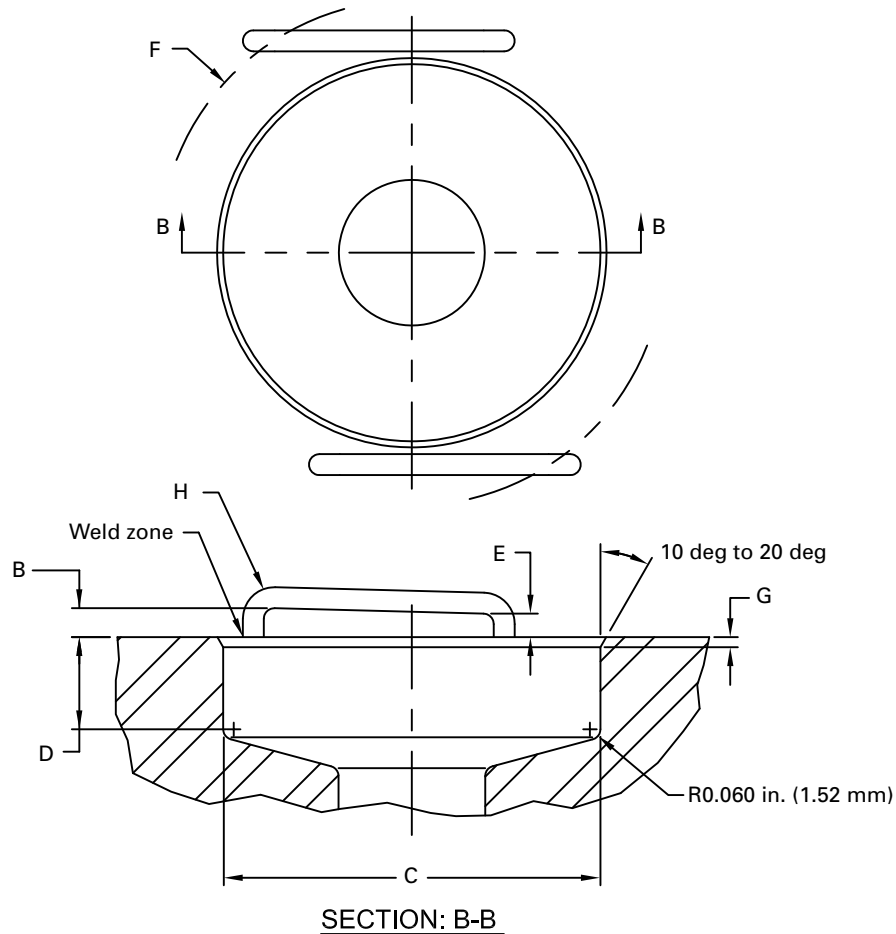


Table DT-4.5.2-1
Tapered Locking Tab Retainer: External



	Dimension		Tolerance		Notes
	in.	mm	in.	mm	
B	0.173	4.39	±0.004	±0.10	...
C	2.250	57.15	+0.003/-0.000	+0.08/-0.00	...
D	0.550 (min.)	13.97 (min.)	...	...	...
E	0.134	3.40	±0.004	±0.10	...
F	R1.430	R36.32	±0.010	±0.25	(1)
G	0.060 (max.)	1.52 (max.)	...	...	(2)
H	0.125 (max.)	3.18 (max.)	...	...	...

GENERAL NOTES:

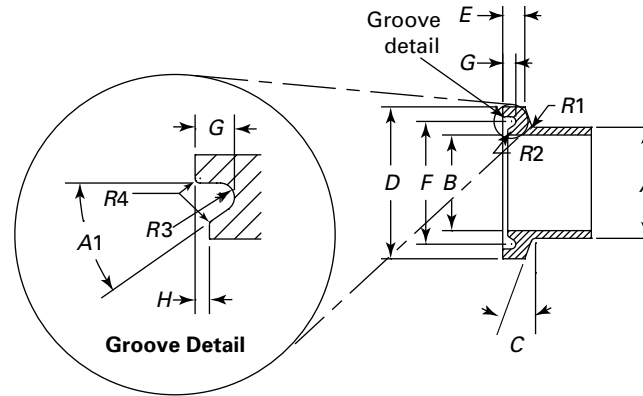
- (a) Locking tab retainer options are shown as possible options and do not represent all possible designs.
 (b) All surfaces shall meet the specified finish of wetted surfaces, excluding the weld zones.

