$3^{1/16} \times 3^{1/16}$	77.7	77.7	239.5	239.5
$4^{1/16} \times 1^{13/16}$	103.1	46.0	220.5	260.5
$4^{1/16} \times 2^{1/16}$	103.1	52.3	228.0	266.0
$4^{1/16} \times 2^{9/16}$	103.1	65.0	243.5	272.5
$4^{1/16} \times 3^{1/16}$	103.1	77.7	260.5	279.5
$4^{1/16} \times 4^{1/16}$	103.1	103.1	297.0	297.0
$5^{1/8} \times 1^{13/16}$	130.1 ^a	46.0	238.0	290.5
$5^{1/8} \times 2^{1/16}$	130.1 ^a	52.3	244.5	295.5
$5^{1/8} \times 2^{9/16}$	130.1 ^a	65.0	260.5	301.5
$5^{1/8} \times 3^{1/16}$	130.1 ^a	77.7	278.0	309.5

...

138.0 MPa				
$1^{13/16} \times 1^{13/16}$	46.0	46.0	227.0	227.0
$2^{1/16} \times 1^{13/16}$	52.3	46.0	235.0	242.0
$2^{1/16} \times 2^{1/16}$	52.3	52.3	250.0	250.0
$2^{9/16} \times 1^{13/16}$	65.0	46.0	243.0	261.0
$2^{9/16} \times 2^{1/16}$	65.0	52.3	258.0	269.0
$2^{9/16} \times 2^{9/16}$	65.0	65.0	277.0	277.0
$3^{1/16} \times 1^{13/16}$	77.7	46.0	252.5	277.0
$3^{1/16} \times 2^{1/16}$	77.7	52.3	267.5	259.5
$3^{1/16} \times 2^{9/16}$	77.7	65.0	286.5	293.0
$3^{1/16} \times 3^{1/16}$	77.7	77.7	302.5	302.5
$4^{1/16} \times 1^{13/16}$	103.1	46.0	282.5	321.5
$4^{1/16} \times 2^{1/16}$	103.1	52.3	297.5	321.5
$4^{1/16} \times 2^{9/16}$	103.1	65.0	316.5	337.5
$4^{1/16} \times 3^{1/16}$	103.1	77.7	332.5	347.0
$4^{1/16} \times 4^{1/16}$	103.1	103.1	377.0	377.0

Table D.14: The table shall be changed as indicated in the red boxes:

Nominal Sizes	Bore Diameter		Center-to-face Vertical Run HH_V	Center-to-face Horizontal Run HH_O
	Vertical Run B_V	Horizontal Run B_O		
Tolerance>	+0.8/-0	+0.8/-0	± 0.8	± 0.8

...

69.0 MPa				
$1^{13/16} \times 1^{13/16}$	46.0	46.0	111.0	111.0
$2^{1/16} \times 1^{13/16}$	52.3	46.0	111.0	111.0
$2^{1/16} \times 2^{1/16}$	52.3	52.3	111.0	111.0
$2^{9/16} \times 1^{13/16}$	65.0	46.0	114.5	130.0
$2^{9/16} \times 2^{1/16}$	65.0	52.3	114.5	130.0
$2^{9/16} \times 2^{9/16}$	65.0	65.0	130.0	130.0
$3^{1/16} \times 1^{13/16}$	77.7	46.0	114.5	149.0
$3^{1/16} \times 2^{1/16}$	77.7	52.3	114.5	149.0
$3^{1/16} \times 2^{9/16}$	77.7	65.0	130.0	149.0
$3^{1/16} \times 3^{1/16}$	77.7	77.7	149.0	149.0
$4^{1/16} \times 1^{13/16}$	103.1	46.0	114.5	174.5
$4^{1/16} \times 2^{1/16}$	103.1	52.3	114.5	174.5
$4^{1/16} \times 2^{9/16}$	103.1	65.0	130.0	174.5
$4^{1/16} \times 3^{1/16}$	103.1	77.7	149.0	174.5
$4^{1/16} \times 4^{1/16}$	103.1	103.1	174.5	174.5
$5^{1/8} \times 1^{13/16}$	130.1 ^a	46.0	133.5	197.0
$5^{1/8} \times 2^{1/16}$	130.1 ^a	52.3	133.5	197.0
$5^{1/8} \times 2^{9/16}$	130.1 ^a	65.0	133.5	197.0
$5^{1/8} \times 3^{1/16}$	130.1 ^a	77.7	171.5	197.0