NOTES:

- (1) Clearance for locking tabs.
 (2) O-ring lead-in chamfer.

Table DT-7.1-1
Metallic Hygienic Clamp Ferrule Standard Dimensions and Tolerances

Type A

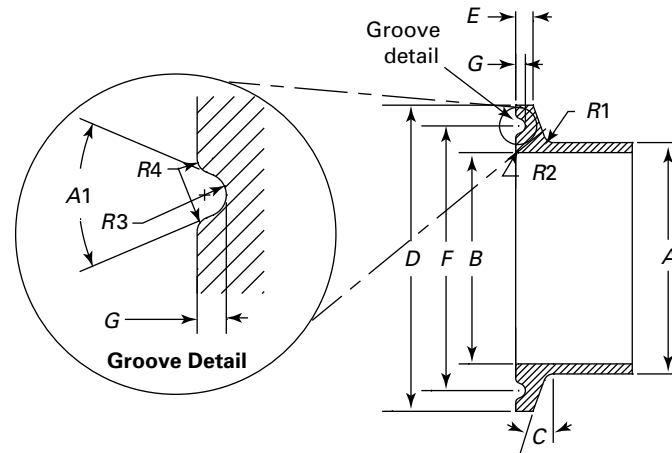


Nominal Size, in.						Tube Diameter, <i>A</i>				I.D. Bore, <i>B</i>				Flange Angle, <i>C</i> , deg				Flange Diameter, <i>D</i>				Flange Thickness, <i>E</i> , ref.		Groove Diameter, <i>F</i>					
						Dimension		Tolerance, ±		Dimension		Tolerance, ±						Dimension		Tolerance, ±				Dimension		Dimension		Tolerance, ±	
						Type	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	
1/4	A	0.250	6.35	0.005	0.13	0.180	4.57	0.005	0.13	20	0.5	0.984	25.0	0.005	0.13	0.143	3.63	0.800	20.32	0.005	0.13								
3/8	A	0.375	9.53	0.005	0.13	0.305	7.75	0.005	0.13	20	0.5	0.984	25.0	0.005	0.13	0.143	3.63	0.800	20.32	0.005	0.13								
1/2	A	0.500	12.70	0.005	0.13	0.370	9.40	0.005	0.13	20	0.5	0.984	25.0	0.005	0.13	0.143	3.63	0.800	20.32	0.005	0.13								
3/4	A	0.750	19.05	0.005	0.13	0.620	15.75	0.005	0.13	20	0.5	0.984	25.0	0.005	0.13	0.143	3.63	0.800	20.32	0.005	0.13								
1	A	1.000	25.40	0.005	0.13	0.870	22.10	0.005	0.13	20	1.0	1.339	34.0	0.005	0.13	0.143	3.63	1.160	29.46	0.005	0.13								

Nominal Size, in.		Groove Depth, <i>G</i>				Face Offset, <i>H</i>				Groove Detail, <i>R3</i>				Groove Detail, <i>R4</i>				Groove Detail, <i>A1</i> , deg		Radius, <i>R1</i> , max.		Radius, <i>R2</i>			
		Dimension		Tolerance, ±		Dimension		Tolerance, ±		Dimension		Tolerance, ±		Maximum		Minimum									
		Type	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	Dimension	Tolerance, ±	in.	mm	in.	mm	in.	mm	
1/4	A	0.085	2.16	0.005	0.13	0.031	0.79	0.005	0.13	0.031	0.79	0.005	0.13	0.020	0.51	0.005	0.13	35	1	0.031	0.79	0.031	0.79	0.005	0.13
3/8	A	0.085	2.16	0.005	0.13	0.031	0.79	0.005	0.13	0.031	0.79	0.005	0.13	0.020	0.51	0.005	0.13	35	1	0.031	0.79	0.031	0.79	0.005	0.13
1/2	A	0.085	2.16	0.005	0.13	0.031	0.79	0.005	0.13	0.031	0.79	0.005	0.13	0.020	0.51	0.005	0.13	35	1	0.031	0.79	0.031	0.79	0.005	0.13
3/4	A	0.085	2.16	0.005	0.13	0.031	0.79	0.005	0.13	0.031	0.79	0.005	0.13	0.020	0.51	0.005	0.13	35	1	0.031	0.79	0.031	0.79	0.005	0.13
1	A	0.085	2.16	0.005	0.13	0.031	0.79	0.005	0.13	0.031	0.79	0.005	0.13	0.020	0.51	0.005	0.13	35	1	0.031	0.79	0.031	0.79	0.005	0.13

Table DT-7.1-1
Metallic Hygienic Clamp Ferrule Standard Dimensions and Tolerances (Cont'd)

Type B



Nominal Size, in.	Type	Tube Diameter, <i>A</i>				I.D. Bore, <i>B</i>				Flange Angle, <i>C</i> , deg		Flange Diameter, <i>D</i>						Flange Thickness, <i>E</i> , ref.		Groove Diameter, <i>F</i>			
		Dimension		Tolerance, ±		Dimension		Tolerance, ±		Dimension	Tolerance, ±	Dimension		Tolerance, +		Tolerance, -		Dimension		Dimension		Tolerance, ±	
		in.	mm	in.	mm	in.	mm	in.	mm			in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
1	B	1.000	25.40	0.005	0.13	0.870	22.10	0.005	0.13	20	1.0	1.984	50.39	0.008	0.20	0.005	0.13	0.112	2.84	1.718	43.64	0.005	0.13
1½	B	1.500	38.10	0.008	0.20	1.370	34.80	0.005	0.13	20	1.0	1.984	50.39	0.008	0.20	0.005	0.13	0.112	2.84	1.718	43.64	0.005	0.13
2	B	2.000	50.80	0.008	0.20	1.870	47.50	0.005	0.13	20	1.0	2.516	63.91	0.008	0.20	0.008	0.20	0.112	2.84	2.218	56.34	0.005	0.13
2½	B	2.500	63.50	0.010	0.25	2.370	60.20	0.005	0.13	20	1.0	3.047	77.39	0.008	0.20	0.008	0.20	0.112	2.84	2.781	70.64	0.005	0.13
3	B	3.000	76.20	0.010	0.25	2.870	72.90	0.005	0.13	20	1.0	3.579	90.91	0.010	0.25	0.010	0.25	0.112	2.84	3.281	83.34	0.005	0.13
4	B	4.000	101.60	0.015	0.38	3.834	97.38	0.005	0.13	20	1.0	4.682	118.92	0.015	0.38	0.015	0.38	0.112	2.84	4.344	110.34	0.005	0.13
6	B	6.000	152.40	0.030	0.76	5.782	146.86	0.005	0.13	20	1.0	6.570	166.88	0.030	0.76	0.030	0.76	0.220	5.59	6.176	156.87	0.005	0.13