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103.5 MPa				
$1^{13/16} \times 1^{13/16}$	46.0	46.0	127.0	127.0
$2^{1/16} \times 1^{13/16}$	52.3	46.0	127.0	127.0
$2^{1/16} \times 2^{1/16}$	52.3	52.3	127.0	127.0
$2^{9/16} \times 1^{13/16}$	65.0	46.0	139.5	139.5
$2^{9/16} \times 2^{1/16}$	65.0	52.3	139.5	139.5
$2^{9/16} \times 2^{9/16}$	65.0	65.0	139.5	139.5
$3^{1/16} \times 1^{13/16}$	77.7	46.0	160.5	160.5
$3^{1/16} \times 2^{1/16}$	77.7	52.3	160.5	160.5
$3^{1/16} \times 2^{9/16}$	77.7	65.0	160.5	160.5
$3^{1/16} \times 3^{1/16}$	77.7	77.7	160.5	160.5
$4^{1/16} \times 1^{13/16}$	103.1	46.0	193.5	193.5
$4^{1/16} \times 2^{1/16}$	103.1	52.3	193.5	193.5
$4^{1/16} \times 2^{9/16}$	103.1	65.0	193.5	193.5
$4^{1/16} \times 3^{1/16}$	103.1	77.7	193.5	193.5
$4^{1/16} \times 4^{1/16}$	103.1	103.1	193.5	193.5
$5^{1/8} \times 1^{13/16}$	130.1 ^a	46.0	168.0	222.0
$5^{1/8} \times 2^{1/16}$	130.1 ^a	52.3	168.0	222.0
$5^{1/8} \times 2^{9/16}$	130.1 ^a	65.0	168.0	222.0
$5^{1/8} \times 3^{1/16}$	130.1 ^a	77.7	168.0	222.0

...

138.0 MPa				
$1^{13/16} \times 1^{13/16}$	46.0	46.0	164.5	164.5
$2^{1/16} \times 1^{13/16}$	52.3	46.0	164.5	164.5
$2^{1/16} \times 2^{1/16}$	52.3	52.3	164.5	164.5
$2^{9/16} \times 1^{13/16}$	65.0	46.0	185.0	185.0
$2^{9/16} \times 2^{1/16}$	65.0	52.3	185.0	185.0
$2^{9/16} \times 2^{9/16}$	65.0	65.0	185.0	185.0
$3^{1/16} \times 1^{13/16}$	77.7	46.0	202.5	202.5
$3^{1/16} \times 2^{1/16}$	77.7	52.3	202.5	202.5
$3^{1/16} \times 2^{9/16}$	77.7	65.0	202.5	202.5
$3^{1/16} \times 3^{1/16}$	77.7	77.7	202.5	202.5
$4^{1/16} \times 1^{13/16}$	103.1	46.0	251.5	251.5
$4^{1/16} \times 2^{1/16}$	103.1	52.3	251.5	251.5
$4^{1/16} \times 2^{9/16}$	103.1	65.0	251.5	251.5
$4^{1/16} \times 3^{1/16}$	103.1	77.7	251.5	251.5

Table D.21: The table shall be changed as indicated in the red box:

Nominal Outlet Size in.	Nominal Thread Size in. <i>A</i>	Threads per Inch TPI	Stub Acme Class 2G Thread Form Dimensions			
			Thread Major Diameter <i>B</i>	Thread Pitch Diameter <i>C</i>	Thread Minor Diameter <i>D</i>	Width of Thread at Root <i>J</i>
Tolerance>			± 0.25	± 0.25	± 0.10	(Ref.)
1 ¹³ / ₁₆	1 ³ / ₄	6	45.21	43.43	42.01	1.65
2 ¹ / ₁₆	2	6	51.56	49.78	48.36	1.65
2 ⁹ / ₁₆	2 ¹ / ₂	6	64.29	62.51	61.06	1.65

Table D.21: The footnote "a" flag in the bottom figure shall be deleted, leaving the bottom figure as follows:

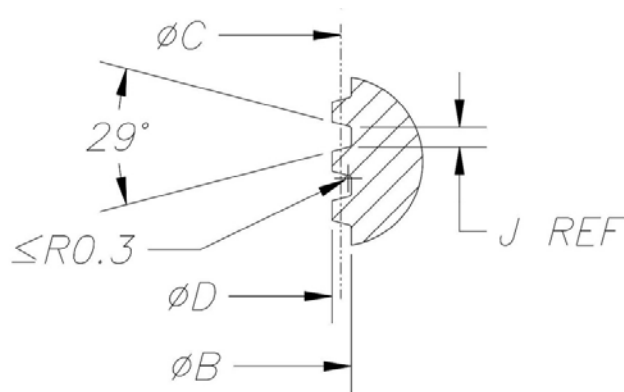


Table D.22: The table shall be replaced with the following:

Nominal size in.	Bore	L, Face-to-face Length, millimeters					
	B	13.8 MPa	20.7 MPa	34.5 MPa	69.0 MPa	103.5 MPa	138.0 MPa
Tolerance>	+ 0.8/-0	± 2	± 2	± 2	± 2	± 2	± 2
1 ¹³ / ₁₆	46.0	—	—	—	464	457	533
2 ¹ / ₁₆ X 1 ¹³ / ₁₆	46.0	295	371	371	—	—	—
2 ¹ / ₁₆	52.3	295	371	371	521	483	584
2 ⁹ / ₁₆	65.0	333	422	422	565	533	673
3 ¹ / ₁₆	77.7	—	—	—	619	598	775
3 ¹ / ₈	79.3	359	435	473	—	—	—
3 ¹ / ₈ X 3 ³ / ₁₆	81.0	359	435	473	—	—	—
4 ¹ / ₁₆	103.1	435	511	549	670	737	965
4 ¹ / ₁₆ X 4 ¹ / ₈	104.7	435	511	549	—	—	—
4 ¹ / ₁₆ X 4 ¹ / ₄	108.0	435	511	549	—	—	—
5 ¹ / ₈ ^a	130.1 ^a	562	613	727	737	889	—
7 ¹ / ₁₆ X 5 ¹ / ₈	130.1 ^a	—	—	737	—	—	—
7 ¹ / ₁₆ X 6	152.4	562	613	737	—	—	—
7 ¹ / ₁₆ X 6 ¹ / ₈	155.5	—	—	737	—	—	—
7 ¹ / ₁₆ X 6 ³ / ₈	162.1	562	613	737	889	1041	PMR
7 ¹ / ₁₆ X 6 ⁵ / ₈	168.2	562	613	737	—	—	—
7 ¹ / ₁₆	179.3	664	714	813	889	1041	PMR
7 ¹ / ₁₆ X 7 ¹ / ₈	180.9	664	714	813	—	—	—
9	228.6	—	—	1041	PMR	—	—
11	279.4	—	—	PMR	—	—	—

FOOTNOTE

^a Bore tolerance for 5¹/₈ in. size is +1.0/-0.

Table D.23: The table shall be replaced with the following:

a) Flanged Full-bore Plug Valves							
Nominal Size in.	Bore	L, Face-to-face Length					
	B	13.8 MPa	20.7 MPa	34.5 MPa	69.0 MPa	103.5 MPa	138.0 MPa
Tolerance>	+0.8/-0	± 2	± 2	± 2	± 2	± 2	± 2
1 ¹³ / ₁₆	46.0	—	—	—	464	457	533
2 ¹ / ₁₆	52.3	333	384	394	521	483	584
2 ⁹ / ₁₆	65.0	384	435	457	565	533	673
3 ¹ / ₁₆	77.7	—	—	—	619	598	775
3 ¹ / ₈	79.3	448	473	527	—	—	—
3 ¹ / ₈ X 3 ³ / ₁₆	81.0	448	473	527	—	—	—
4 ¹ / ₁₆	103.1	511	562	629	670	737	—
4 ¹ / ₁₆ X 4 ¹ / ₈	104.7	511	562	629	—	—	—
4 ¹ / ₁₆ X 4 ¹ / ₄	108.0	511	562	629	—	—	—
5 ¹ / ₈	130.1 ^b	638	664	—	737	889	—
7 ¹ / ₁₆ X 6	152.4	727	765	—	—	—	—
7 ¹ / ₁₆ X 6 ³ / ₈	162.1	—	—	—	889	1041	PMR
7 ¹ / ₁₆	179.3	740	803	978	889	1041	PMR
7 ¹ / ₁₆ X 7 ¹ / ₈	180.9	740	803	978	—	—	—
9	228.6	—	—	—	PMR	1041	—