**Table DT-7.1-1
Metallic Hygienic Clamp Ferrule Standard Dimensions and Tolerances (Cont'd)**

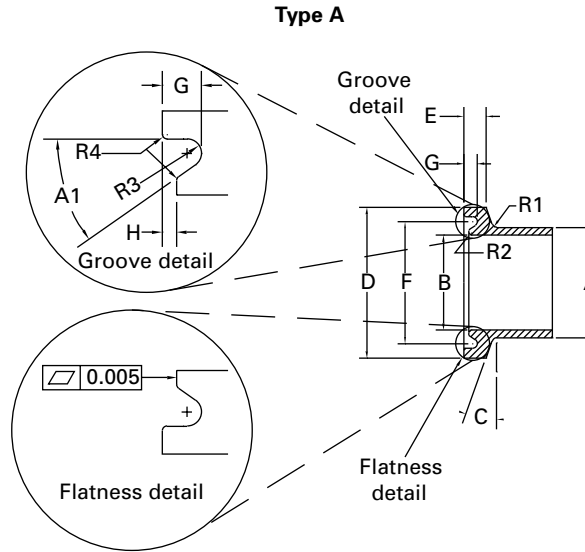
Nominal Size, in.		Type		Groove Depth, <i>G</i>				Face Offset, <i>H</i>				Groove Detail, <i>R3</i>				Groove Detail, <i>R4</i>				Groove Detail, <i>A1</i> , deg				Radius, <i>R1</i> , max.		Radius, <i>R2</i>			
				Dimension		Tolerance, ±						Dimension		Tolerance, ±		Dimension		Tolerance, ±								Maximum		Minimum	
				in.	mm	in.	mm	Dimension	Tolerance, ±	in.	mm	in.	mm	in.	mm	in.	mm	Dimension	Tolerance, ±	in.	mm	in.	mm	in.	mm				
1	B	0.063	1.60	0.005	0.13	N/A	N/A	0.047	1.19	0.005	0.13	0.020	0.51	0.005	0.13	46	1	0.063	1.60	0.031	0.79	0.005	0.13						
1½	B	0.063	1.60	0.005	0.13	N/A	N/A	0.047	1.19	0.005	0.13	0.020	0.51	0.005	0.13	46	1	0.063	1.60	0.031	0.79	0.005	0.13						
2	B	0.063	1.60	0.005	0.13	N/A	N/A	0.047	1.19	0.005	0.13	0.020	0.51	0.005	0.13	46	1	0.063	1.60	0.031	0.79	0.005	0.13						
2½	B	0.063	1.60	0.005	0.13	N/A	N/A	0.047	1.19	0.005	0.13	0.020	0.51	0.005	0.13	46	1	0.063	1.60	0.031	0.79	0.005	0.13						
3	B	0.063	1.60	0.005	0.13	N/A	N/A	0.047	1.19	0.005	0.13	0.020	0.51	0.005	0.13	46	1	0.063	1.60	0.031	0.79	0.005	0.13						
4	B	0.063	1.60	0.005	0.13	N/A	N/A	0.047	1.19	0.005	0.13	0.020	0.51	0.005	0.13	46	1	0.063	1.60	0.031	0.79	0.005	0.13						
6	B	0.063	1.60	0.005	0.13	N/A	N/A	0.047	1.19	0.005	0.13	0.020	0.51	0.005	0.13	46	1	0.063	1.60	0.031	0.79	0.005	0.13						

GENERAL NOTES:

- (a) Dimensions and tolerances apply to machined finishes only.
(b) I.D. bore dimension *B* should be measured on the ferrule face side only.

Table DT-7.1-2
Polymeric Hygienic Clamp Ferrule Standard Dimensions and Tolerances

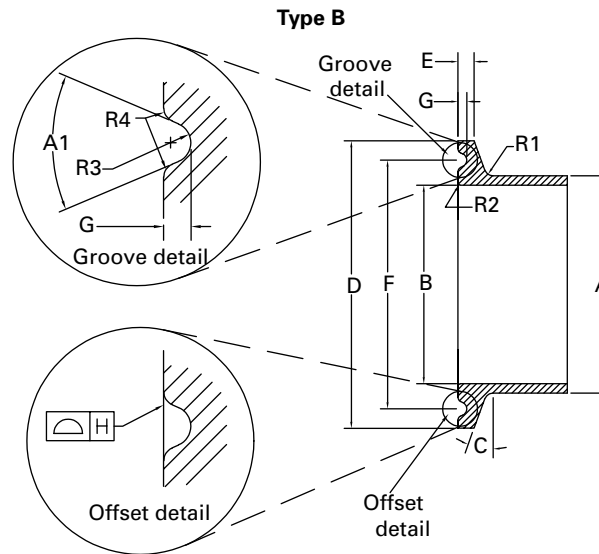
(22)