b) Flanged Full-bore and Reduced-opening Ball Valves							
Nominal Size in.	Bore	L, Face-to-face Length					
	B	13.8 MPa	20.7 MPa	34.5 MPa	69.0 MPa	103.5 MPa ^a	138.0 MPa ^a
Tolerance>	+0.8/-0	± 2	± 2	± 2	± 2	± 2	± 2
1 ¹³ / ₁₆	46.0	—	—	—	464	457	533
2 ¹ / ₁₆	52.3	295	371	371	521	483	584
2 ⁹ / ₁₆	65.0	333	422	473	565	533	673
3 ¹ / ₁₆	77.7	—	—	—	619	598	775
3 ¹ / ₈	79.3	359	384	473	—	—	—
4 ¹ / ₁₆	103.1	435	460	549	670	737	—
5 ¹ / ₈	130.1 ^b	—	—	—	737	889	—
7 ¹ / ₁₆ X 6	152.4	562	613	711	—	—	—
7 ¹ / ₁₆ X 6 ³ / ₈	162.1	—	—	—	889	1041	—
7 ¹ / ₁₆	179.3	—	—	—	889	1041	PMR
9	228.6	—	—	—	PMR	—	—

FOOTNOTE

^a Applies to full bore only.

^b Bore tolerance for 5¹/₈ in. size is +1.0/-0.

Table D.24: Parts b) and c) of the table shall be replaced with the following:

b) Regular and Full-opening Flanged Swing and Lift Check Valves, 13.8 MPa, 20.7 MPa, and 34.5 MPa RWP					
Nominal Size in.	L, Short Pattern Face-to-face Length, mm			L, Long Pattern Face-to-face Length, mm	
	13.8 MPa	20.7 MPa	34.5 MPa	20.7 MPa	34.5 MPa
Tolerance>	± 2	± 2	± 2	± 2	± 2
2 ¹ / ₁₆	295	371	371	—	—
2 ⁹ / ₁₆	333	422	422	—	—
3 ¹ / ₈	359	384	473	435	—
4 ¹ / ₁₆	435	460	549	511	—
7 ¹ / ₁₆	562	613	711	—	737
9	664	740	841	—	—
11	790	841	1000	—	—

c) Regular and Full-opening Flanged Swing and Lift Check Valves, 69.0 MPa, 103.5 MPa, and 138.0 MPa RWP			
Nominal Size in.	L, Face-to-face Length, in.		
	69.0 MPa	103.5 MPa	138.0 MPa
Tolerance>	± 2	± 2	± 2
1 ¹³ / ₁₆	464	457	533
2 ¹ / ₁₆	521	483	584
2 ⁹ / ₁₆	565	533	673
3 ¹ / ₁₆	619	598	775
4 ¹ / ₁₆	670	737	—
5 ¹ / ₈	737	—	—
7 ¹ / ₁₆	889	—	—

Table E.1: The figure shall be changed as indicated in the red box:

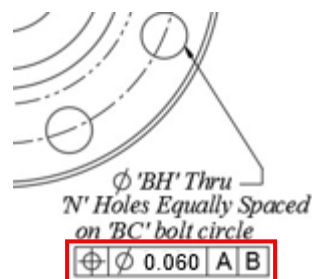


Table E.2: The figure shall be changed as indicated in the red box:

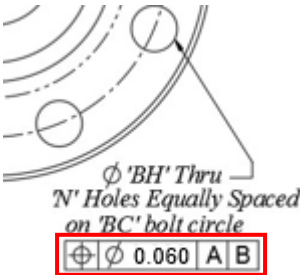


Table E.3: The figure shall be changed as indicated in the red box:

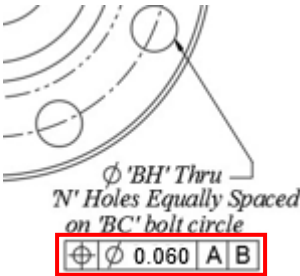


Table E.4: The figure shall be changed as indicated in the red box:

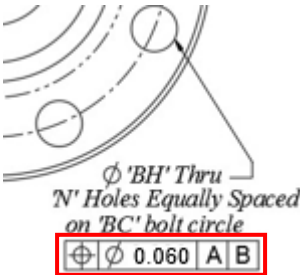


Table E.4: Footnote "b" shall be changed to the following:

Q'' max = E ; Q'' min = 0.12 in. See Table E.11 for value of E if not listed. Raised face (ϕK) may be omitted on studded connectors, but thickness T shall still apply.