Nominal Size, in.				Type		Tube Diameter, <i>A</i>		I.D. Bore, <i>B</i>				Flange Angle, <i>C</i> , deg				Flange Diameter, <i>D</i>				Flange Thickness, <i>E</i> , ref.		Groove Diameter, <i>F</i>			
						Dimension										Dimension		Tolerance, ±		Dimension		Tolerance, ±		Dimension	
				in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
1/4	A	0.250	6.35	0.180	4.57	0.010	0.25	20	1.0	3.0	0.984	25.0	0.010	0.25	0.143	3.63	0.800	20.32	0.010	0.25					
3/8	A	0.375	9.53	0.305	7.75	0.010	0.25	20	1.0	3.0	0.984	25.0	0.010	0.25	0.143	3.63	0.800	20.32	0.010	0.25					
1/2	A	0.500	12.70	0.370	9.40	0.010	0.25	20	1.0	3.0	0.984	25.0	0.010	0.25	0.143	3.63	0.800	20.32	0.010	0.25					
3/4	A	0.750	19.05	0.620	15.75	0.010	0.25	20	1.0	3.0	0.984	25.0	0.010	0.25	0.143	3.63	0.800	20.32	0.010	0.25					
1	A	1.000	25.40	0.870	22.10	0.010	0.25	20	1.0	3.0	1.339	34.0	0.010	0.25	0.143	3.63	1.160	29.46	0.010	0.25					

Nominal Size, in.		Type		Groove Depth, <i>G</i>				Face Offset, <i>H</i>				Groove Detail, <i>R3</i>				Groove Detail, <i>R4</i>				Groove Detail, <i>A1</i> , deg		Radius, <i>R1</i> , max.		Radius, <i>R2</i>			
				Dimension		Tolerance, ±		Dimension		Tolerance, ±		Dimension		Tolerance, ±		Dimension		Tolerance, ±						Maximum		Minimum	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
1/4	A	0.085	2.16	0.005	0.13	0.031	0.79	0.005	0.13	0.031	0.79	0.005	0.13	0.020	0.51	0.005	0.13	35	1	0.031	0.79	0.031	0.79	0.005	0.13		
3/8	A	0.085	2.16	0.005	0.13	0.031	0.79	0.005	0.13	0.031	0.79	0.005	0.13	0.020	0.51	0.005	0.13	35	1	0.031	0.79	0.031	0.79	0.005	0.13		
1/2	A	0.085	2.16	0.005	0.13	0.031	0.79	0.005	0.13	0.031	0.79	0.005	0.13	0.020	0.51	0.005	0.13	35	1	0.031	0.79	0.031	0.79	0.005	0.13		
3/4	A	0.085	2.16	0.005	0.13	0.031	0.79	0.005	0.13	0.031	0.79	0.005	0.13	0.020	0.51	0.005	0.13	35	1	0.031	0.79	0.031	0.79	0.005	0.13		
1	A	0.085	2.16	0.005	0.13	0.031	0.79	0.005	0.13	0.031	0.79	0.005	0.13	0.020	0.51	0.005	0.13	35	1	0.031	0.79	0.031	0.79	0.005	0.13		

Table DT-7.1-2
Polymeric Hygienic Clamp Ferrule Standard Dimensions and Tolerances (Cont'd)



Nominal Size, in.	Type	Tube Diameter, <i>A</i>		I.D. Bore, <i>B</i>				Flange Angle, <i>C</i> , deg			Flange Diameter, <i>D</i>				Flange Thickness, <i>E</i> , ref.		Groove Diameter, <i>F</i>			
		Dimension		Dimension		Tolerance, ±					Dimension		Tolerance, ±		Dimension		Dimension		Tolerance, ±	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	
1	B	1.000	25.40	0.870	22.10	0.010	0.25	20	1.0	3.0	1.984	50.39	0.010	0.25	0.112	2.84	1.718	43.64	0.010	0.25
1½	B	1.500	38.10	1.370	34.80	0.010	0.25	20	1.0	3.0	1.984	50.39	0.010	0.25	0.112	2.84	1.718	43.64	0.010	0.25
2	B	2.000	50.80	1.870	47.50	0.010	0.25	20	1.0	3.0	2.516	63.91	0.010	0.25	0.112	2.84	2.218	56.34	0.010	0.25
2½	B	2.500	63.50	2.370	60.20	0.010	0.25	20	1.0	3.0	3.047	77.39	0.010	0.25	0.112	2.84	2.781	70.64	0.010	0.25
3	B	3.000	76.20	2.870	72.90	0.010	0.25	20	1.0	3.0	3.579	90.91	0.010	0.25	0.112	2.84	3.281	83.34	0.010	0.25
4	B	4.000	101.60	3.834	97.38	0.010	0.25	20	1.0	3.0	4.682	118.92	0.015	0.38	0.112	2.84	4.344	110.34	0.010	0.25

Table DT-7.1-2
Polymeric Hygienic Clamp Ferrule Standard Dimensions and Tolerances (Cont'd)

Nominal Size, in.	Type	Groove Depth, <i>G</i>				Face Offset, <i>H</i>				Groove Detail, <i>R3</i>				Groove Detail, <i>R4</i>				Groove Detail, <i>A1</i> , deg		Radius, <i>R1</i> , max.		Radius, <i>R2</i>			
		Dimension		Tolerance, ±		Dimension		Tolerance, ±		Dimension		Tolerance, ±		Dimension		Tolerance, ±						Maximum		Minimum	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
1	B	0.063	1.60	0.005	0.13	0.000	0.00	0.005	0.13	0.047	1.19	0.005	0.13	0.020	0.51	0.005	0.13	46	1	0.063	1.60	0.031	0.79	0.005	0.13
1½	B	0.063	1.60	0.005	0.13	0.000	0.00	0.005	0.13	0.047	1.19	0.005	0.13	0.020	0.51	0.005	0.13	46	1	0.063	1.60	0.031	0.79	0.005	0.13
2	B	0.063	1.60	0.005	0.13	0.000	0.00	0.005	0.13	0.047	1.19	0.005	0.13	0.020	0.51	0.005	0.13	46	1	0.063	1.60	0.031	0.79	0.005	0.13
2½	B	0.063	1.60	0.005	0.13	0.000	0.00	0.005	0.13	0.047	1.19	0.005	0.13	0.020	0.51	0.005	0.13	46	1	0.063	1.60	0.031	0.79	0.005	0.13
3	B	0.063	1.60	0.005	0.13	0.000	0.00	0.005	0.13	0.047	1.19	0.005	0.13	0.020	0.51	0.005	0.13	46	1	0.063	1.60	0.031	0.79	0.005	0.13
4	B	0.063	1.60	0.005	0.13	0.000	0.00	0.005	0.13	0.047	1.19	0.005	0.13	0.020	0.51	0.005	0.13	46	1	0.063	1.60	0.031	0.79	0.005	0.13

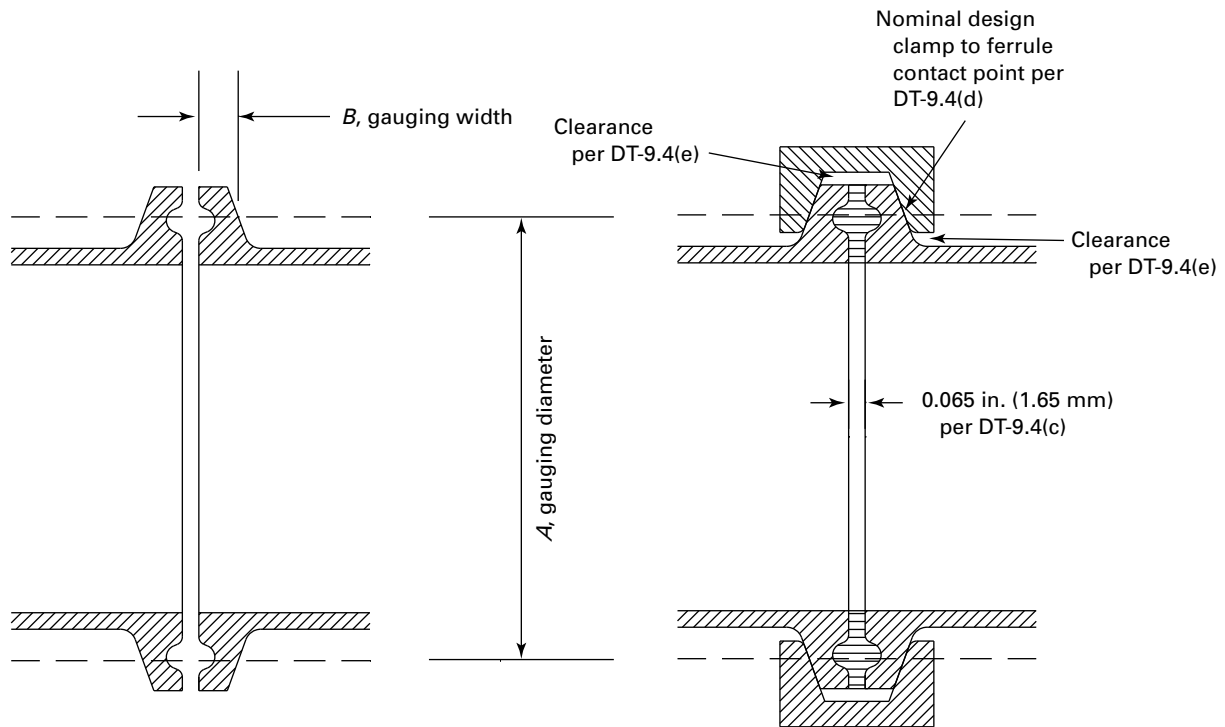
GENERAL NOTES:

- (a) Dimensions and tolerances apply to molded polymer materials only.
- (b) I.D. bore dimension *B* should be measured on the ferrule face side only.
- (c) Ferrules should only be used with elastomeric gaskets.

(22) **Table DT-7.3-1**
Transfer Panel and Jumper Tolerances

Connection Nominal Size,	Parallelism Tolerance (Tol.1) Maximum Gap Allowed		Position Tolerance (Tol.2) Maximum Deviation From the Design Distance Between Centerlines	
	in.	mm	in.	mm
$\frac{1}{2}$	0.010	0.25	0.015	0.38
$\frac{3}{4}$	0.010	0.25	0.015	0.38
1	0.020	0.51	0.015	0.38
$1\frac{1}{2}$	0.020	0.51	0.015	0.38
2	0.025	0.64	0.015	0.38
$2\frac{1}{2}$	0.025	0.64	0.015	0.38
3	0.030	0.76	0.015	0.38
4	0.040	1.02	0.015	0.38

Table DT-9.3-1
Hygienic Clamp Ferrule: Design Criteria



Nominal Size, in.		Basic Gauging and Contact Diameter, <i>A</i> (ref.)		Gauging Width, <i>B</i>				Hygienic Clamp Size, in.
		Dimension		Dimension		Tolerance, ±		
						in.	mm	
in.	Type	in.	mm	in.	mm	in.	mm	
1/4	A	0.867	22.02	0.164	4.17	0.004	0.10	3/4
3/8	A	0.867	22.02	0.164	4.17	0.004	0.10	3/4
1/2	A	0.867	22.02	0.164	4.17	0.004	0.10	3/4
3/4	A	0.867	22.02	0.164	4.17	0.004	0.10	3/4
1	A	1.222	31.04	0.164	4.17	0.004	0.10	ISO DN15
1	B	1.748	44.39	0.155	3.94	0.005	0.13	1 1/2
1 1/2	B	1.748	44.39	0.155	3.94	0.005	0.13	1 1/2
2	B	2.280	57.91	0.155	3.94	0.005	0.13	2
2 1/2	B	2.811	71.39	0.155	3.94	0.005	0.13	2 1/2
3	B	3.264	82.91	0.169	4.30	0.005	0.13	3
4	B	4.288	108.92	0.184	4.66	0.005	0.13	4
6	B	6.255	158.88	0.277	7.04	0.005	0.13	6

(22)