Table E.5: The figure shall be changed as indicated in the red box:

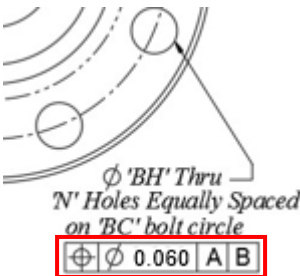


Table E.5: Footnote "b" shall be changed to the following:

Q'' max = E ; Q'' min = 0.12 in. See Table E.11 for value of E if not listed. Raised face (ϕK) may be omitted on studded connectors, but thickness T shall still apply.

Table E.6: The figure shall be changed as indicated in the red box:

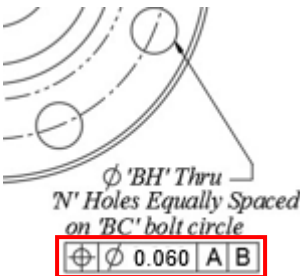


Table E.6: Footnote "b" shall be changed to the following:

Q'' max = E ; Q'' min = 0.12 in. See Table E.11 for value of E if not listed. Raised face (ϕK) may be omitted on studded connectors, but thickness T shall still apply.

Table E.6: The table shall be changed as indicated in the red box:

Nominal Size of Flange	Maximum Bore <i>B</i>	Outside Diameter of Flange <i>OD</i>	Diameter of Raised Face <i>K</i>	Total Thickness of Flange <i>T</i>	Max. Chamfer <i>C</i>	Large Hub Diameter <i>J₁</i>	Small Hub Diameter <i>J₂</i>	Hub Length <i>J₃</i>	Test Flange C' bore Depth <i>p^h</i>
Tolerance	max.	As noted	± 0.06	+0.12/-0	max.	+0/-0.12	min.	min.	max. ^h
1 ¹³ / ₁₆	1.84	10.12 ±0.06	4.62	2.50	0.12	5.25	4.31	1.94	2.50
2 ¹ / ₁₆	2.09	11.31 ±0.06	5.19	2.81	0.12	6.06	5.00	2.06	2.50
2 ⁹ / ₁₆	2.59	12.81 ±0.06	5.94	3.12	0.12	6.81	5.69	2.31	2.50
3 ¹ / ₁₆	3.09	14.06 ±0.06	6.75	3.38	0.12	7.56	6.31	2.50	2.50
4 ¹ / ₁₆	4.09	17.56 ±0.06	8.62	4.19	0.12	9.56	8.12	2.88	2.50

Table E.7 (figure): The figure has been changed as indicated in the red boxes:

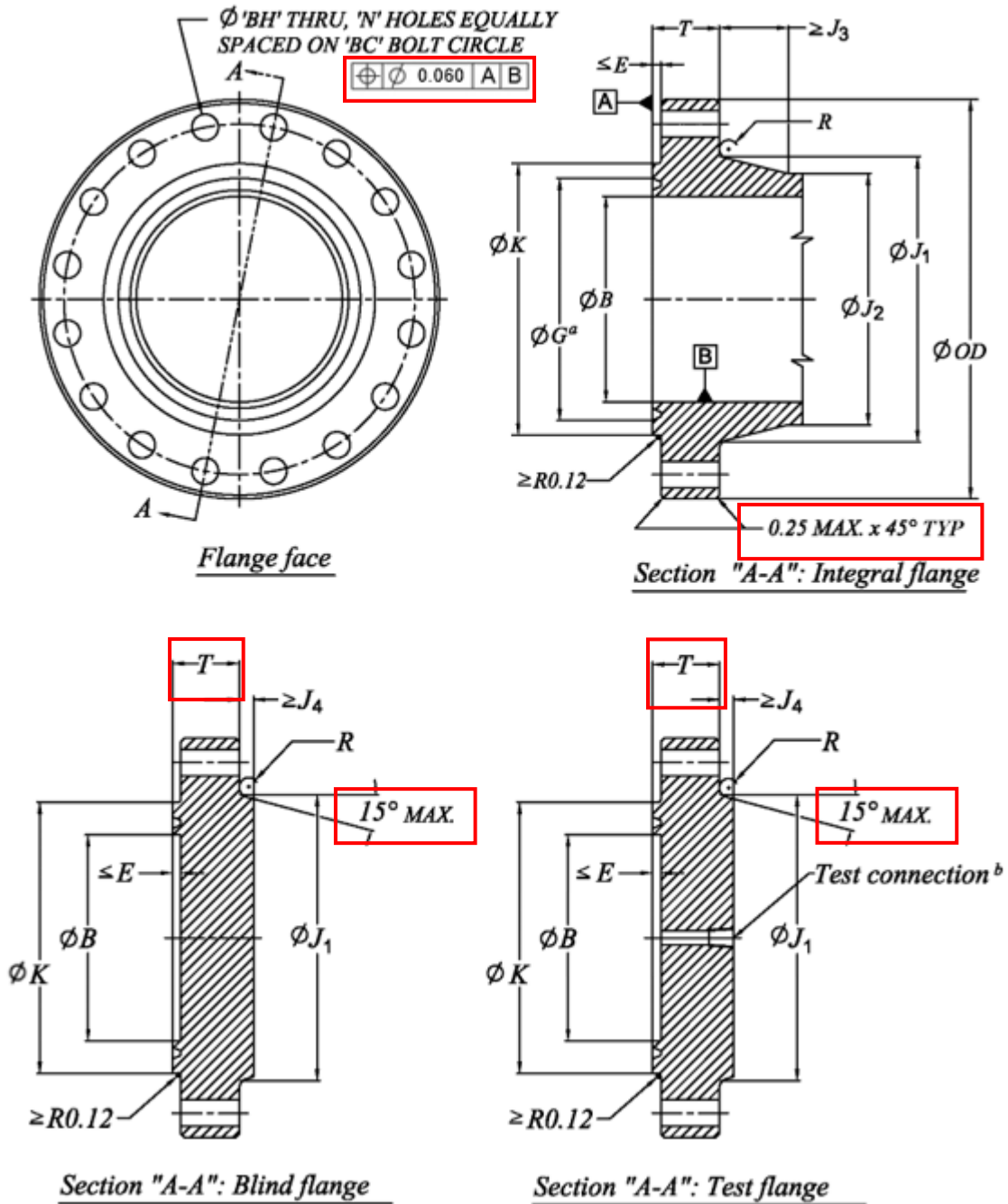


Table E.10: The table shall be changed as indicated in the red box:

Groove Number	Outside Diameter	Width of Ring	Width of Flat	Height of Ring	Height of OD Bevel	Radius on Ring	Distance between Flanges
	<i>OD</i>	<i>A</i> ^a	<i>C</i>	<i>H</i> ^a	<i>D</i>	<i>R</i> ₁	<i>S</i>
Tolerance>	+0.020/-0	+0.008/-0	+0.006/-0	+0.008/-0	+0/-0.030	± 0.02	(Approx.)
...							
RX 57	15.422	0.469	0.254	1.000	0.167	0.06	0.47

Table E.12: The following footnote shall be added to the table as indicated below:

Groove Number	Outside Diameter	Width of Ring ^a	Height of Ring ^a	Diameter of Flat	Width of Flat	Hole Size	Radius on Ring	
	<i>OD</i>	<i>A</i>	<i>H</i>	<i>ODT</i>	<i>C</i>	<i>D</i>	<i>R</i> ₁	
Tolerance>	+0 -0.006	+0.008 -0	+0.008 -0	± 0.002	+0.006 -0	± 0.02	min.	max.
...								
FOOTNOTE								
^a The variation in width <i>A</i> or height <i>H</i> of any ring shall not exceed 0.004 in. throughout its entire circumference.								

Table E.15: The table shall be changed as indicated in the red boxes:

Nominal Size	Outside Diameter		Minimum Length of Thread to Vanish Point	Depth of Counterbore	Diameter of Counterbore	Diameter of Chamfer	Overall Length	
in.	<i>D</i>		<i>L</i> ₄	<i>C</i>	<i>d</i>	<i>e</i>	<i>L</i>	
Tolerance>	Value	Tolerance	Minimum	± 0.02	+0.04/-0	+0.02/-0	+0.04/-0	
1/2	0.840	+0.008/-0	0.7815	None	None	None	2.00	
3/4	1.050	+0.008/-0	0.7935	None	None	None	2.00	
1	1.320	+0.010/-0	0.9845	None	None	None	2.00	
...								
Nominal Size	Hex Size (Across Flats)		Depth of Hex	Overall Length	Hex Size (Across Flats)		Height of Hex	Overall Length
in.	<i>H</i> _i		<i>G</i>	<i>L</i> _i	<i>H</i> _e		<i>B</i>	<i>L</i> _e
Tolerance>	Value	Tolerance	+0.04/-0	+0.04/-0	Value	Tolerance	+0.04/-0	+0.04/-0
1/2	0.38	+0/-0.004	0.31	1.00	0.88	+0/-0.025	0.31	1.13
3/4	0.56	+0/-0.005	0.31	1.00	1.06	+0/-0.031	0.38	1.25