Figure DT-9.4-1
Clamp Conditions at Installation

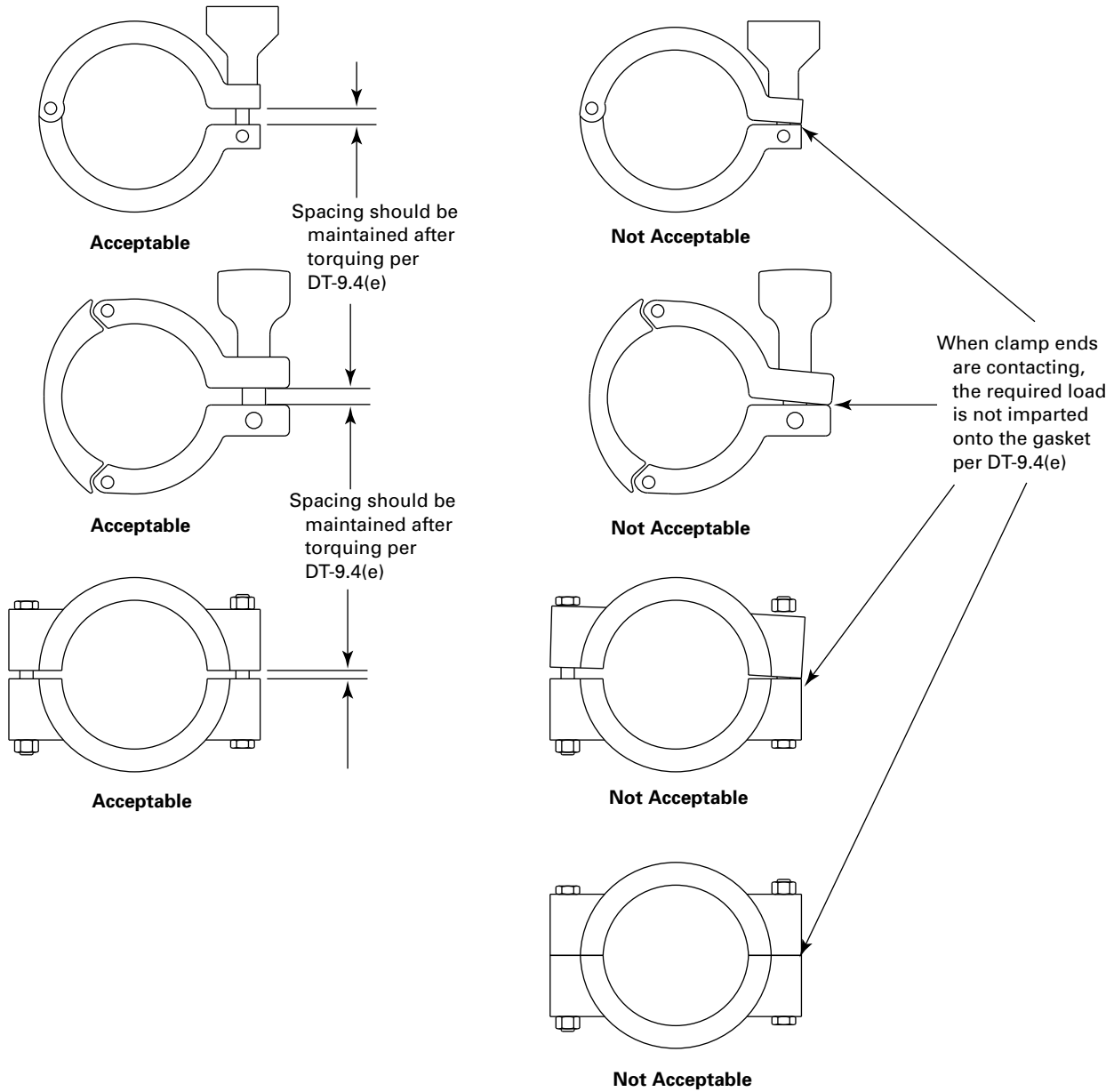


Table DT-11.1.1-1
Minimum Required Marking Information

(22)

Process Component	Heat Number or Unique Identifier	Material Type	Valve Pressure Rating	Manufacturer's Name, Logo, or Trademark	Reference to This Standard (ASME BPE)	Process Contact Surface Designation
Fittings	Required	Required	...	...	...	...
Valves	Required	Required	Required	...	...	...
Instrumentation	Required	...	...	Required	...	...

GENERAL NOTE: When the size of a component does not allow complete marking per [DT-11.1](#), this table defines the marking requirements.