Table E.16 (figure): The figure shall be changed as indicated in the red box:

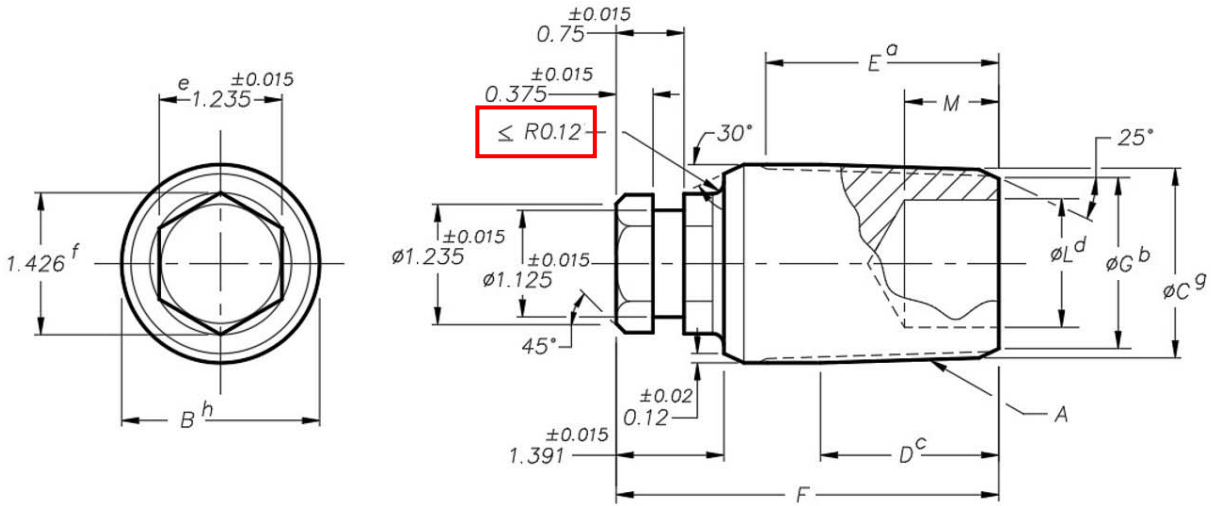


Table E.17: The table shall be changed as indicated in the red box:

Nominal Outlet Size	Nominal Thread OD	Threads per Inch	Thread Type	Thread Bore	Full Thread Length	Chamfer and Counterbore Diameter	Straight Bore
	<i>A</i>	TPI		<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>
Tolerance>		(Ref.)	NA	± 0.005	(Ref.)	± 0.03	± 0.015
$1^{13}/_{16}$	1.660	$11^{1}/_{2}$	Line pipe	1.532	1.08	1.94	1.449
$2^{1}/_{16}$	1.900	$11^{1}/_{2}$	Sharp vee	1.771	1.51	2.19	1.662
$2^{9}/_{16}$	$2^{3}/_{8}$	$11^{1}/_{2}$	Sharp vee	2.242	1.76	2.56	2.117

Table E.21: The table shall be changed as indicated in the red boxes:

Nominal Outlet Size	Nominal Thread Size in.	Threads per Inch	Stub Acme Class 2G Thread Form Dimensions			
			Thread Major Diameter	Thread Pitch Diameter	Thread Minor Diameter	Width of Thread at Root
	<i>A</i>	TPI	<i>B</i>	<i>C</i>	<i>D</i>	<i>J</i>
Tolerance>		(Ref.)	± 0.010	± 0.010	± 0.004	(Ref.)
$1^{13}/_{16}$	$1^{3}/_{4}$	6	1.780	1.710	1.654	0.065
$2^{1}/_{16}$	2	6	2.030	1.960	1.904	0.065
$2^{9}/_{16}$	$2^{1}/_{2}$	6	2.531	2.461	2.404	0.065

Table E.21: The footnote "a" flag in the bottom figure shall be deleted, leaving the bottom figure as follows:

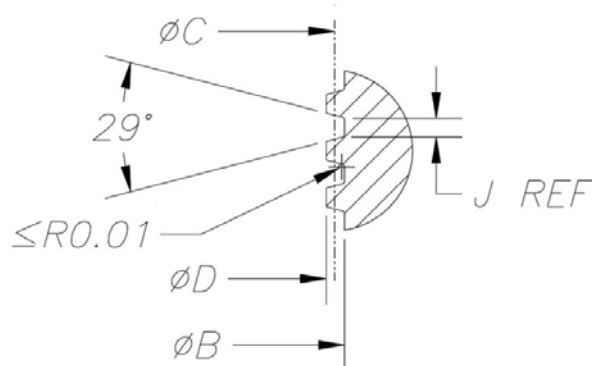


Table E.22: The table shall be changed as indicated in the red boxes:

Nominal Size in.	Bore	L, Face-to-face Length, in.					
	B	2000 psi	3000 psi	5000 psi	10,000 psi	15,000 psi	20,000 psi
Tolerance>	+0.03/-0	± 0.06	± 0.06	± 0.06	± 0.06	± 0.06	± 0.06
1 ¹³ / ₁₆	1.81	—	—	—	18.25	18.00	21.00
2 ¹ / ₁₆ X 1 ¹³ / ₁₆	1.81	11.62	14.62	14.62	—	—	—
2 ¹ / ₁₆	2.06	11.62	14.62	14.62	20.50	19.00	23.00
2 ⁹ / ₁₆	2.56	13.12	16.62	16.62	22.25	21.00	26.50
...							
7 ¹ / ₁₆ X 7 ¹ / ₈	7.12	26.12	28.12	32.00	—	—	—

Table E.23: The table shall be changed as indicated in the red boxes:

a) Flanged Full-bore Plug Valves							
Nominal Size in.	Bore	L, Face-to-face Length					
	B	2000 psi	3000 psi	5000 psi	10,000 psi	15,000 psi	20,000 psi
Tolerance>	+0.03/-0	± 0.06	± 0.06	± 0.06	± 0.06	± 0.06	± 0.06
1 ¹³ / ₁₆	1.81	—	—	—	18.25	18.00	21.00
2 ¹ / ₁₆	2.06	13.12	15.12	15.50	20.50	19.00	23.00
2 ⁹ / ₁₆	2.56	15.12	17.12	18.00	22.25	21.00	26.50
...							
5 ¹ / ₈	5.12 ^b	25.12	26.12	—	29.00	35.00	—
...							

(continued on next page)

b) Flanged Full-bore and Reduced-opening Ball Valves							
Nominal Size in.	Bore	L, Face-to-face Length					
	B	2000 psi	3000 psi	5000 psi	10,000 psi	15,000 psi ^a	20,000 psi ^a
Tolerance>	+0.03/-0	± 0.06	± 0.06	± 0.06	± 0.06	± 0.06	± 0.06
1 ³ / ₁₆	1.81	—	—	—	18.25	18.00	21.00
2 ¹ / ₁₆	2.06	11.62	14.62	14.62	20.50	19.00	23.00
2 ⁹ / ₁₆	2.56	13.12	16.62	18.62	22.25	21.00	26.50
...							
5 ¹ / ₈	5.12 ^b	—	—	—	29.00	35.00	—
...							

FOOTNOTE

^a Applies to full bore only.

^b Bore tolerance for 5¹/₈ in. size is +0.04/-0.

Section F.2.2.2.11: The header shall be changed to the following:

F.2.2.2.11 Body Pressure-temperature Cycles

Section G.5.2.2.2: The first paragraph shall be changed to the following:

S_e at temperature shall be minimum yield strength of the material strength class of Table 8, reduced by the amount of de-rating of yield strength at the elevated temperature compared to the measured yield strength at a temperature between 4 °C and 50 °C (between 40 °F and 120 °F)."

Table G.4: The table shall be changed as indicated in the red box:

Material	De-rating Factor, Y _r		
	149 °C (300 °F)	177 °C (350 °F)	232 °C (450 °F)
25 Cr super duplex	0.81	0.78	0.73
ASTM 453/453M Gr 660D (UNS S66286)	0.97	0.96	0.94

Section L.2: The sole paragraph shall be changed to the following:

Segmented flange dimensions shall conform to Table L.1. Ring groove dimensions shall conform to Table L.2.